



# European Organized Natural Gas Markets

3rd Gas Market Conceptual Model Workshop of the Brazilian National Agency for Oil, Natural Gas and Biofuels (ANP)  
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**European Energy Exchange AG (EEX)**

# EEX AG is part of EEX Group

**7,077** TWh  
Traded on the **EEX Group**  
**power** markets in 2020

**2,412** TWh  
Traded on the **natural gas** markets  
in 2020

**320** M€  
of sales revenues

**789,921**  
Lots traded  
In **dry bulk freight** in 2020

More than  
**776**  
Trading participants  
from **40 countries**

**2000<sup>th</sup>**  
Emissions Auction (EUA+EUAA)  
in 2020

A photograph of a man and a woman in business attire standing in front of a large monitor displaying financial data. The man is on the left, wearing a blue suit and glasses, looking towards the woman. The woman is on the right, wearing a blue dress, looking back at the man. The monitor shows a line chart with a green line and a table of data. The background is a blurred office setting.

# European Gas markets liberalization

## French market case study

# Pre-requisites for the creation of an Exchange

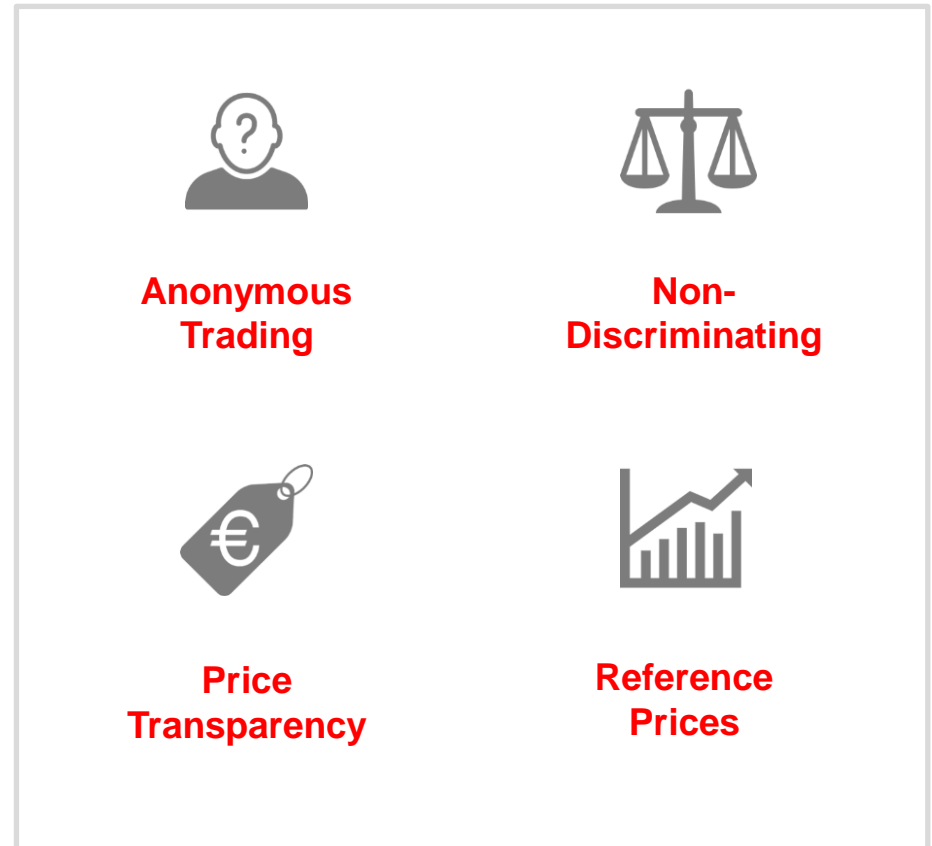
- **Step 1 - Liberalization of the energy markets in France & Institution of an independent regulator**
  - 1998 & 2003: European Directives for the liberalization of gas market
  - 2000: Transcription in French Law for power (creation of Powernext in 2001)
  - 2003 to 2005: transcription in French Law for gas (Powernext Gas)
  - 2000: Institution of an independent authority in the sector (CRE)
  
- **Step 2 – Creation of Independent TSOs**
  - Independence of system operators is compulsory to guarantee non-discriminatory facilities access (unbundling)
    - Creation of TIGF (Total Infrastructure Gaz France), 100% subsidiary of Total in 2005
    - Creation of GRTgaz, 100% subsidiary of GDF-Suez (today Engie) in 2005
  - Rules are set to ensure capacity access to new market players
  
- **Step 3 – Simplification of the transportation scheme & creation of Hubs**
  - Creation of Entry-Exit zones : the French gas transportation network is now organized in 2 full entry-exit balancing zones :
    - North Zone (GRTgaz)
    - TRS “Trading Region South” (operated by GRTgaz and TIGF)
  - Creation of Hubs on each Balancing Zones : in France, Virtual Points called “PEGs” (Gas Exchange Points) are created in 2005 in each zone : these virtual hubs enable title gas trading.
  
