

EXIST

**Changing Energy Routes and The
Role of EPIAŞ as a HUB**

**Ahmet Türkoğlu
CEO**

**VI. International Online Conference
Risk Management in Energy - 2023**

April 13, 2023

EPIAŞ

ENERGY MARKETS DEVELOPMENT PROCESS AND EXIST

‘15

- EXIST was established subject to the Electricity Market Law No. 6446, Turkish Commercial Code No. 6102 and private law provisions.
- Intraday Market (IDM) was opened.
- EXIST obtained Market Operation License.
- Market activities were transferred from PMUM to EXIST.

‘16

- The Transparency Platform was made available to the participants and the public.
- The new Day Ahead Market (DAM) software was launched.
- Eligible Consumer Portal was operated.

‘17

- Organized Wholesale Natural Gas Market (SGM) Regulation has been published.

‘18

- Organized Wholesale Spot Natural Gas Market (SGM) was opened.
- EXIST mobile application was launched.

‘19

- The law amendment allowing the Power Futures Market (PFM) to be operated by EXIST has been published.

‘20

- The Natural Gas Market was opened for weekly products.

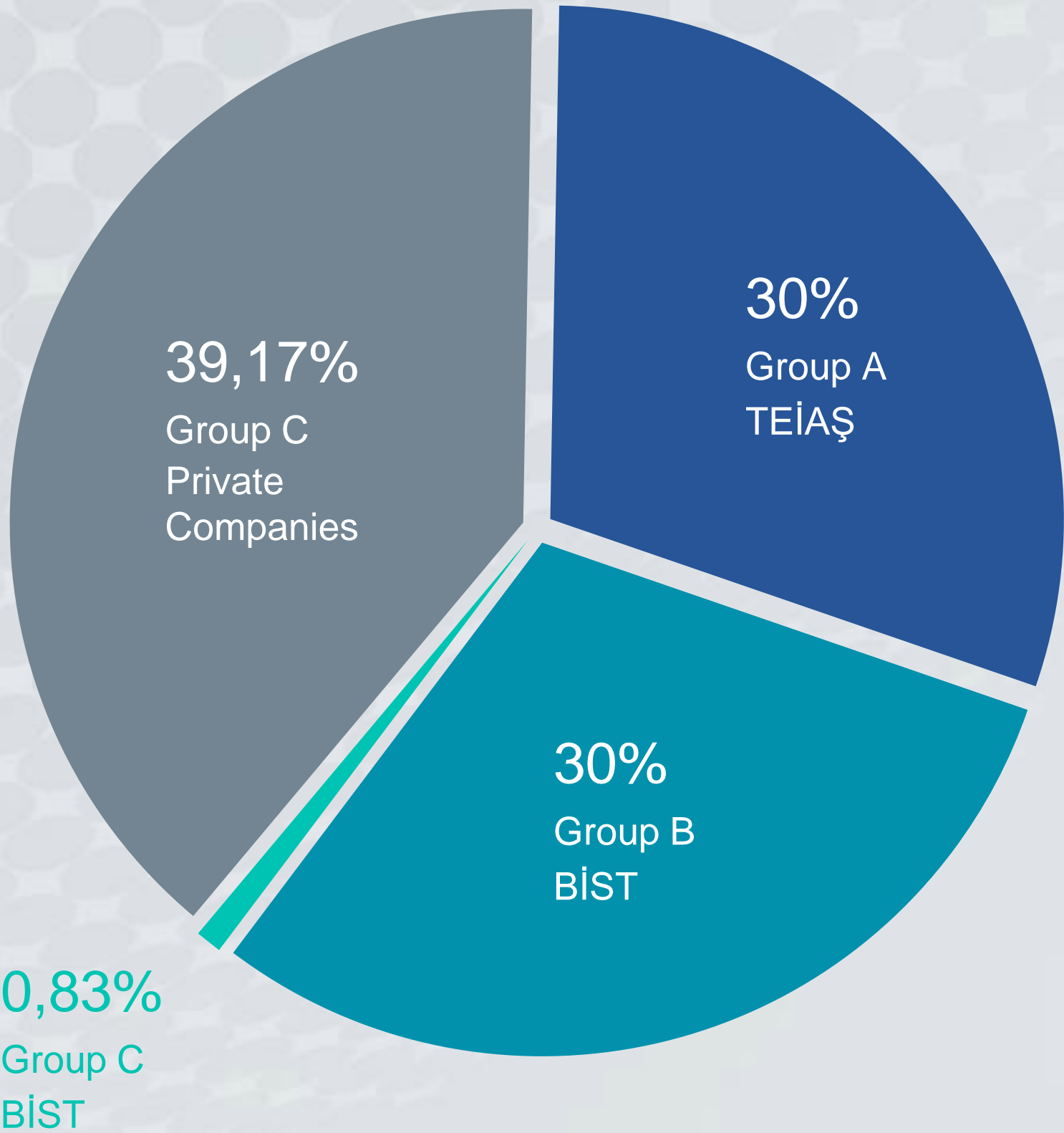
‘21

- Power Futures Market (PFM) was opened.
- Renewable Energy Resource Guarantee (YEK-G) System and Market was launched.
- Gas Futures Market was opened.

‘23

- The business development study has been completed within the Exist for the formation of Gas hub.

SHAREHOLDER STRUCTURE



SHAREHOLDERS	GROUP	SHARE QUANTITY	SHARE AMOUNT(₺)	PERCENTAGE (%)
Türkiye Elektrik İletim A.Ş. (TEİAŞ)	A	18.471.831	18.471.831	30,00
Borsa İstanbul A.Ş. (BİST)	B	18.471.831	18.471.831	30,00
Borsa İstanbul A.Ş. (BİST)	C	511.590	511.590	0,83
Private Companies	C	24.117.518	24.117.518	39,17
TOTAL		61.572.770	61.572.770	100,00

MISSION, VISION AND CORPORATE PRINCIPLES

Mission

Efficient, transparent and sustainable operation and development of energy markets.













Vision

To become a reference energy exchange for global energy markets.

Corporate Principles

- | | | |
|---------------------|------------------------|-------------------------|
| • Fair Approach | • Reliability | • Transparency |
| • Customer Oriented | • Sustainability | • Participation |
