



ARGUS EUROPEAN ELECTRICITY

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The most up-to-date European Electricity methodology is available on www.argusmedia.com

Introduction

The daily Argus European Electricity report is compiled by specialist market reporters in the London office.

The markets covered include the UK, Germany, Switzerland and Austria (the Alpine markets), France, the Netherlands, Spain, Italy, Poland, Hungary, Romania, the Czech Republic, Serbia and the Nordic region. Some price information is shown for Belgium, Portugal, Turkey and Greece. Argus assessments are shown for physically delivered forward contracts for all markets except Spain, which trades financially settled contracts.

Argus publishes prices that report and reflect prevailing levels for open-market arm's length transactions (please see the Argus Global Compliance Policy for a detailed definition of arm's length).

Reporters ascertain over-the-counter prices by telephoning as many market sources as possible towards the end of the trading day, including brokers, generators, suppliers, trading houses and banks. Sources also send closing bid/offer spreads and deal files by email.

A midday commentary is published for the UK which assesses day-ahead base load at 12 noon local time and gives a summary of other trends and prices for the most liquid contracts.

Other market commentaries are compiled after the market close. The report analyses price movements, and relates traders' opinions about why the market is trending up or down. Fundamental drivers are listed, such as plant outages, changes in demand, constraints in interconnection between countries, and changes in the price of fuels. Forthcoming developments that could move the market are pointed out. Some forward-looking technical analysis is given where appropriate.

Assessments reflect a consensus of bid/offer spreads showing the value of the most commonly traded products for base and peak load. Electricity is measured in terms of the number of megawatts delivered over defined time periods, for example a specific day, week, month etc. When a product has not traded and no quote is available, reporters will ask traders to estimate where they think the price should be, and assessments are made in line with price movements in other contracts.

Deals done either on broker screens, exchanges or bilaterally are collected, indicating when they are cleared or off-screen. Deals reported by telephone are only reported when confirmed by more than one source. Deals are also collected via email and automatically sorted and checked for duplicates. The deals are emailed to clients in a separate daily csv file that accompanies the main report.

Indexes are calculated using the weighted average of reported trades for the first contract ahead for day, week, month, quarter, season, and year.

Cumulative indexes in the UK show the rolling average for week-end-ahead, week-ahead, month-ahead and season-ahead since the first trading day of the contract, and for working day-ahead from the start of the electricity forward agreement (EFA) month. UK

months are based on the EFA calendar.

Cumulative indexes for the German, French, Dutch and Czech markets for day-ahead are rolling average from the beginning of the current calendar month. For all other cumulative indexes, the rolling average from the first day of the contract is used.

Electricity cannot be stored and therefore demand must match supply exactly. Some transmission system operators balance the system using a market based mechanism, and a summary of balancing buy and sell prices for the UK is shown.

The UK Electricity Market

The over-the-counter (OTC) table covers prices from the UK OTC market. It consists of buy-sell ranges identified from the wholesale market.

The OTC Market

Minimum Size

- For inclusion in Argus assessments or indices, 5MW is the minimum size of transaction.

Contract period

- Annual contracts from April and/or October depending upon the date of the report.
- Seasonal contracts for summer (2nd quarter and 3rd quarter) and winter (4th quarter and 1st quarter), for seven seasons.
- Quarter contracts (1st is January, February, March; 2nd is April, May, June; 3rd is July, August, September; 4th is October, November, December) for four quarters.
- Monthly contracts for six months.
- Weekly contracts for four weeks.
- Daily contracts for three days.
- Working day-ahead refers to the next working day.
- Weekend refers to the next weekend.

Pricing

- Expressed in pounds sterling (£) per MWh. Pricing is to two decimal places.

Methodology

- The report shows a buy-sell-range for each price series.
- The buy is the best buying indication and the sell is the best selling indication.
- The change shows the difference in the mid-point of the buy-sell range from the last published price.

Spread

- The spread or the difference between the buy and sell price will vary according to the identification of firm bids and offers or according to market consensus.

