

## MARKET COMMENTARY

### Atlantic Basin Industrial: Spot continues decline

Industrial wood pellet supply continued to outpace European utility demand on the week to Wednesday, weighing further on spot market values. The Argus cif northwest Europe (NWE) index for industrial pellets delivered in the next 90-days moved down by 60¢/t on the week to \$120.95/t.

No firm spot buying demand was heard in the week as European utilities remained well-stocked. Storage was filling up across Europe, a market participant said.

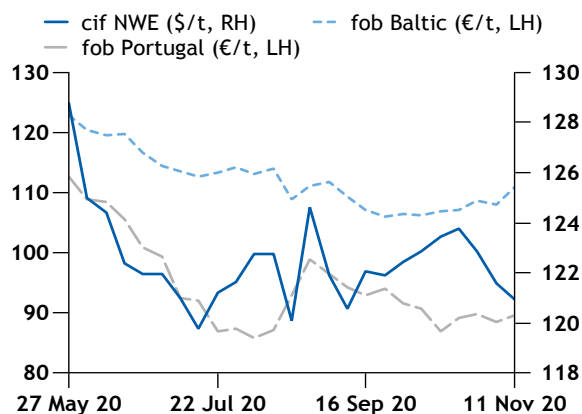
But EPH's Lynemouth and RWE's Eemshaven units are expected to resume operations in the coming weeks, according to their respective Remit data. Once these power plants are burning wood pellets again, stock levels may soon ease, participants said.

Spot discussions were ongoing, participants said, as one utility was heard looking to sell unrequired pellet volumes. And tentative interest was heard for first-quarter deliveries, but no formal discussions were underway, traders said.

Utilities still have inventories that they will "most likely carry over" into 2021, a trader said, pushing demand further into the year. Though market activity remained largely illiquid because of hollowed demand in the week, "there is a light at the end of the tunnel," one trader said.

In the UK, utility Drax's 645MW unit 3 – which returned to operations on 2 November after a 102-day outage – spent much of the week off line. An unplanned outage began on 6 November and is set to run until the evening of 11 November,

### Argus industrial wood pellet index



## EUROPEAN INDUSTRIAL WOOD PELLETS

	Wood pellets - within 90 days (spot)				
	Week index		Month index		
	Price	±	Oct	Sep	Aug
cif NWE \$/t	120.95	-0.60	123.24	121.75	122.54
fob Baltic €/t	111.00	+3.00	107.23	108.09	111.79
fob Portugal €/t	89.58	+1.18	89.13	93.82	91.18

	Wood pellets - within 90 days (spot)	
	Price	±
cif NWE \$/MWh	25.61	-0.13
fob Baltic €/MWh	23.51	+0.64
fob Portugal €/MWh	18.97	+0.25

	Wood pellets - forward prices		
	Bid	Ask	±
cif NWE \$/t			
1Q21	126.50	132.50	-1.50
2Q21	129.50	135.50	-1.50
3Q21	132.00	138.00	-1.00
4Q21	141.00	147.00	-1.00
2021	132.25	138.25	-1.25
2022	159.50	165.50	-1.00
2023	171.25	177.25	-0.25
fob Baltic €/t			
1Q21	112.75	118.75	nc
2Q21	116.75	122.75	nc
3Q21	116.50	122.50	nc
4Q21	125.00	131.00	nc
2021	117.75	123.75	nc
2022	137.25	143.25	nc
2023	144.50	150.50	nc
fob Portugal €/t			
1Q21	97.25	103.25	nc
2Q21	102.00	108.00	nc
3Q21	101.75	107.75	nc
4Q21	111.00	117.00	nc
2021	103.00	109.00	nc
2022	119.00	125.00	nc
2023	128.00	134.00	nc

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at the time of writing. Drax's other units were available in the week. And EPH's 396MW Lynemouth plant is set to come back on line earlier than expected (see news, p.10). Despite the outages, UK biomass-fired generation rose to 0.36TWh from an average of 2.15GW of capacity in the week, up from 0.29TWh and 1.74GW last week, according to data from Drax and Imperial College London.

Along the curve, discussions were heard nearing conclusion in the week for southeast US handsized volumes to Europe in 2022, prices were around \$140/t on a fob basis.

Temperatures in Denmark over the week to Wednesday were milder than usual for the time of year. The average temperature in Copenhagen on 4-10 November was 9.08°C – 1.5°C above the ten-year norm, Speedwell Weather data show, and unlikely to indicate excess heating demand.

Despite this, the fob Baltic index gained €3/t to €111/t on Wednesday, perhaps as a result of curbed spot availability. No fresh Baltic industrial offers were heard in the week. Much of the region's production that was not already contracted remains shut down, traders said.

Storage availability in the Baltics is improving week by week, a trader said.

In Portugal, the spot index rose by €1.18/t to €89.58/t on a fob basis. Interest from Spain and France increased in the week helping to lift sentiment, traders said.

And discussions for two spot coaster vessels for delivery into Ireland from Portugal neared conclusion in the week, with prices reported at just under €100/t on a fob basis.

On the wood chip market, the 90-day spot price held flat on the week at €5.70/GJ cif NWE on Wednesday, as heating demand still lagged behind long-term averages and consumption at one utility fell in the week.

Consumption levels at a Scandinavian utility decreased because of short-term "technical challenges," a trader said.

Temperatures in Stockholm averaged 8.04°C in the week to Wednesday, slightly lower on the week but still 2.79°C higher than the 10-year seasonal norm. Similar recordings were measured in Syddanmark.

Expectations that spot activity will ramp up in the first quarter of 2021 remained, with prices reported around €6/GJ on a cif basis.

Enquiries for wood chips delivered into Poland emerged, but no prices were attached. Polish wood chip demand has increased in recent weeks with several bids made for German supply, a trader said.

In the Baltics, wood chip prices were heard just below €4/GJ fob in the week. Including freight, Baltic wood chips could be secured around the mid-to-high-€5s/GJ on a cif NWE basis, depending on the loading port, a trader said. German wood chip price levels were heard at similar levels.

## NORTH AMERICAN INDUSTRIAL WOOD PELLETS

US fob export price (industrial wood pellets)						\$/t
Origin	Delivery period	Mid	Bid	Ask	±	
fob southeast US	Spot		97.85	100.85	-1.80	
fob southwest Canada	Spot		98.50	101.50	-1.50	
fob northeast US	Spot	100.35				-1.80

US fob export price (industrial wood pellets)						\$/MWh
Origin	Delivery period	Mid	Bid	Ask	±	
fob southeast US	Spot		20.72	21.36	-0.38	
fob southwest Canada	Spot		20.86	21.50	-0.32	
fob northeast US	Spot	21.25				-0.38

Wood pellets - forward prices					\$/t
	Mid	Bid	Ask	±	
fob southeast US					
1Q21		106.40	109.40	-2.70	
2Q21		109.40	112.40	-2.70	
3Q21		111.90	114.90	-2.20	
4Q21		120.90	123.90	-2.20	
2021		111.65	115.65	-2.45	
2022		139.40	142.40	-2.20	
2023		151.15	154.15	-1.45	
fob southwest Canada					
1Q21		107.00	110.00	-2.50	
2Q21		110.00	113.00	-2.50	
3Q21		112.50	115.50	-2.00	
4Q21		121.50	124.50	-2.00	
2021		112.75	115.75	-2.25	
2022		140.00	143.00	-2.00	
2023		151.75	154.75	-1.25	
fob northeast US					
1Q21	108.90				-2.70
2Q21	111.90				-2.70
3Q21	114.40				-2.20
4Q21	123.40				-2.20
2021	114.65				-2.45
2022	141.90				-2.20
2023	153.65				-1.45

## INDUSTRIAL WOOD CHIPS

NWE wood chips - within 90 days (spot)						€/GJ
	Week index		Month index			
	Price	±	Oct	Sep	Aug	
cif NWE	5.70	nc	5.75	6.20	6.20	

Wood chips cif NWE - forward prices					€/GJ
	Bid	Ask	±		
1Q21	5.85	6.05			nc
2Q21	6.15	6.35			nc
3Q21	6.10	6.30			nc
4Q21	6.60	6.80			nc
2021	6.15	6.35			nc
2022	7.10	7.40			nc
2023	7.40	7.80			nc

### European Premium Biomass: Bulk price lifts

Bulk premium pellet prices rose in the week, as steady and “active” seasonal demand continued in Italy, market participants said.

The bulk EN plus-certified A1 pellet price rose by €1/t on the week to €146/t delivered northern Italy. The bagged EN plus A1 pellet price was unchanged on the week at €196.50/t delivered northern Italy.

There was a recovery in buying demand throughout October, and end users stocked up on pellets, traders said. This was later than anticipated – consumer buying typically starts in September.

High pellet stocks, combined with summer 2020 prices around 15pc and 13.6pc lower on the year, for bulk and bagged product respectively, slowed buying in the early heating season. End users were confident of strong, competitively-priced supply beyond the summer months, and have so far been proved correct, with bagged prices holding steady and bulk prices even slipping from a June-August average of €149.54/t on a glut of offers.

The average temperature in Milan on 4-10 November was 12.52°C – 1.6°C above the ten-year average for the period, data from Speedwell Weather show. Though temperatures crept up over the week, the average temperature at night over the week was 7.57°C – likely to support heating demand.

Elsewhere in Europe, activity was relatively muted in the week, market participants said. Some demand was heard in the Baltics and Scandinavia, in line with seasonal norms.

Argus Cif NWE monthly figures		\$/t
Balance of November		118.33
December		119.67
January		122.50
February		123.50

The figures above are an average survey result value for each month contained in the 90-day spot period. They are shown for indicative purposes, to better illustrate the composition of the market-survey component of the spot cif NWE index. The spot index value can be found on page 1 of the report.

