Market Coupling Steering Committee

4th MARKET COUPLING CONSULTATIVE GROUP WORKSHOP

20 OCTOBER 2023

Agenda – morning session

AGENDA

TIME	DURATION	MORNING SESSION	PRESENTER
9:00 – 9:10	10 min	Welcome, review of the action points logged in the last meeting	Lorenzo Biglia, Thomas Van Den Broucke, Pierre Milon (MCCG Convenors)

9: 10 – 10:40	1h 30 min	**SDAC: 15 min Market Time Unit (MTU)**
		- Overview with pro/con arguments for the different options discussed within MCSC governance on:
		  ○ Algorithm Calculation time
		  ○ DA product mix of 15/30/60 min products
		- MCSC recommendations on the way forward
		- Feedback from Market Participants federations (EFET/Eurelectric)
		- Next steps
			Marja Eronen, Timo Suhonen (SDAC MSD Convenors)
			
			EFET/Eurelectric (Lorenzo Biglia)

10:40 – 11:40	60 min	**SDAC operational timings** - Impact of additional computation time on operational timings of the SDAC process - Interdependency with nomination deadlines for MPs - Second auction process reconsideration	Mario Pession/Balint Csuri (SDAC OPSCOM Convenors) Francois-Xavier Detraz (TSO QARM convenor) Pierre Milon (MCCG Convenor) Mario Pession (SDAC OPSCOM Convenor)
11:40 – 12:00	20 min	**SDAC Fallback process:** - Interaction of IDA 1 and DA in case of SDAC delays	David Myska, Lara Visone (SIDC MSD Convenors)
12:00-13:00		**LUNCH BREAK**	

Agenda – afternoon session

Market Coupling Steering Committee

13:00-16:00		AFTERNOON SESSION	
13:00-13:20	**20 min**	**MCSC: Status after summer on the prioritization exercise until 2026 and beyond**	André Estermann, Cosimo Campidoglio, Ondrej Maca (MCSC Chairs)
13:20 – 13:40	**20 min**	**SIDC: 15 min Market Time Unit (MTU)** • Map of time resolutions in Europe in SIDC continuous as well as future SIDC IDAs • Update as requested by Market participants in previous MCCG, slide with the 2025 outlook regarding the 15 MTU switch in intraday continuous, incl. legal deadlines and derogations	Jaime Ponz García Comendador (SIDC OPSCOM convenor)
13:40 – 14:15	**35 min**	**SIDC: Intraday Auctions (IDA)** • Progress & status of IDA testing • Overview on offered capacities types by TSOS for IDA1, IDA2 and IDA 3	Jean-Michel Reghem & Vladimir Satek for status of testing (SIDC QARM chairs) Jean-Michel Reghem for overview IDA capacities
14:15 – 14:25		**10' break**	
14:25 – 14:50	**25 min**	**Stakeholder engagement approach on Market design changes for 15 min MTU in SDAC and IDA (To be confirmed)** • How will MPs be involved for these future market design changes (eg. 15 min MTU, IDA fallback) • When will the proposals be described and via which channels will MPs be informed (eg. MESC/MCCG/consultation)	André Estermann, Cosimo Campidoglio, Ondrej Maca (MCSC chairs) Thomas Van Den Broucke, Pierre Milon (MCCG Convenors)
14:50 – 15:10	**20 min**	**AOB** • Update on MRLVC • Status Co-optimization after consultation on Algorithm requirements • NEMO feedback on the publication of aggregated curves, block execution status	Thomas Van Den Broucke, Hilde/Christoforos (NEMO Tech TF leaders) Pierre Milon
15:10 – 15:40	**30 min**	**AOB for Market Parties - (optional)**	Lorenzo Biglia (MCCG convenor of MPs)
15:40 – 16:00	**20 min**	**Q&A and Closure**	Lorenzo Biglia, Thomas Van Den Broucke, Pierre Milon (MCCG Convenors))

Welcome - by co-convenors of MCCG

The MCCG is led by three co-convenors:

Market participants co-convenor:
Lorenzo Biglia, EFET

TSO co-convenor:
Thomas Van Den Broucke, European Market & Offshore, Elia

NEMO co-convenor:
Pierre Milon, Head of Market Coupling Projects & Algorithms, EPEX SPOT

MoM & review of action points

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MoM of previous MCCG were available on NEMO committee Link & Entso-e website: Link

Overview of action points of the last MCCG:

No	Date	Responsible	Description
11	19/06/2023	MCSC TSOs & NEMOs	TSOs & NEMOs to clarify the impact of the changes in operation timings, especially the extension and shift of the final publication of the results and the link with local deadlines for BRPs on the nomination processes.
12	19/06/2023	SDAC MSD	SDAC MSD to check whether the limitation in the mutual exclusive block orders will be increased from 24 or 96
13	19/06/2023	Market Participants	Market parties to provide MCCG conveners a list of open questions related to changes of operation timings and processes.
14	19/06/2023	SIDC OPSCOM	To add an overview in the presentation of 15 MTU implementations incl. legal deadlines and derogations to the next MCCG presentation.
15	19/06/2023	NEMO Tech TF	NEMOs to check the potential need to complement the Euphemia documentation in the context of new implementations (IDA, 15 MTU).
16	19/06/2023	MCSC NEMOs and TSOs	NEMOs and TSOs to consult market participants on the SDAC future operational timings as well as on the different 15 MTU options of products implementation

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SDAC: 15 minutes Market Time Unit (MTU) roadmap overview

SDAC

15 min MTU implementation in SDAC

Update on extended algorithm calculation time:

As extension of calculation time is necessary from the current 17', the calculation time has been evaluated within SDAC and following options have been discussed:

- **30min calculation time**
  - With optimal go-live configurations (BZ MTU and product configuration) simulations shows that the 30min is sufficient to find at least one solution

- **45min calculation time**
  - More complex configurations can be used if the calculation time will be extended to 45min

The simulations have also indicated that the calculation time is significantly dependent on market data used

- **A safety buffer in calculation time must be considered to avoid unnecessary calculation time extensions**

SDAC 2025 - Setting the scene on different Market Design options

Possible identified options for several open points in the market design for 15 min MTU and IDA

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1 Alternative options for computation time

30 min computation time

40 min computation time

~~60 min computation time~~

2 Products

Implication on product mix given the computation time set for 30 minutes

Compatible product mix (illustrated by SDAC MSD)

- Ratio 15'/60' products (80/20), SCO, NO PUN, LTA
- Ratio 15'/60' products (80/20), SCO, NO PUN, LTA, Delay of Core BZ
- Ratio 15'/60' products (100/0), Increased number of block orders, SCO, NO PUN, LTA

3 `Operational timings

Based on the proposed 30 min computation time operational process to be prolonged by **13 minutes**

4 IDA1 interaction with SDAC

IDA1 cancelled if DA results are late
(after 14:10*/14:20)

IDA1 to be delayed
(with maximum time limit and cancellation when the time limit is reached)

Use IDA as fallback

Potential **removal of second auctions**

Keeping the Shadow auction as fallback for SDAC

Alternative options for computation time, product mix, topology – simulations

A. **If 15 min curve orders are used extensively, also cases "delay in Core BZ" or "extensive number of block orders", go-live with 30 minutes computation time is possible**
B. If 60 min curve orders are used extensively in 15 min BZ and there are "no delay in any Core BZ", some outliers exist, but it is foreseen to be able to solve these situations with a re-calculation of the session. Therefore this scenario is foreseen to be manageable but with an operational risk; currently inconsistent with go-live criteria
C. If 15 min curve orders have very low liquidity and Delay in a Core BZ, Go-live is not possible as likelihood for frequent full decoupling is extremely high

	Configuration	%solved (#unsolved sessions) under 30; 40; 60 minutes with current software			Scenario acceptable for Go-Live
A	Ratio 15'/60' products (80/20), SCO, NO PUN, LTA	100%	100%	100%	**Yes**
	Ratio 15'/60' products (80/20), SCO, NO PUN, LTA, Delay of Core BZ	100%	100%	100%	**Yes**
	Ratio 15'/60' products (100/0), Increased number of block orders, SCO, NO PUN, LTA	100%	100%	100%	**Yes**
B	Ratio 15'/60' products (20/80), SCO, NO PUN, LTA	96.70%** (#3)	97.80%** (#2)	98.90%** (#1)	**Manageable***
C	Ratio 15'/60' products (20/80), SCO, NO PUN, LTA, Delay of 1 Core BZ	93.41% (#6)	93.41% (#6)	94.51% (#5)	**No-Go scenario**
	Ratio 15'/60' products (01/99), SCO, NO PUN, LTA	92.31% (#7)	95.60% (#4)	95.60% (#4)	**No-Go scenario**
	Ratio 15'/60' products (01/99), SCO, NO PUN, LTA, Delay of 1 Core BZ	90.11% (#9)	93.41% (#6)	94.51% (#5)	**No-Go scenario**

* It is to be noted that SDAC MSD is currently working on improving these sessions by making use of configuration improvements of Euphemia, hence this scenario is currently assumed to be "manageable" as the remaining gap is expected to be further reduced, possibly closed.
** Every 1% deviation indicates risk of full decoupling in every 3 months

Alternative options for computation time, product mix – 30 <-> 40 min

- SDAC MSD aims to **minimize the disruption** to market participants caused by the introduction of the 15min MTU.
- MSD proposed the **30min** calculation time
  - As it minimizes the impact to Results Publication schedule
  - Additional time, over 30 minutes, has very marginal improvements to the key indicators
    - No welfare gain
    - No significant increase to the number of found solution

- If market participants start using **15 min** MTU (curve) orders **extensively** from the go-live, the performance is under control even in case one large BZ in Core region remains in 30/60 min MTU.
  - In that case, liquidity is shifted from 60min to 15min
- If market participants continue to use **60min** MTU (curve) orders extensively after the go live, the performance will not be sufficient for the go live and some mitigations measures shall be considered.

