



Gas Geo-economics in Europe: Using Strategic Investment



Anna Mikulska am75@rice.edu Rice University's Baker Institute May 7[,] 2018

Europe's dependency on Russian gas



Russian gas in total gas supply

Austria42.283.550.54%Bulgaria24.027.587.27%Croatia0.026.10.00%Cyprus0.026.10.00%Czech Rep.51.677.466.67%Denmark0.031.10.00%France62.3421.314.79%Germany402.9824.648.86%Greece18.431.758.04%Hungary101.492.1110.10%Ireland0.047.90.00%Latvia13.4100.00%38.86%Maita0.00.00.00%Netherlands32.0375.68.52%Slovakia46.946.7100.43%Spain0.0301.40.00%Sweden0.0301.40.00%Sweden0.0301.40.00%	Country	Suppy from	Total (in	Dependency
Croatia 0.0 26.1 0.00 Cyprus 0.0 0.0 0.00 Czech Rep. 51.6 77.4 66.67 Denmark 0.0 31.1 0.00 France 62.3 421.3 14.79 Germany 402.9 824.6 48.86 Greece 18.4 31.7 58.04% Hungary 101.4 92.1 110.10% Italy 255.4 655.2 38.98% Latvia 13.4 100.00% 110.10% Kithuania 26.4 26.9 98.14% Maita 0.0 0.0 0.00% Foland 95.1 172.8 55.03% Poland 95.1 172.8 55.03% Slovakia 46.9 46.7 100.43% Slovakia 46.9 46.7 100.43% Spain 0.0 301.4 0.00%				Rate 50.54%
Croatia 0.0 26.1 0.00% Cyprus 0.0 0.0 0.00% Czech Rep. 51.6 77.4 66.67% Denmark 0.0 31.1 0.00% Estonia 5.5 5.5 100.00% France 62.3 421.3 14.79% Germany 402.9 824.6 48.86% Greece 18.4 31.7 58.04% Hungary 101.4 92.1 110.10% Italy 255.4 655.2 38.98% Latvia 13.4 13.4 100.00% Kithuania 26.4 26.9 98.14% Maita 0.0 0.00% 655.2 Poland 95.1 172.8 55.03% Poland 95.1 172.8 55.03% Siovakia 46.9 46.7 100.43% Siovakia 46.9 46.7 100.43% Siovakia 0.0 301.4 0.00%	Bulgaria	24.0	27.5	87 27%
Cyprus 0.0 0.0 0.00 Czech Rep. 51.6 77.4 66.67% Denmark 0.0 31.1 0.00% Estonia 55 55 100.00% France 62.3 421.3 14.79% Germany 402.9 824.6 48.86% Greece 18.4 31.7 58.04% Hungary 101.4 92.1 110.10% Italy 255.4 655.2 38.98% Latvia 13.4 13.4 100.00% Katherlands 32.0 375.6 8.52% Poland 95.1 172.8 55.03% Portugal 0.0 45.3 0.00% Slovakia 46.9 46.7 100.43% Spain 0.0 301.4 0.00%				
Czech Rep.51.677.466.67%Denmark0.031.10.00%Estonia5.55.5100.00%France62.3421.314.79%Germany402.9824.648.86%Greece18.431.758.04%Hungary101.492.1110.10%Ireland0.047.90.00%Italy255.4655.238.98%Latvia13.413.4100.00%Maita0.00.00.00%Poland95.1172.855.03%Portugal0.045.30.00%Slovakia46.946.7100.43%Spain0.09.70.00%				
Denmark 0.0 31.1 0.00% Estonia 5.5 5.5 100.00% France 62.3 421.3 14.79% Germany 402.9 824.6 48.86% Greece 18.4 31.7 58.04% Hungary 101.4 92.1 110.10% Ireland 0.0 47.9 0.00% Italy 255.4 655.2 38.98% Latvia 13.4 13.4 100.00% Malta 0.0 0.0 0.0% Poland 95.1 172.8 55.03% Portugal 0.0 45.3 0.00% Slovakia 46.9 46.7 100.43% Slovenia 4.8 6.8 70.59% Spain 0.0 9.7 0.00%				
Estonia5.55.5100.00%France62.3421.314.79%Germany402.9824.648.86%Greece18.431.758.04%Hungary101.492.1110.10%Ireland0.047.90.00%Italy255.4655.238.98%Latvia13.4100.00%Malta0.00.00.00%Netherlands32.0375.68.52%Poland95.1172.855.03%Slovakia46.946.7100.43%Stovenia4.86.870.59%Sweden0.09.70.00%	Czech Rep.	51.6	77.4	
France 62.3 421.3 14.79% Germany 402.9 824.6 48.86% Greece 18.4 31.7 58.04% Hungary 101.4 92.1 110.10% Ireland 0.0 47.9 0.00% Italy 255.4 655.2 38.98% Latvia 13.4 100.00% 30.00% Maita 0.0 0.0 0.00% Poland 95.1 172.8 55.03% Slovakia 46.9 46.7 100.43% Slovenia 46.9 30.0 30.00% Spain 0.0 9.7 0.00%	Denmark	0.0	31.1	0.00%
