

NORDIC MFRR EAM

Aktørmøde 23. juni og 15. august 2022

AGENDA

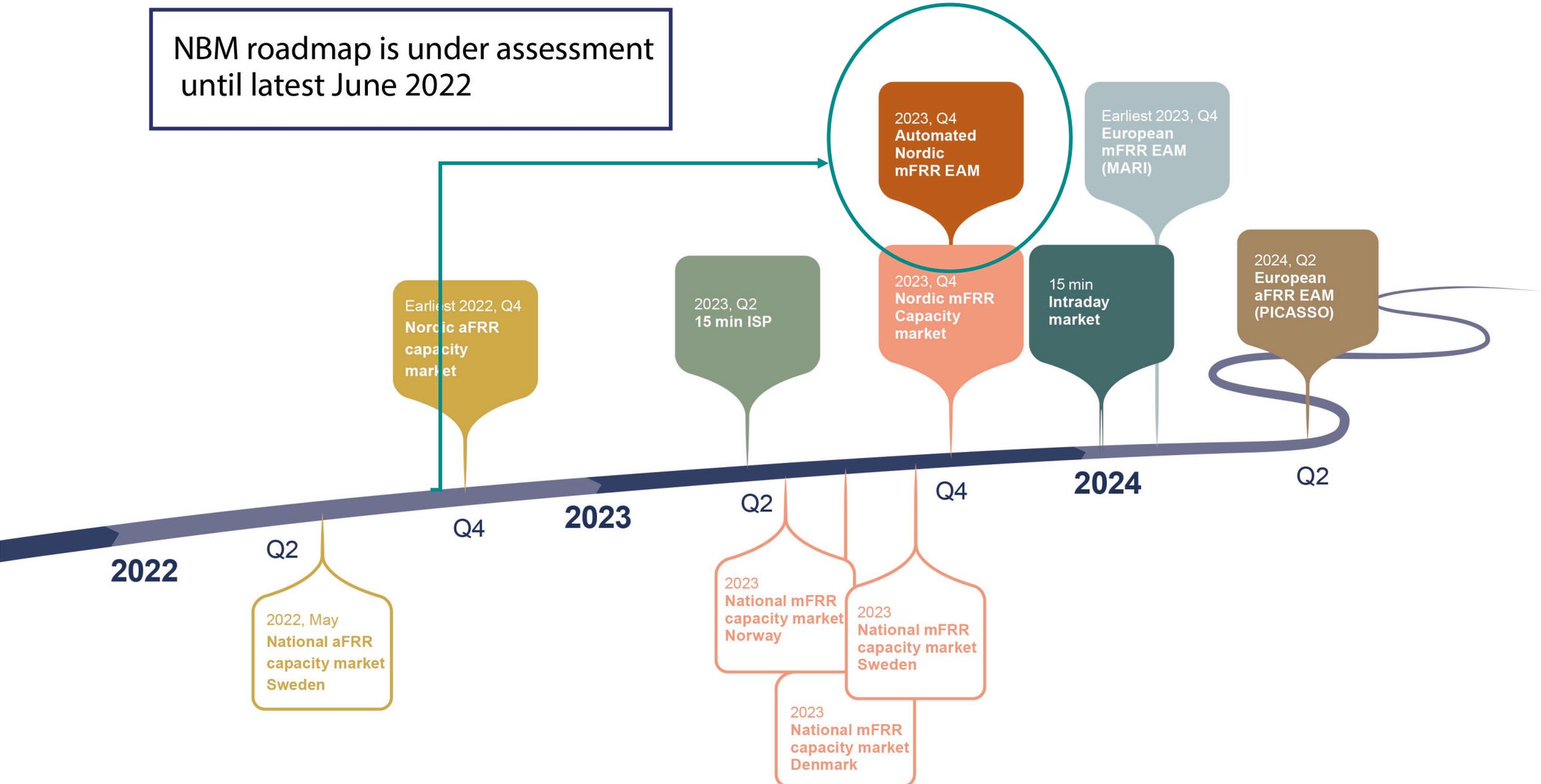
Gennemgang af implementeringsguide for Nordic mFRR EAM

