# >eex ky

**Webinar:** Futures trading in the Japanese power market to manage price risks.

6 October 2020, 16.00 JST



# Agenda

16:00 – Hiroshi Ishiguro (KYOS). Introduction to the webinar

16:05 – Cyriel de Jong and Hiroshi Ishiguro (KYOS), Forward power trading to hedge price exposure

- Price risks in the Japanese power market.
- What products can you trade to manage your position and hedge the risks?
- What is a good trading strategy?

16:20 – Ellie Senaga (EEX), EEX Japan Power Futures: Developing a liquid market together with the industry

- Overview of EEX Japan power futures
- Latest update on trading activity and readiness of participants
- Initiatives to further develop liquidity

16:35 – Q&A and discussion

16:45 – End of the webinar











6 October 2020 For Japanese suppliers, generators and industries

# Trading futures to reduce spot price risks



Cyriel de Jong www.kyos.com, +31 (0)23 5510221, info@kyos.com

# **KYOS Energy Analytics**

#### <u>Background</u>

- Activities since 2002. In 2008 we established KYOS Energy Consulting
- Specialists in power and commodities: Trading, Valuation, and Risk Management
- Our sophisticated solutions are developed to support decision making, investment proposals and risk calculations, and based on a solid analytical framework
- Expert team with years of experience in the market
- We provide our services globally, and are based in the Netherlands

#### KYOS Japan

- Activities started in 2016
- Partnership with Mitsubishi Research Institute: MPX Price Forward Curve
- ETRM tools for the Japanese electricity market
- Support and sales team in Japan











# JEPX spot prices (system)



2012	14.33
2013	15.71
2014	15.96
2015	10.97
2016	7.91
2017	9.29
2018	10.52
2019	8.43
2020	5.86

• Prices on the JEPX are very volatile:

KY

- Long term:
  - economic situation
  - fuel prices
  - investments

# Large fluctuations in short periods



- Power is the most volatile commodity, because it cannot be stored nor transported easily
- In August-2020, spot prices varied from 3 to 13 per day, and from 1 to 50 yen/kWh per hour



# JEPX daily spot price volatility (system)

- Volatility measured over 20, 100 or 365 days of history
- 500% volatility: a 'typical' daily price change is 26% (up or down)



# PPS companies are increasingly buying on JEPX



- Japan has seen various PPS companies make large losses and default, withdraw from the market or restructure
- PPS companies increasingly take a bet on low JEPX spot prices
- With a mismatch between the sourcing strategy (buy power) and the sales strategy (sell power), more 'accidents' will happen



# **Current practice of most suppliers (PPS)**



## What can a PPS do about it? Use of futures

- If you are exposed to an increase in power prices:
  - Buy futures to manage price risk
  - For a supplier or large consumer
- If you are exposed to a decrease in power prices:
  - Sell futures to manage price risk
  - For a generator

Futures are more flexible than individual agreements. There is no credit risk. An exchange pools liquidity from many players.

Swaps are similar to futures, but traded Over-the-Counter (OTC), not on an exchange





# Case study: risk management of a PPS



# Example of a retailer (PPS)

- Suppose a PPS delivers in Tokyo area
  - Half of the clients pay a fixed price
  - Half of the clients pay a formula price equal to the average monthly JEPX price
- Step 1: update load forecast every day
- Step 2: review the volumes to be bought (physically)
- Step 3: review the volumes and earnings at risk (financially)
- Step 4: hedge in the market



# Step 1: daily volume management

- Every day, adjust volume forecast for the next days and beyond
- Do this separately per customer group
- Customer group = clients paying the same type of price



# Step 2: How much is left to buy (physically)?





# Step 3: which volumes are exposed to risk?

- Main exposure is to clients who pay a fixed price
- Difference between sold volume (at fixed price) and bought volume (at fixed price) = volume at risk
- With 2,800 GWh volume at risk, every 1 yen/kWh increase in power prices leads to 2.8 bln yen earnings at risk





# **Step 4: Hedge in the market**

- To reduce price risk, at the time the company sells at a fixed price the trader should buy at fixed price in the market
- This removes the short position and hence the risk
- Most flexible is to buy financially  $\rightarrow$  futures or swaps



- Note: not only fixed price contracts lead to price risk
- Contracts with fuel-adjustment or monthly JEPX contracts lead to price risk too, albeit smaller



# How does a PPS make money?



Effective marketing and sales

#### **Reduce costs**

Efficient administration and invoice collection

#### Manage risks

Optimal systems to manage price and volume

risks



# Thank you for your attention

#### After this webinar:

- Feel free to send more questions
- Further reading: <u>www.kyos.com</u> Nearly ready for launch: <u>www.kyos.jp</u>!

