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Argus Biomass Markets

Weekly biomass markets news and analysis

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MARKET COMMENTARY

Atlantic basin: Spot extends losses

The spot price of industrial wood pellets for deliveries to northwest Europe (NWE) saw significant weekly losses, with confirmed trades for prompt deliveries and as unusually warmer weather pared demand.

The 90-days industrial wood pellet price fell by $52.08/t to $358.53/t cif NWE on Wednesday. This is the largest weekly drop since the price started to be assessed in May 2009.

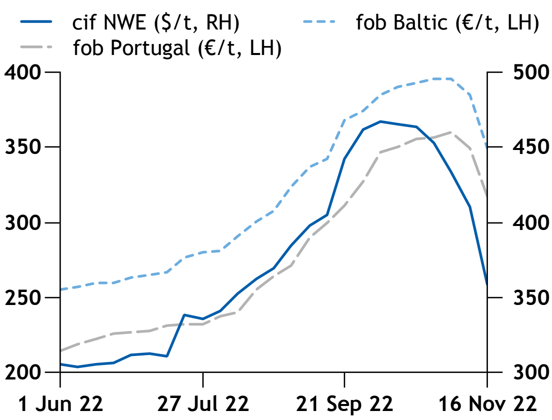
A trade for two handy-sized cargoes for prompt delivery concluded at $330/t cif NWE on Wednesday. Price ideas remained in a wide range in the week, with a steep contango seen for the remaining of winter.

Warmer than usual weather so far this heating season has weighed on power-sector consumption, resulting in higher stocks. And the break-even cost for coal-fired generation maintaining a wide discount to that for pellet-fired generation may have also encouraged some pellet-to-coal switching at co-fired plants, further paring demand for pellets, some participants said.

Buying interest for prompt deliveries remained limited as many utilities were understood to be holding positions until there was more clarity over each country's decision on how to implement recently approved EU rules for capping infra-marginal power prices.

France's national assembly adopted a revenue cap at €180/MWh, adding that the cap could be changed through

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*	358.53	-52.08	461.96	426.85	361.78
fob Baltic *€/t*	349.58	-35.19	390.73	355.41	300.63
fob Portugal *€/t*	317.25	-32.25	352.18	306.92	253.55

Wood pellets - within 90 days (spot)	Price	±
cif NWE *$/MWh*	75.93	-11.03
fob Baltic *€/MWh*	74.03	-7.45
fob Portugal *€/MWh*	67.19	-6.83

Wood pellets - forward prices	Bid	Ask	±
cif NWE *$/t*			
1Q23	407.00	413.00	-40.00
2Q23	372.00	378.00	-5.00
3Q23	352.00	358.00	-5.00
4Q23	363.00	369.00	nc
2023	373.50	379.50	-12.50
2024	267.00	273.00	nc
2025	243.00	249.00	nc
fob Baltic *€/t*			
1Q23	382.00	388.00	-10.00
2Q23	317.00	323.00	nc
3Q23	297.00	303.00	nc
4Q23	303.00	309.00	nc
2023	324.75	330.75	-2.50
2024	207.00	213.00	nc
2025	184.00	190.00	nc
fob Portugal *€/t*			
1Q23	342.00	348.00	-10.00
2Q23	277.00	283.00	nc
3Q23	257.00	263.00	nc
4Q23	263.00	269.00	nc
2023	284.75	290.75	-2.50
2024	180.00	186.00	nc
2025	164.00	170.00	nc

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an additional decree, particularly taking into account "higher costs and volatility for certain technologies," such as gas and biogas, coal, biomass and oil products. The draft is currently being discussed in the Senate and is expected to be finalized in the coming days. While in Belgium, the council of ministers has approved a draft bill which aims at capping revenues at €130/MWh, but for biomass, biogas and waste, a cap of €180/MWh would apply. With the draft still pending approval by the government.

The UK government is also yet to announce details on how the Energy Price Bill will be implemented. The bill gave government powers to impose a temporary revenue cap next year on low-carbon power generators not covered by the contracts for difference (CfD) scheme. The UK government has yet to decide on details, including the revenue limit for generators, although there has been indication that low-carbon technologies that can deliver dispatchable and baseload generation "do tend to have higher input costs (such as biomass and nuclear) and this is being considered as part of the detailed policy design."

Meanwhile, forecasts for colder weather later this year may bolster consumption and could offer some support to prices, some participants said. Although this may also depend on developments in the wider European generation fuels complex. Overnight temperatures in London were expected to hold 1.6°C above the ten-year average of 4.2°C over the next 14 days and 1.8°C above seasonal norms of 3.3°C over the next 45 days. And in Paris these were expected 1.8°C above the ten-year average of 3.9°C over the next 14 days, and 1.3°C above the ten-year average of 2.6°C over the next 45 days. In Amsterdam these were expected 0.7°C above the ten-year average of 3.6°C over the next 14 days, and 0.9°C above the ten-year average of 2.2°C over the next 45 days.

On the UK power sector, biomass-fired power generation increased to 1.8GW on an average hourly basis in the week to Wednesday, up from an average of 1GW a week earlier, remit data show. This was mostly due to higher generation at UK utility Drax Group's 645MW units 2,3 and 4, while the plant's CfD unit 1 remained offline. While all three wood-pellet fired units at EPH's plant in Lynemouth remained offline.

In the Baltics, the spot 90-days pellets price fell on the week to €349.58/t fob Baltic, with trading activity heard muted amid mild temperatures. This market's discount to the cif NWE spot market narrowed significantly to €8.95/t, the lowest since December 2020. Which could mean that the Baltics market could be currently outpriced for deliveries to northwest Europe, a participant said.

Producers in the Baltics were reluctant to revise their selling ideas down significantly, citing high raw material and other costs, and also over expectations that domestic demand would rise again with colder weather and likely to be supported by government subsidies. That said, smaller players in the region may have less financial ability to hold pellets for extended periods of time in stocks, and overall companies were in need of cash, which could encourage companies to offer more to the spot market, a participant said.

Raw material prices in the Baltics remained above long-term averages this week, despite dropping from record highs in recent weeks, according to participants. Residues for wood pellet production were heard to be tight in the region due to a slowdown in timber demand. And worsening weather conditions were slowing harvesting activity.

And productions costs were estimated around the €270-280/t range, two participants said.

NORTH AMERICAN INDUSTRIAL WOOD PELLETS

US fob export price (industrial wood pellets) $/t

Origin	Delivery period	Mid	Bid	Ask	±
fob southeast US	Spot		382.62	385.62	nc
fob southwest Canada	Spot		328.53	331.53	-52.09
fob northeast US	Spot	333.55			-51.05

US fob export price (industrial wood pellets) $/MWh

Origin	Delivery period	Mid	Bid	Ask	±
fob southeast US	Spot		81.03	81.66	nc
fob southwest Canada	Spot		69.57	70.21	-11.04
fob northeast US	Spot	70.64			-10.81

Wood pellets - forward prices $/t

	Mid	Bid	Ask	±
fob southeast US				
1Q23		421.50	424.50	nc
2Q23		351.50	354.50	nc
3Q23		331.50	334.50	nc
4Q23		337.50	340.50	nc
2023		360.50	363.50	nc
2024		241.50	244.50	nc
2025		217.50	220.50	nc
fob southwest Canada				
1Q23		380.00	383.00	-39.50
2Q23		345.00	348.00	-4.50
3Q23		325.00	328.00	-4.50
4Q23		336.00	339.00	+0.50
2023		346.50	349.50	-12.00
2024		240.00	243.00	+0.50
2025		216.00	219.00	+0.50
fob northeast US				
1Q23	385.00			-39.00
2Q23	350.00			-4.00
3Q23	330.00			-4.00
4Q23	341.00			+1.00
2023	351.50			-11.50
2024	245.00			+1.00
2025	221.00			+1.00

European wood chips: Spot edges down

The 90-day spot price for industrial wood chip deliveries to northwest Europe (NWE) fell by €0.25/GJ on the week at €16.25/GJ on Wednesday as availability in the Baltics has increased with utilities trying to delay deliveries amid full stores.

