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From the Editor: In this issue of showCASE, our analyst investigates the developments of the Western Balkans' sustainable energy transition in light of the 6th annual Berlin Process Summit proceedings. Given the political controversy, the success of the sustainable energy transition in the WB6 region hinges upon the political will of its leaders and an enabling partnership with the European Union.

Sustainable Energy Transition in the Western Balkans: Why Hydropower is Not a Solution?

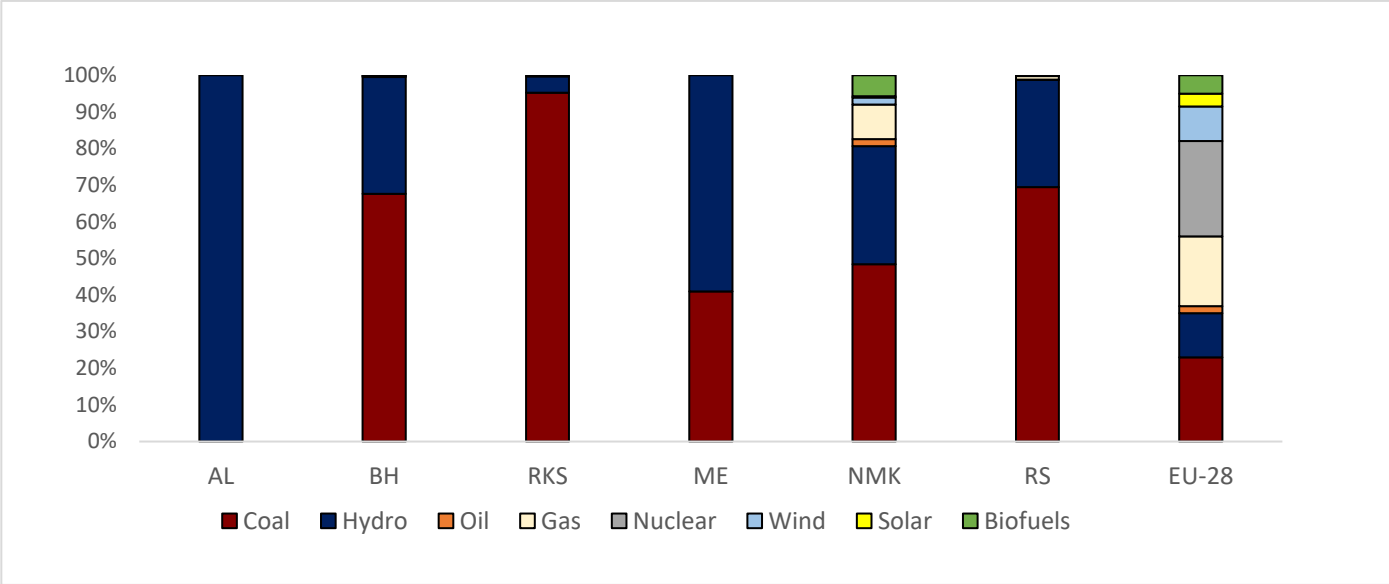
By: Kateryna Karunska, CASE Intern

The 6th annual Berlin Process Summit between the leaders of the European Union and the representatives of the Western Balkans Six (WB6 – Albania, Montenegro, North Macedonia, Serbia, Bosnia-Herzegovina, Kosovo), took place on 4 and 5 July 2019 in Poznań. The summit and the resulting Chair's Conclusions highlighted, among other things, the importance of the energy transition within the region and development of the renewable energy sources. The leaders of the WB6 confirmed their commitment to align with the European energy and environmental strands and planned to present a joint Green Agenda for the Western Balkans at the next Summit in Croatia. Furthermore, the Summit's environmental panel voiced concerns regarding the ongoing investments in construction of new coal plants and lack of energy transition in the region. Indeed, with over 70% of the average regional electricity production coming from coal (except for Albania, which generates 100% of its electricity supply from hydropower) and reaching as much as 97.5% in Kosovo, sustainable energy transition and diversification of the energy mix remain the chief bottlenecks in the development of the WB6 and their successful integration with the EU.

