

ENERGY AND CLIMATE PROGRAM

In 2023, the Energy and Climate Program focused on the following topics:

- **Energy and climate security.** In 2023, CSD expanded its data-driven instrument – the Energy and Climate Security Risk Index (ECSRI) to cover Ukraine, in addition to Bulgaria, Romania, Greece, Germany and Italy. CSD experts strongly advocated for the strategic decoupling from Russian oil in Bulgaria and Southeast Europe throughout the year. The team developed detailed diversification and natural gas phaseout scenarios for the SEE region. CSD also began to globalise its analysis of the Kremlin Playbook by starting a pioneering assessment of the Russian economic influence in Latin America.
- **Decarbonisation, just transition and social acceptance.** The Energy and Climate Program has taken an active role in providing data-driven assessments of the decarbonisation pathways for Bulgaria using scenario modelling, related to key policy instruments such as the Territorial Just Transition Plans (TJTTPs) and the Climate Neutrality Roadmap as part of the National Recovery and Resilience Plan (NRRP). CSD continued its long-term commitment to providing transition challenges solutions and conducted an in-depth analysis of the key socio-economic characteristics of Bulgaria’s coal regions. CSD also expanded its cooperation with the Bulgarian government on the revision of the National Energy and Climate Plan (NECP).
- **Energy efficiency, energy poverty and air quality.** CSD extended its detailed analytical work to study the macro and microeconomic impacts of the introduction of carbon in Central and Eastern Europe (CEE) on energy poverty. The team is also coordinating an instrument that quantifies the multiple benefits of energy efficiency and proposes local-level policy solutions.
- **Cutting-edge low-carbon technologies.** The Energy and Climate team has been analysing the existing legal, administrative and financial barriers to low-carbon investments. In 2023, the program reviewed the existing potential for the easiest-to-implement renewable energy projects, and worked on mapping the offshore wind energy potential in four countries – Poland, Croatia, Romania and Bulgaria, by assessing existing governance barriers for the development of the sector. As part of these efforts, CSD supported the improvement of the Law on Renewable Energy in Marine Areas aimed to streamline the investment process in Bulgaria.

I. Energy and climate security

In 2023, the global energy and climate security situation remained difficult despite the West's efforts to reduce the dependence on the imports of Russian fossil fuels. Europe still faces significant challenges linked to persistent energy supply shortages, way higher-than-usual energy prices and the painfully slow process of coal phaseout. With its **Energy and Climate Security Risk Index (ECSRI)**, CSD offers a data-driven policy instrument that allows political and business leaders to track the development of these risks over time and understand how they are interconnected. Following Bulgaria, Romania, Greece, Germany and Italy, the Index was expanded to include Ukraine. The key findings and recommendations were summarised in a policy brief titled *Moving Forward Together: Energy and Climate Security for Ukraine and Europe*. Building upon this, CSD experts prepared a **study** for the European Commission on alternatives of GDP related indicators. It



proposes an integrated approach for assessing the progress of European countries towards sustainable development and well-being under a “beyond GDP” paradigm.

CSD also developed detailed diversification and natural gas phaseout scenarios for the SEE region published in the report *The Future of Natural Gas in Southeast Europe*. It reveals three scenarios for natural gas supply security in Bulgaria, Romania, and Greece by 2030, as well as long-term policy pathways for reducing natural gas consumption by the end of the decade. CSD presented the comprehensive analysis during the high-level policy roundtable “The Future of Natural Gas in Southeast Europe: Diversification and Phaseout” in Sofia on 28 March 2023. The discussion brought together prominent EU and U.S. energy policy-makers and experts including Geoffrey Pyatt, Assistant Secretary at the Bureau of Energy Resources, U.S. Department of State, Yvon Slingenberg, Director for Strategy, Analysis and Planning at the Directorate-General for Climate Action, European Commission, Melanie Kenderdine, Principal of the Energy Futures Initiative, Peter Zenniewski, Lead Gas Analyst for the World Energy Outlook at the International Energy Agency, etc. The policy brief *Breaking Free: Natural Gas Security and Decarbonization in Southeast Europe* provided a concise summary of the main findings and the following policy measures.

