



The Role of EEX in shaping sustainable commodity markets

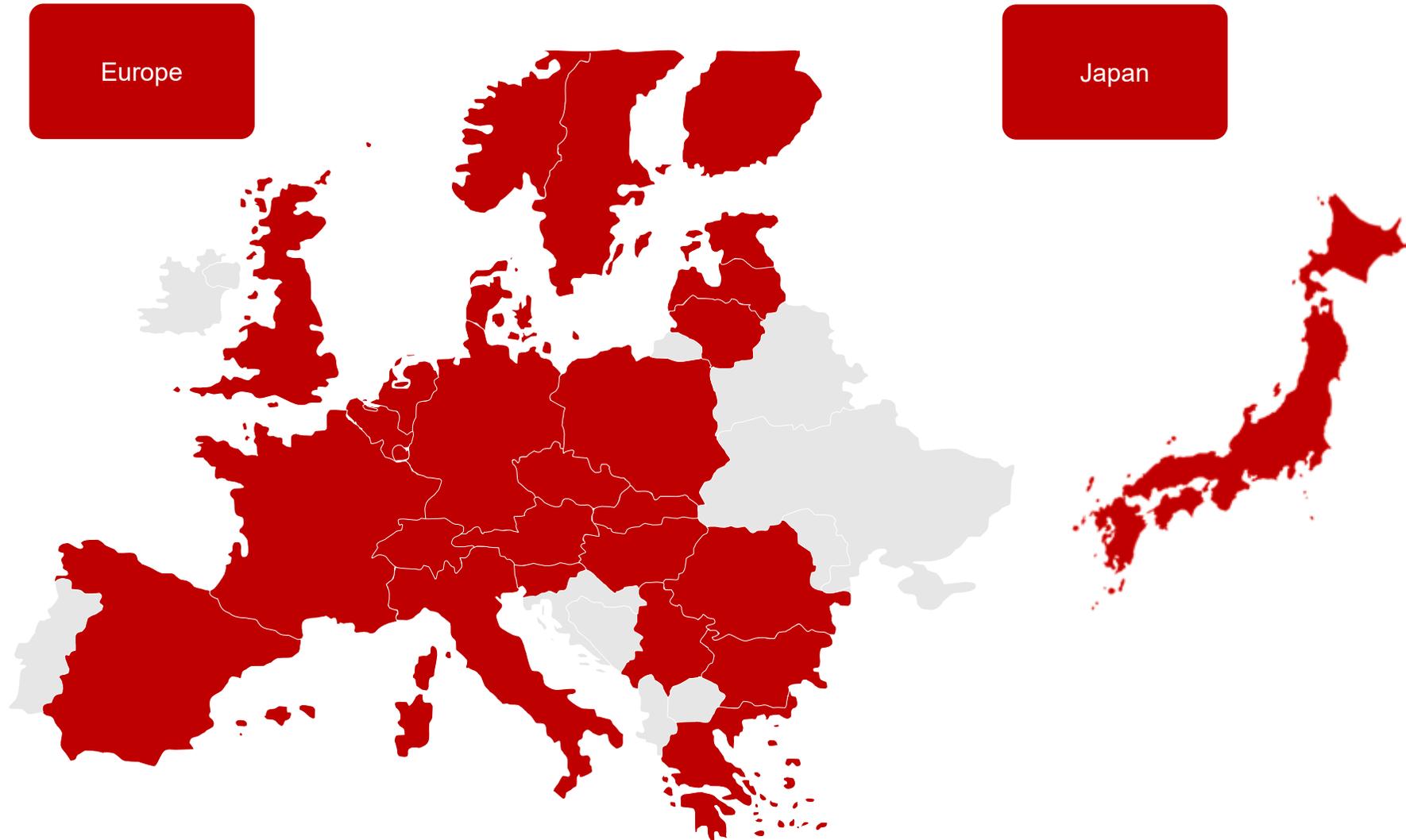
ALL THINGS ENERGY FORUM

2 – 4 June 2021

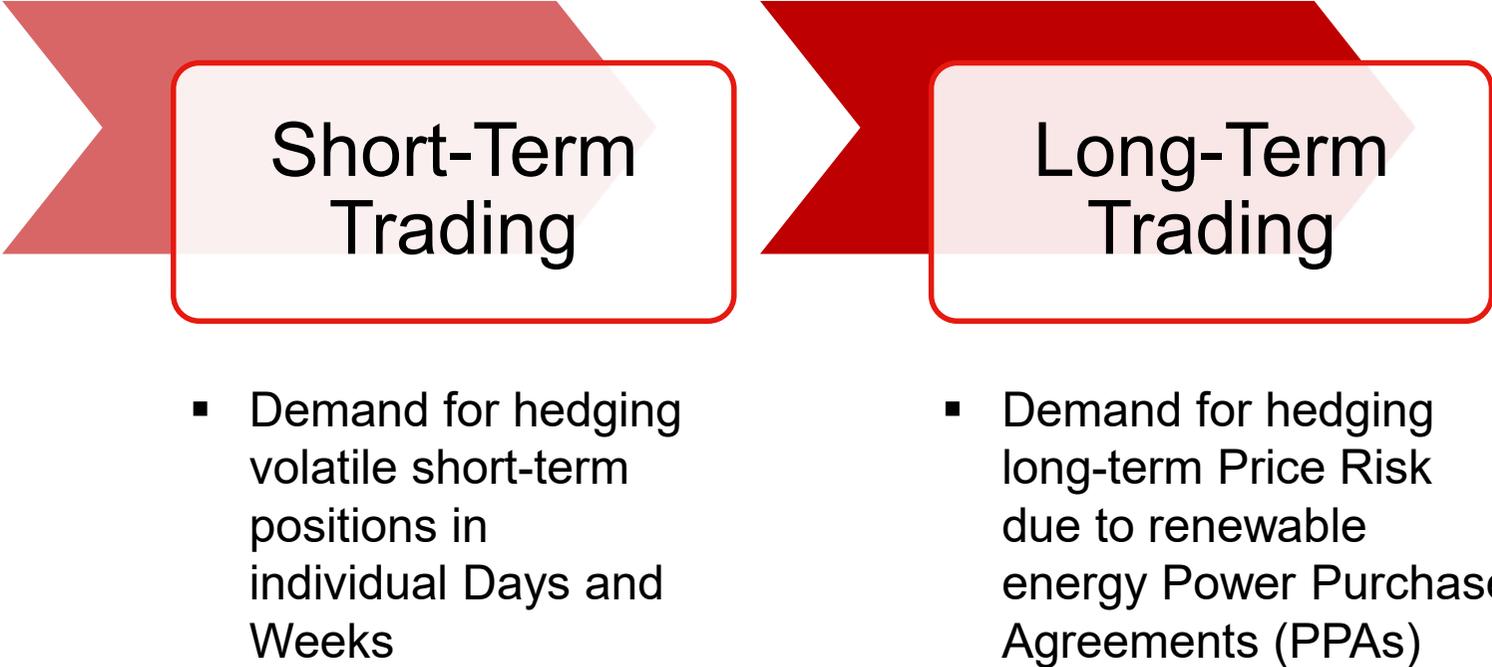
part of eex group

EEX Long-term Hedging (PPAs)

Market Coverage – EEX Power Derivatives



