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Geopolitics of Natural Gas

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The world is experiencing the worst energy crisis since World War II. The energy crisis has contributed to the current global economic recession and world food crisis. While many Western policymakers are putting the blame for the energy crisis on geopolitics, many other factors contributed to its emergence. These include long-term underinvestment in oil and natural gas production, public finance policy of denial of investment in fossil fuels, market design, and energy policies of governments around the world. In illustration, Europe experienced two major energy crises in the two winters (winter 2020/2021 and winter 2021/2022) prior to the current Ukraine-centered crisis. Thus, in considering how to address the energy crisis, it is important to recall that it started before the current geopolitical challenge in Ukraine.

The current natural gas crisis has significant geopolitical and economic implications. Energy security entails not only securing energy supplies, but also securing energy at an affordable price. In response to the current crisis, Europe has been able to replace gas molecules with gas molecules, but at a price that will not allow many industries to continue to operate. Liquefied Natural Gas (LNG) now accounts for about 15 percent of European gas consumption. While this has reduced Europe’s geopolitical vulnerability of reliance on Russian gas, it has come at a price that is not sustainable to European industry, since LNG over time is much more expensive than pipeline supplied gas. In addition, increased European demand for LNG has raised global prices, leading to the pricing out of many medium and low-income countries, in turn leading to extensive electricity blackouts and social unrest in multiple countries.

Despite the raging global energy crisis with a focus on natural gas, Western governments are still refraining from engaging in the geopolitics of natural gas and other energy that is in use today. The recently released U.S. National Security Strategy mentions “energy” 50 times, but over half the times in combination with “clean energy,” “renewable energy,” or “energy transition,” rather than the energy in use today. The strategy doesn’t once mention natural gas. All mentions of fossil fuels in the strategy are negative, even though 75 percent of U.S. energy consumption is from fossil fuels, the U.S. military relies on fossil fuels, and the United States is the world’s largest producer of oil and natural gas in the world. Even the U.S. National Defense Strategy relates to energy mostly in the context of renewable energy, low-carbon energy, and reduction of energy consumption.

Instead of addressing the current energy crisis, the United States and to a certain extent Europe are doubling down on the idea that renewables will solve the entirety of their energy security problems. This is despite the fact that renewables have their own set of geopolitical challenges, in addition to price volatility. Moreover, their unrealistic expectation of current renewables to provide increased supplies were a major factor in the current energy crisis.

Extreme policy against natural gas leads to more consumption of oil and coal, not growth in demand for renewables

To understand the current energy crisis, it is important to examine the public shift in the U.S and European attitudes toward natural gas over the last decade. Natural gas was viewed until recently as a good solution to both energy security and environmental challenges. In the 1990s and 2000s, natural gas was the fastest-growing fuel globally, as well as in Europe. Gas was in demand due to its relatively low emissions and, over the long term, competitive price. Switching from coal to natural gas was also the fastest and cheapest way to lower carbon emissions: As a result of the shale gas revolution, the United States rapidly cut its carbon emissions without government intervention. About a decade ago, activists globally accelerated campaigns targeting natural gas. The result: Europe phased out long-term gas contracts and thus commissioned few dedicated gas supplies, which could have diversified its gas sources and guaranteed affordable prices. This policy set Europe up for the current crisis.

Europe halted commissioning of new gas imports in order to create market demand for renewables. European and many U.S. policymakers present renewables and natural gas as a binary: the growth of renewables is presented as a replacement for natural gas. However, in reality, the current generation of renewables is dependent on a stable base load fuel in order to provide electricity. Today's renewables do not replace natural gas; they go hand in hand. But if policies are not in place to ensure stable and affordable gas supplies, utilities turn to oil and coal, as we have seen in Europe for the past two winters.

Increased consumption of coal and oil in Europe is almost counterintuitively more politically tolerable than natural gas consumption, despite their higher air pollution and climate impact, as using natural gas obligates policy action to actively commission gas supplies, such as allowing long-term contracts. Policy action to commission gas supplies would generate significant public backlash in Europe and to a certain extent in the United States, despite their benefits in lowering emissions and air pollution.

