



ASSOCIATION OF POWER EXCHANGES



APEx Annual Conference 2023
Sep 20-22, 2023
ISTANBUL, TURKEY

APEX Objective

To facilitate the development and communication of ideas and practices in the operation of global competitive electricity markets. One of its primary intentions is to provide a platform for the sharing of information between its members.

Lina Masiuliene

*Director Serviced Markets
Nord Pool*



Market Reform – Finding the Way Forward for Europe

Europe has seen greatly increased interest in how power markets work, from governments, special interest groups and individuals across the world – heightened by the unprecedented high natural gas and electricity prices and general price volatility seen over the past year. As a consequence, the European Commission recently presented a much-anticipated proposal for amendments to European electricity market design.

Key among the proposals was addressing the European energy and electricity supply situation by enabling acceleration of the deployment of onshore renewables and supporting off-shore renewable generation projects. To achieve this the Commission proposed promoting Transmission System Operators (TSOs) to address grid limitation challenges and issuing Transmission Access Guarantees (TAGs) that would facilitate project deployments, with the increase in renewables supported with advancement and promotion of flexibility markets. Promoting alternatives to gas to keep the electricity systems in balance anticipates that demand response, storage and other sources of flexibility must be put in a situation where they can compete effectively, so that the role of natural gas in the short-term market to provide flexibility is progressively reduced.

The EC noted the need for developing new products to foster demand reduction and shift energy at peak times. To do this (through demand response, storage and other flexibility solutions) at peak times, a peak shaving product could be defined and considered as an ancillary service that could be bought by system operators. The Commission felt that better consumer empowerment and protection should be ensured by increasing possibilities for collective self-consumption and electricity sharing.

The widely accepted consensus expressed within the EC proposals is that European energy markets

In the Spotlight

THE ROLE OF NEMOs IN THE EU SINGLE DAY-HEAD AND INTRADAY COUPLING

By Rafael Gómez-Elvira

(Chairman of the NEMO Committee and Director of Public Affairs & Marketing in OMIE)

In 2023 the European Union (EU) is celebrating the 30th anniversary of the European Single Market. A supranational area of free movement of goods, services and people that has provided Europe with the highest degree of political stability and unity ever known.

In this context, since the early 1990's, the EU has been working to liberalise and integrate its electricity markets to deliver benefits to the European energy consumers in terms of better prices and more choice.

The market liberalisation and integration process has been supported by a sequence of EU legislative packages, initially defining common rules for the electricity markets and then the ways in which these markets were to be integrated. Over the last ten years, legislation has been complemented with more detailed technical rules as, for example, the so-called Network Codes.

Organised marketplaces – and, in particular, power exchanges – have played a key role in the success of this process. For example, this year Nord Pool and OMIE are celebrating their 30th and 25th anniversaries, respectively.

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Welcome to the website of all Nominated Electricity Market Operators (NEMOs)



Figure 1. Subscribe to www.nemo-committee.eu and receive the all NEMO Committee newsletters.

In 2015, the European regulation established the figure of Nominated Electricity Market Operators (NEMOs) as the responsible entities to perform the market coupling operation (MCO) function in their respective Member States and bidding zones. Therefore, all Member States had the obligation to designate at least one NEMO to ensure that all national markets would become coupled into an EU-wide Single Day-Ahead and Intraday Electricity Markets.

In 2019, for the first time, NEMOs were formally recognised by both the Council and the European Parliament as a key component of the EU Electricity Market Design to help promote the decarbonisation of the European energy sector. NEMOs are part of the Regulation 2019/943 on the internal electricity market.

Against this background, the NEMO Committee is the cooperation platform of the 17 NEMOs that perform the MCO function and materialises the most tangible achievement of the Internal Electricity Market. Under this framework, NEMOs in cooperation with TSOs have achieved the complete geographical extension of the day-ahead and intraday target model to all the EU.

