20/09/2019 Budapest - Workshop

XBID go-live preparation / Single Intraday Coupling

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hupx
HUNGARIAN POWER EXCHANGE

Agenda

1. Sum up the points from last Workshop
    1. Background, how we got here
    2. Market coupling gain
    3. XBID project overview (XBID Common Projects, XBID System, Local Implementation Projects)
2. What will change with the go live of XBID
    1. Cross zonal capacity allocation
    2. Gate opening
    3. Gate closure
    4. Product changes
    5. The screen
3. Member testing period
4. Go-live
5. XBID success

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How we got here?

First Package → **Second Package** → **Third Package**

- Principles for Single Market

- Rules for liberalization
- Give more power to regulators

- Effective separation of suppliers from network operators
- Establishment of the ACER
- Independent regulators
- Establishment of ENTSO-E
- Protecting consumer rights

…and the tools

- **Forward capacity allocation**
- **Electricity balancing**
- **Capacity allocation and congestion management**

Single day-ahead
Single Intraday market

Most important goals:

- **Improve the competition**
- **Guarantee security of supply**
- **Increase Energy efficiency**
- **Promote the interests of consumers**

Why we really do it?

The benefits of integrating European electricity markets

„The European Commission's Target Electricity Model aims to integrate EU electricity markets. This paper estimates the potential benefit to the EU of coupling interconnectors to increase the efficiency of trading day-ahead, intra-day and sharing balancing services efficiently across borders. Further gains are possible by eliminating unscheduled flows and avoiding the curtailment of renewables with better market design. In the short run the gains could be as high as ***€3.3 billion/yr****, more than 100% of the current gains from trade."*

3,3 billion euros/year - substantial amount

http://www.eprg.group.cam.ac.uk/wp-content/uploads/2015/02/EPRG-WP-1504.pdf

So we do it: XBID project overview

- Establish a common cross border implicit continuous intraday trading solution across Europe, where all the cross border capacities are allocated
- The **XBID Project** started as a joint initiative by Power Exchanges and TSOs from 11 countries **to create an integrated intraday cross-border market**
- Currently 47 members
- Hungary will join in the 2nd wave

Successful delivery of XBID depends on 3 different pillar

XBID Common Projects	XBID System	Local Implementation Projects (LIPs)
Coordinate XBID design and development, implementation, common framework for pre- & post coupling	Project under contract with DBAG– XBID development and testing	Preparation of local systems and interfaces

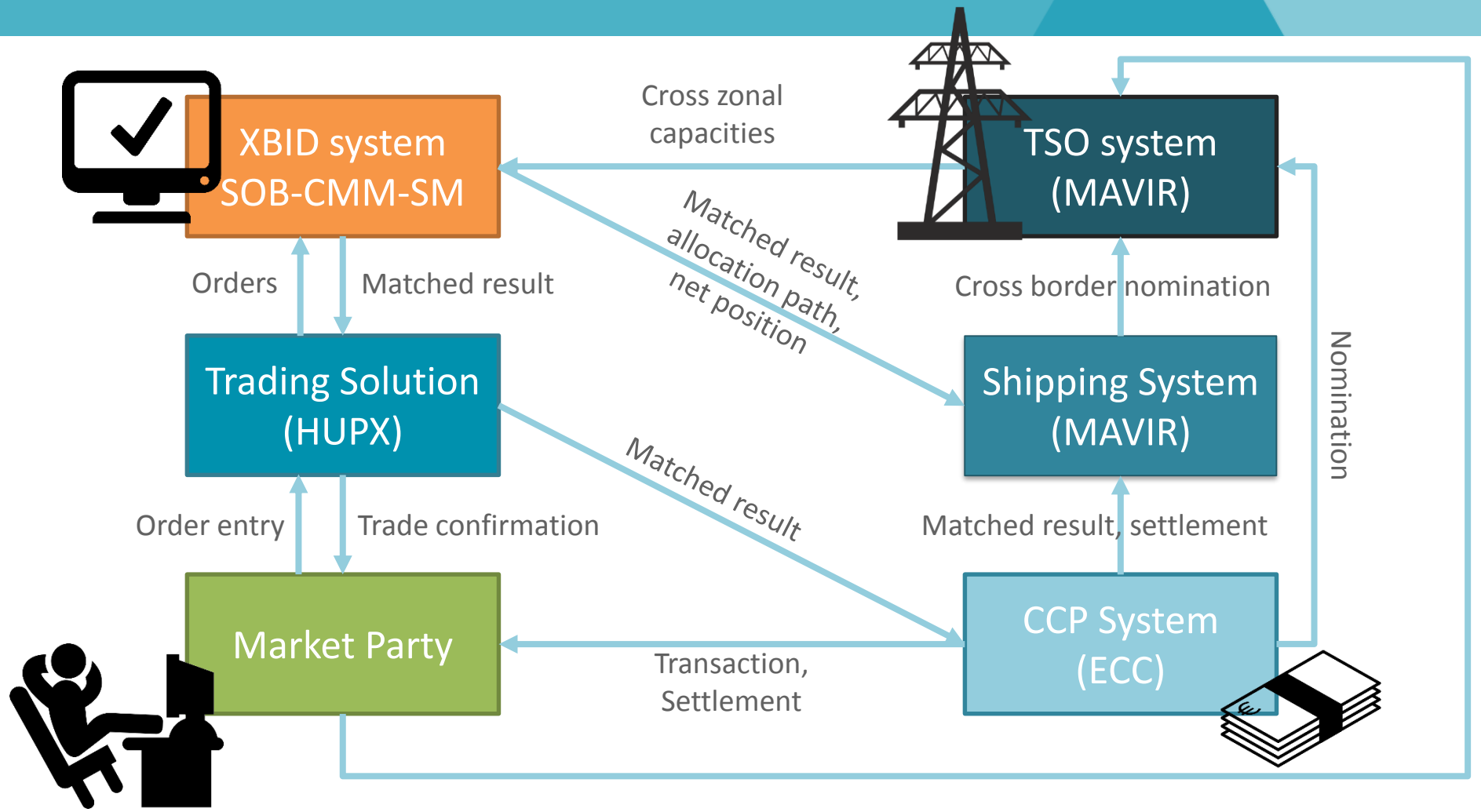
= Countries to be coupled in 1st go-live

Go-live on Tuesday 12th June 2018

XBID – Common project

Successful delivery of XBID depends on 3 different pillar

XBID – Common project (High Level Architecture)

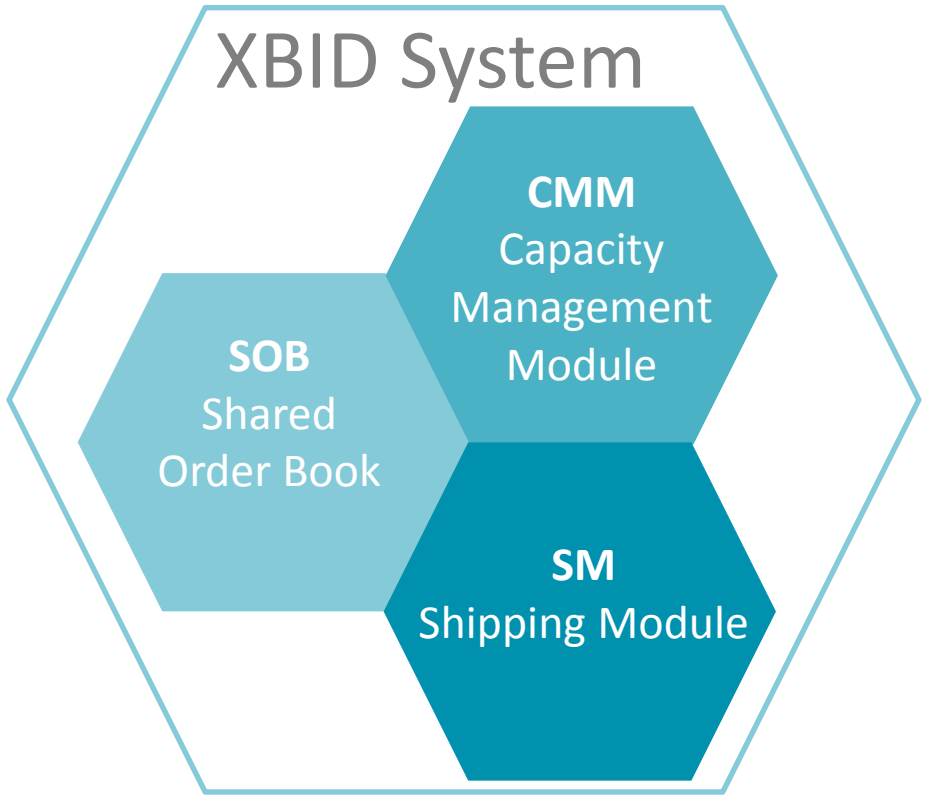


The purpose of the XBID initiative is to increase the overall efficiency of intraday trading

XBID – System

Successful delivery of XBID depends on 3 different pillar

XBID – System (SOB, CMM, SM)



SOB

- Matching of orders
- Calculation order execution flows
- Interface to Local Trading Systems
- Calculation of the Local Views of Order Books

