EEX Nordic Zonal Futures

part of eex group

EEX Nordic Initiative

EEX provides choice for the Nordics

Zonal Futures for all Nordic bidding zones are now **live since 25 March 2024.**

Current set of **Nordic System Price futures remains listed at EEX**.

In addition, the **EEX locational spread** trading functionality are available for trading spreads between Nordic System Price Futures and Zonal Futures as well as between some Zonal Futures and EEX's power futures in other European markets, such as Germany or The Netherlands.

With Zonal Futures and System Price futures both available, **we enable the market to choose what works best for their trading needs**

For more info: https://www.eex.com/en/markets/power/nordic-power-markets

Nordic Zonal Futures: Market Launch

- Several transactions have taken place in DK1, DK2, SE2 and SE3, both via the EEX order book and trade registration, with more zones seeing activity in the order book.
- The market is finding new price levels for the Nordic bidding zones as trading is still in early stages.
- About 30 companies have already been active in the zonal futures.

Simplifying Area Price Hedging with Nordic Zonal Futures

EEX Nordic Zonal Futures

Outright Futures for all Nordic Bidding Zones: one single trade and one collateral requirement for hedging area price risk.

EPEX's trusted, NEMO-harmonised indices as the underlying reference.

Improved Price Transparency for Nordic Bidding Zones and development of robust, long-term price signals.

Improved Liquidity: access to a wider pool of pan-European players can boost liquidity in the Nordics and capture cross-margining efficiencies.

Benefits

1 Large pool of participants

- The Zonal Futures enable Nordic market participants to hedge their price risks more efficiently and allows new players from Continental Europe to participate in the market.

2 Connecting Nordic and Continental European markets

- With Zonal Futures and EEX's spread trading functionality, we provide any trading opportunity that market participants may wish

3 Market participants decide where and how to trade

- EEX provides the full choice of products (System Price and Zonal Futures + spread functionality)

4 Easy access

- Zonal Futures are available to all participants already active in EEX Nordic Power
- New clients have the choice to become member of the EEX or access the market through the broad network of indirect market access providers

5 Capital efficiencies

- Zonal Futures allow to hedge price risks with one single product, thus allowing for more efficient collateral management due to potential cross-margin effects with other zones or even other European power markets

Nordic System Price and Zonal Futures on one Platform

- The economic equivalent of a “combo” trade involving two positions (EPAD + System Price) is a single trade in zonal futures, and therefore a single margin requirement and open position.
- The result is the same as the market participant is fully hedged for the respective price area.

Example:

“Combo” Trade		
Contract	**Position**	**Traded Price**
EPAD NO2	+ 1	10.20
System Price Futures	+ 1	100.00

=

Zonal Futures		
Contract	**Position**	**Traded price**
NO2 Zonal Futures	+1	110.20

- EEX currently offers System Price futures with maturities W+5, M+7, Q+11 and Y+10.
- Trading spreads between zonal futures and the System Price will be possible.

Nordic Zonal Futures Product Scope

Country	Bidding Zone	Area Price Designation	Base Load Futures
Denmark	DK1	ARH	Days, We, Week, Month, Quarter, Year
	DK2	CPH	Days, We, Week, Month, Quarter, Year
Finland	FI	HEL	Month, Quarter, Year
Norway	NO1	OSL	Week, Month, Quarter, Year
	NO2	KRI	Week, Month, Quarter, Year
	NO3	TRH	Month, Quarter, Year
	NO4	TRO	Month, Quarter, Year
	NO5	BER	Month, Quarter, Year
Sweden	SE1	LUL	Month, Quarter, Year
	SE2	SUN	Week, Month, Quarter, Year
	SE3	STO	Week, Month, Quarter, Year
	SE4	MAL	Week, Month, Quarter, Year

Maturities vary according to:

