Energy Security in the Eye of the Beholder: History, Rhetoric, and Reality in the U.S. and Europe

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"We are living in turbulent times – Ukraine, Syria, Iraq, Libya (...) This also poses fresh challenges for energy policy."

--German Foreign Minister Frank Walter Steinmeier, Berlin Energy Transition
Dialogue, 17 March 2016¹

Energy cuts across the entirety of U.S. foreign policy. It's a matter of national security and global stability. It's at the heart of the global economy. It's also an issue of democracy and human rights.

--U.S. Secretary of State Hillary Clinton speech on Energy Diplomacy in the 21st Century at Georgetown University, 18 October 2012²

Introduction

Germany and the U.S. are strategic partners in many areas, from promoting democratic values, human rights, and an international order based on the rule of law to the development of clean energy technology. However, recent events have exposed many areas in which these two allies may be committed to common principles, but not necessarily common definitions. From the balance between privacy and civil liberties to the limits of free expression to free trade, flashpoints like Snowden and TTIP have exposed that the two countries, while united in their adherence to common values, can differ greatly when it comes to how these values are operationalized.

Energy policy is one such area. Both countries have implemented energy policies driven by similar external events, including the oil crises of the 1970s. Both countries see a separation between the public and private sector when it comes to energy, and look to markets to play an important role. Both countries have assumed instrumental roles in climate leadership and negotiations and continue to foster the development of their renewable energy industry. Perhaps most importantly, both countries are undergoing major internal energy transitions. These transitions are altering each country's respective energy policy landscape, energy portfolio, and energy security.

http://translations.state.gov/st/english/texttrans/2012/10/20121018137692.html#axzz4EIRdFAwa

¹ German Foreign Minister Frank Walter Steinmeier, *Speech at Berlin Energy Transition Dialogue, German Foreign Ministry*, 17 March 2016. Accessible at: http://www.auswaertiges-amt.de/EN/Aussenpolitik/Aussenwirtschaft/Aktuelles/160317-EnergieTransitionDialogue.html ² U.S. Secretary of State Hillary Clinton, *Speech on Energy Diplomacy in the 21st Century*, 18 October 2012. Accessible at:

These transformations also have different origins and outcomes, and thus result in different perceptions and operational realities. The confluence of these transformations, along with an increased focus energy policy at the EU level, has raised questions not only regarding the two allies' perceptions of energy security, but how the concept is viewed within the European Union. In an era of revived energy diplomacy both in the U.S. and the EU, energy policy and perceptions of energy security intersect increasingly with foreign policy and security priorities This confluence warrants consideration of how countries work together to achieve a policy priority on which they agree in theory, but may pursue quite differently in practice.

This paper explores how and why these transformations collide, by exploring perceptions of energy security in the U.S., EU, and Germany and assessing whether these perceptions are compatible or incongruous with one another. This examination is conducted with an eye toward recent political events, including consideration of the relevance to the still-nascent Energy Union. To conclude, this paper provides recommendations for policymakers grappling with new energy realities produced by recent policy and security dynamics.

Domestic Transformations with Transatlantic Implications

The United States

The American story is one of production. Around 2008, the combination of hydraulic fracturing and horizontal drilling led to dramatic increases in domestic oil and gas production from shale plays. This technological breakthrough, and the so-called fracking boom it enabled, altered the domestic and the global energy landscape and turned previous predictions upside down. Speculation about increasing U.S. import dependency quickly shifted to the possibility of self-sufficiency, while rapidly increasing production volumes also led to decreasing prices.

As gas became cheap and plentiful, it also became competitive in domestic electricity production. In April of 2012, natural gas achieved parity with coal, slowly bringing to an end coal's dominance in electricity production, a position it held for much of the 20th century.³ While each fuel comprises of roughly one-third of U.S. electricity production in 2015,⁴ many expect that natural gas could soon overtake coal as the combination of market forces and environmental regulations takes its toll. Cheap natural gas has also led to a resurgence in U.S. manufacturing, as lower prices translates into lower bills for feedstock and electricity—and thus costs savings for manufacturers.⁵

As gas production from shale plays soared, so too did oil production from shale—sometimes referred to as tight oil or shale oil. Following decades of declining oil production, U.S. oil production grew from 2010 onward. In 2014 U.S. production increased by 1.2 million barrels

³ Richard J. Campbell, Peter Folger, Phillip Brown, "Prospects for Coal in Electric Power and Industry," Congressional Research Service, 4 February 2013. Accessible at: https://www.fas.org/sgp/crs/misc/R42950.pdf

⁴ "Frequently Asked Questions" U.S. Energy Information Agency, 1 April 2016. Accessible at: https://www.eia.gov/tools/fags/fag.cfm?id=427&t=3

⁵ "Shale Gas: Still a Boon to US Manufacturing?" Price Waterhouse Cooper, December 2014. Accessible at: https://www.pwc.com/us/en/industrial-products/publications/assets/shale-gas-boosts-us-manufacturing.pdf

per day to 8.7 million barrels per day, the largest increase by volume since recordkeeping began in 1900, and the highest output increase by percentage since 1940.⁶ This led many to postulate that the U.S. would be less reliant on oil imports, which would be offset by the domestic windfall. Indeed, according to data from the U.S. Energy Information Agency (EIA), U.S. crude imports have fallen every year since 2008.⁷

This altered energy landscape also led to changes in policy. As production soared, many observers noted the contrast between regulations in reality, as many of the laws governing U.S. energy policy were written in response to supply shocks and based on scarcity. Surging production made previous predictions of import dependency, and the accompanying policies and infrastructure, obsolete. Some stakeholders began to call for a new policy framework which acknowledged these developments, namely through changes to existing law to enable the U.S. to export the fruits of its domestic production.