CMM

- Implicit capacity submission on border level
- Interface to TSOs

SM

- Provides information from trades to all relevant parties of the post-coupling process.
- Between two different Delivery Areas (DAs)
- In the same DA between two different power exchanges

XBID – System (SOB / Local view in HUPX M7)

Order Book Calculation

- On the screen **order from abroad are visible only** if **sufficient transmission capacity is available**
- The same order can be displayed in **multiple local views** (depending on available transmission capacity)
- Cross-border orders in the local views will be displayed **up to the available capacity**; hence orders can be shown with **partial volume**
- An **order is removed** from all local views after full execution, deactivation or deletion

Rules for Order Book Calculation

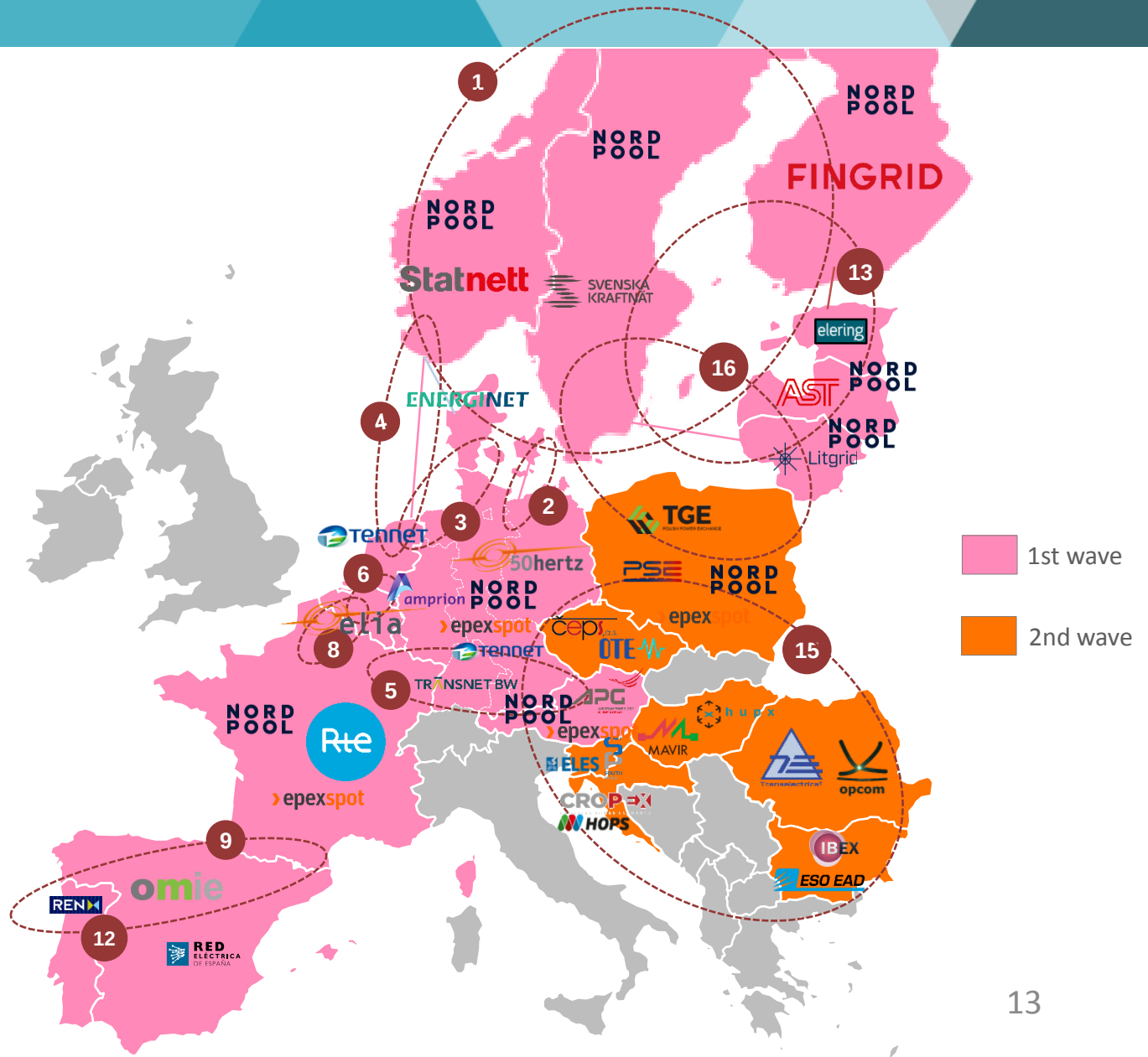
- Orders from other markets are selected based on available capacity and **price-time-priority**
- Traders **cannot see** in which area the orders that they see in their local order book were entered

XBID – LIPs

Successful delivery of XBID depends on 3 different pillar

XBID – LIPs (1st wave and parties involved)

LIP		Participants
1	Nordic	Fingrid, Energinet, SvK, Statnett, Nord Pool, EPEX
2	Kontek	Energinet, 50Hz, Nord Pool, EPEX
3	DK1/DE, DE/NL	Energinet, TenneT NL& DE, Amprion, EPEX, Nord Pool
4	NorNed	Statnett, TenneT NL, EPEX, Nord Pool
5	FR/DE, DE/AT	Amprion, TransnetBW, APG, RTE, EPEX, Nord Pool, Tennet DE
6	NL/BE	Elia, TenneT NL, EPEX, Nord Pool
8	FR/BE	RTE, Elia, EPEX, Nord Pool
9 12	FR/ES& ES/PT	RTE, EPEX, OMIE, REE, REN, Nord Pool
13	Baltic	Elering, Litgrid, AST, Fingrid (Estlink), Svenska Kraftnät (NordBalt), Nord Pool



XBID – LIPs (2nd wave and parties involved)

LIP		Participants	Foreseen capacity allocation
15	AT-CZ, AT-SI, AT-HU, BG-RO, CZ-DE, CZ-PL, DE-PL, SI-HR, HR-HU, HU-RO	**NEMOs**: BSP, Cropex, EPEX, HUPX, IBEX, Nord Pool, OPCOM, OTE **TSOs**: 50Hertz, APG, CEPS, ELES, ESO, HOPS, MAVIR, PSE, Transelectrica, TTG	• Implicit • Implicit & Explicit for SI-HR border
16	LT-PL, PL-SE	**NEMOs**: Nord Pool, TGE **TSOs**: Litgrid, PSE, Svk	• Implicit

Planned go-live date: 19.11.2019 –
depends on the successful delivery of the necessary releases and tests.

Are you awake yet?

Now the changes in your life so please wake up!

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XBID – LIPs Cross zonal capacity allocation

NO need to submit explicit capacity allocation request on XBID borders

NO more explicit capacity allocation on the coupled borders*

NO need to waste time with submission of cross border nomination on intraday timeframe and cross border settlement

Traders will save time!

*except of SI-HR where explicit continuous will be also available

XBID – Cross border / Local gate opening

Inter-connector	Cross Border Gate Opening (Technical GOT)	When cross-border capacity is made available after GOT (Effective GOT)
CZ-DE (50Herz / Tennet)	15:00	22:00
CZ-AT	15:00	22:00
AT-HU	15:00	22:00
HU-RO	15:00	22:00
HU-HR	15:00	22:00
HR-SI	15:00	22:00
PL-DE	15:00	22:00
PL-CZ	15:00	22:00
AT-SI	15:00	22:00
RO-BG	15:00	16:00

