

#	Question	Answer
1	<p>How will the TSO-BSO settlement be handled? Will the BSP/BRP invoice the TSO as before?</p>	<p>The TSO-BSP settlement will be handled by the TSO responsible for the bidding zone, the accepted bid was submitted for. The TSOs current process for settlement of procured reserve capacity will be used.</p> <p>Due to differences of local settlement mechanisms, please contact the local TSOs to clarify details.</p>
2	<p>Why have you chosen to go with this MADES standard for integrating with the technical bidding flow, instead of a more widespread known standard such as a REST API with JSON format. This would supposedly seem to require more work implementing it. We have recently integrated to Nordpools new API, which I think is a great example of how a well documented and easy-to-integrate system could look like. https://developers.nordpoolgroup.com/docs</p>	<p>The question appears to be two-fold, concerning protocol/standard/architecture (MADES vs REST/HTTP) and the information format (XML vs JSON).</p> <p>Regarding the format of the transmitted message, the Nordic TSOs use the latest established standard formats for electronic data interchange published by entso-e and defined by a group of industry experts (CIM expert group). These formats are currently XML based. The use of a JSON format would not align with the harmonisation efforts of TSO communication between ENTSO-E members.</p> <p>Regarding the protocol, MADES is the ENTSO-E communication platform standard for European TSOs. MADES ensures reliable and secure exchange of market documents. The platform ensures that:</p> <ul style="list-style-type: none"> • only the recipient of the message is capable of reading the message content • the sender of any message can unambiguously be verified <p>In addition, we believe that as members of ENTSO-E, the Nordic TSO's are obliged to actively contribute to the evolution of agreed standards, and by implementing MADES we gain the necessary experience to be able to do so.</p> <p>Multiple European common systems are utilizing MADES already, and many more will follow.</p> <p>By using a common standard protocol across Europe, we believe that market players will gain a larger selection of potential system vendors and forward leaning system vendors will gain a bigger market share.</p> <p>Thus; basing communication on an agreed-upon standard will gain the European power market as a whole.</p> <p>More about MADES/ECP;</p> <p>MADES is more than a protocol(like HTTP), it describes the standard upon what we enable secure authentication, message encryption(payload and transport) and non-repudiation. It is a two-way asynchronous communication standard, so that messages can be initiated from central to participant and vice versa. MADES can be used to transport any payload, for instance REST style webservice calls if we should choose to expose such an API.</p> <p>We are using an implementation of the MADES standard called Energy communication platform(ECP).</p> <p>ECP is built upon AMQP v1.0, that is an open standard protocol, this is the comparable part to HTTP for REST.</p> <p>ECP has built in support for certificate handling(issuing ,renewal and revoking), and enables secure authentication and encryption.</p> <p>ECP has built in audit trails and control messages to ensure non-repudiation, sender and receiver are uniquely identified and messages are tracked in all states (sent, in transport, delivered and received).</p>

3	Is it true that aFRR capacity market bids will be given per Elspot area and not per station group?	The aFRR capacity market is portfolio based and not station group based. Each BSP is assigned one portfolio for each bidding zone if he has successfully qualified as a provider of aFRR reserves within it. The activation of aFRR energy will follow the same rules as today, e.g. with activation per station group in Norway. The successful bidder in the capacity market is obliged to deliver volumes accordingly on its prequalified station group in that bidding zone. The activation process will remain as it is today.
4	What is the role of bid numbers in the bidding screen.	Bid numbers are a visual help only and are generated when a bid is submitted to the market. It is used in validation messages returned by the Fifty Nordic MMS frontend. When bids are sent inn via ECP, the web interface or excel import it is not guaranteed that the same bid will be assigned the same bid number per up or down direction or bidding zone. Bids sent by ECP will retain the mRID in the market result which they were submitted with.
5	Are the linked group id and exclusive group fields a free to chose number or text?	Yes these fields can be freely chosen by the BSP but have to be unique and are limited in scope per bidding zone.
6	How is minimum quantity made available or announced.	Minimum quantity is the the minimum bid quantity specified by the BSP which can be accepted by the TSOs. It is a property of the underlying flexibility or restrictions of the unit the BSO provides the service with and can be set in such a way to make the bid economically feasible for the BSP,.
7	In chapter 3.2.1.1 of the implementation guide v1, what does the field subject party signify.	Subject party is the party the bid is given for. It is to be set to the same value as the sender.
8	In chapter 3.2.1.2 of the implementation guide v1, what is the quantity factor and how is that announced.	The quantity factor is the minimum volume increment of a bid. It is defined as 5MW by the market terms and conditions. It is published in the Fifty Nordic MMS market solution web interface accessible to market participants.
9	What is the price interval of a bid and how is it announced.	The price interval is the valid price range of a bid and will be published in the Fity Nordic MMS web interface.

10	Referring to section 3.2.1.2 of the implementation guide v1 " Bid quantity (and minimum bid quantity) must be in the interval [minquantity, maxquantity], given by the Market parameters for the auction. What is the minquantity / max quantity interval and how is that published.	The minimum bid quantity is 5 MW while max quantity is the BSPs bid limit set per bidding zone during the aFRR market qualification process.
11	Referring to section 3.2.1.3 of the implementatin guide v1 "Bid price must be in the interval [minprice, maxprice], given by the Market parameters for the auction. "	The min price and max price interval will be defined by the market terms and conditions prior to market go live and are published to market participants as part of the market parameters in the Fifty Nordic MMS prior to the market start.