First Quarter 2022 Biomass Market Update

Demand drives prices

(RBCN) European wood pellet prices have risen sharply over the past quarter, as producers struggled to meet strong generation demand.

According to a survey of market participants, I2 industrial wood pellets were valued at around $\leq 195.50/t$ (US $\leq 220/t$) CIF ARA, up a significant ≤ 38.50 against the previous quarter. ENplus A1 residential pellets were seen at a small premium to the industrial price.

"The market is still very strong," said a Scandinavian biomass trader, adding the market appetite for wood pellets was outstripping available supply.

"A lot of people are looking for volumes," he said, noting one utility had recently sold pellets to another utility at an "unexpectedly high price"

Market participants said deals had recently been concluded at as high as US\$225/t CIF ARA due to the lack of supply, but that very little volume was changing hands at such levels.

"There is nothing much in stock [at plants or ports], just what is required for to meet immediate requirements," the trader said.

Indeed, combined stocks at several monitored Amsterdam, Rotterdam and Antwerp (ARA) import terminals had diminished to zero, from around 20,000 tonnes at the end of the third quarter, RBCN estimates showed.

"At present, all pellets at our warehouses have been loaded into barges [for user by a large generator]," said

RBCN Wood Pellet Price and Stock assessments

	End Q4 2021	Vs. Q3 2021			
Industrial (I2), CIF ARA	€ 195.50/t	+24.5%			
ENplus (A1), CIF ARA	€ 198/t	+25.3%			
ARA stocks, tonnes	Zero	-20,000			

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

ARA wood pellet stocks, '000 tonnes



a source at one ARA terminal, adding "so there are no pellets in stock at this time."

But he said further vessel arrivals were anticipated in December and early 2022, with stock levels therefore likely to recover to around 25,000 tonnes in January.

Also, feeding into the high price of pellets was expensive freight costs, said one trader, noting vessel costs for pellets imported from northwest Russia had doubled from "normal" levels over the past few months to more than US\$50/t.

Wood Pellet Imports*, tonnes	Q3-21	Q2-21	Year-to-date	vs. Q3-20	vs. YTD-20
Netherlands	700,293	882,196	2,179,589	-1%	37%
UK	2,161,450	2,307,294	6,543,454	1%	0%
Belgium	156,938	249,647	572,619	-24%	-25%
Denmark	218,139	453,627	1,543,299	15%	55%
Of which in Q3-21	US	Canada	Russia	Portugal/Spain	Baltics**
Netherlands	394,121	33,407	163,554	8	109,203
UK	1,345,946	232,016	149,699	70,037	363,752
Belgium	18	0	148,366	0	8,554
Denmark	60,267	0	38,718	13,396	105,758

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

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And the wood pellet market was not immune to developments in the related energy markets, which have seen coal, gas and emissions prices surge to record – or at least, multiyear – highs in September-December.

"Emissions prices have risen dramatically, and this is further driving biomass demand, as coal has become more costly to burn," said the second trader.

Benchmark carbon (EUA) prices in early December rose to highs of more than $\leq 90/t$, compared with less than $\leq 30/t$ a year ago.

"But there is less momentum [for wood pellets] for the second quarter of 2022 and beyond, as buyers are hoping prices will come down once the cold weather goes away," the trader said, adding "I think prices will come down, but by how much is a good question."

Meanwhile, although supply was broadly insufficient to meet demand, there were no noteworthy disruptions to output.

"There was some flooding in Canada, which caused some delays, but otherwise there are no problems with supply," said the Scandinavian trader.

"There is no shortage of residue. Overall, supply for raw material [for pellet production] is pretty good."

He said most producers were "running at full speed", and prioritising the premium pellet market over industrial customers, when possible.

"This is because prices for the residential market are even higher [than for industrial pellets]," he said, adding the premium was "not a lot".

"But as a European supplier, it's important to be friendly with residential buyers," he added.

Drax-Pinnacle partnership blossoms

UK independent generator Drax has made "good progress" integrating US pellet producer Pinnacle since its acquisition in April, Drax said in a December trading update.

"[We are] currently in the final stages of commissioning over 360,000 tonnes of new production capacity at Demopolis, Alabama," it said, adding in October, the group commissioned a 150,000-tonne expansion at its LaSalle plant in Louisiana while at Leola, Arkansas, a new 40,000-tonne satellite plant is due to be commissioned in December.

"These developments, along-side incremental new capacity in 2022, support the group's continued focus on production capacity expansion and cost reduction," Drax said.

Once fully commissioned, Drax will operate around 5 million tonnes of production capacity across three major North American fibre baskets – British Columbia, Alberta and the US Southeast, of which around 2 million tonnes are contracted to third-party counterparties under long-term contracts, with the balance available for Drax's own-use requirements.

"There has been no disruption to own-use or third-party volumes from the global supply chain delays currently being experienced in some other sectors," the UK firm said.

"However, summer wildfires led to pellet export restrictions in Canada [and] more recently, heavy rainfall and flooding in British Columbia have led to some further disruption to rail movements and regional supply chains."