Market	Local Gate Opening
Hungary/HUPX	15:00

Change of Local gate opening from 15:45 to 15:00

XBID – Gate closure / Lead time

Current gate closure time

- 90 minutes before physical delivery

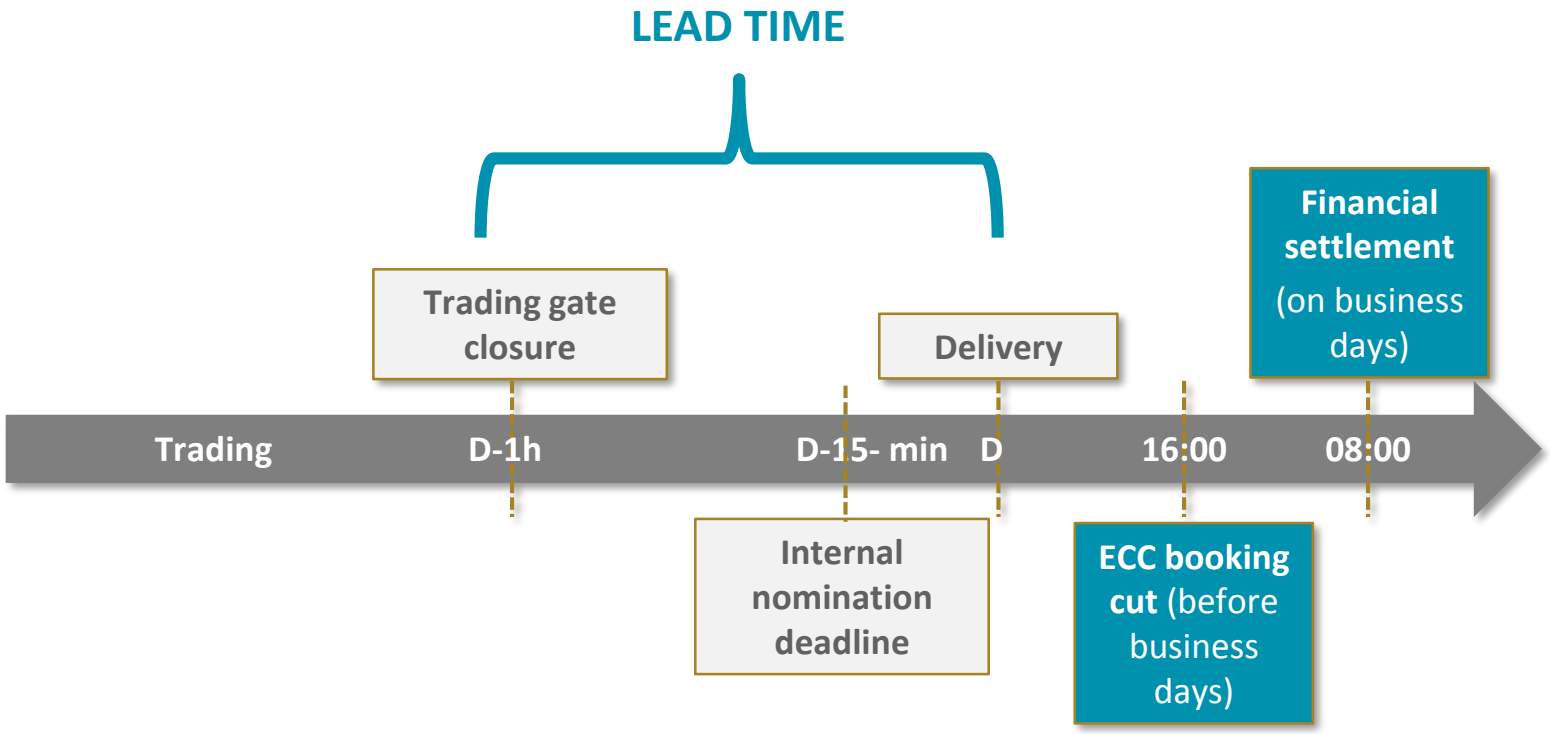
XBID related change

Commercial Code modification submitted by MAVIR to reduce internal nomination deadline to 15 min.

Planned introduction date: 1st November 2019

- **60 minutes before physical delivery**
  1. ECC trade processing and nomination 30 min
  2. 15 min for ECC backup
  3. TSO procedures 15 min

Buffer to be reconsidered after go-live.



Gate Closure Time will decrease from 90 min to 60 min

XBID – Product changes

XBID

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Hourly product will be matched by XBID

Hourly product will be matched cross border
Decomposition to Quarter Hourly products will cease to exist

hupx HUNGARIAN POWER EXCHANGE

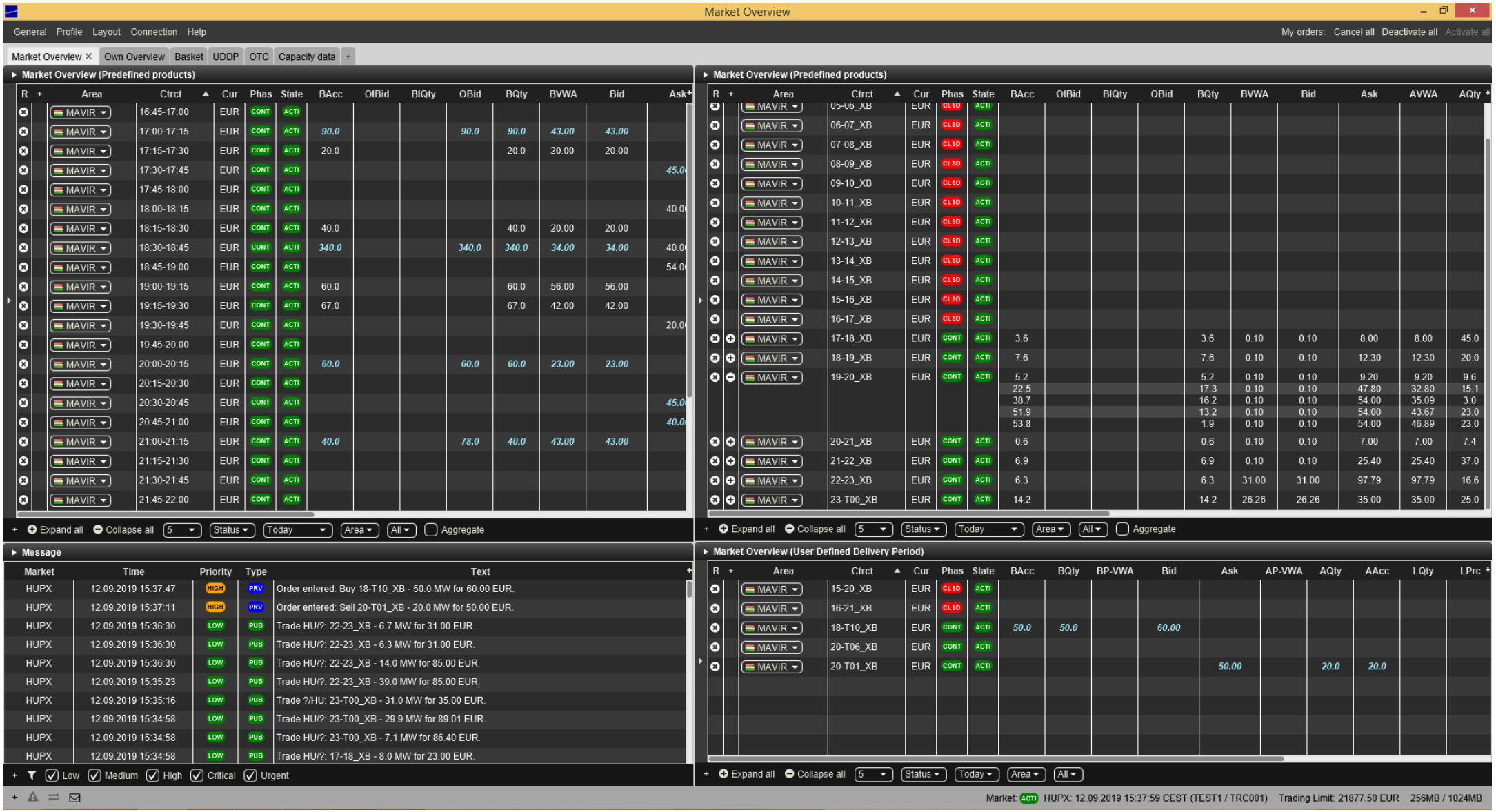
Quarter hourly products will be matched locally

OTC registration is available only locally
New local OTC hourly product and OTC hourly block product

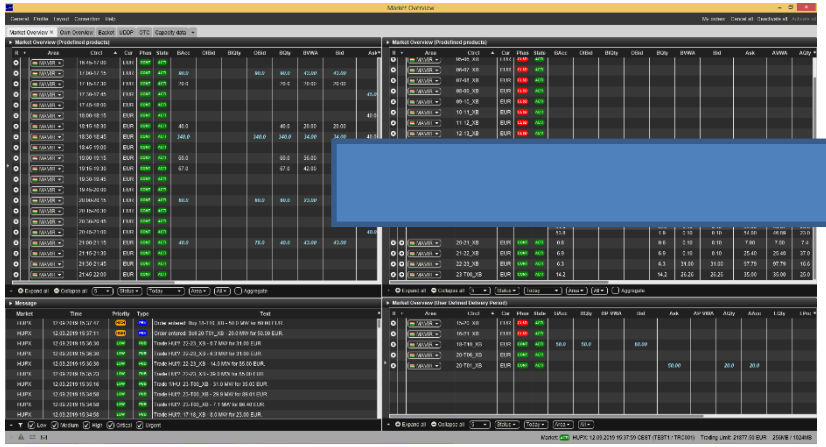
No cross product matching between Hourly and Quarter Hourly products

We are working on the introduction again

XBID – The screen



XBID – The screen



Quarterly_Local Product

Market Overview (Predefined products)