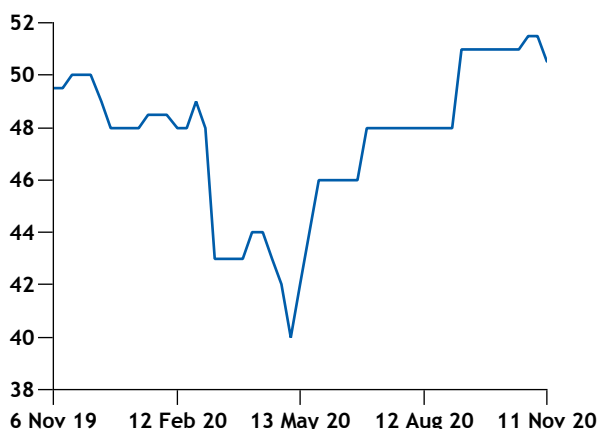
### EUROPEAN PREMIUM WOOD PELLETS

Wood pellets - within 45 days (spot)					€/t
Delivered northern Italy	Mid	Low	High		±
Bulk	146.00	142.00	150.00		+1.00
Bagged	196.50	193.00	200.00		nc

Premium wood pellets				€/t
Delivered northern Italy	Month index			
	Oct	Sep	Aug	
Bulk	145.00	145.69	148.60	
Bagged	196.05	196.00	196.60	

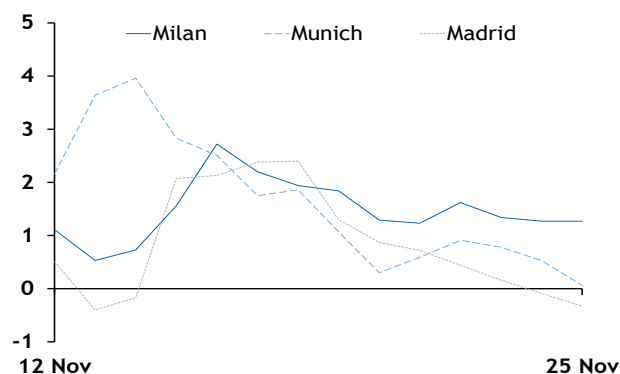
Italian premium prices: bagged and bulk

€/t



European temps, departure from norm

°C



### Asian Industrial Biomass: PKS falls further

The spot price for Indonesia palm kernel shells (PKS) moved down for a seventh consecutive week on Wednesday as strong PKS collection continued.

The spot price for PKS on a fob east coast Sumatra Indonesia basis loading in the next 90 days shed \$4.07/t on the week to settle at \$96.88/t.

No fresh spot tenders from Japanese end-users was reported over the week. PKS supplies remained plentiful amid the peak season of fresh fruit bunch collection, which is expected to last until mid-December. Some PKS stockyards were full, stopping some suppliers from buying PKS from mills, Indonesian suppliers said.

There were several Japanese buyers, tentatively bidding around \$90-95/t fob for spot Indonesian PKS cargoes, while supplier offers were around \$95-100/t.

Meanwhile offers for PKS on a fob Malaysia basis remained higher than their Indonesian counterparts over the week as tight supply in Malaysia continued.

In other markets, the fob Vietnam spot price for industrial wood pellets declined a touch on the week, losing 12¢/t down to \$94.13/t on Wednesday. But the spot price for wood pellets on a cfr Gwangyang, South Korea, basis rose by 31¢/t on the week to \$98.50/t on Wednesday, as the availability of containers for shipping pellets to South Korea tightened as a result of increased container demand in China. The tightness in the container market may take some time to impact wood pellet freight rates further, participants said.

State-controlled utility Korea South East Power (Koen) has issued an emergency tender to buy 41,000t of imported wood pellets for December delivery for its 125MW Yeongdong unit 1 power plant, which was converted to burn 100pc biomass in 2017. The utility issued an emergency tender because suppliers to its previous tender for 250,000t of imported pellets for December 2020-April 2021 delivery, finalised at the end of October, are unable to ship December cargoes because of a slow contract process. Koen’s recent emergency tender will close on 16 November.

South Korean independent power producer (IPP) Hanwha Energy also issued a fresh tender this week, for 5,000t of wood pellets for January-February 2021 delivery. The tender will close on 17 November.

South Korean renewable energy credit (REC) values – which, when firm, typically support independent power plant wood pellet demand – decreased further to W36,900/REC (\$33.21/REC) on 10 November from W39,100/REC on 3 November, according to Korea Power Exchange data. REC values have remained significantly lower on the year throughout 2020. The average REC closing price was W62,844/REC in 2019.

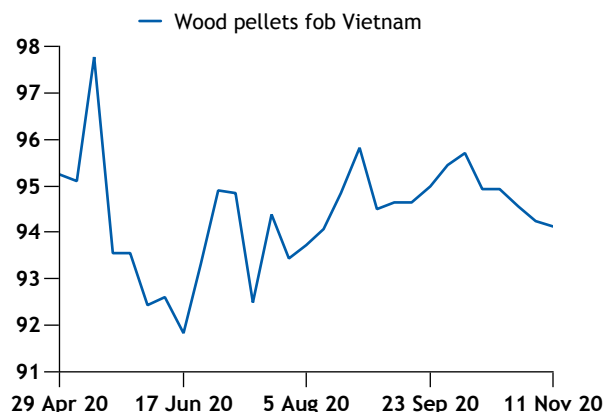
### ASIAN INDUSTRIAL WOOD PELLETS

Wood pellets - 90 days (spot) \$/t					
	Week index		Month index		
	Price	±	Oct	Sep	Aug
fob Vietnam	94.13	-0.12	95.04	94.84	94.61
cfr Gwangyang	98.50	+0.31	98.76	98.53	98.25

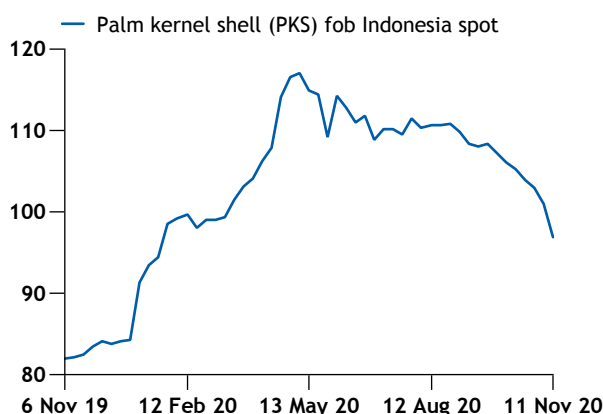
### ASIAN PALM KERNEL SHELLS

Palm kernel shell (spot) \$/t					
	Week index		Month index		
	Price	±	Oct	Sep	Aug
fob east coast Sumatra	96.88	-4.07	104.53	108.38	110.57

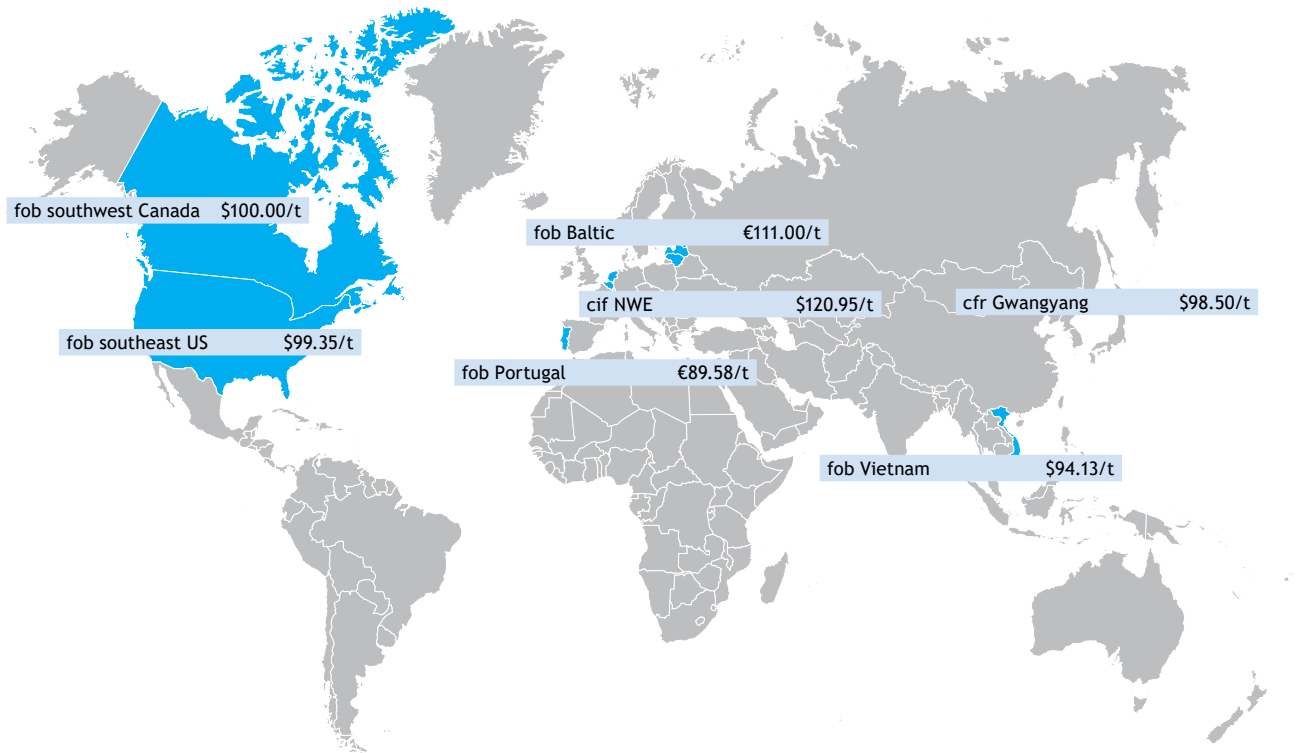
Fob Vietnam industrial pellet spot price \$/t



