

Bengal Chamber

Introduction to Nord Pool

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Hans-Arild Bredeesen
CEO, Nord Pool Consulting

**NORD
POOL**



Europe's leading power market

Efficient, simple and secure power trading
across Europe.

- The world's first electricity exchange.
- The world's first multinational electricity exchange.
- A driving force in European market integration through XBID and PCR projects.
- A global thought-leader in the field of physical power trading.

**NORD
POOL**

Nord Pool at a glance

- More than 360 customers from 20 countries trade on Nord Pool's markets.
- Nominated Electricity Market Operator (NEMO) in 15 European countries.
- Offices in Oslo, Helsinki, Stockholm, Tallinn, London and Berlin.
- Over 140 employees work at Nord Pool.
- 524 TWh of power was traded in 2018.



Nord Pool Consulting

Ambassadors for modern power market across the world

Unique competence in a wide span of topics



Market design

Specialised competence in overall market design and structuring, with emphasis on local needs

Rulebook development

Development of rule books for all market participants to ensure well-functioning markets



Regulation

Deep insight into regulatory frameworks with continuous lobbying efforts towards regulators and politicians

Market systems

Provision of power exchange backbone systems and MCO services



Competence building

Nord Pool Academy is a vehicle to educate customers and stakeholders on internal and external developments