R	Area	Ctrct	Cur	Phas	State	BAcc	OlBid	BlQty	OBid	BQty	BVWA	Bid	Ask	AVWA	AC
	MAVIR	18:00-18:15	EUR	CONT	ACTI										
	MAVIR	18:15-18:30	EUR	CONT	ACTI										
	MAVIR	18:30-18:45	EUR	CONT	ACTI								50.00	50.00	10
	MAVIR	18:45-19:00	EUR	CONT	ACTI								44.00	44.00	4.
	MAVIR	19:00-19:15	EUR	CONT	ACTI										
	MAVIR	19:15-19:30	EUR	CONT	ACTI										
	MAVIR	19:30-19:45	EUR	CONT	ACTI	6.0				6.0	53.00	53.00			
	MAVIR	19:45-20:00	EUR	CONT	ACTI										
	MAVIR	20:00-20:15	EUR	CONT	ACTI										
	MAVIR	20:15-20:30	EUR	CONT	ACTI										
	MAVIR	20:30-20:45	EUR	CONT	ACTI	5.0				5.0	55.00	55.00	56.00	56.00	4.
	MAVIR	20:45-21:00	EUR	CONT	ACTI	5.0				5.0	51.00	51.00	*52.00*	*52.00*	2.
	MAVIR	21:00-21:15	EUR	CONT	ACTI								*51.00*	*51.00*	2.
	MAVIR	21:15-21:30	EUR	CONT	ACTI										
	MAVIR	21:30-21:45	EUR	CONT	ACTI										
	MAVIR	21:45-22:00	EUR	CONT	ACTI										
	MAVIR	22:00-22:15	EUR	CONT	ACTI	*10.0*			*10.0*	*10.0*	*20.00*	*20.00*			
	MAVIR	22:15-22:30	EUR	CONT	ACTI								*50.00*	*50.00*	5.
	MAVIR	22:30-22:45	EUR	CONT	ACTI								63.00	63.00	6.
	MAVIR	22:45-23:00	EUR	CONT	ACTI	5.0				5.0	47.20	47.20			
	MAVIR	23:00-23:15	EUR	CONT	ACTI										
	MAVIR	23:15-23:30	EUR	CONT	ACTI										
	MAVIR	23:30-23:45	EUR	CONT	ACTI										
	MAVIR	23:45-T00:00	EUR	CONT	ACTI										

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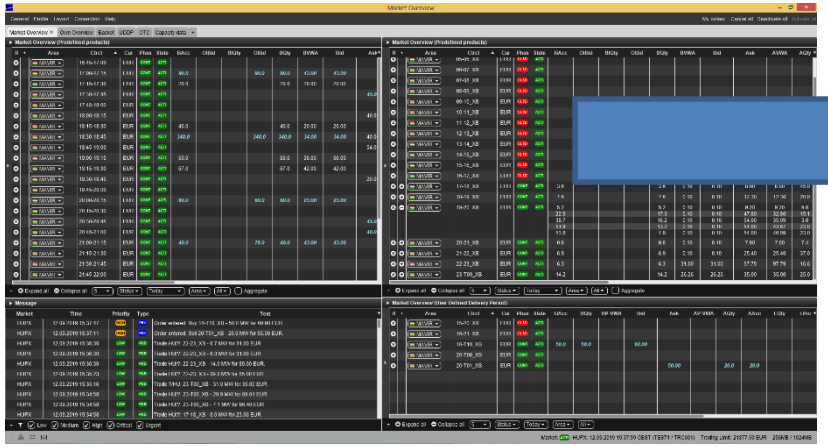
XBID – The screen



XBID_Hour_Power Product

Market Overview (Predefined products)

R	+	Area	Ctrct	Cur	Phas	State	BAcc	OlBid	BIQty	OBid	BQty	BVWA	Bid	Ask	AVWA	AQty
			05-06_XB	EUR	CLSD	ACTI										
			06-07_XB	EUR	CLSD	ACTI										
			07-08_XB	EUR	CLSD	ACTI										
⊗		MAVIR	08-09_XB	EUR	CLSD	ACTI										
⊗		MAVIR	09-10_XB	EUR	CLSD	ACTI										
⊗		MAVIR	10-11_XB	EUR	CLSD	ACTI										
⊗		MAVIR	11-12_XB	EUR	CLSD	ACTI										
⊗		MAVIR	12-13_XB	EUR	CLSD	ACTI										
⊗		MAVIR	13-14_XB	EUR	CLSD	ACTI										
⊗		MAVIR	14-15_XB	EUR	CLSD	ACTI										
⊗		MAVIR	15-16_XB	EUR	CLSD	ACTI										
⊗		MAVIR	16-17_XB	EUR	CLSD	ACTI										
⊗	⊕	MAVIR	17-18_XB	EUR	CONT	ACTI	3.6				3.6	0.10	0.10	8.00	8.00	45.0
⊗	⊕	MAVIR	18-19_XB	EUR	CONT	ACTI	7.6				7.6	0.10	0.10	12.30	12.30	20.0
⊗	⊖	MAVIR	19-20_XB	EUR	CONT	ACTI	5.2				5.2	0.10	0.10	9.20	9.20	9.6
							22.5				17.3	0.10	0.10	17.91	14.90	18.2
							38.7				16.2	0.10	0.10	47.80	26.48	15.1
							51.9				13.2	0.10	0.10	54.00	28.28	3.0
							53.8				1.9	0.10	0.10	54.00	36.87	23.0
⊗	⊕	MAVIR	20-21_XB	EUR	CONT	ACTI	0.6				0.6	0.10	0.10	7.00	7.00	7.4
⊗	⊕	MAVIR	21-22_XB	EUR	CONT	ACTI	6.9				6.9	0.10	0.10	25.40	25.40	23.0
⊗	⊕	MAVIR	22-23_XB	EUR	CONT	ACTI	6.3				6.3	31.00	31.00	99.13	99.13	34.6
⊗	⊕	MAVIR	23-T00_XB	EUR	CONT	ACTI	17.4				17.4	24.80	24.80	35.00	35.00	25.0

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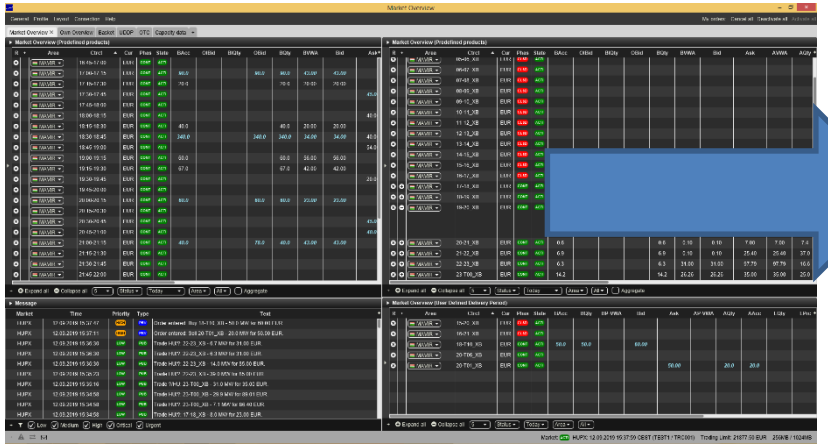
XBID – In case of coupling you see…



XBID_Hour_Power Product

Market Overview (Predefined products)

Search

- Hour_Power_Local
- Quarterly_Local
- XBID_Hour_Power

R	Area	Ctrct	Cur	Phas	State	BAcc	OIBid	BIQty	OBid	BQty	BVWA
	MAVIR	01-02_XB	EUR	CLSD	ACTI						
	MAVIR	02-03_XB	EUR	CLSD	ACTI						
	MAVIR	03-04_XB	EUR	CLSD	ACTI						
	MAVIR	04-05_XB	EUR	CLSD	ACTI						
	MAVIR	05-06_XB	EUR	CLSD	ACTI						
	MAVIR	06-07_XB	EUR	CLSD	ACTI						
	MAVIR	07-08_XB	EUR	CLSD	ACTI						
	MAVIR	08-09_XB	EUR	CLSD	ACTI						
	MAVIR	09-10_XB	EUR	CLSD	ACTI						
	MAVIR	10-11_XB	EUR	CLSD	ACTI						
	MAVIR	11-12_XB	EUR	CLSD	ACTI						
	MAVIR	12-13_XB	EUR	CLSD	ACTI						
	MAVIR	13-14_XB	EUR	CLSD	ACTI						
	MAVIR	14-15_XB	EUR	CLSD	ACTI						
	MAVIR	15-16_XB	EUR	CLSD	ACTI						
	MAVIR	16-17_XB	EUR	CLSD	ACTI						
	MAVIR	17-18_XB	EUR	CONT	ACTI	14.4				14.4	0.10
	MAVIR	18-19_XB	EUR	CONT	ACTI	74.0				74.0	64.75
	MAVIR	19-20_XB	EUR	CONT	ACTI	14.4				14.4	0.10
	MAVIR	20-21_XB	EUR	CONT	ACTI	0.6				0.6	0.10
	MAVIR	21-22_XB	EUR	CONT	ACTI	13.0				13.0	7.32