Fob Indonesia PKS spot price \$/t



## INDUSTRIAL WOOD PELLET SPOT PRICES AT A GLANCE



### COMPETING FUELS

Argus competing fuel assessments			
	Units	Delivery	Price
<b>Europe</b>			
Coal cif ARA	\$/t	90 days	
Gasoil heating oil German cif NWE	\$/t	prompt	
Gasoil heating oil French cif NWE	\$/t	prompt	351.75
Natural gas NBP	€/MWh	December	15.12
<b>US</b>			
Coal Central Appalachian Nymex spec	\$/st		
Fuel oil 1% New York Harbor	\$/bl	prompt	48
Natural gas Nymex	\$/mn Btu	December	2.95
<b>European Emissions</b>			
CO2 EU ETS	€/t CO2e	Dec 2021	26.37
CO2 CDM CER	€/t CO2e	Dec 2020	0.30
UK Rocs auction price	£/MWh	prompt	

### WOOD PELLET FREIGHT RATES

Argus wood pellet freight indications, spot cargo				
Route	Tonnage	Units	Rate	±
Aveiro-ARA	3,500	€/t	15.50	nc
Aveiro-Copenhagen	3,500	€/t	17.50	nc
Aveiro-Hull (UK)	3,500	€/t	15.50	nc
Riga-ARA	5,000	€/t	19.00	nc
Riga-Copenhagen	5,000	€/t	13.75	nc
Riga-Stockholm	5,000	€/t	13.25	nc
St Petersburg-ARA	3,500	€/t	20.25	nc
St Petersburg-Copenhagen	3,500	€/t	16.75	nc
St Petersburg-Stockholm	3,500	€/t	15.75	nc
Mobile-ARA	25,000	\$/t	23.20	+1.20
Mobile-ARA	45,000	\$/t	18.50	+1.00
Savannah-ARA	25,000	\$/t	21.60	+1.20
Savannah-ARA	45,000	\$/t	15.90	nc
Vancouver-ARA	45,000	\$/t	21.00	+1.00

WEATHER

European weather - Departure from normal temperatures												°C	
Location	12 Nov		13 Nov		14 Nov		15 Nov		16 Nov		Precipitation (mm)		
	Avg	± normal*	Avg	± normal*	Avg	± normal*	Avg	± normal*	Avg	± normal*	5-day	15-day	
UK – London Heathrow	10.0	1.1	10.3	1.6	11.6	3.0	11.7	3.3	10.1	1.8	12.1	23.0	
Norway – Bergen Florida	9.6	3.6	9.4	3.5	8.5	2.8	9.7	4.1	7.8	2.3	58.5	160.9	
Norway – Oslo Blindern	5.4	2.4	6.8	3.9	6.6	3.9	9.4	6.8	7.3	4.9	30.3	45.6	
France – Paris Orly	10.8	2.3	11.9	3.6	13.3	5.1	13.2	5.2	10.8	3.0	7.9	16.4	
The Netherlands – Amsterdam Schiphol	10.3	2.3	9.9	2.1	10.9	3.3	12.4	4.9	9.9	2.6	13.5	30.0	
Germany – Essen	10.5	3.1	10.4	3.2	12.0	5.0	13.2	6.4	9.4	2.8	11.1	29.2	
Germany – Berlin Tempelhof	8.3	1.9	8.3	2.1	10.5	4.5	12.6	6.7	10.4	4.7	5.7	21.5	
Poland – Warsaw Okecie	6.2	0.9	6.0	0.9	6.4	1.4	7.8	3.0	8.0	3.4	4.8	19.8	
Czech Republic – Prague Ruzyně	5.7	0.8	6.5	1.8	8.0	3.5	7.9	3.6	7.4	3.3	3.3	15.5	
Hungary – Budapest Lorinc	6.5	-0.9	6.8	-0.4	7.0	0.0	7.2	0.4	7.7	1.1	2.1	9.9	
Serbia – Belgrade Surcin	9.1	0.3	8.6	0.0	8.3	0.0	8.1	0.0	8.7	0.8	3.3	13.7	
Romania – Bucharest Imh	7.4	0.1	7.1	0.0	7.1	0.2	6.6	-0.1	6.0	-0.5	0.8	11.0	
Spain – Madrid Barajas	10.4	0.2	9.7	-0.3	9.9	0.1	11.2	1.6	11.9	2.5	1.2	5.2	

\*normal means cleaned 10-year average (2004-2013 inclusive)

– Ensemble forecasts (12.00 GMT) provided by Speedwell Weather



Ensemble averages and cleaned weather data all supplied by Speedwell Weather Limited (12:00 GMT). For more information visit: [www.speedwellweather.com](http://www.speedwellweather.com)

**Argus European Emissions Markets**

This daily service provides readers with an insight into the key drivers in the EU emissions trading scheme, as well as wider context on the future direction of the scheme.

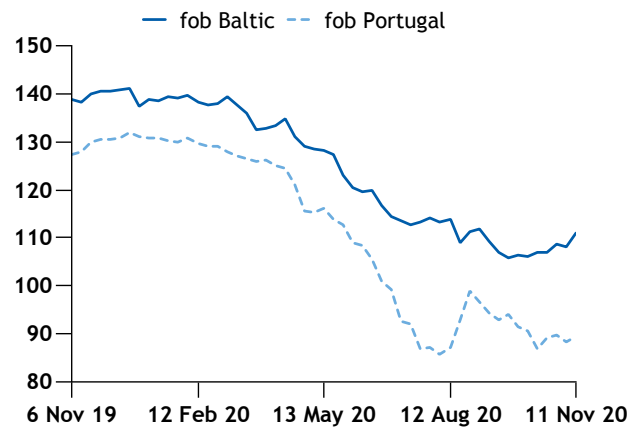
The service also covers pricing, news and analysis on other emissions trading schemes, climate finance, and the UNFCCC process.

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European fob spot prices €/t



## NEWS

**MGT biomass plant start-up delayed to Feb 2021**

UK biomass developer MGT Teesside has further delayed the launch of its new-build 299MW biomass-fired combined heat and power plant in the northeast of the country, pushing the start date back by three months.

The plant is now scheduled to start up on 10 February 2021, data from UK state-owned firm Low Carbon Contracts (LCCC) show. This is the third delay for the unit, which was initially set to begin operations on 31 March. The start date was later adjusted to **31 July** and then **10 November**.

The facility – which is expected to consume 1mn t/yr of wood pellets when running at full capacity – will be fully supplied by US pellet producer Enviva. But the delay to this major new demand project has coincided with near-record low European wood pellet spot prices. The *Argus* cif northwest Europe spot index for industrial wood pellets has held below \$125/t since May, around \$30-40/t below breakeven costs for North American pellet producers.

MGT was awarded a 15-year subsidy in 2014 under the UK's contracts for difference scheme, at an inflation-linked strike price of £125/MWh (\$165/MWh). The current strike price is £145.22/MWh, LCCC data show.

By Georgia Gratton

**Enviva wood pellet sales rise sharply in 3Q**

US wood pellet producer Enviva achieved strong sales growth in the third quarter, with the company's operations largely unaffected by the Covid-19 pandemic.

Enviva sold 1.13mn t of wood pellets in the third quarter, up by 40pc from a year earlier. The company's operations "have not been materially impacted by Covid-19", chief executive John Keppler said, and all "customers have performed in accordance with their contracts". And while the "full implications of Covid-19 are not yet known", Enviva has plans in place to mitigate potential disruptions if necessary, Keppler said.

Enviva's adjusted gross margin was largely steady on the year at \$50.13/t in July-September, down by just 43¢/t, or less than 1pc, from a year earlier.

Enviva expects its overall fourth-quarter earnings "to be stronger than the third", Keppler said.

The company recorded \$8.2mn of revenue for "modifying shipments under its long-term take-or-pay off-take contracts, which otherwise would have been included in product sales".

Several European utilities have requested delays to a range of contracted wood pellet vessels this year, as consumption has lagged behind supply.

All conditions have been satisfied for Enviva's previously

announced 270,000 t/yr 20-year contract to supply Japanese power plant developer Ichihara Yawatafuto Biomass Power GK. The contract, which makes Enviva the sole supplier for Ichihara, is now firm. Sales under the contract are expected to start in 2023, which will take Enviva's total wood pellet supply to Japan to around 2.7mn t/yr by 2024.

**Future demand growth**

The producer maintained its expectations for future wood pellet demand growth, pointing toward climate policies in Europe and Asia-Pacific.

Enviva highlighted Japan's goal to become carbon neutral by 2050 and the proposed increase of the EU's GHG emissions savings target to 60pc from 1990 levels by 2030. "These commitments and the corresponding policies... underpin the continued strong growth expected in global demand for industrial-grade wood pellets," Enviva said.

Enviva remains in an "ongoing dialogue with several large power and heat generators in Germany who intend to convert existing coal-fired assets to biomass, subject to the final legislative direction expected over the next several months", the firm said. And Enviva continues to "progress negotiations that [it] anticipates will result in additional long-term offtake contracts", it said.

**Expansions progressing**

Expansion works are continuing at Enviva's 510,000 t/yr Northampton, North Carolina, and Southampton, Virginia, plants. The installation of new equipment at Southampton is expected by the end of this year.

