Up For Grabs?
The Western Balkans' Aging Energy Systems Place It Between East and West

The Dinaric Alps that span the Balkans have the highest precipitation levels in Europe. The significance of this natural resource was recognized by the Marshall Plan for Europe in 1947, but its potential has been systematically undermined since the 1970s in favor of lignite-fired power plants. Today, the area's existing and potential hydropower capacity will determine Central Europe's ability to deploy intermittent renewable energy to (sustainably) reduce its dependency on Russian natural gas. Use of this massive strategic resource depends on a self-sufficient local electricity market and reforestation of the territory, both of which are dependent on the quality of local governance, which is influenced by external interests. This article highlights the massive opportunity of unlocking the Balkans' capacity to bolster European energy security and the unfathomable cost of the failure to act.

When European ministers of energy met on October 17 to negotiate the European Union Electricity Market Reforms,1 the ministers from the Western Balkans were not present: they had not been invited. Their exclusion is more than a bureaucratic over-

sight; it reveals the reality that the signatories of the Energy Community Treaty² (EnCT) and Switzerland are not embraced as partners in stabilizing the EU energy market,³ though six Western Balkan nations have EU candidate country status.⁴ Moreover, it means that energy market reforms were decided without full consideration of the Western Balkans and their massive hydropower potential, which could help bolster European energy security. Harnessing this strategic potential requires a long-term commitment to use this renewable energy source—and letting the opportunity slip away only adds to the challenge of securing other long-term energy contracts.⁵ Failing to act on this now increases EU energy-security risks as war rages on the continent,⁶ exposing both industry and citizens to greater instability and higher costs. It also opens the door for the Russian Federation, China, and others to further expand their influence over Balkan energy systems and governance in general. This piece explores how the Balkans arrived (again) at this East-West crossroads, what’s at stake, and what can be done to both decarbonize Western Balkan energy systems and link the region to the European market.

SET OF PROBLEMS

After fifty years of operation in the Western Balkans, the legacy energy system⁷ is approaching the end of its useful life. The probability of failures in its lignite-fired power plants⁸ has increased, rendering more than 60 percent of electricity generation unreliable. Oil refineries in Skopje (North Macedonia), Sisak (Croatia), Novi Sad (Serbia) and Brod (Bosnia and Herzegovina) are not operational. Lignite mines are nearly exhausted in Serbia, North Macedonia, and Bosnia and Herzegovina and are exposed to flooding.⁹ Aluminum smelters in Montenegro and Bosnia and Herzegovina are not operating due to the lack of competitive electricity supply, making bauxite available for exports to China.

---

To make matters worse, the power plants in this region emit more sulfur dioxide than the power plants of EU member states combined due to their fuel quality, age, and inefficient technology. This constitutes a dramatic violation of basic human rights following the United Nations General Assembly Resolution from July 2022, and a breach of material obligations under the EnCT (see figure 1). For more than fifteen years, the EU progress reports for the Western Balkans have not documented these treaty breaches in the chapter on the rule of law, and have not recorded environmental impacts in the chapter on human rights.

More than half of the region’s population uses fuel wood as the main source of heat, causing a thirty-year period of deforestation. Biomass now accounts for about 15 percent of the energy balances in Western Balkan nations, which is inaccurately presented as an increase in renewable energy use. The resultant deforestation reduces the functionality of hydropower in the former Yugoslavia and Albania. Existing available hydropower capacity is used to make up for domestic power-generation failures and weather sensitivity, so that the inherent flexibility of hydropower is not available to the EU market. Notably, the Russia-to-Balkans natural gas supply infrastructure is exposed to geopolitical risks and could be deliberately targeted, disconnected, or subjected to incremental transit taxes, which would further constrain the use of Balkan hydropower to support the European grid.

---


The Large Combustion Plants Directive, in effect in the Energy Community as of 1 January 2018, regulates the emission levels of sulphur dioxide (SO2), nitrogen oxides (NOx) and dust from existing thermal power plants. The recorded data for 2022 still show large non-compliance with the emission ceilings for SO2, NOx and dust in the Contracting Parties and with the progressive decrease of the ceilings, the breach is intensifying in some cases. To address these breaches, the Secretariat started dispute settlement cases in 2021, which are still ongoing and will be addressed by the Ministerial Council.