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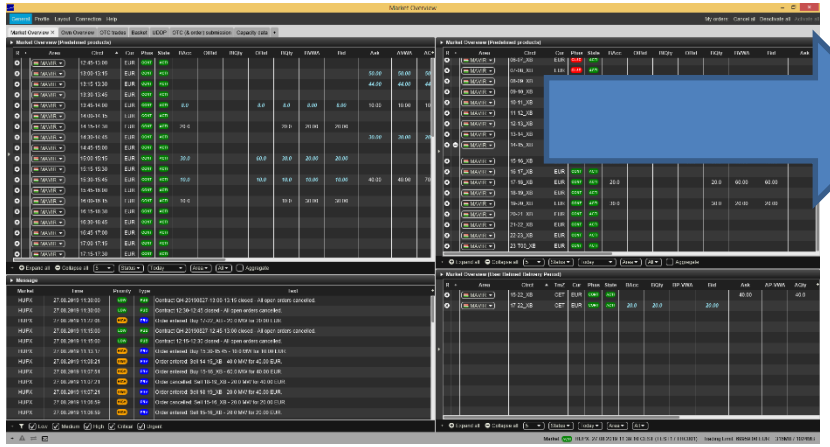
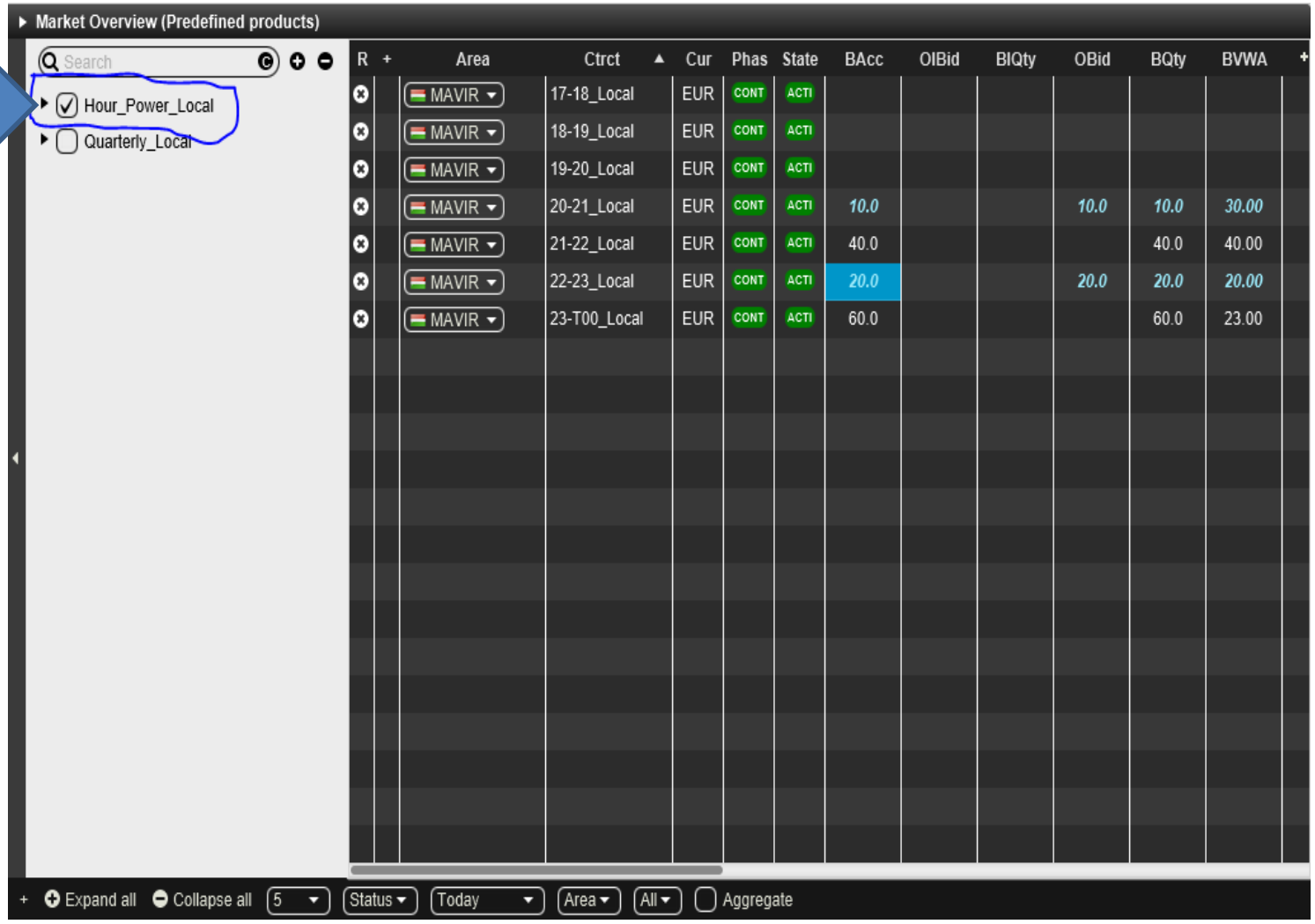
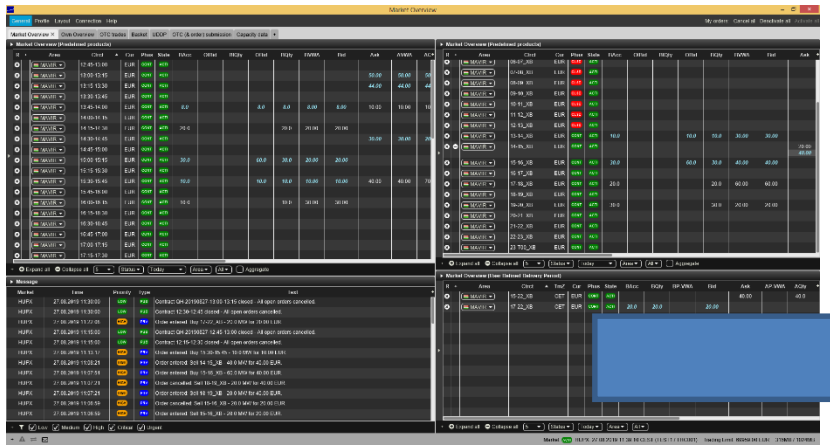
XBID – In case of decoupling you see…





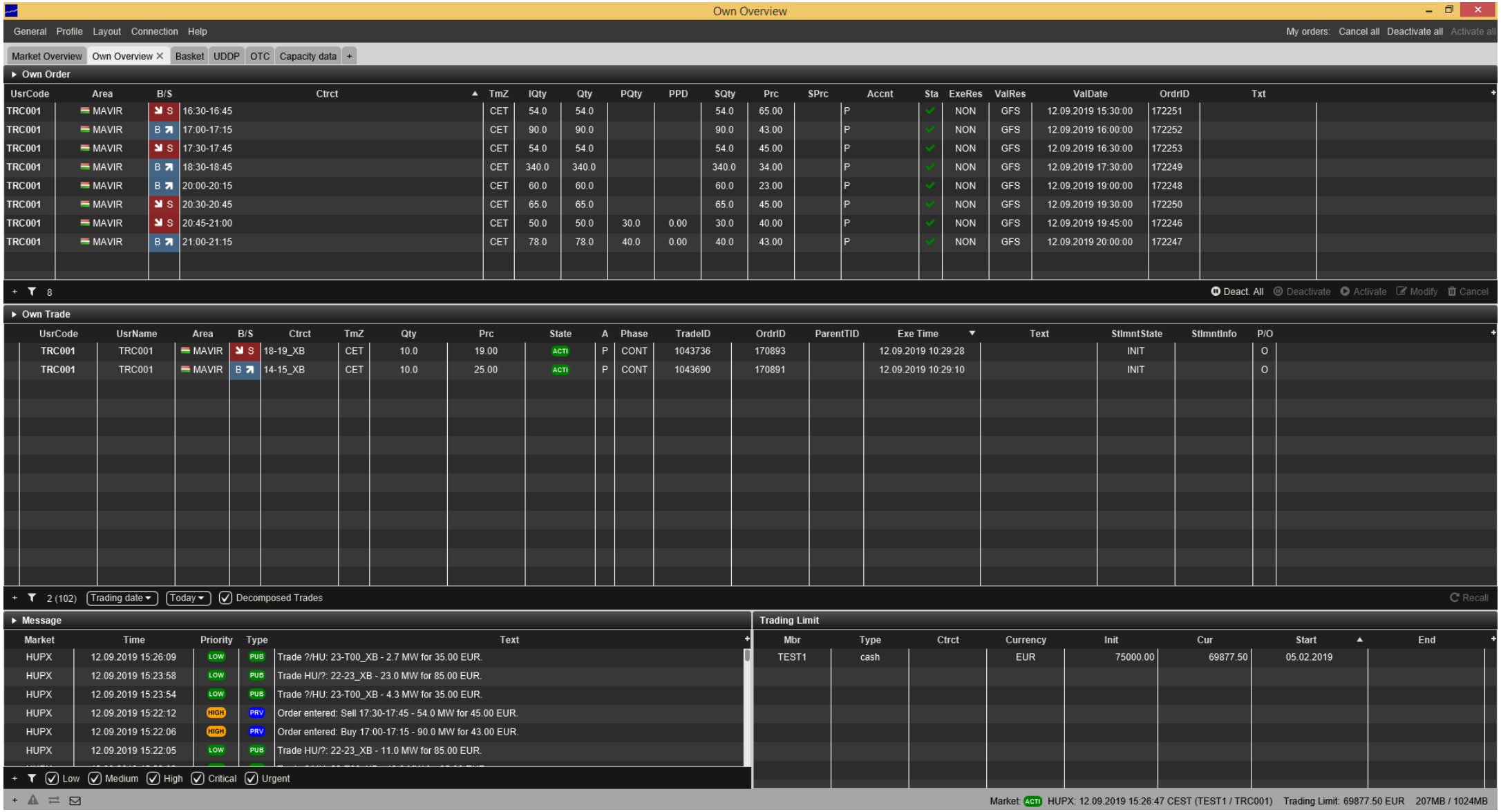
Hour_Power_Local
You need to tick it!

