

The upcoming SEEGAS infrastructure study



- 1. SEEGAS objectives
- 2. Latest developments along supply routes
- 3. New supply routes the Turkish gas hub
- 4. Pending developments
- 5. Risks and opportunities the short and longer-term outlook

1. SEEGAS goals



- Immediate application of EU network codes at border points between EU/Energy Community states.
- Signing of interconnection agreements between: North Macedonia Bulgaria; Bulgaria-Turkey; Turkey-Greece, Romania-Ukraine
- TSOs to offer firm, rather than interruptible capacity wherever possible



TSOs to align on issues such as methane content



- Turkish gas TSO BOTAS to start offering LNG terminal regasification and exit capacity with neighbouring Bulgaria/Greece
- Regulators in Greece and Romania to streamline the licensing and reporting requirements as a matter of urgency
- Romania remains a major concern because of its highly unpredictable regulatory environment. It should consider making significant improvements in that regard.

2. 1.1. Supply corridors: Croatia – Hungary - Ukraine





Krk terminal

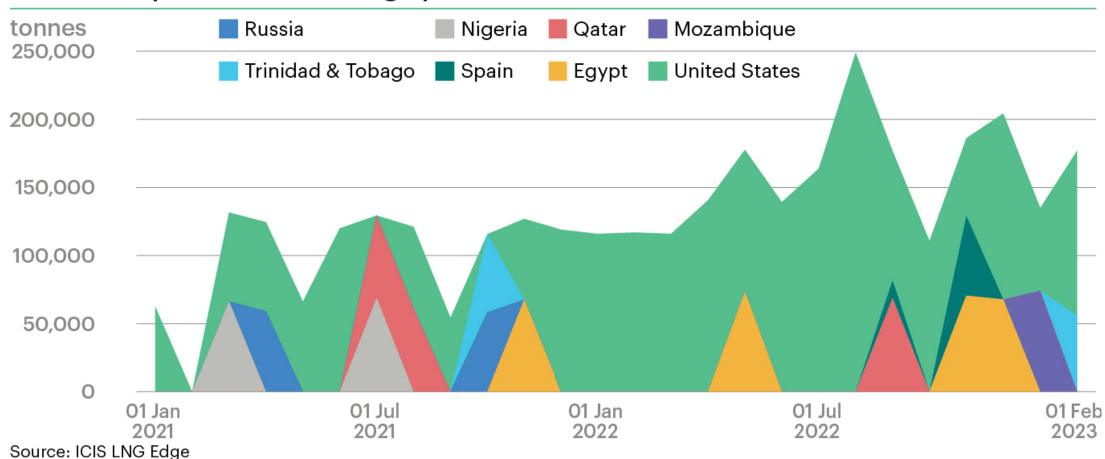
Development plans:

- Expansion of Krk Terminal from 2.9bcm/year to 3.5bcm/year
- Expanding the Bosilijevo Kozarac pipeline to central Croatia and the Lućko-Zabok-Rogatec pipeline to Slovenia will require the development of bigger regasification capacity at the LNG terminal of at least 700,000 m3/h
- Guaranteeing firm capacity of 8mcm/day at the Bereg interconnection point with Ukraine and possibly expanding it with more compression in Hungary

2.1.2. KRK LNG imports



Krk LNG imports since starting operations



2.1.3. KRK LNG imports



- Expansion of Krk Terminal predicted to reach 6.1bcm by 2025/2026.
- The expansion from the terminal's existing 2.9bcm capacity would rely on corresponding pipeline capacity expansions inside the country to receive more LNG.
- An open season to allocate capacity is also expected to be held in 2024.
- Future expected capacity holders already include two Hungarian companies and one Slovenian company.
- Terminal was also in discussions with Italian and German offtakers.

2.2.1 Supply corridors: Poland - Ukraine





Świnoujście terminal

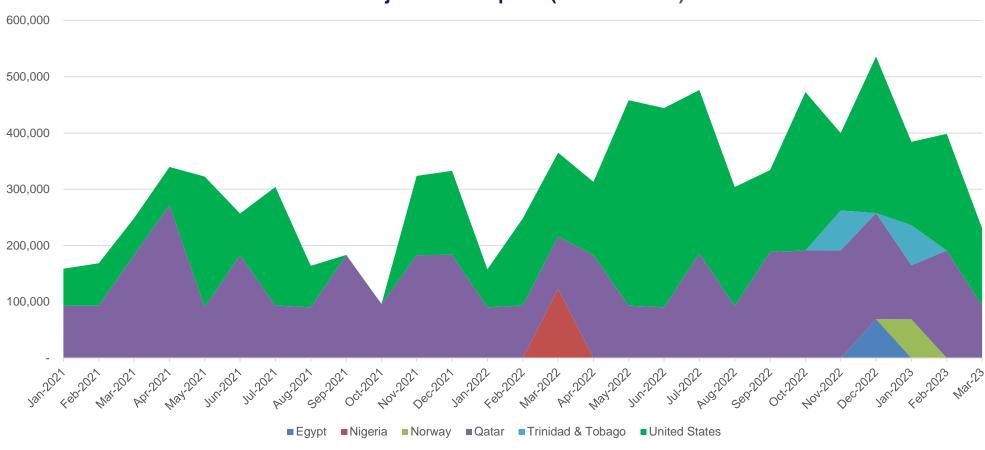
Development plans:

- Expansion of Świnoujście terminal from 6.2bcm/year in 2022 to 8.3bcm/year in 2024.
- Potential for two new FSRUs at Gdańsk with a total regasification capacity of 12.2bcm/year by 2027.
- Incremental firm capacity with Ukraine and the Czech Republic

2.2.2. Świnoujście LNG imports







Source: ICIS LNG Edge

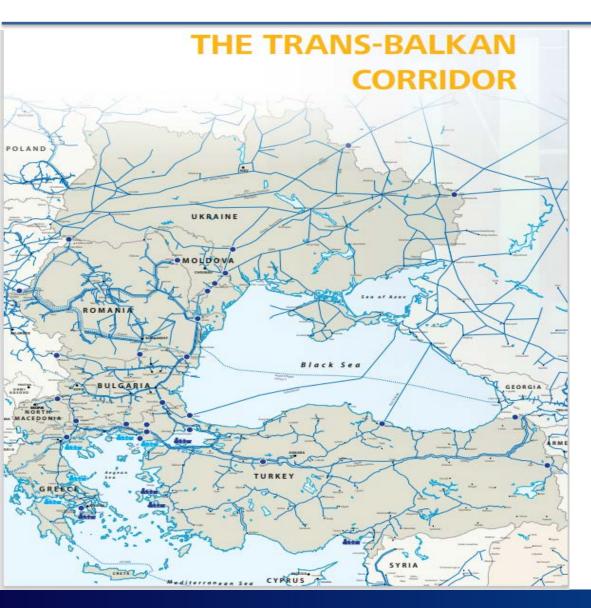
2.2.3. Polish gas market developments



- Baltic Pipe commissioned in October 2022. Daily flow rates at an average 16mcm since 1 January 2023
- Poland-Lithuania IP (Santaka) in operation since May 2022. Flows alternate between imports and exports. Daily net import rates since 1 January 2023 at 1.2mcm
- Poland-Slovakia IP (Vyrava) commissioned in 2022. No reported flows so far
- Poland Ukraine IP allows physical imports into Ukraine at a maximum rate of 4mcm/day. Flows alternate between imports/exports. Currently imports into Ukraine at a daily flow rate of an average 2mcm.
- Ukraine and Poland sign memorandum of cooperation to expand daily capacity to 8mcm by Q2 2030 subject to investments on both sides of the border.

2.3.1 The Trans-Balkan route





Greek Revithousa

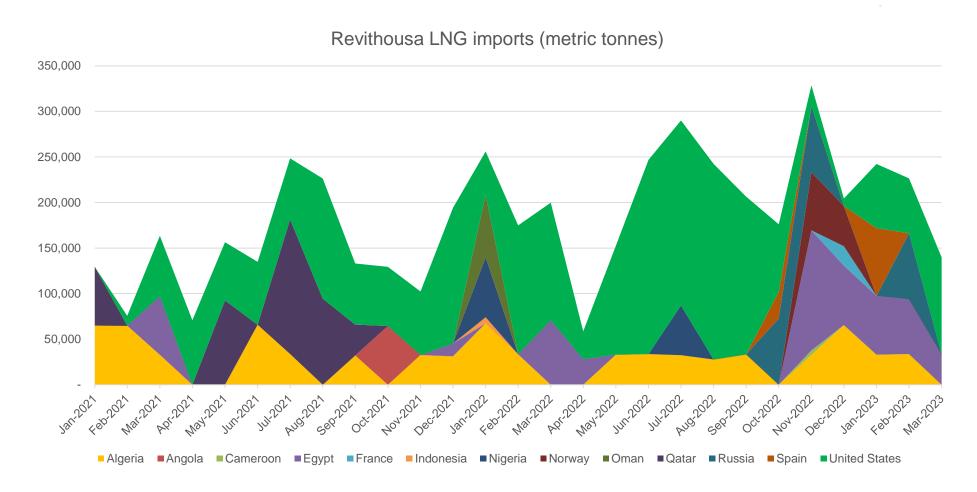
Turkish LNG terminals

Development plans:

- Expansion of Greek LNG regas capacity from the current 8.25 to 30bcm/year by 2027 if four new FSRUs added.
- Expansion of Turkish LNG regas capacity from 44bcm/year currently to 51bcm/year once Gulf of Saros FSRU complete.
- Expansion of domestic Greek transmission capacity
- Commissioning of new North Macedonia Greece interconnector by 2025
- Building a 63km pipeline looping which would increase the total technical capacity of the Negru Vodă 1/Kardam and Negru Vodă 2,3/Kardam on the Bulgaria-Romania border into a single virtual point to up to 25mcm/day from the current 15mcm/day.