"Procurement and detailed engineering activities" to expand the production capacity of its Greenwood plant in South Carolina to 600,000 t/yr are under way, Enviva said. The expansion remains on track for completion by the end of 2021,

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“subject to receiving the necessary permits”, the firm said.

Construction of the 700,000 t/yr Lucedale plant and deepwater marine terminal in Pascagoula, Mississippi, is continuing, and remains on track to be completed by mid-2021.

A final investment decision over the development of a new production plant in Epes, Alabama, is still expected by the end of this year. And

Enviva is evaluating additional sites for wood pellet production plants in Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, and Mississippi.

The company owns and operates nine pellet production plants with a combined capacity of around 4.9mn t/yr in Virginia, North Carolina, South Carolina, Georgia, Mississippi, and Florida.

By April Poore

### Canada's Pinnacle hits new production record in 3Q

Canadian wood pellet producer Pinnacle Renewable Energy reached a new record high for its pellet production in the third quarter, driven by investment in plant upgrades and improving fibre supply.

Pinnacle produced 587,000t of wood pellets in July-September, up by 13pc on the second quarter – the previous record high at 518,000t – and 33pc higher on the year.

Upgrades at existing plants bolstered output in the third quarter. Improvements to the dryer, completed in **late June** at Pinnacle's 230,000 t/yr Williams Lake, British Columbia (BC) facility pushed the plant's output up by 47pc on the quarter. And production also rose at the firm's 400,000 t/yr Entwistle, Alberta plant – up by 6pc on the quarter.

Production was boosted by warm and dry weather, while the growth in plant efficiency and lower fibre costs overall reduced the third-quarter unit production cost by 7pc on the quarter.

#### “Increased confidence” in fibre supply

Sawmill residuals made up 84pc of Pinnacle's feedstock in the third quarter – up by 10 percentage points on the quarter – as a strengthening lumber market provided more sawdust and residues.

Pinnacle's fibre costs in July-September dropped by 2pc on the quarter, and it also ran down fibre inventories by 10pc owing to its “increased confidence regarding the availability of sawmill residuals”, the producer said. But the firm “expects to increase its fibre inventories in the coming months as a hedge against seasonal factors and other potential disruptions in the supply of traditional feedstock”, it said.

Pinnacle has built up fibre inventories to “withstand any shocks”, chief executive Duncan Davies said, and the goal is for Pinnacle “to become relatively agnostic [towards feedstock]”, he added. There are significant differences in

the time and cost of processing different feedstocks, such as the need for more drying for forest residuals or hog fuel compared to sawdust.

A **downturn** in the lumber industry – particularly in BC – led to sawmill curtailments and this was **exacerbated** earlier this year by the Covid-19 pandemic. The changing fibre supply profile forced pellet producers to diversify feedstock sources. Although it has been a strong second and third quarter for Pinnacle's production, Davies noted that “allowable cuts [in reference to felling rates] are going to drop in BC” in the aftermath of the mountain pine beetle infestation in the province, and the firm has been “working hard to develop our strategy to adapt to different forms of feedstock”.

#### Projects under way to lift production capacity by 20pc

Ongoing plant and capacity developments are set to increase Pinnacle's production by nearly 20pc, to 2.8mn t/yr, and take production capacity located outside BC to around 44pc, the firm said. The move into the southeast US and Alberta is part of “reducing the exposure to any variable that could impact the business”, Davies said.

Its 200,000 t/yr **High Level Alberta plant** – an equal partnership with Canadian lumber firm Tolko – remains on track to be commissioned this quarter, Pinnacle confirmed. And “we expect to see some incremental volumes from High Level in December”, Davies said.

Pinnacle is also progressing with upgrades and building at its US assets in Alabama. Construction continues at its planned 360,000 t/yr **Dempolis, Alabama pellet mill**. Commissioning is anticipated for the second quarter of 2021, keeping the project on track.

And the firm completed work at its 270,000 t/yr Aliceville plant in Alabama, adding a truck unloading system to the mill and broadening “access to additional supplies of sawmill residuals”, it said. Aliceville and Demopolis are owned by Alabama Pellets, in which Pinnacle holds a 70pc stake.

And upgrade work at Pinnacle's 225,000 t/yr Meadowbank, BC plant was restarted in the third quarter after it was halted by the Covid-19 pandemic. Similar to recent work at Williams Lake, it will improve the plant's efficiency, allowing it to adapt to the changing nature of BC fibre supply. The work should be complete in the fourth quarter and will raise production levels by 30,000 t/yr.

#### Shipments from Vancouver resume

Pinnacle achieved record output despite logistics problems in the third quarter, which led to an estimated 20,000t of production lost. All pellet shipping activity from mid-September was diverted to the port of Prince Rupert, BC after a grain silo at the Fibreco terminal at the port



of Vancouver [collapsed](#) on 11 September. The additional costs incurred from vessel and rail diversion and demurrage totalled around C\$600,000 (\$461,000), Pinnacle said. Fibreco restarted shipments in mid-October and Pinnacle confirmed that it has resumed shipping some pellets through Vancouver.

But “the spillover of the Fibreco incident impacted loading operations at the port in the early part of the fourth quarter, which may continue through the balance of the quarter and possibly longer, with additional impacts on rail service and production”, Pinnacle said.

Service failures at Canadian National (CN) rail – which Canadian pellet producers are reliant on, given the distance product must travel to reach a port – were also partly responsible for the production loss, Pinnacle said. “Significant time and attention is being directed to the CN service issue with the goal of improving service levels,” Pinnacle said.

Each of Pinnacle’s production plants has only “limited amounts of storage capacity”, and if CN railcars do not arrive on time to move the product to port then the plants could be forced to shut down in the interim, Davies said.

Pinnacle’s “future contract discussions are ongoing and Covid hasn’t impacted them”, outgoing chief executive Rob McCurdy said, noting that “European utilities have been very keen on burning biomass” amid the pandemic.

Pinnacle made a profit of C\$7.74mn in the third quarter, a swing from a loss of C\$1.46mn in the same period of 2019.  
*By Georgia Gratton*

## Erex, Eneos to plan non-Fit biomass power project

Japanese power supplier Erex and major refiner Eneos have agreed to plan the construction of a 300MW biomass power plant without support from the government’s feed-in-tariff (Fit) scheme.

Erex and Eneos aim to begin construction of the ultra-super critical biomass power plant during 2023 and commercial operation in April 2026-March 2027. The companies plan to start the environmental assessment this year at the potential construction site, which is land owned by Eneos in Japan’s northeastern Niigata prefecture. Eneos was formerly known as JXTG.

The companies are considering the use of biomass including imported wood pellets from Russia and new sorghums, sorghum modified for fuel use. Erex began test planting new sorghums in Vietnam and the Philippines in September and aims to start commercial cultivation by April 2021-March 2022. The companies plan to use 1.2mn t/yr of biomass to generate around 2,000 GWh/yr.

Erex and Eneos plan to reduce biomass procurement costs by using new sorghums so that they can run the plant without the Fit scheme. The scheme supports power

generators planning to build renewable power plants by committing to buy electricity produced for 10-20 years at a fixed price. It allows power generators to sell electricity at much higher prices compared with the typical ¥4-12/kWh (\$0.04-0.11/kWh) Japanese wholesale power price.

The companies are mulling supplying electricity generated at the plant to residents in Niigata and member companies of RE100, an international coalition of businesses targeting to source 100pc of their electricity from renewables by 2050 at the latest.

Japan imported 1.5mn t of wood pellets in January-September, up by 26.2pc from a year earlier, according to the finance ministry.

*By Nanami Oki*

## Outage extended at Orsted’s Avedore 1 biomass unit

A planned outage at Danish utility Orsted’s 254MW biomass-fired Avedore 1 combined heat and power (CHP) unit has this week been extended by a further 30 days, taking the full time off line to 52 days.

The unit – which also has heat generation capacity of 370MW – was switched off on 20 October and its return date was initially set for 11 November. This was on 4 November extended to 20 November, and on the 5 November was pushed back to 11 December.

“The outage at Avedore 1 has been extended as the maintenance work was more extensive than first calculated in the audit plan,” Orsted said.

Orsted’s 254MW Avedore 1 and 548MW Avedore 2 units are located just south of Copenhagen, providing the city with heat and power from wood pellets and straw. They were fully converted from coal to biomass in [December 2016](#).

Danish utility Høfor’s 150MW Amager 4 wood chip-fired

## Argus successfully completes annual Iosco assurance review

Argus has completed the ninth external assurance review of its price benchmarks covering crude oil, products, LPG, petrochemicals, biofuels, thermal coal, coking coal, iron ore, steel, natural gas and biomass benchmarks. The review was carried out by professional services firm PwC. Annual independent, external reviews of oil benchmarks are required by international regulatory group Iosco’s Principles for Oil Price Reporting Agencies, and Iosco encourages extension of the reviews to non-oil benchmarks.

For more information and to download the review visit our website <https://www.argusmedia.com/en/about-us/governance-compliance>

CHP will also supply Copenhagen with heat when it starts up. A delayed start date of 27 November was [recently announced](#).  
By Georgia Gratton

### Japanese firms partner on Aichi biomass power plant

Japanese trading house Marubeni, domestic gas retailer Osaka Gas and power producer JAG Energy plan to build a 75MW biomass power plant in Tahara city in Aichi prefecture. The plant is scheduled to start construction in September next year with commercial operations targeted for October 2024.

The three companies have set up the joint venture Aichi Tahara Biomass Power ahead of the construction. Marubeni's wholly owned subsidiary Marubeni Clean Power and JAG Energy hold 37.5pc each with the remaining 25pc owned by Osaka Gas.

