

Market Coupling Consultative Group SDAC 15 min MTU

Workshop

14 February 2025

Q&A via [Slido.com](https://www.slido.com)
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Agenda

| TOPIC | PRESENTER | TIME |
|--|--|--------------------------------|
| 1 Welcome & Introduction - Welcome, review of the agenda and open action points | Zélie Gautier, Pierre Milon, Andreas Papanaklis (MCCG Convenors) | 10:00 – 10:10 (10 min) |
| 2 SDAC 15 min Market Time Unit (MTU) - Update on the SDAC 15 min MTU planning & implementation - End-to-End Member Testing - Rollback - FAQs - Q&A | Adèle Roy & Benjamin Mossot (SDAC QARM Convenors) Pierre Milon (MCCG Convenor) | 10:10 – 11:40 (1 hr 30 min) |
| 3 AOB | | 11:40 – 11:55 (15 min) |
| 4 Closure | Zélie Gautier, Pierre Milon, Andreas Papanaklis (MCCG Convenors) | 11:55 – 12:00 (5 min) |

Welcome by Co-convenors of MCCG

The MCCG is led by three Co-convenors:

Market Participants Co-convenor:

Zélie GAUTIER, ENGIE

TSO Co-convenor:

Andreas PAPANAKLIS, IPTO / ADMIE

NEMO Co-convenor:

Pierre MILON, EPEX SPOT

Scope of Discussion in MCCG

- To ensure clear alignment, the following overview aims to clarify which topics and discussions fall within the scope of MCSC/MCCG versus CCRs. Only the main/overlying topics currently discussed in the respective projects are listed.
- As the main guiding principle, **only topics directly stemming from the CACM guidelines and considered as MCO matters are discussed in MCCG.**
- NEMOs and TSOs would like to make clear that some requests cannot be channelled through MCCG. It is up to the market participants to raise it in the proper forum.

| | MC Steering Committee MC Consultative Group | CCRs (Capacity Calculation Regions) |
|----------------------------------|--|--|
| General Scope | - Capacity allocation | - Capacity Calculation (CC) (Core Flow Based, Nordic Flow Based) |
| Intraday Auctions (IDAs) | - Timings - Products & central algorithm functionalities - Central testing | - Capacity calculation (IDCC in Core CCR) |
| Advanced Hybrid Coupling | - Testing allocation algorithm - Central testing | - Design & Implementation into DACC - Impact assessment |
| SDAC & SIDC 15min MTU | - Timings - Products & central algorithm functionalities - Central testing | - Regional testing |

MoM & Review of Action Points

MoM / Q&A of previous MCCG meetings are available on [[NEMO Committee](#)] & [[ENTSO-E](#)] websites

Overview of action points from the last MCCG:

| Date | Responsible | Description | Deadline/Status |
|------------|---------------------|--|---------------------------------|
| 08/11/2024 | MCSC NEMOs and TSOs | Come back with more information on the OTU implementation over borders coupled through SIDC continuous | Dec 2024 / Q1 2025 – Closed |
| 08/11/2024 | MCSC NEMOs and TSOs | Come back with the glossary of terms regularly used in MCCG | Dec 2024 – Closed |
| 08/11/2024 | MCSC NEMOs and TSOs | Inform MPs on the actual 15' implementation timeline, including testing timings | Dec 2024 |
| 08/11/2024 | MCSC NEMOs and TSOs | Set up a standardised and coordinated checklist between all to outline the minimum technical requirements that are needed for a go-live and keep track of its publication status among all NEMOs/TSOs | Q1 2025 – Closed in Jan 2025 |
| 08/11/2024 | MCSC NEMOs and TSOs | Clarify the exact 30/60 min price index calculation approach implemented by all NEMOs | Dec 2024 – Closed |
| 08/11/2024 | MPs | Provide feedback on the coupled member testing indicative planning and execution organization (including number of test execution, days reserved for system updates and contingency) | Dec 2024 – Closed |
| 08/11/2024 | MPs | Inform MCSC NEMOs and TSOs on what they would like to have tested (systems, GUI, procedures, messages, etc.) as a part of the SDAC 15'MTU MT scenarios on curtailment day, max number of blocks, no liquidity, and max/min price | Dec 2024 – Closed |

MoM & Review of Action Points

Coordinated NEMO Checklist on 15 Min MTU Implementation

- In January 2025, NEMOs have published the **coordinated NEMO checklist on 15 min MTU implementation**, including the overview on products listing, indices, simulation environment, etc.
- The checklist can be found on the [[NEMO Committee](#)] website.
- NEMOs complement this information with individual communication towards Market Participants.