Meanwhile, in the UK, the group's biomass and pumped storage generation assets "continued to play an important role" in providing stability to the UK power system at a time when higher gas prices, European interconnector issues, and periods of low wind had placed the system under increased pressure, Drax said.

Drax said it had cut the carbon emissions from its power generation by over 90% in under a decade, becoming one of Europe's lowest carbon intensity power generators and moving it closer to its target to be carbon negative by 2030.

"Formerly the largest coal power station in western Europe, Drax has this year ended commercial coal generation, sold its existing gas assets and transformed itself into one of the region's primary decarbonisers – it is now a purely renewable power generator," it said, adding it had also made "significant progress" in the first half of 2021 with plans to deploy the world's largest carbon capture project by fitting critical negative emissions technology (BECCS) at its power plant in North Yorkshire.

"Deploying BECCS at Drax could enable the renewable energy company to make an even greater contribution to carbon reductions in the coming decade, while creating jobs and supporting the UK's green transition," it said.

Subject to the right government support, the first BECCS unit at Drax Power Station could be operational in 2027 with a second in 2030, permanently removing at least 8 million tonnes of CO2 from the atmosphere each year, Drax said.

"Replacing fossil fuels with clean power from renewables has enabled the UK's electricity system to decarbonise faster than any other major economy," said Drax CEO Will Gardiner.

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Pellets replace coal at Japanese plants

US firm Enviva, the world's largest producer of wood pellets, has signed an agreement with Tokyo-based utility J-Power to supply up to 5 million tonnes a year, it said in November.

The pellets will be used to replace coal in J-Power's existing coal-fired plants, therefore curbing the utility's greenhousegas emissions and helping it reach its target of becoming carbon-neutral by 2050, it noted.

"Climate change is a global challenge requiring a global solution [and] Enviva has an established track record of delivering a dependable, scalable, and sustainable product," said Thomas Meth, co-founder and executive vice president of sales and marketing at Enviva.

"We are delighted that our partnership with J-Power can help this leading utility in Japan reach its climate goals with reliable, baseload energy that complements the intermittency of wind and solar."

In April, Japan nearly doubled its 2030 target to cut carbon emissions by 40%, up from 26% in 2013, joining other countries shifting from coal and other fossil fuels to accelerate the fight against climate change.

To further align with the government decarbonisation policy, J-Power – which has a total of 8.4 GW of coal-fired power capacity – recently announced various plans, including phase-out of aging thermal power plants and co-firing of biomass.

At the same time, UK energy firm Drax's US subsidiary Pinnacle agreed in early December to acquire the pellet sales contract book of Canada's Pacific BioEnergy, adding 2.8 million tonnes of orders for biomass supply to counterparties in Japan, as well as Europe.

The deal complements Drax's existing supply contracts to Asian counterparties and European generators, increasing Drax's long-term third-party sales book by 15%, to around 23 million tonnes, it said in a press note.

"This deal supports Drax's ambition to double our sales of sustainable biomass by 2030 to markets in Asia and Europe where demand for biomass is increasing as countries transition away from coal," said Drax CEO Will Gardiner, noting it also demonstrated Drax's commitment to the growth of sustainable biomass in Japan specifically, where the firm plans to establish a new office in 2022.

"We look forward to working with our partners in Japan and

other markets across Asia and Europe as part of our aim to be a global leader in sustainable biomass, making an even greater contribution to the world's efforts to reach net zero."

Earlier this year, Enviva announced its own net-zero commitment that will reduce, eliminate, or offset all of its direct emissions by 2030.

Firms agree to support net zero

A coalition of wood bioenergy firms from around the world have signed a declaration setting out a vision for the sector's ambitious growth to support the push to global net zero emissions by 2050, Graanul Invest said in November.

"The Glasgow Declaration on Sustainable Bioenergy, published on 10th November, uses International Energy Agency (IEA) data to highlight the indispensable role that sustainable bioenergy will play to help the world achieve global net zero by mid-century," said the leading biomass producer, which was of the signatories.

"This target would help the world to meet the Paris Agreement's 1.5°C target, and the IEA's 'Net Zero Scenario' projects threefold growth in the use of sustainable bioenergy to achieve it."

Graanul Invest said the document also detailed a framework of sustainability principles that were already helping to deliver sustainable wood-based bioenergy and must continue to underpin the entire industry as it grows internationally.

"The framework includes robust carbon accounting and supply chain transparency, resource management, biodiversity and supporting communities," it said.

The IEA's Net Zero Scenario anticipates that sustainable wood bioenergy must increase threefold to deliver 4% of the global energy supply by 2050. This will reduce emissions by one billion tonnes of CO2e per year compared to 2020.

These reductions will come from a combination of replacing fossil fuels with renewable energy and delivering negative emissions through bioenergy with carbon capture and storage.

"Bioenergy is the world's leading form of renewable energy, supplying five times more energy than wind and solar combined," said Graanul Invest.

"Sustainable wood bioenergy has already contributed significantly to decarbonising the energy sector by providing a reliable, low-carbon, renewable alternative to fossil fuels," it said, adding, "it has directly replaced coal in some cases where coal plants were converted to run on biomass."

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