Russian Security State
GOVT-5519 / IPOL-3519 / REES-5519
Lecture 21. Energy and Natural Resources

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Today's objectives

1. *Take stock*: Russia's status as "energy superpower"
2. *Consider*: how gas can be used as a geopolitical instrument
3. *Discuss*: lessons from Russia's coercive gas diplomacy

Overview

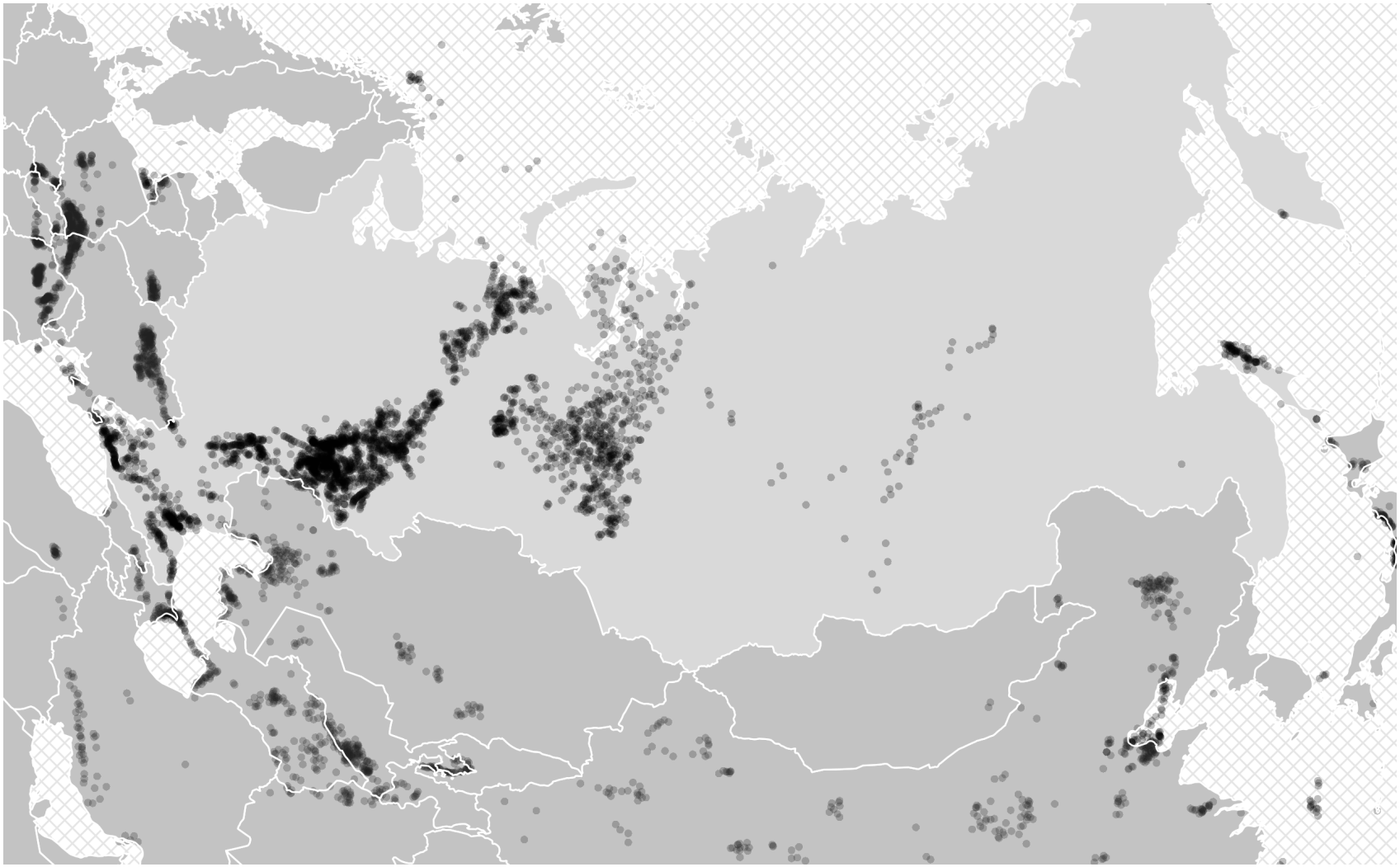

Figure 1: Oil and natural gas fields, 2017

Russia is world's **3rd largest energy producer and consumer**
(data from DOE's Energy Information Administration, 2021)

