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TRANSATLANTIC ENERGY RELATIONS
THE NEED FOR A NEW ENERGY SECURITY NARRATIVE

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Ongoing geopolitical tensions between Russia and both Ukraine and NATO placed the issue of energy security front and center during the recent EU-US Energy Council meeting. The same was true during the Council's meeting in 2014 following Russia's invasion of Crimea and the beginning of armed conflict in eastern Ukraine. **While the response then was to diversify gas import routes to Europe, there are now better options in Europe's energy toolbox that can effectively increase countries' resilience.** Further, there is increasing international consensus around the need to shift to net-zero emissions,[1] and growing recognition of the socioeconomic and security risks presented by climate change.[2]

Prioritising energy efficiency and accelerated clean energy deployment represents a transatlantic strategy that can yield a double dividend: boosting energy security for the European Union (EU) and Ukraine and delivering on the shared climate security agenda. Going forward, the EU and United States (US) have an opportunity to:

[1] **Net-zero Coalition**, United Nations.

[2] C. Flavelle, J. E. Barnes, E. Sullivan, and J. Steinhauer, **Climate Change Poses a Widening Threat to National Security**, *The New York Times*, 1 Nov 2021.

- Continue to demonstrate transatlantic solidarity in tackling the current crisis; and
- Show that the energy security equation has changed and will continue to change by placing the accelerated deployment of energy efficiency and clean energy at the center of transatlantic cooperation.

The security case for efficiency and accelerated clean energy deployment

The 2021 G20 Energy-Climate Ministerial Communique stated that energy efficiency, the expansion of clean energy technologies, and demand-side measures should be prioritised as part of efforts to advance energy security.[3]

This call to action is supported by real world evidence. Energy efficiency and demand-side measures are powerful tools to improve the EU energy system's resilience, as they help constrain the demand for heat generation (both for industry and buildings) – the main cause of seasonal gas demand spikes. According to the International Energy Agency, efficiency gains in Germany and the United Kingdom (UK) between 2000 and 2015 were the primary factor behind reduced demand for gas and decreased imports. Without these measures, gas consumption in 2015 would have been 21% higher in Germany and 27% higher in the UK**,** demonstrating how increased efficiency can insulate Europe from outside pressures on its energy supplies.[4]

Looking ahead, the International Energy Agency found that energy efficiency improvements and the expansion of clean energy consistent with the EU's net-zero emissions targets will result in gas demand falling 20% by 2030, and a peak in gas imports by the mid-2020s.[5] An analysis by the European Commission found that meeting the EU's emissions reduction targets has the potential to result in a 40% decrease in gas imports by 2030,[6] boosting the EU's ability to

[3] **Joint G20 Energy-Climate Ministerial Communique**, G20 Information Centre, University of Toronto, 23 July 2021.

[4] **Multiple Benefits of Energy Efficiency**, International Energy Agency, 2019.

[5] P. Zeniewski, **Despite Short-term Pain, the EU's Liberalised Gas Markets Have Brought Long-term Financial Gains**, International Energy Agency, 22 Oct 2021.

[6] L. Fischer, **What the EU Green Deal Means for European Gas Suppliers: Case Study Norway**, E3G, Aug 2021.

reduce its dependence on both Russian pipeline gas (which comprises about 40% of the EU's overall gas consumption) and global LNG markets.[7]

Energy efficiency could prove especially important for Ukraine. At this past October's EU-Ukraine Summit, European Commission President Ursula von der Leyen explained that by improving Ukraine's level of energy efficiency to that of its closest EU neighbors, "Ukraine would no longer need to import any kind of gas."[8]

Rapid expansion of renewables is also crucial, particularly for limiting gas demand in the European power sector. Unlike fossil fuels, renewable energy sources are not susceptible to price shocks from fluctuating fuel markets. During the current spike in energy prices, households with existing solar across Poland, Spain, Germany, and Belgium have saved an average of 60% on monthly electric utility bills,[9] and power generation from zero-carbon sources resulted in €33 billion in gas savings across the EU from July through September 2021.[10]

Decarbonisation will introduce new challenges that will need to be managed. However, studies demonstrate that transitioning energy systems away from fossil fuels is possible. In the EU, achieving net-zero emissions by 2050 could be realized without increasing the aggregate cost of living for an average household.[11] Likewise, the US could decarbonise its electricity grid 95% by 2035 and make progress toward electrifying other sectors without raising electricity prices.[12] In both cases, transforming the energy system will require massive increases in the deployment of solar and both onshore and offshore wind generation, short-term energy storage, and transmission and interconnection upgrades.

