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BRENT OIL

87,35 \$/BL

GASOLINE

19.37 ₺/LT

USD/TRY

18.56

DIESEL

23.23 ₺/LT

EUR/TRY

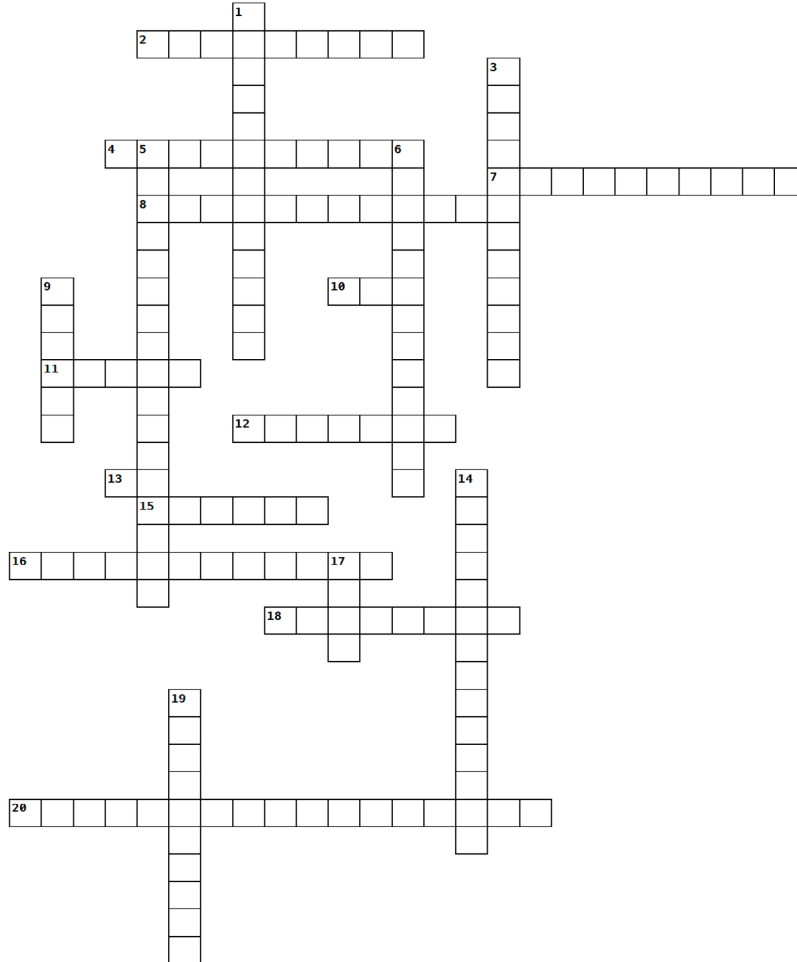
18.19

FUEL OIL

15.98

Weekly Puzzle

Prepared by Büşra Öztürk



Across

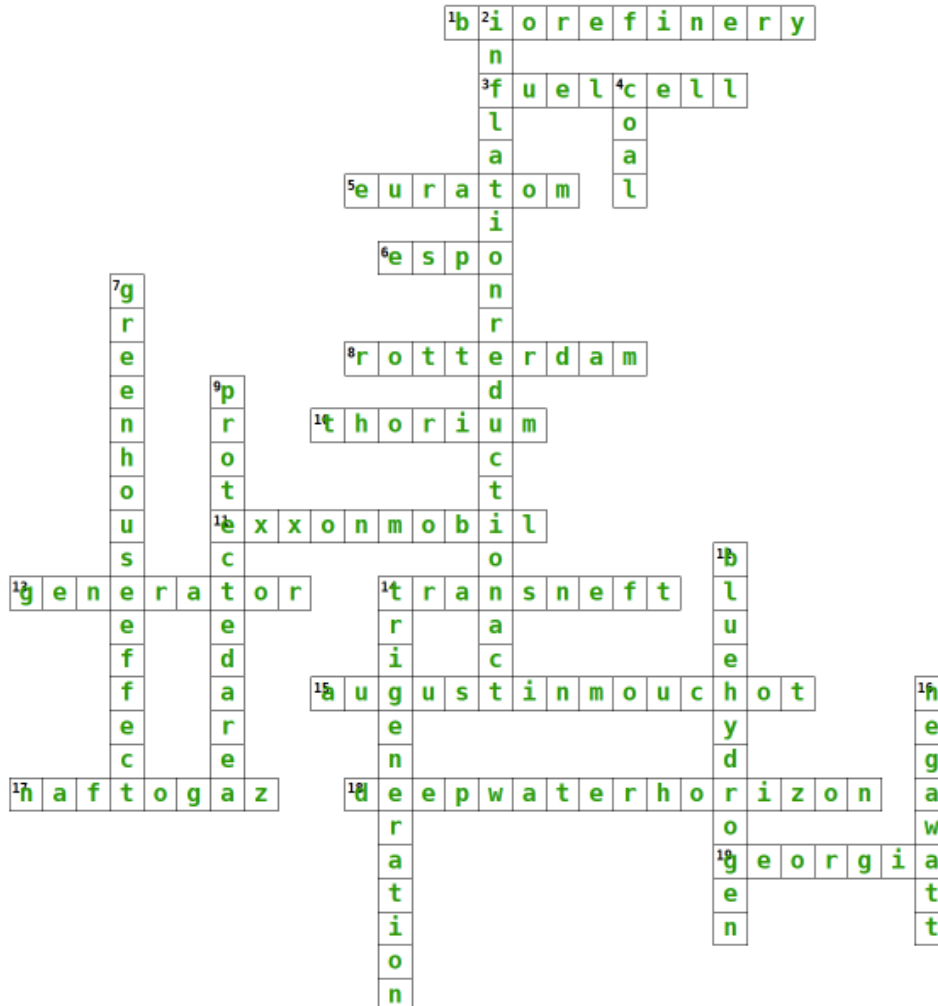
- 2.** A nuclear accident at the nuclear power plant in Ukraine that released large amounts of radiation into the atmosphere
- 4.** One of the Asia-Pacific markets that the Eastern Siberia-Pacific Ocean oil pipeline exports crude oil
- 7.** A measure of how heavy or light the petroleum liquid is compared to water, used in the quality measurement of oil
- 8.** One of the raw materials used in biogas production
- 10.** A unit expressing the amount of energy production or consumption per hour
- 11.** An environmental event that climate change is likely exacerbating the frequency and intensity of the extreme
- 12.** A kind of solvent liquid made from distilling petroleum, mostly used in the dye industry
- 13.** One of the largest international oil giant companies
- 15.** The continent where global warming has accelerated faster than others
- 16.** The country which has the biggest oil refining capacity in the world
- 18.** The process of the exploration and production of crude oil and natural gas
- 20.** Undesirable leaks from pressure-containing equipment or facilities, and from components inside an industrial plant

Down

- 1.** The most suitable hydrogen type for a fully sustainable energy transition that is produced from renewable energy
- 3.** A prominent inventor with the invention of the light bulb
- 5.** A system in which solar power generated at a different location to transmit and feasible for commercial property
- 6.** The name of the most powerful ship in Turkey's drilling fleet
- 9.** One of the few elements found in petroleum
- 14.** A device used to initiate and control a fission nuclear chain reaction or nuclear fusion reactions
- 17.** An abbreviation for a European Organization created after World War II to regulate the coal and steel industries