1. Interconnectors with Continental markets
2. Existing liquidity
3. Prevalence of renewable energy generation capacity

Nordic Zonal Futures Contract Specifications

	EEX Danish Power Base Future	EEX Finnish Power Base Future	EEX Norwegian Power Base Future	EEX Swedish Power Base Future
Market Areas	DK1, DK2	FI	NO1, NO2, NO3, NO4, NO5	SE1, SE2, SE3, SE4
Product type	Cash-settled Power Futures			
Underlying	EPEX Spot Market (Day Ahead) Baseload Price (00:00 - 24:00) for the respective market area			
Contract volume	1 MW x 24 hours x number of calendar days in delivery period			
mimimum lot size	1 contract or a multiple thereof			
Pricing and min. Price Fluctuation	EUR per MWh to the second decimal place, minimum price fluctuation EUR 0.01 per MWh			
Settlement Window	The determination of the daily settlement prices takes place between 3:50 pm – 4:00 pm CE(S)T			
Final Settlement Price	Monthly Average Price of EPEX Spot Market (Day Ahead) Baseload Price (00:00 – 24:00) for the respective market area as published by EPEX			
Available Maturities	Next 9-13 days, next 2 weekends, current and next 4 weeks, the current and next 6 full months, next 7 full quarters, and 6 full years.	the current and next 6 full months, next 7 full quarters, and 6 full years.	current and next 4 weeks[1], the current and next 6 full months, next 7 full quarters, and 6 full years.	current and next 4 weeks[2], the current and next 6 full months, next 7 full quarters, and 6 full years.

[1] EEX Norwegian Week Future only available for NO1 & NO2
[2] EEX Swedish Week Future only available for SE2, SE3, SE4

Nordic Zonal Futures Benchmark Specification

- As of 1 May 2024, the relevant market area for each Nordic Zonal Future is determined by reference to a specific delivery point.

- The EEX Nordic Power Benchmarks will thus be based on the Day-ahead auction prices of EPEX SPOT SE for the market area that encompasses this specific delivery point.

Power Benchmark	Day-ahead auction of EPEX SPOT SE for the market area encompassing:
Denmark DK1	Århus (i.e. electricity area including “Trige 400 kV, Denmark West”).
Denmark DK2	Copenhagen (i.e. electricity area including “Hovegård 400 kV, Denmark East”).
Finland	Helsinki (i.e. electricity area including “Hyvinkää 400 kV, Finland”).
Norway NO1	Oslo (i.e. electricity area including “Smestad 300 kV, Norway”).
Norway NO2	Kristiansand (i.e. electricity area including “Kristiansand 420 kV, Norway”).
Norway NO3	Trondheim (i.e. electricity area including “Strinda 300 kV, Norway”).
Norway NO4	Tromsø (i.e. electricity area including “Hungeren 132 kV, Norway”).
Norway NO5	Bergen (i.e. electricity area including “Fana 300 kV, Norway”).
Sweden SE1	Luleå (i.e. electricity area including “Svartbyn 400 kV, Sweden”).
Sweden SE2	Sundsvall (i.e. electricity area including “Hjälta 400 kV, Sweden”).
Sweden SE3	Stockholm (i.e. electricity area including “Hagby 400 kV, Sweden”).
Sweden SE4	Malmö (i.e. electricity area including “Sege 400 kV, Sweden”).