# Thank you very much!



### >eex group

#### **EEX Japan Power Futures** KYOS/ EEX Webinar

06 Oct 2020 Ellie Senaga, Senior Sales Manager, EEX Asia

>eex >epexspot >eexasia >nodal >ecc >nodalclear >grexel >pxe

## Agenda

Introduction of EEX Group

EEX Japanese power futures overview

How to start trading?

Initiatives to further develop liquidity

Q&A

## **EEX Group – Global position** The home of power trading worldwide



#1#1#2in Powerin Dry Freight Tradingin Emissions TradingTrading WorldwideWorldwideWorldwide

# **EEX Power Derivatives continue to grow** Expertise in developing power market



# Agenda

Introduction of EEX Group

EEX Japanese power futures overview

How to start trading?

Initiatives to further develop liquidity

Q&A

## Japan's spot power market leapfrogs Germany's. The needs for hedging tool is expanding



## The first 5 months of EEX Japanese Power Futures A successful start into a new era

- EEX successfully launched the clearing service for Japanese Power Futures on 18<sup>th</sup> May 2020.
- Despite the challenges caused by the global COVID-19 crisis, various market participants from Japan and overseas were ready on Day 1 and first trades were able to be cleared.
- Thanks to everyone's cooperation, we were able to start the service safely as originally planned. We would like to express our sincere gratitude to all of EEX's Nippon Electric Power Team for their support.



## **Readiness Status** Trading participants, Brokers, Clearing banks

Trading participants	<ul> <li>Ready: at least 14 firms, both from Japan and overseas, are ready and active in the market.</li> <li>In the process of getting ready: About 10 additional firms, both from Japan and overseas, expected to start within the next 4-6 weeks. 70+ potential firms in the pipeline.</li> </ul>
	Ready: 12 brokerage firms
Brokers	<ul> <li>Amerex Energy, Arraco Global Markets, enechain Corporation, GFI Brokers, Ginga Global Markets, ICAP Energy, Marex Spectron Europe, Nissan Securities, SSY Futures, TFS Derivatives, Tradition Singapore, Tullet Prebon Energy Singapore</li> </ul>
Clearing banks	<ul> <li>Ready: 7 clearing banks</li> <li>BNP Paribas, Mizuho Securities, Societe Generale, Macquarie, ED&amp;F Man, ABN Amro, Banco Santander</li> </ul>

# The first 5 months of EEX Japanese Power Futures The trading volume is growing



- Over the last three months, since our launch in May 2020, the trading volume has achieved 217 GWh.
  - May: 11.8 GWh
  - Jun: 104.5 GWh
  - Jul: 0.04 GWh
  - Aug: 58.5 GWh
  - Sep: 42.3 GWh
- We had trades along the entire curve, Weekly, Monthly, Quarterly, Seasonally, and Yearly for Tokyo Area Baseload.
- While Tokyo area has been more active, we had our first trade for Kansai in September.
- As we near the Winter demand season, we expect market activity to increase with more participants joining the market.

# Agenda

Introduction of EEX Group

EEX Japanese power futures overview

How to start trading?

Initiatives to further develop liquidity

Q&A

## **Product Specifications** Japan Power Futures



### **Trade Registration Flow**



### Next steps to start trading



# Agenda

Introduction of EEX Group

EEX Japanese power futures overview

How to start trading?

Initiatives to further develop liquidity

Q&A

## Initiatives to further develop liquidity Zero fees until 31st October 2020

• To support the development of initial liquidity, EEX will wave the trading and clearing fees for Japanese power contracts until 31st of October 2020.

EEX trade registration fee	0.002 JPY/kWh = 2.00 JPY/MWh
ECC clearing fee	0.001 JPY/kWh = 1.00 JPY/MWh

 From 1<sup>st</sup> November 2020, Volume-based rebate scheme is planning to be introduced.



### **Initiatives to further develop liquidity** Continuous communication with all stakeholders

Online meetings and webinars

Monthly newsletter with updates on volumes and liquidity

Although we cannot meet physically at the moment, we will continue to stay in touch with you and the entire market

Series of podcasts (on Spotify and Apple)

Frequent meetings with regulators in Japan and Germany



Thank you very much for your attention

# Questions and Answers







# Contact details > eex

• Europe <u>Steffen Riediger</u> Tel: +49-341-2156-528 Email: <u>steffen.riediger@eex.com</u>

## • Asia

<u>Ellie Senaga</u> Tel: +65-8809-4260 Email: <u>esenaga@eexasia.com</u>

#### • Japan

<u>Bob Takai</u> Tel: +81-90-8440-0106 Email: <u>bob.takai@ext.eex.com</u>



# Contact details KY©S

#### **KYOS Energy Consulting BV**

Cyriel de Jong, Director E-mail: i<u>nfo@kyos.com</u> Tel: +31 23 55 10 221