Energy market in Western Balkans

Despite a significant natural potential for the development of renewable energy sources and effective regional energy market integration, five out of six countries in the Western Balkans rely heavily on lignite. This most toxic and polluting form of coal remains the main source of the regional energy production, accounting for 64% of the total primary energy supply in 2018. In the same year, the local power generation mix was distributed as follows (Figure 1): lignite production and hydroelectric sources accounted for 48% and 46% respectively, followed by gas (4%) and fuel oil (2%). Additionally, 90% of the energy-producing facilities in the region were constructed before the 1990s, and the majority of the existent power plants, both coal and hydroelectric, have seen little investment and adaptation over the last 30 years (some of the systems remain unchanged since the 1950s). The obsolete state of the facilities effectively undermines energy efficiency and air quality in the region.

Figure 1Electricity generation mix in WB6 compared to the EU



Note 1 Author's own based on the data retrieved from the IEA Electricity Information 2018. Albania (AL): https://bit.ly/2ITAt9s; Bosnia-Herzegovina (BH): https://bit.ly/2FCZKmg; Kosovo (RKS): https://bit.ly/2FCZKmg; Montenegro (ME): https://bit.ly/2IU9SZV; North Macedonia (NMK): https://bit.ly/2ZOY5S4; Serbia (RS): https://bit.ly/2J9XvIc; EU-28: https://bit.ly/2Jb5YLb

Despite the commitment under the Energy Community Treaty to increase the share of renewable energy sources to between 21% (North Macedonia) and 40% (Bosnia-Herzegovina) by 2020, Western Balkan countries continue to invest in substandard and CO_2-intensive coal plants. Specifically, over the last five years, at least nine new lignite power plants (about 3 gigawatts in total with almost EUR 5 billion of construction costs), have been planned to be built across the region. Along with over EUR 1.2 billion of coal subsidies, the plans undermine both the progress of integration within the European Energy Community, which clearly prohibits any subsidies to the energy sector, and the commitment of the WB6 under the Paris Agreement to limit the CO_2 emissions.

Effective capacity development of the renewable sources and attainment of the set targets remain challenging for all the six countries in the region, particularly due to the countries' progress gaps in the energy mix diversification. As of today, Kosovo, a country with both some of the oldest power plants in Europe and inexistent air quality monitoring systems, stands out as the biggest regional emitter of greenhouse gases (GHG). In fact, Kosovo has the most coal-intensive energy market in Europe, with about 97.5% of the total power production coming from lignite and only 2.3% from hydroelectric sources. Conversely, in Albania, hydropower plants provide 100% of its power generation capacity. Other economies in the region have also attempted to develop renewable energy sources, mainly focused on hydroelectric power. For example, in 2018, hydropower represented 61% and 37% of total power production in Montenegro and Bosnia-Herzegovina, respectively. Yet, while in Albania the entire stock of hydroelectric power is renewable, in Montenegro it accounts for only 5.5% with about 55.5% coming from non-renewable hydroelectric sources such as pumped-storage plants. Thus, despite relatively high rates of hydroelectric capacity in the WB6 countries, it is not necessarily renewable or 'green' energy per se, because of its ecological footprint.

What is wrong with hydropower?

The EU strategy promoting development of the renewable energy sources incentivised solar and wind power, yet it is the hydroelectric projects that have benefitted most from the national and external investments provided by foreign commercial and multilateral development banks. Small hydropower plants (below 10 megawatts), which constitute around 91% of all the hydropower facilities in the region and whose number is set to grow by another 3000 units in the following years, appear to be the main recipients of the investment. Indeed, there is a controversy between the international environmental policy stance and the region-specific investment policies. Between 2006 and 2012, several

multilateral development banks (including European Bank for Reconstruction and Development (EBRD), European Investment Bank (EIB), and the World Bank) have invested a total of about EUR 301.1 million in hydropower (compared to only EUR 18.5 million in other renewable energy sources). While lower CO_2 emissions are said to be the main advantages of these developments, European Commission's research results indicated that hydroelectric sources, particularly the small ones, were not economically viable in the long-term. Thus, as highlighted by the report, while the contribution of the small hydroelectric plants to energy security and attainment of the renewable energy targets remained marginal (with 387 small hydroelectric plants accounting for only about 3% of the total power generation in the region over the 2001-2015 period), their development threatened the environment considerably.

