

MARKET HEADLINES

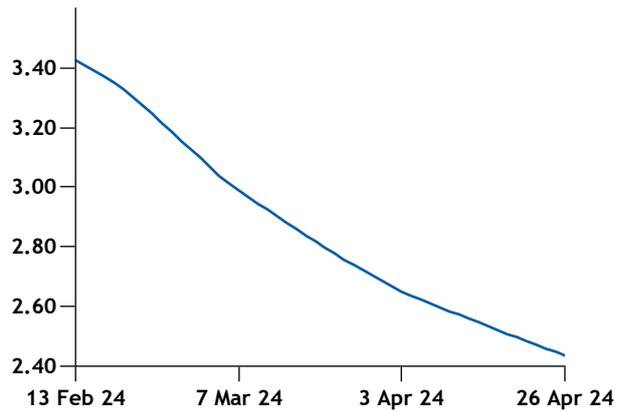
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- European biomethane GOOs: Front-year waste rises
- I-RECs: Thailand, Vietnam edge down
- UK Rego auction reserve narrows discount to OTC
- Croatia's April GOO auction volumes at multi-month high
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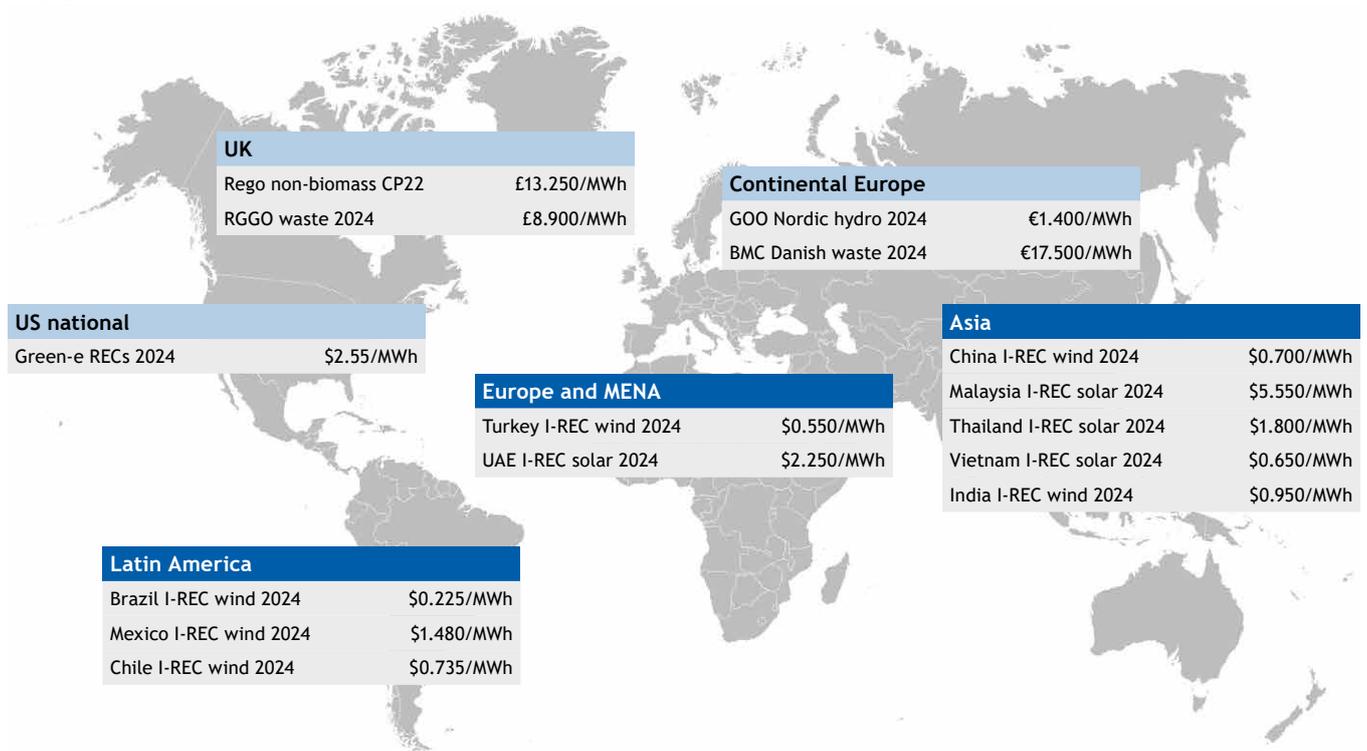
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Nordic hydro current-year GOO index

€/MWh



Key prices



EUROPEAN GUARANTEES OF ORIGIN

Guarantee of origin certificates	€/MWh											
	Nordic hydro			Europe wind			Europe solar			Europe any renewable		
	Bid	Ask	±	Bid	Ask	±	Bid	Ask	±	Bid	Ask	±
2023	0.75	0.85	nc	0.75	0.85	nc	0.75	0.85	nc	0.70	0.80	nc
2024	1.35	1.45	nc	1.35	1.45	nc	1.35	1.45	nc	1.30	1.40	nc
2025	2.15	2.35	nc	2.15	2.35	nc	2.15	2.35	nc	2.10	2.30	nc
2026	2.20	2.40	nc	2.20	2.40	nc	2.20	2.40	nc	2.15	2.35	nc
2027	2.25	2.45	nc	2.25	2.45	nc	2.25	2.45	nc	2.20	2.40	nc

UK Regos	€/MWh					
	Non-biomass			Biomass		
	Bid	Ask	±	Bid	Ask	±
Compliance period 22	13.05	13.45	+0.400	12.25	13.25	+0.400
Compliance period 23	8.40	8.70	+0.250	7.20	8.30	+0.500
Compliance period 24	7.25	7.35	+0.050	6.25	6.65	+0.050
Compliance period 25	6.30	6.60	nc	5.40	6.00	nc

Spanish domestic	€/MWh		
	Any renewable		
	Bid	Ask	±
2024	1.15	1.35	-0.300
2025	1.95	2.05	-0.250

Regos move up

UK CP22 Regos rose for the first time in three months on sustained buying interest, while 2023 AIB GOOs were again the only vintage to resist weekly losses.

CP22 non-biomass and biomass Regos both gained £0.40/MWh week on week to £13.25/MWh and £12.75/MWh, respectively. It was their highest in three weeks and the first time they rose since the end of January. Deals for non-biomass were done at £12.75/MWh at the start of the week, before rising to around £12.95/MWh mid-week, with bids at £13.05-13.10/MWh towards the end of the week.

Non-biomass Regos moved up by £0.15/MWh across the rest of the curve, with CP25 the only period to remain unchanged on the week at £6.45/MWh.

The reserve price in the next Rego auction has again been set at £10/MWh, unchanged since February, although its discount to the OTC market has narrowed slightly since the beginning of April (see separate story).

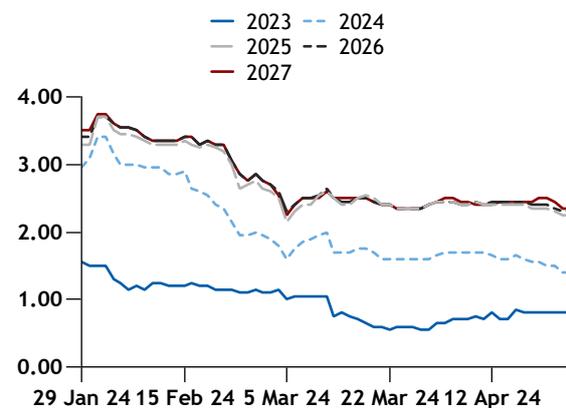
In the AIB, current-year Nordic hydro GOOs fell by €0.15/MWh week on week to €1.40/MWh, while previous-year Nordic hydro was steady throughout the week at €0.80/MWh, unchanged since 18 April.

Further along the curve, 2025-27 vintages shed €0.10/MWh to end the week in a €2.25-2.35/MWh range. Deals for 2028 and 2029 Norwegian hydro GOOs were done at €2.51/MWh on Monday.

Nordic hydro reserves declined in week 16 on lower

Nordic hydro GOOs

€/MWh

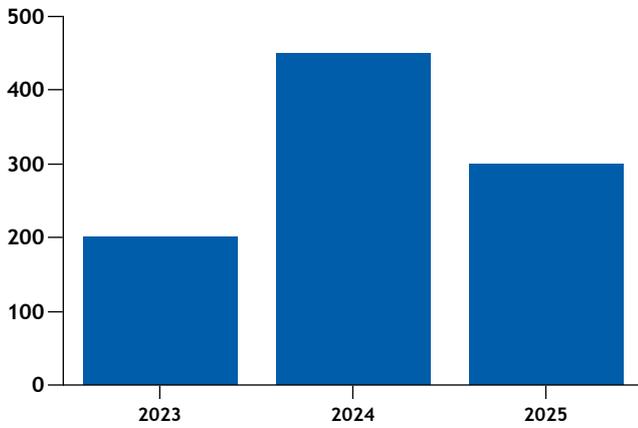


precipitation, while still keeping some of the previous week's gains. Reservoir volumes fell to 32.5TWh, or 25.6pc of capacity, from 33.1TWh, or 26pc of capacity, in week 15. They remain up on week 14 and at a surplus to 2022, but the deficit to last year widened to 0.2 percentage points from 0.1 points in week 15.

