

Nord Stream 2: Implications and Outcomes for US-German Relations and the NATO Alliance

SAS-163

Special Study Team

SMA STRATCOM – 3 March 2021

Dr. Arnold C. Dupuy, Team Lead

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Introduction

Dr. David Dorondo

- 1) Thanks to SMA and USSTRATCOM Academic Alliance.
- 2) NS 2 Special Study Team within NATO STO SAS-163 (NESA).
- 3) Précis: German Political Context; Deterrence Implications and Ukraine; Market-sector Analysis / German-Russian Relations; Great Power Competition; Impact on NATO.

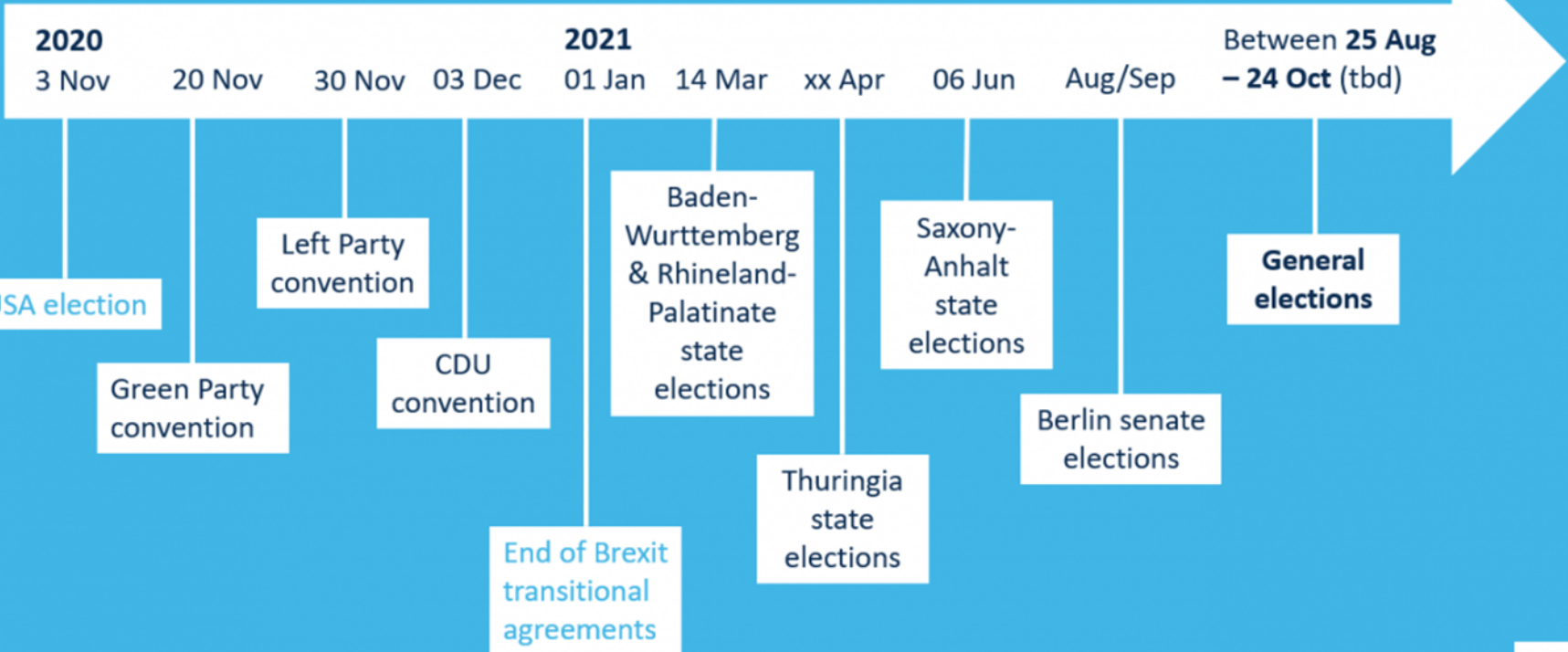
Nord Stream 2: Geo-strategic Setting

 Nord Stream  Nord Stream 2



“Superwahljahr 2021”

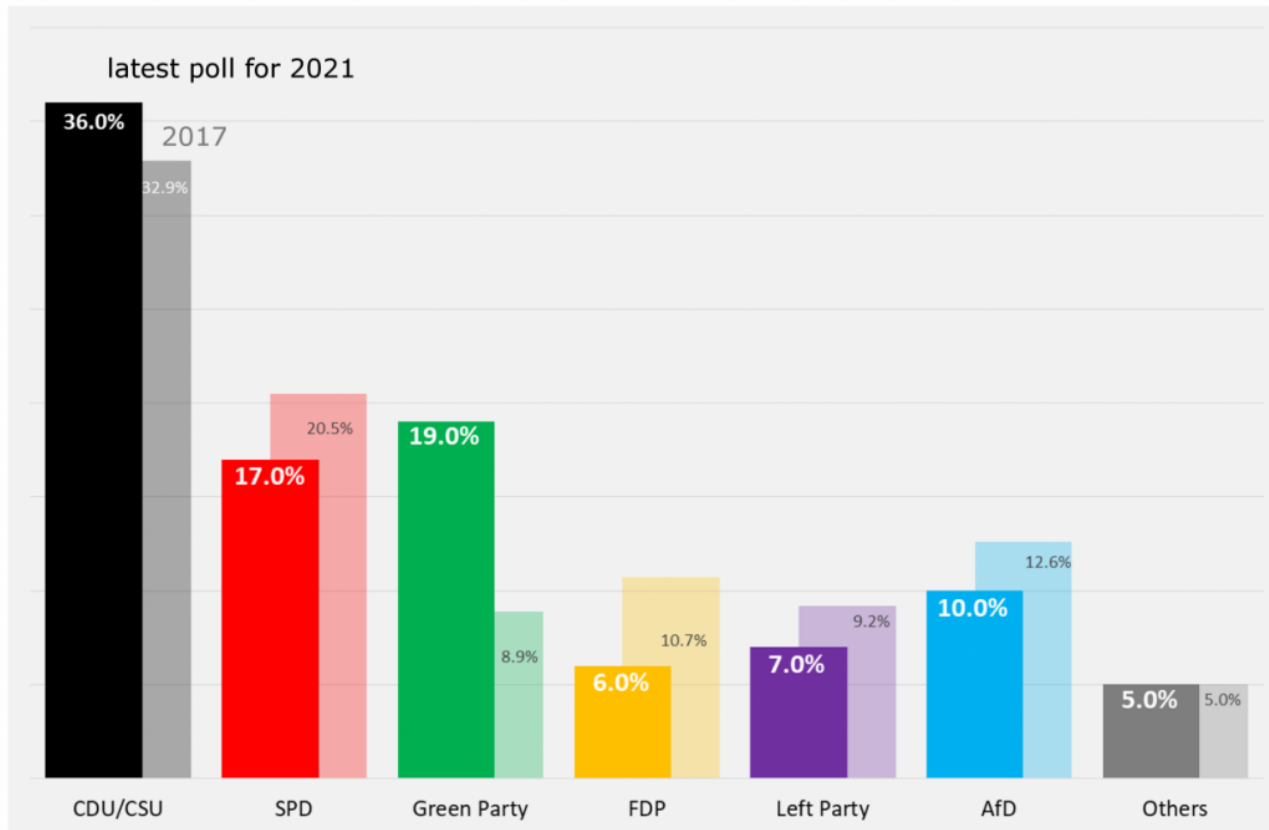
Timeline: General elections in Germany in autumn 2021



Prospects for German Elections and NS 2

Latest poll for 2021 German federal election and 2017 result.

Data: Bundeswahlleiter, Infratest dimap



Note: threshold for seats in parliament is 5%.