Testplan

Drøfte videre forløb, afdække supportbehov

Evt. spørgsmål vedr ECP, eller øvrige spørgsmål til mFRR EAM eller NBM

NBM roadmap is under assessment until latest June 2022



DELVIS IMPLEMENTERING AF MFRR EAM STANDARDPRODUKT APRIL 23

Nødvendig for milestone EN1 og M4

Stepwise implementering
og bedste vej til en tryk go-
live

Risikomitigerende tilgang
for alle parter, samlet

Ny plan er ikke en ekstra
implementering, men et
skridt på vejen – som også
er med til at sikre at aktør
bliver klar til tiden

Ikke en stor ændring
tidsmæssig ift. original plan
i nov 22

Nødvendig tidsplan for
Energinets udskiftning af
det gamle
driftsplanlægningsystem

AGENDA

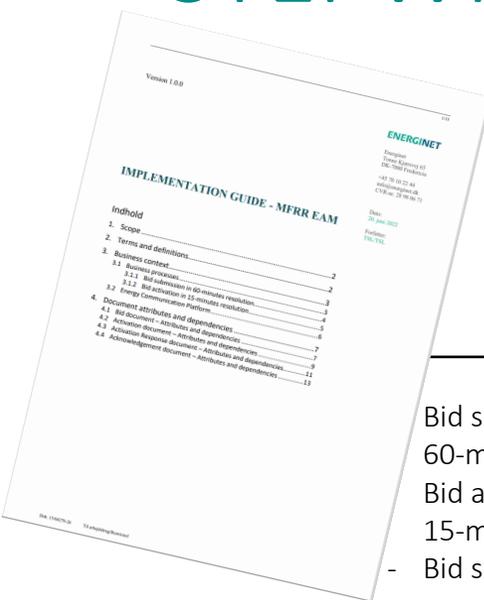
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STEPWISE IMPLEMENTATION



April – Step 1
 Bid submission in new CIM format in 60-minutes resolution
 Bid activation in new CIM format in 15-minutes resolution
 - Bid submission and activation message exchange by ECP
 - Standard ramps (ramping symmetrically around hour/quarter)

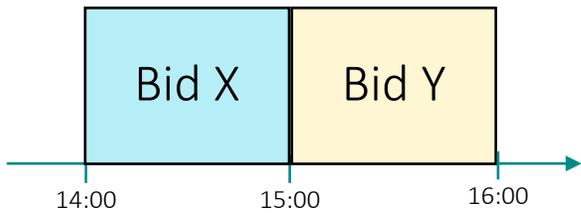


October/November 2023 – Step 2
 - Bid submission in 15-minute resolution
 - New bid attributes
 - Remaining message exchanges (health check, bid availability report, bid activation report)

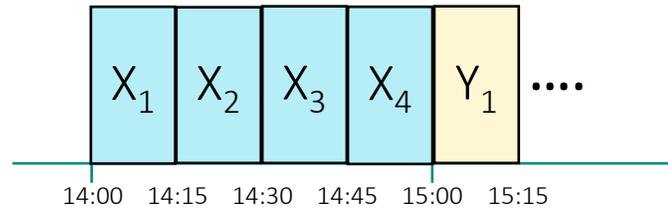


THE mFRR EAM PROCESS APRIL 2023

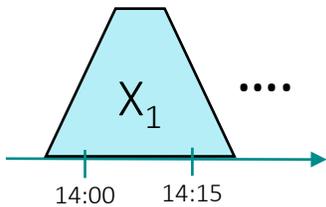
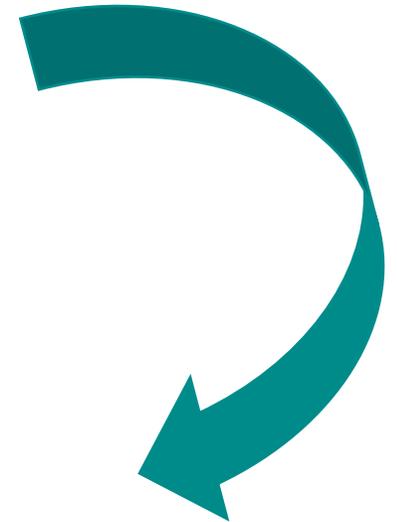
15 minutes activation resolution – but still 60 minutes balancing timeframe



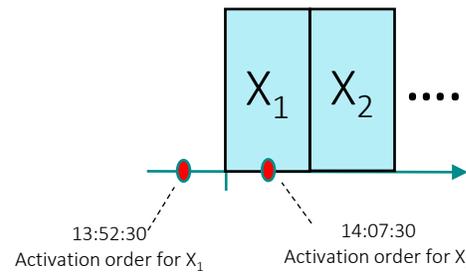
Bids are submitted in 60 minutes resolution by the BRPs.