Contracts

- Base load through all WD and WE periods.
- Peak in WD periods 3, 4 and 5 (7am to 7pm).
- Off peak in WD periods 1, 2 and 6.
- Load shape 44 off peak in WD periods 1, 2 and 6 and peak in WD periods 3, 4 and 5.

Roll dates

- Roll date for a month quotation will be the last day of the month, as specified by the EFA calendar found at https://www.theice.com/publicdocs/EFA_Calendar.pdf; the roll date for a quarter will be the last day of the month preceding the quarter; the roll date for a season quotation will be the last one of the preceding season. The roll date for the annual contracts will be the last day of March or September.

Time stamp

- Price assessments for the UK power market are concluded at 5.30pm London time.

Argus Indexes

- These are calculated using a volume-weighted index of rolling day-ahead, weekend-ahead, week-ahead, month-ahead and season-ahead trades reported each day. If there is no trade the midpoint of the closing spread is taken, with the exception of the weekend indexes, which will only use the closing spread midpoint on a Friday if no trades are reported.
- The cumulative indexes are a volume-weighted average of all trades reported to Argus for that contract, when it exists as the contract-ahead.
- Cumulative average for the previous month shows the cumulative month-ahead index at the end of the previous EFA month. It shows the average of deals done in the previous month for the current month. The index rolls with the change of EFA months.
- Total reported traded volume is the total daily volume of reported trades for all contracts, including those not represented in the indexes, in GWh.

The German and Alpine Electricity Markets

The OTC Market

Minimum Size

- For inclusion in Argus assessments or indices, 5MW is the minimum size of transaction.

Contract period - Germany

- Yearly contracts for four years.

- Quarter contracts (1st is January, February, March; 2nd is April, May, June; 3rd is July, August, September; 4th is October, November, December) for six quarters.
- Monthly contracts for six months.
- Weekly contracts for four weeks.
- Daily contracts for three days.
- Weekend refers to the next weekend.
- Working day-ahead refers to the next working day.

Contract period - Austria and Switzerland

- Yearly contracts for one year.
- Quarter contracts (1st is January, February, March; 2nd is April, May, June; 3rd is July, August, September; 4th is October, November, December) for two quarters.
- Monthly contracts for one month.
- Day-ahead. Day-ahead refers to the next working day.

Contracts

- Base load covers all hours, working days and weekends/public holidays.
- Peak load is 8am-8pm, Monday to Friday.
- Off peaks are 12am-8am and 8pm-12am, Monday to Friday, and all day weekends and public holidays.
- Hourly contracts are listed as such.

Pricing

- Expressed in Euros (€) per MWh. Pricing is to two decimal points.

Methodology

- The report shows a buy-sell range for each price series.
- The buy is the best buying indication and the sell is the best selling indication.

Spread

- The spread or the difference between the buy and sell price will vary according to the identification of bids and offers or according to market consensus.

Roll dates

- Roll date for a month quotation will be the last working day of the previous month (i.e. 30 April for May); the roll date for a quarter assessment will be the last working day of the last month of the previous quarter (i.e. 30 June for Quarter 3); the roll date for a season quotation will be the last working day of the last quarter before delivery (i.e. 31 March for summer seasons). The roll date for the annual contracts will be determined by current market practice.

Argus Indexes

- These are calculated using a volume-weighted index of rolling day-

ahead, week-ahead, month-ahead, quarter-ahead and year-ahead trades reported each day. If there is no trade the mid-point of the closing spread is taken.

- The cumulative indexes are a volume-weighted average of all trades reported to Argus for that contract when it exists as the contract-ahead, with the exception of the day-ahead contract, which is cumulative for a calendar month.
- Total reported traded volume is the total daily volume of reported trades for all contracts, including those not represented in the indexes, in GWh.

The French Electricity Market

The OTC Market

Minimum Size

- For inclusion in Argus assessments or indices, 5MW is the minimum size of transaction.

