

Seventh Market Coupling Consultative Group

Workshop

8 November 2024



Agenda



#	TIME	DURATION	SESSION	PRESENTER							
1	09:00 – 09:10	10min	Welcome, review of the action points logged in the last meeting	Selim Boussetta, Thomas Van Den Broucke, Pierre Milon (MCCG Convenors)							
2	09:10 - 10:20	1h 10min	SDAC & SIDC 15min Market Time Unit (MTU)								
				 Update on the SDAC & SIDC 15minMTU implementation planning 	Adèle Roy & Benjamin Mossot (SDAC QARM Convenors) Chris Kleinpenning & Lyubomir Grozdanov (SIDC 15ITP SPoCs)						
			- SDAC rollback plan	Adèle Roy & Benjamin Mossot (SDAC QARM Convenors)							
				Thomas Van Den Broucke, Pierre Milon (MCCG Convenors)							
3	10:20 - 10:50	30min	SDAC decoupling events								
			- MCSC reflection	Luiza Holban-Fediuc & Bálint Csuri (SDAC OPSCOM Chairs)							
					- MPs feedback	Selim Boussetta (MCCG MPs Convenor)					
	10:50 - 11:00	10min	Coffee break								

Agenda



	ТІМЕ	DURATION	SESSION	PRESENTER
4	11:00 – 11:30	30min	SIDC Intraday Auctions (IDAs)	
			- First months of IDA operations: MCSC	Dalila Garcia Notario & Martim Stilwell (SIDC OPSCOM Charis)
			- First months of IDA operations: MPs	Selim Boussetta (MCCG MPs Convenor)
5	11:30 – 11:40	10min	Implementation of 30-minute IDGCT	Gergő Holló (30-minute IDGCT
			(update from TSOs following the initial input provided on MCCG #6)	SPoC)
6	11:40 – 11:55	15min	Methodologies' updates and consultations	Christoforos Zoumas & Chiara Vitelli (NEMO Tech TF Convenors)
			- SDAC Product methodology	
			- SIDC Product methodology	
			- Algorithm methodology	
			- HMMCP methodology	
7	11:55 – 12:05	10min	SDAC-SIDC Roadmap and key projects	André Estermann, Cosimo Campidoglio, Ondřej Máca (MCSC Chairs)
8	12:05 – 12:15	10min	Co-optimisation	Timo Suhonen & Marja Eronen (SDAC MSD Convenors)
			- MCSC co-optimisation R&D & survey update	
9	12:15 – 12:25	10min	AOB	
			- EMD reform – Trading until the latest point in time	Lara Visone (SIDC MSD Convenor)
10	12:25 – 12:30	5min	Closure	Selim Boussetta, 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:

Selim Boussetta, Regulation and Organization of Energy Markets, EDF

TSO Co-convenor:

Thomas Van Den Broucke, Manager Offshore & Interconnectors market concepts, ELIA

NEMO Co-convenor: Pierre Milon, Executive Expert Market Coupling & Integration, 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.

	MCSC/MCCG	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 algorithmCentral testing	 Design & Implementation into DACC Impact assessment
SDAC & SIDC 15minMTU	 Timings Products & central algorithm functionalities Central testing 	- Regional testing

MoM & review of action points



MoM of previous MCCG were available on NEMO Committee [LINK] & ENTSO-E website [LINK]

Overview of action points of the last MCCG:

Date	Responsible	Description	Deadline/Status
26/02/2024	NEMOs	Ask individual market parties about their expected usage of smart block products in view of increased time granularity of flexible assets and share the data with PCR ALG	Q4 2024 MCCG
27/06/2024	MCSC NEMOs/TSOs and MPs	Continue the discussion on the 15minMTU ID&DA Member testing via a dedicated call Q4 2	
27/06/2024	MCSC NEMOs/TSOs	Clarify in written what will be tested locally / centrally for the 15'MTU member testing in DA/ID	Q4 2024 MCCG
27/06/2024	/2024 MPs Approach MCSC TSOs and NEMOs in order to propose ideas for the organization of member testing		Q4 2024 MCCG
27/06/2024	MPs	Identify a list of legal deliverables which are expected to be not fitting in view of the planned 15minMTU implementation	Q4 2024 MCCG
27/06/2024	-	Collectively address to the MESC the call for a legal gap analysis to help prepare the 15minMTU GL by covering aspects which are not under NEMO- and TSOs-influence	Q4 2024 MCCG



SDAC & SIDC 15min Market Time Unit (MTU)

Update on the SDAC & SIDC 15minMTU implementation planning

Adèle Roy & Benjamin Mossot (SDAC QARM Convenors) Chris Kleinpenning & Lyubomir Grozdanov (SIDC OPSCOM 15ITP SPoCs)



Update on the SDAC & SIDC 15minMTU implementation planning Progress on SIDC testing and go-live planning



- Central systems are ready. 15' product as well as cross-border allocation is implemented in many bidding zones.
- MCSC NEMOs and TSOs are working on the testing and implementation of the 15'MTU in ID CT and IDAs. The transition
 to 15'MTU in SIDC is following a sequential approach of go-live windows organized in windows of borders and bidding
 zones. TSOs and NEMOs aims to keep the windows fixed, without any dependency with SDAC go-live, except for Greece.

Progress status

- Preparation of the testing and go-live of the 15minMTU on SIDC borders and bidding zones is progressing well.
- <u>Window 2</u>: On 01/07/2024, successful go-live of 15'MTU in the Czech bidding zone and on the CZ-AT, CZ-DE, SK-CZ bidding zone borders (Window 2) took place.
- Window 3: Testing for the Baltic parties' go-live is completed. The go-live is scheduled for 20/11/2024.
- <u>Window 4</u>: Compared to the last status update provided in June MCCG, the bidding zones and borders scheduled for go-live in January 2025 (Window 4) were divided into two phases. This is to allow the implementation of 15'MTU on the Italian internal borders on 01/01/2025 (W4a) and on the Italian external borders together with France and French borders (except ES-FR) and bidding zone as well as EstLink (EE-FI) on 22/01/2025 (W4b), avoiding the go-live during the new year period.
- <u>Window 5</u>: Go-live of the window 5 is scheduled for 18/03/2025. Moreover, this window already containing Spain, Portugal, FR-ES, ES-PT, and Polish borders was modified to include also Nordic borders*. The latter change is due to the dependencies on other Nordic projects and related operational reasons. Additionally, the development of necessary systems which are on the critical path is considered a risk. Hence, this switch is to avoid a late announcement of a delay which would have caused the delay of the whole Window 4 which the Nordic borders were initially a part of.
- <u>Window 6</u>: Greece and GR-BG border will go live as part of window 6, scheduled at the same as SDAC go-live.

Update on the SDAC & SIDC 15minMTU implementation planning SIDC Individual NEMO member testing



- To support the preparation for the transition to the 15'MTU in SIDC, NEMOs with borders and bidding zones yet to switch to 15'MTU are organising for their market participants dedicated member testing.
- An overview of the individual NEMO member testing for SIDC 15'MTU transition can be found below.

NEMO	Individual member testing scheduled	High-level testing details
BSP	Wave 4 sometime between December and January	Focusing on both IDCT and IDA Operations
EPEX	 Wave 4 CT: end of December - beginning of January IDAs: beginning of January Wave 5: TBD 	Focusing on both IDCT and IDA Operations
GME	Member tests planned on 21/10 - 20/12	Testing to include IDAs. GME local parties were informed by GME. Together with those changes, a reform of Italian market will go-live.
HENEX	From end Jan-2025	Focusing on DAM Operation, IDAs Operation, IDCT Operation
IBEX	No member testing foreseen for Bulgaria	
NORDPOOL	Different dates for each window	Each date to be scheduled depending on the end of FIT testing
ΟΚΤΕ	No member testing foreseen for OKTE	
OMIE	From mid-December	Focusing on both IDCT and IDA Operations
OTE	No member testing foreseen for OTE	
TGE	Member tests planned on 12/11 - 13/12	Focusing on IDA operations

Update on the SDAC & SIDC 15minMTU implementation planning **Overview of planned go-lives**



GL window

Go-live per bidding zone

Bidding zone	15 min ISP	Planned Go-live date ID CT & IDA
Austria	Implemented	Implemented
Belgium	Implemented	Implemented
Bulgaria	Implemented	Implemented
Croatia	Implemented	Implemented
Czech Republic	Implemented	Implemented
Denmark (All BZs)	Implemented	Implemented
Estonia	20/11/2024	20/11/2024
Finland	Implemented	Implemented
France	01/01/2025	22/01/2025
Germany	Implemented	Implemented
Greece	Implemented	Q2 2025 aligned with SDAC
Hungary	Implemented	Implemented
Italian BZ	01/01/2025	01/01/2025
Latvia	20/11/2024	20/11/2024
Lithuania	01/10/2024	20/11/2024
Netherland s	Implemented	Implemented
Northern Ireland	N/A	30' MTU in January
Norway (All BZs)	07/01/2025	18/03/2025
Poland	Implemented	Implemented*
Portugal	30/11/2024	18/03/2025**
Republic Of Ireland	N/A	30' MTU in January
Romania	Implemented	Implemented
Slovakia	Implemented	Implemented
Slovenia	Implemented	Implemented
Spain	01/12/2024	18/03/2025**
Sweden (All BZs)	Mar/2025	Implemented

· Polish intra-zonal products are set for 15' MTU only in continuous trading. IDAs are still to be switched to 15' MTU