2.3.2. Revithousa LNG imports

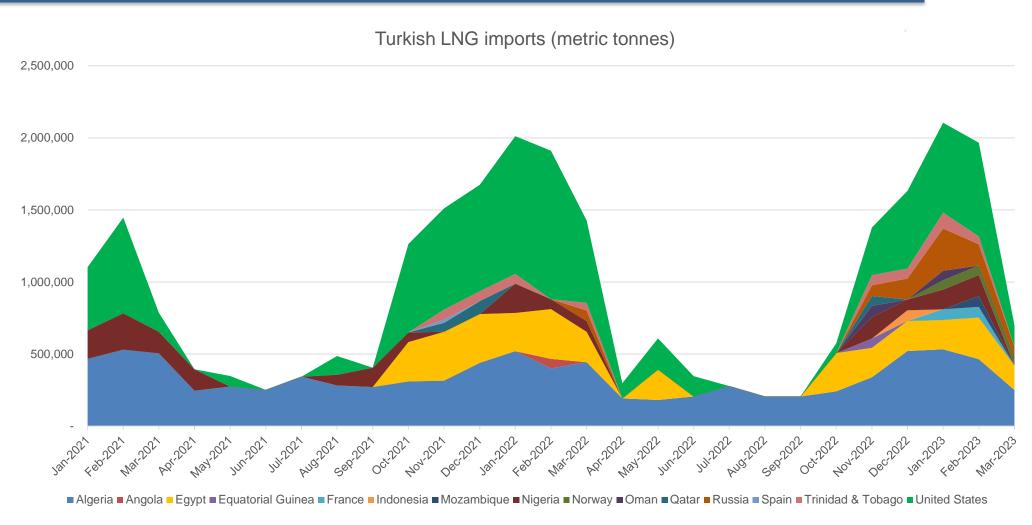




Source: ICIS LNG Edge

2.3.3. Turkish LNG imports





Source: ICIS LNG Edge

2.3.4. Trans-Balkan route developments



- Interconnector Greece-Bulgaria enters commercial operation, daily flow rates at 4mcm
- Moldova backhaul approved. Moldova imported gas from the Balkans
- North-Macedonia Bulgaria interconnection agreement signed
- Turkey commissions fifth LNG terminal at the Gulf of Saros.
- Turkey-Bulgaria sign memorandum of cooperation for access to terminals and grid
- Bulgaria issues buy tender for LNG with delivery via Turkish terminal
- Turkish ruling AKP proposes a number of changes to natural gas market law with view to unbundle BOTAS

3. The Turkish gas hub



Turkish-Bulgarian memorandum of cooperation to facilitate access for Bulgargaz to 1.5bcm of gas annually for a period of 13 years. Proposal has raised questions related to:

- Possible breach of competition on Bulgarian side (EFET)
- Source of natural gas
- What is the technical protocol that governs flows from Turkey to Bulgaria?
- Lack of transparency related to border flows. Does Bulgaria have an obligation to publish incoming flow data from a non-EU member state?
- Can Bulgargaz access the Turkish market if it does not have a subsidiary in Turkey? If so under what conditions?
- Can other companies access the Turkish grid/terminals directly without BOTAS as an intermediary?
- Will Turkish terminals start publishing relevant sendout data and a calendar for booking slots?
- When will BOTAS sign interconnection agreements with DESFA and Bulgartransgaz?

4. Pending developments



- Alignment of gas quality in the SEEGAS region
- Offering firm physical capacity from the Romanian VTP to Ukraine. Current arrangements discriminate against Ukraine
- Romanian taxation regime is a stumbling block to regional integration. Any signs it may be removed?
- No discussions on opening up the Tekovo-Mediesu Aurit and Isaccea II and III. Can these be restarted and what are the odds of successful resolution?
- In case of greater demand for natural gas regionally, will Bulgaria provide more compression or build additional capacity to allow a variety of gas volumes sourced via LNG terminals in Greece and Turkey to flow regionally?

5. Opportunities and risks



- Greater diversification thanks to more LNG and pipeline capacity.
- Greater traders' interest in entering the region following regulatory changes.
- War risk insurance developed by the Ukrainian government together with UK, US, German governments plus IFIs.
- Romanian taxation regime is a stumbling block to regional integration.
- A number of non-asset based shell companies registered in Cyprus are appearing in the region. Do they present any risks?
- Monopoly risks in Turkey and Bulgaria.



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