



5.9.2024

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mFRR-capacity market BSP webinar

Market Trial test period and Fifty NMMS Demo

FINGRID

Agenda

- Schedule for market changes
- Market Trial
- Tasks for BSP's on Market Trial
- Schedule for mFRR capacity market project
- Fifty NMMS Demo
- Summary

Common information about webinar

- Webinar is recorded, the video is available for participants and on other instances on request
- Questions can be asked by raising a hand, Teams chat or in Screen.io –service
 - Screen.io link is in the Teams chat
 - Material will be available on Fingrid web page in Finnish and English
 - All recorded questions will be also answered and these answers can be found from the same website

Schedule for market changes

(Etu nimi Sukunimi)

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mFRR capacity market changes

- Gate Opening Time and Gate Closure Time, introduction into use 22.10.
 - Bids can be submitted 7 days before the delivery date
 - Bids must be submitted by 07:30 CET/CEST a day before the delivery date
- Linked exclusive aFRR and mFRR capacity market bids, introduction into use 19.11.
 - An exclusive link can be created between aFRR and mFRR capacity market bids, meaning that either aFRR CM bid or mFRR CM bid is accepted, not both. Priority in this selection is the aFRR bid
- mFRR capacity market block bids, introduction into use 19.11.
 - Block bids are introduced to the mFRR CM, enabling linking of mFRR CM bids. Accepting one of these bids requires accepting all the linked bids in the block. The bids need to be identical and represent a continuous interval of market time units
- SE1-FI cross zonal capacity allocation on the Nordic mFRR capacity market, introduction into use 19.11.
 - It is possible to allocate SE1-FI cross zonal capacity for the use of aFRR and mFRR capacity markets by maximum 10% from FI to SE1 and maximum 5% from SE1 to FI from the available cross zonal capacity.



Market Trial

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Market Trial

- The Market Trial test period target is to verify the flawless function of capacity market platform Fifty NMMS in the Finnish national mFRR capacity market
 - Official testing of the market platform has been done and the focus of this Market Trial is specifically in the national mFRR CM and the functionalities of Finnish BSP's and TSO
- BSP's / service providers will leave simulated mFRR capacity market bids for Market Trial, and NMMS provides market results in the normal schedule
 - Bids should be priced realistically and bid volumes should be realistic
 - Market is run in the test environment in normal market schedule
 - GOT -7d, GCT 08:30, results 09:00 (Finnish time)
- Market Trial is held 23.9. – 27.9.

Tasks for BSP's on Market Trial

1. AT Fifty NMMS user interface and market message exchange should be tested before participating in Market trial
2. mFRR capacity market Gate Opening Time is 7 days prior to delivery date
 - a. Gate Opening Time is 00:00 16.9. After this BSP's can leave bids for the delivery date 23.9.
 - b. Gate Closing Time is always 08:30 EET/EEST a day prior to delivery date. Bids can be submitted and changed freely until GCT
 - c. BSP or service provider should test sending in bids via market message and from user interface
3. mFRR capacity market algorithm is run at 08:30 EET/EEST and results are ready latest 09:00 EET/EEST
 - a. Market results are sent to BSP's via market message exchange, if ECP has been defined. Results are available on the AT Fifty NMMS platform as well.
4. All BSP's are asked to send in bids for the whole Market Trial test period!

Schedule for mFRR capacity market project

Project schedule

To do	Start	End
BSP configuration to AT Fifty NMMS done	1.7.	1.8.
BSP / Service provider ECP market message testing	5.8.	30.8.
BSP / Service provider Fifty user interface testing	5.8.	30.8.
mFRR EAM webinar, mFRR CM project updates	12.8.	
mFRR market trial webinar	5.9.	
mFRR market trial	23.9.	27.9.
Finnish national go-live	22.10.	
Nordic trilateral go-live	19.11.	



Fifty NMMS Demo

(Written instructions can be found under "notes")

Capacity market overview

NB! Reserved dates:
Auction dates in December 2024 and January 2025 are reserved for Statnett testing.