LNG supplies to Europe: a short-term patch, not a solution

As the EU experiences a gas supply crunch amid tight global markets and reduced delivery of Russian pipeline gas, the EU and US are working to secure

[7] **From Where Do We Import Energy?**, EuroStat.

[8] **Statement by President von der Leyen at the Joint Press Conference with President Michel and President Zelensky following the EU-Ukraine Summit**, European Commission, 12 Oct 2021.

[9] W. Hemetsberger, **European Electricity Price Hikes Supercharge Solar**, *PV Magazine*, 12 Nov 2021.

[10] L. Myllyvirta, H. Thieriot, and I. Suarez, **Europe's Zero-carbon Generation Broke Records in the Third Quarter, Cutting Fuel Bills During the Gas Crisis**, Centre for Research on Energy and Clean Air, Oct 2021.

[11] P. d'Aprile, H. Engel, S. Helmcke, S. Hieronimus, T. Naucler, D. Pinner, G. van Gendt, D. Walter, and M. Witteveen, **How the European Union Could Achieve Net-zero Emissions at Net-zero Cost**, McKinsey Sustainability, 3 Dec 2020.

[12] **Solar Futures Study**, US Department of Energy, Sep 2021.

alternative supplies, mostly in the form of liquefied natural gas (LNG). US LNG exports to Europe more than doubled since November 2021, driven by high LNG spot prices, with 45 out of 75 shipments in January headed to European ports.[13] However, LNG's ability to address the structural issues underlying the current shortage is limited.

Although additional LNG supply can cover a portion of European gas demand in the short term, it is limited in its ability to address substantial demand increases. Additional demand could arise if this spring or next winter are colder than expected, while shortages could occur if there are further cuts in Russian gas supply (such as in the worst-case scenario of Russia cutting supplies of gas delivered under long-term contracts). Russia exports approximately 16.7 billion cubic feet of gas per day to Europe's largest economies. In comparison, in 2021, the three largest LNG producers – Australia, Qatar, and the US – each averaged approximately 10 billion cubic feet per day while exporting at or near maximum capacity.[14] Currently, about 60% of global LNG is tied up in long-term contracts, limiting the availability of LNG that is tradable on the spot market.[15] Looking forward, there is limited uncontracted supply available through to 2025,[16] with Asian economies – especially China – having recently signed numerous long-term contracts.[17]

LNG imports come at a steep price for European households and businesses. Spot prices for LNG are typically higher in Asia than in Europe due to demand from China, Japan, and South Korea – the three largest LNG importers.[18] In recent months, however, prices in Europe have tracked and even exceeded prices in Asia. European futures were at over $30 per million Btu compared to $4 in the US at the end of January.[19] Volatility is an inherent feature of the global gas market resulting from the market's structure and the seasonality of global demand, a reality that is unlikely to change through the rest of the decade. Rising LNG demand in Asia over the next five years is projected to exceed global growth in LNG supply, keeping prices high.[20] Continued competition from markets in Asia and the high cost of processing LNG therefore means that LNG does not represent a cost-effective option for promoting European energy security.

[13] C. Anchondo and M. Lee, **Why the Russia Crisis Matters for US Energy**, *E&E News*, 27 Jan 2022.

[14] S. Disavino, **Could More LNG Supplies Get to Europe in the Event of a Crisis?**, *Reuters*, 25 Jan 2022.

[15] J. Jaganathan, **LNG Sellers Hold Upper Hand in Long-term Supply Talks with Buyers**, *Reuters*, 19 Oct 2021.

[16] S. Stapczynski**, Gas Crunch Pushes Anxious Buyers to Pay More for Contracts**, *Bloomberg*, 12 Jan 2022.

[17] E. Yep, **Analysis: China's Rush for LNG Deals Amid High Spot Prices Signals Strong Gas Demand Growth**, S&P Global, 1 Dec 2021.

[18] **Natural Gas Weekly Update**, US Energy Information Administration, 21 Oct 2021.

[19] S. Disavino, **Could More LNG Supplies Get to Europe in the Event of a Crisis?**, *Reuters*, 25 Jan 2022.

[20] **Long-term LNG Set to Remain a Buyers' Market**, Wood Mackenzie, 15 June 2021.

In addition, further investments in gas supply and infrastructure would be hard to reconcile with the EU's legally mandated decarbonisation timeline. Most LNG import infrastructure is underutilised and located in western and southern Europe, while infrastructure in central and eastern Europe – the region that would be most susceptible to potential cuts in supply from Russia – is limited.[21] Adding further transport and regasification capacity would take years (for example, construction of a new LNG terminal takes four years on average),[22] and would result in stranded assets, as the EU's own modelling anticipates a reduction in its gas consumption by over 30% by 2030 compared to 2015.[23]

In short, adding LNG imports to the EU's overall energy mix until the end of the season can offer a short-term patch and demonstrate transatlantic solidarity. However, better options are available to address the structural challenges in the EU's energy system in the medium to long term. In the context of decoupling energy security from fossil fuels, EU-US cooperation on energy efficiency and clean energy takes on new strategic importance.