Summary:

- With the planned go-live configuration, the 30min calculation time can be supported in cases where **15 min** MTU orders are used extensively by **Market Participants**.
- In case the trading continues largely with 60min MTU orders, **mitigation measures** needs to be considered to secure **daily calculation** and **operational robustness.**

SDAC 2025 product mix and calculation time - Conclusions

- Since, the **product mix and computation time** are not mutually exclusive topics, fixing the computation time to 30 minutes leads to certain implications if the product mix is not following the recommended 15min MTU.

- The **Market Participants** are encouraged to take the **necessary actions** with their NEMOs and be prepared **to support 15min** MTU from the first day of the go-live.
  - **Lack** of liquidity on 15min MTU products is at the best **manageable** operationally or may lead to **Full Decoupling**

- SDAC NEMOs cannot control or anticipate with 100% guarantee the orders of different MTUs submitted by market participants.

- SDAC NEMOs can monitor ex-post from the Bid Curve Aggregation data the actual usage of the 15, 30 and 60min orders.
  - Necessary corrective measures can be initiated based on monitoring results

- **REMINDER**: PUN orders in Italy shall be discontinued as of January 1st, 2025 (as part of the SDAC calculation) and Complex Orders in Iberian peninsula will be replaced by Scalable Complex Orders before the 15min MTU go live

Summary:

- MCSC expects Market Participants to be ready to use **15 MTU** at a noticeable level and to be prepared to a scenario where only 15' time resolution is proposed.
- MCSC is working hard to propose the combination of 15 and 60 min products at go-live. However, given that MCSC parties are not in full control of the **15 min** product usage, MCSC is not in a position at this moment to confirm a go-live with both 15 and 60 min products available in Q1 2025.
- MCSC would like to receive the **feedback from MPs** on the anticipated usage as well as when the final decision shall be taken, if not in October 23.

SDAC 2025 product mix - Implications

- The following observations can be made from the data derived from simulation results:
  - **No** significant **implications** to the KPIs as long as liquidity is shifted mostly to **15min** MTU
  - Implications come if the liquidity **remains** mostly at 60min
  - Number of Paradoxically Rejected Block/MIC/Complex **and** Curve orders **increases** if the liquidity remains on coarser MTU
    - This is indicative information as we do not have yet operational market to get comparable results
- If the liquidity is mostly at 60min MTU, the price volatility will increase

Summary:

- If the market continues to use 60min MTU mostly, there will be uncontrollable negative impacts to market participants and to overall market efficiency

SDAC/SIDC 15 minutes Market Time Unit (MTU) implementation

MCCG, 20 October 2023

EFET European Federation of Energy Traders

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Our views on the 15 minutes MTU in SDAC/SIDC

We welcome the proposals from NEMOs and TSOs regarding market design options.

We need 16 months' advance insight into products and full processes. 15 min MTU implementation should have been subject to clear information and a EU-wide public consultation (on NEMOs and ENTSO-E websites) with quantitative data.

We recommend delaying the go-live in SDAC while considering the necessary preparation time for Market Participants. Priority should be for 15 min MTU in SIDC.

We reiterate our call for a public consultation on the second auction.

We want IDA1 to be cancelled if SDAC results are not available by 14:10.

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Reduced time in SDAC compromise safe market operations

The current SDAC timing is already tight: numerous operations must be performed between market results publication and nominations

1. **Fetch** the SDAC results data and **book** them in the local IT systems
2. **Rerun** the optimization models used to calculate the final DA production plans for every asset in every country/bidding zone based on the clearing prices
3. **Validate** the new production plans and **check/act** on any imbalances
4. **Export** the results of these runs into the local IT systems, in order to generate the files required for the generation nomination
5. **Book** all day-ahead transactions in the Deal Capture System
6. **Nominate** the production plans to the TSOs (and circulate them to the plants)

Scenario	Nomination type	Nomination deadlines depending on the Core bidding areas related to EPEX SPOT				
		BE	FR	DE/LU and AT	NL	PL
Normal day → Market Results published between 12:45 and 13:05	Hub	14:00 (hub 1) 14:30 (hub 2)	14:30	14:30	14:00	14:30
	Cross-border	14:30	14:30	14:30	14:00	14:30
	Generation	15:00	16:30	14:30	15:15	15:00 14:30*
Market Results published between 13:05 and 13:50	Hub	14:45 (hub 1) 15:00 (hub 2)	15:00	15:00	15:00	15:00
	Cross-border	15:00	15:00	15:00	15:00	NA
	Generation	15:30	17:15	15:00	15:45	15:00 14:30*
Market Results published between 14:20 and 14:50	Hub	15:15 (hub 1) 15:30 (hub 2)	15:30	15:30	15:30	15:30
	Cross-border	15:30	15:30	15:30	15:30	15:30
	Generation	15:30	17:15	15:45	16:15	15:30

Source : Epexspot

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Reduced time in SDAC compromise safe market operations

1. Market participants will not be able to **go through their processes,** particularly given the already tight schedule. The increase from 24 buckets to 96 buckets will require additional time.

2. Market participants will not be able to **intervene manually** in the event of delays

3. Operations will need to be **ready** for IDA1 **at 15:00**

- The combination of delays in publication of results and 15 min MTU products in SDAC **is simply not manageable as it is for Market Participants** and will inevitably lead to breaches.
- If the calculation time extension leads to a change in the normal publication of results, it should **subsequently lead to the postponement of nomination deadlines**.

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Products availability in SDAC

Market participants need **hourly products to be retained.**

Reasons

To reflect industrial constraints

Hourly positions will have to be placed in the market with block orders

Block orders are limited, so flexible assets will not be properly optimized

Hourly product have a partial acceptance feature => if replaced by a block, no partial acceptance and high risk of paradoxically rejected block (PRB)

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Conclusions

- **15 minutes MTU** implementation should be **prioritised in SIDC** and not SADC
- 15 min MTU in SDAC will impact market results publication. **TSOs should coordinate for a change in nomination deadlines.**
- **Public consultation on second auction** in SDAC
- **Complex block orders** are essential to maintain
- **Hourly products** must be preserved in SDAC

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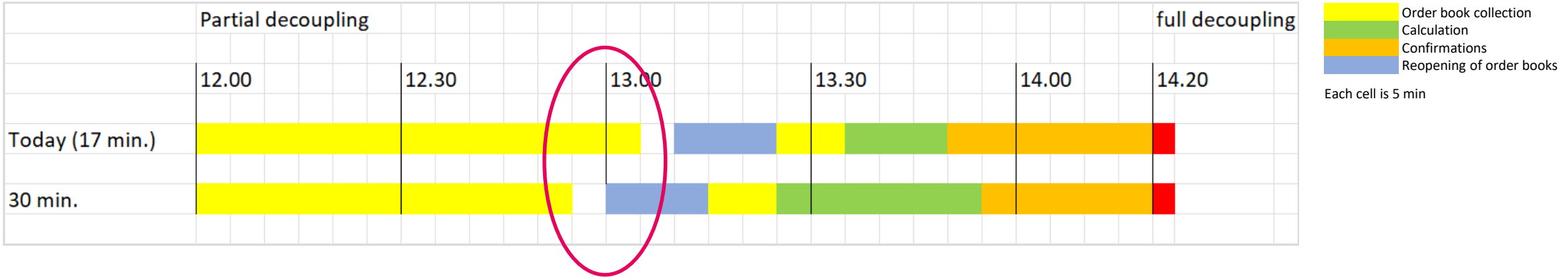
SDAC Operational timings

Daily operational process given 30 min computation time: Partial decoupling (1/2)

Topic description	**30 min are required between the declaration of the partial decoupling and the start of the calculation.** • 5 - 10 minutes organization and information to MPs • 15 minutes reopening of order books • 10 minutes resending of order books **Note:** It is not possible to shorten it, i.e., cancelling the reopening of order books.

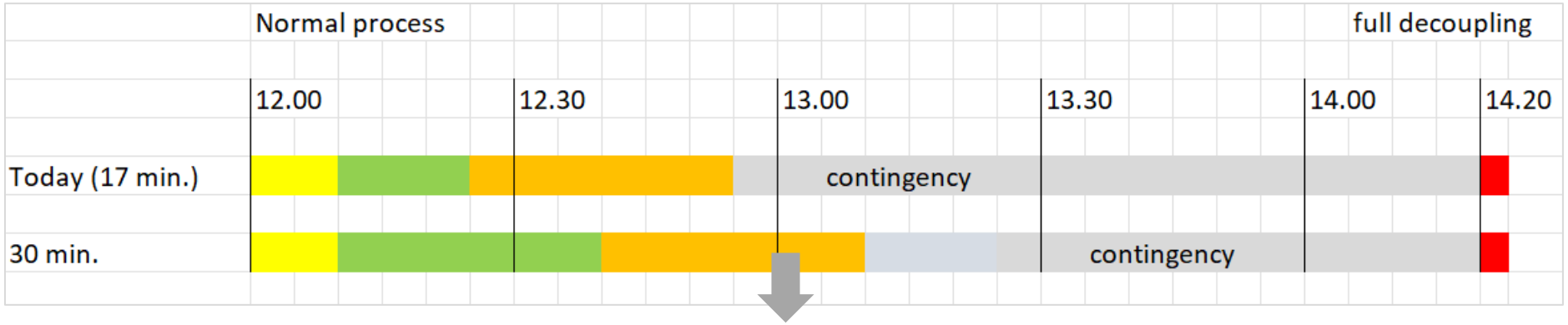


Summary:

- Since the partial decoupling has been moved to 13:05 (current deadline), the time of 12:55 was never reached in partial decoupling situations. Therefore, based on historical facts, an anticipation is that a **computation time increase to 30 min is not so impactful.**
- If confirmation processes are shortened in the future, the partial decoupling deadline could be re-evaluated. **Partial decoupling deadline will be 12:52 – 12:55.**

Daily operational process given 30 min computation time

Topic description & background	Currently, the time dedicated to the SDAC process is 12.00 -14.20. 12.00 is the order book gate closure and is written in CACM. 14.20 is the full decoupling deadline and is derived from the deadline for nomination which is set at 15.30 in several countries. Time from 14.20 to 15.30 is the time dedicated to the actions after full decoupling to respect the 15.30 deadline. With an extension in the calculation, contingency time is reduced.