XBID – The screen



User defined (block) Product

XBID – Own Overview



XBID – UDDP / Block submission

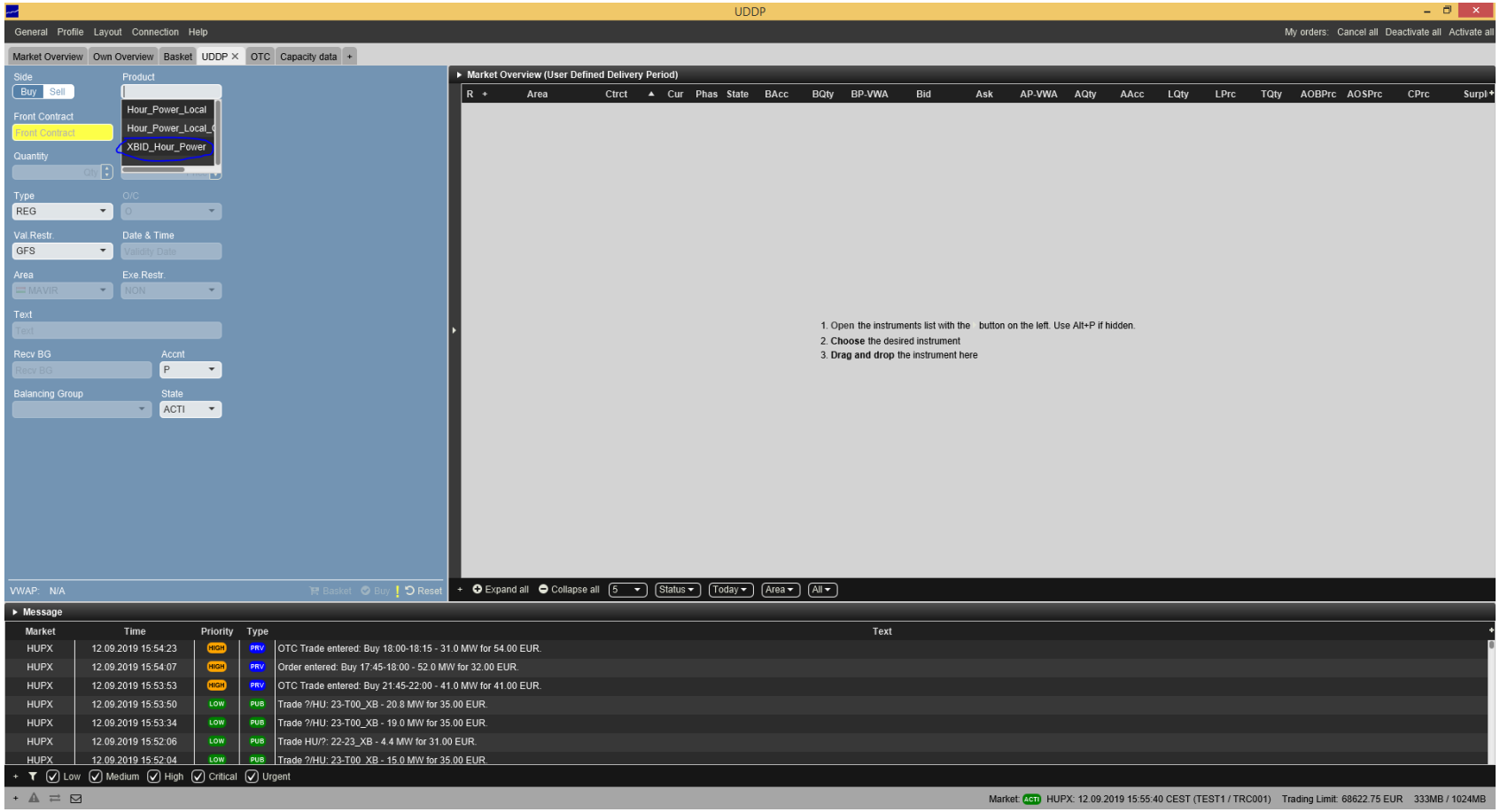
Options for block submission **in case of coupling**:

- Quarterly_Local: no block
- **XBID_Hour_Power**: via „UDDP” overnight orders are possible
- Hour_Power_Local_OTC_UD: „UDDP” overnight orders are NOT possible

Options for block submission **in case of decoupling**:

- Quarterly_Local: no block
- **Hour_Power_Local:** „UDDP” overnight orders are NOT possible
- Hour_Power_Local_OTC_UD: „UDDP” overnight orders are NOT possible

