

ISSUE BRIEF

European Energy Security and Transatlantic Cooperation: A Current Assessment

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INTRODUCTION

This brief emerged from discussions during an Atlantic Council Global Energy Center roundtable on European energy security held in Brussels on March 27, 2019, as well as other events and individual meetings with government officials, private sector executives, and leading academics in the global energy sector. The collective dialogues and key takeaways are reflected in this brief. Because the conversations took place under the Chatham House Rule, the information will not be attributed to any specific individual. The brief will provide a current assessment of EU energy security focusing on the role of gas markets, while future briefs in the European Energy Security series will take a closer look at other critical issues impacting European energy security. Following these briefs, a final report in 2020 will propose specific recommendations for the US and EU governments on how to address transatlantic energy security issues.

The Global Energy Center promotes energy security by working alongside government, industry, civil society, and public stakeholders to devise pragmatic solutions to the geopolitical, sustainability, and economic challenges of the changing global energy landscape.

The transatlantic community has made significant progress leveraging global energy resources to increase energy security, thanks to technological advancements in renewable energy, energy efficiency, shale oil extraction; the development of alternative sources and routes; and new infrastructure. However, security challenges for European energy continue to arise as malign actors use energy for geopolitical coercion, communities around the globe grapple with the realities of climate change, and geopolitical conflicts threaten the security of supply and access to sustainable resource development. Transatlantic cooperation on energy security will be essential to addressing those global challenges and should be prioritized by US and European Union (EU) leadership, since energy security translates into national, political, and economic security.

Despite tensions in the areas of trade and sanctions, and growing nationalism on both sides of the Atlantic, energy security has been, and should continue to be, at the pinnacle of US-EU collaboration. US and EU energy security interests also have a strong economic component, as trade between the two totaled \$1.3 trillion in 2018.¹ Moreover, 54 percent of global investment into the US comes from Europe, while 64 percent of US global investment goes to Europe. US companies' investments in Europe have produced 4.7 million jobs, while European companies' investments in the United

States have created 4.3 million jobs.² In addition to their mutually beneficial economic relationship, the United States and EU hold shared values regarding the importance of the free market, rule of law, and democratic societies. A united and well-connected Europe is a more resilient Europe, and the United States benefits in many ways from having a strong ally with vast energy investment opportunities. US engagement in European energy security is motivated by national strategic priorities, mutual economic interests, and transatlantic interests in liberalized and integrated energy markets.

Figure 1:
EU-28 Total Final Consumption by Source, 1995

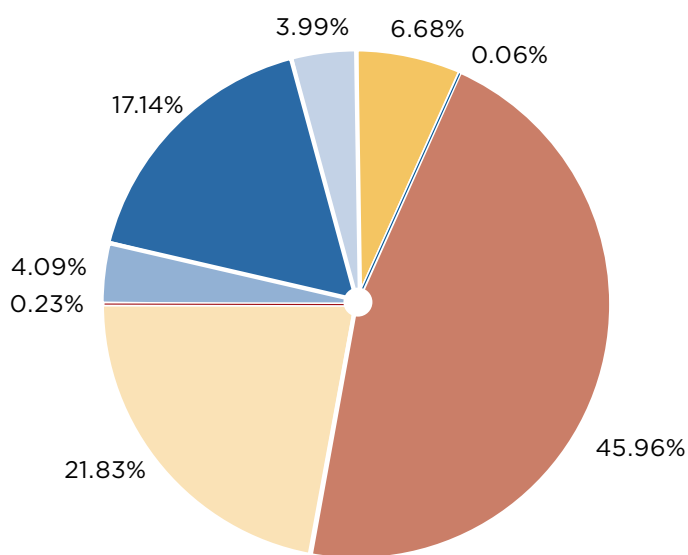
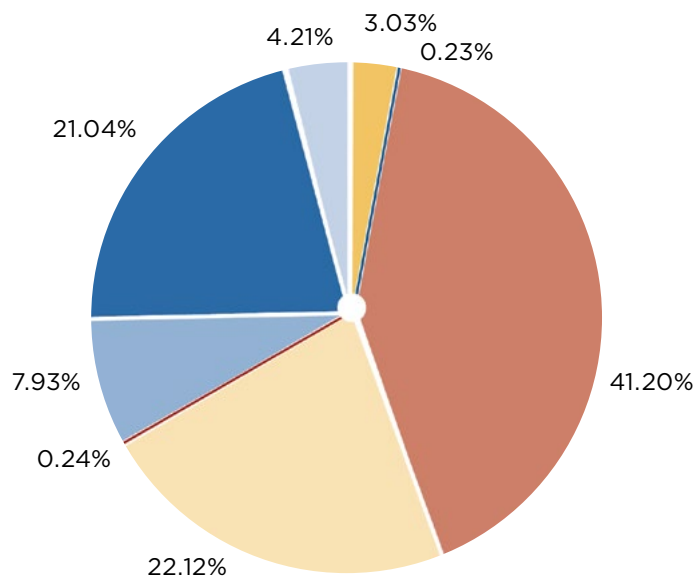


Figure 2:
EU-28 Total Final Consumption by Source, 2016



Source: *World Energy Balances 2018*, International Energy Agency.

1 "European Union," Office of the United States Trade Representative, accessed April 2019, <https://ustr.gov/countries-regions/europe-middle-east/europe/european-union>.
 2 Daniel S. Hamilton and Joseph P. Quinlan, *The Transatlantic Economy 2018: Annual Survey of Jobs, Trade and Investment between the United States and Europe*, Center for Transatlantic Relations, 2018, https://archive.transatlanticrelations.org/wp-content/uploads/2018/03/TA2018_FullStudy.pdf.

Engagement in European energy security also presents an opportunity to reinvigorate transatlantic ties with US allies in times of uncertainty and transformational change across the energy sector.

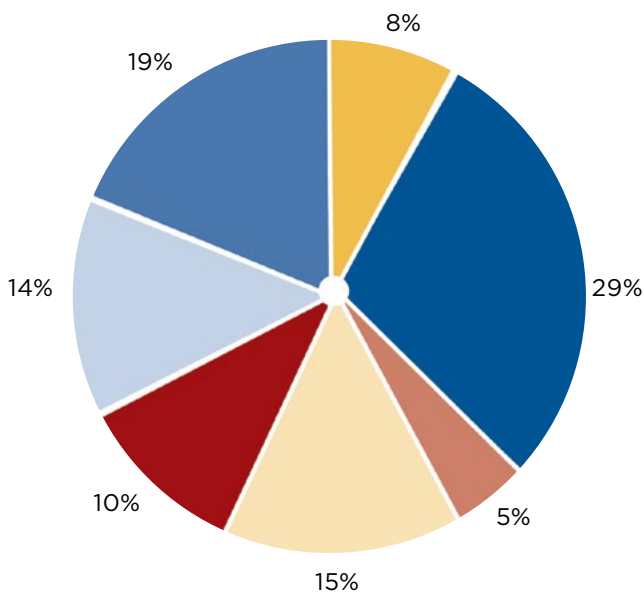
This brief provides an overview of the current energy security landscape in Europe. This series will continue to appraise the progress made to liberalize and integrate EU energy markets, which is imperative to identify where US engagement on EU energy security will be most effective, and it will explore obstacles to the

efficient functioning of EU energy markets and pinpoint priorities for US and EU cooperation.