	17' calculation time	30' calculation time
Preliminary results publication	**12h45**	**12h58**
Publication of Final Results	**12h58**	**13h11**

Summary:

- **Extension of calculation time to 30 min requires finding additional 13 min in the daily operational process.**
- Hence, assessment of possible parallelization **or time shortening** of the SDAC results confirmation process is ongoing. The assessment is ongoing in SDAC OPSCOM.
- The results publication deadline is **foreseen to be 13:11**. This is without any positive outcome on possible parallelization **or time shortening** of processes for the confirmation. Market Participants shall be clearly informed about the proposed timings and impacts on the result publication.

Daily operational process given 30 min computation time: Partial decoupling (2/2)

- Operational experience has shown that the **partial decoupling deadline 12.55 was never reached since the partial decoupling deadline was set to 13.05.**
- This allows for an assumption for the **new partial decoupling deadline to be set around 12:52 – 12:55.**

Indicative timings proposal for 30 min computation time:

	Current timings	2025. timings	
Coupling	12:00	12:00	NEMO Order book Gate Closure Time
	12:10	12:10	PMB GCT // Reception of all Order Data files in PMBs à Start of Calculation
	12:40	12:27	Deadline to send the message for Risk of Partial Decoupling
	12:27	12:40	End of Calculation
	13:05	12:52	Deadline to declare Partial Decoupling
	12:45	12:58	Publication of Preliminary Results and sending to the TSOs
	12:58	13:11	Publication of Final Results à Start of Notification Process
	13:50	13:50	Deadline to send the message for Risk of Full Decoupling
	14:20	14:20	Deadline to declare the SDAC Full Decoupling or Publication of coupled Results

Summary:

- MCSC expect Market Parties to confirm that market participants are fine with the envisaged 2025 extended operational timings, granting 30' calculation time to the algorithm
- MCSC TSOs do not envisage to change nominations deadlines

SDAC 2nd Auction

NEMOs and TSOs consider that from an operational perspective:

- Second auction process could still be proposed even with a calculation time extended to 30mins by 2025.
- Second auction process application is still risky and experience has proven that no contingency exists in case of deviation from the agreed process.
- The efficiency of the second auction process on the price formation can be challenged, given that not 100% of the situations were improved after the second calculation run. On the contrary, a significant number of occurrences led to no bid being modified or to a change of the price into the wrong direction.

NEMOs would like to engage with market participants in order to consider a potential removal of the second auction process from the SDAC framework:

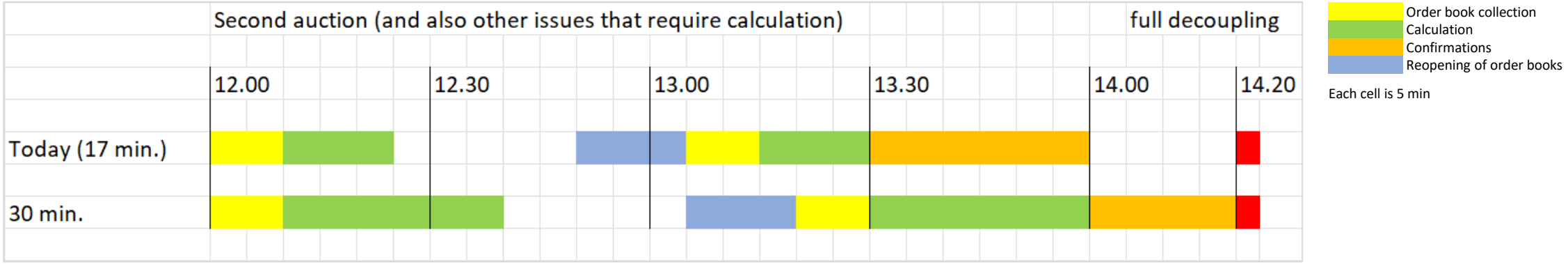
- **Pros**
  - More time to solve incidents
  - Simplified operational framework
- **Cons**
  - Market participants need to anticipate (ie before 12:00 Gate Closure Time), in cooperation with individual NEMOs, any case of mistake as well as exceptional situation from a clearing price level perspective

Summary:

- SDAC NEMOs would like to receive confirmation from the market participants that a plan can be drafted in order to remove second auction process by 2024 or 2025. If confirmed, SDAC NEMOs welcome inputs with regards to the timeline or the process (consultation)

Daily operational process given 30 min computation time: Second auction

Topic description	**30 min are required between the end of the first calculation and the second one.** • 5 - 10 minutes organization and information to MPs • 15 minutes reopening of order books • 10 minutes resending of order books



Summary:

- From the process and usage perspective MCSC advocates to remove second auction process due to limited to no benefit, higher operational risk (tight process timeline).
- By removing the second auction the operation process can benefit from more contingency time available.

Note: topic is still under discussion

Market Coupling Steering Committee

TSO overview of SDAC Nomination deadlines

Introduction and main messages of TSOs

Background

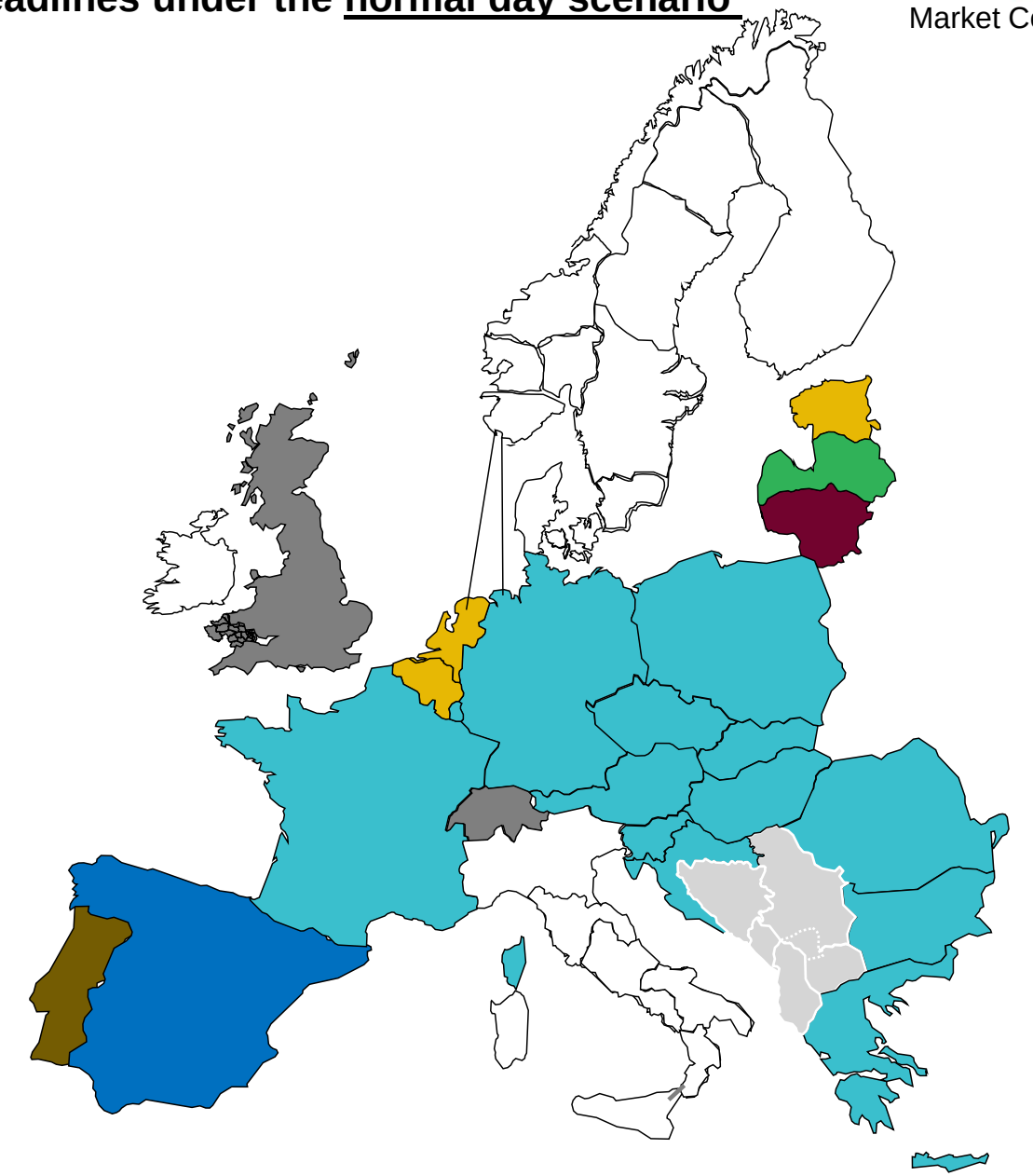
- In the context of the 15 min MTU impact of the 30 min calculation time, the publication of the results to MPs will be shifted from 12h58 to 13h10/13h11. This will give MPs less time to nominate their positions to the local TSOs nomination systems.
- This slide package aims to provide an overview on the different nomination deadlines for local (hub) and cross border nominations of all TSOs in SDAC. Based on the feedback from EFET/Eurelectric further discussions are already initiated after the October MCCG.

Main messages

- For the currently communicated 13:11h timing for results publication mitigations are currently being assessed, such as parallelisation of the process in order to bring it closer to the current timing of 12:58h.
- The (local) nomination deadline of 14:30h can not be moved (e.g., due to subsequent processes to prepare Operations in Day-Ahead timeframe). The Netherlands and Belgium are making steps towards moving their local nomination deadline from 14:00 to 14:30.
- Overall, all parties (TSO, NEMOs and Market Parties) will have to optimise their processes as the accommodate the required implementation of 15min MTU.

