Distribution System Operator Capabilities (EB-2025-0060)

OEB
Hybrid Meeting

Richard Sarti
CEO
richard.sarti@nodesmarket.com

Svein Jørgen Sønning
Head of Technology
svein.jorgen.sonning@nodesmarket.com

Unlocking flexibility. Driving sustainability.

Introduction & Agenda

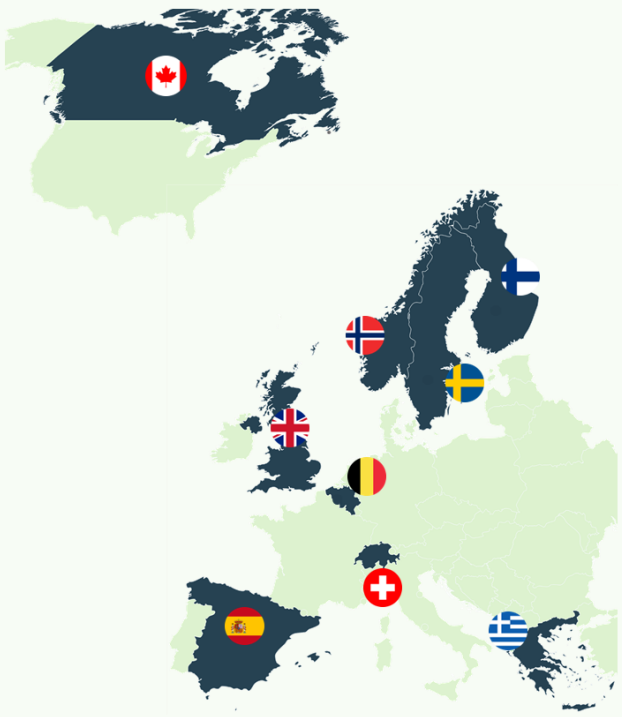
NODES is a Norwegian technology company at the forefront of the energy transition, pioneering innovative solutions for a more sustainable and resilient electricity system.

Our award-winning market design and technology unlock the value of flexibility in power networks, enabling a more secure, affordable and efficient grid for the future.

Reservation contracts
3.3 TWh

Activated flexibility
7.3 GWh

Assets approved
13 000+



22
System Operators

110+
Flexibility Providers

Agenda

- Background for the response
- Feedback to the phased approach and the journey towards a flexibility market
- DER enablement – building flexibility liquidity over time
- Coordination as an enabler for value stacking of DERs
- Local needs, requirements and adaptation
- Key messages

Background for the consultation response

Experience in Europe

In Europe, NODES is collaborating with multiple System Operators and FSPs to establish flexibility markets aimed at managing system bottlenecks in a coordinated manner, thereby creating a smarter and more efficient energy system.

As the energy system decentralises, a new digital value chain is emerging, enabling companies like NODES to collaborate with utilities and technology providers to support System Operators through market-based mechanisms and operational tools that address grid challenges.

NODES is working with local regulators and utilities to implement market-based approaches for engaging DERs in advance of the upcoming Network Code implementation.

Experience in Canada

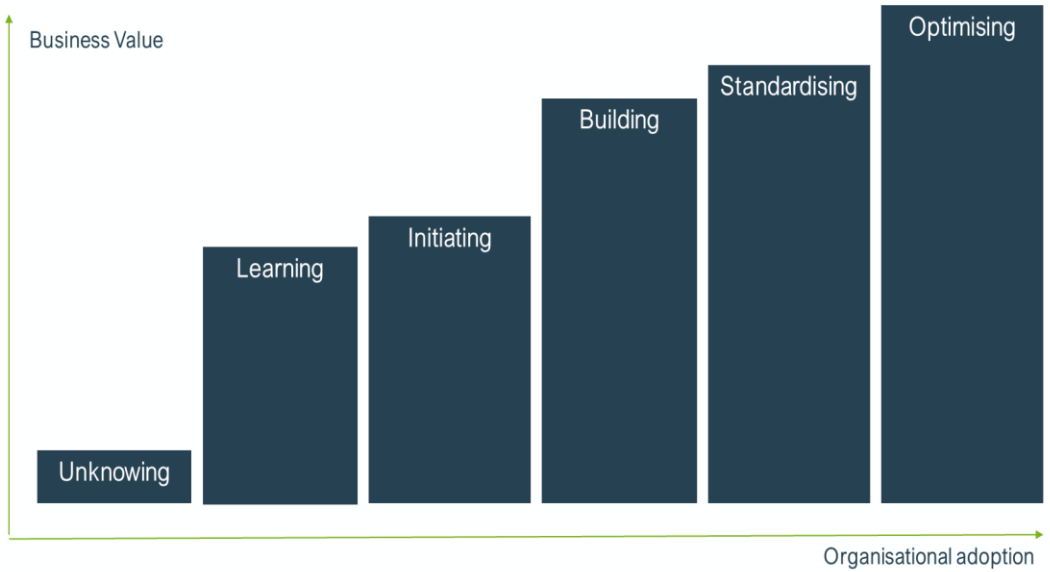
NODES' first Ontario initiative, funded by the IESO GIF, was a collaboration with Powerconsumer and two local utilities to simulate a transactive energy model targeting peak capacity at five locations. The project laid the foundation for a BCA to evaluate non-wires alternatives.

