

Biomass Market Update

Prices spike further

(RBCN) European wood pellet prices have jumped over the past quarter amid tightening supply ahead of winter, although rising stocks and weaker generation demand could limit gains.

I2 industrial wood pellets were assessed at an average of around €200/t (\$213/t) CIF ARA, up €35 versus the previous quarter, according to a survey of market participants. ENplus A1 residential pellets were pegged at an €80 premium to the I2 price.

“Utilities are quite well stocked,” said a Scandinavian biomass trader, pointing to efforts to restock ahead of the winter demand season.

Combined inventories at several monitored Amsterdam, Rotterdam and Antwerp (ARA) import terminals have surged by 13,500 tonnes – or nearly 60% – compared with the end of the previous quarter, to around 36,500 tonnes, RBCN estimates showed.

“Arrivals have been picking up again,” said a source at one European import terminal, adding “I hope this will be continued throughout the coming months”.

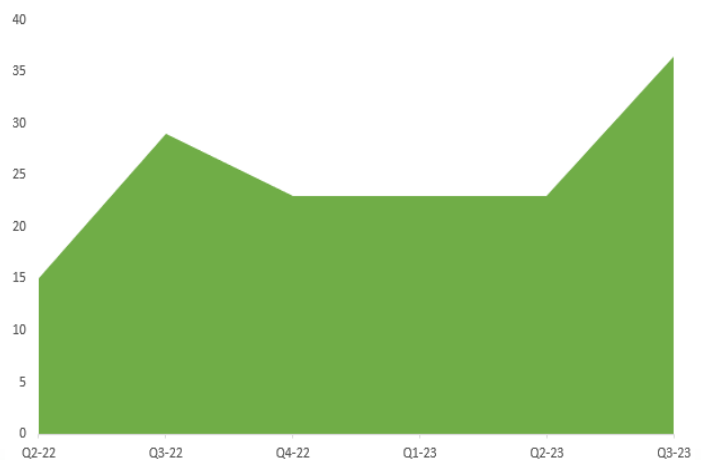
He said however the significant volume of pellets in stock may deter some importers from taking more material.

A source at another terminal said the rise in stocks had more to do with increased vessel arrivals rather than demand, with some maintenance work at plants having reduced burn levels.

RBCN Wood Pellet Price and Stock assessments		
	End Q3 2023	Vs. Q2 2023
Industrial (I2), CIF ARA	€ 200/t	+21.2%
ENplus (A1), CIF ARA	€ 280/t	+7.7%
ARA stocks, tonnes	36,500	+58.7%

**Assessments reflect Europe-origin spot cargoes, loading up to 3 months ahead*

ARA wood pellet stocks, '000 tonnes



Yet, despite the swelling stock levels, the Scandinavian trader said the lack of Russian pellets in the market – particularly for premium pellets – was “still noticeable”.

The EU imposed a ban on Russian and Belorussian pellet imports following the invasion of Ukraine in February last year, thereby removing an estimated 3 million tonnes of supply from the European market and catapulting industrial pellet prices to record levels of more than \$400/t. *Continues on p.2...*

Wood Pellet Imports*, tonnes	Q2-23	Q1-23	Year-to-date	vs. Q2-22	vs. YTD-22
Netherlands	570,409	537,977	1,108,387	17%	6%
UK	1,430,563	1,499,526	2,930,089	-17%	-23%
Belgium	99,630	247,838	347,468	-66%	-34%
Denmark	282,120	465,383	747,503	-60%	-49%
<i>Of which in Q2-23</i>	US	Canada	Russia	Portugal/Spain	Baltics**
Netherlands	515,978	51,958	0	102	2,372
UK	1,152,496	105,937	0	14,447	157,682
Belgium	96,716	0	0	0	2,914
Denmark	120,338	29,424	0	6,478	125,881

**Source: Eurostat & BEIS **Latvia, Lithuania and Estonia*

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“The market is theoretically short because of Russia. But weaker demand is capping prices,” he said.

Furthermore, soaring raw material costs in the Baltics were keeping production, and therefore export, costs high, the trader said.

“Raw material costs in the Baltics are high, accounting for around 60% of the cost. So while these costs remain high, prices will remain supported,” he said.

But spot demand was nevertheless muted, said another European trader.

“There’s not a lot of new demand – it’s mainly the usual suspects,” he said.

“There are not a lot of transactions going on, as these prices are too high for most buyers, such as the UK,” he said, adding however there could still be a price spike this winter should it prove to be unseasonably cold.

Yet US pellet producer Enviva said the “carbon price environment” in the European Union remained strong, which reinforced the cost competitiveness of biomass.