The biomass plant will consume imported wood pellets totalling 300,000 t/yr, Marubeni said, without disclosing the possible supply sources. Japan's wood pellet imports have been increasing with deliveries rising by 30.2pc from a year earlier during January-August to 1.3mn t. Japan buys most of wood pellets from Canada, Vietnam, Indonesia and Malaysia.

Electricity produced by the Tahara plant will be sold under Japan's feed-in-tariff scheme, which supports companies that are planning to build renewable power plants by committing to buy the electricity produced for 10-

20 years at a fixed price. The project can sell its electricity at ¥24/kWh (23¢/kWh) for 20 years to utility Chubu Electric Power. This is much higher compared with the typical ¥4-12/kWh Japanese wholesale power price.

By Reina Maeda

### EPH brings forward Lynemouth return date

Czech-Slovak utility EPH has brought forward the return to operations of its 396MW Lynemouth biomass-fired power plant in the northeast of the UK.

The plant's three 132MW wood pellet-fired units were all switched off on 14 October after a ceiling collapsed in the control room.

Lynemouth's unit 2 will now return to operations on 12 November, unit 3 on 13 November and unit 1 on 14 November, Remit data show. The outage has been curtailed by four days per unit.

By Georgia Gratton

### St Petersburg pellet loadings break Jan-Sep record

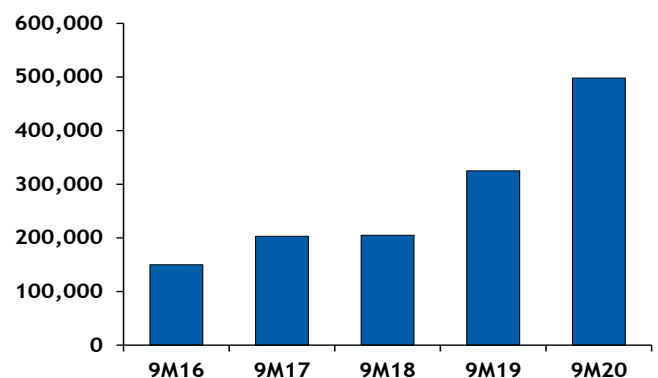
Wood pellet throughput hit a new January-September high at the Russian port of St Petersburg this year following upgrades to infrastructure and logistics.

Pellet handling rose by 53.2pc on the year, to 498,000t from 325,000t, as third-quarter loadings jumped by 67.8pc on the year and by 8.8pc on the quarter to 198,000t (see chart).

The port invested 232.6mn roubles (\$3mn) in infrastructure projects at the start of this year, 40pc more than a year earlier, with the majority used to upgrade handling equipment.

St Petersburg recorded its [largest pellet shipment of 32,800t](#) in June. The vessel was carrying volumes for Danish trading firm Copenhagen Merchants Biomass and was destined for the Amsterdam-Rotterdam-Antwerp region. The previous record wood pellet shipment from St Petersburg was around 11,000t.

St Petersburg wood pellet throughput t



## Argus Biomass Markets: Data & Downloads Available

The Argus Biomass Markets features [downloadable market data published in spreadsheet format, available only in Argus Direct.](#)

**Downloads include:**

- > [Historical prices](#)
- > [Japan biomass power plants](#)
- > [European biomass power plants](#)
- > [South Korean wood pellet tenders](#)
- > [International wood pellet trade data](#)
- > [North American wood pellet export plants](#)
- > [Baltic, Russian and Iberian wood pellet export plants](#)

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Russia has set numerous record highs for wood pellet exports this year, with European and South Korean industrial demand for Russian supply growing. Russian wood pellet producers have ramped up efforts to obtain Sustainable Biomass Program (SBP) certification to match requirements set by industrial users. There were 51 operational SBP-certified biomass production facilities in the country at the beginning of November, up from 26 at the start of 2020.

Russia's aggregate wood pellet exports rose by about 25pc on the year in January-August, to 1.45mn t from 1.17mn t.  
*By Jamie Aldridge*

### Co-firing lifts Poland's biomass burn

Poland's biomass burn continued to increase in the third quarter, with co-firing in coal-fired generators and heating plant consumption rising as utilities endeavoured to reduce their carbon credit costs.

Polish generators produced 5.1TWh of electricity from biomass – across both dedicated and co-fired units – in January-September, up by 10pc on the year, data from Warsaw-based research firm ARE show. ARE is owned by utilities and utility associations, and monitors electricity generation in Polish plants.

Biomass generation in September rose by 7pc on the year to 542GWh, ARE said.

Biomass was burned largely in dedicated units, but there was strong growth in biomass co-firing at coal units this year. Coal-fired utilities have increasingly looked to biomass as way of reducing the cost of EU emissions trading scheme (ETS) carbon allowances associated with coal burn. ETS

allowance prices have been firm in 2020, with just a brief decline in March.

The growth in biomass generation contrasted with an overall decline in electricity production in Poland. Power output fell by 6pc on the year to 115TWh in January-September, ARE data show.

Biomass is the second-largest source of renewable electricity in Poland this year so far, after onshore wind, but ahead of hydro and solar, despite the latter tripling on the year.

Poland had 903MW of installed dedicated biomass capacity at the end of September, flat on the year, ARE said.  
*By Tomasz Stepień*

### North American wood pellet exports post record 3Q

North American wood pellet exports grew to a new third-quarter high this year, bolstered by an increase in shipments to support rising industrial demand in the Netherlands.

The US and Canada exported a combined 2.64mn t of wood pellets in the third quarter, up by 5.2pc from the 2.51mn t shipped in July-September 2019 and up by 5.6pc on the 2.5mn t exported in the second quarter of 2020.

North American wood pellet exports were also up marginally on the year to 862,000t in September, and up by 5.1pc on August.

Canadian exports grew the most, increasing by 15.4pc year on year to 802,000t in the third quarter, a record high for any quarter, while US exports rose by 1.2pc to 1.86mn t, despite logistical hindrances throughout the quarter.

The US south and southeast was hit by three hurricanes in the third quarter – *Isaias*, *Laura*, and *Sally* – resulting in closures and disruptions at several ports. Comparatively, only one hurricane restricted port operations in the south and southeast US during the third quarter last year – *Hurricane Dorian*.

In Canada, producer Pinnacle Renewable Energy diverted all of its pellet shipping activity to the port of Prince Rupert, British Columbia (BC) after a [silo collapse at the Fibreco terminal](#) at the port of Vancouver on 11 September.

The diversion pushed its wood pellet throughput to a [third-quarter record high](#).

The strong growth in North American exports can be attributed to increased industrial demand in the Netherlands. US and Canadian shipments to the Netherlands reached a combined 279,000t in the third quarter, up from just 32,000t a year earlier.

Shipments from Canada grew substantially to 122,000t in July-September this year, up from just 260t previously, while wood pellet exports from the US rose just under five-fold to 157,000t.

Demand capacity continues to rise in the Netherlands as

### Argus launches biomass guarantee of origin price assessments



Argus has launched daily price assessments for guarantee of origin certificates generated from biomass-fired power, covering the previous year, current year and up to three years ahead. Prices, deals and market commentary are published in the [Argus European Electricity report](#).

[Click here](#) to learn more and register

German utility RWE ramps up biomass co-firing at its 630MW Amer 9 plant in Rotterdam and at its 777MW Eemshaven A and B units – although Eemshaven is unlikely to burn biomass until the end of this month, following a fire in May. Biomass co-firing at Amer 9 reached 74pc in the second quarter and 66pc in the first half, both more than doubling on the year.

Additionally, fellow German utility Uniper's MPP3 power plant began co-firing wood pellets in the fourth quarter of last year, having won a subsidy to fire up to 15pc biomass in the autumn 2016 SDE+ auction.

North American wood pellet exports to Belgium fell on the year in the third quarter, as its biomass-fired capacity reduced following the permanent closure of French utility Engie's 80MW biomass-fired Les Awirs power plant at the end of August.

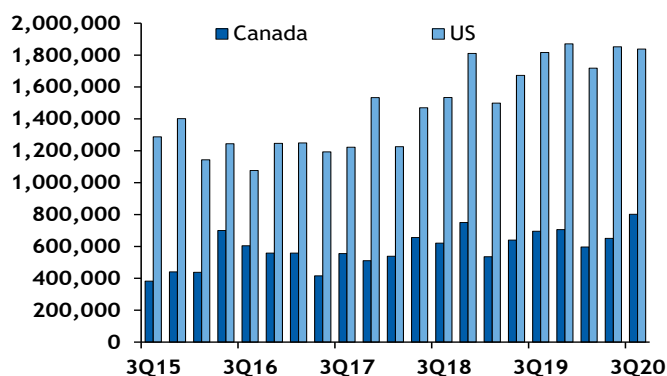
Canada exported nothing to Belgium in July-September, compared to 22,000t in the same period last year, while US deliveries fell by 11.6pc to 122,000t.

The UK remained the primary recipient of North American wood pellets in the third quarter, despite a decline in shipments. Exports from the US slipped by 6.6pc on the year to 1.42mn t in the third quarter. Canadian shipments rose by 18.2pc to 462,000t, but the increase did not offset the decline in US shipments.

Elsewhere in Europe, Canada exported nothing to Denmark or Italy in the third quarter, down from 21,000t and 12,000t previously. While US shipments to Denmark rose by 47.4pc on the year to 84,000t in July-September. US-Italy shipments collapsed to just 725t, from 15,000t in the third quarter last year.