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Pipeline Politics in Central and Eastern Europe: Its Impact on the NATO Alliance

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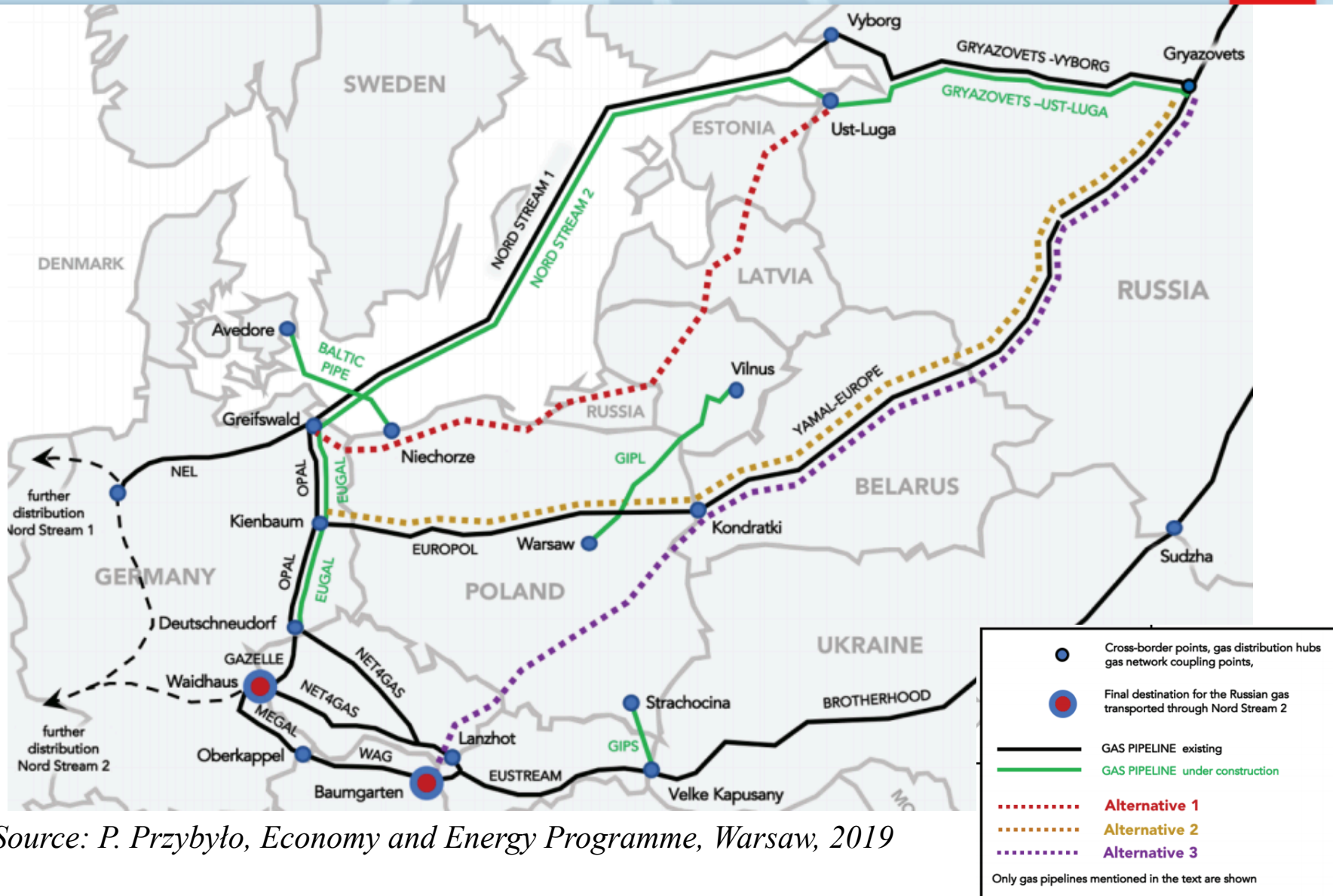
Ion A. IFTIMIE

Pipeline Politics and Deterrence

- Council on the Future Tasks of the Alliance (The Harmel Report) (December 1967)
 - “...to maintain adequate military strength and political solidarity **to deter aggression and other forms of pressure ...**”
 - A more flexible response to the East-West confrontation

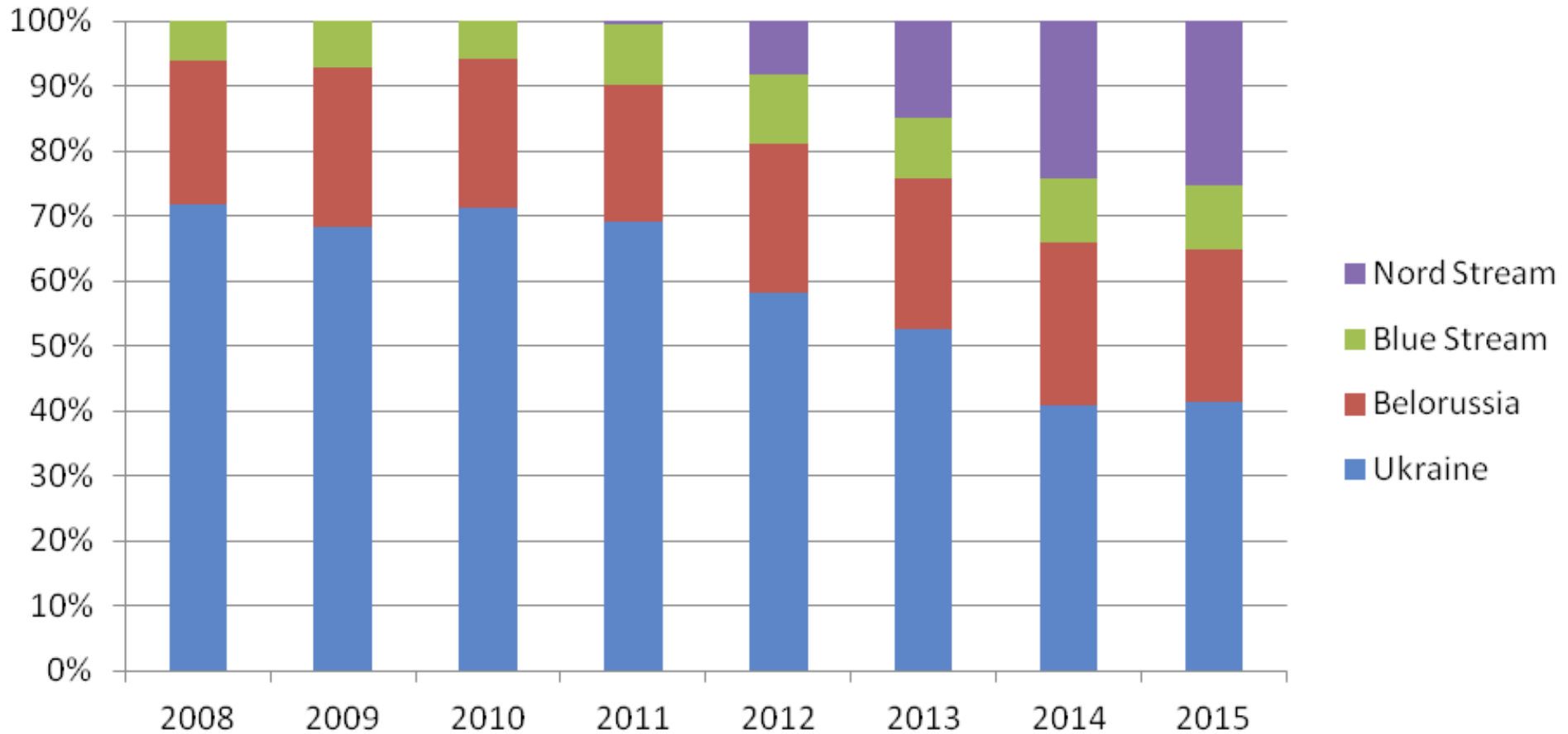
Ukraine as an “exposed area” on the Eastern flank

- **2009 Russia–Ukraine gas dispute all Russian gas to Europe through Ukraine were halted for 13 days;**
 - **Is peace in Ukraine is dependent on current Russian (economic) dependence on Ukrainian pipelines?**