| ALL NEMO COMMITTEE | | SDAC 15-min. | | | | |
|------------------------|--|--|---|---|--|--|
| | | NEMOs communications and offers | | | Trading interface changes | Test environment (and differences with production environment) |
| NEMO | MS(s) | Official public communication | Products (MTUs, smart block, limits) | Indices (calculation, rounding) publication (when, for how long?) | | |
| BSP | SI | To be communicated after the MCSC decision on go-live date | MTU orders Period orders Block orders (simple blocks available already now, exclusive and linked blocks to be introduced shortly after 15 min MTU GL) | MTU Price SDAC 60' Avg Price | SDAC: LTS changes related to introduction of 15 min MTU shall be communicated to MPs in due time SIDC: LTS already supports 15 min products | SDAC: Testing environment is going to be available, details to be shared together with changes in LTS SIDC: Testing environment already contains 15 min products |
| BRM | RO | To be communicated after the MCSC decision on go-live date | MTU curve Simple Blocks Orders Complex Block Orders (Linked Families, Exclusive Groups) | MTU Price SDAC 60' Avg Price | The LTS already accommodates 15-minute products | The testing environment already includes 15-minute products |
| CROPEX | HR | To be communicated after the MCSC decision on go-live date | MTU curve Block orders - all types currently available in DA | MTU Price SDAC 60' Avg Price | SDAC: Any changes to the LTS regarding the introduction of the 15-minute MTU will be communicated to Market Participants in a timely manner. SIDC: The LTS already accommodates 15-minute products. | SDAC: The testing environment will be made available, and details will be shared along with the LTS changes. SIDC: The testing environment already includes 15-minute products. |
| EPEX | NO, SE, FI, DK, PL, DE, LU, NL, BE, FR, AT | Communication plan already started with MPs, new go-live date to be communicated after MCSC decision and in coordination with other NEMOs/TSOs | MTU orders (15') Period orders (30' + 60') Simple Blocks Orders Complex Block Orders (Linked Families, Exclusive Groups, combined links) | MTU Price SDAC 60' Avg Price SDAC 30' Avg Price | SIDC: The LTS already accommodates 15-minute products in production for many bidding zones SDAC : changes are needed for EPEX and MPs, it is under delivery. Trading system already part of TSOs-NEMOs testing since October 2024. Communication on interface changes, indices, etc already started. Simulation environment open as of Feb 2025, depending on the new go-live date | SIDC: The testing environment already includes 15-minute products. SDAC : opening scheduled for Jan or Feb 2025 depending on the new go-live date |

SDAC 15 Min Market Time Unit (MTU)

Update on the SDAC 15 Min MTU Planning & Implementation

Adèle Roy & Benjamin Mossot

(SDAC Quality Assurance Release Management convenors)

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Update on the SDAC 15 Min MTU Planning & Implementation

Go-Live Date

- On 19 December 2024, MCSC NEMOs and TSO have announced the new **go-live date for the 15-minute MTU implementation in SDAC which is set on 11th of June 2025** (delivery date 12th of June).
- **Considerations** which led to the selection of the go-live date:
 - ✓ Does not fall on a weekend, bank holiday, or holiday period
 - ✓ Mitigating potential cascading effects of delays on other parallel projects
 - ✓ Following the regulatory obligation to go live as soon as possible after the legal deadline of 1 January 2025
 - ✓ Allowing for completion of the preparation and testing activities of TSOs and NEMOs
- ❑ Selecting a first delivery day at the beginning of a month or quarter could not be accommodated, as there is no suitable date in the first half of 2025, including 01st April 2025 which comes too early and means a deployment on Monday (D-1) and some preparatory tasks to be performed on Sunday (D-2).

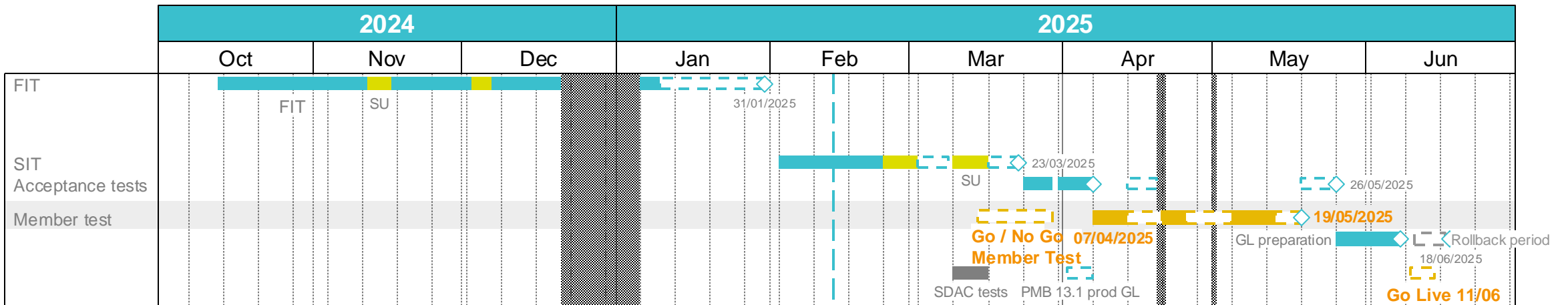
Update on the SDAC 15 Min MTU Planning & Implementation

Test Progress and Implementation Timeline

Status of the 15 min MTU implementation

- Over the past months, European functional testing has progressed with NEMOs and TSOs including regional CCR providers and JAO. **FIT (functional) testing has been completed on 31/01** and **SIT (procedural) testing started on 03/02**.
- Joint End-to-End member tests (Joint E2E MTs) will proceed in early April 2025. **In the second half of March 2025, a GO/NO-GO communication towards Market Participants will be provided by NEMOs for confirming the start of the MTs on 07/04/2025.**
- Individual member tests are planned by each NEMO on top of the Joint E2E MTs, in order to ensure proper training against APIs, trading interfaces, etc. For an overview, please see the annex of this material.
- Technical readiness of NEMOs and TSOs will be declared before the start of the joint Member Testing.**

SDAC 15 min MTU timeline



Update on the SDAC 15 Min MTU Planning & Implementation

Go-Live Preparation - Detailed Timeline

- NEMOs and TSOs have planned **3 weeks of go-live preparation between the end of Joint End-to-End Member test phase (16/05/2025) and the go-live (11/06/2025 first trading day for delivery day 12/06/2025)**
- During this preparation phase (in fact, from the start of the opening of the NEMO individual simulation environments), NEMOs will keep the individual trading system **testing environment open, until the go live**
- Further communication regarding the go-live of SDAC 15minMTU (GO/NO-GO decision on the go-live) will be sent by:
 - MCSC
 - Individual NEMOs towards their respective Market Participants

SDAC 15 Min Market Time Unit (MTU) Joint End-to-End Member Testing

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Joint End-to-End Member Testing