Liquidity in the Nordics can be unlocked through spread trading

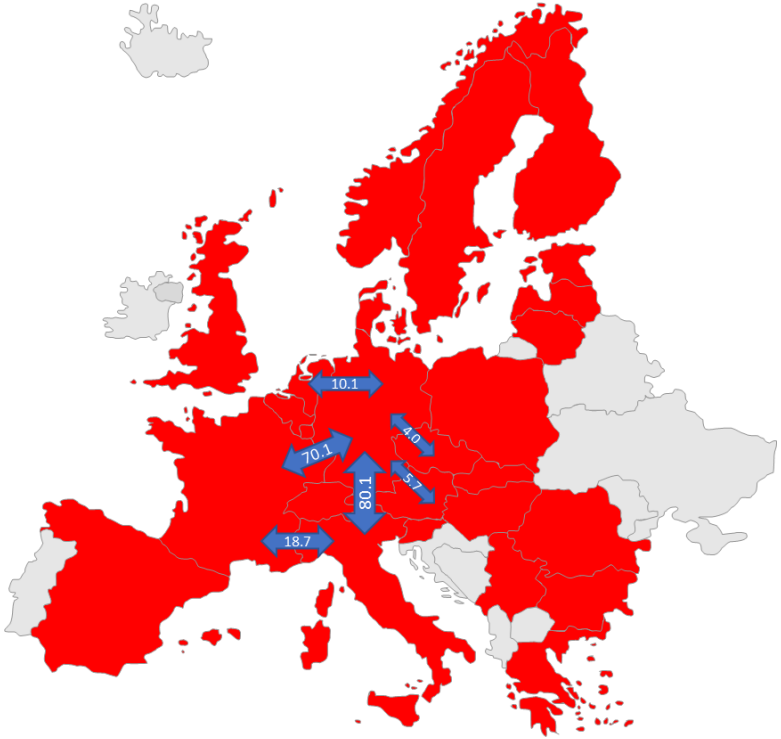
EEX Nordic Location Spreads											
Conti Spreads		SYS - Zonal Spreads		Inter-zonal spreads							
Leg 1	Leg 2	Leg 1	Leg 2	Leg 1	Leg 2	Leg 1	Leg 2	Leg 1	Leg 2	Leg 1	Leg 2
DE	SYS	SYS	DK1	DK1	DK2	FI	NO3	NO2	NO5	NO3	SE3
DE	DK1	SYS	DK2	DK1	FI	FI	NO4	NO3	NO4	NO4	SE1
DE	DK2	SYS	NO1	DK1	NO1	FI	NO5	NO3	NO5	NO4	SE2
DE	NO1	SYS	NO2	DK1	NO2	FI	SE1	NO4	NO5	NO5	SE3
DE	NO2	SYS	NO3	DK1	SE3	FI	SE2	NO1	SE1	SE1	SE2
DE	NO5	SYS	NO4	DK1	SE4	FI	SE3	NO1	SE2	SE1	SE3
DE	SE4	SYS	NO5	DK2	FI	FI	SE4	NO1	SE3	SE1	SE4
DE	SE3	SYS	SE1	DK2	NO1	NO1	NO2	NO1	SE4	SE2	SE3
DE	FI	SYS	SE2	DK2	NO2	NO1	NO3	NO2	SE1	SE2	SE4
NL	DK1	SYS	SE3	DK2	SE3	NO1	NO4	NO2	SE2	SE3	SE4
NL	NO2	SYS	SE4	DK2	SE4	NO1	NO5	NO2	SE3		
NL	SYS	SYS	FI	FI	NO1	NO2	NO3	NO2	SE4		
PL	SE4			FI	NO2	NO2	NO4	NO3	SE2		

Spread creation rules:

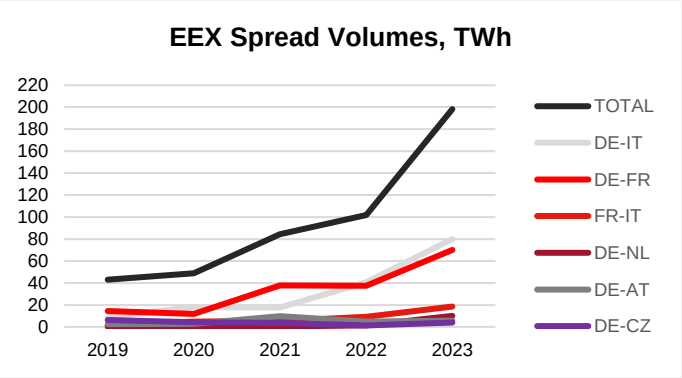
1. Conti leg always leads
2. SYS leg always leads
3. Inter-zonal spreads are created in alphabetic and numeric order

Maturities for Location Spreads depends on underlying products, typically: 5 Weeks, 7 Months,
7 Quarters, 6 Years

Location Spread trading at EEX



- Since 2014, EEX offers locational spread contracts. In 2023 volumes doubled YoY and exceeded **200 TWh**
- **+38 locations spread contracts** (link), +20 of which traded actively, ½ of which are with German power.
- Also **Italy and France** are transforming into trading hubs with the **Czech Republic** as the main connector to Eastern Europe.
- Location spreads have proven to grow liquidity across EEX markets and facilitate **cross-border trading**.