Renewables are driving two major trends in Power Derivatives markets



Short-Term Trading

- Demand for hedging volatile short-term positions in individual Days and Weeks

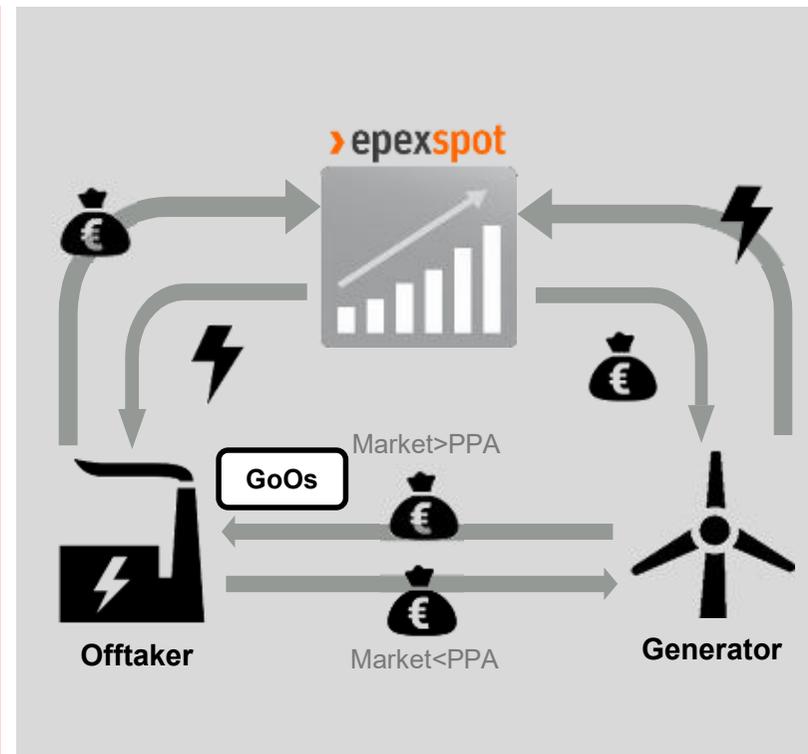
Long-Term Trading

- Demand for hedging long-term Price Risk due to renewable energy Power Purchase Agreements (PPAs)

