

# COLUMBIA GLOBAL ENERGY DIALOGUE

## HOW RUSSIA'S WAR ON UKRAINE HAS IMPACTED GLOBAL GAS MARKETS: ROUNDTABLE REPORT

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On June 7, the Center on Global Energy Policy at Columbia University hosted a private virtual roundtable conducted on a not-for-attribution basis on how Russia's invasion of Ukraine has impacted global gas markets. The roundtable took place three weeks after the European Commission (EC) published its REPowerEU Plan. As of early June, a total of five countries (Bulgaria, Denmark, Finland, the Netherlands, and Poland) and Shell in Germany have had their contracted gas supplies cut by Russia due to their refusal to pay for them in rubles.

Participants in the roundtable included senior corporate executives, civil society representatives, energy analysts, and experts from academia and think tanks. What follows is a summary of the discussion, which focused on two topics: the war's short-term impact on different regions, particularly Europe, where the EC has sought to reduce dependence on Russian gas and secure supply for the upcoming winter simultaneously, and how high natural gas prices and supply disruptions could impact the role of natural gas in the energy transition in the long term.

This event summary reflects the authors' understanding of key points made in the course of the workshop. It does not necessarily represent the views of CGEP.

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## The Short Term: Reducing Dependence on Russian Gas While Surviving the Winter

In the introductory remarks, the keynote speaker observed that European Union (EU) policy had recently been focused on decarbonization until the issues of supply security and affordability returned to the fore due to high gas prices and the war in Ukraine. The speaker remarked that the REPowerEU Plan offers various solutions to the attendant energy crisis but a sharper and more coordinated strategy is needed to achieve the desired outcome of a sustainable, secure, and affordable energy system. The speaker argued that the priority should be bolstering energy efficiency and electrification and making the business case for storage, after which the EU can begin to work on natural gas alternatives. He also emphasized that any solution needs to focus on specific sectors, including industry, power, transportation, and households, rather than temporary and uncoordinated efforts across many sectors, which would result in lower energy volumes at increased costs.

Some participants highlighted the speed at which EC regulatory proposals have become regulations—what usually takes years has taken months. However, as they also noted, these regulations still need to be implemented at a country level. While a few expressed doubts about whether the newly established targets for biomethane, hydrogen, and liquefied natural gas (LNG) imports could be reached, they reckoned that the new regulations are a step in the right direction and that some EU member states are doing more than what the current targets establish. Some participants feared that the EC was already picking winners in terms of technologies.

Regarding the short-term availability of natural gas for Europe, the participants broadly agreed on the relevant factors that require attention, including gas prices, pipeline gas imports from Russia, LNG import capacity, and storage levels. They also pointed to the role of other factors impacting Europe, such as United States (US) LNG exports, Asian and Latin American LNG imports, and the intensity of next winter. While some participants were optimistic about the region's prospects in terms of gas supply based on market data, others highlighted Europe's vulnerability based on Russia's demonstrated readiness to cut supply to any customer at any time.

The discussion opened with one speaker noting the relative stabilization of European gas prices after months of high volatility—leaping from less than \$3 per million British thermal units (mmBtu) in 2020 to as high as \$70/mmBtu in early March 2022, before seeming to settle at around \$26/mmBtu in early June. This speaker emphasized that despite lower Russian pipeline gas imports at 200 million cubic meters per day (mcm/d) in early June, strong LNG imports over the past few months have helped refill storage, with the goal of reaching a filling rate of 80 percent by November.

Some participants saw an optimistic short-term outlook for Europe, given a combination of demand-side factors and favorable winter conditions. Despite its climate goals, the European power sector has been burning as much coal as possible to reduce gas consumption. The speaker who opened the discussion observed that simultaneously European industries have decided to slow down their operations due to high gas prices. In this speaker's view, both

actions have contributed to increased gas storage volumes. The speaker argued that if the former trends continue and winter is mild, Europe's prospects are good, assuming Russian gas continues to flow.

