

Turkey as an Energy Hub

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IKV-CIDOB Initiative on

“Is Turkey a European and Regional Hub?”

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ome

Observatoire Méditerranéen de l'Energie

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What is a Gas “Hub”?

National regulatory authorities provided the following answers (responses have been abbreviated for the purpose of better understanding where appropriate without loss of information, underlining by the authors of the report):

- AUSTRIA : A “hub” shall mean a gas pipeline node where logistic and/or commercial hub services are rendered [...].
- BELGIUM :A hub is defined as “every location where network users can physically put natural gas at disposal with a view to resale; operations which are logistically supported from a technical and commercial point of view by a service provider [...].”
- DENMARK A natural gas hub is a trading point/platform that allows transport customers to execute transactions in the natural gas transmission system.
- FRANCE A place whether contractual or physical where shippers can trade gas. In particular: A virtual point attached to a balancing zone, where one shipper can exchange (ie buy or sell) gas to another. Transactions should be guaranteed by the TSO
- GERMANY Virtual or physical delivery point for gas-trading activities (intra-day and long-term) [...].
- GREAT BRITAIN A gas trading hub is a common delivery point where many buyers and sellers are able to trade [...].
- ITALY Gas hub as [a] place where gas shippers are provided with more flexibility and opportunities to exchange gas between them [...].
- SPAIN A hub is a virtual or physical point where buyers and sellers merge offers to trade gas.
- THE NETHERLANDS A virtual location, serving as an entry and exit point, at which shippers and traders can transfer gas.

TSOs and natural gas hub operators provided the following answers (responses have been abbreviated for the purpose of better understanding where appropriate without loss of information, underlining by the authors of the report):

- AUSTRIA: trading platform offering various trading functionalities: - GRP; - OTC Trade; - Exchange Trade; - Capacity Exchange;
- BELGIUM: A geographical area where several gas systems connect, reachable by several players from different profiles (energy merchants, producers, integrated companies, financial,...), where an independent operator facilitates the market between registered parties through standard services;
- DENMARK: A virtual point in a TSO system where gas can change hands commercially, from one shipper to another.
- FRANCE:
 - A natural gas hub is a place where many different gas sources and gas consumers meet and can be exchanged. The greater the number and diversity of parties, the better the hub.
 - To facilitate gas exchanges by mutual agreement between consignors, TIGF offers, in the context of its transport contract, access to a notional point on its Main Network: the Gas Exchange Point (GEP).
- GERMANY:
 - A virtual trading point enables market parties to process trading activities (title transfers) connected to physical or non-physical gas transport.
 - At Gasunie’s Virtual Trading Point gas quantities may be traded after entry and before exit within the H-Gas Northern Germany market area. The Virtual Trading Point enabled the purchase and sale of gas quantities between balancing groups. It is not allocated to a physical entry or exit point.
- GREAT BRITAIN: A point or zone (real or virtual) for the delivery that allows gas to be delivered to and exported from the zone and allows the trading of gas (both physical and title) within it.
- SPAIN: is a point (physical or virtual) at which title of gas can be transferred between buyers and sellers
- THE NETHERLANDS: A natural gas hub is a place where natural gas from different sources - production, other hubs, transmission systems - comes together and has connections to different markets and other gas hubs where transmission capacity to and from the hub is offered to all interested party under non-

Source: European Regulatory Group for Electricity&Gas, 2010

What is a Gas “Hub”

A trading platform (physical or virtual) that offers a range of services, and facilitates trading activities

What is Turkey ?

- A. A transit country
- B. A corridor
- C. A transit hub
- D. A hub
- E. An energy center

What is Turkey ?

SABAH GALERİ SPOR GÜNAYDIN GÜNDEM EKONOMİ YAŞAM DÜNYA SABAH TV
 flaş CUMHURBAŞKANI ERDOĞAN: ENERJİ KONUSUNDA MÜŞTEREK ADIMLAR

Turkey ... has also offering short, se of its energy rich

country, ly resources 015)

Moniz: Enerji merkezi olma işini başardınız

ALİ ÜNAL Giriş Tarihi: 5.10.2015

Turkey could be 10 years.

the next 5- June 2015)

[Turkey] as a reg neighbors.