- **Step 4 – Development of bilateral trading and establishment of OTC price references**
  - Increasing need for trading is due to the growing number of market parties and the opening of the retail market
  - OTC Brokers are offering services facilitate market access by crossing trading interests
  - Press publications : Heren, Platts, Argus published their first price references in 2005

# Good start... but not a mature market yet

- OTC Brokers facilitate market access by crossing trading interests...  
... but do not provide :
  - Centralized market access (bilateral agreements are required)
  - Anonymity
  - Counterparty risk management
  - Delivery and payment guaranties
- Energy press publications provide market information...  
...but:
  - These price references are not always based on real transactions
  - They can be manipulated (not transparent)

# Importance of Exchange Trading

- Creating **transparency** through recognised reference prices and the publication of market data
- Access to a large number of **trading participants** and concentrating liquidity on **one trading platform**
- High degree of **automation** on account of electronic and standardised trading and settlement processes
- Elimination of the counterparty risk through clearing and settlement via clearing house
- Non-discrimination and equal treatment of all trading participants due to **anonymity and regulation**



# Key success factors to launch an exchange

- Support of the incumbents
- Implication of market makers (official or not)
- Time-to-Market
- Competition
- Number of registered members
- Institutionalization (TSOs, regulator, Price References)
- Quality of the market model and services
- Trading system
- Costs



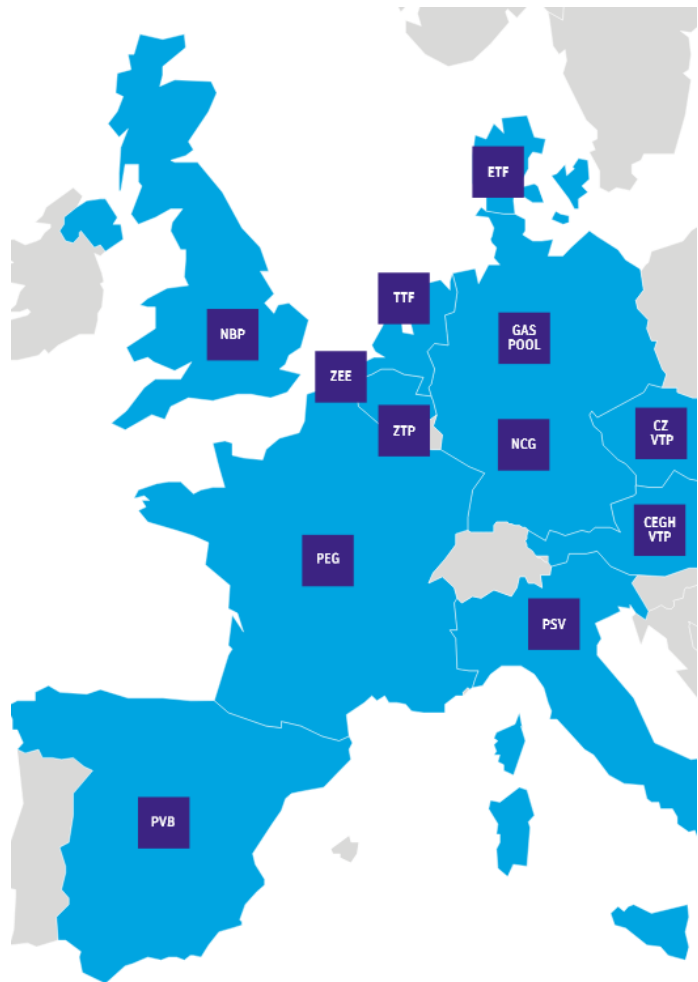
A blurred background image of a trading floor with several people working at desks with multiple computer monitors. A semi-transparent grey rectangle is overlaid on the image, containing the title text.

# Trading in Gas Markets today at EEX



# EEX detailed products and services in natural gas

## *A European and complete offering*



### 10 countries / 12 hubs

- Geographical and time spread products

### Sales teams in

- London
- Paris
- Madrid
- Milan
- Leipzig
- Brussels

### Clearing services by ECC

**Single admission process to all EEX products**

### 24/7 Spot markets on Trayport

**Futures\* markets from 8h00 to 18h00 on T7/Trayport**

- Time Spreads
- OTC trade registration (STP)
- Options (on TTF only)

### Full service suite

- Third party trading
- Third party shipping
- Combined cash limits
- Data and indices provision
- Reporting services

*\*precise product offering depends on the market area. Products are listed both on the Regulated Market and on the OTF platforms of EEX*

