

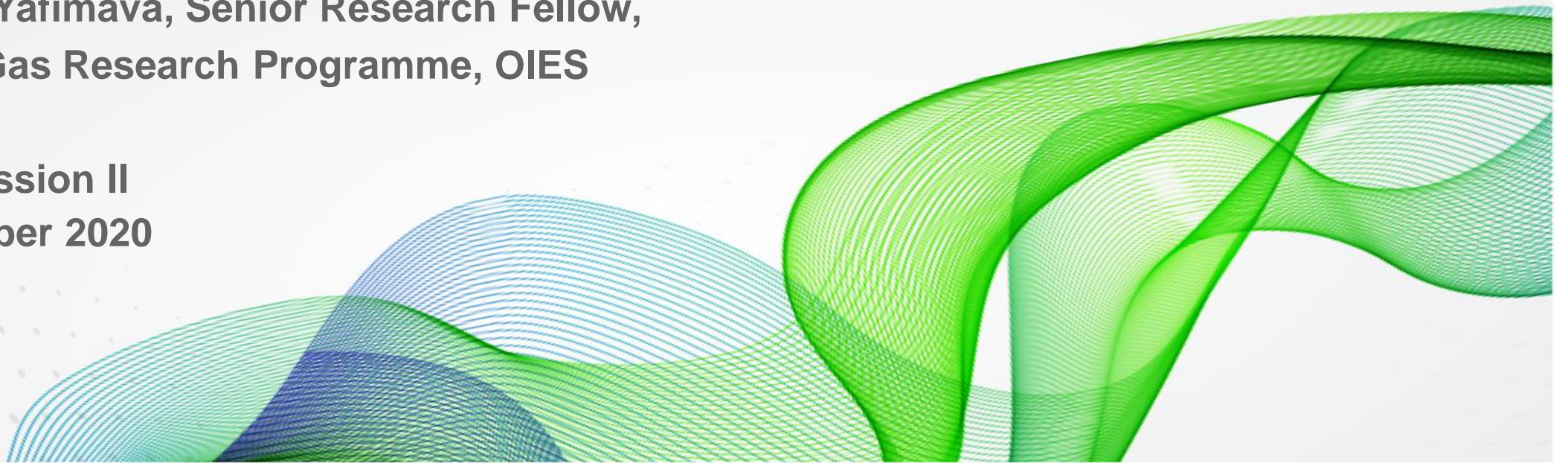


THE OXFORD
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Gas supply prospects and energy security in south east Europe

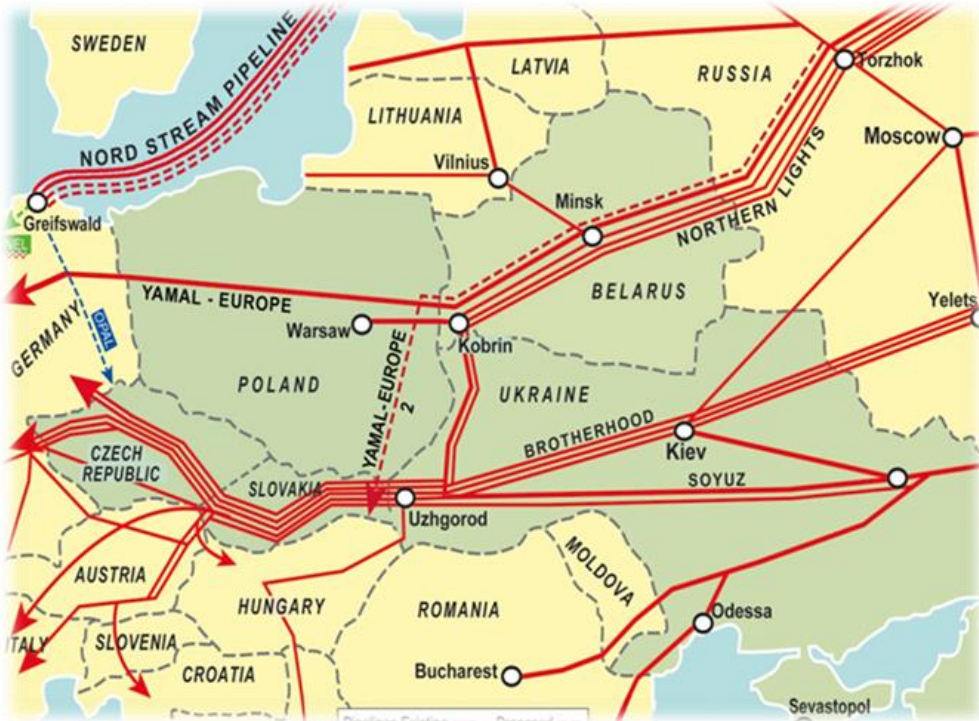
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Energy security in south east Europe: the legacy of the 2009 Ukrainian gas transit crisis and 2014 political/security crisis