Difference Between *Coupled* and *Individual NEMOs'* Members Tests

| | | Test type | |
|-------------------|------------|---|---|
| | | <i>Individual NEMOs'</i> member tests | <i>Coupled / central / Joint E2E</i> member tests |
| Comparison factor | Objectives | <ul style="list-style-type: none"> Verify market participants' readiness Verify connectivity Verify individual NEMO MP interface | <ul style="list-style-type: none"> Promote new functionalities and procedures towards market participants Allow market participants to train their operators and finalize adaptation of their systems |
| | Scope | <ul style="list-style-type: none"> Market participants trading systems connected to NEMOs Local trading systems (LTS) | <ul style="list-style-type: none"> Trading systems under market coupling conditions Procedural changes for market participants To be noted: test scenarios should have been validated in advance as part of planning validation (in June 2024) |
| | Parties | <ul style="list-style-type: none"> Organizer: each NEMO Participants: individual NEMOs' market participant | <ul style="list-style-type: none"> Organizer: SDAC Participants: NEMOs MPs and relevant parties |
| | Timeline | <ul style="list-style-type: none"> ~1-6 months before go-live / ~1-6 months of tests | <ul style="list-style-type: none"> 6 weeks |

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Note: 15minTG will coordinate the coupled member tests

Joint End-to-End Member Testing

Assessment and Organisation of Test Scenarios

Detailed Member tests planning

- SDAC NEMOs and TSOs have allocated **17 days of execution in the course of 6 weeks** to test all joint member tests with contingency and system updates, allowing to re-execute any scenario if need be. Those scenarios are covering what is newly introduced by the 15' MTU implementation.
- **Updated detailed planning** is shown below. NEMOs and TSOs are flexible to change the order of scenarios execution.

SDAC 15minTG Member testing

| Scenario / Testing day | 7/4 | 8/4 | 9/4 | 10/4 | 11/4 | 12/4 | 13/4 | 14/4 | 15/4 | 16/4 | 17/4 | 18/4 | 19/4 | 20/4 | 21/4 | 22/4 | 23/4 | 24/4 | 25/4 | 26/4 | 27/4 | 28/4 | 29/4 | 30/4 | 1/5 | 2/5 | 3/5 | 4/5 | 5/5 | 6/5 | 7/5 | 8/5 | 9/5 | 10/5 | 11/5 | 12/5 | 13/5 | 14/5 | 15/5 | 16/5 | 17/5 | 18/5 | | | | | | | | | | | | | |
|--|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Normal day (with nominations) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Full decoupling with shadow auction (with nominations) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Partial decoupling of the Nordic region (with nominations) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Second calculation due to bidding error management | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Daylight Saving Time - Long Clock Change | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Max / min price reached + curtailment | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| No liquidity in a given time resolution | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Max number of blocks | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Paradoxically rejected curves | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Re-execution | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| System updates | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Key | |
|---|-----------------------------------|
|  | Friday / Weekend / Public Holiday |
|  | Testing / related activity |

- **Updates compared to the indicative planning from December 2024:**
 - Bank holidays have been included in the detailed planning. No testing on those days.
 - Additional Normal day executions (requested by members associations) have been added to the execution plan.
 - o An extra week of Normal day execution is added (week 28/4).
 - o During the period of 07-15/05, NEMOs and TSOs will proceed either with re-execution of previous scenarios, or with Normal day executions depending on where the added value is greatest.
 - Scenario list has been adapted following MCCG MPs representatives' feedback.

Scenarios organized by NEMOs / TSOs:

- ✓ Normal day (with nominations done by Market Participants)
- ✓ Full decoupling with shadow auctions for the capacity allocation (with nominations)
- ✓ Partial decoupling of Nordic region with shadow auction (with nominations)
- ✓ Second calculation due to bidding error
- ✓ Daylight Saving Time (DST) Long Clock Change (LCC)
- ✓ No liquidity in a given time resolution (15minMTU)
- ✓ Max number of blocks
- ✓ Max / min price reached + curtailment
- ✓ Paradoxically rejected hourly curve

Scenarios which will not be organized by NEMOs / TSOs:

- Opposite cross-border flows within the same hour
 - Reasoning: NEMOs / TSOs considered this test as being purely technical test of MCO central assets (PMB/Euphemia). The objective was to simulate different flows directions during different quarters of an hour on a limited number of bidding zones by using specific buy/sell conditions. As the execution of the test was successful, and after discussion with MCCG representatives, NEMOs / TSOs have agreed it won't benefit Market Participants to execute this test during the Joint E2E MT.

- DST Short Clock Change (SCC)
 - Reasoning: NEMOs / TSOs propose to focus on Long Clock Change during this testing phase. NEMOs will take responsibility to organize SCC testing, if need be, for their Market Participants closer to SCC in production, around Q1 2026.

- Rollback
 - Reasoning: Technically, it is infeasible for NEMOs / TSOs to simulate a rollback and have their test environments available for other tests execution or for NEMO individual testing. Each NEMO, TSO, market participant needs to prepare individually for the activation of this exceptional process.

Execution of nominations and shadow auction

- During the 3 first days of execution* (Normal day, Full decoupling and Partial decoupling 07-09/04), all NEMOs, TSOs and JAO will participate in the testing to allow performing all post-coupling related processes:
 - For all 3 scenarios week of 07/04: NEMOs will send the regular market files, as defined in their respective specifications, and TSOs will **allow MPs to perform nominations**.
 - For Full and Partial decoupling: JAO will perform shadow auctions. It is important to note that **shadow auctions will stay in 60 min** (cross borders nominations will be performed in 15 min – with exceptions). Detailed information regarding testing of shadow auction nominations to be published by JAO and if applicable, TSOs.

