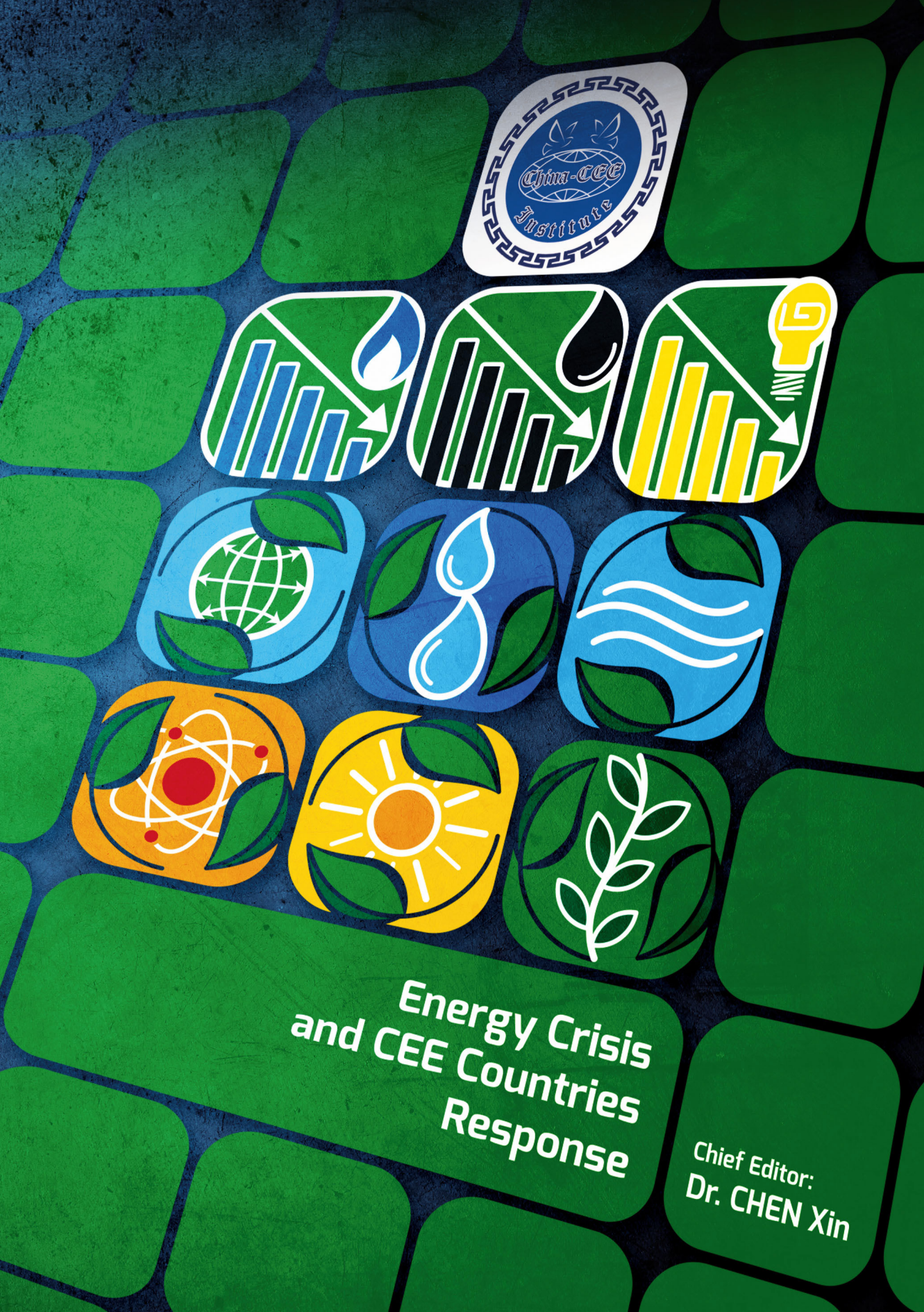

Energy Crisis and CEE Countries Response

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Energy Crisis and Albanian Response to the Situation

Marsela Musabelliu

Summary

The past seven months have been harsh for the European continent and beyond. As the ramifications of the conflict in Ukraine are deepened by the day - in the rest of the continent the headline is energy crises. Determined by the degree of dependence on Russian gas, some European countries are hit more than others. For Albania, the energy crisis *per se* is not the issue; nevertheless, since the country is deeply embedded in the European supply chains, there are consequential losses as an indirect impact caused by the crisis outside its borders.

Introduction

Albania's energy needs are provided at a 99% level by hydropower. The country benefits from this immensely in terms of decarbonizing, but it also renders it extremely vulnerable to weather conditions. The local production of energy on a yearly average is around 70%, and the rest 30% is imported from abroad. Albania has 3 public and more than 200 private hydropower plants (HPP) with concessions, which produced at the rate of 61% and 39% respectively for the last year. The current energy crisis affects mostly when Albania has to import electricity from abroad (1/3 of the time), and in the last year, it has not been cheap.

Context

In September 2022, Prime Minister (PM) Edi Rama would declare during a visit to New York that Albania does not depend on Russian gas because the country relies upon renewable energy completely. Of course, there are issues - he continued - because the energy is based on hydro resources, and when there is no rainfall the government has to purchase abroad.[1] Indeed,

[1] Rama: We do not depend on Russian gas, Albania entirely with renewable energy. https://ata.gov.al/2022/09/19/rama-nuk-varemi-nga-gazi-rus-shqiperia-teresisht-me-energji-te-riperteritshme/

Albania is rich in water resources and paradoxically sells electricity cheaply in the region, when there is no urgent need, and buys it expensively when the country urgently needs electricity. Electricity in the country is produced from hydro sources, depending on rainfall, which is based on the lack of continuity of production.

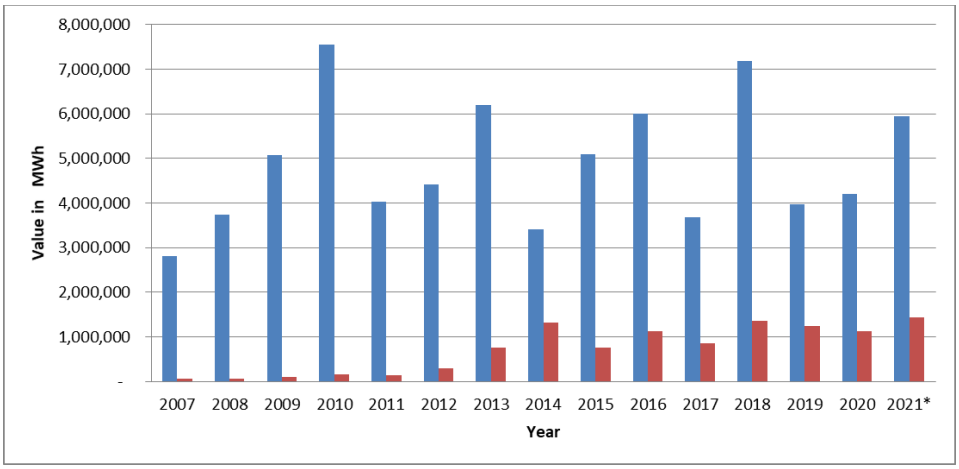
Experts claim that the situation is mismanaged by authorities and also raise concerns about the high level of energy losses in the network with an estimation of over 20%. Although they have diminished in recent years, they are still considered high. According to the authorities, all the energy that is produced by small hydropower plants goes to cover these losses and according to them, the investment needs in the network are many times higher than the current financial capacities. [1] Although Albania is rich in water resources, the most powerful hydropower plants on the Drin River, cannot meet all the country's needs for electricity.[2] While the management of the public HPPs lies entirely on the Albanian Power Corporation (KESH), in the last decades, much more space for investments has been given to the private sector. It was aimed at private investments to make possible the construction of hydropower plants so that they would increase energy production in the country. However, these projects have been accompanied by debates on the efficiency of Public-Private partnerships (PPP) contracts and the protection of specific areas on rivers and valleys.[3] The increasing number of private investments unfolds as follows:

Net electricity production in Albania

[1] "Eager to sell energy" / Energy crisis in Albania, experts: The Drini cascade was misused. https://www.voxnews.al/english/biznes/te-etur-per-para-shiten-e-energji-kriza-energjitike-ne-shqiperi-ekspertet-i9694

[2] Albania's paradox with electricity. https://www.dw.com/sq/paradoksi-i-shqip%C3%ABris%C3%AB-me-energjin%C3%AB-elektrike/a-59460480

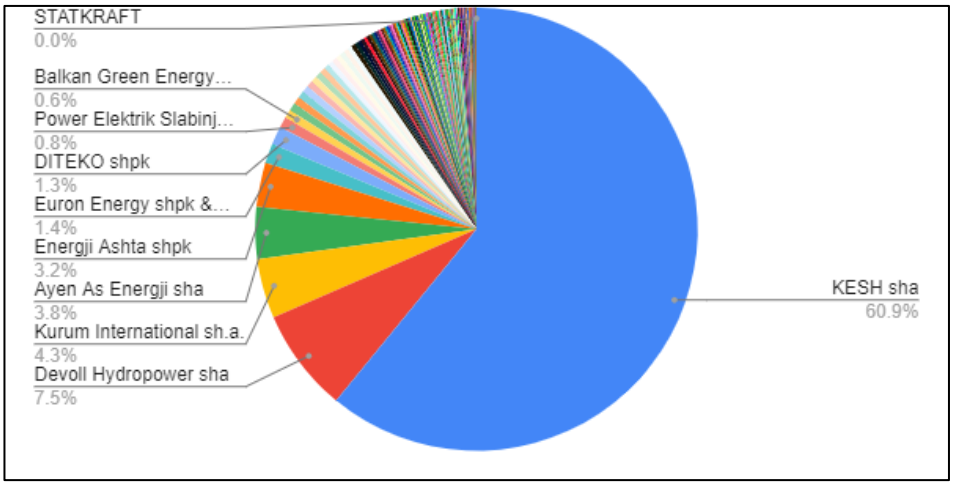
[3] Electricity production from public and private hydropower plants 2007 - 2021. https://ndiqparate.al/?p=15206



Source: OpenData Albania (Public sector [blue] – Private sector [red])

The largest production company, KESH, last year provided the amount of production from Koman HPP, Fierza HPP, and Vau Deja HPP, at 61% of the total. The rest of the private sector displays as follows:

Net production of electricity by company



Source: OpenData Albania

Implications and actions

Authorities have reassured the citizens that there is no plan for an increase in the price of electricity for family consumers and small businesses, nor

restrictions on supply; however, this will very much depend on the level of rainfall. The director of KESH also reiterated that Albania will have no restrictions in winter despite the energy crises in the region and the whole of Europe. For him, the short-term solution to cope with the difficult situation is ships that produce energy to be located on the coast of Vlora.

In April 2022, Albania leased two ships for energy production, and according to the Minister for Energy, this was achieved with the support of the United States (US), in cooperation with the company that is working for the thermal power plant of Vlora, Excelerate Energy. The minister called the "*floating thermal power plants*" vehicles that will produce energy for Albania's needs and labeled it as a great achievement as it will guarantee us energy independence even during the winter.

With these ships functioning, the best-case scenario is that the first power output coming from them will be in November of 2022. This comes as a continuation of the cooperation agreement that the Albanian Government signed in March 2021, with the American company ExxonMobil and Excelerate Energy for the Vlora thermal power plant, to use liquefied gas in the production of electricity. Through this agreement, in addition to the power plant, Vlora is intended to become a regional center for the distribution of liquefied gas imported from the US. The solution (in paper) is that when the situation gets critical, these ships manage the energy reserve, and whenever the price is too high in the stock market they intervene.[1]

However, Albanians are quite accustomed to great expectations from foreign companies in the energy sector, which in reality bring little benefit to local communities when the project is ended. Case in point, the Trans-Adriatic Pipeline (TAP), culminated in 2020 with the commissioning of the carrying of Azerbaijani gas through Greece and Albania and across the Adriatic Sea to Italy. Has Albania benefited as a transit country for

[1] Energy crisis, Albania will have no restrictions! Director of KESH: We will supply ourselves with ships that produce energy! First quantity ready in November. https://shqiptarja.com/lajm/kriza-energjetike-shqiperia-nuk-do-te-kete-kufizime-ergys-verdho-do-furnizohemi-me-anijet-qe-prodhojne-energji-sasia-e-pare-vjen-ne-nentor-te-ketij-viti

Azerbaijani gas on its way to Italy? One and a half billion Euros (€) would be invested in Albania during the duration of the project. Since the end of 2020, when Azerbaijani gas began to flow, about 10 billion cubic meters have reached Italy. The benefit for Albania is doubtful, experts say. Albanians living along the pipeline's route received a small compensation, and resistance to the project was muted. Only currently is the country exploring ways to use TAP and get more gas, even as Europe seeks to accelerate the transition to renewables. Furthermore, now that the project is over, there are no real financial benefits for Albania from having TAP, a Columbia University scholar argues.[1]

Lastly, there could be an intersection for the future between TAP and the abovementioned Vlora project. The 2021 agreement was to convert a power plant in the coastal region of Vlora into a terminal for liquefied natural gas (LNG). If this continues, the plant could be very important. It would involve the construction of a gas pipeline from the coastal city of Fier, where TAP is located, to the power plant in Vlora, where it will convert fossil fuels into electricity to provide support for Albania's struggling electricity market. However, this is a work in progress, a work that for the immediate needs of the country, with the winter ahead, is not truly feasible.

EU energy crisis and spillover effects in Albania

Energy bills all around EU countries have increased exponentially since February 2022, in some even as much as tripled. Considering that almost half of the Western European country's gas supply was coming from Russia, it can be assumed that damages in financial terms to citizens and businesses all across the EU are colossal. Major industries have begun laying off workers and cutting spending because of these bills. Experts say that the increase in demand for gas with the arrival of winter will burden the energy market in Europe like never before. Waves of unemployment,

[1] Benefits from TAP: Arguments for and against the gas transit status in Albania. https://www.reporter.al/2022/06/06/perfitimet-nga-tap-argumentet-pro-dhe-kunder-statusit-te-tranzitit-te-gazit-ne-shqiperi/

high prices, and, in all likelihood, public unrest and disunity among European nations are expected.[1]

High prices in the EU mean automatically high prices in Albania. According to official statistics, trade with the EU countries, in the first eight months of 2022 is 59.7 % of the total. In this period, the share of exports to EU countries was 73.2 % of total export, and the share of imports from EU countries was 52.4 % of total imports.[2] This means that for almost half of the goods in Albania there has been a price increase.

The economic difficulties in Albania's society and the need for more inflows of cash are seen also from the rise of remittances in the country. Even though most of the Albanian emigrants live in the EU, with all the difficulties facing, they are still sending money back to their home country. A recent dataset shows the increase in such value. In the first half of 2021, Albanians sent home the amount of 340 million Euros €, while in 2022, during the first six months they sent home 376 million €.[3] There is an increase of almost 11% year-on-year. The fear for citizens is the upcoming winter, and the very possible price increase in energy and/or potential restrictions on electricity.

Conclusion

When a country depends only on rainfall for the entirety of its energy needs, then, backup plans and long-term strategies for the diversification of resources become crucial. The recent months have placed Albania amid a domino effect from the energy crisis occurring in Europe, a domino effect of which Albania should not be part. If managed properly there would be no financial burden for citizens or lack of energy. The local bounty of

[1] You really don't understand how bad the energy crisis could get in Europe this year. https://twitter.com/i/events/1574505782644703232?s=20

[2] INSTAT, Foreign Trade in Goods. http://www.instat.gov.al/media/10516/tregtia-e-jashtme-gusht-2022.pdf

[3] Bank of Albania. Main data for the Balance of Payments [of which: income from immigrants]. https://www.bankofalbania.org/?crd=0,8,1,1,0,17016&uni=20221015113143791061268249782503&ln=1&mode=alone

hydric resources could be sufficient not only for the country but there is enough potential for the transformation of Albania into a regional energy center.

Energy Crisis in BiH: Five Minutes after Midnight

Faruk Borić

Summary

One of the rare advantages that Bosnia and Herzegovina has is the electricity that is exported from the country to markets all over Europe. However, the production of electricity rests on a dilapidated system which, among other things, consists of insolvent mines within the Elektroprivreda BiH, as well as thermoblocks that have expired or are about to expire, while the transition to renewable energy sources is a long way off. The authorities have been trying to find solutions for the entire energy system for a long time, but these efforts can be figuratively expressed as "one step forward - two steps back". At the same time, BiH is dependent on Russian gas, which mainly comes via Turkish Stream. The largest amount of gas is used by the capital city, Sarajevo for heating purposes. Many people are wondering how they will be heated during the winter and how many bills will come: for gas, if there is any, for electricity, which I hope will not fail. So far.

Introduction

The media and some experts once again took the lead in asking questions, while the authorities were obviously late with the answers. The energy crisis, most experts agree, is very certain. Bosnia and Herzegovina is not ready for the energy crisis that is coming and if this problem continues to be ignored, it can only lead to greater consequences for its citizens. This is a warning that relevant think-tanks, experts and various media often place this autumn (and earlier!), while the temperatures are slowly moving towards lower in a country that has snowy and harsh winters. A recent report by a think-tank states that the BiH authorities do not take the problem of the energy crisis seriously enough as they should, and that one of the solutions could be the effective adoption of measures modeled after the

European Union. The report also says that it is necessary to work on the energy transition process in the country and the region[1].

Electricity exporter

Gross electricity production in BiH was 1.226 GWh in July 2022. In total gross electricity production hydro power plants (HPP) participated with the share of 25.9%, thermal power plants (TPP) with 70.6% and solar and wind power plants (WPP) with 3.5%, data from the Agency for statistics for the last reference month of this year[2].

Electrical energy is one of the export-potential areas of BiH - or at least it used to be. The value of BiH's electricity exports in 2021 jumped 66.9% compared to 2020, to 830 million BAM (about 424 million EUR), which is historically the best export result of this country. The record value of electricity exports from BiH is largely the result of price jumps caused by the energy crisis on the world market. The value of B&H electricity exports in 2020 was 497.1 million BAM (about 255 million euros), and in 2019 it was 574.8 million BAM (about 295 EUR). In the first 11 months of 2021, the export of electric energy of BiH achieved a value growth of 53.9% compared to the same period of the previous year and amounted to 701.3 million BAM (359 million EUR)[3].

[1] Energy crisis vs. energy transition - what now?
https://vpi.ba/bs/2022/09/26/energetska-kriza-vs-energetska-tranzicija-sta-sad/

[2] Short-term indicators of energy statistics, July 2022.
https://bhas.gov.ba/data/Publikacije/Saopstenja/2022/ENE_01_2022_07_1_BS.pdf

[3] The energy crisis raised the value of BiH's electricity exports to a record 424 million euros.

One of the problems is that the existing energy plants, especially thermoblocks, were built back when BiH was one of the republics of the Socialist Federal Republic of Yugoslavia, so their construction dates back to the 1980s at the earliest. That's why Elektroprivreda BiH (EPBiH) started the construction of the new, block 7 of the TPP in Tuzla, industrial center of BiH, but even after several years and numerous ups and downs, that project is still pending[1].