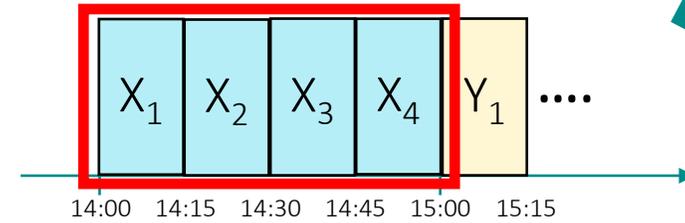
Bids are split into 15 minutes resolution by the TSO



The BRP is expected to ramp symmetrical around the quarter hour shift

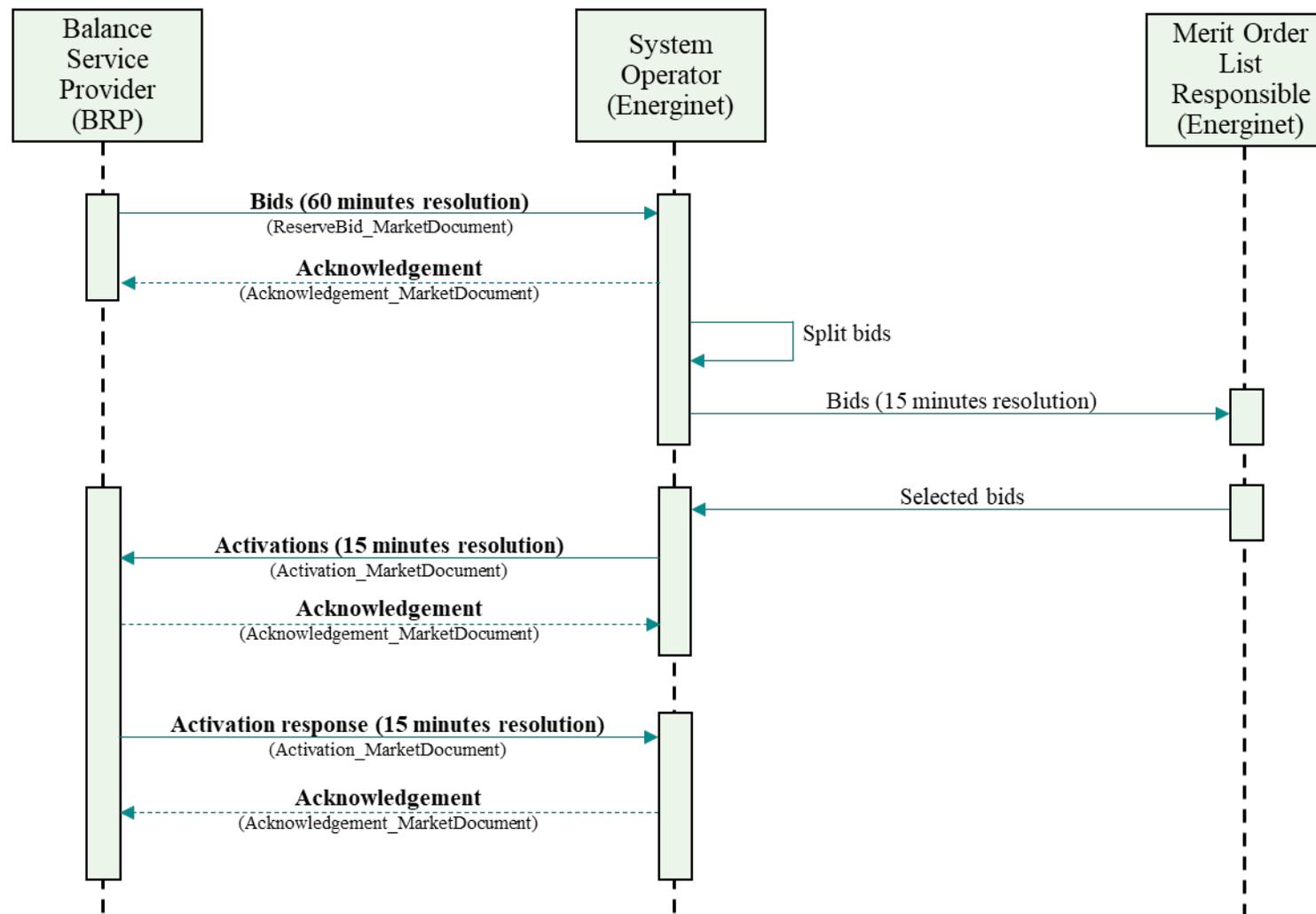


Activation orders are sent to the BRPs at T-7½ for each quarter



TSO operator will select bids to activate each hour as today – but can select bids for a shorter period if necessary

