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1) Background & Goal

SDAC Operations

- Since the go-live of Multi Regional Coupling (MRC, jointly with 4M MC forming SDAC) in 2014, more than 2,700 successful market coupling sessions have been conducted.
- In the last 2 years, three major incidents have happened that led to a partial decoupling of the SDAC Market.
- As part of the SDAC evaluation of these three incidents, recommendations have been made to perform training sessions involving all operational parties (TSOs, NEMOs, CCPs, Shadow Auction entities, etc.) including Market Participants.
- In addition, EFET & EURELECTRIC on behalf of the Market Participants have requested for realistic decoupling training sessions.

Goal

This training session is organized to give all parties involved the opportunity to validate that they are properly prepared to handle such a day-ahead market decoupling incident in real operations and real-life conditions.

2) Date and timeslot

Date
- 03/11/2021

Trade Date

- 04/11/2021

Timeslot
- 12:00-17:00 IST (to have results available from the Fallback auctions)

	SDAC Full Decoupling – Timetable for SEMOpx			
Step	**Description**	**System**	**Simulation time (IST)**	**Production time (IST)**
1	OBK opening	ETS	**08:00**	NA
2	OBK Gate Closure Time	ETS	13:00	11:00
3	Sending of message ExC_02: Delay in Market Coupling Results publication	email + ETS breaking message	13:45	11:45
4	Sending of message UMM_01a: Delay in final result publication	email + ETS breaking message	14:05	12:05
5	Sending of message ExC_03b: Further Delay of the Market Coupling Session	email + ETS breaking message	14:30	12:30
6	Sending of message ExC_04b: Full decoupling	email + ETS breaking message	15:00	13:00
7	Sending of message UMM_04: Reopening of Order books for Local auction (for the CWE and PL bidding zones)	email + ETS breaking message	15:08	13:08
8	In case SDAC price thresholds are reached during the local auction, sending of message of UMM_05: Threshold reached during local auction - Reopening of order books	email + ETS breaking message	15:25	13:25
9	Expected publication of local results	ETS	As of 15:30	As of 13:30
9	Sending of message Nordic_ext_01: Order book reopening for running the Nordic Regional Coupling	email + ETS breaking message	As of 15:30	As of 13:30
10	Expected publication of Nordic coupling results	ETS	As of 16:30	As of 14:30 Latest 19:00
11	Nomination process done by ECC and/or Market Participants (depending on local rules)	-	Until 16:30 for CWE and PL Until 19:00 for Nordics	Until 14:30 for CWE and PL Until 19:00 for Nordics

3) Scenario: Full decoupling of SDAC

Full vs partial decoupling
- Because of all the operational mitigating measures in place, a <u>partial decoupling is more likely to occur than a full decoupling</u>.
- However, in order to make the training session <u>interesting for all participating parties</u>, it has been decided to train for a full decoupling scenario.
- After the SDAC full decoupling is declared, <u>fallback mechanisms will be activated</u>, where applicable, such as: Shadow/Explicit Auctions, local auctions or regional coupled auctions run by NEMOs.

How it will be simulated
- There are various issues that can lead to a full decoupling of SDAC.
- Based on 7 years of DA Market Coupling operations, starting with NWE, subsequently MRC, and now SDAC, we have decided to simulate:
    - A trigger that is in line with the facts likely to lead to a full decoupling.
    - A scenario that is besides representative, also possible to "simulate in a controlled manner" so that there are no distracting complications.
- It will be simulated that there are technical issues with the central calculation process, meaning that no market coupling results will be available at SDAC level.
- The TSOs, NEMOs and JAO will <u>handle everything in line with the procedures</u>.
- The <u>market participants are expected to respond/act</u>, based on the operational messages from their respective NEMOs and JAO, <u>exactly like in real operations</u>.
- The <u>complete process chain</u> will be addressed (incl. nomination and matching).
    - Except for Nordic market participants, which are not required to nominate towards eSett following the Nordic-Baltic regional coupling?

