The background of the slide is a photograph of the Vienna skyline at night. The most prominent feature is the tall, illuminated spire of St. Stephen's Cathedral (Stephansdom) in the center-left. The sky is filled with numerous colorful fireworks exploding in shades of pink, purple, and white. The city's rooftops and other buildings are visible in the foreground and middle ground, with some lights glowing from windows.

28th CEGH Feedback Workshop & 15 Years Gas Exchange in Austria

28 November 2024

Today's Agenda

12:30 Welcome Coffee

13:30 CEGH-Updates on
- **CEGH VTP**
- **EEX CEGH Exchange**
- **Green Gas Projects**

14:00 Update on EEX environmental products: GO trading and French Biogas auctions
Aude Filippi, EEX

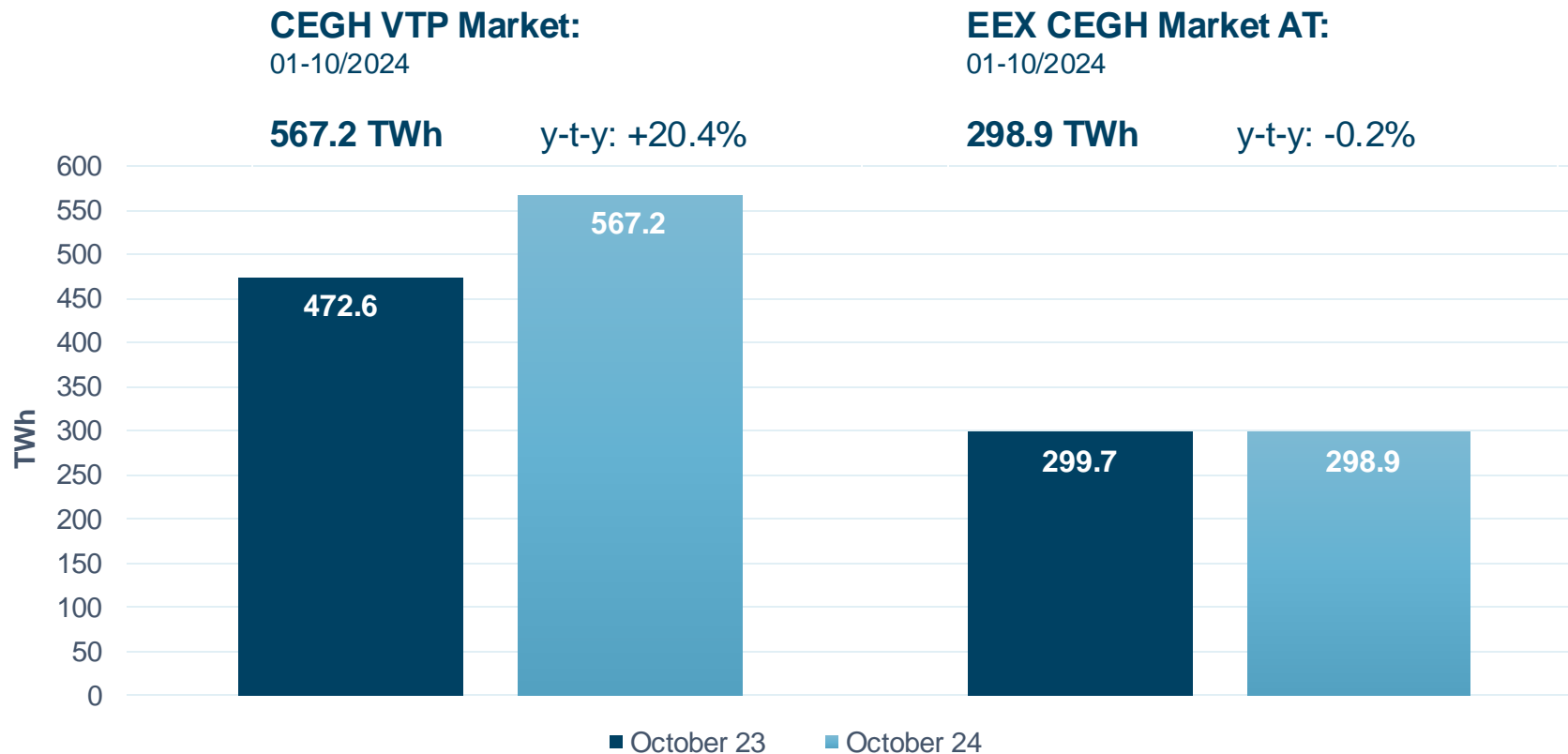
14:15 The future of gas trading in the Baltic – Finnish markets
Gintaras Buzkys / Get Baltic

14:30 Coffee Break

15:00 15 Years of Gas Exchange in Austria
with special guests:
Erich Holzer / OMV
Steffen Köhler / EEX
Wolfgang Urbantschitsch / E-Control Austria

- **Welcome & Introduction**
- Update on CEGH VTP Operations
- News on EEX CEGH Gas Exchange
- CEGH GreenGas Platform
- CEGH GreenHydrogen Index

CEGH Volumes 01-10/2024

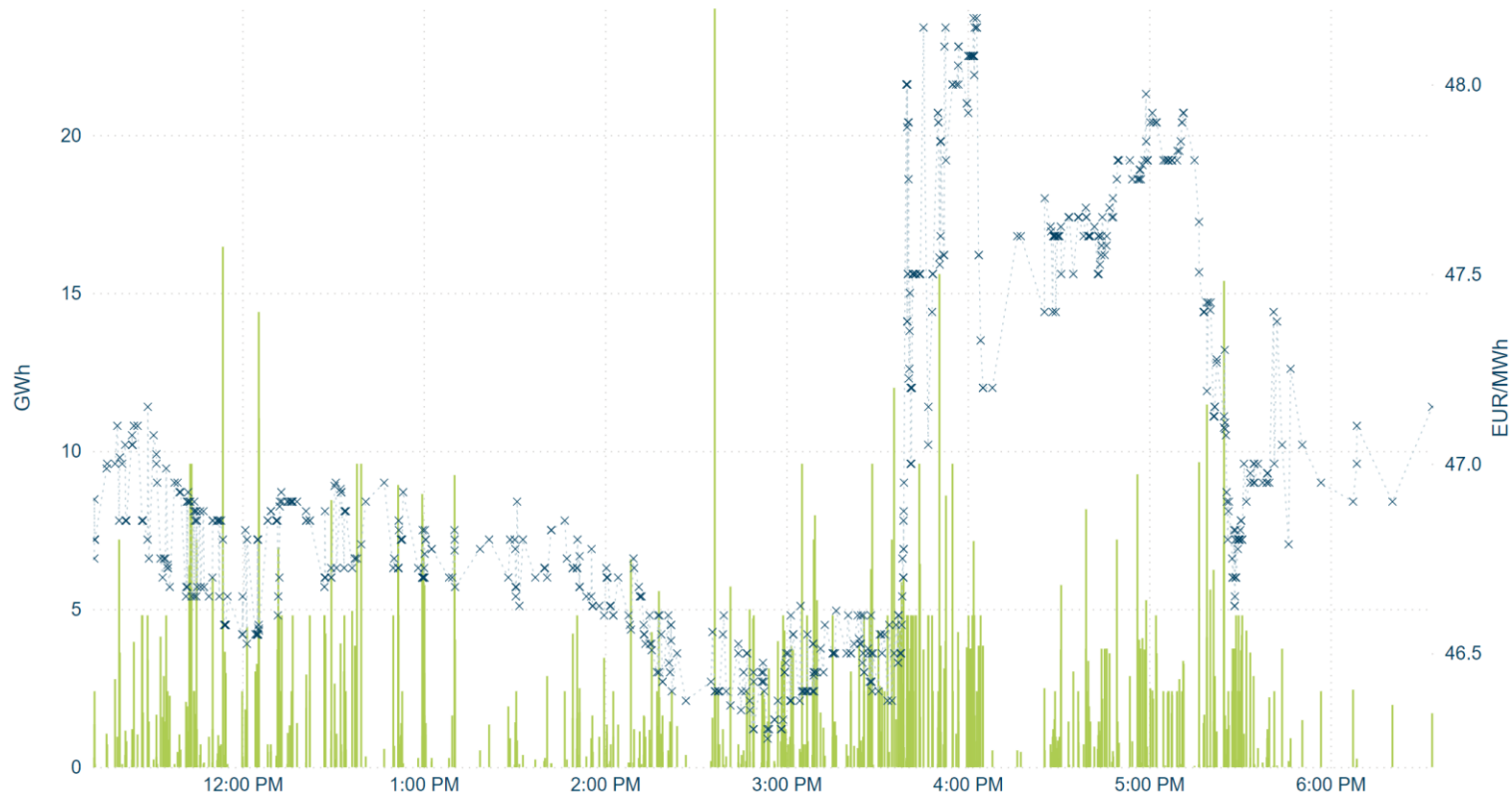


EEX CEGH Spot Trade Prices and Volumes

15th November 2024 trading day; Day-ahead and Weekend contracts

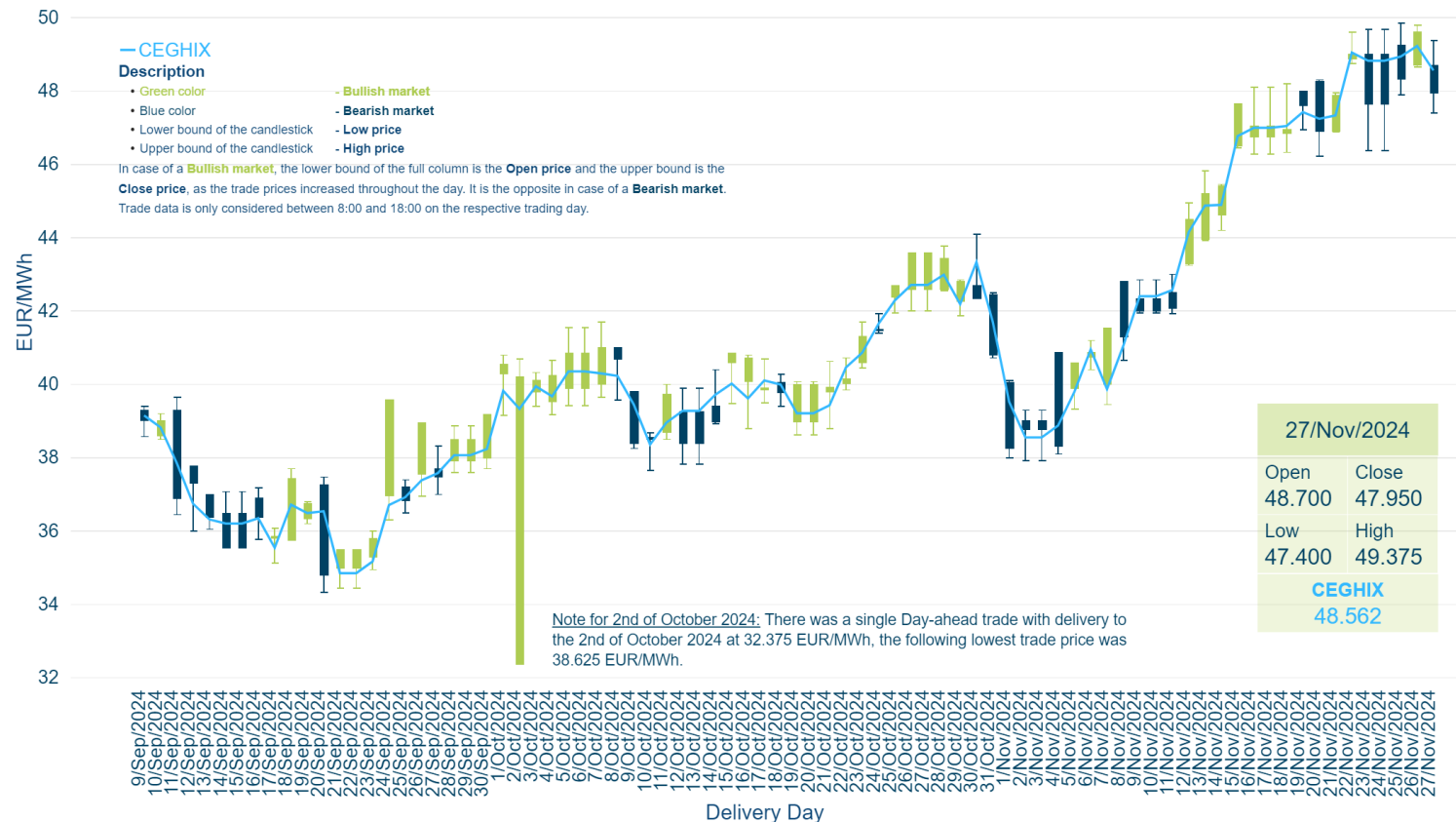


● Traded Volume (GWh) × Trade Price (EUR/MWh)