Local hub nomination/market schedules deadlines under the normal day scenario

- 20' after SDAC results
- 30' after SDAC results
- 13:30
- 14:00
- 14:30
- 15:30
- N/a

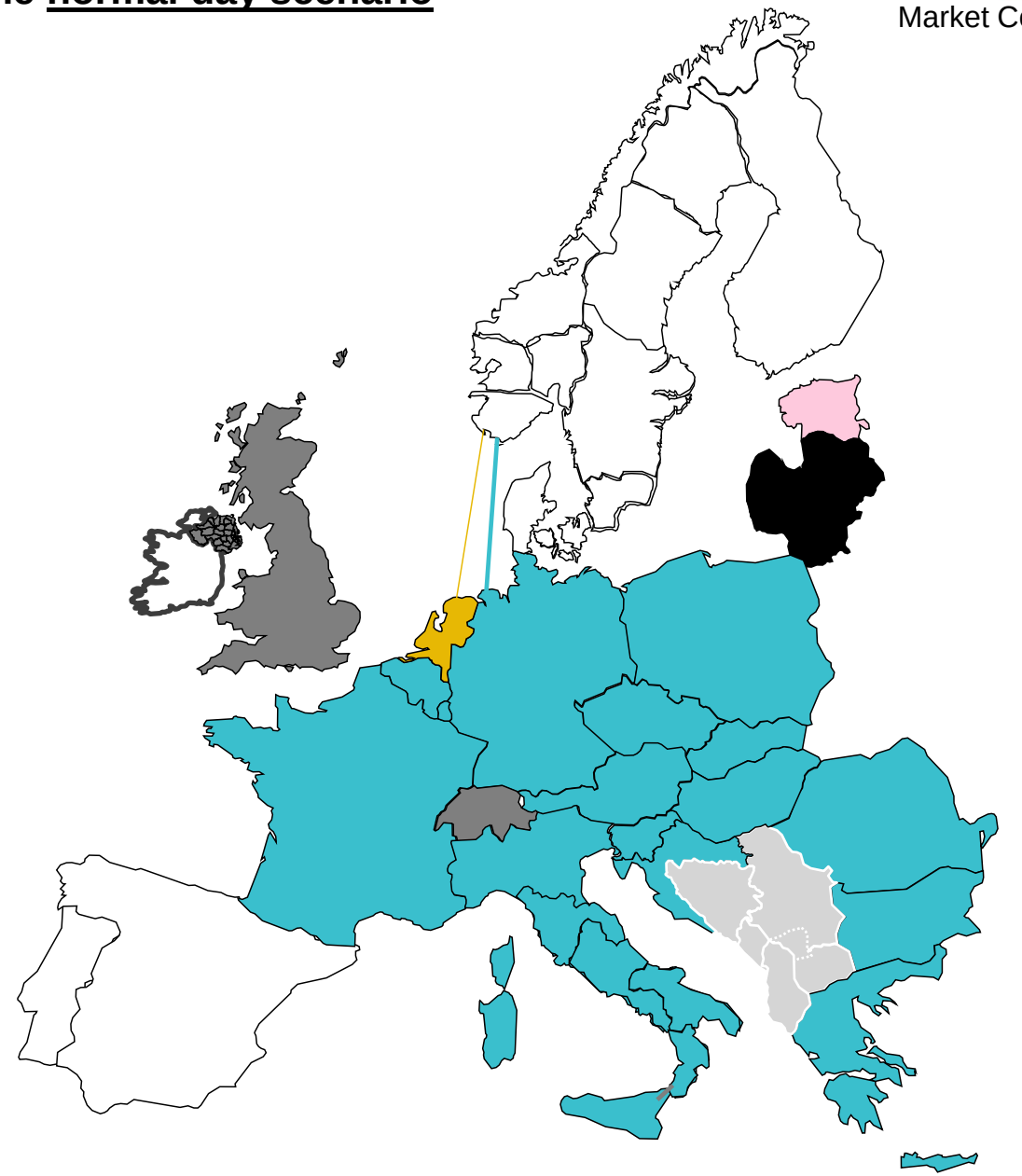


Note: slides take into account most recent feedback received

*Nordics are labelled N/A as nomination deadline is 1h before delivery
*For Belgium: 14:00; with 14:30 second gate for correction
*For Lithuania 13:30; with 14:00 second gate for correction

Cross-border nomination deadlines under the normal day scenario

- 13:00
- 13:50
- 14:00
- 14:30
- N/a



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SIDC: IDA1 interaction with SDAC delays and fallback processes

IDA1 interaction with DA

Topic description & background	▪ **Calculation of network capacities for IDA1 and possibly other internal processes such as scheduling / generation availability information preparation are dependent on completion of the DA processes**. ▪ Recent DA procedures foresee the **central processes shall be finished by 14:20 otherwise full decoupling and local process follows.** These procedures are under review in relation to 15min MTU implementation for DA. Local processes will be also impacted with IDAs introduction ▪ **IDA SG discussed in particular until when the DA final results must be available to be able to run IDA1 in line with normal procedure**. Initial IDA SG conclusions may be impacted by outcomes of the discussion on DA process changes

Options	Description	Pros	Cons
Option 1	IDA1 to be cancelled in case results of DA are not available at 14:10 /continuous trading will start once DA process is completed and gate opening time for continuous trading is reached/	▪ Allows to use maximum time for DA process ▪ TSO and NEMO resources are not distracted with parallel processes handling ▪ Allows to accommodate regional/local specifics regarding fallback processes and gives possibility to offer capacity to continuous trading based on these regional/local processes ▪ IDA 2 is still scheduled at 10pm	▪ May impact market participants interest for IDA1 if cancelation frequency is high
Option 2	IDA1 to be delayed (also with maximum time limit and cancellation when the time limit is reached) /continuous trading is halted until the delayed IDA1 is finished or cancelled/	▪ Allows to use maximum time for the DA process	▪ IDA process is designed to the maximum extent as automatic to be able to respect very strict time limitations. By delaying the IDA1 number of processes would need to switch to a manual mode increasing operational risks. ▪ The shifted IDA1 timeline will need to respect the slowest regional/local process. In the same time it would delay start of reliable continous allocation process.
Option 3	IDA1 to replace DA in case of risk of decoupling	▪ Unified pan-European solution for case when DA process fails	▪ Considering the target where the topologies and other configurations of DA and IDA are aligned there is a high risk that also IDA1 could fail due to same reasons as DA and due to more strict time constraints

IDA1 interaction with SDAC delays and incidents

Option 1 is recommended for the IDA Go-Live
Option 2 and 3 are considered as not feasible for MCSC parties for go live

Workshop outcome

IDA1 interaction with SDAC delays of fallback

- Regional feedback was received regarding the analysed options on interaction between IDA1 and SDAC.
- Full visibility on local impacts on other open aspects related to Option 2 are not clarified at this stage. Therefore, MCSC suggest to go live with option 1 while the option 2 could be investigated after go-live (no implementation of option 2 in 2024)
- SIDC experts will focus on building systems and operational procedures for 2024 go-live according to option 1. They will focus on option 2 in a subsequent step

- **IDA as instead of shadow auction or in general as replacement for DA in case of risk of decoupling (Option 3)**
  - Prepared by TSOs in alignment with regional projects and in alignment with work of ENTSO-E
  - Using IDA as fallback instead of shadow auction is not considered as feasible, mostly given IDA cannot be considered as a stable & robust alternative at its moment of go live
  - Next rounds of discussion with market participants and NEMOs can be expected when there is more experience with IDA operations after IDA go live

Summary:
- SIDC NEMOs and TSOs would like receive feedback of MPs on the proposal to cancel IDA 1 if SDAC process delays, giving the maximum opportunity to SDAC process to be completed successfully
- SIDC NEMOs would like to receive the feedback if a process shall be implemented in order to have IDA 1 delayed but still performed later in the afternoon in case of SDAC delays

Market Coupling Steering Committee

Market Coupling Consultative Group meeting

LUNCH BREAK

20 October 2023

Agenda – afternoon session

Market Coupling Steering Committee

13:00-16:00		AFTERNOON SESSION	
13:00-13:20	**20 min**	**MCSC: Status after summer on the prioritization exercise until 2026 and beyond**	André Estermann, Cosimo Campidoglio, Ondrej Maca (MCSC Chairs)
13:20 – 13:40	**20 min**	**SIDC: 15 min Market Time Unit (MTU)** • Map of time resolutions in Europe in SIDC continuous as well as future SIDC IDAs • Update as requested by Market participants in previous MCCG, slide with the 2025 outlook regarding the 15 MTU switch in intraday continuous, incl. legal deadlines and derogations	Jaime Ponz García Comendador (SIDC OPSCOM convenor)
13:40 – 14:15	**35 min**	**SIDC: Intraday Auctions (IDA)** • Progress & status of IDA testing • Overview on offered capacities types by TSOS for IDA1, IDA2 and IDA 3	Jean-Michel Reghem & Vladimir Satek for status of testing (SIDC QARM chairs) Jean-Michel Reghem for overview IDA capacities
14:15 – 14:25		**10' break**	
14:25 – 14:50	**25 min**	**Stakeholder engagement approach on Market design changes for 15 min MTU in SDAC and IDA (To be confirmed)** • How will MPs be involved for these future market design changes (eg. 15 min MTU, IDA fallback) • When will the proposals be described and via which channels will MPs be informed (eg. MESC/MCCG/consultation)	André Estermann, Cosimo Campidoglio, Ondrej Maca (MCSC chairs) Thomas Van Den Broucke, Pierre Milon (MCCG Convenors)
14:50 – 15:10	**20 min**	**AOB** • Update on MRLVC • Status Co-optimization after consultation on Algorithm requirements • NEMO feedback on the publication of aggregated curves, block execution status	Thomas Van Den Broucke, Hilde/Christoforos (NEMO Tech TF leaders) Pierre Milon
15:10 – 15:40	**30 min**	**AOB for Market Parties - (optional)**	Lorenzo Biglia (MCCG convenor of MPs)
15:40 – 16:00	**20 min**	**Q&A and Closure**	Lorenzo Biglia, Thomas Van Den Broucke, Pierre Milon (MCCG Convenors))