Offers for wood chips from Germany and France were heard between €14-15/GJ on a fob basis, but with no matching bids or trades reported in the week. And offers from northern Spain were heard around €9-11/GJ fob.

Spot availability in the Baltics was heard to be holding at a higher-than-average level for the time of year as utilities delayed shipments from long-term contracts due to their being well stock for the remainder of the fourth quarter at least, a participant said. This, along with an ongoing shift to harvesting lower quality wood in the region, was leaving more material available for the spot market, participants said.

Mild temperatures in October and November have pared demand for wood chip fired heating so far this heating season. Although temperatures were expected to drop from the end of November, Speedwell Weather data show. Minimum overnight temperatures in Oslo, Norway were forecast at 0.5°C in the coming fortnight, or 1.6°C above seasonal norms. And, the 45-day outlook was minus 3.3°C, or 0.5°C below their 10-year averages for the period.

The implementation of the EU's Renewable Energy Directive (REDII) sustainability standard from 1 January has caused some concern in recent weeks as participants assess its impact. But this may not restrict supply availability significantly, although it may mean a shift in trade flows depending on the approach each member states takes, participants said this week.

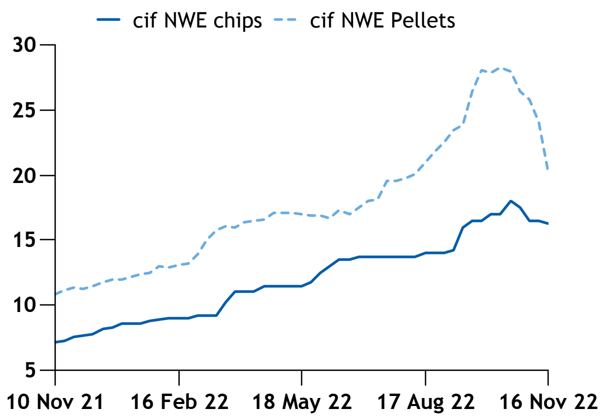
Swedish utility Stockholm Exergi's 190MW Vartan KVV1 unit was scheduled to return online on Wednesday following a seven-month outage, with no other major wood chip-fired plants on planned outages in the upcoming week, remit data show.

INDUSTRIAL WOOD CHIPS

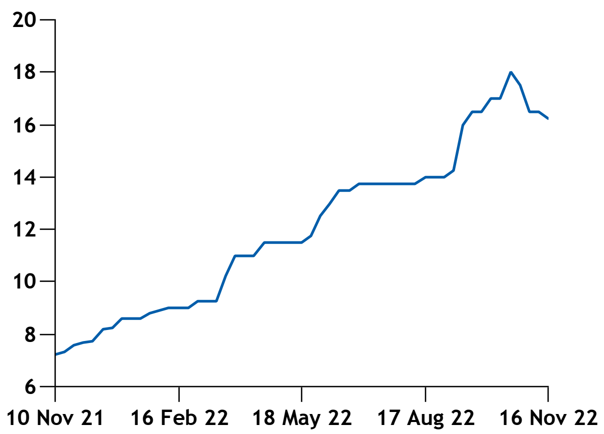
NWE wood chips - within 90 days (spot)					€/GJ
	Week index		Month index		
	Price	±	Oct	Sep	Aug
cif NWE	16.25	-0.25	17.38	15.81	13.90

Wood chips cif NWE - forward prices			€/GJ
	Bid	Ask	±
1Q23	15.50	18.00	nc
2Q23	11.00	13.00	nc
3Q23	11.00	13.00	nc
4Q23	12.25	14.25	nc
2023	12.50	14.50	nc
2024	9.00	10.00	nc
2025	8.50	9.00	nc

Spot wood chips vs pellets cif NWE €/GJ



Spot wood chips, cif NEW €/GJ



European premium: Spot falls

The 45-day spot price for EN plus-certified A1-grade pellets delivered to northern Italy fell on the week, as producers were heard to have dropped prices amid low demand.

Bagged and bulk premium pellet prices dropped by €30/t to €550/t and €510/t delivered northern Italy, respectively, on Wednesday. With price ideas heard in a wide range in the week.

In Italy, demand has halted, owing to unusually warmer weather so far this heating season paring consumption, and expectations of further price decreases, participants said.

Producers in Germany, Austria and Czechia were also heard to have built up stocks, because of lower consumption, which was also contributing to lower price ideas in the market. Supply is outpacing demand at the moment, a producer said.

That said, temperatures were expected to drop significantly in the coming weeks. Overnight temperatures in Milan were forecast 1°C above seasonal norms at 1°C in the coming fortnight and at 1.1°C below norms in the coming 45 days, at -0.4°C, Speedwell Weather data show.

Night time temperatures for Vienna were forecast at 0.3°C in the coming fortnight, above seasonal norms of minus 1.5°C, and at minus 1.6°C in the coming 45-days, just above seasonal norms of minus 1.8°C. In Munich, temperatures were forecast at minus 2.5°C in the next two weeks, below seasonal norms of minus 1.9°C, and at minus 4.9°C for the next 45 days, lower than the seasonal norm at minus 3.1°C.

In the Baltics, more volumes were made available, particularly as warmer than usual weather pared local consumption, participants said. Adding that dropping temperatures in the Baltics, and elsewhere in southern and central Europe may offer support to prices and reverse the downside trend in the coming weeks.

Offers were heard for bagged pellets at €420/t ex works bagged in the Baltics, though no matching bids were heard.

In Latvia, one price idea was heard for bagged pellets around €430/t ex-works and in Estonia around €400/t ex-works.

Elsewhere, a bid was heard for A2-grade premium pellets at €370/t cif Belgium, but with no matching offers.

An offer for Baltic pellets was heard at €400/t cif southern Finland in the week, with prices having dropped significantly because of weaker demand and more volumes put on the market, a participant said. Although there were no matching bids. And the price ideas for local sales in the country were heard around €450/t on a dap basis. Colder weather forecast for the coming weeks may result in a recovery in demand which could support prices later in winter, the participant added.

In Portugal, some 2,000t of A2-grade uncertified pellets were heard trading for prompt delivery at around €305/t on an fot basis.

And in the UK, some 30,000t of industrial pellets with no EN Plus certification but of premium quality for delivery in November were heard trading at $325/t on an fca basis in the week.

Argus Cif NWE monthly figures	$/t
Balance of November	330.00
December	330.00
January	410.00
February	410.00

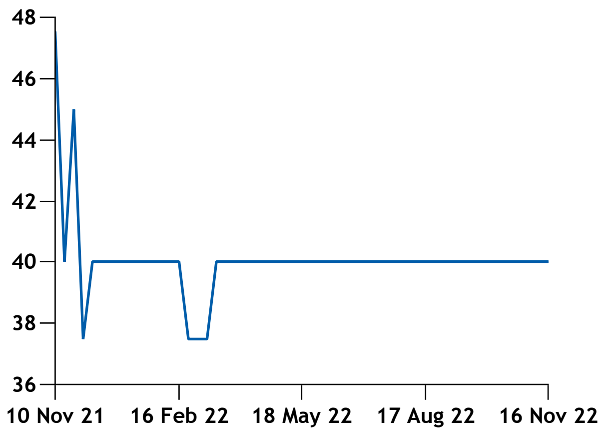
The figures above are an average survey result value for each month contained in the 90-day spot period. They are shown for indicative purposes, to better illustrate the composition of the market-survey component of the spot cif NWE index. The spot index value can be found on page 1 of the report.