- 2009 Ukraine gas crisis: the most serious gas security crisis ever experienced in Europe and probably the biggest energy security crisis for more than 30 years, with no gas deliveries to Europe via Ukraine for 2 weeks
 - Impact on South East Europe: fear of recurrence has led to development of interconnectors, new LNG terminals, storages;
 - Pressure to diversify supplies: Southern Corridor gas, LNG

The 2009 gas crisis has led the EU to develop new policy and legislative initiatives aimed at increased resilience and reduced dependence on Russian gas. It has also confirmed to Russia the correctness of its transit-diversification strategy so that Ukraine would have no monopoly on Russian gas transit to south east Europe (South Stream/TurkStream)



Energy security in south east Europe: the EU new policy initiatives (1)

- **European Energy Security Strategy (2014):** interconnection, transparency, reduction of dependence on external suppliers; expansion of supply infrastructure with Norway, the southern corridor, the Mediterranean gas hub; coordination of national energy policies, access to LNG, crisis situations
- **Energy Union (2015):** ‘energy security, solidarity, and trust’ (net import dependence, supply concentration index (SCI), N-1 rule); ‘a fully integrated European energy market’ (market concentration index, wholesale gas prices, switching rates); ‘energy efficiency contributing to moderation of demand’; decarbonising the economy’; ‘research, innovation, competitiveness’
- **LNG and Storage Strategy (2016):** increased access to LNG as part of import diversification (security) strategy
- **EU Green Deal (2019)/ Clean Planet for All:** “striving to be the first climate neutral Continent” Net-Zero by 2050