Table 1: Total Energy Production

Ranking	Country	quadrillion Btu
1	China	135.0
2	United States	98.3
3	**Russia**	64.1
4	Saudi Arabia	26.6
5	Canada	23.4

Table 2: Total Energy Consumption

Ranking	Country	quadrillion Btu
1	China	165.2
2	United States	97.9
3	**Russia**	34.2
4	India	32.0
5	Japan	18.1

Oil

(2021 data)

1. Reserves
   a) 8th largest reserves (80 billion barrels)
2. Production
   a) 3nd largest producer (11 million barrels/day)
3. Consumption
   a) 4th largest consumer (3.7 million barrels/day)
4. Exports
   a) 2nd largest exporter (5.2 million barrels/day)
   b) 82% tanker, 18% pipeline
   c) 2022:
      - 42% to EU
      - 36% to China
      - 12% to India

Table 3: Petroleum production

Ranking	Country	1000 barrels/day
1	United States	20,301
2	Saudi Arabia	12,144
3	**Russia**	10,938
4	Canada	5,694
5	China	5,119

Table 4: Crude oil exports

Ranking	Country	1000 barrels/day
1	Saudi Arabia	7,341
2	**Russia**	5,196
3	Iraq	3,976
4	Canada	3,177
5	UAE	2,427

Natural gas

(2021 data)

1. Reserves
   a) world's largest reserves (1,688 trillion cubic feet)
2. Production
   a) 2nd largest producer (25 Tcf/year)
   b) 71% consumed domestically
3. Consumption
   a) 2nd largest consumer (15.8 Tcf/year)
4. Exports
   a) world's largest exporter (8.9 Tcf/year)
   b) 85% pipeline, 15% LNG
   c) 2021: 61% to EU (5.4 Tcf)
      2022: 16% to EU (1.4 Tcf)

Table 5: Natural gas production

Ranking	Country	Tcf
1	United States	34.5
2	**Russia**	24.8
3	Iran	8.8
4	China	7.5
5	Canada	6.4

Table 6: Natural gas exports

Ranking	Country	Tcf
1	**Russia**	8.9
2	United States	6.7
3	Qatar	4.4
4	Norway	3.9
5	Australia	3.7

Natural Gas as Foreign Policy Instrument

Figure 2: Natural gas pipelines, 2023

Table 7: Russia's major natural gas export pipelines (2021 data)

Pipeline	**Capacity**	**Length**	**Origin**	**Markets**	**Transit**
Yamal-Europe	1.2 Tcf	2,552 mi	W Siberia	Poland, Germany, N Europe	Belarus
Blue Stream	0.6 Tcf	754 mi	W Siberia	Turkey	Black Sea
~~Nord Stream~~	1.9 Tcf	761 mi	W Siberia	Germany, N Europe	Baltic Sea
~~Nord Stream 2~~	1.9 Tcf	761 mi	W Siberia	Germany, N Europe	Baltic Sea
Soyuz, Brotherhood	1.1 Tcf	2,800 mi	W Siberia, C Asia	Europe	Ukraine
TurkStream	1.1 Tcf	580 mi	W Siberia	Turkey, SE Europe	Black Sea
Europe total	**7.8 Tcf**				
Sakh.-Khab.-Vlad.	0.2 Tcf	1,118 mi	Sakhalin	NE China, Vladivostok LNG	
Power of Siberia	2.2 Tcf	5,040 mi	E Siberia	NE China	
Asia total	**2.4 Tcf**				

Gas and Geopolitics

How Russian gas is different from oil

1. Infrastructure
   a) only ways to transport gas are pipelines & liquefied natural gas
   b) both very expensive to build (investments tied to long-term, state-sanctioned contracts)
   c) storage facilities also costly (vulnerable to disruptions)
2. Markets
   a) can't buy gas on spot markets (harder to diversify sources)
   b) no global "market price" for gas (seller can dictate price)
   c) gas can be sold direct to customer (Gazprom = local energy utility)
3. Ownership
   a) no private gas production, sales (Gazprom is state monopoly)

Figure 3: Option 1

Figure 4: Option 2

How did Europe get hooked on Russian gas?