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Turkey is very wo Turkey will be on (Miguel Aria

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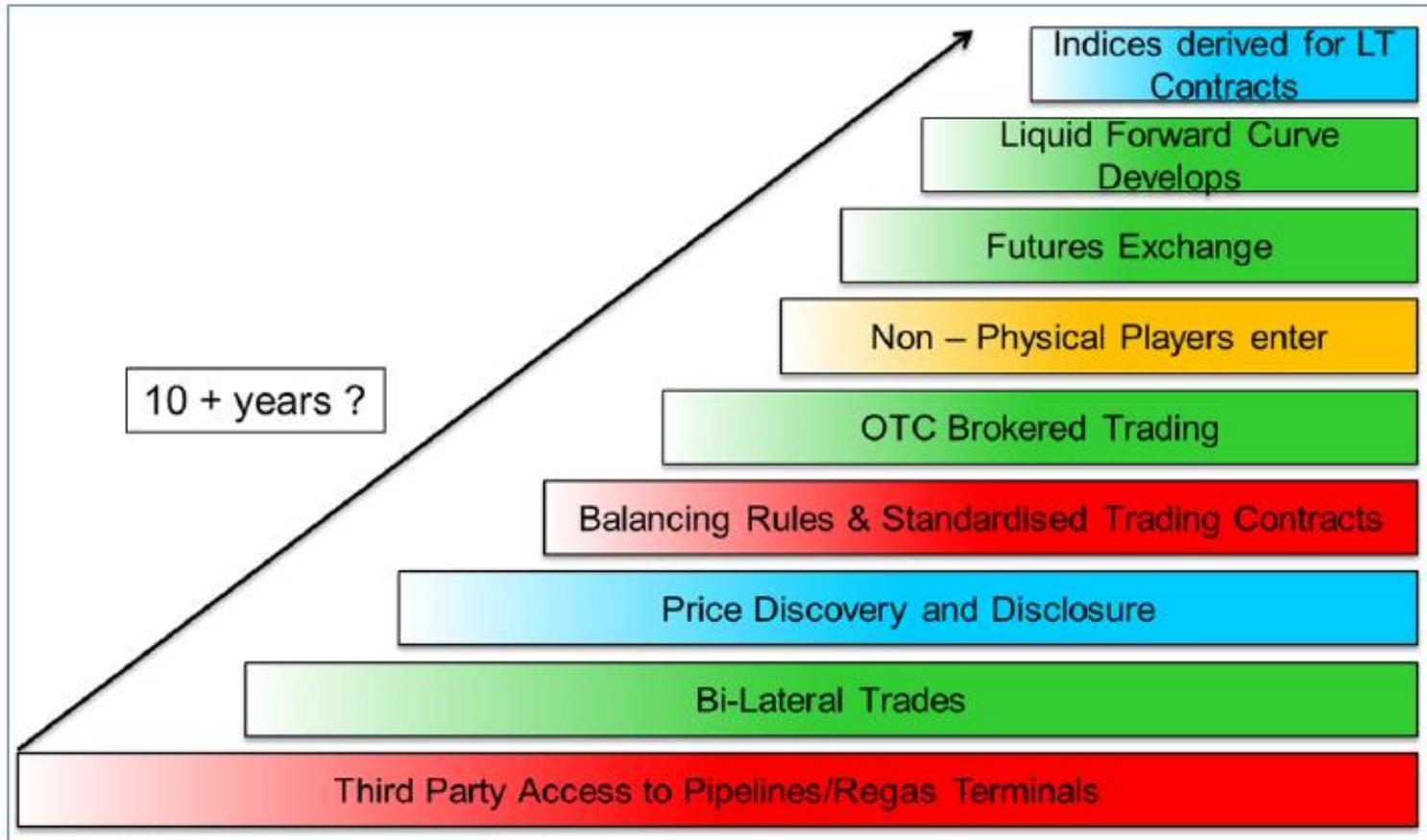
f t g+ A A + SİTENE EKLE YORUM YAP



ABD Enerji Bakanı Moniz, Türkiye'nin bir enerji merkezine dönüştüğünü, hidrokarbon rezervlerinin Avrupa'ya ulaştırılması noktasında iki önemli ülkeden biri olduğunu söyledi

The Path to Maturity

What constitutes a 'good' hub?