Location spread trading creates liquidity through linked order books

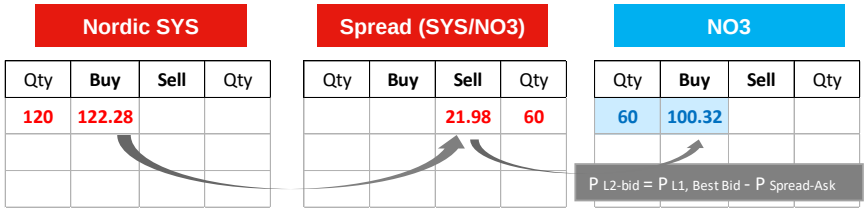
What are location spreads?
Location spreads are a technical functionality that allows for the simultaneous execution of two combined orders in at least two different contracts in a synthetic order book. Linked order books also generate automatic multiplication of explicit orders – see opposite example.

How do location spreads create liquidity?
An explicit buy order in an outright future order book and an explicit sell order in another order book, will be automatically mirrored in the respective spread order book. Price discovery is achieved and trading opportunities and thereby liquidity is facilitated.

What is their benefit?
Market participants can efficiently hedge against regional price risks and contribute to increased price discovery and liquidity in linked markets.

Example: System Price-NO3 Location Spread

An explicit buy order in the SYS order book and an explicit sell order in the SYS-NO3 spread order book will lead to an implied buy order in the NO3 order book.



The automatic multiplication of explicit orders into implied orders generates trading opportunities by bridging liquidity from an anchor market into less liquid markets.

Multiple scenarios are possible for the creation of implied orders

Order Origins Matrix x - Explicit (x) - Implied	Order Book 1		Order Book 2		Spread	
	Bid order	Ask order	Bid order	Ask order	Bid order	Ask order
Case 1	x			x	(x)	
Case 2		x	x			(x)
Case 3	x		(x)			x
Case 4		(x)		x		x
Case 5		x		(x)	x	
Case 6	(x)		x		x	

Six possible simple scenarios are shown for implied order creation.
More complex scenarios involving more than two spread order books are possible.

Theoretically all markets with linked spreads could influence each other, leading to increased liquidity and price discovery.

Legend

Order Book: The electronic list of buy orders and sell orders for a specific future.

Bid Order: An order to buy a future.

Ask order: An order to sell a future.

Explicit order: A buy or sell order entered by a market participant into an order book.

Implied order: An order generated synthetically from two explicit orders registered in an order book. These two orders could be constituted from either two individual legs or one individual leg and a strategy involving that leg.

Leg: A term used when referring to the execution of a trading strategy with more than one component.

ECC Clearing Network

Broker Community

600+

Participants

29

Clearing Members

ABN AMRO Clearing Bank N.V.
Banca Akros SpA
Banca Popolare di Sondrio SCPA
Banco Santander, S.A.
Bayerische Landesbank
BNP Paribas SA.
BofA Securities Europe SA
Commerzbank AG
Citigroup Global Market Europe AG
Citigroup Global Markets Limited
Goldman Sachs International
Intesa Sanpaolo
J.P. Morgan Securities plc
KELER CCP Ltd.
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Macquarie Bank Europe
MAREX Financial Limited
Mizuho Securities USA LLC
Morgan Stanley Europe SE
Morgan Stanley & Co Intl plc
National Bank of Greece SA
Oesterreichische Kontrollbank AG
Raiffeisenbank a.s.
Renta 4 Banco S.A.
Skandinaviska Enskilda Banken AB
Société Générale SA
StoneX Financial Ltd
UBS AG
UniCredit Bank AG

Margin Requirements: Initial Margin Rates

Positions in EEX Nordic Zonal Futures are subject to ECC initial margin requirements.

ECC will calculate the margin rates on each ECC Business day according to ECC's standard margin methodology.