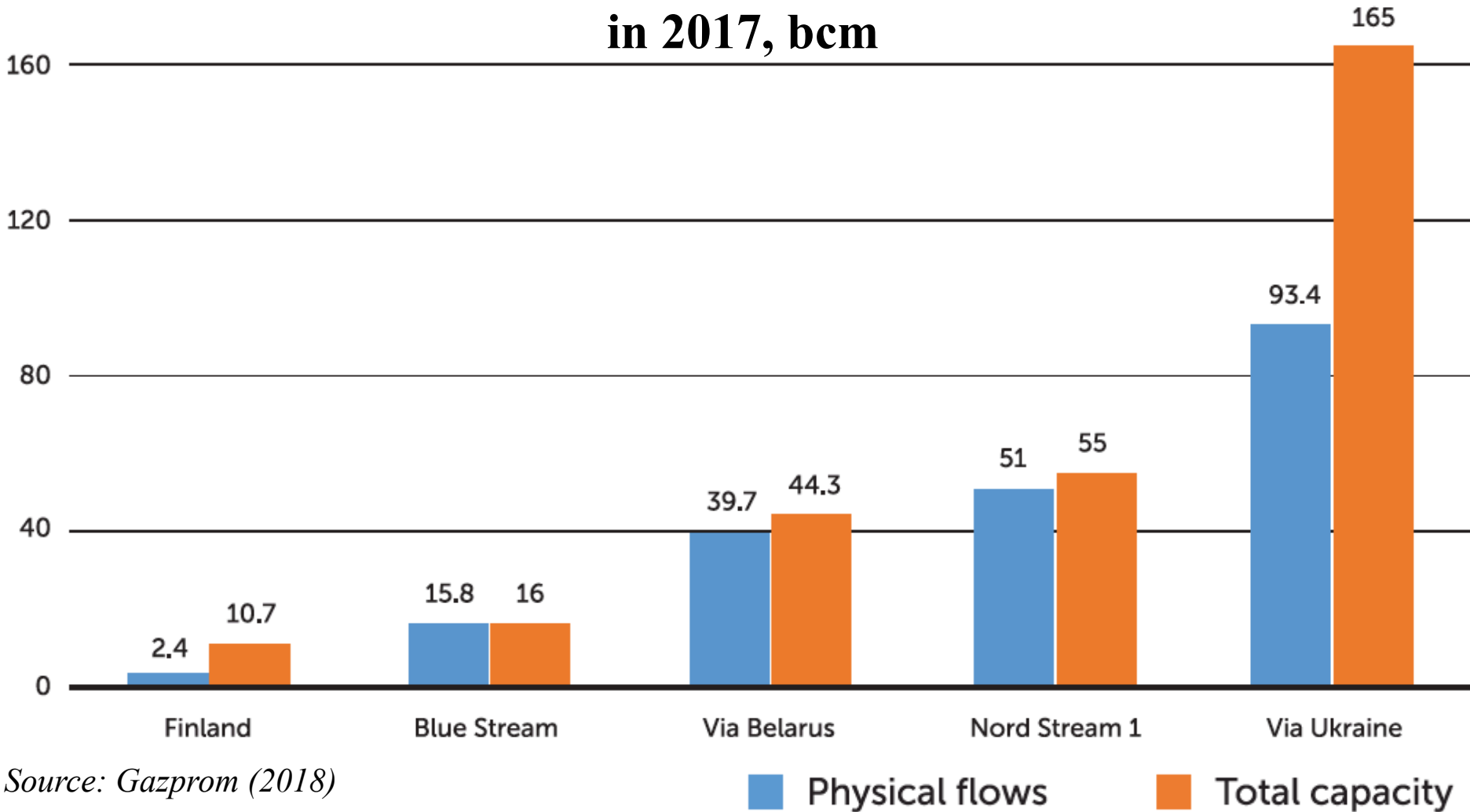
Source: P. Przybyło, *Economy and Energy Programme*, Warsaw, 2019

Russian gas exports to Europe and Turkey by route, %



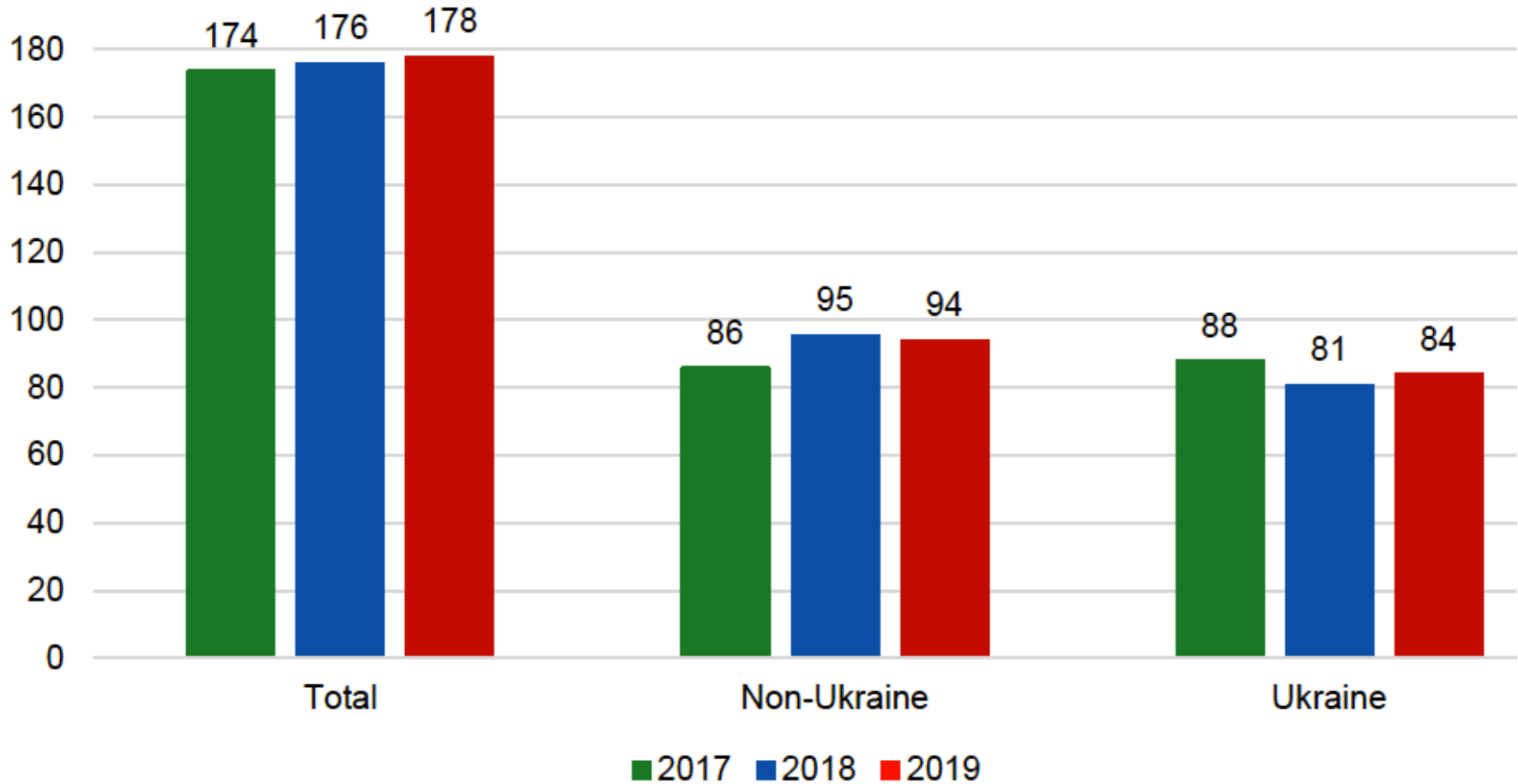
Source: Naftogaz of Ukraine, Eustream, Gazprom, ENTSO-G

Capacity utilization of main supply routes of Russian gas to Europe in 2017, bcm



Source: Gazprom (2018)

Russian pipeline exports to Europe by delivery route (bcm/y)



Source: S Pirani and J Sharples, *Energy Insight 64*, Oxford Institute for Energy Studies, 2020

Ukraine and NATO Efforts to Strengthen Energy Security

NATO's 1991 Strategic Concept. Article 12 states:

“...Alliance security interests can be affected by other risks of a wider nature, including acts of terrorism, sabotage and organised crime, and by the *disruption of the flow of vital resources.*”

Russia expected to reduce flow through Ukraine to 40 bcm/year for the period 2021-24 → Implications for Strategic Concept