| • Innovation | • Respect to Employees | • Social Responsibility |

ACTIVITY FIELDS

 SPOT DAY-AHEAD AND INTRADAY POWER MARKET TRANSACTIONS	 POWER FUTURES MARKET TRANSACTIONS
 SPOT GAS MARKET TRANSACTIONS	 GAS FUTURES MARKET TRANSACTIONS
 RENEWABLE ENERGY GUARANTEES OF ORIGIN SYSTEM (YEK-G) AND ORGANIZED YEK-G MARKET TRANSACTIONS	 BALANCING POWER MARKET, DAY-AHEAD AND INTRADAY SPOT POWER MARKET , POWER FUTURES MARKET AND IMBALANCE 'S <u>SETTLEMENTS AND FINANCIAL TRANSACTIONS</u>
 SPOT AND FUTURES GAS MARKET <u>SETTLEMENTS AND FINANCIAL TRANSACTIONS</u>	 ANCILLARY SERVICES MARKET SETTLEMENTS
 BILLING TRANSACTIONS	 OPERATION OF THE RENEWABLE ENERGY RESOURCES SUPPORT MECHANISM (RERSM, YEKDEM)
 MANAGEMENT OF ELIGIBLE CONSUMER SUPPLIER CHANGE PROCESSES	 MANAGEMENT OF THE ELIGIBLE CONSUMER PORTAL

ENERGY MARKETS

DAM

SPOT ELECTRICITY DAY AHEAD
MARKET



IDM

SPOT ELECTRICITY INTRADAY
MARKET



PFM

POWER FUTURES
MARKET



SGM

SPOT NATURAL GAS MARKET



GFM

NATURAL GAS FUTURES MARKET



YEK-G

RENEWABLE ENERGY GUARANTEES OF ORIGIN
SYSTEM ORGANIZED YEK-G MARKET



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SGM

SPOT NATURAL GAS MARKET

The Spot Natural Gas Market (SGM), one of the most important steps taken in the development of energy trade and liberalization of energy markets in Türkiye, was put into service on 1 September 2018.

With the SGM designed and developed by EXIST using domestic and national resources, Türkiye has become the first country in its region where the natural gas price is formed in the free market.

EXIST

• SGM is an organized market that works with the logic of continuous trading.

• EPIAŞ provides central counterparty service to the parties. Physical delivery and payments are guaranteed.

• It is a market where contracts ranging from 1 day to 7 days are offered and the commercial risk undertaken can be reduced or eliminated.

• The Transmission Company has the opportunity to balance the network on a market basis with the help of SGM.

• SGM contracts are traded in the organized market and can change hands continuously until the delivery period.