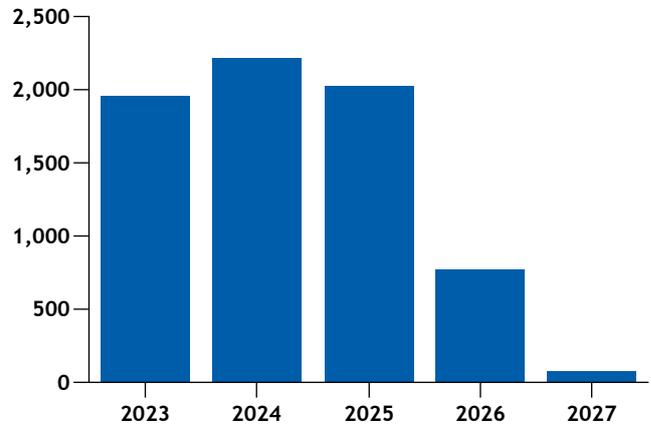
Traded volumes on Italian GME's continuous market platform and Epex Spot's GOO auction in April were down by nearly two-thirds and 82pc on the month, respectively. And Italy's GME will launch a new bulletin board for long-term trading of GOOs on 6 May (see separate stories).

GUARANTEES OF ORIGIN

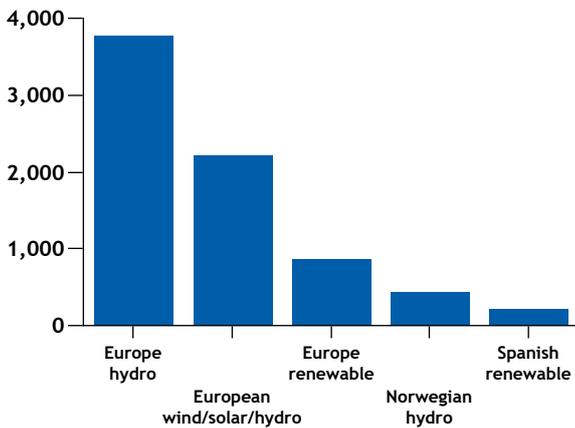
Nordic hydro monthly cumulative volume



Nordic hydro annual cumulative volume

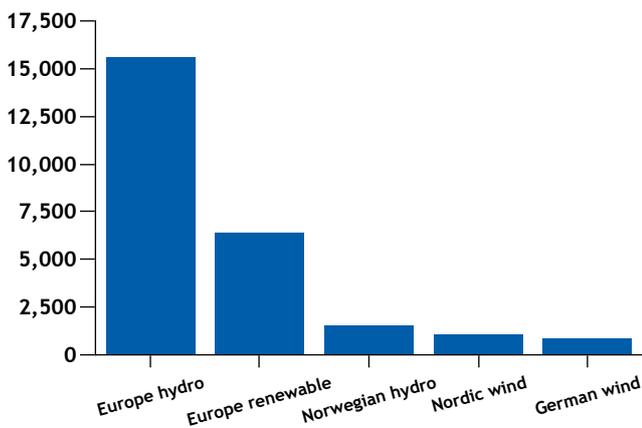


Monthly cumulative volume



*Top five most liquid non-assessed products, any vintage

Annual cumulative volume



*Top five most liquid non-assessed products, any vintage

European GOO current -year spot indexes €/MWh

Nordic hydro	2.434
European wind	2.434
European solar	2.434
European any renewable	2.384

UK Rego current compliance period spot indexes £/MWh

Non-biomass	8.450
Biomass	7.463

Spanish domestic GOO current -year spot index €/MWh

Any renewable	1.515
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Guarantee of origin deals

Day of trade	Product	Generation period	Volume MWh	Price €/MWh
25 Apr 24	GOO Spanish domestic wind/solar/hydro certificates	2024	30,000	1.400
25 Apr 24	GOO Spanish domestic renewable certificates	2024	22,500	1.300
25 Apr 24	GOO European wind/solar/hydro certificates	2024	150,000	1.460
25 Apr 24	GOO European wind/solar/hydro certificates	2024	25,000	1.420
25 Apr 24	GOO European wind/solar/hydro certificates	2024	50,000	1.370
25 Apr 24	GOO Europe hydro certificates	2023	50,000	0.800
25 Apr 24	GOO Europe hydro certificates	2028	100,000	2.300
25 Apr 24	GOO Europe hydro certificates	2027	100,000	2.300
25 Apr 24	GOO Europe hydro certificates	2026	100,000	2.300
25 Apr 24	GOO Europe hydro certificates	2025	50,000	2.245
25 Apr 24	GOO Europe wind certificates	2024	24,000	1.390

All chart volumes in GWh. Individual deal specifications available through the [Argus Direct platform](#)

EUROPEAN BIOMETHANE GUARANTEES OF ORIGIN

Front-year waste premium rises

EU year-ahead waste RGGOs increased their premium to the current year to a new high, while UK certificates held steady this week.

Dutch and Danish 2025 waste RGGOs were assessed at €28/MWh this week, having hovered around €30/MWh for the past three months, while 2024 fell for the fifth consecutive week to €17.50/MWh as offers fell to €18-19/MWh. In contrast, the front year-current year premium was €0.50/MWh throughout April last year. EU 2023 waste RGGOs were unchanged on the week at €15.50/MWh.

Activity was more muted on Dutch and Danish crop RGGOs, with 2024 vintage rising by €0.50/MWh to €13/MWh and the bid-offer spread holding tight €12.50-13.50/MWh.

UK RGGOs were mostly unchanged week on week, with 2024 waste assessed at £8.90/MWh and bids and offers in an €8-10/MWh range at the end of the week.

In Germany, low import and greenhouse gas emission reduction certificate prices are weighing on unsubsidised, advanced biomethane prices with origin in Germany, a CI of minus 100gr CO₂e/MJ and for delivery in 2024 this week. Premium biomethane was assessed at €115-135/MWh, down by €5/MWh. Biomethane imported from other EU countries was at a discount of up to €30/MWh.

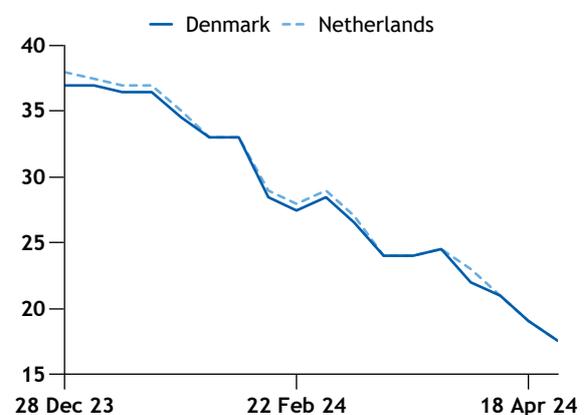
Prices for biomethane with a CI of 10g CO₂e/MJ continue to compete with usage under Germany’s Renewable Energy Act (EEG). Biomethane traded under EEG remained at around €90/MWh, while prices in the road fuel sector fell by €5/MWh on the week to €65-75/MWh.

The German customs office confirmed this week that biomethane imported from EU countries can be used to balance the GHG quota without a change in national law. This could lead to further imports of biomethane from EU countries and further depress German biomethane prices. Some market participants had held back on imports because they were waiting for a final clarification from customs, which has now been given.

And Germany’s governing parties have agreed that upon the completion of its coal phase-out, support for renewables including biomethane would also be phased out. The parties had targeted a coal exit “ideally” by 2030, but the legal deadline remains 2038.