EEX CEGH Spot Prices

Open-Low-High-Close and CEGHIX Spot Index



EEX CEGH Futures Prices

Daily Settlement Prices and WAVG CEGHIX since October 2023

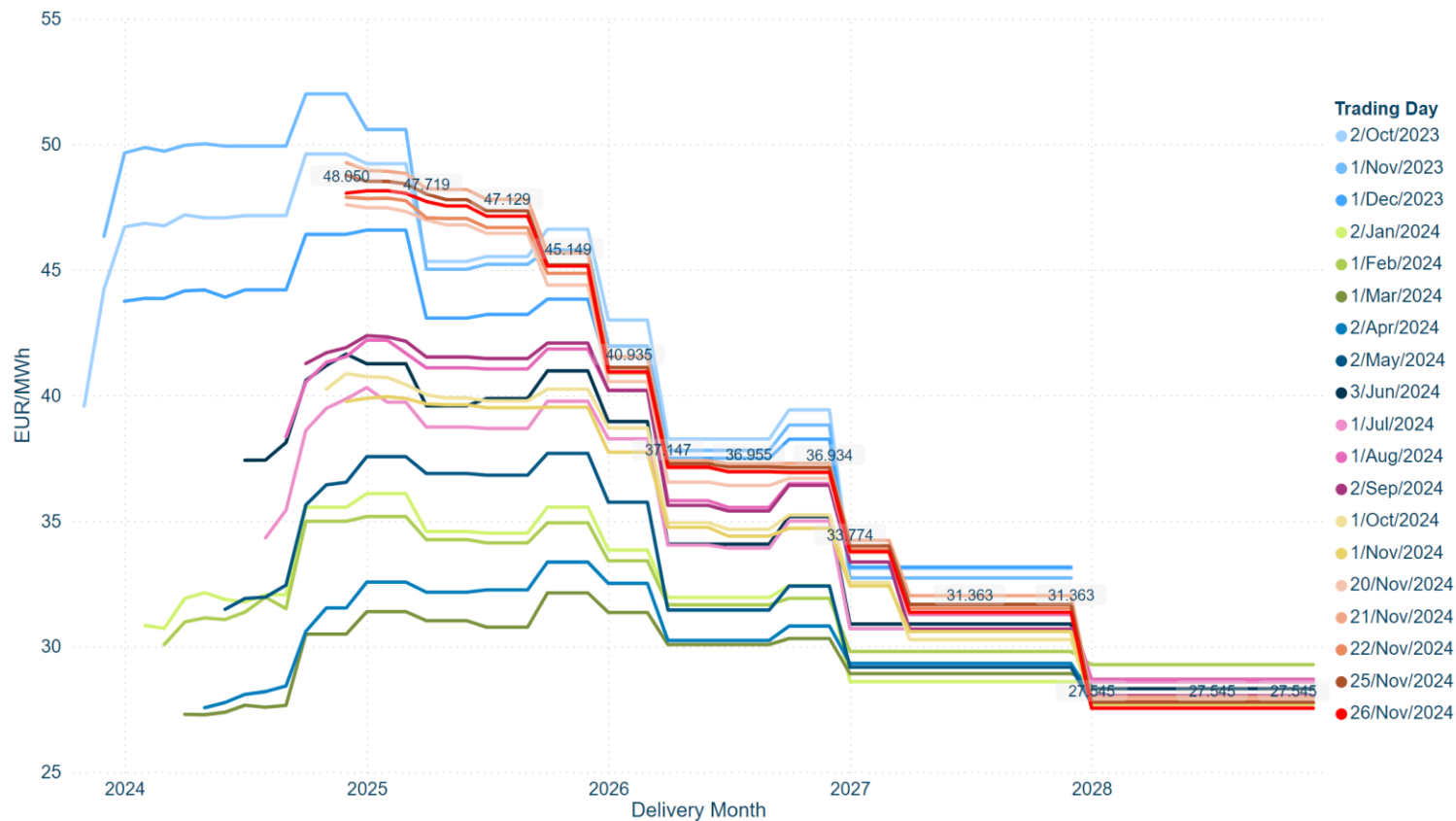


Maturity ● Weighted Average CEGHIX ● Month +1 ● Quarter +1 ● Season +1 ● Calendar +1