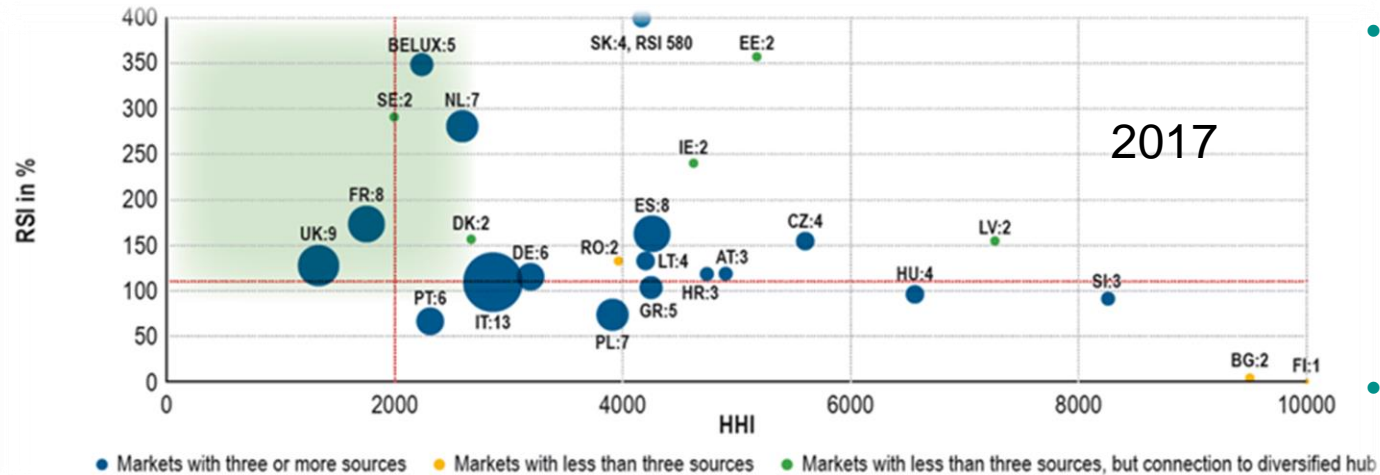


Energy security in south east Europe: the EU new legal initiatives (2)

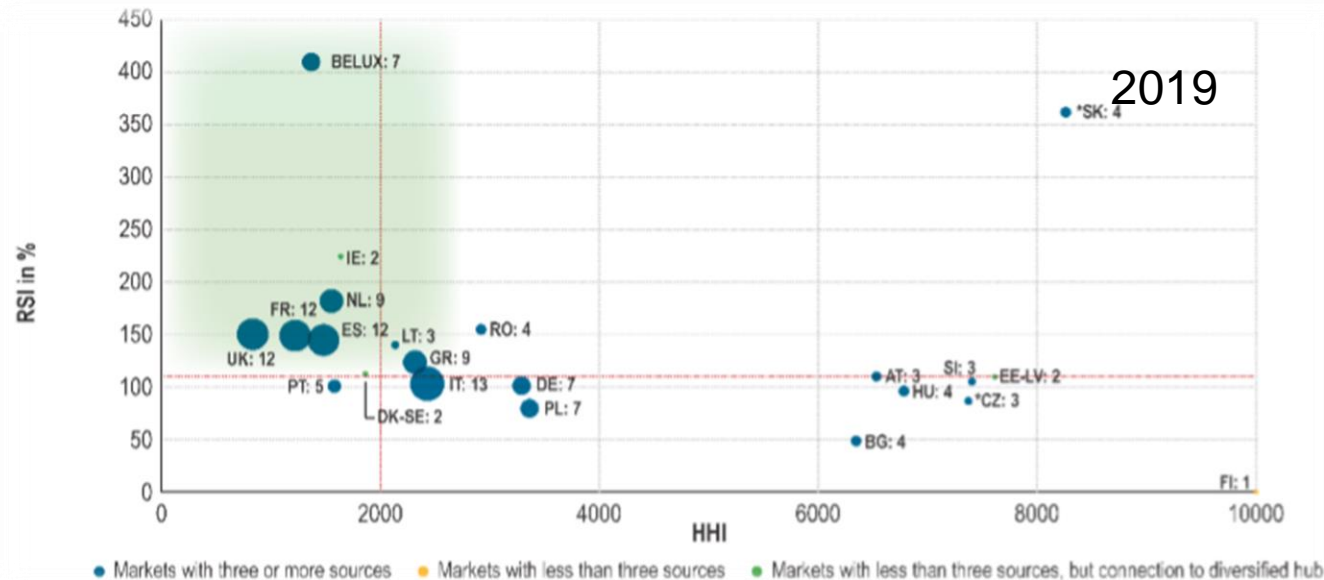
- **Security of Supply Regulation (2010)**: Infrastructure Standard (N-1) so that the capacity of the remaining infrastructure to satisfy total gas demand during a day of exceptionally high gas demand by 3/12/14; obligation to enable permanent bi-directional capacity on all cross-border interconnections between Member States by 3/12/13
- **TEN-E Regulation (2013)**: favourable treatment for PCI enabled development of interconnectors and LNG terminals in most vulnerable member states and which otherwise would not have been built
- **Security of Supply Regulation (2017)**: safeguarding security of gas supply... by allowing for... solidarity measures as a last resort” and “transparent mechanisms concerning, in a spirit of solidarity, the coordination of planning for, and response to, an emergency” based on risk groups and national common risk assessments (1/10/18), preventive & emergency action plans (1/03/19), solidarity supplies & compensation (1/12/18), Information exchange
- **Governance Regulation (2018)**: ‘a robust political process between Member States and the EC [...] in view of the achievement of the Energy Union objectives’ based on integrated 10-year national ECPs with indicators, by which progress on each dimension of the Energy Union would be measured



