

Coupling Energy Security, Regional Connectivity and REPowerEU Targets in the CEE Region

Policy brief



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Abstract

The REPowerEU Plan sets ambitious targets to be achieved by EU Member States to ensure their energy security. The distinct infrastructure, environmental and financial circumstances of different countries in the CEE region, however, should be taken into consideration. Energy efficiency and conservation are promising tools for the short-term reduction of energy consumption but they need public buy-in and EU support to work. If the EU's medium- and long-term targets are to be attained, enhanced regional connectivity through physical infrastructure, trade and emergency assistance and a strategic perspective towards the future transit of energy will be pivotal.

Given the unexpected future of Russian energy in Europe, it is in the interest of CEE countries to advocate for a green recovery in Ukraine and the development of low-carbon and renewable gaseous, liquid and solid energy in the region to ensure their energy security and maintain their transit role.

1. REPowerEU targets for the CEE region – main features

The REPowerEU Plan aims to reduce the EU dependence on Russian fossil fuels by fast forwarding the clean transition and joining forces to achieve a more resilient energy system and a true Energy Union.

keep prices in check due to lower average incomes in the region compared to Western Europe and the sensitivity of the issue to their approval ratings. Authorities are also generally rather reluctant to intervene radically into legal and regulatory issues.

Structural changes to consumption will only be possible over the medium and long-term through comprehensive energy efficiency measures that will require substantial investments. The COVID-19-related economic slowdown has left the CEE region with a shortfall in the public funds necessary to finance a reopening of existing support schemes and introduce additional incentives for ambitious targets. The austere state budgets further limit government options in putting in place fiscal incentives to spur the adoption of efficient equipment through, for instance, a cut in the VAT on heat pumps, appliances and insulation materials. Facing financial constraints, CEE countries are also unable to introduce more ambitious national energy targets and climate plans in line with REPowerEU objectives.

Since most CEE countries are land- and infrastructure-locked, they enjoy few opportunities to diversify their energy supplies by means of LNG. Several CEE countries still rely on Russia as their sole energy supplier despite direct threats to their energy security during the 2006 and 2009 gas crises, the reconfiguration of gas flows in the aftermath of the Nord Stream I launch (2012) and Russia's aggression against Ukraine in 2014. Even this year, as of September, CEE countries have failed to approve solidarity agreements for the sharing of gas reserves thereby challenging regional energy security and limiting accessible reserves to the quantities found in their respective national storages and moderate production capacities. Hungary's unilateral reliance on Russian gas and restrictions on gas exports to neighbours has further led to a deterioration in regional energy security.

The implications are that only market instruments (i.e. higher prices) can now attract non-Russian gas from western, northern and southern neighbours if an emergency were to occur (this would involve soaring regional prices and budget

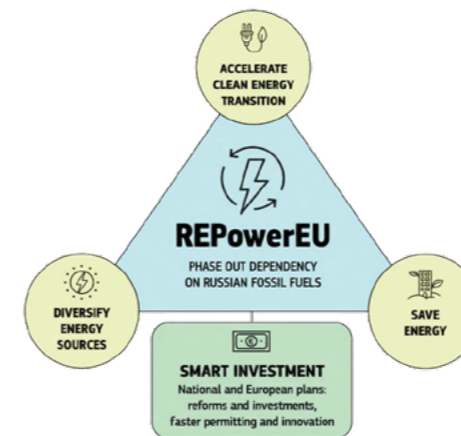


Fig. 1 Main features of the REPowerEU

Energy savings are the most sustainable way to reduce consumption and expenses. Immediate savings can be achieved through the improved management of consumption and behavioural changes without imposing significant costs. Local and municipal authorities, for one, can lower consumption through the optimisation of street lighting and the rationing of energy use by SMEs and public utilities ahead of the heating season. The prevalence of outdated infrastructure in the CEE region, nevertheless, could substantially reduce the expected savings potential compared to Western Europe and limit efforts by public authorities.

Behavioural changes are expected to contribute an additional 5% reduction to the demand for gas and oil in the short to medium period. Yet this figure is unpredictable due to the mostly voluntary nature of such changes. Across most CEE countries, households are benefitting from subsidised energy prices and appear less interested in radical cutbacks to their energy use. Government officials have elected to

expenses to compensate vulnerable consumers). The launch of the Polish-Slovakia gas interconnector with a 4.7 bcm capacity in the direction of Slovakia is expected to enhance access to alternative gas volumes, provided their availability and affordability for regional players, including Ukraine.