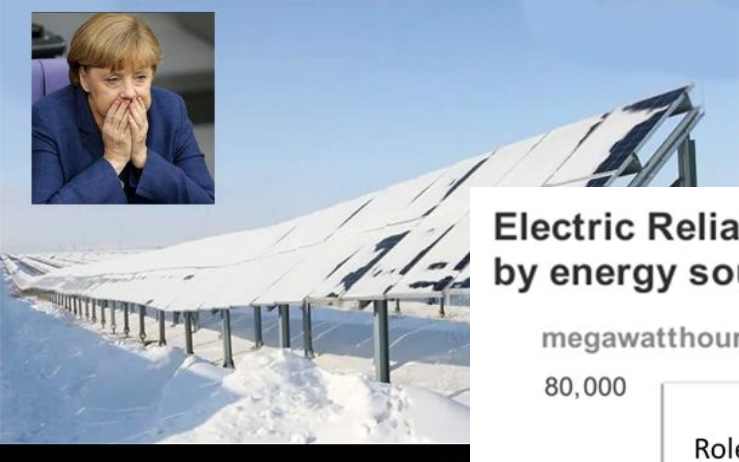
The 2021 Munich Security Conference did not address the Nord Stream 2 issue

Marketing and Commercial Calculations and Trends: Nord Stream 2

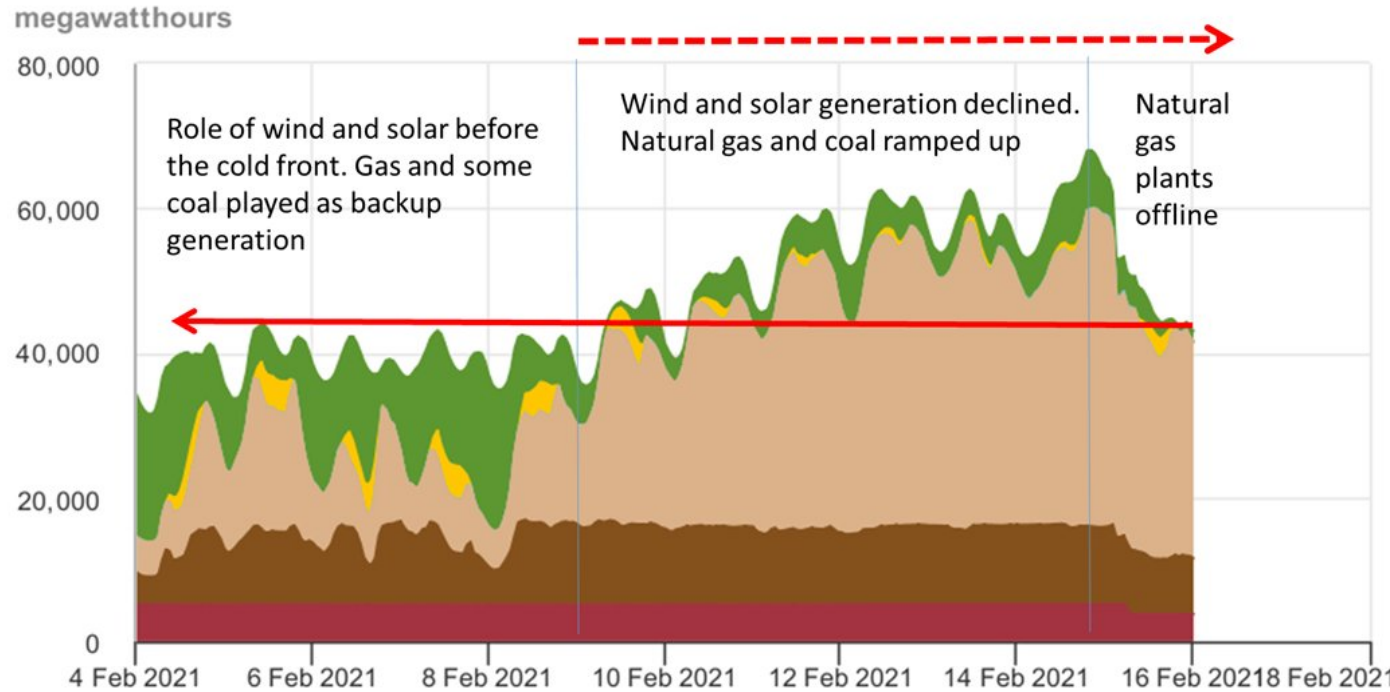
Impact of Energy Geopolitics on NATO

SAS-163 Special Study Team, March 3, 2021

Prof. Paul Michael Wihbey, Executive Director,
Institute on the Geopolitics of Energy and Strategic Resources
Washington, DC



Electric Reliability Council of Texas, Inc. (ERCOT) electricity generation by energy source 2/4/2021 – 2/17/2021, Central Time

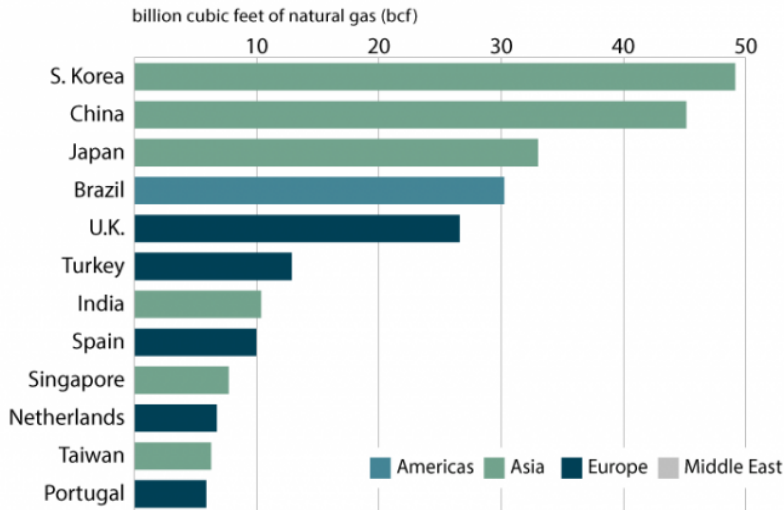


● Wind
 ● Solar
 ● Hydro
 ● Other
 ● Natural gas
 ● Coal
 ● Nuclear



Source: U.S. Energy Information Administration

Top 12 USLNG Destinations - Nov. 2020



Source: DOE LNG Monthly (Data through Nov. 2020)

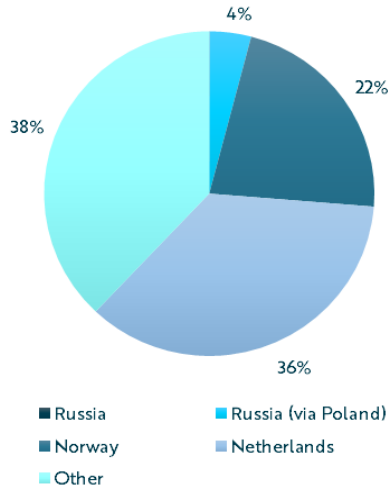
©LNG Allies, 2021

Qatari LNG Exports to Europe and Asia 2017-2021

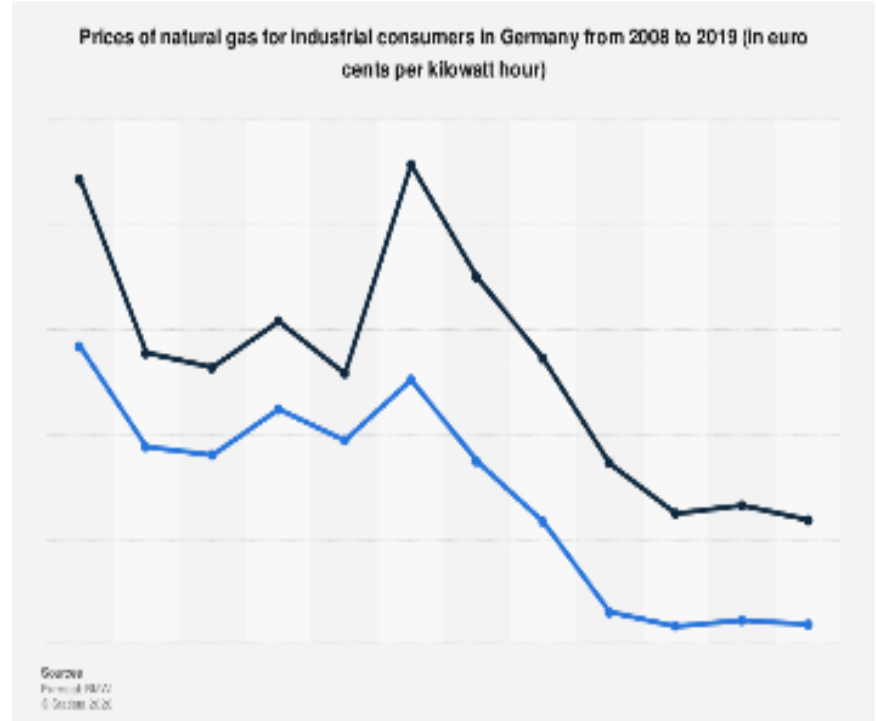
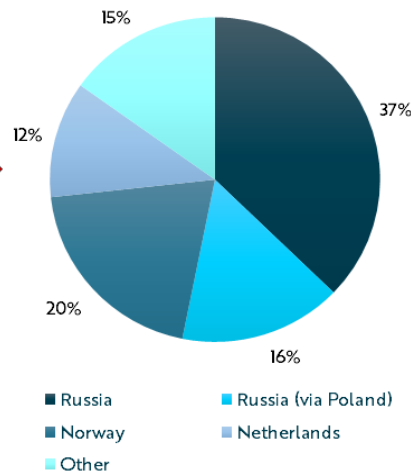