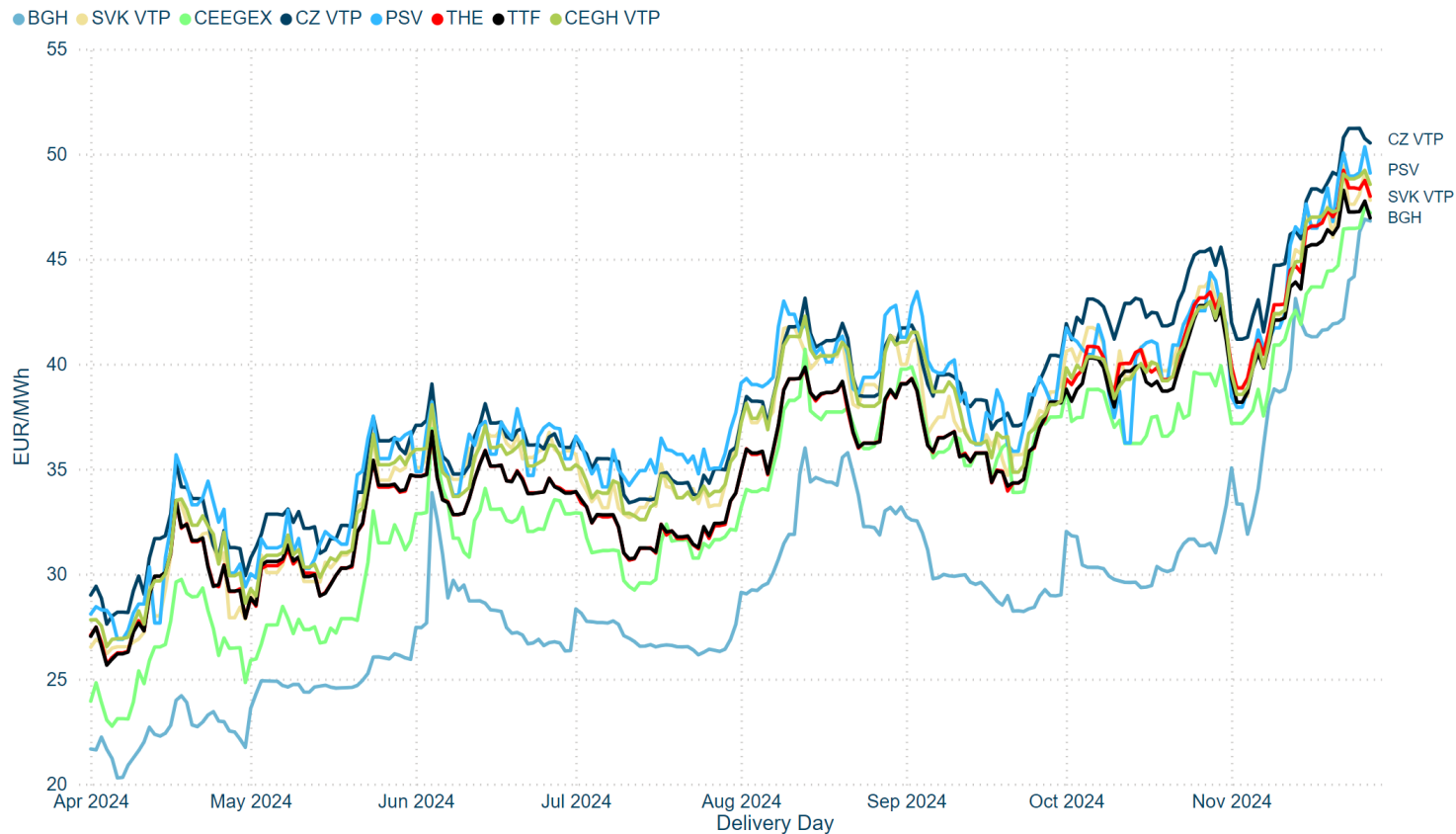
EEX CEGH Futures Prices

Arithmetic Average of Daily Settl. Prices for the respective Delivery Month



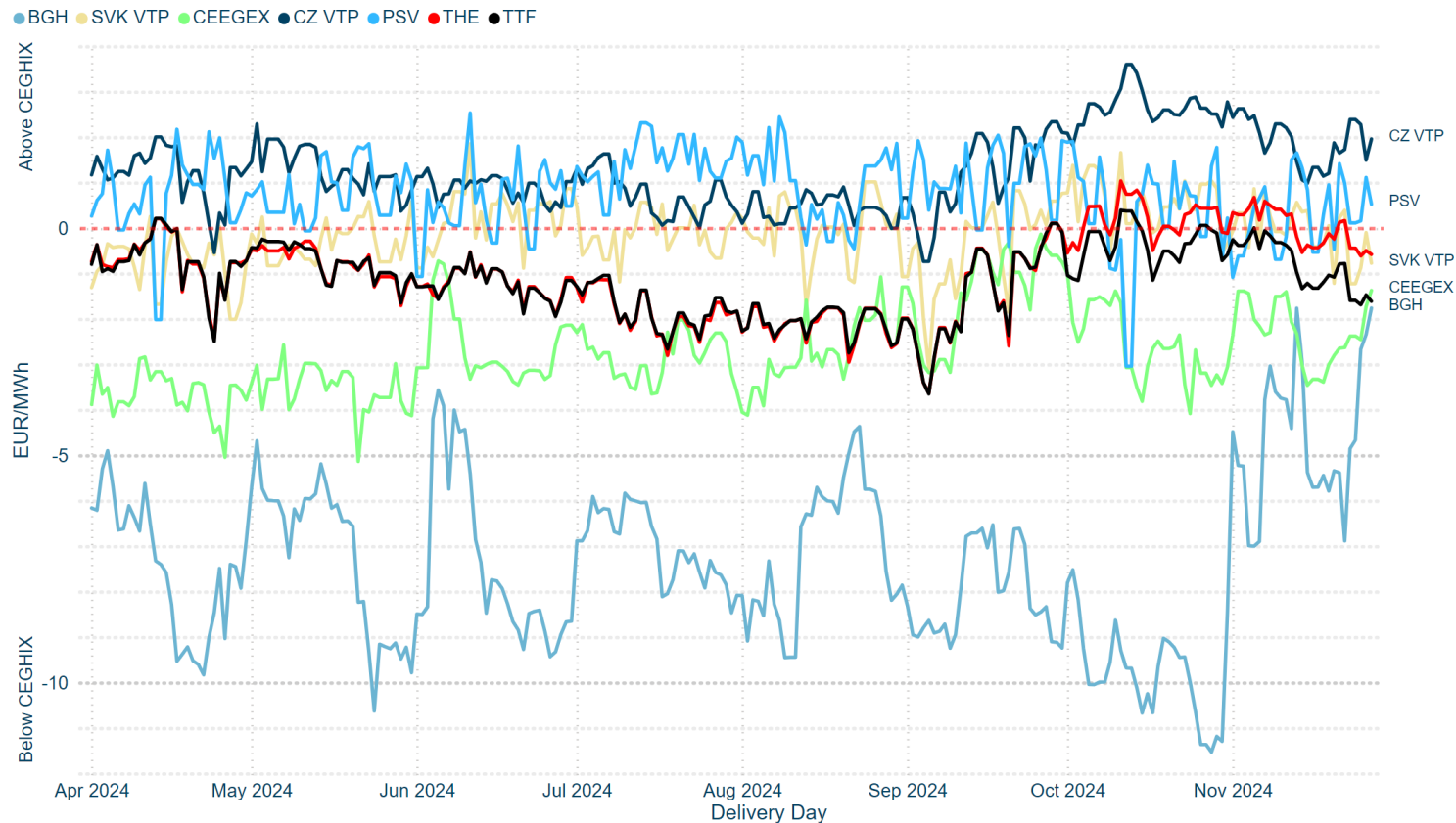
European Natural Gas Spot Prices

Since April 2024



European Natural Gas Spot Prices

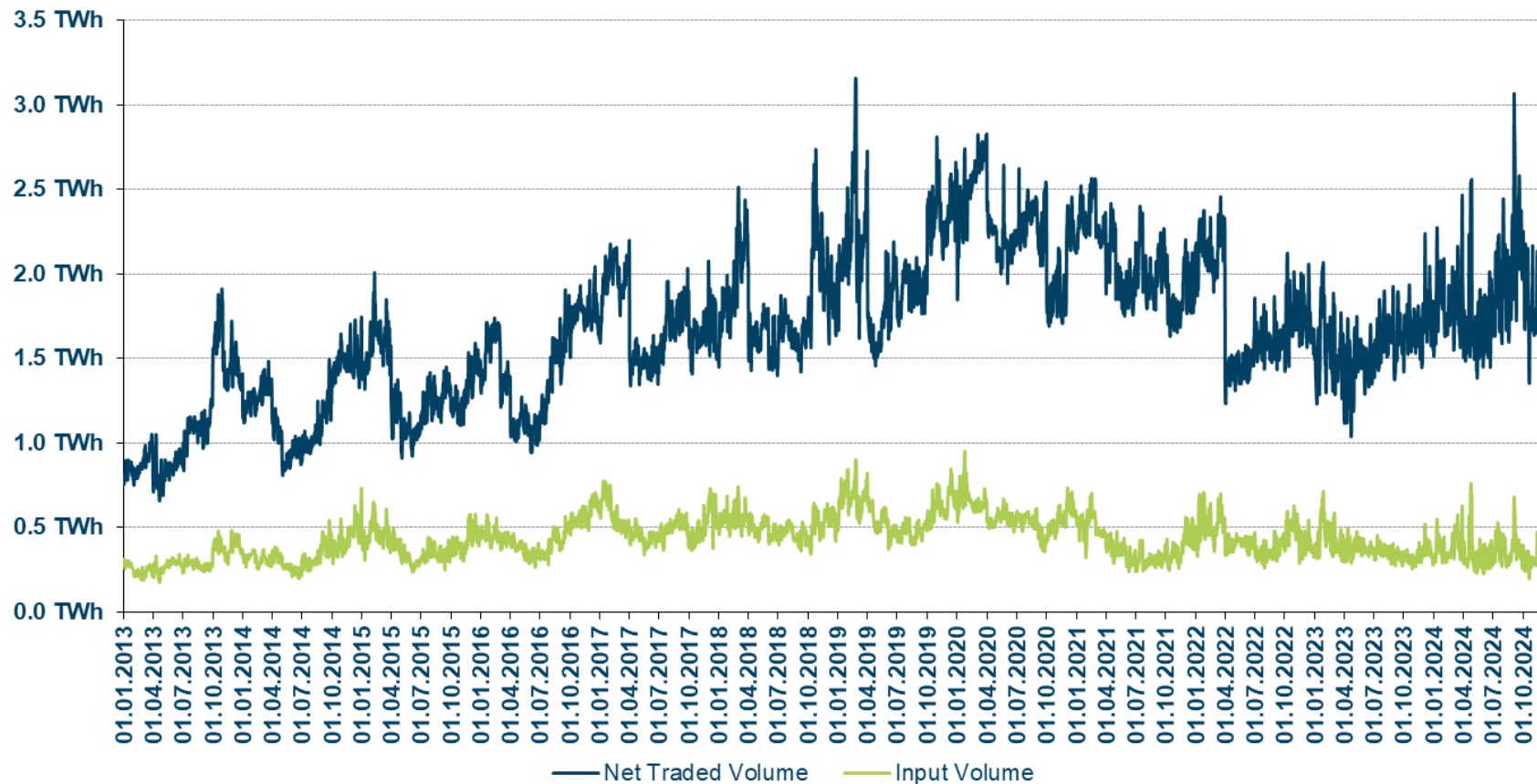
Compared to CEGHIX; Since April 2024



- Welcome & Introduction
- **Update on CEGH VTP Operations**
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- CEGH GreenHydrogen Index

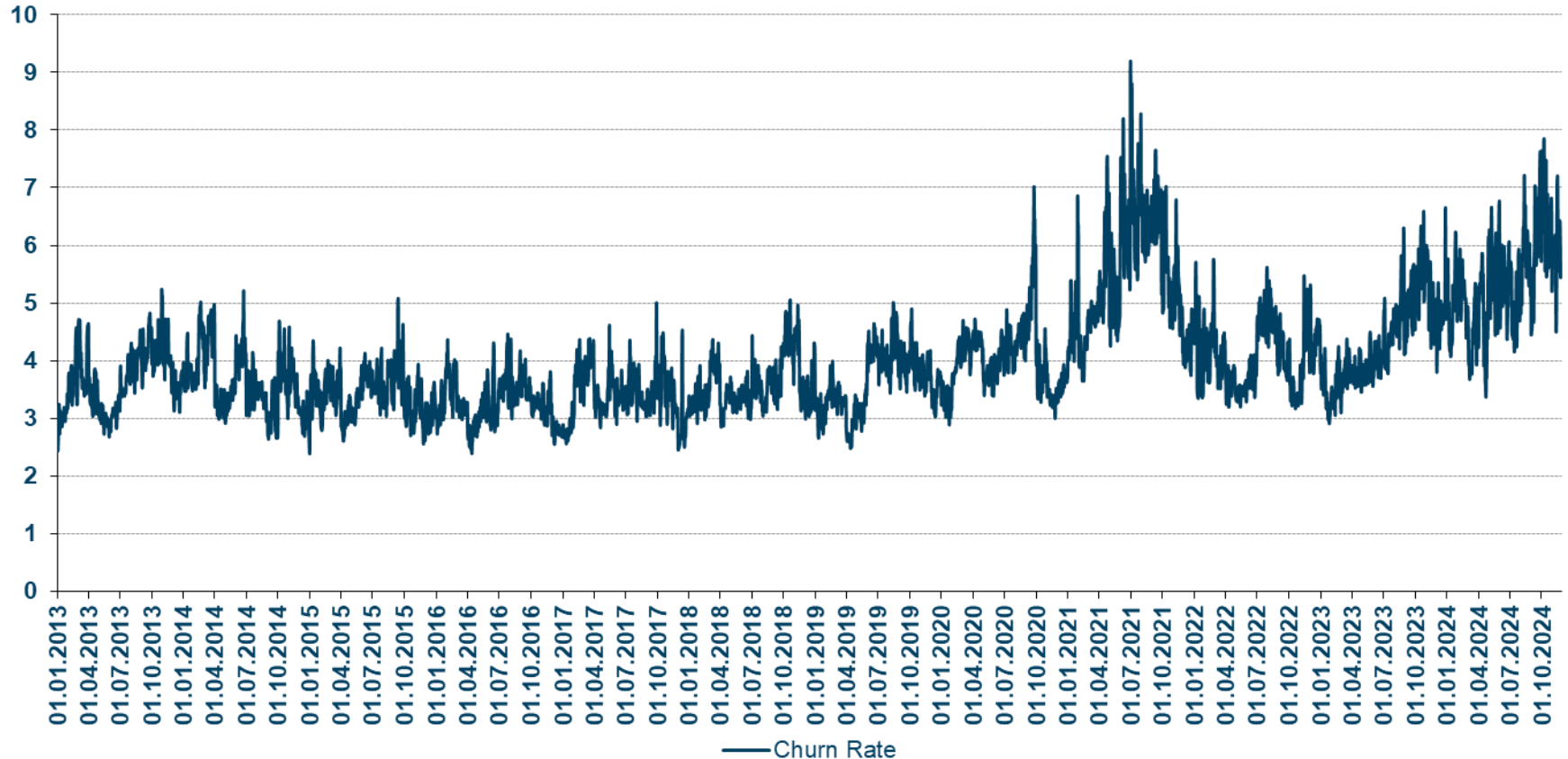
CEGH VTP: Daily Net Traded Volume

Since January 2013

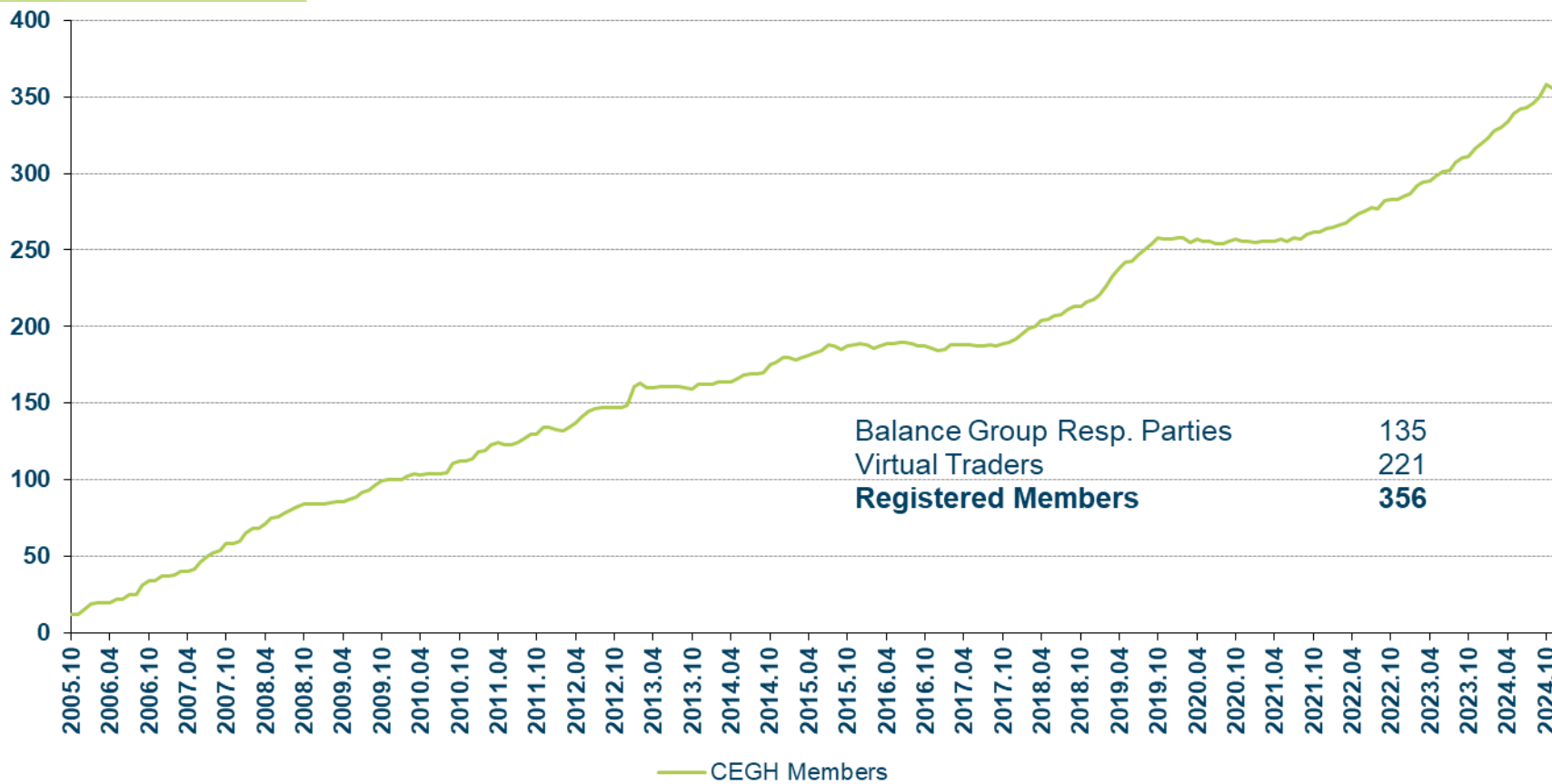


CEGH VTP: Daily Churn Rate

Since January 2013



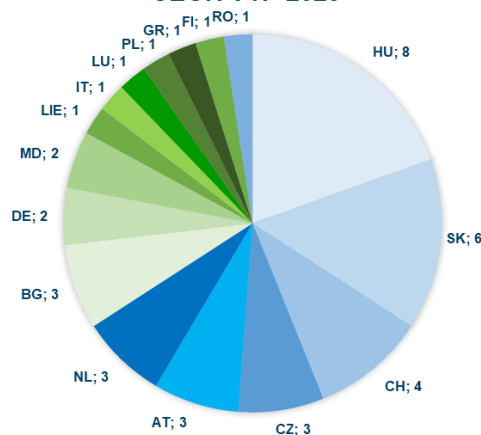
CEGH VTP: Number of Registered Members



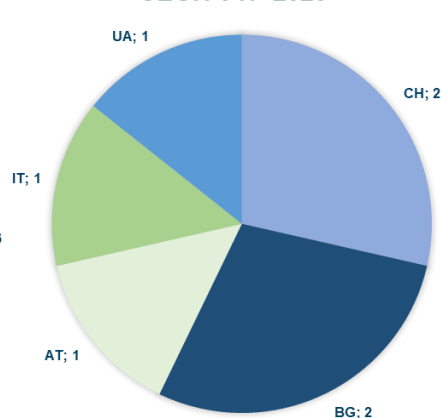
CEGH Customer Development

- **New members joining CEGH in 2023:**
41 new members and 7 member terminations
resulting in **319 members** in total at the end of the year.