EUROPEAN PREMIUM WOOD PELLETS

Wood pellets - within 45 days (spot)				€/t
Delivered northern Italy	**Mid**	**Low**	**High**	**±**
Bulk	510.00	485.00	535.00	-30.00
Bagged	550.00	520.00	580.00	-30.00

Premium wood pellets			€/t
	Month index		
Delivered northern Italy	**Oct**	**Sep**	**Aug**
Bulk	564.38	546.25	432.00
Bagged	604.38	586.25	472.00

Italian premium prices: bagged vs bulk €/t



Asian industrial: Fob pellet prices at historical highs

Vietnam's industrial wood pellet market continued to firm on the week as raw material supply remains in short supply.

The 90-day spot price for industrial Vietnamese pellets sold mainly to South Korea was assessed $1.07/t higher on the week at $180.14/t, the highest since *Argus* began assessing this market in December 2015, while pellets sold mainly to the Japanese feed-in tariff (FIT) market rose by $4.17/t to $204.75/t this week.

Wood pellet feedstock remains in tight supply after Vietnam's furniture market has experienced a softening in export demand this year, resulting in less sawdust and wood chip availability for pellet production.

Meanwhile, the cfr Gwangyang price fell by 39¢/t to $202.50/t as South Korean demand slowed because some power plants were heard to have stocks to last them until January.

South Korea's REC value — which typically supports IPP wood pellet demand when firm — rose to 64,000 won/REC ($48.42/REC) on 15 November from W63,900/REC on 8 November, Korea Power Exchange data show. This was still 64pc higher than the November 2021 average spot price of W39,033/REC.

The SMP for inland South Korean power — excluding Jeju — edged down to W257.64/kWh on 16 November from W258.33/kWh a week earlier, which is 103pc higher than the November 2021 average of W126.83/kWh, Korea Power Exchange data show. The SMP is the unit price at which independent power producers sell to state-controlled utility Kepco.

Prices of wood pellets that are typically sold to Japan saw a steeper increase this week as utilities were heard to be seeking shipments after temperatures dipped as the country transitions further into winter.

But waning interest from Europe in Vietnamese wood pellets was observed after European demand fell on lower power sector demand during October and into November because of higher than usual temperatures. Additionally, uncertainty around the EU and UK revenue price caps on inframarginal biomass generation has also weighed on market sentiment.

In the palm kernel shells (PKS) market, the 90-day east coast Sumatra spot price eased by $1.52/t on the week to $129.79/t along with the Peninsular Malaysia price, which fell by $3.08/t to $119.55/t.

Buyers in Japan, the biggest importer of PKS, are experiencing weaker buying power following a depreciation in the value of the yen against the US dollar. The country's FIT scheme is also limiting purchasing power as it is resulting in a price ceiling while the power market turns more profitable.

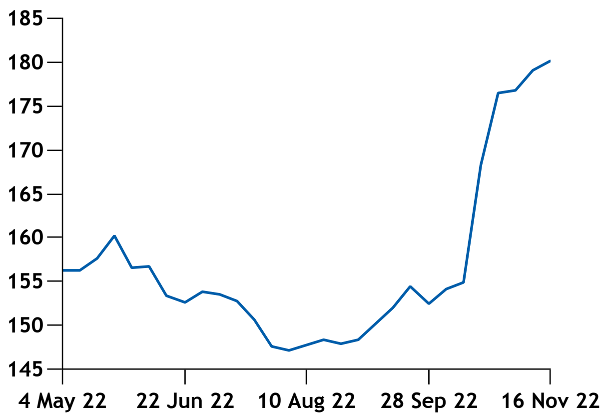
ASIAN INDUSTRIAL WOOD PELLETS

Wood pellets - 90 days (spot)					$/t
	Week index		Month index		
	Price	±	Oct	Sep	Aug
fob Vietnam to S Korea	180.14	+1.07	163.42	152.25	147.91
fob Vietnam to Japan FIT	204.75	+4.17	188.03	183.96	183.22
cfr Gwangyang	202.50	-0.39	192.01	182.69	181.93

ASIAN PALM KERNEL SHELLS

Palm kernel shell (spot)					$/t
	Week index		Month index		
	Price	±	Oct	Sep	Aug
fob east coast Sumatra	129.79	-1.52	129.83	129.58	130.13
fob peninsular Malaysia	119.55	-3.08	120.56	118.87	115.60

Fob Vietnam to S Korea wood pellet spot price $/t



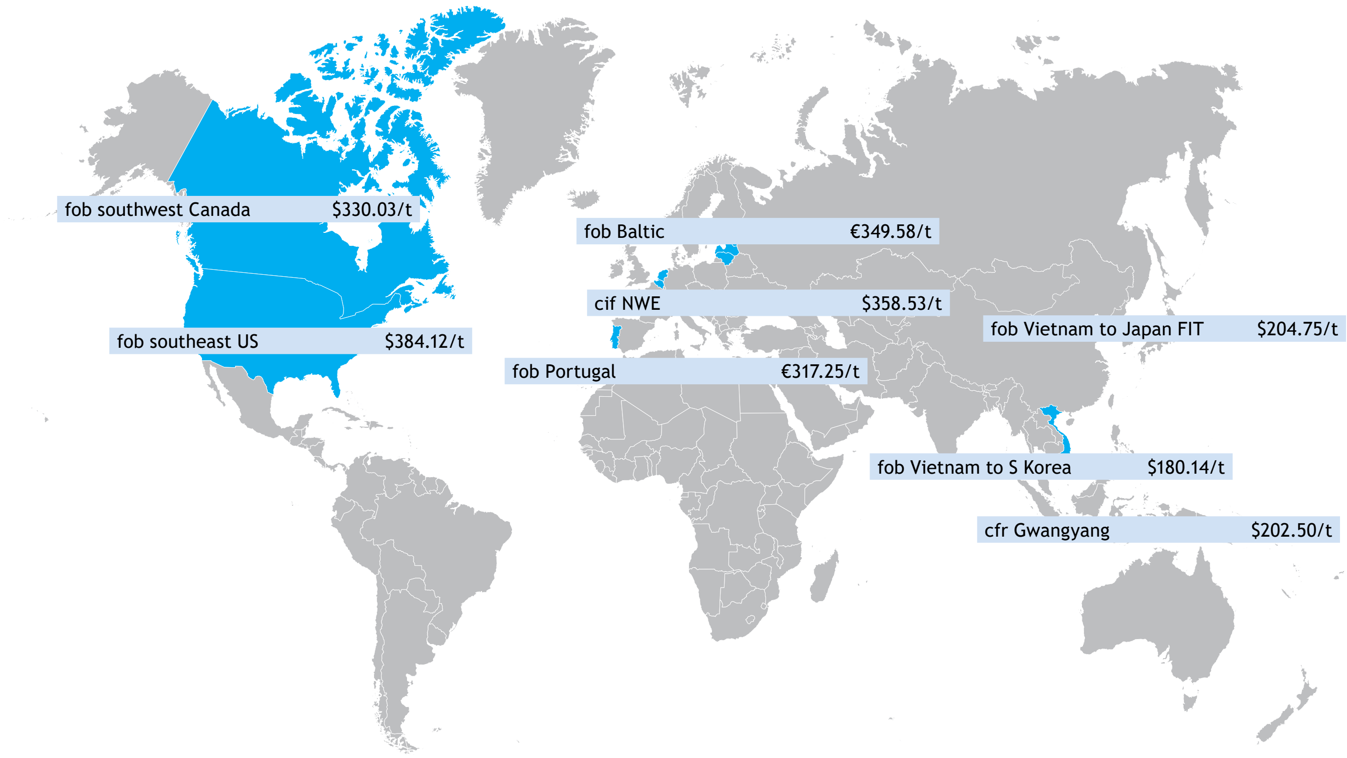
But the supply side is seeing a firmer outlook as both Indonesia and Malaysia are in the early stages of the low harvest season, with monsoon rain limiting fresh fruit bunch collections.