MESSAGE FLOW



BID SUBMISSION (1 OF 2)

- Standardized document format: CIM *ReserveBid_MarketDocument*
- *Acknowledgement_MarketDocument* will be returned. Either fully rejects or fully accepts the bid message.
- Bids must have globally unique IDs (GUIDs are required). One bid per timeseries. Multiple timeseries are allowed in the bid document.
- FAT is specified in attribute *activation_ConstraintDuration.duration*. Start/stop gradient and dead time no longer supported.
- Production type must be specified in attribute *mktPSRType.psrType* for "Solar", "Onshore wind" and "Offshore Wind".
- Gate closure (H-45) are unchanged.
- Bids can be divisible or indivisible (set by the *Divisible* attribute). Lower bound for a divisible bid is set by *minimum_Quantity.quantity*
- Updates are done by sending the affected time series (same ID) with new data. Cancellation of time series is done by sending value 0 for quantity.
- Communication mechanism is ECP.

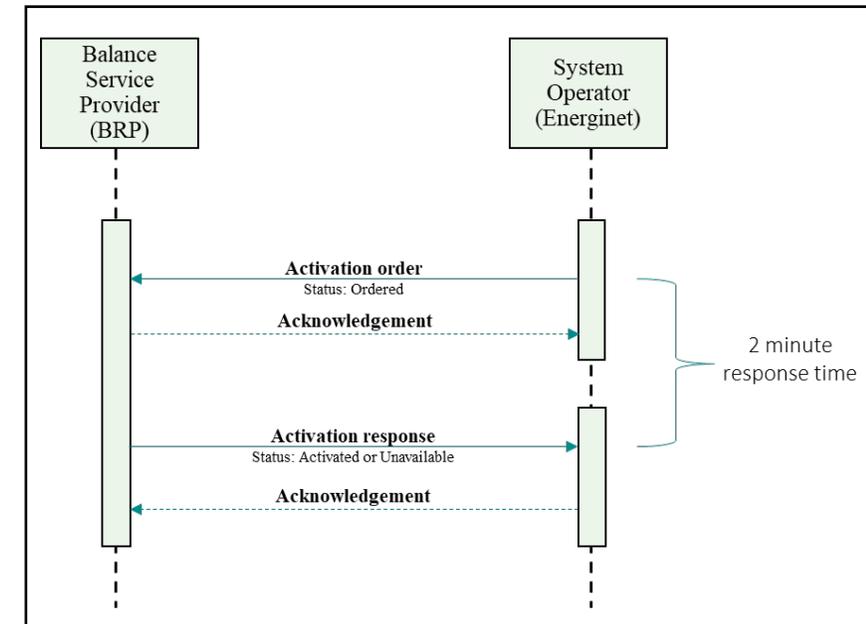
BID SUBMISSION (2 OF 2)

Most bid characteristics are unchanged:

Bid characteristics	
Currency	EUR (DKR not allowed)
Maximum price	5000 EUR/MWh
Price granularity	0.01 EUR
Minimum bid size	5 MW
Maximum bid size	50 MW
Bid granularity	1 MW
Activation granularity	1 MW
Bid time resolution	60 minutes