Reduced gas supply can be partially compensated for by using electricity instead. Once Ukraine and Moldova's electricity grids were synchronized with the Continental Europe Synchronous Area (CESA), the CEE region and Ukraine began trading energy – this electricity may be able to substitute some gas volumes in neighbouring countries. Existing transborder lines could additionally reduce gas demand **by up to 5 bcm/y** provided the reparation and extension of capacities in the near future. Ukraine boasts a significant surplus of low-carbon nuclear and renewable (solar and wind) electricity, which could be exported to the EU and contribute in the short-term to decarbonization efforts.

Further options for partnership may include the diversification of the nuclear fuel supply and the creation of conversion, enrichment and fuel fabrication capacities given the CEE region dependencies and intention to use nuclear energy in the future.

The European Commission has proposed increasing the target in the **Renewable Energy** Directive to 45% by 2030 (up from the previous 40% level). Solar photovoltaic technology is considered to be an innovation that can be rapidly deployed through installations on the roofing of public, municipal and (later) residential buildings. Wind energy presents another area of European technological leadership – opportunities remain to expand on progress herein. The further deployment of both these energy resources will depend on the simplification of approval processes, supply chain facilitation and the different local potential across CEE countries.

Hydrogen, meanwhile, provides a medium- to long-term option to diversify away from Russian gas and replace gaseous fuel for hard-to-abate appliances in industry and transport. The CEE region could play a role through the production of fossil-free nuclear-based hydrogen to ensure affordable resources for pilot projects of low-carbon steel and cement production. This type of hydrogen could also be supplied by Ukraine to ensure investments in hydrogen transportation networks and enhance investor confidence that large-scale projects combining wind, solar and electrolyzers will proceed in the future.

Biomethane production and supply is also considered to be a viable option for substituting up to 35 bcm of natural gas and enhancing Europe's energy security. But given the substantial capital costs for biomethane facilities and limited opportunities for scaling them up to avoid impacts on land use and food security, it will likely only be a supplemental option for CEE communities in combination with solar and wind. At the same time, biomethane can be produced from agricultural waste in larger volumes in Ukraine and transported via CEE countries for further use thereby preserving a regional transit role and associated revenues.

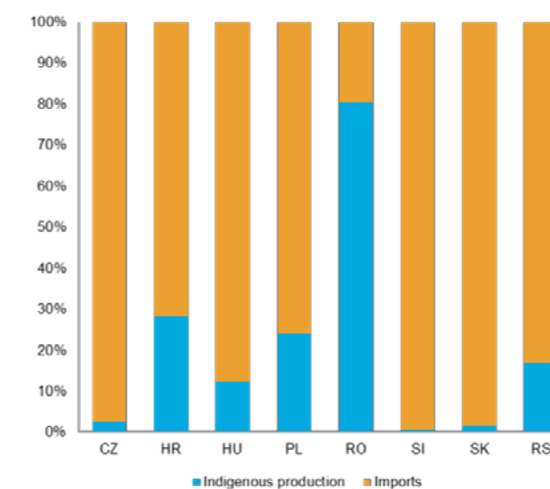
2. Dynamics of gas and electricity production vs. consumption in the CEE region

The CEE region is a net importer of natural gas and relies considerably on the import of other fuels (coal, nuclear assemblies, oil) to cover electricity generation demand.

Fitch views the Czech Republic, Hungary and Slovakia as the most vulnerable CEE countries due to their high reliance on Russian gas and their lack of viable short-term

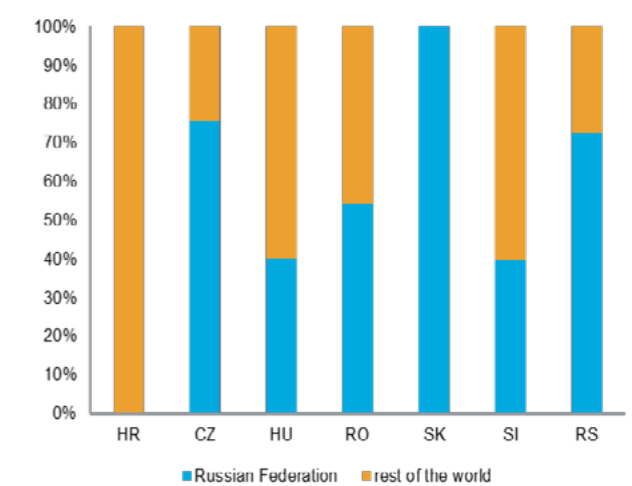
alternative energy supplies. Bulgaria, Croatia, Estonia, Latvia and Slovenia are either less exposed or have developed contingency plans. Poland and Romania, finally, are the least exposed buoyed by their access to alternative supplies or meaningful domestic gas production (see Fig.1)

Share of indigenous production and imports of natural gas in 2020 (%)



Source: Eurostat, Erste Group Research

Geographical origin of imported natural gas (in gaseous state) 2020 (%)



Source: UN Comtrade Database, Erste Group Research
Note: Data for Poland is missing in the UN database.

