ENSURING SIDC CONTINUOUS TRADING STABILITY THROUGH EFFECTIVE AND FAIR CORRECTIVE MEASURES – FEBRUARY 2026

BACKGROUND

Since 2024, the Single Intraday Coupling (SIDC) platform has been experiencing order volumes significantly above levels originally envisaged in the platform's Service Level Agreements (SLAs). This development has been **anticipated**, yet necessary performance improvements have not been implemented at the pace required to offset the negative impacts on algorithmic performance caused by significant market growth.

Since XBID went live in 2018, Nord Pool has been continuously monitoring the activity of its market participants, and their potential impact on the performance of the system. Over time, Nord Pool has also implemented load-management measures. In addition, following the critical SIDC infrastructure incident on the system provider side of **6 September 2025**, Nord Pool introduced additional extraordinary measures to safeguard overall system stability, reducing its daily order load by approximately **around 2.5 - 3 million orders per day**.

Nevertheless, after an initial reduction in overall XBID transactions following Nord Pool's initiative, **aggregated order volumes on SIDC soon returned to their previous levels and have continued to increase thereafter**. Although the exact causes should be investigated further, Nord Pool believes it is possible that the reduction in load on Nord Pool's platform was partially absorbed by other exchange venues' growth, and/or that market participants shifted their volumes from Nord Pool to other competitive NEMOs.

LIMITATIONS OF ORDER-TO-TRADE RATIO (OTR) MEASURE

To tackle the performance degradation of the SIDC algorithm, there are several load-management measures that can be implemented. One of them is Order to Trade Ratio (OTR), which is defined as the number of orders divided by number of matched trades.

Nord Pool argues that OTR applied to one NEMO, a subset of NEMOs or all NEMOs at the same time is *ineffective* and *distorts competition* and cause *unjustifiable economic damage to market participants*.

This measure is *ineffective* because:

a) it does not address the root cause of system performance degradation, which is the increasing number of matched trades, particularly during peak times.

b) irrespective of whether it is applied to one NEMO, a subset of NEMOs or to all NEMOs at the same time, it allows market participants to shift their Order Transaction volumes from NEMOs that reach their OTR thresholds towards NEMOs with more headroom. As a result, OTR does not limit the highest intensity participants but merely allows them to shift their volumes to other exchange venues with a lower OTR. This means that their volumes are shifted across NEMOs, while the cause of the performance degradation remains untouched.

c) Market Participants reported that, in the past, when faced with OTR, they placed small lot-sized orders (e.g. 0.1 MWh), which automatically resulted in lower OTR but dramatically increased the number of orders and trades in XBID. This is the opposite of what the measure seeks to achieve.

OTR distorts competition because:

- Market Participants shift their volumes between NEMOs because of the OTR limits, rather than service quality, price or performance.
- It targets certain NEMOs because of the kind of members that choose to trade with them. The OTR of a NEMO depends on the type of members they have (who can range from asset-based members to very active algorithmic liquidity providers, all of whom perform a useful function for the SIDC).

Ultimately, as OTR is ineffective in addressing performance degradation, and restricts trading activity, it causes *unnecessary and unjustifiable economic damage.*

REGULATORY CONSIDERATIONS

These considerations are central to decisions by NEMOs and TSOs when determining corrective measures.

Nord Pool understands that EU Competition Law, specifically Article 101.3 TFEU, allows, in exceptional circumstances – including the situation potentially faced in SIDC – to permit measures that restrict or distort competition, provided that these are necessary, do not eliminate competition and deliver economic efficiency and benefits (such as the safe operation of the SIDC market), which outweigh their anti-competitive effects.

A corrective measure which, by its design, cannot effectively address the performance degradation of the SIDC algorithm (for example due to migration of trading volumes from one platform to another), is less likely to meet the requirements of Article 101.3 TFEU as its anti-competitive effects could outweigh its benefits.

RECOMMENDED MEASURES (PHASED APPROACH)

Nord Pool recommends implementing a phased adoption of the measures shown below. These are listed in order of effectiveness and ease of implementation (See Appendix I). Each measure should be applied individually, and each further measure should be adopted only if the preceding one does not restore algorithm performance to the required level.

Measure I – Reduce Order Book Depth

The first measure to implement is **a reduction of the order book depth of the entire SIDC continuous trading**.

Step 1 – Reduce order book depth to 20 levels.

Step 2 – If insufficient, reduce stepwise down to 5 levels (see Appendix II).

This measure reduces the number of messages going through one of the key components of the XBID system and hence reduces the pressure applied to it. Alleviating such pressure would, according to recent analysis, reduce a critical bottleneck in the central platform.

Measure II – Adjust Price Tick Size

If the previous measures combined cannot restore performance, the **'price tick size'** should be reduced from 0.01 € to, for example, 0.1 €.

In our understanding, this measure can reduce the number of smaller trades and hence the pressure on the central platform.

In future, we could propose adding a functionality in XBID which replicates the financial market's tick-size management as described in MIFID II article 49. This enables tick sizes to be adjusted according to price levels: the price tick increases when the price decreases and vice-versa. This mechanism is widely used in financial markets and successfully supports algorithmic stability.

Measure III – Limit Order Transactions During Peaks

If all the combined measures above are insufficient, the market participants' **number of order transactions (OT) during peak situations should be limited.**

Step 1 – Limit participants to 50 OT per second.

Step 2 – Reduce to 20 OT per second if needed.

One of the biggest performance challenges that the XBID system faces today is that it is subject to peaks in trading activities. Reducing these peaks would be a very effective measure to stabilise the performance.