### Figure 1: Breach of Material Obligations to Reduce Harmful Emissions under the Energy Community Treaty

In 2022, the breach of the SO2 emission ceiling continued in all WB6 Contracting Parties implementing NERPs. With the exception of Bosnia and Herzegovina where a minor decrease was observed, absolute emissions grew, in the case of Kosovo* and North Macedonia significantly. In combination with the gradual decrease of the ceilings, this means that the breach intensified: Bosnia and Herzegovina still surpassed the ceilings more than eight times, while Serbia close to five times and North Macedonia more than seven times.

Bosnia and Herzegovina as well as Serbia managed to reduce their total NOx emissions compared to 2021, while in the case of Kosovo* and North Macedonia, absolute emissions showed a growing trend. In the case of North Macedonia, the level of increase was particularly large (over 60%) which is of concern even if no breach of the ceilings occurred. Bosnia and Herzegovina and Kosovo* did not comply with their ceilings for NOx emissions. The fact that NOx ceilings are to decrease gradually by approx. 50% between 2018 and 2023 will make compliance increasingly difficult in the coming years for all parties.

The breach of the dust ceiling limits continued in Bosnia and Herzegovina, Kosovo* and North Macedonia. Serbia achieved compliance with the dust ceiling also in 2022 despite a minor increase of dust emissions compared to 2021. In the case of Bosnia and Herzegovina, dust emissions were reduced significantly (by more than 20%), yet they surpass the ceilings by almost three times. Despite a minor decrease reported by Kosovo*, emissions are more than six times the limit, which is caused by the decreasing ceiling. In the case of North Macedonia, emissions increased significantly and were approximately two and half times the ceiling in 2022.

Source: The Energy Community Secretariat, Energy Community CBAM-Readiness Tracker, June 2023, 10, CC By 4.0 license, no changes made, https://creativecommons.org/licenses/by/4.0/.

**Note:** Given the nature of air pollution, the above emissions data automatically imply breaches of the United Nations Economic Commission for Europe’s Convention on Long-range Transboundary Air Pollution. In physical terms, the data signal, for example, well over half a million tons of sulfur dioxide emissions per year. This pollution could become the subject of complex cross-border disputes.

---


2 Follow up most recent developments at https://unece.org/environmental-policy/air.
A lack of support for the EnCT, as a critical legal framework, and the fragility of the power generation system add a new layer of insecurity to the region’s known dependency on natural gas and oil imports. During the last thirty years, reduced maintenance, environmental neglect, and effective divestment of power infrastructure—made possible by cross-subsidy from existing hydropower—have been key tools in the Western Balkans to help subsidize fiscal, political, and social stability. Implicit credit, by delaying payment for oil and natural gas imported from the Russian Federation, continue to provide further fiscal liquidity while generating malign “off balance sheet” debt. That fiscal illusion is losing its power to deceive amid the hard realities of aging lignite mines and power plants, oil and gas supply insecurity, and the associated implicit debt. The quest for fiscal revenues and quick fixes for energy security entices political leaders to consider a variety of political compromises and alliances.

This set of problems has placed the Western Balkans “on tender,” so to speak, seemingly up for grabs in a competition between the transatlantic community and a combination of the Russian Federation, China, and various other power centers. The choice between European integration with a transatlantic future or participating in a Sino-Russian system is outlined below.

AN OPPORTUNITY FOR EUROPEAN INTEGRATION

In November 2022, the Western Balkan Summit in Berlin resulted in the Declaration on Energy Security and the Green Transition in the Western Balkans, which reads as follows:

We ask the Energy Community, together with other relevant regional organizations and initiatives, to conceptualize and propose regionally coordinated approaches to phasing out coal-fired power generation, as well as energy security mechanisms and carbon pricing schemes with the ultimate objective to join the European emission trading scheme and avoid the application of the planned carbon border adjustment mechanism (CBAM) by the European Union.