One market participant reported flooded plantations in Malaysia while another participant reported trucking delays owing to poor road conditions to and from mills following recent rain.

Vessel queues at Tanjung Buton, Dumai and Panjang ports in Indonesia were also reported to have increased to around two to three weeks for berthing because of weather-related disruptions.

Indonesia also increased its PKS export duties for 16-30 November, and reinstated export levies after the CPO reference price exceeded $800/t, bringing the total tax and levy package for PKS to $8/t.

INDUSTRIAL WOOD PELLET SPOT PRICES AT A GLANCE



COMPETING FUELS

Argus competing fuel assessments	Units	Delivery	Price
Europe			
Gasoil heating oil French cif NWE	*$/t*	prompt	947.250
Natural gas NBP	*€/MWh*	Dec	115.1230
US			
Fuel oil 1% New York Harbor	*$/bl*	prompt	81.075
Natural gas Nymex	$/mnBtu	Dec	5.933
European Emissions			
CO_2 EU ETS	€/t	2023	76.660

Suspension of Russian freight assessments for biomass

Argus is suspending its freight assessments for biomass for the three routes out of St Petersburg from 1 June, as a result of the Russia-Ukraine conflict. *Argus* will continue to monitor the situation and will provide further announcements in due course.

WOOD PELLET FREIGHT RATES

Argus wood pellet freight indications, spot cargo

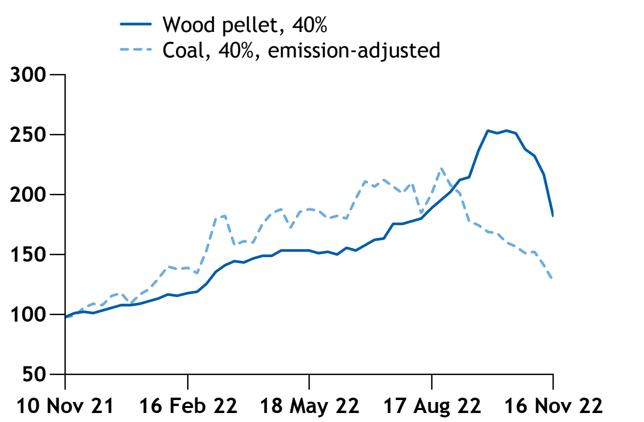
Route	Tonnage	Units	Rate	±
Aveiro-ARA	3500	€/t	39.000	+1.000
Aveiro-Copenhagen	3500	€/t	46.000	+1.000
Aveiro-Hull (UK)	3500	€/t	40.000	+1.000
Riga-ARA	5000	€/t	25.500	+0.500
Riga-Copenhagen	5000	€/t	19.500	+0.500
Riga-Stockholm	5000	€/t	17.500	+0.500
St Petersburg-ARA	3500	€/t	na	nc
St Petersburg-Copenhagen	3500	€/t	na	nc
St Petersburg-Stockholm	3500	€/t	na	nc
Mobile-ARA	25000	$/t	30.000	nc
Mobile-ARA	45000	$/t	26.000	-0.500
Savannah-ARA	25000	$/t	26.000	-1.000
Savannah-ARA	45000	$/t	22.500	-0.500
Vancouver-ARA	45000	$/t	28.500	-0.500

BREAK-EVEN GENERATION COSTS

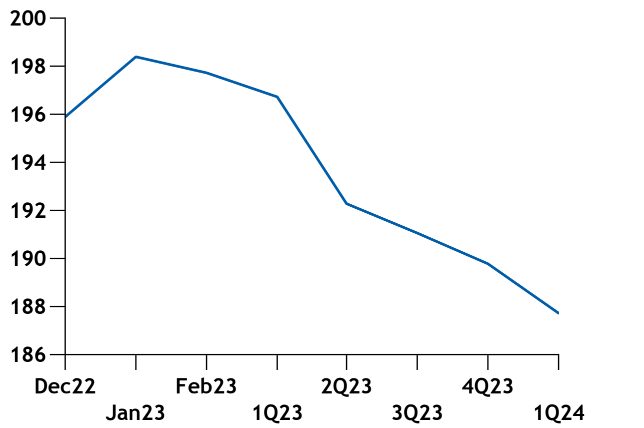
cif NWE wood pellet break-even				cif ARA coal break-even			
16 Nov		Spot	1Q23	Week average		Spot	1Q23
Pellet cost *$/t*		**358.53**	**410.000**				
Plant efficiency	Unit		Break Even	Plant efficiency	Unit		Break Even
36%	$/MWh	210.92	241.20	36%	$/MWh	148.20	148.81
	€/MWh	202.76	231.86		€/MWh	142.47	143.06
38%	$/MWh	199.82	228.50	38%	$/MWh	140.40	140.98
	€/MWh	192.09	219.66		€/MWh	134.97	135.53
40%	$/MWh	189.83	217.08	40%	$/MWh	133.38	133.93
	€/MWh	182.48	208.68		€/MWh	128.22	128.75
41%	$/MWh	185.20	211.78	41%	$/MWh	130.13	130.67
	€/MWh	178.03	203.59		€/MWh	125.09	125.61

**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.*

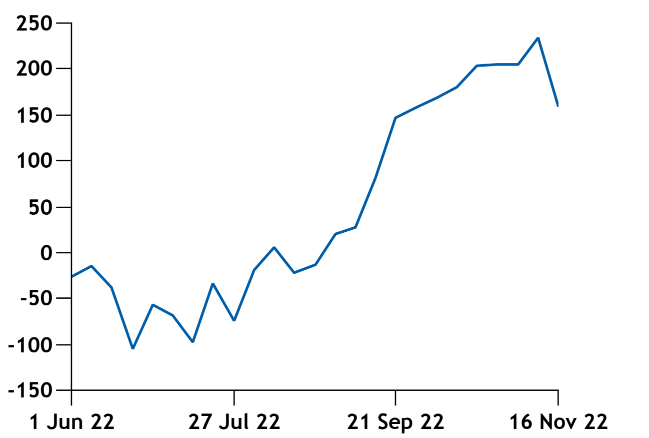
Break-even generation cost, cif NWE front month *€/MWh*