Natural gas producers and policymakers alike began to call for the Department of Energy (DOE) to streamline the process for licensing liquefied natural gas (LNG) export terminals. Under the Natural Gas Act, DOE is required to make a "national interest determination" on export license applications for projects proposing to export to countries with whom the U.S. does not have a Free Trade Agreement. Given the volume of applications for authorization of LNG export terminals (and complaints from companies that the approval process was taking too long), in 2014 the Department of Energy streamlined procedures and prioritized those projects with the best chances of being constructed in the attempt to ensure the timely review of applications.⁸

A similar debate ensued on crude oil exports, as oil companies began to lobby for permission to sell unrefined product abroad (to the chagrin of refiners at home). Following the oil crises of the 1970s, U.S. policymakers prohibited the export of crude oil, albeit with a few exceptions which allowed minimal exports mostly to Canada. Thus, while exports of refined oil and petroleum products are permitted, crude exports have been constrained for decades. Following a debate over whether policies based on supply shortage were appropriate in an era of supply glut, an amendment lifting the restrictions was included in the 2016 Consolidated Appropriations Act. The measure was included in the spending and tax relief package passed by Congress and signed by President Obama in December of 2015 in exchange for inclusion of tax breaks for solar and wind power and authorization for the first U.S. payment to the Green Climate Fund. The measure was included in the spending and tax or the control of the first U.S. payment to the Green Climate Fund.

⁶ "Today in Energy: U.S. oil production growth in 2014 was largest in more than 100 years", U.S. Energy Information Administration, 30 March 2015. Accessible at: http://www.eia.gov/todayinenergy/detail.cfm?id=20572

⁷ "Petroleum and Other Liquids: U.S. Imports by Country of Origin," U.S. Energy Information Administration, Series History. Accessible at:

https://www.eia.gov/dnav/pet/pet move impcus a2 nus ep00 im0 mbbl a.htm

⁸ Jim Magill, "Changes in US LNG permit process to streamline approvals: DOE official", *Platts*, 9 June 2014. Accessible at: http://www.platts.com/latest-news/shipping/houston/change-in-us-lng-permit-process-to-streamline-21735947

⁹ Public Law 114-13: The Consolidated Appropriations Act, 2016, December 18, 2015.

¹⁰ Amy Cook, Glenn Harder, "Congressional Leaders Agree to Lift 40-Year Ban on Oil Exports," *The Wall Street Journal*," 16 December 2016. Accessible at: http://www.wsj.com/articles/congressional-leaders-agree-to-lift-40-year-ban-on-oil-exports-1450242995

Germany

While policymakers in the U.S. largely responded to, rather than drove, disruptions in the market, Germany's domestic transition has largely been a policy-driven enterprise, with the German government at the wheel. While external events, namely the 2011 Fukushima nuclear disaster, served in part as a catalyst, the disaster reinforced resolve and galvanized existing support for a policy change driven by policymakers and public opinion rather than market forces.

Following the Fukushima disaster, the German government codified a long-discussed but never fully enacted policy: the Atomausstieg, or nuclear exit. The decision to move away from nuclear was embedded in a larger policy shift now widely known as the Energiewende, a term which has taken on a life of its own as a symbol for the transition to a clean energy future. While the nuclear exit is the bedrock concept undergirding the Energiewende, the policies encompassed under this transition are wide ranging, and in sum are a multi-decadal effort to shift the power sector from fossil fuels to renewables and chart Germany on a course toward a climate-friendly—and ultimately carbon neutral—future.

This top-down policy decision and the integration of energy and climate policy has driven many of the ongoing changes in Germany's energy portfolio. This includes a surge in renewable installation due largely to a policy instrument known as the feed-in tariff, a mechanism which guarantees a fixed per-kilowatt hour payments in excess of market price for renewable energy generation. The Energiewende is widely considered a success from the renewable installation vantage point--according to the German Federal Ministry of Economic Affairs and Energy (BMWi) the proportion of power generation from renewable resources rose from 6 percent in 2000, the year the Renewable Energy Sources Act (EEG) was passed, to just over 30 percent in 2015.¹¹

However, as the share of nuclear power in the country's energy mix continues to diminish, coal has demonstrated remarkable staying power, and even mounted a resurgence. In 2014, just three years after Fukushima, consumption of brown coal in Germany rose to the highest levels since 1990, 12 while greenhouse gas emissions increased from 2011 onward before falling after 2014. 13 Continuing coal usage and fluctuating greenhouse gas emissions are considered unwelcome developments by many, and some detractors have questioned the wisdom of a policy which replaces carbon-neutral nuclear energy production with coal (although it must be noted that the nuclear exit was motivated by safety concerns rather than carbon emissions).

Meanwhile, natural gas, a key source of heating and a potential source of flexible baseload electricity to replace nuclear power and pare with renewables, comes with a different set of issues—namely geopolitical ones. These concerns surrounding gas imports and gas supply

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 ^{11 &}quot;Renewable Energy at a Glance," Federal Ministry for Economic Affairs and Energy. Accessible at: http://www.bmwi.de/EN/Topics/Energy/Renewable-Energy/renewable-energy-at-a-glance.html
 12 Stefan Wagstyl, "German coal use at highest level since 1990," *The Financial Times*, 7 January 2014. https://next.ft.com/content/e6470600-77bf-11e3-807e-00144feabdc0
 13 "The Energy of the Future, Fourth 'Energy Transition' Monitoring Report—Summary," *The Federal Ministry for Economic Affairs and Energy*, November 2015. P.15. Accessible at: http://www.bmwi.de/EN/Service/publications,did=746824.html

define and drive many of the energy security definitions—and disputes—within the EU, and in understanding between the U.S. and Germany.

When Energy Policy and Energy Diplomacy Collide

While domestic energy transitions in their own right, these developments on either side of the Atlantic have been wound together thanks to a renewed emphasis on energy diplomacy in the U.S. and EU. This diplomatic focus has unsurprisingly occurred alongside political events that elevated energy security concerns and raised questions about the link between energy, security, and foreign policy. Thus, these transformations in the U.S. and Germany collided most clearly in the juxtaposition of certain events—a resurgent Russia on the one hand and a U.S. ready to export its newly found hydrocarbon riches, in theory to its European brethren suffering at the hands of a gas dependency (and in reality to the highest bidder)—that many took as evidence that energy and security are intertwined.