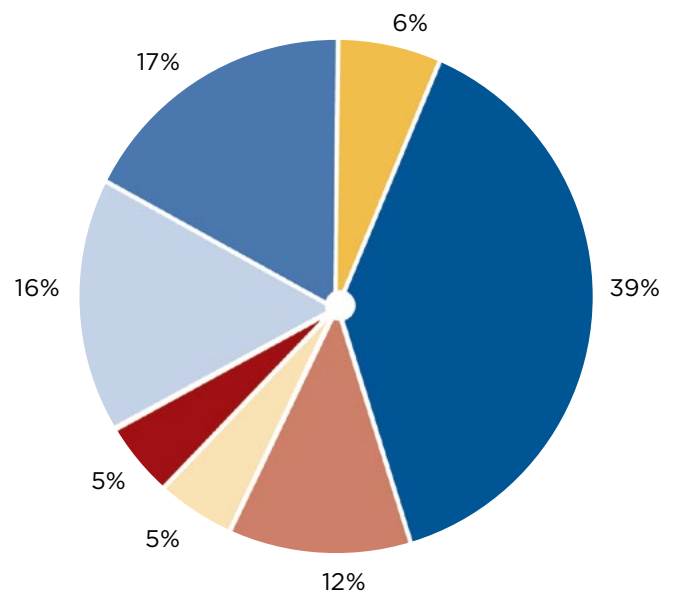
KEY EUROPEAN ENERGY TRENDS AT A GLANCE

An overview of the EU’s current energy mix demonstrates both the diversity of energy sources powering the EU and the crucial role that imports play in meeting its energy needs. In the last twenty years, the EU’s energy mix has shifted to include more renewables and

**Figure 3:
2016 World Energy Production by Region**



**Figure 4:
2016 World Energy Consumption by Region**



Source: *EU energy in figures, Statistical pocket-book 2018*, European Commission.

natural gas, while decreasing the share of solid fuels and petroleum products.³

The EU produces about 5 percent of global energy supply, while consuming around 12 percent.⁴ As long as the EU relies on imports for more than half of its energy consumption, diversification of supply, including clean energy, will be key to ensuring energy security.

Diversified Gas Markets are Key to EU Energy Security

The EU's reliance on energy imports will increase as coal and nuclear power plants retire, domestic production continues its decline, the transportation sector ramps up electrification, and the EU member states devise plans to meet climate targets under both the Paris Agreement and the Energy Union policy framework.

The robust growth in renewable energy deployment and continued investments in energy efficiency will take care of some of the lost capacity. Nevertheless, natural gas—both piped gas and liquefied natural gas (LNG)—will continue to play an essential role in fueling Europe and serving as a bridge fuel in the shift toward a low-carbon economy. The EU's energy leadership acknowledges that natural gas will remain “an important component” of the EU's energy mix, but its role will evolve by the middle of the century to become a “complement” to electricity generation from wind and solar power.⁵ Access to LNG and a well-integrated internal pipeline network remain essential to European energy security, as gas fuels 23 percent of the EU's total energy needs, second only to oil's roughly 36 percent share of the energy mix. However, gas is not as fungible of a commodity as oil, meaning that it is not as easily traded on global markets. Though European gas markets have become more liberalized and better connected, the price discrepancies throughout EU states and regions are a testament to the infrastructural barriers and market distortion caused by having a dominant single supplier.

The EU has made significant progress in mitigating threats from monopolistic suppliers through investments in infrastructure, development of alternative gas routes, and improvements to the regulatory framework. Yet more work must be done to address energy and political security threats.

US and European Gas Market Trends

Natural gas markets have gone through tremendous changes in the last decade. Thanks to technological advancements and efficiencies in the production and transportation of LNG, the United States experienced the shale revolution.⁶ Global LNG markets have shifted toward market-driven pricing mechanisms. Stronger climate targets and pollution controls have also elevated the role of natural gas in serving global energy needs.

Natural gas pricing is moving away from oil-linked pricing models and in the direction of hybrid, market-based hub pricing and spot pricing. “Take or pay” and “destination” clauses in LNG contracts—which restrict where shipments of gas can be unloaded and prevent buyers from selling on excess cargoes—are becoming less popular and, in some cases, obsolete.⁷ While suppliers and investors prefer the predictability of long-term contracts, such terms are becoming less attractive. In the current “buyer's market,” consumers flock to destination flexibility and spot or short-term contracts, which reinforce optionality.

These changes demonstrate that gas markets are becoming more competitive and transparent in pricing. However, a fully liquid global gas market does not yet exist. Large price disparities remain across North American, European, and Asian natural gas and LNG markets. This is an opportune area for US and EU collaboration. The United States has an important role to play as a reliable LNG supplier for Europe, and the transatlantic allies have a unique opportunity to work together on managing key natural gas market trends driving the shift

3 *EU energy in figures: Statistical pocketbook 2018*, European Union, September 25, 2018, <https://publications.europa.eu/en/publication-detail/-/publication/99fc30eb-c06d-11e8-9893-01aa75ed71a1/language-en/format-PDF/source-77059768>.

4 Ibid.

5 Frédéric Simon, “Cañete sees gas as ‘a bridge’ to reach EU's clean energy goals,” *EURACTIV*, February 11, 2019, <https://www.euractiv.com/section/climate-strategy-2050/news/cañete-sees-gas-as-a-bridge-to-reach-eus-clean-energy-goals/>.

6 Ellen Scholl, *The Future of Shale: The US Story and Its Implications*, Atlantic Council, January 8, 2019, <https://www.atlanticcouncil.org/publications/reports/the-future-of-shale>.

7 Aaron Sheldrick, “Destination Clauses on LNG Will Soon Fade Away: Gas Union President,” Reuters, February 25, 2015, <https://www.reuters.com/article/us-asia-lng-contracts/destination-clauses-on-lng-will-soon-fade-away-gas-union-president-idUSKBNOLTOYY20150225>.

toward more liquidity, transparency, and global competition. The greater goal is for Europe to establish a competitive natural gas market (including LNG) where the supply can come from multiple sources, including the United States, Qatar, Algeria, Australia, and elsewhere.

Greater energy consumer engagement has an impact on the gas market. Energy consumers are engaged in the details of where their energy comes from, how it is utilized, and what impact different sources have on the environment. Education, open dialogue, transparency, and relationship building with communities are all essential for successful development of energy projects. Some European constituents are pushing back against US LNG due to environmental and climate concerns. It is important for the EU to have consistent messaging on the role natural gas will have in meeting the Energy Union environmental milestones. To aid in this endeavor, the United States and EU could collaborate more closely on public communication and develop a transatlantic strategy to educate consumers about the geopolitical and energy security benefits of energy infrastructure projects, such as wind turbines, transmission lines, and natural gas infrastructure, as well as clear messaging on the environmental impacts of US fracking practices.

ENERGY MARKET WINS IN EUROPE

Current Regulatory Progress in Europe: the Energy Union and Energy Security

One of the EU's key tools for ensuring energy security is its regulatory framework. In order to engage effectively with the EU on future advancements across the energy sector, the United States must better understand and recognize improvements to the framework. The European Commission has made significant progress in delivering on the regulatory goals of the Energy Union. Launched in 2015, the EU's Energy Union is a five-pronged strategy that mandates EU countries develop integrated national energy and climate plans for 2021–2030 that cover five dimensions: security, solidarity, and trust; a fully integrated internal energy market; energy efficiency; decarbonizing the economy; and research, technology, and innovation.⁸ The Energy Union has been the flagship objective of the Juncker Commission, much like key Euro-

pean Union milestones of economic integration and the internal market project were in the early 1990s.