**NEW CUSTOMERS
CEGH VTP 2023**

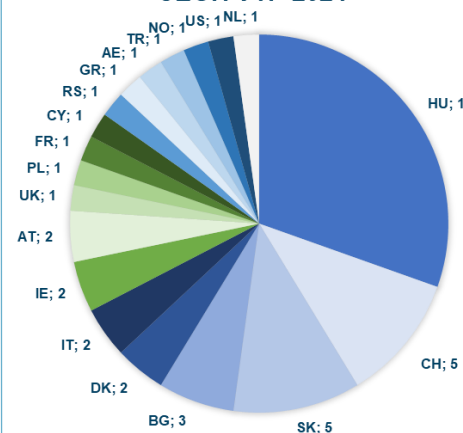


**CUSTOMER TERMINATIONS
CEGH VTP 2023**

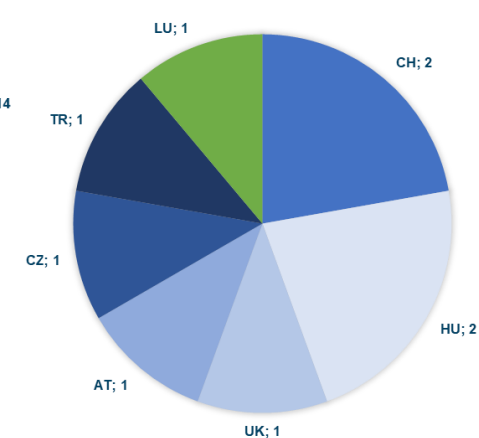


- **New members joining CEGH in 2024:**
46 new members and 9 member terminations
resulting in **356 members** in total in November 2024.

**NEW CUSTOMERS
CEGH VTP 2024**

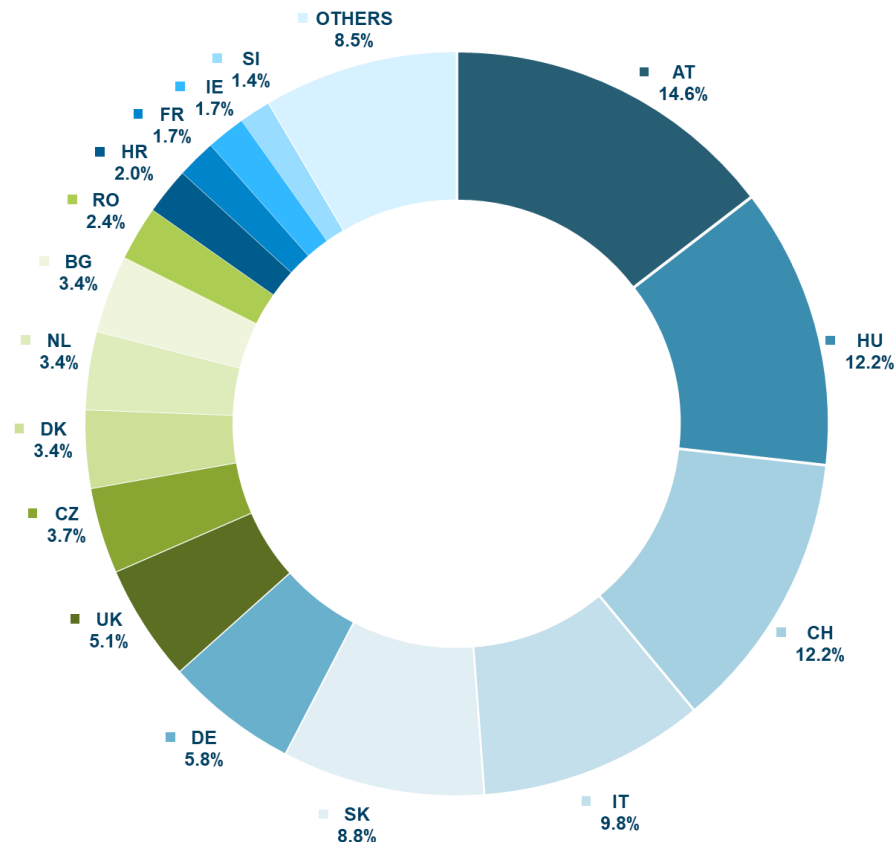


**CUSTOMER TERMINATIONS
CEGH VTP 2024**



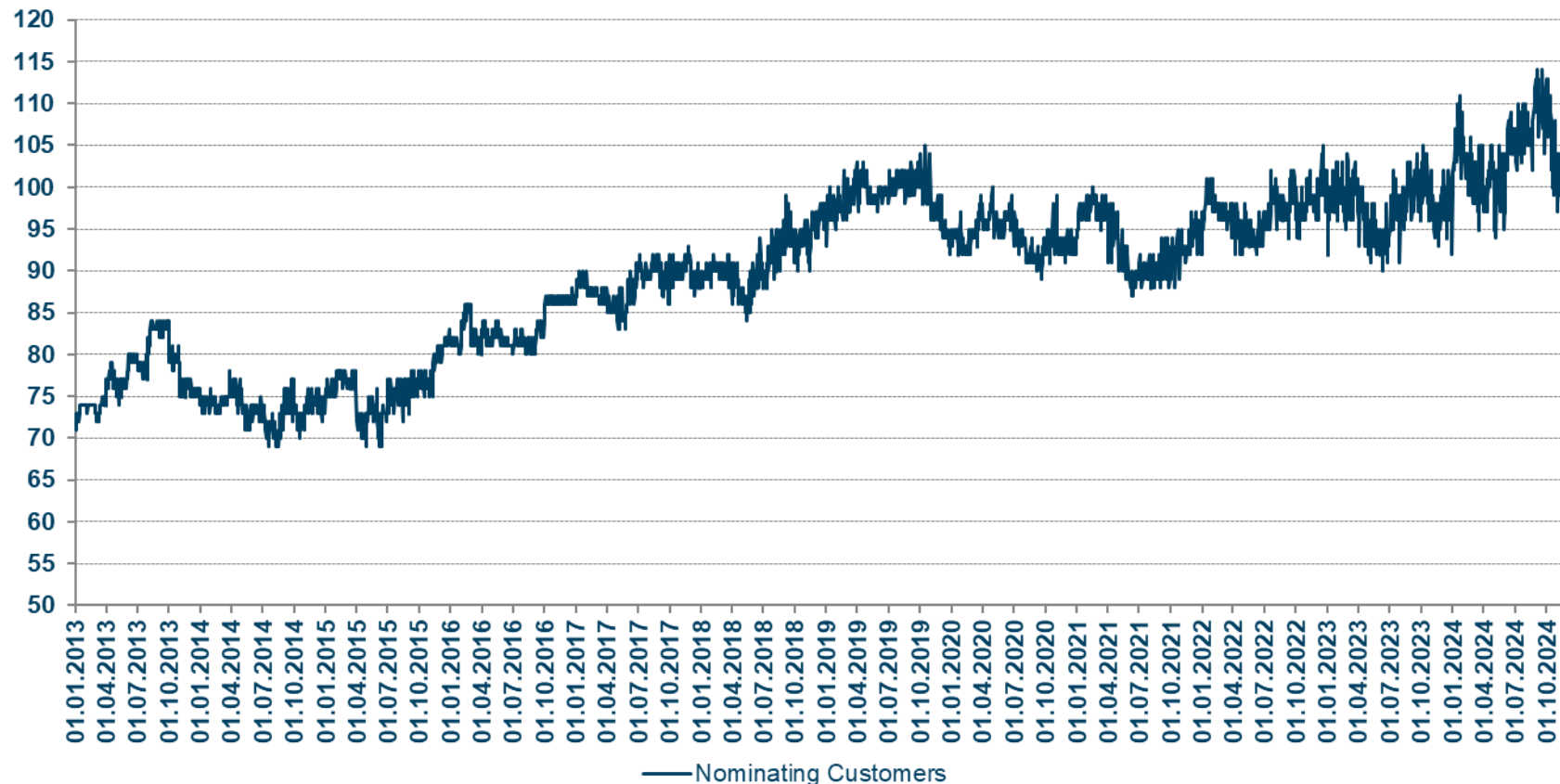
CEGH VTP: Number & Origin of Members

356 Members
November 2024



CEGH VTP: Nominating Customers on Daily Basis

Since January 2013



CEGH REMIT Platform



- Available 24/7
- Contents open to the public
- Supports “templates” and “wildcards”
- AGGM, GCA and CEGH publish on CEGH REMIT platform their Urgent Market Messages (UMMs): Main source of information in the Austrian Market Area
- Posting only for registered users
- Postings fulfil legal obligation to publish insider information acc. to REMIT Art. 4
- Meeting all ACER requirements and recommended by E-Control
- Free of charge plus publication alert / RSS feed subscription
- Registered users and publication alert users can manage received notifications either via country selection or via information type

➤ <https://www.gashub.at/remit/postings.xhtml>

CEGH Gas Storage Marketing Platform



Key Facts

- Launched: November 2018
- Approx. 90 companies registered
- Offered working gas volume: more than 29 TWh
- Primary & secondary capacity marketing
- 3 Categories: 1. Storage Capacity, 2. Gas in Storage, 3. Balance Group Service
- Publication of storage offers (SELL) only for companies with a CEGH contract
- Publication of storage requests (BUY) free of charge for companies until further notice

Framework

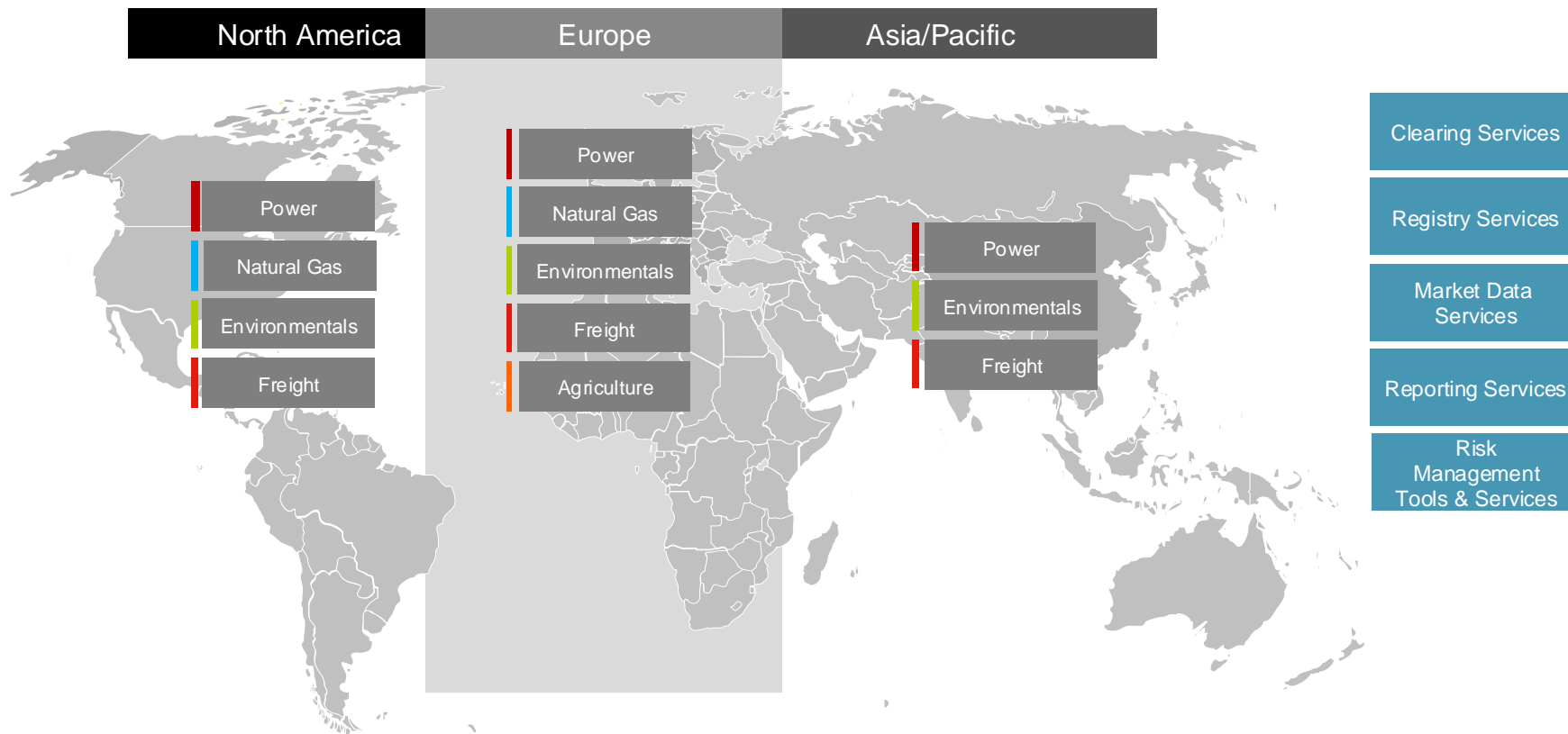
- Free to use and easy to register for all interested parties for bidding – no bidding checks and restrictions – everyone can place a bid for every publication on the platform
- 2-ways to use the Storage Platform: auction mode or publication until revoked
- Allocation according to the rules of the initiator who is selling / buying