Source: H.Rogers

starts with TPA and ends with Indices used as reference prices in physical contracts

European Gas Markets and Hubs



Trading hubs (e.g., NBP, TTF), Transit Hubs (eg, ZEE, CEGH) and Transition Hubs

Benchmark of gas market places

Advanced hubs: NBP and TTF

Broad liquidity

Sizeable forward markets which contribute to their role in supply hedging

Larger presence of financial players

Price reference for other EU hubs and for long-term contracts indexation

Advancing hubs: NWE region

Ongoing increasing liquidity

More reliant on spot products and balancing operations

Progress on supply hedging role although relatively lower liquidity levels for longer-term products results in weaker price risk management role

Developing hubs: CEE region

Improving liquidity from a lower base taking advantage of enhanced interconnectivity

Liquidity partially driven by market obligations imposed on incumbents

Markets still significantly more reliant on long-term contracts

Illiquid hubs SSE, Iberia, Baltic

Markets **chiefly relying on long-term contracts**

Embryonic organised market places

Success factors for gas hubs

- ***Transparency,***
- ***Deregulated gas market,***
- ***Interconnectivity,***
- ***Nondiscriminatory access to storage,***
- ***Flexibility, access to multiple gas supplies,***
- ***A clearing house,***
- ***Political will,***
- ***Market culture,***
- ***Liquidity,***
- ***....***

The place of Turkey

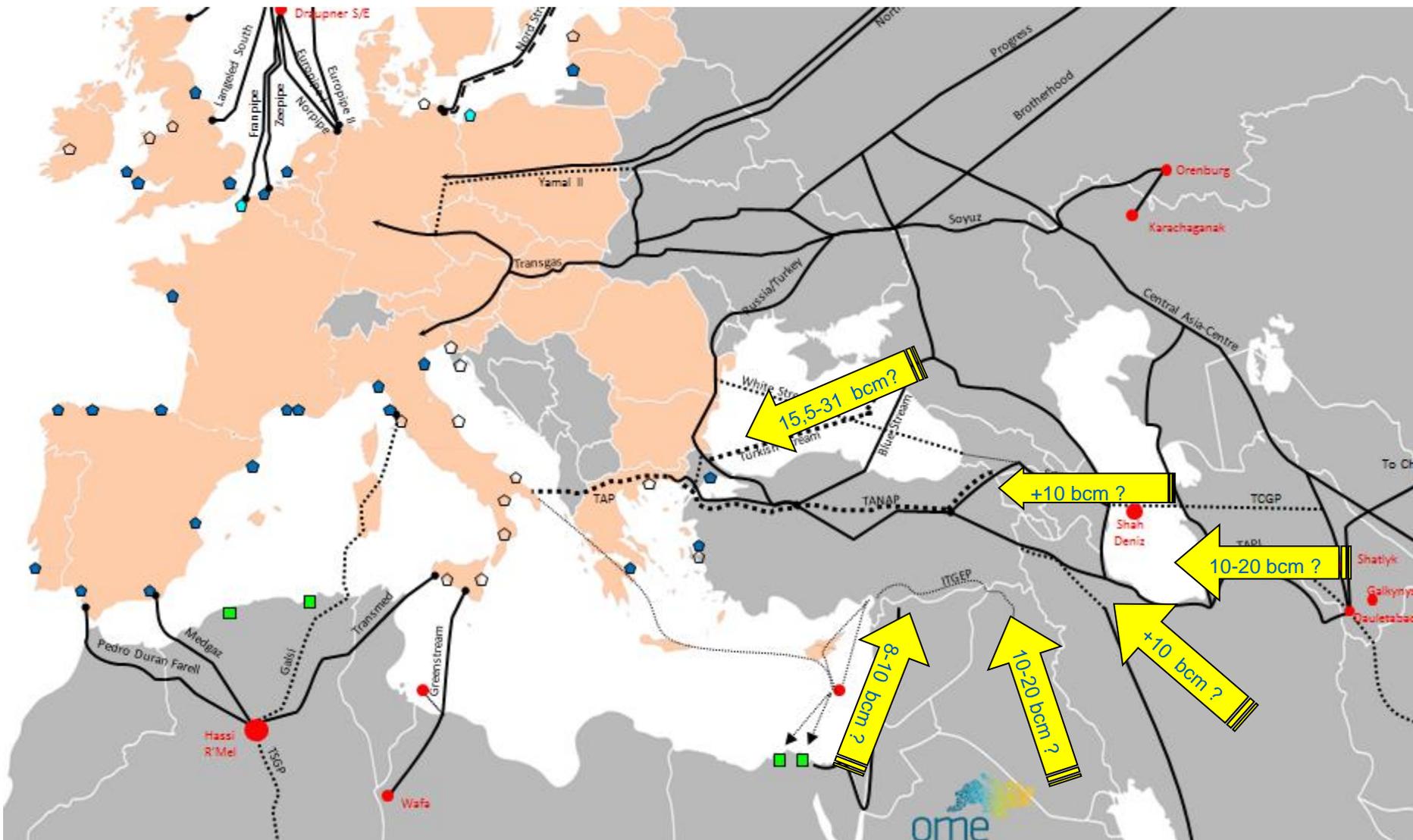
**According to the 2015 update of
the EFET (*European Federation of Energy Traders*)
European Gas Hub Development Study,**