This declaration is endorsed by the European Union, and the Regional Cooperation Council (RCC) is tasked with coordinating the implementation of the Green Agenda for Western Balkans (GAWB). Accession to the EU emission trading scheme (EUETS) would provide an automatic exclusion from CBAM in Article 2(6). It also would advance integration into EU carbon and financial markets while promoting fair trade. Beyond that, EUETS inclusion would open up the possibility of a free allocation of carbon credits for

---


the decarbonization of the power system. Although the free allocation of carbon credits to modernize the energy sector in Central Europe has delivered mixed results over the last fourteen years, there is enough experience to streamline this mechanism toward the rapid phaseout of coal, as prescribed by GA WB. It is the first opportunity for Western Balkan power companies to access a financial mechanism that incentivizes accession to the broader European market framework while being beyond the control (and sovereign debt limits) of the local governments.

Financial support to the Trans Balkan Electricity Corridor calls for the rapid displacement of lignite-fired plants (which now feed more than 70 percent of electricity into the corridor) and decarbonization. Financial mechanisms within EUETS are seen as the cornerstone facility to achieve this transition. However, one year later, a cohesive plan for integrating the region into EUETS is still missing in action.

And now a new model has surfaced. In October, the Energy Community Secretariat reported to the Tirana Summit that during the intervening period they had promoted an entirely different model: the “regional ETS,” an untested trading scheme lacking market liquidity and any financial capacity to support much-needed investments in new regional power generation. Moreover, such an approach is not envisaged by the EU Emissions Trading System (ETS) directive and does not guarantee irreversible exemption from CBAM. The countries are instead advised to seek exemption under CBAM Article 2(7), which is temporary and reversible. As CBAM’s import duty becomes a credible threat to the Balkans, it casts a shadow on the EU’s Stabilization and Association Agreements, specifically its free trade provisions and its political purpose to promote EU enlargement. As a result, the lack of a cohesive plan exposes the entire region to uncertainty about its economic viability and political destiny, while depriving it of any means to wrestle with its energy supply crisis.

Such shortcuts in operationalizing complex policy objectives are unfortunately not without precedent in the region. EU grants successfully displaced private investments in the liquid natural gas (LNG) terminal at the Port of Rijeka in Croatia a couple of years ago. As a result, the (now) government-owned terminal is a couple of times smaller, less efficient, less functional, and less competitive than its private competitors. The terminal is placed at a heavily regulated interface between the global LNG market and the Central European gas market that actually increases transaction costs, making LNG less competitive versus pipeline gas than would have been the case under private-sector operation of the terminal. Now a similar scenario is unfolding in the Port of Bar in Montenegro. This helps to explain Sofia’s motivations in levying a tax on Russian gas transiting Bulgaria to Hungary and Serbia, which aims to reduce the competitiveness of Russian gas versus (insufficiently competitive) LNG terminals in the region while also adding to state coffers.

---


Figure 2: Six Large Lignite-Fired Units in Serbia Suddenly Failed (morning of December 12, 2021)

Source: Extracted by author from EMS (Power Grid of Serbia company), https://ems.energyflux.rs/#/dashboard.

Note: The combined effect of technical fragility and the poor quality of lignite coal caused the simultaneous failure of six baseload thermal power generators with capacity of nearly 2000 megawatts electric (MWe)—nearly half of the total available thermal capacity in Serbia. In technical terms, that is categorized as an n-6 event, while technical standards require a power system to be capable to sustain an n-1 event (failure of only one unit at a moment in time). In both Serbia and the region, hydropower production has ramped up to make up for these failures and prevent power-system breakdown and blackouts.
Support for the Western Balkans comes at a meaningful cost to European taxpayers; as a result, it should also realize tangible benefits for them. So far, the EU has not put forth a comprehensive plan to integrate the Western Balkans into EUETS, missing an opportunity to lay the groundwork to capture strategic benefit to heighten EU energy security, reduce energy transaction costs, and promote greater access to transport infrastructure. Although an Energy Community governance impact assessment has never been conducted, it is fair to say that the quality of governance has not improved over twenty years, while private-sector investments are missing or have been crowded out. Meanwhile, the EU has failed to stand behind its treaties and address the enormous environmental impacts on basic human rights in the Western Balkans. For both the EU and the Western Balkans, there are costs and unrealized benefits.