The Resilient Energy Union with a Forward-Looking Climate Policy (informally known as the European Energy Union) was built on the premise of integrating energy security, decarbonization, and competitiveness agendas, which had previously been evolving independently. The delivery of major milestones in advancing the EU's energy regulatory framework and building the Energy Union in Europe can be credited to Maroš Šefčovič, European Union vice president for the Energy Union; Miguel Arias Cañete, energy and climate commissioner; and Dominique Rostori, director general for energy. The Energy Union sets a vision for decarbonization and the clean energy transition as an economy-wide transformation and future economic development model for the EU.

Strengthened energy security and integrated internal electricity and gas markets have remained the core pillars of the Energy Union, and these policy objectives are closely tied to the national security and sovereignty of EU countries. The EU and its member states have made significant strides in advancing the EU's energy regulatory framework. In a rather short period, the EU was able to move forward on a few key elements of the energy regulatory framework discussed below.

Security of Gas Supply Regulation

Following Russia's annexation of Crimea and heightened political conflict in Ukraine, the EU has stress tested energy sectors in EU member states and select neighboring countries. The stress tests focused on analyzing the ability of EU countries to withstand energy supply emergencies. The direct outcome of the tests was a revision of the Security of Gas Supply Regulation, and the revision entered into force in 2017.⁹ The new rules require EU countries to work together in regional clusters to assess risks for gas supply disruption and agree on joint regional actions to respond to those risks. The change introduced a new "solidarity principle" that requires countries to prioritize helping neighboring countries supply vulnerable consumers (such as hospitals or schools) during supply emergencies. Natural gas operators are now required to notify national au-

8 "Priority: Energy union and climate," European Commission, accessed May 2019, https://ec.europa.eu/commission/priorities/energy-union-and-climate_en.

9 "Securing Europe's gas supply: new Regulation comes into force," European Commission, October 30, 2017, https://ec.europa.eu/info/news/securing-europes-gas-supply-new-regulation-comes-force-2017-oct-27_en.

thorities about major long-term supply contracts that may affect the security of supply.

Modification of the Decision on Intergovernmental Agreements

The 2018 Modification of the Decision on Intergovernmental Agreements¹⁰ added a layer of European Commission oversight through the introduction of a European Commission review of proposed international energy agreements negotiated by member states.¹¹ If a new agreement significantly affects national gas supply in a given member state, it triggers a review of potential energy security implications for the EU. European Union countries must notify the European Commission of new international agreements in advance. Major international energy contracts made with countries outside the EU will have to be written so that the contracts comply with EU law before they are finalized. EU countries will have to consider implications not only for national, but also for European, energy security.

Amendment to the EU Gas Directive

Adopted in April 2019, the amendment to the EU Gas Directive has major implications for the functioning of the EU's internal energy market.¹² This legislative change clarified that pipelines entering or leaving the European internal energy market need to comply with EU law. Any new gas pipelines originating outside the EU will have to comply with the core principles of the Third Energy Package—namely, ownership unbundling, third-party access, and nondiscriminatory tariff regulation. How the amendment will specifically impact offshore pipelines such as Nord Stream 2 and TurkStream, and the final course of actions by the project stakehold-

ers, is still to be determined. However, the amendment to the EU Gas Directive has significantly changed the operational environment for controversial projects by increasing political and economic risks to them. (The impacts of the amendment are discussed further in the sections below.)

KEY INFRASTRUCTURE MILESTONES

In addition to strengthening the regulatory backstops, the EU has made considerable investments in strategic energy infrastructure in order to prevent and manage energy supply emergencies. More than thirty strategic energy projects have been implemented in Europe in the last five years, with a specific focus on the most vulnerable regions. The EU's Projects of Common Interest in the energy sphere hit several milestones, with EU-wide support in the form of fast-tracked permitting, feasibility studies, and seed capital.¹³ Under the EU's LNG Strategy, adopted in 2016, the European Commission set out to ensure that each EU country has access to LNG, pipeline gas, and natural gas storage.

The European Commission projects that all member states, except for Malta and Cyprus, will have access to three sources of gas by 2022.¹⁴ Currently, only one EU country is fully dependent on a single supplier, thanks to the significant buildout of gas interconnectors and LNG import terminals in the EU regions—Central, Eastern, and Southeastern Europe—that are most vulnerable to changes in energy supply. To date, the EU has co-financed LNG infrastructure worth more than \$733 million (or €656 million). According to the European Commission, “in addition to the existing 150 billion cubic meters of spare capacity in the EU, the EU is supporting eight LNG projects that will increase capacity by another 22 billion cubic meters

10 “Proposal for a DECISION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on establishing an information exchange mechanism with regard to intergovernmental agreements and non-binding instruments between Member States and third countries in the field of energy and repealing Decision,” European Commission, February 16, 2016, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52016PC0053>.

11 “Commission Welcomes Agreement to Ensure Compliance of Intergovernmental Agreements in the Field of Energy with EU Law,” European Commission, press release, December 7, 2016, http://europa.eu/rapid/press-release_IP-16-4311_en.htm.

12 “Energy Union: Commission Welcomes Tonight’s Provisional Political Agreement to Ensure that Pipelines with Third Countries Comply with EU Gas Rules,” European Commission, press release, February 12, 2019, http://europa.eu/rapid/press-release_IP-19-1069_en.htm.

13 “Projects of Common Interest,” European Commission, accessed May, 2019, <https://ec.europa.eu/energy/en/topics/infrastructure/projects-common-interest>.

14 *Fourth report on the State of the Energy Union*, European Commission, April 9, 2019, https://ec.europa.eu/commission/sites/beta-political/files/fourth-report-state-of-energy-union-april2019_en_0.pdf.



Local employees work at the nearby Marta Pass, the highest point (2100m) of the Trans Adriatic Pipeline (TAP) in Korce, Albania, April 17, 2019. REUTERS/Florion Goga.

by 2023.”¹⁵ The total EU LNG regasification capacity is expected to increase from 210 billion cubic meters in 2017 to 232 billion cubic meters by 2022.¹⁶

Baltic countries have switched from being “energy islands” to “energy pioneers” under the EU’s Baltic Energy Market Interconnection Plan (BEMIP). Lithuania’s Klaipeda LNG terminal, commissioned in late 2014, unlocked Gazprom’s grip on the Baltic states’ gas supply. The mere presence of the terminal placed Lithuania in a position to negotiate a 20 percent discount with Gazprom.¹⁷ The Balticconnector, which will connect the Finnish and Estonian gas networks, is set to start operating in

2020. Poland, once fully reliant on Russian gas, is complementing a further expansion of the Świnoujście LNG terminal with a new pipeline—the Baltic Pipe—that will link markets in Poland to Denmark, as well as to Norwegian gas fields. The EU invested €128 million for the expansion of the Świnoujście LNG terminal, in addition to its prior investment of €224 million.¹⁸ The Baltic Pipe recently received €215 million in EU funding for the construction work. The new connections are especially timely, as Poland’s Gazprom contract expires in 2022 and Poland’s current LNG terminal is fully booked until 2035.¹⁹ Additionally, the construction of the Gas Interconnector Poland-Lithuania (GIPL) is set to start this autumn. GIPL

15 “EU-U.S. Joint Statement: Liquefied Natural Gas (LNG) imports from the U.S. continue to rise, up by 181%,” European Commission, press release, March 8, 2019, http://europa.eu/rapid/press-release_IP-19-1531_en.htm.