**NORD
POOL**

... and me

25 years experience from international power market reforms

Hans-Arild Bredesen
CEO, Nord Pool Consulting

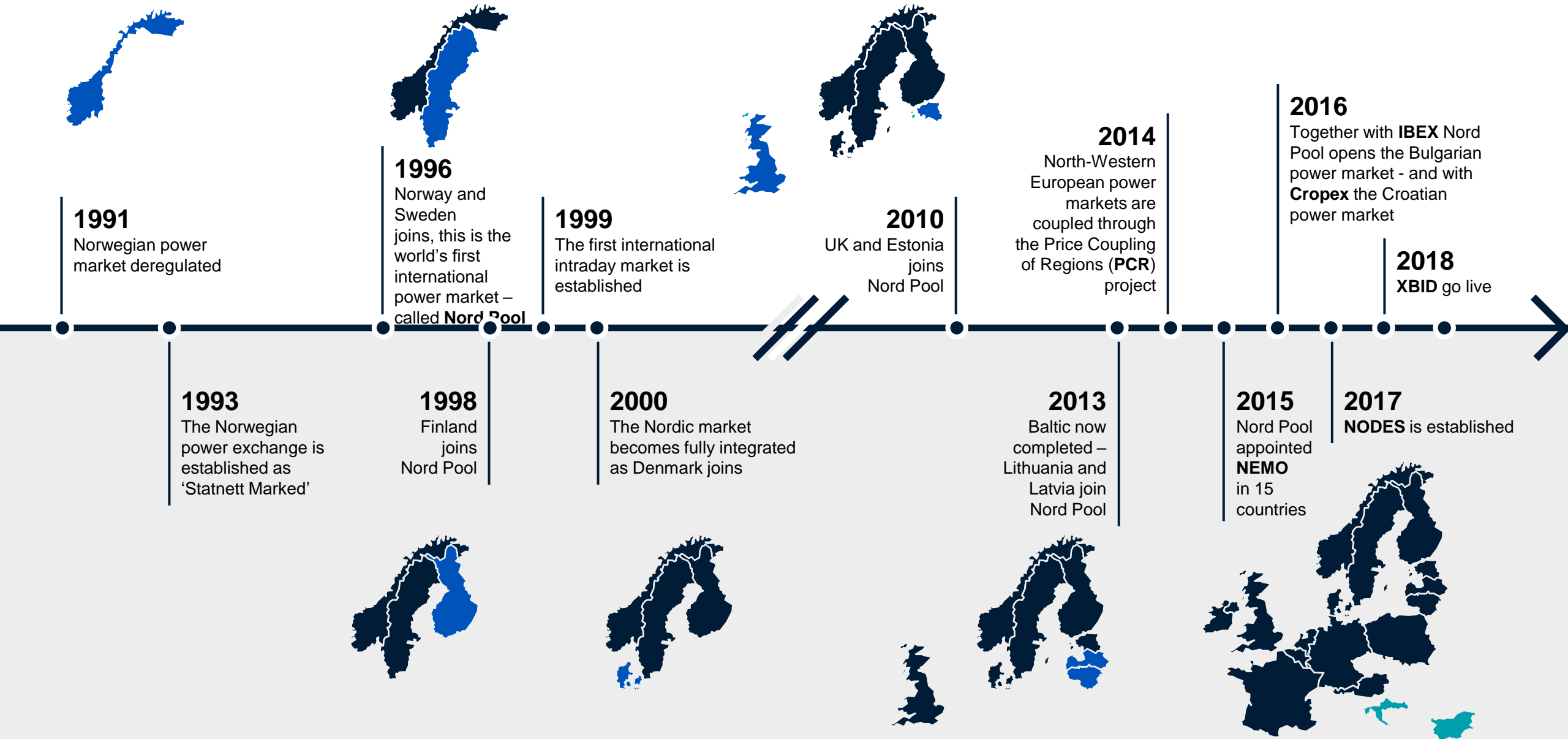


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- BSc in Computer Science
- Involved in the electricity deregulation process since 1992.
- Technical project manager for the market systems at Nord Pool
- Product manager for wholesale energy market participant systems for the Nordic market.
- Wide international experience from key roles in the development of strategies for trading, scheduling and settlement systems for PXs and TSOs in California, Ireland, India, Romania, Turkey, Ukraine, Southern Africa and South-east Europe.
- **SAPP project manager and partner since 2006**
- **Implementing a Wholesale Market Opening for SEE (South East Europe)**
- **Project manager for the Detailed Project Report leading to the markets in India (2005-6)**
- **Author of "Power to the People"**
- **Board member of NODES – building local flexibility markets**

A journey towards a European electricity market





Products and Services

Nord Pool delivers day-ahead and intraday trading, clearing and settlement to customers.

N DAY-AHEAD

Our day-ahead trading platform offers single hourly blocks, block orders, minimum acceptance ratio, linking, flexi orders and exclusive orders.

N INTRADAY

Through the European Cross-Border Intraday Market (XBID) solution, customers can trade 12 intraday markets in one and get access to a large intraday liquidity pool.

N CASS

Nord Pool offers an efficient in-house clearing solution to all customers, with access to all data and information they require.

N COMPLIANCE

We have developed our compliance services and automated reporting tools to help our customers meet obligations under REMIT and Transparency regulation.

Market and prices: the way forward in EU

PRICE SIGNALS REFLECTING THE REAL COST OF ELECTRICITY



Prices should **drive power usage**, dispatch and investments
Prices should thus **reflect the actual situation** of the system

Enable scarcity prices in all market timeframes (DA, ID, Balancing)

Imbalance prices to be more cost-reflective (up to VOLL in times of scarcity)

Introduce dynamic pricing at retail level

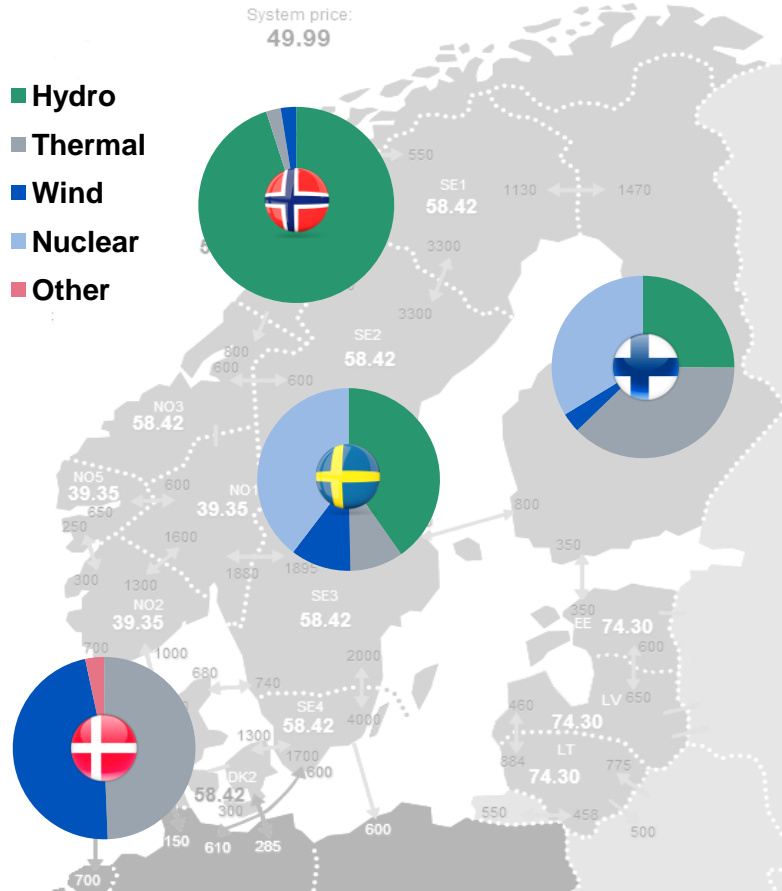
Markets should value flexibility and all system services