** Subject to IBERIAN NRA formal approval

Go-live per border

	Planned Go-live			Planned Go-live		
Border	date ID CT & IDA	SIDC GL window	Border	date ID CT & IDA	SIDC GL windov	
BE-NL	Implemented	Implemented	IT internal	01/01/2025	W4a	
CZ-AT	Implemented	Implemented	IT-CP-AT	22/01/2025	W4b	
CZ-DE	Implemented	Implemented	IT-CP-FR	22/01/2025	W4b	
CZ-PL	Mar/2025	W5	IT-CP-SI	22/01/2025	W4b	
DE-AT	Implemented	Implemented	IT-GR-GR	N/A	Exception*	
DE-BE	Implemented	Implemented	LT-PL	Mar/2025	Ŵ5	
DE-DK1	Mar/2025	W5	LT-SE4	Mar/2025	W5	
DE-DK2	Mar/2025	W5	LV-LT	20/11/2024	W3	
DE-FR	22/01/2025	W4b	NO1-NO2	Mar/2025	W5	
DE-NL	Implemented	Implemented	NO1-NO3	Mar/2025	W5	
DE-NO2	Mar/2025	W5	NO1-NO5	Mar/2025	W5	
DE-PL	Mar/2025	W5	NO1-SE3	Mar/2025	W5	
DK1-DK2	Mar/2025	W5	NO2-NL	Mar/2025	W5	
DK1-NL	Mar/2025	W5	NO2-NO5	Mar/2025	W5	
DK1-NO2	Mar/2025	W5	NO3-NO4	Mar/2025	W5	
DK1-SE3	Mar/2025	W5	NO3-NO5	Mar/2025	W5	
DK2-SE4	Mar/2025	W5	NO3-SE2	Mar/2025	W5	
EE-FI	22/01/2025	W4b	NO4-SE1	Mar/2025	W5	
EE-LV	20/11/2024	W3	NO4-SE2	Mar/2025	W5	
ES-PT	18/03/2025	W5**	PL-SE4	Mar/2025	W5	
FI-SE1	Mar/2025	W5	RO-BG	Implemented	Implemented	
FI-SE3	Mar/2025	W5	SE1-SE2	Mar/2025	W5	
FR-BE	22/01/2025	W4b	SE2-SE3	Mar/2025	W5	
FR-ES	18/03/2025	W5**	SE3-SE4	Mar/2025	W5	
GR-BG	Q2 2025 same as	W6 aligned with	SI-AT	Implemented	Implemented	
GR-BG	SDAC	SDAC	SI-HR	Implemented	Implemented	
HR-HU	Implemented	Implemented	SK-CZ	Implemented	Implemented	
HU-AT	Implemented	Implemented	SK-HU	Implemented	Implemented	
HU-RO	Implemented	Implemented	SK-PL	Mar/2025	W5	
HU-SI	Implemented	Implemented	* Due to tech	nical limitation of the HVDC cable,	60min MTU/OTU will be maintai	

OTU will be maintained.

15 min MTU in ID (CT and IDA) *Live*

Borders: DE-BE, BE-NL, DE-NL, HU-AT, HU-RO, HU-SI, DE-AT, SI-AT, SK-HU, RO-BG, SI-HR, HR-HU, CZ-AT, CZ-DE, SK-CZ

<u>Bidding zones</u>: Austria, Belgium, Bulgaria, Germany, Netherlands, Romania, Slovakia, Slovenia, Denmark, Sweden, Finland, Croatia, Hungary, Poland, Czech Republic



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

15 min MTU in ID (CT and IDA) Planned go-live: 20/11/2024

<u>Borders</u>: DE-BE, BE-NL, DE-NL, HU-AT, HU-RO, HU-SI, DE-AT, SI-AT, SK-HU, RO-BG, SI-HR, HR-HU, CZ-AT, CZ-DE, SK-CZ + LV-LT, EE-LV

<u>Bidding zones</u>: Austria, Belgium, Bulgaria, Germany, Netherlands, Romania, Slovakia, Slovenia, Denmark, Sweden, Finland, Croatia, Hungary, Poland, Czech Republic + Estonia, Latvia, Lithuania



Border on 15 min MTU
Border on 30 min MTU
Border 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

15 min MTU in ID (CT and IDA) Planned go-live: 01/01/2025

<u>Borders</u>: DE-BE, BE-NL, DE-NL, HU-AT, HU-RO, HU-SI, DE-AT, SI-AT, SK-HU, RO-BG, SI-HR, HR-HU, CZ-AT, CZ-DE, SK-CZ, LV- LT, EE-LV + IT internal borders

<u>Bidding zones</u>: Austria, Belgium, Bulgaria, Germany, Netherlands, Romania, Slovakia, Slovenia, Denmark, Sweden, Finland, Croatia, Hungary, Poland, Czech Republic, Estonia, Latvia, Lithuania + Italy



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

15 min MTU in ID (CT and IDA) Planned go-live: 22/01/2025

Borders: DE-BE, BE-NL, DE-NL, HU-AT, HU-RO, HU-SI, DE-AT, SI-AT, SK-HU, RO-BG, SI-HR, HR-HU, CZ-AT, CZ-DE, SK-CZ, LV- LT, EE-LV, IT internal borders + IT-CP-AT, IT-CP-SI, IT-CP-FR, DE-FR, FR-BE, EE-FI

<u>Bidding zones</u>: Austria, Belgium, Bulgaria, Germany, Netherlands, Romania, Slovakia, Slovenia, Denmark, Sweden, Finland, Croatia, Hungary, Poland, Czech Republic, Estonia, Latvia, Lithuania, Italy **+** France



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

15 min MTU in ID (CT and IDA) Planned go-live: 18/03/2025

<u>Borders</u>: DE-BE, BE-NL, DE-NL, HU-AT, HU-RO, HU-SI, DE-AT, SI-AT, SK-HU, RO-BG, SI-HR, HR-HU, CZ-AT, CZ-DE, SK-CZ, LV- LT, EE-LV, IT internal borders, IT-CP-AT, IT-CP-SI, IT-CP-FR, DE-FR, FR-BE, EE-FI + FR-ES*, ES-PT*, Nordic borders**, Polish borders

<u>Bidding zones</u>: Austria, Belgium, Bulgaria, Germany, Netherlands, Romania, Slovakia, Slovenia, Denmark, Sweden, Finland, Croatia, Hungary, Poland, Czech Republic, Estonia, Latvia, Lithuania, Italy, France **+ Spain***, **Portugal***, **Norway**

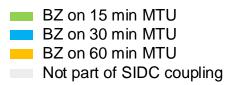
* Subject to IBERIAN NRA formal approval

** Except Estlink - On 15minMTU since 22/01/2025



Border on 15 min MTU
Border on 30 min MTU

— Border on 60 min MTU



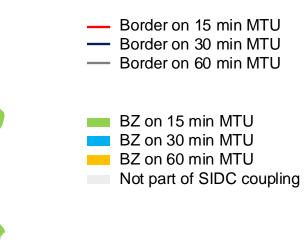
note: import/export areas not considered here

15 min MTU in ID (CT and IDA) Planned go-live: Aligned with SDAC

All borders & bidding zones*

*IT-GR-GR & IT-SARD-IT CODC will remain at 60'MTU & OTU due to technical limitation of the HVDC cable.





15 min OTU vs. MTU in ID (CT and IDA) Working assumption



— 15' OTU after MTU 15' MTU on Border

— N/A

For the explanation of the OTU, please refer to the answer provided in the minutes from 20 October 2023 MCCG available on ENTSO-E website [LINK] and NEMO Committee website [LINK].



^{— 15&#}x27; OTU at the same time as 15' MTU on Border



It was brought to the attention of the Nordic 15'MTU&IDA Steering Committee that in Nordic CCR, there is a high density of implementations from S2 2024 to S1 2025, with some exceptions and nuances.

Therefore, the Nordic 15'MTU&IDA SC would like to present an overview of the main implementations related to Nordic CCR borders, which can be found on the next slide.

Update on the SDAC & SIDC 15minMTU implementation planning Overview of Nordic-specific implementations on Nordic CCR Internal Borders



Party	ISP (period)	15'MTU product intrazonal	mFRR EAM	ISP (price)	15'MTU products cross- border	Transition to 96 Gate Closures	SDAC 15'MTU
Fingrid	Implemented	Implemented					
Energinet	Implemented	Implemented	Jan/Feb 2025	40/00/0005	40/00/0005	40/02/2025	Together with
SVK	Implemented	Implemented	TBC on 01/11/24	18/03/2025	18/03/2025	18/03/2025	SDAC big- bang go-live
Statnett	Implemented	18/03/2025					

Nordic borders	As-is value	New ramping value	Aligned with go-live
FI – SE3	N/A	600 MW/MTU	Nordic DA FB
DK1 – SE3	600 MW/MTU	300 MW/MTU	mFRR EAM
DK1 – NO2	450 MW/MTU	225 MW/MTU	mFRR EAM
DK1 – DK2	600 MW/MTU	300 MW/MTU	mFRR EAM
Lineset NO2- NO2A	900 MW/MTU	450 MW/MTU	SIDC 15'MTU wave 5

Update on the SDAC & SIDC 15minMTU implementation planning SDAC update



- European functional testing was started in October 2024 with most NEMOs and TSOs, including regional CCR providers. Initial testing encountered several critical issues in the first weeks. For several processes, testing with workarounds was needed due systems not yet ready.
- There is a risk of TSOs and NEMOs not being able to declare the technical readiness for testing with MPs at the end of March 2025 after the completion of the functional and procedural testing activities. The technical readiness shall allow the centrally coordinated member testing phase to start.
- Concerning the necessary technical information for Market Participants to test with the individual NEMOs, it can be confirmed that some NEMOs already have provided this necessary information, and the remaining NEMOs will do so shortly. NEMOs will come back on the request of a checklist of Member associations.
- Members associations have been in continuous engagement with NEMOs and TSOs, with the focus since summer 2024 on
 properly evaluating the time needed by market participants to tests, either on individual NEMO trading platforms or within
 the centrally coordinated SDAC member testing phase. Some time will also be reserved between the completion of the
 member testing phase and the SDAC go-live itself. This last phase will be necessary to dedicate time to the go-live
 preparation.
- A new go-live date, after March 2025, will be communicated in December 2024 together with dates for central member testing, during MESC. MCSC considers organizing a dedicated SDAC 15 min go-live MCCG session (to be confirmed).