16 Ibid.

17 Kjetil Malkenes Hovland, “Gas Terminal Plans Helped Lithuania Negotiate Lower Price from Gazprom,” *Wall Street Journal*, May 28, 2014, <https://www.wsj.com/articles/gas-terminal-plans-helped-lithuania-negotiate-lower-price-from-gazprom-1401188154>.

18 “U.S. liquefied natural gas exports up by 272% as EU and U.S. host High-Level Business-to-Business Energy Forum,” European Commission, press release, May 2, 2019, http://europa.eu/rapid/press-release_IP-19-2313_en.htm.

19 James Shotter, “Poland Aims to Break Dependence on Russian Gas,” *Financial Times*, January 27, 2019, <https://www.ft.com/content/d1b9d764-febd-11e8-aebf-99e208d3e521>; Andrius Sytas, “Lithuania LNG Port Aims to be Baltic Hub, Double Flows,” Reuters, January 21, 2019, <https://www.reuters.com/article/lithuania-Ing/lithuania-Ing-port-aims-to-be-baltic-hub-double-flows-idUSL8N1ZL2C9>.

is planned to start operating in 2021 and could serve as another supply channel to Ukraine through Lithuania. The EU allocated €10.6 million for preparatory work and €294.4 million for the construction.²⁰

The first gas of the Southern Corridor, from the Caspian region, is expected to reach Europe next year, improving energy security in Central and Southeast Europe. In 2018, the European Investment Bank approved a loan of \$1.5 billion, which was the bank's largest ever single loan to an energy project, for the construction of the Trans-Adriatic Pipeline (TAP)—the last leg of the Southern Gas Corridor.²¹ Most recently, Bulgaria and Greece inaugurated the construction of the Interconnector Greece-Bulgaria (IGB), which is a key strategic priority for the EU and connects TAP to the Bulgarian gas network.

The EU also aims to create a Mediterranean gas hub south of Europe by supporting two strategic projects—the Cyprus East Med Pipeline and the Cyprus LNG terminal. Additionally, Croatia's Krk LNG terminal secured the final investment decision in January 2019. The EU had allocated a total of €124 million to support the terminal, including €16 million for the evacuation pipeline. The Croatian government is providing €100 million (€50 million in 2019 and €50 million in 2020), and €32.6 million will be contributed by the founders of the LNG Croatia company—the HEP national electricity provider and the Plinacro gas network operator.²² Although the funding has been secured, downstream purchase agreements will be essential to the project's timely completion, and negotiations are currently taking place. Hungary has expressed interest in acquiring a 25 percent stake in the terminal ownership, but no final decision has been reached.

Geopolitical divides in the Eastern Mediterranean have energy security implications for Europe. The divide be-

tween countries in the region and disagreements over recently discovered resources are hindering further development of the Eastern Mediterranean gas market.²³ ExxonMobil's presence on the coast of Cyprus could encourage greater US involvement in the region, but the United States and EU need to work together to resolve political obstacles and find creative solutions to ensure benefits to all stakeholders.

The EU is also supporting new-capacity developments in Greece's Revithoussa LNG terminal, as well as LNG developments in Spain, Ireland, and Sweden (details on the EU investment in LNG terminals can be viewed online).²⁴ Even Germany is proposing two LNG terminals, with the Wilhelmshaven terminal being developed by a company that is also invested in Nord Stream 2.²⁵

US LNG exports to Europe have emerged as an important source of gas supply, contributing to energy security and supply diversification. The United States has a significant role to play in the EU's natural gas market by reinforcing competition and optionality. The EU and the United States agreed to strengthen strategic energy cooperation in July 2018 and to work toward facilitating large-scale US LNG exports to Europe. Since the political agreement, the EU and the United States have held the first business forum under the EU-US Energy Council, as well as the May 2019 joint visit by Maroš Šefčovič and US President Donald Trump to the Cameron LNG facility in Louisiana, which will start exporting to European and Asian markets at the end of 2019. The first commissioning cargo of LNG departed on May 31, 2019.²⁶ According to the EU data, the United States is emerging as Europe's third largest supplier of LNG, with a share of 12 percent of EU LNG imports in 2019.

20 "Gas Interconnection Poland-Lithuania (GIPL)," Amber Grid, accessed May 2019, <https://www.ambergrid.it/en/projects/gas-interconnection-poland-lithuania-gipl>.

21 Sam Morgan, "EU Bank Approves Largest Ever Energy Loan, for TAP Pipeline," *EURACTIV*, February 7, 2018, <https://www.euractiv.com/section/energy/news/eu-bank-approves-largest-ever-energy-loan-for-tap-pipeline/>.

22 "Hungary Offers to Buy 25% of LNG Terminal on Krk," *Hina*, April 13, 2019, <https://www.total-croatia-news.com/business/35291-lng-terminal>.

23 Simone Tagliapietra, "An Opportunity for Natural Gas in the Eastern Mediterranean," *Bruegel*, March 12, 2019, <http://bruegel.org/2019/03/an-opportunity-for-natural-gas-in-the-eastern-mediterranean/>.

24 "EU-U.S. Joint Statement: Liquefied Natural Gas (LNG) imports from the U.S. continue to rise, up by 181%."

25 Madeline Chambers and Paul Carrel, "UPDATE 1—Germany Set to Have at Least 2 LNG Terminals—Minister," *Reuters*, February 12, 2019, <https://www.reuters.com/article/germany-lng/update-1-germany-set-to-have-at-least-2-lng-terminals-minister-idUSL5N2072W1>.

26 Sibyl Layag, "Cameron LNG ships 1st commissioning cargo from 1st train," *S&P Global*, May 31, 2019, <https://www.spglobal.com/marketintelligence/en/news-insights/trending/rtdo3kPfoqwCaCrkmVCnHw2>.



Workers are seen through a pipe at the construction site of the Nord Stream 2 gas pipeline, near the town of Kingisepp, Leningrad region, Russia, June 5, 2019. REUTERS/Anton Vaganov.

THE EU'S PROGRESS IS SUBSTANTIAL, BUT FURTHER MARKET INTEGRATION AND LIBERALIZATION ARE NECESSARY

The LNG optionality and alternative gas pipelines provide EU countries with flexibility, and they strengthen the EU's position when renegotiating existing gas supply contracts and locking in price reductions and more attractive commercial terms with other suppliers.

While the EU has made great strides on regulations and infrastructure, key energy security challenges remain for optimizing competitiveness and interconnections in the European energy market. The biggest barrier to an integrated and liberalized energy market in Europe is the uneven implementation of the Third Energy Package and the Energy Union Strategy across EU members states, as well as infrastructure gaps in electricity and gas interconnectors—especially in Central and Southeastern Europe.

Energy Markets and Diversification

The strengthening of the EU's energy regulatory framework is a meaningful step toward the completion of a single energy market, and a crucial achievement for European energy solidarity. Yet, substantial opportunities remain for improved infrastructure connectivity and energy market functionality. Europe's dependence on imports is significant and set to increase, and some regions are exposed to more risk due to their reliance on a dominant supplier. Robust energy interconnections give energy consumers leverage, but not all of Europe's energy network is equally connected.