EU Single Day-Ahead Coupling Market

The aim of Single Day-ahead Coupling (SDAC) is to manage a single pan European cross zonal day-ahead electricity market. The integrated day-ahead market increases the overall efficiency of trading by promoting effective competition, increasing liquidity, and enabling a more efficient

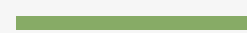
have proved their robustness in recent years. The unprecedented price volatility and increases we saw last year have been caused by energy supply disruption rooted in the Russian invasion of Ukraine. Overall, the liquidity of the European day-ahead and intraday markets is healthy and growing. However, taking into account the ongoing evolution of markets, the accelerating introduction of renewables and the backdrop of energy and electricity price shifts and volatility, the EC proposals noted that improvements in long- and short-term electricity markets should take place.

Increased interest in hedging as a result of price volatility, led to the Commission noting the need to support long-term markets and participants' hedging needs by introducing virtual price hedging hubs to increase liquidity, as well as promoting Power Purchase Agreements (PPAs) and two-way Contracts for Differences (CfDs).

The EC also noted proposals for advancing intraday markets: shifting the cross-border intraday gate closure time closer to real time, mandating liquidity sharing (pooling) between market operators (power exchanges and flexibility market operators) and linking flexibility markets to the wider European Single Intraday Coupling (SIDC) intraday market.

Also, updates and enhancement of the integrity and transparency regulations of the energy market were proposed to take into consideration evolving wholesale energy market design in recent years: new commodities, new products, new actors, new configurations and improved data reporting.

The recent EC market design consultation was long-anticipated by a wide range of power market stakeholders, not least power exchanges such as Nord Pool. It is reassuring that the overall good functioning of the short-term markets, with market design which ensures security of supply, efficient operation of the power system – facilitating decarbonization, cheaper electricity, free flow of power between Member States and delivering innovation in products – was recognized and acknowledged. APEx continues to be an effective forum where stakeholder experiences can be shared for the benefit of the on-going evolution of power markets around the world.



Association of Power Exchanges

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utilisation of the centralized and decentralized resources across Europe.

SDAC allocates scarce cross-border transmission capacity in the most efficient way by coupling wholesale electricity markets from different regions through a common algorithm, simultaneously taking into account cross-border transmission constraints thereby maximising social welfare.

In February 2014, the North-Western Europe (NWE) region started operating under a common day-ahead price-coupling using the Price Coupling of Regions (PCR) solution. The same solution was also used at the same time in the SWE region in a common synchronised mode until May 2014 in which the Iberian Market was fully coupled. The first go-live of this coupling included the following countries: Belgium, Denmark, Estonia, Finland, France, Germany/Austria, Great Britain, Latvia, Lithuania, Luxembourg, the Netherlands, Norway, Poland (via the SwePol Link), Sweden, Portugal, and Spain. After that initial go-live, several extension waves were accomplished until June 2021, when the 4M MC region (Czech-Slovak-Hungarian-Romanian coupled market areas) was merged with the rest of Europe. In October 2021, the BG-RO border was also coupled within the SDAC.

Currently, the SDAC handles almost 1700 TWh/year, more than 60% of the EU electricity demand, delivering 10 b€/day of social welfare.

EU Single Intraday Coupling Market

Single Intraday Coupling (SIDC) creates a single EU cross-zonal intraday electricity market. In simple terms, buyers and sellers of energy (market participants) are able to work together across Europe to trade electricity continuously on the day the energy is needed.

As renewable intermittent production such as wind and solar energy increases and distributed resources are being massively deployed, market participants are becoming more interested in trading closer to real time. The Single Intraday Coupling allows all market participants to trade across Europe until one hour before the instant delivery of the electricity.

Being able to balance their positions until one hour before delivery time is beneficial for market participants and for the power systems alike by, among other things, reducing the need for reserves and associated costs while allowing enough time for carrying out system operation processes for ensuring system security.

The first go-live wave was in June 2018 and included 15 countries. A second go-live with seven further countries was achieved in November 2019, a third go-live including Italy in September 2021. In November 2022 the fourth go-live was completed with Greece and Slovakia and meant that Europe’s SIDC was fully coupled.