Canadian wood pellet exports to Japan fell by 25.4pc on the year to 135,000t in the third quarter despite Japanese pellet demand rising on the year. Instead, Japan turned to southeast Asia, especially Vietnam, for supply in the third quarter. Vietnam's exports to Japan almost doubled to

North American wood pellet exports t



Canadian pellet exports			
Countries	3Q20	3Q19	±%
Belgium	0	22,000	-100.0
Denmark	0	21,000	-100.0
Italy	0	12,000	-100.0
Japan	135,000	181,000	-25.4
The Netherlands	122,000	260	46,823.1
South Korea	26,000	3,000	766.7
UK	462,000	391,000	18.2
US	57,000	54,000	5.6
Total	802,000	695,000	15.4

– StatCan

US wood pellet exports			
Countries	3Q20	3Q19	±%
Belgium	122,000	138,000	-11.6
Canada	10,000	11,000	-9.1
Denmark	84,000	57,000	47.4
Italy	725	15,000	-95.2
The Netherlands	157,000	32,000	390.6
UK	1,418,000	1,519,000	-6.6
Martinique	44,000	44,000	0.0
Total	1,838,000	1,816,000	1.2

– USITC

354,000t in the third quarter.

Elsewhere in Asia, Canadian pellet exports to South Korea rose to 26,000t in July-September this year, up from just 3,000t a year earlier.

US exports to the French Caribbean island of Martinique held flat on the year at 44,000t in the third quarter. US producer Enviva has a contract with France's Albioma, which launched a 40MW biomass-fired power plant on the island in the second quarter of 2018.

Canada's aggregate wood pellet exports rose by 9.6pc on the year to 2.05mn t in the first nine months of this year, while US aggregate wood pellet exports rose by 8.4pc to 5.41mn t in January-September.

By Jamie Aldridge

Belarusian pellet exports hit quarterly high

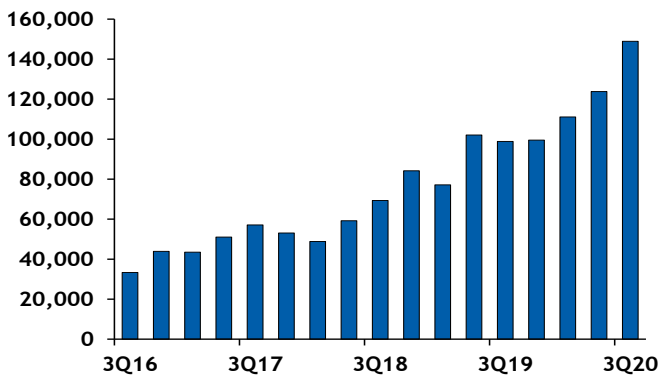
Belarusian wood pellet exports reached a quarterly high in July-September, surpassing the previous record set in the second quarter, amid an increase in deliveries to Denmark and Lithuania.

Exports rose by 50.5pc on the year to 149,000t in the third quarter, putting them 20.2pc above second-quarter shipments of 124,000t (see chart).

And volumes rose in September for a fifth consecutive month – climbing by 71pc on the year and by 8.2pc from August – to hit a monthly record of 53,000t.

Denmark was the main driver of Belarusian wood pellet

Belarusian wood pellet exports



export growth in the third quarter, overtaking Lithuania to become the largest recipient. Belarus shipped just under 55,000t to Denmark in July-September, up from 12,000t a year earlier and a rise of 37.5pc on the quarter.

The [Danish voluntary energy agreement](#) states that utilities must ensure that 90pc of their wood pellet supply is Sustainable Biomass Programme (SBP) compliant in 2020. To match these requirements, Belarusian wood pellet producers have ramped up their efforts to obtain SBP certification. There were 16 operational SBP-certified biomass production facilities in the country at the start of this year, but there are now 45.

Deliveries to Lithuania continued to ramp up in the third quarter. Most supply from Belarus to Latvia and Lithuania is re-exported to Scandinavian countries, the UK, and more recently, the Netherlands.

Belarus shipped 53,000t of wood pellets to Lithuania in July-September, up by 35.9pc on the year and by 15.2pc on the quarter.

Exports to Latvia slipped by 24.1pc on the year to 22,000t. Similarly to Lithuania, most supply sent to Latvia is re-exported onto Scandinavia and the UK.

For January-September, Belarusian wood pellet exports rose by 38.1pc on the year to 384,000t, with all three quarters setting new records for any quarter.

By *Jamie Aldridge*

**Japanese banks provide loan for Ichihara biomass project**

The Shikoku Alliance, a group of four regional banks on western Japan’s Shikoku island, will provide a \$420mn loan to support the construction of a 75MW biomass power plant in the country’s eastern Chiba prefecture.

Iyo bank, Awa bank, Hyakujushi bank and Shikoku bank will jointly finance the construction of Japanese utility Tokyo Gas’ biomass power plant in Ichihara city, as part of

their renewable energy initiative.

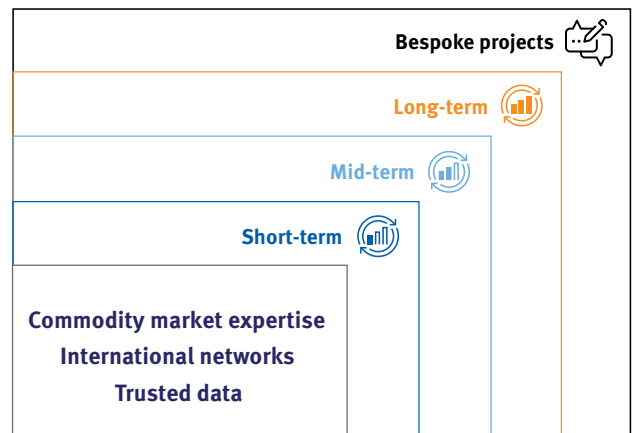
The alliance has signed an agreement with Tokyo Gas’ recently acquired [Ichihara Yawatafuto Biomass Power](#), which will construct and operate the biomass power facility.

The transaction was completed on 30 September.

Ichihara Yawatafuto began constructing the 75MW biomass power plant last month, with commercial operations targeted to start by January 2024. The plant will mainly consume wood pellets for power generation.

Japanese trading house Itochu, utility Osaka Gas and Mitsui Engineering and Shipbuilding also have a biomass power project in Ichihara city. Their 49.9MW biomass power plant was scheduled to start operations last month, but this was delayed by a typhoon last year. The plant has been undergoing test operations since September this year and it is unclear

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when commercial operations will begin, Osaka Gas said.

Japan's wood pellet imports have been increasing, with January-August deliveries rising by 30.2pc on the year to 1.3mn t. Japan mainly buys wood pellets from Canada, Vietnam, Indonesia and Malaysia.

*By Reina Maeda*

### South Korea's Koen seeks imported wood pellets

South Korean state-controlled utility Korea South East Power (Koen) has issued a tender seeking imported wood pellets for its 125MW Yeongdong unit 1 power plant, which was converted to burn 100pc biomass in 2017.

Koen is seeking 41,000t of imported wood pellets for delivery during 1-31 December on a delivered duty paid (ddp) basis. Bidders are invited to supply a minimum of 1,000t and up to a maximum of the total tender volume.

The utility specified a minimum net calorific value of 4,000 kcal/kg, slightly higher than South Korea's new wood pellet standard of 16.5 GJ/t or 3,943.60 kcal/kg. The maximum limits on ash, sulphur and nitrogen are capped at 5pc, 0.05pc and 0.7pc, respectively.

The utility will stop accepting bid applications at 2pm Korea Standard Time (05:00 GMT) on 16 November.

Koen recently finalised a tender at the end of October to buy 250,000t of imported wood pellets with maximum nitrogen levels of 0.3pc, much lower than the 0.7pc typically accepted by other utilities, for December 2020-April 2021 delivery on a ddp basis for its 125MW Yeongdong unit 1 and its recently-converted 100pc biomass-fired 200MW Yeongdong unit 2 plants. The winning bid was \$155-165/t ddp with 10pc VAT, equivalent to \$140-150/t ddp without VAT or \$100-105/t on a fob Vietnam basis, South Korean traders said. The tender was fulfilled by Vietnamese, Malaysian, Indonesian, Thai and Russian pellets.

*By Sam Hong*

### Cez, Energa lift Polish biomass burn in Q3

Czech utility Cez increased its biomass-fired power output by 7pc on the year to 304GWh in the third quarter, according to its financial results.

The firm's biomass generation growth stemmed from stronger burn at its Polish units, while generation at its units in the Czech Republic declined.

Cez's Polish biomass-fired power output surged by 40pc on the year to 168GWh in the third quarter and by 38pc to 411GWh in January-September.

The utility mainly co-fires biomass with coal in its 238MW combined heat and power (CHP) plant in Chorzow. The plant, alongside Cez's 492MW Skawina plant near Krakow, is to be divested.

The Czech firm said that it expects to receive bids from potential buyers by 7 December. Tentative early interest has been expressed by 14 entities, Cez said.

Cez's Czech biomass-fired power generation fell by 17pc on the year to 136GWh in the third quarter and by 6pc to 425GWh in January-September.

But the firm's overall biomass-fired output grew by 12pc on the year to 836MWh in January-September.

### Energa increases co-firing

Biomass-fired power output continued to grow for other Polish generators in the third quarter. Utility Energa's biomass burn rose by 11pc on the year to 24,000t in July-September, while its usage for the first nine months of the year climbed by 19pc to 97,000t.

The growth was a result of Energa resuming biomass co-firing with coal at its 690MW Ostroleka power plant in northeast Poland. Energa's biomass-fired power production reached 11GWh in the third quarter, and 105GWh in January-September, compared with zero generation from co-firing in the first three quarters of 2019.

