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ARGUS BIOMASS

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The most up-to-date Argus Biomass methodology is available on www.argusmedia.com

Introduction

Argus Biomass Markets is a weekly report that publishes prices and market commentary on the international bulk spot market for industrial grade wood pellets and wood chips. The report is published every Wednesday, or on the next working day in the UK, with the exception of the week between December 25 and January 1.

The market

Argus Biomass Markets contains assessments of delivered prices for industrial grade wood pellets and wood chips delivered to north-west Europe. Northwest Europe is defined as ARA (Amsterdam-Rotterdam-Antwerp) and UK Humber (Hull, Immingham). Delivered prices are on a cost-insurance-freight (cif) basis. Prices are assessed in euros per tonne, and converted into British pounds and US dollars.

The report contains assessments of export prices from North America for industrial grade wood pellets and wood chips, and domestic North American prices for industrial grade wood pellets and wood chips.

The specifications for wood pellets and for wood chips match those of the products assessed for delivery to northwest Europe.

Export prices are on a free-on-board (fob) basis. Domestic prices are for delivery on a cost-insurance-freight (cif) basis to terminals in specific US locations, determined by trading, storage and point-of-transfer.

Export prices for industrial grade wood pellets are assessed for northeast USA, southeast USA, northwest USA and southwest Canada. Export prices are assessed in US dollars per tonne.

Seven assessments for domestic US prices for industrial grade wood pellets are included in the report (Portland, Maine; Camden, NJ; Wilmington, NC; Port Everglades, Florida; Mobile, Alabama; Chicago, Illinois; and Seattle-Tacoma, Washington). Prices are assessed in US dollars per tonne, and converted into US dollars per short ton.

Export and domestic prices for wood chips are assessed for Portland, Oregon (includes Longview); Tacoma, Washington; Vancouver, British Columbia; Mobile, Alabama; Morehead City, North Carolina and Sheet Harbour, Nova Scotia. Export and domestic prices for wood chips are assessed in US dollars per tonne, and converted into US dollars per short ton.

The market commentary covers the ARA market, North American export and US domestic markets.

The product

Argus Biomass Markets assesses industrial grade wood pellets, defined according to the following specifications.

Net calorific value: 17GJ/t;
Diameter: 6-10mm;

Ash content: up to 2.5pc
Moisture content: up to 10pc

Argus Biomass Markets assesses industrial grade wood chips, defined according to the following specifications.

Net calorific value: 9-11GJ/t;
Dimensions: 97pc of the chips to be a max of 50x50x20mm
Ash content: 3-4pc
Moisture content: 30-50pc
Chlorine: 0.05pc
Sulphur: 0.05pc

Indexes

Argus Biomass indexes are for "spot" delivery of industrial wood pellets and wood chips cif northwest Europe, where "spot" is defined as delivery within 90 days. The indexes are based on two elements - a survey of market participants' views on where prices stand, and a volume-weighted average of any trades which fit the index specifications and which Argus has been able to verify. Argus applies editorial judgement to the survey and may discard extreme or outlying prices when arriving at an average value. The final index value is an average of the survey value and the volume-weighted trade value.

Argus reporters conduct a comprehensive weekly survey of key industry participants to uncover all relevant market information and to confirm market transactions, bids and offers for inclusion the assessments. Argus uses the telephone and various electronic mail and messaging services to acquire and cross-check its information. Argus does not restrict itself to one subsection of the market such as a single trading platform or single informational channel for its market information. The market surveys are balanced in their approach and are conducted by well-trained specialists.

Deals, bids and offers must be considered repeatable to be reflected in the assessments. All information is taken into account but if the market shows high volatility, Argus will weight the assessments towards trading activity at the end of the Wednesday of assessment.

Information from the survey is verified as best as possible and archived in databases.

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).

The methodologies are detailed and transparent. A professional approach by trained staff monitored by experienced managers is a characteristic of the Argus tradition.

Forward Prices

In addition to the spot Indexes, Argus Biomass Markets contains assessments of forward prices for delivery for three quarters ahead, and for three years ahead.

Assessments of fob North America export prices are on spot basis for delivery within 90 days.

Forward price assessment roll dates

The prompt quarter rolls on the first working day of the second month of the quarter. For example, Q3 becomes the prompt quarter on May 1 and Q4 becomes the prompt quarter on August 1. The prompt year rolls on the first working day of the year. For example, 2011 becomes the prompt year on January 1, 2010.

Generation economics

The generation economics table compares the implied profit margins on converting industrial wood pellets and coal into power, after taking into account the cost of EU ETS emissions allowances, and government subsidies granted for the use of biomass as a renewable power source. Implied spark spreads are shown for the UK, Germany, the Netherlands and France. Implied spark spreads are shown in euros per megawatt hour, except for the UK market which is shown in British pounds per megawatt hour and euros per megawatt hour. The relative profitability of wood pellets and coal (including emissions costs) is shown as "clean dark spread minus biomass spark spread". A positive value implies that coal is the more profitable generation fuel. A negative value implies that wood pellets are more profitable.

Implied biomass spreads are for dedicated wood biomass power generation plants. The calculations do not take into account local taxes and transport costs, handling costs, or adjustments for other capital expenditure.

All prices contained in the sections on competing fuels, electricity, emissions allowances and UK renewable obligation certificates are Argus proprietary assessments.

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