Geopolitical implications of the current natural gas crisis

Emerging geopolitical trends resulting from the current global energy and natural gas crisis include:

- Global instability is increasing due to lack of access to affordable natural gas supplies and thus increased electricity blackouts and collapse of industries.

- Western countries provide a geopolitical advantage to energy producers and lowered impact over market trends through continued consumption of fossil fuels, while declining to support production.
- Geopolitics is playing out in economic instruments that highly affect gas market and gas trade.
- Increased threats to critical energy infrastructure are emerging in both natural gas producing and consuming countries.
- Western natural gas finance policies create a geopolitical advantage for China.

The geopolitics of the natural gas trade will be highly affected by several technical decisions, such as whether the EU will allow long-term natural gas contracts and U.S. and European policy allowance of public finance for natural gas projects.

Global instability is increasing due to lack of affordable natural gas supplies:

Global instability has emerged and will increase in multiple locations due to lack of access to affordable natural gas supplies and a resulting increase in electricity blackouts. In addition, rising food costs (driven by rising fertilizer costs due to high natural gas prices) will contribute to global instability. The expansion of the global energy crisis is expected to bring about an increase in the rate of national government collapse and level of social turmoil.

Western countries want to consume natural gas (and other fossil fuels), yet not produce them:

Several countries in Europe, including those that are most affected by the boycott and disruption of Russian gas supplies, such as Germany, have chosen over the years to ban or create obstructions to natural gas production in their own countries. In addition, many investing companies in the United States, Europe, and several Western countries have chosen to withhold investment in natural gas, despite potential profitability due to market demand for gas. This has created a challenging geopolitical situation of increased energy import dependence, since Western countries are consuming fossil fuels, but do not want to produce them. Production declines have also lowered the U.S. ability to influence energy market trends.

Geopolitics is playing out in economic instruments that shape the gas market and gas trade:

Geopolitics of natural gas is playing out in several spheres, beyond the classic models of suppliers withholding supplies or consumers boycotting certain suppliers: sanctions, gas price caps, export bans, contract limitations, and gas hub price manipulations are now in the toolbox of both several gas importers and gas exporters.

U.S. and European foreign public finance policy is creating a geopolitical advantage for China:

Despite the current energy crisis and the clear demand for new natural gas supply projects, the United States, Europe, and major international financial institutions have decided to deny public finance to fossil fuel projects, including natural gas. For example, the Biden administration's *Interim Energy Engagement Guidance* from December 2021 "promotes ending international financing of carbon-intensive fossil-fuel based energy."

This guidance encompasses not only U.S. government finance, but technical and policy support and energy technology collaboration in gas projects abroad. It applies to all U.S. government agencies and affiliated organizations. Over the years, the United States has been a major player in natural gas financing abroad and Washington's policy efforts have been critical in promoting natural gas supply infrastructure projects that have improved energy security, such as the Southern Gas Corridor from the Caspian region to Europe. In addition, in the last year, the United States has led efforts to end new international finance for natural gas and other fossil fuel projects globally.

The lack of U.S. finance for and policy efforts to promote natural gas projects means that many low-income economies will be denied the benefits of reliable electricity, which is critical to economic growth. It also means that China will become the main provider of public finance for power generation and natural gas in the developing world, with all the geopolitical ties that go along with Chinese loans.

Threats to energy infrastructure have intensified

Threats to critical energy infrastructure are increasing and have higher impact due during times of energy crises. Infrastructure security affects natural gas trade more than that of other fuels because it relies on fixed infrastructure, such as pipelines and LNG facilities. Attacks on energy infrastructure can have significant geopolitical impact, especially since the U.S. military's energy supplies run primarily on civilian energy supplies. In addition, even short-lived electricity disruptions can cause large-scale panic and economic disruption in the United States. The energy industry, insurance companies, and governments need to pay much closer attention to the protection of energy infrastructure.