4) Operational process and timings 1/3
as described in the operational procedures

Normal process and timings (in IST / GMT)
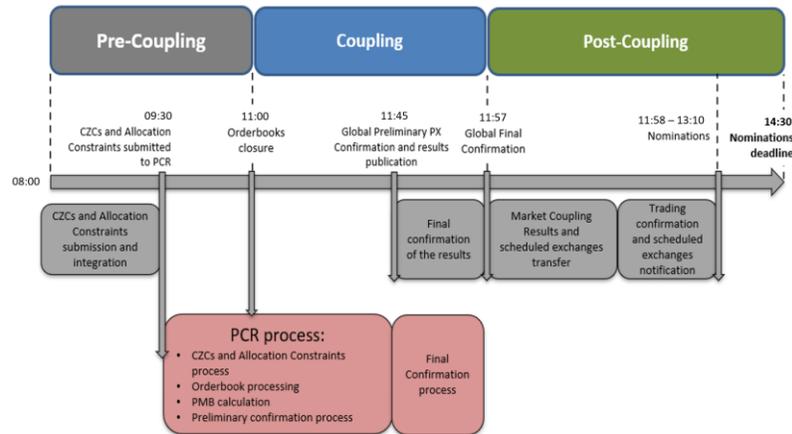
- To start with, the TSOs provide cross border interconnector capacities to the coupling system (PMB, meaning PCR Matcher Broker) via NEMOs systems and Market Participants send orders for buying and/or selling through the Local Trading System of their NEMO.

- At 11:00 IST/GMT (production time), the local order books of each NEMO are closed and submitted to the PMB, which subsequently starts the calculation with the EUPHEMIA algorithm. The results of this calculation are subsequently shared and validated by each NEMO before the results can be published towards Market Participants with a preliminary status. After a last round of validations (mainly performed by the TSOs) the results are confirmed as firm and final.

- Once the results are firm, they are sent to the Shipping Agents who will nominate towards the TSOs.

4) Operational process and timings 2/3

	Production (IST / GMT)	Testing (IST)	
Pre-Coupling	08:00	12:00	Start of the Market Coupling Session
	08:15	**12:15**	**Latest Time start an IC for issues in the Configuration Synchronization step**
	08:45	12:20	Deadline to skip the Configuration Synchronization step
	09:30	12:30	Target Time for submitting the Network Data in the PMB
	10:00	**12:35**	**Latest time to start an IC for missing Network Data (TSOs can join the call)**
	10:15	12:40	Risk of Partial Decoupling for one or more interconnectors (at regional level)
	10:30	**12:45**	**Deadline to declare the Partial Decoupling for an interconnector** (at regional level)
Coupling	11:00	13:00	NEMO Order book Gate Closure Time
	11:10	13:10	PMB GCT // Reception of all Order Data files in PMBs → Start of Calculation
	11:15	**13:15**	**Latest Time to start an IC for Order Data-related reasons (TSOs can join the call)**
	11:25	13:25	Deadline to send the message for Risk of Partial Decoupling
	11:27	13:27	End of Calculation
	11:29	13:29	Reception of Results in NEMO Local systems + Start of 12 min Confirmation process
	11:41	13:41	Deadline to send the Preliminary Confirmations → Generation of GPC
	11:45	**13:45**	**Publication of Preliminary Results and sending to the TSOs** → Start of 12 min Final Confirmation process
			Message ExC_02: Delay in Market Coupling Results publication=>MPs invited to update Shadow Auction bids*
	11:57	13:57	Deadline to send the Final Confirmations
	11:57	13:57	Reception of all Final Confirmations in the PMB → Generation of GFC
	11:57	13:57	Reception of Global Final Confirmation in local PMBs
	11:58	**13:58**	**Publication of Final Results** → Start of Notification Process
	12:15	**14:15**	**Latest time to Start an IC and invite TSOs**
	12:30	14:30	Deadline to send the message for Risk of Full Decoupling to the TSOs/market
			Message ExC_03b: Further delay Market Coupling session and risk of Full decoupling =>MPs invited to update Shadow Auction bids*
	12:50	**14:50**	**Closure of shadow auction bidding process by JAO**
	13:00	**15:00**	**Deadline to declare the SDAC Full Decoupling**
			Message ExC_04b: Declaration of Full decoupling
	13:10	**15:10**	**Publication of shadow auction process results to relevant parties**
	After 13:10	**after 15:10**	**Local NEMO process for running local auctions or regional coupled auctions, depending on local/regional fallback rules. These auctions will be followed by nominations towards the TSOs.**
	15:00	after 16:30	Nordic-Baltic regional coupling results publication