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https://balkangreenenergynews.com/rs/energetska-kriza-podigla-vrednost-izvoza-struje-bih-na-rekordnih-424-miliona-evra/

[1] The complete story about the project financed by the Chinese EXIM Bank and carried out by a consortium of Chinese companies is complex and requires a separate work, and speakers of the official languages in BiH can be informed about some aspects of the project at following links:

It will soon be known whether the construction of Block 7 continues or is suspended. https://www.akta.ba/vijesti/bih/147245/uskoro-ce-biti-poznato-da-li-se-nastavlja-ili-obustavlja-izgradnja-bloka-7,

Is it worth investing a billion euros in Block 7 and what are renewable sources really? https://www.klix.ba/biznis/isplati-li-se-milijardu-eura-investirati-u-blok-7-i-sta-su-zaista-obnovljivi-izvori/201020019

Block 7 of the Thermal Power Plant in Tuzla: Between geopolitics, economics and ecology.

https://radiosarajevo.ba/metromahala/teme/blok-7-termoelektrane-u-tuzli-izmedu-geopolitike-ekonomije-i-ekologije/331692

Block division: For and against workers and energy sovereignty in BiH - the case of Unit 7 of the Tuzla TE.

https://prvasmjena.com/blokovska-podjela-za-i-protiv-radnika-i-energetskog-suvereniteta-u-bih-slucaj-bloka-7-te-tuzla/

Why is the story of the failure of the largest investment project served to the public: The story of Block 7 is a story about Bosnia and Herzegovina, not about China!

https://startbih.ba/clanak/zasto-se-u-javnosti-servira-prica-o-propasti-najveceg-investicionog-projekta-prica-o-bloku-7-prica-je-o-bih-a-ne-o-kini/168806

Indeed, because of the undefined status of the construction of block 7, the EPBiH received from the Parliament of the Federation of BiH a permit for the further operation of the dilapidated blocks 4 and 5 of TPP Tuzla[1], which are old and cannot be used as firm response to the energy crisis. This is what EPBiH General Director Admir Andelija said as well, clarifying that the blocks are old and that they have a degree of utilization in the summer period of some 30-32%, in the winter period a little more.

"When we convert that into tons, it means that out of 1,000 tons of coal, we convert 300 tons into electricity. 700 t goes into some losses, and then it is completely technically unjustified to return those 300 t of electricity to heating," says Mr. Andelija.[2]

In another media appearance, Mr. Andelija reiterated that electricity cannot be the basic fuel for heating, but also that he does not expect prices to rise for all customers in the public consumption category, but that for customers on the market supply, he will respect the legal solutions and decisions of the FBiH Government. In the end, he said that under some normal conditions of consumption, there will be no problem with either the supply

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Among the existing texts in English, this one is available, which provides basic information about the project: Preparatory Works on the Construction of Blok 7 of the Tuzla Thermal Power Plant officially started. https://sarajevotimes.com/preparatory-works-on-the-construction-of-blok-7-of-the-tuzla-thermal-power-plant-officially-started/

[1] Odobren produžetak rada Blokova 4 i 5 u TE Tuzla i TE Kakanj / Snabdijevanje strujom i grijanjem ostaje sigurno. https://www.oslobodjenje.ba/vijesti/bih/odobren-produzetak-rada-blokova-4-i-5-u-te-tuzla-i-te-kakanj-snabdijevanje-strujom-i-grijanjem-ostaje-sigurno-740876

[2] While Europe is saving, BiH it is doing make up? https://bljesak.info/gospodarstvo/novac/dok-europa-stedi-mi-se-opet-cesljamo/394648

or the price, but if there is a radical increase, then the prices will have to be corrected[1].

However, electricity saving measures are being delayed. While Europe is afraid of shortages, in BiH there is currently only fear of more expensive energy sources and recommendations for more rational use of electricity, but no savings plans. One example is the issue of turning off the outdoor public lighting. While representatives of the authorities in Sarajevo say that they will use practice and experience from the region and Europe, in the second largest city in BiH, Banja Luka, public lighting is the largest consumer of electricity with over two million BAM (over a million EUR), but that "these are not large savings, but more influence on awareness[2]".

Russian gas, Turkish Stream

The question of whether there will be enough electricity and what its price will be is inseparable from the question of whether there will be gas and what its price will be. And that is a set of questions whose answers have become more complicated due to the war in Ukraine. The disparity of political views expressed and still expressed by some BiH officials when it comes to the situation in Ukraine, in a bizarre way, benefited BiH. Namely, it is widely known that the (soon to be former) member of the BiH Presidency, Milorad Dodik, wholeheartedly supports Vladimir Putin, with whom he had several direct meetings recently. After the meeting of the two, which took place in May, the price of a cubic meter of gas was agreed,

[1]Andelija: Electricity cannot be the basic fuel for heating.
https://www.klix.ba/biznis/andelija-elektricna-energija-ne-moze-biti-osnovni-energent-za-grijanje/220907147

[2] While Europe is saving, BiH it is doing make up?
https://bljesak.info/gospodarstvo/novac/dok-europa-stedi-mi-se-opet-cesljamo/394648

which in the entity Republika Srpska (without value added tax) amounted to 0.96 BAM (0.48 EUR), in the Federation of BiH entity, the price per cubic meter was 0.89 BAM (0.45 EUR).

The consumption of gas in the FBiH is 180 million cubic meters, and the majority is in Sarajevo Canton, where 120-130 million cubic meters are consumed annually. The largest consumers are the population with around 60 million and the Public Institution "Toplane" (*Heating plant*), which heats the urban parts of Sarajevo, apartments in buildings, with 40 million. The rest falls on industry, institutions, etc[1].

BiH has no gas reserves and is completely dependent on Russian supplies. Only one branch of the gas pipeline "Turkish stream", which goes from Russia through the Black Sea through Turkey and ends in BiH, supplies natural gas to two cities, Sarajevo and Zenica, and the surroundings of those cities. Work is underway to expand the gas pipeline network to other parts of the country, but this process is not going fast enough, and BiH has not been put on Russia's list of "enemy countries" for now. Diversification of supply is planned with the construction of the "Southern Interconnection" gas pipeline, which would connect Bosnia and Herzegovina with Croatia. However, the project is still in the approval phase[2].

While neighbors are trying to solve the energy crisis by providing and storing different types of energy in all possible ways, such activity is absent in BiH. Experts note that Serbia has leased certain gas storage facilities in Hungary although has its own capacities. Croatia has an LNG terminal, but

[1] Are we facing an energy crisis and a hard winter?

https://ba.n1info.com/biznis/slijedi-li-nam-energetska-kriza-i-teska-zima/

[2] BiH and the energy crisis. We have no gas reserves, we are completely dependent on Russian deliveries.

https://raport.ba/bih-i-energetska-kriza-nemamo-rezerve-plina-topupuno-se-oslanjamo-na-ruske-isporuke/

also implements special savings measures. It is proposed to increase the reserves in the oil sector, as well as the method of gas storage and its delivery by truck, while in the electricity sector it is necessary to implement more effective measures of energy efficiency and additional savings[1].

Oil from neighbors

When it comes to oil, BiH has to rely on its neighbors, at least in the short term. BiH currently imports crude Russian oil "*ural*", but due to the absence of an oil company on the territory of BiH, this energy source is processed in the countries of the region: Croatia, Serbia and Hungary. In addition, part of the derivatives is also bought in Slovenia. What is in BiH's favor is the fact that Serbia provided a replacement for Russian oil, which it will not be able to import from November 1 due to EU sanctions against Russia.

Serbia and Croatia are the main oil routes for BiH and in will continue to buy derivatives. Therefore, oil will be procured from Pančevo in Serbia and Rijeka in Croatia, and elsewhere. Therefore, the question is not whether BiH will find a replacement for Russian oil, but whether refineries in the area will find a replacement for it[2].

[1] Neighbors store gas, but Bosnia and Herzegovina nothing?! Bičakčić proposes key steps to save from the energy collapse in October.
https://depo.ba/clanak/234413/susjedi-skladiste-gas-a-bih-nista-bicakcic-predlaze-kljucne-poteze-za-spas-od-energetskog-kolapsa-u-oktobru

[2] ENERGY CRISIS AT THE DOOR: Bosnia and Herzegovina will be knocking on its neighbor's door for oil.

https://vecernjenevosti.ba/99228/vijesti/energetska-kriza-pred-vratima-bih-ce-za-naftu-kucati-na-komsijska-vrata/

Once, BiH has reliable companies: Brod Refinery in the entity RS and the company "Energopetrol" in FBiH which used to process crude oil, but they no longer do it because their production capacities are out of order. However, experts says there is no need to make a drama about all of the above, since Serbia has already found an alternative, and Hungary will continue to have Russian oil, given that the "Družba" oil pipeline is exempt from EU sanctions. The only change could be the price of oil from other markets, because then the transportation routes will probably be changed as well.

"Obviously, we don't know how to deal with oil and it's easier for us to buy in neighboring countries than to build something. It seems that this is our fate", says this expert[1].

Conclusion

Some people will need candles, said the title of a recent text of a very influential news-portal that discusses the problem of the lack and high cost of energy consupmtions in BiH. In the same article, a professor at the Faculty of Electrical Engineering of the University of Tuzla and an energy expert, Mirza Kušljugić, recalled that a few months ago he called for the formation of crisis teams to deal with a possible energy crisis, and that only partial measures have been taken to deal with it. The assessment is that the authorities will not be able to count on support in measures for rational energy consumption if they do not demonstrate this by their actions, as the authorities in the Western countries do[2].

[1] *Ibid.*

[2] Only with the first colder days do we think about the energy crisis: Some people might need candles. https://www.klix.ba/biznis/privreda/tek-s-prvim-hladnijim-danima-razmisljamo-o-energetskoj-krizi-nekima-bi-mogle-zatrebati-svijece/220919083

And what the authorities are doing was best summed up by another expert in another text: “Every government in BiH has been subsidizing consumption, gas, pellets, coal, etc... for the last 20 years. These are not postulating of energy. Savings or possibly production from renewable sources are subsidized. Now the fire that burns for 12 hours at midnight is extinguished”[1].

With all the objective problems facing BiH, one cannot escape the impression that those responsible for creating and implementing the energy policy have done nothing, or almost nothing. And that it is not 12 midnight, but five minutes after midnight.

[1] Are we facing an energy crisis and a hard winter?

https://ba.n1info.com/biznis/slijedi-li-nam-energetska-kriza-i-teska-zima/

The Gas Connection Between Greece and Bulgaria Is Already Decisively Changing the Energy Map of Europe[1]

Evgeniy Kandilarov

Summary

Europe is facing an unprecedented energy crisis that is pushing the economy ever closer to recession. Russia has significantly cut its natural gas supplies to Europe since Western countries imposed sanctions on Moscow after its invasion in Ukraine. The most difficult situation can be expected for countries where a combination of negative factors is observed, namely - loss of significant volumes of gas imports from Russia, low storage capacity and difficult access to alternative supplies. From this point of view, it seems that Bulgaria is facing the highest risk of being hit hardest by the energy crisis. This is because, until a few months ago, the country was almost entirely dependent on gas imports from Russia, its storage capacity in Chiren is at one of the lowest levels in Europe, and the opportunities to diversify gas supplies as of September were extremely limited. At the beginning of October, Bulgaria managed to change this negative situation by successfully completing and putting into operation the gas interconnector Greece – Bulgaria (project IGB) which ensures diversification not only of the routes but also of the natural gas sources for Bulgaria and the wider region. Through IGB Bulgaria and its neighboring countries will have access to alternative supplies from the Caspian region as well as from existing or planned LNG terminals. The commissioning of the facility led to a decrease in the price of gas in Bulgaria by 34% in October.

[1] These are words of Bulgarian President Rumen Radev during the event on the occasion of the commissioning of the IGB, on October 1, 2022.

Europe is facing an unprecedented energy crisis that is pushing the economy ever closer to recession and raising serious concerns among people about how they will survive the coming winter months and whether they will be able to pay their household bills for electricity and gas.

Russia has significantly cut its natural gas supplies to Europe since Western countries-imposed sanctions on Moscow following its invasion in Ukraine. Reduced gas supplies are a problem for European countries, as they import 40% of it. The most difficult situation can be expected for countries where a combination of negative factors is observed, namely - loss of significant volumes of gas imports from Russia, low storage capacity and difficult access to alternative supplies.

From this point of view, it seems that Bulgaria is one of the countries facing the highest risk of being hit hardest by the energy crisis. This is because, until a few months ago, the country was almost entirely dependent on gas imports from Russia, its storage capacity in Chiren is at one of the lowest levels in Europe, and the opportunities to diversify gas supplies until September were extremely limited.

At the beginning of August, the caretaker government headed by Galab Donev announced that the situation with gas supplies for Bulgaria is very serious, even critical. The quantities of gas have been secured only until the end of September, but they are not enough to satisfy the consumption in the country until the end of the year. At the time, it was stated that the situation was critical, and the Ministry of Energy would work hard to solve the gas problems as quickly as possible. The caretaker government created a crisis headquarters to manage the energy crisis. Its main task was to find ways to ensure supply and predictability of gas prices, as well as mechanisms to control and reduce fuel and electricity prices.

Bulgaria started negotiating with both Greece and Turkey for future use of their LNG terminals.

At the same time Bulgarian government started actively working on the completion and commissioning of the Gas Interconnector Greece–Bulgaria. It is a natural gas pipeline linking the Greek and Bulgarian natural gas pipeline networks. The idea was that the benefits of the interconnector would be felt by every citizen and that this would directly affect the cost of living of the people, just as winter and the energy crisis are coming.

At the end of September 2022, the European Energy Commissioner, Kadri Simson, during an extraordinary meeting of EU energy ministers in Brussels, summarized that at the moment 13 EU member states are affected by a partial or total reduction in gas supplies from Russia. The EC's assessment at this point was that the suspension of supplies has a negative effect, but does not pose an immediate threat to energy security.

In an attempt to find a solution to the high electricity prices, the relevant ministers agreed to ask the member states for a mandatory reduction of energy consumption during peak hours in the EU, but a unified position on the ceiling of gas prices from Russia was not reached. Most of the countries reported that they were able to fulfill the agreement to reduce the consumption of blue fuel by 15 percent.

At the end of September, Bulgaria found itself in one of the last places in terms of gas reserves. Bulgarian Energy Minister informed the European Council that most of the gas consumers in Bulgaria have already switched to alternative fuels due to high gas prices. That is why the government does not envisage additional measures.

Bulgaria imports almost all the gas that is consumed in the country and makes great efforts to diversify supplies. The government has announced that it has secured gas needs for September and October and is continuing negotiations to secure supplies until the end of the winter season. The government announced also that the country's storage is more than 60 percent full, with the goal of reaching 80 percent by October.

Europe is facing an energy crisis with record energy and electricity prices fueled by the war in Ukraine and continuing concerns about limited natural gas supplies. To deal with this situation, a number of countries in the European Union have taken measures to support businesses and households. Governments set aside billions to cushion the blow of high electricity and gas prices for Europeans.

Although Bulgaria is in the top three electricity exporters in Europe, the country is forced to pay record prices and subsidies for businesses due to the electricity deficit in Europe and due to the lack of long-term contracts and system solutions.

Bulgaria has a package of measures worth 1 billion EUR, which are aimed at business. The goal is to limit the negative effects of high energy prices, as well as fight inflation. The price of electricity for households is under the regulation of the Energy and Water regulatory Commission (EWRC).

Regarding fuels, the government of Kiril Petkov, which already resigned, reduced the price of the most popular gasoline in the country - A95, and of methane, by BGN 0.25 per liter. The discount can be offered at will by the owners of the gas stations and is only for individuals. The government refunds the rebate to gas station owners who participate in the program. Value added tax (VAT) for thermal energy has also been reduced from 20% to 9%.

The current compensations for the industry are an anti-crisis measure that can last another year, but it should be gradually supplemented and possibly replaced by providing opportunities for long-term contracts and two-tier pricing in compliance with European recommendations and market principles. Thus, the financial pressure on the Bulgarian Energy Holding and the state budget will be controlled and weakened over time, and the Bulgarian industry will be provided with predictability in energy supplies.

At the beginning of October, Bulgaria managed to achieve a significant breakthrough in solving the issue of diversification of gas supplies, which sharply cut off gas prices, which became cheaper by 34%.

The gas interconnector Greece-Bulgaria started commercial operation on October 1st. The commissioning of the gas pipeline coincided with the first day of the new gas year and the start of the heating season.

The first quantities of natural gas through the interconnector were transited from the Trans-Adriatic Pipeline (TAP). The gas interconnector Greece – Bulgaria (project IGB) connects the natural gas transmission network of Greece near the town of Komotini with the Bulgarian transmission network near the town of Stara Zagora. The total capacity with which the gas pipeline begins operating is 3 billion cubic meters per year (bcm/y).[1]

The President of the European Commission and a number of heads of state welcomed the first quantities of natural gas through the IGB during an official event held later in the day in Sofia, Bulgaria. The landmark event on the occasion of the commissioning of the IGB was honored by the Prime Minister of Bulgaria Galab Donev, the President of the country Rumen Radev, the President of Azerbaijan Ilham Aliyev, the President of Serbia Aleksandar Vučić, the President of North Macedonia Stevo Pendarovski, the President of the European Commission Ursula von der Leyen, Prime Minister of Greece Kyriakos Mitsotakis and Prime Minister of Romania Nicolae Ciucă.

The implementation of the IGB project aims to ensure diversification not only of the routes but also of the natural gas sources for Bulgaria and the South East Europe. As part of the development of the Southern Gas Corridor, through IGB Bulgaria and its neighboring countries will have access to alternative supplies from the Caspian region as well as from

[1] https://www.icgb.eu/news/the-interconnector-with-greece-has-successfully-started-commercial-operation/

existing or planned LNG terminals. IGB is set to create new market opportunities and will enhance international partnerships in the region.

The project is a game-changer for the Bulgarian energy market with its ability to increase the competition and decrease the prices for consumers while securing diversified gas deliveries.

IGB is being developed in great synergy with the LNG terminal near the Greek city of Alexandroupolis, which is set for completion by the end of 2023. With the terminal's implementation, IGB's capacity may see a significant boost of up to 5 bcm/y, which will further ensure the independent energy deliveries in the region.

Thus, at the present moment, Bulgaria manages to find a solution to the energy crisis, diversifying its gas supplies, which leads to a significant reduction in gas prices, which should affect the general energy prices in the country.

Energy Crisis and Croatia's Response: Support Package and LNG Project

Valentino Petrović

Summary

The main topic of this article is the current energy crisis that began approximately one year ago when countries started to lift the COVID-19 restrictions and the global economy was set in motion once again. The crisis was intensified during the war conflict in Ukraine and Russian continuous threats that it will halt the supply of natural gas to European countries. This situation provoked reactions from EU leaders, as well as its member states who decided to take actions. Until now, the Croatian Government introduced two packages of measures to battle high energy prices, while some projects, such as LNG terminal on the island of Krk, proved to be necessary considering the ongoing circumstances surrounding natural gas supply.

Introduction

In the wake of energy crisis, European Union (EU) leaders, as well as the energy ministers of its member states are looking to find joint solutions on how to tackle the issue of high fossil fuels prices, especially of natural gas whose global prices have skyrocketed after the Russian invasion of Ukraine in late February 2022. However, the energy crisis began even before the conflict between the two countries escalated, and it is predominantly explained among the experts as a consequence of countries around the world lifting the COVID-19 restrictions and the global economies reopening, with the demand for fossil fuels rising once again. Only recently, the EU leaders met at the summit in Brussels but did not reach an agreement over whether to impose a price cap on Russian natural gas. When it comes

to particular member states, in early September, the Croatian government introduced a package that encompassed measures for energy sector and consider the package to be an important milestone in battling high energy prices.

