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Gas Geo-economics in Europe: Using Strategic Investment to Enhance Energy Security

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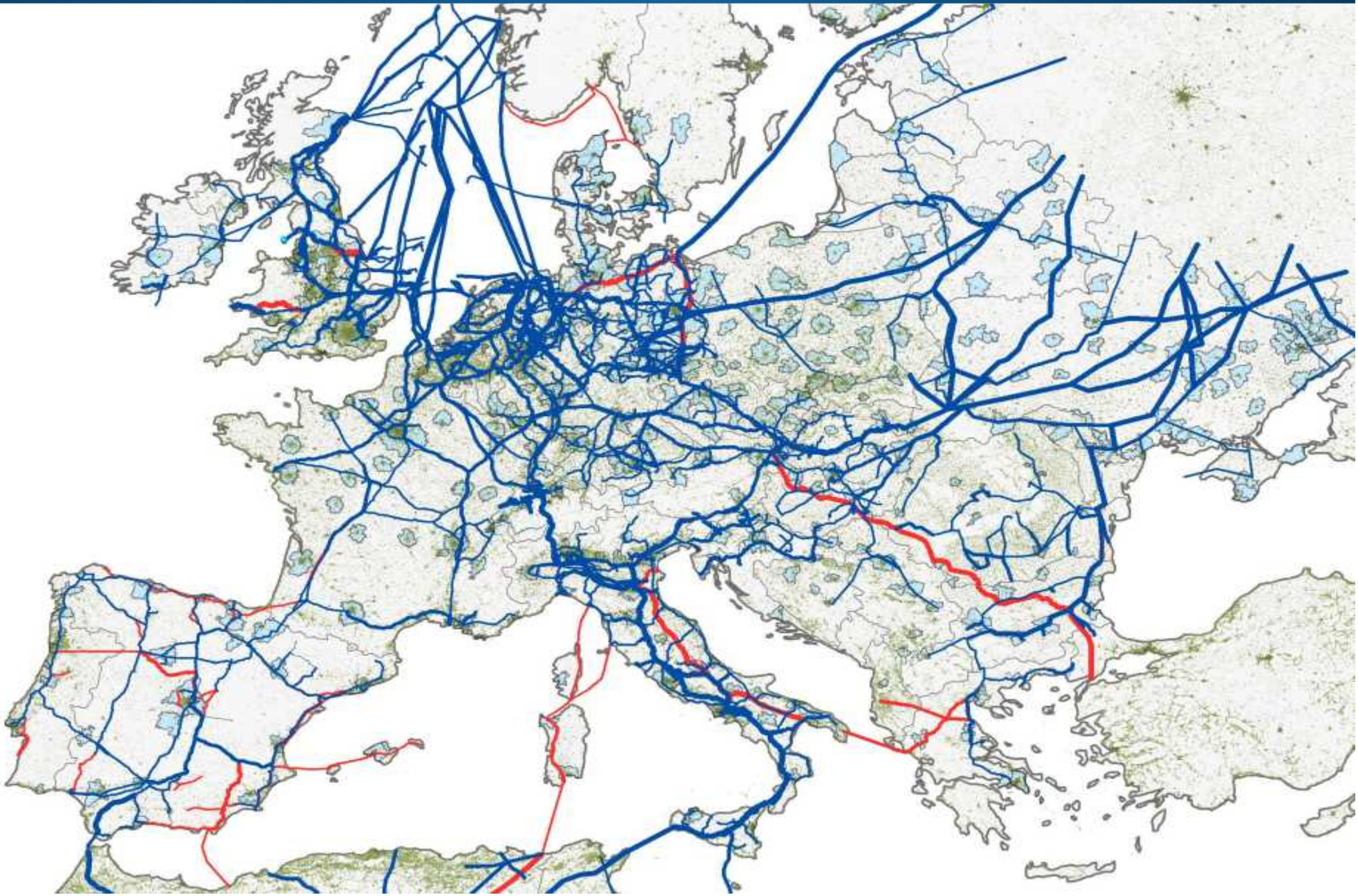
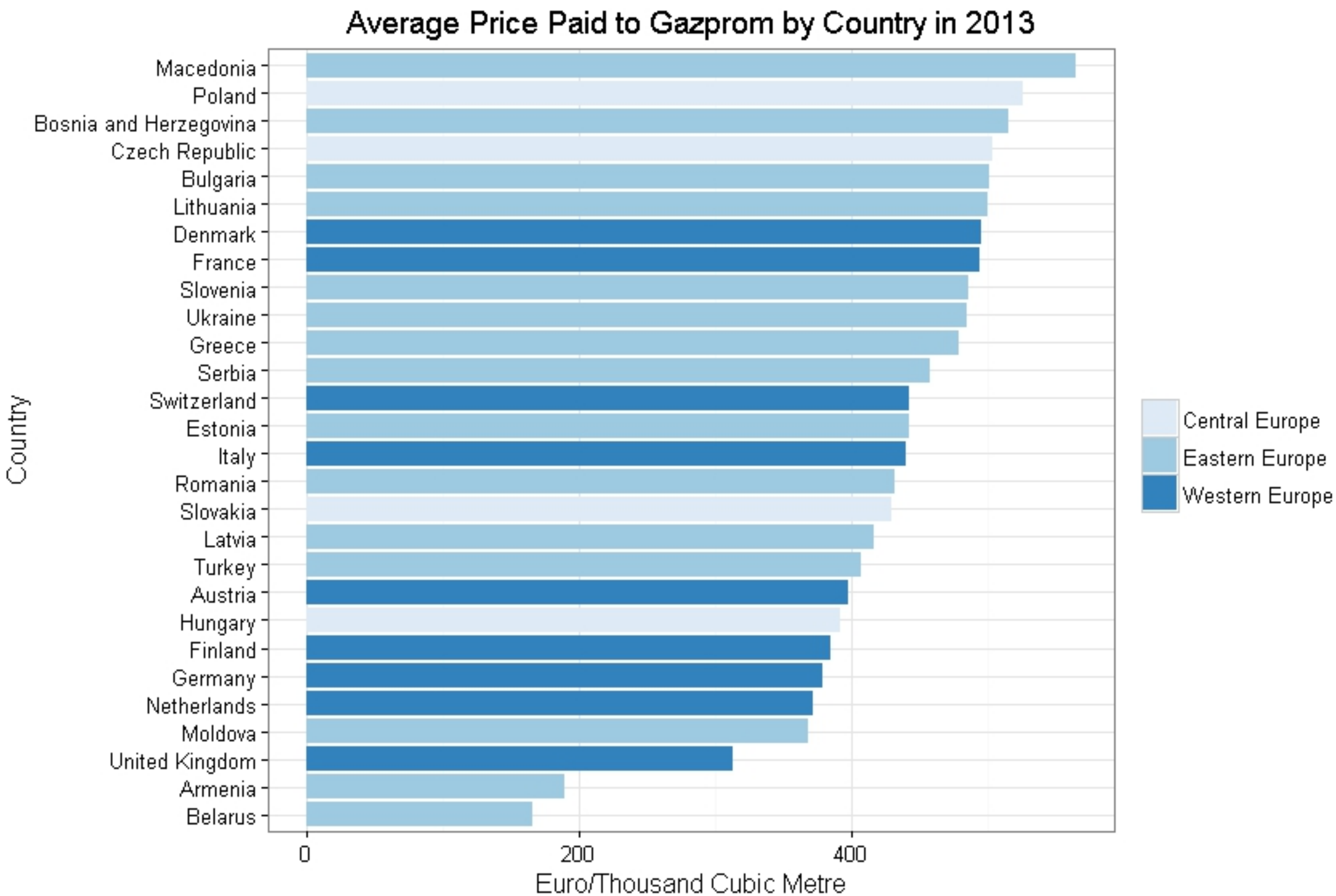