** Could be re-executed upon MPs' requests*

Specific instructions

- For the scenarios in the following slide, **specific conditions** need to be met for allowing MPs to experience the targeted market conditions.
- The **instructions might evolve** and could be updated closer towards the start of the joint Member Testing.
- Important to note: **In case any targeted outcome for MPs is not met due to inaccurate input data, TSOs and NEMOs can try to plan a retest subject to receiving a request from MPs and a confirmation that the data quality will be improved in the second run.**

Joint End-to-End Member Testing

Organisation of Test Scenarios

Specific instructions

| Scenario name | Targeted outcome for MPs | Preliminary instructions for MPs and NEMOs potential modifications |
|--|--|---|
| No liquidity in a given time resolution | <ul style="list-style-type: none"> • Specific result file and impact on calculation time. • High level of volatility within the same hour. | <p>MPs should follow the following instructions:</p> <ul style="list-style-type: none"> • Submitting no orders in 15' MTU for each BZ (with the exception of OMIE's BZ for which only 15'MTU is available) <p><i>If some MPs do not follow these instructions, NEMOs will modify the non-compliant OBKs. Additionally, all the adjusted OBKs will be made available to the respective MPs so they can understand the changes made.</i></p> |
| High number of blocks | <ul style="list-style-type: none"> • Either decoupling or calculation is successful with extended calculation time. | <p>MPs should follow the following instructions:</p> <ul style="list-style-type: none"> • Submitting OBKs with high number of blocks (although realistic) in 15 min and 60 min resolution. • Volumes and prices must be similar to current production levels (e.g., volumes per quarter are similar to volumes in 60 min resolution) <p><i>If some MPs do not follow these instructions, either NEMOs will modify the non-compliant OBKs, or NEMOs will provide dummy files to add orders for reaching a high prod-like number of blocks. Additionally, all the adjusted OBKs will be made available to the respective MPs so they can understand the changes made.</i></p> |
| Max / min price reached + curtailment | <ul style="list-style-type: none"> • No second auction triggering • Results containing at least 1 time unit with max price with curtailment for each BZ. | <p>MPs should follow the following instructions:</p> <ul style="list-style-type: none"> • Lots of sell orders with high prices: DE, ES, IT, SI, HU, SK, LT, SE, BG, EE • Lots of buy orders with high prices: FR, NL, BE, AT, CZ, PL, DK, HR, RO, GR, NO, FI, LV <p><i>If some MPs do not follow these instructions, either NEMOs will modify the non-compliant OBKs, or NEMOs will provide dummy files to add orders for reaching a high prod-like number of blocks. Additionally, all the adjusted OBKs will be made available to the respective MPs so they can understand the changes made.</i></p> |
| Paradoxically rejected 60' curve | <ul style="list-style-type: none"> • MPs see their 60' curves being paradoxically rejected. | <p>Instructions will follow after further analysis from NEMOs / TSOs. Provoking market conditions for triggering paradoxically rejected 60' curves is highly complex to simulate.</p> |

Joint End-to-End Member Testing

Organisation of Test Scenarios

Input capacity data

- NEMOs and TSOs are able to provide **capacity data for D-7** (trading day D-7 compared to the execution day) for Member tests. This will ensure that production-like capacity data is used and can be anticipated (values known 7 days before).

Timings for member tests*

- SDAC NEMOs and TSOs will run Order Book Gate Closure Time at 14:00 CEST, with 13:00 CEST for full or partial decoupling scenarios.
- Capacity provision will start around 11:00 CEST and result / final confirmation provision will be around 14.52 CEST.

Coordination & registering during the member test

- Conditions for communication during the Joint E2E MT are similar to production.
- Hence, it is important that **Market participants register towards their individual NEMOs** (each NEMO is responsible for its own registration process). The organization of JAO registration regarding shadow auction will be clarified in the communication package.

Participation

- NEMOs/TSOs would like to emphasize the fact that **Market Participants' participation is of the utmost importance to be able to simulate the production-like market conditions.**
- A communication package will be provided by NEMOs/TSOs, as well as individual NEMOs, containing information regarding detailed planning, OBK related instructions, environment, etc.

* Timings may be subject to adapting depending on procedural test result. They will be provided with the Member tests communication package.

SDAC 15 Min Market Time Unit (MTU) Rollback

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The rollback concept is a switch to the configuration of systems prior to the SDAC 15'MTU go-live (hence the 60 min resolution). Based on experiences of past European projects, MCSC developed a proposal for the SDAC 15'MTU rollback. Below are some high-level principles:

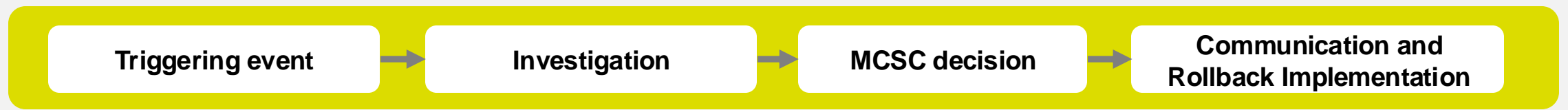
The monitoring period in which the rollback can be activated is within 1 week after 15'MTU go-live:



- The decommissioning of 60'MTU-related systems/functionalities must not be done prior 24th June – see next slide

Rollback validation and triggering process

- In practice, this means that the following **Rollback validation and triggering process** could be activated anytime during the 1-week period:



Rollback

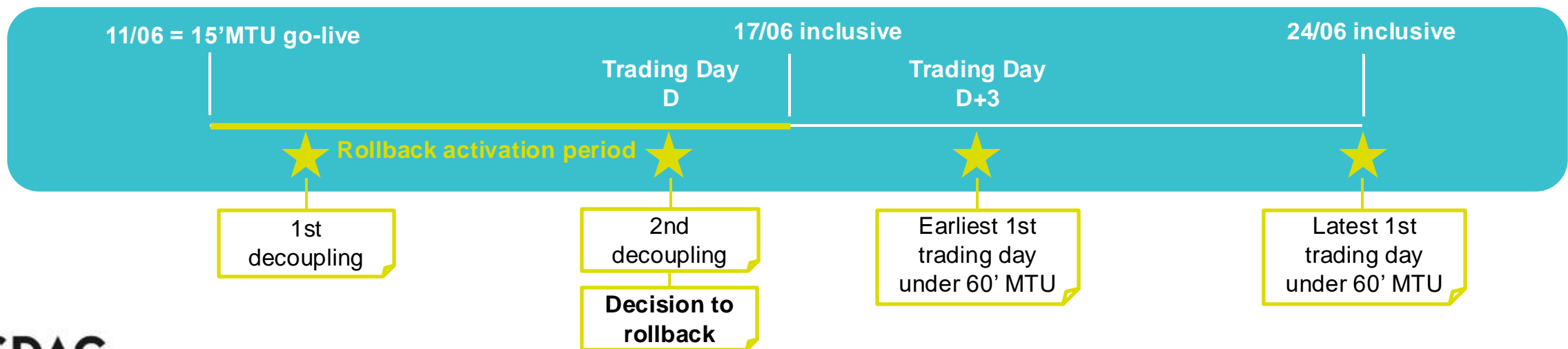
Detailed Proposal

Rollback validation process & triggering events

- The decision to apply the rollback solution shall be taken by MCSC, following a recommendation from SDAC Operational Committee (OPSCOM).
 - The SDAC OPSCOM recommendation shall be based on the outcomes of the investigation, focusing on the following factors:
 - Whether the incident at hand is related to 15 min MTU change in SDAC and NEMOs/TSOs/MCO assets, incl. identification, reproduction, and root cause analysis of the incident at hand.
 - The expected time required to resolve the incident at hand.
- Activation of the rollback will be decided if the following **criteria** is met: **declaration of a full or partial decoupling** due to an incident regarding the central or regional assets (e.g., no Market Coupling Results, rejected Market Coupling Results or any other situation leading to a full / partial decoupling) **twice during the 7-day monitoring period**.

Implementation and lead-time

- A lead-time of 3 days will be necessary to switch back from 15 min MTU (trading and allocation) setup to 60 min.



Rollback

Feedback to MPs' Questions

Background

- During an alignment on 12/12/2024, MCSC and MPs' representatives further discussed and clarified questions on the rollback process.
- To complement, MCSC NEMOs and TSOs have provided **additional insights on the remaining open points**, as can be seen below.

Q&A

- Q: In case of issues, will the rollback be for all NEMOs or just the ones having issues?
 - **A: The rollback will be applied to the whole of SDAC, meaning all NEMOs and TSOs.**
- Q: What will be the lead time between the decision to rollback and its implementation? 1 day? 2 days?
 - **A: See slide 21 under sub-header 'Implementation and lead-time'**
- Q: We would need further clarifications on the 15-minute index continuity: in the event of a market rollback, will the NEMOs continue to publish a 15' price index (e.g., with 60' prices copied 4 times into each quarter) to ensure that all commercial agreements at the 15' granularity can continue to be fulfilled?
 - **A: In the event of a rollback, the clearing price will be in 60'. Hence, NEMOs will discontinue with the publication of 15' clearing price. See table below for reference:**

| | Before go-live | After go-live | After rollback |
|-----------------------|--|---|--|
| Clearing price | 60' | 15' | 60' |
| Index 60' | Index is not existing, because clearing price is already 60' | Calculated and published (strict arithmetical average of the 4 15' clearing prices of the hour) | Index is not existing, because clearing price is already 60' |

SDAC 15 Min Market Time Unit (MTU) Frequently Asked Questions (FAQs)

Pierre Milon (MCCG Convenor)

Q&A via **Slido.com**
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SDAC 15 Min Market Time Unit (MTU)

FAQs

- In the past months, MCCG webinars have served to answer multiple questions related to the implementation of 15 min MTU in SDAC.
- **The main relevant documents** can be found here:
 - Updated Euphemia public description [[LINK](#)]
 - Products that can be taken into account in the Single Day-Ahead Coupling [[LINK](#)]
 - Report on the outcome of the public consultation on SDAC Products methodology in view of SDAC 15min MTU [[LINK](#)]
 - Alternatives to SDAC second auction [[LINK](#)]
 - Q&As on SDAC second calculation [[LINK](#)]
 - MCCG material on [[ENTSO-E](#)] and [[NEMO Committee](#)] websites
- With the 15 min MTU go-live approaching, a summarized **overview of the most frequently asked / relevant questions** from the 2024 MCCG meetings was created to support Market Parties with the preparation for the transition to the new product granularity.
- **The FAQ overview** contains information on:
 - Products and indexes
 - Timings
 - Other useful sources

Liquidity in 15 min MTU is the preference

- **Q: Do you expect in the future more 15 min price dependant bids than in 60 min? Will the market participants go to quarter products or stay at 60 min?**
- A: It cannot be forecasted what will be the behaviour of market participants when using respective products. The liquidity in 15minMTU is the preference, despite the algorithm being able to also work with 60 min Period Orders. It would be helpful, from the price volatility perspective, to use 15 min MTU. If the liquidity is largely on the coarser MTU, the possibility of paradoxical rejection of 60' curve orders and the volatility of prices will increase. The market will not be split into different merit orders. We will continue having a single market where parties can trade with multiple time resolutions.