Renewable gas guarantees of origin					
	Unit	Bid	Ask	Mid	±
Denmark crop					
2023	€/MWh	11.00	12.00	11.500	nc
2024	€/MWh	12.50	13.50	13.000	+0.500
2025	€/MWh	14.00	17.50	15.750	nc
Denmark waste					
2023	€/MWh	14.00	17.00	15.500	nc
2024	€/MWh	16.00	19.00	17.500	-1.500
2025	€/MWh	26.00	30.00	28.000	nc
Netherlands crop					
2023	€/MWh	11.00	12.00	11.500	nc
2024	€/MWh	12.50	13.50	13.000	+0.500
2025	€/MWh	14.00	17.50	15.750	nc
Netherlands waste					
2023	€/MWh	14.00	17.00	15.500	nc
2024	€/MWh	16.00	19.00	17.500	-1.500
2025	€/MWh	26.00	30.00	28.000	nc
UK crop					
2023	£/MWh	4.00	5.50	4.750	+0.250
2024	£/MWh	5.00	6.00	5.500	nc
2025	£/MWh	5.50	10.00	7.750	nc
UK waste					
2023	£/MWh	7.00	8.00	7.500	nc
2024	£/MWh	8.30	9.50	8.900	nc
2025	£/MWh	9.00	11.50	10.250	nc

Danish, Dutch current-year waste RGGOs €/MWh



INTERNATIONAL RENEWABLE ENERGY CERTIFICATES (I-RECS)

International renewable energy certificates (I-RECs)													\$/MWh
	Wind			Solar			Hydro			Biomass			
	Bid	Ask	±	Bid	Ask	±	Bid	Ask	±	Bid	Ask	±	
China													
2023	0.40	0.60	nc	0.40	0.60	nc	0.05	0.15	nc	na	na	na	
2024	0.65	0.75	nc	0.65	0.75	nc	0.10	0.20	nc	na	na	na	
India													
2023	0.40	0.60	nc	0.40	0.60	nc	0.30	0.40	nc	na	na	na	
2024	0.85	1.05	-0.050	0.85	1.05	-0.050	0.60	0.70	nc	na	na	na	
Malaysia													
2023	na	na	na	4.70	5.20	nc	1.20	1.30	nc	na	na	na	
2024	na	na	na	5.45	5.65	nc	1.30	1.40	nc	na	na	na	
Thailand													
2023	1.50	1.70	-0.050	1.50	1.70	-0.050	1.25	1.35	nc	na	na	na	
2024	1.70	1.90	-0.050	1.70	1.90	-0.050	1.45	1.55	nc	na	na	na	
Vietnam													
2023	0.45	0.55	-0.050	0.45	0.55	-0.050	0.15	0.25	nc	na	na	na	
2024	0.60	0.70	-0.050	0.60	0.70	-0.050	0.25	0.35	nc	na	na	na	
Brazil													
2023	0.17	0.21	nc	0.17	0.21	nc	0.11	0.15	nc	na	na	na	
2024	0.21	0.24	nc	0.21	0.24	nc	0.14	0.21	nc	na	na	na	
Chile													
2023	0.68	0.72	nc	0.68	0.72	nc	0.64	0.68	nc	na	na	na	
2024	0.71	0.76	nc	0.71	0.76	nc	0.67	0.73	nc	na	na	na	
Mexico													
2023	1.40	1.47	nc	1.40	1.47	nc	1.22	1.34	nc	na	na	na	
2024	1.44	1.52	nc	1.44	1.52	nc	1.29	1.37	nc	na	na	na	
Turkey													
2023	0.40	0.50	+0.020	0.40	0.50	+0.020	0.18	0.22	+0.010	0.16	0.20	nc	
2024	0.50	0.60	nc	0.50	0.60	nc	0.25	0.35	+0.025	0.23	0.33	+0.055	
UAE													
2023	na	na	na	2.10	2.20	nc	na	na	na	na	na	na	
2024	na	na	na	2.20	2.30	nc	na	na	na	na	na	na	

Thailand, Vietnam edge down

I-REC prices edged down in Thailand and Vietnam for wind and solar this week while hydro I-RECs held steady.

Wind and solar I-RECs for the 2023 and 2024 vintages edged down by \$0.05/MWh in Thailand and Vietnam this week. In both countries the current year discount for hydro I-RECs narrowed to \$0.30/MWh from \$0.35/MWh a week earlier.

In Thailand in February electricity generation from renewables excluding hydropower was 2pc higher than in 2023 while fossil fuel-fired generation was 20pc higher and hydro was 11pc lower. In Vietnam, water flows to hydropower reservoirs are 20-75pc below seasonal norms, while a prolonged heatwave has been increasing power demand, with coal power output increasing to meet demand.

Out of 100 of the world's largest public firms, 70 have net zero targets, while 38 out of the 100 largest private companies have net zero targets, according to a new report by Net Zero Tracker (see separate story). The report noted substantial regional differences. Of the 100 private compa-

Weekly Green-e eligible REC market prices, 19 Apr					\$/MWh
	Vintage	Bid	Ask	Price	±
National any	2024	2.50	2.60	2.55	nc
	2025	3.00	3.20	3.10	nc
Texas wind	2024	2.70	2.80	2.75	nc
	2025	3.30	3.40	3.35	+0.05

Daily US REC pricing, news and analysis available in [Argus Air Daily](#)

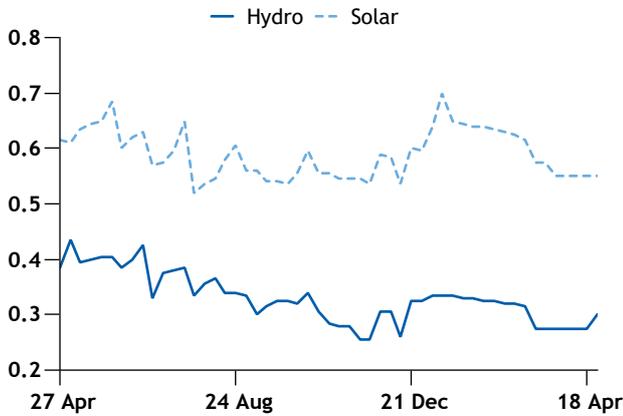
nies assessed, 50 operate in the US, and just 11 – 22pc – of these have a net zero target, it found. Of the 16 headquartered in China, 25pc, or four, have a net zero target. Of the 21 companies based in the EU and UK, 68pc have a target.

The UK and Colombia have signed an "energy transition action plan", to support Colombia's decarbonisation. The governments will work together to share experience and expertise and skills in "low carbon energy sectors", including renewable energy, hydrogen, carbon capture and storage (CCS) and energy efficiency. Current-year Colombian hydro I-RECs are offered at around \$0.95-1.10/MWh, while solar and wind offers are more scarce, at a \$0.10/MWh premium to hydro.

INTERNATIONAL RENEWABLE ENERGY CERTIFICATES (I-RECS)