In the U.S., then-Secretary Clinton's 2012 speech on energy diplomacy at Georgetown University outlined the concept and articulated its importance. Clinton argued that energy "rests at the core of geopolitics, because, fundamentally, energy is a source of wealth and power...a source of cooperation and conflict." Unsurprisingly, this came at a time when the U.S. was aiming to convert some of this energy power into foreign policy leverage. In an institutional nod to the link between energy and foreign policy, the Bureau of Energy Resources headed by the Special Envoy for International Energy Affairs was created within the State Department during her tenure.

In Europe, the actions of a resurgent Russia and the role of energy in Russia's relationship both with the Ukraine and other EU member states brought energy security-and questions of energy supply- into sharp relief. Not only did the events revive and give impetus to EU-led energy initiatives, namely the Energy Union, tensions between different member state's definitions of energy security were also exposed, as were questions of national versus EU energy prerogatives. National interest-based definitions and member state versus supranational jurisdiction are at the heart of challenges facing the Energy Union, as well as the broader European project

Following the March 2014 Russian invasion and annexation of Crimea and ensuing EU sanctions (along with American and Canadian sanctions), the focus on the gas relationship between EU member states, including Germany, and Russia has intensified. However, this is hardly the first time the relationship (or dependency) has come under scrutiny. The 2007 and 2009 gas supply dispute and subsequent cut off between Russia and Ukraine galvanized ongoing efforts to coordinate energy policy at the EU level, such as the Third Energy Package.

¹⁴ Secretary of State Hillary Clinton, *Speech on Energy Diplomacy in the 21st Century*, 18 October 2012. Accessible at:

http://translations.state.gov/st/english/texttrans/2012/10/20121018137692.html#axzz41eNyG9yW ¹⁵ U.S. Department of State Media Note, "State Department Launches 'Bureau of Energy Resources'," *Office of the Spokesperson,* 16 November 2011. Accessible at: http://www.state.gov/r/pa/prs/ps/2011/11/177262.htm

Amid the discussion surrounding Russia, the U.S. export debate was ongoing. Many policymakers saw an opportunity to link the American energy export debate to the renewed attention to energy security across the Atlantic Policymakers and pundits alike speculated that increased exports thanks to shale production were not only key to elusory domestic energy independence, but marked the creation of the U.S. as a 'benign' energy superpower, capable of running to the rescue of European countries looking for an alternative (or a source of leverage in) their gas relationship with Russia.¹⁶

However, the first LNG cargo to set sail from Sabine Pass (the first LNG export terminal completed in the U.S. in forty years) arrived not in Europe but Brazil in February 2016.¹⁷ The cargos that followed went to locations ranging from Argentina to Kuwait to India—while the only exports to Europe were to Portugal.¹⁸ The diversity of the customers (and the absence of Central or Eastern European customers) demonstrates the reality of energy diplomacy given that the private energy sector in the U.S. is driven by market forces rather than diplomatic priorities.

Amid the debate over gas dependency, sanctions against Russia, and energy security, Germany appeared to go a different direction. In September 2015, Gazprom, BASF, E.On, Energie, OMV and Shell announced that a shareholders agreement on implementation of the Nord Stream II (NSII) pipeline project was reached. The project would double the capacity of the existing Nord Stream project, an undersea pipeline connecting Germany and Russia, by adding two new pipelines through the Baltic Sea with a total capacity of 55 billion cubic meters (bcm). If built, NSII would serve as an alternative route for Russia to export gas to the European continent, bypassing Ukraine. It would also increase Gazprom's share of the German market from 40 percent to 60.²⁰

This development occurred as the Energy Union was still getting on its feet. Born out concerns stemming from the Russian invasion and annexation of Ukraine, the Union prioritizes energy security, along with other policy objectives. However, NSII exposed what many already wondered—whether all member states agree with the version of energy security espoused by the Union's initial promoter, former Polish Prime Minister Donald Tusk. While a consensus on just what energy security means may not be possible, desirable, or even useful, understanding where conceptions diverge in a policy context is. Furthermore, while the merits and utility of particular lenses of energy security, whether economic, geopolitical, or historical, can be debated, understanding these views is crucial.

https://www.foreignaffairs.com/articles/2016-03-04/united-states-turns-gas

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¹⁶ Jason Bordoff and Akos Losz, "The United States Turns on the Gas: The Benign Energy Superpower?" *Foreign Affairs*, 4 March 2016. Accessible at:

¹⁷ Harry Weber and Jonathan Crawford, "Cheniere Poised to Export First LNG Cargo Today to Brazil," *Bloomberg*, 24 February 2016. Accessible at: http://www.bloomberg.com/news/articles/2016-02-24/cheniere-energy-poised-to-ship-first-lng-cargo-today-to-brazil

¹⁸ Matt Smith, "Market Currents: US LNG exports heading far and wide," *Fuel Fix at the Houston Chronicle*, 23 June 2016. Accessible at: http://fuelfix.com/blog/2016/06/23/market-currents-us-lng-exports-heading-far-and-wide/

¹⁹ "Nord Stream 2 press release," Nord Stream 2 AG, 4 September 2015. Accessible at: http://www.nord-stream2.com/media-info/news/gazprom-basf-e-on-engie-omv-and-shell-sign-shareholders-agreement-on-the-nord-stream-2-project-2/

²⁰ Janosch Delcker, "Germany blocks out allies' wails over Russian pipeline love," Politico EU, 17 May 2016. Accessible at: http://www.politico.eu/article/germany-shrugs-over-nord-stream-fuss/

Energy Security Origins in the U.S. and EU

In order to understand what energy security is, it is important to consider the concept's origins, and how it took shape. Most definitions of energy security, whether in academic literature, political lexicons, and strategic calculations were conceived following the oil crises of the 1970s. However, these definitions, and their focus on oil supply security, have origins dating back to Churchill's decision to convert the British Naval fleet from coal to oil in the early 20th century.²¹

World War II notwithstanding, it is difficult to overstate the degree to which the 1970s oil shocks, the first following the Arab oil embargo and the second in the wake of the Iranian revolution, shaped modern definitions of energy security. Many definitions of energy security still include elements of this era, and many national energy policies were organized around these concepts and concerns. The International Energy Agency, perhaps the best-known international energy organization, was born out of the 1973 crisis.

