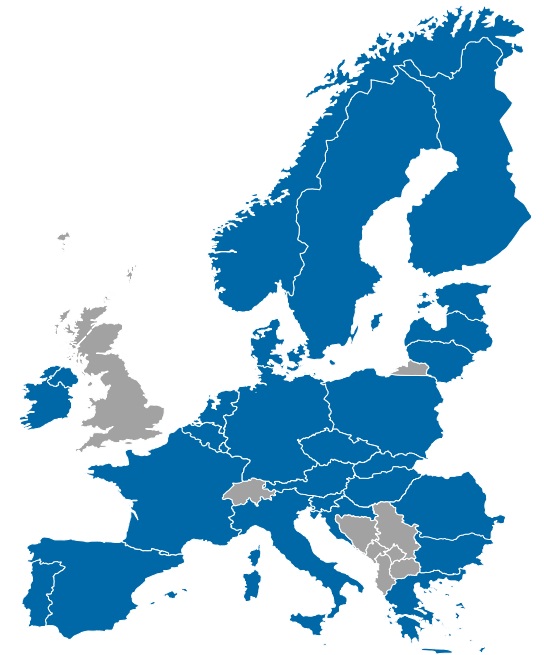# Aggregated Curves – Initial Steps and prepared Solution

Report to MESC

ANDOA DA SC, 9 December 2020

- After several MNAs went live in different regional projects, NRAs requested the development of a technical solution for the publication of Aggregated Anonymized Market Data (bid/offer curves)

- Main requirement of the technical solution
    - NEMOs to develop joint proposal for the publication of anonymized aggregated bid/offer curves
    - The proposal shall include an anonymization process
    - All anonymized complex orders and block bids shall be published
    - The publication shall take place during the four hours immediately after the publication of the final market results from the day-ahead coupling process
    - Data shall be published in, at least, one free-to-access website, with a format adequate for its processing by market participants
    - The solution shall be prepared to allow for the extraction of aggregated bid/offer curves from other bidding zones. It shall be sufficiently scalable to extract the data of all bidding zones of the Single Day-Ahead Market Coupling project.

- Specific requirements and exemptions
    - NEMOs currently applying "unit-bidding approach" can request the NRA of the country in which it operates for an extension of the delay for publication. The requested extension cannot exceed 7 natural days from the publication of final market results.
    - Monopoly NEMOs may request to their NRA to continue using their current solutions for the extraction.
        - NEMOs understand from the NRA position paper that monopoly NEMOs may deviate from the detailed information provided by the central solution, and instead comply with national regulation.
    - All NRAs insist that, not earlier than after the go-live of the publication, NEMOs of MNA regions do no longer publish their respective individual NEMO bid/offer curves, in order to respect the privacy risk.

- Until the Solution is fully designed and implemented, NEMOs agreed to start with these initial steps:
  - As a starting point NEMOs will use the NEMO Committee web page to add a section with links to data published individually by NEMOs in the format NEMOs are used to follow
  - See Annex for summary how NEMOs are publishing the requested data today
  - This initial step will facilitate publication of aggregated curves in non-MNA countries.
  - When the Solution is in place, e.g. also aggregated curves in MNA countries, also curves in MNA countries will be provided via links to the relevant NEMO's websites.

- NEMOs expect the initial step to be ready by the end of the year.

- Once the corresponding NEMO Committee webpage is prepared, we will inform MPs and NRAs.