“Wood pellets are currently the cheapest form of thermal energy generation in Europe,” it said, in its Q2 results, adding Enviva’s long-term contracted wood pellets at \$220 -260/t made biomass generation in the EU more profitable than conventional generation, especially compared to delivered liquified natural gas (LNG) prices.

“Biomass continues to be very price competitive, with biomass currently forecasted to be cheaper than natural gas and coal at most points along forward curves,” it said.

Enviva also said it had made its first sales into the emerging biomass market in Poland.

“Enviva has sold two test shipments for consumption in Poland that are scheduled to be loaded during third-quarter 2023,” it said.

It noted that Poland had one of the highest per-capita rates of coal usage in the EU, and historically had been very dependent on Russian fossil fuels.

“Poland is progressing with its energy transition plans to meet 2030 and 2050 renewable energy targets, and in the Polish National Energy and Climate Plan, the government declared that by 2030, the consumption of biomass for heat production in heating plants must grow almost 10 times,” it said.

The Polish government was consolidating coal plants to manage the carbon transformation of its asset base, and was in the process of amending renewable energy regulation, which was expected to support the conversion of coal plants to biomass usage, it noted.

Meanwhile, with most power capacity in Europe able to convert to biomass having already done so, some producers were

looking to other sectors for opportunities.

“Pellet producers are focusing more on what possibilities there will be in other industries, as there is no growth in demand for the power industry,” said the first trader.

“They are looking, for example, at biomass for sustainable aviation fuel, and also the cement and chemical industries,” he said.

“But nothing is happening yet, that I’m aware of, that’s using significant tonnage, so it’s back to the power industry,” he noted.

A Ukraine-based biomass trader said his company had been looking at developing biofuel production from biomass – mainly from grains – with aim of producing 3,000 tonnes/month from mid-October.

“This is considered big for bioethanol,” he said, adding while he was trying to build up a customer base for the new produce, they would continue producing pellets “as a sideline”.

Europe’s pellet imports drop 24% in first quarter of 2023

Britain’s biomass usage as a generation fuel decline in January-August by 1 percentage point to a 4.7% share of the power mix, TSO data showed.

A biomass trader, familiar with the UK market, said relatively high prices for wood pellets had deterred generators – notably at the 400 MW Lynemouth plant – from operating biomass units.

Drax also said in its latest Electric Insights Report that “unprecedented wood pellet prices made many units unprofitable to run”.

The drop biomass usage came despite an overall 1.6 percentage point increase in the share of renewable energy in the mix to 33.4%. This was thanks largely to a rise in wind power’s contribution, from an average 21% to 23.3%.

The share of gas dropped sharply, from 40.0% to 34.3%, while coal’s slice of the mix was down 0.8 percentage points to just 0.7%.

“With the country now down to just one coal power plant, the end of coal is in sight,” Drax said in the report.

“The roll out of wind and solar, and whether a nuclear renaissance emerges will play a large role in determining whether and how fast natural gas generation continues to decline in the coming years,” it added.

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UK government reiterates support for biomass CCS

The UK government has reiterated its support for the use of biomass with carbon capture and storage (CCS) as a power generation fuel.

The government said it was “critical” for the country to reach net-zero carbon emissions by 2050.

“The use of biomass in energy generation in the UK’s power sector has helped to reduce the use of fossil fuels dramatically,” the government said in its new biomass strategy report published in August.

Biomass accounted for 11% of the country’s renewable power last year, which totalled 135 TWh, making it the second largest renewable electricity source after wind, it said.

Biomass electricity generation – and power bioenergy with carbon capture and storage (BECCS) – could operate at a baseload or dispatchable level, which could help make the electricity system “reliable as well as net-zero consistent”, it said.

The government intended by 2035 to transition away from unabated emission uses of biomass where possible to sources such as BECCS, which were “critical to meeting net zero”, it said.

Yet, minister for energy security and net zero, Graham Stuart, said securing sustainable supply of biomass, both from within the UK and from imports, remained a significant challenge.

“We are committed to maintaining a strict approach to biomass sustainability and are planning to consult on a sustainability framework to support this approach,” he said in the report.

The report found that biomass was a “versatile resource” and could be used to produce “almost any type of energy”, including power, heat and transport fuels, while also offering opportunities to replace fossil fuels in chemicals, materials, and products.

The government said the Biomass Strategy set out steps it intended to take to strengthen biomass sustainability and the opportunities for the use of sustainable biomass across multiple sectors of the economy in support of achieving the UK’s net zero target.

“It builds on the 2021 Biomass policy statement and the Powering up Britain strategy which emphasised the important role that biomass will play in Britain’s fully decarbonised power system by 2035, subject to security of supply,” it noted.

UK power producer Drax, which plans to develop the at the world’s biggest BECCS project at its plant in North Yorkshire, said it welcomed the government’s plans.