➤ <https://www.gashub.at/storagemarketing/overview.xhtml>

- Welcome & Introduction
- Update on CEGH VTP Operations
- **News on EEX CEGH Gas Exchange**
- CEGH GreenGas Platform
- CEGH GreenHydrogen Index

EEX Commodity Exchange Trading

Power, Natural Gas and Environmentals





5 Asset Classes

Natural gas, power, emissions, freight, agricultural

10 Hubs

Austrian CEGH, Belgian ZTP, **Czech VTP**, Danish ETF, Dutch TTF, French PEG, German THE, Italian PSV, Spanish PVB, British NBP, and JKM LNG

Multiple products

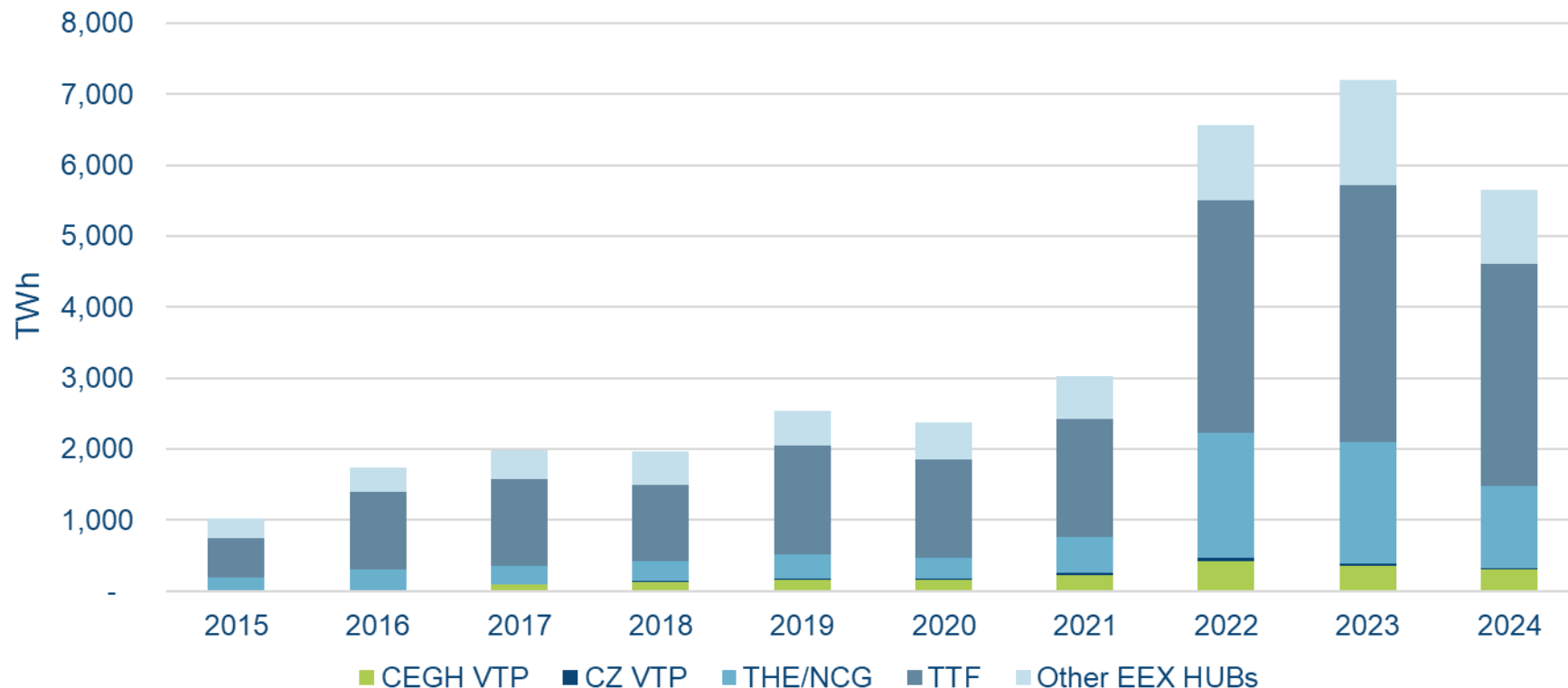
Spot, futures, options, OTF, time spread, location spread