Average Price Paid to Gazprom by Country in 2013
Macedonia
Poland
Bosnia and Herzegovina
Czech Republic
Bulgaria
Lithuania
Denmark
France
Slovenia
Ukraine
Greece
Serbia
Switzerland
Estonia
Italy
Romania
Slovakia
Latvia
Turkey
Austria
Hungary
Finland
Germany
Netherlands
Moldova
United Kingdom
Armenia
Belarus
Country
0
200
400
Euro/Thousand Cubic Metre
Central Europe
Eastern Europe
Western Europe

Priority Zone 1

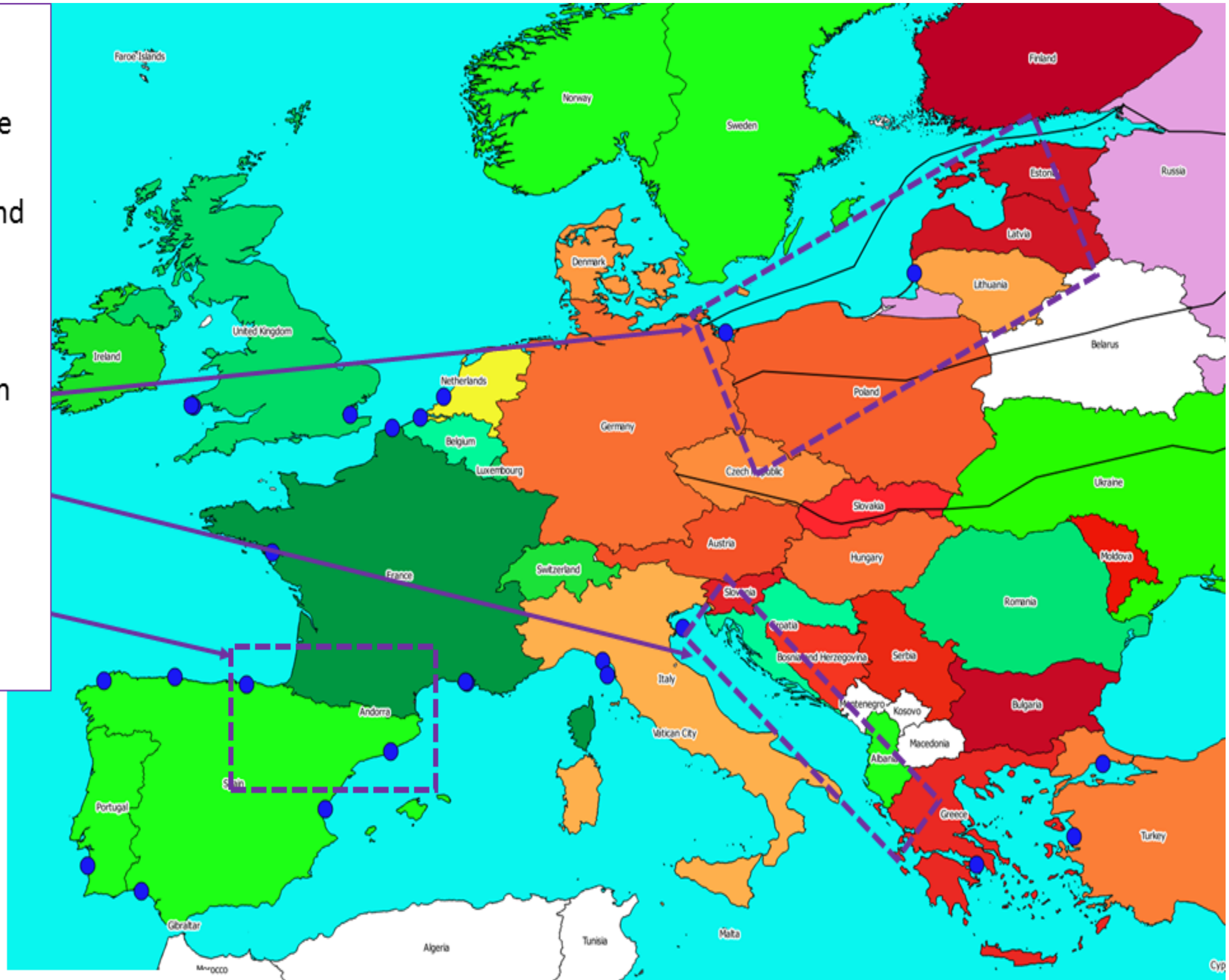
Boosting Baltic Sea LNG import capacity and enhancing pipeline connectivity, including north/south between Poland and neighbors