Contract period

- Yearly contracts for three years.
- Quarter contracts (1st is January, February, March; 2nd is April, May, June; 3rd is July, August, September; 4th is October, November, December) for four quarters.
- Monthly contracts for three months.
- Weekly contracts for two weeks ahead.
- Weekend contract refers to weekend ahead.
- Day-ahead refers to the next working day.

Contracts

- Base load covers all hours, working days and weekends/public holidays.
- Peak load is 8am-8pm, Monday to Friday.
- Off peaks are 12am-8am and 8pm-12am, Monday to Friday, and all day weekends and public holidays.
- Hourly contracts are listed as such.

Pricing

- Expressed in €/MWh. Pricing is to two decimal places.

Methodology

- The report shows a buy-sell range for each price series.
- The buy is the best buying indication and the sell is the best selling indication.
- The change shows the difference in the mid-point of the buy-sell range from the last published price.

Spread

- The spread or the difference between the buy and sell price will

vary according to the identification of bids and offers or according to market consensus.

Roll dates

- Roll date for a month quotation will be the last working day of the previous month (i.e. 30 April for May); the roll date for a quarter assessment will be the last working day of the last month of the previous quarter (i.e. 30 June for Quarter 3); the roll date for a season quotation will be the last working day of the last quarter before delivery (i.e. 31 March for summer seasons). The roll date for the annual contracts will be determined by current market practice.

Argus Indexes

- These are calculated using a volume-weighted index of rolling day-ahead, week-ahead, month-ahead, quarter-ahead and year-ahead trades reported each day. If there is no trade the mid-point of the closing spread is taken.
- The cumulative indexes are a volume-weighted average of all trades reported to Argus for that contract when it exists as the contract-ahead, with the exception of the day-ahead contract, which is cumulative for a calendar month.
- Total reported traded volume is the total daily volume of reported trades for all contracts, including those not represented in the indexes, in GWh.

The Dutch Electricity Market

The OTC Market

Minimum Size

- For inclusion in Argus assessments or indices, 5MW is the minimum size of transaction.

Contract period

- Yearly contracts for three years.
- Quarter contracts (1st is January, February, March; 2nd is April, May, June; 3rd is July, August, September; 4th is October, November, December) for four quarters.
- Monthly contracts for three months.
- Weekly contracts for two weeks ahead.
- Weekend contract refers to weekend ahead.
- Day-ahead. Day-ahead refers to the next working day.

Contracts

- Base load covers all hours, working days and weekends/public holidays.
- Peak load is 8am-8pm, Monday to Friday.
- Off peaks are 12am to 8am and 8pm-12am, Monday to Friday, and all day weekends and public holidays.
- Hourly contracts are listed as such.

Pricing

- Expressed in €/MWh. Pricing is to two decimal places.

Methodology

- The report shows a buy-sell range for each price series.
- The buy is the best buying indication and the sell is the best selling indication.

Spread

- The spread or the difference between the buy and sell price will vary according to the identification of bids and offers or according to market consensus.

Roll dates

- Roll date for a month quotation will be the last working day of the previous month (i.e. 30 April for May); the roll date for a quarter assessment will be the last working day of the last month of the previous quarter (i.e. 30 June for Quarter 3). The roll date for the annual contracts will be determined by current market practice.

Argus Indexes

- These are calculated using a volume-weighted index of rolling day-ahead, week-ahead, month-ahead, quarter-ahead and year-ahead trades reported each day. If there is no trade the mid-point of the closing spread is taken.
- The cumulative indexes are a volume-weighted average of all trades reported to Argus for that contract when it exists as the contract-ahead, with the exception of the day-ahead contract, which is cumulative for a calendar month.
- Total reported traded volume is the total daily volume of reported trades for all contracts, including those not represented in the indexes, in GWh.

The Spanish Electricity Market

The OTC Market

Minimum Size

- For inclusion in Argus assessments or indices, 5MW is the minimum size of transaction.