# Trading on the screen: trader's point of view

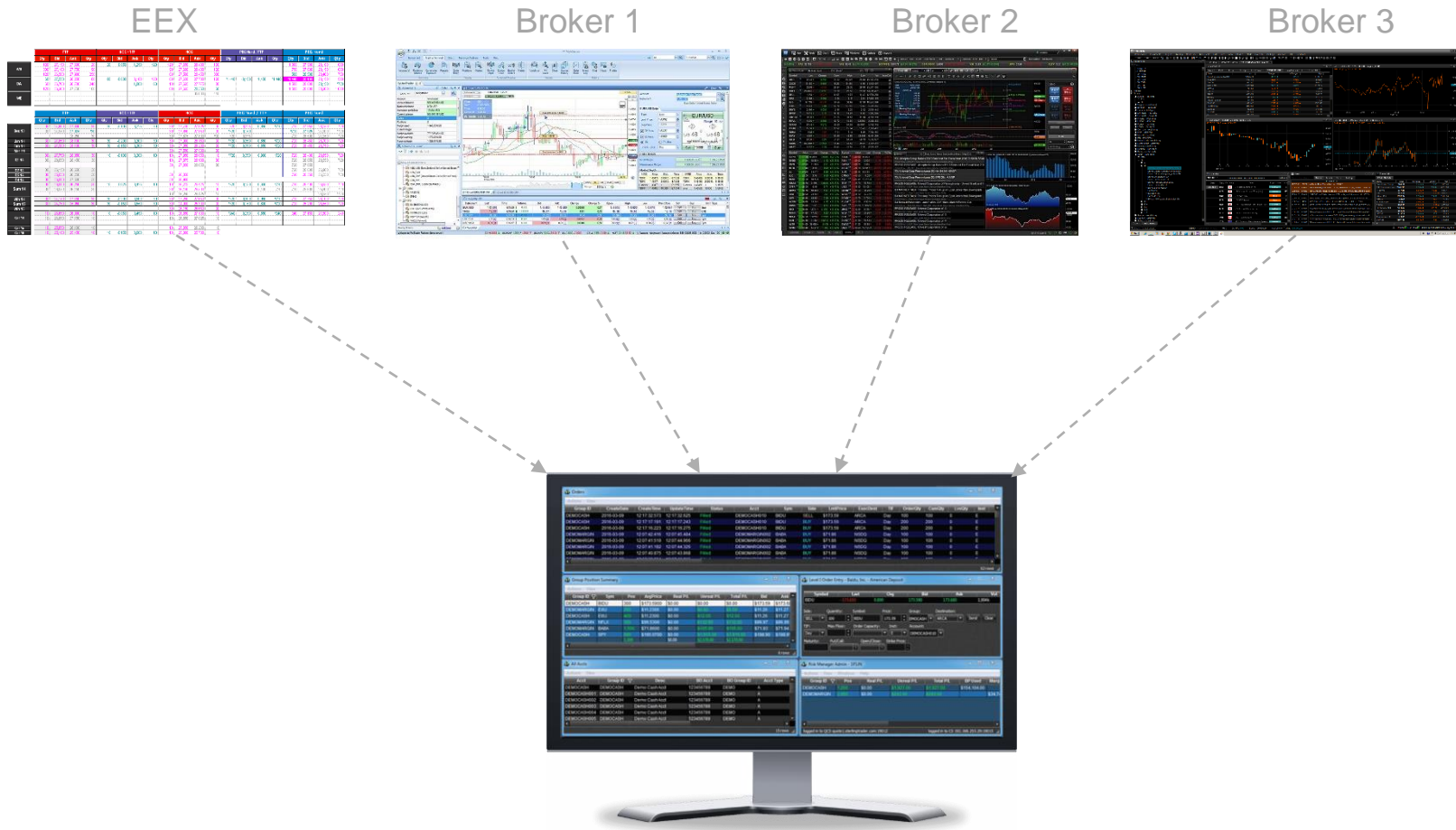
	TTF				NCG / TTF				NCG				PEG Nord / TTF				PEG Nord			
	Qty	Bid	Ask	Qty	Qty	Bid	Ask	Qty	Qty	Bid	Ask	Qty	Qty	Bid	Ask	Qty	Qty	Bid	Ask	Qty
WD	120	27,150	27,600	20	20	0,050	1,250	120	120	27,650	28,400	130					1 000	27,900	28,100	1 000
	300	27,100	27,750	90					90	27,600	28,400	120					750	27,600	28,150	1 000
	120	26,500	27,900	250					60	27,500	28,450	300					500	26,500	28,400	750
DA	60	27,550	28,250	60	60	-0,600	0,100	120	60	27,650	27,700	120	*1 440	-0,150	1,450	*1 440	*1 440	28,100	28,150	1 500
	60	26,700	28,700	240			1,000	60	10	27,625	27,775	30					1 500	28,000	28,150	*720
	120	26,200	27,750	100					80	27,625	28,350	60					1 500	28,000	28,200	1 000
WE											35,000	440								