Power output fell by 19pc on the year at Energa's dedicated 25MW Elblag biomass CHP plant in northern Poland, totalling 17GWh in the third quarter as optimisation works take longer than expected. The unit's thermal heat capacity is being expanded to 42MWt from 20MWt, and the work is expected to be completed this quarter, Energa said. The unit produced 36GWh in January-September, down by 67pc on the year.

### Swiss premium pellet prices continue rise into October

Switzerland's premium wood pellet retail price rose for the fourth consecutive month in October, as the heating season began and buyers continued to make the most of the discounted prices, according to data from the Swiss Federal Statistical Office.

The average price of premium-grade wood pellets in the country rose marginally on the month to 346.19 Swiss francs/t (\$378.14/t) in October, from SFr344.99/t in September. But retail prices were still down by 2.3pc on the year.

Switzerland's premium pellet market is driven primarily by residential heating demand – pellet producers typically offer their lowest prices in May and June to encourage consumers to stock up. Swiss wood pellet prices then tend to rise steadily in July-September ahead of the heating season.

Despite plentiful stock levels across Europe left over from the lacklustre 2019-20 heating season, the rise in prices from pre-seasonal buying in July through to the first month of the heating season in October was steeper than in previous years. The premium retail wood pellet price in

Switzerland rose by SFr14.51/t in July-October this year, compared to a rise of SFr8.14/t in July-October 2019 and SFr6.95/t in the same period of 2018.

Prices rose as temperatures fell in Switzerland. The average temperature in Zurich in October was 9.85°C – 1.04°C lower than the 10-year norm. Night-time temperatures fell as low as 3.3°C in Zurich and averaged 0.73°C below the 10-year norm of 7.37°C.

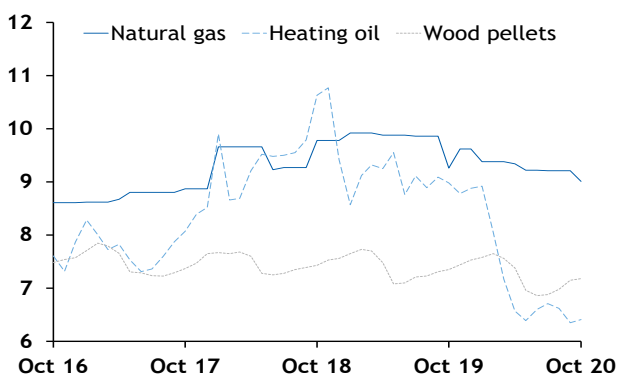
Neighbouring countries [Austria](#) and [Germany](#) also recorded a small rise in premium pellet prices on the month in October, albeit only a 0.4pc and 1.8pc increase, respectively.

The rise in Swiss wood pellet prices coinciding with a fall in natural gas prices helped to narrow the fuel's cost advantage over natural gas last month. The cost of heating with wood pellets rose marginally to SFr0.72/kWh in October on an energy-equivalent basis, while the price of natural gas fell by 2.2pc to SFr0.90/kWh.

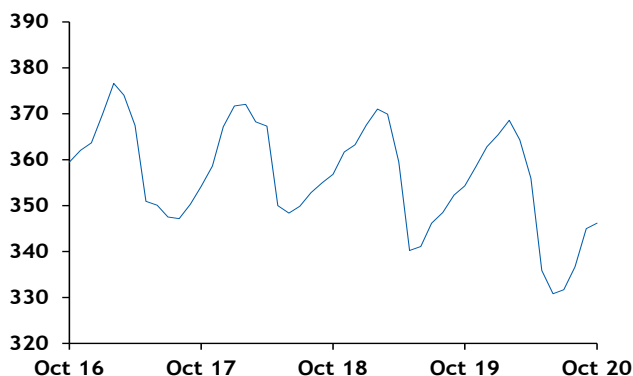
But the cost of heating with heating oil rose on the month to SFr0.64/kWh in October, slightly outpacing the rise in wood pellet prices, and narrowing its cost advantage.

By *Jamie Aldridge*

Swiss competing heating fuel costs Rp/kWh



Swiss premium wood pellet prices SFr/t



## Two biomass units win Polish renewable auction

Two planned combined power and heat (CHP) plants in northeast Poland have been awarded 15-year contracts to sell electricity at auction for new biomass-fired units of more than 1MW capacity.

Selected units including PEC Ciechanow and MPEC Lomza municipality heat suppliers will receive a contract for difference (CfD) at prices ranging from 379.95-407.76 zlotys/MWh (€84.5-90.5), according to Polish regulator URE, which hosted the auction.

URE offered 1.1TWh under the auction, held earlier this month, but it was undersubscribed and attracted just three bidders. The total volume of contracted electricity reached 319.6GWh.

PEC Ciechanow is planning to build a wood chip-fired 11MW biomass unit as part of a wider conversion of its coal-fired infrastructure, while MPEC Lomza is building a 12MW biomass unit, also fired by wood chips, as part of the modernisation of its coal-fired technology, the company said.

The auction was one of several renewable energy auctions being held by the Polish regulator in November and December.

## UK's Beis extends non-domestic RHI scheme

The UK has further extended the application window for non-tariff guaranteed installations under its non-domestic renewable heat incentive (NDRHI) subsidy scheme because of Covid-19, pushing the deadline to 31 March 2022.

The Department for Business, Energy and Industrial Strategy (Beis) had already extended the deadline by six months, to 30 September 2021, [in August because of projects facing Covid-related delays](#).

Applicants will now be able to submit an "extension application" in March 2021 to give them an additional 12 months – until 31 March 2022 – to submit a full application for NDRHI accreditation.

A tariff guarantee (TG) allows applicants to secure a tariff rate before their installation is commissioned and fully accredited on the RHI, and is typically given to larger installations.

The deadline extension applies only to non-TG NDRHI installations such as biomass-fired plants with less than 1MW of thermal capacity and ground source heat pumps with less than 600kW of thermal capacity. It excludes TG installations, such as solid biomass combined heat and power plants, geothermal and biomethane facilities, biomass-fired plants with at least 1MW of thermal capacity, biogas plants with at least 600kW of thermals (kWth), and ground source and water source heat pumps larger than 100kWth.

The extension "will allow hundreds of businesses to continue to decarbonise their heat requirements, despite

Covid-19 delays which threatened the completion of their projects before the end of the RHI in March 2021”, UK renewable energy association REA’s head of policy, Frank Gordon, said.

“However, it should not be forgotten that this measure only helps projects that are already in the pipeline. There remains a growing renewable heat policy gap, with no firm indication yet on how new industrial or business heat decarbonisation projects are going to be delivered once the RHI is closed for good next year.”

In June, Beis also extended the deadline for new applications to its [renewable heat incentive \(RHI\) subsidy scheme](#) for a year, until 31 March 2022.

By *Jamie Aldridge*

### Finland’s coal-to-waste conversion expected in 2022

Finnish energy company Turku Seudun Energiantuotanto (TSE) will fully convert the existing 145MW coal-fired unit 4 at the Naantali plant to run on recycled waste in 2022, it said.

TSE signed fuel supply deals with several energy companies, including Fortum waste solutions and Delete Ymparistolvelut. The agreements cover the delivery of 50,000-80,000t of recycled fuel each year in 2021-26.

The installed capacity at Naantali 4 will remain unchanged once the conversion is complete, TSE said. The company plans to phase out coal in its energy production by 2025. Naantali’s coal-fired unit’s 1 and 2 – with a combined installed capacity of 220MW – were decommissioned in July.

There are currently no plans to convert the remaining 105MW coal-fired unit 3 to run on alternative fuels, TSE added. Finland aims to become carbon neutral by 2035 and is set to ban the use of coal in energy generation by 2029.

By *Cristina Pinto*

### India’s NTPC defends coal in clash over Delhi pollution

Coal-fired power plants are not responsible for deteriorating air quality in India’s capital city of Delhi and its adjoining areas, the country’s state-controlled utility NTPC said.

The comments come as the federal government sets up a panel to tackle pollution in the city. The state of Delhi last month urged the federal government to [close nearly a dozen coal-fired power plants](#) in its vicinity to control rising pollution.

The state is seeking the closure of 13 coal-fired power plants with a combined generation capacity of 11GW, located within a 300km radius of the city. Delhi wanted closure of one of the units at NTPC’s Dadri power plant in the neighbouring state of Uttar Pradesh. The Dadri power plant has 1.8GW of coal-fired capacity and about 830MW of gas-based generation.

NTPC attributed the pollution primarily to vehicle emissions in the city and the burning of agricultural waste in nearby regions. Construction activities, road dust and industrial emissions have also contributed to the smog, it said.

“Coal-fired power plants have often been accused of increased pollution, which may not always be correct,” said NTPC, which accounts for about a quarter of India’s installed coal-fired capacity.

All the Dadri power plant’s coal-fired units have been closed since October, but the air quality continues to deteriorate, it said.

The Dadri units were operational during India’s nationwide Covid-19 lockdown, which partially ended in June, and caused little pollution, NTPC said. This was also partly because of emissions-control systems installed at the Dadri power plant, along with continuous air quality monitoring mechanisms.

### More emission cuts planned

The Dadri thermal power plant has developed a facility for co-firing coal with rice stubble agro-waste pellets. More than 8,000t of agro pellets have been fired in the last two years, aiding in some reduction in crop-stubble burning by farmers.

“The irony is that all the coal units at Dadri are under shutdown and the opportunity for generation” via co-firing is lost there, it said.

NTPC also aims to co-fire [5mn t of pellets](#) at 17 of its power plants in the 2020-21 fiscal year that ends on 31 March.

The company is expanding its footprint in the [clean energy space](#). It wants renewables to account for at least 30pc of its projected installed capacity of 130GW by 2032, up from 25pc planned earlier.