Update on the SDAC & SIDC 15minMTU implementation planning

Difference between *coupled* and *individual NEMOs'* members tests



		Test type					
		Individual NEMOs' member tests	Coupled member tests				
Comparaison factor	Objectives	 Verify market participants' readiness Verify connectivity Verify individual NEMO MP interface 	 Promote new functionalities and procedures towards market participants Allow market participants to train their operators and finalize adaptation of their systems 				
	Scope	 Market participants trading systems connected to NEMOs Local trading systems (LTS) 	 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	Organizer: each NEMOParticipants: individual NEMOs' market participant	Organizer: 15min Test GroupParticipants: NEMOs MPs and relevant parties				
	Timeline	 ~1-6 months before go-live / ~1-6 months of tests 	 Depends on scenarios, see following slides (under discussion 				

Note: 15minTG will coordinate the coupled member tests

Update on the SDAC & SIDC 15minMTU implementation planning SDAC Joint (E2E) Member test



Background:

- Upon receiving feedback from the Market Participants, SDAC NEMOs and TSOs has assessed the scenarios that can be included in the joint end-to-end member test centrally organized.
- Some of the scenarios requested were not part of the earlier member test campaigns; therefore, SDAC NEMOs and TSOs are investigating the feasibility of their execution.

15minTG scenario assessment

Scenario name	Feasibility assessment / clarification needed		
Normal day (with nominations)	Feasibility OK		
Full decoupling with shadow auction (with nominations)	Feasibility OK		
Partial decoupling of a NEMO and potentially a subset of SDAC borders with shadow auction	Feasibility OK		
Second calculation due to bidding error management	Feasibility OK 15minTG agrees to perform this scenario during member tests: MPs requested to test this specific production situation prior SDAC 15min MTU Go-live, adding this to member tests optimizes the number of test phases organized.		
DST LCC	Feasibility OK To be noted: a DST SCC will be organized after 15min MTU go-live, prior to DST SCC in production.		
Opposite cross-border flows within the same hour	Organization under investigation. To trigger this scenario, NEMOs would need to overrule MPs' OBK for 1 hour period and on one (or several borders). It means that potentially, OBKs entered by MPs would be different than the ones used for calculation (hence the result wouldn't be coherent). Could MP clarify what part of the process they would like to test (files, GUI, market messages, etc.)?		
Max / min price reached (OBK to be discussed)			
No liquidity in a given time resolution (extreme cases on types of product offered: only a few bids of 15min, no bids of 1h)	Organization under investigation. To trigger this scenario, NEMOs would need to overrule MPs' OBK. It means that potentially, OBKs entered by MPs would be different than the ones used for calculation (hence the result wouldn't be coherent). Could MP clarify what part of the process they would like to test (files, GUI, market messages, etc.)?		
Max number of blocks			
Curtailment day	Organization under investigation. Curtailment would likely be triggered when max/min prices are reached, hence the two could be performed together.		

Update on the SDAC & SIDC 15minMTU implementation planning

Overview of scenarios executed in preceding test phases



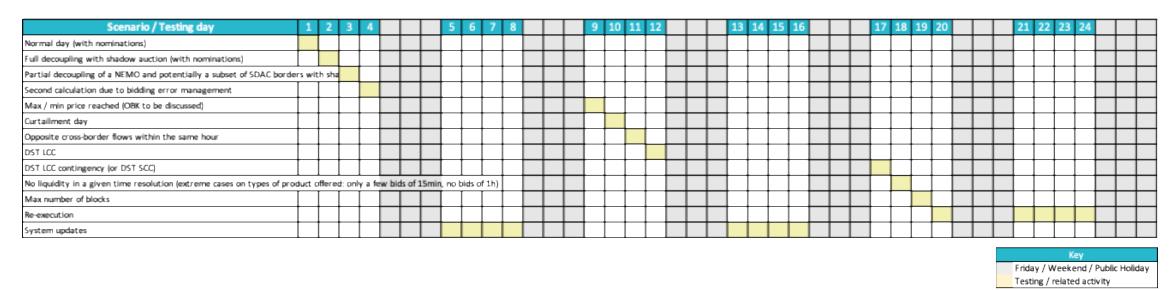
Test scenarios	FIT	SIT	Acceptance
Normal day	Х	Х	Х
Normal day - back up communication mode / back up tools	Х	Х	
SDAC / IDA full chain	Х		
Partial decoupling for CZC reason	Х	Х	
Partial decoupling for NEMO reasons (including a Nordic regional coupling)	Х	Х	
Missing PLAC (specific to Core region)	Х	Х	
Daylight Saving Time	Х		
Full decoupling	Х		
Full decoupling with shadow auctions	Х	Х	
OBK with 60' only	Х		
Performance of PMB: high number of OBK multi-resolution	Х		
X-borders flow in opposite direction in quarters with same hour	Х		
Second auction with max peak price detection		Х	
Portfolio allocations issues with new version of OBK		Х	

Update on the SDAC & SIDC 15minMTU implementation planning SDAC Joint (E2E) Member test



Planning

- SDAC NEMOs and TSOs will allocate enough time to test all the joint member test scenarios as well as adding contingency, allowing to execute any scenario if need be. Those scenarios are still being aligned between MCCG Conveners and relevant MCSC groups. First discussions led to an indicative testing period of 6 weeks (without consideration of public holidays).
- Below, an **illustrative planning is shown that includes the requested scenarios**. It should be noted that the order of scenarios is subject to revision.



SDAC 15minTG Member testing

 In the December update of the planning, SDAC NEMOs and TSOs will reflect also the allocated time requested between end of coupled MTs and go-live (between 3 weeks and 2 months).

Update on the SDAC & SIDC 15minMTU implementation planning SDAC Joint (E2E) Member test



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.

Timings for member tests

• SDAC NEMOs and TSOs prefer OBK GCT at 14:00 CE(S)T, with 13:00 CE(S)T for full decoupling scenarios.

Update on the SDAC & SIDC 15minMTU implementation planning SDAC Individual NEMO member testing



Background:

- Before the joint member test, each NEMO will organise individual tests with their respective MPs to verify the functioning of their systems.
- MPs have been raising concerns about the length of this period and its criticality given the system upgrades required on their end to enable trading in 15minMTU resolution.

An overview of the individual NEMO member testing for SDAC 15'MTU transition can be found below:

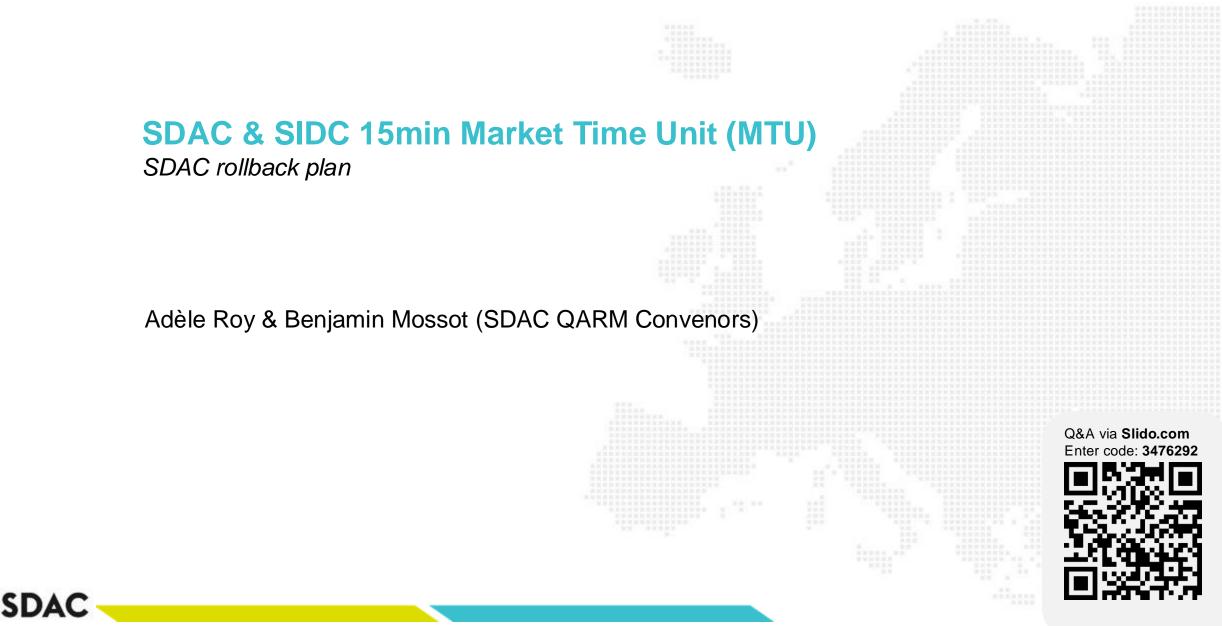
NEMO	Individual member testing scheduled	High-level testing details
BSP	Jan/Feb 2025 - End before Central Member Testing	Verifying connectivity, Market Participants' readiness and all LTS functionalities from MP perspective
BRM	December 2024 until multi-MTU go-live	NEMO – client testing activities
EPEX	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
ΟΚΤΕ		
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.
ΟΤΕ	Since June 2024 – uncoordinated individual tests (testing environment available for MPs, without regular matching) Feb 2025 - coordinated testing with MPs	Detailed information (changes in framework, formats and communication) is available on OTE website <u>here</u> (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

Update on the SDAC & SIDC 15minMTU implementation planning 60' average price



- NEMOs agree to use a joint calculation method of a SDAC 60' average price for applicable as of the go-live of the SDAC 15MTU project. This average price is already technically implemented within SDAC algorithm (EUPHEMIA).
- NEMOs agree to publish locally, at least, but not limited to, a harmonized SDAC 60' average price based on the data calculated by SDAC algorithm (EUPHEMIA).