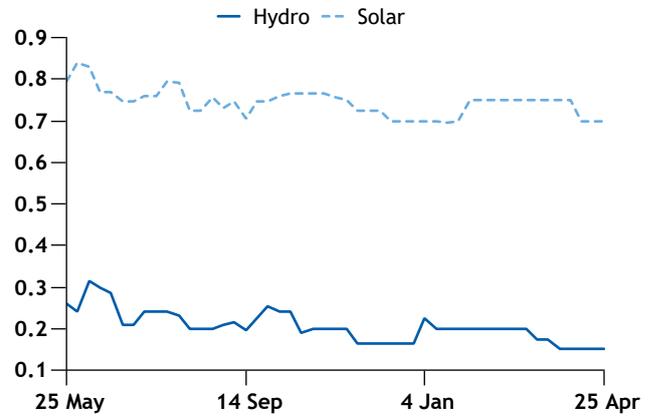
Turkey current-year solar and hydro

\$/MWh



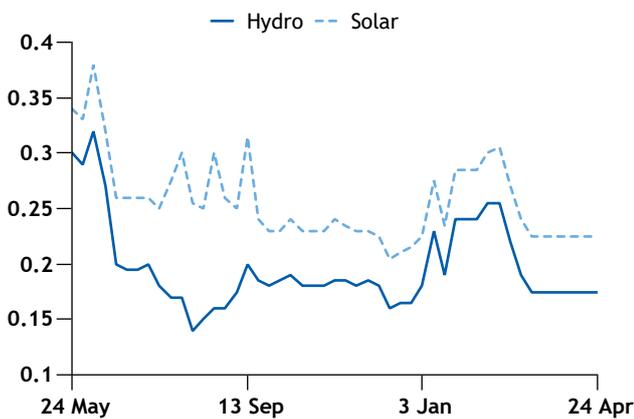
China current-year solar and hydro

\$/MWh



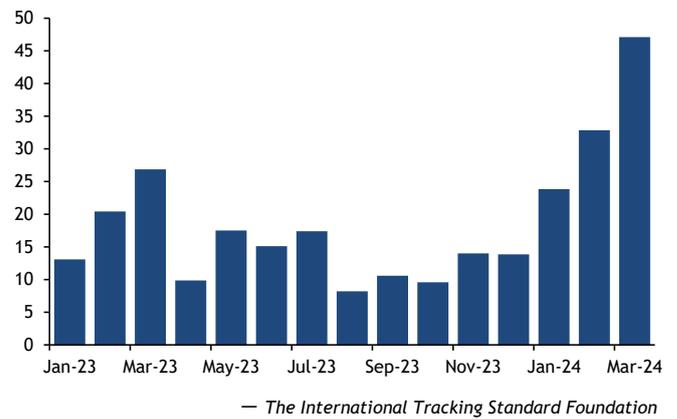
Brazil current-year solar and hydro

\$/MWh



Global I-REC redemptions

TWh



— The International Tracking Standard Foundation

I-RECs deals

Day of trade	Delivery type	Delivery year	Volume	Volume Unit	Price	Price Unit
27 Mar 24	IREC Chinese hydro certificates	2023	32,700	MWh	0.35	CNY/MWh
19 Mar 24	IREC South African wind certificates	2024	2,500	MWh	1.48	USD/MWh
19 Mar 24	IREC Indian wind/solar certificates	2024	100,000	MWh	0.95	USD/MWh
19 Mar 24	IREC Indian wind/solar certificates	2023	50,000	MWh	0.50	USD/MWh
19 Mar 24	IREC South African wind certificates	2023	1,800	MWh	1.45	USD/MWh
19 Mar 24	IREC UAE solar certificates	2023	8,800	MWh	1.95	Euro/MWh
19 Mar 24	IREC Zambian hydro certificates	2024	2,800	MWh	1.50	USD/MWh
5 Mar 24	IREC Mexican renewable certificates	2023	na	na	1.35	USD/MWh
29 Feb 24	IREC Mexican solar certificates	2023	46,000	MWh	1.35	USD/MWh
29 Feb 24	IREC Indian wind/solar certificates	2024	18,000	MWh	1.35	USD/MWh
28 Feb 24	IREC Chinese renewable certificates	2023	na	na	0.75	USD/MWh
21 Feb 24	IREC South African renewable certificates	2022	na	na	0.14	USD/MWh
12 Feb 24	IREC Indian hydro certificates	2023	na	na	0.55	USD/MWh
8 Feb 24	IREC Brazilian wind certificates	2022	na	na	0.10	USD/MWh
7 Feb 24	IREC Ugandan solar certificates	2022	na	na	0.52	USD/MWh
6 Feb 24	IREC Indian biomass certificates	2023	22,000	MWh	0.60	USD/MWh

More deals specifications available through [Argus Direct](#)

NEWS

Epex GOO volumes fall on the month

Traded volumes in Epex Spot's April guarantee of origin (GOO) auction fell from a record high in March, with prices broadly in line with the over-the-counter market.

Around 218GWh of GOOs produced over June 2023-March 2024 sold in Epex Spot's auction today, out of nearly 1.2TWh on offer. This was the lowest traded volume since December, when 131GWh of 2023-generated GOOs were sold, and was also lower on the year, with about 310GWh of 2022 and 2023-generated GOOs changing hands in April 2023.

Hydropower accounted for most certificates sold this month, with just over 4GWh coming from solar. Traded GOOs were produced across France, Germany, Finland, Norway and Sweden. Norwegian GOOs represented the largest share at 108GWh, followed by Sweden at 68GWh and France at 28GWh.

Certificates produced in 2023 cleared in a €0.75-0.80/MWh range, while certificates from January-March 2024 generation traded at €1.30-1.48/MWh. Argus last assessed Nordic hydro and European solar GOOs at €0.80/MWh for 2023 and €1.50/MWh for 2024 on Tuesday.

Epex Spot's March auction had seen a [record high for both offered and traded volumes](#), with 1.18TWh being sold out of 2TWh.

By *Giulio Bajona*

UK Rego reserve narrows discount to OTC

The reserve price in May's auction for UK renewable energy guarantees of origin (Regos) is unchanged on the month, but over-the-counter (OTC) market prices have recently declined.

The default reserve price for Regos has been set at £10/MWh (\$12.5/MWh) for all technologies in an auction scheduled to take place on 9 May, unchanged since February. But prices in the OTC market have fallen slightly since the previous auction in April was announced.

Argus last assessed compliance period 22 (CP22) non-biomass and biomass Regos at £13.25/MWh and £12.75/MWh, respectively, on 25 April. Both assessments were up by £0.40/MWh from a week earlier, but still £0.10/MWh below market levels when UK auction provider E-power announced its previous session at the beginning of April. The auction reserve price is now at a £2.75-3.25/MWh discount to OTC prices.

Around 330GWh of CP22 Regos traded below the OTC market in an [auction last week](#), nearly half of the 600GWh sold in March.

By *Giulio Bajona*

Croatian April GOO auction volumes rise

The total volume of guarantees of origin (GOOs) to be offered in Croatian power exchange Cropex's auctions this month is close to a two-year high, with reserve prices at a discount to the over-the-counter (OTC) market.

Croatian market operator Hrote will auction around 208GWh of wind power GOOs on 29 April. Certificates were produced in January-March from plants with commissioning dates of December 2015 to May 2020.

This follows the announcement that state-owned utility [Hep will auction GOOs from 2024 generation](#) next week, bringing this month's total offering on the Cropex platform to 308GWh, the highest since [July 2022](#).

The reserve price is set by Hrote at €0.80/MWh, which is well below the OTC market. Argus last assessed 2024 European wind GOOs at €1.55/MWh on 19 April, down by €0.10/MWh week on week.

By *Giulio Bajona*

GME to launch new GOO platform

Italian market operator GME's new platform for trading guarantees of origin (GOOs) will go live on 6 May, and allow users to post bids and offers for renewable electricity and gas GOOs.

The new platform will be open to buyers and sellers who are registered in the Italian or any Association of Issuing Bodies (AIB) GOO registry and will take the form of a bulletin board. The bids and offers can be for current-year vintage or the following three years. Transactions cannot be completed on the new platform, but subsequent trades will have to be registered in either GME's bilateral market platform or another GOO registry within the AIB hub.

GME currently operates the Italian continuous and bilateral market platforms for renewable electricity and gas GOOs. Biomethane GOOs have only been tradable on the platforms since November. There are currently plans to introduce trading for hydrogen GOOs as well as certificates for heating and cooling sources.

By *Emma Tribe*

GME 2023 GOO sales fall in April

The volume of Italian guarantees of origin (GOOs) traded on energy operator GME's continuous market platform was nearly two-thirds down on the month in April, with prices recovering from March.

A total of 49GWh of GOOs from 2023 generation sold on the Italian continuous market platform last week, down from almost 136GWh in March. It was the first time GME sold

NEWS

previous-year certificates in its April session, following the publication in July of decree 224 by the Italian ministry for the environment and energy security.

The decree allows GOOs to be traded within 12 months of production and to be cancelled for up to 18 months. GOOs previously had to be cancelled by 31 March of the following year, regardless of their production date. The new decree makes previous-year certificates available for redemption for the next compliance period after the disclosure deadline in March.

No GOOs were sold on GME's continuous platform in April last year, while sales of 2022-generated GOOs were at 35GWh in April 2022.

Prices saw an increase this month with a weighted average of €0.82/MWh, up from a weighted average of €0.51/MWh for continuous GOO sales at the end of March. Over-the-counter market prices also moved up over the same timeframe, with *Argus* assessments for 2023 Nordic hydro averaging €0.78/MWh in the week to 19 April, compared with €0.58/MWh in the last week of March.

By *Giulio Bajona*

Germany confirms biomethane import rules

The German customs office has confirmed to *Argus* that biomethane imported from EU countries via the public gas grid can be used to balance the GHG quota without a change in national law.

Biomethane imports into Germany via the grid have increased in recent months, according to market participants, even though many had also been hesitant because of a lack of legal clarity. This has pressured domestic prices with value for unsubsidised biomethane with German origin and a carbon intensity (CI) of -100grCO₂e/MJ falling by €15/MWh since the start of this year to €125/MWh on 25 April, converging with prices on the import market, which were reported at around €90/MWh for product with the same greenhouse gas (GHG) savings.

The final confirmation from Germany's customs office could increase import volumes and squeeze the spread between domestic and import prices.

Biomethane can be counted towards the GHG quota if it has been fed into the natural gas network in another EU country. This is based on a decision by a court in Berlin and "on the basis of the currently applicable version of the [Federal Immission Control Act], further transposition into national law is therefore not required", the customs office told *Argus*.

For imported and mass balanced biomethane to be

counted towards the quota five conditions must be met: The feedstock must comply with German biomass sustainability criteria, the gas must be fed into the natural gas network within EU excise territory, the gas must be transported to Germany for accounting purposes, the biomethane must be taxed and used as a fuel in Germany, the required quality characteristics for injection into the European natural gas network must be proven and, finally, proof of sustainability must be available and be transferred.

But any addition to these requirements cannot be ruled out, the Directorate General of Customs said. They point out that Germany is allowed to restrict subsidy regulations under EU law if current regulations could mean benefits for non-German biomethane.

By *Nik Pais dos Santos*

Naftogaz seeks to export biomethane

Ukrainian state-owned gas and oil company Naftogaz is keen on participating in the development of the country's biomethane sector and plans to export domestically produced resources.

Naftogaz is considering opportunities to buy biomethane from local producers under long-term contracts for export to European markets, Naftogaz director for foreign economic activity and partnership development Oleksii Lukashuk said at the first Ukraine biomethane forum in Kyiv.

Such partnership between local producers and Naftogaz could benefit both sides, he said. The co-operation can help local producers to save costs related to the organisation of exports. Additionally, by accumulating resources produced by local companies and leveraging its external business contacts, Naftogaz can sell the resource for more attractive prices at foreign markets than if smaller Ukrainian firms sold their biomethane separately, according to Lukashuk.

Another potential benefit of the partnership between the state-owned company and local biomethane producers is Naftogaz's infrastructure assets, namely gas distribution systems, underground storage facilities and a network of gas-fuelling stations. Naftogaz plans to provide producers with comprehensive services for connecting biomethane production facilities to the network. Additionally, partnership with Naftogaz can facilitate the access of local producers to financial resources, he said.