Over the last decade, Russia has greatly expanded its presence in Germany, now contributing over 50% of piped imports in 2020. The growth has come at the expense of bordering nations such as the Netherlands.

Share of German Imports by Exporting Country – 2010

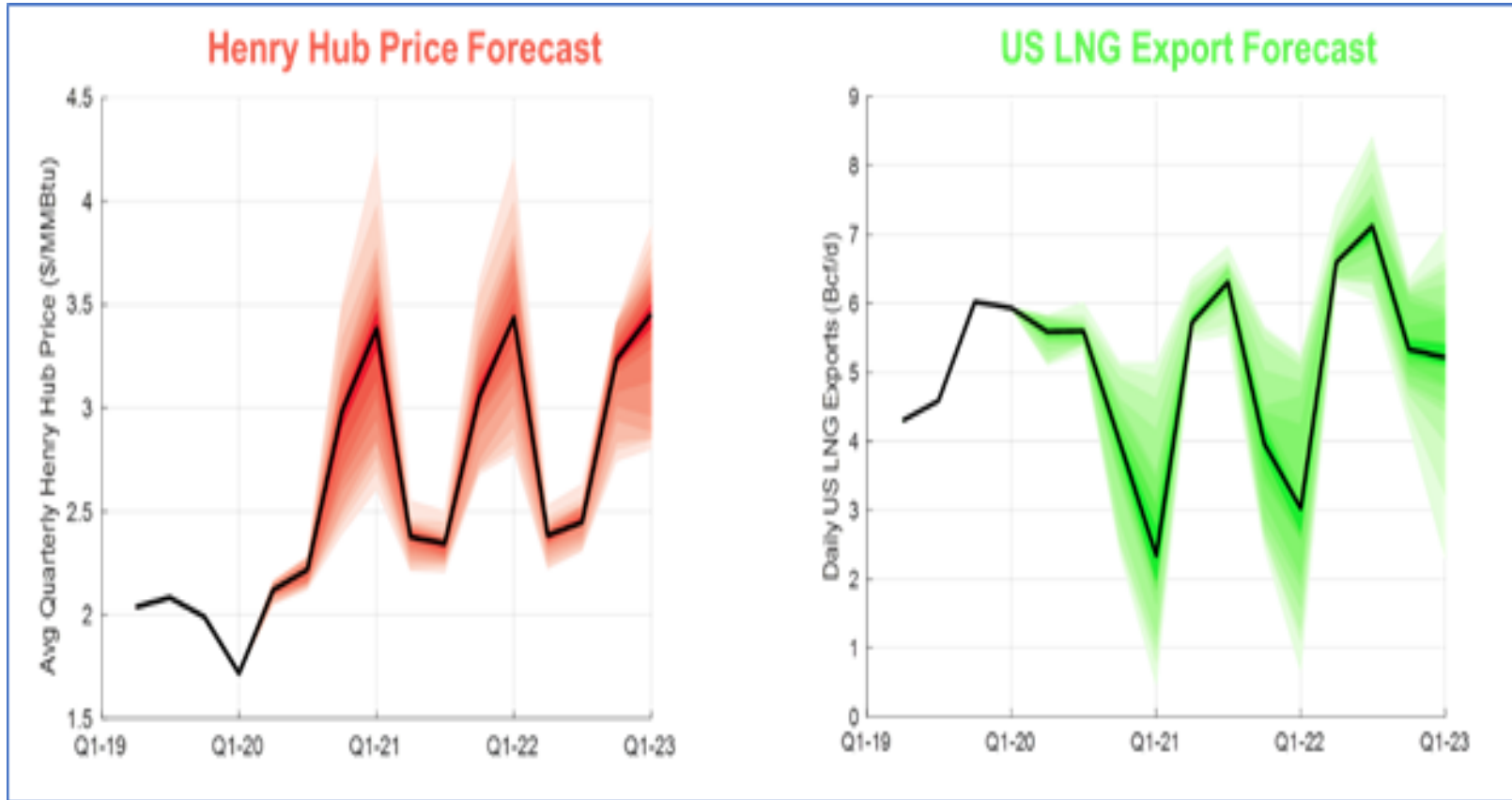


Share of German Imports by Exporting Country – 2020



Source: BTU Analytics, IEA gas trade flows

Source: Federal Statistical Office of Germany, October 2020



Conclusions:

--- Paul Michael Wihbey

- Great Power Competition Aspects of NS2



Dr. Daniel Nussbaum
Energy Academic Group
dnussbaum@nps.edu

Naval Postgraduate School (NPS)

America's national security research university



1909 Founded at U.S. Naval Academy

1951 Moved to Monterey, CA

Operations Research Curriculum

- Facilities of a graduate research university
- Faculty who work for the U.S. Navy, with clearances
- Students with fresh operational experience

- 65 M.S. and 15 Ph.D. programs
- 679 faculty
- 1432 resident students includes (182 international / 47 countries)
983 distributed learning students

■ Energy Academic Group

- Established in 2012
- Mission:
 - Bring together an interdisciplinary group of NPS faculty to provide coordination and awareness for EAG's three pillars in support of energy activities at NPS
- EAG's three pillars:
 - **Education**-- Conduct graduate level energy education for NPS students, Naval Officers, and other DoD personnel
 - Research--Coordinate energy-related research for NPS faculty and student
 - **Outreach** --remote outreach efforts to develop energy partnerships among DoD, USG, academia, industry, and international partners
- Highly educated team capable of coordinating and advancing Naval energy needs

Our research falls into 4 general categories, and there are these associated with almost every one of these projects:

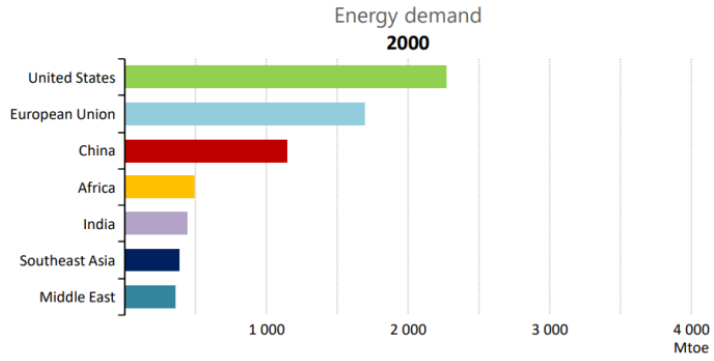
- **Optimization & Efficiency Research**
 - OTTER (Optimized Transit Tool Easy Reference)
 - Developed within EAG as a tool for the Surface Fleet to optimize fuel usage during transits
 - Works within existing operational constraints and can still provide double digit % savings on average (16-20% in tests)
 - Continues to be enhanced and we are working on rollout and uptake within the fleet
 - Bulk Fuel Delivery in Support of Expeditionary Advance Base Operations
 - Explores different means of delivering bulk fuel to the high water mark to facilitate and sustain USMC operations
- **Critical Energy Infrastructure Protection & Resilience**
 - Table Top Exercise (TTX) in Ukraine on Hybrid Warfare and CEIPR
 - TTX planning for CEPS (Central European Pipeline System) – FY19
 - Hurricane recovery and reconstruction efforts in US Virgin Islands – system modelling
 - Critical Energy Infrastructure Protection and Resilience (CEIPR)
- **Renewables and Emerging Technologies**
 - Smart grids, Forward Basing, Remote Charging (viability)
- **Awareness & Behaviour Change**
 - Energy video, ADL, Behaviour studies