Germany402.9824.648.86%Greece18.431.758.04%Hungary101.492.1110.10%Ireland0.047.90.00%Italy255.4655.238.98%Latvia13.413.4100.00%Malta0.00.00.00%Netherlands32.0375.68.52%Poland95.1172.855.03%Romania9.5127.67.45%Slovakia46.946.7100.43%Spain0.0301.40.00%	Estonia	5.5	5.5	100.00%
Greece 18.4 31.7 58.04% Hungary 101.4 92.1 110.10% Ireland 0.0 47.9 0.00% Italy 255.4 655.2 38.98% Latvia 13.4 13.4 100.00% Maita 0.0 0.0 0.00% Netherlands 32.0 375.6 8.52% Poland 95.1 172.8 55.03% Romania 9.5 127.6 7.45% Slovakia 46.9 46.7 100.43% Spain 0.0 9.7 0.00%	France	62.3	421.3	14.79%
Hungary101.492.1110.10%Ireland0.047.90.00%Italy255.4655.238.98%Latvia13.413.4100.00%Lithuania26.426.998.14%Maita0.00.00.00%Netherlands32.0375.68.52%Poland95.1172.855.03%Portugal0.045.30.00%Slovakia46.946.7100.43%Spain0.0301.40.00%Sweden0.09.70.00%	Germany	402.9	824.6	48.86%
Ireland0.047.90.00%Italy255.4655.238.98%Latvia13.413.4100.00%Lithuania26.426.998.14%Malta0.00.00.00%Netherlands32.0375.68.52%Poland95.1172.855.03%Portugal0.045.30.00%Slovakia46.946.7100.43%Spain0.0301.40.00%Sweden0.09.70.00%	Greece	18.4	31.7	58.04%
Italy255.4655.238.98%Latvia13.413.4100.00%Lithuania26.426.998.14%Malta0.00.00.00%Netherlands32.0375.68.52%Poland95.1172.855.03%Portugal0.045.30.00%Slovakia46.946.7100.43%Spain0.0301.40.00%Sweden0.09.70.00%	Hungary	101.4	92.1	110.10%
Latvia 13.4 13.4 100.00% Lithuania 26.4 26.9 98.14% Malta 0.0 0.0 0.0% Netherlands 32.0 375.6 8.52% Poland 95.1 172.8 55.03% Portugal 0.0 45.3 0.00% Slovakia 46.9 46.7 100.43% Slovenia 4.8 6.8 70.59% Sweden 0.0 9.7 0.00%	Ireland	0.0	47.9	0.00%
Lithuania 26.4 26.9 98.14% Maita 0.0 0.0 0.0% Netherlands 32.0 375.6 8.52% Poland 95.1 172.8 55.03% Portugal 0.0 45.3 0.0% Slovakia 46.9 46.7 100.43% Slovenia 0.0 301.4 0.0% Sweden 0.0 9.7 0.0%	Italy	255.4	655.2	38.98%
Maita 0.0 0.0 0.00% Netherlands 32.0 375.6 8.52% Poland 95.1 172.8 55.03% Portugal 0.0 45.3 0.00% Romania 9.5 127.6 7.45% Slovakia 46.9 46.7 100.43% Spain 0.0 301.4 0.00%	Latvia	13.4	13.4	100.00%
Netherlands 32.0 375.6 8.52% Poland 95.1 172.8 55.03% Portugal 0.0 45.3 0.00% Romania 9.5 127.6 7.45% Slovakia 46.9 46.7 100.43% Spain 0.0 301.4 0.00%	Lithuania	26.4	26.9	98.14%
Poland 95.1 172.8 55.03% Portugal 0.0 45.3 0.00% Romania 9.5 127.6 7.45% Slovakia 46.9 46.7 100.43% Slovenia 4.8 6.8 70.59% Spain 0.0 9.7 0.00%	Malta	0.0	0.0	0.00%
Portugal 0.0 45.3 0.00% Romania 9.5 127.6 7.45% Slovakia 46.9 46.7 100.43% Slovenia 4.8 6.8 70.59% Spain 0.0 9.7 0.00%	Netherlands	32.0	375.6	8.52%
Romania 9.5 127.6 7.45% Slovakia 46.9 46.7 100.43% Slovenia 4.8 6.8 70.59% Spain 0.0 301.4 0.00%	Poland	95.1	172.8	55.03%
Slovakia 46.9 46.7 100.43% Slovenia 4.8 6.8 70.59% Spain 0.0 301.4 0.00% Sweden 0.0 9.7 0.00%	Portugal	0.0	45.3	0.00%
Slovenia 4.8 6.8 70.59% Spain 0.0 301.4 0.00% Sweden 0.0 9.7 0.00%	Romania	9.5	127.6	7.45%
Spain 0.0 301.4 0.00% Sweden 0.0 9.7 0.00%	Slovakia	46.9	46.7	100.43%
Sweden 0.0 9.7 0.00%	Slovenia	4.8	6.8	70.59%
	Spain	0.0	301.4	0.00%
UK 0.0 773.1 0.00%	Sweden	0.0	9.7	0.00%
	UK	0.0	773.1	0.00%