Ukrainian biomethane exports have remained unavailable because of legislative framework restrictions that arose after Ukraine introduced a ban on exports of some commodities and [energy resources in March 2022](#) to protect local markets in the context of the full-scale Russian invasion.

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At the same time, given the lack of incentive to produce the biomethane for sale on the local market, Ukrainian authorities find it worthwhile to enable biomethane exports. The Ukrainian [parliament in March adopted changes to legislation aimed at allowing the export of domestically-produced biomethane](#). But the document is yet to be signed into law. Secondary legislation must also be amended to enable biomethane exports, their customs clearance and taxation.

In addition, several impediments challenge the implementation of new biomethane projects and development of the sector in Ukraine, according to market participants attending the forum. This includes the lengthy, time-consuming and bureaucratic procedure of connecting new capacity to the network, restrictions on biomethane feeding to the system, high cost of project construction, limited access to financing and lack of economic incentive.

By Anastasia Gasan

Octopus, ScottishPower sign PPAs with Sky, Co-op

UK utility Octopus has signed a power purchase agreement (PPA) with UK media and telecommunications firm Sky, while ScottishPower has signed a deal with UK consumer co-operative Co-op, the firms said.

Octopus Renewables Infrastructure Trust signed a 10-year PPA with Sky for 69pc of the output from the 46MW Crossdykes wind farm in Lanarkshire, Scotland. The plant is expected to generate roughly 144 GWh/yr of power, Octopus said.

And ScottishPower Renewables, a subsidiary of Spain's Iberdrola, has agreed a 15-year PPA with Co-op for the entire output of the 9MW Coldham solar farm near Wisbech, England.

By Matt Bowen

FDP wants to end renewables support 'quickly'

In its 12-point plan to accelerate the country's "economic transition", German pro-business coalition party FDP stated it wants to abolish support for renewables "as quickly as possible".

The party said it wants to integrate renewables into the market "once and for all" and end subsidies under the renewable energy act (EEG). All opportunities to increase efficiency and reduce EEG costs "must be exploited" in the short term, the FDP said, pointing specifically to abolishing the remuneration of negative power prices or lowering the maximum price.

In the coalition agreement between the FDP, SPD and

Greens in 2021, the governing parties agreed that upon the completion of the coal phase-out, support for renewables would also be phased out. The parties had targeted a coal exit "ideally" by 2030, but the legal deadline remains 2038. Under the 2023 amendment to the EEG, tenders for onshore wind, biomass and biomethane capacity will run at least until 2028 and for ground-mounted and rooftop solar until 2029.

During the course of this government, the FDP has clashed with its coalition partners on several energy-related issues, including [the introduction of an industry power price](#) and the controversial building energy act.

The party also said it wants to expand the use of domestic energy reserves and called for modernisation to the legal framework to allow the creation of a nuclear fusion law. Germany has a long history of popular opposition to nuclear energy and [last year completed its long-awaited nuclear phase-out](#). But opposition party CDU/CSU – with whom the FDP have formed coalition governments several times, most recently during 2009-13 – last year criticised the move, with the parties' parliamentary group calling for the last three reactors that were shut down on 15 April to be restarted and operated until at least the end of 2024.

By Helen Senior

German law could boost renewable direct supply

German wind association BWE today outlined potential amendments to the German energy industry act (EnWG) and renewable energy act (EEG) that could support the expansion of direct supply of onshore wind power to industrial consumers.

The direct supply of power generated from renewable energy is rarely used by Germany's small and medium-sized enterprises, but this could change through a better legal framework, BWE president Barbel Heidebroek said.

The criterion of "immediate spatial proximity" included in the EEG should be removed, BWE said. This restricts the length of power lines connecting plants for direct supply to a consuming facility to avoid a "nonsensical expansion of the private grid", the association said. But the construction of unnecessarily long direct lines is economically unattractive in the first place, and a lack of specificity of the criterion leads to planning uncertainty that hinders investment, BWE argued. The association added that removing the criterion would "put an end to discrimination against wind turbines", which unlike rooftop solar photovoltaic systems are usually placed several kilometres from consumption to comply with emissions regulations.

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Similarly, the limitation of the maximum power line length for direct supply to 5km included in the EnWG should also be discarded, as distance restrictions “stand in the way” of further expanding wind capacity, BWE said.

The association also called for further clarifying the terminology around direct supply, as concluding direct supply contracts is “lengthy and complicated” and leads to barriers to investment, it said. Facilitating direct deliveries would free up a “considerable amount” of private funds for the expansion of renewables, which would ultimately relieve the burden on the federal budget, BWE said.

And the association suggested that plants generating power for direct supply could also be used for redispatch measures.

The government in May last year [presented an onshore wind strategy](#), aimed at tackling major barriers to expanding onshore wind power in Germany. But BWE said that it currently has no knowledge of the strategy being implemented.
By Adrien Seewald

UK to examine 1.1GW offshore wind application

The UK planning inspectorate has accepted German utility RWE’s application for the 1.1GW Five Estuaries offshore wind farm for examination, it said.

The project will now move into the pre-examination phase, with the examination phase expected to begin this summer and last for six months. A final decision on consent is anticipated in the summer of 2025.

RWE expects to begin installing the project in 2027 and for it to be operational by the end of the decade. It will consist of up to 79 turbines built 37km off the Suffolk coast.

RWE is developing the project with a consortium led by Australian firm Macquarie, Irish state-owned utility ESB and Japanese company Sumitomo. It is an extension to the existing 353MW Galloper offshore wind farm, which has been fully operational since March 2018.

The current UK government is aiming to install [50GW of offshore wind capacity by 2030](#), with opposition party Labour targeting 55GW in the same time frame.

By Matt Bowen

Sonnedix starts building 120MW UK solar plant

Renewables developer Sonnedix has begun installing the 120MW Cowley Complex solar project in County Durham, England, which it expects to complete in the third quarter of 2025.

The project is made up of three connected sites with capacities of 60MW, 43MW and 17MW, respectively. Once

operational, they will generate roughly 124.6 GWh/yr of power, Sonnedix said. The project was successful in the UK government’s contracts for difference scheme, which will come into effect in 2026, the firm added.

Sonnedix signed a €500mn (£428.6mn) [loan facility](#) late last year with six commercial lenders to finance the building of its renewables pipeline in the UK and Europe. It has a UK pipeline of 300MW, comprising the Cowley Complex and four other plants with a capacity of 20-60MW each.

By Matt Bowen

Germany passes renewables, grid expansion law

Germany’s lower and upper houses of parliament today passed the so-called “solar package 1” which aims to accelerate expansion of solar, wind and power grids.

Under the changes, tendered capacity for rooftop solar photovoltaic (PV) systems will rise to 2.3GW per year from 2026, and after a transition period of one year the minimum capacity at which plants have to participate in tenders will be reduced to 750kW. And operators of systems with a capacity of up to 200kW will in future be able to pass on surplus volumes to the grid operator without direct marketing costs, albeit also without remuneration.

For ground-mounted PV tenders, the maximum capacity of projects allowed to participate will be lifted to 50MW from the current 20MW. And so-called “disadvantaged” agricultural areas will be opened up for ground-mounted PV systems, although federal states have an opt-out option if a certain proportion of land used for agriculture is taken up by PV. Additional PV built on agriculturally-used land will be limited to a maximum of 80GW by 2030.

Agri-PV and other special PV systems – including floating solar and car park solar – will have their own sub-segment of the ground-mounted PV tenders with a maximum bid value of €95/MWh. The tendered capacity in this sub-segment will be increased incrementally up to 2.075GW per year, but overall ground-mounted tender capacity will not rise.

The changes also extend the EU emergency regulation allowing for an accelerated approvals procedure for onshore and offshore wind, PV and grids to the end of June 2025 from the end of June this year. And existing wind energy areas will be recognised as “acceleration areas” under REDIII regulations, meaning approvals processes will be significantly eased in future.

For biomethane and biomass tenders, the southern quota will be suspended until 2027, and the realisation deadline for biomethane plant will be extended by six months. And from 2025, part of the unawarded biomethane tender volume will

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be added to the tender volume for biomass in the following year.

Solar association BSW welcomed the reform package, but called for further reforms in tax law, energy market design and grid access. A second solar package is needed before the end of this year to increase PV additions to 22GW from 2026, BSW managing director Carsten Koenig said.

By Helen Senior

Greece's Intrakat starts work on 171MW of PV

Greek construction conglomerate Intrakat has started the installation of a solar photovoltaic (PV) portfolio of 171MW capacity in Ptolemaida in northern Greece.

The portfolio comprises three PV plants of 80MW, 75MW and 16MW capacity, owned by Greek utility PPC's renewables subsidiary, PPC Renewables. The construction is scheduled to be completed by June 2025, Intrakat said today.

The total cost of development is estimated at €43mn (\$46mn).

This is part of a larger 1.2GW renewable portfolio that PPC Renewables controls in the region, with projects being at various stages of development.