Day: 27.03.2024

Daily requirements Bid entry Bid results

Auction process Day 27.03.2024

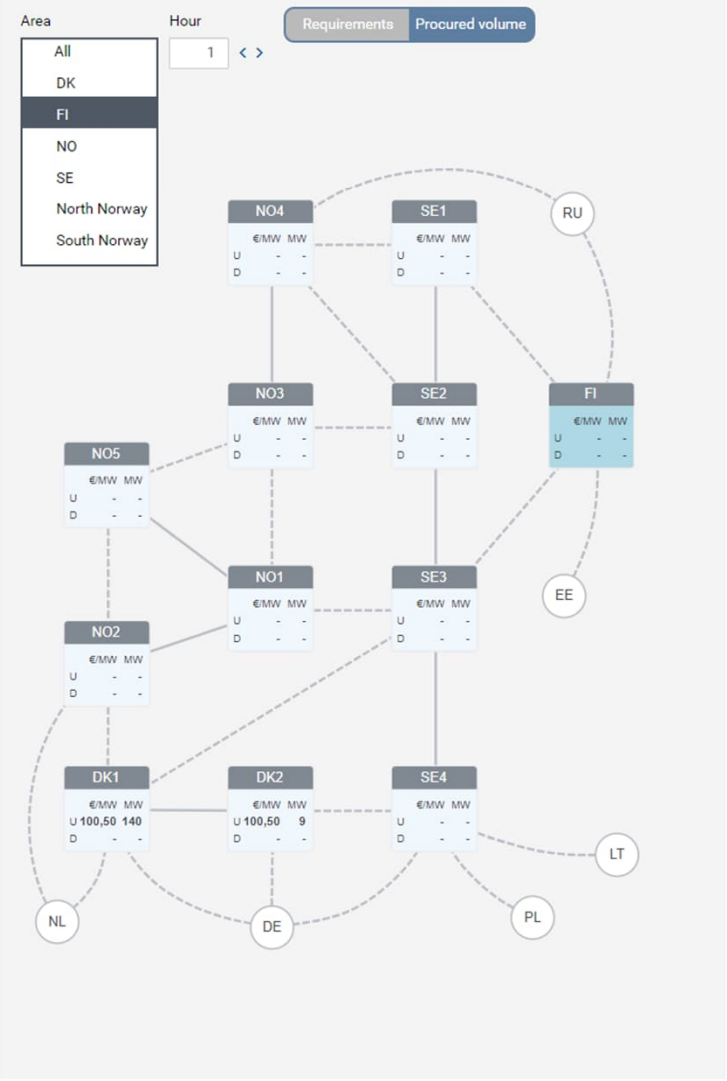
Auction state: ● Auction cleared

Clearing result: Optimal solution (after relaxing)

- ✔ 🕒 **Open bidding gate**
20.03.2024 00:00
- ✔ ⚡ **Close bidding gate**
26.03.2024 07:30
- ✔ ⚡ **Run clearing**
26.03.2024 07:30
- 🕒 ⚡ **Accept and publish results**
26.03.2024 09:10

Market messages in the last 24 hours (6)

- 07:30 The bidding gate for 27.03.2024 on mFRR Capacity Market has been closed.
- 09:13 Results for 25.03.2024 on mFRR Capacity Market have been published.
- 09:12 Results for 24.03.2024 on mFRR Capacity Market have been published.
- 09:11 Results for 23.03.2024 on mFRR Capacity Market have been published.
- 09:05 CZC forecast for 04.04.2024 has been completed.
- 09:04 CZC forecast for 03.04.2024 has been completed.



Area: FI

Market totals	Total volume	Clearing price	
Up	-	-	-
Down	-	-	-
Reserve requirements	Requirement	Minimum	Maximum
Up	240	-	-
Down	250	-	-

BSP filter: All

Reserved CZC

CZC reservation data is not yet available for this auction

Nordic MMS aFRR Capacity Market mFRR Capacity Market System

Daily requirements

mFRR Capacity Market / Auction data /

Day: 27.03.2024 Area: All

Show min/max regulation Clear filters Update data

Week day: Wednesday Type: Auction Market: mFRR Capacity Market Last modified at: 09.02.2024 11:05:32 Unsent reserve requirements: Export