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



Dependence on Russian gas

Low *High*

Blue dots represent existing LNG terminals

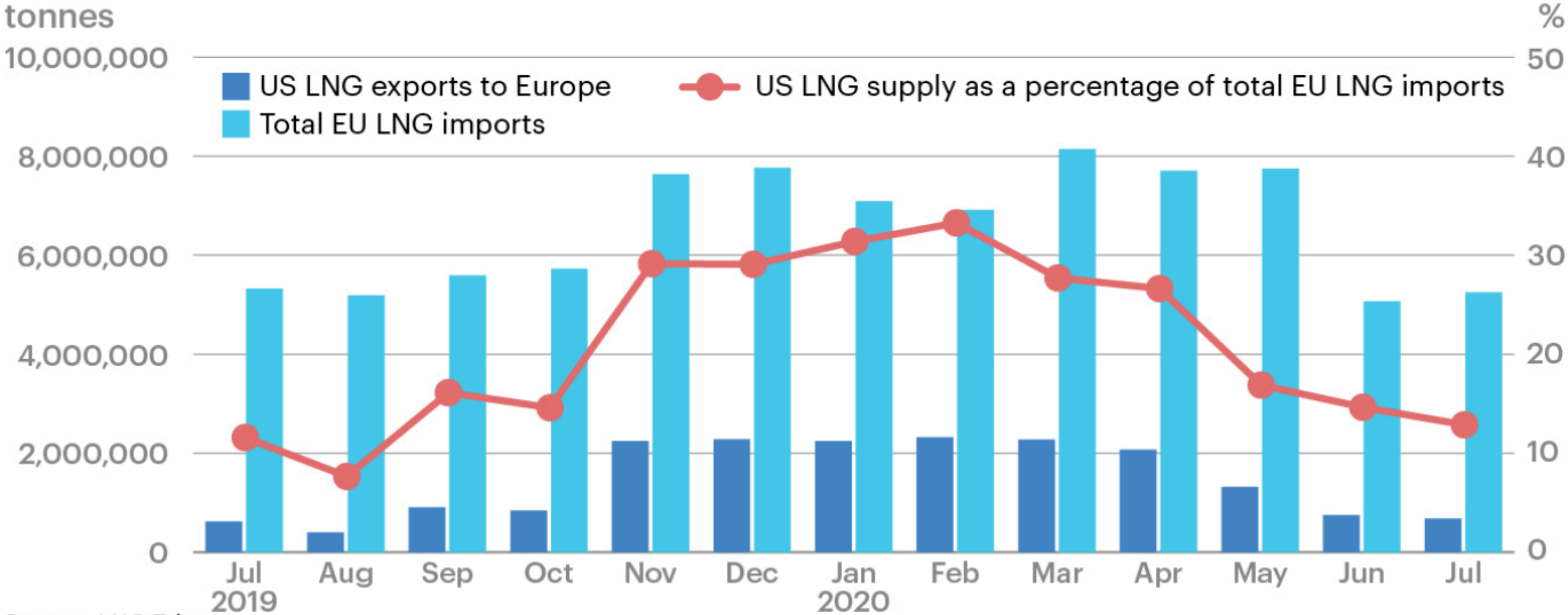
Hungary

- Gas – ¼ of total electricity generation (49.4-nuclear
- Reliance on Russian gas & oil (90%), nuclear technology
  - 10.5 bcm in 2019 (42% increase over 2018)
- Window of opportunity: 2 expired (2019) & 2 long-termgas contracts with Russia expiring in 2021
  - New supply
    - New contract to supply LNG (non-Russian) from Croatia (Krk): MFGK has booked 0.67 Bcm at the terminal for the period January-September 2021 and 1.01 Bcm/year for the subsequent gas years through 2027. Via Reverse flow project on the Hungarian-Croatian interconnector currently under construction and scheduled to be operational in January 2021.
    - Romania?
  - Better contracting conditions w/Russia
  - June 2020, agreement to buy 6.2 bcm from Gazprom in three 5-year contracts via TurkStream

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 2 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?
  - Will commercial and governmental institutions in Europe be able to generate finance capital at the necessary scale and speed to support gas infrastructure investments when EU policies increasingly emphasize decarbonization and potential project finance sources fear that assets they back could become "stranded" before the end of their useful service lives?

US LNG supply dynamics into Europe



Source: LNG Edge

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 Legislation: October 2018, Sen. Chris Murphy, D-CT, introduced **Senate Bill 3585**, the "European Energy Security and Diversification Act of 2018. "The 2018 bill evolved into **Senate Bill 704** ("European Energy Security and Diversification Act of 2019") and a House companion bill, **H.R.1616** (introduced by Rep. Kinzinger, R-IL), which passed the House in March 2019 by a vote of 391-24. The bill has been received in the Senate, read twice, and referred to the Committee on Foreign Relations.

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.

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