DURATION AND TRANSPARENCY

Please note that, in accordance with Article 12 of the Algorithm Methodology currently in force, corrective measures are temporary, last-resort tools that shall be applied for a maximum of eight months – extendable if the performance of the algorithm is not restored.

All NEMOs must announce publicly any introduction or discontinuation of a corrective measure at least seven calendar days before its introduction or discontinuation.

Some of the above proposals are based on Nord Pool data, meaning that they could differ slightly at central XBID level. Nord Pool is actively working to ensure greater transparency on some key parameters from the central system provider.

CONCLUSION

SIDC stability is a **shared responsibility**. Nord Pool has demonstrated that meaningful order transaction reduction and technical mitigations are feasible.

However, OTR **applied to one, several or all NEMOs** is **ineffective** because it **does not restore algorithm performance**, **distorts competition between NEMOs and unjustifiably damages market participants.**

Nord Pool therefore calls for the phased adoption of the measures described above, which:

- Directly address system risk
- Preserve liquidity and competition
- Apply equally to all members across SIDC
- Align with proportionality and regulatory good practice
- Protect the long-term health of the European intraday continuous market

In parallel with these measures, it is crucial to continue improving the performance of the central SIDC system to ensure it remains stable in future.

Nord Pool remains committed to constructive engagement with market participants, TSOs, NEMOs and regulators to achieve these objectives.

APPENDIX I : IMPLEMENTATION EFFORT VS EFFECT MATRIX

Measures are positioned based on estimated effect on algorithm performance and implementation complexity. The proposed implementation follows a stepwise application approach.

Table 1: Corrective Measures ranking

	IMPLEMENTATION EFFORT →
↑ HIGH EFFECT / LOW EFFORT – QUICK WINS	**HIGH EFFECT / HIGH EFFORT – STRATEGIC**
I. Order Book Depth Reduction Reduce each NEMO’s order book depth to 20 levels initially, with stepwise reduction to 5 if insufficient. *Step 1 – ~35% update reduction at depth 20 (see Appendix II)*	**III. Order Transaction Throttling** Limit participants to 50 OT/sec during peak, with further reduction to 20 OT/sec if needed. *Step 3 – Requires fair allocation mechanism & monitoring* **II. Price Tick Size Adjustment** Increase tick size from 0.01 € to 0.1 €. Future: dynamic MiFID II Art. 49-style tick management. *Step 2 – Applied if Measure I is insufficient*
↓ LOW EFFECT / LOW EFFORT — EASY ADDS	**LOW EFFECT / HIGH EFFORT – RECONSIDER**
	IV. Linked Orders Removal Remove Linked Order functionality from the XBID algorithm entirely *Following the SIDC project assessment – **this potential measure did not show any positive performance effect** – therefore Nord Pool proposes not to implement it.*

Table 2: Proposed Application Sequence

1	**2**	**3**
OB Depth → 20	**Tick Size → 0.1€**	**OT Throttle**
Reduce order book to 20 levels. Stepwise to 5 if needed.	Increase price tick size to reduce order granularity.	Limit to 50 OT/sec per participant, then 20 if needed.
STEP 1	**IF STEP 1 INSUFFICIENT**	**IF STEPS 1+2 INSUFFICIENT**

Note: Positioning reflects preliminary assessment. Actual impact and effort may vary depending on XBID system architecture constraints, regulatory approval timelines, and coordination requirements across NEMOs and TSOs. Measures I–III follow a sequential application approach.

APPENDIX II: ORDER BOOK DEPTH REDUCTION EFFECT ANALYSIS

Objective

This analysis quantifies the distribution of order book updates across price levels to assess the impact of reducing the published order book depth. The goal is to determine how many order book update messages could be eliminated by limiting the number of visible price levels, and to evaluate whether the current depth is effectively utilised by market participants.

Table 3: Scope and Parameters

Parameter	Scope
Bidding zones	Denmark and Germany
Side analysed	BUY
Observation period	10 February 2026 – 14 February 2026
Total updates analysed	~87 million of order book updates

Methodology

The analysis was performed on public order book data (live stream or stored event replay) using the following approach:

1. **Snapshot initialisation** – An order book snapshot was obtained from the public data feed (or reconstructed from an arbitrary starting point by replaying incremental updates).

2. **Filtering** – Only updates matching the selected bidding zones, contracts, and the BUY side were retained.

3. **Sorting** – The snapshot was sorted in ascending price order (consistent with the convention where the best buy price occupies the highest-numbered position).

4. **Update tracking** – Each time the order book was updated, the position (rank) of the update, was recorded.
5. **Distribution construction** –A cumulative distribution was built from the position counters. See Table 4 below, which shows an example where 100 updates were processed with different position counters.

Table 4: Example of distribution construction

Position	Hits	Cumulative share
1	5	5%
2	30	35%
3	25	60%
4	30	90%
5	4	94%
6+	6	100%

This means 35% of all updates land in the top 2 positions, 60% in the top 3, and so on.

6. Key Findings:

The analysis reveals the following distribution of order book updates across price levels:

- ~50% of updates occur at positions 1–10 (the 10 best price levels).
- ~80% of updates occur at positions 1–40.

7. Implications for Order Book Depth Reduction:

Based on the observed distribution, reducing the published order book depth from the current level 50 to 20 price levels would result in approximately 35% fewer order book update messages being disseminated to market participants.

This reduction in message volume could yield measurable benefits in terms of XBID system performance, while retaining visibility of the most actively traded price levels.