27.03.2024	Area	mFRR Capacity Market																	
		Bidding zone												Macro area					
		DK1	DK2	FI	NO1	NO2	NO3	NO4	NO5	SE1	SE2	SE3	SE4	DK	FI	NO	SE	South Norway	North Norway
Req [MW]	Req [MW]	Req [MW]	Req [MW]	Req [MW]	Req [MW]	Req [MW]	Req [MW]	Req [MW]	Req [MW]	Req [MW]	Req [MW]	Req [MW]	Req [MW]	Req [MW]	Req [MW]	Req [MW]	Req [MW]		
1	284	240	240	50	50	50	50	50	50	50	50	50	524	240	250	200	150	100	
2	284	240	240	50	50	50	50	50	50	50	50	50	524	240	250	200	150	100	
3	284	240	240	50	50	50	50	50	50	50	50	50	524	240	250	200	150	100	
4	284	240	240	50	50	50	50	50	50	50	50	50	524	240	250	200	150	100	
5	284	240	240	50	50	50	50	50	50	50	50	50	524	240	250	200	150	100	
6	284	240	240	100	100	100	100	100	100	100	100	100	524	240	500	400	300	200	
7	284	240	240	300	200	200	200	200	100	100	100	100	524	240	1 100	400	700	400	
8	284	240	240	350	350	350	350	350	100	100	100	100	524	240	1 750	400	1 050	700	
9	284	240	240	300	300	300	300	300	300	80	100	100	524	240	1 500	380	900	600	
10	284	240	240	400	400	300	300	300	80	100	100	100	524	240	1 700	380	1 100	600	
11	284	240	240	400	400	300	300	300	80	100	100	100	524	240	1 700	380	1 100	600	
12	284	240	240	400	400	300	300	300	80	100	100	100	524	240	1 700	380	1 100	600	
13	284	240	240	400	250	250	250	250	80	100	100	100	524	240	1 400	380	900	500	
14	284	240	240	400	250	250	250	250	80	100	100	100	524	240	1 400	380	900	500	
15	284	240	240	400	300	300	300	300	80	100	100	100	524	240	1 600	380	1 000	600	
16	284	240	240	400	300	300	300	300	80	100	100	100	524	240	1 600	380	1 000	600	
17	284	240	240	400	400	300	300	300	80	100	100	100	524	240	1 700	380	1 100	600	
18	284	240	240	450	450	300	300	350	80	100	100	100	524	240	1 850	380	1 250	600	
19	284	240	240	400	400	300	300	300	80	100	100	100	524	240	1 700	380	1 100	600	
20	284	240	240	400	400	300	300	300	80	100	100	100	524	240	1 700	380	1 100	600	
21	284	240	240	300	300	300	300	300	80	100	100	100	524	240	1 500	380	900	600	
22	284	240	240	300	300	300	300	300	80	100	100	100	524	240	1 500	380	900	600	
23	284	240	240	350	0	0	0	50	0	0	0	0	524	240	400	0	400	0	
24	284	240	240	350	0	0	0	0	0	0	0	0	524	240	350	0	350	0	

Nordic MMS aFRR Capacity Market mFRR Capacity Market System 26.03.2024 09:09 CE

Bid entry

mFRR Capacity Market / Auction data /

Day: 28.03.2024 Bid zone: FI

Clear filters Update data

Day: 28.03.2024 Open: 21.03.2024 00:00:05

BSP	Bid zone	DIR	Bid #	Price [€/MW/h]
Demand FI		Up		
Demand FI		Down		
FG TEST	FI	Up	1	10,00

Auction data

- Bid entry
- CZC forecast
- Reserve requirements

Results

- Bid results
- Special results
- Market totals
- Reserved CZC
- Accepted bids
- Algorithm log
- Relaxed constraints

Process management

- Auction process
- Bid entry log
- Auction control

Market parameters

- Bottleneck group
- Auction timeline
- Bid validation parameters
- Portfolios
- Location membership
- Party agents
- Clearing configuration
- Noticeboard edit

Bid results

mFRR Capacity Market / Results /

Day 26.03.2024 Bidding zone BSP Direction All

Resource All Show non-accepted bids Clear filters Update data

Day 26.03.2024 Open 19.03.2024 00:00:03 Close 25.03.2024 07:30:00 Clearing 25.03.2024 09:10:00 Fallback mode - State Auction cleared