EAG Professional Development

- Current Short Courses and Support to Sponsors
 - Course Topics:
 - Energy Security Strategic Overview
 - Energy Security – Regional Focus (tailored for delivery)
 - Critical Energy Infrastructure (CEI) Protection & Resilience
 - Energy Efficiency in Military Operations
 - Energy Awareness (ADL)
 - Sponsors:
 - OSD, ONR, NETSAFA, OPNAV, SECNAV, NATO School Oberammergau (NSO), NATO Energy Security Center of Excellence (ENSECCOE)
 - Locations:
 - **CONUS** - Monterey, San Diego, DC
 - **OCONUS** - Lithuania, Ukraine, Azerbaijan, Georgia, Kuwait, Indonesia

World Energy Outlook 2018

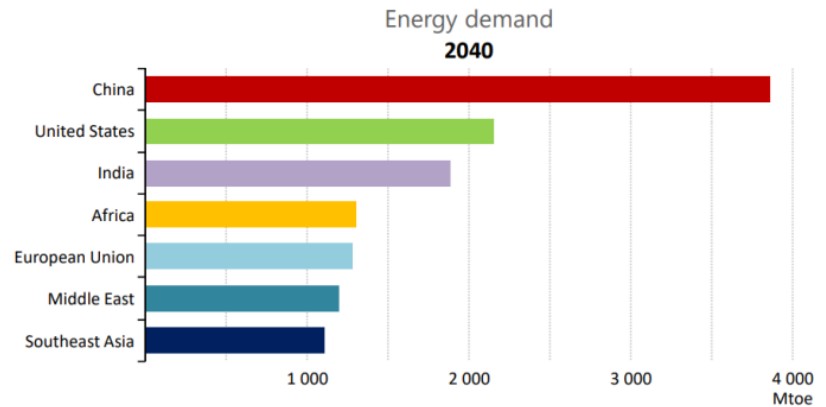
The new geography of energy



In 2000, more than 40% of global demand was in Europe & North America and some 20% in developing economies in Asia. By 2040, this situation is completely reversed.

The new geography of energy

World Energy Outlook 2018



In 2000, more than 40% of global demand was in Europe & North America and some 20% in developing economies in Asia. By 2040, this situation is completely reversed.

© OECD/IEA 2018

The Geopolitics of it All

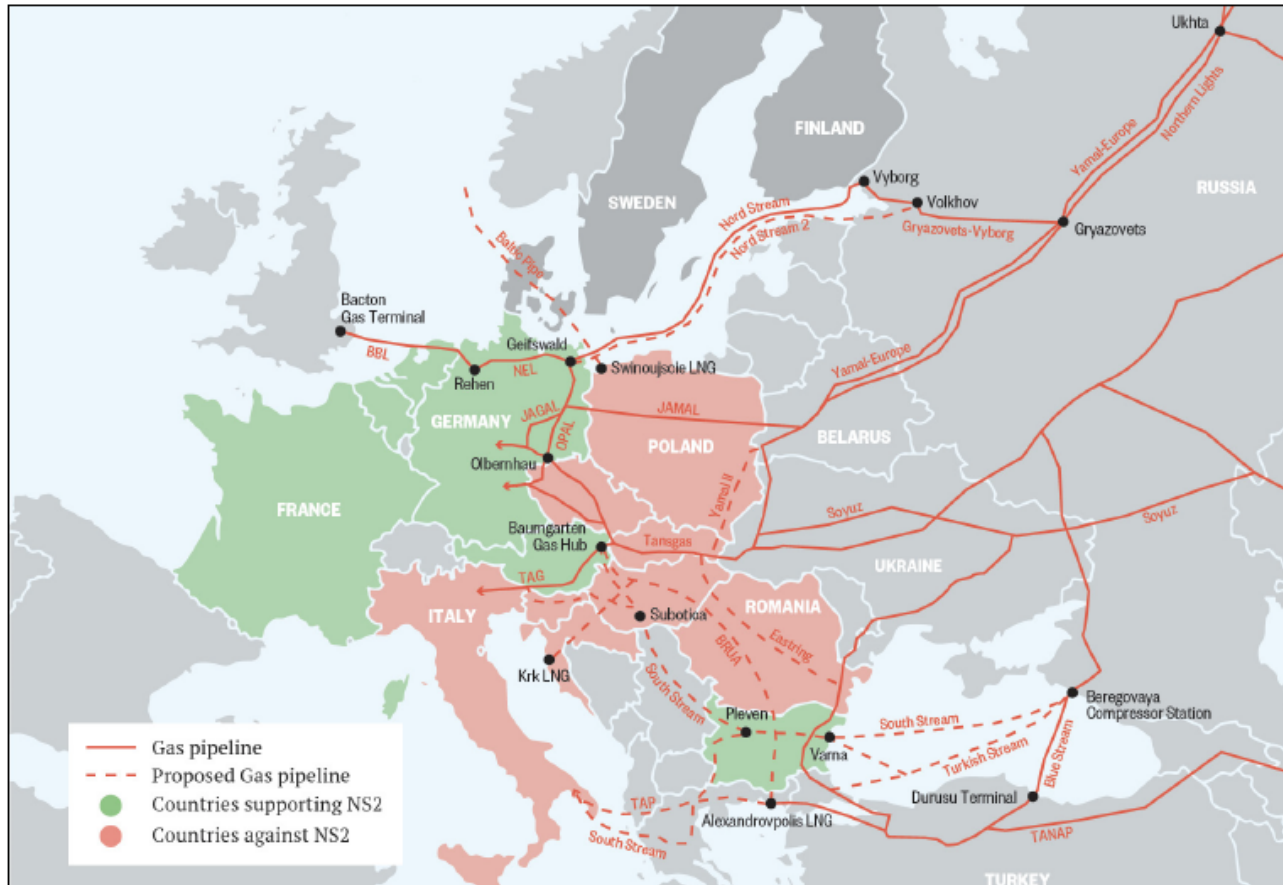
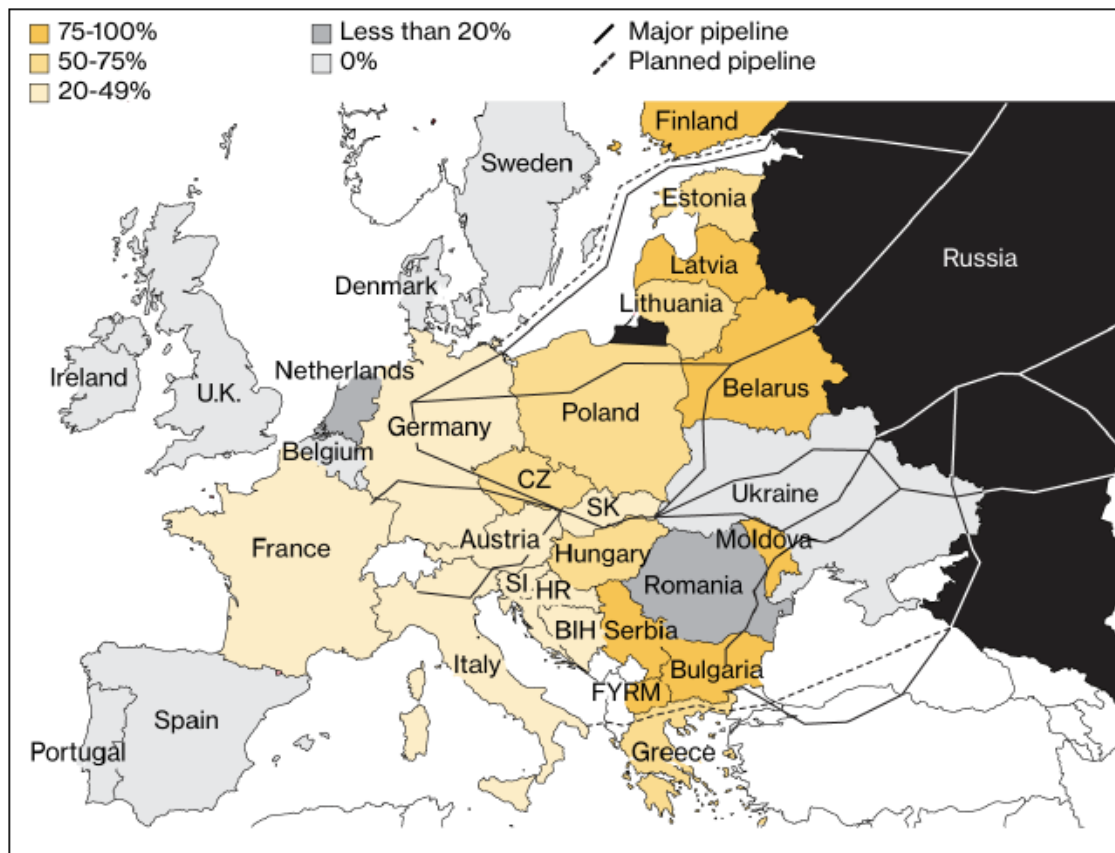