The risks related to overreliance on a single supplier were demonstrated in 2006 and 2009 when Gazprom stopped nearly all its natural gas exports to Europe through Ukraine.²⁷ Those events were the impetus behind new EU regulatory safeguards such as the Third Energy Package and Energy Union, as well as the reinvigor-

27 "TIMELINE: Gas Crises Between Russia and Ukraine," Reuters, January 11, 2009, <https://www.reuters.com/article/us-russia-ukraine-gas-timeline-sb-idUSTRE50A1A720090111>; Andrew E. Kramer, "Russia Cuts Gas, and Europe Shivers," *New York Times*, January 6, 2009, <https://www.nytimes.com/2009/01/07/world/europe/07gazprom.html>.

ated push for energy interconnectivity priority projects. The United States and EU have a timely opportunity to collaborate on building the Energy Union and aligning the EU and US strategies on connectivity and energy infrastructure investment.

Even with the impressive progress made, energy connectivity voids exist in Central, Eastern, and Southeastern European countries. Eleven EU member states (Bulgaria, the Czech Republic, Estonia, Latvia, Hungary, Austria, Poland, Romania, Slovenia, Slovakia, and Finland) depend on Russian gas to meet at least 75 percent of their gas needs. Also, around 40 percent of EU gas imports come from Gazprom, a number that could potentially increase if the proposed Nord Stream 2 and TurkStream pipelines come online.²⁸ Rather than eliminating Russian gas supplies, the EU market aims to liberalize, connect, and diversify the internal market to ensure that no single player abuses its dominant position, and that all participants abide by the EU rules. There are ample opportunities for the EU and United States to partner on strategic infrastructure, and to increase diversification of supply and market integration.

The Bulgaria-Romania-Hungary-Austria (BRUA) gas pipeline is progressing as a recent EU Agency for the Cooperation of Energy Regulators (ACER) ruling gives Hungary a mandate to evaluate the economic feasibility of the original pipeline route through Hungary. Another considered route is the Bulgaria-Romania-Hungary-Slovakia-Austria (BRUSKA) pipeline, which goes through Slovakia, utilizing existing infrastructure. Transgaz (Romania's natural gas transmission system operator) has already begun work on the Black Sea Shore-Podisor Pipeline, which would connect the Black Sea coast with both its national transmission system and the proposed BRUA pipeline. In 2018, Transgaz secured a €50 million loan from the European Investment Bank. But, several factors signal BRUA's uncertain future: Romanian gas export restrictions and its tax regime have lessened investors' appetite for tapping into offshore Black Sea reserves, and the planned BRUA route through Hunga-

ry is still not finalized.²⁹ The Eastring pipeline is another project that has been progressing slowly in the same region as BRUA. The Eastring pipeline would connect Bulgaria, Romania, Hungary, and Slovakia. EU-funded studies demonstrate technical and financial feasibility of the pipeline, and the project timeline suggests that the first phase of the project could be completed in 2025, with the second phase concluded in 2030.³⁰ Securing funding is the next key hurdle for Eastring pipeline development. Both BRUA and Eastring could ensure Central and Eastern Europe (CEE) gas supply diversification. Hungary, for example, is renegotiating a new long-term agreement with Gazprom that will begin in 2021, and the optionality of additional supply routes should give Hungary more leverage in these negotiations.

The Iberian Peninsula is still not fully integrated with the European gas market. The EU made several commitments to invest in interconnections in Spain and Portugal, but some of the projects have stalled. The future of the MidCat Project (a pipeline linking Spain and France) is uncertain, as energy regulators in Spain and France have rejected an investment request to build an essential portion of the pipeline. Another untapped opportunity is the expansion of the Portuguese Port of Sines LNG terminal. Greater terminal capacity could supply Portuguese, Spanish, French, and greater European gas needs. The gas interconnection across Portugal and Spain, and its connection to the European gas market through France, would strengthen energy security across the Iberian Peninsula and Europe more broadly.

The United States and EU have worked together on promoting Ukrainian energy sector reforms, developing energy sector contingency planning, and supporting Ukrainian gas transit. Despite the country's vulnerable situation in economic and political terms, Ukraine has not imported Russian gas since 2015 due to the establishment of reverse gas flows from European Union member states. The EU has assisted the Ukrainian government in preparing the establishment of an independent energy regulatory authority, as well as new gas and elec-

28 "Statistics Explained: EU imports of energy products—recent developments," Eurostat, October 2018, <https://ec.europa.eu/eurostat/statistics-explained/pdfscache/46126.pdf>.

29 Valerie Hopkins, "Romanian Tax Demand Puts Black Sea Gas on Hold," *Financial Times*, November 21, 2018, <https://www.ft.com/content/09a36204-c8bc-11e8-86e6-19f5b7134d1c>.

30 "Feasibility Study for the Eastring Project," European Commission, March 2017, <https://ec.europa.eu/inea/sites/inea/files/6.25.1-0010-skhus-m-16.pdf>.

tricity laws to improve efficiency in the energy sector.³¹ The EU has also worked with Ukraine on the creation of the Energy Efficiency Fund that will—for the first time—support the energy efficient renovation of multi-apartment buildings, facilitating budgetary and household savings.³² Ukraine's ten year gas transit contract with Gazprom is set to expire at the end of 2019. The EU has engaged at the top level in mediating the Ukraine-Russia talks on the future of Ukrainian gas transit. However, despite those efforts, the results of negotiations are uncertain in light of the impending conclusion of the Naftogaz and Gazprom agreement, the Nord Stream 2 completion date, and the uncertainty of the new Ukrainian government's negotiating position at the end of 2019. Ukraine must continue making progress on energy sector liberalization. The country is under tremendous pressure to unbundle the ownership of Naftogaz by the end of 2019. The EU and the United States have to align messaging toward the Ukrainian government and continue working together to secure the viability of the gas transit system and ensure a competitive energy market in Ukraine.

For many Central and Eastern European countries, like Bulgaria, Romania, and Ukraine, the struggle for energy independence is a symbol of a greater identity battle. Close geographic proximity to Russia makes it challenging for the CEE region to implement EU energy reforms fully, because they rely on Russia for the majority of their energy needs, among other commodities.

Although the completion of the Southern Gas Corridor is on the horizon, its success could be compromised by an influx of Russian gas from TurkStream, a 32 billion cubic meter (bcm) gas pipeline system connecting Russia to Turkey, which is on track to start operating by the end of 2019. The pipeline's 15.75 bcm capacity, destined for European markets, could adversely impact expanded Azeri gas supplies and hinder Greece's ambitions of becoming an energy hub. In a free-market environment, additional pipelines would create more options for a consumer, but TurkStream does not originate from such a market. Gazprom is the only company in Russia allowed to export piped natural gas and, unlike the European operators, it is not required to allow a third-party supplier access to a portion of the pipeline's capacity (outside the EU market). Russian gas can play a role in Southeastern Europe, but Gazprom needs to comply with EU market rules. The

amendment to the EU Gas Directive could change the operational environment for the TurkStream pipeline, but the directive's impact on TurkStream remains unclear.