Clearing price based on 15 min MTU

- **Q: Would there be a separate clearing price for 15' MTU / 30' Period Order / 60' Period Order that can differ between the different granularities?**
- A: The 15' price (in €/MWh) is the official price for energy after the go live of the 15min MTU. Then the averaging rule belonging to the central SDAC algorithm DNA will make sure that all prices are linked. In other words, we are not talking about 15' and 60' separate merit orders mechanisms! 60' prices are the results of an averaging mechanism (strict arithmetical average). 60' price index will exist.

Most NEMOs will offer 15 min MTU, as well as 30- and 60 min Period Orders

- **Q: Are you planning the transition period after launch of 15 min trading interval when both 15 min and 60 min trading will be available?**
- A: In most countries, 15- and 60-min trading will be made possible by the respective NEMOs. Please see the following slide for the full overview of time resolution of products proposed by NEMOs when 15 min MTU is implemented in SDAC, as presented in 27 June 2024 MCCG.

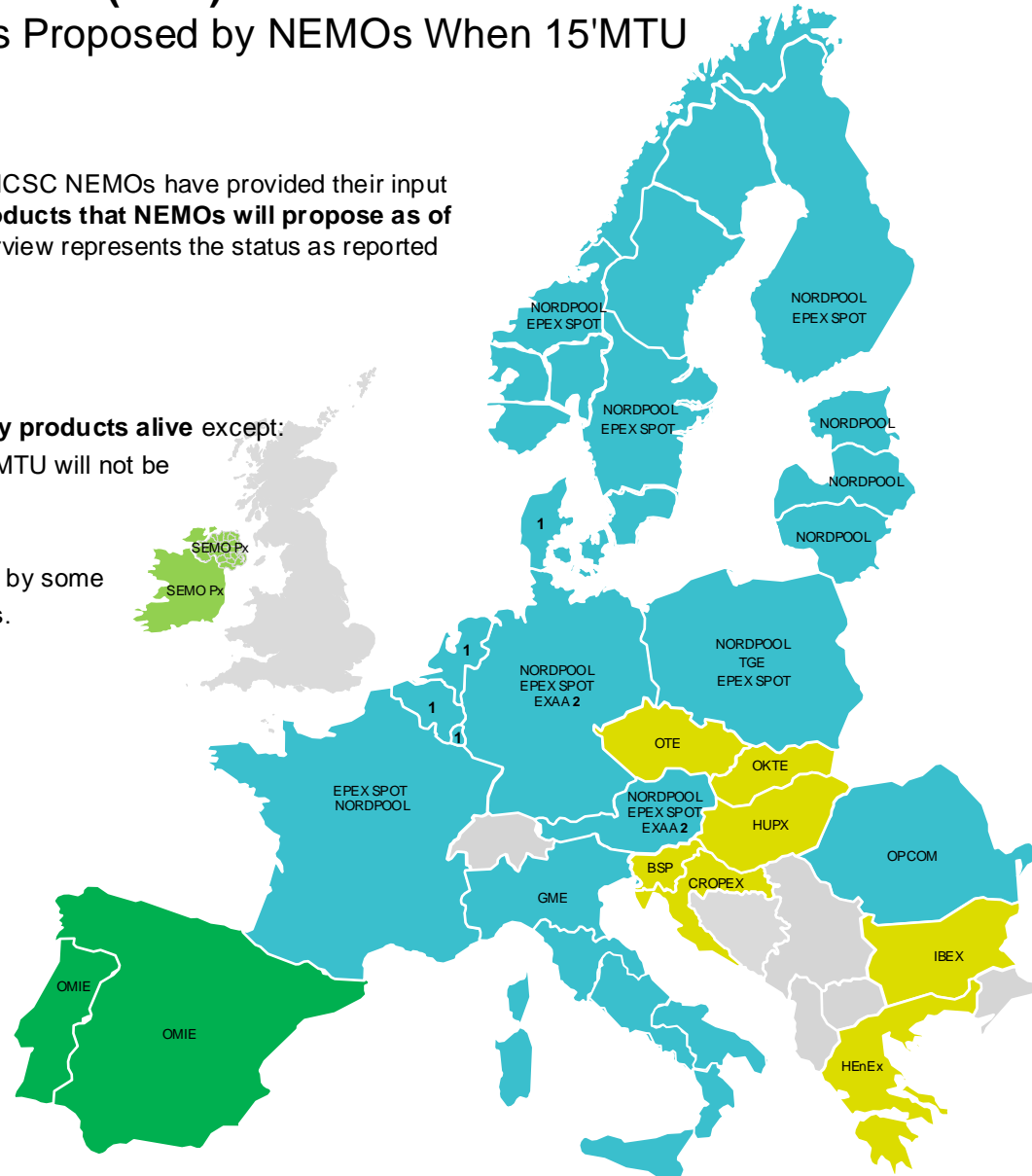
SDAC 15 Min Market Time Unit (MTU)

Time Resolution of Products Proposed by NEMOs When 15'MTU Is Implemented in SDAC

Based on the request from market parties, MCSC NEMOs have provided their input in the **survey on time resolution of the products that NEMOs will propose as of 15' MTU go-live in SDAC in 2025**. The overview represents the status as reported on 27/06/2024.

The following **highlights** can be observed:

- **15' MTU is confirmed** (except Ireland);
- **Most of the NEMOs will keep the hourly products alive** except:
 - SEMO Px (derogation is granted, 15' MTU will not be implemented in 2025 in Ireland)
 - OMIE (ES, PT)
- 30' Period Orders (POs) will be proposed by some NEMOs on top of 15' and 60' granularities.