Through the IESO GIF, NODES partnered with IESO and Essex Powerlines to establish a flexibility market in Leamington, enabling DERs to deliver non-wires solutions. Local assets were dispatched to manage grid constraints and simulate coordination with IESO's RTEM.

More recently, NODES has been working with Hydro One to support its customer engagement program, using a stepwise approach to establish a market for procuring Non-Wires Services. This initiative aims to prevent future congestion issues while ensuring broad availability of DERs.

Feedback to the phased approach

A System Operator (SO) journey on Flexibility



- Enable mechanisms to create a **clear measurable path** to a competitive market, anchored in **Transparency**, **Technology Neutrality** and **Price Formation through open competition.**
- Excessive focus on transitional approaches may **impede progress** toward full market adoption.
- Market models aren't inherently complex—use **reservation contracts** alongside programs to secure resource availability

2025

HydroOne
Flexibility Initiative

1 LDC
4 FSPs

Hydro One has adopted a phased approach to establishing a flexibility market and has now begun securing Non-Wires Services to ensure capacity availability and test technical feasibility as part of its flexibility procurement strategy.

2025

FinFlex

1 TSO
1 DSO
14 FSPs

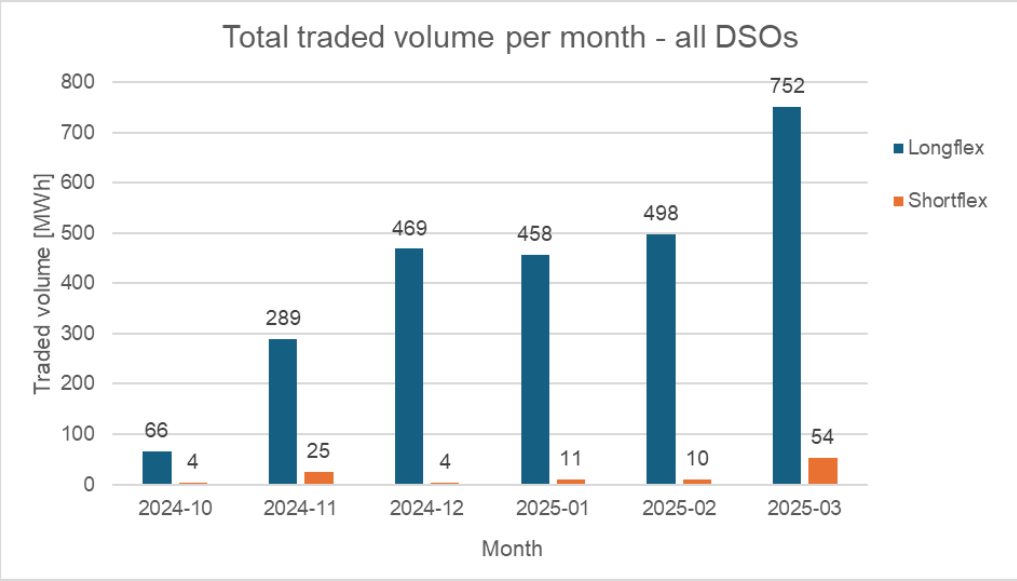
Asset registration started following NRA Approval

Designed to complement existing markets in Finland, the Finnish market was established in just 20 days and went live following regulatory approval of the market rules.