The EU Summit on Energy Crisis

From 20 to 21 October, the leaders of 27 EU member states gathered in Brussels to discuss the ongoing crisis related to the War in Ukraine, in addition to other topics and subtopics such as military and financial support for Ukraine, global food security, external relations between EU and China and for this paper the most important topic, energy crisis. The summit produced diverging opinions when it comes to the long-discussed issue of price cap on Russian natural gas, with countries like France and its President Emmanuel Macron pushing for introduction of price cap, while countries like Germany and its Chancellor Olaf Scholz expressing skepticism over such market interventions due to the fact that price cap could endanger the security of supplies and eventually lead to higher price[1]. On the other hand, Prime Minister of Hungary, Viktor Orban, asked for exemption from gas price cap system which was eventually approved. Orban was expressive in giving his opinion on this issue. He wrote on Twitter: "[The] gas price cap is like going to a bar and telling the bartender you want to pay half price for your beer. Not going to happen. Customers can't reduce energy prices. Only diversification and competition can"[2]. Eventually, the result of the October summit was general enough for all leaders of member states to agree with and was framed in such a way to avoid any further implications that there may be discrepancies in opinions.

[1] Strupczewski, Jan. 2022. Hungary will not agree to EU gas price cap, will need exemption. Reuters.com https://www.reuters.com/business/energy/hungary-will-not-agree-eu-gas-price-cap-will-need-exemption-2022-10-20/.

[2] Őry, Mariann. 2022. Hungary Receives Exemption from Gas Price Cap. Hungarytoday.hu https://hungarytoday.hu/hungary-receives-exemption-from-the-gas-price-cap/.

The European Council President Charles Michel later commented: "There is the strong determination, shared unanimously, as the written conclusions attest, to act together, as European, to achieve three goals: bring down prices, guarantee the safety of supply and continue to work to reduce demand"[1]. As for the concrete measures undertaken at the supranational level, on 6th October, the Council of the EU adopted an emergency regulation that allows member states to redistribute the surplus generated from the energy sector to the most affected people and companies, thus, helping them in paying their bills.

The Importance of LNG Terminal on the Island of Krk

When asked about the EU summit, Croatian Prime Minister Andrej Plenković expressed his satisfaction with the results and agreements achieved during the meeting, while attributing the recent deterioration of natural gas prices to actions undertaken by the leaders of the EU. The decision to increase gas reserves, that is, to fill out gas storage facilities before the winter months is considered as an important driver that led to the lower costs of natural gas. The goal of the EU was to reach 85% of storage capacities by the end of the year; however, only in October the average number was 92%. Those member states that do not have natural gas storage facilities are expected to collaborate with member states that have larger facilities, thus, securing their supplies in upcoming months[2]. In addition to measures undertaken at the EU level to tackle energy crisis, it is worth noting that the Croatian Government made a strategic decision in August to increase the overall capacity of the LNG terminal and gas pipeline Zlobin-Bosiljevo. The original capacity of the terminal is 2.9

[1] Euronews.com. 2022. EU leaders make progress on 'roadmap' to address energy crisis https://www.euronews.com/my-europe/2022/10/20/eu-council-live-leaders-debate-emergency-measures-for-energy-crisis.
[2] European Council. Council of the European Union. 2022. Infographic - How much gas have the EU countries stored? https://www.consilium.europa.eu/en/infographics/gas-storage-capacity/.

billion cubic meters annually, but with the decision of the Government the capacity will be expanded to 6.1 billion cubic meters annually. As reported, the upgrade of the terminal will cost EUR 180 million, with EUR 155 million being invested in expansion of pipeline network, while EUR 25 million will be related to the terminal itself[1]. The LNG terminal, which became operational on January 1, 2021, is considered a significant geopolitical and geoeconomic project, not only for Croatia, but for neighboring countries and other Central and Southeastern European countries as well. With the terminal, the Croatian authorities are hoping that the country can use its geographical position and become a regional hub in supplying other countries with liquefied natural gas, thus, contributing to energy diversification priority of the EU, with countries like Hungary, Slovenia, Italy and Austria intended to be the main recipients. The importance of the project was underlined in Prime Minister Plenković's speech at the UN General Assembly last September when he commented that War in Ukraine brought the new understanding of energy security in Europe, with projects such as LNG terminal in Croatia intended to reduce the dependency of EU member states on Russian natural gas.

Measures Introduced to Battle High Energy Prices

Apart from energy, the terminal is projected to have relevance for other sectors in Croatia, such as shipping business, due to that fact that by 2040, approximately 50% of ships governed by the state-owned sea shipping company Jadrolinija and tourist cruise ships are expected to transit to liquefied natural gas, rather than continue using diesel as driving fuel[2]. The works on the LNG terminal could, therefore, be seen through the lens of

[1] Vlada Republike Hrvatske. 2022. Povećanje kapaciteta LNG-a i ulaganje 180 milijuna eura u plinovod Zlobin – Bosiljevo https://vlada.gov.hr/vijesti/povecanje-kapaciteta-lng-a-i-ulaganje-180-milijuna-eura-u-plinovod-zlobin-bosiljevo/35926.

[2] Carić Herceg, Sandra. 2021. Sigurna opskrba: 'LNG terminal na Krku u samo godinu dana opravdao je investicije'. Nacional.hr https://www.nacional.hr/lng-terminal-na-krku-u-samo-godinu-dana-opravdao-je-investicije/.

what was discussed as the long-term strategy of Croatia in diversifying its energy supply routes. However, when it comes to the current energy crisis, the Government introduced short-term measures that will last until March 31, 2023. The aim of these measures is to take off the burden from shoulders of households and private companies in the wake of galloping inflation. The first such package intended to mitigate the growth of energy prices was adopted in February 2022 and was worth approximately EUR 636 million, while the second package which focused on capping the price of electricity was adopted this September and is worth EUR 2.8 billion. The most important part of the second package was recategorization of entities in order to allow the introduction of different prices that entities will have to pay depending on the total consumption level. The previous categorization encompassed only entities that were registered as either households or entrepreneurship. If talking about the set-price of particular entities regulated within the new crisis package, the price of electricity of households is capped at 59 EUR per MWh if the household consumes up to 2.500 kWh. If the household consumes more than 2.500 kWh, the price is capped at 88 EUR per MWh[1].

Conclusion

As much as the energy crisis is unpredictable and, therefore, difficult to tackle, it shed light on the long-term priorities of both EU and its members states. For example, one can argue that energy crisis will be the factor that will accelerate the transition to renewable energy sources which was previously discussed only in general terms that would highlight the good-will of members states. Furthermore, energy crisis unveiled the importance of LNG that is brought to Europe through different transit routes, rather

[1] Vlada Republike Hrvatske. 2022. Snažan, pravedan i sveobuhvatan paket mjera vrijedan 21 milijardu kuna zaštitit će sve i omogućiti mirnu jesen i zimu https://vlada.gov.hr/vijesti/snazan-pravedan-i-sveobuhvatan-paket-mjera-vrijedan-21-milijardu-kuna-zastitit-ce-sve-i-omoguciti-mirnu-jesen-i-zimu/36021.

than natural gas that comes predominantly from the east. Thus, the crisis should not be considered only in negative terms, but as an opportunity given to EU leaders under condition that they know how to make use of what was given to them.

Energy Crisis: A Challenge and Risk for the Liberal Democratic Regime

Ladislav Zemánek

Summary

The energy crisis together with inflation and expanding indebtedness are significant economic but also social challenges and risks in the Czech Republic. The briefing analyses the main political measures addressing the rocketing prices of energy – the introduction of a price ceiling and windfall tax. Attention is paid to the energy policy of the incumbent cabinet and concrete steps that are to offset the suspension of supplies from Russia. The anti-Russian position requires seeking alternative sources of gas which is seen especially in LNG supplies from the US, however at much higher prices. At the same time, possible diversification can be a positive result of the current unfavourable circumstances.

Introduction

The energy crisis has had multiple impacts on different economic subjects, be they households, companies or the state. Due to its staunch anti-Russian position, the ruling coalition does not follow a pragmatic line typical of Hungary. On the contrary, it has belonged to those who have called for the interruption of relations with Russia including the supplies of gas and oil from the very beginning. This radicalism is in sharp contrast with the economic reality. The Czech Republic was fully dependent on Russian gas. In conjunction with rocketing inflation, it exerts enormous pressure on society, undermining people´s livelihood and standard of living. The liberal Government has prepared certain countermeasures. These are, however, generally considered insufficient.

Political response

The cabinet has set a price ceiling for electricity and gas which will be in force for 2023. The ceiling will apply to households, state and public services as well as companies connected to low voltage. It is to amount to 6,000 CZK (245 EUR) per MWh for electricity, and 3,000 CZK (122 EUR) per MWh for gas.[1] Despite the ceiling, many households can thus pay four times more for the same consumption than this year. The concrete parameters, nevertheless, have already been changed several times, not being excluded that it will happen again. The crisis communication towards the public is often chaotic and contradictory, similar to the pandemic period. Obviously, the political elite has learnt no lesson from the previous crisis.

Even though the measures are known roughly for households and SMEs, large companies are experiencing a high degree of uncertainty. It can have very negative impacts on their operation, bringing the risks of dismissals and bankruptcies. Volkswagen Group, the owner of Škoda Auto which is the Czech Republic´s leading automobile manufacturer and the biggest employer, has already warned that it might move its factories to other countries with more favourable price conditions.[2] Ministry of Finance estimates that the introduction of price ceiling will necessitate around 130 billion CZK (5.3 billion EUR) which will be acquired from profits of SOEs, emission permits and an extraordinary windfall tax.[3] The latter should be in force between 2023 and 2025, applying to chosen energy, oil and extractive companies and banks.[4]

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[1] *Vláda stvrdila zastropování cen elektřiny a plynu. Platit začne v listopadu* (2022, October 05). E15.cz. https://www.e15.cz/byznys/prumysl-a-energetika/vlada-stvrdila-zastropovani-cen-elektriny-a-plynu-platit-zacne-v-listopadu-1393690

[2] *Kvůli plynu přesuneme výrobu z Německa a východní Evropy, hrozí Volkswagen* (2022, September 23). iDNES.cz. https://www.idnes.cz/ekonomika/zahranicni/nemecko-volkswagen-vyroba-prumysl-presun.A220923_080612_eko-zahranicni_jadv

[3] *Vláda zastropovala energie maloodběratelům: Limit pro silovou elektřinu je 6 Kč za kWh a pro plyn 3 Kč* (2022, September 13). Patria.cz. https://www.patria.cz/zpravodajstvi/5139560/vlada-zastropovala-energie-maloodberatelum-limit-pro-silovou-elektrinu-je-6-kc-za-kwh-a-pro-plyn-3-kc.html

[4] *Opět změna. Banky a spol. si oddechly, vláda mimořádnou daň letos neuvalí* (2022, October 19). Seznam Zprávy.

Expensive American LNG instead of Russian gas

The rising costs of energy including gas are already changing consumers´ behaviour. From the data collected by the Ministry of Industry and Trade follows that the consumption of gas could drop by a third. It is indicated by the figures from October 10–17 which were by 34 per cent lower compared to the same week a year ago (from a three-year perspective, consumption went down by a quarter). However, the question is how it was affected by weather conditions for this October is above-averaged in terms of the outside temperature. It enables both full covering of daily consumption of gas and creating reserves. By mid-October, there were around 3.2 billion cubic metres of gas reserves in contrast to 2.8 billion cubic metres in 2021. The current reserve is thus tantamount to about a third of total gas consumption in the last year which exceeded 9 billion cubic metres.[1]

As a consequence of the economic war against Russia and the extensive sanction regimes in force, supplies of gas from Russia were problematised and the European countries have started to prepare for the suspension of supplies. The impacts of such a situation, however, differ in individual countries. The Czech Republic together with Latvia were fully dependent on Russian gas (100.0 per cent of domestic consumption), being followed by Hungary (95.0 per cent), Slovakia (85.4 per cent) and Bulgaria (75.2 per cent).[2] Unlike Hungary whose government is trying to keep a balanced position, the Czech political representation demonstrated that it wanted to make use of the crisis to reduce the supplies from Russia to the possible minimum. Given the level of dependence on Russia is it a very challenging

https://www.seznamzpravy.cz/clanek/ekonomika-firmy-prekvapeni-pro-banky-a-spol-vlada-zdani-mimoradne-zisky-uz-za-letosni-rok-217215

[1] *Spotřeba plynu je o třetinu nižší než loni. Zásobníky jsou plné z 92 procent, tvrdí Síkela* (2022, October 19). E15.cz. https://www.e15.cz/byznys/prumysl-a-energetika/spotreba-plynu-je-o-tretinu-nizsi-nez-loni-zasobniky-jsou-plne-z-92-procent-tvrdi-sikela-1394037

[2] *Česko je spolu s Lotyšskem nejvíce závislé na ruském plynu* (2022, April 01). E15.cz. https://www.e15.cz/byznys/prumysl-a-energetika/cesko-je-spolu-s-lotysskem-nejvice-zavisle-na-ruskem-plynu-1388924

task. The cabinet, nevertheless, has been active in finding alternative sources and has already achieved concrete results. In September, a new LNG terminal at Dutch Eemshaven was inaugurated and it is to operate at full capacity by the end of November. The Czech Republic through ČEZ, the largest utility and biggest public company in the CEE region, has booked 3 billion cubic metres a year, thus covering a third of total consumption. It corresponds to 30 tank ships. LNG is bought at a spot price so the costs cannot be calculated in advance. Moreover, the Czech side is obliged to pay for the lease of the terminal. The actual price has not been made public but it should be at least several dozen of million EUR a year.[1] Expenses needed for the substitution of Russian gas with the US-origin LNG are, therefore, high.

Diversification of resources

Besides the Dutch LNG terminal, the Czech side is interested in those facilities in Wilhelmshaven and Brunsbüttel near Hamburg that are under construction. Czech Minister of Industry and Trade Jozef Síkela has held talks with his German counterpart in this regard. Negotiations about sharing of gas between both countries are also underway. Germany is the Czech Republic´s crucial economic partner and the socioeconomic development of the adjacent country affects the domestic performance substantially. That is also why Prague is worried about Berlin´s plan of support for German households and companies in response to rising prices of energy. In September, the German cabinet announced that it would transfer up to 200 billion EUR to individual subjects until spring 2024.[2] Such massive state support would give preferential treatment to the German companies, providing them with a substantial competitive advantage which

[1] *Zkapalněný zemní plyn z Nizozemska se již používá v Česku* (2022, October 10). ČTK. https://www.ceskenoviny.cz/zpravy/zkapalneny-zemni-plyn-z-nizozemska-se-jiz-pouziva-v-cesku/2269311

[2] *Dohoda o sdílení plynu s Německem je blízko dokončení, Česko chce i podíl v LNG terminálech* (2022, October 17). E15.cz. https://www.e15.cz/byznys/prumysl-a-energetika/dohoda-o-sdileni-plynu-s-nemeckem-je-blizko-dokonceni-cesko-chce-i-podil-v-lng-terminalech-1393988

would have devastating consequences not only for their Czech competitors. These issues are being intensively discussed between Germany and the Czech Republic within the latter´s presidency of the Council of the EU.

The current crisis has made the Czech and Polish sides revive the plan to build the Stork II gas pipeline. The first stage of the project – Stork I – was opened in 2011. However, it is only a one-way pipeline, transporting gas from the Czech Republic to Poland. Concurrently, Stork II project was drafted with the aim to connect Polish Świnoujście with the Croatian island of Krk in a North-South direction. In 2016, Warsaw withdrew from the project to focus on the Baltic Pipe with Norway. In September 2022, the Prime Ministers of the Czech Republic and Poland announced that both sides had agreed on the continuation of preparations of the Czech-Polish section of Stork II. If the investment is approved in the months to come, the pipeline can be inaugurated no later than in 2026.[1]

On the basis of President Miloš Zeman´s invitation, Emir of Qatar Tamim bin Hamad Al Thani visited Prague on October 5–6 to discuss the possibility of LNG supplies from the North Field. Qatar can become a strategic supplier for the emirate has one of the world´s largest gas reserves and, moreover, Doha is preparing the expansion of its North Field. The expansion could help to solve the current situation when an overwhelming majority of LNG from Qatar is sold to Asian countries (particularly China, India, South Korea and Japan) based on long-term contracts which makes immediate supplies to the Czech Republic virtually impossible.[2] Emir´s October visit, nevertheless, laid foundations for further cooperation which

[1] *ČR a Polsko žádají unii o financování plynovodu Stork II* (2022, September 30). ČTK. https://www.ceskenoviny.cz/zpravy/cr-a-polsko-zadaji-unii-o-financovani-plynovodu-stork-ii/2264303

[2] Mazúchová, S. (2022, October 07). *S Katarem na věčné časy. Česko se mu zřejmě bude muset upsat na desetiletí*. iDNES.cz. https://www.idnes.cz/ekonomika/zahranicni/katar-zkapalneny-plyn-lng-emir-evropa.A221006_153815_eko-zahranicni_maz

is especially promising in the field of energy, infrastructure, new technologies, defence and medicine.[1]

Conclusion

The building of new energy infrastructure will take several years. Chairwoman of the State Office for Nuclear Safety and respected energy expert Dana Drábová expects that the next years will be difficult because supplies from Russia cannot be objectively replaced in a short-term horizon. At the European level, she recommends the commissioning of nuclear power plants that have been shut down in France and Germany in conjunction with substantial energy saving. As far as the Czech Republic is concerned, the emphasis should be put on nuclear and renewable sources, and the substitution of coal power stations with gas ones.[2] Energy can also be produced by small modular reactors (SMR) that are to complement the energy mix. ČEZ company plans to build the first Czech SMR in Temelín nuclear power plant. Moreover, SMRs could be used for the production of emission-free hydrogen, another possible source of energy.[3]

[1] Ovčáček, J. (2022, October 06). *Úspěšná česko-katarská jednání na Pražském hradě*. Pražský hrad. https://www.hrad.cz/cs/pro-media/tiskove-zpravy/aktualni-tiskove-zpravy/uspesna-cesko-katarska-jednani-na-prazskem-hrade-16622

[2] *Energetická krize podle Drábové nemá krátkodobé řešení* (2022, October 14). ČTK. https://www.ceskenoviny.cz/zpravy/energeticka-krize-podle-drabove-nema-kratkodobe-reseni/2271181

[3] Kanta, A. (2022, October 04). *Malé modulární reaktory nabízejí Česku skvělou příležitost, shodli se diskutující experti*. E15.cz. https://www.e15.cz/byznys/prumysl-a-energetika/male-modularni-reaktory-nabizeji-cesku-skvelou-prilezitost-shodli-se-diskutujici-experti-1393641

The Energy Crisis in Greece and the Government's Response

Evelyn Karakatsani

Summary

The briefing elaborates on the effects of the current energy crisis and the policies taken by the government in order to secure energy efficiency, as well as economically support the citizens and businesses during the winter months. It is evident that the country undertakes major projects in order to diversify energy resources at a national level and even become an energy provider in the region. However, the energy crisis and the consequent rapid increase of prices proves that it is a battle against time and social policies to support the citizens need to be well designed in order to minimize its impact to the society.