• Participants can balance their portfolios and provide physical optimization.

• Current weighted average gas prices (GRF) in the market are shared instantly.

• SGM contracts are subject to the legal regulation determined by EMRA and are exempt from stamp tax.



GFM

NATURAL GAS FUTURES MARKET

Achieving, one after another, its respective goals intended to develop products and services for competitive, transparent, reliable, predictable and sustainable markets in all areas of energy trade, EXIST has most recently introduced Natural Gas Futures Market (GFM), opened for live transactions on 1 October 2021, as a new addition to the energy markets that provide service in accordance with international standards.

EXIST

- It is an organized market where market participants can trade natural gas futures with physical delivery.

- It provides market participants with the opportunity to predict the future price of natural gas and hedge against price risk.

- EPIAŞ provides central counterparty service to the parties. Physical delivery and payments are guaranteed.

- GFM provides the environment for faster forecasting and more accurate determination of natural gas price.

- GFM contracts are traded on the organized market and can change hands continuously until the delivery period.

- Market participants can trade for Monthly, Quarterly and yearly products.

- GFM ensures that risks are minimized by taking a reverse position against price changes.

- GFM contracts are regulated, exempt from stamp duty.



TRANSPARENCY PLATFORM



DATA CATEGORY	DATA NUMBER
Power Markets	58
Power Generation	6
Power Consumption	15
RESS	16
Power Transmission	10
Gas Transmission	13
SGM	26
GFM	6
Dams	8
Market Message System	1
TOPLAM	159

With the awareness that transparency has an important place for a reliable and sustainable market, EXIST, offering the Transparency Platform to the use of participants and the public in 2016, continuously increases the quality and quantity of the data published on this platform. The Transparency Platform continues to serve in line with the goal of publishing all market-related data from a single center in a fast, reliable, continuous and healthy manner.

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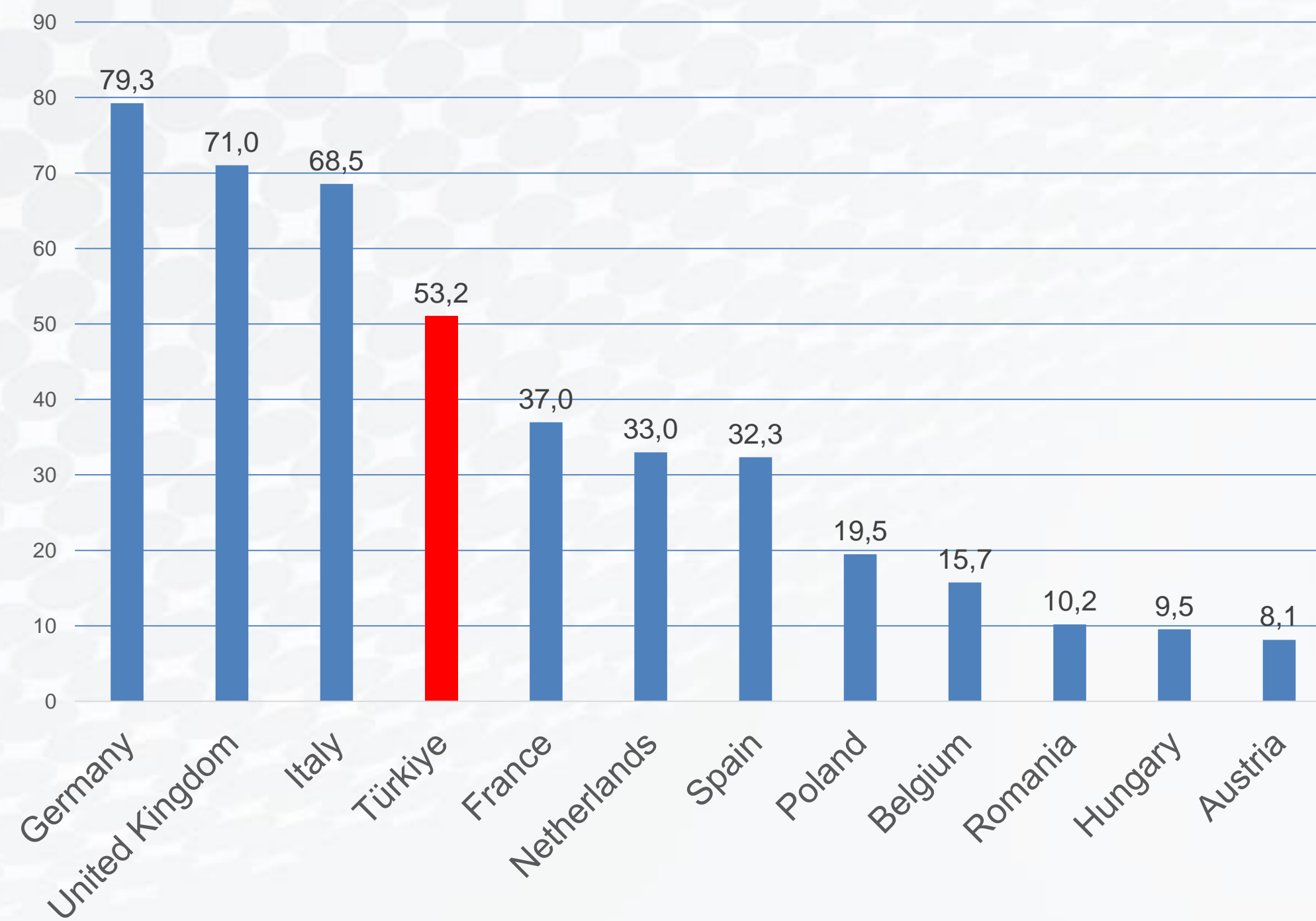
PRODUCTS AND QUANTITIES IN OUR GAS MARKET