PPC Renewables and Intrakat signed an agreement at the end of last year to [jointly develop up to 2.7GW of renewables in the country](#).

PPC plans to [add around 4.3GW of renewable capacity in 2024-26](#).

By Apostolos Tsarikas

Germany opens second 2024 rooftop solar tender

Germany today opened its second rooftop solar photovoltaic (PV) tender for 2024, which will close on 3 June.

A total of 258MW of capacity is being tendered at a maximum bid value of €105/MWh – [see German renewable energy tenders](#). Grid regulator Bnetza [lowered the maximum bid value](#) in December from the 2023 level of €112.50/MWh, owing to the decline in projected costs of rooftop systems. The first 2024 tender round recorded an average bid value of €89.20/MWh for successful bids, the lowest since the December 2022 tender round. A total of 900MW will be offered over the three 2024 rooftop PV tender rounds.

The “solar package 1”, [which was agreed on by the government last week](#), will “roughly double” the number of tenders for rooftop PV systems from the current three a year, economic affairs and climate action ministry (BMWK) circles told *Argus*.

By Adrien Seewald

Scotland approves six projects ahead of CfD close

Scotland has approved six projects that will produce power from renewable energy sources (RES) ahead of the UK's closure of the application window for the sixth allocation round (AR6) of its contracts for difference (CfD) scheme, which shut on 19 April.

The projects consist of the [560MW Green Volt](#) and [100MW Pentland](#) floating offshore wind farms, as well as one wave energy project and three tidal energy developments.

The UK has allocated a [£1bn budget for the AR6 auction](#), almost quadrupling that set for the previous auction. All the projects recently approved by Scotland will be eligible to bid into pot two, which has a budget of £105mn, with a minimum of £10mn ringfenced for tidal stream developments.

The CfD auction delivery body National Grid ESO opened the assessment window for AR6 at 9am on Monday and will close it at 5pm on 20 May, it said. The results publication window will be open on 28 June-4 September, the Scottish government said.

By Matt Bowen

Denmark eyes 3GW offshore tenders by December

Denmark will hold the first round of offshore tenders as part of its broader 6GW development programme in December, according to the tender criteria published this week.

The Danish energy ministry will offer three of the six areas in the December round, with a minimum of 3GW available to prospective bidders. The North Sea area will be separated into three development zones, each with a minimum capacity of 1GW, although additional capacity may be built. Interested developers may submit bids until 5 December.

Subsequent tenders for the Kattegat, Kriegers Flak II and Hesselo area will close on 1 April 2025, with the first two each offering a minimum of 1GW and the Hesselo area accepting bids planning a minimum of 0.8-1.2GW of capacity.

All projects must be operational by 2030, or developers will be subject to financial penalties, according to the tender documents.

Denmark currently has 2.7GW of operational wind power capacity.

By Daniel Craig

OX2 eyes 900MW of new renewables by 2025

Swedish renewable developer OX2 expects to bring at least 900MW of new European renewable and battery storage capacity on line by the end of 2025, according to its first-quarter results.

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The Swedish developer will complete 156MW of onshore wind and battery storage by the end of this year. New wind capacity will be distributed between Italy and Poland, with the 63MW Wysoka and 24MW Krasnik wind farms in Poland, while the 27MW Eolia wind farm will be built in Italy. OX2 expects its 43MW Bredhalla battery storage project this year to be Sweden's largest storage unit when completed. Swedish battery operator Flower acquired the plant from OX2 [earlier this month](#).

Beyond this year, OX2 plans to connect around 790MW of new renewable capacity in 2025, comprising four onshore wind turbines and one solar photovoltaic project. The largest single project expected to come on line in the next two years is the Finnish 455MW Lestijarvi wind farm, which began development in 2021. Two further Poland-based projects, the 20MW Bejce onshore wind farm and the 100MW Rutki solar farm, are scheduled for completion next year.

The Swedish developer completed 300MW of new capacity in the first quarter, reducing its total portfolio under development to around 33.1GW from around 33.5GW at the end of last year.

OX2 registered a loss in the first quarter of this year of 110mn kronor (€9.41mn), down sharply from a SKr102mn profit in the first quarter of 2023. But the firm expects operational losses to be mitigated over the year with more than 2GW of project sales under way.

By Daniel Craig

Matrix Renewables to add 239MW PV in Spain

Renewable Spanish developer Matrix has taken a €179mn loan to finance the construction of five solar photovoltaic (PV) projects in two Spanish regions.

The company will install a 46MW in Badajoz, in Extremadura and four PV plants ranging 44-53MW of capacity in Palencia, in Castilla Leon, bringing the total capacity to 239MW. The Spanish firm began building the projects in December 2023, and plans to start operations in the first quarter of 2025.

The company announced it signed a €179mn loan from the Spanish bank Sabadell to finance these projects, but it did not specify the total value of the investment.

By Thess Mostoles

Developers submit proposal for Welsh wind farm

UK-based renewables developer Coriolis Energy and Irish state-owned utility ESB have submitted a planning proposal for their 130MW Y Bryn onshore wind farm in south Wales, they said.

The project will now be evaluated for slightly over four months, with a decision given to Welsh ministers within six months of the validation. From there, a decision from the Welsh ministers must be issued within nine months, meaning a decision should be delivered within roughly 18 months. If built, the plant will generate almost 318 GWh/yr of power from 18 turbines. The project will be co-located with a battery energy storage system (BESS), the firms said.

UAE state-run renewables firm Masdar is [interested in investing in UK onshore wind if the regulatory framework allows](#), global offshore wind director Husain Al Meer told *Argus* earlier this year.

By Matt Bowen

Enovos to complete German PV project in 2025

Luxembourg-based utility Enovos has officially inaugurated its Sudeifel solar photovoltaic (PV) project in Rhineland-Palatinate, Germany, with the total 200MW of capacity expected to be installed by the end of next year, the company told *Argus*.

The project is comprised of 11 sites, with two segments with a combined 37MW commissioned in late 2023, and six others with a combined 122MW commissioned in the first quarter of this year. As of March, two of the remaining projects were being built, while the third was in the final stages of approval. All 11 sites were originally due to be commissioned by the end of 2023.

Enovos has already signed agreements to market all of the project's output under power purchase agreements (PPAs), with the majority destined for industrial consumers in Germany and Luxembourg. [Enovos signed three PPAs](#) for a total of 68.7 GWh/yr with German firms Siemens, Nordzucker and Freudenberg Service in 2022.

By Adrien Seewald

HEP eyes 498MW reversible hydro plant

Croatian state-owned utility HEP has started a preliminary environmental licensing procedure for the planned development of the 498MW Blaca reversible hydropower plant in the country's southeast.

The facility at Otok and Gala is envisioned to generate 986 GWh/yr of electricity in production mode, calculated on six hours/d of turbine operation and eight hours/d running in pumping mode, and assuming the plant operates for 11 months a year, a licensing document said.

The plant is scheduled to have 489MW of capacity and 1.3 TWh/yr of energy demand in pumping mode, with its upper and lower reservoirs holding 13mn m³ and 2.6mn m³

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of water, respectively. No details were released about the expected date of its commissioning.

Blaca would use excess output from domestic wind and solar plants in pumping mode, the document said. Croatia may need additional power storage capacity as its overall wind and solar capacity could increase to nearly 2.6GW and 960MW by 2030 from 987MW and 138MW in 2021, the government said in its updated draft national energy and climate plan last year. The country announced a tender in April to support future renewable capacity, [including 60MW of wind and up to 350MW of solar projects](#) with an installed capacity of more than 1MW.

The Blaca plant would also help with flood protection along the Cetina river, improve irrigation in the Sinjsko Polje area and allow HEP to run its existing 237MW Orlovac hydro plant nearby at rated capacity even in situations of high water levels in the Cetina, the document said.

HEP currently operates 28 hydro plants with a combined capacity of more than 2GW. Its biggest existing reversible or pumped-storage unit is the 276MW Velebit plant

By Béla Fincziczki

Czech Republic to set up zones for wind, solar

The Czech Republic plans to create “acceleration zones”, or special geographic areas, for renewable energy projects, where developers may be eligible for simpler and shorter permitting procedures.

The Czech government approved a proposal on Wednesday to update the country’s spatial development policy and set the basic procedure of identifying “acceleration zones” for renewable developments, including wind farms, solar plants and related energy storage facilities.

Developments meeting the specific conditions related to these special areas are scheduled to have simplified environmental impact assessment requirements, the Czech environmental ministry said.

Authorities will be required to complete permitting procedures in the zones in up to 12 months, or up to six months for upgrading existing energy production equipment, installing new equipment with a capacity of less than 150kW and adding energy storage at the same location, the ministry said. This will compare with a 24-month permitting procedure limit for developments outside the special areas.

Domestic authorities, local governments and communities “will work together” to determine the location of future acceleration zones, the Czech industry and trade ministry said. It said the zones are likely to be located in existing industrial areas or at former mines. No “acceleration zone”

can be created in national parks, Natura 2000 areas or protected landscape spots, the ministry said.