Meanwhile, NTPC has increased efforts to reduce its [overall emissions](#) by installing pollution-control equipment such as flue-gas desulphurisation packages.

By *Saurabh Chaturvedi*

### Spanish 1.2GW CHP capacity tender imminent: Acogen

Spain is planning imminent auctions for 1.2GW of incentivised combined-heat-and-power (CHP) generation capacity that will replace or modernise existing plants coming to the end of their regulatory life, according to CHP sector association Acogen.

The government has informed the association of an “immediate tender for CHP within the current auction framework,” Acogen said, referring to the new auction model for at least 3.1GW of incentivised renewables capacity [to be launched before the end of this year](#).

But the CHP tender will not be enough to save 442MW of generation capacity from 46 plants that will lose state subsidies



this year and likely close, with Acogen asking for further support to modernise the plants and keep them running.

“Acogen is asking the government to speed up the revision of the regulatory framework to update and transform plants or to hybridise them with renewables,” the association said.

About 1.57GW of Spain’s estimated 5.24GW of CHP plants are expected to come to the end of their regulatory life and shut down permanently over the next decade, according to Spain’s 2021-30 National Energy and Climate Plan (NECP).

Spain’s existing subsidised CHP capacity is mainly used by its energy-intensive industrial sectors to keep costs down – 92pc of plants are at industrial sites while the rest supply heat and power to the services and residential sectors.

The 2021-30 NECP includes plans to promote the installation or modernisation of 1.2GW of highly efficient CHP plants with the effective use of heat recovery systems, self-consumption, supply-side management and renewables.

A total of 84pc of current CHP generation capacity runs on natural gas, compared with 16pc that uses fuel oil or diesel and, in a few cases, renewables such as biomass.

Spanish CHP generation in 2020 has been hit hard by lower industrial production from the Covid-19 crisis and is expected to fall by 8pc on the year to about 27.2TWh, according to Acogen.

By Jonathan Gleave

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**Announcement**

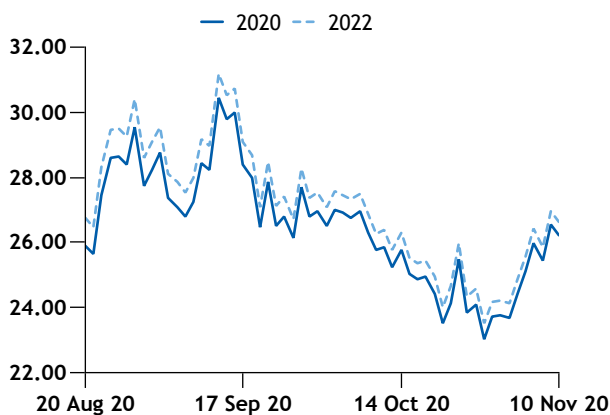
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### BREAK-EVEN GENERATION COSTS

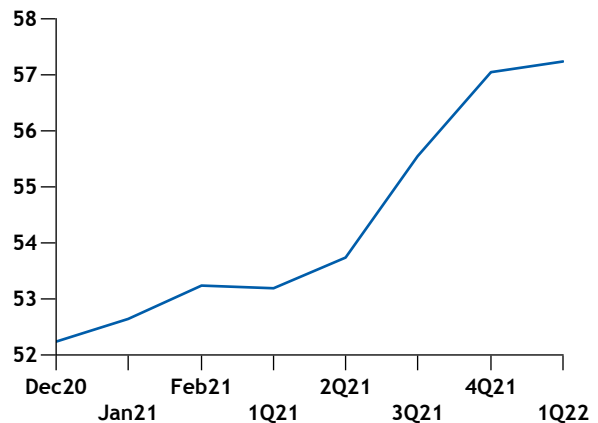
cif NWE wood pellet break-even				cif ARA coal break-even			
11 Nov		December	1Q21	Week average		December	1Q21
Pellet cost \$/t		120.95	129.50				
Plant efficiency	Unit	Break Even		Plant efficiency	Unit	Break Even	
36%	\$/MWh	71.15	76.18	36%	\$/MWh	29.30	30.07
	€/MWh	60.16	64.33		€/MWh	24.77	25.40
38%	\$/MWh	67.41	72.17	38%	\$/MWh	28.22	28.96
	€/MWh	56.99	60.95		€/MWh	23.86	24.45
40%	\$/MWh	64.04	68.57	40%	\$/MWh	27.25	27.95
	€/MWh	54.14	57.90		€/MWh	23.04	23.60
41%	\$/MWh	62.48	66.89	41%	\$/MWh	26.80	27.48
	€/MWh	52.82	56.49		€/MWh	22.66	23.21

\*Breakeven generation costs represent the calculated costs of generating power with wood pellets and/or coal based on Argus assessed spot prices. For a plant to break even, the combined price of power and subsidy amount (if applicable) would need to be equal to the calculated breakeven generation cost.

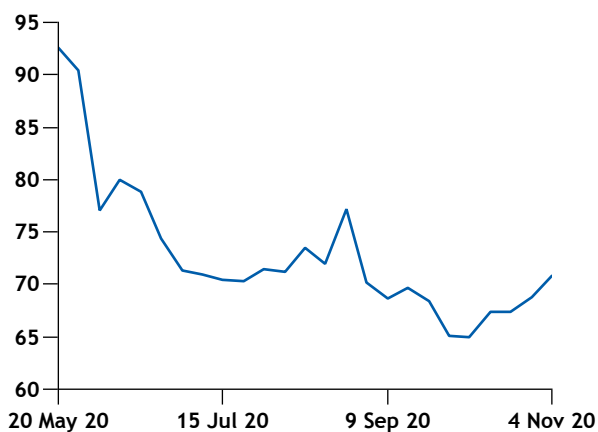
EU ETS December 2014 and 2015 allowances \$/t CO<sub>2</sub>e



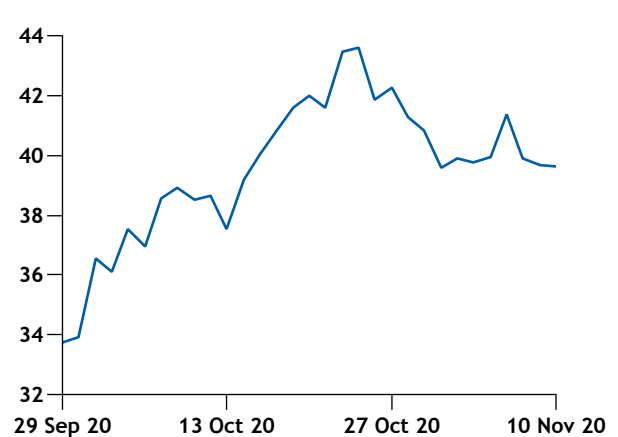
Coal Rotterdam swaps forward curve \$/t



Wood Pellet 90 cif ARA index premium to Coal API2 \$/t

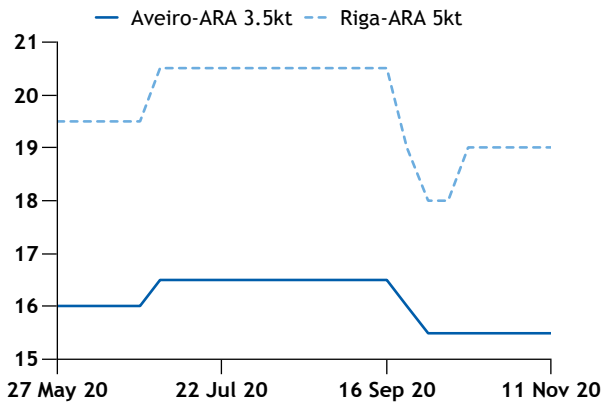


NBP front-month gas p/t



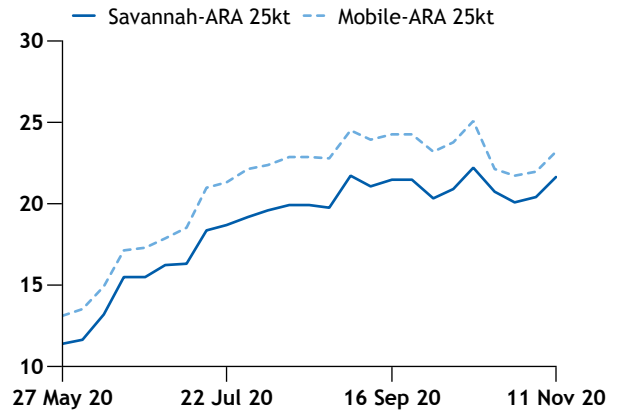
Wood Pellet Freight

€/t



North America wood pellet freight 25,000t

€/t

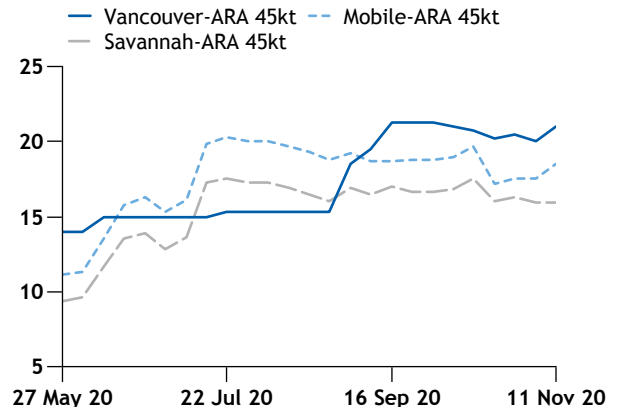


\$/€ exchange rate



Wood Pellet freight 45kt

\$/t



Argus Biomass Markets is published by Argus Media group

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ISSN: 2041-2503

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