

The Case for a Gas Trading Hub in SE Europe

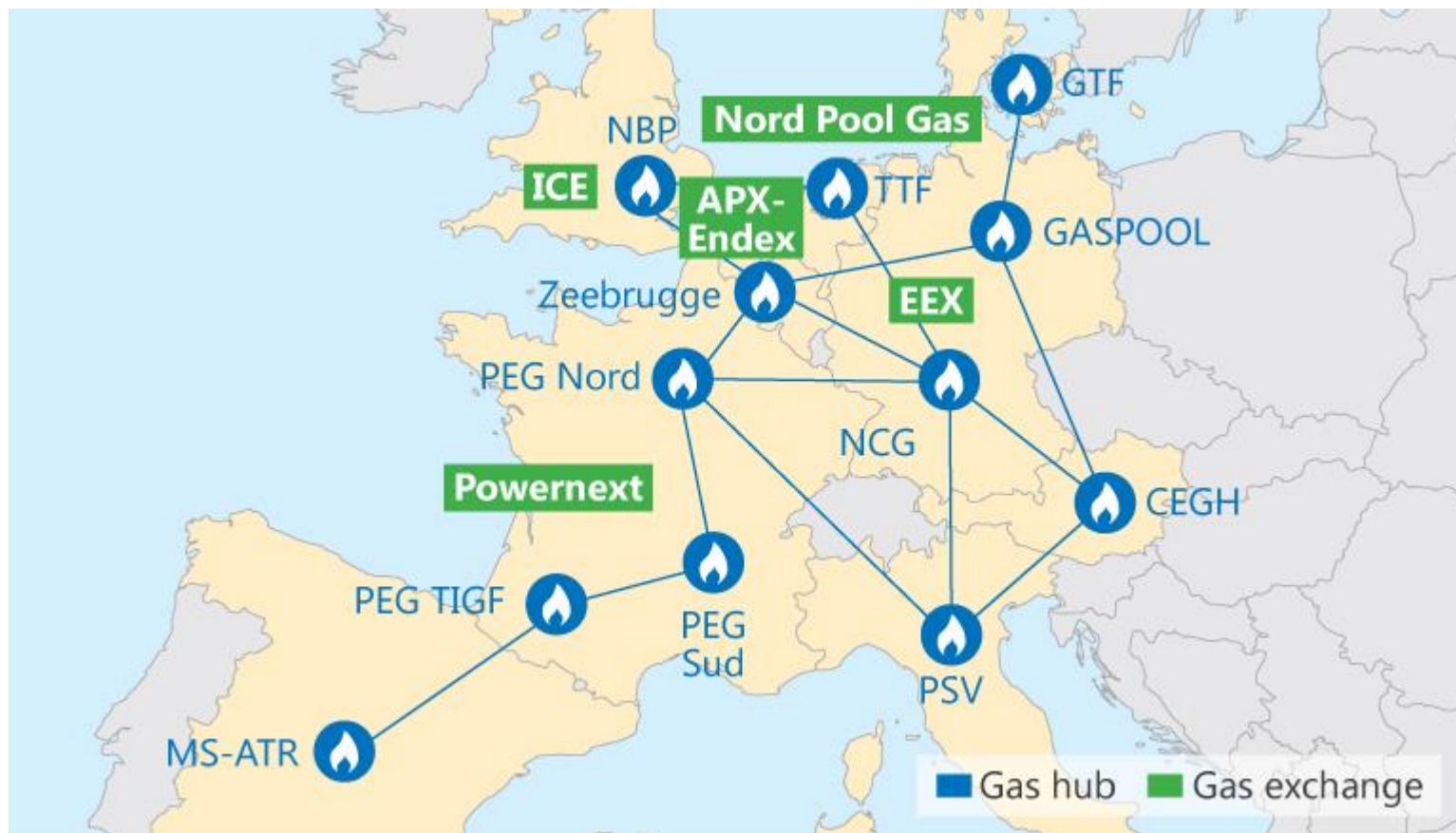
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Head of Research
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European Gas Hubs and Exchanges

- Today, there is not a single gas trading hub east and south east of Vienna whose CEGH could act as a benchmark and pivot for promoting gas trading in the region.



Hub Pricing is Expanding in Europe

GOG: gas-on-gas competition
OPE: oil price escalation

Figure 6.3 Europe Price Formation 2017

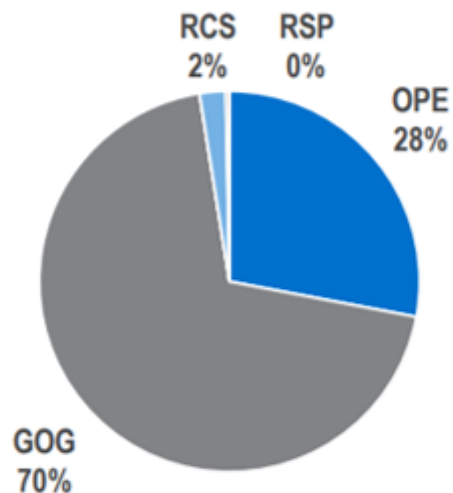
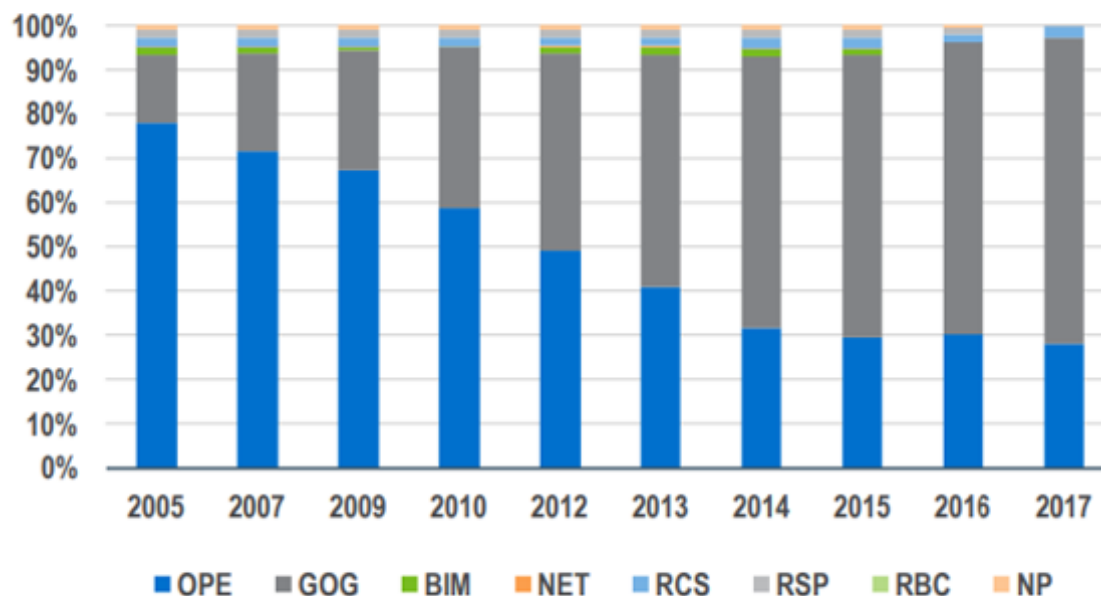


