



Day Ahead Auction Market Product overview

N2EX

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1. Introduction

This document describes the product offering in the N2EX Day Ahead market (DAM).

1.1 Marketplace platform

The DAM runs on the SAPRI trading system. It is possible to access SAPRI in two ways:

1. Install the SAPRI Trade client on your computer. The SAPRI Client can be downloaded at <https://n2ex.com/software>
2. Access SAPRI Trade client using the "Click once" application at: <https://test.ukauction.n2ex.com>

Systems feature:

- Secure internet access
- Place DAM orders
- Receive DAM results
- Automatic BSC Notification
- Central counterparty clearing

1.2 Market Rules and supervision

The N2EX Rulebook is under UK law and can be found using the link:

<https://www.n2ex.com/physicalmarket/legalframework>.

The Physical market is operated by Nord Pool Spot AS (NPS) for trading and NASDAQ OMX Commodities (NOMXC) through Stockholms Fondsbörs AB for clearing.

The Market Surveillance Department will monitor the trading activities in the physical and financial markets at Nord Pool Spot and NASDAQ OMX and conduct investigations of possible breaches of laws and regulations.

2. Overview of Day Ahead Auction at N2EX

2.1 Day-Ahead Auction specifications

The DAM runs on the SAPRI Trade Client.

- **Quotation method:** Continuous trading during Trading Hours where Transactions will be matched automatically when concurring Orders are registered in the ETS.
- **Gate closure:** 11:00 GMT/BST.
- **Contracts availability:** Every Tuesday contracts for the following week will be listed in SAPRI. In effect the DAM market will have between 7 – 14 days open for bidding at any given time.
- **Publication of prices and distribution of participant schedules:** 11:42 GMT/BST
- **Trading days:** The DAM is open every day of the year. This includes bank holidays and public holidays.
- **Trade lot:** 0.1 MW
- **Tick Size:** GBP 0.01/MWh
- **Currency:** GBP (Pounds Sterling)
- **Price steps:** The number of price steps for the day-ahead market is 200 including the upper and lower price limits.
- **Lower technical price limit:** £ -500
- **Upper technical price limit:** £ 3000
- **Order Types:** (a) Hourly Orders, (b) Block Orders (c) Flexible Orders (d) Group Block Orders
- **Block Order Volume Limit:** 500 MW
- **Contracts:** Hourly contracts will be listed in periods 1 to 24.

Period	Hour (GMT/BST)
1	23:00 – 00:00
2	00:00 – 01:00
3	01:00 – 02:00
...	
...	
23	21:00 – 22:00
24	22:00 – 23:00

- **Settlement:**
 - Delivery day + 1 for buy positions
 - Delivery day + 3 for sell positions

2.1.1 DAM Products

Purchases are designated as positive numbers, sales as negative numbers.

There are five types of orders available in DAM;

- hourly orders
- block orders
 - Linked
 - Profiled
 - Curtailed
- flexible orders
- group block orders

2.1.2 Hourly orders

The hourly order is the basic type of DAM market order. Each participant individually selects the range of price steps for Hourly Orders.

The simplest order is a price independent order for all hours. The participant will receive a schedule of deliveries equal to the specified volume for all hours, regardless of the price level within the range.

Participants who submit price dependent orders accept that Nord Pool Spot will make a linear interpolation of volumes between each adjacent pair of submitted price steps. Once the DAM price for each hour is determined, a comparison with a participant's order form for the day establishes the traded volume for that participant.

2.1.3 Block order

The block order gives the participant the opportunity to set an 'all or nothing' condition for all the hours within the block. The block order is an aggregated order for several hours, with a fixed price throughout these hours. The participants can freely pick the start and stop hour of a block but it must consist of at least two consecutive hours.

A block order must be accepted in its entirety; thus, if accepted, the contract covers all hours and the volume specified in the order. The block order price is compared with the average DAM price for the hours to which the block order applies; a block order is accepted if the following conditions are met:

- If the order price of a sales block is lower than the average DAM area price
- If the order price of a purchase block is higher than the average DAM area price

Each participant may post up to 80 block orders per portfolio per delivery day.

Maximum volume per block is 500 MWh.

2.1.3.1 Minimum acceptance ratio (temporarily suspended until further notice)

It is possible to add a minimum acceptance ratio in Megawatt or percentage. This means that a block order may be curtailed down to a chosen ratio and no longer needs to be an all or none bid.

In SAPRI this is displayed as "Min accept MW" or "Min accept %" accordingly. These cells are interchangeable and one cell will automatically change if the other cell is changed.

For Profiled Blocks (see 2.1.3.X) the percentage acceptance ratio will apply across all periods, and the acceptance ratio in Megawatt will become void.

2.1.3.2 Linked Block Orders

It is possible to define links between block orders meaning that the evaluation and acceptance of one block order B (=child block) is dependent on the acceptance of another block order A (parent block). The maximum level of links are three, meaning that you can link a block order C (=Grandchild) to block order B (=Child) which again is linked to block order A (=Parent).