*for borders where Shadow Auctions apply

Note: Relevant decoupling steps and messages for Market Participants indicated in yellow.
Additional regional messages that might apply are not included, because these depend on the regions.

4) Operational process and timings 3/3
Regional specificities

For a full list of the auction timings and market messages that will be issued as part of this session, please refer to the "SEMOpx Auction Timings and Market Messages" document contained on the SEMOpx website.

Please find below the updated test message timings that you will expect to receive during the test session.

Sending Time (GMT/BST)	Market Message Title	Communication
11:45 **13:45 Test Time**	[ExC_02]: Delay in Market Coupling Results publication	Please be aware that the publication of the Market Coupling Results is delayed until further notice. The Market Coupling Results will be published as soon as they are available. If needed, another delay message will be sent out.
12:05 **14:05 Test Time**	[UMM_01a]: Delay in final Market Coupling Results publication	The Market Coupling process is delayed due to technical reasons or market issues. Therefore, the publication of the final Market Coupling Results is delayed.

4) Operational process and timings 3/3 - continued

Regional specificities

Sending Time (GMT/BST)	Market Message Title	Communication
12:30 **14:30 Test Time**	[ExC_03b]: Further Delay of the Market Coupling Session	Please be aware that the Market Coupling Session is delayed. Therefore, the Market Coupling Session encounters a risk of Full Decoupling. If the Final Market Coupling Results are still not available at HH:MM, another message will be sent out in order to announce the Full Decoupling[4] This issue does not impact on SEMOpx auction trading, except in the potential for a delay in the publication of the SEM final DAM auction results. ***Disclaimer:*** *The Timings are expressed as CET timings.*
13:00 **15:00 Test Time**	[ExC_04b]: Full Decoupling	Due to technical reasons or market issues, the whole price coupled area is fully decoupled. Please follow the local auction rules of each PX. This issue does not impact on SEMOpx auction trading, except in the potential for a delay in the publication of the SEM final DAM auction results. --- *Please be aware that for SEMOpx market, the PX Order books will be reopened at **14:08** for exactly **20 minutes**.* ***Disclaimer:*** *The Timings are expressed as CET timings.*

5) Coordination

Registration process

- Participants have been requested to provided the following information in order to register in the Market Trading System for this test:
- Member Full Name, Member Shortname and ECC Code + contact details.

Environments to connect to

Environment	EPEX SIMULATION 2
ETS version	3.5.3
Deployment date	Deployment of the new release on 13/10/2021 EOD
Server Address	ets.epexspot.com port 443
Gateway Server Address	ets-svpx.simu2.epexspot.com port 4443
API hostname	ets-simu2.svpx.api.epexspot.com
API port	4444
API end point	https://ets-simu2.svpx.api.epexspot.com:4444/OpenAccess/3.3 (if using the 3.3.2 schema) https://ets-simu2.svpx.api.epexspot.com:4444/OpenAccess/3.4 (if using the 3.4.6 schema) https://ets-simu2.svpx.api.epexspot.com:4444/OpenAccess/3.5 (if using the 3.5.1 schema)
API WSDL version	WSDL v3.5 Supported API schemas: 3.3.2, 3.4.6, 3.5.1 To retrieve the WSDL: https://ets-simu2.svpx.api.epexspot.com:4444/OpenAccess/3.5?wsdl

6) Evaluation and reporting

Evaluation

In order to jointly learn and profit as much as possible from this joint training session, it is foreseen to evaluate the session and to address the following questions

- What went well?
- What needs more attention?
- Need for more training sessions?
- Ideas for the future?