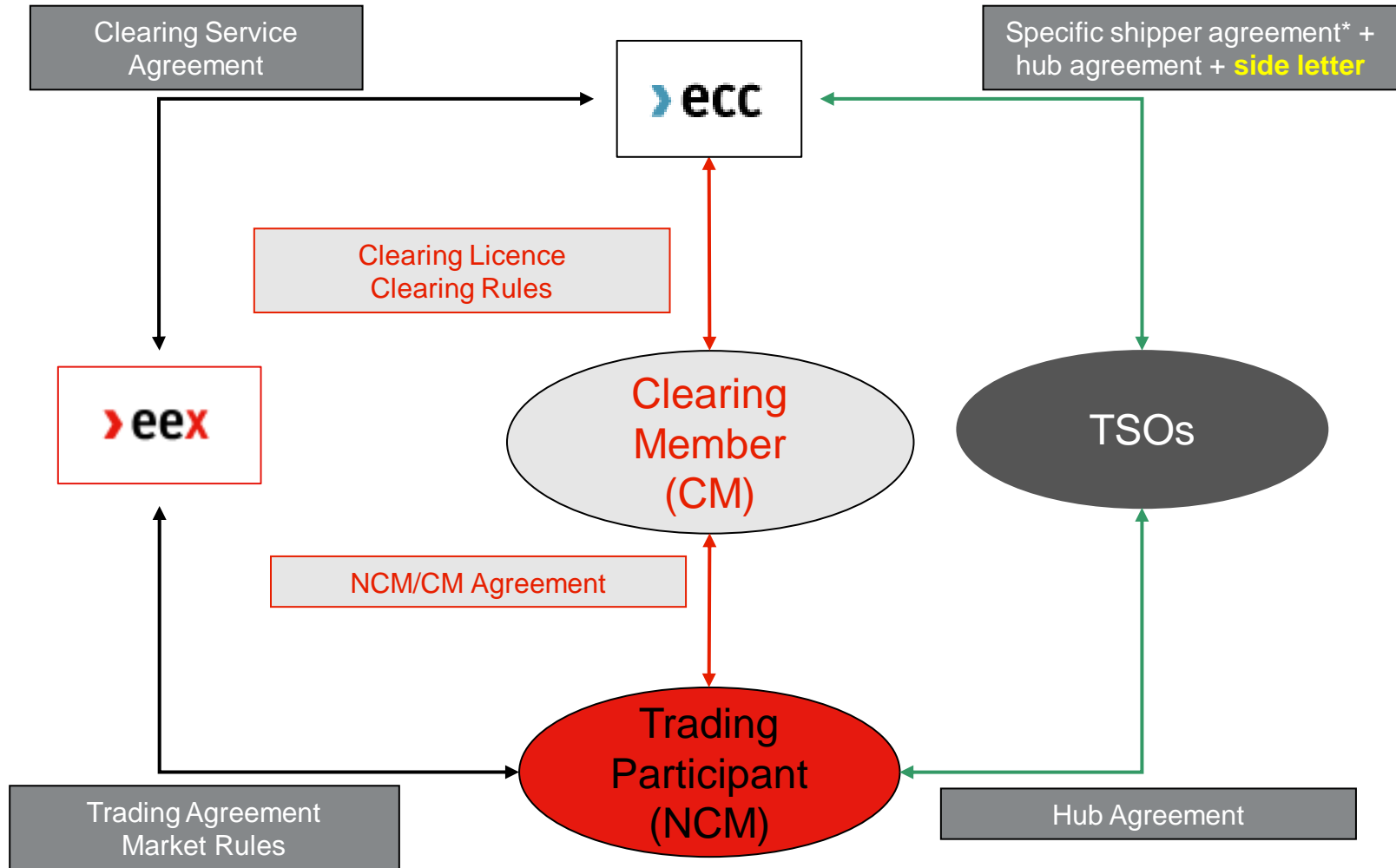
	TTF				NCG / TTF				NCG				PEG Nord / TTF				PEG Nord			
	Qty	Bid	Ask	Qty	Qty	Bid	Ask	Qty	Qty	Bid	Ask	Qty	Qty	Bid	Ask	Qty	Qty	Bid	Ask	Qty
Dec 13	30	27,600	27,800	30	30	-0,100	0,225	30	30	27,700	27,825	30	720	0,325	0,650	*720	720	27,950	28,250	720
	30	27,950	27,925	*30					30	27,650	27,850	30	*720	0,150			*720	27,925	27,900	*720
			28,250	30					30	27,875	27,800	*30	720	0,375			720	28,500	27,950	720
Jan 14	30	27,850	28,100	30	30	-0,200	0,300	30	30	27,900	28,150	30	*720	0,350	0,850	*720	720	28,450	28,700	720
Feb 14	30	27,900	28,100	30	30	-0,150	0,300	30	30	27,900	28,200	30	*720	0,350	0,850	*720	720	28,450	28,750	720
Mar 14									30	27,550	27,900	30								
Q1 14	30	27,750	28,050	30	10	-0,100	0,300	10	10	27,950	28,050	10	*720	0,350	0,900	*720	720	28,400	28,650	720
	30	28,050	28,450	30					10	27,875	28,100	30					720	28,050	28,550	720
									30	27,850	28,050	30					720	27,850		
Q2 14	30	26,150	26,650	30													720	26,600	26,900	720
Q3 14	30	25,850	26,250	30					30	26,050							720	26,250	26,550	720
Q4 14	30	26,800	27,500	30					30	26,900										
Sum 14	30	26,000	26,250	30	10	0,025	0,425	10	10	26,275	26,425	10	*720	0,150	0,650	*720	720	26,400	26,650	720
	30	26,050	26,450	30					30	26,150	26,500	30			0,400	720	720	25,600	25,900	720
									10	26,250	26,425	10							26,050	*720
Win 14	30	27,150	27,450	30	30	-0,200	0,500	30	30	27,250	27,650	30	*720	0,300	0,950	*720	720	27,750	28,100	720
Sum 15	30	24,750	25,050	30	30	-0,150	0,550	30	30	24,900	25,300	30	*720	0,150	0,800	*720	720	25,200	25,550	720
Win 15									30	26,150	26,650	30								
Cal 14	10	26,650	26,900	10	10	-0,050	0,450	10	10	26,850	27,100	10	*240	0,250	0,850	*240	240	27,150	27,500	240
	10	26,850	27,150	10					10	26,850	27,025	10								
Cal 15	10	25,650	26,100	10					10	25,850	26,200	10								
Cal 16	10	25,100	25,450	10	10	-0,150	0,600	10	10	25,300	25,700	10								