SDAC & SIDC 15min Market Time Unit (MTU) SDAC rollback plan (1/2) – High level rollback plan



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

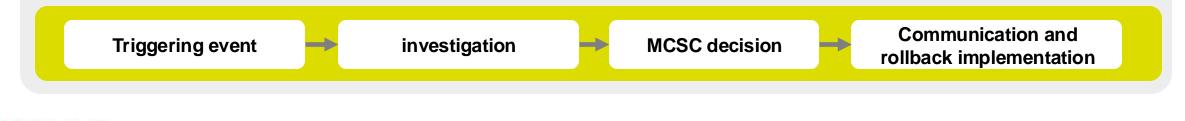
The period in which the rollback can be activated is within 2 weeks after 15'MTU go-live:

0 = 15	MTU go-live	0+1 week	0+2	weeks	0+3 v	veeks	0+4 weeks		

• The decommissioning of 60'MTU related systems/functionalities must not be done prior 2 weeks post go-live

Rollback validation and triggering process

 In practice, this means that the following Rollback validation and triggering process could be activated anytime during the 2-weeks period:



SDAC & SIDC 15min Market Time Unit (MTU)



SDAC rollback plan (2/2) – Detailed proposal on the rollback

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 15minMTU change in SDAC and NEMOs/TSOs/MCO assets.
 - o Identification, reproduction, and root cause analysis of the incident at hand.
 - The expected time required to resolve the incident at hand.
- Such investigation will be triggered if the following criteria is met:
 - The Incident Committee has decided to **declare 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 or partial decoupling), **twice in a 7-day rolling period.**

Implementation

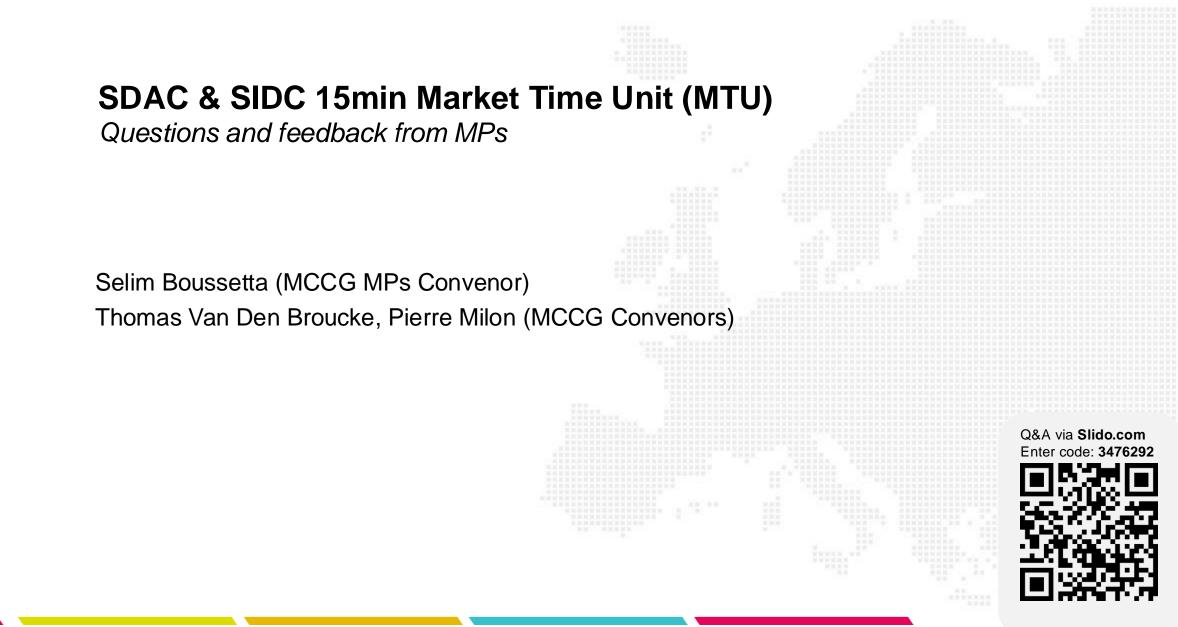
• The date of the activation (1st trading day of the rollback set-up) of the rollback will be preferably a working day to guarantee sufficient level of active participation of TSOs, NEMOs, and market participants and in order to be compliant with constraints of all parties.

Next steps:

- NEMOs and TSOs will gather the required lead-time for implementing the rollback as well as any technical impacts and blocking points.
- SDAC OPSCOM will prepare procedures in alignment with all SDAC parties.







SDAC & SIDC 15min Market Time Unit (MTU)



Questions and feedback from MPs: MCSC follow-up

MCSC NEMOs and TSOs followed-up on several open points from June 2024 MCCG.

SDAC 15minMTU member testing

- MCSC NEMOs and TSOs organized several alignment calls with MPs' representatives on SDAC 15minMTU member testing.
- The majority of the open points identified by MPs in the following slides were already taken in for MCSC the planning.

Polish and Nordic BZs vs. adjacent BZBs

- In June 2024 MCCG, MPs inquired on technical limitations causing some borders (Polish and Nordic) to not switch to the final 15minMTU resolution while the two adjacent bidding zones already were using the 15minMTU.
- For the respective Polish borders, the explanation was provided in the MCCG #6 Q&A available on ENTSO-E [LINK] and NEMO Committee [LINK] websites.
- Regarding the Nordic borders, the situation can be explained by TSOs as follows:

"For allowing cross-border capacity to be traded with a 15-minute resolution on the border, different systems are used than for the capacity calculation within a BZ. These regional systems for cross-border capacity calculations on Nordic internal and (some) external borders will allow cross-border trading in SIDC on 15-minute resolution at a common go-live.

In addition, for allowing 15'MTU XB trades in SIDC, it needs to be possible to balance with the same granularity and also being able to operationally manage this, which will be introduced with the Nordic mFRR EAM go-live. Hence, it is at this moment not yet possible to allow 15'MTU trades on the Nordic internal & external borders, even though adjacent BZs could be operating on a 15'MTU resolution."

SDAC 15-min MTU go-live preparation

General observations

- We continue to have strong concerns over the lack of technical details provided to date by some NEMOs on the 15-min MTU implementation.
- We observe regional discrepancies between NEMOs and TSOs in their approach to shifting to 15-min MTU particularly in the sequencing of ISP/ID/DA. Notably we don't support the linking of the ID and DA go-lives in order to avoid cascading effects if SDAC go-live is delayed.

Way forward

1. We consider a standardized and coordinated checklist between all NEMOs is necessary. This should outline the minimum technical requirements that are needed for a go-live and keep track of its publication status among all NEMOs/TSOs.

2. NEMOs and regulatory authorities must ensure that market participants have enough time to conduct developments on their side once necessary information is made available.

Once all technical details are released, sufficient time must be allocated :

- for MPs development : we are at the end of the development chain and are dependent on the availability of sufficient information to undertake our own developments... but they are no less important, and their proper conduct is necessary for a safe go-live.
- for testing (both member testing and "real" conditions testing)

3. So far, MPs are still missing an official confirmation of the go-live date: the current level of information gives little trust in the TSOs/NEMOs' planning. MPs have a hard time scheduling their own developments, suppliers don't know when to start updating their retail contracts and notifying consumers of the change (legal obligation in some areas) etc.

SDAC go-live date Annex – Tentative checklist framework

	Individual NEMO AP						All NEMOs AP			
NEMOs	NEMOs communciations and offers			Trading interface	Test environnement	TSOs-NEMOs alignment (ISP-	Euphemia description	Product definition -	Official go-live	
	public (communic s ation k	Products (MTUs, smart	Indices (calculation, rounding)	changes	(and differences with production environnement)	SIDC15 go-lives)		SDAC products methodology	date	
		block, limits)	publication (when, for how long?)				100% 1/8/2024	100% 26/9/2024	?	
NEMO A										
NEMO B										

• Are NEMOs going to publish indices, including a 30' and 60' index - for each BZ? for each NEMO?

• How are NEMOs going to calculate those indices - weighted average or simple average?

• Will the indices be made publicly available on NEMO websites or only on market data files? If not, why not.



SDAC 15-min MTU go-live preparation Focus on testing

Development time required before Member Testing

Once technical details are shared, MPs will need time to make the necessary developments to be ready for member testing.

Duration and expectations during Member Testing (1/2)

<u>Organisation wise:</u> the testing period can then be optimised using a 2-step approach:

- Technical tests for platform access : considering current deadlines, this step should begin no later than December 2024.

→ individual NEMOs testing should be organised to avoid overlaps so that MPs active in multiple markets can test on all relevant platforms. This sequential approach requires careful planning.

- Full process testing (~4 to 6 weeks): at least one month is needed to develop results processing tools after receiving the first results file.

In total, testing would certainly require more than a month, as any necessary fixes would have to be implemented and then re-tested with NEMOs – this assumes that NEMOs are available and responsive to MPs queries and feedback.



SDAC 15-min MTU go-live preparation Focus on testing

Duration and expectations during Member Testing (2/2)

Content-wise:

- Testing should cover individual + coupled testing, feedback, results integration, nominations and handling constraints
- The focus of the tests doesn't need to be on simulating 'real' auctions. The primary goal is to verify that submissions function correctly and that results can be processed automatically. Dummy results can be sufficient for this purpose. If the process is not successful, results should still be made available after each auction.
- Tests should not focus solely on problem cases as it was the case for SIDC but rather include stable, normal auctions, with problem scenarios included in moderation.
- Proposed scenarios (non-exhaustive list) : normal days, 2 DST-changeover days, decoupling day, curtailment day, second auction/calculation caused by exceeding the price limit, scenario with max numbers of blocks, no liquidity in a given time resolution (e.g. extreme cases on types of products offered: only a few bids of 15 minutes, no bids of 1 hour, or only bids of 1 hours),

Feedback integration time required after Member Testing

The time needed to integrate feedback from the tests is difficult to estimate: it depends on technical specifications that will only be confirmed after the Member Testing phase and the issues encountered during the tests. Current estimates is somewhere between 3 weeks and 2 months.

Overall, preference would be to develop on an ongoing basis and therefore to have a longer test phase that is stable.







SDAC decoupling events Partial decoupling incident of 25/06: MCSC reflection

Background:

- On 25/06 (delivery date 26/06), an incident took place that led to a partial decoupling of some areas in Europe caused by local issues at EPEX SPOT preventing the order books from EPEX SPOT for the Core region and for the Nordics to be submitted before the operational deadline. Following regional agreements, in the Nordic also the remaining NEMO (EMCO-Nordic) was decoupled.
- Market participants were properly informed in time. Correct execution of partial decoupling allowed NEMOs and TSOs to not trigger Full Decoupling.
- Capacity allocation could be secured on all SDAC borders: Explicitly (shadow auctions) on NO2-NL, DK1-NL, NO2-DE, DK1-DE, DK2-DE borders.
 Implicitly and in line with regional fallback procedures on other SDAC borders.
- Robust organization of market coupling ensured market results computation and publication despite major operational challenges. The final SDAC market
 coupling results for the remaining coupled parties were published at 14:09 CEST. The common coupling system worked as expected and ensured the
 coupling of the remaining part of SDAC topology.
- Due to the same local issue, IDA3 on June 25 at 10:00 CEST was cancelled for all participating NEMOs, as per SIDC IDAs decoupling procedures. Instead, the subsequent IDA1 on June 25 at 15:00 CEST was performed. EPEX SPOT and Nord Pool (only Nordic bidding zones) were partially decoupled in advance from IDA1, following the SIDC IDA market coupling procedures. For the rest of the remaining regions and coupled NEMOs (including Nord Pool and its Core BZs) IDA 1 on June 25 at 15:00 CEST was successfully performed.
- Market situation turned back to normal in the next SDAC coupling session.