However, while the 1970s was a critical era for both the U.S. and countries now comprising the EU, the two regions embarked on different energy security trajectories. While security of supply was paramount for both, the prerequisites and strategies for attaining it differed. The United States focused largely on the security of oil supply, while the EU became preoccupied with the security of natural gas supply in later decades. While the United States looked to reduce reliance on foreign suppliers, pursuing self-sufficiency through domestic production, many European nations, Germany in particular, sought stable and long-term relationships with reliable energy suppliers while improving energy efficiency.

The U.S. Quest for Energy Independence, and Influence

In the U.S., the focus on energy security has been shaped by the oscillation between the poles of abundance and scarcity and remains tightly intertwined with geopolitics and security in popular conception and political rhetoric.²² The early U.S. experience as the world's largest oil producer in the early 20th century, particularly during the Second World War, linked oil production with foreign policy leverage and political power. This period also coincided with relative self-sufficiency of domestic supply, also seen as insulating the U.S. from the dire straits facing their overseas allies.²³

While domestic demand increased following World War II and production flagged, U.S. oil companies largely dominated the world market. Five of the so-called Seven Sisters were American companies, and they presided over a time of relative oil market stability. ²⁴ However, it was the fracturing of this stability, first with the 1973 oil embargo and later during the Iranian revolution that helped solidify the U.S. conception of energy security around the competing experiences of scarcity and abundance--and helped spur the inward focus, seeking stability by limiting, rather than increasing, ties with seemingly volatile market players.

²¹ Amy Below, "Obstacles in energy security: An analysis of congressional and presidential framing in the United States," *Energy Policy* 62 (2013): 860-868. July 2013. P. 862.

²² Andrew Holland, "Energy and Statecraft: American Diplomacy in the Energy Revolution," in *Reducing Vulnerability: A Transatlantic Approach to Energy Security*, American Institute for Contemporary German Studies Policy Report 60, Johns Hopkins University. Accessible at: http://www.aicgs.org/site/wp-content/uploads/2015/04/PR60-Reducing-Vulnerability.pdf
²³ Thijs Van der Graf, *The Politics and Institutions of Global Energy Governance*, Palgrave Macmillan: 2013, Series on Energy, Climate and the Environment. P 47.

The birth of energy security during the politically driven oil shocks also solidified the link between energy security and geopolitics in the U.S. mentality. In addition to demonstrating the relationship, these events were pointed to as a cautionary tale illustrating the danger of reliance on unstable regimes, and the influence prolific producers could gain thanks to high levels of U.S. consumption. Thus, the oil price shocks of the 1970s demonstrated not only that oil was a source of strength, but that reliance on foreign sources of oil was a source of weakness.

The preferred policy alternative has been to simultaneously attempt to shape geopolitical realities in the Middle East while also increasing domestic production in pursuit of self-sufficiency and ever-elusive (and conceptually problematic) energy independence. President Nixon warned that the U.S. will not be coerced by those attempting to deploy an "oil weapon", a term frequently used in the current energy discourse, ²⁵ while the Carter Doctrine pronounced protection of the Gulf in the U.S. national interest. Carter stated "an attempt by any outside force to gain control of the Persian Gulf…an assault on the vital interests of the United States of America" to be countered militarily if necessary, thus pledging the U.S. to protect the flow of oil from the very countries upon whom reliance represented a "clear and present danger" to U.S. national security.²⁶

President Nixon's response to the crisis in his 1974 State of the Union Address was an initial indicator of the prominent role self-sufficiency would play in U.S. energy security. In order to "break the back of the energy crisis", Nixon said the U.S. must develop domestic capacity "to meet America's energy needs", 27 while Nixon's successor Gerald Ford also promoted self-sufficiency as a counterweight to OPEC influence, and reducing imports and reliance on foreign suppliers. 28 Overall, the pursuit of self-sufficiency has relied on tax credits and subsidies, research and development funding, an emphasis on technology development, and the belief that the U.S. can invent, engineer, and entrepreneur its way to energy security.

From Nixon through Obama, this language has largely remained constant. President Obama pointed to oil dependency as a security issue in a 2011 speech at Georgetown, noting that the only way to mitigate this threat is to reduce imports and increase domestic production. ²⁹ In President Obama's *Blueprint for a Secure Energy Future*, rather than redefine the concept of energy security amid what many hail as a new age of abundance, he placed himself squarely in the US pantheon. ³⁰ Noting that every president since Nixon has called for America's independence from foreign oil, Obama repeated the oft-echoed refrain to reduce reliance and expand domestic energy sources, tasking American ingenuity with the continued search for solutions.

http://www.presidencv.ucsb.edu/ws/?pid=4327

²⁵ President Richard Nixon, *Address of the State of the Union Delivered Before a Joint Session of the Congress*, 30 January 30 1974. Made available by the American Presidency Project. Accessible at:

²⁶ President Jimmy Carter, *The State of the Union Delivered by a Joint Session of the Congress*, 23 January 1980. Made available by the American Presidency Project. Accessible at: http://www.presidency.ucsb.edu/ws/?pid=33079

²⁷ President Richard Nixon, *Address of the State of the Union Delivered Before a Joint Session of the Congress*, 30 January 1974. Made available by the American Presidency Project. Accessible at: http://www.presidency.ucsb.edu/ws/?pid=4327

²⁸ President Gerald Ford, *Address Before a Joint Session of Congress Reporting on the State of the Union*, 15 January 1975. Accessible at: http://www.presidency.ucsb.edu/ws/?pid=4938

²⁹ Office of the White House, *Remarks by the President on Energy Security*, 30 May 2011. Accessible at: https://www.whitehouse.gov/the-press-office/2011/03/30/remarks-president-americas-energy-security

³⁰ The White House, *Blueprint for a Secure Energy Future*, 30 March 2011. Accessible at: https://www.whitehouse.gov/sites/default/files/blueprint_secure_energy_future.pdf

The EU: From Coal and Steel to Security, Solidarity, and Trust

Meanwhile, the EU can trace the role of energy back to the European project's roots. The concept of energy security was part of the EU's initial foundation, serving as a foundation for the European Coal and Steel Community (ECSC) as outlined in the 1950 Schuman Declaration. While this declaration was focused primarily on the connection between coal as an input to war, it was based on the assumption that the means of energy production were a source of power and potential military might.