Fig. 1. Source: Erste Group Research

At the same time, CEE countries also exhibit different degrees of reliance on gas to produce electricity and heat - Hungary appears to be most dependent on affordable gas volumes and consequently could be vulnerable herein (see Fig.2 and Fig.3).

Gross electricity generation 2019 (%)

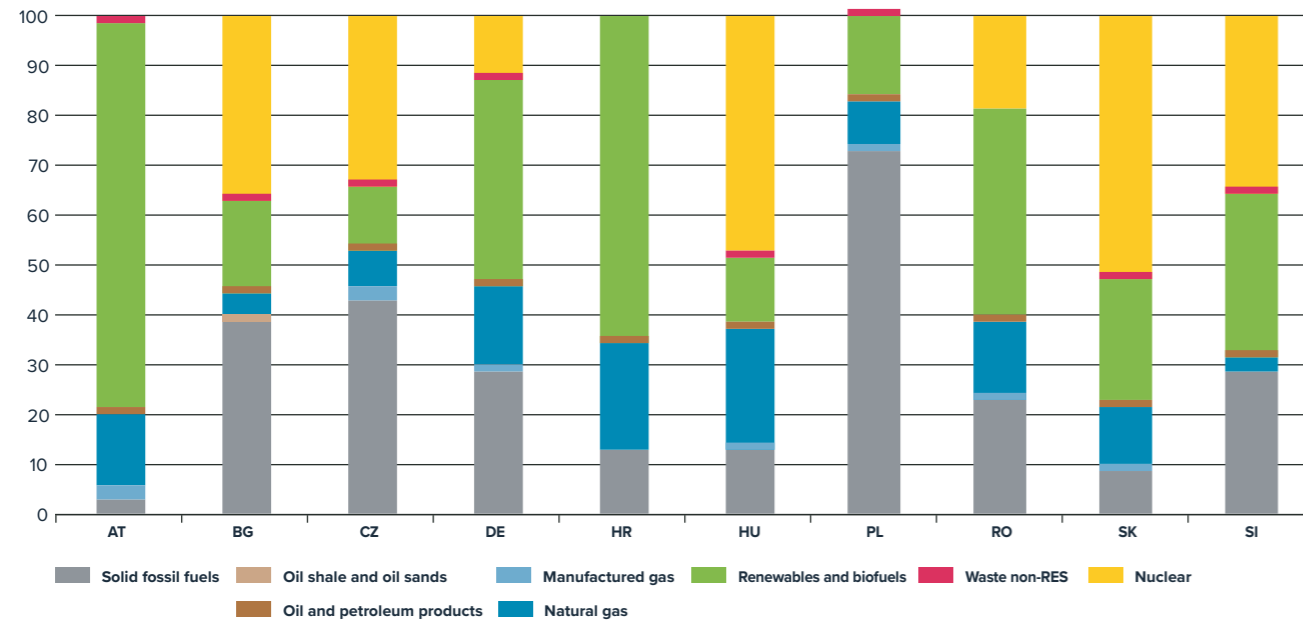


Fig. 2. Source: ENTSOG

Gross heat generation by fuel 2019 (%)