Contract period

- One yearly contract.
- One balance of the year contract, running from the month-ahead to the end of the current calendar year.
- Quarter contracts for four quarters (1st is January, February, March; 2nd is April, May, June; 3rd is July, August, September; 4th is October, November, December).

- Monthly contracts for three months.
- Week-ahead.
- Day-ahead.

Contracts

- Base load covers all hours, working days and weekends/public holidays. Only base load prices are quoted.

Pricing

- Expressed in €/MWh. Pricing is to two decimal places.

Methodology

- The report shows a buy-sell range for each price series.
- The buy is the best buying indication and the sell is the best selling indication.
- The change shows the difference in the mid-point of the buy-sell range from the last published price.

Spread

- The spread or the difference between the buy and sell price will vary according to the identification of bids and offers or according to market consensus.

Roll dates

- Roll date for a month quotation will be the last working day of that particular month (i.e. 30 April for May); the roll date for a quarter assessment will be the last day of the last month of the previous quarter (i.e. 30 June for quarter 3).

The Italian Electricity Market

The OTC Market

Minimum Size

- For inclusion in Argus assessments or indices, 5MW is the minimum size of transaction.

Contract period

- Two yearly contracts.
- Two quarter contracts.
- Three monthly contracts.

Contracts

- Base load covers all hours, working days and weekends/public holidays. Only base load prices are quoted.

Pricing

- Expressed in €/MWh. Pricing is to two decimal places.

Methodology

- The report shows a buy-sell range for each price series.
- The buy is the best buying indication and the sell is the best selling indication.
- The change shows the difference in the mid-point of the buy-sell range from the last published price.

Spread

- The spread or the difference between the buy and sell price will vary according to the identification of bids and offers or according to market consensus.

Roll dates

- Roll date for a month quotation will be the last working day of that particular month (i.e. 30 April for May); the roll date for a quarter assessment will be the last day of the last month of the previous quarter (i.e. 30 June for quarter 3).

The Nordic Electricity Market

- Prices are in €/MWh.
- Systemwide refers to the next consecutive day.
- Base and peak load closes are sourced from the Nord Pool website.

The Polish Electricity Market

The OTC Market

Minimum Size

- For inclusion in Argus assessments or indices, 5MW is the minimum size of transaction.

Contract period

- Two yearly contracts.
- One balance of the year contract, running from the month-ahead to the end of the current calendar year.
- Quarter contracts for four quarters (1st is January, February, March; 2nd is April, May, June; 3rd is July, August, September; 4th is October, November, December).
- Monthly contracts for three months
- Three weekly contracts.
- Day-ahead.

Contracts

- Base load covers all hours, working days and weekends/public holidays. Peak load is from 7am -10pm CET.

Pricing

- Expressed in Polish zlotys/MWh (PLN/MWh) and also converted to €/MWh. Pricing is to two decimal places.

Methodology

- The report shows a buy-sell range for each price series.
- The buy is the best buying indication and the sell is the best selling indication.
- The change shows the difference in the mid-point of the buy-sell range from the last published price.

Spread

- The spread or the difference between the buy and sell price will vary according to the identification of bids and offers or according to market consensus.

Roll dates

- Roll date for a month quotation will be the last working day of that particular month (i.e. 30 April for May); the roll date for a quarter assessment will be the last day of the last month of the previous quarter (i.e. 30 June for quarter 3).

The Czech Electricity Market

The OTC Market

Minimum Size

- For inclusion in Argus assessments or indices, 5MW is the minimum size of transaction.

Contract period

- Three yearly contracts.
- One balance of the year contract, running from the month-ahead to the end of the current calendar year.
- Quarter contracts for four quarters (1st is January, February, March; 2nd is April, May, June; 3rd is July, August, September; 4th is October, November, December).
- Monthly contracts for three months.
- Two week-ahead contracts.
- Day-ahead.

Contracts

- Base load covers all hours, working days and weekends/public holidays. Peak load covers 8am-8pm CET.

Pricing

- Expressed in €/MWh. Pricing is to two decimal places.