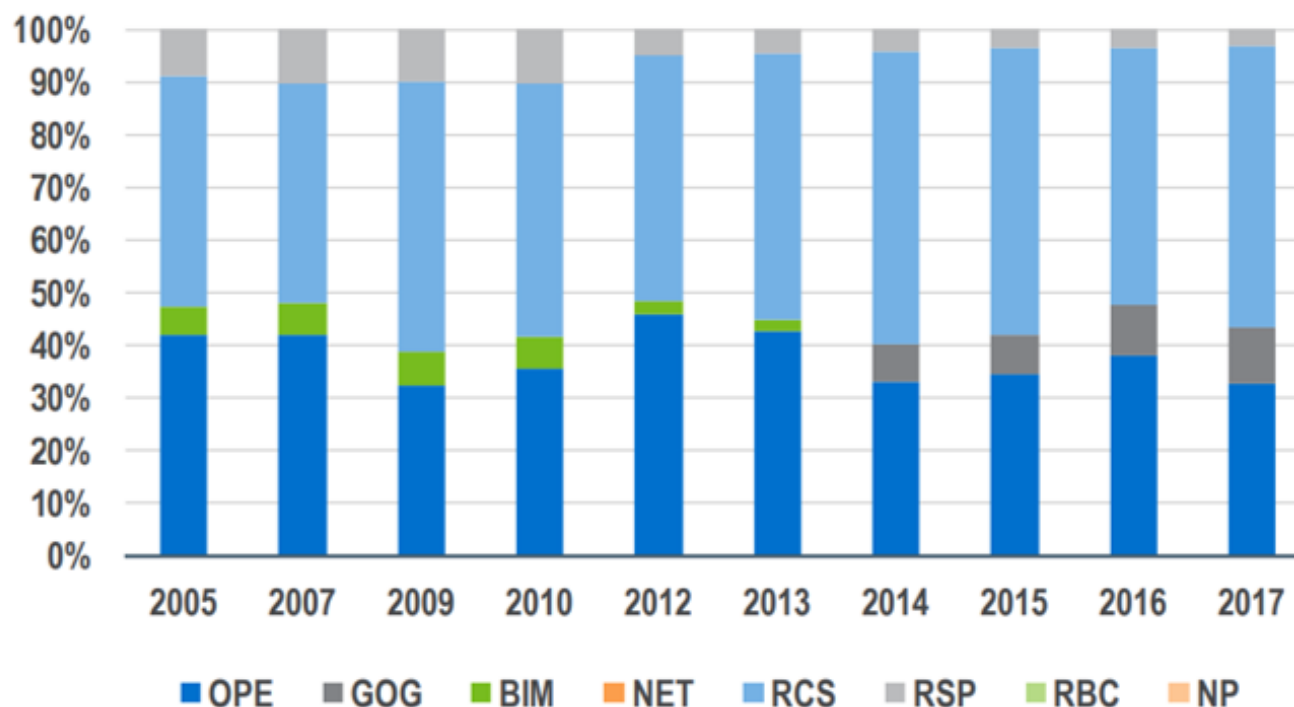
Figure 6.4 Europe Price Formation 2005 to 2017



European consumption in 2017: 551 bcm,
15% of global gas consumption

Hub Pricing is Low But Expanding in SE Europe

Figure 6.9 Southeast Europe Price Formation 2005 to 2017



GOG: gas-on-gas competition
OPE: oil price escalation

Southeast Europe, as defined by IGU, includes Bosnia, Bulgaria, Croatia, North Macedonia, Romania, Serbia and Slovenia

Where Does SE Europe Stand Today?



Established hubs

- Broad liquidity
- Sizeable forward markets → supply hedging
- Price reference for other EU hubs & for long-term contracts indexation

Advanced hubs

- High liquidity
- More reliant comparatively on spot products
- Progress on supply hedging role but relatively lower liquidity levels of longer-term products

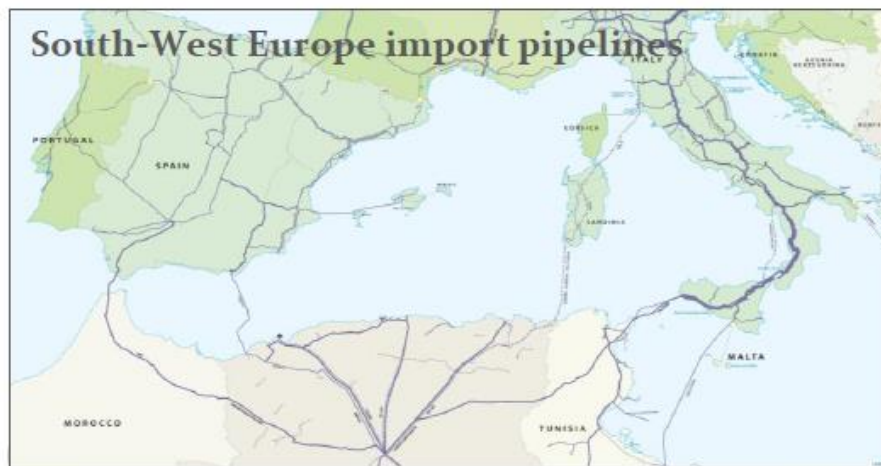
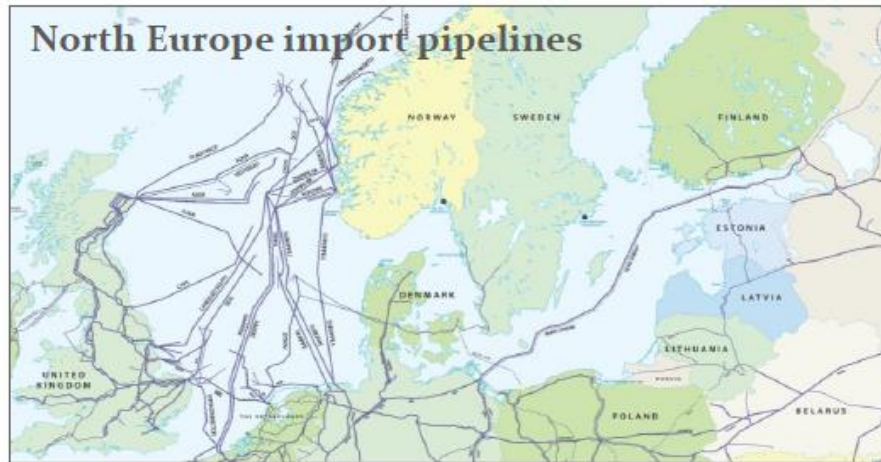
Emerging hubs