REGULATORY IMPLEMENTATION AND ENFORCEMENT ACROSS THE EU

In addition to infrastructure investments that enable better connectivity, functioning regulatory backstops at the EU member-state and EU levels promote competitive energy markets in Europe. Europe has two main regulatory challenges: implementation of the Third Energy Package and the Energy Union framework across EU member states, and the EU's consistent enforcement of its rules.

Regulations are only as compelling as their enforcement, and several examples of how the EU handled challenges to its rules paint a vivid picture of its regulatory discipline.

Amended Gas Directive

The amendment to the Third Energy Package Gas Directive has the potential to impact the way EU rules are enforced significantly, but only if it is fully implemented by the EU member states and enforced by the European Commission. The amendment expands EU rules to cover offshore pipelines from third-party countries entering the union. EU law entails ownership unbundling, third-party access, and nondiscriminatory price tariffs. However, how the Nord Stream 2 pipeline complies with the amendment will test the effectiveness of the amended directive.

The changes to the Gas Directive clarify that the EU's Third Energy Package applies to the offshore part of Nord Stream 2 and brings the pipeline under EU law. Given its current setup, the Nord Stream 2 project would need to make substantial changes to its ownership structure, tariff system, and ability to grant third-party access to the pipeline's capacity. The amendment's language leaves room for exemptions and derogations, and it differentiates between existing and future pipelines. Under the Gas Directive, existing pipelines with third-party countries will be able to request project-specific derogations with the member states to which the pipelines connect. Derogation decisions do not require

31 "EU-Ukraine relations - factsheet," European External Action Service, May 10, 2019, https://eeas.europa.eu/headquarters/headquarters-homepage/4081/eu-ukraine-relations-factsheet_pl.

32 Ibid.

approval by the European Commission. Future pipeline infrastructure projects will not be able to benefit from derogations. Rather, they will be able to apply for exemptions, which would be approved by a national regulator of a member state and subject to a final approval by the European Commission. The exemption scenario is uncertain for Nord Stream 2, given that the project would have to prove that it would not hamper market competition and security of gas supply.

Under the change to the Gas Directive, EU member states can request an authorization for a bilateral agreement. The bilateral agreement would need to be consistent with EU law. The agreement may not be detrimental to the EU gas market, competition, and security of gas supply. As an alternative, an EU-level agreement could also be negotiated by the European Commission on behalf of all European Union member states.

The adoption of the amendment to the EU Gas Directive has been a major political achievement for EU solidarity. This was a step toward rekindling a tense political and legal environment for the controversial Nord Stream 2 project, which has been one of the key challenges in current transatlantic energy relations.

Gazprom Antitrust Case

For seven years, the EU investigated Gazprom over claims that it abused its dominant position through unfair prices and restrictive terms in eight EU countries: Bulgaria, the Czech Republic, Estonia, Latvia, Lithuania, Poland, Hungary, and Slovakia. The investigation concluded with a settlement in which the EU imposed no monetary fines on Gazprom, in contrast to those that it imposed on several US companies.³³ However, the settlement included several restrictions on Gazprom, such as binding obligations to enable the free flow of gas at competitive prices in Central and Eastern European gas markets. As seen from the US perspective, the final ruling exposed inconsistencies in the way the EU addresses Gazprom's behavior in comparison to other companies like Google and Qualcomm, which were fined €2.4 billion and €997 million, respectively, for their antitrust practic-

es. The EU's argument is that the European Commission, rather than imposing a one-time fine, has seized the opportunity to impose a detailed set of rules on Gazprom for the long term. If Gazprom breaks any of these obligations, the European Commission can impose a fine of up to 10 percent of the company's worldwide turnover without having to prove an infringement of EU antitrust rules. According to the EU, the detailed set of rules includes the elimination of contractual barriers to the free flow of gas, an obligation to facilitate gas flows to and from isolated markets, a structured process to ensure competitive gas prices, and no leveraging of dominance in gas supply.³⁴

OPAL Pipeline Case

The Ostsee-Pipeline-Anbindungsleitung (OPAL) gas pipeline carries Russian gas from the original Nord Stream pipeline in northern Germany to German and Czech customers in the south. In 2009, the European Commission capped Gazprom's utilization of the pipeline at 50 percent, per Third Energy Package regulations. However, the 2009 decision was revised in 2016. All parties, including dominant companies, could book half of the OPAL pipeline's capacity, whereas the other half would remain fully exempt. In addition, a share of capacity would have to be made available as firm (or guaranteed) capacity. The EU based its decision on the imposition of additional conditions regarding the pipeline operation, which included a provision on the German energy regulator monitoring the effectiveness of the OPAL decision for improving competition on the Czech market. The OPAL operator will be certified under the applicable unbundling provisions.³⁵

However, Poland challenged the 2016 decision. The final ruling by the European Court of Justice, expected later in 2019, will determine if the previous 2016 ruling will stand, which opens the possibility for Gazprom to use 100 percent of the pipeline capacity.

The robust regulatory framework of the Energy Union is a solid foundation for the full liberalization of the EU's gas market. However, to achieve the Energy Union's po-

33 Foo Yun Chee and Alissa de Carbonnel, "EU Ends Antitrust Case Against Gazprom Without Fines," Reuters, May 24, 2018, <https://www.reuters.com/article/us-eu-gazprom-antitrust/eu-ends-antitrust-case-against-gazprom-without-fines-idUSKCN1IP1IV>.

34 "Antitrust: Commission imposes binding obligations on Gazprom to enable free flow of gas at competitive prices in Central and Eastern European gas markets," European Commission, press release, May 24, 2018, http://europa.eu/rapid/press-release_IP-18-3921_en.htm.

35 "Gas markets: Commission reinforces market conditions in revised exemption decision on OPAL pipeline," European Commission, press release, October 28, 2016, http://europa.eu/rapid/press-release_IP-16-3562_en.htm.



A meeting during the Three Seas Initiative's third summit, which took place in Bucharest, Romania from September 17-18, 2018. Wikimedia Commons/Administration of the President of the Republic of Bulgaria.

tential, the EU needs to enforce its existing regulations consistently, especially in cases where monopolistic suppliers are impeding supply diversification across Europe.

THE BIG PICTURE: ON A PATH TO A GLOBAL ENERGY MARKET

Analysis of regulatory and infrastructure achievements and opportunities has exposed several areas that could benefit from more proactive transatlantic cooperation, including sustainable and coordinated funding mechanisms and energy markets that provide a level playing field for competing suppliers. It is also worth taking stock of current US engagement on these issues, to identify an effective path forward.

TRANSATLANTIC INVESTMENT STRATEGY: FUNDING COMMON ENERGY SECURITY

Economic and geopolitical forces are converging as Europe prioritizes future energy investments. European countries are facing the need to finance infrastructure that is essential to energy security, but not economical. The EU's substantial support for such projects has been vital to their actualization and, as noted with the Lithuanian LNG terminal example, alternative options for energy supply provide energy security benefits. Questions

still exist as to whether countries and companies would pay a security premium for a second source of supply, such as LNG, and who would pay the cost of underutilized terminals. Assigning specific value to strategic optionality remains a dilemma, as does identifying who should bear its cost. To date, existing LNG terminals in Europe are utilized at 25–30 percent of their capacity, while some regions still experience terminal congestion. This imbalance signals a need for further interconnections and competitive pricing options across Europe.