Zooming in on the energy and climate security conundrum in Bulgaria, CSD outlined a series of short and long-term measures that would put Bulgaria on a consistent path towards strategic decoupling from Russia and carbon neutrality in the report *Energy Without Russia*.

In collaboration with the Friedrich Naumann Foundation, CSD continued mapping Russian economic influence

in Europe by conducting an in-depth analysis of Russia's direct and indirect economic footprint in Germany, with a focus on energy-intensive industries, and the powerful Russian-German networks of influence linked to strategic business sectors, which the Kremlin has leveraged to sway Germany's foreign policy on key issues. The report *Strategic Decoupling: Phasing Out Russian Economic Influence in Germany* attracted significant policy and media attention and CSD's findings were widely quoted by major German media. The policy impact was amplified during two high-level policy roundtables held in Berlin on 6 September: "Strategically Dependent: Russian Economic Influence in Germany and Sanctions Evasion" and "German Business Interests in Russia: How German Companies Continue Their Business". The events focused on the proposed government approach for completing the strategic decoupling from Russia and

the closing of governance gaps enabling sanctions evasion. CSD also briefed several key MPs from the German Parliament, as well as the Ministry of Finance, the Ministry for Economic Affairs and Climate Action, and the Federal Foreign Office on countering Russian economic and political influence in the country.

CSD begun to globalise its Kremlin Playbook methodology by starting an assessment of the Russian economic influence in Latin America. The study, which began in late October with a kick-off expert workshop in Cali, Colombia, will map the footprint of Russian companies and Kremlin-linked oligarchic networks in five countries: Bolivia, Panama, Argentina, Venezuela and Brazil.

The implementation and enforcement of energy sanctions in Europe was a major focus of CSD's work throughout the year. In addition to the work



(L-R): Ruslan Stefanov, Program Director, Center for the Study of Democracy, Norbert Beckmann-Dierkes, Director, Konrad Adenauer Stiftung Sofia Office, and Melanie Kenderdine, Principal, Energy Futures Initiative and former Counsellor to the U.S. Secretary of Energy, at the policy roundtable "Countering the Kremlin Playbook in the Black Sea Region", Sofia, 14 June 2023

on sanctions evasion in Germany, CSD published the analysis *Making Sanctions Work in the European Energy Sector*, which dissected the sanctions regime in the European energy sector and exposed the main loopholes that allow Russia to continue exporting oil, natural gas, and nuclear fuel to the EU. The key policy measures to close the governance gaps in the sanctions regime formed the basis of the discussion during an international policy conference in Sofia in June entitled “Countering the Kremlin Playbook in the Black Sea Region”, together with prominent EU and U.S. energy experts. They agreed that the EU should extend the scope of sanctions to include natural gas, as well as secondary sanctions for oil traders, shippers, and insurers enabling Russian oil sales around the world. The roundtable was complemented by a high-level workshop where CSD and its partners from the Energy Futures Initiative, a Washington-based global energy policy think tank, discussed [the global future of natural gas in a low-carbon world](#).

During 2023, CSD strongly advocated for the strategic decoupling from Russian oil in Bulgaria and the SEE region. The continued dominance by a Russian company of the Bulgarian oil sector poses the biggest threat to the country’s energy and national security. Successive Bulgarian governments have falsely claimed that without the derogation from the EU oil ban of Russian oil imports, the largest refinery in the region, owned by Lukoil, would not be able to operate, and Bulgaria would face a security of supply crisis. As early as February 2023, CSD published the working paper *Decoupling from Russian Oil*, built upon a report published in May 2022, reiterating that the refinery could easily replace Russian crude oil imports and assessing the value of the surplus profits generated by Lukoil in

Bulgaria. In the policy brief *Bulgaria’s Reliance on Russian Oil: the Derogation and Beyond*, CSD discussed several scenarios for ending the derogation, prepared for the Bulgarian government, outlined the possible consequences from this decision and proposed concrete policy measures to overcome the potential negative impact for the Bulgarian economy.