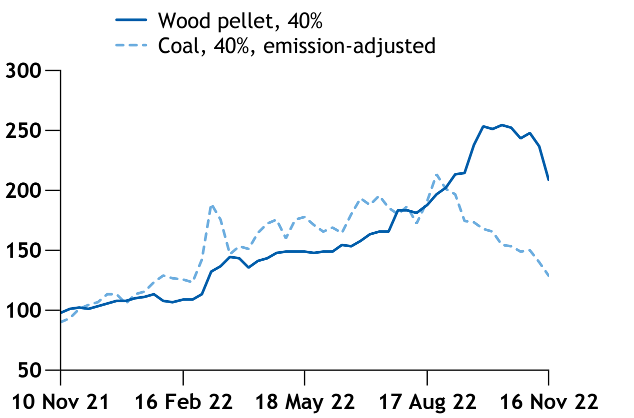
cif ARA coal swaps forward curve *$/t*



Wood pellet, cif NWE spot premium to coal, cif ARA *$/t*



Break-even generation cost, cif NWE front quarter *€/MWh*



WEATHER

European weather - Departure from normal temperatures												°C
	17 Nov		18 Nov		19 Nov		20 Nov		21 Nov		Precipitation (mm)	
Location	Avg	± normal*	Avg	± normal*	Avg	± normal*	Avg	± normal*	Avg	± normal*	5-day	15-day
UK — London Heathrow	9.7	1.6	8.3	0.3	6.9	-0.9	7.7	0.0	7.0	-0.5	20.6	56.8
Norway — Bergen Florida	5.5	0.2	4.2	-1.0	1.6	-3.5	1.7	-3.2	2.3	-2.5	0.3	25.7
Norway — Oslo Blindern	1.5	-0.8	0.6	-1.5	-0.6	-2.5	-1.4	-3.2	-1.0	-2.6	4.9	36.9
France — Paris Orly	11.2	3.5	8.9	1.4	7.2	-0.1	7.3	0.1	7.4	0.4	15.6	43.5
The Netherlands — Amsterdam Schiphol	9.7	2.6	8.1	1.1	5.5	-1.3	5.0	-1.7	6.1	-0.4	31.0	57.1
Germany — Essen	10.3	3.9	8.2	1.9	5.9	-0.2	5.0	-0.9	5.6	-0.2	26.3	51.8
Germany — Berlin Tempelhof	4.1	-1.4	0.5	-4.8	-2.8	-8.0	-0.6	-5.6	1.3	-3.5	6.7	20.2
Poland — Warsaw Okecie	-0.5	-5.0	-2.9	-7.2	-4.5	-8.6	-3.4	-7.4	-1.4	-5.2	2.2	12.1
Czech Republic — Prague Ruzyne	4.5	0.6	2.8	-1.0	-0.5	-4.1	0.0	-3.4	0.6	-2.6	12.8	26.9
Hungary — Budapest Lorinc	5.9	-0.4	2.9	-3.2	1.5	-4.4	-0.6	-6.3	0.0	-5.5	15.1	38.0
Serbia — Belgrade Surcin	8.1	0.4	8.6	1.1	6.9	-0.4	6.0	-1.1	5.5	-1.4	34.3	59.4
Romania — Bucharest Imh	8.8	2.5	6.3	0.2	7.3	1.4	6.0	0.2	6.6	1.0	33.3	60.1
Spain — Madrid Barajas	12.9	3.7	9.2	0.2	7.6	-1.2	10.6	2.0	10.7	2.3	24.8	54.1

*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

NEWS

RWE Dutch biomass-fired output up in 3Q

German utility RWE's biomass burn for power at its Dutch co-fired units rose in the third quarter of this year because of "favourable market circumstances" for biomass co-firing and other renewables, it said in its quarterly results.

RWE's biomass-fired generation in the Netherlands rose to 1.27TWh in July-September from 1.19TWh a year earlier, preliminary company data show. And output at the UK's 55MW Markinch plant also rose, to 79GWh from 52GWh, over the same period.

Higher power prices in the third quarter have incentivised biomass burn in northwest Europe and a cost advantage over other fuels has made biomass co-firing more attractive.

Despite higher generation in the third quarter, RWE's biomass-fired output in the Netherlands fell overall in the first nine months of this year to 3.27TWh from 3.81TWh. This was mostly because lower coal burn in the first quarter reduced biomass co-firing, data show.

"Lower generation volumes based on Urgenda restrictions" were cited as the reason for lower first-quarter generation in the company's quarterly results. The Supreme Court of the Netherlands upheld the 'Urgenda Climate Case' lawsuit in 2019, urging the Dutch government to cut carbon emissions by at least a quarter from 1990 levels. These were effective from 1 January-21 June of this year.

Lower generation reversed "after the release of restrictions catching up with higher coal generation volumes due to favourable market circumstances", RWE said.

The company's coal-fired generation in the Netherlands and Belgium rose to 2.7TWh in July-September from 2.4TWh a year earlier but held flat on the year in the first nine months of this year, at 5.3TWh.

At a group level, RWE's adjusted earnings before interest, taxes, depreciation and amortisation in January-September rose to €4.1bn and adjusted net income reached €2.1bn, both up from a year earlier.

"All segments of our green core business contributed to this strong operational performance, particularly our highly successful global supply and trading business and our European hydropower, biomass and gas activities," Dr Michael Müller, chief financial officer of RWE, said during a press conference on 11 November.

By John Cooper

Cez's biomass-fired generation fell in 3Q22

Czech utility Cez's biomass burn for power generation fell on the year in the third quarter of 2022, accelerating the pace of the decline so far this year.

Cez produced 147GWh of electricity from biomass in the third quarter of 2022, down from 194GWh a year earlier.

The firm's biomass-fired generation in January-September fell to 563GWh, from 694GWh a year earlier.

Cez operates biomass-fired power and heat plants in the Czech Republic and Poland, and in both markets its biomass generation has seen a declining trend.

In the Czech Republic, Cez's biomass burn for power fell by 25pc on the year to 328GWh in January-September, and in Poland by 11pc to 211GWh.

Biomass was the second-fastest-dropping source of fuel in Cez's generation mix in January-September, after natural gas.

Cez's overall generation fell by 1pc on the year to 39.6TWh in the first nine months, with the fall in biomass, hydro and gas-fired output slightly offsetting higher solar, nuclear, coal and lignite-fired generation.

By Tomasz Stepien

Russia exported pellets to Turkey in Aug-Sep

Turkey has become Russia's newest destination for wood pellet exports, as Russian firms continue efforts to diversify their export markets after western sanctions on Russian wood products came into force in early July.

Russia exported 67,000t to Turkey in August-September, the first sizeable shipments to Turkey on record, Russian customs data show. Deliveries rose from 21,000t in August to 46,000t in September, accounting for 35pc and 22pc of total Russian exports for each month, respectively. Russian deliveries to Turkey were reported at 153t in July and were zero or near zero in any previous month, the same data show.

Turkey is thought to have a relatively small wood pellet production capacity and is not a large consumer of industrial or residential pellets either. The country depends heavily on imported gas and hard coal for residential heating and power generation. But rising costs for imported gas and coal — and the electricity they are used to produce — as well as the continued weakness of the Turkish lira against the US dollar and other currencies, are likely to have provided Turkish firms with an incentive to consider offers of Russian pellets, which are thought to be priced at heavy discounts to pellets for delivery to northwest Europe.

Russian companies have been trying to redirect pellet and other wood product sales to markets in Asia or elsewhere since earlier this year, after the EU, the UK and other western governments announced sanctions on a number of commodities, including wood products, under chapter 44 of the HS classification of traded goods. Sanctions on wood products from Russia and Belarus came into effect on 11 July.

Russian pellet exports to Serbia also increased in September, to just under 2,000t from zero in August and 1,600t earlier in 2022. Total deliveries to Serbia were 1,300t in 2021 and stood at only 63t in 2020, Russian customs data show.

Exports to northeast Asia — primarily to South Korea and Japan — increased gradually from March-April, with the region having become a main market for Russia's pellets from July.

Russia exported 49,000t in August and 84,000t in September to South Korea, up sharply from 9,000t and 18,000t a year earlier, respectively. The volume shipped in September is the largest recorded delivery to South Korea for any month, customs data show.

Russian producers have been offering heavily discounted prices to Asian buyers, which are not affected by the suspended certification for Russian pellets by various sustainability bodies.

Russia exported 19,500t of pellets to Japan in August, up by 8,500t on the year, but deliveries were zero in September compared with 24,000t a year earlier. The fall in September deliveries to Japan was in line with previous expectations that Japanese users would stop accepting Russian pellets, following an announcement from the Programme for the Endorsement of Forest Certification in July that it would suspend forest management and chain-of-custody certifications within Russia, initially from 11 August. Japan, unlike South Korea, operates under a feed-in-tariff state support scheme that requires third-party certification for pellets.