Prioritization exercise

MCSC & Prioritisation proposal

Background of the discussion and MCSC role

Background

- Prioritisation process proposal is a result of numerous rounds of discussion between ACER, NRAs, NEMOs, TSOs and Market participants.
- The aim is to establish a regulatory procedure to secure streamlined implementation of deliverables and projects to minimise delays in implementation. Prioritisation exercise shall be carried out by ACER & NRAs based on the inputs from projects, market parties etc.
- **Prioritisation shall only cover the implementation timeline 2025+** (hence, current MCSC timeline is not affected by prioritisation)

Steps taken so far:

- MCSC prioritisation proposal presented in the dedicated MESC workshop 10/05
- 09/06 ACER Guidance on Project prioritisation and planning for EU implementation projects
- 03/07 MCSC response to the ACER Guidance on Project prioritisation and planning for EU implementation projects providing views on weights assigned to criteria
- 05/07 MESC meeting + establishment of the MESC SubGroup to finalise the process proposal
- End of August - Updated Guidance on Project prioritisation and planning for EU implementation projects & MCSC position providing comments on the general approach, timeline of the process, criteria & scoring
- **After PCG 25/09 ACER to prepare as much as possible the coming exercise of the prioritisation and set up informal exchanges as soon as possible.**

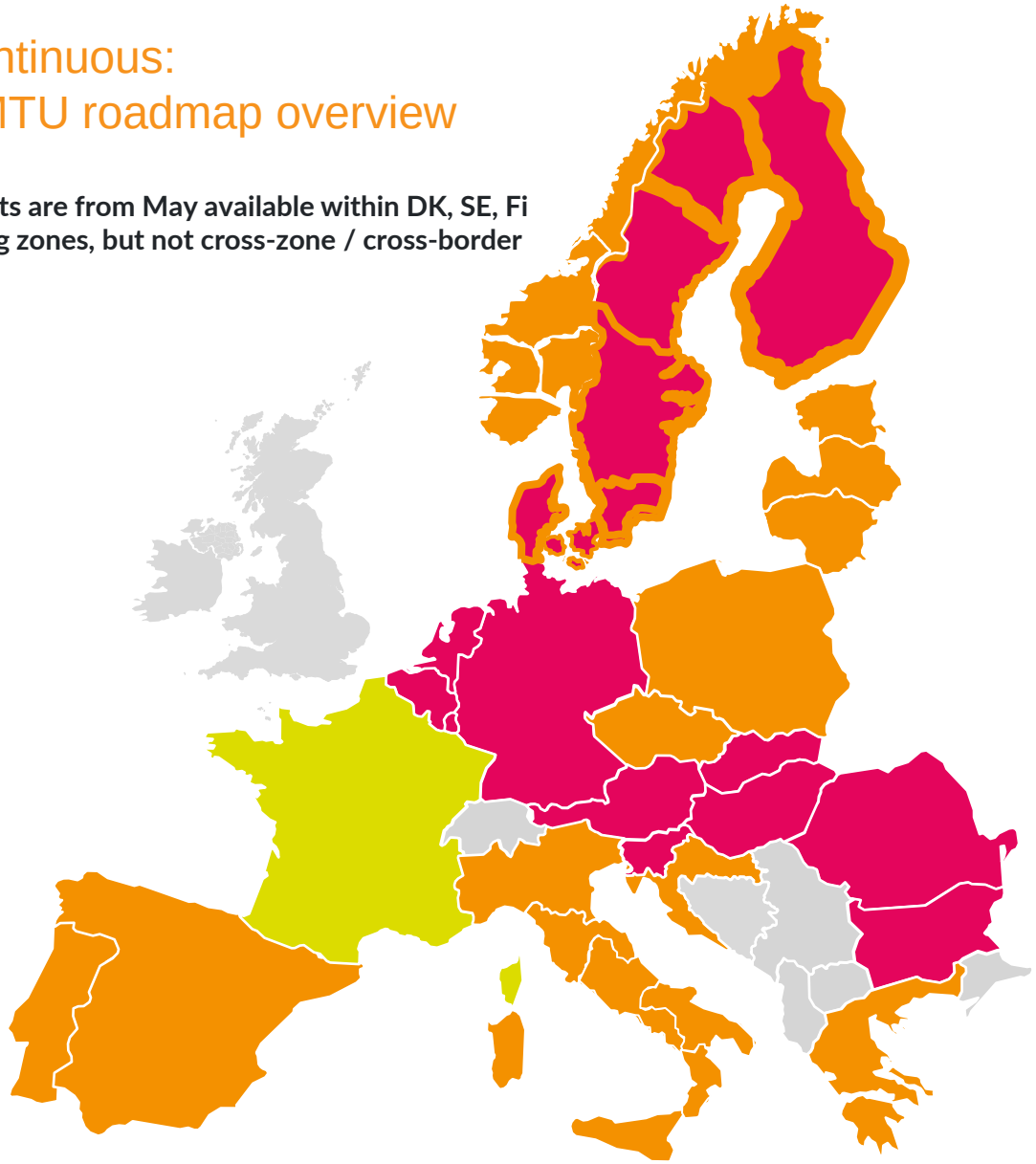
Role of MCSC: MCSC NEMOs and TSOs to provide inputs to the prioritisation exercise based on ACER/NRA request.

Importance of alignments with market parties/in MCCG: to be seen as an **important tool to ensure that the prioritisation will bring realistic outcomes** based on (coordinated) inputs from market participants/NEMOs/TSOs

15 minutes Market Time Unit (MTU) roadmap overview

SIDC continuous:
15 min MTU roadmap overview

15-min products are from May available within DK, SE, Fi internal bidding zones, but not cross-zone / cross-border



Lowest product granularity in particular BZs

- BZ on 15 min MTU
- BZ on 30 min MTU
- BZ on 60 min MTU
- Not part of SIDC coupling

Note 1: Hourly products are available in every SIDC country

Note 2: 30-min products are currently tradable across the borders FR-DE, DE-NL, DE-BE, FR-BE and BE-NL.

Note 3: 15-min products are currently tradable across the borders BE-NL, BE-DE, NL-DE, AT-DE, AT-HU, AT-SI, AT-SK, HU-SK, HU-RO, BG-RO.

Upcoming 15m MTU go-lives in countries that are already in SIDC.

- Croatia cross-border (HR-SI, HR-HU) – Q1 2024
- Nordic Area cross-border and Poland intra-zonal – 2024 H1
- Czech Republic cross-border (CZ-DE, CZ-AU, CZ-SK) – Q3 2024

Regulatory Deadlines regarding 15 MTU implementation

- All SIDC Bidding zones must have 15 min MTU (15 min XBID products proposed to market participants) by 01st January 2025
- Cross-border resolution of 15 min OTU (Operational Time Unit) in the interconnectors must follow the implementation of 15 MTU once the two areas connected by one interconnector offer 15 min MTU granularity. Process agreed by TSOs and regulators:
  - Dividing the process in 2 phases that don't have to take place simultaneously is valid:
    - 1. Implementation 15 Min MTU within BZ. Dependent on NEMO, TSO and regulators.
    - 2. Implementation 15 min OTU in the border. Dependent on TSOs and regulators.

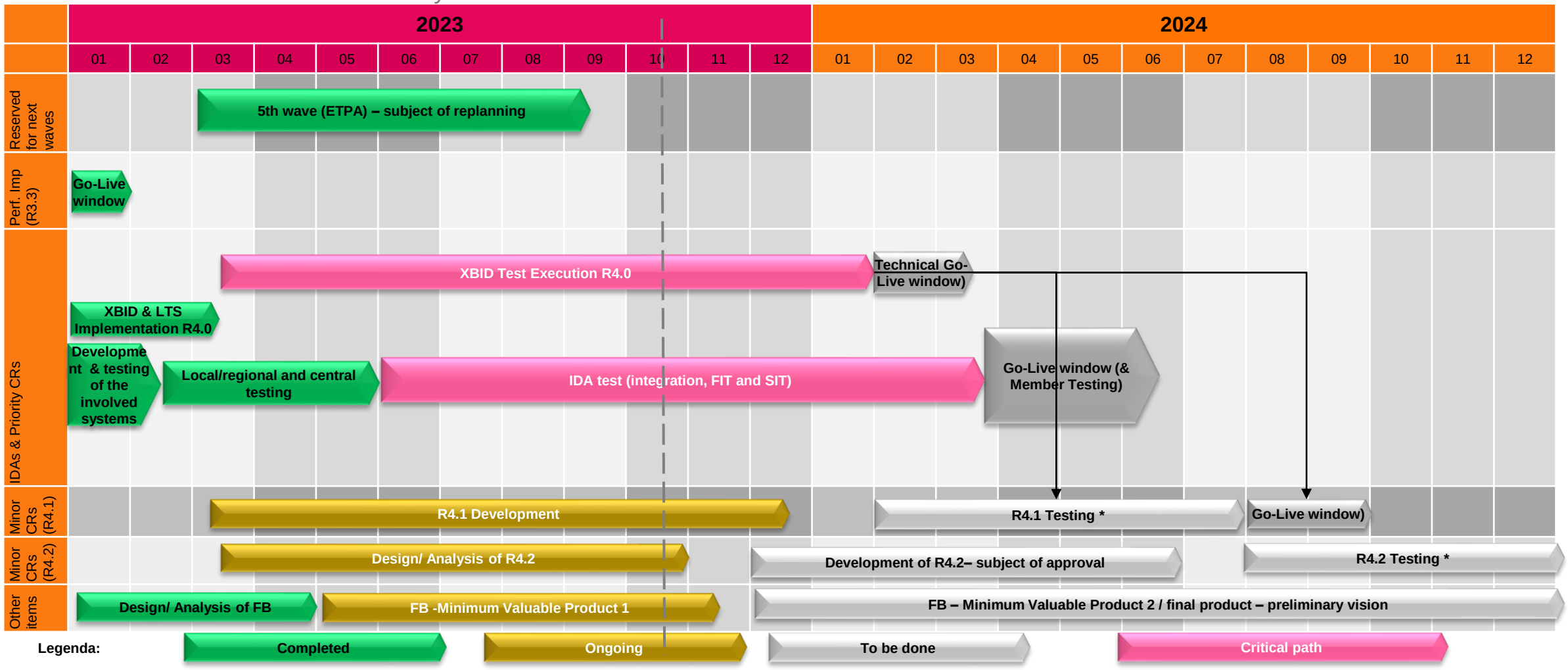
- In conclusion:
  - All SIDC Bidding zones will offer 15 min MTU by 1st January 2025.
  - 15 min OTU resolution in each border may have some delay with regards to 1st January 2025 deadline, depending on each TSO, national regulator (NRA) and ACER