- Improving liquidity from a lower base taking advantage of enhanced interconnectivity & regulatory interventions
- High reliance on longer-term contracts & bilateral deals

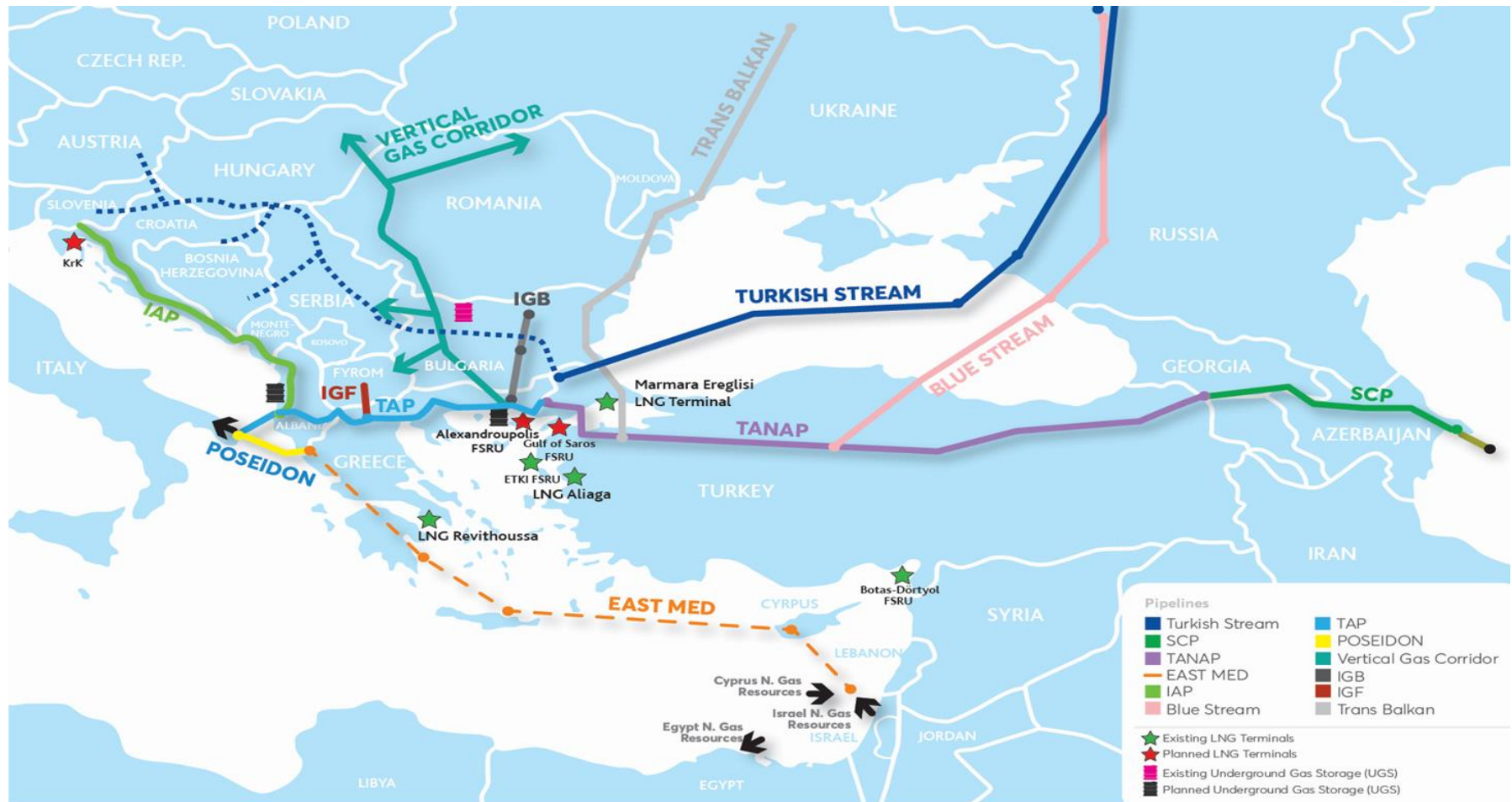
Illiquid-incipient hubs

- Embryonic liquidity at a low level & mainly focused on spot
- Core reliance on long-term contracts & bilateral deals
- Diverse group with some jurisdictions having:
 - Organised markets in early stage
 - To develop entry-exit systems