In the years that followed, the European project was expanded to include efforts to forge a common market. This would include the creation of an atomic, or nuclear, energy community then called the European Atomic Energy Community, or EURATOM, as codified in the 1957 Treaties of Rome.³¹ The initiative was driven in part by member states' desire to "achieve energy independence" and address shortages in domestic energy supply. The founding countries (Belgium, France, Germany, Italy, Luxembourg, and the Netherlands) were in agreement that "independence" could be achieved through interdependence, in part by ensuring "a regular and equitable supply of ores and nuclear fuels to all users in the Community".³²

With the passage of the 1993 Maastricht Treaty and the founding of the EU, energy was originally left to the prerogative of each individual member state. Though cooperation and integration were seen as means of achieving energy security, decisions over fuel choice and energy portfolios remained in the hands of the member states. The 2009 Treaty of Lisbon made energy a joint competence, securing a legal footing for the EU.³³ However, while the Lisbon Treaty was hailed for elevating energy security (namely security of supply) to the European level, countries still retained the authority over one of the most important factors shaping energy security: domestic fuel mix.³⁴

Thus, member states have their own energy policies, different resource profiles, and varying levels of domestic production and consumption. Taken as a whole the EU is the world's largest energy importer, with imports accounting for over half (53%) of energy consumption to the tune of over one billion Euros per day.³⁵ While there is some oil and gas production in the Netherlands, UK, and Romania, domestic production across the EU is dwindling, and even amid flat or declining demand many anticipate the need for imports will rise in the years to come. This positions explains why one of the major goals in EU energy policy has long been security of supply.

This is an important contrast to the U.S. experience with domestic production. Absent a domestic resource base, dependence on external suppliers is less security threat than necessity, while the reduction of foreign supplies is a problem, rather than a solution. However, much like the U.S., European conceptions of energy security—and ensuing policy-

³¹ Information, Treaty establishing the European Atomic Energy Community (Euratom). Accessible at: http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=URISERV:xy0024&from=EN

³² Original Text, Treaty establishing the European Atomic Energy Community (Euratom). Accessible at:

http://www.ab.gov.tr/files/ardb/evt/1_avrupa_birligi/1_3_antlasmalar/1_3_1_kurucu_antlasmalar/1957 treaty establishing euratom.pdf

³³ Kacper Szulecki, Severin Fischer, Anne Therese Gullberg, Oliver Sartor, "Shaping the 'Energy Union': between national positions and governance innovation in EU energy and climate policy," *Climate Policy* Vol.16, No. 5. 548-567. P. 549.

³⁴ Tim Boersma, *Energy Security and Natural Gas Markets in Europe: Lessons from the EU and the United States*, Routledge: 2015, Studies in Energy Policy. P. 61.

³⁵ European Commission, Energy; Imports and Secure Supplies. Accessible at.: https://ec.europa.eu/energy/en/topics/imports-and-secure-supplies

--have also been driven by geopolitical events. In particular, the idea of energy security in the EU is heavily influenced by fears or instances of gas transit disruption or supply shut offs.

In particular, the 2006 and 2009 price and debt disputes between Russia and the Ukraine and subsequent supply disruptions in south, central, and eastern Europe served as the EU's "never again moments", resulting in a range of policy changes and renewed focus on the internal energy market. The events were also painful illustrations of the domino effect of disruption and need for greater integration and stable transit routes, leading to calls for diversification of supply routes (and of suppliers, in the eyes of some) and increased interconnection. Much like in other policy and political sphere, more integration was seen as a way to buffer these risks, as the Third Energy Package, a series of measured designed to modernize and integrate the EU internal energy market, including through the privatization and unbundling of member states' domestic market, and progress on the EU internal market for energy indicate.

While gas supply concerns are the main driver behind discussions of energy security in the EU, there is yet to emerge a clear, agreed-upon idea as to what this means. In fact, in the EU "so far the only thing that stands out is a lack of consensus about pretty much all aspects of energy security." That said the EU experience with energy yield a few conclusions which drive the continent's energy concerns—namely that a secure energy system requires secure supplies and that integration can help increase energy security.

Enter the Energy Union

Following the events in the Ukraine in early 2014, then-EU-President and former Polish Prime Minister Donald Tusk first laid out the concept for an Energy Union in an April 2014 Financial Times op-ed. Tusk based his concept for an Energy Union on the assessment that "massive dependence on Russian energy makes Europe weak." In the wake of the invasion of Crimea, Tusk argued that energy dependence on Russia is a threat and urged European solidarity in supply security and pursuing collective gas purchases to undercut Russian leverage.

The concept put forth by the European Commission in February 2015 included the original security dimension, framed as energy security, solidarity, and trust. However, far from being the sole priority, energy security is one of five 'mutually supporting dimensions,' including the internal energy market, energy efficiency as a contribution the moderation of energy demand, decarbonization of the economy, and research, innovation, and competitiveness.³⁹ These dimensions are in accordance with the Commission's long-term energy policy objectives: security of supply, sustainability, and competitiveness.

It remains to be seen whether the broadening of Tusk's original idea will result in successful expansion of Commission authority over energy policy and galvanize progress on the internal energy market, or if the laundry list approach will diffuse and dilute the proposal's effectiveness. In particular, while the expansion of the proposal to include popular concepts

³⁶ EU Security of Supply Press Conference, *Speech by Commissioner Miguel Arias Canete*, Brussels, 16 February 2016. Accessible at: http://europa.eu/rapid/press-release_SPEECH-16-326_en.htm ³⁷ Tim Boersma, *Energy Security and Natural Gas Markets in Europe: Lessons from the EU and the United States*, Routledge: 2015, Studies in Energy Policy. P.13.