To find the current ECC margin rates applicable to Nordic Futures:

1. Visit the ECC website at https://www.ecc.de/en/risk-management/margining
2. Click or scroll down to Reports & Files
3. Click on "Scanning Ranges"
4. Download the latest Scanning Ranges or Intercommodity Spreads .csv files and apply text to columns.
   - The EUR value for Initial Margin can be found in the "PriceScanRange" column.
   - The credit applied to the combination of two commodity positions can be found under the "Credit" column.

Nordic Zonal Futures: Capital Efficiency

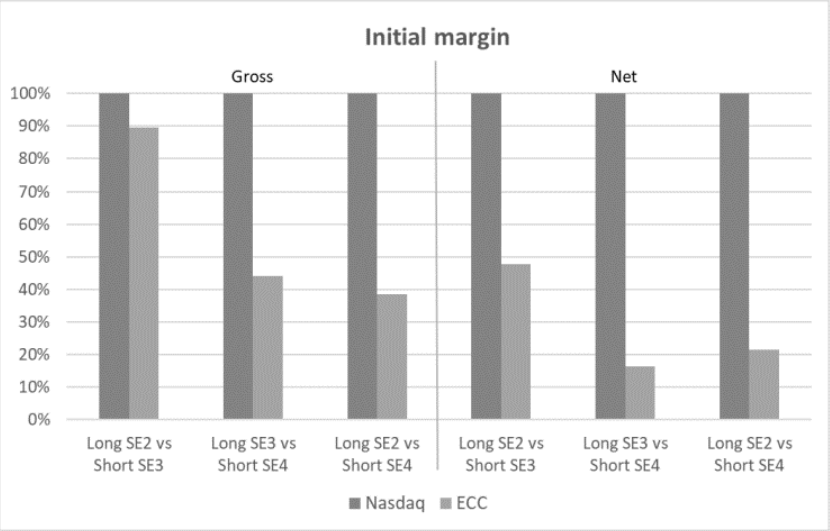
One Position for One Hedge

The economic equivalent of a so-called “combo” trade involving two positions (EPAD + System Price) is a single trade in zonal futures, and therefore a single margin requirement and open position.

The result is the same as the market participant is fully hedged for the respective price area.

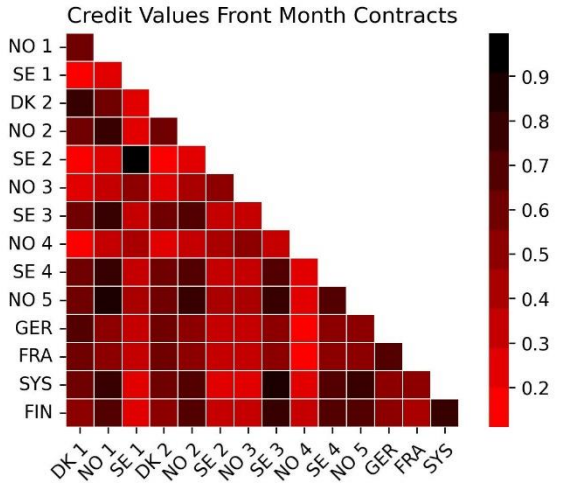
ECC Inter-Commodity Credits

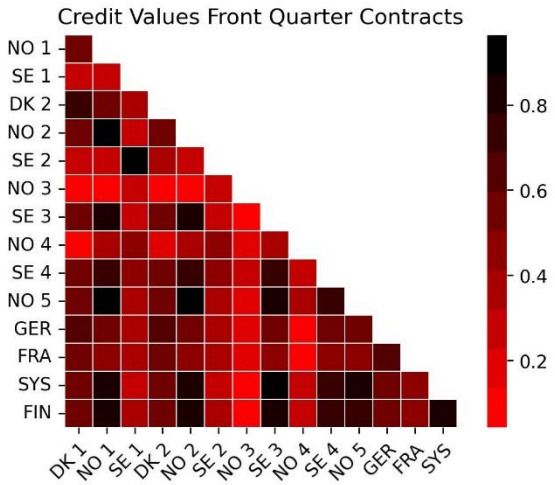
ECC effectively reduces the overall margin requirement per trading participant through inter-commodity credits.

