ONE PAGER:

Ensuring System Stability in Europe

The Role of Energy Storage in Providing Inertia

As wind and solar are spreading over conventional generation, system inertia is declining. Lower inertia increases the grid's exposure to rapid frequency and voltage disturbances. As a result, Europe lacks a harmonised EU framework to assess inertia needs, a non-discriminatory technical capability requirements & competitive procurement framework, as well as long-term supply plans.

How can Europe consistently assess inertia needs?

Develop a harmonised European methodology

An EU common methodology for assessing inertia needs should be developed by the European Commission. This methodology would address Member States' fragmentation by monitoring operational inertia and defining a minimum inertia criterion per Member State (H > 2 MWs/MVA for more than 50% of the year by 2035). It should enable TSOs and NRAs to consistently identify inertia needs, share data via ENTSO-E's Transparency Platform, and facilitate informed, Europe-wide planning for the deployment of energy storage.

How can the EU framework technically ensure all ESS technologies can provide inertia?

Adopt the Network Code on Requirements for Generators (NC RfG 2.0)

The adoption of the amended NC RfG 2.0 should be accelerated by the European Commission so that energy storage assets can contribute to system stability on a level playing field. ENTSO-E, within its Implementation Guidance Documents for Member States, should consider technical requirements for different Energy Storage systems.

How can inertia be procured in a cost-efficient and technology-neutral way?

Define EU market-based procurement guidelines

EU common guidelines supporting national TSOs and NRAs inertia procurement as a market-based service should be promoted by the European Commission, aiming to ensure cost-efficient and technology-neutral provision of inertia on a level playing field. The framework should ensure transparent tenders, clear reliability standards, and equal access for all eligible storage assets, while safeguarding fair competition and system stability.

How can Europe ensure a long-term and reliable supply of inertia?

Inclusion of energy storage technologies in strategic deployment planning

All new energy storage projects delivering inertia should be included into the EU's 10-year network development plans by ENTSO-E, based on future system inertia needs. This would foster investment and innovation in energy storage solutions. The European Commission should address financial incentives, such as Innovation Fund auctions, multi-year contracts, and tailored PPAs, to ensure fair competition, and provide long-term investment security of supply.