**which assesses
5 regulatory, 6 TSO, and 6 market conditions**

Turkey's score is 5,5 (out of 20).

A long way to go!

Turkey as a gas transit/corridor/hub/center?



Incremental potential: 65 – 100 bcm pipeline gas + LNG

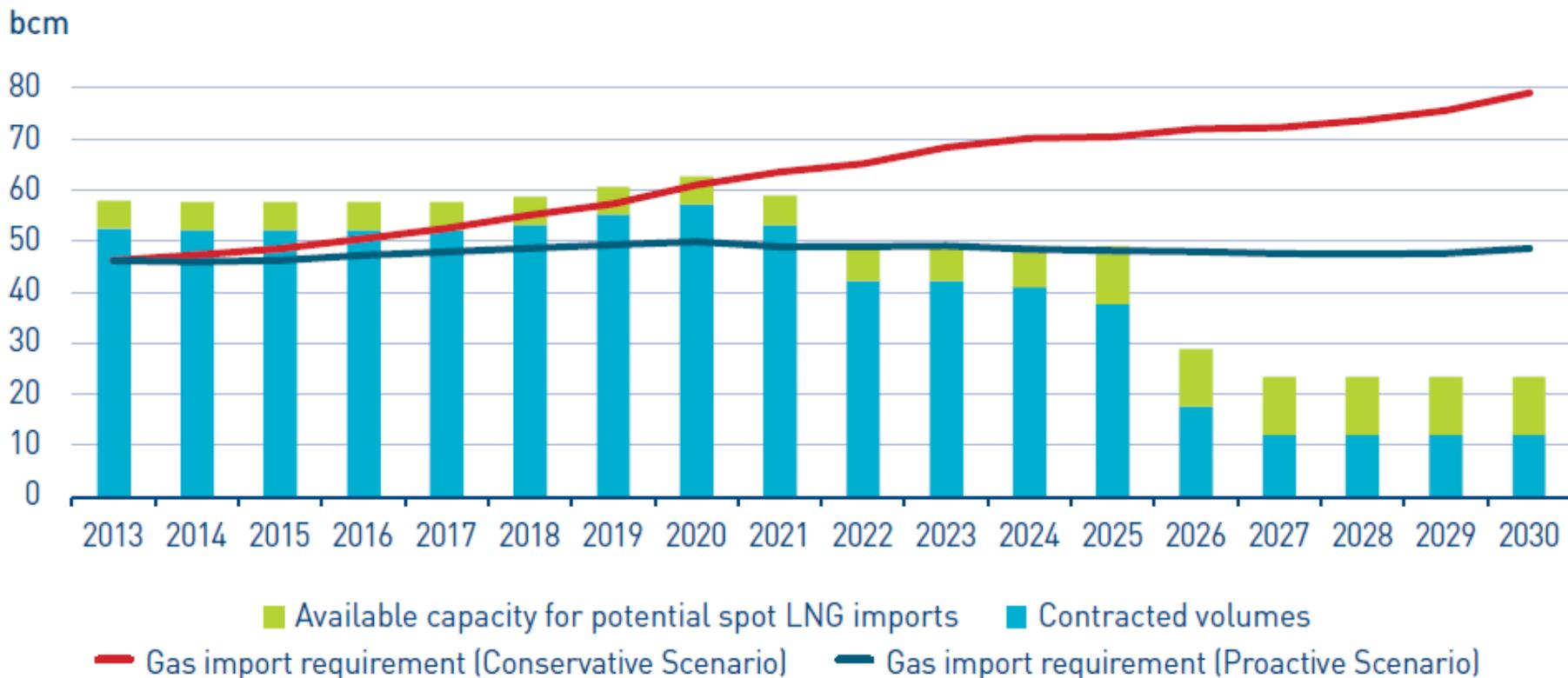
Turkey's gas market is facing many challenges