Russia also exported 5,000t of pellets to Uzbekistan in August, the first recorded shipment from Russia to the central Asian country.

By Erisa Senerdem and Hannah Adler

German climate forest focus hits bioenergy

The German government's plans to raise forests' contribution to climate protection will reduce the domestic availability of wood precisely at a time when wood is needed for the shift towards a bioeconomy and to defossilise the country's energy sector, Germany's wood energy sector warns.

The German government has passed a €900mn support programme called "Climate-adapted forest management" that was expected to take force at the end of the week. Under the programme, forest owners will be financially rewarded for adapting their forests to climate change and raising their forests' carbon emissions mitigation impact. The programme calls for a range of measures to be implemented by forest owners and comes with a certificate system for climate-adapted forest management. The proposed measures go beyond existing standards such as from the PEFC and FSC, which already apply to 80pc of Germany's forests.

Forest owners may already apply for a total of €200mn in funding before the end of this year. The entire €900mn package is earmarked to be disbursed by 2026.

The most problematic of the proposed measures, according to German wood energy association FVH, is the obligation on owners with acreages of more than 100 hectares (ha) to take 5pc of this acreage out of use for at least 20 years for "natural regeneration". FVH managing director Gerold Buecheler argues that managing a forest is actually the only way to "actively" protect the climate.

FVH said it is too early to calculate the exact effects of the programme on the availability of wood in Germany. This will depend on how many forest owners take up the offer and on the condition of the acreage affected by this measure, Buecheler said.

Acreage of privately owned forests alone with more than 100ha cover about 1.7mn ha, Buecheler said.

The missing wood volumes would have to be procured elsewhere, increasing pressure on commercial forests in Germany and worldwide, FVH said. Imported wood would also cause additional greenhouse gas (GHG) emissions over the transport route and reduce the positive climate protection effects of wood.

Germany's wood industry association HDH said that in the government parties' coalition agreement of December 2021, the German government pledged a "timber construction initiative". This makes suggestions towards increased usage restrictions "all the more problematic", HDH said.

HDH pointed out the results of a study published this summer by the Thuenen Institute that concluded that implementing the EU Biodiversity Strategy (EUBDS) for 2030 measures would allow a maximum EU roundwood production of roughly 281mn m3 in 2030 in the "intensive" and 490mn m3 in the "moderate" scenario, compared with a volume of 529mn m3 in the "reference" scenario.

Taking wood-producing acreage out of the system will inevitably reduce volumes of available wood in the market, according to Bernhard Moehring, professor of forestry economics at the university of Goettingen. But Moehring told a parliamentary hearing on 7 September that the impact is likely to be below the 5pc of lost acreage, as forest owners will choose the areas accordingly.

The support programme is part of Germany's Action Programme Natural Climate Protection, which the government expects to approve in early 2023. The government views the action programme as a key instrument with which the country can reach its GHG emissions targets through nature-based solutions in the land use, land use change and forestry sector. The action programme will also implement the EU's draft Nature Restoration Law, which includes proposals for new, legally binding targets for the renaturation of seas, rivers and forests and is itself part of the EUBDS.

Germany's agriculture and food ministry said the country has lost about 400,000ha of forest in the past five years to climate change-related drought, heat and insect infestation. "Our forests are collapsing under the burden of the climate crisis," minister Cem Özdemir said at the presentation of the support programme.

By Chloe Jardine

Parliament eyes faster renewable permitting

The maximum period to approve new installations in renewables "acceleration" or "go-to" areas should be cut to nine from 12 months, although biomass and small hydro would be excluded from such areas, the European Parliament's energy committee said.

Amendments agreed in committee need to be voted on by the whole parliament and then approved by EU member states before entering force. Outside designated renewables areas, the maximum permitting period should not exceed 18 months.

The commission's May RepowerEU, aimed at reducing dependence on Russian fossil fuel imports, requires EU countries to install renewables faster. Designating "go-to" areas would see renewables permits deemed approved if competent authorities do not respond within deadlines. And it would formally increase the EU's renewable energy target share for 2030 to 45pc.

But the earlier exclusion by parliament's environment committee, and now the energy committee, of specific technologies — notably biomass combustion or small hydro with a maximum capacity of 10MW — from easier permitting rules in "go-to" renewable areas is highly concerning, the European Renewable Energies Federation (EREF) said. The association wants parliament and member states to agree a final legal text that reverts back to the commission's original proposal by taking in all renewables, including hydro and bioenergy.

The whole parliament could vote, possibly as early as next week, on the commission's May amendments. This would pave the way for negotiations with member states on a final legal text.

Last week, the commission proposed an additional temporary emergency regulation — for one year — to cover the period until member states implement the fast-track permitting rules.

By Dafydd ab Iago

EU agrees details of 310mn t CO2 net removal

The EU has agreed the details to a law setting a target of 310mn t CO2 equivalent (CO2e) of net greenhouse gas (GHG) removals in the land use, land use change and forestry (LULUCF) sector by 2030.

The target will increase the bloc's carbon sinks by 15pc by 2030, compared to today, the EU said. The overarching goal of 310mn t CO2e of net removals remains unchanged from a proposal made by European Commission in July 2021. Also unchanged are the individual targets for member states proposed by the commission. The LULUCF target will increase the EU's 2030 GHG reductions to 57pc from 55pc, as previous calculations assumed LULUCF savings of 225mn t of CO2e, the European Parliament said.

"The deal ensures different circumstances in each member state are taken into account when setting further ambition towards the 2030 targets," said Czech environment minister Marian Jurecka, who led negotiators for EU member states.

Current rules, which stipulate emissions should not exceed removals, continue to apply until 2025. Removals should exceed emissions over 2026-30, with each EU country set a binding national target for 2030. The agreement also foresees a "budget" of non-binding annual values of removals and emissions for 2026-29. And EU countries may buy and sell removal units.

To reach the LULUCF targets, countries may use surplus annual emission allocations under the effort sharing regulation that covers some 60pc of emissions not targeted by the bloc's emissions trading system (ETS), notably in road and domestic maritime transport, buildings, agriculture, waste and small industry sectors.

Other points in the LULUCF agreement allow countries a certain flexibility, including if they are affected by wildfires, pests and climate change, although the EU must reach the 2030 target as a whole.

"EU sinks have been decreasing for the last decade. We now have a more ambitious target and safeguards such as better data and stricter reporting requirements, more transparency as well as a review by 2025," said Finnish green Ville Niinisto, who negotiated on behalf of parliament.

Parliament had wanted to merge CO2 and non-CO2 emissions from the LULUCF and agriculture, forestry and other land-use sectors, chair of the agriculture committee Norbert Lins said. He is "convinced" that a review clause part will eventually merge the two sectors, taking into account progress in the agricultural sector. But he noted "serious concerns" about biodiversity conservation in the agreement, even if there is a need to take a "realistic" approach.

The provisional political agreement between the European Parliament and EU member states paves the way for formal approval. The revised LULUCF regulation could enter the EU's Official Journal early next year.
By Dafydd ab Iago

Czech Republic sets power generators' revenue ceiling

The Czech government approved a ceiling on electricity generators' revenues that varies by technology, the industry and trade ministry said.

The government set a €180/MWh ceiling on the revenues of wind, solar, hydropower and geothermal power generators. The revenue cap was regulated at €240/MWh for gaseous biomass generation, at €210/MWh for solid biomass, and at €70/MWh for power production from municipal waste.

The government also regulated a ceiling of €230/MWh for lignite-fired power plants of up to 140MW installed capacity and €170/MWh for plants with higher capacity, while the cap for power generation from mineral oils and peat was set at €180/MWh.