European Gas Network: SEE EU Needs Additional Import Routes

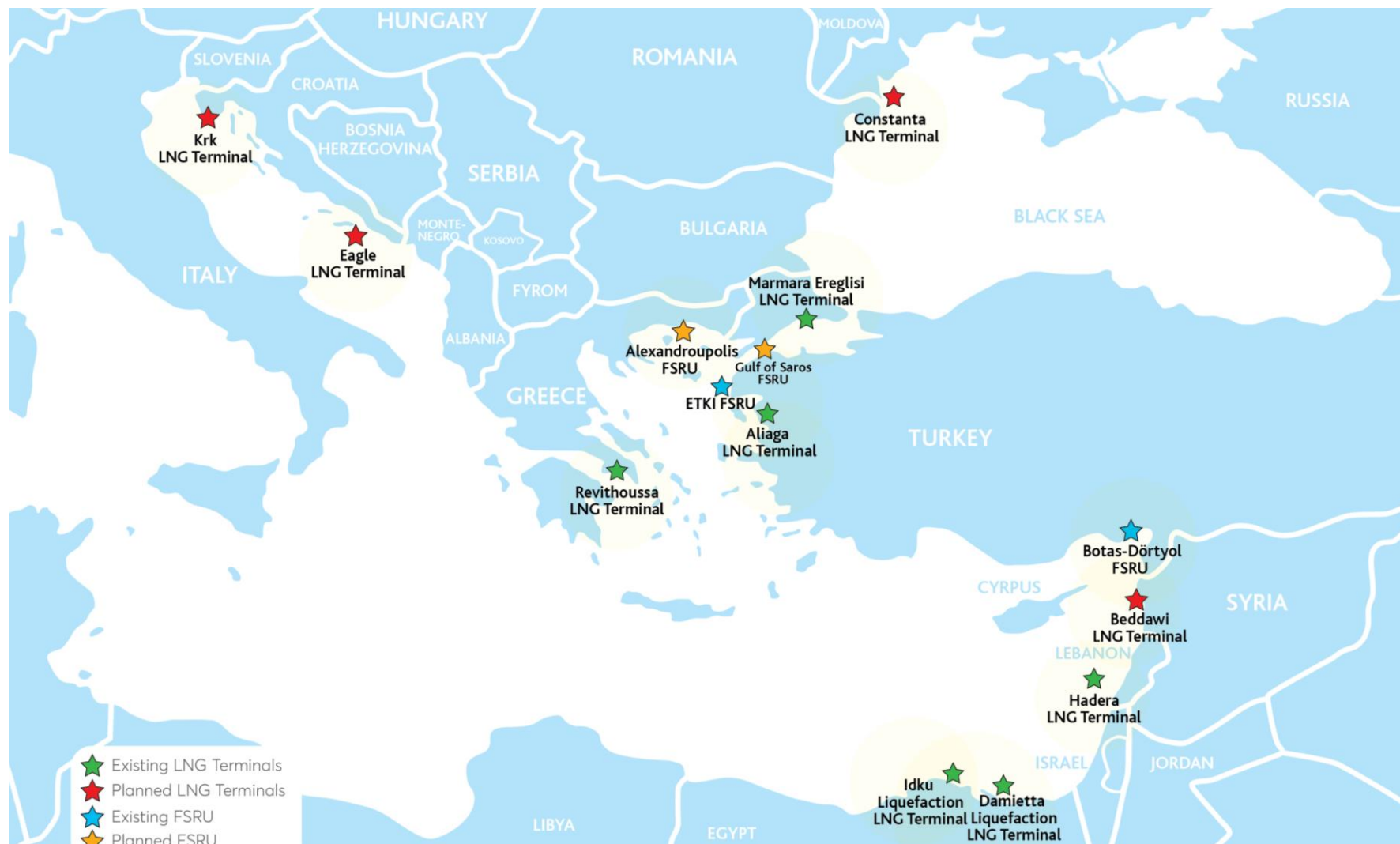


The Expanded Southern Gas Corridor



NB.: The TANAP has been completed, while TAP and Turkish Stream are under construction, with IGB at an advanced planning stage with FID already taken. The IAP, the IGI Poseidon in connection with East Med pipeline and the Vertical Corridor and the IGF are still in the study phase. Blue Stream and Trans Balkan are existing pipelines.

LNG Terminals in SE Europe



Source: IENE

Anticipated Gas Volumes Through Greece (2020-2030)

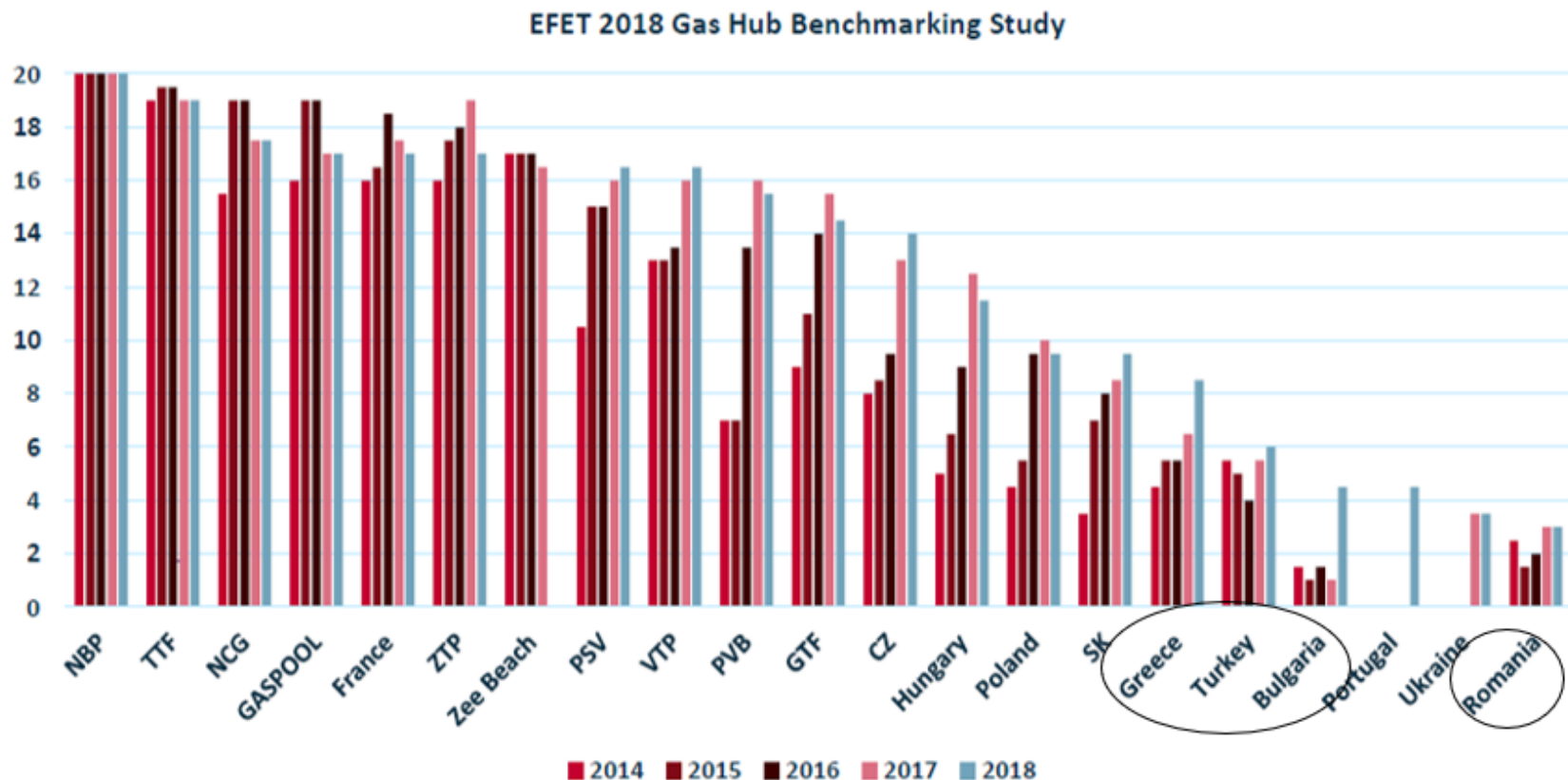
- Through **TAP** ➡ **10.0 bcm** in 2020 (1.0 bcm to Greece, 1.0 bcm to Bulgaria and 8.0 bcm to Italy), while in 2030 ➡ **20.0 bcm** (2.5 bcm to Greece, 1.5 bcm to Bulgaria and 16.0 bcm to Italy).
 - Through **IGB** ➡ **1.0 bcm (2020)** and **4.0 bcm (2030)**
 - Through **IGF** ➡ **1.0 bcm (2020)** and **1.5 bcm (2030)**
 - Through **Revithoussa** ➡ **1.5 bcm (2020)** and **3.0 bcm (2030)**
 - Through **Alexandroupolis FSRU** ➡ **1.5 bcm (2020)** and **4.0 bcm (2030)**
 - Through **East Med** ➡ **0.0 bcm (2020)** and **10.0 bcm (2030)**
-
- Based on the above, it is estimated that in the first phase (2020), **13.0-14.0 bcm** of additional gas volumes will be directed through Greece to various destinations, corresponding to 3.1% of European gas demand (excluding Turkey), while in 2030 these quantities may have reached **30.0 bcm**, which will correspond to approx. 6.7% of European gas demand.