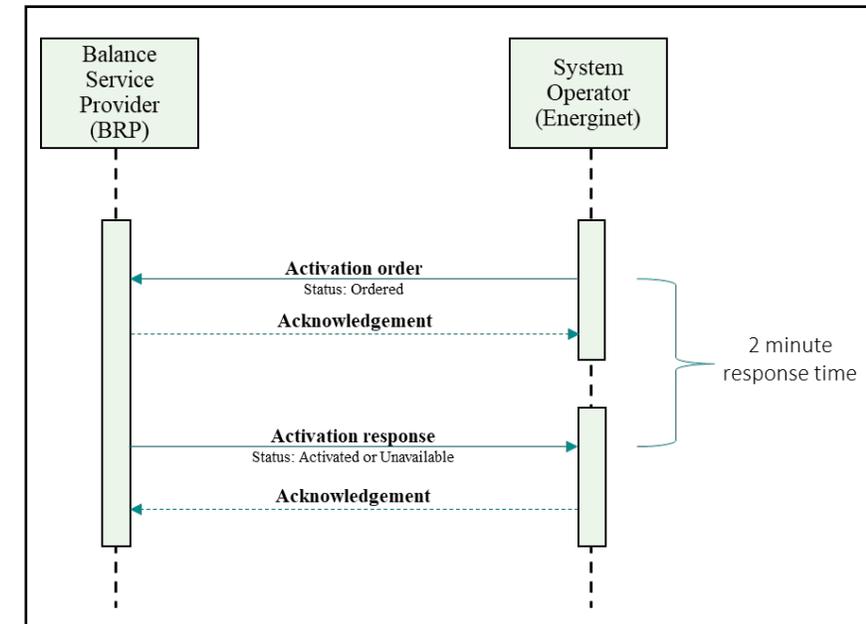
ACTIVATION ORDER

- Standardized document format: CIM *Activation_MarketDocument*
- *Acknowledgement_MarketDocument* must be returned. Either rejects or accepts the activation order (only accepting the message – not the activations).
- The activation order has 15 minutes resolution.
- The activation order will refer to the ID of the original 60 minutes bid. One bid activation per timeseries. Multiple timeseries are allowed in the activation order document.
- Activation order will be sent 7½ minutes before the quarter hour shift.
- Activation order will issue a unique order ID (in attribute *order_MarketDocument.mRID*).
- The format allows for sending new versions of activation order (by increasing *order_MarketDocument.revisionNumber*). This is not expected to be used 1st of April 2023.
- Communication mechanism is ECP.



ACTIVATION RESPONSE (1 OF 2)

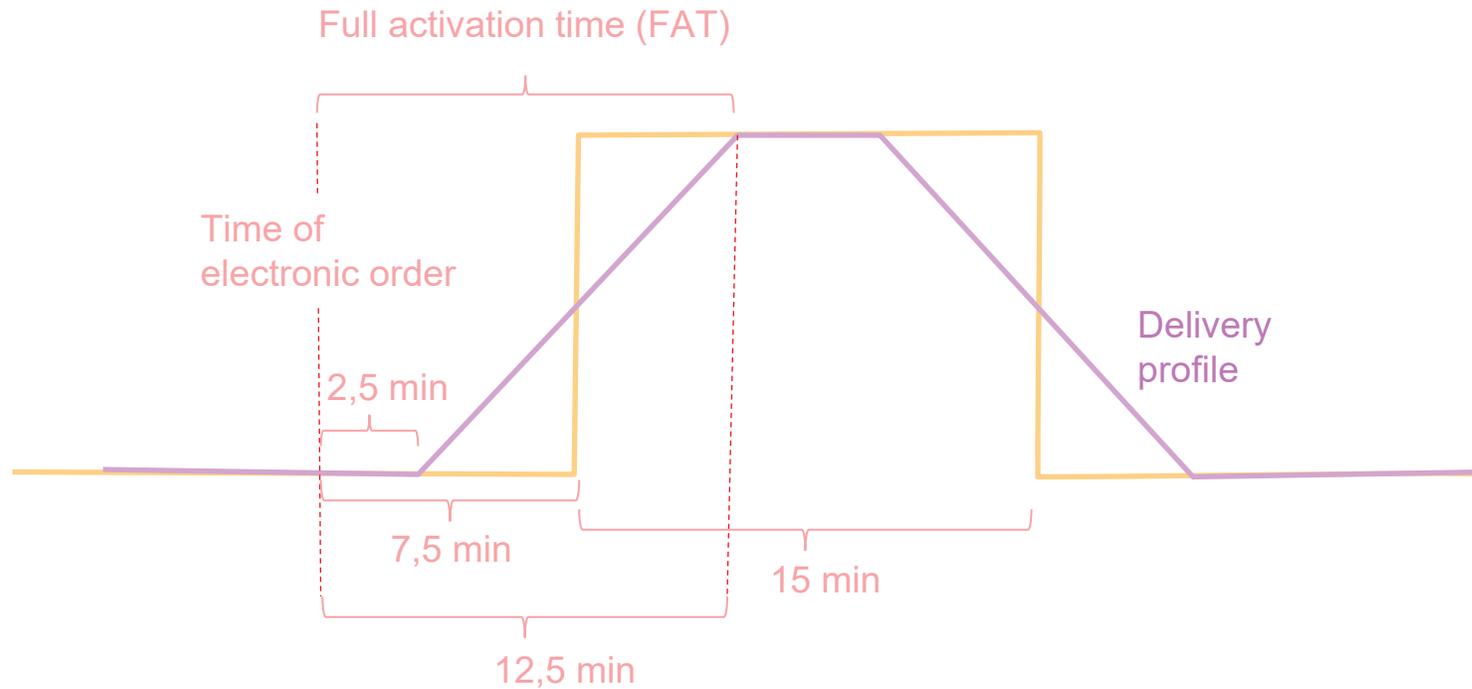
- Standardized document format: CIM *Activation_MarketDocument*
- *Acknowledgement_MarketDocument* will be returned. Either fully rejects or fully accepts the activation order message.
- Activation order must be sent no later than 2 minutes after the activation order is received.
- The activation response document must refer to the unique order ID issued in the activation order (in attribute *order_MarketDocument.mRID*).
- The activation response will either confirm or decline the ordered quantity (in attribute *marketObjectStatus.status*) for each of the activations.
- If an activation is declined a **Reason** element - indicating why the activation is declined - must be provided.
- The activation response will refer to the ID of the original 60 minutes bid.
- Communication mechanism is ECP.