The legislation will be in effect until December 2023 and the government will collect 90pc of the revenues from generators selling above the regulated levels to support consumers deal with high energy prices, the ministry said. The Czech parliament also approved last week a 60pc windfall tax on profits made by energy, oil and mining companies, as well as banks.
By Apostolos Tsarikas

Coal-fired power exit needs $6 trillion: IEA

The world's transition from coal-fired power requires $6 trillion of investment in order for countries to meet their 2050 climate pledges, according to the International Energy Agency (IEA).

The agency said 90pc of this $6 trillion would be absorbed by renewables and nuclear and the remainder on storage and grid upgrades.

The *Net Zero Transitions* report was published today, over six months after the agency formed an advisory group on the coal exit. This comprises ministers from coal exporting and importing countries, energy executives and officials from development banks.

Unrecovered capital, inflexible power purchase agreements and uncompetitive power market structures must be resolved for the transition from thermal coal, the IEA said.

While average investment in coal supply and coal-fired power in 2016-21 fell by $80bn from the previous six-year average to $160bn, coal-fired plants with a combined capacity of 175-180GW are still under construction globally, the IEA noted. Since 2015, around 30GW of coal-fired capacity has received approval each year, with most new approvals in China. China, with the highest per-capita coal demand in the world, alone approved more than 20GW of new coal-fired power projects in the first quarter of this year, the agency added.

Investment trend

Investors have not recouped more than $1 trillion of invested capital in 1,400GW of coal-fired capacity, the IEA said — nearly 70pc of the global fleet. This could be a key barrier to a successful transition, particularly in emerging economies, it warned. A typical coal-fired plant operates for 50 years, but at least 30 years of operation is required to recover initial capital investment, according to the IEA. The average age of coal plants in China and Indonesia is 13 years, while the average in Vietnam is 8 years.

The IEA analysis finds that half of the world's top 100 financial institutions have not made any commitments to restrict coal-related financing, while another 20pc have made only weak exit pledges.

Nearly 60pc of coal-related investments over the previous seven years has been debt-financed, according to the report. The weighted average cost of capital for coal plant owners and operators is 7pc, the agency's analysis shows. The IEA suggests bringing this figure down to 4pc with additional financial packages would probably accelerate the recovery of initial investments. The agency also proposed the idea of multilateral development banks establishing investment vehicles that target the coal phase-out through bond issues.

IEA executive director Fatih Birol said relying on private-sector investment is "not ideal" for developing countries, and that international institution-led financing is an "important" means to securing funds for the transition. Birol praised Indonesia's agreement with the US and Japan to accelerate the transition as a "real testament of international co-operation", and hinted that India or Brazil could be next to accelerate their exit plans. The agency identified Indonesia, Mongolia, China, Vietnam and India as the five countries with the greatest coal dependency. Regions with the highest dependency were Indonesia's East Kalimantan, China's Shanxi, South Africa's Mpumalanga and

Colombia's Cesar.

Power market problems

The report indicates that power purchase agreements (PPAs) risk "locking in a significant share of coal-fired generation" because they require power to be generated from specific coal-fired plants — prolonging output from contracted plants for years. The IEA noted that PPAs dictate the operation of half the coal-fired plants in Vietnam, while the majority of India's independently-operated coal plants — around half the country's fleet — have PPAs in place.

Many coal plants, especially those owned by state-controlled utilities, lock in their lifespans because they are "shielded" from competition because they have greater access to public-sector finance, the agency said. The public sector accounted for almost 60pc of global coal-related investments, and the ratio is 80pc in China, according to the report's authors.

The IEA proposed a combination of policies for the coal exit, notably financial incentives, earlier plant retirements, use of carbon capturing and co-firing with hydrogen-based fuels or biomass.

The IEA suggests the global power sector needs $250bn of investment to replace coal-fired generation, primarily with wind and solar, by 2030 in a bid to achieve national climate targets.
By Ronald Kim

Cop 27: Nigeria seeks G7 support for energy transition

Nigeria environment minister Mohammed Abdullahi has called on the G7 countries to include Nigeria in a climate partnership list for the co-creation of a just energy transition partnership (JETP), as the country seeks to financing to hit its net zero by 2060 target.

Speaking at the Cop 27 UN climate conference in Sharm el-Sheikh today, Abdullahi reiterated that to meet its emissions reductions targets, Nigeria needed "significant resources" to implement its energy transition plan (ETP) unveiled last year.

The plan intends to reduce greenhouse gas (GHG) emissions from the power, cooking, oil and gas as well as transport and industry sectors, accounting for 65pc of the country's total emissions.

According to its own calculations, Nigeria would need an additional total of $410bn, or around $10bn in annual spending, in order to meet the 2060 net zero target, funds the country seeks to secure at the Cop 27 summit.

Most of the funds will be needed to transform the power sector, driven by costs to reach about 220GW of solar, biomass and hydro generation capacity, 90GW of storage capacity and 34GW of hydrogen systems.

At the same time, the country's ETP puts an important transitional role on gas use in domestic sectors such as power generation, grid stabilisation for the integration of renewables and for cooking purposes. The plan predicts gas production expansion costs between 2020-2030s to reach around $4bn, when it also expects domestic demand to rise by 25pc above 2019 levels.

Domestic demand will decline after 2030 but further estimates show that export demand will remain significant until 2050, which has made the "commercialisation" of gas a priority for the government, according to its ETP.

Nigeria's call for a G7 partnership comes after Indonesia agreed a JETP plan for $20bn with the US and Japan today, to help the country bring forward its carbon reduction targets by largely phasing out its dependence on coal.

South Africa signed a similar agreement with Germany and France last year to help fund its energy transition and phase out coal-fired power generation, although the country warned this week that most of the funding is made of loans.
By Florence Schmit

Indonesia's PLN to cut GHGs with renewables push

Indonesian state-owned utility PLN targets cutting greenhouse gas (GHG) emissions this year by 32mn t with various approaches, including increasing renewable energy in its overall fuel mix.

Other measures to reduce GHG emissions this year include processing exhaust gas into electricity, using more efficient coal-fired power generation technology and implementing biomass co-firing at coal-fired power plants, PLN said.

It first implemented co-firing in 2020 and it has since expanded the project to include more of its power plants. The company said that 33 out of the 48 power plants identified to be part of the co-firing project have successfully integrated biomass in their operations.

The co-firing project is expected to consume 450,000t this year but PLN aims to increase this fivefold to 2.2mn t in 2023. It aims to have at least 52 coal plants utilising co-firing technology and consuming 10.2mn t/yr by the end of the programme. This alone is expected to cut up to 11mn t/yr of GHG emissions once completed.

PLN has also removed 13GW of planned coal-fired generation capacity from its medium-term electricity supply business plan (RUPTL), which will reduce 1.6bn t of carbon dioxide emissions over the next 25 years.

PLN said that it is also accelerating the development of renewable energy, with renewable sources accounting for 20.9GW of new power capacity in the 2021-30 RUPTL. The additional renewable energy is meant to offset the removal of coal-fired power plants in the RUPTL, as well as the early retirement of existing such plants. It is targeting to retire 6.7GW of coal-fired capacity by 2040 and 16GW by 2060, in line with its net zero emissions target.

Tighter coal-fired regulations

The Indonesian government in September issued a new regulation restricting the approval of new coal-fired power projects.

The regulation, signed by Indonesian President Joko Widodo, is part of the government's commitment to cut GHG emissions and pivot to renewable energy.

The regulation will help accelerate a switch to cleaner energy, Indonesia's ministry of energy and mineral resources said at the time. But coal-fired power plants are still expected to play a key role in ensuring the country's short-term energy security while renewable energy projects are being developed.

