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BULLETIN

EU-South Caucasus-Central Asia Electricity Infrastructure Projects Face Challenges

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The construction of the Black Sea Submarine Cable and the Trans-Caspian Submarine Cable would enhance EU energy security and weaken Russia's influence in Armenia, Azerbaijan, Georgia, and Kazakhstan. Doubts about the economic rationale of the projects should not overshadow the potential benefits to the EU of the political and economic stabilisation of the South Caucasus and Central Asia and a "just" energy transformation of countries that derive significant revenues from hydrocarbon exports.

The energy transition and the electrification of economies are driving the development of cross-border electricity interconnectors. They provide additional energy and stabilise electricity systems characterised by increasing fluctuations and seasonality of RES generation. High Voltage Direct Current (HVDC) interconnectors are becoming more important due to their low energy transmission losses, high power output, and the possibility of laying HVDC cables on the seabed. Once such interconnector has linked Denmark and the UK since 2024, and there are also plans to connect Greece, Cyprus, and Israel together, as well as Spain and Morocco. The EU, which is becoming a net electricity importer due to the energy transition, the loss of Russian energy supplies, and rising consumption, could take greater advantage of such connections. The planned Black Sea Submarine Cable (BSSC) and Trans-Caspian Submarine Cable (TCSC) offer the opportunity for cooperation with Armenia, Azerbaijan, Georgia, Kazakhstan, and Uzbekistan, countries with relatively proximity and high potential for RES development, which, in view of the global energy transition and the phase-out of fossil fuels, will be forced to replace lost revenues from hydrocarbon sales with green energy exports.

Project Assumptions and Economic Challenges. The construction of the BSSC to connect the South Caucasus with the EU is envisaged in the 2022 Agreement on Strategic Partnership in the Development and Transmission of Green Energy between Azerbaijan, Georgia, Romania, and Hungary. It provides for the construction of a parallel fibreoptic and HVDC link with a length of 1,195 km, a voltage of 500 kV, and a planned capacity of 1,000-1,500 MW. The cable is to connect the Georgian port of Anaklia with Romanian Constanta and is expected to be the longest of its kind worldwide. The estimated cost is around €3.5 billion, with an expected completion date of 2030.

However, preliminary Western analyses (e.g., by the World Bank) show no significant economic justification for the project. In an optimistic scenario, the BSSC project's expected return on investment is 20 years at the earliest, and in less favourable options, it will be infeasible. This is due to the technical challenges of laying 700 km of cable at depths of more than 2,000 m, HVDC supply chain issues, and the need to bypass Russian and Ukrainian waters. The lack of adequate RES capacity and unclear plans for its development in Georgia and Azerbaijan to power the link is also a challenge, as using fossil fuels will reduce the project's viability due to the Carbon Border Adjustment Mechanism. The connection of a cable in the Dobrudja region, where the Romanian authorities plan to expand RES capacity, including offshore wind farms, could lead to disputes. Indeed, cheap energy from the Caucasus could reduce the profitability of these projects and increase the cost of grid development in

Romania. Increasing competition from Turkey's energy exports to the EU could also be problematic.

There is a stronger economic rationale for the construction of the simultaneously planned fibreoptic cable, allowing a direct connection between the EU and the countries of the South Caucasus and Central Asia (the existing ones run through Russia). The development plans assume that digital services to EU players will be an essential part of their economies.

Plans to build the BSSC have impeded talks on the TCSC to connect Kazakhstan and Uzbekistan with Azerbaijan. In 2023 and this year, they signed memorandums on the integration of energy systems and the establishment of such a link to export green energy to the EU. This could be the first trans-Caspian energy project, made possible by the adoption of the Caspian Sea Convention in 2018. No official details on the technical or financial aspects of the investment are available at this stage. Its implementation will depend on the establishment of the BSSC or the development of links with Turkey.

Regional Relevance. Both projects could bring tangible strategic and political benefits: strengthening cross-border connections, attracting foreign investors, improving energy security, and enhancing economic integration. They would also reduce dependence on Russia, which has stakes in the Georgian and Armenian energy sectors and is a major supplier of oil and gas to them, as well as a transit country for fossil fuel exports, for example, from Kazakhstan to the EU. The BSSC would improve conditions for the development of RES in the Caucasus, particularly the construction of wind farms in the Caspian Sea and decentralised PV installations. It would also enable the implementation of the TCSC, which would support the energy transition of Central Asia and improve its negotiating position with China, which is interested in importing green energy from them.

In the Caucasus, Azerbaijan is particularly interested in implementing the BSSC, planning to become a major producer of green energy to be transmitted to the EU, and Georgia, wishing to play mainly the role of transit country. Armenia is also ready to join the project, but its involvement depends on the progress of peace negotiations with Azerbaijan and its policy towards the EU. The realisation of Armenia's announced investment in a new nuclear power plant (the contractor has not yet been selected) would further increase the country's importance in stabilising the BSSC. Kazakhstan and Uzbekistan are monitoring developments and hoping for project synergies to enable them to switch from hydrocarbon exports to green energy.

The EU's Role. Among the EU countries, Romania and Hungary, which are expected to become energy consumers and transit countries, are advocates of the BSSC. The investment is also supported by Bulgaria, which announced in June 2023 that it would join the initiative, as well as by Serbia, Ukraine, and Moldova. This is due to the significant loss of power in the region caused by Russian destruction of Ukrainian infrastructure (Ukraine was an important energy exporter), the closure of local coal-fired power plants, and rising energy demand, resulting in record electricity prices.

The EU has welcomed the plans to build the BSSC and it included the project in its 10-year Network Development Plan (a pan-European programme to expand energy connections) in 2022. Still, the level of EU financial commitment to the project has yet to be determined. Georgia and Romania plan to apply before the end of this year for inclusion on the list of Projects of Mutual Interest, which will entitle it to receive additional administrative and financial support.

However, a positive opinion and further EU support, including financial support, for the BSSC may depend on factors not directly related to the investment appraisal. The victory of the Georgian Dream in the autumn elections in Georgia will negatively affect the country's relations with the West, deepen its dependence on China, and strengthen Russia's influence in the infrastructure and energy sectors. As a result, investments may be delayed or suspended. The EU may not support the BSCC project unless there is deeper integration of the Caucasian energy market and improved interoperability with the EU market, which requires reforms and alignment of energy sector regulations with its standards. It will also be important to improve the investment climate for EU companies and RES development strategies in Georgia and Azerbaijan.

Conclusions and Recommendations. From the point of view of the EU and Poland, the political benefits and improved energy security of Central and Eastern Europe (including potentially supporting the post-war reconstruction of Ukraine) outweigh the economic costs of the BSSC project. It remains vital to link possible EU financial and administrative support to internal reforms (including, for example, Armenia's accession to the Energy Community), regional cooperation and the involvement of EU firms in the investments. Ensuring the security of the planned infrastructure on the Black Sea remains a challenge, which should be considered in the project's design phase.

EU diplomacy could use the involvement of the South Caucasus countries in the BSSC project to improve relations between Azerbaijan and Armenia, the green transition, and energy market reforms. In the context of COP 29 in Baku, the initiative could be an example of the EU's global commitment to a "just" transition and offer an alternative to oil states on negotiating a transition away from fossil fuels.

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