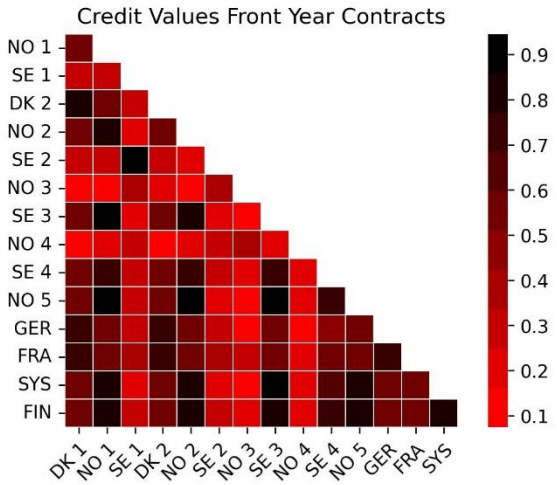


Comparison between Gross and Net Initial margin requirements (for an EPAD combination at Nasdaq and a zonal futures combination at ECC) for calendar year contracts 2025 (YR-25)
(Source: Svenska Kraftnät)

Margin Requirements: Inter-commodity spreads







Inter-commodity spreads will apply for correlated opposing positions, reducing the overall margin requirement for portfolios

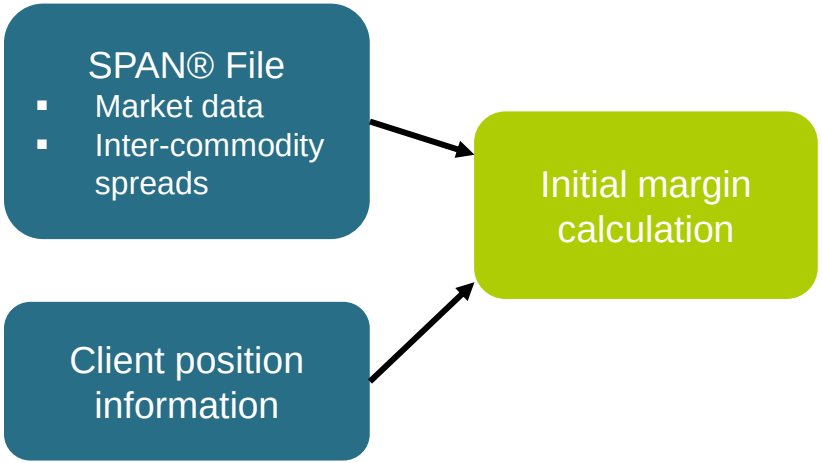
Margin spreads depend on correlation across commodities, regions, periods and profiles

Matrices above show the indicative correlation between the different Nordic zones and related countries in the front Month/Quarter/Year contracts