SPOT	DAILY	<ul style="list-style-type: none">• Day Ahead• Intra Day• After Day Price• Regional	Daily Reference Price	TSO Balancing Price
	WEEKLY	<ul style="list-style-type: none">• Weekend• Week Days• Whole Week	Balancing Gas Price	Weekly Reference Price
FUTURE	MONTHLY (12)		Base Price	Daily Reference Price
	QUARTERLY (4)			
	YEARLY (1)			

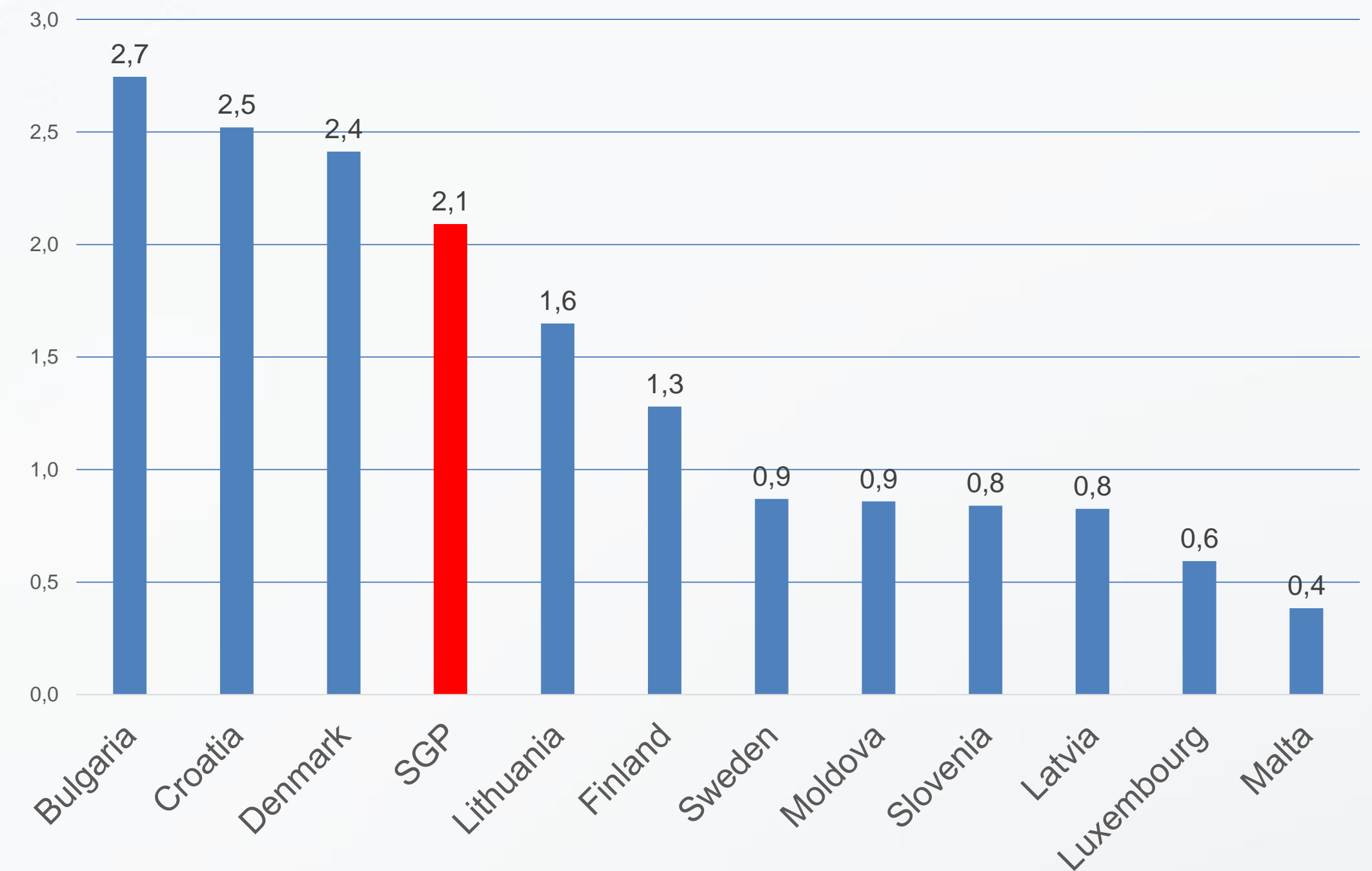
** There are 53 market participants in the spot market and the number of traders is 21.*