Introduction

Following the Russian invasion of Ukraine, a rally of increasing prices in energy was registered globally. Especially, many European countries, which imported natural gas mainly from Russia, are more vulnerable to the current energy crisis. Greece was among the countries with high dependency on Russian energy. Consequently, the country faces a dual threat. On the one hand it needs to urgently diversify its energy resources and on the other to tackle the rapid increase in energy prices. The government, in order to decrease the impact of the crisis, proceeds in implementing projects which will ensure the country's energy efficiency. The geostrategic position of Greece as well as its climate may offer the possibility for the country to become an energy gateway to Europe. Yet, policies and projects towards this end need time to be concluded. Consequently, it is demanding that social measures to be implemented. Hence, the government has introduced numerous support measures aiming

to relief the citizens and businesses from the economic burden of the increasing energy prices.

The energy crisis and the Greek strategies for energy efficiency

The reopening of the EU member states following the COVID-19 pandemic and the increase of demand in energy triggered an energy crisis in the EU. However, the Russian invasion of Ukraine made things much worse since the majority of the EU member states imported energy from Russia. Specifically, imports from Russia in the beginning of 2022 accounted for 46% of Europe's solid fuels, such as coal, 38% of natural gas and 26% of crude oil (1). Thus, the sanctions imposed by the EU, as well as the Russia's weaponization of its gas exports has created a mix that accelerates the energy crisis and raises fears concerned energy efficiency of several EU member states.

Greece was highly dependent from Russia concerning energy. According to Eurostat, in 2020 Greece's imports from Russia accounted for 46.5% of available energy, in comparison to 24.4% of the EU average (2). Following the Russian invasion of Ukraine in February 2022, Greece as a member of NATO and the EU, agreed imposing sanctions to Russia, as well as sending military aid to Ukraine. In parallel, the government needed to urgently implement strategies that would decrease the energy dependence of the country from Russia, ensure energy efficiency of the country.

The Revythoussa natural gas storage facilities have played an important role to the diversification of gas supply in Greece and in the Balkans. In particular, according to official data of the National Natural Gas System Operator (DESFA), LNG deliveries to Revythoussa this year and until August were 63% higher than last year. Especially in August 2022 the deliveries were 154% more than the corresponding month last year. This increase in the activity of Revythoussa covered the gap created by the reduction of imports from Russia though the Turkstream pipelince, which this year according to eight-month data, covered 18% of the market needs in comparison to 45% last year. In addition, Revythoussa covered the

increased demand for natural gas exports to countries of the region, such as Bulgaria. Moreover, Romania and Ukraine has also request access for gas supply from Revythoussa (3). In addition, the construction of the Liquefied Natural Gas (LNG) terminal in Alexandroupoli was agreed in May 2022. The Aleaxndroupoli terminal has a capacity of 153,500 cubic meters liquefied natural gas. LNG arriving to the Alexandroupoli terminal will be transmitted through the Interconnector Greece-Bulgaria (IGB) to Serbia, Romania, North Macedonia, Moldova and Ukraine.

Thus, IGB is a project that will play a significant role to the energy security of the country, as well as upgrade its position as an energy hub in the region. IGB is a project consisted by 182 km pipeline with initial capacity of 3 billion cubic meters which can be expanded to 5 billion cubic meters. IGB is a project of Common Interest (PCI) endorsed by the European Commission and a priority project of the Central and South Eastern Europe Gas Connectivity Initiative (CESEC). On 1st of October 2022 the inauguration of the project took place and the Greek PM stated "this pipeline significantly strengthens the energy and supply security for all interconnected countries in the Balkans, but also in the European continent as a whole" (4).

Moreover, IGB is connected to Trans Adriatic Pipeline (TAP). TAP is operating since 2020 and transports natural gas from Azerbaijan to Europe. The pipeline starts near Evros at the Greek-Turkish border where it connects to the Trans Anatolian Pipeline (TANAP) and crosses Albania and the Adriatic See. It ends to Southern Italy where it connects with the Italian gas network. Its capacity in 2022 is 10 billion cubic meters. Thus, TAP is very important for ensuring energy security of the region and Europe, especially during the time of the energy crisis (5).

Another important project underway is the EuroAfrica interconnector. The project is an electricity highway with capacity of 2,000MW connecting the national electricity grips of Egypt, Cyprus and Greece via a 1396 km subsea cable. The project is expected to be concluded in December 2023 (6). In addition, the EuroAsia Interconnector project, which will provide electricity interconnection between Israel, Cyprus and Greece is also

underway and is expected to be operational in December 2025. The transmission capacity of EuroAsia Interconnector will be 1,000 MW (7). EastMed project should also be mentioned. EastMed is a natural gas pipeline project, which will transport natural gas from Levantine Basin to Greece through Cyprus and then via the Poseidon and IGB pipelines into Italy and other European states. The project was initially supported by the US, but in January 2022 US withdrew the support to the project. However, due to the Ukrainian crisis EastMed is again a project discussed among the concerned states.

In addition to the latter projects the government accelerated investments on green energy. According to IPTO, in 7th of October, for the first time ever, Greece's electricity needs were covered for 5 hours exclusively by renewable energy. This event creates optimism for the future green transition of the county and its energy autonomy (8). On the other hand, due to the energy crisis, the government promotes a plan for the maximum utilization of lignite in order to increase its participation in the fuel mix for power generation. According to the German newspaper Handelsblatt, Greece managed to reduce its natural gas consumption in September by 40% compared to the same month last year. The newspaper argues that this was possible mainly due to the increased use of lignite and diesel in the production of energy (9).

Policies to support the citizens and to reduce energy consumption

However, despite the above projects the global energy crisis has driven the prices in energy to a rally of increases, which burdens the citizens, households and businesses. According to a report of the European Commission, in the second quarter of 2022 the largest year-on-year increase to wholesale electricity prices were registered in France (+254%), Greece (+238%) and Italy (+234%). Thus, Greece was the third most expensive market with an average electricity price of 237 euros/MWh (10). The Greek PM in order to halt the rally of prices has proposed to the EU a

wide price cap on natural gas. However, since not all member states have agreed to this measure a final decision has not yet taken place.

The government in order to support the citizens and relief the households and businesses from the energy economic burden have introduced numerous of economic support measures. PM Mitsotakis during the 86th Thessaloniki International Fair (TIF) on the 10th of September, announced 21 support measures with a total budget of 5.5 billion euros. The package of measures among others includes a subsidy of 250 euros in December for 2,300,000 of the most economically vulnerable citizens, the increase of the heating allowance from 84 million last year to 174 million along with the expansion of the criteria in order for approximately 1.3 million citizens to benefit and the abolishment of the special solidarity contribution (11). Moreover, Kostas Skrekas the Minister of the Environment and Energy announced more measures for supporting citizens and businesses in November. These measures include electricity and natural gas allowances to citizens without income criteria and regardless of the provider (12). Thus, it is evident that the government not only focuses to the citizens with low income but to support of the society as whole.

Furthermore, during the coming winter, the government has elaborated plans on energy saving, such as reducing the energy consumption of the municipalities. Skrekas stated that removing one lamp every 10 or more, together with reducing the hours of night electricity supply for decorative reasons or lighting of archeological sites can reduce consumption by 30%. According to this plan, the lights in historical monuments will be turned off at 3 o'clock (13). Hence, it is expected that voluntary or even mandatory reduction of the consumption in natural gas and electricity will be implemented for consumers, industries, municipalities and public infrastructure.

Conclusion

The energy crisis has a strong impact to the European countries. Greece is among the countries that energy prices have skyrocketed. Solidarity among

the EU member states, and joint policies and actions are the key to overcome the crisis. Projects to diversify energy resources and promote energy autonomy are crucial, as well as measures to support the citizens and businesses.

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Energy Crisis in the EU: Hungarian Policy Responses

Csaba Moldicz

Summary

The urgent need for strong energy diversification was an oft-repeated policy objective in European Union documents and strategies for many years before the war. However, the EU has never made significant progress in this area and has been under the illusion that the European Union does not need to look for other energy sources because the problems will be solved by investing in renewable energy and the energy shortage in Europe will disappear. This paper is not intended to discuss whether this plan or this way of thinking was reasonable, but we are currently faced with the reality that these efforts have not been enough, and the EU is now on the brink of energy shortage.

Introduction

Indeed, the energy crisis in the European Union may remind us of the second oil crisis in the early 1980s, when rising prices were accompanied by slow GDP growth, slow job creation, and rising interest rates. Back then, the combination of tight monetary policy, runaway inflation and falling global demand hit emerging markets in particular, whose finances depended heavily on external sources, leading to sovereign debt problems and currency crises in Asia, Latin America, and Eastern Europe. It may be that this time will be no different

Under the above circumstances, it seems difficult to balance public budgets and provide financial relief to families and businesses struggling to survive because of skyrocketing energy prices. Against this backdrop, it is clear why policy responses are important and why the briefing takes a closer look at the steps taken by the Hungarian government in the context of the unfolding energy crisis.

Energy prices before 2022

Because the country is landlocked, has no direct access to energy sources, and energy supply is more limited than in most EU member states, the Hungarian government rejected the European Commission's earlier approach, which assumed that energy prices are determined mainly by demand and supply. While the Hungarian government never said that the energy market had to be centralized or even nationalized, it was clear that energy monopolies could not be managed by foreign companies, including EU companies. For this reason, it took over these foreign companies and they now have Hungarian owners. This strategic move also enabled a reduction in energy prices, which is the second pillar of this policy. For electricity and natural gas, households paid less than they would have paid based on market prices

Another step was taken even before the war: The Hungarian government set the price of gasoline and diesel at HUF 480 (per liter). The regulation is renewed every third month, and at the end of the period the government reviews the necessity of the regulation. Since the Hungarian regulation was outstanding, citizens from neighboring countries have been increasingly filling up their cars and trucks in Hungary ("oil shopping tourism"). For this reason, the regulation was amended several times and foreign citizens and companies were excluded from the regulation. The reason for the change was the increasing burden on the public budget. In this way, only Hungarian families can benefit from this regulation, which also limits the daily amount of subsidized gasoline or diesel.

After the war broke out

After the outbreak of the war in Ukraine, energy prices again increased dramatically. For this reason, the government maintained the above-mentioned programs to subsidize gasoline and energy prices (natural gas and electricity). The biggest blow, however, came from the European Union, which introduced several rounds of economic sanctions against

Russia, which also affected the import of crude oil into the EU. To this day, EU leaders are discussing the possibility of imposing a price cap on natural gas across the board. (The question is whether there will be enough supply for European countries at the given ceiling price) As we can see, sanctions have not helped to end the war in Ukraine, so one may wonder whether sanctions are the right tool in this case

In early July, the Hungarian government was forced to announce changes to the energy price regime because it was putting a heavy burden on the Hungarian state budget. The measure was part of broader austerity efforts. It should be recalled that at that time the government had already cut government spending for 2022 and 2023. According to the plans, the new special taxes introduced at that time would bring 800 billion forints in additional revenue to the public budget in 2022 and 1,000 billion forints in 2023. In addition to regulating energy prices, other measures were also decided: (1) The government plans to increase domestic natural gas production from 1.5 to 2.0 billion cubic meters. (2) The Minister of Foreign Affairs was tasked with continuing negotiations on natural gas supplies from other sources. For this reason, he later visited Russia and other countries. (3) The government imposed an export ban on energy sources and firewood. At the same time, the government also introduced an official price for firewood in September 2022. A family can buy about 17 cubic meters of firewood at the official price, which is set at 19 thousand or 30 thousand forints, depending on the type of firewood. (4) The government intends to increase domestic coal production. (5) The power plant in Mátra must be restarted. (6) The government has decided to extend the life of the Paks nuclear power plant and will conduct a review of costs and feasibility plans. (7) The government began subsidizing the energy consumption of energy-intensive companies in September. The government will pay half of the increase in energy prices for these companies. The subsidy is not granted automatically to enterprises; they must apply to the Ministry of Technology and Industry. The maximum amount of the subsidy is 500 thousand euros for a period of three months. One of the conditions is that the participants also invest in energy-saving technologies in the period

2023 and 2024. The other condition is that the number of employees does not decrease by more than 10 percent by the end of 2023. (The National Confederation of Businesses and Employers recently called on the government to extend the scheme to other sectors as well.)

Why the government had to cut the system of energy prices has three causes:

- growing costs of maintaining the price system in its original form,
- the unpredictability of war makes prices fluctuate
- economic sanctions from Brussels, which the government believes will backfire.

According to the government's plans, the new system will come into force on August 1, 2022. The main change is that government subsidies will apply only to a certain amount of energy and natural gas consumption. The amount exceeding the average monthly consumption must be paid at market prices

To maintain public support for the necessary steps and Hungarian foreign policy, the Hungarian government has launched a new wave of public consultation, where the questions are related to the energy pricing policy steps. The government has asked the following questions in the consultation:

- do you agree with the Brussels oil sanctions?
- do you agree with the sanctions concerning natural gas supplies?
- do you agree with the sanctions on raw materials?
- do you agree with the sanctions on nuclear fuel rods?
- do you agree that the sanctions should include the nuclear investment in Paks?
- do you agree with the restrictions on European tourism?
- do you agree with the measures to increase food prices?

Before each question, there is a small passage of text that attempts to introduce the reader to the context and explain the background of the question

The Hungarian government was also forced to take the unpopular measure of limiting electricity feed-in from solar panels. The government argued that the current grid could not handle the energy input from new solar panels and therefore suspended this option. In other words, the solar energy generated can only be used in the household where it was generated, and it cannot be "borrowed" and "lent back" by the national energy grid.

Summary

The Hungarian government faces the next energy-related challenges:

1. The war in Ukraine is clearly contributing to the worsening of the energy crisis, but this is a factor that the Hungarian government cannot influence. Therefore, the government urges the parties to the conflict to agree on a ceasefire, negotiations, and peace.
2. Brussels' sanctions against Moscow also contributed significantly to the unfolding energy crisis in the European Union. However, this element could be influenced by consistent argumentation and the deliberate strengthening of Hungarian interests in European decision-making bodies
3. The FED interest rate hikes also contribute to a steadily growing pressure on the Hungarian state budget, which makes it more difficult to take the necessary steps to significantly reduce the financial burden of energy prices on the population and businesses.

Previous government decisions have also shown that the government is willing to work to protect Hungarian interests. We do not believe that this approach will change. The new wave of public consultations also confirms this assumption of ours.

Energy Crisis and Latvian Response

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Summary

Since the invasion of Russia in Ukraine, a significant increase in the prices of energy resources has been observed. As the heating season approaches, support for residents in the energy price crisis has been approved in Latvia - partial compensation for heating, pension supplements, as well as a wider housing allowance. The existing situation has affected the entire society and processes in the economy, starting with the population and households and ending with the large, manufacturing companies, which are the backbone of our economy - precisely for all groups of society support measures have been created to reduce the impact of the increase in energy prices.

Introduction

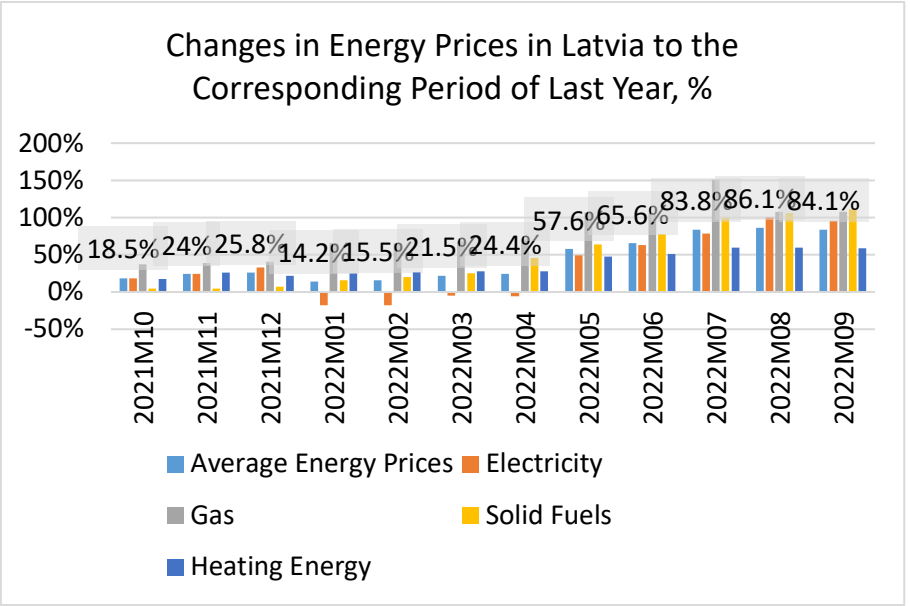
The prices of energy resources in Latvia have increased almost 2 times during the last year. Latvian society, especially families, pensioners and the low-income are worried - whether it will be possible to survive the winter even with the existing state support. This social briefing analyses the extent to which the country is affected by the energy crisis, and what response measures the state proposes to support the Latvian society.

Energy Crisis in Latvia

In October 2022, compared to the corresponding month of 2021, the price of energy resources in Latvia increased by 84.1% on average (see Figure

1). On the other hand, if we compare energy prices in 2015, the increase is threefold - consumers now pay 203.5% more for energy resources.

Figure 1.

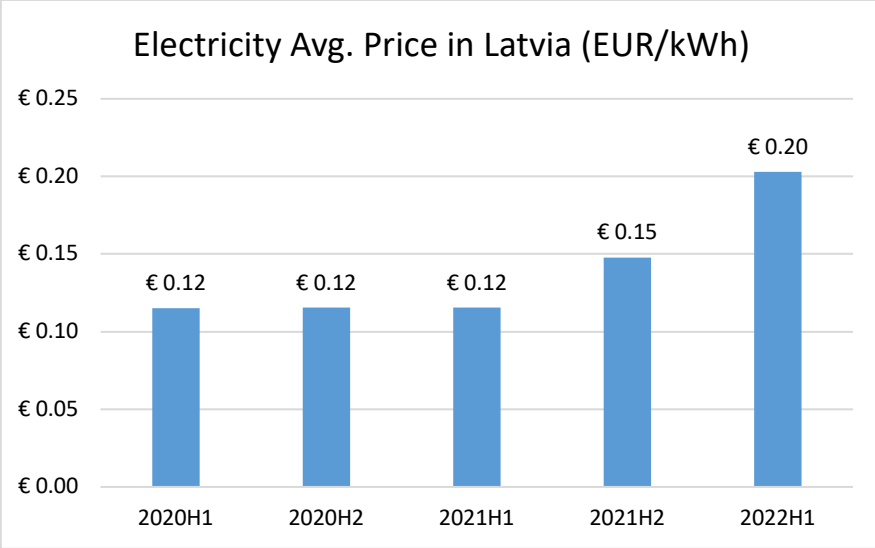


Data: Central Statistical Bureau of Latvia, 2022

For natural gas, the highest price increase was observed in July 2022, when the price of natural gas for consumers increased almost 2.5 times. The highest overall price increase of energy resources was observed in August 2022, when energy resource consumption prices increased by 86.1% compared to August 2021.

According to the data of the Central Statistical Bureau of Latvia, it can be seen that already in the first half of 2022, electricity prices increased almost twice compared to the price of electricity per kilowatt hour in the first half of 2021 (see Figure 2).