Some participants rebutted this optimism by noting that importing only 200 mcm/d is insufficient to support a favorable scenario and Russian gas may not continue to flow. Furthermore, from an economic perspective, they warned that natural gas sales to Europe only represent 10 percent of Russia's revenue, much of which comes from crude oil, and this amount could be sacrificed easily. Some experts noted that Russia is thinking not in economic but in geopolitical terms, making it more difficult to predict the fate of long-term contracts and Russian exports to Europe. In their view, Russia is using natural gas as a geopolitical blackmail tool, reinforcing the argument that Gazprom is ready to sacrifice its field production and facilities to help make Russia a superpower again.

An expert on China explained that the timing of the country's economic recovery could benefit Europe's gas outlook. With China unlikely to meet its 5.5 percent gross domestic product growth target in 2022, due to its zero-COVID policy and the recent lockdowns in Shanghai and Beijing, she noted, gas demand growth this year will likely be in the single digits. The expert also explained that due to high LNG spot prices, China currently prefers pipeline imports, meaning the country could serve as an escape valve for the Russian gas flowing through pipelines while simultaneously releasing pressure from the LNG market, and that Chinese LNG imports over the first four months of 2022 decreased 17 percent year on year. According to the same expert, another factor that reduces China's appetite for LNG is its priority to increase its fossil fuel production, with China's national oil companies ramping up natural gas exploration and production as part of the country's overall decarbonization strategy. One participant pointed out that China is looking to produce 13 percent more coal in 2022 to bolster its energy security. Regarding domestic oil production, the expert on China noted that while technically China will be unable to increase production after peaking in 2015, the Chinese government wants to maintain levels of 4 million barrels per day. However, Chinese companies have also signed many long-term LNG contracts since 2021 due to rising concerns about the volatility of spot prices.

In terms of US supply, an expert on the US gas market argued that domestic production is expanding with the support of drilling activity. He noted that the weather patterns that contributed to higher domestic natural gas demand are now normalizing, driving down prices. Another expert addressed the evolution of US LNG exports. Observing that export levels could grow from 134 billion cubic meters (bcm) to 186–196 bcm (13 billion cubic feet per day [bcf/d] to 18–19 bcf/d) and eventually reach 227–258 bcm (22–25 bcf/d), he questioned whether infrastructure would ramp up sufficiently to support this evolution and expressed concerns about the underperformance of US gas supply. One participant agreed that the US needs to increase gas supply availability but remarked that the US market can rebalance itself.

## The Long Term: The Impact of High Gas Prices and the War in Ukraine on the Role of Gas in the Energy Transition

The participants disagreed on whether the impact of the current crisis on the role of natural gas in the energy transition would be structural or temporary. There is lasting concern that current high gas prices are destroying the growth of global gas demand—and with it the expectation that gas will replace coal as part of the energy transition.

One speaker highlighted that Russia's decision to invade Ukraine has raised concerns about its relationship with the West broadly, which many believe has changed irreversibly: European countries understand that they can no longer rely on Russian gas and acknowledge the need for systemic change to address the complexity of their energy systems. Another speaker cautioned that an orderly move away from Russian gas is needed to avoid a full-fledged crisis: Russian gas exports to Europe are so large (155 bcm in 2021) that it will be difficult to rebalance immediately. From the demand side, the expert noted that Europe needs to reduce its gas demand by scaling up renewables, other alternative energy sources, and its energy efficiency. However, as this expert pointed out, while policies that target household consumption are present, they have not been adopted in all European countries.

Regarding the role of governments in the European gas market, another speaker asserted that crisis management—not just market management—is needed, so government intervention is expected to address the security of supply and high energy prices. The opening speaker then asserted that the crisis will give way to a greener Europe and a greener transition: once the critical years have passed, the world will discover that decarbonization in Europe has accelerated and that the contribution of renewables, hydrogen, and biomethane to this process has increased.