ACTIVATION RESPONSE (2 OF 2)

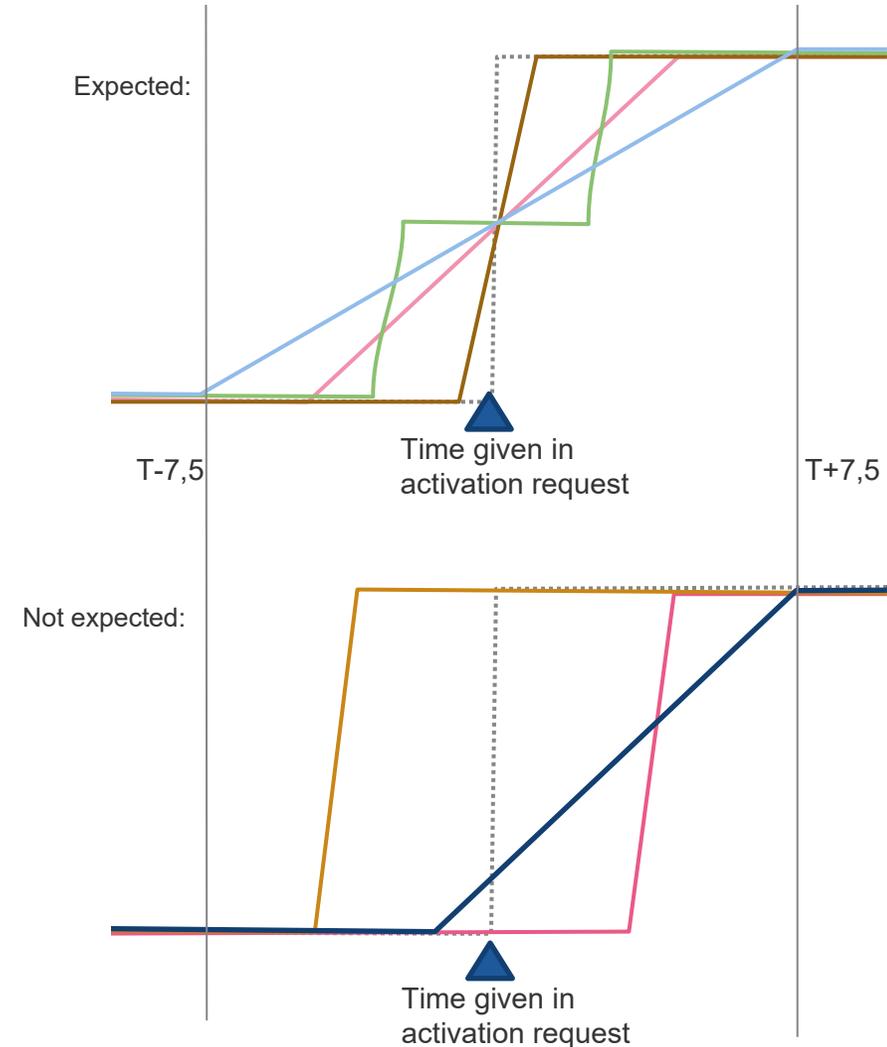
- BRP is not accountable for activation if
 1. The BRP declines the activation with an acceptable reason before the 2-minutes deadline.
- BRP is accountable for the activation if
 1. The BRP accepts the activation before the 2-minutes deadline
 2. The BRP does not send an activation response or the activation response is received after the 2-minutes deadline.