Anticipated Gas Consumption (bcm) in Selected European Countries (2020, 2025 and 2030)

Country	2020	2025	2030
Austria	7,5	7,3	7,1
Bulgaria	4,0	4,2	4,3
Greece	5,0	5,2	5,41
Croatia	3,7	3,8	3,9
Hungary	11,0	10,5	10,0
Italy	71,3	79,2	83,8
North Macedonia	0,1	0,1	0,13
Romania	13,0	13,5	13,5
Slovenia	1,2	1,2	1,3
Slovakia	7,0	7,2	7,3
Serbia	2,2	2,25	2,3
Turkey	60,0	65,0	70,0
Ukraine	35,8	36,0	36,5
Total gas consumption	221,8	235,45	245,54

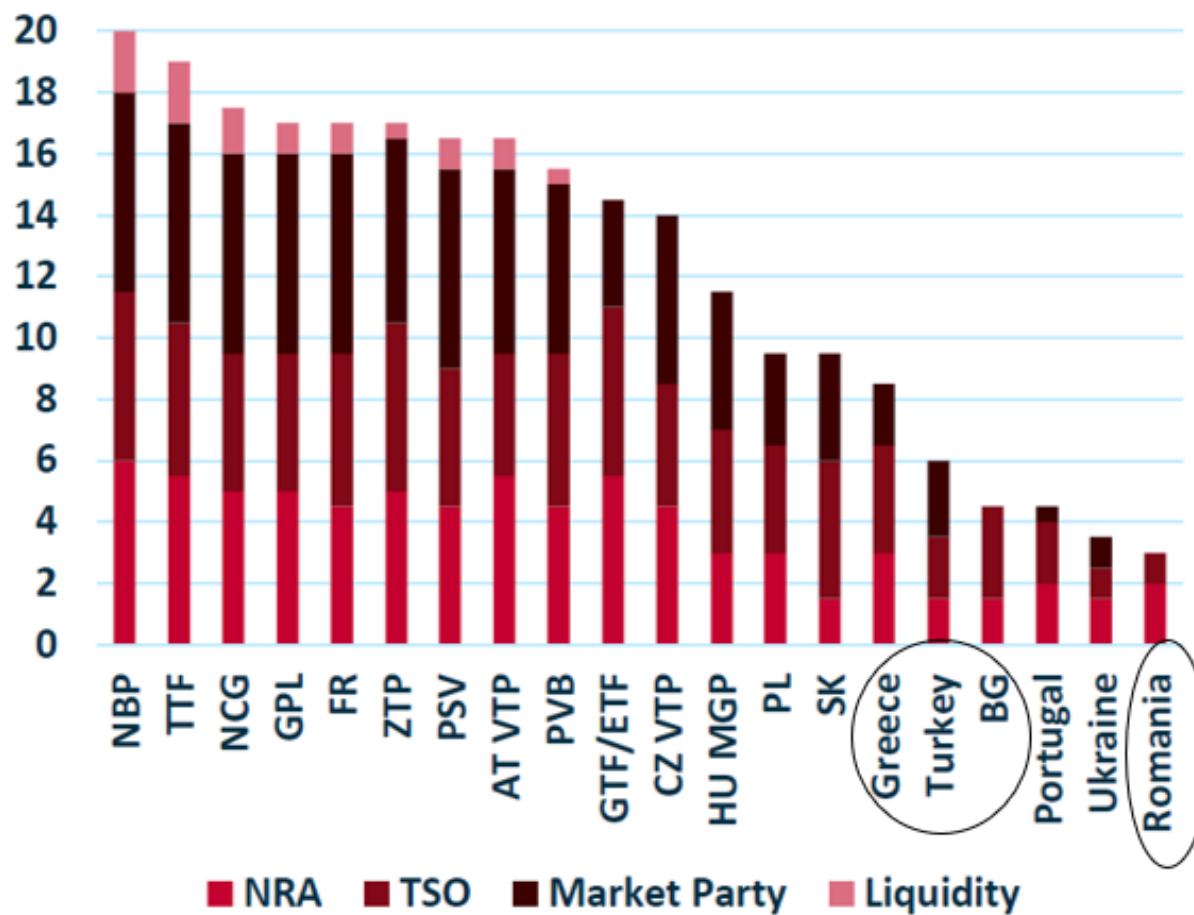
Source: European Commission

Annual Scorecard 2018 Update

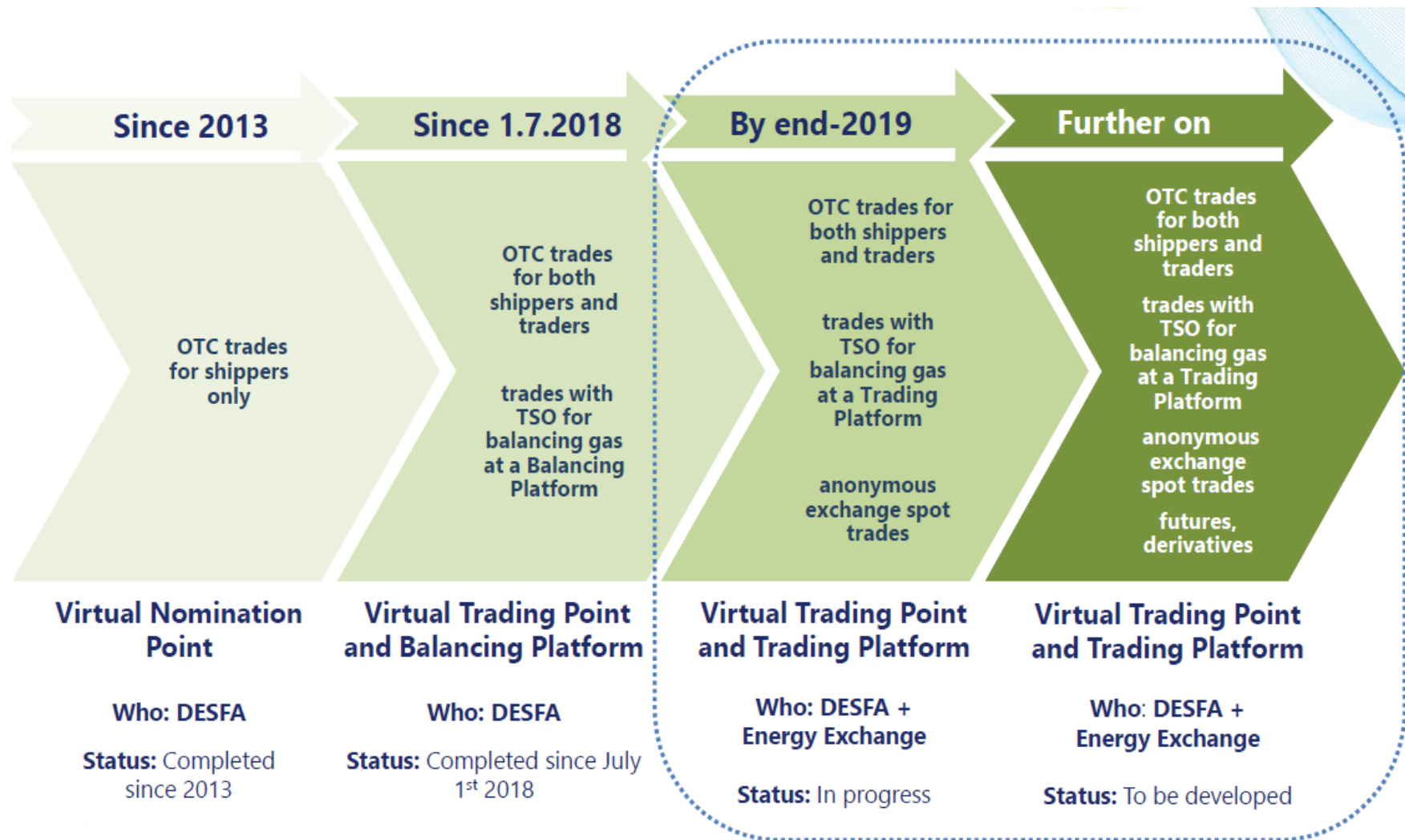


Source: EFET

Total Hub Scores 2018



Proposed Road Map for the Development of a Natural Gas Hub Based in Greece



Hellenic Trading Point