³⁸ Donald Tusk, "A united Europe can end Russia's energy stranglehold," *The Financial Times*, 21 April 2014. Accessible at: http://www.ft.com/intl/cms/s/0/91508464-c661-11e3-ba0e-00144feabdc0.html#axzz30pcAkBUE

³⁹ "Energy Union Factsheet," The European Commission, 25 February 2015. Accessible at: http://europa.eu/rapid/press-release_MEMO-15-4485_en.htm

and priorities for various member states enticed more buy in, it also resulted in what some have called a "floating signifier", or "an empty box, in which every stakeholder tries to put whatever is on the top of their priority list."⁴⁰

Thus, when it comes to the pillars of the Energy Union, meaning is in the eyes of the beholder. Much like other EU policy, it includes terms which are easy to agree on in principle, but whose definitions are harder to find consensus on or implement in practice. Further, it gives little guidance on how one value might be prioritized versus another, or how to resolve situations in which two pillars appear to contradict one another. In implementation, these differences in definition are exposed, and potentially are at odds with one another. For the Union to move from concept to policy, discrepancies over the meaning of 'energy security, solidarity, and trust' will have to be resolved, necessitating a coming to terms with the framing of energy security and a common understanding of policy objectives.

Union or Disunion: Germany and Poland

While the differences between the EU and U.S. are obvious, and general, the erstwhile Energy Union lays bare differing conceptions of energy security within the EU and the impediments this might pose for policy. This is perhaps most easily illustrated by the differences between Poland and Germany--differences mirrored in the discrepancies between the Energy Union as proposed and as promulgated, and made public in the debate over NSII.

In particular, while Germany has largely been amenable (though not overly enthusiastic) about the Energy Union, the country initially expressed skepticism, noting that past transit and supply risks were largely addressed by the Third Energy Package, and maintaining that relations with Gazprom were about business, not solidarity.⁴¹ This follows from the prevalent (but not sole) view in Germany of energy security as a commercial concern.⁴²

For Germany, a highly industrialized country with an export-driven economy mostly lacking in domestic resources (with the exception of coal), securing energy supply from external sources is not only vital, but considered a matter for industry and the private sector to grapple with. This is not to say there is no debate in Germany over the degree to which energy is a private or public (and political) issue—rather to say that the majority of the discourse tends to focus on energy as a private good, the province of markets and industry, while the energy security is grounded in commercial needs and a legal approach.

This picture of energy security as the province of commerce dictated by markets rather than a goal of policy dictated by politics is particularly striking in the context of the Energiewende. The transition is a government-driven program which relies heavily on political support, policy instruments, and market intervention. While Germany is certainly not an outlier among nations in this regard, the blurred lines between public and private domains when it comes to the Energiewende make it more difficult to accept the assertion that cross-border gas flows are the province of industry. Thus, while state intervention in support of the nuclear exit or

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⁴⁰ Kacper Szulecki, Severin Fischer, Anne Therese Gullberg, Oliver Sartor, "Shaping the 'Energy Union': between national positions and governance innovation in EU energy and climate policy," *Climate Policy* Vol.16, No. 5. 548-567. P. 548-549

⁴¹ Stefan Meister, "Energy Union: the View from Berlin," *European Council on Foreign Relations* Blog, 7 May 2014. Accessible at: http://www.ecfr.eu/blog/entry/energy_union_the_view_from_berlin ⁴² Kirsten Westphal and Severin Fischer, "Energy and Statecraft: A German Perspective," in *Reducing Vulnerability: A Transatlantic Approach to Energy Security*, American Institute for Contemporary German Studies Policy Report 60, Johns Hopkins University. P. 7. Accessible at: http://www.aicgs.org/site/wp-content/uploads/2015/04/PR60-Reducing-Vulnerability.pdf

climate goals is high, "state intervention in energy markets in order to guarantee energy security is reduced to a minimum." 43

This tension is in part related to the relationship between Germany and Russia and the historical role energy trade has played in rapprochement. To ensure supply, Germany has solidified relationships with reliable suppliers. More specifically, Germany has historically sought security in a long-term supply relationship with the Soviet Union and stability in long-term contracts and the necessary pipeline infrastructure to support them. In particular, the so-called "gas for pipe" deals between the Soviet Union and the Federal Republic of Germany in the 1970s were considered a core component of Ostpolitik--and a major source of contention between West Germany and its allies in Europe and the U.S. concerned with the security implications of the relationship.⁴⁴

The supply relationship with Russia, a stable and reliable supplier for Germany, is just one component of a larger commercial relationship. Germany is Russia's largest gas export market and viewed as a reliable (and valuable) customer, insulating Germany in the eyes of some from profit-maximizing behavior or coercion at the hands of Gazprom. ⁴⁵ The expansion of the Nord Stream project is both symbolic of and a product of the degree of mutual trust and commercial interest, as the project based in part on the conception that in addition to a reliable customer, Germany is a reliable distributor and a preferred alternative to Ukraine.

Many argue the prevailing wisdom in Germany holds that more economic contact and trade between Germany and Russia can serve as a base for normalization during times of conflict. While German officials have on the one hand continue to insist amid the uproar over NSII that the deal is commercial, it is also perceived as an opportunity to re-engage with Russia amid turmoil in the relationship. However, other European countries point out that this argument is in itself political as much as it is commercial, and indeed the line between the two is difficult to discern.

Standing in stark contrast to Germany, called a "strategic partner" when it comes to Russia, Poland is deemed a "new cold warrior".⁴⁷ The historical relationship between Poland and Russia is different, as are the resulting views on energy security which are distinctly more geopolitical. While Polish conceptions of energy security, similar to Germany, largely focus on security of supply, the means of ensuring that are different. At its most basic level, energy security can be characterized as an expressed willingness to pay for supplies from anywhere but Russia.⁴⁸

⁴³ Kacper Szulecki, Severin Fischer, Anne Therese Gullberg, Oliver Sartor, "Shaping the 'Energy Union': between national positions and governance innovation in EU energy and climate policy," *Climate Policy* Vol.16, No. 5. 548-567. P.554.

⁴⁴ Jonathan Stern, "Gas pipeline co-operation between political adversaries: examples from Europe," *Chatham House*, January 2005. Accessible at:

https://www.chathamhouse.org/sites/files/chathamhouse/public/Research/Energy,%20Environment% 20and%20Development/jsjan05.pdf

⁴⁵ Oistein Harsem, Dag Herald Claes, "The interdependence of European-Russian Energy Relations," *Energy Policy* 59 (2013) 784-791. P. 789.