In November 2023, an exclusive article based on the joint investigation by CSD, Global Witness, and the Centre for Research on Energy and Clean Air (CREA) entitled *Sanctions Evasion and Derogation on Russian Oil* was published in *Politico*, revealing how Lukoil exported around \$1 billion worth of oil products from its Burgas refinery to countries inside and outside the EU, effectively using Bulgaria’s oil exemption to circumvent sanctions. In anticipation of the analysis, CSD briefed key EU and U.S. policy-makers on the findings, including among others, the EU Sanctions Envoy David O’Sullivan, his U.S. counterpart Jim O’Brien, the Director for Central and Southeast Europe at the U.S. National Security Council Jeremy Long, and the Assistant Secretary of State for Energy Geoffrey Pyatt, as well as the Deputy Assistant Secretary of State for Europe Sonata Coulter. The publication of the analysis created a media storm, accelerated the lifting of the derogation to 1 March 2024, and spurred an inquiry by the European Commission into Bulgaria’s actions as well as declarations by the European Parliamentary Groups of the EPP and ALDE calling on the EU to stop all imports of fossil fuels from Russia. On 13 December, CSD in partnership with CREA published a follow-up [assessment](#) showing how Lukoil sharply increased crude oil imports in Bulgaria after July 2023 above the oil price cap, leading to at least \$700 million surplus revenues for the Kremlin between August and October.

II. Decarbonisation, just transition and social acceptance

Decarbonisation

Compared to its peers in CEE, Bulgaria has been hesitant to unleash its potential for the decarbonisation of its economy through the ambitious policy and financial initiatives for climate neutrality of the EU. In response, CSD has taken up an active role in the discussions of the Energy Transition Commission (ETC), part of the Consultative Council on the European Green Deal at the Council of Ministers, and its task to develop Bulgaria's climate neutrality roadmap. Dr. Mariya Trifonova, Senior Research Fellow at CSD, co-led the work of the ETC, and participated in close policy discussions with the European Commission and the Bulgarian government on the development of the analysis of coal phaseout scenarios. In addition, CSD conducted two data-driven assessments of the decarbonisation pathways for Bulgaria using scenario modelling, in partnership with the Regional Ener-

gy Policy Research Centre (REKK) and CLIMACT.

The in-depth [modelling impact assessment](#) of the different scenarios for a coal phaseout, developed by CSD, was presented at the roundtable [„Bulgaria's 2050 Climate Neutrality Roadmap”](#) on 23 March 2023. CSD experts were joined by prominent policy-makers such as Borislav Sandov, Deputy Prime Minister for Climate Policies (2021–2022) and Delyan Dobrev, Chairman of the Energy Committee of the Bulgarian parliament and over 70 key energy policy-makers and independent experts. The speakers at the roundtable united around the need for the development of a comprehensive, evidence-based energy strategy that builds on an inclusive stakeholder engagement process. Focusing on the implications for energy and climate security, CSD conducted a second modelling assessment covering the [decarbonisation of the Bulgarian power sector until 2050](#), which was presented during the roundtable on [“Bulgaria's Climate Neutrality Roadmap: Energy](#)



Policy roundtable “Bulgaria’s 2050 Climate Neutrality Roadmap”, Sofia, 23 March 2023

and Climate Security” on 12 September 2023. The objective of the analysis was to verify the assumptions and the key results from the electricity section of the Ministry of Energy’s report mapping the two coal phaseout scenarios that will underpin both the Climate Neutrality Roadmap and the Territorial Just Transition Plans (TJTPs). CSD’s analysis stressed on the need to accelerate the coal exit and the address systemic risks for the security of power supply that have been exaggerated by key government officials and business networks linked to the coal sector.

Just transition

In 2023, CSD also continued its long-term commitment to provide solutions to overcoming the transition challenges faced by Bulgaria’s coal regions. Stepping on a comprehensive stakeholder consultations and expert survey, CSD conducted an in-depth analysis of the key socio-economic characteristics of the [Stara Zagora](#), [Kyustendil](#) and [Pernik](#) districts, presenting an alternative perspective about the potential and effective measures to facilitate the regions’ economic transformation. CSD experts actively contributed to the debate on the coal phaseout and the regions’ TJTPs by proposing [concrete policy actions](#) for enabling the just transition as well as a targeted social media campaign showcasing the potential of the regions. CSD experts were effectively the lone voices against the coal lobbies and most of the government representatives arguing for a more ambitious coal phaseout timeline, the elimination of coal subsidies and the need to undertake the difficult but essential steps to achieve the economic transition without leaving the most vulnerable groups behind.