EU COUNTRIES AND TURKIYE GAS CONSUMPTION

Gas Consumption (bcm) 2022



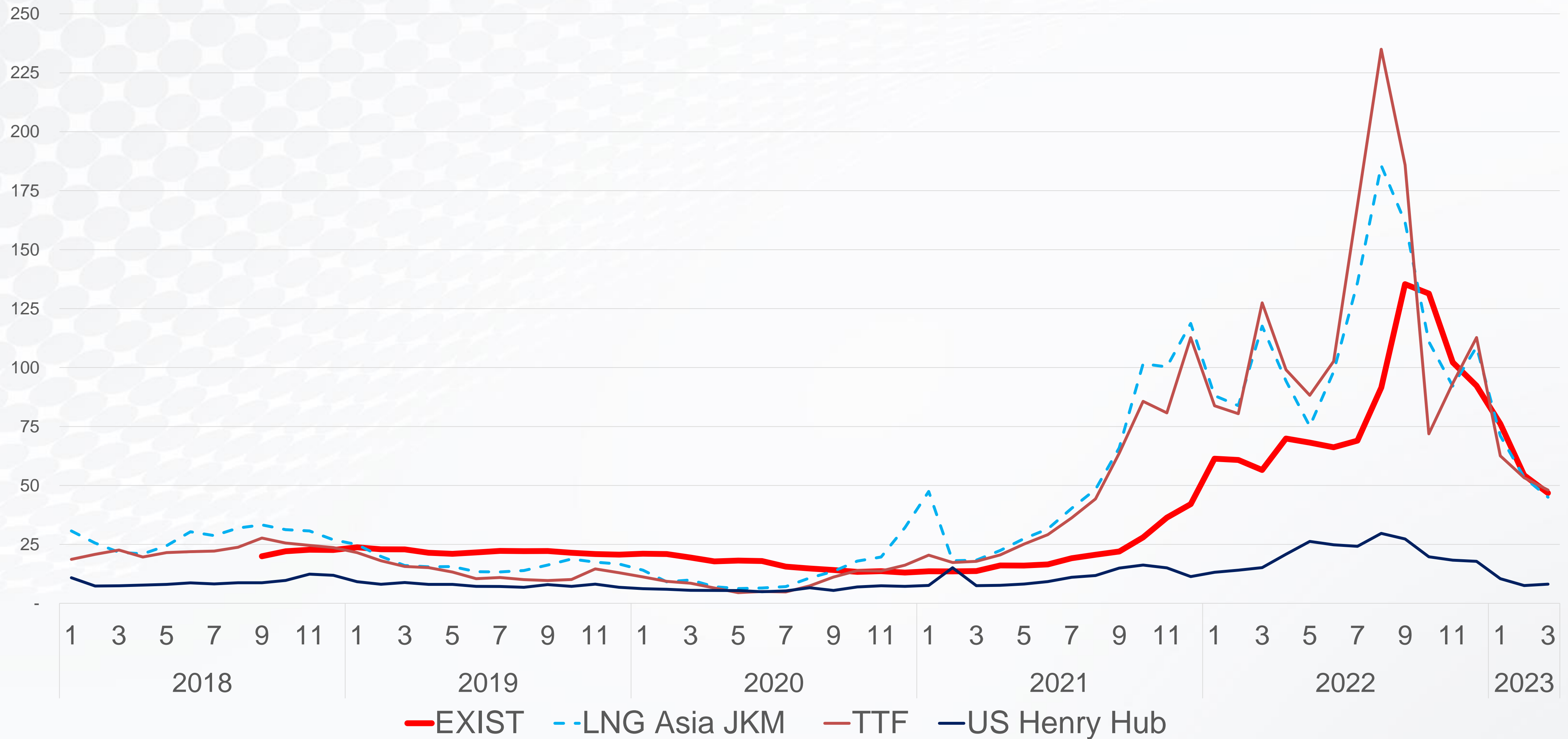
SGM Transaction Volume & Gas Consumption of Some Countries in 2022 (bcm)