Allow development of risk-hedging products to protect oneself against price volatility

Why cooperate across borders? The Nordic Model

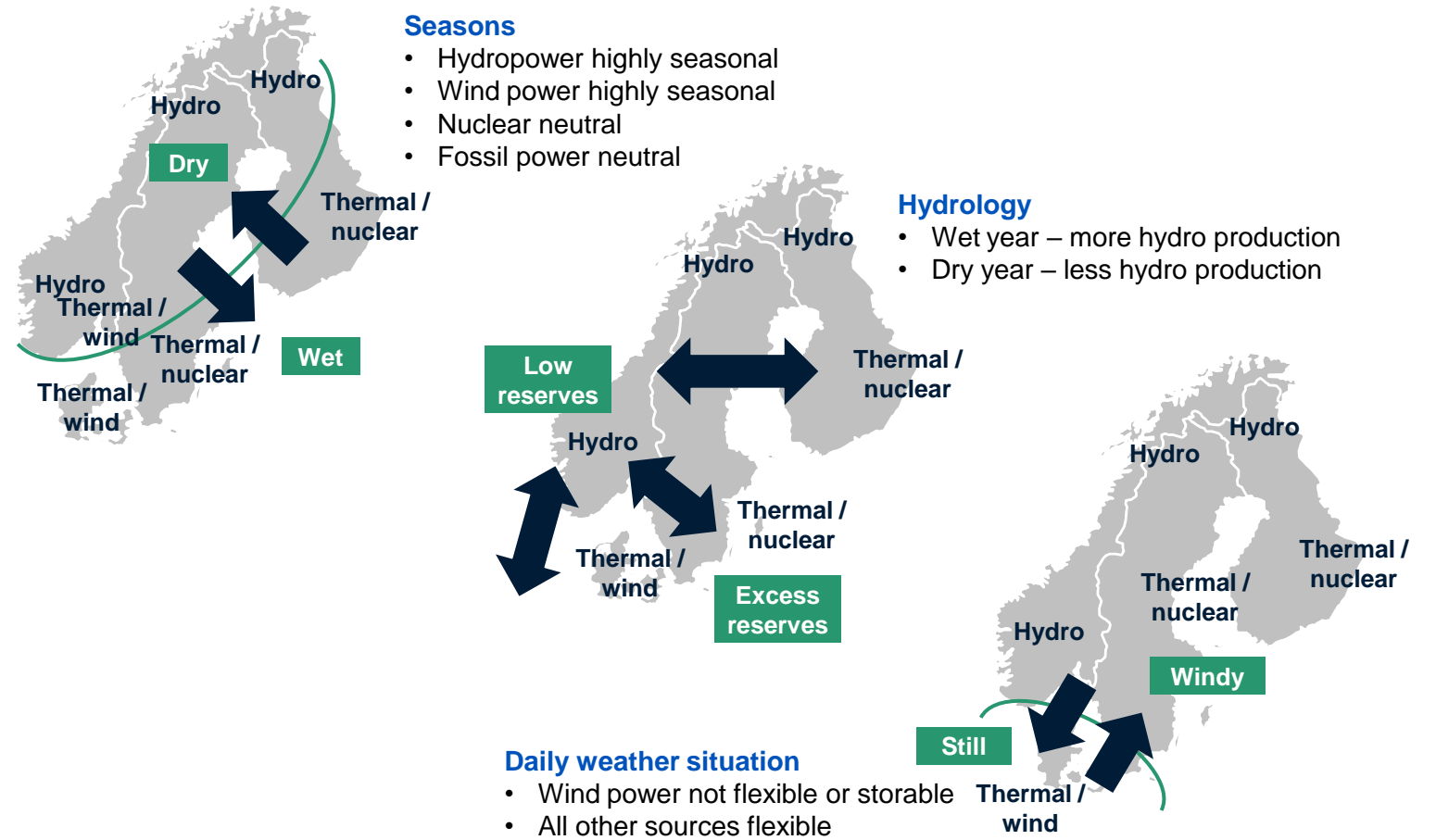
Connecting the Nordic countries secures optimal use of natural resources and more stable prices