Geoeconomic Approach: Definition and Goals

- Geoeconomics: using "economic instruments to produce beneficial geopolitical results" (Blackwill and Harris, 2016)
- U.S.-funded investment in natural gas infrastructure to bolster gas supply and national security across Europe.
- Addresses two core problems:
 - Why would a private commercial entity pay for gas infrastructure intended to deal with broader national—and Continental-level—security concerns?
 - How can policymakers potentially incentivize national level decision makers and monopoly gas distribution service providers in Europe to facilitate more rapid gas market liberalization?

center for **ENERGYSTUDIES** Rice University's Baker Institute



Priority Zone 1

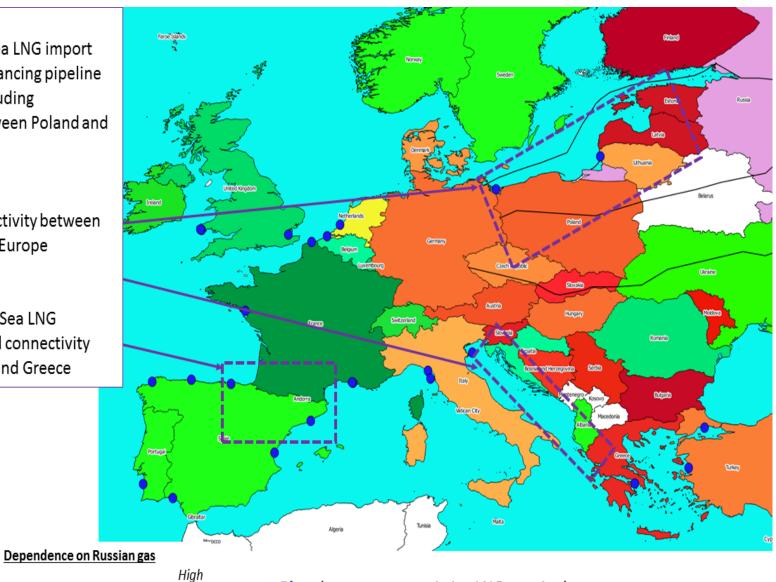
Boosting Baltic Sea LNG import capacity and enhancing pipeline connectivity, including north/south between Poland and neighbors

Priority Zone 2 Improving connectivity between Spain and rest of Europe

Priority Zone 3 Boosting Adriatic Sea LNG

capacity and local connectivity into the Balkans and Greece

Low



Blue dots represent existing LNG terminals





Geoeconomic Approach: Objectives

- Diversify supply sources
- Foster liberalization of gas markets in Europe
- Make Russia a "normal" commodity supplier that is less able to selectively employ gas supplies as a coercive instrument against EU and NATO partners and affiliates





Current U.S. Engagement

- Military presence
- Sanctions
- Promotion of liberalization and diversification:
 - State Dept. Bureau of Energy Resources promoting "market-based" solutions
 - Funding feasibility studies of new supply routes (i.e. nearly \$1 million to Romania for construction of the Romanian portion of the Bulgaria-Romania-Hungary-Austria Connector and the Black Sea-Shore- Podisor Connector)



US-funded Investment: Preconditions

- Capital flow tied to liberalization of natural gas market
- Investments "molecule indifferent"
- Projects must seek to be connected with pipeline networks capable of enabling transnational movement of gas.



Strategic Investment: Implementation

- Investment types: "forgivable debt," direct financing, "assured payback," or preferential finance loans.
- Implementation metrics:
 - lifting price controls
 - physical unbundling of gas production, storage, and transmission infrastructure;
 - the emergence of verified, market-based trading of pipeline capacity;
 - verified, non-discriminatory third-party access by non-Russian controlled entities to gas pipelines in the country;
 - trading turnover rates at virtual transfer points or gas hubs associated with the host country's gas pipeline network





Expected Effects

- Unorthodox proposal
- Short-term engagement with long-term benefits
- Bolsters European resilience
- A new way to deal with increasingly aggrieved and revanchist Russia
- Economic consequences to Russia without collateral damage to EU economy that can result from economic sanctions

center for **ENERGY STUDIES** Rice University's Baker Institute