Resource: Jodidb.org

SPOT PRICES

Monthly Average Spot Natural Gas Prices (EUR/MWh)

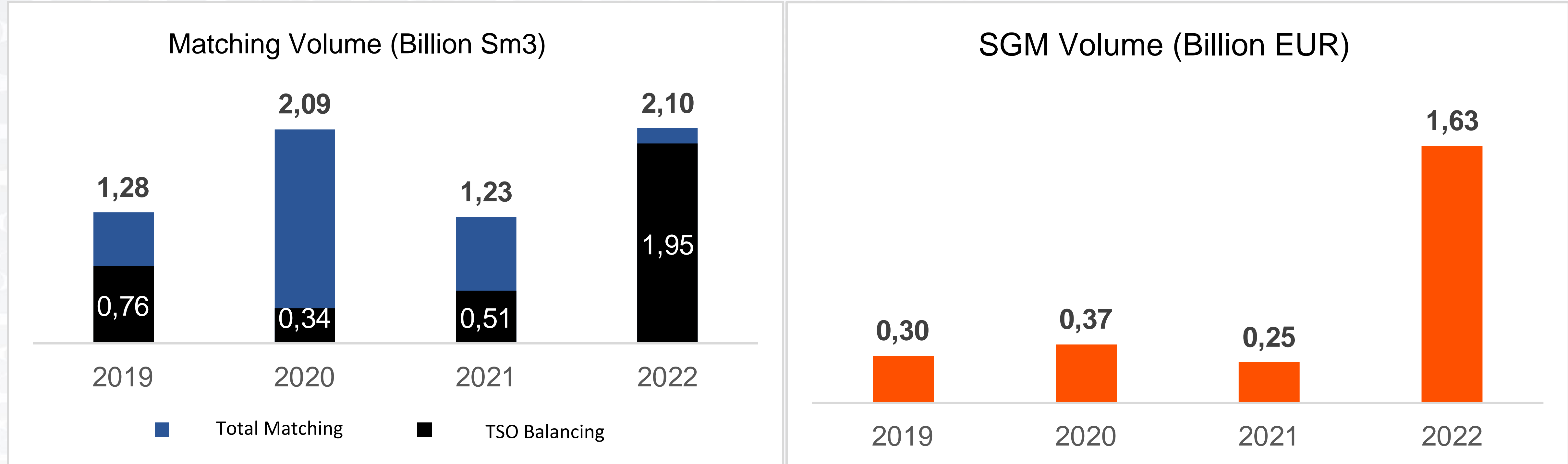


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Resource: Energymarketprice.com

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TRADING VOLUME



Since September 1, 2018, 7.3 bcm of matching to 2.7 billion EUR have been realized.