- Main design principles of the joint solution
  - Joint Single solution will be developed to be used by all NEMOs to ensure equal treatment between all NEMOs
  - NRAs requirement that publication shall take place during the four hours after the publication:
    - This requirement implies the process of aggregation and publication will be done on daily basis as part of post-coupling process
    - NEMOs decided that since the aggregation and publication have lower priority than market coupling process, it will be done after latter is finalised
    - Detailed daily process will be further elaborated after specification and design of the technical solution is finalised
  - The solution will aggregate the curve order data from all NEMO trading hubs belonging to the same bidding zone clusters. The output thus will be aggregated order data per bidding zone cluster (i.e. country).
  - The impact on current procedures is needed to be evaluated. New procedure for aggregated curve processing needs to be developed.
  - NEMOs agreed that each NEMO may publish the filtered perimeter (subset of full perimeter covering all clusters a NEMO is active in) on its own webpage
  - Publication format used by all NEMOs will be agreed
  - NEMOs decided to use NEMO Committee web site for central web site with links to data published individually by NEMOs
  - Go-Live is planned to be made in conjunction with go-live of Euphemia and PMB release in the first half of 2021. Exact date is still pending both due to development of unrelated features and for the Aggregated SOB Curves.

NEMO	publishing the results?	if yes, in which format	link	comment
BSP	YES	XML	https://www.bsp-southpool.com/price-curve.html	Anonymous and aggregated price curves are available on the sFTP and on the web page.
CROPEX	YES	XLSX, PNG	https://www.cropex.hr/en/market-data/day-ahead-market/price-curves.html	Available for download only trough dedicated sFTP
GME	YES	PDF (aggregated demand and supply curve)	http://www.mercatoelettrico.org/It/Esiti/MGP/EsitiMGP.aspx	GME publishes aggregated demand and supply curves for each market "price" zone (all zones having the same prices aggregated into one). Complete bids offers disclosure after 7 days (data available in xml and other formats).
HEnEx	YES	XLSX	https://www.enexgroup.gr/web/guest/markets-publications-el-day-ahead-market	HEnEx publishes aggregated B/S hybrid curves and block orders status data (current in dry-run period).
HUPX	YES	PNG	https://hupx.hu/en/market-data/dam/aggregated-data	
IBEX	YES	XLSX and through GUI	http://www.ibex.bg/en/market-data/dam/aggregated-curves/#data-chart	
OKTE	YES	PNG, JPG, PDF and SVG vector image	https://www.okte.sk/en/short-term-market/published-information/daily-stm-results/#date=2020-09-16&periodes=0	
OMIE	YES	GUI, CSV,XML,JPG	https://www.omie.es/en/market-results/daily/daily-market/aggragate-suply-curves	
OPCOM	YES	PDF, XML, CSV	https://www.opcom.ro/rapoarte/pzu/curbe_agregate.php?lang=en	
OTE	YES	XLSX, XML	https://www.ote-cr.cz/en/short-term-markets/electricity/matching-curves?set_language=en&hour=1&date=2020-09-16	
SEMOpx	YES	XML	For current: https://www.semopx.com/market-data/static-reports/?page=2&sort_by=PublishTime&order_by=DESC&name=&group=Market+Data&date_from=&date_to=&MARKET=&PUBLICATION=&RUN_TYPE=&PERIOD_TYPE=&page_size=20 For older than 2 months: URL: https://www.semopx.com/documents/general-publications/BidAskCurves.zip	They are published for each of our areas (NI & ROI). They aren't aggregated for the Island of Ireland. They are published for each auction D+1. Both our regulators have granted SONI and EirGrid as NEMOs an approval to our request that SDAC publication of aggregate SEM bid/offer curve is delayed until one day after publication of day-ahead market results (i.e. D+1).
TGE	NO			Market results are published on TGE website. Publication in accordance with ACER requirements requires arrangements with all NEMOs operating in the PL MNA
EPEX	YES	CSV	https://www.epexspot.com/en/market-data	
EXAA	Not applicable			EXAA operates in a multi-NEMO-environment, where the publication of one NEMO's aggregated curves does not completely fulfil the needs of market stakeholders. For this reason, aggregated curves for EXAA are currently made available only to its market participants via the EXAA trading system.
Nasdaq	Not applicable			Nasdaq not yet operational
Nord Pool EMCO	Not applicable			Nord Pool EMCO operates in only multi-NEMO-environments, where the publication of one NEMO's aggregated bidding curves does not fulfil the requirements put forward by the market stakeholders.