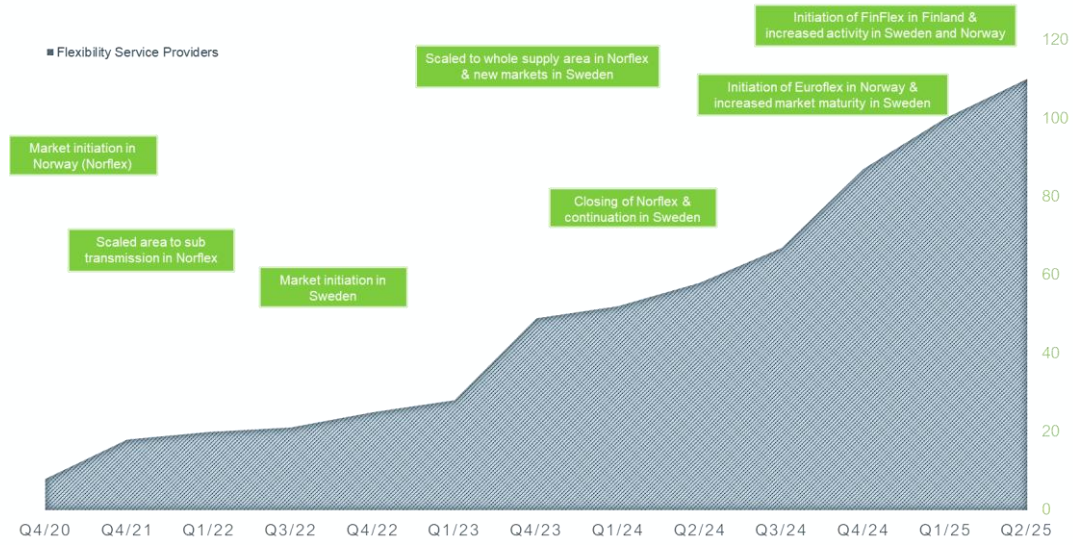
DER enablement – building flexibility liquidity over time

- Identifying, testing, and scaling customer flexibility
- Customer engagement to understand willingness, capability and barriers to participation

Flexibility procurement in Norway – winter 24/25



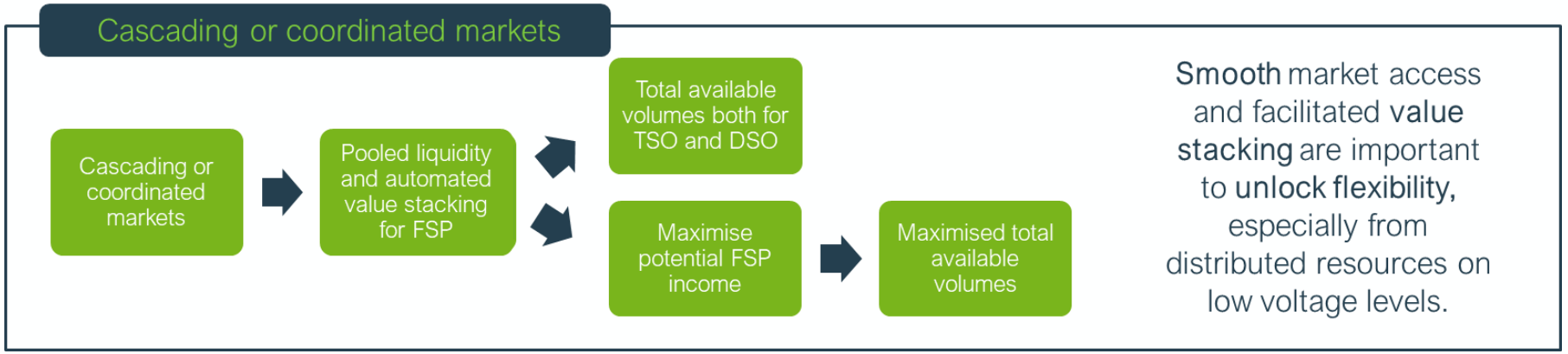
Growth in Flexibility Service Providers in the Nordics



Coordination as an enabler for value stacking of DERs

Flexibility available to all levels of the grid

- DERs can stack value across wholesale and DSO markets
- Flexibility procurement – two distinct processes that can be developed in parallel
  - LDC flexibility procurement and market establishment
  - IESO-LDC coordinated flexibility procurement
- Overlapping programs and coordination with embedded and neighboring Local Distribution Companies



Local needs, requirements and adaptation

- Establish incentives and frameworks that support innovation and new business models
- Involve DER owners and aggregators from day one to ensure alignment and collaboration
- Encourage learning through practical experience, including room for experimentation and failure
- Maintain momentum – ensure continuity beyond pilot phases
- Shaping a more sustainable and scalable market approach
- Develop a clear pathway for transitioning from technical pilots to business-as-usual market implementation

Key messages

- Affordability
  - Market-based approach
  - Technology neutrality
  - Phased market approach
- Security
  - DER liquidity
  - Non-wires solutions
- Reliability
  - Market access for DERs
  - Regulatory model
- Clean electricity
  - Transparency and customer focus
  - Inclusive approach

We recommend that Step Two include a clear requirement for any procurement mechanisms or programs to demonstrate a measurable pathway toward a competitive market framework—anchored in transparency, technology neutrality, and price formation through open competition.

Step Two should allow phased implementation of flexibility procurement from multiple aggregators via a centralized solution, alongside voluntary programs. This would foster early market experience with price formation and support a smoother transition to a more developed DSO-model (Step Three).

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