Market Coupling Steering Committee

SIDC – IDAs: progress on implementation

IDA implementation project timeline

Release for IDAs & IDA POMs (R4.0), Priority CRs (R4.1) , Priority CRs (R4.2), FB

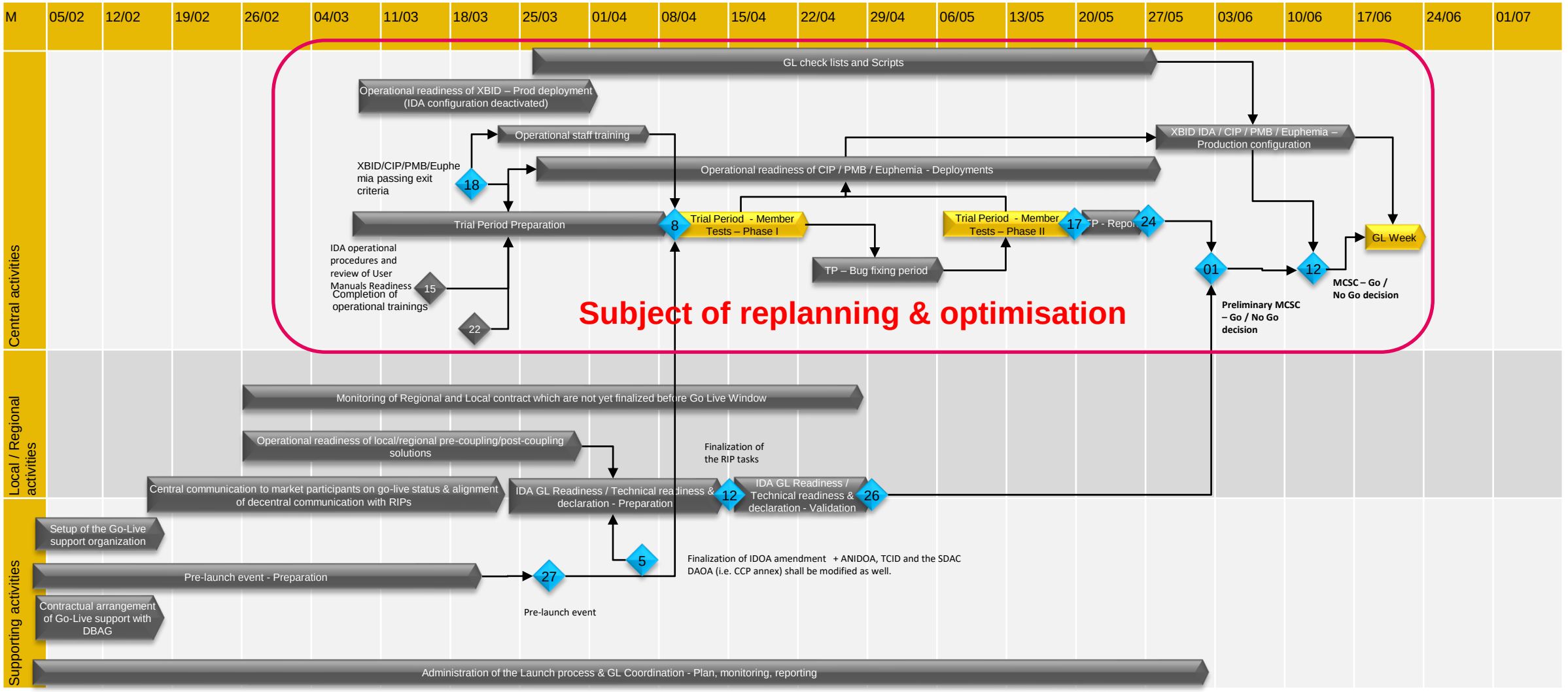


IDA implementation project timeline – Progress achieved

- **Progress on IDAs**
  - **Functional specification and development of all systems supporting IDAs is finalized.**
  - **Functional testing, performance testing and failover testing of a system for continuous trading**, which prepares network data for IDAs, (XBID) is completed. The preparation of Daylight Saving Time (DST) tests is progressing in line with the plan.
  - **Functional testing of action-based systems** for exchange of the messages (CIP) is completed. Functional testing of other systems such as PMB/Euphemia with the latest version supporting all operational situations, such as partial decoupling, is ready and is subject of functional and non-functional tests. There is a pending fix for borders with ramping constraint which implementation is take care of with a very high priority. 5 runs of the Functional Integration Tests (FITs) are completed, two additional runs are added, mainly to focus on the robustness and stability of post coupling processes. This results in the updated IDA Testing timeline.
  - The **scenarios for non-functional testing of the whole chain** – e.g. End 2 End Testing, procedural testing (on top of IDA procedures also procedures for continuous and auction trading are subject of review) including testing of the dependencies of the trading timeframes (Day-Ahead → IDAs → Continuous trading) are completed. The testing of full chain scenario is rescheduled for early 2024, in order to reflect the latest regional development of Day-Ahead.
  - Majority of **Regional Integration Projects** (RIPs) are in line with the updated IDA testing timeline. There are some development challenges for a limited number of parties, which shall not have a negative impact on the overall IDA timeline. The impact of the announced date of **Polish Balancing Market Reform (go live scheduled for 14/06/2024) on IDA Go Live**, which, due to a local need of synchronization with IDAs, is subject of analysis as well as optimization of Go Live process to secure Go Live by mid 2024.
  - Detailed planning of so-called IDA Go Live window is established (see the next slide).
- **Progress on other developments**
  - Implementation of R4.1 is almost completed
  - Implementation of the Flow based – Minimum Valuable Product has started
- **5th wave (ETPA):**
  - The planned Go Live of the 5th wave as of 14/06 was not successful due to some technical local issues, the second try was successful on 1st August 2023

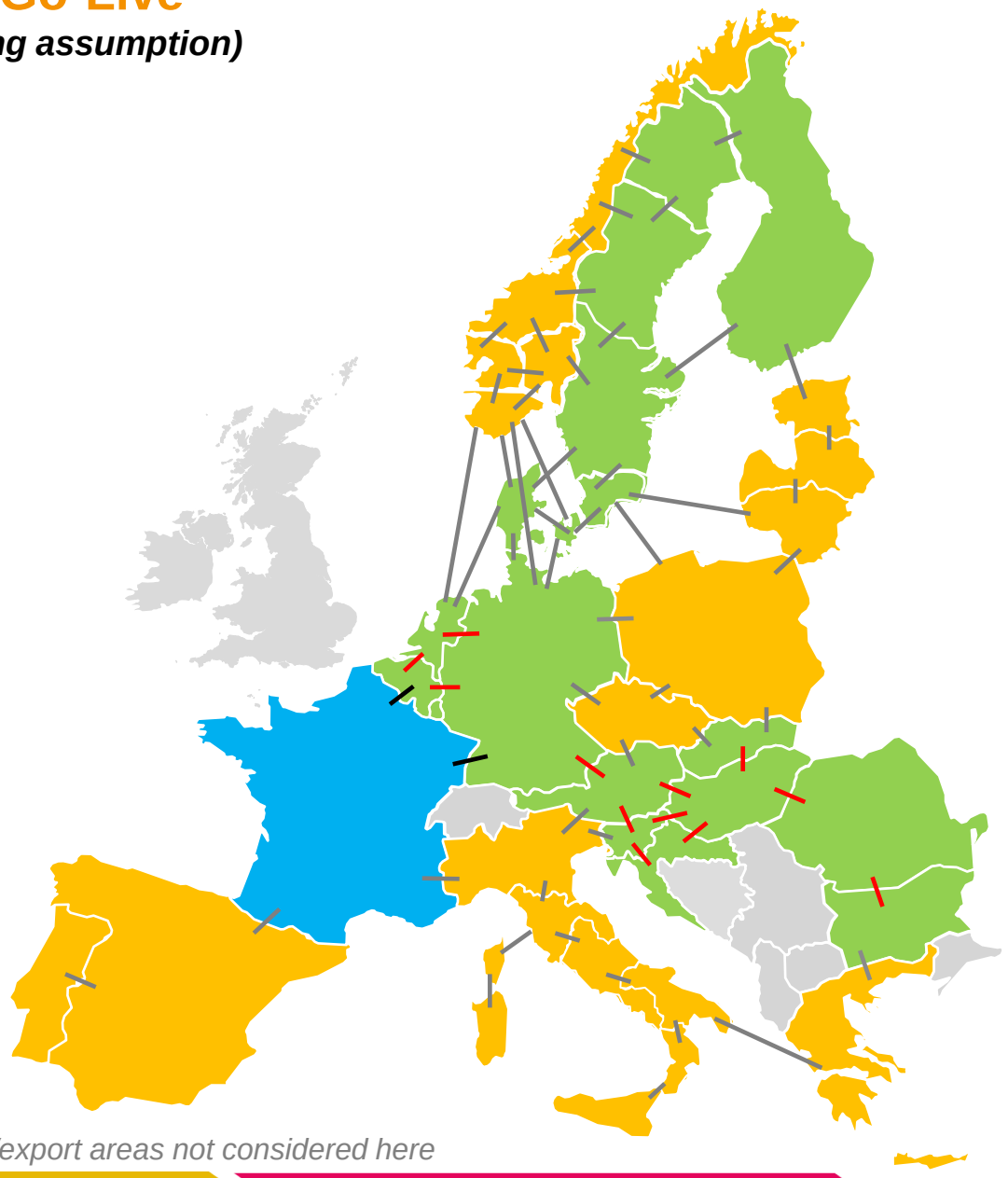
*15 min MTU for IDA will be operational before the 15 min MTU for DA