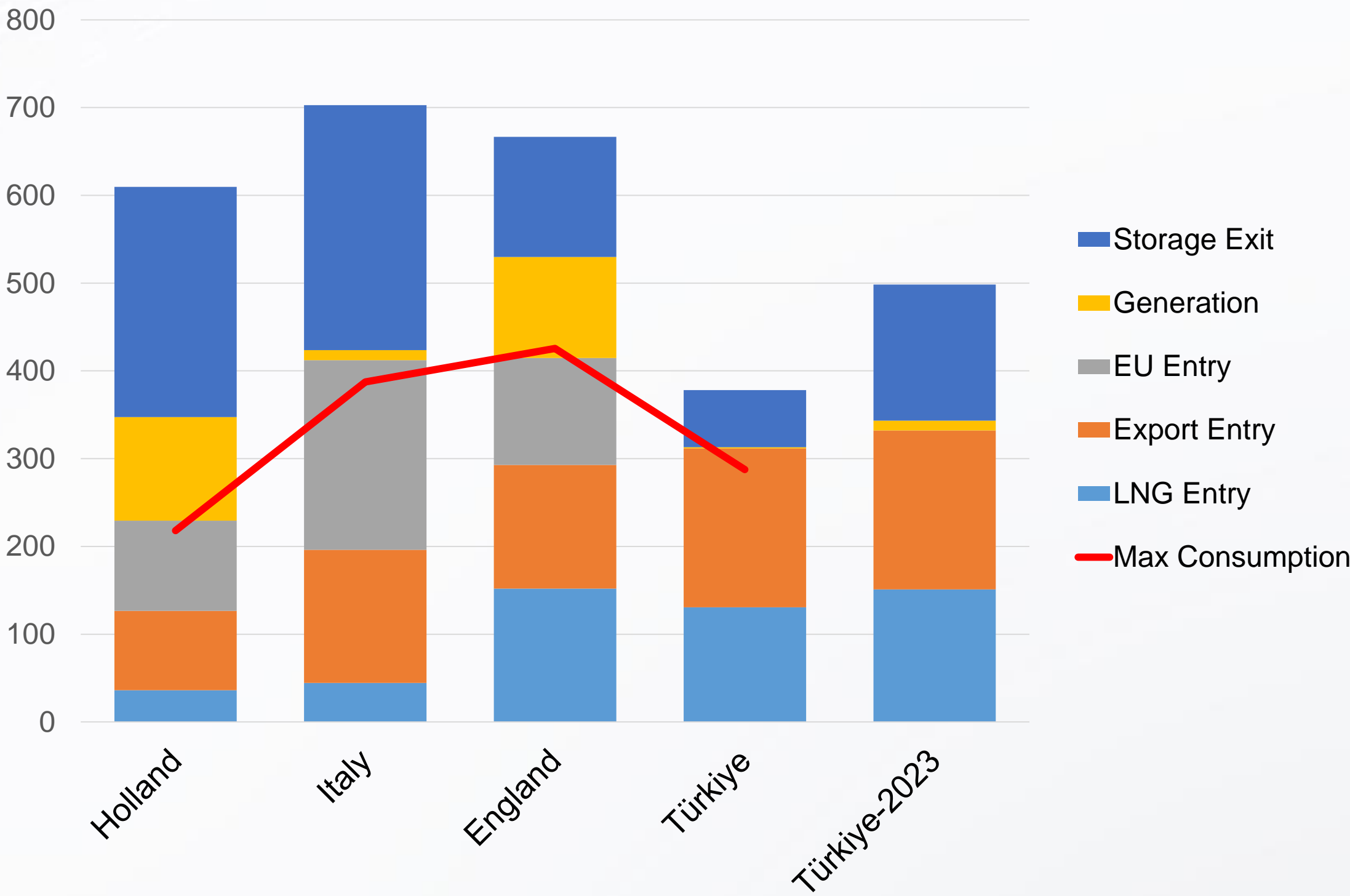
PHYSICAL DATA OF NATURAL GAS HUB (2022)

Million Sm3/Day

	Holland	Italy	England	Türkiye	Türkiye-2023
LNG Entry	70	47	152	131	151
Export Entry	91	154	141	181	181
EU Entry	80	109	0	-	
Production	112	9	100	1	11
Send-Out	262	274	0	65	155
TOTAL ENTRY	614	594	392	378	498
EU Exit	292	63	0	15	
Max Consumption	167	376	349	288	
Send-Out	132	160	0	42	
TOTAL EXIT	590	598	349	344	

Total Gas Consumption (Billion Sm3)	36	75	80	59
Storage Capacity (Billion Sm3)	12	18	1.5	10
Electricity Installed Capacity (MWe)	18.530	44.614	0	25.295

Daily Entry Capacity (Milyon Sm3)



ENTSO-G System Development Map

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THE MAP OF TURKISH GAS INFRASTRUCTURE