The full SDAC report on the partial decoupling incident of 25/06 can be found on the <u>NEMO Committee</u> and <u>ENTSO-E</u> websites

Measures taken and next steps:

- NEMOs and TSOs strive to improve the communication process during an incident. The aim is to ensure a successful application of the fallback measures in case of future decouplings, including a smoother process for running Shadow Auctions for the decoupled interconnectors.
- Some regional procedures have already been improved.
- Moreover, a deeper understanding of the specific decoupling scenarios will be fostered by increasing the awareness on these fallback procedures and scenarios.





SDAC decoupling events Partial decoupling incident of 24/07: MCSC reflection

Background:

- On 24/07 (delivery date 25/07) an incident took place that led to a partial decoupling of the Czech Republic caused by local issues at the OTE Local Trading System (LTS) preventing the order books from OTE to be submitted before the operational deadline. Hence, OTE-CZ was decoupled at 13:05 CEST in line with the relevant procedures.
- Market participants were properly informed in time. Correct execution of partial decoupling allowed NEMOs and TSOs to not trigger Full Decoupling.
- The Shadow Auctions and the operational process for performing them worked as expected and were performed by JAO according to the operational procedures.
- The robust organization of market coupling worked as expected and ensured the coupling of the remaining parts of the SDAC topology with adapted capacity for the internal Core borders. As the partial decoupling involved a bidding zone located within a flow-based region, an additional fallback procedure had to be applied to allocate the capacity of the non-decoupled Core CCR internal borders with ATC instead of using flow-based parameters. The final SDAC market coupling results were published around 14:15 CEST.
- Due to the same local issue, OTE was also decoupled in advance from two IDAs: IDA 3 at 10:00 CEST, and from IDA 1 at 15:00 CEST on the day of the SDAC decoupling.
- Market situation turned back to normal in the next SDAC coupling session.

The full SDAC report on the partial decoupling incident of 24/07 can be found on the <u>NEMO Committee</u> and <u>ENTSO-E</u> websites

Measures taken and next steps:

- OTE and their IT provider will implement further deployment testing of third-party hardware / software updates.
- However, as this issue was caused by third party hardware / software fault, it cannot be fully prevented for the future. The issue would occur in the same manner independently from the MCO setup (e.g., for single NEMO arrangement) as it was caused by a local issue at OTE.





SDAC decoupling events Further improvements in sight: MCSC reflection

- In response to the recent decoupling events, MCSC NEMOs and TSOs have initiated a temporary expert group to investigate potential improvements in the communication process during and after decoupling situations.
- Composed of NEMOs, TSOs and JAO, the expert group met between 25/09 and 18/10 with the following outcomes:

11 pain points were identified in the communication process.

A list of solutions that address those pain points was prepared.

These solutions will be proposed for **MCSC validation in Q4 2024**.



SDAC Decoupling incidents MPs' feedback: Problem statement

- Due to "a local technical issue", one of the NEMOs (EPEX) was not able to participate in the market coupling on June 25th 2024, for delivery date June 26th. This led to a partial decoupling where EPEX ran local auctions with no access to XB transmission capacity, in parallel to the coupled auction comprising all other NEMOs and the XB transmission capacity.
- This event had several adverse consequences:
 - The communication was confusing: with very frequent (not always crystal clear) messages from the concerned NEMO in direct contradictions with messages from JAO
 - It led to two prices in several bidding zones: this can be problematic for:
 - the settlement of contracts indexed on one or the other prices
 - the settlement of LTTRs : the remuneration of LTTR is based on the SDAC price but some MPs can be hedged with the NEMO that is decoupled and hence, are not capturing the SDAC price
 - all the other policy instruments indexed on the SDAC price (RES-E subsidies, CfDs, etc.)
 - Market participants lacked visibility on the whole market to adjust their dispatch schedules. They had to rely fully on the intraday market once the picture was clearer, which can be challenging especially for dispatch schedules of technologies with longer ramping periods.
- Post incident, there are still missing elements in the incident reports: details on the technical issues; reaction and measures taken from an IT perspective; availability of back-up systems; suggestions to avoid such incidents and their consequences.

SDAC Decoupling incidents MPs' feedback: Way forward

1. Giving market coupling the best chance to succeed

Priority should be given to finding solutions/improvements to avoid that a decoupling takes place. This covers (non exhaustive list):

Considering moving the TSO nomination deadlines, allowing the SDAC process to run longer (only in decoupling situations, not in "normal days"). This would allow reducing the risk of decoupling by giving more time to the NEMO in trouble to fix the problem. This is similar to the situation in Nordic region where the SDAC can be extended until 20:00, giving more time to perform a regional coupling.

Questions : would it have been useful on past decoupling sessions ? Is it possible to know whether (and how much) more time would allow solving the issue? What is the point for Core TSO to maintain the nomination deadlines at current timings while nominations will likely be off target?

- Investigating improvements to be made to NEMO IT processes and tools that led/could lead to technical issues
 - Questions : which systems were faulty ? Can IT processes and communication channels be built differently for more robustness ?
- Reinforcing the detection of erroneous bids, somehow related to the suppression of 2nd auction and its replacement with a 2nd calculation.

2. Investigating remedies to avoid two prices in case of decoupling

Regardless of efforts invested in giving the best chances for market coupling to succeed, decoupling will still happen. Discussions should take place to see what is the best way forward (see next slide)

3. Making communication clear and harmonised in case of decoupling

Communication during the event should be improved: the messages were confusing, overwhelming in number, and sometimes in contradiction with each other. NEMOs and JAO need to coordinate on the issuance of urgent market messages, ensuring consistency and clarity.

SDAC Decoupling incidents

MPs' feedback: When decoupling still takes place, what could the procedures be?

- Three objectives could be pursued here : \rightarrow Price: avoid having 2 different prices in a given bidding zone (where MNAs are in place)
 - \rightarrow Volumes: seeking to allow market participants to dispatch the right schedules
 - -> Cross-border capacity: seeking to allocate capacity in the most optimised manner

• Possible solutions :

Solutions	Single price	Schedules	Cross-border capacity
Current framework (local auction in parallel of coupled auction)	No	Yes, but local schedules are likely off target	Market coupling, but XB capacity does not take account of transactions in the local auction
No local auction – Only the coupled NEMO makes the price	Yes	No, at least not for all market participants	Market coupling, but XB capacity does not take account of missing transaction from excluded NEMO
One local auctions with all local order Yes books (including non-failing NEMOs)		Yes, but schedules can be off target	Explicit XB capacity allocation, where market participants can bid knowing all transactions (implicit allocation only in ID)
No decoupling – E.g. by considering a D-2 order book or reference days order books	Yes	Yes, but schedules can be off target	Market coupling but XB capacity are allocated on possibly off-target OBs
others ?			

There is no obvious perfect solution, market participants are still discussing recommendations – and request an inclusive dialogue with the NEMOs, TSOs and NRAs.



Q&A via **Slido.com** Enter code: **3476292**

Seventh Market Coupling Consultative Group meeting

COFFEE BREAK

8 November 2024







SIDC Intraday Auctions (IDAs)

First months of IDA operations: MCSC

Updates and Points of Attention

- Since IDA Go-Live on 13/06/2024, 422 IDA auctions have been performed of which 410 sessions have been carried out satisfactorily, publishing the results to the market participants on time, resulting in IDA availability rate of 97.16% until 31/10/2024. Twelve IDA sessions have been cancelled due to local/technical issues.
- Twelve partial decoupling cases (considering Automatic Partial decoupling (five cases) and Partial Decoupling in advance (seven cases) of various parties have taken place since the IDA go-live. Each case is investigated by SIDC OPSCOM, and mitigating measures are applied either on local level or as process improvement centrally to improve operational robustness.
- SIDC OPSCOM is continuously monitoring and analysing each incident to assure no reoccurring cases and implementation of process / procedural improvements (when applicable).

Published IDA Weekly Reports* are available on ENTSO-E [LINK] & NEMO Committee [LINK] websites.



* For the explanation of the types of incidents mentioned in the Reports, please refer to the Annex 1.



SIDC Intraday Auctions (IDAs)

First months of IDA operations: MCSC

In two and a half months of operations, IDA market managed generally, approximately 600 millions of MWh of energy – considering both supply and demand (with a total of 27 millions of cleared MWh).

Months	Total Energy (MWh)	Total Cleared Energy (MWh)
June*	116.416.516,17	5.392.568,50
July	220.053.175,23	10.503.225,82
August	256.426.629,65	11.388.680,59
TOTAL	592.896.321,05	27.284.474,91

Slight increment of offered energy from July to August can be noticed, which also corresponds to a small increasing of cleared energy.

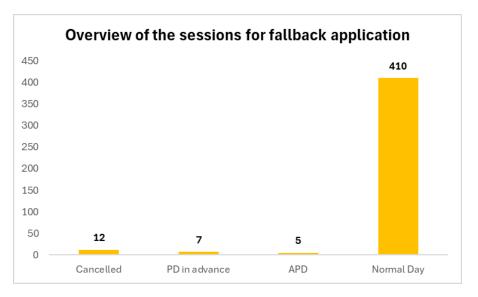
Out of **422 sessions** run in the observed period (from delivery 14th of June – date of Go Live – to 31st of October), **24 of them were affected by fallback** procedures:

- 12 cancelled,
- 7 affected by Partial Decoupling in advance,
- 5 affected by APD (Automatic Partial Decoupling).

Which means that:

DC

- IDA has been working smoothly in the 97,16 % of the times,
- in the 3% of the cases, no results were published at all;
- in the 3% of the cases, the results were available not for all parties (the case of partial decoupling in advance can involve even only one party (or BZ).