IDA Go Live Preparation Timeline – focus on market participants



SIDC IDAs Go-Live

Q2 2024 (working assumption)



AT, BE, BG, FR, DE, NL, SI, SK areas will have to manage several BZB resolutions

note: import/export areas not considered here

SIDC IDAs : Full transfer to 15 min MTU

At the latest Q1 2025 (working assumption)*

- BZB on 15 min MTU
- BZB on 30 min MTU
- BZB on 60 min MTU
- BZ on 15 min MTU
- BZ on 30 min MTU
- BZ on 60 min MTU
- Not part of SIDC coupling

note: import/export areas not considered here

* Transfer to status presented in this figure may happen in several steps where individual BZs and BZBs will switch to 15 min MTU

Market Coupling Steering Committee

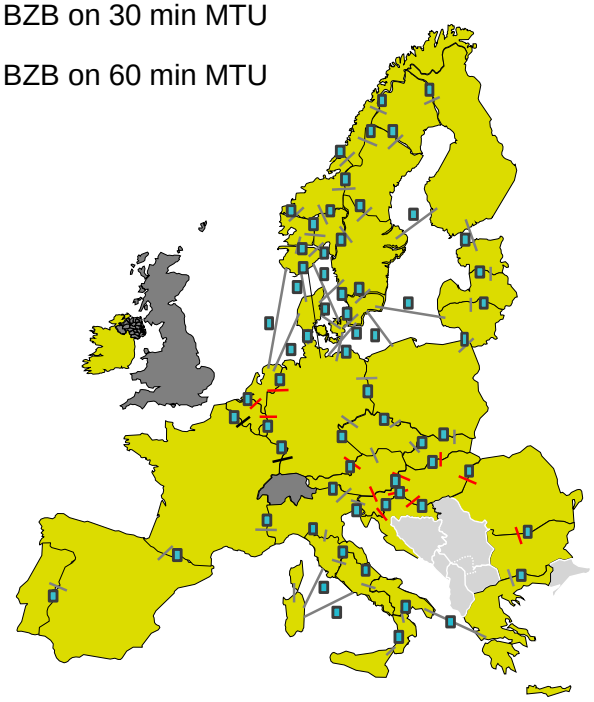
Cross-zonal Capacities for the IDAs

MCSC TSO overview

Summary of the version as approved by MCSC TSO approval and with all CCR feedback incorporated.

Simplified overview of expected/indicative cross zonal capacities (CZC) for IDA Go-live

- No cross-zonal capacities*
- Cross-zonal capacities* ➔ different approaches possible as summarised on the next slide
- BZB on 15 min MTU
- BZB on 30 min MTU
- BZB on 60 min MTU



IDA 1 (D-1 14h45)

IDA 2 (D-1 21h45)

IDA 3 (D 9h45)

*In some cases it is not yet confirmed or decided, whether there will be cross-zonal capacities (cf. details on the next slides)

Overview of approaches used across the CCRs

Below, the different approaches for capacity calculation approaches for IDAs is listed - as indicated by TSOs from the respective CCRs. Terminology being in the same row does not automatically indicate similarity of approaches. Furthermore, letters have no further significance other than differentiating between approaches per CCR.

	Nordic	Hansa	Core CCR	IBWT	GRIT	South-West Europe	Baltic	South-East Europe
IDA 1	a) CZCs are leftovers based on D-2 CGM and an extraction taking into account the SDAC allocations.	A) No CZCs B) Leftover CZCs C) Re-calculated CZCs	a) no CZCs (if existing derogation in CCM is applicable)* b) Updated CZC after DA MC: CZCs for ID extracted from the D-2 CGM at DA MCP, but with different parameters for virtual capacities or potential removal of virtual capacities.	a) no CZCs b) Updated CZC after DA MC: CZCs for ID calculated as day-ahead left-over ATC without virtual capacities	a) Intra-Day cross-zonal capacities based on Day-Ahead „left-overs“ initially* indicated for all borders for IDA1.	a) DA Leftovers: CZCs leftover after SDAC allocations. These CZCs are extracted based on the regional day-ahead capacity calculation process on D-2	A) DA Leftovers: CZCs leftover after SDAC allocations. These CZCs are extracted based on the regional day-ahead capacity calculation process on D-2	a) DA Leftover: CZCs leftover after SDAC allocations. These CZCs are extracted based on the European wide D-2 CGM (for IDA1)
IDA 2	b) CZCs will be leftovers for IDA go-live but target is to re-assess the CZCs based on D-1 CGM according to Nordic CCM.	B) Leftover CZCs C) Re-calculated CZCs D) Re-assessed CZCs	c) Updated CZC after DA MC plus Increase/Decrease: same as b) complemented with an optional possibility to increase or decrease capacities on bilateral level based on D-1 CGM d) Calculated ID CZC (IDCC 1): CZC is calculated based on D-1 CGM and last available AAC	c) CZCs for ID** calculated as day-ahead left-over ATC without virtual capacities d) CZCs for ID calculated as day-ahead left-over ATC with virtual capacities	b) "re-assessed" based on regional D-1 CGM.	b) Re-calculated ID CZC (IDCC1): 1st run of regional intraday capacity calculation process (22:00h D-1). This process was implemented in March 2022	A) DA Leftovers: CZCs leftover after SDAC allocations. These CZCs are extracted based on the regional day-ahead capacity calculation process on D-2	b) Re-assessed based on regional D-1 CGM (for IDA2) .This process was implemented in October 2021
IDA 3	c) CZCs will be leftovers for IDA go-live but target is to re-assess the CZCs based on ID CGM according to Nordic CCM.	B) Leftover CZCs C) Re-calculated CZCs D) Re-assessed CZCs	e) ID capacities available for continuous trading in XBID at 9:45 will also be used for IDA3 until IDCC2 is implemented f) CZC is calculated based on ID CGM and last available AAC (IDCC2 implementation)	e) CZC re-assessed based on regional ID CGM	c) "re-assessed" based on regional ID CGM.	c) Re-calculated ID CZC (IDCC2) : 2nd run of regional intraday capacity calculation process (10:00h D) Pending implementation	A) DA Leftovers: CZCs leftover after SDAC allocations. These CZCs are extracted based on the regional day-ahead capacity calculation process on D-2	c) Re-assessed based on regional ID CGM (for IDA3) This process was implemented in October 2022

*Note that the final set-up for Core is dependent on the outcome of the ongoing ACER’s referral on the 2nd & 3rd amendment of Core ID capacity calculation methodology, expected Q4 2023

** For IBWT the target model is under CCR consideration

Market Coupling Steering Committee

Stakeholder engagement approach on Market design changes for 15 min MTU in SDAC and IDA

MCCG stakeholders engagement

Enhancing further the cooperation

Background and steps taken to far

- MCCG forum was introduced in 2022, and since then, MCCG convenors alignments defined the agenda items to be discussed
- During MCCG #4 preparation (October 2023), NEMOs and TSOs proposed some items for decisions to market participants, and options as well as recommendations were proposed. Objective was to gather feedback with 2 weeks from the market participants, and to discuss those upfront to the MCCG meeting.

Proposal for enhancements

- NEMOs, TSOs and market participants systematically define joint positions to be conveyed for MESC and PCG meetings MCCG would take place 2-3 weeks before MESC meetings
- All events (meetings, consultations) where a joint feedback could be given are listed 6 months in advance, speakers or doers are defined
- MCCG would dedicate specific section to discussion related to SIDC and SDAC market design
- Consultation of market parties is enhanced and process applied for MCCG #4 preparation is used as a basis

Any recommendation from market participants?

AOB

AOB

- MLRVC
- Status Co-optimization after consultation on Algorithm requirements
- NEMO feedback on the publication of block and complex block orders

AOB - MRLVC

- In February 2023 EU and UK TSOs received a list of technical questions from European commission and UK government (DESNZ) concerning MRLVC which were to be answered within 5 months after receipt. Final report was delivered to EC and UK government is 10th of July but given its confidentiality cannot be shared externally by MCSC parties. Specialized committee of Energy is expected to take place before end of 2024

- The list of questions are focused on technical aspects providing aiming to provide more clarification for a possible implementation of MRLVC as foreseen in the TCA. It only makes a comparison to current explicit trading arrangements in place today on several GB-EU borders. Other alternatives are not in scope of the current exercise

- Scope of the questions targeted following domains, which are a follow up of the CBA performed in 2021 :
  - Preliminary Order Book option
  - Common Order Book option
  - MCO of MRLVC
  - Bidding Zone Border Flow Forecast methodology
  - Implementation timeline & costs for establishment of MRLVC

  UK and EU TSOs, with involvement of NEMOs, have intensively worked on this topic and jointly preparing answers to the questions received in cooperation with MCSC parties which have been shared to EC and UK government.

  MCSC TSOs and NEMOs already previously shared their concerns and views on the MRLVC market model and its implications in case of an implementation. Based on the insights of the current exercise this position is not changed and the concerns remain. Which are further elaborated on the next slide.