“The inclusion of BECCS at the top of a priority use framework is a clear signal that the UK wants to be a leader in carbon removals,” said Drax CEO Will Gardiner.

The Wood Pellet Association of Canada was also “pleased” with the UK government’s report, it said in a note.

“Canada is the second largest country supplier of wood pellets to the UK,” it said, noting that 16% of the 9.1 million tonnes of wood pellets imported into the UK in 2021 came from Canada.

The US remained the largest supplier at 60%, while EU countries – Latvia, Portugal and Estonia – provided 18% and the rest came from Brazil and Russia, it said.

“As the demand for biomass rises in the UK, Canada is well positioned with an untapped sustainable and renewable source of fibre in the tens of millions of cubic metres [forest harvest residue, or “slash”] left in the forest every year due to economics,” it said.

“Government incentives, both domestically and internationally, can work together to incentivise the forest sector, including a growing number of Indigenous-led businesses, to bring this “slash” to market,” it added.

Europe pellet imports drop 24% in Q1 Imports of wood pellets by four key European consumers in the first half of 2023 dropped by nearly a quarter, versus the same period last year, as Russian supply ground to a halt, Eurostat data showed.

The Netherlands, UK, Belgium and Denmark imported an estimated 5.1 million tonnes of wood pellets in January-June, which was 1.68 million tonnes lower than in the first half of 2022, the data showed, based on RBCN calculations.

Of the total, the UK imported 2.93 million tonnes, down 17% on the year, while Denmark imported 60% less at 0.75 million tonnes and Belgium reduced imports by 66% to 0.35 million tonnes. (*see table on p.1*).

Enviva increases Q2 sales by 2%

The world's largest producer of industrial wood pellets, Enviva, sold 1.3m tonnes of wood pellets in the second quarter of 2023, up by a marginal 2% from the same quarter last year citing heightened output at a Mississippi plant.

"Second-quarter 2023 volumes benefited from our Lucedale (Mississippi) plant being fully ramped; however, a scheduled extended outage conducted at the Waycross (Georgia) plant – one of Enviva's top-performing plants – as well as our Amory (Mississippi) plant being offline following tornado damage suffered in March 2023, dampened the aggregate increase in produced volumes," the company said in its Q2 results.

The extended Waycross outage, which included installing improved emissions control equipment, was completed during April and May, with a return to full production in June, it said, adding that operations at Amory were expected to resume by October this year. Production volumes achieved in June 2023 reflected the initial benefits of operational changes being made at certain Enviva plants, it said.

"In particular, since the latter part of second-quarter 2023, Enviva has been operating the Southampton (Virginia) plant at half of its nameplate capacity while we retrofit an under-performing dryer line," it said.

Southampton had been operating unprofitably for the past several quarters, and with recent changes, Enviva expected the plant to operate on a financial breakeven basis in the second half of 2023.

"Currently, Enviva is evaluating alternatives to return Southampton to profitability on a go-forward basis," it added.

Looking ahead, the firm pointed to the likelihood of a positive fourth quarter.

"There is seasonality to Enviva's business, whereby the fourth quarter experiences an uptick in biomass consumption due to winter heating demand coupled with seasonal impacts to the amount of solar and wind energy available to power grids," it said.

"Additionally, historically, we have seen higher commercial value materialise in the fourth quarter, and there are a number of wood pellet supply and demand dynamics that are expected to be supportive of that activity this year," it added.

RWE plans battery storage at biomass plant

Germany utility RWE has finalised its investment decision for a battery storage project at its biomass plant at Eemshaven in the Netherlands.

The battery storage will have an installed power capacity of 35 MW and a storage capacity of 41 MWh. A total of 110 lithium-ion battery racks are to be installed on an area of around 3,000 square metres. RWE plans to invest approximately €24 million.

RWE said the battery project was an important step towards a portfolio of innovative demand assets to optimally integrate the weather-related fluctuating power generation profile of the "OranjeWind" offshore wind farm into the Dutch energy system.

The planned battery storage facility can operate at its installed capacity of 35 MW for over an hour. This is sufficient to charge around 800 EVs. The system has been designed to be virtually coupled across technologies with RWE power plants in the Netherlands.

"This enables optimal management of balancing energy, which can be supplied by selected units either individually or as a group," RWE said.

The battery storage system receives excess power from the electricity grid and feeds it back into the system when required, in order to maintain the required grid frequency.

"With the increasing share of renewable energies in the electricity mix, the demand for flexible battery storage is also rising," said Roger Miesen, CEO RWE Generation and Country Chair for the Netherlands.

"With this large-scale project, RWE is gaining experience in the marketing of energy storage systems on the Dutch energy markets and is actively contributing towards stabilising the Dutch electricity grid," he added.