# The front end is part of an integrated platform

## This allows traders to use it along with other venues



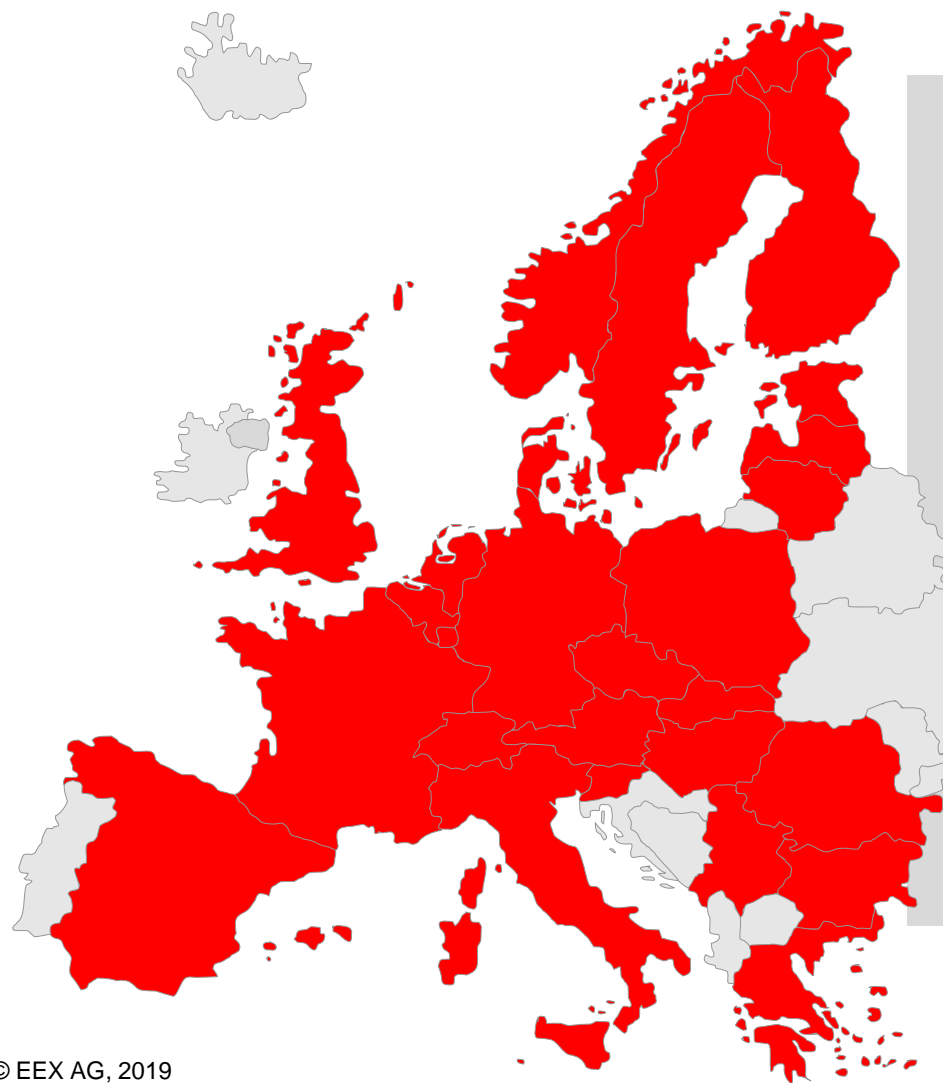
# Contractual framework: Exchange, TSOs, Clearing House



