Biomass Market Update

Prices slide nearly 50%

(RBCN) European wood pellet prices have dropped nearly 50% over the past quarter as demand declines and amid sufficient supply .

I2 industrial wood pellets were assessed at an average of around €186/t ($200/t) CIF ARA, down €162 against the previous quarter, according to a survey of market participants. ENplus A1 residential pellets were assessed at a €15 premium to the I2 price.

"The market is quiet, with nobody really in the market for spot volume," said a UK-based biomass-market participant, who noted the focus was now for the fourth quarter and 2024 supplies.

"Price levels are still pretty good, but obviously down quite a bit from last year," said a Scandinavian biomass trader, adding however prices were still high compared with the historical average of around $170/t.

An EU-wide ban on Russian and Belorussian pellet imports last year – following Russia's invasion of Ukraine in February – left Europe with a deficit of some 3m tonnes, which in turn propelled prices to record levels of well over $400/t.

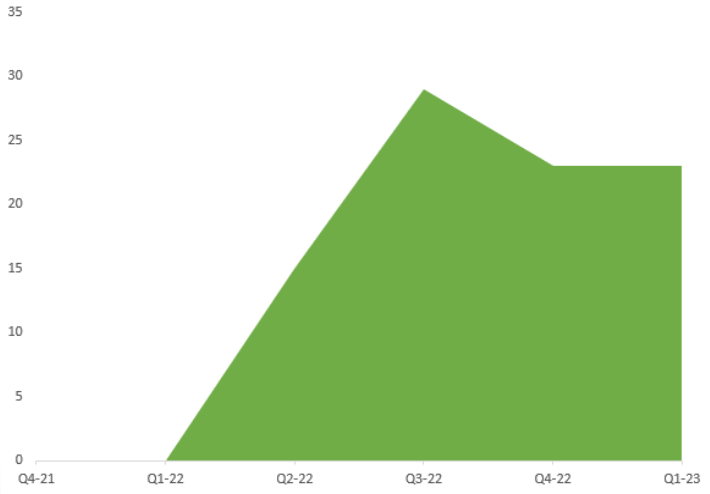
The trader said the lower prices therefore likely reflected reduced demand, adding "I'm not aware of any new production capacity having come online".

"But high production costs are keeping prices [relatively] high," he said, adding "no one wants to sell below $200/t, but buyers want to pay $180/t."

RBCN Wood Pellet Price and Stock assessments		
	End Q1 2023	Vs. Q4 2022
Industrial (I2), CIF ARA	€ 186/t	-46.6%
ENplus (A1), CIF ARA	€ 201/t	-55.1%
ARA stocks, tonnes	23,000	Unchanged

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

ARA wood pellet stocks, '000 tonnes



The trader said producers would be "happy" to sell at $220/t, but that the spread was "big enough for a lot of deals not to happen".

"People are well stocked and the season is ending, so there is no demand for pellets, except for next season," he said, adding he had already sold his 2023 supplies in autumn last year.

Continues on p.2...

Wood Pellet Imports*, tonnes	Q4-22	Q3-22	Year-to-date	vs. Q4-21	vs. YTD-21
Netherlands	605,794	880,853	2,533,924	3%	-8%
UK	1,711,850	1,923,460	7,425,004	-28%	-17%
Belgium	169,412	174,548	868,546	41%	25%
Denmark	188,815	269,496	1,912,379	-66%	-9%
Of which in Q4-22	**US**	**Canada**	**Russia**	**Portugal/Spain**	**Baltics****
Netherlands	529,093	42,038	0	264	34,399
UK	1,193,616	220,091	0	49,723	248,419
Belgium	136,376	3,384	0	11,614	18,039
Denmark	40,982	29,910	0	52	117,871

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

Continued from p.1...

At the same time, another European trader said wood pellet prices were being driven by the price of coal plus carbon, as some utilities were able to swap between coal and biomass, depending on which provided the most favourable generation margins.

"There is a good chance there will be a shortage of pellets next season too, especially if industrial demand is there," he said, adding this could also draw premium – or residential – pellets into the industrial market.

"No one is paying up yet [for premium pellets], but maybe they could get a slight premium," he said, adding strong demand over the 2024-2025 winter could however result in a "big premium".

Combined inventories at several monitored Amsterdam, Rotterdam and Antwerp (ARA) import terminals were unchanged from the end of the previous quarter at around 23,000 tonnes, RBCN estimates showed.

"Stock levels haven't changed at our terminal," said a source at one import terminal, adding imports were expected to decrease slightly in March and April.

"However, imports remain at a [historically] high level for us," he added.

Meanwhile, US producer Enviva said rising carbon prices "reinforced the cost-competitiveness of biomass".

European benchmark carbon prices hit record levels of over €100/t in February and had so far this year averaged nearly €90/, at the time of writing.