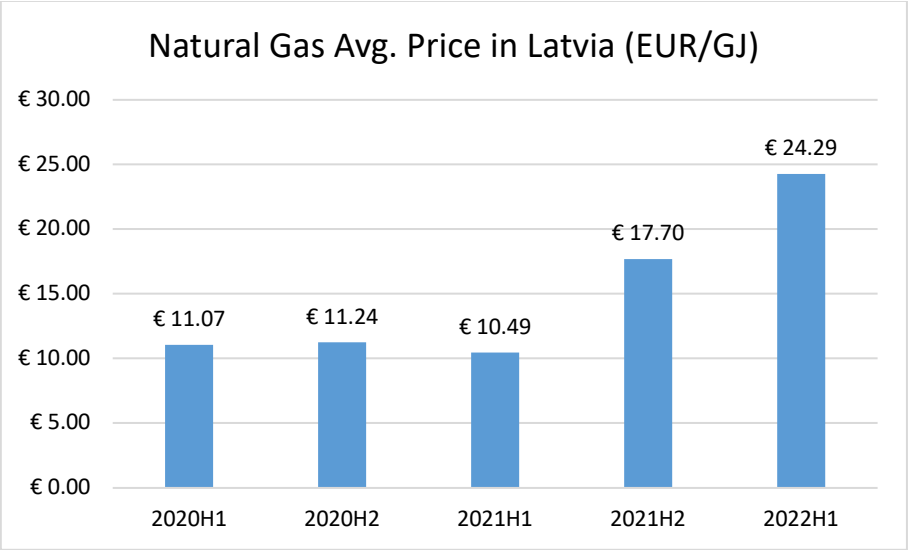
Figure 2.



Source: Central Statistical Bureau of Latvia, 2022

On the other hand, the price of natural gas in the first half of 2022, compared to the first half of 2021, increased more than 2 times - from EUR 10.49/GJ to EUR 24.29/GJ (see Figure 3).

Figure 3.



Source: Central Statistical Bureau of Latvia, 2022

Experts estimate that the prices of natural gas and other energy resources could continue to rise until the 1st quarter of 2023, so Latvian residents will have to reckon with unprecedented, record-high energy bills in the winter period. Currently, almost every resident of Latvia feels a pressing situation in their budget. The dark evenings of winter and heating are just ahead, which also causes concern as to how it will be possible to pay.

To mitigate the effects of inflation, it is necessary to provide support to households to approximately 80% of society, referring to the analysis of the structure of household expenses, dividing the population into five groups or quintiles according to their wealth. 20% for each group from the poorest to the richest.

Looking more closely at the expenditure structure of these households, for example, it is very noticeable that the 1st quintile, or the poorest 20%, spent 43 euros per household member on housing, water and electricity in 2019, while compared to the 5th quintile, which would be the wealthiest part of society, this indicator is already 95 euros.

On the other hand, if we look a little further than the situation with the reserve income at the disposal of households, the first three quintiles, or about 60% of the society, live systematically in the red for the year 2020. The fourth quintile is the 20% below the wealthiest 20% - for them, the average monthly savings per household is a small plus of 127 euros, while only the wealthiest 20% of society is able to add 1163 euros to their saving every month.

State Support Measures

Over the past six months, the Government and the Parliament have decided on support measures several times. Their set, or the support basket, is defined in the law on measures to reduce the extraordinary increase in energy resource prices.

State allowances and housing allowances are provided for vulnerable population groups, the allocation of which has changed this heating season. State benefits will be paid by the State Social Insurance Agency (SSIA) from November 1, 2022, to May 31, 2023. The amounts of the benefit will differ – 30 euros, 20 euros or 10 euros per month – considering the amount of payment (pension) that the person currently receives from SSIA.

State benefits are intended for seniors, people with disabilities, persons who have lost their breadwinners, families raising a child with disabilities, as well as persons with refugee or alternative status.

If the household's income is still insufficient with state benefits and heating benefits to be able to cover housing expenses, it is possible to contact the social service of the municipality. From October 1, 2022, to April 2023, a coefficient of 3 is applied to the Guaranteed Minimum Income[1] (109 euros) in the calculation of the housing allowance, which is used in the housing calculation formula. Therefore, the GMI threshold for calculating the

[1] GMI - Guaranteed Minimum Income

housing allowance is 327 euros for the first or only person in the household and 228 euros for the other persons in the household.

There are also 7 support packages for all households. As of July, of this year, every household that uses natural gas for heating is compensated 3 cents per kWh for consumption above 221 kWh or 21 m3 per month. In addition, from October 1, all households that use natural gas for heating have a single price threshold of 108.7 euros per kWh. Therefore, summing up the support, the actual total natural gas price threshold is 7.8 cents per kWh.

Calculating support for district heating is more complicated. If the district heating tariff is up to 6.8 cents per kWh, no compensation is applied. If the tariff is between 6.8 cents and 15 cents per kWh, then 50% compensation is applied to this part. If the tariff is even higher (exceeds 15 cents), then a 90% discount is applied.

There are two options for receiving compensation for firewood. The cost of firewood will be compensated in the amount of 50% of the price that exceeds 40 euros per cubic meter. The maximum amount for which compensation can be requested is 35 cubic meters or 21 sters. Support is no more than 15 euros for one cubic meter.

If there is heating of pellets or briquettes, the principle is similar, as both the threshold price from which the increase in price is compensated and the quantity (10 tons) for which support can be received is also determined. If the purchase price exceeds 300 euros per ton, then the household can receive 50% compensation for the payment above 300 euros per ton.

In the electricity bill, which the residents will receive from the electricity dealer, there will already be a subsidy (fixed payment of 16 cents per kWh) for the first 100 kWh.

Conclusions

Currently, almost every resident of Latvia feels a pressing situation in their budget due to the energy crisis. Not a single person is unpleasantly surprised by the monthly electricity bill, which has increased significantly, but the dark evenings of winter and heating are just ahead, which also causes concern as to how it will be possible to pay for everything. The response will be state support for both heating and electricity. However, the increase in the price of energy resources will be felt by a part of the population even with all the state support. State support is especially felt in the conditions of the natural gas market; however, the costs will still be high for residents who use it for heating. The most critical situation will be for the population group that has gas boilers, unrenovated houses and energy-inefficient systems. Looking at population groups connected to a centralized heat supply system, the situation there will be a bit more stable. To mitigate the impact of the energy crisis, it is necessary to promote and implement energy saving measures, for example, lowering the temperature. In general, the currently accepted state support for the population is satisfactory, because they have chosen to provide the most support directly to the most disadvantaged groups of society - the support is appropriately targeted.

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Energy Crisis and its Impact on Lithuanian Society

Justas Karčiauskas

Summary

As Lithuanian cities announce the start of the central heating season and the electricity and fuel prices are increasingly volatile, many Lithuanians are contemplating how to financially survive this winter. This period of rising prices of all types of energy has been dubbed energy crisis, and has put households with lower incomes under significant financial pressure. The government scrambles to put policies in place to help such households. Lithuanian state institutions and other organizations lead by example and adopt extensive measures to save energy bills, and citizens increasingly save on energy consumption and other expenditure in general. The article outlines these developments and how they affect Lithuanian society.

Introduction

In Lithuania during winter and parts of autumn and spring a so-called heating season takes place. It is the season when all houses connected to central heating network are receive the heat. This year heating season is especially sensitive period as heating bills are forecast to double comparing to the previous season. On top of that, rising prices of all other types of energy has created a perfect storm – an energy crisis which has already started to affect many Lithuanians.

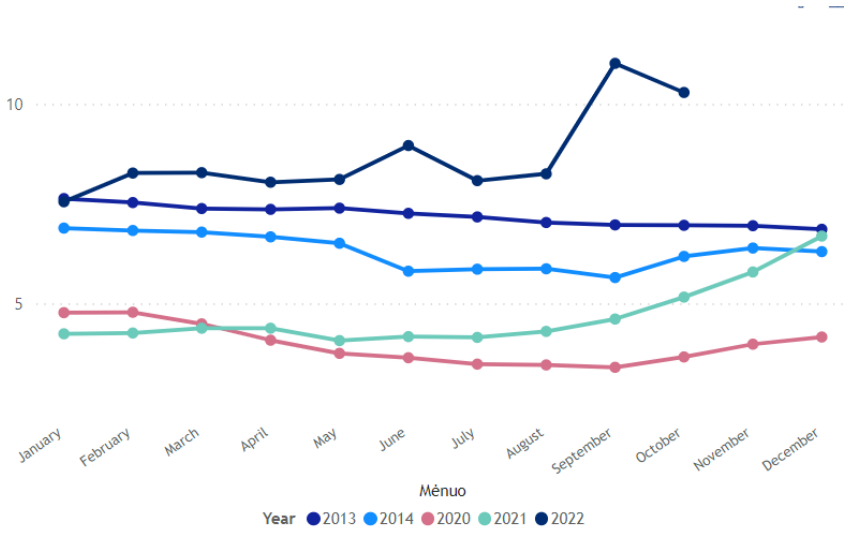
Dynamics of heating prices in Lithuania

According to Lithuanian National Energy Regulator website, in October, 2022, the average price for heating in Lithuania is 10,29 Euro cents per

kWh. It's a 99 per cent year-over-year increase comparing to October 2021, and even more staggering increase of 181 per cent comparing to October 2020. Such an increase is definitely a shock to many Lithuanian households.

However, looking at a longer trend of heating prices and comparing October of 2022 to, for example, October of 2013, we see that there has been only 57 per cent increase in heating prices over 9 years which roughly translates into quite moderate 5 per cent growth on average.

Graph 1: Average heating price in Lithuania in 2021 and 2022 (Euro cents / kWh), without VAT[1] (note)



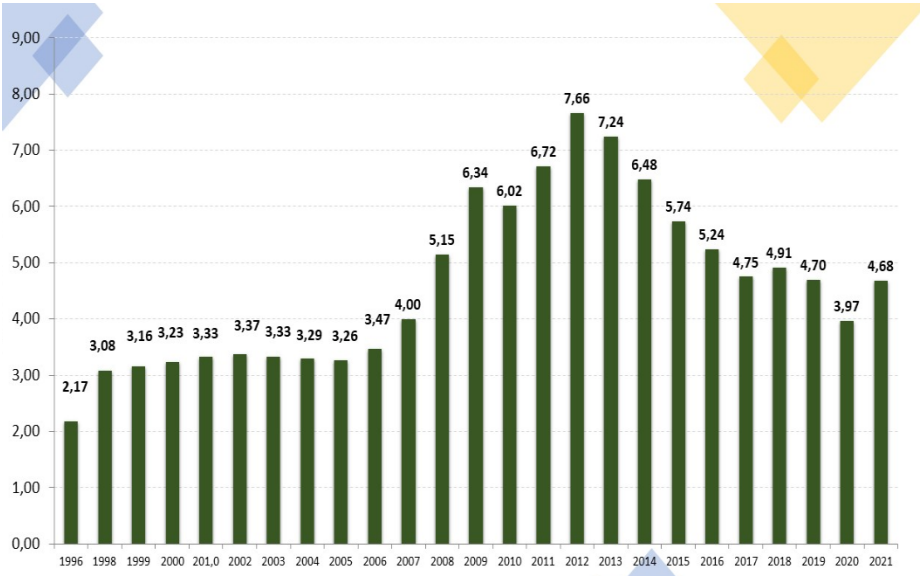
This heating price charged to consumers is not regulated by the government, and at this moment no government subsidies go to heating providers. In Lithuania there is a scheme in place which compensates part of heating bills

[1] VERT: Average heating price in Lithuania in 2021 and 2022, in: https://www.vert.lt/siluma/Puslapiai/statistika.aspx

and is available to some households with lower incomes, after an application to receive such compensation is submitted and accepted.

In fact, a historical heating prices graph (see Graph 2) from 1996 to 2021[1] shows that over the last decade heating prices in Lithuania have largely been dropping, thanks to investment in long term projects such as building cogeneration plants which produce heat from burning waste, transition away from fossil fuels and towards biofuels, and starting using a floating LNG storage and regasification unit "Independence" since 2014.[2]

Graph 2 – Average heating prices in Lithuania from 1996 to 2021 (Euro cents / kWh, without VAT)



[1] LSTA: Šilumos kainos, in: https://lsta.lt/silumos-ukis/silumos-kaina/
[2] WIKIPEDIA: FSRU Independence in: https://en.wikipedia.org/wiki/FSRU_Independence

Winter is coming… together with the heating season

Lithuania has a well-developed extensive central heating network, and this month (October) most Lithuanian cities announced the start of heating season, which could last as long as half a year. More than 50% of Lithuanian households use the central heating, and in big cities this proportion reaches 70-80 per cent.[1] Remaining households have individual heating systems.

Heating season bills directly increase the wealth gap – poorest people live in older houses without proper heating insulation while the richer people live in newly-built, A+ or even A++ energy class buildings. Therefore, for a given apartment size and temperature in the room, heating bills for people living in older not renovated houses could be as much as four times higher than that of new well insulated homes.[2]

What is more, many Soviet-built apartment buildings have old central heating supply systems and residents are not able to set temperatures or switch off the heating in their individual apartments, effectively relying on decisions made by residential property administrators. Residents of apartment buildings with systems allowing to set individual apartments temperatures are required by regulations to maintain at least 17 degrees Celcius in their rooms, even when leaving on holidays.

Because of the aforementioned reasons, many Lithuanians see heating bills as a form of taxation which cannot be avoided. In media and social media one can find many residents complaints about heating bills. Some residents don't understand how such bills are calculated.[3] There are cases when some

[1] Lietuvos centralizuoto šilumos tiekimo sektoriaus 2020 metų apžvalga, In: https://lsta.lt/wp-content/uploads/2021/09/APZVALGA_final_ST.pdf

[2] VERT: Average heating price in Lithuania in 2021 and 2022, in: https://www.vert.lt/siluma/Puslapiai/statistika.aspx

[3] LRT: LRT trumpai. Mokestis už gyvatuką. Kaip jis pskaičiuojamas? In: https://www.lrt.lt/naujienos/verslas/4/1800338/lrt-trumpai-mokestis-uz-gyvatuka-kaip-jis-apskaiciuojamas

residents illegally cut the heating equipment, usually in their bathrooms, in an attempt to save on heating bills. In Lithuania there is a separate fixed monthly bill for households which have centrally supplied hot water-filled heaters in their bathrooms, and an article recently appeared in one of Lithuania's largest news portals saying that such bathroom heaters bill cannot be avoided if bathroom heater is removed without permission from heating supplier.[1]

Coordinated efforts to save energy

A wide range of Lithuanian institutions, organizations, cities and towns have adopted various measures to save electricity. For example, capital city Vilnius has dimmed street lighting.[2]

Even Lithuanian Parliament are determined to lead by example.[3] The Parliament, for example, has adopted energy saving measures which will allow to reduce electricity and heating consumption in the Parliament building by up to 15 per cent and 10 per cent, respectively. The measures include switching off some elevators, reducing the temperature of hot tap water, reducing the amount of lighting. Also, in winter common areas inside the Parliament building will be heated only up to 19 degrees Celsius,

[1] LRT: Išaugus šildymo kainoms, perspėja gyventojus: savavališkai nupjovus vonios gyvatuką, vis tiek teks už jį mokėti, in: https://www.lrt.lt/naujienos/verslas/4/1805282/isaugus-sildymo-kainoms-perspeja-gyventojus-savavaliskai-nupjovus-vonios-gyvatuka-vis-tiek-teks-uz-ji-moketi

[2] LRT: Vilnius dims street lighting as electricity prices bite, in: https://www.lrt.lt/en/news-in-english/19/1768573/vilnius-dims-street-lighting-as-electricity-prices-bite

[3] LRT: Seimas imasi taupymo: ribos temperatūrą iki 19 laipsnių, atsisakys dalies automobilių, paviršių dezinfekcijos, in: https://www.lrt.lt/naujienos/lietuvoje/2/1788797/seimas-imasi-taupymo-ribos-temperatura-iki-19-laipsniu-atsisakys-dalies-automobiliu-pavirsiu-dezinfekcijos

and in summer air conditioning will only be switched on when the inside temperature reaches 26 degrees Celsius.

All these energy saving measures and targets is an example for everyone that relatively insignificant adjustments to behaviour patterns can have a noticeable impact on energy consumption and energy bills. That is meant to motivate and encourage Lithuanian citizens to do the same.

Government's help during energy crisis

Lithuanian government is scrambling to help people to fight the energy crisis, and one of the main tools is found in government's proposed 2023 draft budgetary plan. The government plans to extend and increase compensations for electricity and heating bills available to households with lower incomes. Furthermore, a zero VAT rate on centrally supplied heating, which had been agreed a few months earlier, came into force on 1st of October this year. The standard Lithuanian VAT rate is 21 per cent, but VAT rate on centrally supplied heating had already been set to a reduced VAT rate of 9 per cent starting this year. And in September, when the energy crisis became increasingly difficult, Lithuanian Parliament voted to extend this zero VAT rate until the end of 2023-2024 heating season.

Impact on daily life

A natural people's response to increased energy prices is trying to reduce consumption of electricity, fuel, hot water and heating. That inevitably means that certain behaviour patterns must be changed. More people pay attention to how many lights are on in their apartments, whether unused appliances are switched off, and those who can adjust the room temperature. Drivers drive more slowly on highways to save fuel, some commuters switch to public transportation.

As the energy bills rise, people must also find sources to pay for them. Usually, it is saving when purchasing other goods and services. A survey ordered by "Maxima" – Lithuania's leading food retailer – found that in September 82 per cent of consumers prioritized food products which had discounts, and 60 per cent of people adjusted their shopping lists based on what discounts were being offered.[1] Some shoppers openly admit that they became "discounts slaves"[2] who shop while hunting discounts.

Even decisions of some employees whether to work remotely from home or in the office involve considerations which way would allow to save energy. Some employees who previously had chosen to work from home now go to the office so that they can consume less heating and electricity energy in their homes while working in the office.

What is more surprising, is that now there is the opposite push by some employers, who recommend their employees to work from home on certain days of the week. Again, public sector is leading here. For example, the Energy Ministry plans requesting its staff to work remotely on Mondays and Fridays, which would allow decreasing heating inside workplaces to 17 degrees Celsius.[3]

Links between energy crisis and war in Ukraine

[1] LRYTAS: Apklausa atskleidė, kaip lietuviai taupo: 6 iš 10 žmonių savo pirkinius planuoja pagal akcijas, in: https://www.lrytas.lt/verslas/mano-pinigai/2022/10/14/news/apklausa-atskleide-kaip-lietuviai-taupo-6-is-10-zmoniu-savo-pirkinius-planuoja-pagal-akcijas-24870103

[2] TV3: Gyventojai prisipažįsta tapę akcijų vergais: „Laukiam nuolaidų, kad galėtumėme apsipirkti", in: https://www.tv3.lt/naujiena/video/gyventojai-prisipazista-tape-akciju-vergais-laukiam-nuolaidu-kad-galetumeme-apsipirkti-n1196290

[3] LRT: Lithuania's energy crisis plan to help save €800m, says minister, in: https://www.lrt.lt/en/news-in-english/19/1775630/lithuania-s-energy-crisis-plan-to-help-save-eur800m-says-minister

There has been a narrative in Lithuanian media that by reducing consumption of energy resources citizens are in fact aiding Ukraine and undermining Putin's efforts to use energy as a weapon and force Europe into negotiations with Russia. For example, the campaign to cut electricity consumption and heating bills by at least 10 per cent and 5 per cent, respectively. in 500 properties housing state institutions was launched by Property Bank – the manager of Lithuanian state-owned properties – back in August. Interestingly, the campaign was called 'putinOut'. The reasoning behind such campaign's name was provided by Mindaugas Sinkevičius – chief executive of Property Bank: "Why 'putinOut'? Because we know who is to blame for the energy war ravaging Europe. We in Lithuania, seeing that energy resources [of Russia] are being used for war, have to think about how to contribute to Ukraine's victory. In this case, our goal is to encourage the institutions and society to use as little energy as possible."[1]

This direct connection between the energy crisis and the war is felt by many Lithuanians, and this idea perhaps gives Lithuanians extra resilience and motivation to fight this crisis.