GTM 2.0 Market Health metrics: number of supply sources, RSI, and HHI (2017 and 2019)



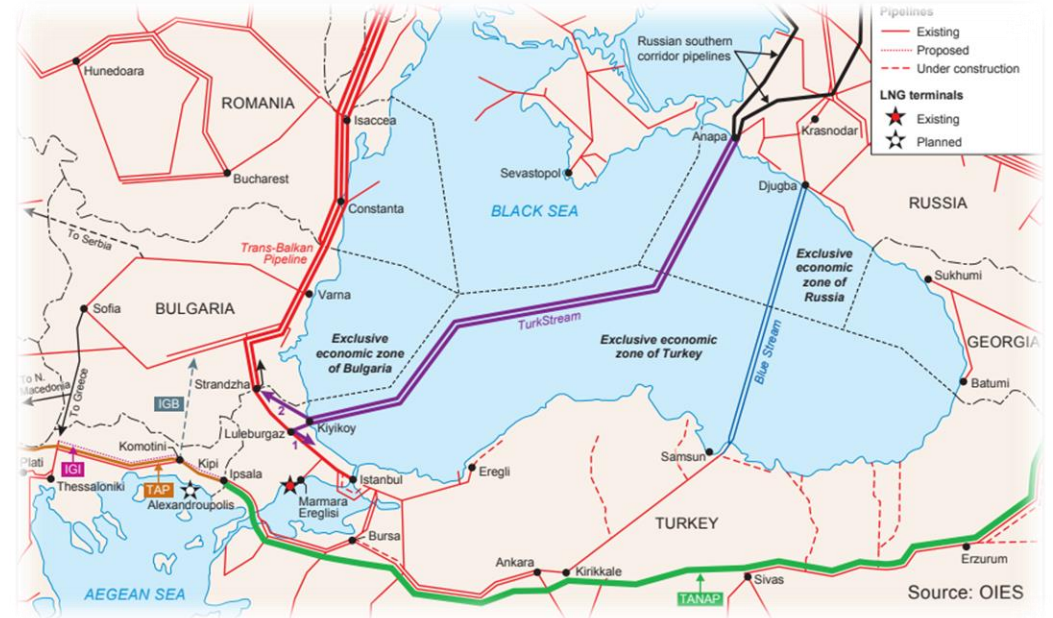
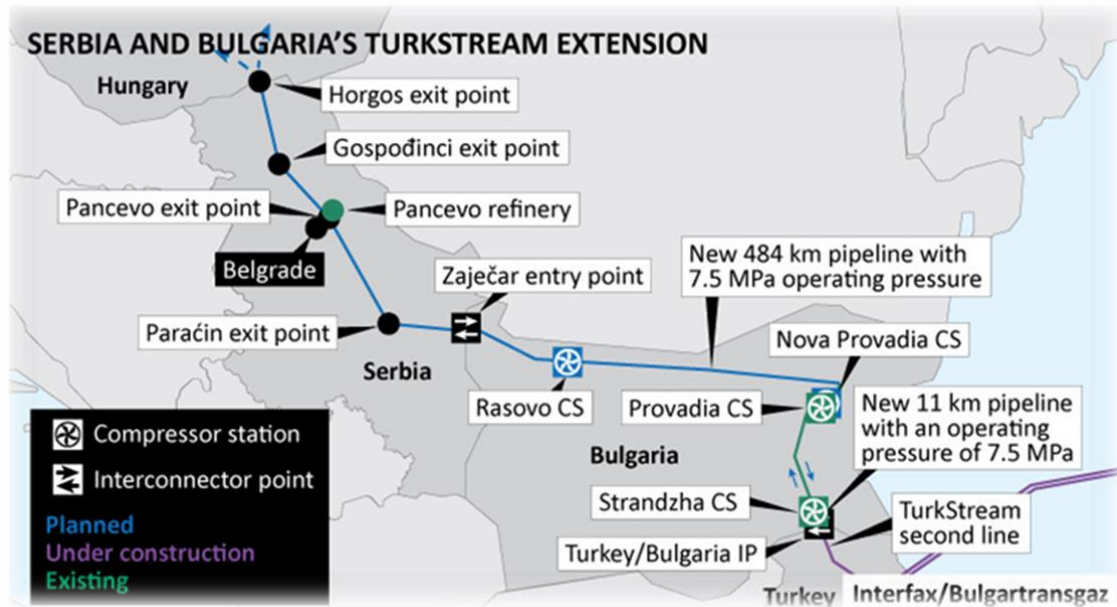
- Although the EU gas market is characterised by high upstream market concentration with majority of member states not meeting the level considered 'healthy' by GTM (HHI < 2,000), there has been an improvement
- EU member states that either host or sufficiently interconnected to well-functioning hubs, those with less concentrated domestic production and/or those benefiting from access flexible supply source (e.g. LNG) have lower HHI values
- Majority of EU member states (and the biggest markets) meet the 'three source' criterion. Several member states do not either due to almost complete dependence on one source or predominant reliance on domestic production