The Czech Republic is expecting to add about 8GW of new solar and 1.2GW of new wind capacity by 2030, the government said in the draft update of its energy and climate plan in October.

By Béla Fincziczki

Hungary’s first storage tender supports 440MW

Hungary’s first energy storage tender will support 440MW of capacity by the first half of 2026.

The tender allocated 62bn forint (€158mn) for both industrial and individual energy storage facilities through a non-refundable investment support and income compensation scheme. Winning projects should become operational by April 2026, and they will have to operate for at least 10 years. The [tender was oversubscribed](#), with applications totalling Ft115bn. Applications were selected based on technical lifespan, lowest-cost principle and lowest-income compensation claim.

Among the selected projects of the tender was a 20MW battery storage facility to be installed by Hungarian transmission system operator Mavir, which will be the largest such facility once completed. Hungary currently has 20MW of energy storage capacity, and will increase its capacity twentyfold through this scheme. Hungary’s revised national energy and climate plan (NECP) calls for 1GW of storage capacity to be installed by 2030.

Hungary will add further storage capacity through the Solar Energy Plus Programme, in which households are eligible to receive Ft5mn for the installation of solar photovoltaic (PV) panels and battery storage.

Hungary added [1.63GW of solar PV capacity in 2023](#) between utility-scale and household units. But the Hungarian grid has been struggling to balance excess capacity from small-scale solar installations, and suspended new household units from exporting surpluses to the grid in October 2022, although the ban has been lifted in most areas this year.

Solar generation has averaged 770MW or 21pc of the Hungarian power mix so far in April, up from 490MW or 13pc of the mix over the same period last year.

By Annemarie Pettinato

Moldova approves law for renewable tender

The Moldovan government today approved legislation that enables the launch of a tender to support the installation of 165MW of renewable capacity.

The legislation simplifies the participation requirements

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and the procedures for organising renewable tenders, the country's energy ministry said today. Moldova aims to allocate a total of €190mn (\$203mn) by next year through the scheme to support the installation of 105MW of onshore wind and 60MW of solar photovoltaic (PV) capacity.

Winners will benefit from a 15-year contract at a fixed price for the plant's output. Moldova's energy regulator Anre has set the maximum support level at 1,500 Moldovan lei/MWh (€78.84/MWh) for wind farms and at Lei1,670/MWh (€87.77/MWh) for PV plants, the ministry said.

Once commissioned, the plants will help Moldova to meet 16.6pc of its electricity consumption from renewables, from 10pc at the end of 2023. The country aims for renewables to account for 30pc of its final electricity consumption by 2030.

The country also aims to [launch its day-ahead power market](#) by the end of the year.

By Apostolos Tsarikas

UK ETS free allocations for 2021-25 edge higher

The UK government has made the final revision relating to 2023 activity levels to the number of free allowances that can be allocated to eligible sectors under its emissions trading scheme (ETS) in 2021-25, adjusting the volumes marginally upwards.

A total of 170mn UK ETS permits are now scheduled to be handed out over 2021-25 to installations deemed at risk of carbon leakage, whereby companies relocate to other jurisdictions to avoid carbon costs.

The latest data published by the government this week indicate allocations of 37.79mn allowances for 2021 and 35.44mn for 2022, falling to 32.57mn for 2023, 32.12mn for 2024 and 32.1mn for 2025. This compares with 32.38mn for 2023, 31.93mn for 2024 and 31.91mn for 2025 in the [previous update published in February](#).

Installations receiving free allocations totalled 463 in 2021, 450 in 2022 and 438 in 2023, the data show. This edges down to 432 for 2024 and 431 for 2025.

The adjustment has been made to align free allocations with changes to operators' activity levels recorded in 2023. Allocation levels are based on the previous year's activity and adjusted for future years if activity levels change. The annual process has now concluded for 2023 activity levels.

The government is yet to publish its response to the [consultation it held](#) between December and March on potential changes to the system of free allocation, including a dynamic approach to activity levels that would make free allocation levels set at the beginning of the year provisional,

to be adjusted to an installation's actual activity at the end of the year.

By Victoria Hatherick

EU approves biofuels feedstock law

The European parliament has paved the way for EU adoption of delegated legislation adding eligible feedstocks for production of biofuels and biogas. It dismissed a motion calling for resubmission of a European Commission directive expanding eligible feedstocks under the bloc's renewables law.

The motion maintained that expanding biofuel feedstocks to crops grown on severely degraded land risks incentivising additional use of synthetic fertilisers, pesticides, nutrients and water. And the commission's delegated directive includes a feedstock representing a "high risk of fraud". The commission had gone beyond its executive powers.

The commission's directive will notably now define intermediate and cover crops as "advanced" when used in aviation. The same feedstock, used in maritime or road sectors, is to be classed as "mature" and capped at 1.7pc of transport fuels and electricity under part B of the EU's renewable directive's annex IX.

An industry representative was "glad" the objection failed. "They reject anything that doesn't fit into their electrification-only narrative. Accepting more sustainable feedstocks, such as intermediate crops, which do not compete with food, is critical to allow the EU to meet its decarbonisation targets, especially in aviation," the source said.

The source expects the commission's directive to enter into force in mid-May, two months after the commission [proposed](#) the delegated directive on 14 March.

The large majority of 331 votes to 245 overturns a narrow committee vote earlier in April.

By Dafydd ab Iago

EU adopts sustainability due diligence rules

The European parliament has formally approved a Corporate Sustainability Due Diligence Directive (CSDDD), which will require large EU companies to make "best efforts" for climate change mitigation.

The law will mean that relevant companies will have to adopt a transition plan to make their business model compatible with the 1.5°C temperature limit set by the Paris climate agreement. It will apply to EU firms with over 1,000 employees and turnover above €450mn (\$481mn). It will also apply to some companies with franchising or licensing agreements in the EU.

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The directive requires transposition into different EU national laws. It obliges member states to ensure relevant firms adopt and put into effect a transition plan for climate change mitigation. Transition plans must aim to "ensure, through best efforts" that business models and company strategies are compatible with transition to a sustainable economy, limiting global warming to 1.5°C and achieving climate neutrality by 2050. Where "relevant", the plans should limit "exposure of the company to coal-, oil- and gas-related activities".

Despite a provisional agreement, EU states initially [failed to formally approve](#) the provisional agreement reached with parliament in December, after some member states blocked the deal. Parliament's adoption – at its last session before breaking for EU elections – paves the way for entry into force later in the year.

Industry has obtained clarification, in the non-legal introduction, that the directive's requirements are an "obligation of means and not of results" with "due account" being given to progress that firms make as well as the "complexity and evolving" nature of climate transitioning.

Still, firms' climate transition plans need to contain "time-bound" targets for 2030 and in five-year intervals until 2050 based on "conclusive scientific" evidence and, where appropriate, absolute reduction targets for greenhouse gas (GHG) for direct scope 1 emissions as well as scope 2 and scope 3 emissions.

Scope 1 refers to emissions directly stemming from an organisation's activity, while scope 2 refers to indirect emissions from purchased energy. Scope 3 refers to end-use emissions.

"It is alarming to see how member states weakened the law in the final negotiations. And the law lacks an effective mechanism to force companies to reduce their climate emissions," said Paul de Clerck, campaigner at non-governmental organisation Friends of the Earth Europe, pointing to "gaping" loopholes in the adopted text.

By Dafydd ab Iago

[Incinerators want waste heat in renewables target](#)

Industries in the EU are pushing for all heat recovered from thermal waste-to-energy (WtE) to be considered as eligible under waste heat targets set out in the revised renewable directive (REDIII).

Environmental campaigners claim the push could eventually affect how greenhouse gas (GHG) emissions from such waste are treated once municipal waste incineration installations are included in the EU's emissions trading system

(ETS).

Current EU rules, including REDIII, acknowledge the "importance" of waste heat, but it is essential that guidance documents in preparation by the European Commission fully recognise heat recovered from WtE processes, European waste-to-energy plants association Confederation of European Waste to Energy Plants (Cewep) Cewep noted in a recent briefing.

"Transferring the heat produced by WtE in district heating networks helps to decarbonise the heating sector, substituting the combustion of fossil fuels," said Cewep managing director Ella Stengler. "Waste is not produced on purpose, and it is definitely not produced to feed WtE plants," Stengler told *Argus*. Cewep represents over 400 incineration plants with energy recovery.

Opposing the move, environmental organisations are now calling on the commission and EU states to explicitly exclude waste incineration from eligibility under REDIII waste heat targets. "Currently, only the energy from burning the organic fraction of mixed waste, such as bio-waste and paper, is considered renewable. Burning plastics is very high carbon, worse than burning fossil gas," said Zero Waste Europe policy manager Janek Vahk.

"The ETS focuses on fossil emissions, not biogenic. If the renewable directive then labels everything as waste heat, including the fossil part, not just biogenic, you could speculate on whether there'd then be an exemption from the ETS," Vahk said. And he raised concerns that labelling all incineration heat as 'waste heat' would create demand also for WtE with industry meeting renewable directive obligations to buy waste heat.