PPAs create Spot Price Risk Exposure

Financial PPAs as a first guarantee of revenues for the Generator and long-term price certainty for the Offtaker; but physical flows are executed on the Spot market

Financial PPA

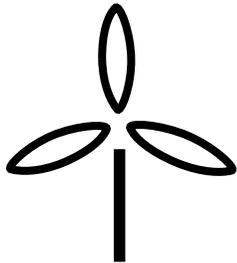


- Future-based agreement from 5 up to 20+ years
- **Production is sold at the Spot market**, offtaker procures via wholesale market, no physical delivery via balancing accounts
- Different options for structuring such as CfDs, Options, Index-based
- **In combination with GoOs** to qualify as “green power” as no direct access to renewable power from a certain generator

Due to Spot price risk exposure, a **long-term hedge** can be made on the Futures market to offset risk, ideally to the same tenor of the PPA

How are EEX Members active in PPAs?

RE Developers sell Power via Long-Term PPAs



EEX Members buy Power via Long-Term PPAs and build RE assets



EEX Members provide balancing services on Spot & hedge via Futures

> epexspot

> eex

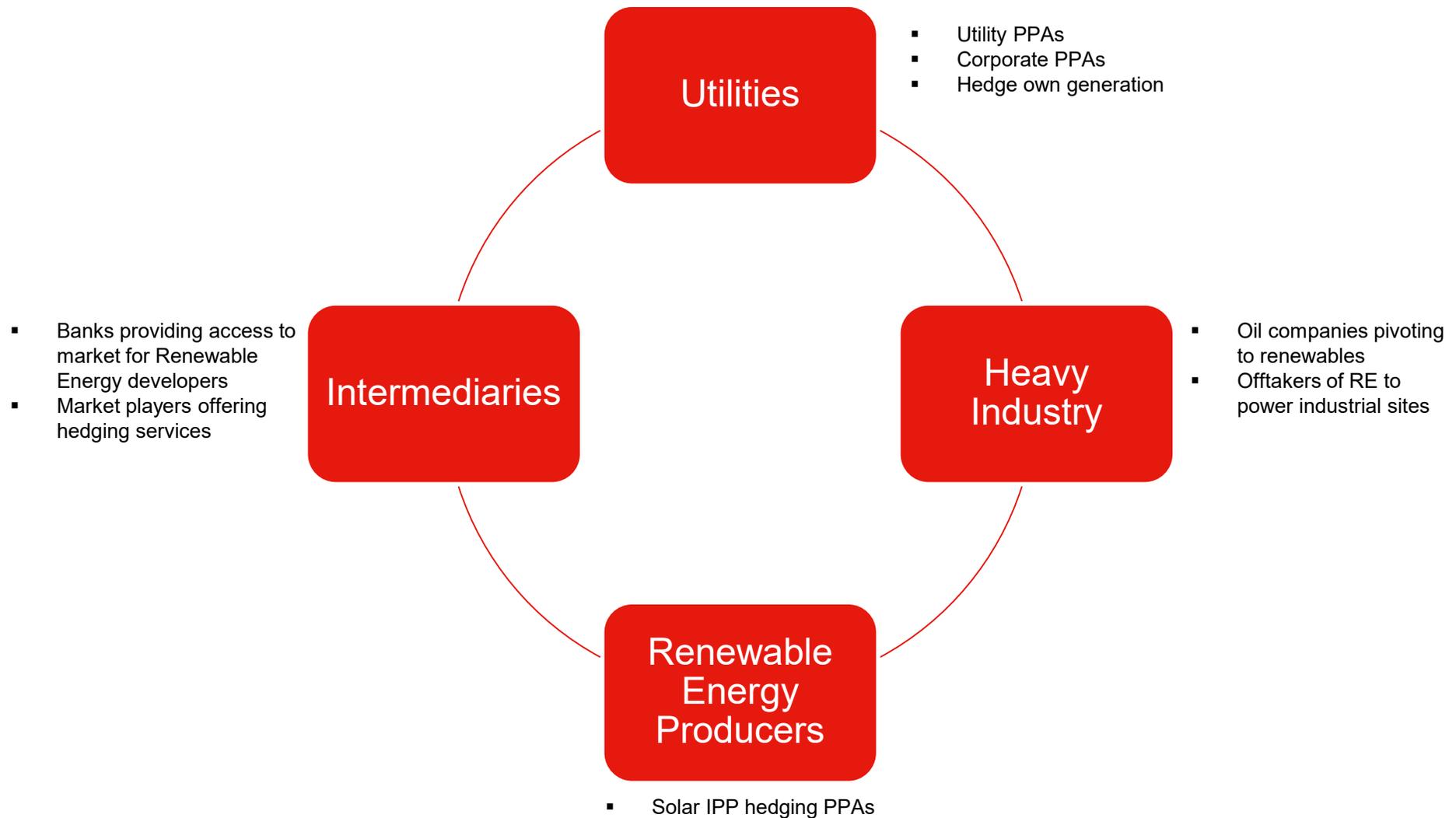
Banks provide financing once PPA is in place