In its simplest form a block order B (=child) is linked to another block order A (=parent). In this case a portfolio will get either 1) neither A nor B, 2) only A, or 3) both A and B. Block B will never become cleared on its own.

- A child order (B) can only be linked to one parent order (A)
- A grandchild (C) order can only be linked to one Child order (B)
- A block order cannot be linked to a flexi order or vice versa
- Order A, B and C can span any set of hours independently of each other
- Order A, B and C can have any order price independently of each other
- The number of link levels must not exceed three
- Circular link chains are not allowed: Order C is linked to Order B that is linked to Order A that is linked to order C.
- If the parent block is curtailable, the child block can only be accepted to the same ratio as its parent.
- A family of linked blocks can be accepted even though the parent block is out of the money, if the child blocks provide sufficient surplus to compensate for the loss of the parent.

2.1.3.3 Profiling of Blocks Orders

It is possible to have different quantity in each hour of a block. Since the volume in a profiled block is no longer the same for all hours, it is the Volume Weighted Average Price (VWAP) that determines whether the block is accepted or not.

Note: It is not possible to have both buy and sell in the same block.

2.1.4 Flexible order

A flexible Order can contain between 1 and 23 consecutive hours. The order will be accepted in the hour(s) where it provides the highest Social Welfare, given that the order is in the money.

It is possible to specify between which hours of the day the order may span.

Each participant may post up to 3 flexible hourly orders per delivery day.

Maximum volume per block is 500 MWh

2.1.5 Group Block Orders

An Exclusive Group is a basket of blocks where a maximum of one block within the group can be accepted.

Exception: More than one block may be partially accepted as long as the blocks do not exceed a combined acceptance ratio of 1.

Block orders within an Exclusive group can hold the same features as any other blocks, except linking of blocks. A group is defined by its Group ID. The group ID is entered in the "Group" column of the SAPRI trade client. All orders that have the same group ID will belong to the same group.

Each participant may post up to 3 Exclusive Groups per portfolio per delivery day.

Each Exclusive group may consist of up to 15 Block orders

Maximum volume per block is 500 MWh.

2.2 Codes for settlement of DAM trades

The Day Ahead Auction follows the EFA calendar. However, in the Clearing and Settlement system, these hourly prices are presented according to the standard calendar. The price for Period 1 (23:00-00:00) in the auction corresponds to hour 24 the previous day according to the standard calendar. The following reporting codes will appear in the settlement procedure.

CONTRACT TYPE	CONTRACT CODE	CONTRACT CODE	EXAMPLE
Daily Auction hour	DH	yyyymmdd-nn	DH20140907-06

SUFFIX VARIABLE	DEFINITION	RANGE
Dd	Day of Month (Two Digits)	01 to 31
Mm	Month of Year (Two Digits)	01 to 12
Yyyy	Year (Four Digits)	2000 to 2099
nn	Hour Period (Two Digits)	01 to 24 (25)

3. Index

N2EX has, in consultation with the market, decided to provide two alternative indices based upon the activity in the Physical UK Power markets.

3.1.1 N2EX Day Ahead Auction Market index

The arithmetic average of the 24 individual hourly prices in the DAM for a specific day calculated 09.30 am on the day before delivery.

3.1.2 Adjusted Gas Price index

Gas price quotes are sent from Platts to N2EX operators each day at 11:00 GMT/BST. Price quotes including WD (Within Day), DA (Day-ahead) and WE (Weekend) are registered and adjusted gas price is calculated. To match EFA calendar, 7/24 of WD + 17/24 of DA is used to derive adjusted gas price.

3.1.3 N2EX Spark Spread index

Spark Spread is derived from Day-Ahead auction base load price for corresponding delivery date and trader-supplied WD (Within Day) and DA (Day-Ahead) gas prices, taken at 11:00 to correspond with the closing time for the day-ahead power auction.

Industry average rates are used to derive Spark Spread: Conversion factor = 06945: the conversion rate from gas in p/th to a notional cost of gas-fired generation, based on 34.1232 th per MWh for natural gas and 49.13% station efficiency.

3.1.4 Index naming convention

Index	CONTRACT CODE	CONTRACT CODE	EXAMPLE
DAM Index	N2P_DAM-	yyyymmdd-nn	N2P_DAM-20130907
Adjusted Gas Price	N2P_GAS-	yyyymmdd-nn	N2P_GAS-20130907
Spark Spread Index	N2P_DSS-	yyyymmdd-nn	N2P_DSS-20130907

PREFIX	DEFINITION
N2P_DAM	N2P: N2Power DAM: Day-Ahead Market
N2P_GAS	N2P: N2Power GAS: Gas Price
N2P_DSS	N2P: N2Power DSS: "Dirty" Spark Spread

SUFFIX VARIABLE	DEFINITION	RANGE
dd	Day of Month (Two Digits)	01 to 31
mm	Month of Year (Two Digits)	01 to 12
yyyy	Year (Four Digits)	2000 to 2099