\*This specific shipper agreement allows specific rights to ECC such as:

- Single sided nomination and firmness of nominations
- Exemption of delivery fees and security
- Information rights and confidentiality agreements

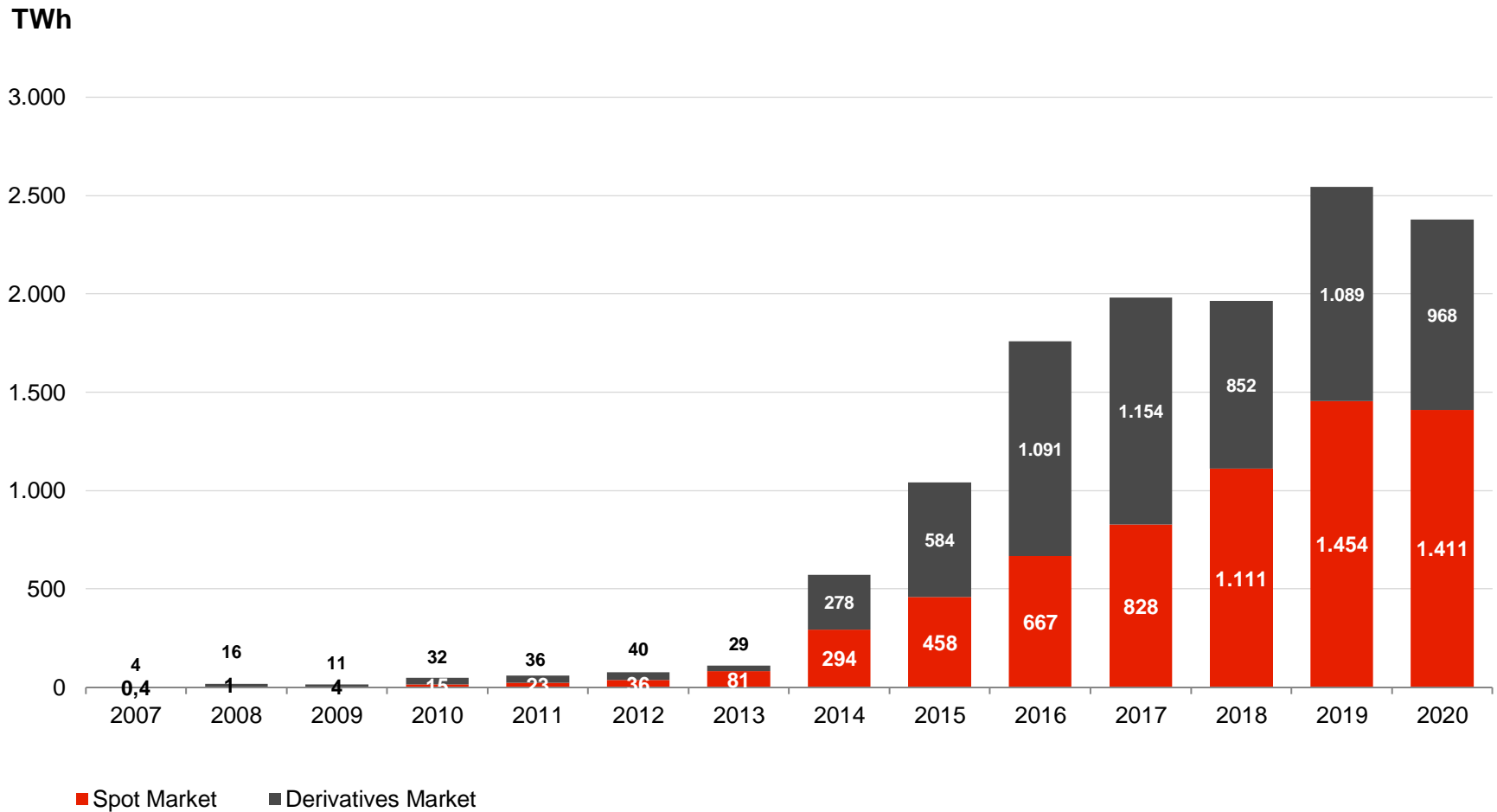
# Trading participants of EEX in Europe



**EEX connects 413 trading participants from 30 countries:**

<b>23</b> Austria	<b>4</b> Luxembourg
<b>8</b> Bulgaria	<b>18</b> Netherlands
<b>17</b> Czech Republic	<b>10</b> Norway
<b>14</b> Denmark	<b>9</b> Poland
<b>1</b> Finland	<b>2</b> Portugal
<b>24</b> France	<b>6</b> Romania
<b>89</b> Germany	<b>8</b> Slovakia
<b>10</b> Greece	<b>8</b> Slovenia
<b>11</b> Hungary	<b>17</b> Spain
<b>5</b> Ireland	<b>4</b> Sweden
<b>40</b> Italy	<b>29</b> Switzerland
<b>1</b> Liechtenstein	<b>43</b> United Kingdom
<b>1</b> Georgia	<b>1</b> N.N.
<b>1</b> Cayman Islands	<b>3</b> Belgium
	<b>1</b> United States
	<b>1</b> Malta
	<b>4</b> Singapore