Figure 10. Gas Import Routes in Eastern Europe.⁷⁹

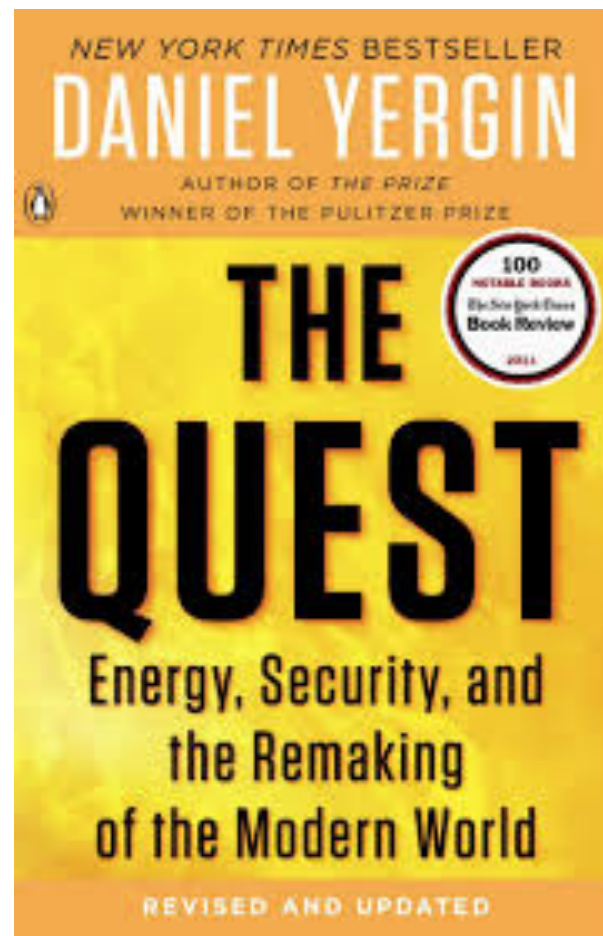
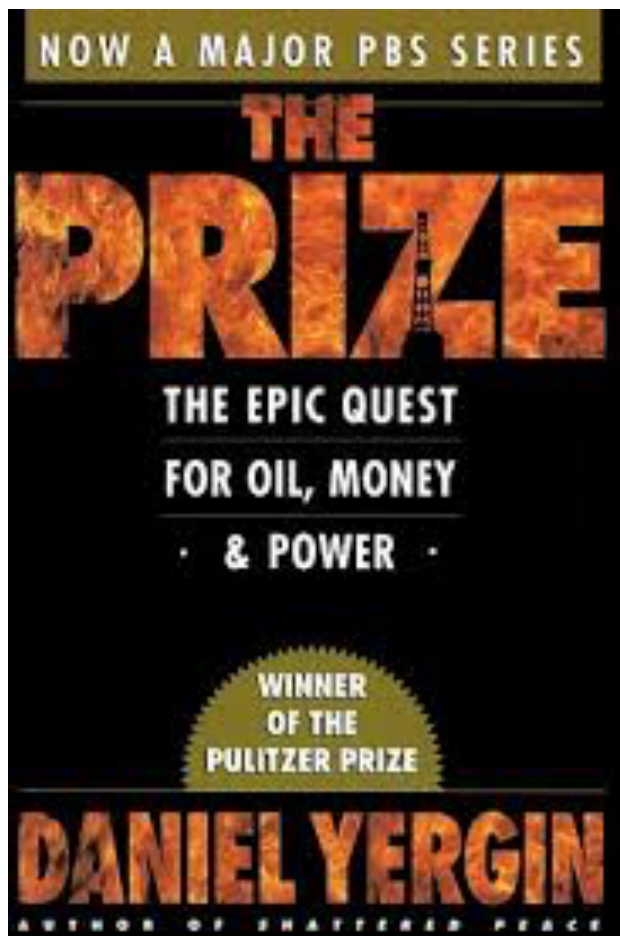
The Geopolitics of it All



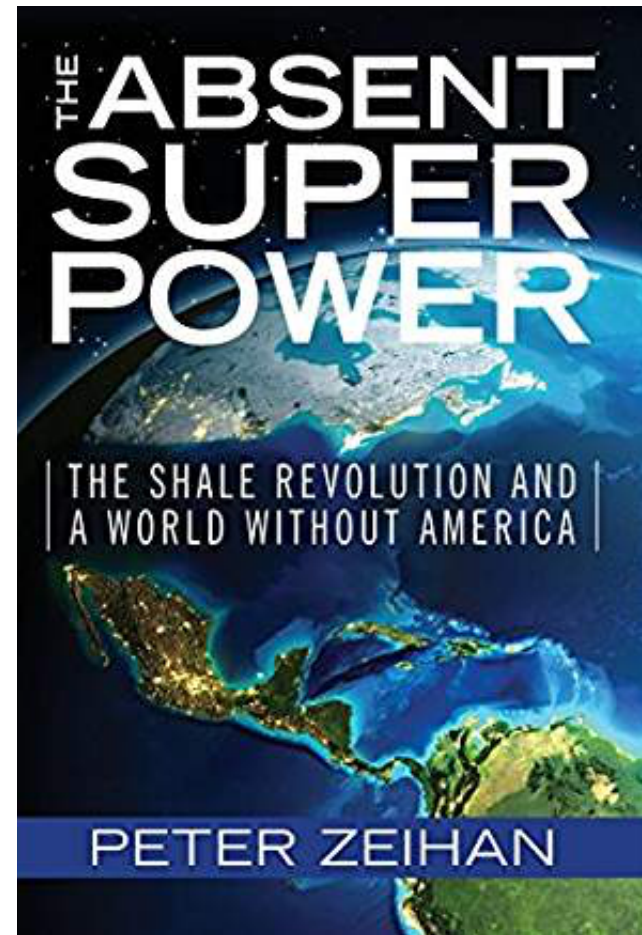
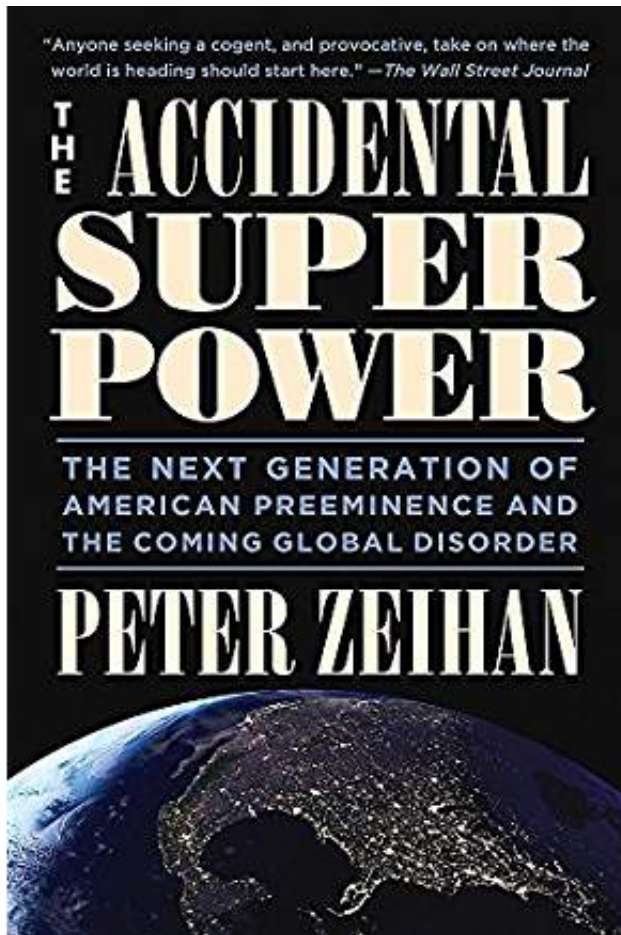
Data from 2017 depicting the percentage of Russian natural gas imported by European countries.