- Today, DESFA's Gas Trading Platform is firmly set on the course in becoming a fully fledged gas hub, known as Hellenic Trading Point (HTP).
- The full activation of the Hellenic Energy Exchange (HENEX) by October 2019 is expected to augment and strengthen the trading aspects of HTP by facilitating "gas future" trading, etc.
- HTP could well emerge as SEE region's leading gas trading hub since by 2020/2021 will have access to increased liquidity, while offering full transparency and market accessibility.

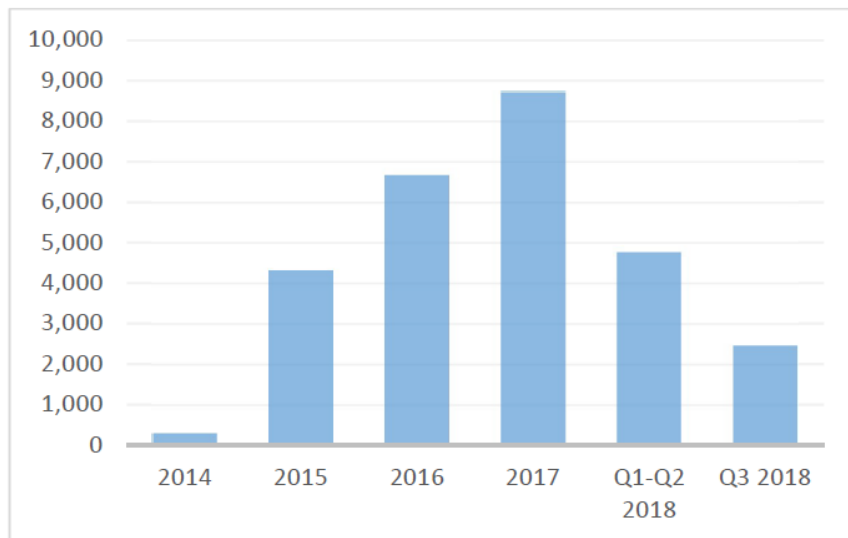


Chart 1: Number of transactions at the NNGTS virtual point

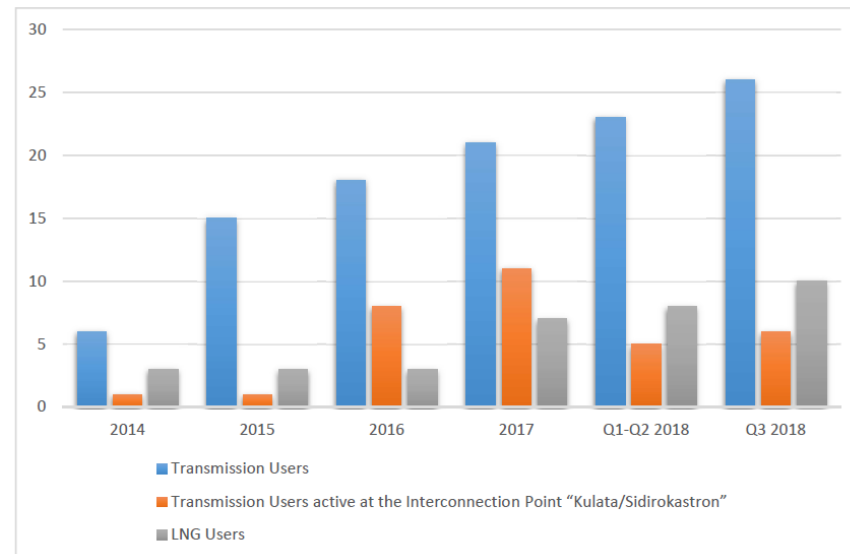
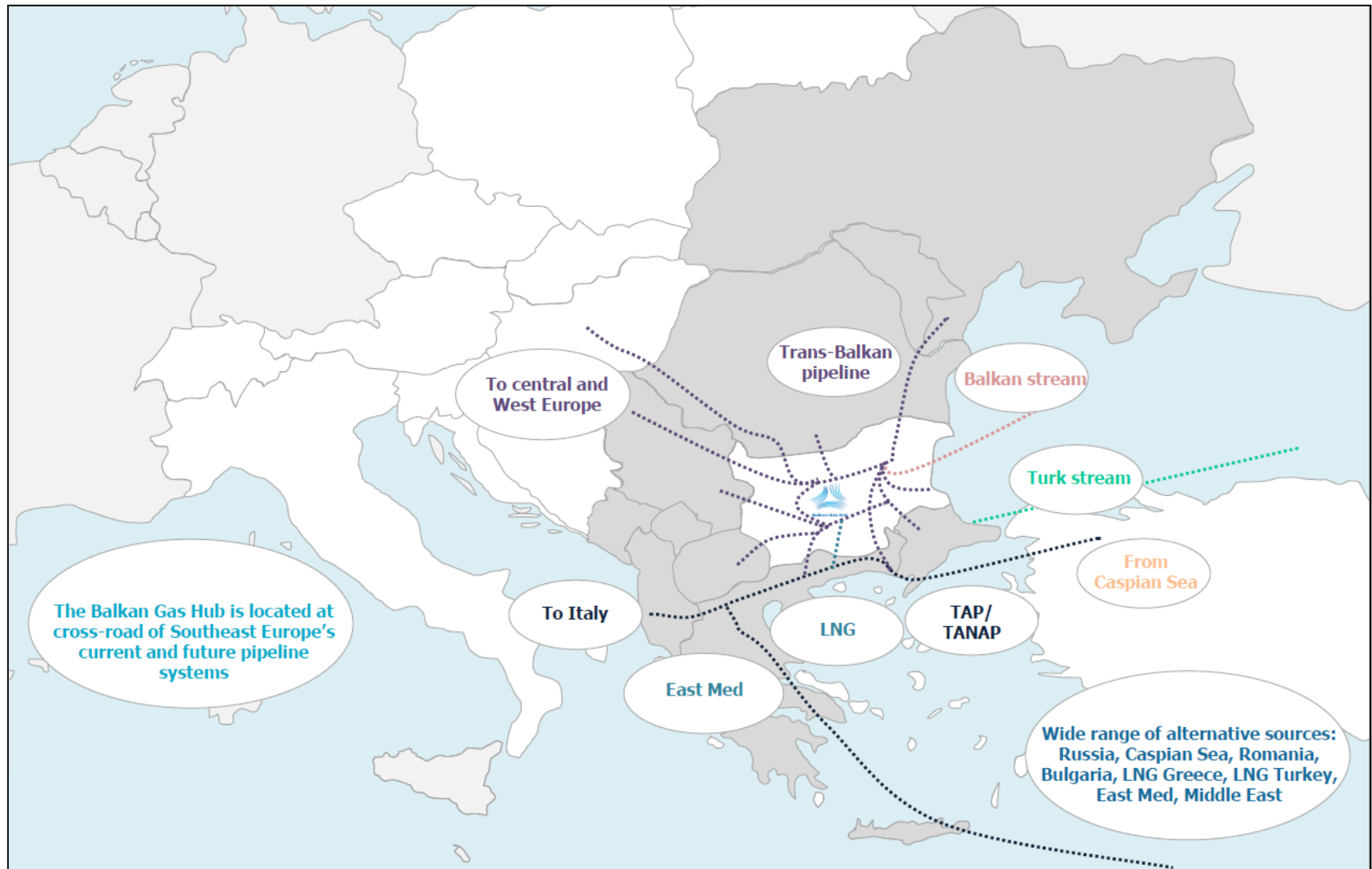