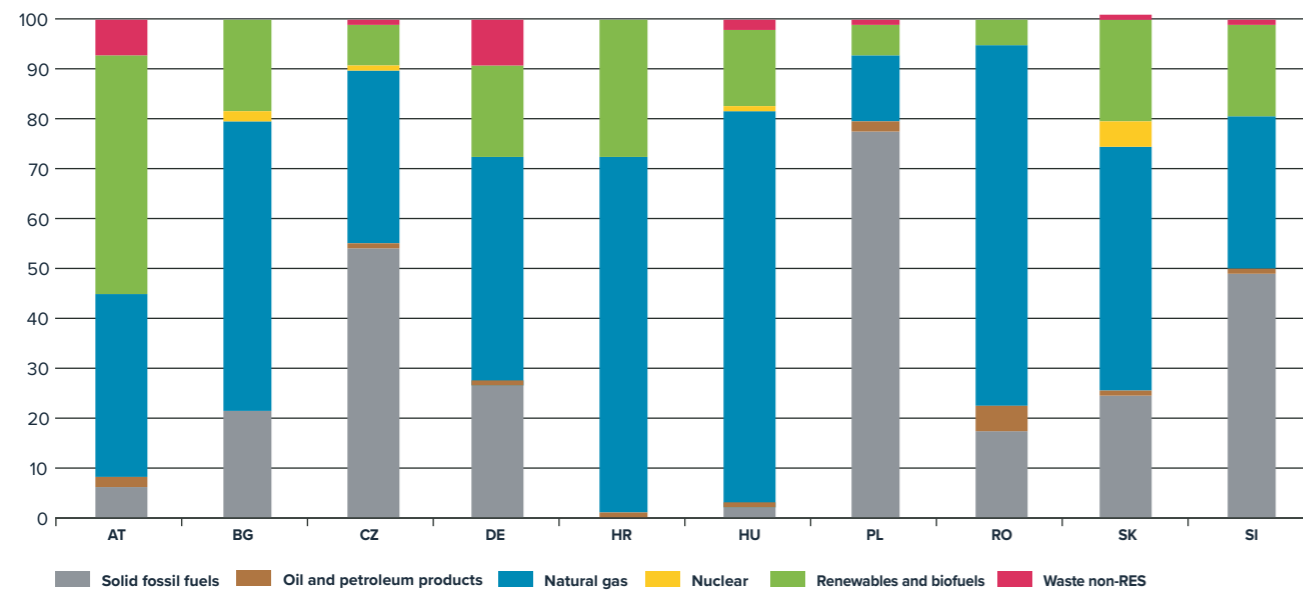


Fig.3. Source: ENTSOG

The combination of high dependencies on imported gas, only moderate domestic production and subsidised prices in most CEE countries could turn existing energy security challenges into a threat to the stability of governments and democracies in the region.

3. Cross-border energy trade in the CEE region – economics vs. security

All CEE countries, apart from Hungary, have formally supported solidarity arrangements proposed by the European Commission – they are also expected to sign special gas agreements with neighbours. As of September 2022, however, only Slovenia has signed one with Italy. Czechia and Poland, meanwhile, are still negotiating a deal with Germany. Other countries have sought to fill underground gas storages and keep gas trade relations with other countries open.

The CEE region has turned to LNG as an alternative source of gas. As more resources flow through recently built gas interconnectors, the use of traditional gas transmission routes will also be impacted. Slovakia, for instance, has received several LNG shipments since the beginning of 2022 on behalf of SPP, its energy supplier, via the KrK terminal in Croatia and recently commissioned a connection link with Poland. Bulgaria, Romania and even Hungary are looking South for more LNG from Greek terminals and stand ready to expand further cross-border gas interconnectors.

In the CEE region, Hungary and Serbia aim to use long-term gas supply contracts with Russia to significantly change their domestic energy balance and enable the gradual transition from coal to gas fired electricity generation on their way towards future decarbonized economies. In 2019 and 2020, Hungary enjoyed a profitable gas business with Russia through the national pipeline system fuelled by an increase in regional trade and liquidity as well as stockpiling. However, the prospects for gas exports to European countries, based on Hungary's special relationship with Russia, seems faint. Budapest, in fact, introduced a halt of gas exports to neighbouring countries beginning August 2022. Substantial diplomatic efforts were undertaken to attain more Russian gas via the TurkStream-Bulgaria-Serbia route, reportedly for domestic consumption, because Hungary had not signed a single solidarity agreement with

other member states on the exchange of gas reserves. Budapest rather merely co-signed an early-stage multi-country electricity solidarity treaty in June 2022 together with Germany, Austria, Czechia, Poland, and Slovakia.

Poland is reportedly the only country in the CEE region that successfully diversified its gas imports following Russia's belligerent actions against Ukraine in 2014. The Świnoujście LNG terminal and Baltic gas pipeline are expected to come online in October 2022. Warsaw, therefore, benefits from reliable gas imports and can support its neighbours. The Polish government has affirmed its readiness for gas solidarity though it expects amendments to the EU emissions trading scheme (ETS) in return to ease the financial burden of coal plant owners.

The CEE region experienced a weekly stoppage of oil flows via the southern branch of the Druzhba oil pipeline (it transits through Ukraine to refineries in Slovakia, Hungary and the Czech Republic) in August 2022. According to European oil transportation companies, it is apparent that a correspondent bank, Dutch ING, blocked advance payments of the Russian pipeline monopoly Transneft to the Ukrainian oil transit company Ukrtransnafta due to sanctions. It subsequently, however, reconsidered the decision and agreed to process the payment after a workaround was found. Russian oil deliveries to the above countries are now expected to continue until the middle or end of 2024, providing them necessary time to prepare alternative sources and future oil supply routes.