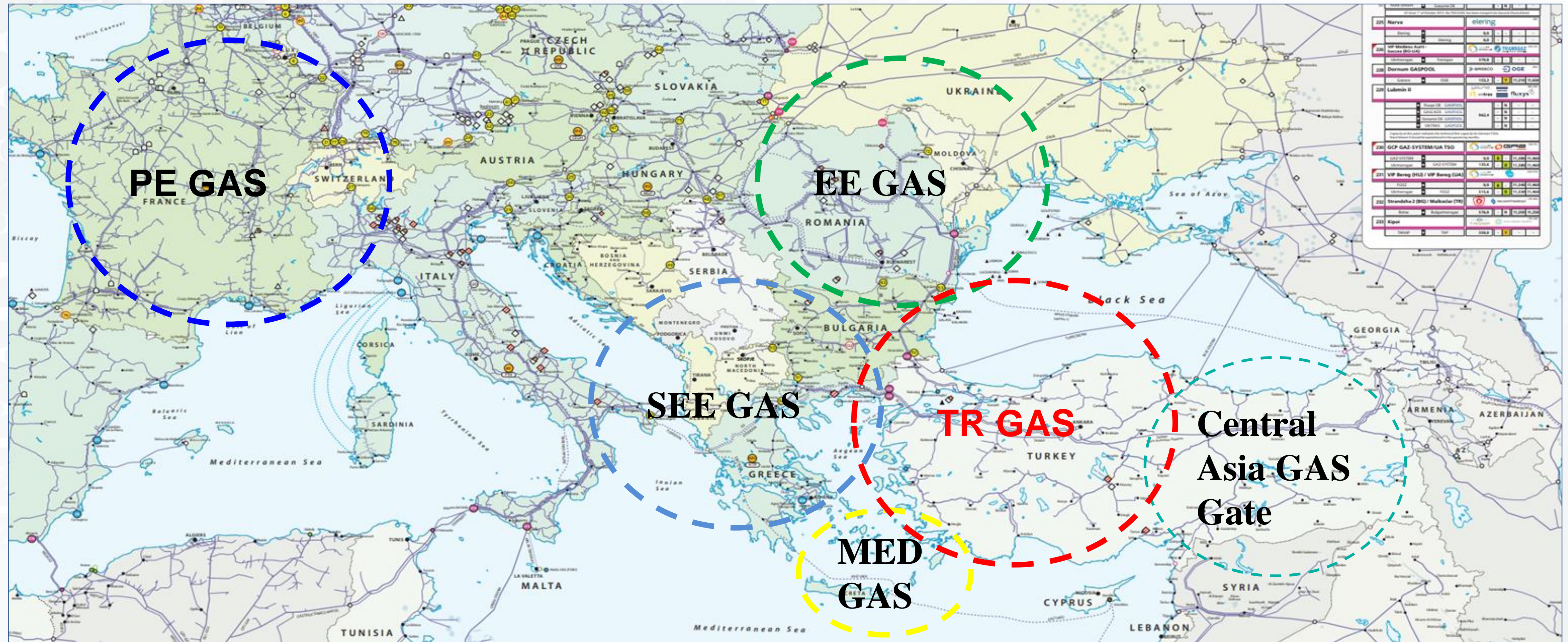


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Source: BOTAŞ

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OPPORTUNITIES OF THE REGIONAL MARKETS



Western/Northern European markets have matured and are moving East. Regions around TR: Balkans, Eastern Europe, E. Mediterranean developing.

INTERNATIONAL COOPERATION

Europex



entsoe

WORLD
ENERGY
COUNCIL | TÜRKİYE

EXIST



ENERGY EXCHANGE ISTANBUL

OUR COMPETENCIES AND STRENGTHS

Market Operation Experience

Electricity and Natural Gas
Markets operating experience

Versatile Product and Service Group

Spot and forward electricity
and natural gas market
products and services such as
settlement, invoicing,
operation of YEKDEM
mechanism

EXIST



In-house Software Development

Domestic and national market
software. Approach that
supports new technologies

International Collaborations

Cooperation and memorandum
of understanding signed with
international energy market
stakeholder institutions

TÜRKİYE ON THE PATH OF BECOMING A REGIONAL GAS HUB

- Organized Wholesale Markets

- Standardized Contracts

- Clearing & Settlement Services

- TSO System Balancing

- IT Infrastructure

- Data Sharing Platform

- Black Sea Gas Production Field

- Storage and LNG Capacity

- Route of Supply and Demand

- Great Deal of Domestic Gas Consumption

- Political Will

- Regulations

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epiastr

Maslak Mh. Taşyoncası Sk. No:1/F F2 Blok 34485
Sarıyer - İstanbul / TÜRKİYE

T: +90 212 264 15 70 F: +90 212 269 01 12

www.epias.com.tr/en

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