"Wood pellets are currently the cheapest form of thermal energy generation in Europe," Enviva said in its 2022 results, noting wood pellets at $220-260/t made biomass generation in the EU more profitable than conventional generation, especially compared to delivered liquified natural gas prices.

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

According to some estimates, I2 pellets for delivery in northwest Europe were valued at $225/t for 2024 and $230/t for 2025.

Yet trade association Bioenergy Europe said the energy market situation remained "incredibly unstable", in a recent presentation.

"It's very complicated to predict how the situation will evolve for the upcoming months," it said.

Meanwhile, in Ukraine, there were some efforts to provide agripellets to the European market, in light of a shortfall in wood-pellet availability.

"There seems to be quite a market in the EU for biomass at the moment," said a Ukraine-based biomass trader.

"Wood pellets are in tight supply, as there's almost no wood left [in Ukraine], but as a substitution we might consider [exporting] pellets from sunflower husks," he said.

The Scandinavian trader said buyers typically "pay more attention" to agripellets when wood pellet prices are high.

"If you had sunflower husks last year, you could have sold them for a fortune," he said.

"Sunflower husks are not so good and certification can be more complicated, but all utilities have burnt sunflower husks at some point," he said.

German wood pellet production rose 6% in 2022

Germany increased wood pellet production by over 6% in 2022 to an estimated 3.57 million tonnes, amid growing domestic consumption, provisional German Energy Wood and Pellet Association (DEPV) data show.

The rise came as German consumption grew from 2.9 million tonnes in 2021 to 3.1 million tonnes last year, the estimates showed, while total production capacity reached 3.96 million tonnes, from 3.625 million tonnes.

Around 90% of the country's production was consumed domestically, according to DEPV chief executive Martin Bentele, who also noted imports of wood pellets had dropped last year due to the war in Ukraine, where much of the supply was sourced in past years.

Drax loads 200th ship at US port

UK generator Drax has loaded is 200th vessel with wood pellets at the port of Greater Baton Rouge, Louisiana, and processed over 10 million tonnes, it said in March.

"The shipment marks a major milestone for Drax's operations in the United States as it amounts to more than 10 million tonnes having been shipped and used to generate renewable dispatchable power for homes and businesses in the UK," it said in a note.

The shipment was loaded on to a bulk carrier vessel earmarked for the Associated British Ports' Humber International Terminal. From there, the biomass would be transported by rail to Drax Power Station.

"A cargo typically takes around 17 to 21 days to reach the UK," Drax said.

Over the last decade Drax has converted four of its power station's six generating units to use biomass instead of coal.

Increased bioenergy needed for 2050 climate target

Climate neutrality by 2050 would not be possible without significantly increasing the share of bioenergy in all end-use sectors, such as electricity, heating and transport fuels, said the executive director of the World Bioenergy Association.

Speaking at a wood pellet conference in Wels, Austria, Bharadwaj Kummamuru said bioenergy was playing a critical role already in helping to reduce fossil fuel use.

"Bioenergy also has a role to play in the energy transformation in developing countries, from traditional forms of bioenergy and other renewables," he said, adding it was therefore "crucial" for the sector to collaborate closely, with producers, consumers, equipment manufacturers and researchers developing an "effective communication strategy".

"The reality is that our energy mix is dominated by fossil fuels," Kummamuru said, noting they accounted for approximately 81% of global energy supply.

But he said that the renewables share had been constant – at around 14% – since the start of the century, with increased deployment matched by increasing consumption. And bioenergy was the largest renewable resource globally.

Biomass made up around 10% of global energy supply, with the forestry sector accounting for 85% of biomass supply, he said.

"Biomass is the third largest renewable power sector after hydropower and wind," he said, noting in 2019, 680 TWh of dispatchable power was produced from biomass sources, such as wood pellets and chips in the EU.

"New markets for sold biomass [are being found] in Japan, South Korea and South East Asian countries," he said.

Indeed, according to David Wong, of Malaysian pellet producer Rainbow Pellets – who was also speaking at the event – Japanese wood pellet import demand would likely rise by 1.1 million tonnes this year to 5.5m tonnes, while South Korea imports could hit 4.5m tonnes, compared with 3.9 million tonnes in 2022.

"Pellets are one of the fastest growing commodities worldwide," Kummamuru said, noting global production had risen to 44 million tonnes, with Europe accounting for 56% of the total output.

As such, feedstock mobilisation and densification technology had become critical, he said.

He said the UK's 4 GW Drax power plant – which has four dedicated biomass-fired units – was a noteworthy "success story", and an "important example of coal to biomass conversion".

The plant has 14 TWh of dispatchable, renewable power, equivalent to 4 million homes, he added.

Enviva Q4 production hits record

Enviva, which is the world's largest producer of industrial wood pellets, produced a record 1.5m tonnes in the fourth quarter of 2022, and sold at higher-than-expected prices, the firm said in its 2022 results.