Methodology

- The report shows a buy-sell range for each price series.
- The buy is the best buying indication and the sell is the best selling indication.
- The change shows the difference in the mid-point of the buy-sell range from the last published price.

Spread

- The spread or the difference between the buy and sell price will vary according to the identification of bids and offers or according to market consensus.

Roll dates

- Roll date for a month quotation will be the last working day of that particular month (i.e. 30 April for May); the roll date for a quarter assessment will be the last day of the last month of the previous quarter (i.e. 30 June for quarter 3).

Argus Indexes

- These are calculated using a volume-weighted index of rolling day-ahead, week-ahead, month-ahead, quarter-ahead and year-ahead trades reported each day. If there is no trade the mid-point of the closing spread is taken.
- The cumulative indexes are a volume-weighted average of all trades reported to Argus for that contract when it exists as the contract-ahead, with the exception of the day-ahead contract, which is cumulative for a calendar month.
- Total reported traded volume is the total daily volume of reported trades for all contracts, including those not represented in the indexes, in GWh.

The Hungarian Electricity Market

The OTC Market

Minimum Size

- For inclusion in Argus assessments or indices, 5MW is the minimum size of transaction.

Contract period

- One yearly contract.
- Quarter contracts for four quarters (1st is January, February, March; 2nd is April, May, June; 3rd is July, August, September; 4th is October, November, December).
- Monthly contracts for three months.
- Week-ahead.
- Day-ahead.

Contracts

- Base load covers all hours, working days and weekends/public holidays. Peak load covers 8am-8pm CET.

Pricing

- Expressed in €/MWh and also converted to Hungarian forints/MWh (HUF/MWh). Pricing is to two decimal places.

Methodology

- The report shows a buy-sell range for each price series.
- The buy is the best buying indication and the sell is the best selling indication.
- The change shows the difference in the mid-point of the buy-sell range from the last published price.

Spread

- The spread or the difference between the buy and sell price will vary according to the identification of bids and offers or according to market consensus.

Roll dates

- Roll date for a month quotation will be the last working day of that particular month (i.e. 30 April for May); the roll date for a quarter assessment will be the last day of the last month of the previous quarter (i.e. 30 June for quarter 3).

The Serbian Electricity Market

The OTC Market

Minimum Size

- For inclusion in Argus assessments or indices, 5MW is the minimum size of transaction.

Contract period

- One yearly contract.
- One monthly contract.
- One weekly contract.
- Day-ahead refers to the next working day.

Contracts

- Base load covers all hours, working days and weekends/public holidays.

Pricing

- Expressed in €/MWh. Pricing is to two decimal places.

Methodology

- The report shows a buy-sell range for each price series.
- The buy is the best buying indication and the sell is the best selling indication.
- The change shows the difference in the mid-point of the buy-sell range from the last published price.

Spread

- The spread or the difference between the buy and sell price will vary according to the identification of bids and offers or according to market consensus.

Roll dates

- Roll date for a month quotation will be the last working day of that particular month (i.e. 30 April for May).

The Romanian Electricity Market

The OTC Market

Minimum Size

- For inclusion in Argus assessments or indices, 5MW is the minimum size of transaction.

Contract period

- One yearly contract.
- Two quarterly contracts.
- Three monthly contracts.

Contracts

- Base load covers all hours, working days and weekends/public holidays.

Pricing

- Expressed in RON/MWh and also converted to €/MWh. Pricing is to two decimal places.

Methodology

- The report shows a buy-sell range for each price series.
- The buy is the best buying indication and the sell is the best selling indication.
- The change shows the difference in the mid-point of the buy-sell range from the last published price.

Spread

- The spread or the difference between the buy and sell price will vary according to the identification of bids and offers or according to market consensus.

Roll dates

- Roll date for a month quotation will be the last working day of that particular month (i.e. 30 April for May).

The Turkish Electricity Market

Contract period

One monthly contract

Four quarterly contracts (1st is January, February March; 2nd is April, May, June; 3rd is July, August, September; 4th is October, November, December).