- **Russia is and will remain the largest supplier**
 - **New/additional supply sources will improve SoS (inc. LNG)**
- **Gas storage (and GS/Demand) is a burning issue**
 - **manage the seasonal S-D balance**
- **There is a need for a new legal & regulatory framework**
 - **Botas is yet to complete the legal unbundling of its activities**
 - **Suppressed prices on the market make Botas sale price a reference price**
 - **There is a need to let the market work to create a deep and liquid market**
- **Domestic production is negligible.**

But opportunities are more...

The Future of Gas in Turkey is uncertain

FIGURE 6.12 CONTRACTED NATURAL GAS IMPORT VOLUMES VERSUS TURKEY'S NET GAS IMPORT REQUIREMENT, 2013 - 2030



Source: OME.

... expiring BOTAS contracts are an opportunity to improve SoS

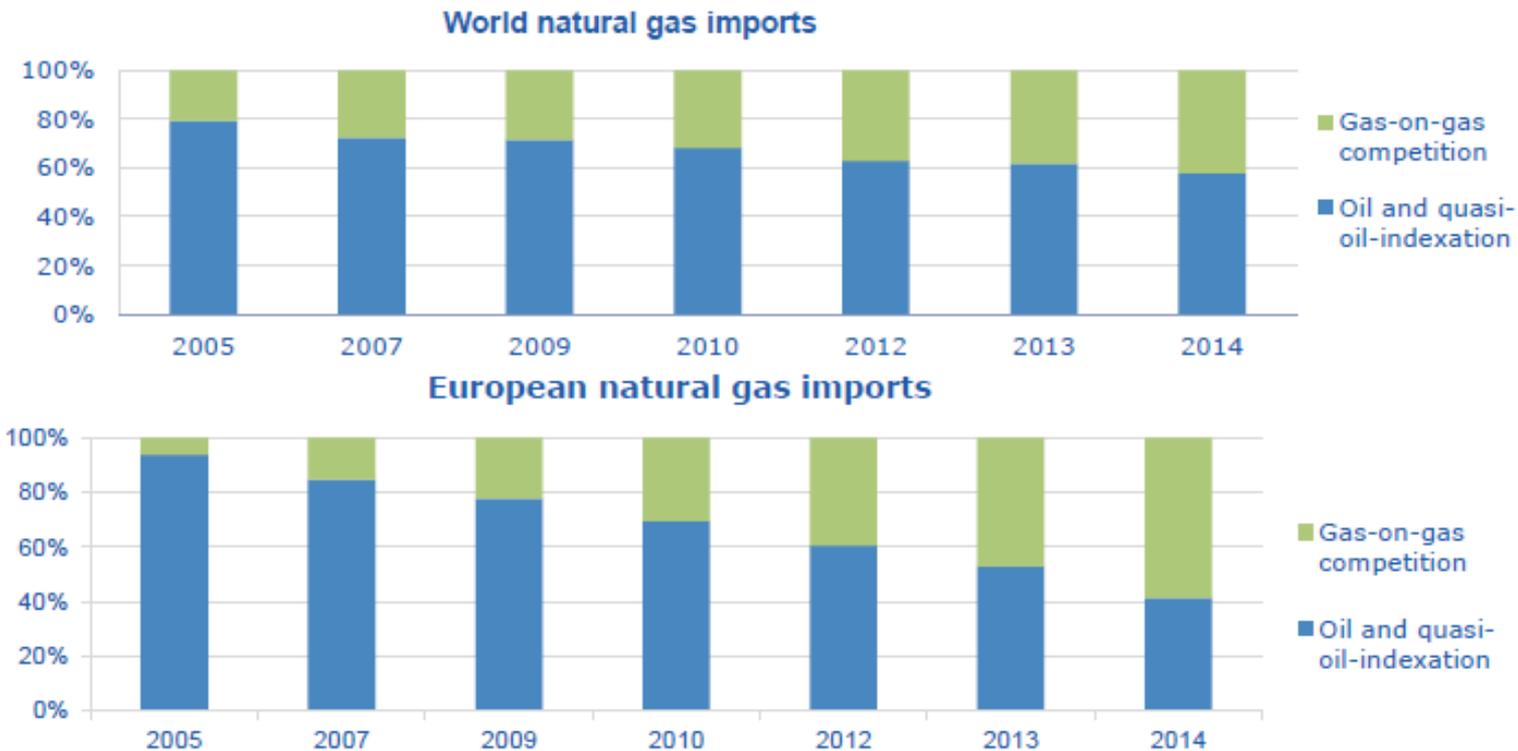