US-EU coordination to support strategic energy infrastructure is important, because it is essential for projects that provide security of supply but may take several years to become economically feasible. A joint strategy would allow the EU and United States to eliminate redundancies and identify common strategic priorities, and it would provide a stronger unified front in the face of competition or malign influence from global players whose investments could pose energy security risks. Regional efforts like the Three Seas Initiative, led at the presidential level by twelve countries between the Baltic, Adriatic, and Black Seas could greatly benefit from closer EU, Three Seas member states, and US engagement on strategic infrastructure in the Central and Eastern Europe. The Three Seas Initiative aims to improve connectivity in energy, transportation, and digital networks

through coordinated regional financing mechanisms such as the Three Seas Investment Fund. Closer EU and US cooperation on investment opportunities would ensure coherence with, and support for, the priorities of the existing primary forums for the EU-US dialogues in the digital, transport, and energy areas.

US TOOLS FOR SUPPORTING KEY EUROPEAN INFRASTRUCTURE

United States International Development Finance Corporation

The Better Utilization of Investment Leading to Development (BUILD) Act, which passed with bipartisan support in 2018, established a new development agency—the United States International Development Finance Corporation (USDFC). The USDFC consolidates the US Agency for International Development's (USAID) Development Credit Authority (DCA) and the Overseas Private Investment Corporation (OPIC). This signals a new era of strategic US investment and foreign aid, with a greater focus on mobilizing private investments.

If properly operationalized, the new agency structure could be an effective way for the United States to support projects significant to energy security and open funding for regions and initiatives that did not previously qualify for aid. For example, some projects in developing countries may not require US companies' investments, unlike in the past, and projects could instead qualify based on energy security criteria. The cap on the USDFC portfolio will double the current OPIC limit to \$60 billion (including loans, political risk insurance, and equity). The new USDFC will have an opportunity to expand on deeply rooted relationships that have foundations in USAID and OPIC's previous work in the CEE region. Some European countries have welcomed closer engagement and support by the USDFC with energy security projects in Central and Eastern Europe. As presently set out, the BUILD Act would be primarily utilized for developing countries specifically, or for low-income economies and lower-mid-

dle-income economies. However, OPIC and other stakeholders involved in operationalizing USDFC are working to clarify restrictions for upper-middle-income countries (several CEE countries fall into that category). Those restrictions would signal instances when those countries could or could not utilize USDFC services. Projects in upper-middle-income countries could also be approved on the basis of national security waivers by the president of the United States. The operationalization of the USDFC will be completed by October 2019, at which point the qualification criteria for USDFC services will be clarified.

US-EU Coordination on Investments

The United States' greater presence in Central and Eastern Europe for funding and closer coordination with the EU could offer an alternative to China's Belt and Road Initiative (BRI), which is already working closely with several European countries. Italy is the first member of the Group of Seven (G7) to partake in the BRI, which has led to a total of twenty-nine deals, amounting to €2.5 billion (\$2.8 billion), which were signed during Chinese President Xi Jinping's recent visit to Rome.³⁶

Risk screening of investments in strategic infrastructure has become a shared concern on both sides of the Atlantic. The United States adopted changes to the CFIUS under the Foreign Investment Risk Review Modernization Act of 2018 (FIRRMA), while in March 2019, the EU adopted a regulation setting up a framework for the screening of foreign direct investment that may affect security or public order.³⁷ In addition to the lack of financial transparency, the quality of Chinese-built infrastructure in some African countries is another area of concern.³⁸ However, the BRI has significantly higher amounts of funding available than the assistance from the United States, and Morgan Stanley estimates China's spending will total \$1.3 trillion by 2027.³⁹ The investments are set to increase China's economical and geopolitical leverage and build up its soft power around the globe. While the United States and EU will have to compete with the quantity of money available under the Belt and Road Initiative, the transatlantic allies

36 "Italy Joins China's New Silk Road Project," BBC News, March 23, 2019, <https://www.bbc.com/news/world-europe-47679760>; Angela Giuffrida, "Italy pulls out red carpet for Xi Jinping in trade charm offensive," *Guardian*, March 22, 2019, <https://www.theguardian.com/world/2019/mar/22/italy-pulls-out-red-carpet-for-xi-jinping-in-trade-charm-offensive>.

37 "Screening of foreign direct investment," European Commission, April 10, 2019, <http://trade.ec.europa.eu/doclib/press/index.cfm?id=2006>.

38 Luke Patey, "The Chinese model is failing Africa," *Financial Times*, August 26, 2018, <https://www.ft.com/content/ca4072f6-a79f-11e8-a1b6-f368d365bf0e>; Edward Wong, "Competing Against Chinese Loans, U.S. Companies Face Long Odds in Africa," *New York Times*, January 13, 2019, <https://www.nytimes.com/2019/01/13/world/africa/china-loans-africa-usa.html>.

39 David Tweed, "Quicktake: China's New Silk Road," *Bloomberg*, April 16, 2019, <https://www.bloomberg.com/quicktake/china-s-silk-road>.

have a case for better quality, security, and transparency in their funding. A joint transatlantic investment strategy is needed for a comprehensive approach to counter initiatives such as the BRI in Europe, Africa, the Eastern Mediterranean, and Asia.

US Legislative Solutions to Funding European Energy Security

The European Energy Security and Diversification Act of 2019 (S. 704), introduced on March 7 2019 by Senator Chris Murphy (D-CT), is a piece of US legislation that could open the doors to further strategic investment. This bill aims to “prioritize the efforts of and enhance coordination among United States agencies to encourage countries in Central and Eastern Europe to diversify their energy sources and supply routes, increase Europe’s energy security, and help the United States reach its global energy security goals.”⁴⁰ It also stipulates the provision of \$1 billion in financing to support private sector investment in projects that diversify the energy sources and energy transport capabilities of Central and Eastern European countries. The bill was read twice—but not passed—and then referred to the Senate Committee on Foreign Relations. The House version of S. 704 is H.R. 1616, the European Energy Security and Diversification Act of 2019.⁴¹ It was introduced by US Representative Adam Kinzinger (R-IL16)—also on March 7 2019. After passing in the House, the bill was referred to the Senate Committee on Foreign Relations later that month. This legislation would be an effective way of supporting transatlantic energy security objectives and energy diversification in Europe.

THE CURRENT AND FUTURE ROLE OF US ENGAGEMENT

The United States Department of State and the United States Department of Energy (DOE) are the major forces when it comes to forging transatlantic cooperation on

issues such as energy security, and US allies are paying close attention to their outreach.

The US-EU Energy Council is a forum for transatlantic energy cooperation. It was established in 2009 as a high-level body to facilitate coordination on strategic energy issues of mutual interest and cooperation on research and development (R&D).⁴² Co-chaired by the secretary of energy and the secretary of state on the US side and their EU counterparts, the Energy Council meets annually (with several exceptions) to discuss issues of importance. Most recently, the US-EU Energy Council met in 2018 in Brussels with the participation of Secretary of State Michael Pompeo and Secretary of Energy Rick Perry. Additionally, in 2019, the US-EU Energy Council held the historic first high-level, business-to-business forum “Towards Large Scale US LNG Exports to the EU” in Brussels. The business forum gathered more than five hundred energy professionals to discuss the future of large-scale US LNG supplies to Europe, pricing mechanisms, and the role of US LNG in European energy security.