Figure 7. European Reliance on Russian Natural Gas.⁵¹

Recommended Reading



Recommended Reading



Nord Stream 2: Its Impact on the NATO Alliance

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Dr. Arnold C. Dupuy

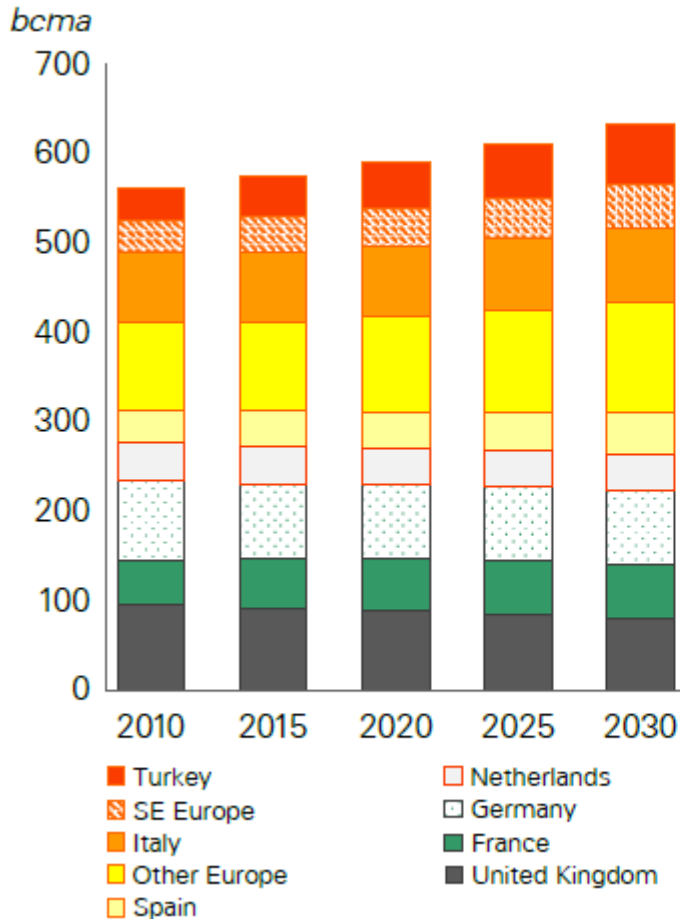
Considered fundamental questions regarding Nord Stream 2:

- 1) The German and regional political foundation
- 2) Pipeline politics, deterrence and collective defense
- 3) Private sector markets and possible alternatives
- 4) Great power competition

5) Impact on the NATO Alliance

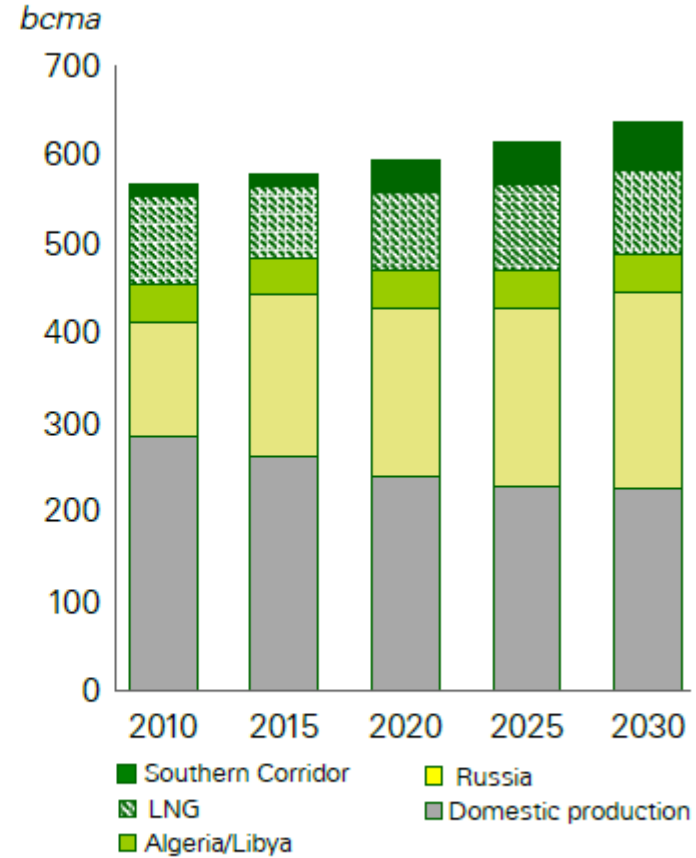
European Gas Demand and Suppliers to 2030

European gas demand



Source: CERA

European gas suppliers



Source: BP Energy Outlook 2030

EU/NATO Dependence on Russian Natural Gas



Structural Precedents

- Committee on Non-Military Cooperation (The Three Wise Men) (December 1956)
 - Pearson (CA), Martino (IT) and Lange (NO)
 - Acknowledged the importance of non-military cooperation
 - Political and economic cooperation
 - Reinforced by the Suez Crisis of November 1956
- Council on the Future Tasks of the Alliance (The Harmel Report) (December 1967)
 - “...to maintain adequate military strength and political solidarity **to deter aggression and other forms of pressure ...**”
 - A more flexible response to the East-West confrontation

Consider “Exposed areas”: the South-Eastern flank and the Mediterranean

NATO Operational Energy Precedents

- NATO Pipeline System (NPS)
 - Started in 1958
 - 12,000 km
 - Military priority, though in use by civilian entities
- Central European Pipeline System (CEPS)
 - The largest pipeline within the NPS

The NPS is dedicated to petroleum, not natural gas

NATO Efforts to Strengthen Energy Security

NATO's 1991 Strategic Concept. Article 12 states:

“...Alliance security interests can be affected by other risks of a wider nature, including acts of terrorism, sabotage and organised crime, and by the *disruption of the flow of vital resources.*”

Subsequent Strategic Concepts and Summits have strengthened energy security

The 2018 Brussels Summit communique does not mention Nord Stream 2

NATO Energy Security Organizations

- Hybrid Threats and Energy Security Section
 - Formed in 2010
 - Located in Brussels
- Energy Security Center of Excellence (ENSECCOE)
 - Formed in 2012
 - Located in Vilnius, Lithuania

Nord Stream 2: Implications for the NATO Alliance

“The arrival of Russian infrastructure into a NATO country puts all NATO members at risk...The U.S. relationship with Germany is a cornerstone of the transatlantic alliance. But allowing the completion of Nord Stream II is not a constructive path forward for this partnership.” (Sens. Jeanne Shaheen (D., NH) and Jim Risch (R., ID) February 12, 2021)

Nord Stream 2: Implications for the NATO Alliance

Secretary of Defense Lloyd Austin attempted to calm member states' nerves:

- February 18, 2021 at the NATO Summit
- February 16, 2021 Washington Post OPED
 - Never mentioned NS 2
 - The fundamental problem is not addressed

Key Points Regarding NATO Energy Security Efforts

- NATO action is limited by member state sovereignty
- Primarily focused on petroleum products for military operations
 - As well as political and economic concerns
- Natural gas is not a military operational commodity
 - Operational implications in contemporary operations as a source of power generation

Trade in natural gas has political, economic and military (operational) implications

Nord Stream 2: Implications for the NATO Alliance

- **Stability:** Security-related implications in Eastern Europe
 - Ukraine, Poland, Slovakia, Hungary, and Romania, as well as the Baltic States
- **Cohesion:** Adverse affects of a dramatic split between Germany and some Central and Eastern Europe allies
 - Not to mention a US-German split
- **Credibility:** NS 2 could force an even more rancorous debate further weakening NATO's standing
- **Deterrence:** Energy sales to Russia are funding the very state the Alliance is trying to deter

Thank you

Arnold C. Dupuy

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