Changing dynamics in global gas markets

- Transition to more flexible and dynamic markets
- Moving away from pipeline gas to LNG
- Transition to G-G competitive pricing
- Contracts: Shorter term, more spot, and hub based
- Destination flexibility
- New technologies (e.g. FSRUs)
- ...

Increasing weight of G-G competition



Gas-on-Substitute Competition versus Gas-On-Gas Competition in the International Trade, 2005-2014*



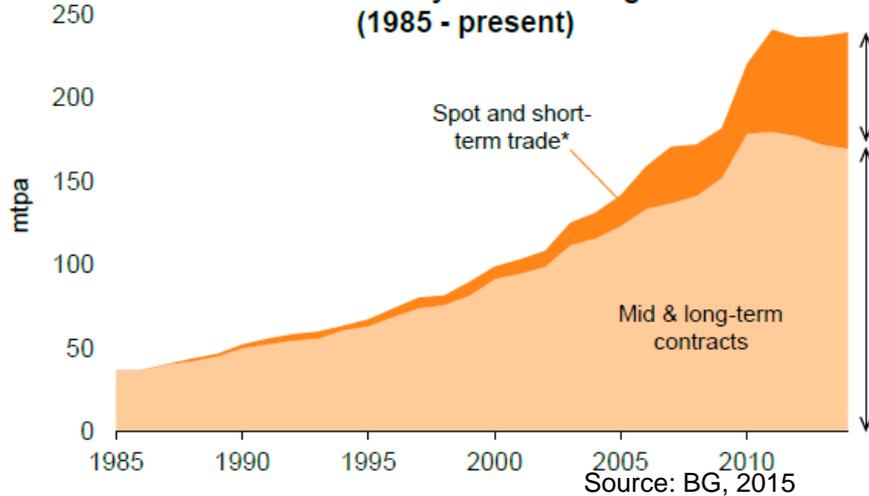
From 2005 to 2014 share of gas-on-gas pricing was growing. Nevertheless, in 2014 oil-and quasi-oil indexation accounted for 58% in the world and 42% in European gas imports.

* - Oil and quasi-oil-indexation is pricing based on inter-fuel competition. Gas-on-gas pricing is reflective of demand and supply interplay.

Source: Adapted from Wholesale Gas Price Survey 2015 (the International Gas Union)