AOB MRLVC:
MRLVC vs a full re-integration of UK in the SDAC

- Current explicit model suffers from significant trade efficiency losses, which has been confirmed in the report
- It is expected for MRLVC would reduce losses, though uncertain to which amount as it also relies on forecasts being made. But there will surely remain welfare losses compared to full implicit price coupling
- MCSC assessed that MRLVC would introduce an additional, completely new interdependency for the SDAC process (additional risk on process, fallbacks needed, extensive parallel-runs required,…)
- Future offshore grid and generation development could be compromised due to MRLVC's limited efficiency and expected long implementation time
- There are fundamental unresolved points and issues with MRLVC's application to offshore bidding zones which have no clear solution today (see next slide)
- MCSC believes that the main challenge for integrating UK again in the SDAC is political, not technical

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AOB- MRLVC
MRLVC raises fundamental concerns on how it would work for offshore bidding zones

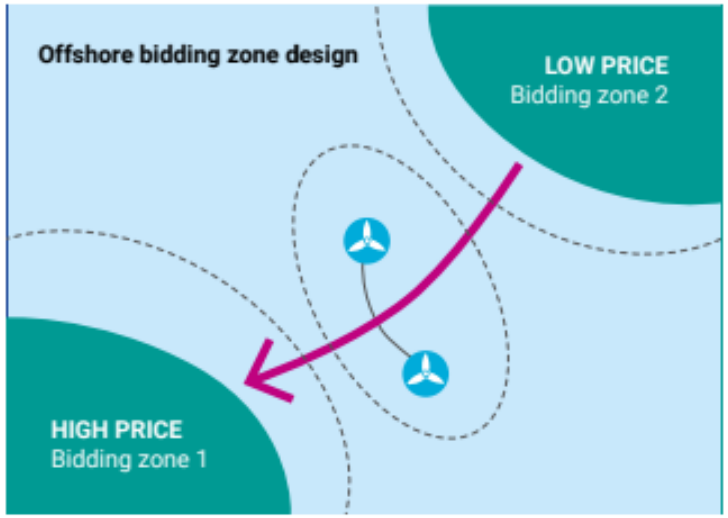

Image Source: ENTSO-E Position paper on Offshore Development Market and Regulatory Issues. Link

- Current explicit trading model would not couple the UK price directly, but depend on separate trades over the cable
- Under MRLVC, there is no clear solution yet how any price effect would carry over in the Offshore Bidding Zone
- Both models (Explicit & MRLVC) rely on forecasts, that could result in suboptimal allocation of capacity (underutilization of infrastructure, suboptimal allocation of offshore wind,…)
- Because of limited and single-source local offers, the OBZ could be more sensitive to explicit/MRLVC inefficiencies than other (larger) bidding zones
- MCSC believes that only a full return to implicit price coupling with offshore bidding zones is expected to be best scalable solution for offshore wind ambitions on UK and EU side.

AOB - Status Co-optimization after consultation on Algorithm requirements

Procedure, participation & current process status

Process & publication

- Public consultation on Algorithm Methodology update for Co-optimisation and IDAs launched on 31st July 2023.
- Information on Public Consultation available @ the NEMO Website. PC ended on 25th September 2023 (couple of additional days “unofficially” provided for some MPs to submit their feedback).

Participation

- 8 Market Participants: CEZ, EDF, EFET, EnBW, ENGIE, Eurelectric, SPP, UFE.

Current process status

- NEMOs are working on providing Public Consultation report to be published on NEMO Committee website

AOB - Status Co-optimization after consultation on Algorithm requirements

Main points raised by the majority of MPs (1/2)

Implementation process and prioritization.

- Co-optimization should not be considered as a priority. Especially taking into consideration the current developments and commitment on achieving the goals for 15min MTUs/products introduction in SDAC up to 2025. Even the proposed target for 01/2029 seems unrealistic for providing a safe case to be demonstrated for a production scale implementation.

Algorithm performance, calculation time / Results publication time.

- Results on 15min simulations already indicate that SDAC algorithm is at its limits. R&D should take into consideration the 15min MTUs impact on the co-optimization and relevant tests should reflect the proper MTUs and calculation times.

Product availability/selection for SDAC.

- Co-optimization should not place any restrictions/limitations on products availability/flexibility for accommodating the co-optimization of energy and balancing capacity.

Complexity of MPs bidding process.

- Bidding process and strategies will become more difficult for either historic and new MPs. Change of sequential bidding in separate Capacity/Energy markets in one co-optimized market will have big impact both in the process followed and the expected market outcome for the MPs. Existing portfolio bidding could become cumbersome with lack of proper product selection. Requires proper handling and time for maturity.

AOB - Status Co-optimization after consultation on Algorithm requirements

Main points raised by the majority of MPs (2/2)

Bidding Guide and product features needed for Co-optimisation.

- Bidding Guide presenting the products and options for linking should be discussed with MPs and this would be required as ground for further R&D guideline. Multilateral linking is preferable vs unilateral linking.

Efficiency and Benefits.

- Co-optimisation will be subject to inefficiencies due to inaccurate forecasts, as any BC market. Some MPs acknowledge the theoretical welfare gains of co-optimisation as a mean to be less sensitive to forecasts quality of either market participants or TSOs in the definition of energy and reserve values. The allocation of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves defined through a market-based process has a beneficial intrinsic value. Negative effects to be addressed: price signals, constraints to adjust positions efficiently across borders, exclusion of some BSPs like storage if no adequate linking-options as implemented, any welfare gains should surpass the welfare loss inflicted by reduced participation.
- Efficiency and added value of co-optimisation in comparison to market-based alternative remains uncertain.

Required R&D.

- Despite all relevant comments for the Bidding Guide, the following should be also considered: 60min -2- 15min complexity and efficiency of algorithm; proper price signals formation; adequate roadmap and transparency/reporting on results.

AOB - Status Co-optimization after consultation on Algorithm requirements

Proposal for bidding-guide, R&D and implementation

- NEMOs shall issue the amended AM by mid November, as expected. This shall include all changes requested by ACER.
- With specific reference to the timeline of activities, the potential agreement with TSOs could work as follows:
  - **By beg of 2025**, NEMOs and TSOs shall collect from MPs the «Bidding Guide», to be used as input for drafting amended set of requirements.
  - **In parallel**, MCSC would assign to N-SIDE some light R&D on the logical aspects of bid linking.
  - **By beginning 2026,** TSOs shall issue amended set of requirements to NEMOs, in case the two process above produce new relevant information.
  - **At a later stage,**
    - MCSC shall run a proper R&D to prototype co-optimization, as needed input to issue a fully fledge revision of AM.
    - NEMOs shall issue the fully fledge revision of AM.
- It has been discussed the possibility to make further industrialization of the prototype, including impact on SDAC operations, to actually implement co-optimization algorithm, conditional upon request of at least two TSOs.
- TSOs will re-draft and re-submit the proposal for the Article 4A(8) for further steps on implementation process reflecting the above for bidding-guide, bid-linking, R&D, update of requirements, proof-of-concept and possible industrialization.

AOB - NEMO feedback on the publication of block and complex block orders (1/2)

- Following a request at the MCCG the NEMOs assessed improving the existing info at the Nemo Committee website on data published for Aggregated Curves (AgCs) and Block Orders (BOs) for the DA and Intraday Auction Markets. NEMOs' positive feedback on the subject was also provided during the last June/2023 MCCG meeting

- On top of the existing information on publication links for DA, NEMOs considered reasonable, although not mandatory by relevant regulation, to provide AgCs and BOs data for the IDAs.

- NEMOs considered NC TTF to provide relevant proposals for improvements.

- The aim is to improve existing NEMO Website content and provide:
  - A table-like format publication with all active NEMOs for the DAM, and later on for the IDAs, with the following data:
    - Publicly available data like: MS(s) active, details/links on NEMO website content (AgCs data/figure, BO information)
    - Data-platform content: Indication/mark for information provided at the NEMO's Data Platform

- NEMOs performed an internal survey for collecting the required information and the collected information up-today-is as follows:
  - (see next slide for mock table-like format publication)

- Next step is to create the NEMO mock-webpages and considering relevant internal approval publish the information by end-October 2023 (for DAM data).

AOB - NEMO feedback on the publication of block and complex block orders (2/2)

		DAM Resource links and Info					
		Public @ WWW			NEMO D/P		
NEMO	MS(s)	AC-G	AC-D	IB	AC-G	AC-D	IB
BSP	SI	X	X		X	X	
CROPEX	HR	X					
EPEX	NO, SE, FI, DK, PL, DE-LU, NL, BE, FR, AT	X				X	X
EXAA	AT, DE	X					
GME	IT	X	X				
HEnEx	GR		X	X			
HUPX	HU	X		X			
IBEX	BG	X	X				
NORDPOOL	NO, SE, FI, DK, Baltics (EE, LT, LV), PL, DE-LU, NL, BE, FR, AT	X			X	X	X
OKTE	SK	X	X		X	X	
OMIE	ES,PT	X	X		X	X	
OPCOM	RO	X	X	X			
OTE	CZ	X	X	X			
SEMOpx	IE, NI		X			X	
TGE	PL	X		X		X	X
		Links to the relevant URLs will be provided under X-mark.			X-mark indicates availability @ the NEMO data-platform.		

		IDAs Resource links and Info					
		Public @ WWW			NEMO D/P		
NEMO	MS(s)	AC-G	AC-D	IB	AC-G	AC-D	IB
BSP	SI		X			X	
CROPEX	HR	TBC	TBC	TBC			
EPEX	NO, SE, FI, DK, PL, DE-LU, NL, BE, FR, AT	X				X	X
GME	IT	X	X				
HEnEx	GR		X	X			
HUPX	HU	TBC	TBC	TBC			
IBEX	BG	TBC	TBC	TBC			
NORDPOOL	NO, SE, FI, DK, Baltics (EE, LT, LV), PL, DE-LU, NL, BE, FR, AT	TBC	TBC	TBC	TBC	TBC	TBC
OKTE	SK	TBC	TBC	TBC	TBC	TBC	TBC
OMIE	ES,PT	X	X		X	X	
OPCOM	RO	TBC	TBC	TBC			
OTE	CZ	TBC	TBC	TBC			
SEMOpx	IE, NI		X			X	
TGE	PL	TBC	TBC	TBC	TBC	TBC	TBC
		Links to the relevant URLs will be provided under X-mark.			X-mark indicates availability @ the NEMO data-platform.		

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 2024, details & date will be shared by end of the year

Market Coupling Steering Committee

4th MARKET COUPLING CONSULTATIVE GROUP WORKSHOP

THANK YOU FOR YOUR PARTICIPATION

20 OCTOBER 2023