Sorting by Price

Market prices				7	8	9	10	11	12	13	14																								
Clearing price	Up			63,33	63,33	63,33	12,74	12,74	12,74	12,74	12,74																								
Clearing price	Down			0	0	0	0	0	0	0	0																								
BSP	Bid zone	DIR	Bid #	7		8		9		10		11		12		13		14																	
				A	O	A	O	A	O	A	O	A	O	A	O	A	O	A	O																
				524	524	524	524	524	524	524	524	524	524	524	524	524	524	524	524	524															
				500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500															
				25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25															
				4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4															
				17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17															
				14	13	13	12	12	12	12	12	15	15	15	15	15	15	15	15	15															
				8	7	7	10	10	10	10	7	7	7	7	7	7	7	7	7	7															
				1	2	2	1	1	1	1	2	2	2	2	2	2	2	2	2	2															
											4	4	4	4	4	4	4	4	4	4															
				2	1	1	2	2	2	2																									
											1	1	1	1	1	1	1	1	1	1															
				8	9	9	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8														
				20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20														
				3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3															
				2	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2															
				7	8	8	7	7	7	7	9	9	9	9	9	9	9	9	9	9															
				14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14															
				2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2															
				5	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5															
				7										3	3	7	7	7	7	7															
				1	1	1	1	1	1	1																									
				1	2	2	1	1	1	1																									
					7	7	7	7	7	7	7	7	4	4																					
				2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2															
				2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2															
				145	144	144	145	145	145	145	149	149	149	149	149	149	149	149	149	149															
				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0															

mFRR Capacity Market System

Auction data

- Bid entry
- CZC forecast
- Reserve requirements

Results

- Bid results
- Special results
- Market totals
- Reserved CZC
- TSO-TSO settlement
- Accepted bids
- Algorithm log
- Irregular results
- Costs and benefits

Accepted bids 🔍

mFRR Capacity Market / Results /

Day 05.08.2024



Bidding zone

BSP

Direction All

Resource All

✕ Clear filters↻ Update data

Day 05.08.2024

Open 29.07.2024 00:00:09

Clearing 05.08.2024 08:19:36

Fallback mode -

State Finished

Market mFRR Capacity Market

[Edit](#)[Export](#)

Clearing price		DIR	Bid #										1	2	3	4	5	6	7	8	9	10	11	12	13	
Clearing price		Up											666,00	666,00	666,00	666,00	666,00	666,00	666,00	666,00	666,00	666,00	666,00	666,00	666,00	666,00
Clearing price		Down											25,00	25,00	25,00	25,00	25,00	25,00	25,00	25,00	25,00	25,00	25,00	25,00	25,00	25,00
BSP	Bid zone	DIR	Bid #	Location	Price [€/MW/h]	Incl. ID	Excl. group	Tech. ID	Block	Dur.	RT.	Min. [MW]	Accepted [MW]													
													1	2	3	4	5	6	7	8	9	10	11	12	13	
													342	339	337	336	335	534	545	641	628	633	637	642	643	
													500	500	500	500	500	500	600	600	600	600	600	600	600	
FG TEST	FI	Up	1	FINORTH	2,50				-				10	10	10	10	10	10	10	10	10	10	10	10	10	
FG TEST	FI	Up	2	FINORTH	3,00				-				10	10	10	10	10	10	10	10	10	10	10	10	10	
FG TEST	FI	Up	3	FINORTH	3,20				-				15	15	15	15	15	15	15	15	15	15				
FG TEST	FI	Up	4	FINORTH	3,70				-				10	10	10	10	10					10	10	10	10	
FG TEST	FI	Up	5	FINORTH	4,00				-				5	5	5	5	5	5	5	5	5	5	5	5	5	
FG TEST	FI	Up	8	FISOUTH	25,00				-				10	10	10	10	10	10	10	10	10	10	10	10	10	
FG TEST	FI	Up	7	FISOUTH	60,00				-				10	10	10	10	10	10	10	10	10	10	10	10	10	
FG TEST	FI	Up	10	FISOUTH	100,00				-				10	10	10	10	10	10	10	10	10	10	10	10	10	
FG TEST	FI	Up	6	FISOUTH	120,00				-				10	10	10	10	10	10	10	10	10	10	10	10	10	
FG TEST	FI	Up	9	FISOUTH	666,00				-				10	10	10	10	10	10	10	10	10	10	10	10	10	
FG TEST	FI	Down	1	FICENTRAL	5,00				-				5	5	5	5	5	5	5	5	5	5	5	5	5	
FG TEST	FI	Down	2	FICENTRAL	10,00				-				10	10	10	10	10	10	10	10	10					
FG TEST	FI	Down	3	FICENTRAL	15,00				-		10		15	15	15	15	15	15	15	15	15	15	15	15	15	
FG TEST	FI	Down	4	FICENTRAL	20,00				-				22	22	22	22	22	22	22	22	22	22	22	22	22	
FG TEST	FI	Down	5	FICENTRAL	25,00				-				33	33	33	33	33	33	33	33	33	33	33	33	33	
Total selectable quantity		Down											85	85	85	85	85	85	85	85	85	75	75	75	75	
Total selectable quantity		Up											100	100	100	100	100	90	90	90	90	90	100	85	85	
Procured quantity		Down											85	85	85	85	85	85	85	85	85	75	75	75	75	
Procured quantity		Up											100	100	100	100	100	90	90	90	90	90	100	85	85	