+North America

Nodal Exchange offers futures contracts at Henry Hub

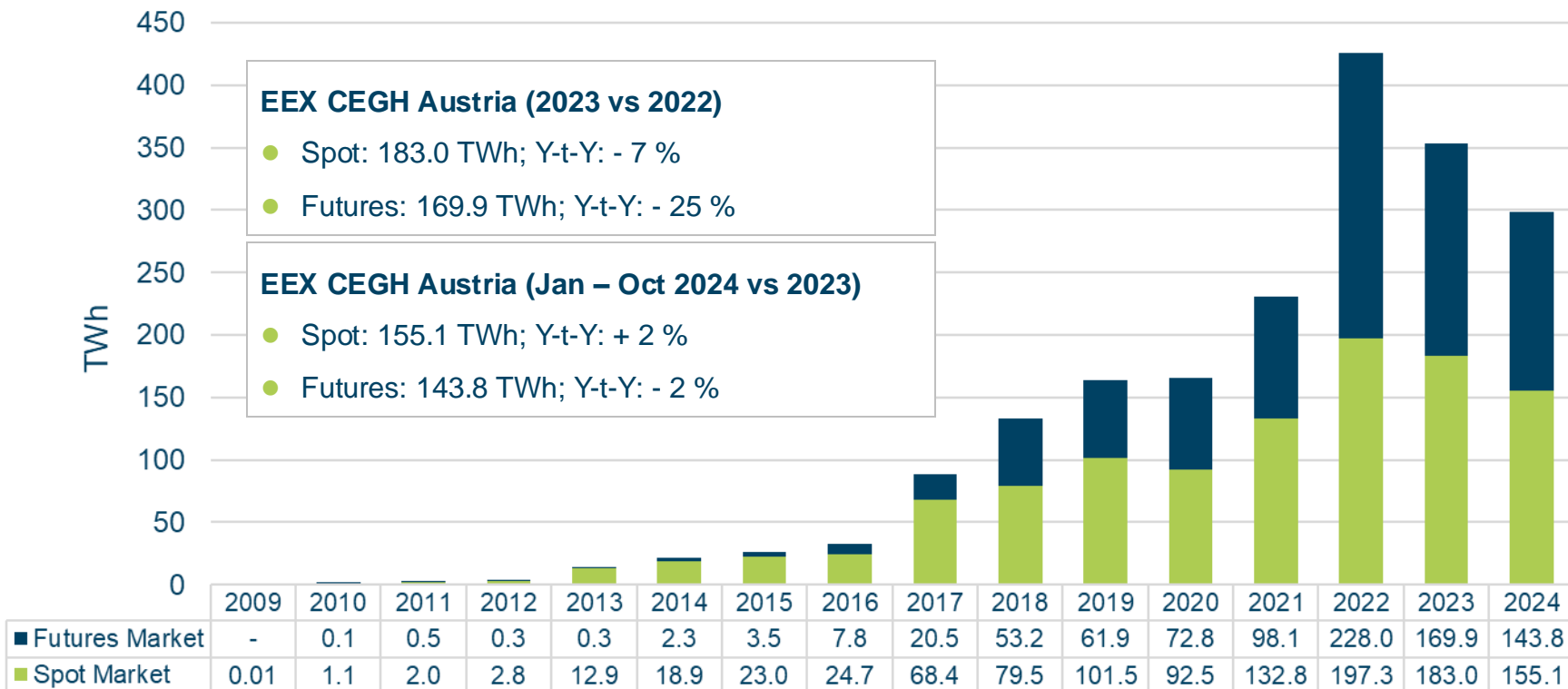
EEX Group Natural Gas Trading Volumes

Yearly Trading Volumes: January 2015 – October 2024



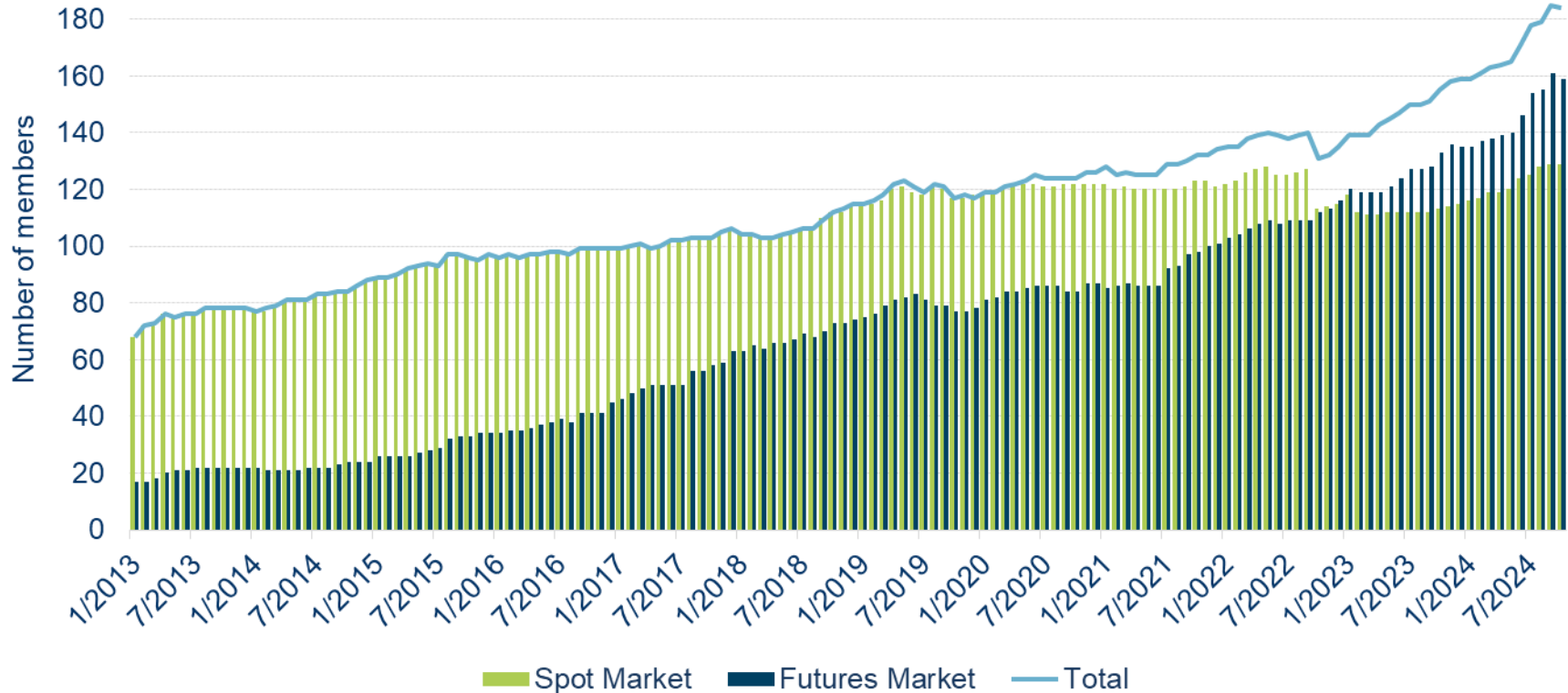
EEX CEGH Austrian Gas Market

Yearly Trading Volumes: January 2009 – October 2024



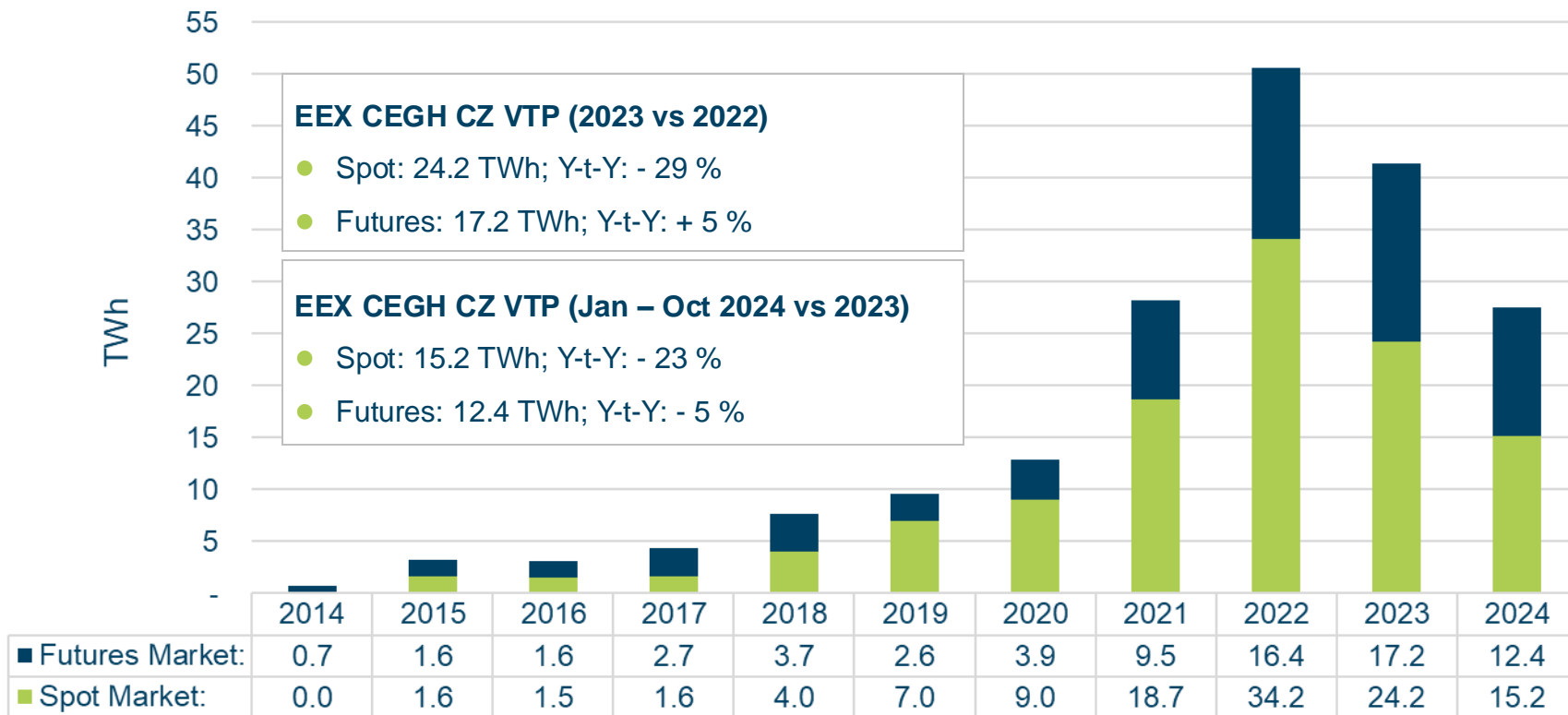
EEX CEGH Austrian Gas Market

Development of Members: January 2013 – October 2024



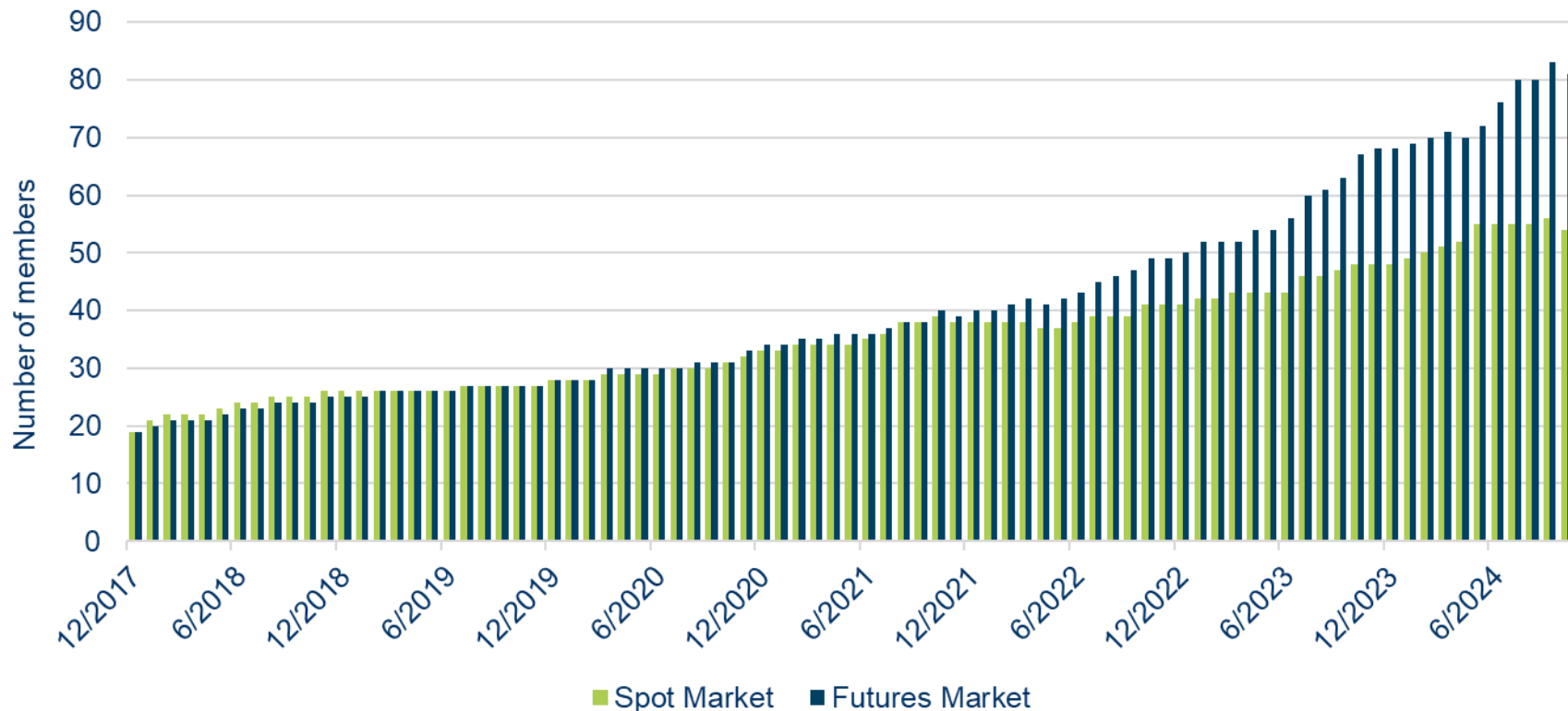
EEX CEGH Czech VTP Gas Market

Yearly Trading Volumes: February 2014 – October 2024



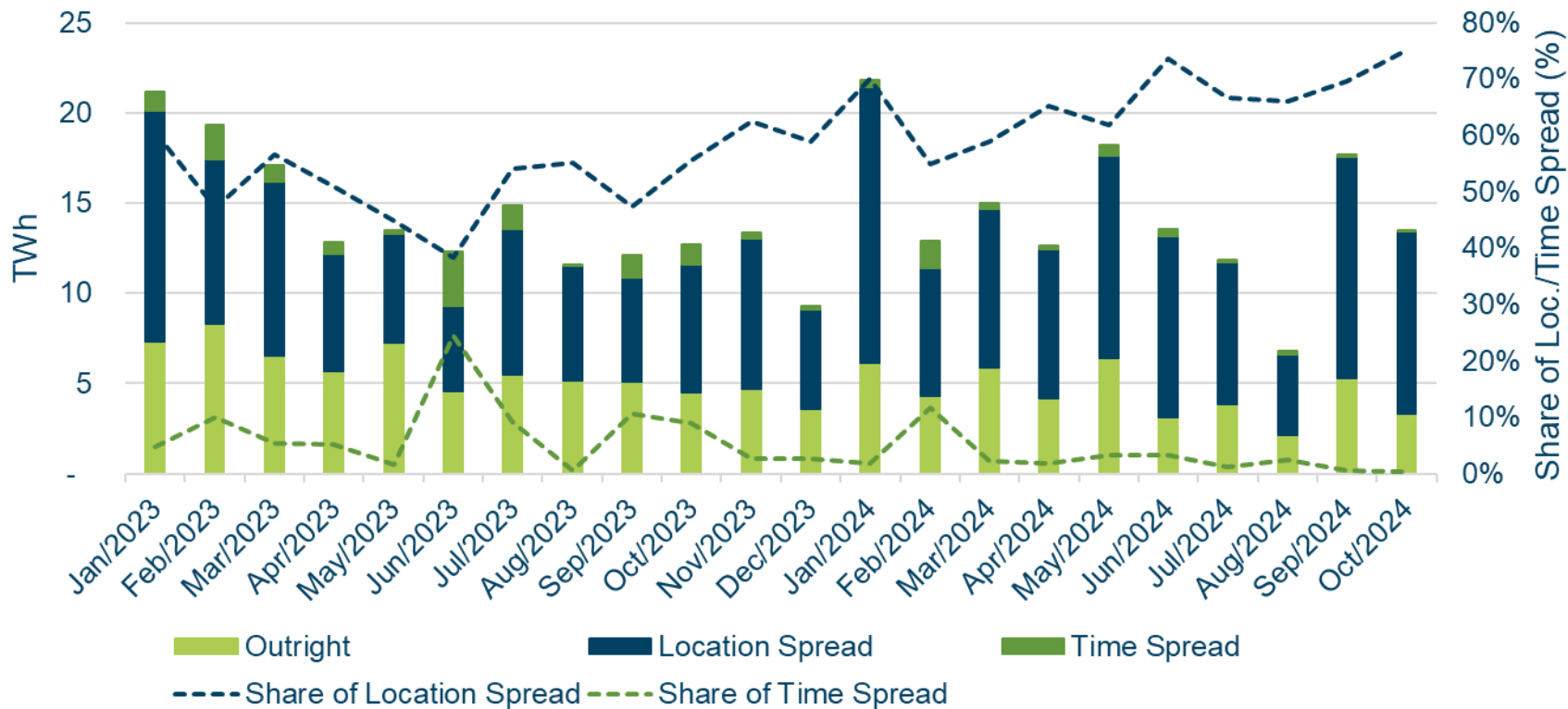
EEX CEGH Czech VTP Gas Market

Development of Members: December 2017 – October 2024



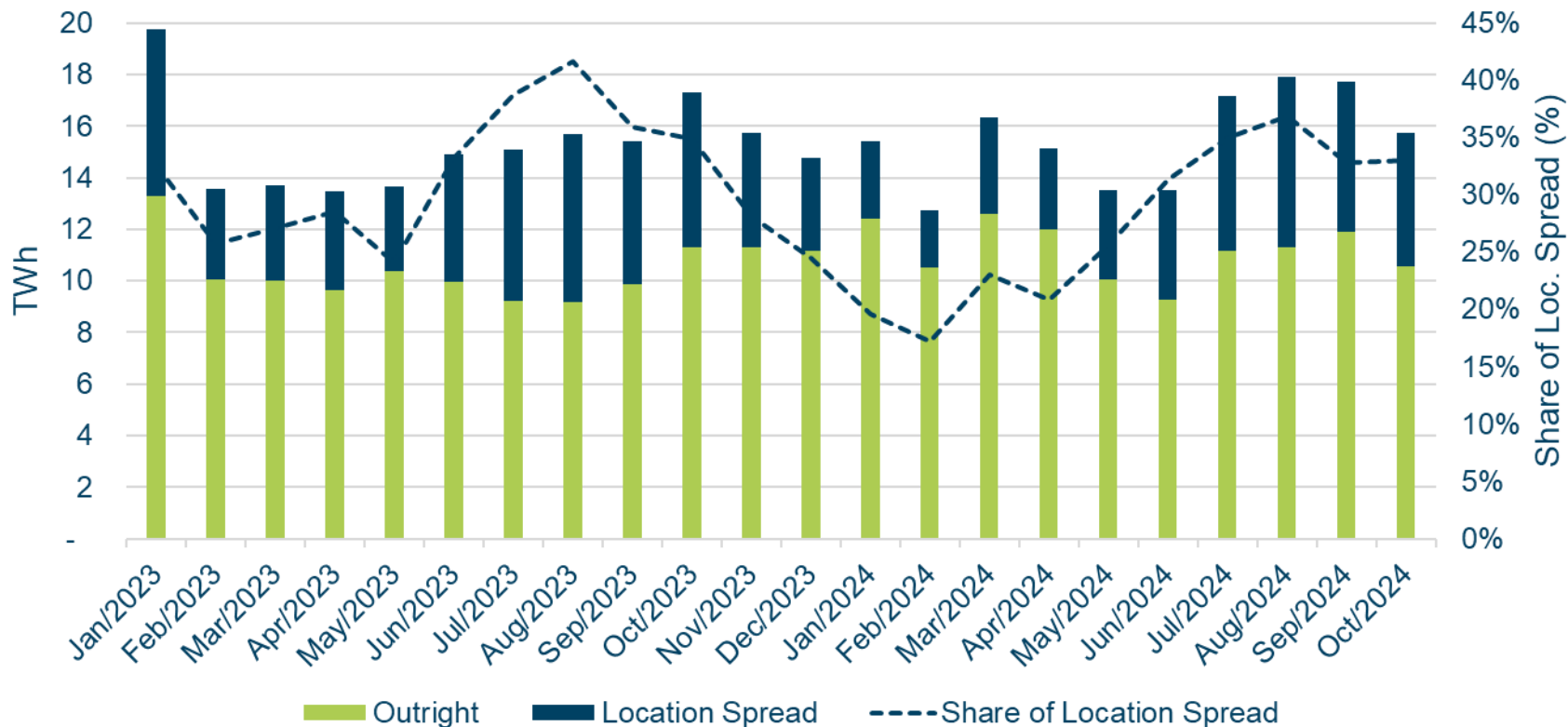
EEX CEGH Austrian Futures Market

Types and Share of Spread Trading



EEX CEGH Austrian Spot Market

Types and Share of Spread Trading

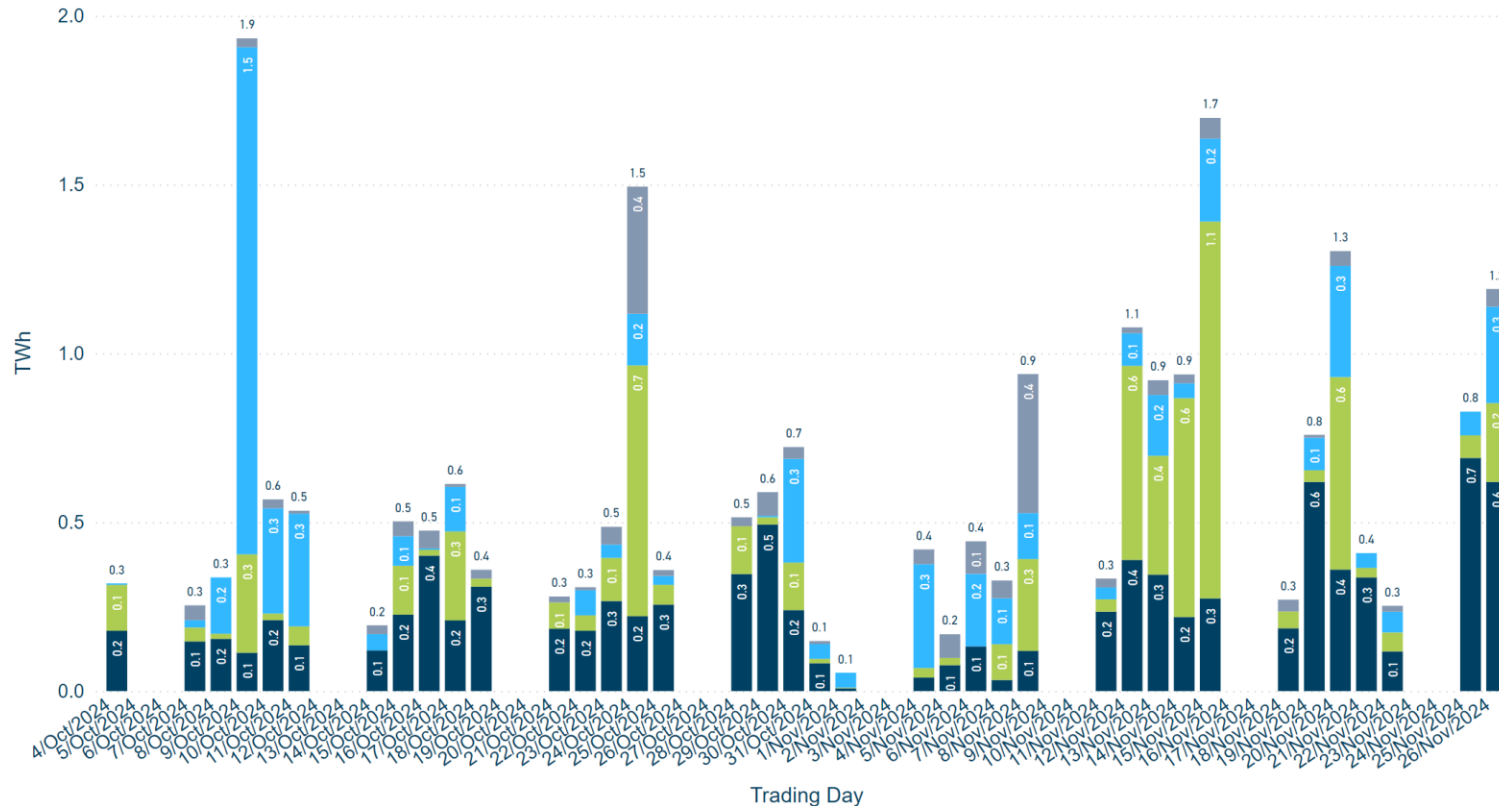


EEX CEGH Futures Market

Daily Traded Volumes



Futures Contract ● Month ● Quarter ● Season ● Calendar



EEX Financial Gas Futures (EGSI)

June 2021 – October 2024



EEX and ECC Recent & Upcoming Developments



For more details, please reach out to us

- **Jan 2024:** Introduced new volume rebates for gas derivatives (all hubs), to standardize further and ensure equal/fair treatment; any member trading a combination of hubs, with more than 4 TWh/month (excluding free legs) receives rebates, as published in price list.
- **April 2024:** JKM/LNG (\$TTF) launch - extended product offering on gas derivatives, financially settled EEX TTF Natural Gas Month (\$/MMBtu) Futures.
- **April 2024:** Changed ISINs of CEGH VTP futures products.
- **June 2024:** Frontend / interface prices increased slightly.
- **Oct 2024:** EEX Paris (PWX) ftp server was shut down, all data are available on EEX Group DataSource server and/or APIs.
- **Nov 2024:** Launch LNG Freight futures
- **Dec 2024:** Launch GO Futures

- **Nov 2024:** Introduction of a new price list, with new Volume Rebate Schemes for Power & Gas on **transaction fees** for spot and futures. *(Effective from 01.01.2025).*