OUTSOURCING SECURITY OF SUPPLY?

Gazprom Neft of Russia acquired a controlling stake in Serbia’s oil industry (Naftna Industrija Srbije) in 2008 under the 2007 comprehensive energy agreement between Serbia and the Russian Federation. It was a rather small financial investment, comparable to some modest, low-cost real estate deals at the time, but its strategic impact was massive. The deal effectively granted Gazprom (and thereby the Russian Federation) control over Serbia’s national upstream crude oil resources, domestic natural gas production, and domestic retail market for oil refined products, which collectively generate a quarter of Serbia’s national budgetary revenues. This complements Gazprom’s dominance in natural gas imports. The Russian Federation’s control of ammonia fertilizers for Serbia’s agriculture industry is augmented by control over diesel supply. Gazprom Neft also acquired control of Serbia’s vast geothermal potential—one of the largest on the European continent. It controls most of Serbia’s national petroleum storage capacity that determines compulsory oil stocks and remains the largest (if not only) customer of the Adria oil pipeline in Croatia, thus dictating the economics of that company. Furthermore, Gazprom is locally involved in media, provides financing for religious organizations, and is represented in European institutions. Robust revenue streams allow further acquisitions of renewable energy projects and upstream concessions in the region, preventing the development of alternative resources.

Russian malign influence is further visible in Turk Stream, a project with much broader implications than the pipeline itself. The project calls for an existing pipeline system connecting Bulgaria to Hungary via Serbia to be extended to Bosnia and Herzegovina and Kosovo, while North Macedonia would be supplied via Bulgaria. Capacity is reserved for several natural gas-fired power plants including already-built combined-cycle plants in Skopje (North Macedonia), and Pančevo (Serbia). Planned power generators include 500 MW units in Nis, Belgrade, and Novi Sad (Serbia); Banja Luka (plus

one more in Bosnia and Herzegovina; and Slavonski Brod\textsuperscript{45} (Croatia). Most of the design and permitting has been done, and Gazprom and Chinese contractors and lenders have forged a strategic alliance.

Russian investors, with Chinese technical and financial support, present formidable market power capable of massive strategic impact with relatively modest direct investments. Conversion from lignite to gas for power offers (partial) decarbonization,\textsuperscript{46} with the added “benefit” of outsourcing energy security to the Russian Federation, which may govern national fiscal systems as well as indigenous hydropower potential through simple control of a pipeline valve.

This Sino-Russian alternative lets regional governments off the hook: they are relieved of the responsibilities for environmental impacts, human rights, fiscal discipline, sustainable energy security, and the rule of law, eliminating any need to improve the quality of governance and increase transparency in line with European standards. The model delivers fiscal support and a notion of energy security (even if it remains entrusted to hands beyond local governments). Unfortunately, this alternative worsens the region’s situation on the ground. Continued poor governance repels any private investment in energy projects and makes the region more dependent on its “security outsourcing contract,” an approach that will prove unsustainable in both a technical


and political sense. The more money to be made from oil and gas sales in Europe, the greater the payback from the investment in sustaining bad governance in the Balkans.

**AN ACTIONABLE PLAN**

The Energy Community Treaty (EnCT) has thus far failed to deliver on its critical material obligations. However, it provides the only legal framework that (at least nominally) links the Western Balkans to the EU energy market. It is crucial to preserve the EnCT and restore its material obligations in a context that includes the Paris Agreement (reached at a UN Framework Convention on Climate Change Conference of the Parties in 2015), and with a refreshed understanding encompassing environmental impacts and human rights, the current and likely future energy security situation, and geopolitical realities. A thorough evaluation of reality and a newly upgraded and relevant treaty are urgently required. The UN, the United States, the World Bank, and the EU—which convened in 1999 to 2005 within the framework of the Stability Pact for Southeastern Europe (the predecessor to the RCC) to create the EnCT—have the capacity to initiate this process.