Source: State of the Energy Union Reports



TurkStream pipelines: 100% completed



Both (offshore) and onshore strings have been built and are operational. Onshore connections of the second string of TurkStream are on course to be built and operational in the early 2020s (EU acquis)



TurkStream and connecting pipelines: state of play

- 31.5 bcm (in two strings); Gazprom (offshore): the first string was completed in April and the second – in November 2018. Gazprom-Botas 50-50 JV (onshore Turkey) – completed
- In Jan 2020 Russian gas started flowing through the first string of TS directly to western Turkey and through the second string of TS to Bulgaria, Greece and North Macedonia, delivered to new IP Strandzha 2 via new (Gazprom-Botas) pipeline thus diverting flows from the Trans-Balkan pipeline
- Further connections (currently under construction) could deliver Russian gas from the second string of TS to Serbia, Hungary and Austria in the early 2020s (subject to regulatory compliance)

TurkStream has been underutilised (and Blue Stream is reported to have been idle since May 2020) as Turkey has sharply reduced imports of Russian gas in favour of (lower-priced) LNG but TurkStream utilisation has increased in H2 2020



TurkStream connecting pipelines: regulatory aspects

- Bulgaria & Hungary have proceeded under CAM NC
- Serbian NRA has granted an exemption but Energy Community Secretariat has requested the following changes (which were declined)
 - Serbia-Bulgaria border: exemption applies to up to 70% of capacity
 - Serbia-Hungary border: exemption applies to up to 75% of capacity
 - Serbia domestic exits: applies to up to 55% of capacity
 - Gastrans shareholders to offer each quarter 30% of their total gas sales
 - **Unbundling** of Srbijagas's subsidiary, Transportgas Srbija

Capacity caps of 25 and 30% requested by Energy Community Secretariat are higher than those envisaged by CAM NC when an alternative allocation mechanism is applied (20%)