Alternative oil supply routes from the south – the Adria oil pipeline was upgraded back in 2015 and can deliver around 14 billion tons of crude oil to Hungary, Slovakia and Czechia – can, in fact, serve the CEE region. But if this route is to be activated, Hungary should change its political position towards maintaining Russian supply lines.

4. Bottlenecks and opportunities for fostering more flexible and sustainable regional cooperation

The CEE region is confronting unprecedented challenges in the energy sector including existing bottlenecks and an unpredictable future. Uncertainty ranges from the ongoing landscape of supply routes and energy sources and the unpredictable reconfiguration of these sources in emergency cases.

The region is also still dependent on historically established gas transportation routes and long-term contracts with Russia vital to maintaining pipeline pressure and affordable prices for consumers. Numerous countries have targeted their national energy and climate plans towards transitioning from coal to gas-fired power generation to lower emissions and meet climate protection obligations.

The CEE countries are pursuing their own pathways to achieve their renewable energy targets, with a general preference towards developing hydropower and biomass capacities and moderate progress in wind and solar generation both at the industrial and household levels.

In most CEE countries, regulated prices apply to certain groups of consumers. These rules, however, limit producer competition. The subsidies for these programmes also exhaust state budgets even as they aid some vulnerable consumers.

Russia has effectively exploited the region's historical reliance on energy imports and politically supported

bilateral agreements between its own suppliers and the often state-owned gas trading entities in the CEE region. Governments rather have turned to relatively cheap Russian gas. Many alternative diversification projects (Odesa-Brody oil pipeline, Nabucco gas pipeline), by contrast, have been slashed. This climate has bolstered the rise of populists. It has also spurred wasteful household energy consumption and state budgetary spending (i.e. energy subsidies rather than funds devoted to supporting economic growth and innovation).

Policy recommendations

In addressing unprecedented security challenges and threats to their financial stability, the CEE region should seize the moment to foster their resilience and enhance their role in contributing to Europe's future climate neutral space.

1. CEE governments and state-owned companies should publicly address European authorities by requesting the start of investigations of Russian Gazprom deals in the EU. They should also prepare and submit to relevant arbitration lawsuits.
2. CEE governments should also request the European Commission to provide additional financial support to bolster energy efficiency and respective projects in the region. The extension of loans to local SMEs producing and providing necessary materials and services to this end should also be supported, especially ESCO-contracts.
3. Energy efficiency and conservation campaigns in the CEE region should be developed and implemented deploying communication strategies based on narratives that resonate with the public – these may focus on the consequences of Russian Gazprom deals, the unsuitability of negotiations with an aggressor, government assistance for vulnerable consumers and benefits allocated to the modernization of residential and commercial buildings.
4. More energy efficiency and savings support schemes are needed including grants and low-rate loans allocated to private households in rural areas and vulnerable consumers.
5. The CEE region boasts qualified personnel and experience in using nuclear power. It now urgently needs to reconfigure its supply chains away from Russian assemblies and instead towards alternative suppliers. The medium-term goal must be to establish regional capacities in cooperating with reliable and trustworthy international companies. Ukraine has uniquely adapted Westinghouse fuel to Soviet-era reactors and could join its European neighbours in common projects. Long-term goals could include research and the deployment of small modular nuclear reactors as the next generation of low-carbon generation capacities.

6. The CEE region must prioritize the preservation of the transit status of Ukraine taking into consideration the future development of renewable gaseous, liquid and solid energy production. Ukraine, if it were to join the EU, could become a source for renewable electricity and hydrogen for the EU. The Alliance further will be able to establish cooperation with other potential suppliers of low-carbon resources from the East (Asian countries and potentially democratic post-Russia state entities).
7. Europe will rely on energy imports for many decades to come. The current policy of retroactive measures to eliminate Russian energy has witnessed prices skyrocket in response to unjustified and unprovoked activities. The EU should rather act resolutely and recognize that Russia as a quasi-federation is at the end of its history (and the potentially many indigenous nations that could emerge should gain the opportunity for the creation of their own democratic states and their turn at becoming new reliable partners). The recent experience of negotiations with Middle Eastern and African countries on future energy cooperation and transformation to low-carbon and renewable suppliers could be replicated also by the EU in the East and Asia. This approach could help restore peace and the economic preconditions for development and prosperity in Eurasia.



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