 ⁴⁶ Janosch Delcker, "Germany blocks out allies' wails over Russian pipeline love," *Politico EU*, May
 17, 2016. Accessible at: http://www.politico.eu/article/germany-shrugs-over-nord-stream-fuss/
 ⁴⁷ Oistein Harsem, Dag Herald Claes, "The interdependence of European-Russian Energy Relations,"

^{**} Oistein Harsem, Dag Herald Claes, "The interdependence of European-Russian Energy Relations," Energy Policy 59 (2013) 784-791. P. 787.

⁴⁸ Tim Boersma, Energy Security and Natural Gas Markets in Europe: Lessons from the EU and the United States, Routledge: 2015, Studies in Energy Policy. P. 43-44.

While gas accounts for only a small portion of Poland's energy supply (13 percent), nearly all of this gas comes from Russia.⁴⁹ A major difference between the Polish and German case lies in the different price each pays for Russian gas, and the perceived reason for this price disparity.⁵⁰ While higher prices could be (and are in part) indicative of monopoly behavior, as Gazprom seeks to maximize revenue in a market with a captive customer base and few alternatives, to many in Poland profit maximization looks a lot like political coercion when exercised by a company whose majority owner is the Russian state.

Alternative supply is seen as a means to extricate Poland from either this monopoly behavior or political pressure. Examples include the October 2015 inauguration of the Świnoujście LNG terminal, along with continued support for domestic coal. The LNG project, as announced, is specifically intended to lessen Polish dependence on supplies from the east and achieve "full independence" from Russia. Former Prime Minister Tusk also equated coal, a domestic resource, to energy security in his initial articulation of the Energy Union. Much like the American conception of energy security, Tusk promoted the utilization and production of domestic resources, arguing the EU "should make full use of the fossil fuels available including coal and shale gas", declaring coal "synonymous with energy security." 52

Many argue there are both economic and environmental costs to this kind of diversification. Detractors of the LNG terminal have called Świnoujście a "political project" which "makes no economic sense" and further "violates the laws of economics".⁵³ It has been argued that the costs of imported LNG could be up to a third higher than Russian gas, while others say the premium could run as high as fifty percent.⁵⁴ Either way, this may be the first example of a country, and taxpayers, willing to "pay a premium for a concept called energy security."⁵⁵ Meanwhile, the continued reliance on coal as a major energy source runs afoul of the EU climate goals, and directly contradicts the inclusion of decarbonization as one of the Energy Union's key priorities.

While LNG comes at a cost, it could be evidence that Polish consumers, or at least the Polish government, sees energy security as a good that the market alone will not ensure. While this is diverges from a purely commercial conception of energy security, it is arguably no less market oriented than the Energiewende and its reliance on market intervention to spur energy sector transformation, a goal supported by the German taxpayers. While Poland might have a higher willingness to pay for security versus Germany's willingness to pay for sustainability, the question is how to reconcile these preferences under the Energy Union.

⁴⁹ Kacper Szulecki, Severin Fischer, Anne Therese Gullberg, Oliver Sartor, "Shaping the 'Energy Union': between national positions and governance innovation in EU energy and climate policy," *Climate Policy* Vol.16, No. 5. 548-567. P. 557.

Glenn Kates, Li Luo, "Russian Gas: How Much Is That?" Radio Free Europe, 1 July 2014.
 Accessible at: http://www.rferl.org/content/russian-gas-how-much-gazprom/25442003.html
 Marek Strzelecki, "Poland Opens LNG Terminal, Pledges to End Russian Dependence," Bloomberg Business, 12 October 2015. Accessible at: http://www.bloomberg.com/news/articles/2015-10-12/poland-opens-lng-terminal-pledges-to-end-russian-gas-dependence

⁵² Donald Tusk, "A united Europe can end Russia's energy stranglehold," *The Financial Times*, 21 April 2014. Accessible at: http://www.ft.com/intl/cms/s/0/91508464-c661-11e3-ba0e-00144feabdc0.html#axzz30pcAkBUE

⁵³ Christian Oliver and Jan Cienski, "Energy Security: The price of diversity," *The Financial Times*, 23 February 2014. Accessible at: http://www.ft.com/intl/cms/s/0/67308bb8-97f2-11e3-8c0e-00144feab7de.html#axzz44HpdfG9k

⁵⁴ Oleg Vukmanovic and Agnieska Barteczko, "Poland's energy security strategy comes at a high cost," *Reuters*, 9 September 2013. Accessible at: http://www.reuters.com/article/poland-energy-lng-idUSL6N0H22WR20130909

⁵⁵ Tim Boersma, *Energy Security and Natural Gas Markets in Europe: Lessons from the EU and the United States*, Routledge: 2015, Studies in Energy Policy. P. 122.

Diversification as a strategy or means of achieving the goals of EU energy policy could also prove another point of divergence. For Germany, this might mean diversification of fuel sources, like the proliferation of renewable generation, or a diversity of fuel source options as opposed to fuel suppliers. For Poland, diversification means shifting away from a traditional supplier by diversifying import options, as illustrated by the LNG import terminal. It is in this understanding of diversification as a key goal to achieve energy security that the Polish opposition to NSII can be understood. Rather than reducing reliance on Russia, the project doubles down. Thus, in the Polish view, NSII does not reinforce energy security—it is antithetical to it.

While Germany insists on an economic approach, many of Germany's neighbors continue to view the project, and energy security in general, through the prism of hard security—a prism heavily influenced by history and politics. To illustrate just how present these historical perceptions remain in the minds of some of Germany's neighbors, participants at the Central European Energy Conference in Bratislava in November of 2015 went as far as to liken the pipeline project to the Molotov-Ribbentrop pact, the infamous agreement between Nazi Germany and Communist Russia which divided Poland.⁵⁶

Other views focus less on the past, but argue against the project on the basis of the present security situation in Europe. These detractors may agree on the nature and economic viability of the project, and may feel it contributes to long term supply security. However, they argue the timing is bad. Amid the need for continued European solidarity in the wake of the Russian invasion and annexation of Crimea, the wisdom of arguably the most influential EU member state expanding its commercial relationship with a country also being targeted by economic sanctions is questionable.