DG COMP Gazprom investigation: commitments and implications

- **Price review clauses**, establishing a contractual right to immediately trigger a price review if prices diverges from competitive price benchmark, including retroactive application (Bulgaria, Estonia, Latvia, Lithuania, Poland)
- **No territorial restrictions**; a right to request a **change to new delivery points** (in Baltics and Bulgaria for customers in Poland, Hungary, Slovakia);
- Contractual measures enabling increased market integration (Bulgaria) (Gazprom liable for gas quality at the entry point and ensuring for it not to become obstacle to the conclusion of interconnection agreements) and waiver of damages in respect of South Stream cancellation for 15 years
- Commitments **made it easier for Poland and Bulgaria to succeed in reducing (retroactively) the price of gas**, via arbitration and negotiation respectively

**Commitments provide ‘a tailor-made rule-book for Gazprom’s future conduct’
and are binding for eight years (2018-2026) (DG COMP, Vestager)**



Southern Gas Corridor (SCP, TANAP, TAP) and other initiatives



- **TAP:** 10 bcma (initial capacity); operational since 15th November 2020 but no gas has been flowing yet
- **IGB:** delayed until H1 2021 and Bulgaria could potentially receive its contracted SD gas via the existing IP between Greece and Bulgaria
- **BRUA / BRUSKA:** promoted by the EC to carry Romanian (and Bulgarian) offshore gas towards Austria but the Romanian legislation, in respect of which the EC has initiated infringement procedures as non-compliant with energy and competition acquis, led IOCs to postpone FIDs thus questioning the pipeline's rationale

TAP/TANAP corridor is expected to bring 10 bcma of gas to Europe and 6 bcma to Turkey. A combination of unfavourable politics, economics, and regional security issues substantially reduced the scale of the initiative to just bringing Azeri gas from Shah Deniz fields (but not Turkmen, Iranian or Iraqi gas)



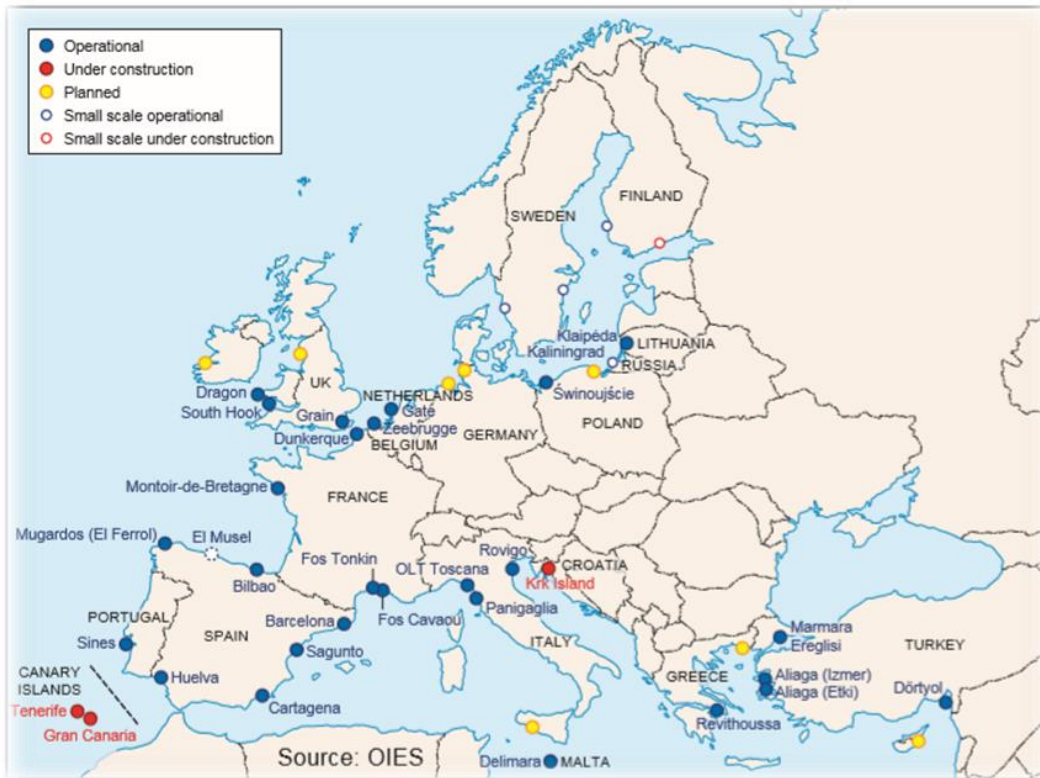
Trans-Adriatic pipeline: regulatory issues