CSD also expanded its cooperation with the Bulgarian government on the revision of the National Energy and

Climate Plan (NECP) in anticipation of the submission of a draft version to the European Commission in Q2 2024. On 27 November 2023, the CSD team co-organised the first series of official stakeholder discussions on the strategic document. CSD will lead the stakeholder consultation strategy of the Bulgarian Ministry of Energy as part of its contract for DG Energy of the European Commission on providing technical assistance to Member State governments in the process of updating their NECPs.

Social acceptance

In the area of participatory foresight, CSD implemented the novel CIVISTI method, which facilitates a more inclusive, citizen-led process for defining and implementing the EU sustainable policy and innovation agendas. In the summer of 2023, CSD organised a series of citizen consultations on the societal impacts of the uptake of bioenergy across four European countries (Bulgaria, Italy, Sweden and Austria). The consultations



raised awareness about the role of bioenergy in the energy transition and enabled citizens to voice and incorporate their values, hopes, and visions for the EU policy and research priorities on the topic.

On 27–28 September 2023, CSD chaired a panel on social acceptance of bioenergy in the context of EU’s decarbonisation targets, as part of the annual Stakeholder Plenary Meeting of the ETIP Bioenergy held in Brussels. The discussion featured key EU policy and industry experts and aimed at elaborating policy solutions to improve social acceptance of renewable energy in the EU and ultimately to contribute to the achievement of the EU’s energy and climate targets.

III. The nexus between energy efficiency, energy poverty and air quality

Acknowledging the importance of ambitious clean air policies at the local level, CSD has worked in close cooperation with Sofia Municipality to improve one of the first low-emission zones in CEE.



In December 2022, the city of Sofia introduced the first low-emission zone (LEZ), following the example of 300 other cities across the continent. Despite its original intent to introduce an ambitious initiative to address the poor air quality in Sofia, the current version



Policy roundtable “Solving Energy Poverty and Decarbonising the Bulgarian Economy”, Sofia, 15 March 2023

of the LEZ lacks ambition in both design and execution.

CSD developed an analysis on [smart enforcement of the low-emission zone in Sofia](#), which provided city-specific recommendations based on European best practices, traffic models and implementation scenarios. Building upon them, the [Legal Guidelines for the Effective Implementation of the Low-Emission-Zone in Sofia](#) proposed legislative measures that would contribute to a more effective implementation of the zone in Sofia Municipality.

Considering the severe energy poverty risks that Bulgaria is facing with skyrocketing energy prices and high inflation rates following the Russian invasion in Ukraine, CSD extended its detailed analytical work on studying the link between carbon pricing and energy poverty. A [policy roundtable](#) held on 15 March 2023 focused on overcoming energy poverty and decarbonising the Bulgarian economy. Participants discussed the main findings from a [comprehensive assessment](#) of the macro and microeconomic impacts from the introduction of carbon pricing throughout the economies of five CEE countries: Germany, Hungary, Poland, Romania and Bulgaria and the ways carbon pricing, coupled with well-implemented tax revenue redistribution policies, could contribute to a net welfare gain for the 50% economically most vulnerable Bulgarian households.

As an interrelated challenge to reducing energy poverty, EU Member States should work on strengthening energy efficiency policies, a key ingredient for achieving the EU 2030 and 2050 targets. To convince policy elites and citizen in Europe about the need for a faster uptake of energy efficiency, there is a need for introducing innovative tools for measuring both the energy and non-en-

ergy impacts of energy efficiency. CSD, in partnership of a European research consortium, consisting of some of the most experienced energy modelling institutes in Europe, is developing the REFEREE tool, an online decision-support tool for energy efficiency measures. It can quantify the multiple benefits of energy efficiency, e.g. in terms of productivity, socioeconomic development, wellbeing, environment, air quality and climate change. CSD is responsible for coordinating the piloting of the instrument in Italy, Germany, Spain and Bulgaria. The goal has been to present the tool to the most relevant national and local government institutions, and then to test specific existing or planned energy efficiency policies to determine their impacts on energy demand, GDP, employment, budgets, air quality and GHG emission reduction in relation to different decarbonisation policy scenarios at the EU level.