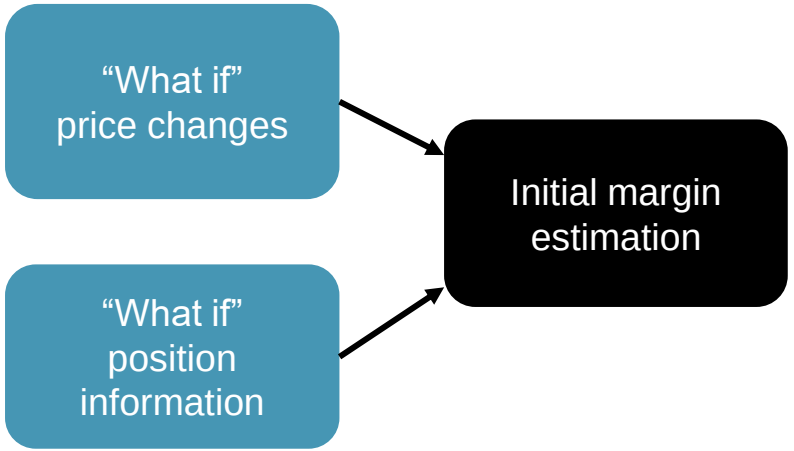
Lacima Analytics Margin Simulator

An easy-to-use tool to estimate margins for current and potential portfolios

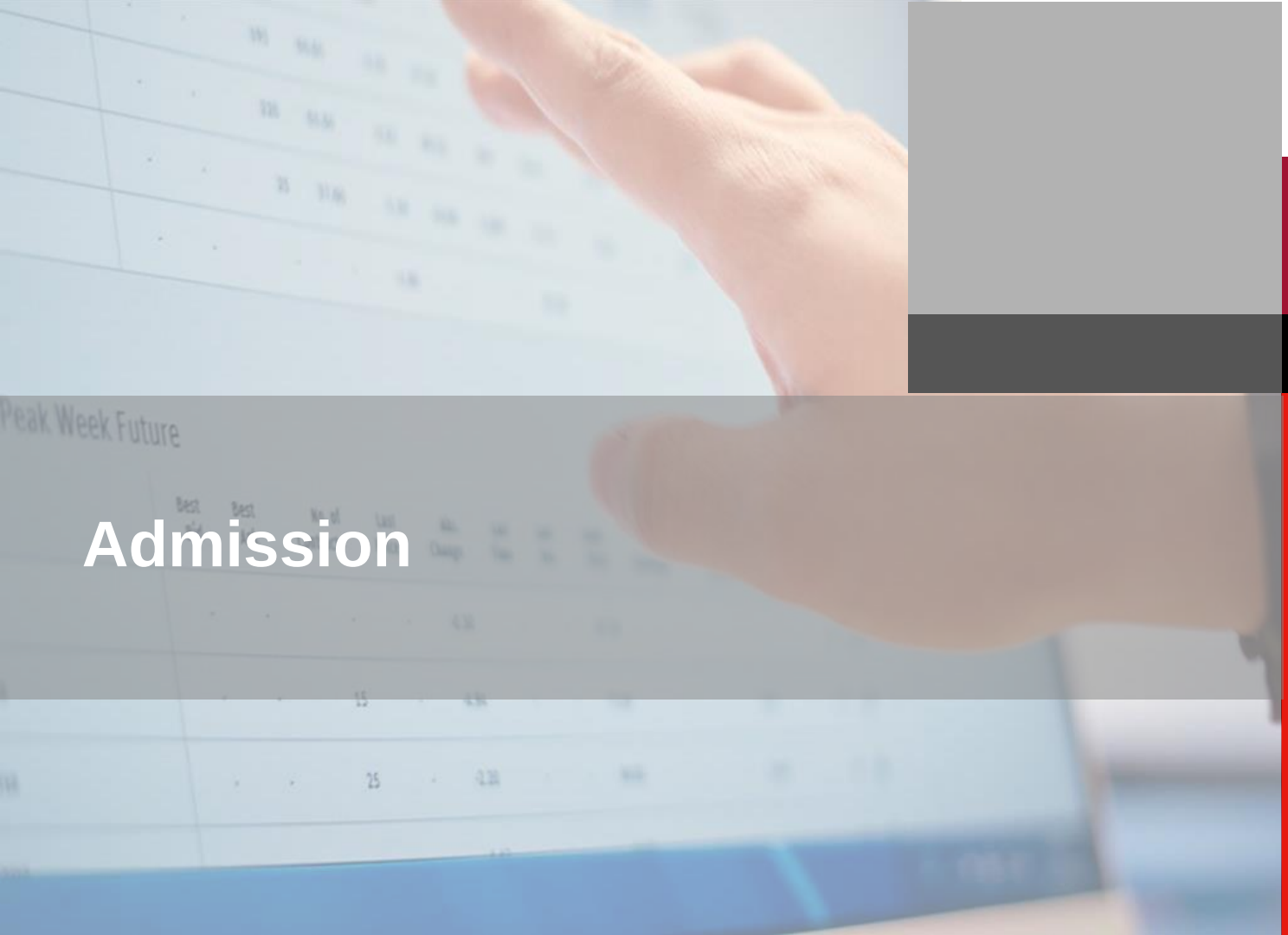
Calculate initial margins on end-of-day positions using the ECC SPAN® file



Option to extend to estimate margins based on changing prices and changing positions



For more information please contact info@lacimagroup.com

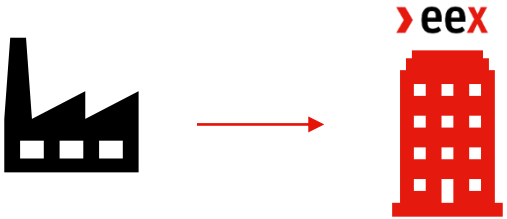


Admission

part of eex group

How can companies access EEX's Nordic Power Futures?