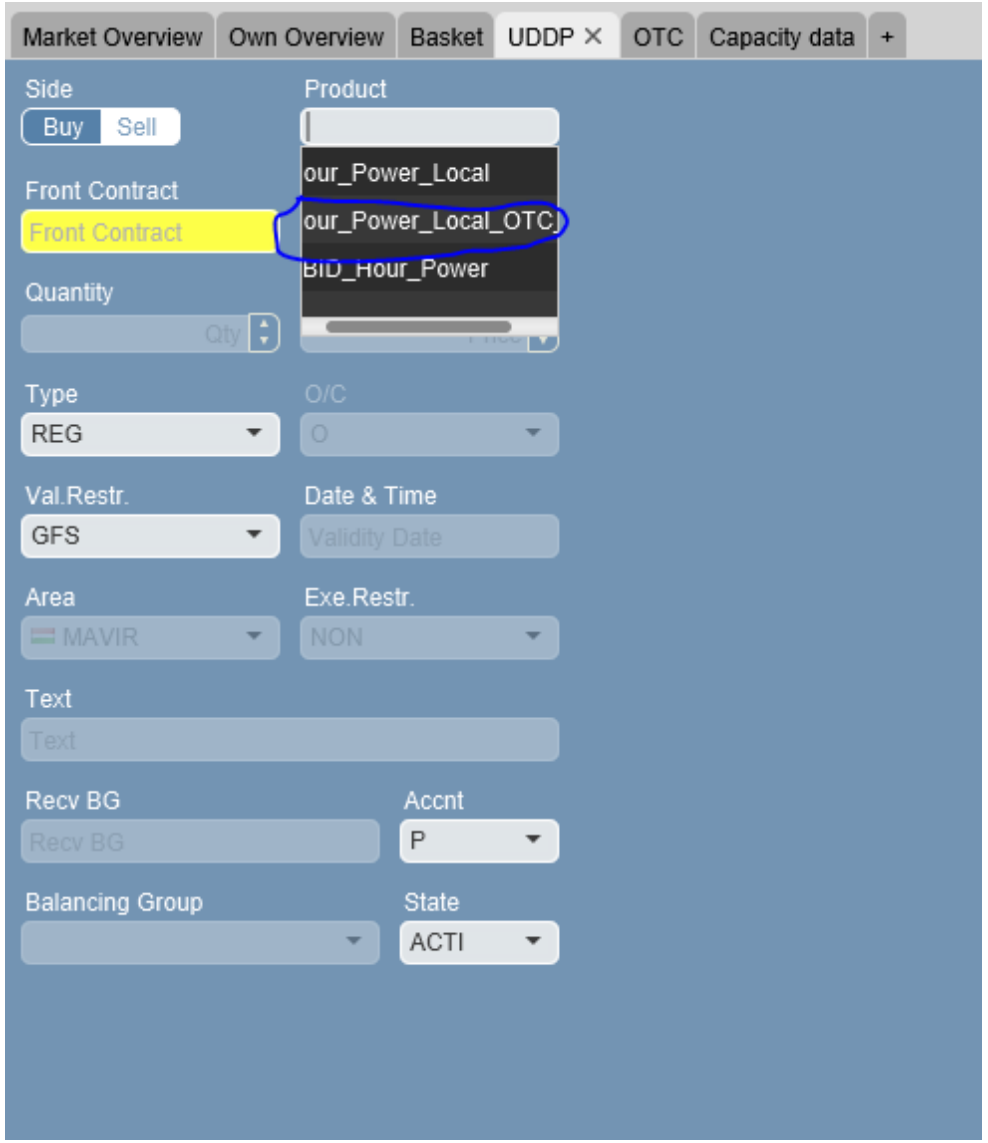
XBID – In case of coupling…



…you can submit XBID_Hour_Power

XBID – and…

…you can submit
Hour_Power_Local_OTC_UD

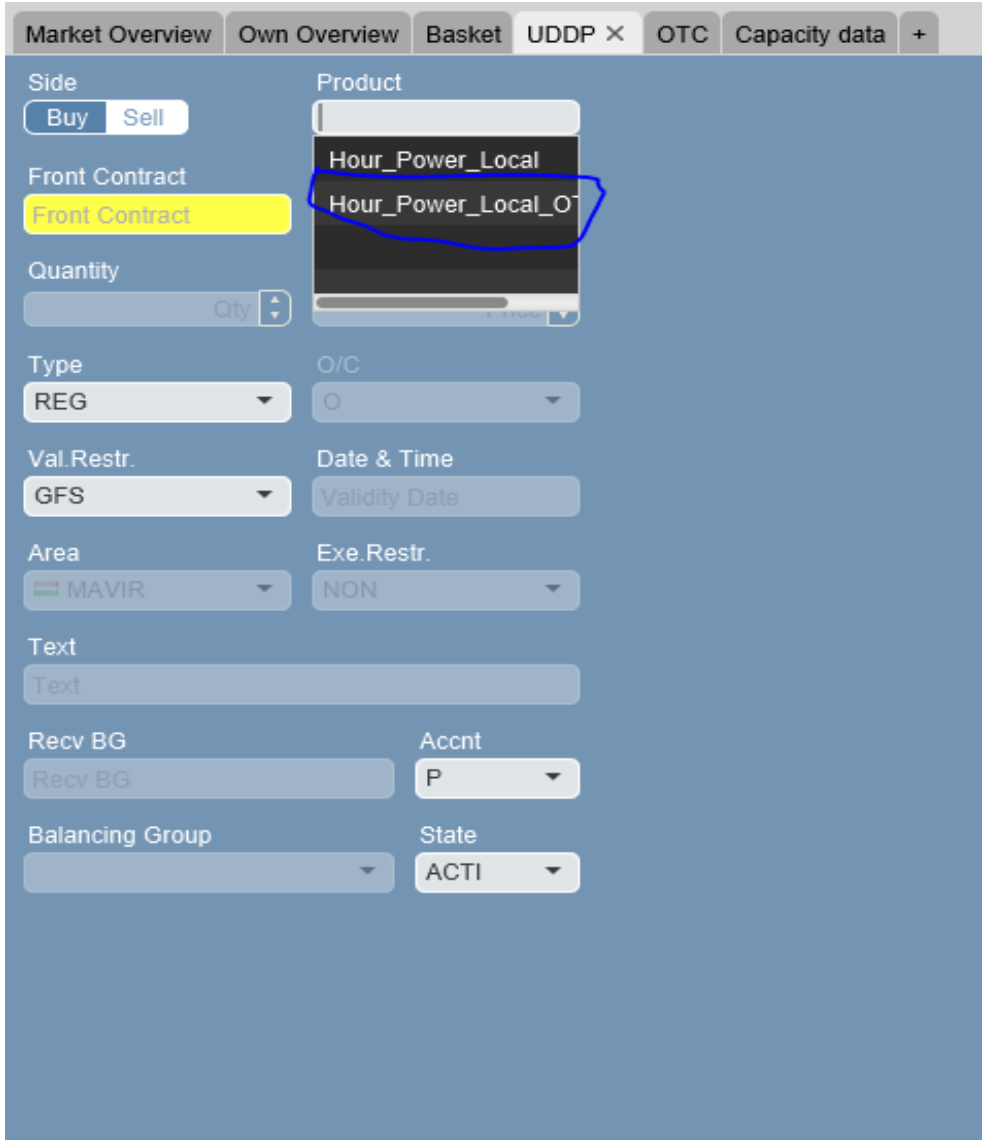


XBID – In case of decoupling…

…you can submit Hour_Power_Local

XBID – and…

…you can submit
Hour_Power_Local_OTC_UD



XBID – OTC submission

Options for OTC submission **in case of coupling**:

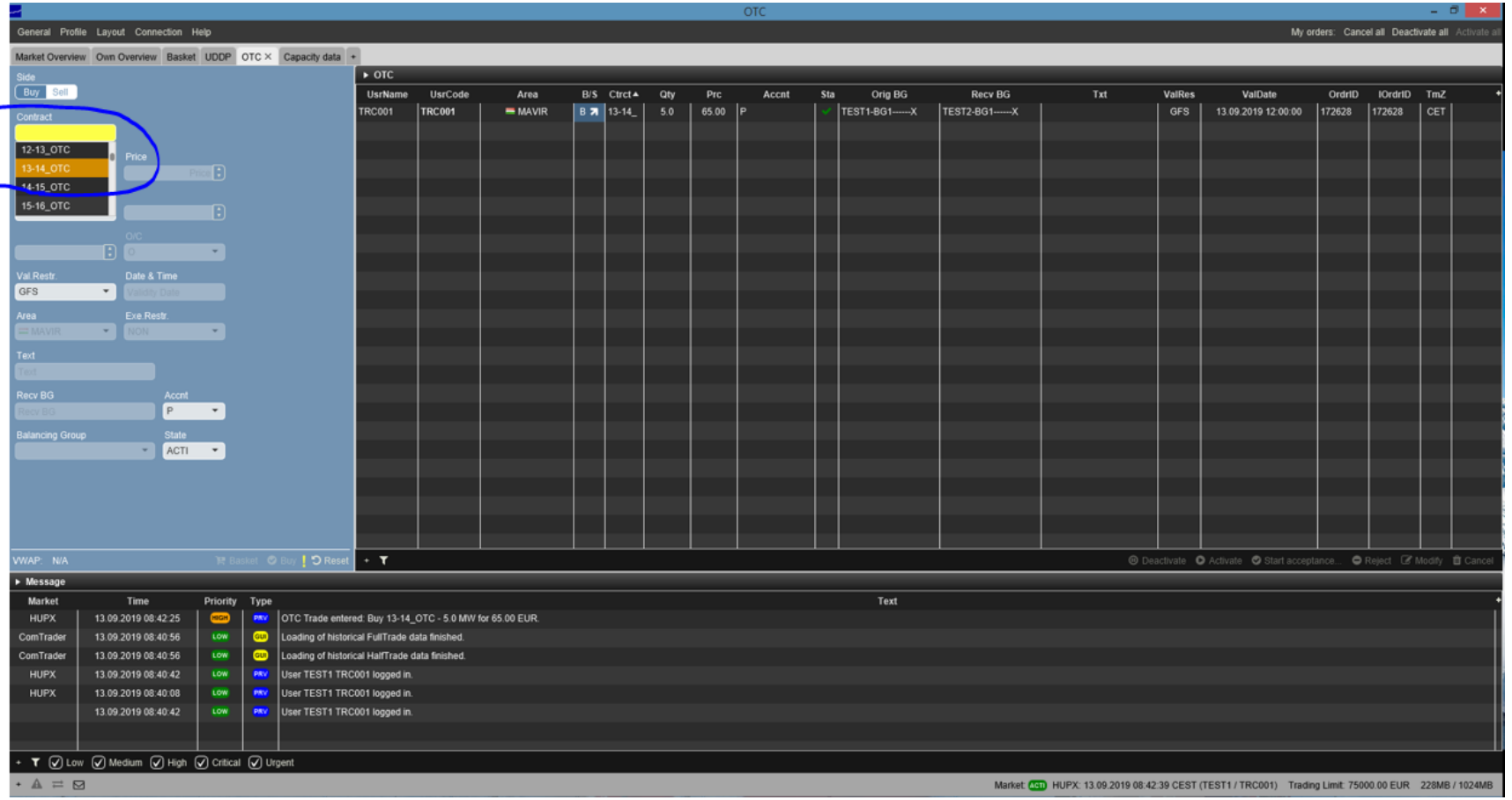
- Quarterly_Local: via „Market Overview” and „OTC”
- XBID_Hour_Power: no OTC is possible
- Hour_Power_Local_OTC: via „OTC”
- Hour_Power_Local_OTC_UD: via „UDDP”

Options for OTC submission **in case of decoupling**:

- No difference to coupling as OTC is possible only locally

XBID – OTC submission

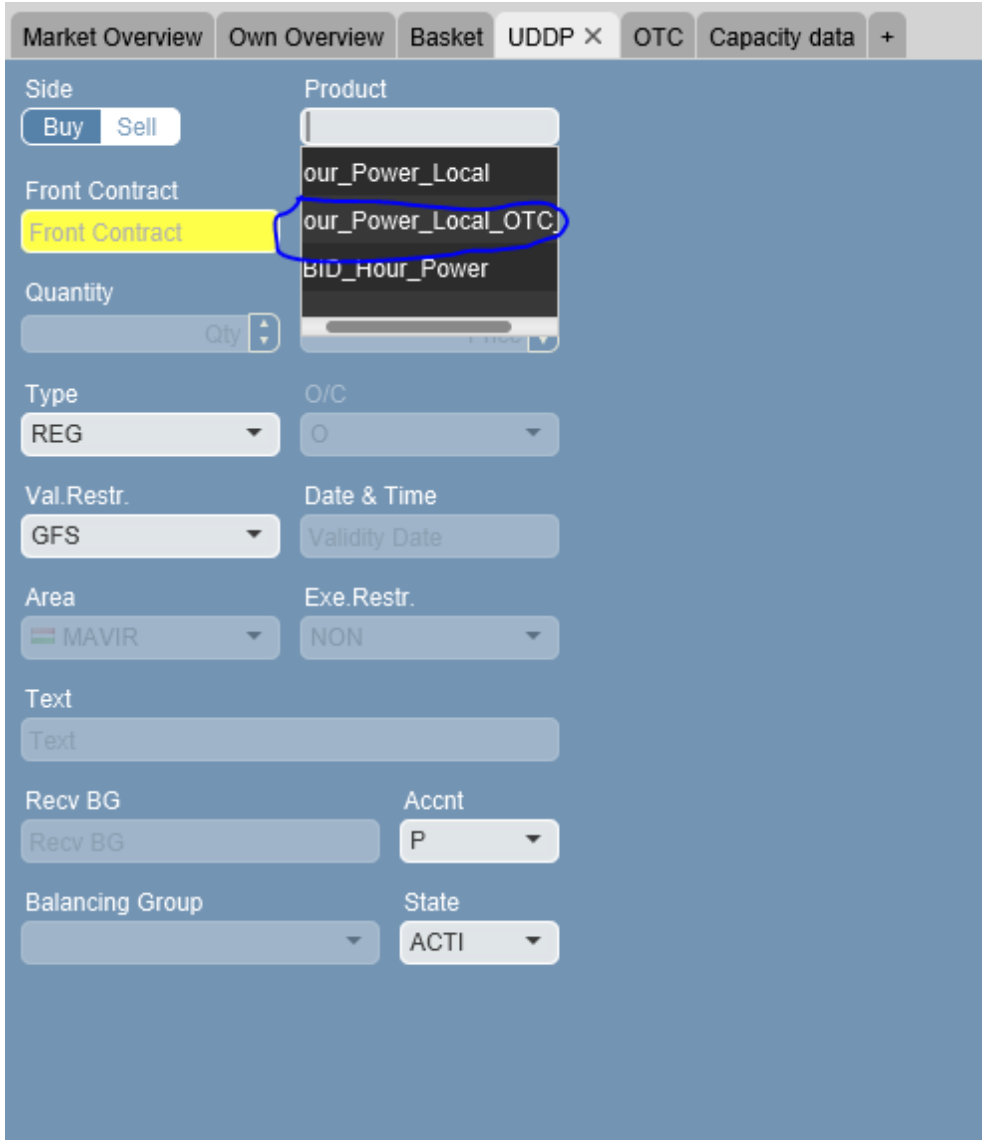
Hour_Power_Local_OTC : via „OTC”