Conclusion

Rising energy costs has been a big financial pressure to many Lithuanians. It has inevitably affected their behaviour and lifestyle and has reduced life quality to some extent. On the other hand, it seems that there is a common goal of reducing energy consumption among state institutions and citizens. The government is determined to help people who are in greatest need. As can be seen from heating price dynamics, Lithuania has spent years of improving competitiveness of its central heating system. Furthermore,

[1] LRT: 'PutinOut' – Lithuanian state institutions to compete in saving energy, in: https://www.lrt.lt/en/news-in-english/19/1768538/putinout-lithuanian-state-institutions-to-compete-in-saving-energy

there have been fairly cohesive and widespread energy-saving measures put in place across the country, and therefore this energy price shock will be difficult but not devastating to Lithuania.

Energy Crisis and CEE Countries Response – Montenegro study

Vojin Golubovic

Summary

The energy crisis is a phenomenon that has not bypassed Montenegro in the conditions of global interdependence. Nevertheless, this crisis is not as noticeable as in some other countries, because during the previous period there was no noticeable increase in the price of electric energy, nor were there any restrictions despite the very unfavorable energy situation around the world. However, it seems that the energy crisis in Montenegro will only be felt in the coming period, because the capacities of the state to react and continuously implement measures to suppress the negative effects of the crisis are increasingly limited. The deepening of the energy crisis is expected not only due to external factors, but also due to poor management of the energy sector. On the other hand, Montenegro can expect international support in overcoming the energy crisis.

Introduction

The energy crisis caused by external factors and the war in Ukraine represents a shock to the global economy and a challenge to economic and social policy in numerous countries. Montenegro, as a small open economy, is also not immune to global events. The concerns of the citizens, but also of the Montenegrin public as a whole, are present and justified. This justification is also a consequence of the very poor performance of the energy company this year, which indicates that the price of electricity will inevitably rise.

The energy crisis in Montenegro and response to crisis

The state-owned Electric Company (EPCG) did not increase electricity prices this year. This somewhat mitigated the negative effect of the energy crisis, because the business operations of the company were not additionally threatened, and social peace and the standard of living of the citizens were preserved to some extent. According to the pretentious opinion of the company's management, that company spared Montenegro from the devastating impact of the energy crisis and the record rise in electricity prices on European stock exchanges[1]. However, a deeper analysis of the company's operations indicates that the possibilities of maintaining prices and providing a sufficient amount of energy for the needs of the economy and Montenegrin citizens are quite limited, which is partly a consequence of the disastrous management of the company during the previous period, especially during the previous two years. According to the company's business report, it was visible that EPCG made a loss of over 60 million euros in the first eight months of 2022. Companies within EPCG group were making multi-million profits until two years ago (when there was a change in management), and their current managements generally do not see the reasons for this year's bad results in their decisions and moves, but point out that the biggest culprits for the bad results are the global energy crisis and high electricity prices on international markets. However, the energy crisis is not the only reason for losses. Harmful operations are evident, because in the midst of the energy crisis, those companies sold electricity from storage at several times lower prices than the price at which EPCG later bought electricity. Also, the sale of coal from the mine to energy company of another country (Serbia) was started at a price of only 28.8 euros per ton, while coal is sold to the citizens of Montenegro at a price that is almost 4 times higher. This way of managing energy companies (within the EPCG group) leads to the complete collapse of the energy system of Montenegro. Additionally, during the previous two years,

[1] They saved the citizens and the economy from a noticeable increase in prices (https://mina.news/mina-business-ekonomske-vijesti-iz-crne-gore/spasili-gradane-i-privredu-od-osjetnog-poskupljenja/)

there was evident political employment in energy companies that was not based on the economic needs of the company. This is an additional reason for the negative financial result, which continues to burden the work of these companies.

The consequence is that the effects of the energy crisis will be felt in the form of significantly higher electricity prices in the upcoming period, in order to compensate for the negative business results. Also, the desire for a more energy production has reduced hydropotentials, so in the event that there is not enough rain by the end of the year, citizens may face restrictions on electricity, and companies from the energy sector may face additional losses. Although until now there has been no increase in the price of electricity, the energy crisis is visible through the increase in the price of fuel for heating. Due to the crisis, the demand for firewood and pellets increased (by about 100%). The reaction of the government was reflected in the limitation of the price of pellets and the adoption of the Decision on limiting the export of certain wood assortments[1], which limited the export of pellets from Montenegro.

The meeting of the energy ministers of the Western Balkan countries, attended by the Minister of Capital Investments in the Government of Montenegro, clearly indicated that the energy crisis requires a comprehensive response. Montenegro harmonizes its energy policy and regulations with the policy and legislation of the European Union (EU) in the field of energy and the environment. In this context the government of Montenegro has taken certain steps. The issue of Montenegro's energy transition and investment opportunities and conditions are a priority that prioritizes the need to strengthen the capacity of renewable energy sources. The official opinion is that Montenegro should at the same time ensure support for the most vulnerable segments of society while at the same time launching a strong campaign that would indicate the importance of a long-term orientation towards a green economy, as well as continuous

[1] The decision is available at: https://www.gov.me/dokumenta/168e9a68-b9d2-4a91-b01c-586da7cdd969

encouragement of structural reform measures and the implementation of capital infrastructural projects that have a regional impact.

Bearing in mind such an approach, the Government of Montenegro is currently working on the preparation of the first National Energy and Climate Plan, which should be adopted by the middle of 2024. It will be the development plan of the energy sector of Montenegro, which will aim to satisfy the demand for energy, ensuring the implementation of the clean energy transition and the minimal negative impact of the energy sector on climate change. Also, Montenegro is making certain efforts to fulfill all obligations from the Energy Community Agreement. This points to the need to create conditions for more intensive use of domestic energy potentials, especially renewable ones. Namely, Montenegro has significant potential of renewable energy sources, such as hydro potential, wind potential, solar radiation and biomass. With the support of the European Bank for Reconstruction and Development (EBRD), the preparation of the Law on Renewable Energy Sources has begun, which should also create the prerequisites for a market mechanism involving the private sector.

Despite small solar power plants, without the construction of large enegry sources, it is difficult to talk about the benefits and energy independence of Montenegro. Significant energy potentials (primarily for large hydropower plants) have not yet been used. Regardless of the current bad economic situation (excessive indebtedness and unstable public finances), Montenegro must start building energy plants. Also, the Government of Montenegro formed the National Council for the analysis and monitoring of the security of supply of energy and energy products. These are some of the medium-term measures to overcome the crisis. However, this should have been thought of much earlier.

What is favorable for Montenegro is that it can expect direct budget support from the European Union (EU) to mitigate the effects of the energy crisis. Namely, the Ministry of Capital Investments submitted a priority proposal for this type of support to the EU Delegation. Direct payment of EU funds to the budget is expected already at the beginning of next year. This kind

of support is expected because the EU must demonstrate its strategic ability to defend its interests in the Western Balkans region. However, the energy crisis, with its complexity, will put this ability to the test. In energy matters, the European Union would have to start treating the countries of the Western Balkans as part of the EU. Confirmation that the EU intends to provide assistance to Montenegro in overcoming the energy crisis was announced at the end of October, when the Ministry of Capital Investments expressed expectations that the amount of support will be between EUR 30 and 40 million.[1] It is still uncertain.

Montenegro is not ready for the upcoming energy crisis, and one of the reasons is political instability and the impossibility of consensus on any important decision. There is no strategic approach to solving and preventing the energy crisis. Ad hoc activities aimed at raising the population's current awareness of saving electricity were created late and with a questionable impact, because raising the population's awareness is a process that should be carried out continuously for a long period of time. Holding electricity prices in 2022 may buy social peace in the short term, but it is possible to expect price increases already in 2023. One of the more important items is the education of the population on how to use electricity wisely. Although Montenegro is implementing some of the activities as part of medium-term measures to overcome the crisis, it is evident that many opportunities have been missed. Therefore, it is very necessary to provide more support to the development of production projects from renewable energy sources, especially when we have in mind the potential in the field of hydro, wind and solar energy sources. Greater production and inclusion of as many renewable sources of electricity as possible, i.e. use of potential, seems to be the main guardian of society against energy crises.

[1] The EU alleviates the energy crisis in Montenegro as well (https://www.vijesti.me/vijesti/politika/628278/eu-ublazava-energetsku-krizu-i-u-crnoj-gori)

The Energy Crisis Exposes Gross Mismanagement of the Energy Sector and Threatens to Accelerate Energy Poverty

Gjorgjioska M. Adela

Summary

In August 2022 a state of energy crisis was officially declared. Although the central issue of concern was the supply of electricity, the crisis also exposed weaknesses in other critical areas such as energy production, provision and distribution. Throughout this period, the Government attempted to attribute the blame for the energy crisis to the geopolitical developments around Ukraine and the impact of the global energy crisis. However, the domestic energy crisis exposed the consequences of the decades long corruption and mismanagement of the energy sector, which has created all the current vulnerabilities - the low domestic energy production, high dependence on energy imports and the inadequate handling of the energy infrastructure. All of these factors combined suggest that the ongoing energy crisis will further deplete the state budget whilst accelerating the already alarming energy poverty in the country.

On August 25th 2022 the Government declared a month-long state of crisis in the electricity supply market on the entire territory in the country and in the heating energy market in the city of Skopje, due to the lack of electricity and natural gas for heating.[1] Several weeks later the state of energy crisis was extended until April 30, 2023. According to the government, the lack of heating energy, the possibility of using alternative fuels and the overall

[1] North Macedonia to declare state of energy crisis in August, published on 25.07.2022, available at

https://balkangreenenergynews.com/north-macedonia-to-declare-state-of-energy-crisis-in-august/ accessed on 23.10.2022

state of the energy market all played a role in adopting the relevant measures.[1] The country's officials warned that the coming winter will be one of the most difficult due to the energy crisis, but said that all domestic capacity will be fully utilized in order to prevent power restrictions. Vice Prime Minister in charge of economic affairs, Fatmir Bitici, said that compared to 2021, AD ESM (Power plants of North Macedonia, the government-owned electricity producing company) is planned to produce 25 percent more electricity. The Government expects that this will be sufficient to compensate for that part of the electricity that is necessary for citizens and small consumers.[2]

According to Minister of Economy Bekteshi, power outages are not expected, even if natural gas deliveries are halted, and the import of electricity from other countries will be banned. He informed that coal and fuel oil will be purchased for the three units of thermal power plant REK Bitola, the thermal power plant in the REK Oslomej complex, and the fuel-oil-fueled Negotino facility, and added that the country must preserve the hydropower capacities for the winter. Bekteshi said that in addition to declaring a state of crisis in the electricity sector, the Ministry also intends to establish a commission for the energy crisis to allow government intervention to increase the production of electricity from domestic capacities.

[1] N. Macedonia extends state of energy crisis until April 2023, published on 14.09.2022, available at

https://seenews.com/news/n-macedonia-extends-state-of-energy-crisis-until-april-2023-797912#:~:text=In%20August%2C%20North%20Macedonia's%20government,additional%20sources%20for%20electricity%20generation. Accessed on 02.11.2022

[2] Why did the Government of North Macedonia declare an energy crisis?, published on 26.08.2022, available at

https://macedonian.trtbalkan.com/region/zoshto-vladata-na-severna-makedonia-proglasi-energetska-kriza-10038950 accessed on 23.10.2022

Earlier in the year the European Bank for Reconstruction and Development (EBRD) approved EUR 100 million for the liquidity of Power plants of North Macedonia (ESM) in the midst of the energy crises affecting North Macedonia.[1] The funds would allow it to buy electricity and also coal and fuel oil for the needs of the power plants. However, it soon emerged that obtaining the necessary quantities of coal and fuel oil is in itself quite problematic and marred with difficulties as well as possible illicit activities. In early September, the leader of the opposition party VMRO-DPMNE, Hristijan Mickoski, blamed the Government for stealing from the people with the tenders for the transportation and procurement of fuel oil and coal, pointing out that unless real measures are taken, the citizens will face a difficult autumn and an even more difficult winter.[2] Suspicions were raised also by the media who reported that two newly formed companies had been involved in the procurement of 550 thousand tons of coal for the REK Bitola power plant, as part of a controversial procurement tender which ended in mid-June.[3] Energy experts and opposition figures voiced concerns that similarly suspicious practices are being involved in the new procurements of coal, fuel oil and gas.

On the 13th of September, the General Director of ESM informed that "the delivery of one million tons of coal and 250,000 tons of fuel oil is being

[1] ESM Energy Crisis Liquidity Support, published on 12.05.2022, available at https://www.ebrd.com/work-with-us/projects/psd/53692.html accessed on 02.10.2022

[2] Mickoski: The government is robbing the people with the tenders for transport and procurement of fuel oil and coal, published on 07.09.2022, available at https://kanal5.com.mk/mickoski-vlasta-go-pljachka-narodot-so-tenderite-za-transport-i-nabavka-na-mazut-i-jaglen/a545889 accessed on 12.10.2022

[3] Who is the guarantor of the mysterious micro-companies that deliver coal worth millions of euros?, published on 19.09.2022, available at https://prizma.mk/nabavkite-na-jaglen-transparentni-dogovorite-skrieni/?fbclid=IwAR2EhzNvng05bMv_a1Xsdt2eDTmNvif23IgcYGVbIMlWnbLqQ3Djf5tBQGg accessed on 15.10.2022

agreed with Greece".[1] As Kovacevski said, the coal will be primarily for the needs of REK Bitola, but part of the quantities will be able to be used for REC Oslomej, while the fuel oil is for the thermal power plant in Negotino, and part of the quantities are also for Bitola and Oslomej. Several weeks later, Hristijan Mickoski, the leader of VMRO-DPMNE, announced that his party had found cheaper fuel oil and natural gas through contacts in Western Europe. "From Western Europe, we found fuel oil for TPP Negotino, which will be able to provide 160 to 180 megawatts of power, but the electricity will be given to the business. The fuel oil will be 200 euros cheaper per ton and the savings will be 40 million euros", Mickoski summarized. He also added that alternative sources for gas had also been located. The gas that would be provided would be from Gazprom, but it would be brought by Swiss, German and Czech companies, which, according to Mickoski, are ready to help. "We can contract 250 million standard cubic meters of gas for the TE-TO plant. The price of gas would be slightly more than 200 euros. Otherwise, at the moment we have to pay more than 700 euros for the gas that the government is negotiating with Serbia", claimed Mickoski.[2] The total savings if VMRO DPMNE's offer is accepted, according to Mickoski's calculations, would be 300 million euros. These offers were then handed over to the Ministry of Economy. It remains to be seen from which source and at what price the Government will procure the needed supplies of coal, fuel oil and gas.

[1] Kovacevski from ESM: Delivery of one million tons of coal and 250,000 tons of fuel oil is being agreed with Greece, published on 13.09.2022, available at

https://novamakedonija.com.mk/ekonomija/kovachevski-od-esm-so-grcija-se-dogovara-isporaka-na-eden-milion-toni-jaglen-i-250-000-toni-mazut/ accessed on 10.11.2022

[2] VMRO-DPMNE ANNOUNCED THAT THEY FOUND CHEAPER GAS AND FUEL - the savings for the country would be up to 300 million euros, published on 29.09.2022, available at

https://faktor.mk/vmro-dpmne-objavi-deka-nashle-poevtin-gas-i-mazut---zashtedite-za-zemjava-bi-bile-do-300-milioni-evra accessed on 30.10.2022

In addition to the provision and supply of electricity and heating, the cost of energy remained a key concern for households and businesses. Starting from July 1st, the Energy Regulatory Commission (ERC) adopted a new model for charging electricity consumption of households that pegs the price per kilowatt hour (kWh) to the monthly level of consumption and increases prices by 7.4% on average for 98.8% of consumers.[1] According to the ERC, the price increases are due to the country's power supplier EVN Home having higher costs for delivering electricity because of the return of many companies and public institutions from the free to the regulated electricity market and the higher prices that electricity producer ESM charges the company. The increase in the cost of electricity will inevitably increase the energy poverty in the country, which is already amongst the highest in Europe. Many Macedonians are unable to adequately heat their homes, cook a warm meal, or shower. In 2018, almost a quarter of the country's population (25%) reported being unable to keep their homes warm compared to the EU average of 7.3%[2] The situation is expected to deteriorate much further due to the energy crisis and the shock of the high inflation, currently at over 20%.

The Government has adopted measures aimed at tackling energy poverty. On the 9th of October the Government announced a new package of anti-crisis measures worth over 350 million euros. "We will not leave anyone

[1] Under the new four-tiered pricing model, electricity prices have increased by 5.5% for households consuming up to 210 kWh of electricity per month and by 10.3% for households which consume between 210 kWh and 630 kWh per month. Prices have increased by 18.3% for households which consume from 630 kWh to 1,050 kWh of electricity per month and by 138.7% for consumers using more than 1,050 kWh.

[2] North Macedonia's Losing Battle With Energy Poverty, published on 11.07.2020, available at

https://www.theclimateherald.com/post/north-macedonia-losing-battle-with-energy-poverty accessed on

20.10.2022

alone to deal with the consequences of the economic and energy crisis, we will all overcome this crisis together", Prime Minister Dimitar Kovacevski said upon announcing the package. As part of the package a preferential tax rate of 5% has been adopted for the sale of electricity to households in order to mitigate the price impact of the rising price of electricity on the world markets. Moreover, the program for energy poverty has been continued, providing direct assistance to 4,000 families. With this measure, each family is helped with almost 200 euros during the year. Such measures however are likely to present a temporary and minor alleviation of the overall energy burdens that households across the country are facing. An additional 26 million euros will be used for exempting companies from paying VAT when importing natural gas and electricity, heat or cooling energy. The large share of the package will be used for subsidizing the price of electricity. In order for the electricity bills to remain the same until the end of 2022, a total of over 222.7 million euros will be set aside for the entire year.[1]

These measures demonstrate a reactive approach by the Government in response to the energy crisis, which has exposed the consequences of the decades long corruption and mismanagement of the energy sector; these have created all the current vulnerabilities - the low domestic energy production, high dependence on energy imports and the inadequate handling of the energy infrastructure. As the prices of electricity and heating rise, and inflation continues to increase, the pressures of energy poverty are expected to affect larger shares of the Macedonian population. All of these factors combined suggest that the ongoing energy crisis will further deplete the state budget whilst accelerating the already alarming energy poverty in the country.