In its role to decarbonize the Western Balkans and rebuild Ukraine’s energy infrastructure, the EnCT will need to facilitate the largest investment undertaking in a generation with the potential to alter Europe’s energy supply for a more resilient and sustainable future. To make this sensitive task more feasible, the EnCT Secretariat, currently in Vienna, should be relocated to a NATO member state to ensure that delicate planning can take place in a secure environment.

A roadmap of the accession of the Western Balkans to EUETS by 2026 and use of the carbon-credit allocation mechanism through 2034 is necessary to overcome uncertainties and facilitate investments. In order to avoid the shortcomings evident in use of a similar mechanism with Central Europe, allocation of EUETS allowances for decarbonization (or, effectively, coal phaseout) of the energy sector within the EUETS system must be handed over to particular plant operators in the Balkans, in line with effective decarbonization plans and commercial commitments to execute them. Following the principle of additionality, these plans should combine into a much higher ambition of decarbonization than is currently expressed by the national energy and climate plans (NECPs). Once a carbon-intensive plant is phased out, a proportion of allowances could be sold at the EUETS market to European operators, who are making five times more economic value per ton of CO2 than in the Balkans. Sustainable energy portfolios would emerge rapidly. It is only sustainable energy—not simple combustion of lignite—that is suitable to support “nearshoring” of both manufacturing and provision of strategic materials and rare earths to the Balkans.

There is a hope that, this time, the EU is going to “walk the walk” following the president of the European Commission’s announcement of “Rule of Law Reports” for countries in the accession process. Addressing the rule of law, fiscal discipline, and the environmental violation of human rights may set the stage for an improvement in the quality of governance.

However, proper facilitation and conditions for investments are not enough. An EnCT decarbonization roadmap needs to be augmented by actual physical interventions. Actual investment opportunities must be formulated to ambitiously exceed the nominal NECP. It will require the leadership of the transatlantic community, a keen understanding of strategic implications, and deployment of the most modern technologies and commercial wisdom to make it happen. Herein lies a call to action: bring the public and private power generation companies of the Western Balkans to the table. Present them with the opportunity to be a critical part of the solution. Operators of the region’s power systems have suffered from systemic underinvestment, with technical failures getting more frequent. These stakeholders, not their governments, are now struggling for survival. For them, the fight for energy security is one that impacts the future of their families, their communities, and their employment. They have skin in the game to make the best use of domestic resources, avoid

---


import dependencies, bring hydropower to the European market, deliver heat and power to domestic customers, and fight bad governance. They need a commercial opportunity beyond "just transition funds." They need the opportunity to secure meaningful investment. Funding private sector-led opportunities from existing commercial export credit and decarbonization funds is a realistic option.

European public funds and the Regional Climate Partnership involving Germany and six Western Balkans states present a great opportunity to overcome energy poverty in the region. If effectively planned and executed, it could reduce network losses by one-third and introduce sustainable and clean energy to households and local communities: this would improve the lives of millions of people and bring them toward European integration. It is not about raising awareness further but about actual projects that will clean the air.

Synchronized deployment of these commercial and public funds would create an opportunity for European industry as well. It would respond to the EU Economic Growth Plan for the Western Balkans by better targeting and further mobilizing commercial funds. It would increase technological sophistication while raising demand for advanced technology and equipment that US, UK, Japanese, South Korean, and European industry could deliver. It is a real opportunity for reindustrialization.

It is now time to cancel the alternative that involves outsourcing energy security. It is up to key stakeholders to devise specialized institution and give birth to a framework that will deliver this much-needed change.

---

53 Energy Community, “Just Transition Initiative.”

ABOUT THE AUTHOR

Aleksandar Kovacevic contributed some critical inputs to the Energy Community Treaty process regarding key pillars and its inception. An energy economist, he provides policy advice and consulting services to institutional clients including the World Bank, the International Energy Agency, and the USAID as well as a range of commercial clients. Notably, he provided guidance to the UN Office for the Coordination of Humanitarian Affairs on the reconstruction of energy infrastructure in the Western Balkans after the 1999 war. He combines knowledge of energy technology with an understanding of energy policy and geopolitics in the Balkans and the Black Sea region.


UP FOR GRABS? THE WESTERN BALKANS' AGING ENERGY SYSTEMS PLACE IT BETWEEN EAST AND WEST