Standard mFRR energy product

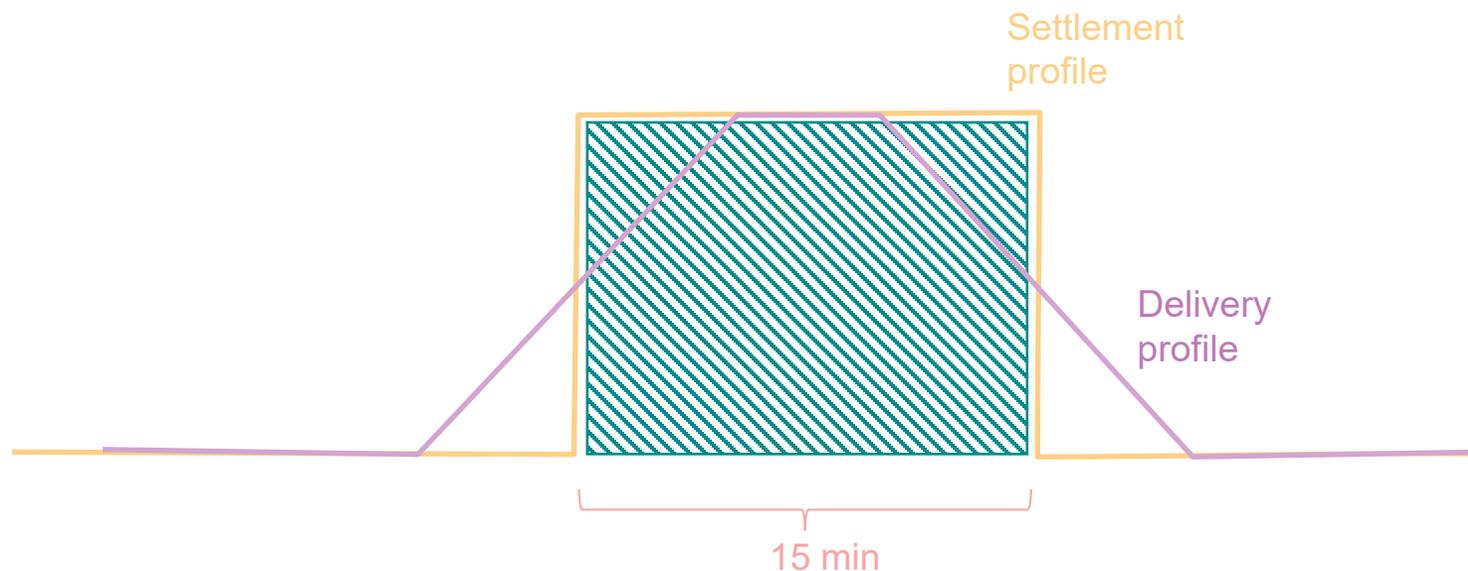


Activation – delivery shapes

- The activation order will specify the start and stop for activation as the points in the middle of the expected ramp
- The expected delivery ramp is "symmetrical" ramping around the ordered start and stop time



SETTLEMENT 1ST OF APRIL 2023



Proposal - may change

- Settlement will be based on unramped volumes per 15 minutes.
- Hourly marginal price.
- Symmetrical ramp is expected/required.