- 15' MTU and 60' Period Orders (POs)
- 15' MTU, 30' and 60' POs
- 15' MTU
- 30' POs

| NEMOs | Covered BZs | 15' MTU | 30' POs | 60' POs |
|-----------|---|---------|---------|---------|
| BSP | SI | ✓ | | ✓ |
| CROPEX | HR | ✓ | | ✓ |
| EPEX SPOT | NO, SE, FI, DK, PL, DE-LU, NL, BE, FR, AT | ✓ | ✓ | ✓ |
| EXAA | AT, DE | ✓ | | ✓ |
| GME | IT | ✓ | ✓ | ✓ |
| HEEx | GR | ✓ | | ✓ |
| HUPX | HU | ✓ | | ✓ |
| IBEX | BG | ✓ | | ✓ |
| NORDPOOL | NO, SE, FI, DK, EE, LT, LV, PL, DE-LU, NL, BE, FR, AT | ✓ | ✓ | ✓ |
| OKTE | SK | ✓ | | ✓ |
| OMIE | ES, PT | ✓ | | |
| OPCOM | RO | ✓ | ✓ | ✓ |
| OTE | CZ | ✓ | | ✓ |
| SEMOPx | IE, NI | | ✓ | |
| TGE | PL | ✓ | ✓ | ✓ |

1 – NORDPOOL and EPEX SPOT
2 – EXAA proposed 15'MTU and 60' POs

No need to convert 60 min Period Orders into block orders - could be sent as a matrix with 60/30/15 min granularity

- **Q: As the 60 min Period Order will still be available, is it possible to send the 60 min Period Order in the same manner as today, i.e., as a matrix, or do market participants have to convert them into block orders?**
- A: Yes, as today, i.e., as a matrix with 60/30/15 min granularity. There is no need to convert the products into block orders. Please mind that there is also the discretionary choice of each NEMO to offer the 60 min Period Orders to their members. At least the central Algorithm supports 60 min curve orders (without the need to do any conversion).
- For day-ahead and on the contrary to Intraday auctions, the multi-time resolution will be proposed. This means that hourly curves can be kept on top of which, 15 min MTU will be introduced (and potentially 30'). As a reminder, in intra-day per bidding zone, only 1 time resolution – 15minMTU – is proposed, i.e., without the possibility to submit hourly curves.

Block orders can be defined from any quarter

- **Q: Is it correct that you can define the block orders from any quarter to any quarter, i.e., you don't have to stick to hours or half hours?**
- A: This is correct. MPs can define Block Orders (always using a single period base, i.e., either 15', 30', 60'). So, when using 15', the block may start, let's say from 00:45 and end to 02:15. When using 30', it could start from 04:30 and end to 06:00.

An hourly order can be only cleared at an hourly basis

- **Q: Can a 60 min product be partially cleared on quarter-hourly basis?**
- A: Period Orders (30' and 60') are cleared at the level they are submitted. There could be partial acceptance of a Period Order leading to the same volume cleared for the Period of the Order (and at the end for each of the MTUs contained in the Period Order to the same volume).

Average 60 min and 30 min price calculated as the arithmetic average of the 15 min MTU clearing price

- **Q: How is the average 60 min price calculated?**
- A: It is a strict (arithmetic) average of the 15' MTU clearing price. The same principle would be applied also for the 30' harmonized index.

Hourly index in bidding zones with multiple NEMOs

- **Q: How will the hourly index be established in bidding zones with multiple NEMOs?**
- A: Clearing prices will be published in 15' granularity,
- NEMOs agreed on a methodology to calculate and publish 60' (and sometimes 30') price indices. The hourly price is equal to the strict arithmetical average of the 4 quarterly prices

Linked blocks within a family should be using the same time resolution

- **Q: Will it be possible to link 15-, 30- and 60-minute products, or only 15-minute products?**
- A: MTU (15') or Period (30' or 60') Orders are not available for linking. Linked blocks within a family should be using the same time resolution.

Calculation time extension to be confirmed after the System Integration Testing preceding the start of the Coupled Member Testing

- **Q: What will change in the publication time of the results?**
- A: Given the extension of the calculation time in order to secure proper functioning of the market in a more complex situation (15' granularity), NEMOs and TSOs concluded that preliminary market results will be published at 12h52, firm results will be visible at 13h02. Member Timing phase will be the opportunity to confirm this is working fine.

SDAC 15 Min Market Time Unit (MTU)

Q&A

Q&A via **Slido.com**

Enter code: **2805807**



AOB

Q&A via **Slido.com**
Enter code: **2805807**



Closing Remarks



Closing Remarks, Further Information

The minutes of the meeting will be available on the NEMO Committee and ENTSO-E website. The links will be sent out via email.

The next meeting will be scheduled in Q2 2025 (TBS); details & date will be shared soon.