[1]Kovachevski: With a new package of measures of over 350 million euros, we are helping the most vulnerable, no one will be left alone in the crisis, published on 09.10.2022, available at

https://vlada.mk/node/30448 accessed on 10.10.2022

The Actions of the Polish Government in the Face of the Energy Crisis

Konrad Rajca

Summary

Faced with rising energy prices in Poland and around the world as a result of the war in Ukraine, the Polish government is taking active measures to limit the effects of the crisis. The Polish government's actions include subsidies for individual households using coal, gas and oil for heating, a partial freeze on electricity prices for households and for sensitive entities such as schools or hospitals, as well as small and medium-sized businesses. The Polish government is also introducing legal mechanisms to reduce energy prices, such as the abolition of the exchange obligation, i.e. the obligation to purchase energy through the stock exchange. It is also expanding cooperation with local governments to better distribute coal, a key resource for Poland, which accounts for more than 70 percent in the Polish energy mix. Environmental criteria have also been relaxed, and it has been permitted to burn inferior quality coal, such as lignite or coal dust. Efforts are underway to increase coal exports from such destinations as Colombia, Australia, and Indonesia to replace raw material from Russia and its own mining. New gas connections that have been under construction for many years – The Baltic Pipe with Denmark and a pipeline with Slovakia - have also opened in recent months.

Introduction

The Polish parliament passed in October the mechanism for a maximum electricity price of no more than about 165 euros/MWh for sensitive entities, including hospitals, nurseries, universities and small and medium-sized businesses. For households, the maximum price above the limit (2 MWh per year - ed. note) will be 145 euros/MWh. This is the maximum level

accepted by the European Commission. The solution is to be financed from a special fund and the state budget. According to Climate and Environment Minister Anna Moskva, the main source of funding for support for vulnerable electricity consumers, micro, small and medium-sized companies, will be the revenues of energy producers. In turn, as Development and Technology Minister Waldemar Buda assured, the assistance of establishing maximum energy prices is directed to almost all companies. He also informed that the guaranteed energy price level will apply to 80 percent of a company's energy consumption, as these are EU requirements.

Electricity prices in 2023 at 2022 prices

Earlier, the Polish parliament passed a law according to which in 2023 electricity prices will be frozen at this year's levels up to a certain consumption limit: 2 MWh per year for a household, 2.6 MWh for households with people with disabilities and 3 MWh for families with the Large Family Card (an entitlement that gives discounts to large families for using many services) and farmers. Once the indicated consumption limits are exceeded, customers will be billed for each additional amount of energy consumed according to the tariff rates or price lists in effect in 2023. The freeze in energy prices is accompanied by a freeze in distribution fee rates up to the indicated consumption limits.

The new law also stipulates that if, between October the 1st of this year and December 31st in 2023, a customer reduces his consumption by at least 10 percent compared to the period October 1st, 2021-December 31st, 2022, in 2024 the seller is to offer him a discount of 10 percent of the cost of electricity from the period October 2022-December 2023. Electricity companies are also to receive compensation for electricity price freezes and discounts.

The law also provides for the introduction of an electricity allowance for households whose main heating source is powered by electricity. The amount of the electricity allowance has been differentiated into two thresholds depending on annual electricity consumption. The source of funding for the new measures is to be the Covid-19 Counteracting Fund.

The law also stipulates that measures be taken to reduce the electricity consumption of government and local government offices. Managers of units in the finance sector from December 1, 2022 to December 31, 2022 are to reduce the consumption of electricity in occupied buildings, by technical equipment, etc. by 10 percent compared to the 2018-2019 average, while in 2023 the target of a 10 percent reduction from 2022 consumption is also to apply. Those who fail to meet this obligation are to be subject to a fine of up to 4170 euros.

Elimination of the obligation to purchase energy through the exchange

At the end of September, the Polish parliament also passed a law abolishing the so-called exchange obligation, i.e. the obligation to sell electricity through an exchange. In the justification for the bill, the government pointed out that the obligation is a regulation that limits the freedom of entities in the electricity market, and that competition can be achieved in other ways. After the abolition of the exchange obligation, commercial transactions will continue to be carried out on commodity exchanges, with the use of this form of trading to be decided by each market participant on its own, according to its own market strategy, the government indicates. The law also introduces penalties for "energy market manipulation" and the use of inside information to trade in energy products on the wholesale market.

The President Andrzej Duda has also signed into law the Gas Security Act. Among other things, the law extends until the end of 2027 the obligation of the President of the Energy Regulatory Authority to approve gas tariffs

for certain customers. This applies to tariffs for gas sales to domestic customers and strategic public benefit institutions, such as hospitals, schools and kindergartens.

Cheaper coal for local authorities

Parliament also passed a bill that sets the price of coal sales to local governments at a maximum level of about 315 euros. This means, as government plans, that coal for the end user will be much cheaper. Under the legislation, municipalities, municipal companies and municipal unions will be able to buy coal from importers at about 315 euros per ton, to then sell it to residents at no more than about 415 euros per ton. As the government explains, the difference of 100 euros per ton is a means for municipalities to cover coal distribution costs, such as transportation costs.

To buy coal from the local government, residents will apply to the municipality for preferential purchase. The solution will be available to those who are entitled to receive the so-called coal allowance. After considering this allowance, which is about 625 euros, the effective price of coal per ton is expected to be only about 210 euros, which is much lower than the market price. Limits on the purchase of coal will be included in a regulation to the law.

Under the bill, formalities related to the purchase and sale of coal by municipalities are to be simplified. Local governments will be exempt from applying the Public Procurement Law and from issuing a certificate of origin for coal. The municipality will be able to distribute coal through: its own organizational units, selected companies such as municipalities, an agreement with a coal depot, an agreement with another municipality. Municipalities that bought coal for sale before the new law takes effect will be able to request a refund of the difference in price. The laws are to take effect retroactively. There are to be 50 coal distribution points throughout

Poland operated by state-owned coal and oil companies Węglokoks and PGE Paliwa. Coal will also be able to be picked up from the ports.

Subsidies for entities heating with coal, gas and oil

In August, a bill entered into force, which stipulates that a one-time support of about 638 euros will be available to households heating with hard coal. The coal allowance is available to households whose main source of heating is appliances for which at least 85 percent of the fuel is hard coal. The subsidy will also apply to heating sources other than coal, such as row pellets, biomass, chunk wood, LPG gas, and fuel oil, and in this case will range from 106 to 638 euros. The law also provides for surcharges for certain network heat customers to limit price increases for individual heat consumers. The act also loosens the ecological criteria regarding the possibility of using coal in households for heating purposes, allowing the use of lower-quality coal.

Subsidies to energy bills totaling a total of 255 million euros will also be given to sensitive entities. The aid will be granted on a one-time basis for a selected heat source. Support will be available to those entities that incur the cost of purchasing coal, briquette or pellets containing at least 85% coal, wood pellets, as well as other types of biomass, LPG, fuel oil, used for heating purposes, in connection with the performance by these entities of their statutory activities. This includes hospitals, clinics, units organizing social assistance, night shelters, schools, nurseries, cultural institutions, among others. The amount of the allowance will be 40% of the increase in heating supply costs.

Opening of Baltic Pipe gas pipeline with Denmark and connection to Slovakia

September also saw the launch of two important Polish gas connections that have been under construction for many years. The Baltic Pipe pipeline in the Baltic Sea is intended to diversify sources of gas supply to Poland and Denmark and other countries in the Baltic Sea region and Central and Eastern Europe from Norway and become independent of Russian supplies. It will provide Poland with direct access to gas deposits located on the Norwegian Shelf. It is being implemented in close cooperation between the Polish gas transmission system operator GAZ-SYSTEM and the Danish gas and energy transmission system operator Energinet.

In late August, the prime ministers of Slovakia and Poland inaugurated the new Poland-Slovakia gas link. The total length of the constructed gas pipeline is more than 165 kilometers, of which 61 kilometers are on the Polish side. - This is a peace pipeline that creates a security community based on the strategic community of the Tri-Mountain region, Prime Minister Mateusz Morawiecki said. The Poland-Slovakia interconnector is a two-way high-pressure gas pipeline connecting the national system's gas hub in Strachocina in Podkarpacie with Slovakia's Velke Kapuszany hub near the Ukrainian border. The pipeline is an important part of the North-South Corridor and is one of the key energy investments in the region, which will strengthen the resource security of Poland and Slovakia.

Conclusion

The Polish government is taking comprehensive measures to curb the increase in energy prices for consumers, through subsidies for households using coal, gas and oil for heating purposes, freezing electricity prices for households, companies and sensitive institutions, and cooperation in coal distribution with local governments. New gas connections to other countries are also being launched, with the aim of boosting Poland's energy security and independence in supply from Russia.

Energy Crisis and Romania's Response

Oana Popovici

Summary

While Romania has the capacity of covering almost 90% of gas needs from domestic production, energy production remains difficult, as the technical capacities are missing. In order to protect consumers, the Government adopted "capping and compensation" schemes for gas and electricity that target the population, while the industry is supported through a state aid scheme that was recently approved. However, inflation generated by energy prices remains a major concern. Experts also advocate for increasing the energy production capacity, given Romania's potential in this area.

Actual situation and forecasts for the winter

The Minister of Energy showed that "for the winter of 2022-2023, the preparations made, the level of gas and coal deposits as well as the recently adopted compensatory measures ensure security of supply for Romanian consumers"[1], the domestic production being currently the main source of supply. In fact, 65% of Romania's population does not depend on the gas resource, given that five million households are using firewood for heating[2], therefore showing higher resilience than other European Union (EU) countries. In addition, Romania manages to cover about 90% of its gas needs from domestic production. However, it might face vulnerabilities in the cold season when domestic production and extraction from

[1] https://economedia.ro/criza-energetica-ce-masuri-sustine-romania-si-ce-masuri-vrea-ue.html#.Y0fNrnZByUk, accessed October 14th

[2] https://spotmedia.ro/stiri/politica/65-la-suta-din-populatia-romaniei-nu-depinde-de-resursa-de-gaz-pretul-va-fi-o-problema, accessed October 14th

underground stocks do not cover total consumption[1]. In addition, a study of the Energy Policy Group shows that Romania will manage to reach this year approximately 87% of the total available capacity of natural gas stored in underground storages, which is above the EU target of 80%[2]. However, energy production remains difficult, as the technical capacities are missing. Data show a reduction of primary energy production by 18.1% in 2020 as compared to 2007, and of electricity by 9% in the same interval[3]. In this context, Romania is net importer of electricity since 2019.

Implications of the energy crisis

However, even if the gas quantity will be enough, the price will continue to increase no matter the state subsidies or capping, which will affect the entire economy. It is well known that the increased gas and energy prices produce chain effects, which are reflected in the prices of all the other products, in the manufacture of goods and services, which increase the cost of living and erodes revenues[4]. A NBR adviser stated that "Never before have so many crises gathered together as there are now. We don't even know how to count them anymore. But anyway, the worst and most important are the energy crisis and the price mess, which are linked"[5]. In Romania, inflation hit 15.9% in September, the highest level in the last 19

[1] https://www.hotnews.ro/stiri-esential-25790177-unde-afla-romania-marea-criza-energetica-europeana-6-intrebari-raspunsuri-despre-subiectul-cosmar.htm, accessed October 14th

[2] Energy Policy Group, "Cât de pregătită este România pentru aprovizionarea cu gaze naturale în iarna 2022-2023?", p. 4, https://www.enpg.ro/wp-content/uploads/2022/09/EPG-Policy-Paper_Pregatirea-pentru-iarna_v2.pdf, accessed October 14th

[3] https://cursdeguvernare.ro/desenul-politica-energetica-a-romaniei-in-ultimul-deceniu-scaderea-productiei-la-cresterea-consumului-si-importurile.html, accessed October 17th

[4] https://spotmedia.ro/stiri/economie/statele-europene-vor-face-fata-diferit-crizei-energetice-si-scumpirilor-in-lant-cum-va-trece-romania-iarna-interviu-video, accessed October 14th

[5] https://www.hotnews.ro/stiri-opinii-25843251-cat-mult-sperie-iarna-energetica.htm, accessed October 14th

years[1]. The biggest price increases were those for energy even under the conditions of subsidizing energy prices, with hikes up to 70.6% higher as compared to September 2021. Electricity has become more expensive by 25%, thermal energy by 23%, fuels by 29% and the general increase for the area of "electricity, gas and central heating" was of 41.4%, according to the latest National Institute of Statistics data. At EU level, there are fears that economic divergences might increase[2]. Romania just managed to achieve a GDP per capita which is 73% of EU average in 2021[3], which evidenced a good evolution towards the closure of the welfare gap with the EU average, even if not equitably achieved throughout the country.

Policies for facing the energy crisis

Romania's Government implemented several measures to protect citizens and the economy from rising prices in energy and natural gas. In a recent speech[4], Prime Minister Nicolae Ciucă indicated that the measures to compensate and cap gas prices were extended until September 1, 2023, and the consumption cap was eliminated for the economic environment. Romania also follows European decisions for managing energy consumption, discouraging the tendency of unjustified price increases and diversifying energy sources. For the moment, Romania took position and requested the capping of the price for the entire amount of gas entering the EU, regardless of source. In addition, Romania emphasized the importance of activating the European Energy Platform for the joint purchase of natural

[1] https://insse.ro/cms/sites/default/files/com_presa/com_pdf/ipc09r22.pdf, accessed October 17th
[2] http://www.romania-actualitati.ro/nota_de_plata_pentru_criza_energetica_din_europa-173116, accessed October 14th
[3] https://economedia.ro/pib-per-capita-in-2021-romania-s-a-situat-la-73-din-media-uniunii-europene-date-eurostat.html#.Y02BYHZBw2w, accessed October 17th
[4] https://gov.ro/ro/stiri/mesajul-transmis-de-premierul-nicolae-ionel-ciuca-in-cadrul-conferintei-internationale-a-gazului-din-romania, accessed October 14th

gas in order to ensure a fair distribution of the additional volumes of gas attracted to the EU. Measures for reducing energy consumption are also envisaged, but rather difficult to implement, as they request, in some cases, the change of the consumption behavior, which must be educated and involves a long-term process. In addition, the continuation of the Black Sea gas extraction projects is a priority for Romania in ensuring independence from energy imports[1].

Bruegel think-thank data shows that Romania has allocated EUR 6.9 billion from September 2021 until September 2022 to cushion households and businesses from the energy crisis. The amount represents 2.9% of GDP and it is the 7th highest level in the EU[2].

Supporting private consumers

The protection of vulnerable consumers faced with the energy crisis was among the first measures the Government implemented, using a form of "capping and compensation". In concrete terms, the measure envisages capping the price of electricity paid by the consumers to suppliers. The measure is available from November 1, 2021 and it was constantly extended or enlarged for adding new groups of beneficiaries. Initially, the Government had committed to compensate suppliers for the difference between their average purchase price and the capped price paid by consumers. The system was criticized because of the huge expense it would have involved. The modifications further adopted, which are available at present, risk hurting suppliers. Therefore, it is possible that new changes to

[1] Idem 1
[2] https://www.bruegel.org/dataset/national-policies-shield-consumers-rising-energy-prices, accessed October 14th

be adopted by the Parliament [1], who is currently working on this Government ordinance.

For electricity, there are several consumption thresholds for the population. If those thresholds are surpassed, the client will pay the difference. However, no similar consumption ceiling was introduced for natural gas. In addition, at the beginning of October, the Government also decided to cap the price of firewood[2].

These measures are seen as temporary, as their first negative effect is on the investment capacity of the suppliers[3]. Experts say that the only real solution to help consumers, implicitly leading to lower prices, is to increase energy production. At present, there is too little energy in the market compared to what is consumed. New sources of energy production should be found for solving the problem on the long term. In fact, the absence of new production capacities has favored the increase of the price and has not stimulated productive consumption[4]. Moreover, Romania's potential is huge both onshore and especially offshore, on the continental platform of the Black Sea.

In addition, several measures for the protection of the population, grouped under the name "Support for Romania", are in force since the 1st of July[5]. In brief, they are related to the postponement for a period of 9 months of installments at banks for citizens and companies facing financial difficulties due to the multiple crises of the last period, additional revenues

[1] https://www.hotnews.ro/stiri-specialisti_stoica_si_asociatii-25843164-plafonarea-pretului-energiei-electrice-banii-guvernului-sau-furnizorilor.htm, accessed October 14th
[2] https://economie.hotnews.ro/stiri-consumator-25828679-guvernul-plafoneaza-pretul-lemnul-foc-400-lei-metrul-cub-mai-mult-decat-era-prevazut-masura-vizeaza-peste-3-milioane-gospodarii.htm, accessed October 17th
[3] https://romania.europalibera.org/a/32067973.html, accessed October 17th
[4] Idem 5
[5] https://www.hotnews.ro/stiri-politic-25491517-coalitia-anunta-pachetul-masuri-sprijin-pentru-romania-marcel-ciolacu-lauda-psd-propus-cele-mai-multe.htm, accessed October 17th

for public sector employees and additional funds for pensioners with low incomes.

Supporting industry

Following the EU's decision to reduce the demand for natural gas by 15% for the period August 2022-March 2023, data for Romania show that in the first 9 months of this year[1], gas consumption was 11% lower as compared to the average consumption for the period 2019-2021. The largest part of the decrease comes from the high reduction of consumption in industry (63%), which is the largest decrease in the EU. Several major consumers of natural gas in industry curtailed their activity or stopped production for several days during the summer, faced with the hikes in energy prices.

Until recently, there was no policy for supporting industrial consumers. However, in September, the EU agreed on providing aid schemes[2] for large energy-consuming companies and small and medium size enterprises (SMEs) operating in certain sectors of activity. The state aid worth up to EUR 1.5 billion during the period 2022-2030 and EUR 150 million annually, coming from the sale of Romania's available gas emission quotas. At present, the Romanian authorities are preparing the documentation for accessing these facilities. The state aid is granted in the form of non-refundable financial subsidies and the estimated number of beneficiaries covers 170 economic operators.

Moreover, SMEs will benefit of a compensation covering 85% of the average monthly consumption of electricity. In addition, in the negotiations

[1] https://cursdeguvernare.ro/industria-din-romania-si-a-redus-consumul-de-gaze-la-o-treime-in-ue-cererea-totala-de-gaze-a-scazut-cu-doar-7.html, accessed October 17th

[2] https://cursdeguvernare.ro/schema-de-sprijin-pentru-170-de-companii-energointensive-buget-de-15-mld-euro-pentru-perioada-2022-2030.html, accessed October 17th

at the EU level, Romania also supports a decoupling of the gas price from the energy price. That could ameliorate the issues industry faces now.

Conclusion

The increasing price of energy raises difficulties for the economy in the near future, despite the grants and the support the state already adopted. The problem resides not only in ensuring the needed consumption capacity, but also in dealing with the high inflation that erodes revenues. Actual measures are rather targeting a short-term amelioration. However, it is possible that new measures will be adopted for supporting investment in new capacities, as Romania has the resources for getting closer to energy independence.

Energy Crisis and Serbia's Response

Ivona Ladjevac

Summary

Although still completely not recovered by the crisis caused by the COVID-19 pandemic, Serbian society faced with another challenge caused by the conflict in Ukraine. According to various parameters, Republic of Serbia dealt with the first crisis more or less successfully and even succeeds in keeping positive economic rate. But, this new crisis has dominantly different surface – it is mostly energy and as such poses huge threat to the entire population and particularly those with less income.