Changing dynamics in global gas markets

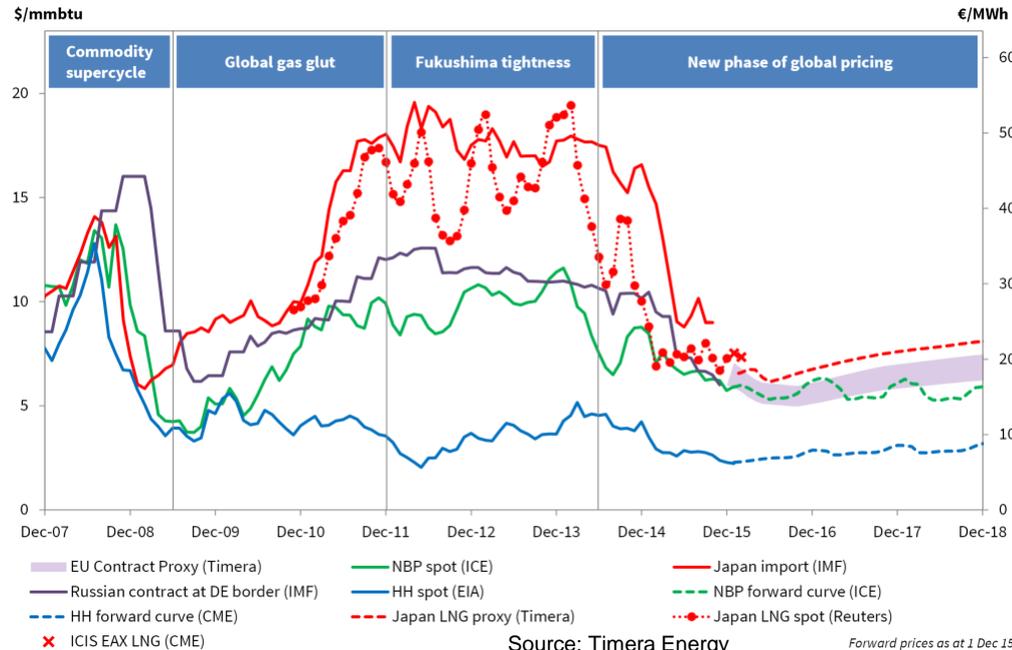
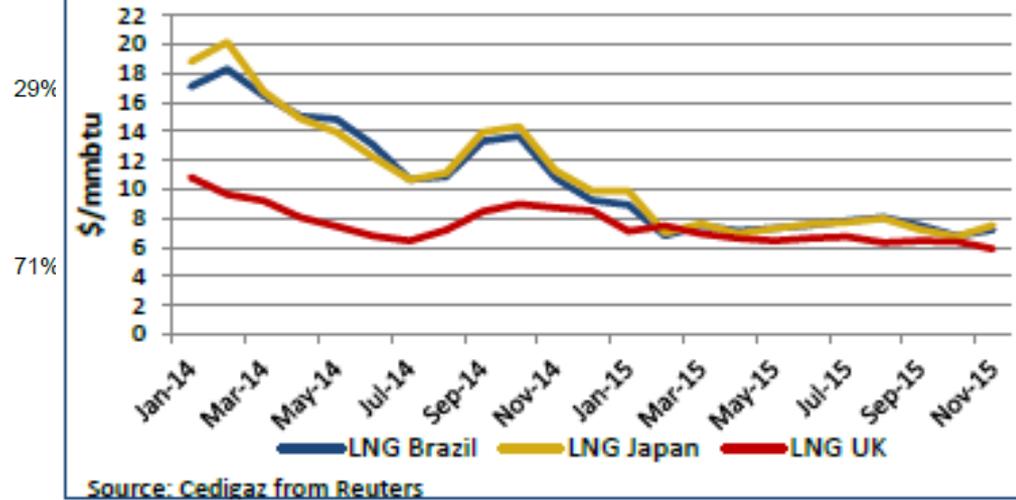
LNG trade by contract length (1985 - present)



Data source: Poten & Partners (2000), GIIGNL (2015)
 *Contact duration of 4 years or less (GIIGNL)

- Turkey's spot LNG share in total LNG imports 2014: 23%
- LNG utilization rate in 2014: >50%

LNG Spot prices in the UK, Japan and Brazil



Concluding Remarks

- **The development of a liquid gas trading hub will be difficult, *but not impossible***
- **Plenty of pressing challenges but opportunities are more;**
- **Need to put its house in order first;
speed up market reforms;**
- **Turkey could become an oil hub;**

Concluding Remarks

What is Turkey ?

- A. A transit country
- B. A corridor
- C. A transit hub
- D. A hub
- E. An energy center

There is no reason why Turkey cannot become all of the above

Turkey should develop a strategy to put its vision into action.



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Thank you.

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