Spot	Rebate rates	Futures (OTF)	Rebate rates
Up to 8 TWh	0%	Up to 4 TWh	0%
8 TWh–10 TWh	40%	4 TWh-8 TWh	30%
10 TWh–12 TWh	50%	8 TWh-12TWh	40%
12 TWh-14 TWh	60%	Above 12TWh	50%
Above 14 TWh	70%	-	-

- Comeback on **EGSI Futures** with an uptick of >2TWh in 2024 (mainly on TTF).
- German Storage Fee (Gasspeicherumlage), abolishment (transit) **gas fee still pending**.
- Launch of spot and futures contracts for Lithuania, Finland, and Latvia-Estonia under EEX license and with ECC clearing by Tuesday **27 May 2025**

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CEGH GreenGas Platform

Easy Access to Trading Biomethane/Certificates/Guarantees of Origin (GOs)



- Platform was developed closely with market participants.
- CEGH GreenGas Platform enables trading of certificates / GOs or bundled certificates / GOs together with biomethane, or biomethane without certificates / GOs
- Connected Registers:
 - Germany: DENA
 - Denmark: Energinet
 - Austria: E-Control, AGCS
- Offers and requests can be posted anonymously (optional) for EU and select countries, with or without registry.
- Create term sheet directly on the platform for easy contract negotiation.
- Launching as "bulletin board" and as "auction" based on market feedback
- Easy registration and newsletter function
- Potential for expansion to other countries and feature extensions

The image displays two screenshots of the CEGH GreenGas Platform interface, showing auction details for Biomethane and Certificates.

Top Screenshot (Biomethane):

- Header: GEBOT SÄGBABE BIS AUF WIDERRUF MÖGLICH
- Buttons: Verkauf (red), Minimum Preis, -- € / MWh
- Veröffentlichungsdatum: 24.09.2024 12:30
- Angebots ID: 789
- Produkt: Herkunftsnachweis/Zertifikat
- Register / Nachweis / Herkunftsländ: E-Control Herkunftsnachweisdatenbank / Herkunftsnachweis / Österreich
- Gebotszeitraum: bis auf Widerruf
- Produktionszeitraum: -
- Table:

Production period	Product type	Carbon Intensity	Menge	Transfer date
03.24 - 03.24	GOs	gCO ₂ eq/MJ	MWh	
	Feedstock type		1.000	
	other(s)			
	Mixture of crops and waste			
	Subsidy			
	Yes			

Bottom Screenshot (Certificates):