EEX Members sell Power via LT Corporate PPAs

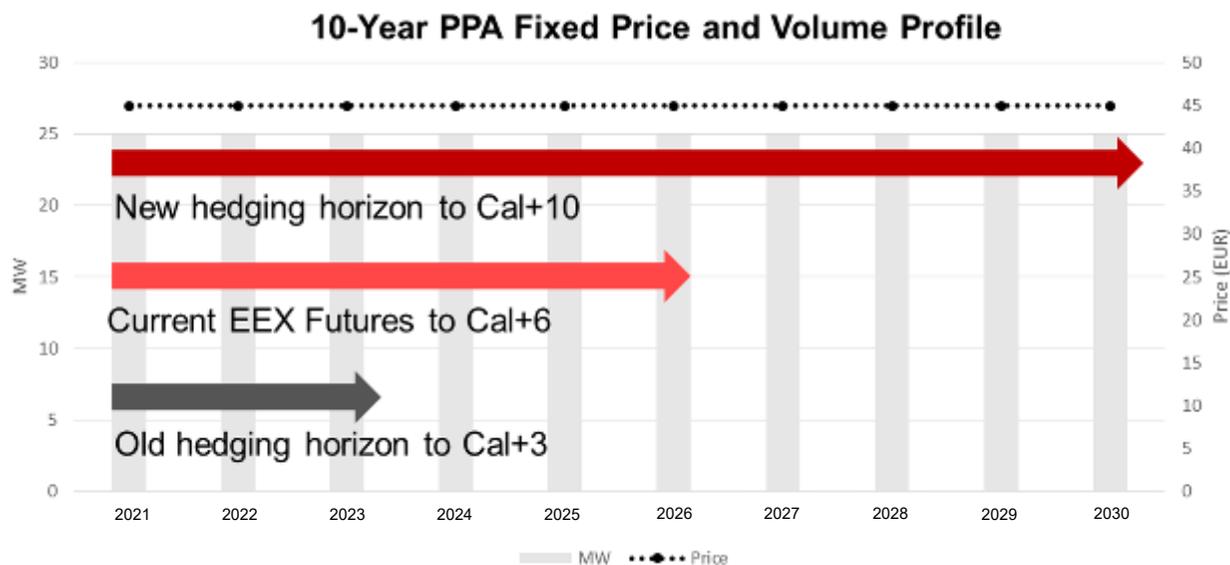


Who are the PPA Hedgers on EEX?



New Renewables investments are driving demand for long-term risk management

- EEX members have been increasingly demanding long-term hedging capability in order to manage risk from long-term contracts such as PPAs, primarily used to fund the construction of new Renewable Energy assets
- EEX is working towards **extending to Cal+10** in markets with high potential of PPA activity: **Spain, Germany and Italy**, to facilitate long-term hedging and more PPA development
- PPAs, combined with hedging price risk on exchange, provides a **market-based solution to achieving EU renewable energy targets** instead of Member States relying on onerous subsidies (e.g. CfDs)



Merchant Renewables are the Next Phase in the Energy Transition



PPAs are one enabler of new Renewable Energy investments....



...but the market is in need of more standardisation and better risk management products in order to grow and meet the EU's ambitious targets.