Nordic power production capabilities

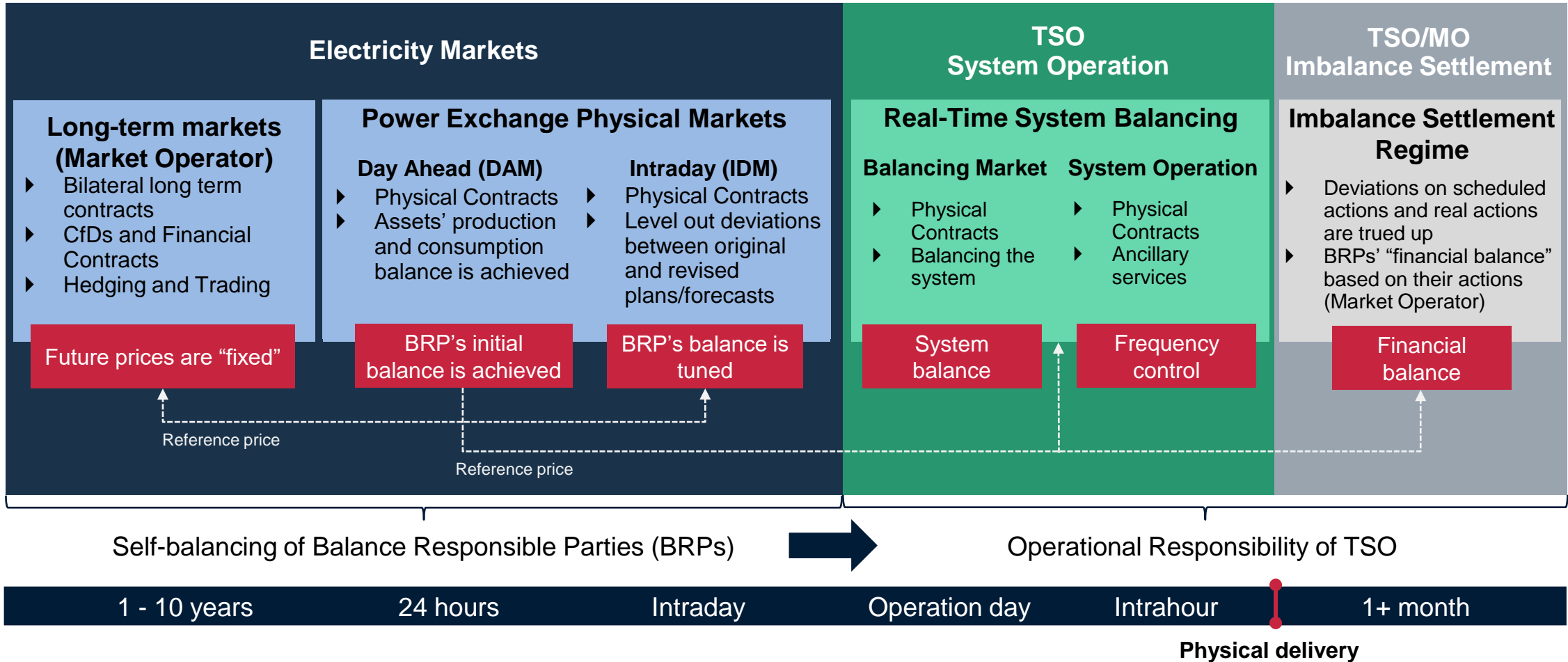


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Connecting markets with differing production profiles provides stability to the system



The European target model contains several power market segments for individual purposes



Day Ahead prices are determined simultaneously across Europe

Current state of play

The **EU Internal Energy Market for electricity** covers Day Ahead (DA), Intra-Day (ID), Balancing and Forward Market.