Demonstrating solidarity by delivering on clean energy promises for Ukraine

In July 2021, Germany and the US launched the US-Germany Climate and Energy Partnership. Among its core pillars is an initiative to support energy transitions of third countries, including Ukraine. As part of the initiative, Germany agreed to establish a Green Fund to support Ukraine's energy transition, efficiency upgrades, and energy security. Both the US and Germany pledged to support investments of at least $1 billion following an initial donation by Germany of at least $175 million.[24]

Previous instances when Russia cut off gas supply to Ukraine,[25] together with Ukraine's reliance on reverse flows of Russian gas, suggest that Ukraine is the country that is most vulnerable to potential supply disruptions.[26] Germany and the US have an opportunity to prioritise Ukraine's energy security by

[21] B. McWilliams, G. Sgaravatti, S. Tagliapietra, and G. Zachmann, **Can Europe Survive Painlessly Without Russian Gas?**, Bruegel, 27 Jan 2022.

[22] S. Disavino, **For LNG Developers, Another Year of Canceled Projects**, *Reuters*, 18 May 2021.

[23] R. Hanoteaux and L. Fischer, **Phasing Down Gas Use in Europe: Benchmarks for Gas in Fit for 55**, E3G, Sep 2021.

[24] **Joint Statement of the United States and Germany on Support for Ukraine, European Energy Security, and our Climate Goals**, US Department of State, 21 July 2021.

[25] P. Kirby, **Russia's Gas Fight with Ukraine**, *BBC*, 31 Oct 2014.

[26] N. Tsafos, **Can European Energy Cope with a Conflict in Ukraine?**, Center for Strategic & International Studies, 21 Jan 2022.

jumpstarting and accelerating the implementation of the Green Fund, thereby demonstrating solidarity and showing themselves as reliable partners. The EU and US can further contribute to improving Ukraine's energy security by supporting green infrastructure development through the recently announced Global Gateway and Build Back Better World initiatives, and by providing technical assistance through the US's Net-Zero World Initiative.

A way forward for transatlantic energy diplomacy

The current gas price and supply crisis presents an opportunity for the EU and US to refocus transatlantic energy cooperation by taking the following steps:

1. **Leverage transatlantic diplomacy to advance the energy transition and improve energy security** by addressing the urgent need to double down on efficiency and demand-response measures, energy systems resilience, and accelerated deployment of clean energy.

2. **Jumpstart the Transatlantic Green Technology Alliance** announced at last June's EU-US Summit.[27] The Alliance offers a potential platform for fostering collaboration on innovation and at-scale deployment of clean energy technologies to accelerate the energy transition and improve energy security in the EU, US, and third countries.

3. **Evaluate opportunities offered by other existing fora for cooperation**, including the Partnership for Transatlantic Energy and Climate Cooperation (P-TECC). Adding climate action to P-TECC's goals could offer an additional platform for improving coordination on energy efficiency upgrades, innovative clean technologies, and clean energy deployment.

4. **Reset the Three Seas Initiative (3SI):** as of fall 2021, gas projects dominated the energy projects presented in the 3SI database, outnumbering renewable projects by two to one.[28] By prioritising energy efficiency and clean energy as core elements of 3SI, central and eastern European countries and the US can better place the region on a path toward energy security and accelerated decarbonisation, and reduce the future risk of stranded assets.

5. **Address crucial questions to set the pace and scope of the energy transition on both sides of the Atlantic and beyond,** improve resilience to shocks, and bring the EU, US, and partner countries closer to their climate neutrality goals. Key questions include:

[27] **US-EU Summit Statement**, The White House, 15 June 2021.

[28] G. Aitken, **The Three Seas Initiative's Failing Case for Gas**, Global Energy Monitor, Sep 2021.

- How can countries accelerate the deployment of clean energy technologies and reduce energy demand?
- How can the EU and US scale and secure critical supply chains to enable the energy transition?
- What steps are required to accelerate innovation into long-term storage and other solutions necessary for a secure, clean energy system?

About E3G

E3G is an independent European climate change think tank with a global outlook. We work on the frontier of the climate landscape, tackling the barriers and advancing the solutions to a safe climate. Our goal is to translate climate politics, economics and policies into action.

E3G builds broad-based coalitions to deliver a safe climate, working closely with like-minded partners in government, politics, civil society, science, the media, public interest foundations and elsewhere to leverage change.

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