Indonesia plans to achieve net zero emissions by 2060 or sooner, setting targets on the use of energy sources such as coal and biofuels in a report to the UN Framework Convention on Climate Change published last year. *The Long-Term Strategy for Low Carbon and Climate Resilience 2050* report sees Indonesia's GHG emissions peaking in 2030, although the role of coal in its energy mix remains significant until 2050.

Indonesia is the world's largest thermal coal exporter and a major GHG emitter. Coal made up the largest share of its power generation mix at 59pc in 2019, although the report sees coal's share falling to a still significant 38pc after renewables such as hydropower, biomass and biofuels at 43pc by 2050 under its low-carbon scenario, which is compatible with the Paris climate agreement.

Indonesia exported 435mn t of coal in 2021 and is targeting exports of 497mn t this year.

The country is the biggest palm kernel shell (PKS) exporter and the third-largest wood pellet exporter in Asia-Pacific after Vietnam and Malaysia. It exported 4.11mn t of PKS and 366,000t of wood pellets in 2021.

By Antonio delos Reyes and Andrew Jones

Indonesia raises 2H November CPO export duties

Indonesia has increased palm oil export duties for the second half of November, after prices increased on expectations of tighter crude palm oil (CPO) supply because of floods in parts of Malaysia and Indonesia that are likely to disrupt palm fruit harvests.

The CPO reference price rose by 7.3pc to $826.58/t for 16-30 November from $770.88/t for 1-15 November, according to Indonesia's trade ministry. This pushed export duties up to $33/t from $18/t for CPO and from $4/t to $5/t for palm kernel shells (PKS).

Export levies on palm products were also reinstated after the CPO reference price exceeded $800/t, bringing the total tax and levy package to $118/t for CPO and $8/t for PKS.

Levies on used cooking oil (UCO) and palm oil mill effluent (Pome) will be reimposed at $35/t and $5/t respectively.

The export levy was previous extended to December or until the CPO reference price exceeds $800/t.

By Deborah Sun

Vietnam establishes new wood pellet association

Vietnam's wood pellet industry and the country's general department of forestry have established an association that aims to promote the organisation and development of the country's wood pellet industry.

The newly-formed Vietnam Wood Pellet Association currently has 80 members, but this is likely to increase to around 300. Members currently comprise sellers, buyers, and sustainability bodies, its chairman Thanh Phong Nguyen of Vietnamese pellet supplier Phu Tai Bioenergy said. The majority of the current members are local sellers, with the rest being foreign organisations such as overseas buyers and sustainability bodies, he said.

The association plans to support the Vietnamese wood pellet industry by addressing issues surrounding wood pellet feedstock, production, certification and sustainability, Phong said. It also plans to provide support to smaller stakeholders through experience-sharing. The Vietnamese wood pellet market is relatively dispersed and is made up of many different minor stakeholders, which can make co-ordination and oversight monitoring problematic.

Vietnam is likely to export a total of 5mn t of wood pellets this year, increasing to around 10mn t/yr by 2025 as more participants enter the market, Phong said.

Vietnam is a major supplier of wood pellets to key Asia-Pacific markets such as South Korea and Japan. South Korea imported around 2.1mn t of Vietnamese wood pellets in 2021 and around 1.7mn t in January-September this year, while Japan imported around 1.6mn t of Vietnamese wood pellets in 2021 and around 1.8mn t in January-September, according to South Korean customs data and data from Japan's ministry of finance, respectively.

By Deborah Sun

Ecuador tender draws up to 500MW of renewables

Ecuador's call for proposals to build up to 500MW of renewable power drew 14 offers from both domestic and international companies and consortia.

The tender, launched in December, seeks 150MW in mini-hydroelectric plant capacity, 200MW in wind projects, 120MW in solar photovoltaic and 30MW in biomass or biogas generation. For hydroelectric projects, the government is offering 30-year contracts, 25-year contracts for wind and solar photovoltaic projects and 20 years for biomass and biogas generation.

The San Jacinto consortium presented an offer for the 49.9MW San Jacinto hydroelectric project. Neoen presented three projects for the Imbabura, Intillana and Ambi solar plans, with 60MW of capacity each.

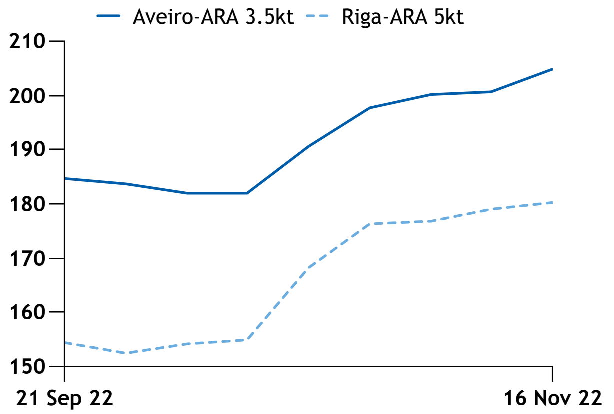
Dominium Energy presented an offer for a 60 MW photovoltaic project; while the Santa Rosa Energy consortium presented an offer to build a 49.5MW hydroelectric plant. The El Rosario Energy consortium bid with an offer of a 49.5MW hydroelectric plant, and China Huadian Hong Kong presented two offers for the 50 MW Cashapamba and 100MW Maca Grande wind farms.

The Cez Esco consortium presented an offer for a 17.6MW photovoltaic farm and Cbsing bid with an offer for a 2.01MW hydroelectric plant. The French Total Eren participated with two offers for a 44.81MW wind farm and 66.01MW Nana Pura photovoltaic facility.

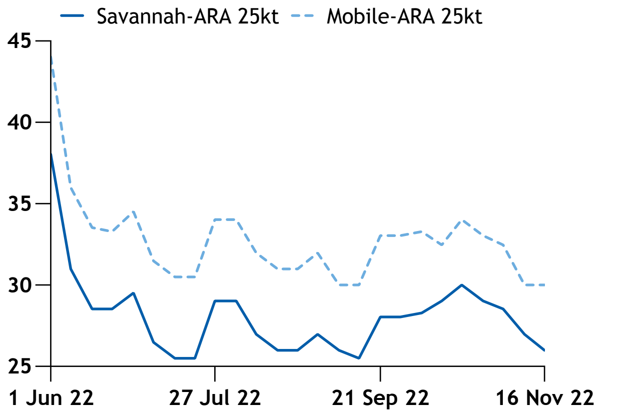
Finally, the Tambo consortium presented an offer of a 19.48MW hydroelectric plant. The projects are expected to be awarded from February-March 2023.

By Alberto Araujo

Wood pellet freight, coaster size €/t



Trans-Atlantic wood pellet freight rates 25,000t $/t



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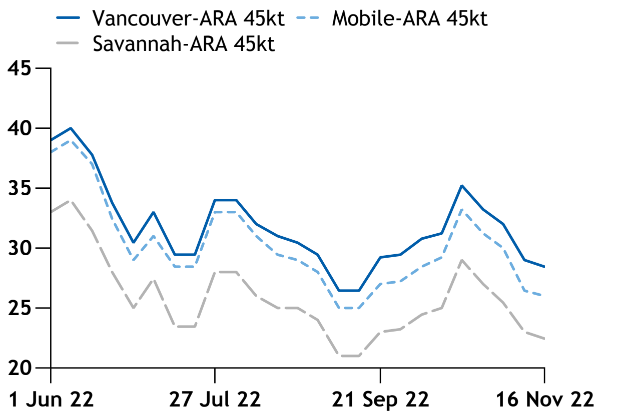
Trans-Atlantic wood pellet freight rates 45,000t $/t



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