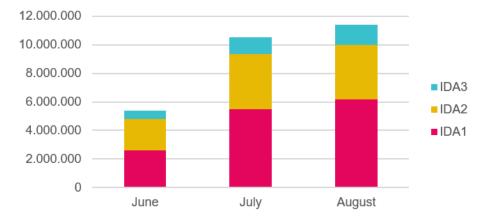


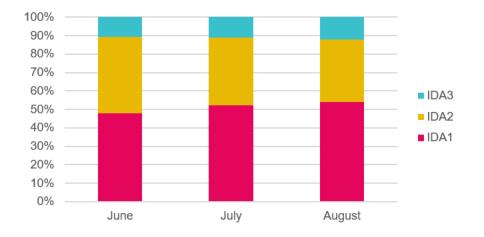
SIDC Intraday Auctions (IDAs) First months of IDA operations: MCSC

Giving a closer look to the available data:

 The cleared volume per month is increasing for each of the IDA (having in mind of course IDA3 manages half of the contracts)

 While the shares among the 3 auctions, for each of the month can be considered quite stable, with a slight change in August where we can observe IDA2 slightly lagging behind the other two auctions





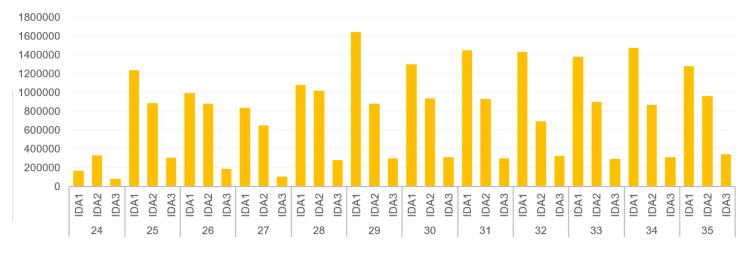


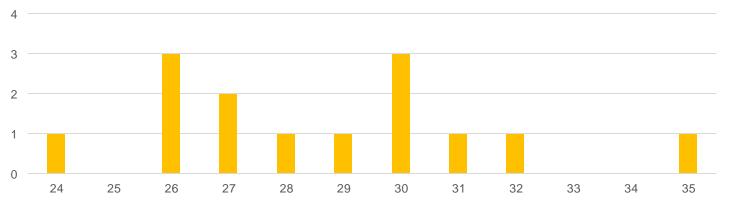


SIDC Intraday Auctions (IDAs) First months of IDA operations: MCSC

The weekly data overview shows offered and cleared volume over each of the weeks since Go Live, for each IDA session, with indication of fallback events occurrence:

 The highest level of cleared volume was reached during IDA1 sessions for week 29.





Numbers of fallback sessions over the weeks

 The data above needs to be read in light of the weekly sessions affected by fallback.

IDC

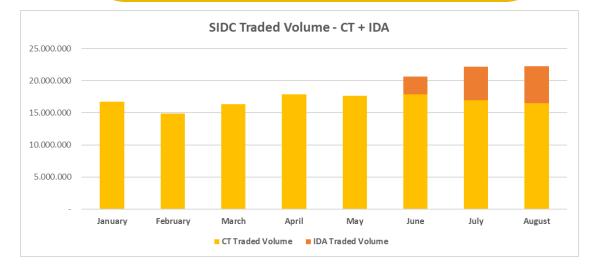
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SIDC Intraday Auctions (IDAs) First months of IDA operations: MCSC

The overall traded volume^(*) within SIDC (MWh) is growing over the summer, with the one exchanged via continuous trading slightly descending from June, letting IDA one going ahead.

Month	CT Traded Volume	IDA Traded Volume
January	16.729.284,60	
February	14.849.588,07	
March	16.314.405,07	
April	17.904.729,45	
May	17.659.513,65	
June	17.907.907,90	2.696.284,25
July	16.914.528,27	5.251.612,93
August	16.512.481,95	5.694.340,29



^(*) For this comparison, the data are adapted to those already collected and provided via AM/SH reports. Differently than the previous slide, there's just one side of the market considered for that.

DC



Further IDA Improvements:

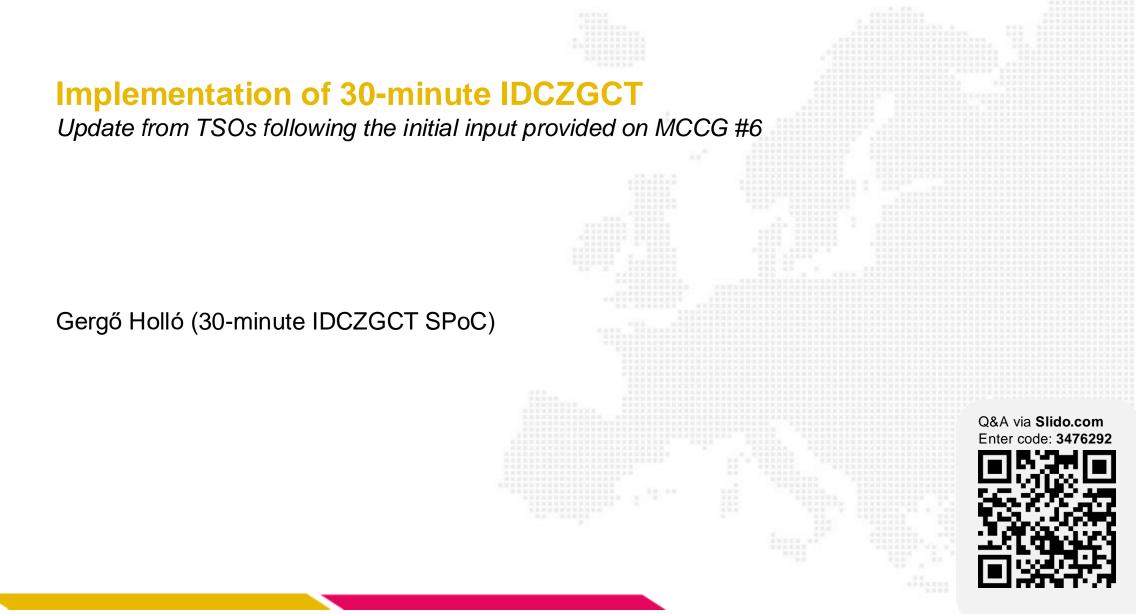
- After the five months of experience with IDA in operation, further optimization of times has already been performed to speed up the process. Possible improvements are continued to being analysed with seven already implemented into production in a short period of time and one more is being analyzed for viability.
- Testing activities for each improvement are vigilantly executed, numerous test cases and analyses have been
 performed focusing on the performance and system integration. In terms of human resources, numerous highly
 qualified and multidisciplinary experts have been actively involved in the mentioned tests.
- The IDAs procedures are continuously updated, including improvements detected during the execution of IDAs in production, like optimization of times and clarification in communication, among others.



SIDC Intraday Auctions (IDAs) First months of IDA operations: MPs

- Eurelectric and Energy Traders Europe had reservations about IDAs potentially draining liquidity from the continuous market. These concerns remain, as evidenced by feedback indicating issues with liquidity in some continuous markets, particularly in smaller markets like Belgium and the Netherlands.
- We still believe that the intraday continuous trading is the best solution to trade close to real time with more RES capacity, since it allows to react more rapidly to changes of system fundamentals (better than ID auctions).
- Technically, there have been challenges related to auction suspensions impacting continuous market operations and complexities in position closing, but we can expect that the system will become more robust over time.
- Moving forward, it is crucial to:
 - monitor continuous ID liquidity closely vs auctions, overall in SIDC and for each market
 - work on shortening XBID suspension windows (currently 40min).
 - enhance collaboration between TSOs to improve cross-border capacity availability





SIDC

Implementation of 30-minute IDCZGCT Development framework

- Implementation of 30 min IntraDay Cross-Zonal Gate Closure Time¹ is a requirement set in Regulation 2024/1747.
- The work is governed by MCSC in close coordination with other TSO bodies like ENTSO-E, MARI Platform, Verification Platform, CCRs. MCSC TSOs appointed a SPoC to make coordination more efficient.
- Introduction of 30min IDGCT requires changes in various TSO processes on local, regional and pan-EU level:

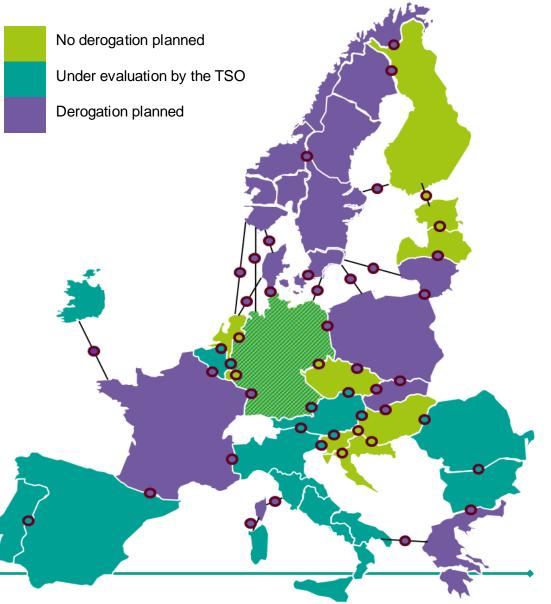
Торіс	De	d²	
	Pan-EU	Regional	Local
Nomination and matching	~		~
Balancing Timeframe Capacity Calculation (BTCC)		~	~
MARI platform	\checkmark		\checkmark
Securtiy analysis and remedial action activation		~	~

1) Please note that local ID market gate closure could only decrease due to this but generally will not be affected

2) Discussions are ongoing on the potential solutions that can influence affected bodies/levels.

Implementation of 30-minute IDCZGCT Derogation survey

- TSOs analysed the effects of 30min IDGCT to their processes and already identified several topics where modification will be necessary.
- Discussions are ongoing on different levels (pan-EU, regional and local) to find the optimal and futureproof solutions.
- Complexity of the analysis to be performed on local level may vary between the TSOs due to the local specificities. Therefore, there are differences in the evaluation status.
- Finalization of the above-mentioned design solutions on pan-EU and regional level might affect the local TSO decision on derogation.
- Regular update on the status will be provided in MCCG.