- **TAP exemption decision (June 2013):**
 - 10 bcm of TAP's Initial Capacity, nearly all of which has been booked under 25 year ship-or-pay contracts for transporting ~10 bcm of Azeri gas sold on 25 year contracts, has been exempted from TPA and regulated tariffs, whereas the tariff is to cover all costs of realizing this capacity (TAP Tariff Network Code)
 - Although no exemption from TPA was granted in respect of TAP's Expansion Capacity (a further 10 bcm, additional to the Initial Capacity), the TAP consortium is only obliged to build it if there is a request made for such capacity during the Booking Phase of the Market Tests at an auction, where TAP shareholders and third parties could participate (TAP Network Code)
 - Exemption from the unbundling requirements for 25 years

TAP exemption has provided a very favourable regulatory treatment under Third Gas Directive Art. 36 exemption regime, not in the least because TAP has enjoyed significant political support of the EC



LNG import terminals in south east Europe and Turkey



- Greece
 - Revithoussa - 6.9 bcma, regulated, 2000
 - Alexandroupolis FSRU*
- Croatia
 - LNG Croatia FSRU (Krk) – 2.6 bcma, regulated, start of operation Jan 2021
- Turkey
 - Izmir Aliaga – 6 bcma, 2006
 - Etki Aliaga FSRU – 5 bcma, 2016
 - Dortyol FSRU – 5.6 bcma, 2018
 - Marmara Ereğlisi – 6.3 bcma, 1994

Significant LNG import capacity enabling the region's access to global LNG, initially for coastal states but increasingly for non-coastal states as bi-directional flow has been enabled at the existing IPs and additional IPs are being added



Ukraine: 2020-24 transit agreement

- **Conclusion of 2020-24 Ukraine transit agreement is a positive development**
 - trilateral protocol (Dec 2019), Gazprom-Naftogaz ‘ship-or-pay’ transportation agreement; Naftogaz-GTSOU transportation agreement (transit contract), Gazprom-GTSOU interconnection agreement
- **But questions remain in respect of GTSOU independence whereas the loss of certification could cause a revision of 2020-24 transit agreement**
 - Ukrainian Constitutional Court investigation of constitutionality of unbundling;
 - dismissal of an independent foreign chair of MGU/GTSOU board;
 - short-notice announcement of unplanned two-month maintenance works at Budince IP potentially jeopardizing storage arrangements as its capacity has been booked for flowing gas to Ukrainian storages seen as an attempt to force Slovak NRA to implement CAM NC on the Ukrainian border and offer VRF via Velke Kapushany IP

Energy Community Secretariat and EC are guarantors of GTSOU certification under 2019 trilateral Ukraine transit agreement



Conclusions

- **TurkStream started operations in January 2020 with deliveries of Russian gas to Turkey, Bulgaria, Greece and North Macedonia, whereas deliveries to Serbia and Hungary could be possible in the early 2020s as further connections are built**
- **TAP started operations in November 2020 enabling deliveries of Azeri gas to Bulgaria, Greece, and Italy (although no gas has started flowing yet)**
- **LNG terminals in Greece and Turkey have enabled the region to take advantage of competitively priced global LNG imports**
- **As decarbonisation means limited funding for new gas infrastructure the emphasis must be made on the most efficient use of the existing capacity**

South east Europe's energy security has strengthened in the 2010s as its access to, and its ability to secure supplies from, different sources at more competitive prices has improved – but decarbonisation poses new challenges



Thank you!

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