Many say such a move is detrimental both to the message that the EU hopes to send to Russia and the maintenance of EU solidarity. Either way, the argument over the pipeline is symbolic of a much larger question regarding member state interests and EU governance. In this case, one country's commercial interest is (perceived as) another country's geopolitical risk. Ultimately, while many EU member states continue to pursue bilateral or regional approaches to energy, namely vis-a-vis Russia, questions of the possibility, and efficacy of a Union abound.

U.S. Energy Diplomacy and the Energy Union

For the U.S., the Energy Union is a point of engagement for its newly-rejuvenated energy diplomacy. Moreover, the Energy Union is perceived as a point of entry for the U.S. to pursue two intertwined policy priorities: continued geopolitical isolation of Russia and promotion of hydrocarbon exports. For the U.S., the Energy Union, and its anti-Russian origins, is a potential area of policy engagement through which the U.S. to counter Russian influence in Central and Eastern Europe, and an opportunity to re-establish America's perceived role as a hydrocarbon exporter and reclaim the pursuant geopolitical influence.

However, as made abundantly clear by the initial LNG shipments, private sector and market based decisions will determine where U.S. LNG goes, not political considerations. American producers will sell to the customer that pays the highest price, not the one the foreign policy establishment thinks needs the product for leverage or alternatives. That is not to say the interests of policymakers and the private sector cannot align, nor that the former cannot attempt to influence the latter --just that projects touted for their geopolitical import will likely fail to come to fruition if the underlying economics do not add up. That is also not to say that

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⁵⁶ Central European Energy Conference, *Panel IV: Regional integration of gas markets and security of supply*, 21-22 November 2015. Accessible at: http://archive.ceec.sk/archive/9th-annual-energy-conference/

an increasingly liquid LNG market won't drive down prices globally, sever the link between LNG and oil pricing, or provide additional supply options on the market. However, these distinctions are frequently lost when touting the U.S. 'gas weapon.'

The same goes for European supply options. While the U.S. can provide an alternative, long-term, stable supply option, this may only be viable for customers willing to pay a premium for it as LNG prices remain higher than piped gas supply in much of Europe, not to mention the cost of building the necessary infrastructure. However, the reality of higher costs does not preclude the potential for tangible benefit to those willing to pay, particularly in countries that lack options. The inauguration of Lithuania's LNG terminal, Independence, and the presence and possibility of alternative supply that came with it, is thought to be one of the major factors in the 23% price reduction the country was offered shortly thereafter by Gazprom, suggesting that alternatives could temper monopoly behavior.⁵⁷

However, while the existence of an 'option' for countries totally reliant on Gazprom could serve as a bargaining chip to negotiate, the infrastructure must exist to give this threat teeth. Amid increased excitement (and what sometimes could be called overhype) and even as energy sector developments seem to be accelerating, gas infrastructure investment and construction do not happen overnight. The U.S. was well into the shale revolution, which began in 2008-2009, before the first LNG exports set sail in February of 2016. Furthermore, most long-term gas contracts in Europe extend until the mid-2020s, meaning that European countries are contractually bound to purchase at least 115 bcm from Gazprom until the middle of the next decade.⁵⁸

Conclusions and Policy Recommendations

This all points to the need for more honest accounting and deeper understanding of energy security and the means to achieve it, and an identification of where strategic objectives and market realities align, and where they diverge. It should be understood that definitions of energy security will be based on a number of factors, some historical, some political, some resource-based, some economic—and no one country has a monopoly over which definition prevails.

In order to cooperate, it is important that countries talk not only of energy security, but security of what and for whom, and how this can be achieved. ⁵⁹ Absent discussions of the concrete requirements of energy security, the risks, and the policy tools to mitigate these risks, countries will too often agree on the term and the policy goal without actually agreeing on what this means in practice. In the EU, divergent conceptions can put member states at cross purposes when pursuing initiatives like the Energy Union, while in the United States this can result in rhetorical mismatches between the political application of energy security concepts and the reality of private energy sector decisions. To avoid such misunderstandings, all actors should strive to create not just a shared vernacular or shared set of values, but an understanding of which those ideas are based upon shared definitions—and which are not.

⁵⁷ Hidetoshi Azuma, "The Rise of Lithuanian LNG: A Long-Term Opportunity for the U.S.," *The American Security Project*, 4 November 2014. Accessible at:

http://www.americansecurityproject.org/the-rise-of-lithuanian-lng-a-long-term-opportunity-for-the-u-s/
⁵⁸ Katya Yafimava, "European Energy Security and the Role of Russian Gas: Assessing the Feasibility and Rationale of Reducing Dependence, "*Instituto Affari Internationali Working Paper*, Issue 15754. 3 January 2016.

⁵⁹ Aleh Cherp and Jessica Jewell, "The Concept of Energy Security, Beyond the 4As," *Energy Policy*75 (2014): 415–421.

The relationship between a countries' historical memory and resource reality and its ability to achieve energy security must also be understood. When working with partners, the U.S. must go beyond the basic assumption that the presence of a resource breeds independence and security while its absence means dependency and insecurity. For countries lacking in domestic resource bases, this binary is not necessarily a useful framework for thinking about energy security, while the reality—and value of—other tools to achieve the goal of energy security must be acknowledged. It also must be recognized that different countries might prioritize different policy goals and tools to achieve those goals, an issue over which many EU member countries are currently at cross purposes.

Finally, countries must acknowledge, like it or not, the degree to which energy policy decisions are part of larger political and security developments, whether in reality or in public perception. At a time when Germany is struggling to hold a fractured EU together, it is worth asking what the political costs of a divisive project like NSII might be, namely given the need to "present a united front' when it comes to the Energy Union. ⁶⁰ Furthermore, while this project is but one example, it highlights the most pressing challenge at the heart of European energy diplomacy, and perhaps energy security as well—to 'speak with a single voice." ⁶¹

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⁶⁰ "The European Union Explained: Energy," The European Commission, November 2014. Accessible at: P. 7. Accessible at: http://europa.eu/pol/pdf/flipbook/en/energy_en.pdf ⁶¹ Ibid.