Implementation of 30-minute IDCZGCT Derogation and go-live approach

- Only those TSOs will ask for derogation who cannot go live by January 2026, i.e. not necessary both sides of the border.*
- The longest derogation will determine the go-live of the border.
- This will lead to sequential go-live on the affected bidding zone borders.
- NRAs can provide derogation in two step until mid 2031 at the latest. There is no firm deadline for the submission of the first derogation request, local regulation will determine the time requirement for NRA approval and subsequently the submission deadline.* Deadline for submission of second derogation is 30 June 2028 according to the regulation.
- Go-live window approach is proposed to integrate this lengthy process to the MCSC roadmap.





Methodologies' updates and consultations

- SDAC & SIDC product methodology
- Improvement of the products consultation process
- Algorithm methodology
- HMMCP methodology

Christoforos Zoumas & Chiara Vitelli (NEMO Tech TF Convenors)





Update for SDAC product methodology

Hearing phase for SDAC PM concluded on 31/07. ACER decision number 13/2024 issued on September 25.

Main content of the Decision:

- The methodology doesn't include provisions on PUN nor Complex Orders, including the fallback period of 6 months, and specified in Article 6 that the (amended) terms and conditions would apply only as of the go-live of the 15' MTU in SDAC.
- ✓ Curve orders renamed and kept among the mandatory products: the 30' and 60' Curve Orders are now renamed into Periods Orders and the 15' Curve Orders into MTU Orders.
- ✓ Period Orders are kept among the **mandatory products** as well as the MTU ones.



Update for SIDC product methodology

Public Consultation report for the SIDC PM has been published on the NC website.

Main content of the Proposal (note that none of these amendments are essential for introducing 15minMTU in IDAs):

- ✓ IDAs Curve Orders renamed and kept among the mandatory products: the concept of ACER decision 13/2024 for SDAC PM was followed: the 30' and 60' Curve Orders are renamed into Periods Orders and the 15' Curve Orders into MTU Orders, both are kept among the mandatory products. Other terminology adaptations for SDAC PM also introduced for the IDAs part in SIDC PM.
- Cross Product Matching updates for in/out of the money rules also aligned with the relevant SDAC PM adopted text.
- ✓ The proposed update of the methodology doesn't include Complex Orders, replaced by Scalable Complex orders.
- ✓ Exclusive groups block orders: description as been aligned with the one in SDAC PM.



Improvement of the products consultation process

In June 2024 MCCG, MPs raised a question on whether a more inclusive mode of consultation on products could be envisaged. Considering this request, MCSC NEMOs propose the following **improved set-up of the products consultation process**.

Main content of the proposal:

- Current set-up
 - The bi-yearly consultation obligation for NEMOs on available SDAC/SIDC products and order types is stemming from CACM Regulation. NEMOs are following this obligation and even more, provide consultation occasions when required by relevant needs/circumstances.
 - The format of the consultation is following specific standards: NEMOs are proposing updates to the relevant SDAC/SIDC methodologies documents and annexes supported by explanatory notes. Consultation period provided is always at least for one month. In the course of the public consultation, NEMOs are collecting correspondents' feedback and provide replies via consultation report. During this process, any feedback provided that could be considered irrelevant to the public consultation is also highlighted.

Possible improvements

- In MCCG, a consultative forum, MPs can provide constructed proposals for updates and improvements on existing and new
 products/order-types. Such proposals may be collected and evaluated for consideration via the standard bi-annual public
 consultation process or even on an ad-hoc basis where the case may be, and even as a collective input of MCCG.
- Dedicated workshops for discussing the NEMOs and MPs proposals could also be organized and supported by explicit material and Q&As.
- Drafting of the methodologies, however, is considered on a legal and efficiency basis a responsibility of the NEMOs (and where the case may be in coordination with the TSOs).



Algorithm methodology

ACER Decision 11/2024 on the amendment on AM & AMM issued on 23/09/2024.

Main updates:

- Decision now concentrates on the R&D required for the development of co-optimisation in SDAC. Any direct provisions in AM or AMM to the Balancing Capacity market/products in SDAC are not included (as proposed by TSOs and NEMOs).
- Following the common meetings with TSOs and ACER's representatives at the reviewing/hearing phases the following amendment areas where identified:
 - Amending the DA Requirements Annex: for updating the DA requirements for co-optimisation.
 - Amending the R&D content: listing the areas of interest following a gradual approach as commonly proposed by NEMOs and TSOs.
 - Amending the R&D timeline: in line with the R&D content and again following a gradual step-by-step approach as commonly proposed by NEMOs and TSOs (although with slight modifications on the proposed deadlines). R&D deliverables always under public consultation and taking into consideration ACER proposals.
 - Any reference to process for amending the AM or any satellite TCMs like the SDAC PM or SPBC Methodology were removed.
 - Any reference for defining an implementation date was also removed.



Algorithm methodology

- Several sequential stages of R&D are planned before considering implementation:
- All stages with relevant Reports (R0, R1, R2), involvement of ACER and designated public consultations with MPs.

		2024		2025				2026			
Activity	Q2	Q3	Q 4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
R&D I, including conceptual study	Co	nceptual study	Simple simu		ort R0	Rep	ort R1				
R&D II					R&D F	lan		R&D Activities	Report R2	Finalisation of re	eport Report R3
R&D III											R&D Ac
Consultation with ACER & MPs										-	
		ТОГ	DAY		1						I

- Current focus: R&D I including the conceptual study for addressing R&D items (a-c)
 - TSOs and NEMOs work on R0.
 - R0 report to be delivered to ACER by end Q1-2025.



Harmonized Max-Min Clearing Prices Methodology

- Reassessment of the methodology is foreseen in 2025 after 2 years' time from the <u>ACER decision 01/2023</u>, according to relevant CACM terms and Article 4.4 of the HMMP Methodology.
- > Market Participants will be consulted according to Article 12 of CACM Regulation: **beginning 2025.**



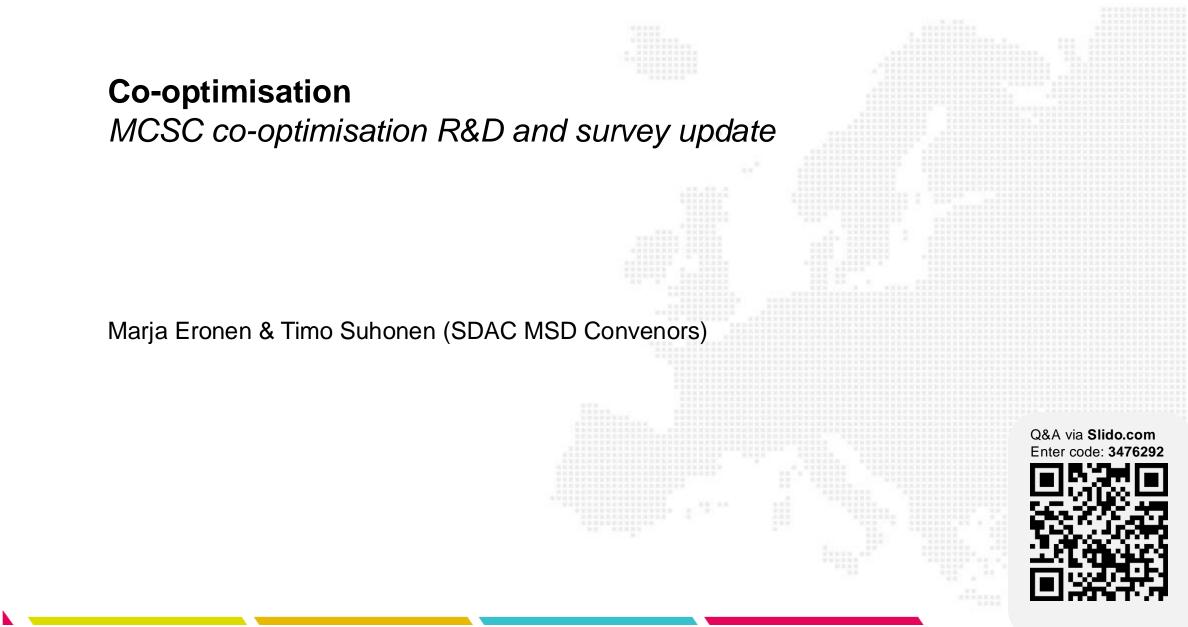


SDAC-SIDC Roadmap and key projects



		2024		20	20	26			
	Activity	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Remark
Top priority	15 min MTU for DA Implementation & testing	Central te	esting	Go-live wind	dow & member testing (TBC)				
Tc prio	15 MTU XBID & IDA GL waves	LV-LT; EE-LV	Technical readi	ness confirmation	⇒TBC				
ts & on	Euphemia/PMB Euphemia & PMB releases Further performance improvements Euphemia		PMB13.1/E1			/B 14.0/E 12.0	PMB 14.	1/E 12.1 (TBC)	
Improvement: optimisatio	Operational improvements SDAC SIDC XBID releases	Operational timings update & in XBID R4.1	nproved communications	Pote	Ntial improvements after 15 MTU	golive	testing (until Q2-Q3 2026)		
о Ш	IDA releases Operational improvements SIDC & IDA	XBID R4.2 & 5	5.0 implementation		XBID R4.2 & 5.0 testing in IDA (TBD) file management, CMM & SOB ref		& IDA test (FIT/SIT) (TBD)		
R&D	SDAC R&D R&D activities Future studies 2030 Co-optimisation R&D Continuous improvements and Euphemia Lab Solver change SIDC R&D	PST model & Storage orders Offshore BZ study 2.0 Simple simulations R	&D Report R0	BZ configuration ent use of HVDC lines in FB do Consultations and scoping Continuous perfor CPLEX to Xpress	main Report R1 mance improvements	SEC Calculation F Several	B & Celtic (Q1 2026) domains R&D II activities		
Exten sions	Flow-Based allocation in Intraday BRM extension of operations ETPA extension of operations Baltic Cable extension of operations in ID	Extended R&	D phase (includes several a	BRM in IDA (TBC: Subject to 1 ETPA in IDA (TBC: Subject to		MVP II product (Curre	ent estimation: 2027)		
Acces sions	EnC Accessions SDAC SIDC	Preparatory	<u>activities</u>				AC go-live window Q12027 SIDC go-live window Q42027		<u> </u> }
Regional requirements	SDAC Related MNAs (some projects relevant also for SIDC/IDA) Capacity calculation RfCs Core Advanced Hybrid Coupling Synchronisation Baltics CESA SIDC Related 30 IDCZGCT	FR ES MNA			Baltic MNA for SDAC	S, SIDC, and IDA	01/01/2026 Legal deadline	implementation	} ~?