Gas market structure and trade

The current global energy crisis had produced several trends in the structure of gas markets:

1. Revival of commercial and government interest in gas pipelines: The current energy crisis has created a renewed commercial and government policy interest in natural gas supplied by pipelines. Countries are now seeing the benefit of access to dedicated gas supplies and an anticipated price via pipeline, in contrast to the volatility and unreliability of LNG supplies. As a result, there is renewed interest in pipeline-supplied gas.
2. Re-nationalizing of energy utilities and markets: In contrast to the trend of the last three decades, states are taking greater control of gas and electricity markets. With the collapse of many utilities across the globe, governments have essentially nationalized or become the controlling stockholder of dozens of utilities. At the same time, in order to deal with the energy crisis, many governments are imposing price caps on the market and windfall taxes on suppliers. This has led to increased government control, or at least influence, over gas and electricity trade.
3. Policy change toward long-term contracts of natural gas supplies? Over the last two decades, Europe created impediments to long-term contracts for gas in order to create more demand for renewable energy. This policy backfired and led to natural gas shortages. The EU has been reluctant

to allow its gas buyers to commit to long-term contracts, but this change will be necessary for Europe to guarantee its security of supply and price. It remains to be seen if the current natural gas crisis in Europe will lead to a change in the policy of some major consumers toward long-term contracts of natural gas supplies.

4. End of aspiration for gas-on-gas competition: In the last three decades, the United States and Europe have promoted establishment of gas markets that are based on gas-on-gas competition. With the failure of European gas and electricity markets to provide sufficient supplies at affordable prices as well as the failure of many electricity markets in the United States, both are looking for new market models.
5. Convergence of natural gas markets: Traditionally, natural gas markets have been local or regional, with market trends in faraway continents having little impact on each other. In the last decade, the impact of markets in different locations on others has increased. In the last three years, this trend has skyrocketed: By not providing sufficient pipeline gas supplies to the European market, Europe, Asia, and the developing world now compete for LNG supplies. Thus, the need in each location affects the price for all. In addition, due to rising exports of natural gas from the United States and Australia, domestic gas prices in both countries have risen considerably. All in all, a greater convergence of natural gas markets has emerged. It is not a global natural gas market, but mutual influences between markets are growing.
6. Coal and oil are substituting natural gas: Since the winter 2020 energy crisis in Europe, utilities have turned to coal and fuel oil to substitute for the lack of gas supplies. Thus, gas shortages have led to demand destruction for natural gas in the short and medium term and increased demand for coal and oil.
7. Long-term: increased demand for natural gas goes hand in hand with increased demand for renewables: The current generation of renewable energy requires a base load energy source. Natural gas, due to its flexibility, is the most compatible base load source. Therefore, in the long run with anticipated increased demand for renewable energy, there will be increased demand for natural gas.
8. Potential backlash against ESG and Stakeholder Capitalism: The current global energy crisis has increased global scrutiny of the business practices that led to the crises. A major factor in the current crisis is underinvestment in energy production, especially oil, natural gas, and coal. Fossil fuels still supply 84 percent of global energy consumption. Despite market needs, both public and private finance denied funding to fossil fuels production and infrastructure over several years, contributing to the current crisis. A revival of traditional investment practices toward energy in use may generate new access to investments and capital for oil and natural gas production and supply infrastructure.

Moving forward, the key to blunting the adverse geopolitical implications of natural gas trade is adherence to basic energy security principles: diversified fuel mixes, natural gas sourced from diverse geographic locations, and establishment of gas storage and redundant infrastructure. Natural gas can be consumed securely and even imported from states with a geopolitical agenda if a market diversifies its fuel mix and natural gas sources and mandates establishment of needed storage and infrastructure. The United States and other countries will need natural gas for decades to come. Its benefits should not be disregarded due to the geopolitical risks. Proper policies can mitigate those risks.