Major energy players are already starting to hedge their long-term price risk with standard EEX products.



EEX will ensure we remain part of our Members' long-term hedging strategy, and explore opportunities to build new products for risk management of Renewable Energy.



EEX Emissions Markets

part of eex group

Key Benefits of EEX's Emissions Markets

Markets & products	<p>Unique access to emissions auctions on 4 days/week plus continuous trading on one single exchange</p> <p>Most liquid power market in Europe, closely tied to emissions</p>	✓
Participants	<p>Strong client base in emissions markets, including utilities, industrials and financial players alike</p>	✓
Price quality	<p>Competitive market price ensured by several market makers in both emissions Spot and Futures market</p>	✓
Fees	<p>Most competitive fee structure in Europe</p>	✓
Market access	<p>Multiple connectivity solutions, EEX TT Screen and all major ISVs supported (Trayport, Fidessa and FFastfill)</p> <p>State-of-the-art trading screen with sophisticated trading functionalities</p>	✓
STP	<p>Easy straight-through processing</p>	✓
Margining	<p>Cost-efficiency through cross-margining, especially valuable when trading emissions alongside power and gas</p> <p>EUAs accepted as collateral reduce initial margin costs</p>	✓
Customers support	<p>Strong customers focus and personal assistance through account managers in London, Paris, Milan and Leipzig</p>	✓

All Important Compliance Instruments are offered for trading

EEX's product portfolio in emissions markets:

Spot	Derivatives
Primary Market	
<i>Spot auctions with T+1 delivery</i>	
EU Allowances (EUA)	
EU Aviation Allowances (EUAA)	
Secondary Market	
<i>Spot trading with T+1 delivery</i>	<i>Futures trading with T+2 delivery after expiry, incl. related spreads</i>
EU Allowances (EUA)	EU Allowances (EUA) up to 2027
EU Aviation Allowances (EUAA)	EU Aviation Allowances (EUAA)
Green Certified Emission Reductions (CER)	<i>Options trading on Futures</i>
	EU Allowance (EUA) Dec-Futures

Clearing and settlement of trades are provided by EEX's clearing house ECC.

Why participate in Emissions Auctions?

- Auctioning is the default method of allocating allowances within the EU Emissions Trading System (EU ETS) → this means that companies liable under the EU ETS have to buy a proportion of allowances (European Union Allowances (EUAs) and EU Aviation Allowances (EUAAAs)) through auctions
- Auctioning is an open, transparent, harmonised and non-discriminatory process (see [Auctioning Regulation](#))
- Advantages to participate in EUA/ EUAA Auctions at EEX:
 - ✓ Unique access to emissions auctions on 5 days/week, covering 100% of European auction volume plus continuous trading on one single exchange
 - ✓ Variety of direct and indirect access options offered
 - ✓ Strong customers focus and personal assistance through our single admission team and offices in Leipzig, London, Madrid, Milan, Paris, Prague and Oslo
 - ✓ Fair and transparent price formation
 - ✓ Opportunity to hedge EU ETS business exposure





EEX Hydrogen Activities

part of eex group

EEX as an actor in the Hydrogen Economy

- Hydrogen will become a liquid commodity market approximately by 2030, **EEX Group is committed to develop these markets soon:**
 - **Guarantees of Origin:** Grexel, part of EEX Group operates CertifHy
 - **European Hydrogen Markets:** From small cluster markets to bigger market areas
 - **Imported Hydrogen:** Integration of imported hydrogen to European Hydrogen markets
 - **Community Building:** EEX created Hydrogen Working Group
 - **Transparency:** Development of a hydrogen index together with the market
- **Europe as global hub:** If Europe establishes the first transparent market place for Hydrogen worldwide, it has the potential to become the global center of Hydrogen trading

Transparency is key!

Why develop now an H2 index?

KICK STARTER

Basis for investment decision

Reflecting need for infrastructure development (alternative transport)

Basis for market-based instruments

EUROPE AS HUB

No price transparency for H2 yet

First transparent and freely available price information likely to attract global trading interest

SWARM INTELLIGENCE

No existing market yet

Putting all pieces of the puzzle together to form a valuable and trustworthy price

DEVELOPMENT

H2 index to undergo constant development

First based on contributions and price assessment, later based on liquid spot market



GoingGlobal

Thank you!

Alex Papageorgiou
Senior Sales Manager
European Energy Exchange AG
Milan Office
alex.papageorgiou@eex.com
mob: +39 347 3946 996