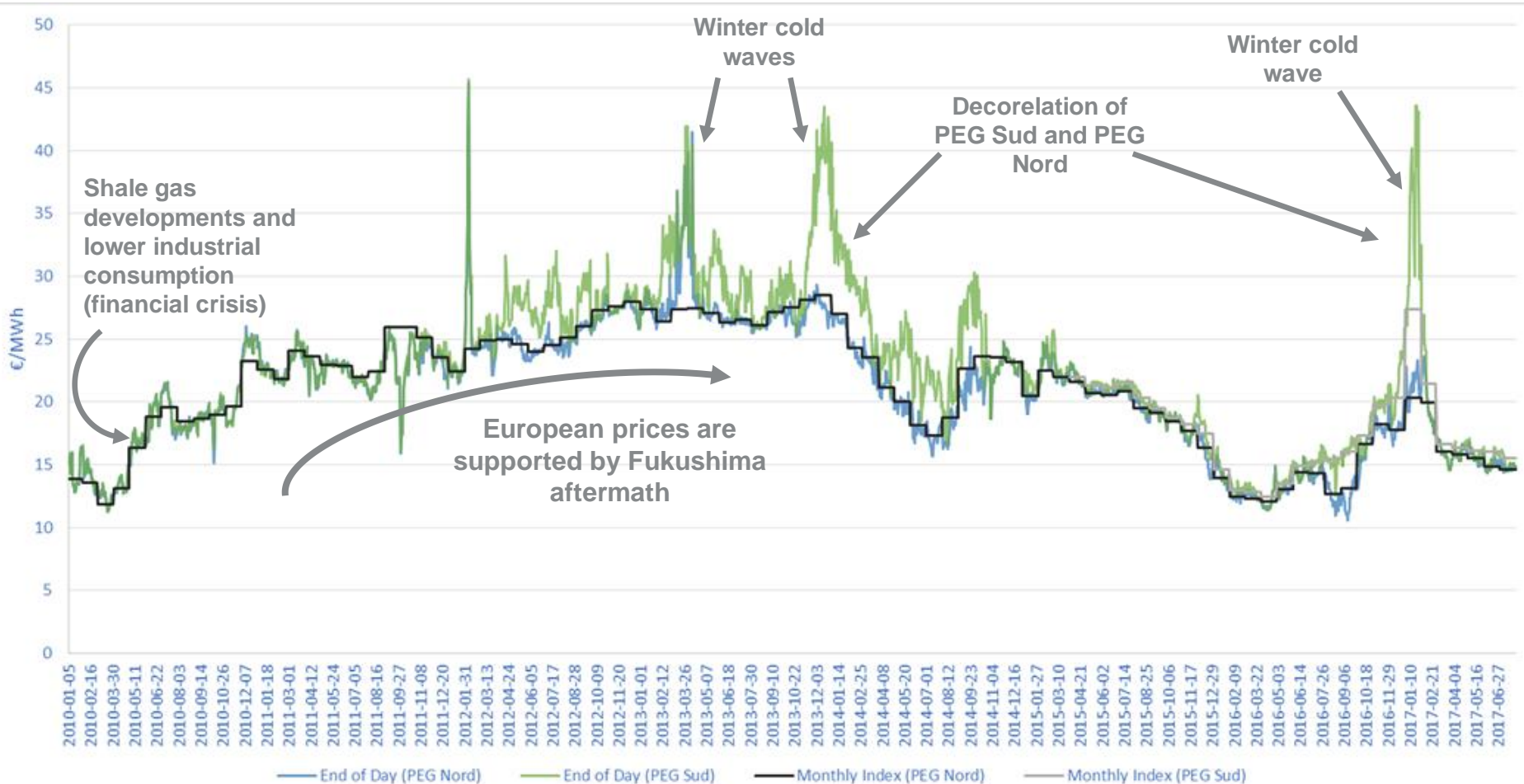
# Trading volumes in EEX Gas Markets



# Quality price references used by the industry

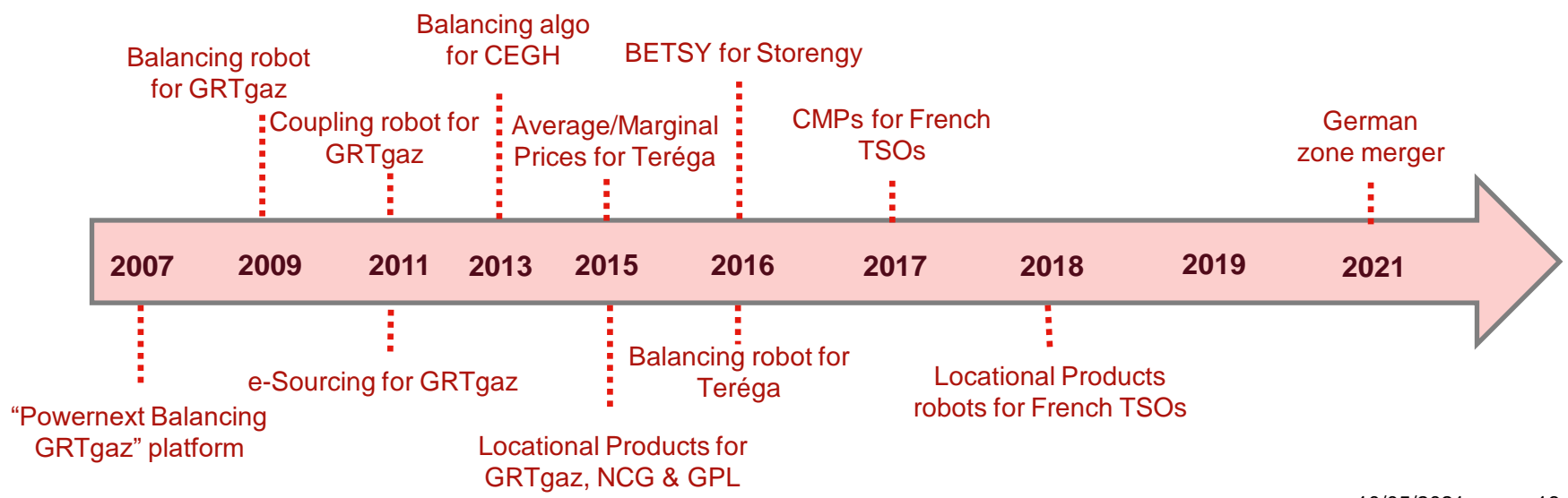
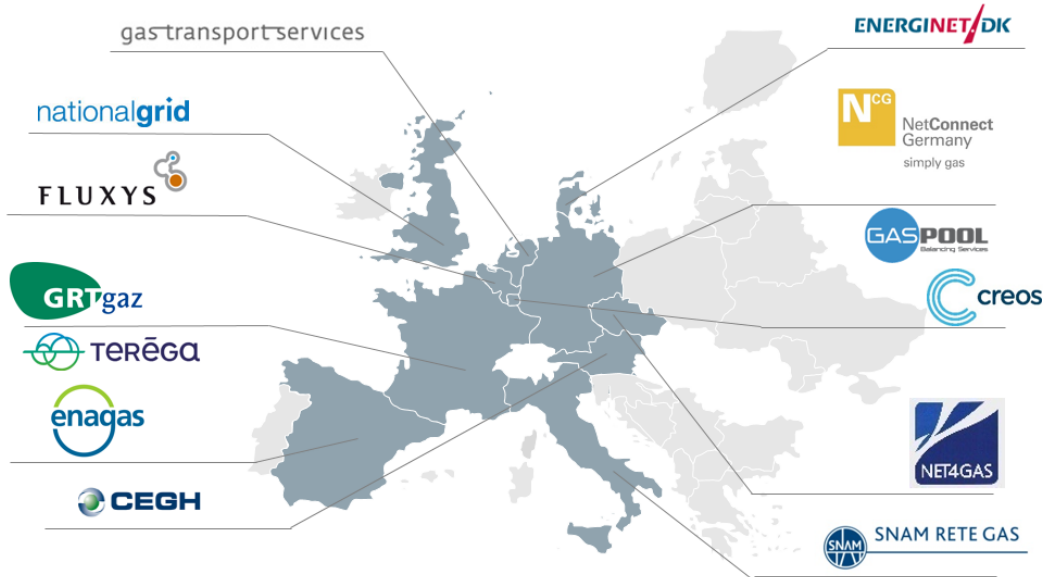
We publish daily prices for spot and futures, including a monthly index

For instance, in France:





# EEX Gas services : a continued support to European TSOs and SSOs



# Looking forward to working with you!

EEX is open to any collaboration with the Brazilian authorities and all stakeholders of the Brazilian gas market to overcome the many challenges of such a transformation of the Brazilian gas sector, in the coming years as we have been doing already in other parts of the world.

- There is a wide range of areas in which our expertise could be valuable:
  - Consultancy services in market design and regulation, by sharing expertise in product and services design, market development strategies, regulatory strategy, market surveillance, financial products development, market and sector coupling, etc.
  - Technological / IT support in development, hosting and operation : trading and auction platforms technology, balancing algorithms for TSO, etc.
  - Clearing services via (counterparty risk and guarantees management, physical and financial settlement of transactions, providing security and cross-margining, etc.)
  - Full market operations

Muito obrigado pela sua atenção!

Contact:

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