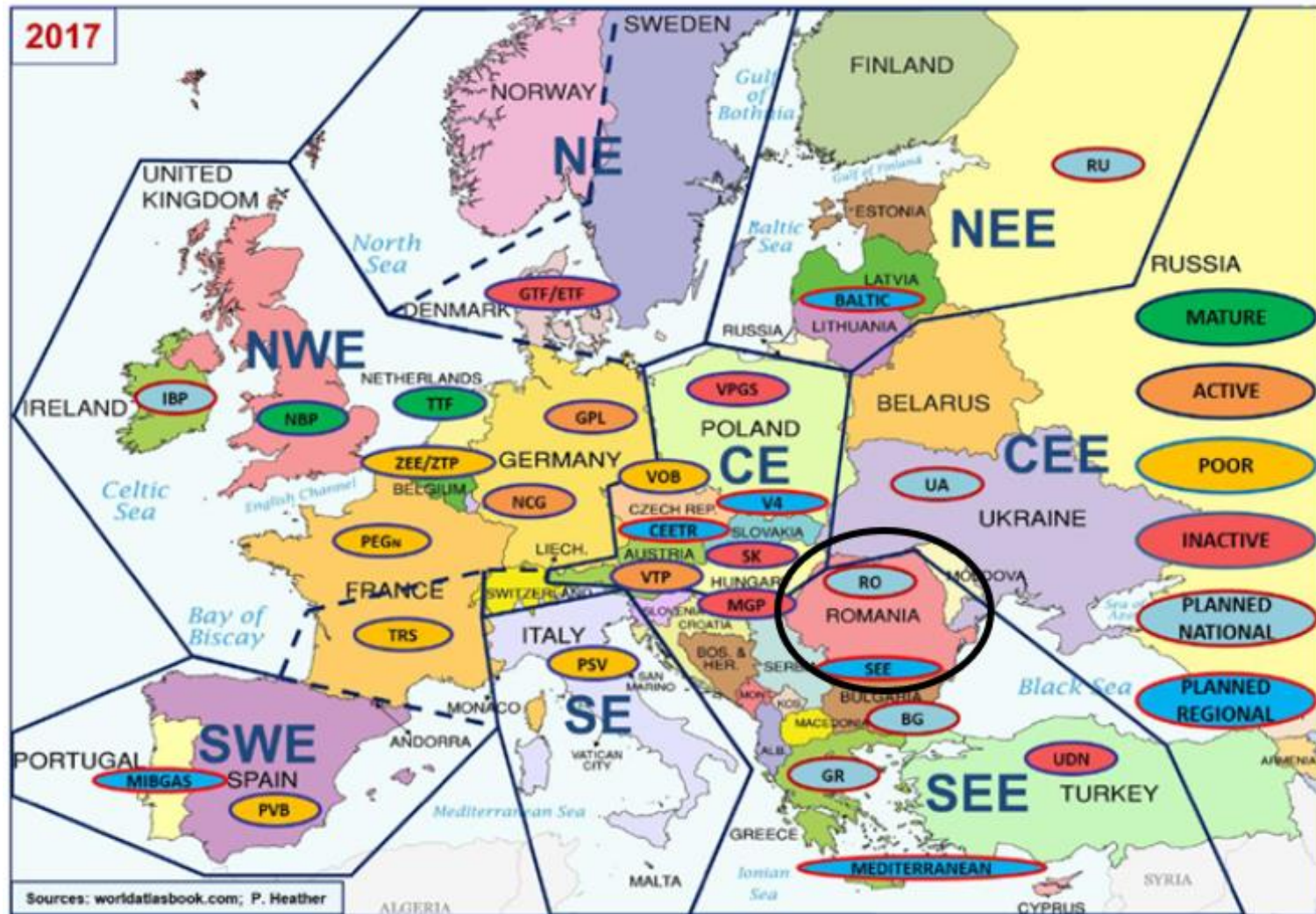
Chart 4: Evolution of the number of Transmission Users, of the number of Transmission Users active at the Interconnection Point "Kulata/Sidirokastron" and of the number of Liquefied Natural Gas (LNG) Users

The Balkan Gas Hub



Source: Schneider, M. (2018)