Capacity market overview

Day: 05.09.2024

Auction process

Day 05.09.2024

Auction state ● Results published

Clearing result Optimal solution (after relaxing)

✓ ⌚	Open bidding gate	i
	29.08.2024 00:00	
✓ ⚡	Close bidding gate	i
	04.09.2024 07:30	
✓ ⚡	Run clearing	i
	04.09.2024 07:31	
✓ ⚡	Accept and publish results	i
	04.09.2024 09:37	

Market messages in the last 24 hours (1)

- 12:46 The bidding gate for 06.09.2024 on mFRR Capacity
- 04.09 Market has been closed.

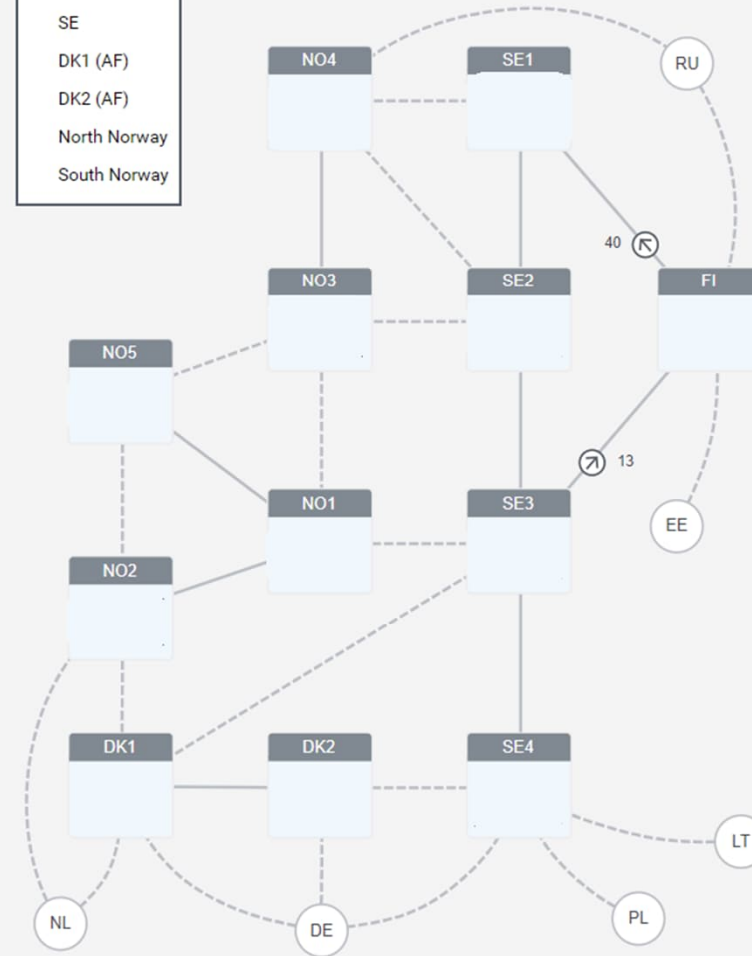
Area

Hour

Requirements Procured volume

- All
- DK
- FI
- NO
- SE
- DK1 (AF)
- DK2 (AF)
- North Norway
- South Norway

1 <>



Market topology

- Market definition
- Product
- Area
- Area binding
- Border
- Border direction

Parties

- Party management
- Users**
- Active sessions
- Location

Bid entry Bid results

Max clearing price 32,85

BSP filter

All



Reserved CZC

All areas are selected

Users

Settings / Parties /

Party
 User
 Role
 Active
 Inactive
 Deleted
 Unused

Name	Party	Email	Account status

New user

First name
 Last name
 Party
 Account status
 Phone
 Email
 Send market messages to this email address
 Warning message with sound
 Roles

Name	Description
There are no data for the selected date and filters	

As user administrator, I hereby confirm that the person on who's behalf I am creating or updating this user, has given his or her consent to the NMMS [privacy notice](#).



Questions?

Summary

- It is still possible for BSP's and service providers to test mFRR capacity market on AT Fifty NMMS test environment
- Gate Opening Time is -7d, meaning bid submitting for Market Trial begins on week 38. We highly recommend that all BSP's and service providers participate to the Market Trial

Upcoming events

- Market Trial –test period is held on week 39
- National Fifty NMMS golive 22.10.
- Nordic mFRR capacity market golive 19.11.

Contact person for mFRR capacity market change is Joonas Muikku, joonas.muikku@fingrid.fi



**Changes required from
BSP's / Service providers
(presented already on 27.3. webinar)**

BSP testing

- BSP testing consists of the following steps
 - Signing in to the new NMMS market platform
 - This is possible from the end of May, by using the updated login procedure of the NMMS platform