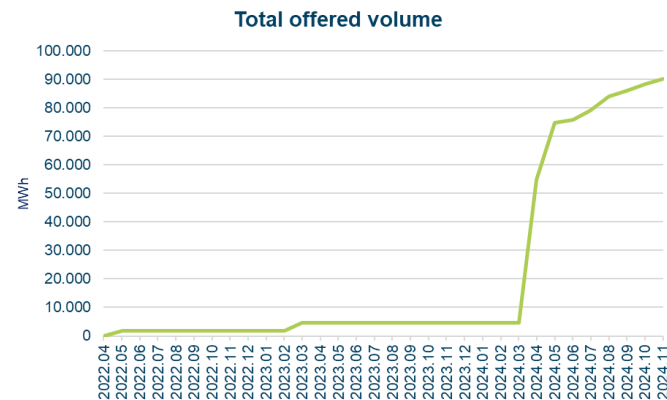
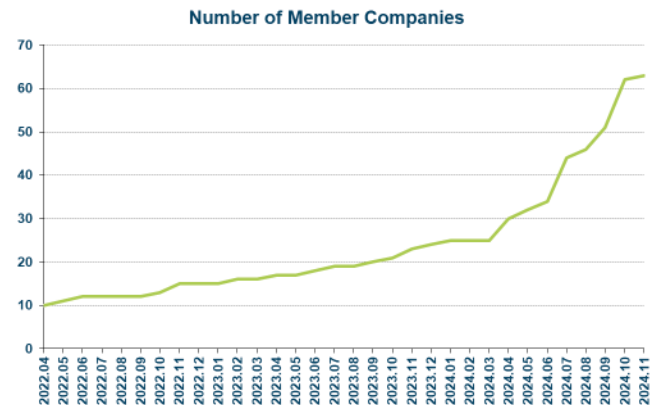
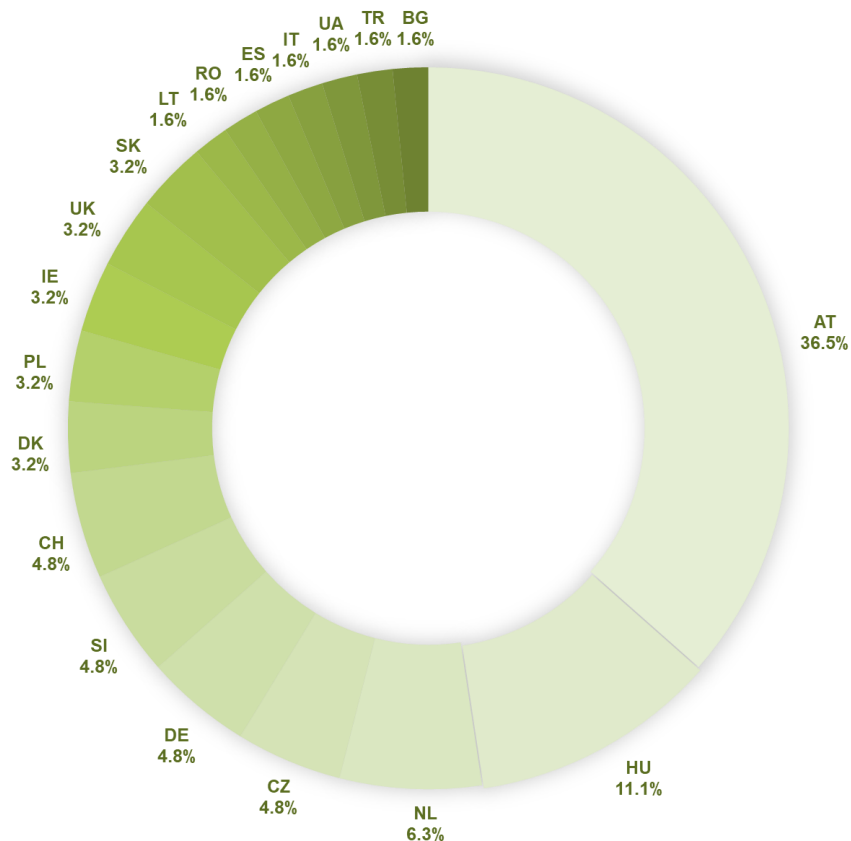
- Header: GEBOT SÄGBABE BIS AUF WIDERRUF MÖGLICH
- Buttons: Verkauf (red), Minimum Preis, -- € / MWh
- Veröffentlichungsdatum: 18.09.2024 08:30
- Angebots ID: 788
- Produkt: Herkunftsnachweis/Zertifikat
- Register / Nachweis / Herkunftsländ: AGCS Biomethan Register Österreich / Biomethannachweis / Österreich
- Gebotszeitraum: bis auf Widerruf
- Produktionszeitraum: -
- Table:

Production period	Product type	Carbon Intensity	Menge	Transfer date
12.17 - 12.17	Certificate	gCO ₂ eq/MJ	MWh	
	Feedstock type		691	
	other(s)			
	Mixture of waste and crop			
	Subsidy			
	Yes			

CEGH GreenGas Platform: Number & Origin of Members



November 2024: 63 registered Members from 19 Countries



CEGH GreenGas Platform



Interested persons or companies

- register for **publication alerts** via E-Mail or
- register as **“Platform Users”** for the possibility to place bids/asks

Platform Users

- publishing bids / asks
- informing all registered platform users by using the CEGH GreenGas Platform
- collecting bids and signing transaction bilaterally

CEGH

- operator of the CEGH GreenGas Platform
- providing technical support for customers
- further improving and developing the CEGH GreenGas Platform based on market needs







The conclusion of a contract for the offered products is subject to discretion of the company offering or requesting this product.

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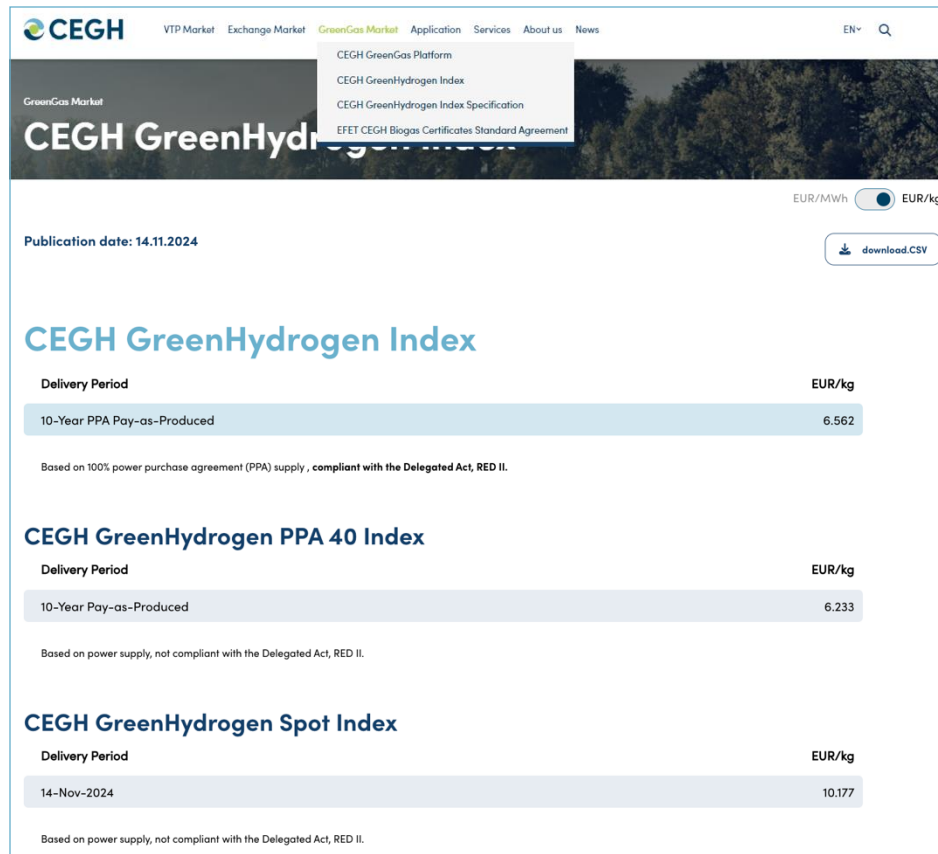
CEGH GreenHydrogen Indices (since Dec 2022)

Measuring the Value of the Various “Shades” of Green Hydrogen



Index	Green Power Supply for Hydrogen Production	Product Definition
CEGH GreenHydrogen Spot Index	 <ul style="list-style-type: none"> Sourcing of “grey” power in the day-ahead market Sourcing of guarantees of origin via exchange / platforms 	<ul style="list-style-type: none"> Cheapest Day-ahead power prices optimized with a yearly hPfc
CEGH GreenHydrogen Forward Index	 <ul style="list-style-type: none"> Sourcing of “grey” power in forward markets Sourcing of guarantees of origin via exchange / platforms 	<ul style="list-style-type: none"> Cheapest Monthly, Quarterly, Seasonal and Yearly power prices optimized with yearly hPfc
CEGH GreenHydrogen PPA 40 Index	 <ul style="list-style-type: none"> 40% of green power (PPA) and 60% “grey” power (forward) Sourcing of guarantees of origin via exchange / platforms 	<ul style="list-style-type: none"> Combination of 10 Years PPA and Optimized Grid Supply
CEGH GreenHydrogen Index	 <ul style="list-style-type: none"> 100% sourcing of green power via power purchase agreements (renewable PPA) 	<ul style="list-style-type: none"> 10 Years PPA Pay as Produced

CEGH GreenHydrogen Indices on CEGH's Website



CEGH

VTP Market Exchange Market **GreenGas Market** Application Services About us News

CEGH GreenGas Platform
CEGH GreenHydrogen Index
CEGH GreenHydrogen Index Specification
EFET CEGH Biogas Certificates Standard Agreement

GreenGas Market

CEGH GreenHydrogen Index

Publication date: 14.11.2024

EUR/MWh EUR/kg

download.CSV

Delivery Period	EUR/kg
10-Year PPA Pay-as-Produced	6.562

Based on 100% power purchase agreement (PPA) supply, compliant with the Delegated Act, RED II.

CEGH GreenHydrogen PPA 40 Index

Delivery Period	EUR/kg
10-Year Pay-as-Produced	6.233

Based on power supply, not compliant with the Delegated Act, RED II.

CEGH GreenHydrogen Spot Index

Delivery Period	EUR/kg
14-Nov-2024	10.177

Based on power supply, not compliant with the Delegated Act, RED II.

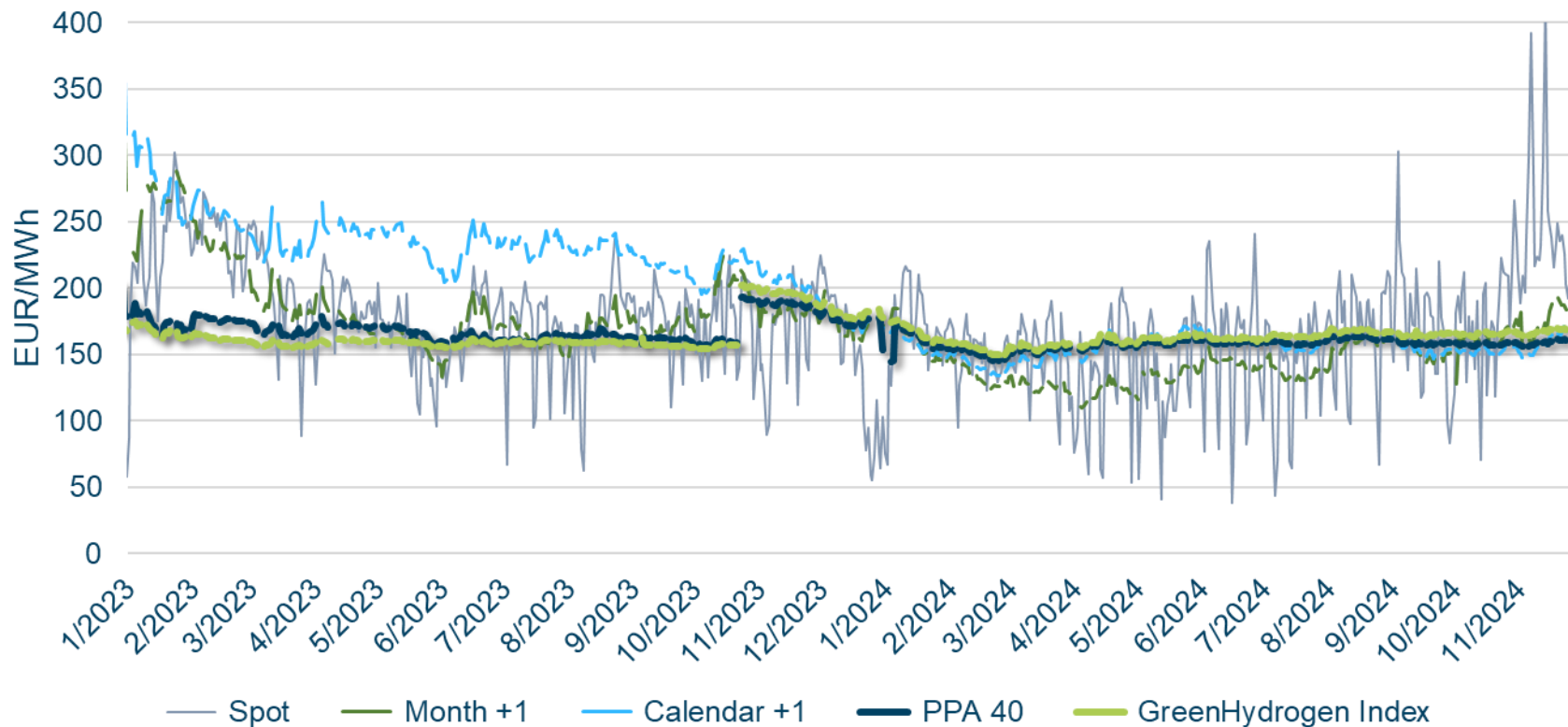
➤ New **slide button** to switch from EUR/MWh(hhv) to EUR/kg

➤ Access to CEGH GreenHydrogen Index and Specification:

<https://www.cegh.at/en/greengas/cegh-greenhydrogen-index/>



CEGH GreenHydrogen Indices Price History





**THANK
YOU FOR
YOUR
ATTENTION**