1. Diversification from Middle East
   a) 1973 oil crisis price shocks
   b) USSR seen as potentially more reliable supplier
   c) assumption: USSR to be "one of several" alternatives
2. Search for alternative fuel sources
   a) reduce reliance on coal & oil (natural gas is relatively clean-burning fossil fuel)
   b) phase out nuclear (Germany)
3. Russian efforts vs. competition
   a) lobbying vs. S Caucasus pipeline (NABUCCO)
   b) efforts to destabilize alt transit routes (Georgia)
   c) price discounts

Table 8: Exports to region, 2021

	Region	Tcf
1	Europe	7.36
2	Asia	1.12
3	Rest of world	0.38

Table 9: Exports to country, 2021

	Country	Tcf
1	Germany	1.70
2	Turkey	0.95
3	Italy	0.92
4	Belarus	0.70
5	France	0.62
6	China	0.56
7	Poland	0.37
8	Japan	0.32
9	United Kingdom	0.17
10	South Korea	0.14

How is Europe quitting Russia? (2022)

1. Supply shocks
   a) oil:
      - ban on seaborne oil imports
      - global oil price cap (G7)
   b) gas:
      - Nord Stream 2 suspended
      - Nord Stream 1 disabled
2. Switch to LNG
   a) 77% increase in LNG imports (mostly from US, but also Russia)
   b) build new LNG terminals
3. Conserve
   a) fill storage tanks (82 pct in 2023)
   b) reduce consumption
4. Get lucky
   a) mild winter 2022-2023

Figure 5: Storage tanks

Russia gas share of Europe's energy:
40% (2021) → 10% (2022)

Case Study: Ukraine 2006 Gas Crisis

Russia's coercive gas diplomacy

1. Set prices
   a) sell at "below-market rates"
   b) wait for low rates to become baseline for destination country's economy, industry
   c) threaten to raise rates to extract policy concessions
2. Collect/cancel debts
   a) ignore under/non-payments
   b) then offer to cancel debt in exchange for concessions (e.g. pipeline equity stake)
3. Control local gas distribution
   a) contacts include shares of local, transit pipelines
   b) direct sales to customers

Figure 6: "property of V.P."

Background to 2006 crisis

1. Pre-2005
   a) 80% of Russia's NG exports transit through Ukraine
   b) existing agreement: Ukraine pays \$50/tcm until 2009 (lower than Russian domestic customers)
2. 2005
   a) Yushchenko elected president, sets course for EU/NATO
   b) Gazprom request price hike to \$160-\$230/tcm (almost 5-fold)
   c) Putin offers loan to help Kyiv pay
   d) Yushchenko rejects offer
3. January 2006
   a) Gazprom cuts volume of gas (new = old − Ukraine's share)
   b) Ukraine withdraws same amount as before, cutting gas to Europe

Figure 7: Viktor Yushchenko

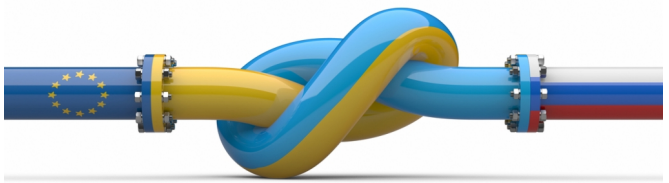

Figure 8: Hordiyiv vuzol

The Deal

1. Sketchy middleman to the rescue
   a) GazpromExport sells to Naftohaz Ukrainy through intermediary: RosUkrEnergo (RUE)
   b) RUE buys
      - Russian gas at $230/tcm
      - Turkmen gas at $60/tcm
   c) RUE sells to Ukraine at $95/tcm
   d) RUE becomes sole importer of Russian gas to Ukraine
2. Who is RosUkrEnergo?
   a) Swiss-registered company
   b) co-owned by Dmytro Firtash
3. Criticism
   a) numbers don't add up (need 80/20 Turkmen/Russia mix just to break even at this price)
   b) complete lack of transparency

Figure 9: Man in the middle

ROSUKRENERGO

Figure 10: A trusted brand

Discussion:

a) How did these corrupt deals help Russia geopolitically? What is the "theory of cause and effect"?
b) How successful was Russia's coercive gas diplomacy in achieving its intended political effects? (i.e. keeping countries in Russia's orbit)
c) Why didn't Russia play similar game with countries in Western/Central Europe?
d) Is this still a viable strategy as Russian exports pivot to China?

NEXT MEETING

Information, Hybrid and Cyber Warfare (Tu, Nov. 19)

- How has Russia leveraged new technologies of warfare?
- Can these new technologies prove decisive on the battlefield?