- 19.** A natural gas pipeline under construction between the Norwegian zone of the North Sea and Poland

Previous Week's

Correct Answers



Across

1. Facility that enables the production of different industrial products such as biochemicals, biomaterials and biofuels
3. A device that converts chemical energy directly into electrical energy
5. An organization that conducts research on nuclear energy and provides cooperation among member states on this issue
6. The abbreviation of the oil pipeline that carries Russian oil to China
8. Europe's most carbon-emitting port
10. A fission element, a raw material for nuclear energy
11. A company that researches and produces crude oil and natural gas internationally
13. A machine that converts mechanical energy into electrical energy and provides the continuous supply of electricity for most institutions
14. A Russia-based oil and gas pipeline transportation company
15. French inventor who produced the world's first parabolic solar collector and converted solar energy into mechanical energy
17. Ukraine's national oil and gas company
18. The name of the explosion on the drilling platform in the Gulf of Mexico and the great environmental disaster caused by the oil spill into the bay
19. One of the countries where TANAP's route passes

Down

2. The bill which has been described as the largest investment in the United States so far in the combat against climate change
4. One of the conventional energy sources
7. The warming of the world resulting from the trapping of heat from the sun by various gases such as carbon dioxide as a result of industrial production
9. The general name called for the places that are under protection due to their natural, ecological and cultural values
12. A hydrogen type that is produced from natural gas and supports carbon capture and storage
14. A system where heating and cooling can be generated simultaneously with electricity
16. A unit of power for measuring the amount of energy saved in megawatts because of efficient consumption

Do We Have the Right Reasons to Reform Electricity Markets?