DOE has reinvigorated the department’s involvement in Europe by increasing the frequency of high-level visits by officials and staff, launching the Partnership for Transatlantic Energy Cooperation (P-TEC), and working through the US-EU Energy Council. Since 2017, United States Secretary of Energy Rick Perry has visited Europe multiple times, with stops in the United Kingdom, Belgium, France, Italy, the Czech Republic, Poland, Hungary, Romania, Ukraine, Austria, and Slovenia; he has also hosted numerous European leaders in Washington, DC.

Secretary Perry announced P-TEC at the 2018 meeting of the Three Seas Initiative in Bucharest, Romania, the goal of which is “to provide policy makers and civil society stakeholders within the transatlantic energy community with the resources and technical tools to build and enhance secure and resilient energy systems.”⁴³ Secretary Perry said, “energy choice will strengthen energy secu-

40 US Congress, Senate, European Energy Security and Diversification Act of 2019, S. 704, introduced March 7, 2019, <https://www.congress.gov/bill/116th-congress/senate-bill/704/actions>.

41 US Congress, House, *To prioritize the efforts of and enhance coordination among United States agencies to encourage countries in Europe and Eurasia to diversify their energy sources and supply routes, increase energy security in the region, and help the United States reach its global energy security goals, and for other purposes*, HR 1616, 116th Congress, introduced March 7, 2019, <https://www.congress.gov/bill/116th-congress/house-bill/1616/text?r=4>.

42 “U.S.-EU Energy Council,” US Department of Energy, accessed June 2019, <https://www.energy.gov/ia/international-affairs-initiatives/us-eu-energy-council>.

43 The Three Seas Initiative is a presidential-level collaboration across the countries between the Baltic, Adriatic, and Black Seas, focusing on increased collaboration on projects in energy, transportation, and digital interconnection.

...economic security...and national security.” Although little progress was made in 2018 or the first quarter of 2019, Secretary Perry officially rolled out P-TEC at CER-AWeek in Houston in March 2019.⁴⁴ The initiative’s key priorities will include fossil fuel, nuclear energy, technology innovation, renewable energy, and energy efficiency. As P-TEC evolves from planning to implementation stages, its success will be tied to alignment of priorities and close collaboration with the European Commission and the US-EU Energy Council.

United States Department of State Involvement

It is important for the State Department to stay involved in transatlantic energy security issues, in addition to its robust engagement on the Nord Stream 2 pipeline. The State Department has vocally supported the development of the KrK LNG terminal in Croatia, as well as the completion of the Southern Gas Corridor. The Bureau of Energy Resources (ENR) has provided technical assistance to Ukraine’s Naftogaz (national oil and gas company) on the implementation of governance reforms. In addition, the State Department participated in the Three Seas Initiative Strategy Session in Warsaw in February 2019, and the Three Seas Initiative portfolio has been specifically assigned to the deputy assistant secretary of the Bureau of European and Eurasian Affairs.

The Role of Sanctions in US Engagement on Energy Security

Newly proposed US energy sanctions, aimed at Russia, could have a strong impact on transatlantic relations and EU-US unity. Even when sanctions do not explicitly target the EU, unintended consequences of sanctions can negatively impact EU businesses, including through secondary sanctions. There are a number of Russian sanctions measures proposed in Congress with significant energy implications, including the Defending Elections against Trolls from Enemy Regimes (DETER) Act, Defending American Security from Kremlin Aggression (DASKA) Act legislation, and the Nord Stream 2 sanc-



US Energy Secretary Rick Perry and EU Energy Commissioner Miguel Arias Canete hold a joint news conference at the EU Commission headquarters in Brussels, Belgium, May 2, 2019. REUTERS/Francois Lenoir

tions recently introduced by Senators Ted Cruz (R-TX) and Jeanne Shaheen (D-NH). Close US engagement and coordination with the EU are essential to attempt to avoid negative consequences for US allies. Transatlantic unity is critical for ensuring maximum political and economic pressure on Russia. The existing Russia sanctions legislation, the Countering America’s Adversaries Through Sanctions Act (CAATSA), adopted in 2017, requires US coordination with the EU, which should continue to be an integral part of any new measures.⁴⁵

Sanctions against Oleg Deripaska and his companies Rusal and EN+ are an example of justifiable sanctions from the US standpoint. But, because of the lack of coordination with Europe, these sanctions inadvertently and severely impacted the European aluminum industry. This measure could have resulted in a victory for the Chinese aluminum industry.⁴⁶ These unintended consequences eventually led to the US rollback of these sanctions.

Even many EU states that are concerned with escalating Russian aggression and coercion are not advocating for new US sanctions against Russia. Nevertheless,

44 Rick Perry, “The New American Energy Era: Secretary Perry Keynote Address at CERA Week,” (speech, Houston, TX, March 13, 2019), US Department of Energy, <https://www.energy.gov/articles/new-american-energy-era-secretary-perry-keynote-address-cera-week>.

45 “Countering America’s Adversaries Through Sanctions Act,” US Department of the Treasury, last updated May 21, 2019, <https://www.treasury.gov/resource-center/sanctions/Programs/Pages/caatsa.aspx>.

46 “Trump lifts sanctions on firms linked to Russian oligarch Oleg Deripaska,” Reuters, January 27, 2019, <https://www.theguardian.com/world/2019/jan/27/us-lifts-sanctions-oleg-deripaska-russia>.

some experts have mentioned that the ambiguity of proposed US sanctions has encouraged the EU to take the Nord Stream 2 pipeline issue more seriously, and to take the lead on mitigating the pipeline's negative effects. Uncertainty over sanctions against Nord Stream 2 has been one of the factors helping to put the necessary pressure on the United States' European allies to address Russian monopolistic behavior through the expedited passage of the amendment to the Gas Directive. US sanctions can remain "on the table" as a deterring option.

To be proactive in addressing transatlantic energy security threats and infrastructure connectivity needs, the United States and EU need a comprehensive strategy on relations with Russia, China, and geopolitical hotspots such as the Eastern Mediterranean and Ukraine.

CONCLUSION: FURTHER OPPORTUNITIES FOR US-EU COOPERATION ON ENERGY SECURITY

The EU has made substantial progress in building the Energy Union by improving its regulatory framework and investing significant funds in strategic energy infrastructure projects. Opportunities remain for further advancing European energy security by countering influence of monopolistic suppliers, implementing the existing regulatory framework, and addressing energy interconnection gaps. The United States and EU must work together on supporting European market liberalization and interconnectivity projects across Europe because strong markets are a shield against energy security threats, monopolistic behavior, and the use of energy for geopolitical pressure by malign actors. The development of priority infrastructure projects, support for consistent implementation of EU rules, increased education for energy consumers, resolution of energy-related conflicts, and joint collaboration on funding mechanisms for European and global energy infrastructure are critical to European energy security and present the greatest opportunities for transatlantic cooperation.

The United States and EU should be more attuned to each other's concerns regarding contentious issues such as Nord Stream 2 and US sanctions. Transparent, competitive, and liquid energy markets will mitigate energy security threats, and should be a top priority for US-EU cooperation.

Future briefs in the European Energy Security series will demonstrate how the United States and EU can engage with each other on issues related to infrastructure, alternative sources and routes, advanced energy technologies, climate action, electric power markets, the transportation sector, and sustainable funding mechanisms. US-EU cooperation will strengthen transatlantic energy security and contribute to a reliable, accessible, and competitive energy market in Europe—a win for both sides of the Atlantic.

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