IV. Cutting-edge low-carbon technologies

The energy crisis since 2021 has galvanised policy support for decarbonisation efforts and the imperative to reduce dependence on fossil fuels. Consequently, the EU doubled down on its commitment to upscaling the deployment of renewable energy sources, fostering the expansion of investment in wind, solar, and other sustainable energy options. CEE is lagging behind due to a number of socio-economic and governance factors, but mostly due to the lack of political will for the development of a transparent and supportive regulatory framework. In 2023, CSD has continued advocating for closing governance gaps to incentivise the adoption of renewable energy technologies in the region.

CSD has analysed the existing legal, administrative and financial barriers

to low-carbon investments. The Center held a policy co-creation session in June 2023 and the key conclusions we presented in a [joint statement](#) by key stakeholders submitted to the parliamentary Committee on Energy to inform its debate on the transposition of the EU Renewable Energy Directive into national law.

CSD also mapped the existing potential for the easiest-to-implement renewable energy projects. At least 10 GW of installed onshore wind capacity could be realised in North-Eastern Bulgaria (in the districts of Varna, Dobrich, Shumen and Razgrad) with high average wind speeds, low land use barriers and suitable environmental conditions. Nearly a third of the Bulgarian coastline is also suitable for offshore wind energy development with a potential of nearly 176 GW of total installed capacity. These are some of the findings of a study titled *The Lowest Hanging Fruit: Wind Energy Potential in Bulgaria* and developed in cooperation with the Austrian Institute of Technology. It was presented during the roundtable discussion on “Unlocking the Potential for Onshore Wind”, which



**THE LOWEST HANGING FRUIT:
WIND ENERGY POTENTIAL IN BULGARIA**

Policy Brief No. 138, September 2023

The ambitious objective to fully decarbonise the European economy is facing strong headwinds from the ongoing energy price volatility, the supply deficits on electricity and gas markets, and the bottlenecks in accelerating the renewable energy investments – the backbone of the REPowerEU plan. At the center of the energy transition is the unlocking of Europe’s wind energy potential. While Northwestern Europe has unlocked massive deployment of onshore and offshore wind power plants that have been eating away from the share of natural gas and nuclear generation facilities in the power market, the wind parks development in South East Europe has significantly lagged behind.

Wind-based power boasts high capacity factors and is less affected by seasonal factors, resulting in relatively low Levelised Cost of Electricity (LCOE). Furthermore, the implementation of wind projects depends less on land acquisition and offers synergies with other agricultural or economic activities. Wind energy development is crucial for balancing the power system during periods of limited sunlight, while in periods of excess supply of electricity, the additional power generation volumes can be harnessed for hydrogen production in industry.

The slow uptake of wind energy in Bulgaria is largely due to widespread governance deficits such as ad-hoc regulatory changes, technical and administrative bottlenecks before grid connection and access, the opposition from local communities, land use and environmental conflicts, and, more generally, a lack of political commitment to accelerate the investment process. There is also limited availability of evidence-based assessment of the technical-economic potential for wind energy, which feeds widespread disinformation narratives undermining the social acceptance of the deployment process.

KEY POINTS

- Wind energy remains an underutilized resource for electricity generation in Bulgaria, due to legal and regulatory inconsistencies, difficult grid access, opposition from local communities, environmental conflicts, and a lack of political will.
- There is high potential for both on and offshore wind energy in Northeastern Bulgaria, leading to strong regional competition for the available grid capacity.
- At least 10 GW of installed onshore and offshore wind capacity with high utilization factors and suitable land use and environmental conditions can be added in the Varna, Dobrich, Razgrad and Shumen districts.
- Around a third of the Bulgarian coastal area is considered suitable for offshore wind deployment with installed capacity potential of 176 GW.
- There is a need for significant power grid expansion to accommodate the current pipeline of projects, which are all located in areas with limited grid availability.
- The unlocking of the offshore wind energy development requires the adoption of an enabling regulatory framework and a National Maritime Spatial Plan with detailed mapping of prospective offshore wind energy zones.
- There is a need to simplify the land use and construction permitting procedures for wind energy projects and boost the capacity of local authorities to manage the projects more effectively under a common central coordination body.