MARKET COUPLING CONSULTATIVE GROUP SDAC 15 Min MTU

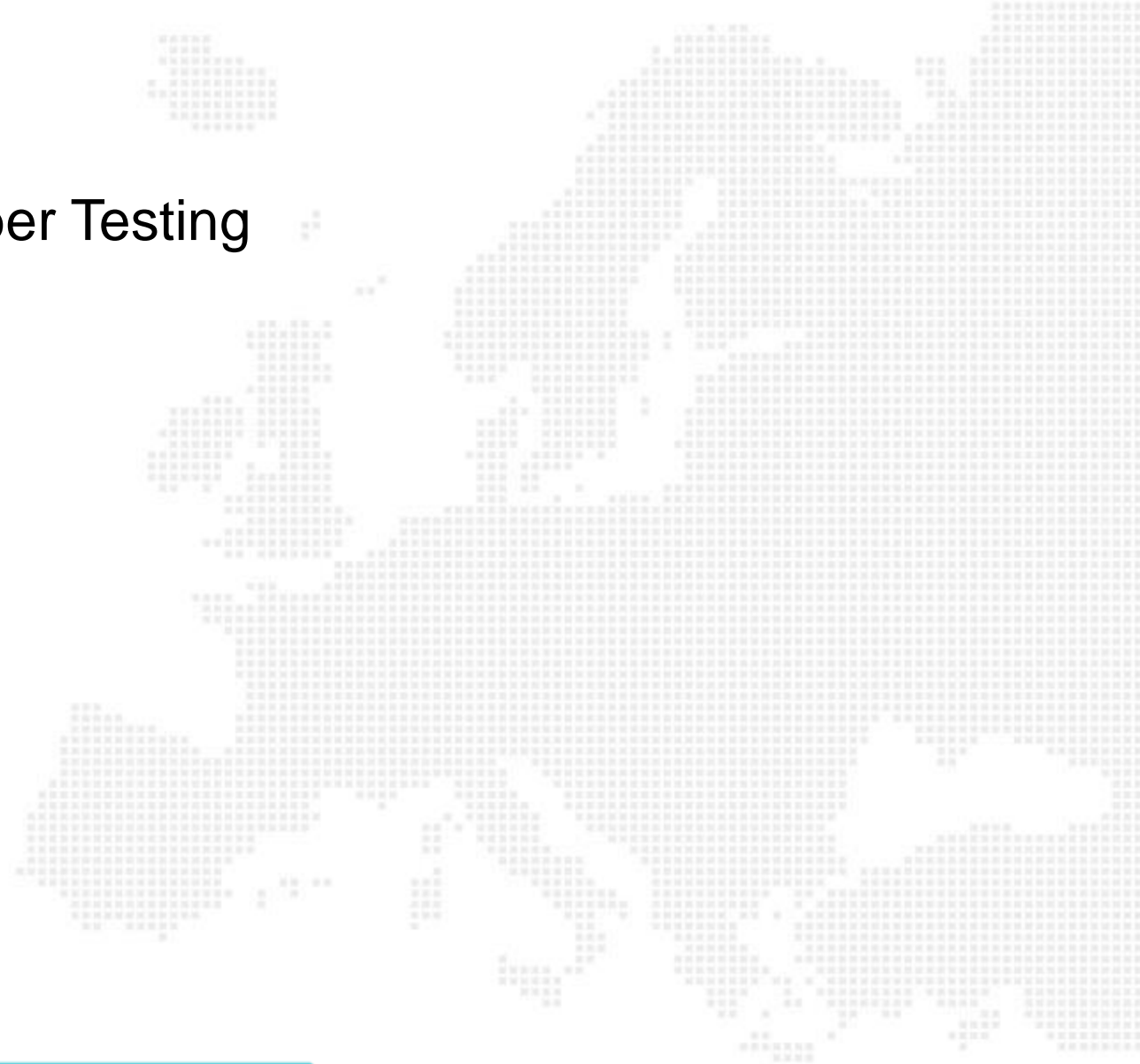
WORKSHOP

14 February 2025

THANK YOU FOR YOUR PARTICIPATION

Annex

SDAC Individual NEMO Member Testing



Update on the SDAC & SIDC 15Min MTU Implementation Planning

SDAC Individual NEMO Member Testing

Background:

- Before the joint member test, each NEMO will organise individual tests with their respective Market Parties to verify the functioning of their systems.

Overview of the individual NEMO member testing for SDAC 15 min MTU transition (as of 08/11/2024)

| NEMO | Individual member testing scheduled | High-level testing details |
|-----------|---|---|
| BSP | Jan/Feb 2025 - End before Central Member Testing | Verifying connectivity, Market Participants' readiness and all LTS functionalities from MP perspective |
| BRM | December 2024 until multi-MTU go-live | NEMO – client testing activities |
| EPEX | Jan/Feb 2025 - End before Central Member Testing | Verifying connectivity, Market Participants' readiness and all LTS functionalities from MP perspective |
| EXAA | Dec 2024 / Jan 2025 - End before Central Member Testing | Verifying connectivity, Market Participants' readiness and all LTS functionalities from MP perspective |
| CROPEX | December 2024 until multi-MTU go-live | NEMO – client testing activities |
| GME | Jan/Feb 2025 - End before Central Member Testing | Verifying connectivity, Market Participants' readiness and all LTS functionalities from MP perspective |
| HENEX | Jan/Feb 2025 - End before Central Member Testing | Verifying connectivity, Market Participants' readiness and all LTS functionalities from MP perspective |
| HUPX | Jan/Feb 2025 - End before Central Member Testing | Verifying connectivity, Market Participants' readiness and all LTS functionalities from MP perspective |
| IBEX | December 2024 until multi-MTU go-live | NEMO – client testing activities |
| NORD POOL | December 2024 until multi-MTU go-live | NEMO – client testing activities |
| OKTE | Jan/Feb 2025 - End before Central Member Testing | Verifying connectivity, Market Participants' readiness and all LTS functionalities from MP perspective |
| OMIE | Since 10/07/2024 – future OMIE product typology delivery. Since 23/09/2024 until multi-MTU GL – Matching simulation. | 2 days per week, on an environment with multi-MTU setup and future OMIE product typology (including SCOs and Block Orders), matching auction is simulated for Iberian MPs. |
| OTE | Since June 2024 – uncoordinated individual tests (testing environment available for MPs, without regular matching) | Detailed information (changes in framework, formats and communication) is available on OTE website here (additional information will be released there in the coming weeks and our MPs will also be individually invited to a webinar, where further details will be given) |
| TGE | | |
| SEMO PX | Jan/Feb 2025 - End before Central Member Testing | Verifying connectivity, Market Participants' readiness and all LTS functionalities from MP perspective |