Volumes were 35% higher than in the third quarter, it said.

"A portion of the shipments were sold at prices aligned with elevated market prices," the producer said, regarding surging prices in the wake of an EU-wide ban on Russian and Belorussian pellets – due to Russia's invasion of Ukraine – which left a 3 million-tonne gap in supply.

"During fourth-quarter 2022, Enviva had three separate customers request not to take shipments due to various operational challenges they were experiencing," it said, noting the firm, in turn, had shipments available to sell at a premium compared to deliveries into the originally scheduled contracts, which were linked to market prices in December 2022.

"These are normal opportunities that arise periodically and, in 2022, we were able to take advantage of strong pellet spot pricing conditions," it said.

The incremental cash collected above the take-or-pay obligation for the shipments sold at elevated market prices was approximately $32 million, it said.

Enviva's customers were renewing existing contracts and signing new contracts in large part due to the urgent need to reduce lifecycle greenhouse gas emissions from their supply chains and products while securing reliable, affordable, renewable feedstocks over the long term, Enviva said.

"There are limited large-scale alternatives available for renewable baseload and dispatchable power and heat generation, and even fewer sustainably sourced feedstocks to substitute in hard-to-abate sectors".

Europe must replace 3 million tonnes of banned pellets

European wood pellet consumers must replace 3.1 million tonnes of supply due to a ban on Russian imports, with Denmark and Belgium most affected, according to trade association Bioenergy Europe estimates.

Nine EU member states have had more than 15% of their wood pellet consumption affected by the war in Ukraine, the association's Irene di Padua said at a wood pellet conference in Wels, Austria.

Of the total, Russia accounted for 68%, Belarus 18% and Ukraine the rest.

Wood pellet imports from Russia and Belarus have been banned from the EU since summer last year, while Ukraine has been unable to produce or export the production due to the war, she said.

Denmark was the worst affected, with an estimated shortfall of 1.2 million tonnes, while Belgium was second with 0.4 million tonnes, according to Bioenergy Europe data.

The other most impacted countries were largely in central and eastern Europe, and included Poland with 0.23 million tonnes, Latvia with 0.18 million tonnes, Romania with 0.07 million tonnes and Bulgaria with 0.06 million tonnes.

Latest Bioenergy Europe data showed wood pellet consumption in the EU hit 20 million tonnes in 2021, up from 18.3 million tonnes in the previous year and therefore made up around half of the global total of just over 40 million tonnes.

However, while the UK was by far the largest individual consuming country, the biggest growth was seen for Japan, with 1.1 million tonnes, followed by the Netherlands with 0.94 million tonnes and South Korea with 0.7 million tonnes.

It saw industrial consumption as the most significant driver.

On the production side, the association saw EU output reaching 24.5 million tonnes in 2021, up from 20.7 million tonnes in the previous year. This was just under 50% of global production, with North America in second place with 2.8 million tonnes, or 31% of total output. Only negligible volumes were produced – or consumed – in Asia, Oceania, the rest of Europe and South America.

"2021 was an exceptional year for pellets, with increased production, increased consumption and increased sales of appliance," di Padua said, pointing also to the "increasing importance" of the Asian power market.

Drax pauses BECCS investment

UK biomass-fired power generator Drax has paused investment in bioenergy with carbon capture and storage (BECCS) until the government provides certainty of financial support.

"Drax's power station in Yorkshire is currently the largest provider of dispatchable power to the GB electricity system, as well as being one of the only renewable sources of secure supply," the firm said, of its 4 GW plant in northwest England.

"Its renewable biomass generation provides 2.6 GW of electricity, supplying millions of homes and businesses with dispatchable, reliable power," it said.

But whilst Drax welcomed the government's support for CCS in the recent Budget, it needed its BECCS project to gain so-called "Track 1" status, without which it said the plant could become "unviable" and unable to contribute secure power at a time of such critical need.

"Until it receives this clarity, Drax has taken the decision to pause it's multi-million-pound investment programme into the BECCS project at Drax Power Station," it said.

At times with the tightest margins, Drax's biomass units provide up to 11% of total GB electricity generation and up to 70% of the renewable generation, the firm said.

"The loss of Drax's and other biomass units from the GB electricity system would further reduce the country's dispatchable capacity to 80% of peak demand," it said, noting this was from the already forecasted fall to 85%, with increasing reliance on gas and power imports, generation from intermittent renewables, and increasing costs for consumers.

"Until we have this clarity, we are pausing our… investment programme in the UK BECCS project and urge the government to use the planned announcement at the end of [March] to outline their support for this," said Drax CEO Will Gardiner.

"Any further delays to this project could impact the UK's security of supply, net zero and levelling-up ambitions and the viability of Drax Power Station," he added.