 - NMMS market platform testing (possible after successful login)
 - This process is each BSP's responsibility. Target is to test independently submitting and deleting bids from the NMMS user interface
 - More instructions coming to BSP's during spring
 - ECP/EDX market message exchange testing (possible after the BSP has been configured to the platform)
 - BSP will agree on the schedule with Fingrid experts on separate e-mail
 - Bid submitting and result receiving is tested in this process

Changes to market messaging (1/2)

- Submitting bids
 - Market message format remains the same (reservebiddocument v 7.1), but there are changes to some bid attributes. Changes can be found from the Nordic [Implementation Guide](#)
 - It is no longer possible to add "Reason text" to the bid
- Receiving market results
 - Market result message is almost the same as in the Vaksi configuration right now, but the message scheme is the older version (reserveallocationresult 6.0)
 - Some changes to single attributes
 - Same status codes as of now (B16 is also on time series level, not just point)

Changes to market messaging (2/2)

- Receiving the TSO reserve requirements
 - NMMS sends automatically the procurement amount of mFRR capacity as soon as the Gate Opening Time (-7d) is reached
 - Information is always updated if TSO decides to change the procurement amount closer to delivery date
 - This information is sent also on the aFRR capacity market

Changes to ECP/EDX configuration

- SERVICE "FI-MFRRCAP" that is used now, changes as market platform changes from Vaksi to Fifty NMMS
 - New service is called "SERVICE-NO-MFRRCAP" In addition EDX message types are changed. These can be found from the Nordic Implementation Guide

Process	Sender	Format	ECP message type
Publishing Reserve Requirements	Nordic MMS	iec62325-451-7-reservebiddocument_v7_1.xsd	MO-MCC-RESERVE-REQUIREMENTS
Bid Submission	BSP	iec62325-451-7-reservebiddocument.xsd	MO-MCC-BIDS
Bid acknowledgement	Nordic MMS	iec62325-451-1-acknowledgement.xsd	MO-MCC-BIDS-ACK
Accepted bids	Nordic MMS	iec62325-451-7-reserveallocationresult.xsd	MO-MCC-ACCEPTED-BIDS-BSP
Market Result	Nordic MMS	iec62325-451-6-balancing.xsd	MO-MCC-MARKET-RESULTS