Bariş Sanlı 

A little bit of history saves a lot of trials and words. Therefore, we have to understand how gas generation and the current market model cohabited with each other. After the end of the 1970s, cogeneration with gas turbines has become very popular. This technological innovation has allowed particular consumers to generate their heat and electricity. We can call this the 2nd decentralization wave.

The idea of competitive electricity markets was based on competition based on short-term marginal costs. It has an unintended effect of a “missing money” problem since most competitors may not fully get their capital investments. In a world of oil, coal, and partial nuclear generation in the 1970s, natural gas generation was the clear winner because of its low costs and ease of operation.

The marginal cost model has fostered this relation to new heights. Any electricity system undergoing market transformation began to experience a massive influx of gas

generation. The electricity markets became a fertile ground for gas generation. Especially with the gas turbines, ramping up or down was much easier than coal and incumbent generation technologies.

Therefore the current market model is inherently coupled with gas markets. The decoupling of gas from power markets is an attempt to slash the 40 years of the symbiotic relationship between electricity markets and gas. Can it be done? Of course, electricity markets are social constructs. You can always create them with new formulas, rules, or regulations.

Currently, our problem is not in the electricity market. Electricity markets are just reflecting underlying fundamentals. Severing this fundamental relation will practically dismantle the mechanics of power markets. We may have a day ahead market not reflecting marginal gas, renewable, or hydro opportunity costs. From another



vantage point, what if gas prices fall suddenly? Then, will there be a reason to talk about problems in the electricity markets?

The European market problem is in the benchmark gas price, namely TTF. Without solving the gas pricing mechanism, reforming on the electricity side will avalanche the difficulties. Electricity markets might work as intended if the gas price was 1/5th of the current value.

That doesn't mean that there is no need for electricity market reform. But reform has to be done for the right reasons. These reasons are obvious enough for market observers: A valuation mechanism for zero marginal cost resources and flexibility in the market.

Is electricity a homogenous product? I view electricity generation as a bundled service. There is an electron (electric field) generation and a time-shifting ability of this electron

generation. So there is a commodity and stock service bundled as generation services. A coal/gas generation is electron plus stock so it can be time-shifted within certain limits. Renewable electricity is just an electron generation, with no stock services. Therefore, underlying market should value time-shifting abilities better.

Is it the right time for an electricity market reform? I believe not. We are in the midst of an energy crisis. The root cause of this crisis is gas prices. If we cannot address that problem correctly, electricity markets may be broken for some time.

Escalating Concern about Air Pollution with Energy Crisis in Europe

Yaren Öztürk 

As Europe scrambles to minimize the impact of the energy crisis and make this winter as warm as possible, it could trigger other problems that could cause serious harm to the health of living beings and lead to death. As Europe tries to avert a widespread energy crisis, European households are turning to solid fuels such as coal and wood to heat their homes. According to Bioenergy Europe, a Brussels-based international organization comprising 41 associations, 143 companies, several academies, and research institutes, the demand for wood in Europe has already increased due to rising electricity prices. The return of stoves as the primary source of heat will significantly impact the environment and living beings. In addition to air pollution, using solid fuels for heating, especially old stoves in poor condition, has serious implications for human health. Using solid fuels for heating releases a range of fine particulate pollutants into the environment, including volatile organic compounds and dioxins, which are known to damage lung development and worsen conditions such as asthma and heart disease. In 2019, the European Union reported 307,000 premature deaths from particulate matter pollution. This problem, exacerbated by the energy crisis, is expected to affect Central and Eastern Europe, which has given the green light to solid fuels for home heating.