Despite international environmental standards and the limited efficiency of small hydropower projects, about 49% of the 1640 hydropower plants intended to be built in the WB6 countries are to be located in the protected areas (among which 32% fall into the 'strictly protected' category) covering Ramsar and World Heritage Sites, Biosphere Reserves, and Natura 2020. Indeed, since 2015, both national and external stakeholders have continuously put forward the necessity to reshape extensive hydropower development in the WB6 and remove its detrimental effects on the unique bio- and aqua diversity of the region. In the case of North Macedonia, the 2014 progress report of the European Commission raised concerns regarding the potential environmental risks fueled by two major hydropower plants in the country. The 2019 progress report highlighted again the need for further investment in hydroelectric facilities to be compliant with the European environmental acquis. As for Albania and its 100% energy generation capacity coming from hydropower, it appears that the state should diversify its energy mix to tackle the 'intrinsic vulnerabilities' of the exclusive reliance on the hydroelectric facilities (including energy security) and adapt its hydropower development in compliance with the international environmental guidelines, natural protection and water sources preservation requirements. Last but not least, the lack of renovation of the hydroelectric plants and dams not only undermines their efficiency but more importantly contributes to the emission of methane – a GHG estimated to be about 30 times more harmful than CO_2.

Ironically, under the European Water Framework Directive, by 2027 countries will have to bring their bodies of water to a 'good ecological status' equal to low level of distortion from human activities. In the specific case of the WB6, it means the need to roll back the consequences of the intensive hydropower investments, put forward, among others, by the EU.

Alternative solutions

In contrast to the hydropower generation, which is volatile on yearly and seasonal basis and fails to guarantee energy security and independence, the natural characteristics of the WB6 region allow it to produce solar energy throughout the entire year. Similarly, all the six Western Balkan economies present a significant unexploited potential of wind power generation. As of today, none of these renewable energy sources benefits from domestic or international investments, which lowers the potential of the sustainable energy transition of the region. Finally, the landscape of the WB6 countries comprises a number of areas that are located at higher altitudes, are mountainous and/or unsuitable for agriculture but enjoy both greater insolation and more consistent wind speeds. Therefore, one of the options would be to lease these lands, which otherwise generate limited or no income, for the development of the renewable energy projects.

Given divergent geopolitical interests in the region and emergence of alternative investment opportunities for the support of traditional energy sources, the EU, in particular, should aim to increase attractiveness and accessibility of the green investments in the Western Balkans. At the end of the day, the success of the sustainable energy transition in the WB6 region hinges upon the political will of its leaders and enabling partnership with the European Union.

Trade, Innovation, Productivity

According to provisional data published on July 12th by Statistics Poland (GUS), Poland's trade balance from January to May was slightly positive, at PLN 900 million (EUR 200 million). Exports in the period totalled PLN 416.7 billion (EUR 97 billion), while imports were at PLN 415.8 billion (EUR 96.8 billion), growing by 9.6% and 7.7% y/y, respectively. This new data underlines the twin forces that have been shaping Polish trade flows in the past several years. On the one hand, Polish exports are on the rise as domestic producers progress up global value chains and consolidate their presence on foreign markets. On the other hand, domestic consumption, sustained by full employment and buoyed by government spending in the form of social transfers, keeps demand for imports high. Geographically, over 80% of Polish exports continue to be destined for the EU, while developing countries remain rather unexplored avenues for Polish producers (6.9%).