Price Coupling of Regions (PCR)

- The initiative of 7 PXs to develop a single price coupling solution, launched Feb 2014
- EUPHEMIA algorithm

Multi-Regional Coupling (MRC)

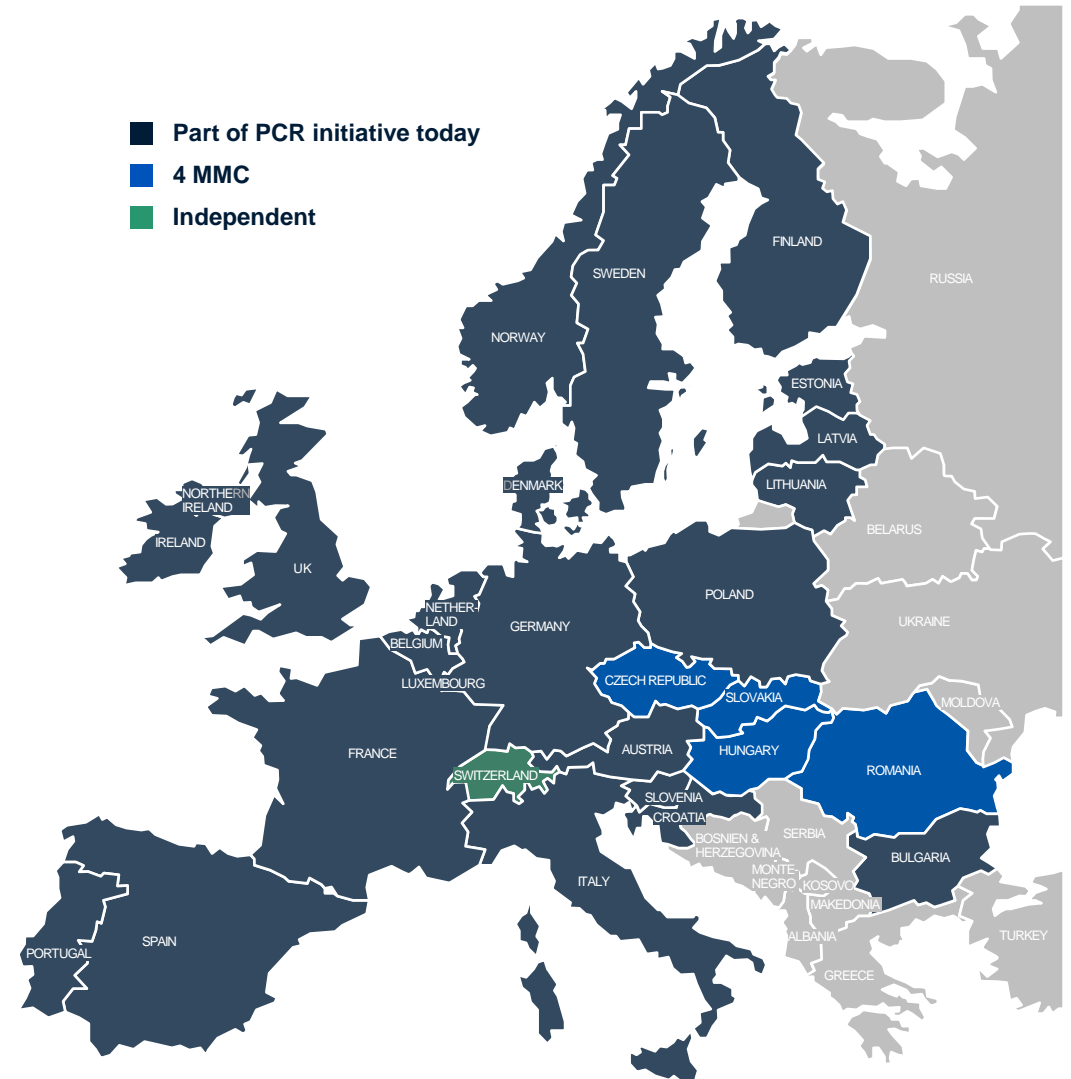
- Coupling of regions and efficient management of available transmission capacities between areas and countries
- Implicit capacity allocation

Cross Border Intraday Trading (XBID)

- First wave launched in June 2018, third late 2020.

Giving:

- **Less CO2 emissions**
- Better competition
- Saved costs
- **Higher security of supply**



NORD POOL CONSULTING

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