In Poland, where political debates have been raging for a long time about how this winter would play out, the opposition had warned for months of a possible coal shortage while accusing the government of abandoning the people to their own devices. When the Polish government initially recommended insulating homes, was faced with a coal shortage that could affect around 2 million households, Poland's de facto leader Jarosław Kaczyński suggested that people burn almost everything for heating this winter, except for harmful substances such as tires. At the same time, the Polish government announced a grant of 3,000 zlotys (€630) to help households that rely on coal for heating to buy more coal and other fuels. Around 35% of Polish households use coal for heating, and a total of 11.5 billion zlotys (€2.4 billion) will be allocated for the new subsidy program. Aleksander Śniegocki, CEO of the Reform Institute, a Polish think tank, said this means that Poland is risking years of progress towards cleaner air and environmentally friendly forms of heating. On the other hand, Hungary, a country heavily dependent on Russian gas, cancelled a draft law banning the felling of trees in protected forests to survive this winter and announced an increase in lignite production to secure household energy supplies. Judit Szegő, project manager at Levegő Munkacsoport, a clean air-focused non-governmental organization based in Hungary, said that this



decision is entirely wrong, as wet wood burns less than dried wood and releases more harmful pollutants into the environment. In Romania, where more than half of the population is heated with wood, the government has started distributing vouchers to subsidize the purchase of firewood this winter. In 2020, Bulgaria, which has failed to adequately heat the households of a quarter of its population, banned wood exports to third-world countries this winter to ensure adequate supplies for its people. Ugo Taddei, head of clean air at ClientEarth, an organization that provides legal assistance on climate and the environment, described this as a sharp reversal from the policies that many governments in Europe have adopted to reduce air pollution from domestic heating.

While governments across Europe are focused on getting through this winter and putting air pollution on the back burner, a group of German citizens recently sued the German government over "dangerously" high levels of air pollution. The seven plaintiffs claim that the government has failed to protect their health by failing to make progress in meeting the World Health Organization's recommendations for air quality levels set for 2021, violating their right to breathe clean and healthy air. While air pollution levels in German cities have fallen in recent years and are now generally in

line with European Union legislation, air pollution levels in Germany, like in many countries, remain above World Health Organization limits. The plaintiffs, including people with asthma living in Düsseldorf, Berlin, Frankfurt and Munich, four of Germany's seven largest cities, claim they breathe air with pollution concentrations four to five times higher than the World Health Organization's acceptable limits.

Europe is going through a turbulent period in the energy sector, and as winter approaches, the crisis and the accompanying debates are deepening. While many alternatives to Russian gas are on the table, at a certain point, promoting the use of coal and solid fuels, which is a quick fix, will inevitably have environmental and human health impacts. A study published last month shows how simply breathing in car fumes can awaken dormant cells and lead to lung cancer, and nearly one in 10 cases of the disease are attributed to air pollution. Experts warn that air pollution will worsen this winter as people turn to coal, wood and even garbage to heat their homes. At this point, how this winter will pass and the German court's decision in the case against the government will be decisive for the future.

How Will the Liz Truss's Cabinet Cope with the Energy Crisis?

Alperen Ahmet Koçsoy 

While the United Kingdom mourns the death of Queen Elizabeth II and prepares for the kingship of Charles III, there remains a persisting concern about how the UK can prepare for the energy crisis challenge in the forthcoming winter. Liz Truss, who became the new prime minister of the UK on September 6th, is the person of focus regarding the response to the crisis.

A long and hard way awaits Liz Truss and her cabinet. Markets have already reflected on this challenge, making pound sink almost to the historically low levels since 1985. The energy crisis is one major challenge. The other associated challenge, inflation in the UK in the fourth quarter of 2022, is forecasted at 14% by BCC (British Chambers of Commerce). The forecast was made before Russia declared that it would halt flows from Nord Stream 1 natural gas pipeline until Western sanctions are lifted; thus, inflation may surge even more.

Liz Truss answered concerns over the energy hardship in the coming winter by announcing a 150 billion pounds energy support plan named The Energy Price Guarantee. The plan is much larger than the previously set £400 Energy Bills Support Scheme. It includes a price cap limiting average annual household electricity bills to £2,500 for the next two years. For businesses, the period of help will be six months. After six months, the help will be provided to 'vulnerable industries.' The difference between the actual price the

energy suppliers would charge before and the capped price will be paid to energy suppliers with a £150bn help package. The prime minister also put out a £40bn liquidity facility to energy suppliers to help them cope with the emergencies and prevent them from running out of cash. Moreover, green levies, which are taxes on carbon-sourced electricity, will be ruled out temporarily.