Labour Markets and Environment

The Polish government has amended the main principles governing its flagship Family 500+ program. The monthly support equal to PLN 500 per child (untaxed) is now available for all children up to the age of 18, regardless of the income earned by the family (previously the income criterion was taken into account in case of families with one child). As of July 1, 2019, parents of children who previously had not been entitled to the benefit can also apply for support. Some administrative procedures related to the program have also been simplified, e.g. issuing administrative decision on granting support is no longer necessary as parents can be informed about it via e-mail. According to the Ministry of Family, Labour and Social Policy, the amendments will allow 6.8 million children to benefit from support (including 2 million only children), and will cost the state budget PLN 31 billion in 2019 (as compared to the average 23 billion a year to date). However, the total cost of the program in 2020, the first full year of its implementation, is estimated at PLN 41 billion – the number that equals 1.8% of the expected Polish GDP that year and corresponds to 40% of public health spending. The program was introduced by the government in 2016 with the aim to boost fertility, but its most prominent effect is poverty reduction in the most disadvantaged large families.

Macroeconomics and Public Finance

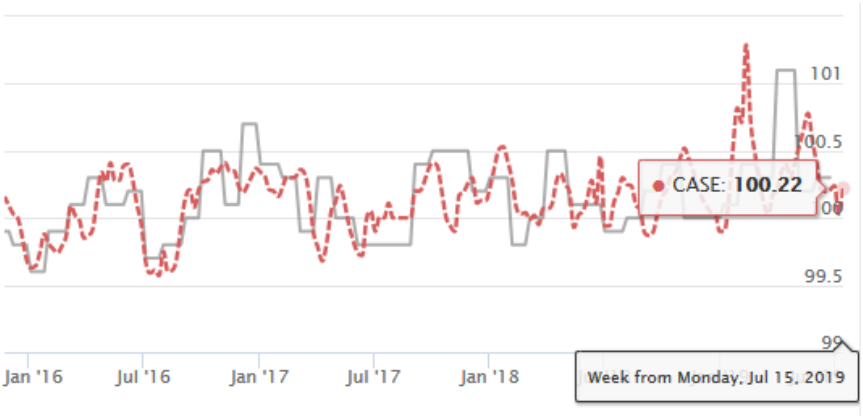
Industrial production decreased in Poland in June by 2.7% y/y and by 5.9% m/m, which is the first decline since April 2017. Although economists expected a slowdown (Bloomberg consensus: 2.0%), a negative growth rate was a negative surprise. Some part of the decrease can be attributed to calendar effects (fewer working days; a holiday mid-month), which is reflected in seasonally adjusted data that showed growth of 2.7%. The strongest decline was recorded in tobacco, clothing, metal, coal mining, and automotive sectors. The fact that the slowdown has affected as many as 20 industrial sectors, both oriented towards exports and the internal market, shows that there must have been other factors at play than just economic slowdown in the euro area. An important factor that might have contributed to the decline was unusually high temperatures as for June. We expect a rebound in July and we maintain our forecast of industrial production at 3.8% and of GDP at 3.7% in 2019.

The Weekly Online CASE CPI

The online CASE CPI is an innovative measurement of price dynamics in the Polish economy, which is entirely based on online data. The index is constructed by averaging prices of commodities from the last four weeks and comparing them to average prices of the same commodities from four weeks prior. The index is updated weekly. For more information on our weekly online CASE CPI, please visit: http://case-research.eu/en/online-case-cpi.

The mid-July read-out of the CASE Online Inflation Index indicates a decreased price dynamic compared to May and June; however, the overall level of prices has been increasing steadily since the beginning of the year. In fact, we have recorded only one week when CASE Online Inflation Index fell below 100 since January. This phenomenon comes across as unusual, as prices of car fuels are only slightly higher than in January. Average prices of *Food and Beverages* have increased since June by 0.4% – the most pronounced shift upwards was observed for fish (+ 1.7%), fresh meat (+1.1%), and non-alcoholic beverages (+1.5%).

Our Weekly Online CASE CPI



Online CASE CPI (– – – –) vs GUS CPI (——)

Monthly CASE Forecasts for the Polish Economy

Every month, CASE experts estimate a range of variables for the Polish economy, including future growth, private consumption, investments, industrial production, growth of nominal wages, and the CPI.

CASE economic forecasts for the Polish economy
(average % change on previous calendar year, unless otherwise indicated)

	GDP	Private consumption	Gross fixed investment	Industrial production	Consumer prices	Nominal monthly wages
2019	3.7	3.9	3.3	3.8	2.7	7.5
2020	3.1	3.3	2.5	2.5	3.0	4.0

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