MCSC co-optimization R&D and survey update



Survey Objectives & 11/10 Webinar

Understanding of Co-optimisation framework & status Explanation of MCSC Informal survey purpose and content Getting valuable insights for further development of Co-optimisation concept

MCSC NEMOs and TSOs active in SDAC, in cooperation with ENTSO-E, are conducting an **informal** survey among market participants regarding the future use of co-optimised balancing capacity and energy markets. Survey questions are included in Annex 2.

- Why: To collect inputs about cost structures and their impact on bid designs and to avoid developing concepts that do not fit the market needs upon implementation.
- When:
 - Informal survey 07/10 06/11/2024 via ENSTO-E Public consultation platform [LINK]
 - Webinar 11/10
 - ✓ Material on ENTSO-E [LINK] and NC [LINK] websites
 - ✓ Recording available on ENTSO-E [LINK] and NC [LINK] YouTube channels

As a follow-up of the survey, a workshop with MPs will be organised by NEMOs and TSOs by the end of 2024 in Brussels, at ENTSO-E.

MCSC co-optimization R&D and survey update Conceptual design



Implementation of Co-Optimization in SDAC Requires:

Extensive R&D to specify the final set of requirements for implementation

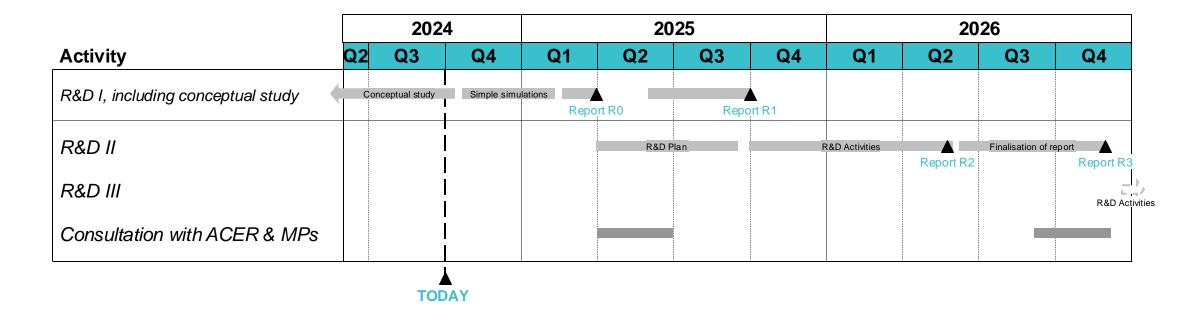
Adaptation of relevant **methodologies** Industrialization and introduction into production

MSCS NEMOs and TSOs initiated work on the **conceptual study as the initial step of the R&D work** to research bidding alternatives and basic design considerations. Aim is to analyse as many impacts as possible of different models.



MCSC co-optimization R&D and survey update Co-Optimization Timeline

Several Stages of R&D Are Planned Before implementation:



Newly approved Algorithm methodology [LINK] provides the basis for the introduction of cooptimisation and sets out a basic timeline for the R&D for the upcoming two years.



Q&A via Slido.com Enter code: 3476292

AOB



EMD reform - Trading until the latest point in time

- Market closing times for a product (contract) define for every delivery area the latest point in time when an order for a specific product may be submitted to the single intraday coupling. Different delivery areas have different market closing times.
- The Electricity Market Design reform introduced, among other changes, amendments to the Regulation (EU) 2019/943 on the internal market for electricity (Electricity Regulation), obliging NEMOs to "submit all orders for intraday products and products with same characteristics to the single intraday coupling from the single intraday coupling gate opening time until the latest point in time when intraday trading is allowed in a given bidding zone."
- In July 2024, right after the mentioned regulation entered into force, XBID SOB configuration was changed for the system to be compliant with the mentioned regulation, allowing NEMOs to share their OBKs until the latest point in time possible.
- Based on each national balancing market rules, 7 countries were subject to the configurational change^(*):
 - Austria

AOB

- Belgium
- Finland 🛛 🛃
- France 🚺

- Germany
- Luxemburg
- The Netherlands 🗾
- Since 18th of July 2024, the schedule in Operations is set as can be seen below.

Image: Image in the area	Trading with delivery D+1 opens in the area	Cross-Border trading	Cross-Border trading closes Cross- Scheduling trading closes	Intra-Zonal Trading closes	Intra-Zonal Trading closes
D 14:00	D 15:00	D+1 H-1 ⁽¹⁾		D+1, 5 mins before delivery	D+1, start of the delivery

-

Note: In DE, the intra-zonal trading closes 5min before delivery, not at delivery, as per DE TSOs request.

(*) being all the others in SIDC already in line with the Regulation.



(1) Meaning with H-1 = 1 hour before the start of the delivery.



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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 Q1 2025 (TBS); details & date will be shared soon.



SEVENTH MARKET COUPLING CONSULTATIVE GROUP WORKSHOP

THANK YOU FOR YOUR PARTICIPATION

8 NOVEMBER 2024

Annex 1 Types of IDA incidents



- **Cancellation of IDA:** Cancellation of the entire IDA for all participating NEMOs.
 - Cause: Issue faced prior (in advance) or during the Market Coupling Session (MCS) which doesn't allow the session to be completed successfully. In this case, no results published for any of the NEMOs. The session is cancelled in IDCT by JAO.
- Automatic Partial Decoupling in IDA: Removal of some NEMOs from MCS. While some NEMOs are decoupled, there are still NEMOs remaining coupled, hence, called an Automatic Partial Decoupling (APD) and not Partial Decoupling.
 - Cause: An issue with provision of Order Book or Network Data during the MCS. As per the design, the NEMOs that will not be decoupled, except if failing to provide the order data, are OMIE, GME and Henex. However, if they are the party having the issue, they will be removed from IDA session as well. In this case, there are results published for the NEMOs who remain coupled but not the others. Automatic Partial Decoupling will always be done during the MCS and without any action from IDA Coordinator, based on predefined parameters (time limit and list of NEMOs to be decoupled).
- Partial Decoupling in advance in IDA: Removal of a / some NEMOs from MCS prior to start the MCS. While a /some NEMOs are
 decoupled in advance, there are NEMOs coupled ready to start the MCS, hence, called a Partial Decoupling in advance and not Partial
 Decoupling.
 - Cause: A request prior to the auction such as in case of planned maintenance during the MCS or technical issues founds prior the MCS. In case of partial decoupling in advance, the IDA Coordinator is manually selecting the NEMO to be decoupled and only decoupling this NEMO (no other) based on the request of decoupling in advance.
- Delay in results publications: Holdup of results publication respect to normal operation publication times.
 - Cause: During the IDA auction an event happens that prevents the execution of the MCS under normal timings, consequently reaching the agreed time limit, results are still not published according to backup procedures.

Published IDA Weekly Reports* are available on ENTSO-E [LINK] & NEMO Committee [LINK] websites.



Annex 2

MCSC co-optimization R&D and survey update - Informal Survey Questions

- 1. What are the name, contact details (email) and company of the respondent
- 2. What assets does your company own or operate?
 - a. Renewable generation
 - i. Wind
 - ii. Solar
 - iii. Biomass
 - iv. Other

- b. Conventional thermal generation (Coal, gas, nuclear, etc)
- c. Run-of-river hydro generation
- d. Storage
 - i. Batteries
 - ii. Pumped Hydro Storage

- iii. Hydro Storage
- e. Industrial demand
- f. Boilers
- g. Heat Pump
- h. Other, please specify
- 3. Are you currently participating in a balancing capacity market? YES/NO
- 4. Do you currently **see opportunities** to decrease or increase demand/production on short notice, provided this would be profitable? If your answer is no, please elaborate on the reasons.
- 5. In case yes:
 - Would you use a specific asset (e.g., battery, demand response), or a combination of assets? If it's a combination, what factors influence the 'shift' between different assets or technologies?
 - What characteristics or market conditions might prevent the participation of a single asset?
 - Is it possible to reserve this capacity the day before operation?



Annex 2

MCSC co-optimization R&D and survey update - Informal Survey Questions

- 6. What kind of costs would you incur by reserving, for example, 1 MW for a specific period the next day to provide balancing services to the TSO?
 - For instance, reducing demand/consumption could decrease your production, but this may or may not be recoverable later. Heat can be stored, so temporarily reducing the demand of a boiler may not affect output, but could incur other costs. Please note that TSOs and NEMOs are interested in understanding the <u>cost</u> <u>structures</u> in the form of fixed costs (independent of the volume of offered balancing capacity) and variable costs (dependent on the volume of offered balancing capacity), rather than specific costs in EUR (or other currencies).
- 7. The simplest option, from the market design perspective, would be to use offers consisting of a volume in MW and a price in Euro/MW for one or several MTUs the next day. What additional attributes would be necessary for a balancing capacity bid in a co-optimised setup to help you optimise the utilisation of your asset(s), aside from MW(h) and Euro/MW(h)
 - For example, would you need dependencies between assets, dependencies with off-takers, efficiency rates, minimum/maximum delivery time, or resting time?



Annex 2

MCSC co-optimization R&D and survey update - Informal Survey Questions

- 8. If activated by the TSO to deliver balancing energy in real time following the D-1 procurement of balancing capacity bid for, for example, one MTU, how would this impact your ability to deliver in the same direction (up or down) in the subsequent MTUs?
 - For instance, a battery fully charged at 2 MWh may deliver 1 MW for two hours, but then it needs to be recharged, which could lead to a violation of your balancing capacity procurement obligation. Similar constraints may pertain to other assets.
- 9. What would be necessary for you to consider **continuing or starting participation in future markets for balancing capacity under a co-optimised design**, assuming attractive profit opportunities exist? Which design choices (e.g., bid attributes) do you find important?
- 10. Additionally, please **share any ideas for a future bid design** in a co-optimisation setup that have not been covered by the questions above.
- 11. Would you be willing to provide additional information in a potential future interview?