However, there are concerns about financing the price cap. The decision to finance the energy suppliers for their losses from the price cap leads to fiscal loosening. If fiscal loosening exacerbates inflation, the monetary policy should be contractionary to handle inflation. In reaction to the new energy package, the Bank of England stated that it is likely to hike interest rates to bring down inflation. Although consumer inflation will be lower in the short run with the new package, it will rise later because of the new decision. This is the reason why the Bank of England is signaling interest rate raises. On the other hand, two of the suggestions to help finance Truss's new package are (1) unlinking the energy prices from natural gas prices and (2) windfall taxes.

In addition, the government looks forward to increasing the domestic supply, from the North Sea oil and gas to nuclear and renewables such as solar and wind. Nuclear energy's capacity is planned to progress up to 24 GW in 2050. Truss stated that she wants more oil and gas extracted from the North Sea. She told the Commons: "We will end the



moratorium on extracting our huge reserves of shale, which could get gas flowing as soon as six months, where there is local support for it.” Fracking to extract natural gas and oil has long been criticized by environmentalist circles, and shale gas exploration has been under a moratorium since 2019, when Boris Johnson was the prime minister. Boris Johnson already expressed his dubiousness about Truss’s confidence in fracking. She should be ready to get more criticism from Green Tories.

In her cabinet, there are names that can conflict over clean energy. Alok Sharma and Rees-Mogg are the most prominent two of them. Whereas Alok Sharma continued his role of COP26 Presidency in the new cabinet, Jacob Rees-Mogg was selected as the new Business and Energy Secretary. Sharma, who stated back in July that he may quit if the new prime minister does not make a firm commitment to the net zero goal, will be working under Rees-Mogg. Rees-Mogg is known as a climate skeptic. He accuses “climate alarmism” of high energy prices. Naturally, he is pro-fracking and said, “We need to be thinking about extracting every last cubic inch of gas from the North Sea.” The appointment of Rees-Mogg looks intentional, aligning with Truss’s plans for fossil fuels.

For some, incentivizing energy efficiency should come together with the measures of increasing domestic supply and freezing prices. As its peers in continental Europe are

trying to prevent energy waste, The United Kingdom should do the same to cut unnecessary demand to help finance the price cap on electricity bills. The government draws additional criticism, especially from Labour Party, for not imposing a windfall tax on energy companies. “I believe it’s the wrong thing putting companies off investing in the UK just as we need to be growing the economy,” the Prime Minister said. The UK “cannot tax its way to growth,” according to her. Since her leadership of the Conservative Party campaign, Ms. Truss has been signaling her neoliberal ambitions.

The United Kingdom and Liz Truss’s cabinet have a long winter ahead. With geopolitical uncertainties looming around, global economic hardships continuing and energy crisis persisting, not much is foreseeable. The government should implement pragmatic but also long-term policies. The opportunities in the North Sea might seem lucrative against Putin’s sanction on natural gas. However, it should also be remembered that (1) renewable energy sources such as wind power can be lucrative too, and (2) the United Kingdom should pursue its commitments to net zero. A sweet balance between short-run urgencies and long-run commitments; and between fossil fuels and clean energy is much needed at this moment.

Western Balkans: Regional Collaboration and Opportunities

Erkin Sancarbaba 

The Western Balkans have been characterized by crises and conflicts throughout recent history, as countries insisted on their theses and did not allow for diplomacy and compromise. Although there are still disagreements on political issues today, it is possible that collaborations and partnerships can replace these disagreements. By identifying the common problems of the countries in the region, the region's governments can establish solution-oriented joint initiatives, which will improve the welfare of the people in the Western Balkans. Especially in a period when the effects of the global energy crisis are deeply felt and countries around the world, especially the European Union, are trying to anticipate the effects of the crisis, the joint efforts of the Western Balkan countries to establish regional energy security will ensure long-term economic and political stability in the Western Balkans.

While regional cooperation is already increasing, political and economic entities such as the Open Balkan Initiative can enable governments to act in synchronization when implementing energy policies. Within the scope of the Open Balkan Initiative, it is observed that collaborations that are

important for the establishment of the region's energy security are being realized.

The Open Balkan Summit held in Belgrade on September 2 was the most recent reflection of the atmosphere of cooperation in the Western Balkans. Serbian President Aleksandar Vucic, Albanian Prime Minister Edi Rama, and North Macedonian Prime Minister Dimitar Kovacevski agreed to establish a joint mechanism for sharing surplus energy resources and food.