Figure 2. SDAC geographical scope (source: nemo-committee.eu)

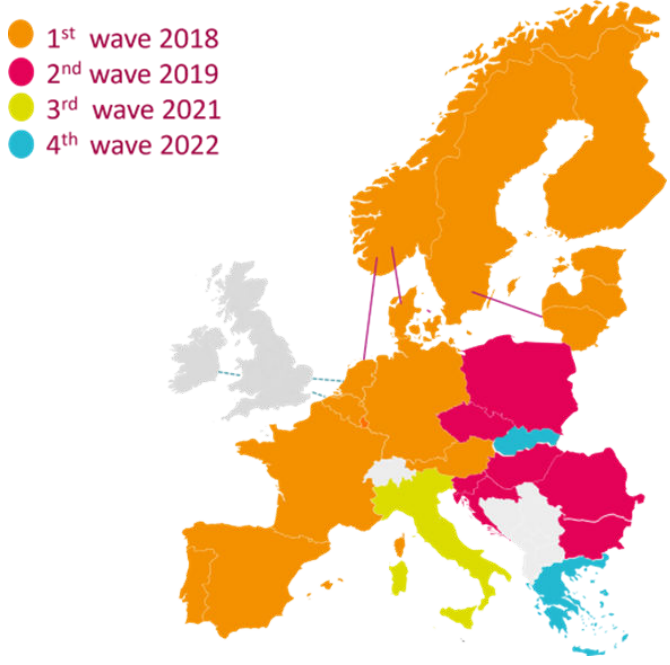
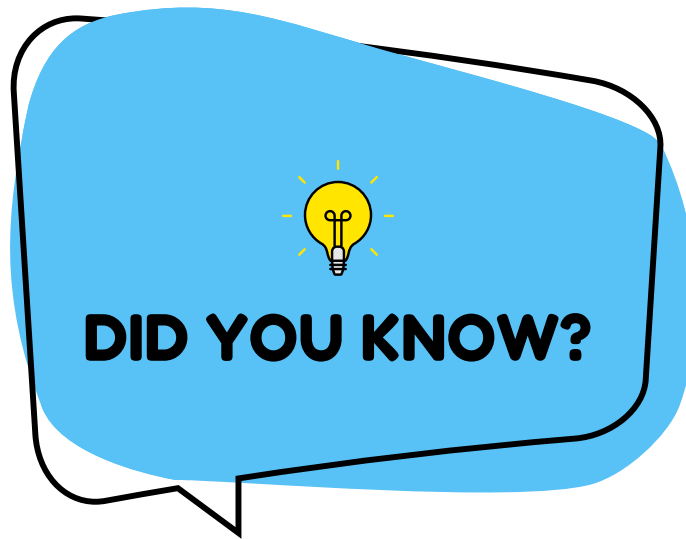


Figure 3. SIDC geographical scope (source: nemo-committee.eu)

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- APEx stands for Association of Power Exchanges.
- APEx was established in 1996 at the first annual conference of the Australia Energy Market Operator (AEMO) in Melbourne, Australia.
- APEx is a non-profit corporation and all 11 APEx Board Directors volunteer their time.
- APEx Board Directors represent areas throughout the world and many attend monthly Board of Director Meetings during off business hours.
- APEx has hosted 26 annual conferences in 20 different countries across 5 different continents.
- The new APEx website will be live mid-2023 and will provide links to industry resources, annual conference papers, APEx resources, membership information, upcoming events and more.
- In 2023, APEx plans to offer opportunities for trainings, additional seminars and of course, another annual conference!

To have your member company featured “In the
Spotlight,” please send an email to:
Katrina.Zarczynski-Magee@pjm.com



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SAVE THE DATE

APEX 2023 CONFERENCE

SEPTEMBER 20-22, 2023
İSTANBUL- TÜRKİYE

Join us in Istanbul, the cradle of civilization and former capital of the Roman, Byzantine, and Ottoman Empires, for a unique three-day event.

Senior APEX Member representatives, sponsors, and industry participants from all over the world will come together to share information, network, and plan for the future of electricity markets.

This year panels will be oriented around:

- **Panel 1:** Integration and Applications of Storage in Markets
- **Panel 2:** Markets and Exchanges facilitating the Energy Transition: Flexibility, Renewables, and Technologies
- **Panel 3:** Regulators' Perspective
- **Panel 4:** Price Formation and Market Design
- **Panel 5:** What is required to ramp up markets for (green) hydrogen? What role can energy exchanges play?

For more information please visit
www.apex2023istanbul.com
or contact us on apex@epias.com.tr

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*Details will be forthcoming and communicated.

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