The Gas Hub of Romania

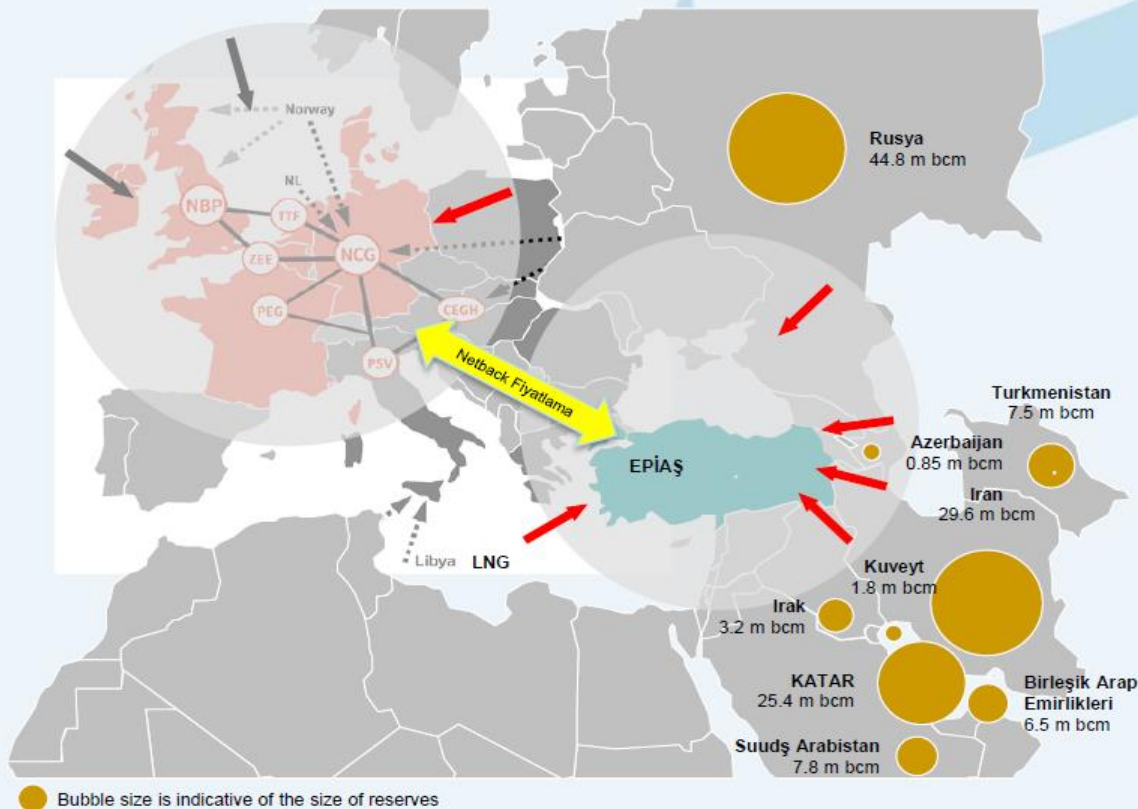


Source: OIES Energy Insight

Integration of Turkey with European Hubs



- 8 major European trading hubs
- Trading on OTC's via brokers
- Trading on Energy Exchanges



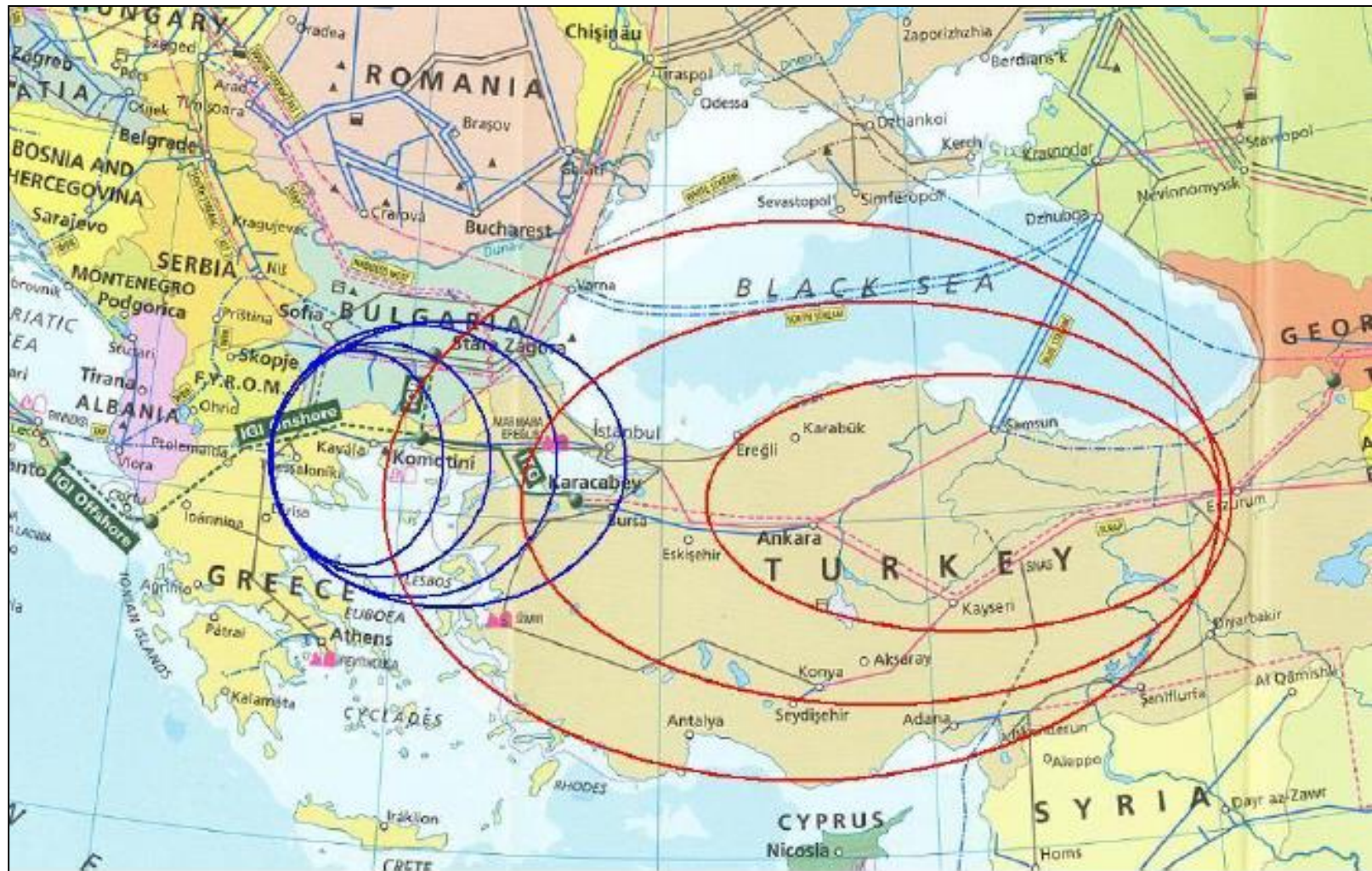
After Turkey completes structural reforms, its gas market will be integrated with EU trading hubs and establish a regional gas reference price

The Creation of a Natural Gas Hub Based in Turkey

- After the successful completion of a five-month testing phase, starting on April 1, 2018, the spot gas trading system in Turkey officially went online.
- On July 27, 2018, EPIAŞ began to publish gas transmission data through its online transparency platform. It also started to share transport nomination, virtual trade, capacity, reserve, actualization and stock amounts, on a daily basis.
- **EPIAŞ launched its spot gas trading system on the energy stock exchange in early September 2018.**



Gas Hubs in Greece and Turkey Can Coexist



Source: IENE study, "The Outlook For a Natural Gas Trading Hub in SE Europe", (M19), Athens, September 2014



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**Thank you for
your attention**

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