took place on 26 September 2023 in Sofia. Policy-makers and experts agreed on the need for an improved regulatory framework that will reduce the administrative and regulatory burden for investors and will ensure a competitive environment for the future develop-



Policy roundtable “Towards a Black Sea Renewable Energy Coalition: Strategic Partnership for Energy and Climate Security”, Sofia, 13 June, 2023

ment of the sector. The electricity grid, especially in the areas with the highest potential, where it is at its lowest capacity, needs to be substantially expanded and modernised.

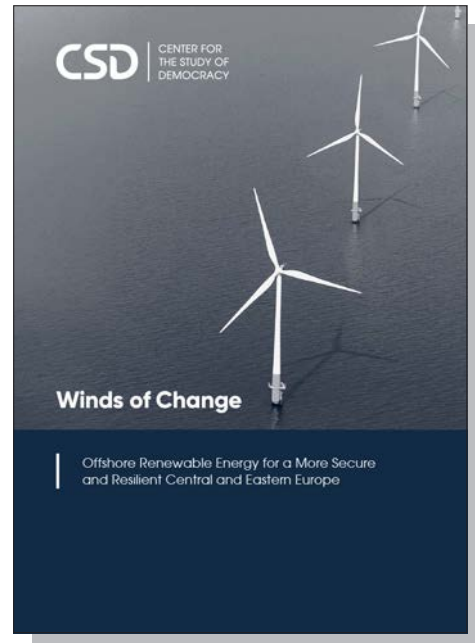
Related to this, CSD pioneered the work on putting the Black Sea on the offshore wind energy map in Europe. In June 2023, CSD, Energy Policy Group, Romania, the Turkish Offshore Wind Energy Association, and the Ukrainian Wind Energy Association, launched the *Black Sea Renewable Energy Coalition (BSREC)* – a platform for knowledge exchange and collaboration in the deployment of zero-carbon marine renewable energy and infrastructure in a nature-friendly way.

In 2023, CSD worked on perfecting the *Law on Renewable Energy in Marine Areas* that aims to streamline the investment process in Bulgaria by eliminating potential conflicts with other existing legislative acts and secondary legislation and proposes two approaches for site development: CfD-based tenders for promising areas and integration of offshore wind deployment into the national Maritime Spatial Plan. The Law, which will attract strategic investors by creating a consistent and predictable regulatory framework, was tabled for discussion in the National Assembly on 4 December.

CSD experts developed a comprehensive report on the offshore wind energy potential of the Three Seas region (Baltic, Adriatic and Black Sea), titled *Winds of Change: Offshore Renewable Energy for a More Secure and Resilient Central and Eastern Europe*, presented at a roundtable in November 2023 in Sofia. The assessment maps the offshore wind energy potential of Poland, Croatia, Romania and Bulgaria, and conducts a comprehensive evaluation of the existing governance barriers for the

development of the sector. The key national and EU policy-makers, experts and business representatives present agreed that the offshore wind deployment carries large technical, economic, social, and environmental benefits for the CEE region.

On 5 December 2023, CSD presented the main policy findings from the analysis and announced the tabling of the new offshore wind energy law in Bulgaria during the high-level policy roundtable “[Paths to Faster Decarbonisation: Offshore Wind Energy Potential in the Three Seas Region](#)” at the Bulgarian Pavilion within the UNFCCC COP28 Conference in Dubai. The event explored the mechanisms to overcoming the technical and governance obstacles for unleashing the investment in the sector, and its role for accelerating the decarbonisation of the energy sector. The speakers focused not only on environmental and energy security benefits, but also on the potential for economic transformation of coastal communities.





*Policy Roundtable “Paths to Faster Decarbonisation:
Offshore Wind Energy Potential in the Three Seas Region”, Dubai, 5 December 2023*