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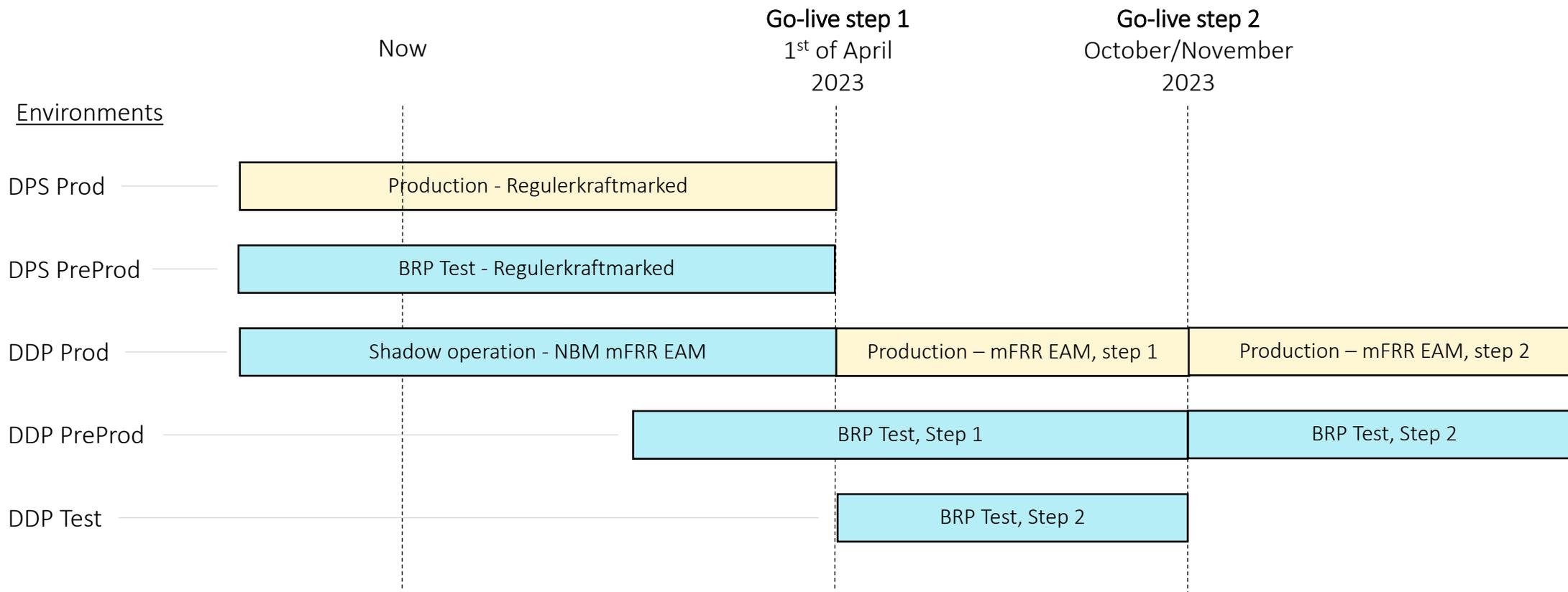
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PRODUCTION AND TESTING ENVIRONMENTS



DPS: Energinets existing Market Management System
 DDP: Energinets future Market Management System

TEST PLAN

Test in same environment
as shadow operation

Current plan:

Process	Time	2022				2023			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Bid submission (all attributes not fully supported)			Test	Test	Test	Test	Test	Test	Go-live
Activation (all attributes not fully supported)			Test	Test	Test	Test	Test	Test	Go-live
Health check					Test	Test	Test	Test	Go-live
Other messages (availability report, market result)					Test	Test	Test	Test	Go-live
Full support for all attributes						Test	Test	Test	Go-live

New plan:

Process	Time	2022				2023			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Bid submission (Bids in 60 minutes resolution)					Test	Test	Go-live, step 1		
Activation (15 minutes resolution)					Test	Test	Go-live, step 1		
Bid submission (Bids in 15 minutes resolution)							Test	Test	Go-live, step 2
Health check							Test	Test	Go-live, step 2
Other messages (availability report, market result)							Test	Test	Go-live, step 2
Full support for all attributes							Test	Test	Go-live, step 2

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MFRR EAM SKOLEN

Forløb med "undervisning" om standardproduktet, ved normal drift og ved fallback. Forløbet kan også give indsigt i resultater fra Shadow Operation, hvad gør AOF'en i forskellige situationer? Hvordan kan det påvirker aktørernes optimering?

FAST KONTORTID

Fast opsatte tidspunkter, feks kl 10-12 hver mandag, hvor aktørerne, eller deres service providere, kan logge ind og få hjælp eller afklaring på spørgsmål

IMPLEMENTERINGSMØDER

Månedlige fællesmøder hvor implementering er i fokus

FAST TRACK RESPONS

Der sættes op en aktørsupport mailadresse, med henblik på hurtig respons og svar på spørgsmål

SPØRGSMAÅL