Reporting

The findings will be captured in a report that will be shared in due time.

Backup slide 1: Fallback solution per Interconnector

Options

Depending on the Interconnector/border, the following
Fallback solutions may be used:

- Capacity goes to Intraday;
- Day Ahead Explicit auction;
- Shadow auction via JAO;
- Capacity goes back to the interconnector owner.
- Regional Coupling (implicit allocation)

Interconnector	Fallback solution
SEM interconnectors:	
NI – ROI	NI-ROI always remains coupled
Nordic-Baltic interconnectors:	
Nordic internal borders	Always remain coupled through Nordic internal coupling
Baltic internal borders	Always remain coupled through Nordic internal coupling
NO2-NL (NorNed)	Shadow Auctions via JAO
NO2-DE (NordLink)	Shadow Auctions via JAO
DK1-DE	Shadow Auctions via JAO
DK1-NL (COBRA cable)	Shadow Auctions via JAO
DK2-DE (KonteK)	Shadow Auctions via JAO
SE4-DE (Baltic Cable)	Capacity goes back to the interconnector owner
PLC-SE4 (SwePol Link)	Capacity goes back to the interconnector owner
PLC-LT (LitPol Link)	Capacity goes back to the interconnector owner
SE4-LT (NordBalt)	Always remains coupled through Nordic internal coupling
EE-FI (EstLink)	Always remains coupled through Nordic internal coupling
CWE internal borders:	
AT – DE	Shadow Auctions via JAO
NL – BE	Shadow Auctions via JAO
BE – FR	Shadow Auctions via JAO
FR – DE	Shadow Auctions via JAO
NL – DE	Shadow Auctions via JAO
BE – DE (ALEGrO) (BE-ALBE, DE-ALDE)	Shadow Auction via JAO
SWE interconnectors:	
FR-ES	Shadow Auctions via JAO
IBWT internal borders:	
IT – FR	Shadow Auctions via JAO
IT – SI	Regional coupling
IT – AT	Shadow Auctions via JAO
GR – IT	Shadow Auctions via JAO
AT – SI	Shadow Auctions via JAO
SI – HR	Shadow Auctions via JAO
BG – GR	Shadow Auctions via JAO
ICP interconnectors:	
CZ-AT	Shadow Auctions via JAO
CZ-DE (TenneT)	Shadow Auctions via JAO
CZ-DE_50Hz	Shadow Auctions via JAO
CZ-PLC	Shadow Auctions via JAO
SK-PLC	Shadow Auctions via JAO
HU-AT	Shadow Auctions via JAO
CZ-SK	Shadow Auctions via JAO
SK-HU	Shadow Auctions via JAO
HU-RO	Shadow Auctions via JAO
DE_50Hz-PLC	Shadow Auctions via JAO
DE_50Hz – PLC/CZ	Shadow Auctions via JAO
PL-PLC	Capacity goes back to the interconnector owner
Polish technical profile:	
PLC-DE_50Hz/CZ/SK	Shadow Auctions via JAO

Backup slide 2: Fallback solution per Bidding Zone

Options

Depending on the local/regional procedures, the following Fallback solutions may be used:

- Local auctions run by the relevant NEMOs
- Regional Coupling (implicit allocation)

Bidding Zone	Fallback solution
CWE Bidding Zones (FR, DE/LU, NL, BE, AT)	Local auction run by the relevant NEMOs
SEM (ROI and NI)	Local auction run by the relevant NEMO
Nordic Bidding Zones (DK, NO, SE and FI)	Nordic-Baltic regional coupling between the relevant NEMOs