Introduction

The energy crisis, which entire Europe and a large part of the world are facing with, inevitably affects Serbia as well. Actually, the crisis in Serbia is additionally intensified by many unfavorable internal factors. On daily level it is notable that energy prices rising unstoppable and the upheavals on the energy market indicate that the unstable situation will last. With rising inflation and rising prices of a number of other goods and services, it is realistic to expect an additional worsening of the position of the poorer parts of the population. That is not surprising, knowing that among the population with lower incomes the largest portion of consumption is for food and energy. Apart from rumors on huge rise of the price of the electricity, gas, coal and other energy supplies, there also rumors on expected electricity saving measures. All these generate climate of upset and fear among Serbian population while the new heating season is approaching.

Energy sector in Serbia and society

As the autumn had approaching, Serbian Prime Minister, Ms. Ana Brnabić, expressed hope that the country will not be in a situation to implement drastic electricity saving measures. Our government, as she says, is making efforts to stabilize electricity production in the country and to ensure sufficient reserves, so the restrictions haven't been planned.[1] . In "Elektroprivreda Srbije" (EPS) emphasized that the information that this public company is allegedly preparing restrictions on consumption, as some individuals place via social networks, is incorrect. According to the EPS plan, as they pointed out, no restrictions were foreseen.

The EPS officials stated that this year's drought reduced the production of electricity in hydroelectric power plants by 27 percent, but that the supply of citizens and the economy is stable, because the lack of electricity from the hydro sector is compensated by the operation of thermal power plants and imports. Accordingly, the long-term drought and historically bad hydrological conditions with river inflows, which are the lowest in the last 10 years, have influenced the very low levels of reservoirs in Serbia. Therefore, the adjustment i.e. the increase of the electricity price was necessary.

Subsequently, since September 1, electricity price in Serbia rose for 6.5%. But, after adding a tax of 20 percent to 6.5 percent without VAT, as well as an excise tax of 7.5 percent, it becomes clear that the electricity price is 8.3 percent higher.

[1] Kriza sve jača, mora se štedeti: Vlada nastoji da obezbedi stabilnu proizvodnju struje, kako na našoj teritoriji ne bi bilo restrikcija, *Novosti*, 20 August 2022, https://www.novosti.rs/ekonomija/vesti/1146552/kriza-sve-jaca-mora-stedeti-vlada-nastoji-obezbedi-stabilnu-proizvodnju-struje-kako-nasoj-teritoriji-bilo-restrikcija, accessed on: 25/10/2022.

President Aleksandar Vučić said that it was a minimal increase that will not threaten the living standards of citizens, even the poorest. Still, one might wonder if that is really so.

One of the problems in the Serbian energy industry is that the state has been conducting social policy for decades through relatively low energy prices. That is especially true for the price of the electricity. In spite the fact that market requires urgent change in that field, in order for the transition to a system in which all consumers pay the economic price for the energy they consume, that process can't be conducted over the night. The Government must establish an effective system for the protection of energy-jeopardized households. In other words, Government has to be socially responsible.

In Serbia, there is already budget assistance intended for energy-jeopardized customers to pay electricity and gas bills[1]. It is nearly 70,000 households which in total costs to the state of around 10 million euros per year. Analyzes show that the existing system is not sufficient to adequately protect all objectively vulnerable citizens from an economically justified increase in the price of electricity, gas and heating, which is why it must be urgently reformed. Namely, several independent sources indicate that there are 250-300,000 households in Serbia that can be considered energy vulnerable, which is at least four times more than the number of households currently receiving state aid[2].

[1] All socially vulnerable citizens and recipients of child allowance have the right to reduce their electricity and gas bills, without submitting an application, while for other citizens, the subsidy amount is the amount of earnings per household member and they must submit an application for the privilege to be granted. For a one-member household, the income limit is up to 15,690 dinars, with two and three members up to 22,845 dinars, for a family with four and five members up to 29,994 dinars, with six and more members up to 37,719 dinars. Exchange rate per 1 Euro is 117,8 Dinars.

[2] Energy Security of the Republic of Serbia, Ministry of Mining and Energy of the Republic of Serbia, https://www.mre.gov.rs/sites/default/files/2022/02/energy_security_of_the_republic_of_serbia.pdf, p. 8, accessed on: 25/10/2022.

Comparative analyzes also confirm that the coverage of this social program in Serbia is insufficient and that it should be expanded to cover 10-15% of all households[1]. Another important change that seems necessary is that assistance for energy-vulnerable households should be expanded to include bills for central heating. According to some evaluations, these changes would lead to an increase in the budgetary costs of protecting energy-unsafe households by around 50 million euros, which is completely justified - the fiscal cost could reach one billion euros next winter, if energy prices do not increase.

Apart the price of electricity, Serbian people are also concerned both with the gas price and its stable supply.

Price of the gas has been changed on July 1, when gas for households raised 12% and again on October 1 when new accounting formula has been introduced. Tariffs for capacity and energy started to be expressed in kWh instead of cubic meters as it was before. It was explained by new methodology implementation.

Still, the change of the gas price in Serbia is more or less expected. Serbia is providing only 10% of its needs from domestic production, so the final price must be adjusted with procurement.

More than 90% of the gas it consumes, Serbia imports from the Russian Federation. Serbian only natural gas supplier is the Russian "Gazprom", which is why the diversification of suppliers is just as important as the diversification of routes.[2] This matter now might be in special focus due to the Ukrainian crisis, but diversification of supply routes should be a fundamental task no matter to current situation. It is the matter of national interest to ensure even more stable and secure market supply, provide a favorable climate for potential investors and increase the level of gasification of Serbia, which is currently regionally uneven and insufficient.

[1] Ibidem
[2] Op. cit., p. 4.

Supply security and stability would contribute to additional incentives for the development of the economy as a whole.

Diversification of routes and suppliers through interconnectors with neighboring countries and their gas pipeline systems would enable the supply of natural gas to the Serbian market from the Caspian Sea region, by connecting to the Southern Gas Corridor, delivering natural gas from the Leviathan field in the Mediterranean, and connecting to LNG terminals in Croatia and Greece. It would also enable the delivery of natural gas from underground storage facilities in countries in the region and throughout Europe.

Connecting with the countries of the region via gas interconnectors would enable the formation of regional cooperation for the supply of markets of the Republic of Serbia and the region on the basis of cooperation in case of crisis situations. In order to raise the level of security of natural gas supply, it is necessary to form strategic reserves of natural gas and expand the existing ones, i.e. build new storage capacities.

Conclusion

The global energy crisis was the trigger that exposed the domestic crisis of state-owned energy companies, which had been simmering for a long time[1]. These two crises (global, and especially domestic) have led to the fact that from the fall of 2021, Serbia's main problem has become the question of how to finance and ensure the country's regular supply of electricity and gas. Elektroprivreda Srbije (EPS) can no longer produce enough electricity for domestic needs because it did not invest in its coal mines in time - so now have to import both coal and electricity, at record high prices.

[1] Kriza u EU udara i Srbiju: Analitičari ocenjuju da u Evropi nema mnogo prostora da se spreči najgori scenario, Novosti, https://www.novosti.rs/c/ekonomija/vesti/1169897/energetska-kriza-srbija-ekonomska-kriza, accessed on: 25/10/2022.

In contrast to EPS, which should be the backbone of the domestic economy and which with its own production not only covers domestic consumption but also exports, Srbijagas is systematically dependent on imports. Although import prices are beyond the control of domestic economic policy, Srbijagas' big failure is that it has not yet built a gas storage facility with sufficient capacity (which was scheduled to be completed a long time ago). That storage would enable a stable supply of the country during the winter, when consumption is the highest due to heating. Due to the lack of storage capacity, and partly due to poor management of the existing warehouse in Banatski Dvor, heating gas had to be largely imported on the market during the previous winter, at extremely high prices.

Since the problems of EPS and Srbijagas are of a structural (more permanent) nature, they will continue during the next heating season, which is why the domestic energy sector remains facing huge challenges.

The Energy Crisis and the Slovenian Response

Gašper Pirc

Summary

Since 2004, Slovenia has been a member of the European Union, and while the continuation of the membership has been generally well-supported in the Slovenian population and has had its definite perks, it may have also made Slovenia more vulnerable to the changes in the global market than before. Slovenia, much like the rest of the European Union, already felt the early signs of the energy crisis in the second half of 2021 when the trend of increasingly high (wholesale) prices of energy started to develop. This has been further exacerbated in 2022 after the start of the Russo-Ukrainian war and the souring of the relations between the European Union and Russia.

While the rising prices of energy represent a heavy burden for the population, it appears that the response from the Slovenian government has been prompt and several measures were already taken in order to mitigate the effects of the energy crisis, with more of them announced to come in 2023.

Background: the economic performance and inflation in Slovenia before 2022

Until 2021, when the first signs of the incoming energy crisis due to the rising prices of energy started to show, Slovenia has been regarded as well-positioned in terms of energy production and distribution, with generally affordable prices of energy (especially due to its high production rates and relative self-sufficiency regarding electricity). In 2020, the total primary energy supply was 6,4 million toe, but as the total amount of domestic energy sources accounted for more than half (53%) of the state`s energy

demands, Slovenia can be considered to be somewhat less dependent upon the energy imports than some other member states of the European Union. [1]

Following the 2019 data from the International Energy Agency, before the start of the COVID-19 crisis more than 93% of the Slovenian electricity needs were provided by (largely domestic) nuclear power (36.2%), hydroelectricity (29.1%), and coal (27.9%). Since nuclear power also covers 22% and coal 16% of its total energy needs, it seems that the Slovenian energy mix could be regarded to be generally well-protected against severe crises; however, since Slovenia imports all of its oil and natural gas in its energy mix, and oil is the primary source of energy with its coverage of around one-third of Slovenia`s total energy needs, Slovenia is a net importer of energy and is vulnerable to changes on the energy market. [2]

Due to the specifics of its energy needs, the issues with the energy supply can be much more pronounced in the time of the heating season since petroleum products and gas represent the two critical heating agents in Slovenia.

The first signs of crisis due to the rising prices of energy

In Autumn 2021, after more than a year since the beginning of the COVID-19 health crisis and a slowdown in economic and transport activity, the European Union (along with Slovenia) was hit with the first wave of energy market disruptions when the wholesale prices of energy have risen to the record levels, in some cases even by five times in comparison to the 2019 prices. [3]

Among the causes for the severe spike in prices were thought to be the direct effects of the COVID-19 crisis which caused a downward spiral in the demand for energy products and the neglect of the maintenance of the energy production lines to which the distributors of the raw materials have

not been able to answer quickly after the crisis waned in late 2020 and the demands for the energy have risen again. The intentional speculation that was stimulated by the coping strategies of the capitalist market, the seasonal weather (low levels of wind and water during summer 2021), and even the intentional retainment of natural gas by the Russian distributors which was denied by the Russian government but may have also played a part in the souring of relations between the EU and Russia (the European Commission thus singled Gazprom as the contributor to the situation by not providing the extra support to the help member states of the EU to ease the pressure due to the rising prices). [4]

Already then, the supply of gas represented the greatest issue as the wholesale prices of gas had risen the most dramatically; for example, the wholesale price of gas rose from 2019 to the end of 2021 by more than 500% in countries such as Germany, Belgium, or the Czech Republic. Since gas plays a lesser role in energy mixture in Slovenia and the increase of its wholesale price has not been as significant as in some other EU member states, the immediate effects of the rising prices crisis were not fully recognized in 2021. Since the war in Ukraine started in 2022, the issues with the supply of gas have become even more pronounced.

Nevertheless, the trend of rising prices also caused a 151% spike in the wholesale price of electricity in comparison to the price in 2019, which brought severe problems for both the electricity distributors and retailers; some of them even broke contracts with several of their clients due to their inability to provide them with electricity at the originally agreed-upon prices. [5] Likewise, while the retail price did not have such an immediate increase and was later regulated to a degree, the rising prices nevertheless soon started to affect the social life in Slovenia.

Due to the trend of rising prices, on January the 14th Slovenian government temporarily exempted households from paying the network fee and allocated EUR 70 million in aid to companies while the entire package of adopted energy measures was worth around EUR 200 million. [6] However,

most of the measures expired after some months and were rather unsuccessful in mitigating the larger energy crisis that unfolded in 2022.

The Energy Crisis in 2022 and the Response of the Slovenian Government

It is clear from the above-written, that the energy crisis in 2022 has not been just a sudden effect of the souring of relations with Russia and the issues with the trans-European supply chain. In fact, the foundation of the current crisis was already set in preceding years while the Russian invasion of Ukraine, the heavy (financial) sanctions that the EU placed upon Russia, the Russian response to the sanction, and the compromise of active energy supply routes, as well as the market speculation on the grounds of difficulties with supply, exacerbated to it to the greater level. Along with the record levels of general inflation, a large spike in the (retail) price of energy products has been recorded around the European Union.

In 2022, households in Slovenia are under severe stress due to the ever-higher (retail) prices of energy. For example, the biggest Slovenian electricity provider GEN-I raised the price of electricity for the single tariff from 0.05794 EUR/kWh to 0.09499 EUR/kWh without VAT; the price rise came into effect in September 2022. In September, the second largest distributor, Petrol, also raised the prices of the uniform tariff from 0.08495 EUR/kWh to 0.09499 EUR/kWh euros without VAT. Given some calculations, if the prices of electricity would follow the concerning trends in European stock markets and would be left unregulated, the annual price of electricity for a household would rise around two and a half times. However, the 15th Slovenian government, as I will expound upon later, has been regulating energy prices for some time. [7]

Similarly to the prices of electricity which increased by 35% in the second quarter of 2022, the prices of other energy products also soared in 2022. While gas is not a critical element of the energy mix in Slovenia, it has a

relevant role especially in the heating season, and its price has increased by 11% despite governmental regulations. [8] The prices of petroleum products such as motor fuel and heating oil have however been under heavier regulation, and while still higher than in 2019, they are currently among the lowest in the European Union. For example, the price of gasoline has been regulated since March 2022, and the 15th government of Slovenia further capped the prices of motor fuel in the Summer of 2022. Thus, the price of gasoline decreased from 1.52 USD/L in August to 1.36 USD/L in September of 2022 and is currently capped at 1,414 EUR/L at non-motorway gas stations. [9] On September 12, just before the heating season, the government of Slovenia also capped the margin for retailers at 0.08 EUR/L. It is estimated that this will help to reduce the price by around ten cents per liter. [10]

As the price increases most immediately harm vulnerable groups and families, the Slovenian government introduced further measures that are intended to mitigate the effects of the energy crisis. Among them are the singular energy allowance in the value of 200 EUR for citizens in need, and the dearness allowance for recipients of child benefits which will help families that are entitled to child benefits and will be distributed according to the social and economic situation of the receiver. Outside of households, the Government will co-finance the costs of electric energy and natural gas above a double increase of their price for small, medium-sized, and large enterprises until 31 December 2022, determine the maximum resale prices of electricity and natural gas, and continue to limit the price of motor fuel and other petroleum products. [11] The government stated that measures against the energy crisis will be worth more than 5 billion EUR in 2023. [12]

Furthermore, the government has been active in raising awareness of the crisis by promoting a more cautious and economical approach to the use of energy. For example, in June 2022 the government requested that their premises and other administrative building should not be cooled under 25 degrees Celsius and that they should not be heated to more than 20 degrees Celsius barring special circumstances. [13] There have also been additional

awareness-raising campaigns. It will be interesting to see how similar measures can be applied in a heating season, especially in the occasion of severe winter.

Finally, Slovenia has been active in finding new supply lines of energy (especially natural gas) and in the promotion of energetic self-sufficiency. While the crisis is far from over, it seems that Slovenia is well-prepared to withstand all but the most drastic consequences of the global energy crisis.

Conclusion

While Slovenia is not energetically fully self-sufficient, it has been so far able to replace most of the compromised supplies with domestic sources or via alternative supply ways. The relative self-sufficiency regarding electricity and its lesser dependence upon Russian gas makes Slovenia less vulnerable to the changes in the global energy market than some of the other member states of the European Union. Nevertheless, much like with the trend of rising food prices, the rising prices of energy (sometimes only due to speculation) have already affected the lives of Slovenian citizens, especially the ones in the weaker economic situation.

The energy crisis thus not only affects the economy and politics but can also leave severe marks on society as such. The 15th Slovenian government has been adamant in saying that they will focus on measures to help bring the existential standard for most of the Slovenian population and ensure higher social stability. The energy crisis represents the first issue that the government will need to overcome in their attempts to improve the social condition of Slovenia; the measures they have so far announced to mitigate it are a positive sign, but more may need to come later on.

[1] Source: https://www.stat.si/StatWeb/en/News/Index/10319. See also the data for the energy dependency in 2021

(47,3%): https://pxweb.stat.si/SiStatData/pxweb/en/Data/-/1817902S.px/table/tableViewLayout2/.

[2] All the data is taken from the official records of the International Energy Agency, accessed at its official webpage (https://www.iea.org/data-and-statistics/data-sets). See also the energy balance in 2021: https://pxweb.stat.si/SiStatData/pxweb/en/Data/-/1817901S.px/table/tableViewLayout2/.

[3] The data is taken from the report by the Commission to the European Parliament, the European Council, the Council, the European Economic, and Social Committee, and the Committee of the regions titled Tackling rising energy prices: a toolbox for action and support (accessible at https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2021%3A660%3AFIN&qid=1634215984101).

[4] Sources: https://eur-lex.europa.eu/legal-

content/EN/TXT/?uri=COM%3A2021%3A660%3AFIN&qid=1634215984101; https://www.rtvslo.si/evropska-unija/bruselj-predstavil-predloge-za-resevanje-energetske-

krize/597328; https://www.rtvslo.si/gospodarstvo/plina-je-dovolj-nobene-elektrarne-nismo-zaprli-vzroki-so-

v-spekulacijah-ki-jih-nekdo-vodi/597374.

[5] All the data is taken from the report of the Commission, available at https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2021%3A660%3AFIN&qid=1634215984101. Consult also the following document for a more general overview of the price spikes of energy products around the EU: https://static1.squarespace.com/static/616804e3b1bb682181eb927a/t/62221c7de71bf131409ddd09/1646402762378/HEPI_Press_Release_February_2022.pdf.

[6] Source: https://www.varcevanje-energije.si/aktualne-novice/cena-elektrike-2020-drasticno-navzdol.html.

[7] Sources: https://www.varcevanje-energije.si/aktualne-novice/cena-elektrike-2020-drasticno-navzdol.html; https://www.delo.si/novice/slovenija/gen-i-bo-cene-elektrike-izenacil-z-reguliranimi/.

[8] Source: https://www.stat.si/StatWeb/en/News/Index/10535.

[9] Sources: https://tradingeconomics.com/slovenia/gasoline-prices;

[10] Source: https://www.euractiv.com/section/politics/news/slovenia-to-subject-heating-oil-to-price-regulation/.

[11] Source: https://www.gov.si/en/registries/projects/measures-to-mitigate-price-increases/.

[12] Source: https://www.euractiv.com/section/energy/news/slovenian-government-projects-e5-billion-for-2023-to-combat-the-energy-crisis/.

[13] Source: https://balkangreenenergynews.com/slovenias-energy-agency-issues-gas-crisis-warning/.