The participants agreed that gas markets will remain tight in the short term due to the time needed to bring additional gas supplies to market, resulting in more coal burn, increased renewables, and greater energy efficiency in Europe. In the medium term, however, they see global gas markets rebalancing thanks to additional LNG supplies from Qatar and the US eventually coming onstream within three to five years.

Speakers expressed contrasting views regarding the need for and the role of long-term contracts in Europe, which has traditionally relied on the spot market instead. One speaker questioned whether the capacity upgrade of hydrogen and other renewables could really be accelerated. He asserted that pursuing long-term LNG agreements was a less complicated option for many countries but Europe must determine its future needs for natural gas in order to secure long-term contracts. Some participants opposed the idea of Europe procuring LNG in a long-term contract scheme, insisting that the commodity should instead support the energy transitions of other regions such as Asia. One participant suggested that countries should continue to pay attention to methane emissions as Europe diversifies toward LNG, while much uncertainty remains around the future of methane emissions in Russia.

Another speaker argued that Europe's response to the geopolitical events in Ukraine will have implications for the rest of the world as well, but participants disagreed on the extent

of these implications. One expert noted that Asia is seen as the key engine of gas and LNG demand growth, while an expert on the Asian gas market highlighted that the current policies of the Association of Southeast Asian Nations (ASEAN) member states preserve an important role for natural gas in these countries' energy supply mix. As this latter expert explained, natural gas plays a significant role in the ASEAN economy, representing 23 percent of the overall energy supply mix and 31 percent of total installed electricity generation capacity. The industrial sector is the main driver of economic growth and gas demand growth in the region, and though natural gas production is in decline domestically, it has been stable overall during the last five years. According to the same expert, existing policies suggest that in 2025 natural gas will still play a major role in the energy supply mix and, consequently, the region will become a net gas importer, with imports reaching 130 bcm by 2050. However, as the expert also noted, the gas price hike since 2021 may change this outlook in the long run by shifting perceptions around gas affordability and policy attitudes toward new investments in gas infrastructure. Some participants argued that if tighter gas markets persisted, coal would become more competitive, which may cause Asian buyers to hesitate in moving to LNG or even motivate them to leapfrog to renewables. But some participants still believed that demand for LNG will not peak before 2040 and that gas has a positive role to play in the energy trilemma by balancing the intermittent output from renewable energy.

An expert on Latin America noted that natural gas is also an important energy source for most Latin American countries, as demonstrated by the region's significant share of global LNG imports (around 14 percent). Given that Latin American countries rely heavily on revenues from the oil industry, it is not surprising that the region's pursuit of natural gas production is less intensive compared to that of oil. As this expert observed, its increased natural gas consumption over the past few decades stems from the intensified effect of climate change on the region, especially in Brazil, Chile, and Argentina. Despite the high share of renewables in Latin America's electricity generation mix, the importance of hydropower makes the region vulnerable to extreme droughts. As the same expert discussed, in 2021 Brazil's LNG imports approached levels typically seen only by buyers in Asia and Europe, drawing supply away from Europe. In anticipation of the reduced output from hydropower, Latin American countries have started to move to natural gas, leading to increased LNG imports. According to the expert on Latin America, this strategy now faces a major challenge, however, with LNG spot prices also increasing, raising questions about whether Latin America's policy of shifting to natural gas and building more LNG import infrastructure is sustainable amid new market conditions that may lead to energy reliability issues in the region. The region's reliance on US LNG supply is expected to increase, which may also pose a risk as demands for US LNG from Europe also increase due to Russia's invasion of Ukraine, making the LNG market tighter than ever.

To conclude, the roundtable participants observed that countries around the world are continuously trying to meet the energy transition target while also securing their domestic energy supply. Although they affirmed that both of these goals can be achieved simultaneously, they acknowledged that today's geopolitical events in Europe are threatening energy security in the region and pushing many countries to prioritize fossil energy as a short-term solution to the problem of energy supply. Some participants worried that this shock could undermine the massive efforts underway to transition energy systems to cleaner alternatives and may imperil the global climate agenda.

## About the Authors

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