Choose contracts with „_OTC” flag

XBID – OTC submission

…and Hour_Power_Local_OTC_UD via UDDP



XBID – Products 2/1

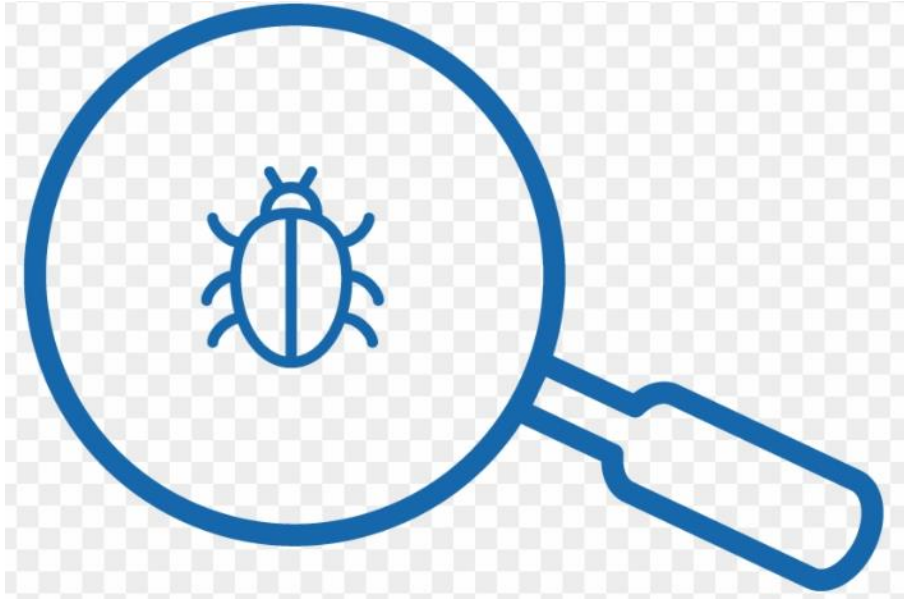
Product	Hourly Coupling: XBID_Hour_Power Decoupling: Hour_Power_Local	Hourly - OTC only Hour_Power_Local_OTC	Quarter Hourly Quarterly_Local
Size	Min vol. Increment 0.1 MW		
Price tick	EUR 0.01 per MWh		
Price range	-9 999 €/MWh to 9 999 €/MWh (EU regulation)		
Type of orders	Regular, Basket, Iceberg	OTC	Regular, Basket, Iceberg, OTC
Execution restriction	NON, IOC, FOK	-	NON, IOC, FOK
Trade recall	NO	NO	YES
Overnight trade	-	-	-

XBID – Products 2/2

Product	User Defined Coupling: XBID_Hour_Power Decoupling: Hour_Power_Local	User Defined OTC: Hour_Power_Local_OTC_UD
Size	Min vol. Increment 0.1 MW	
Price tick	EUR 0.01 per MWh	
Price range	-9 999 €/MWh to 9 999 €/MWh (EU regulation)	
Type of orders	Regular, Basket,	OTC
Execution restriction	AON, IOC	-
Trade recall	NO	NO
Overnight trade	Only for: XBID_Hour_Power	

No decomposition at all
No Baseload and
Peakload block

Testers please pay attention!



Agenda

1. Sum up the points from last Workshop
    1. Background, how we got here
    2. Market coupling gain
    3. XBID project overview (XBID Common Projects, XBID System, Local Implementation Projects)
2. What will change with the go live of XBID
    1. Cross zonal capacity allocation
    2. Gate opening
    3. Gate closure
    4. Product changes
    5. The screen
3. **Member testing period**
4. Go-live
5. XBID success

XBID – Member testing 3/1

What is Member test?

- Member Test Period gives the Market Participant the **opportunity to connect via Local Trading Systems (HUPX M7) to the XBID system**.
- Member test will be conducted in **production-like conditions**, meaning that following items are configured in accordance with the foreseen go-live configuration:
  - product range;
  - product naming and product scheduling;
- Post-coupling activities like **nominations are out of scope** of the Member test
- Operational Messages: the purpose of the Trial Period is to simulate operation as close as possible to the standard production operation. This implies that the systems / HUPX MO will send operational messages.

XBID – Member testing 3/2

- Period of execution:
  - **1st timeslot: 14/10/2019 - 18/10/2019**
    - Mo 14.10.2019 Normal operations
    - Tu 15.10.2019 Normal operations
    - We 16.10.2019 Normal operations + Trade recall and trade cancellation + Closing of market(s)
    - Th 17.10.2019 Normal operations + Trade recall and trade cancellation + Closing of borders
    - Fr 18.10.2019 No testing planned
  - 2nd timeslot: 21/10/2019 - 25/10/2019
  - 3rd timeslot: 28/10/2019 - 02/11/2019
- Note: activation of the timeslot is decision of the XBID project week by week. The goal is to execute all related scenarios within the first timeslot.
- The IT System will be operating on a 24x5 basis during the Trial Period.

XBID – Member testing 3/3

During member test in case of question HUPX **Market operation** is available:

- from 9:00 to 17:00 weekdays
- Phone: +36 1 304 1092
- E-mail: idmarketops@hupx.hu

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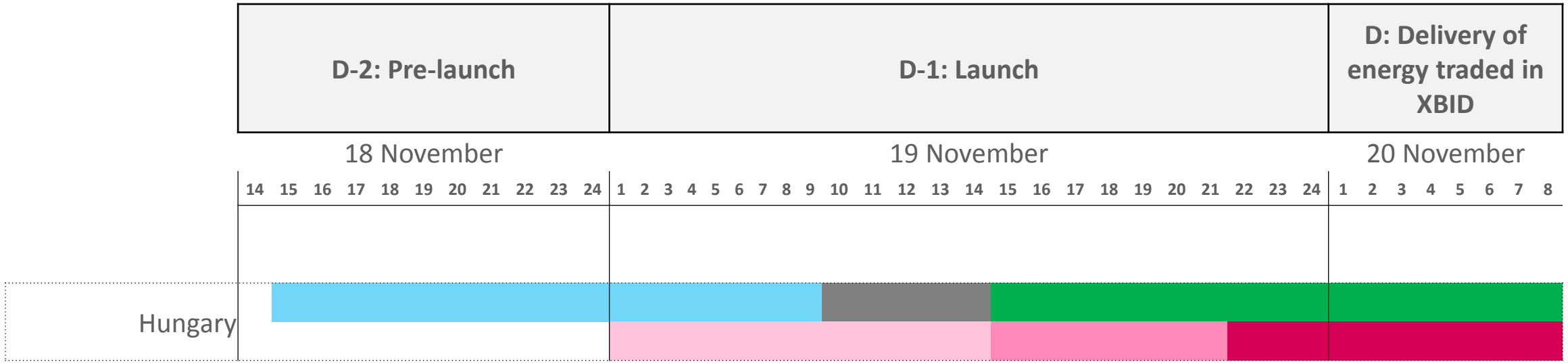
XBID – Go live day



- Local Market Trading for delivery D-1
- No trading
- Local Market Trading for D
- XBID is running
- Cross bordes trading via XBID for delivery D
- Cross bordes trading via XBID for delivery D (capacities provided)

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XBID – Summary of the most important changes

- No more Cross Border Intraday auction on the concerned borders
- Cross Border Gate opening time at 15:00, Effective GOT at 22:00
- Local Gate Opening at 15:00
- Gate Closure 60 min before delivery
- Separated Product for OTC matching
- Clearing and settlement is not influenced by XBID/coupling

Questions?

Thank you for listening!

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HUPX ZRT.

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