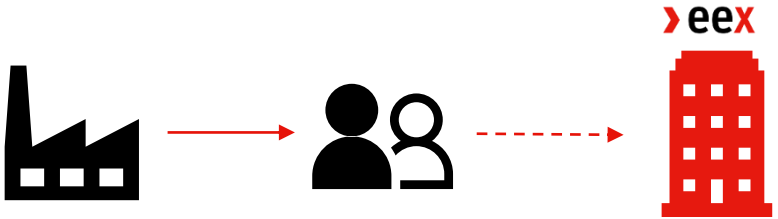
Via own EEX membership (direct access)



Trading participant holds membership with exchange/CCP and accesses the market directly

All clients already admitted to trade Nordic Power at EEX will be automatically admitted to trade Nordic Zonal Futures

Via market access provider (indirect access)



Trading participant holds contractual relationship only with access provider

Market is accessed indirectly via the access provider's membership

Direct Access

eex

- Pass the trader exam
- Choose the specific technical access
- Fill in the admission documents

Admission to the exchange EEX

ecc

- Find a Clearing Bank and sign a NCM agreement
- Fill in the KYC and admission documents

Admission to the Clearing House ECC

Indirect Access

Trade EEX products without becoming an exchange member

- EEX members, (ie. Banks) provide access to EEX products for non-members (“Access Provider”).
- The non-member trades via the member ID of the Access Provider.
- Several access options available, depending on each Access Provider’s offering, e.g. the non-member uses:
  - Its own trading frontend
  - The trading screen of the Access Provider, or
  - No frontend at all, where everything is handled by the Access Provider.

In all cases, the Access Provider remains legally and operationally responsible for any transactions concluded under its member ID.

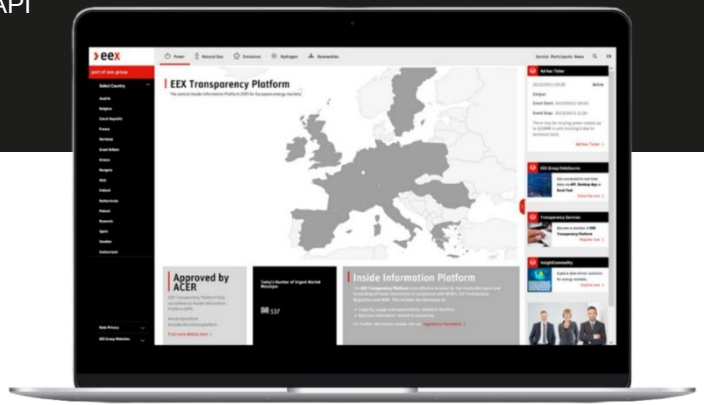
List of Market Access Providers available at:
https://www.eex.com/en/indirect-access

Disclosing Inside Information under REMIT

The EEX Transparency Platform as a central Inside Information Platform (IIP) enables market participants to fulfil their disclosure obligations under REMIT.

Our Service

- Effective and timely data publication on a central IIP
- Automatic data forwarding to ACER and, if additionally required, to NRAs and ENTSO-E
- Report efficiently and easily with the EEX Inside Information Messenger (browser-based) or connect directly to our web service API



> 200 market participants from
16+ countries report data to the EEX Transparency Platform.

Your Advantages

- Regulatory approved by ACER as IIP and Registered Reporting Mechanism (RRM)
- REMIT 2.0 ready and high availability including backup solution
- Secure and certificate-based solutions
- Technical validation and checks ensure highest data quality
  Approved third-party provider for ENTSO-E

#centralplatform

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Thank you

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Or visit our dedicated website at:
https://www.eex.com/en/markets/power/nordic-power-markets