One calendar-year contract

One rolling 52-week-ahead contract. (Physical delivery from the start of the next month).

Contracts

-Base load covers all hours, working days and weekends/public holidays.

Pricing

Expressed in TRY/MWh and also converted to €/MWh. Pricing is to two decimal places.

Methodology

- The report shows a buy-sell range for each price series
- The buy is the best buying indication and the sell is the best selling indication
- The change shows the difference in the mid-point of the buy-sell range from the last published price

Spread

- The spread or the difference between the buy and sell price will vary according to the identification of bids and offers, or according to market consensus

Time stamp:

Assessments are made each Thursday, or for the next working day.

Roll dates

- Roll date for the month quotation will be the last working day of the previous month (ie 30 April for May); the roll date for a quarterly assessment will be the last day of the last month of the previous quarter (ie 30 June for quarter 3). The roll date for the calendar year ahead will be the last working day of the previous year.

The Bulgarian Electricity Market

The OTC Market

Contract period

One monthly contract

Contracts

- Base load for export, including export fees. Base load covers all hours, working days and weekends/public holidays.

Pricing

Expressed in €/MWh. Pricing is to two decimal places.

Methodology

- The report shows a buy-sell range for each price series
- The buy is the best buying indication and the sell is the best selling indication
- The change shows the difference in the mid-point of the buy-sell range from the last published price

Spread

- The spread or the difference between the buy and sell price will vary according to the identification of bids and offers, or according to market consensus

Time stamp:

Assessments are made each Thursday, or for the next working day.

Roll dates

- Roll date for the month quotation will be the last working day of the previous month (ie 30 April for May).

The Greek Electricity Market

The OTC Market

Contract period

One monthly contract

Contracts

- Base load covers all hours, working days and weekends/public holidays.

Pricing

Expressed in €/MWh. Pricing is to two decimal places.

Methodology

- The report shows a buy-sell range for each price series
- The buy is the best buying indication and the sell is the best selling indication
- The change shows the difference in the mid-point of the buy-sell range from the last published price

Spread

- The spread or the difference between the buy and sell price will vary according to the identification of bids and offers, or according to market consensus

Time stamp

Assessments are made each Thursday, or for the next working day.

Roll dates

- Roll date for the month quotation will be the last working day of the previous month (ie 30 April for May).

Generating Costs

Spark spreads

Argus spark spreads provide illustrative information about generation economics. They are derived from Argus' outright power, fuel and emissions assessments and are not intended to be an assessment of trading in the over-the-counter spark-spread market.

Argus provides unadjusted spark spreads for gas, coal and fuel oil for the UK, Germany, the Netherlands and France. Argus also provides emissions-adjusted or "clean" spark spreads for gas and coal for the UK, Germany and Netherlands. The power price is the midpoint of the bid/offer spread for a given contract.

For contracts within 90 days, the coal price is the spot price of coal cif ARA from the *Argus Coal Daily International* report. Forward curve contract are taken from the coal swaps curve assessments in Argus Coal Daily International. The standard plant efficiency is 38pc.

Natural gas price are taken from the *Argus European Natural Gas Report*. The conversion factor to KWh from therms is 29.3071. The standard plant efficiency is 49.13pc.

EU ETS emissions prices are taken from the *Argus European Emissions Markets* report. For day-ahead contracts, the emissions price used is the spot EU ETS allowance price. For forward contracts, the EU ETS allowance price for the corresponding delivery year is taken. Clean spark spreads are calculated using emissions factors of 0.897t/MWh for coal and 0.411t/MWh for gas.

The fuel price is the low sulphur fuel oil spot price cif Rotterdam for the UK and fob ARA barges for Germany, France and the Netherlands. Prices are taken from the *Argus European Products Report*.

Other information

Prices are converted into UK pounds sterling (£) and Euros (€) per megawatt hour for comparative purposes.

Latest revision: APRIL 2012.