The leaders' agreement indicates that the Western Balkan countries intend to build energy security jointly. Moreover, the governments in the Western Balkans are open to cooperation with neighboring governments on all issues.

Moreover, leaders of the Western Balkan countries often express their willingness to cooperate with neighboring countries in the region. In particular, Albanian Prime Minister Edi Rama has stated that the European Union's vaccine policy does not include the Balkan countries and called the EU's vaccine policy a "shameful mistake". Rama



then noted that the EU's mistakes in vaccine policy should not be repeated in energy policy and called on the EU to help Balkan countries.

Although it is unknown to what extent the EU will contribute to the energy security of the Balkan countries, the call for help has not gone unanswered. Turkish Foreign Minister Mevlut Cavusoglu announced at the Open Balkan Summit, which he attended as a guest, that Turkey will help Balkan countries to ensure their natural gas needs during winter. This statement is an indication of the strategic importance attached to the Balkans by the neighboring countries.

It is also well known that Serbia, the region's most crucial country, is looking for alternatives to Russian energy. The Serbian government plans to purchase natural gas from Azerbaijan in 2023 and talks with Iraq and Venezuela to purchase oil. The aforementioned efforts of the Serbian government disprove the common argument that Serbia is making no effort to reduce its energy dependence on Russia. Therefore, given that the region's countries have demonstrated a will to diversify their energy sources, it is

necessary for all surrounding countries, including the EU countries, to support the Western Balkans economically and politically.

At the Open Balkan Summit, Serbia and Albania signed a Memorandum of Cooperation to increase cooperation in energy and mining. The memorandum envisages capacity expansion of renewable energy production facilities in both countries and cooperation between the two countries in the construction process of the Vlora LNG terminal to be built in Albania. A similar memorandum between Kosovo and Albania, which has signed in June 2022, envisaged mutual cooperation in developing the Vlora LNG Terminal.

As it will be recalled, on March 12, 2021, a Memorandum of Understanding (MoU) was signed between the US-based LNG company Excelerate Energy, the American multinational energy company ExxonMobil and the Albanian government for the development of an LNG terminal in the Port of Vlora. The project is critical for the diversification of the energy supply for Albania and the entire Balkans.



Through the LNG terminal to be developed in Albania, it will be possible to supply energy to neighboring countries. On July 14, 2022, Exceleerate Energy and Bulgaria's Overgas signed a MoU to sell LNG from the Vlora LNG terminal to Bulgaria. Under the MoU, Overgas is expected to purchase 1 billion cubic meters (bcm) of natural gas per annum for ten years through the proposed Vlora-Fier Pipeline, which is expected to connect to the Vlora Terminal and existing natural gas infrastructure in Europe's Southern Gas Corridor. It can be foreseen that similar agreements will be seen among the Western Balkan countries.

Another notable area of progress is the Serbia-led new power interconnections projects, which envisage the construction of new power connections between Serbia and neighboring countries. The Trans-Balkan Corridor project aims to make Serbia an energy hub for electricity distribution to the Balkan countries and other surrounding countries. Through the 250-kilometer power connection, 400 kV lines will be able to transmit electricity from Serbia to the borders of Bosnia and Herzegovina and Montenegro. Once the Montenegro section of the power connection is completed, it will be possible to transmit electricity between Montenegro and Italy via undersea cables. With the other planned transmission project, the Serbia-Croatia

interconnection line aims to build a new 400 kV electricity distribution line between the two countries.

The 170-kilometer-long Pannonian Corridor is expected to increase the electricity transmission capacity between Serbia and Hungary. On the other hand, the North CSE Corridor will double the existing interconnection between Serbia and Romania, and the Central Balkan Corridor will build a 400 kV line from Bulgaria to Montenegro and Bosnia and Herzegovina. According to Serbia's transmission system operator (TSO) EMS, all five projects are scheduled to be completed before 2035.

The role of the Western Balkan countries in ensuring the region's energy supply security has the potential to mitigate the negative impact of the global energy crisis on the region. Increased cooperation in the Balkans can be defined as a product of the common interests of the region's people. Political disagreements should not be valid reasons to undermine regional cooperation. There is a concrete will on all parties to increase energy cooperation in the region. As joint energy investments in the Western Balkans gain momentum, a stable regional energy strategy can be adopted.



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