The renewable directive obliges EU states to increase renewables in industry by an indicative minimum of 1.6 percentage points annually until 2030. And countries can count waste heat and cold towards that target for up to 0.4 percentage points. That directive also stipulates power, heating and cooling from municipal solid waste shall not be subject to GHG emissions-saving criteria.

The ETS directive obliges the commission to assess by July 2026 the feasibility of including municipal waste incineration installations in the EU ETS. And the commission should assess potential member state opt-outs until the end of 2030. The commission confirmed it is working on a set of guidance documents for REDIII, including one on heating and cooling and accounting of targets. The commission is planning to complete the work and publish guidance by July, an official said.

By Dafydd ab Iago

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TBG looks to biomethane as Bolivia output falls

Brazilian gas transport company Transportadora Brasileira Gasoduto Bolivia-Brasil (TBG) is seeking to expand biomethane transport to meet growing demand from industries for low-carbon fuels and offset the decline in Bolivian gas output.

“Biomethane production is small, but the fuel has a promising future,” Rafael Perrone, the company’s new business director said.

TBG is seeking to expand biomethane output amid growing concerns regarding falling Bolivian gas production and exports to Brazil. The 2,593km (1,610-mile) Gasbol pipeline transports Bolivian gas imports to Brazil and has capacity to transport 30mn m³/d, but has moved significantly less in recent years. It transported an average of 15.4mn m³/d in the first three quarters of 2023, down from 17.5mn m³/d in 2022 and 19.8mn m³/d in 2021, according to data from the mines and energy ministry.

The company’s pipeline goes across key agricultural states, including Sao Paulo, Mato Grosso do Sul, Parana, Santa Catarina and Rio Grande do Sul, all of which have announced biomethane investments and have potential to increase output.

Part of the company’s biomethane strategy involves identifying potential joint ventures with gas distribution companies, Perrone said.

This includes the development of biomethane hubs, which would concentrate production and demand.

The company is also working with potential clients to study the potential for biomethane to meet a share of the unmet demand for gas across TBG’s transport grid, Perrone said.

Currently, Brazil has 20 biomethane plants, but only six of these producers sell the fuel to third parties. By 2029, 90 plants are expected to be selling biomethane on the market, with supply seen reaching 7mn m³/d, up from roughly 1mn m³/d currently, according to the Brazilian biogas producers’ association Abiogas.

Brazil to add biomethane plant in 2025

Brazilian renewable power company Marca Ambiental and global industrial gas company Air Liquide will co-invest in the first biomethane plant in Espirito Santo state.

The plant will have capacity to produce roughly 25,000 m³/d of biomethane and is scheduled to begin operating in July 2025. Air Liquide will supply the equipment to the plant, which will require investments of R70mn (\$13.5mn).

The biogas used in the plant will come from a landfill in

the municipality of Cariacica. Biogas contains 50pc methane, which can be processed into biomethane, a drop-in substitute for natural gas. The company plans to boost production to 100,000 m³/d over the next decade.

Last year, [natural gas distributor ES Gas <https://direct.argusmedia.com/newsandanalysis/Article/2522496>] agreed to distribute the renewable fuel through its distribution network. Marca also plans to sell the biomethane on the spot market.

Brazil produces around 1mn m³/d of biomethane, according to the Brazilian biogas producers’ association Abiogas.

UK, Colombia sign energy transition plan

The UK and Colombia have signed an “energy transition action plan”, to support Colombia’s decarbonisation.

The governments will work together to share experience and expertise and skills in “low carbon energy sectors”, including renewable energy, hydrogen, carbon capture and storage (CCS) and energy efficiency. They also plan to “develop pipelines of innovative, large-scale bankable renewable energy projects” via initiatives such as the UK’s climate finance accelerator programme, the UK government said.

The agreement did not name specific funding, but the governments pledged to “further explore how to maximise Colombia’s ability to access the deep pools of capital available in London for green finance”, as well as supporting Colombia to mobilise local finance for climate action.

The countries also said that they would work to set a coal phase-out date and retire coal-fired power stations. The UK’s final coal-fired power plant is set to close in September. Colombia [joined the Powering Past Coal Alliance in September last year](#), which commits it to phase out unabated coal-fired power generation.

The country is a major coal exporter, with 58.2mn t of thermal coal shipped last year, up from 57.9mn in 2022. The IEA estimated that Colombia’s coal production rose by 18pc to 64mn t last year, compared with 2022. The country is also Latin America’s third-largest oil producer, with output of around 760,000 b/d. Its president Gustavo Petro has pledged not to grant new oil contracts in a bid to transition the economy towards tourism and away from hydrocarbons.

Today’s plan builds on the Colombia-UK partnership for sustainable growth, signed in 2019. It committed the countries to collaborate to cut emissions and strengthen climate resilience, in line with the Paris climate agreement.

Colombia will host the UN Cop 16 biodiversity summit later this year. The country is also this week hosting technical talks on the new climate finance goal, in Cartagena.

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The finance goal represents the next step from the \$100bn/yr that developed nations pledged to deliver to developing countries over 2020-25, and must be decided at the UN Cop 29 climate conference in Baku, Azerbaijan in November.

Colombia and the UK have both set in law a target of net zero emissions by 2050.

By Georgia Gratton

New Zealand commits \$25mn to ADB fund

New Zealand's government has committed \$25mn to the Asian Development Bank's (ADB) Energy Transition Mechanism (ETM) fund, which aims to support the shift away from coal-fired power plants.

The ADB's ETM was launched in 2021 and is aimed at using concessional and market-based funds to retire or repurpose power plants running on coal or fossil fuels, replacing them with clean power. The ETM Partnership Trust Fund (ETMPTF) consolidates concessional funds from financing partners to fund efforts such as feasibility studies for projects that are in line with the ETM's objectives.

New Zealand is the third country to contribute to the ETMPTF. Japan pledged \$25mn in 2021, followed by Germany with €25mn (\$26.6mn) in 2022.

The ADB in November 2022 signed an initial agreement with Indonesia under the ETM to explore the [early retirement of the 660MW Cirebon-1 coal-fired power plant](#). The re-financing required to shorten the operational lifespan of the coal plant by 10-15 years is expected to cost \$250mn-350mn.

Philippine energy firm [ACEN has also implemented the ETM](#) for the early retirement of its 246MW coal-fired power plant at Batangas.

The world cannot achieve net zero emissions without phasing out coal in Asia, and this in turn cannot be done without [blended finance and transition credits](#), said speakers at the UN Cop 28 climate summit in Dubai in December last year. Coal-fired power plants in Asia are relatively younger and more funds are required to compensate the owners, with the cost capital of phasing out coal in Asia estimated to be 2-3 times higher than in Europe.

By Prethika Nair

Australia to launch 6GW renewables tender in May

Australia's federal government plans to launch the country's largest ever tender for renewable energy in May, with more than a third of the capacity to be allocated to New South Wales (NSW) state.

The first major tender under the federal government's [expanded Capacity Investment Scheme \(CIS\)](#) will offer sup-

port for 6GW of renewable generation capacity, with at least 2.2GW of the total set specifically to NSW, the federal and state governments said in a joint statement on 22 April. A market briefing outlining the tender process will be released in early May.

A minimum of 300MW will also be exclusively allocated to projects in South Australia (SA), even though that is still subject to a final agreement between the federal and state governments. The remaining capacity will be allocated across the National Electricity Market, which apart from NSW and SA also includes Queensland, Victoria, Tasmania and the Australian Capital Territory.

Tenders will run every six months until 2026-27 under the expanded CIS, with up to 15 years of support for a [total of 32GW](#). This will consist of 23GW of renewable capacity like solar, wind and hydro and 9GW of dispatchable capacity such as pumped hydro and grid-scale batteries with at least two hours of dispatch.

The inclusion of generation projects in NSW in the first CIS tender will replace the state's scheduled long-term energy service agreements (LTESA) tender under its NSW Roadmap. NSW will proceed though with the LTESA tender for long-duration storage infrastructure in the second quarter of 2024, as well as processes to award access rights for its Central West Orana and South West Renewable Energy Zones.

The federal government also said it plans to launch a separate tender in Western Australia in mid-2024 targeting 500MW of dispatchable capacity.

By Juan Weik

Takuma invests in Yonezawa biomass project

Japanese engineering firm Takuma has decided to invest in a planned woody biomass-fired power generation project in Japan's northwestern Yamagata prefecture, as part of its strategy to expand into the renewable energy space.

Takuma has agreed with domestic construction firm Iwahori to set up joint venture firm Yonezawa Bio Energy to continue building a 7.1MW biomass power plant in Yonezawa city. Takuma has been building the plant since July 2022.

Takuma has a 35pc stake in the joint venture firm and Iwahori owns the remaining 65pc. Takuma has declined to reveal the investment amount.

The plant is designed to burn 85,000 t/yr of wood chips made of unused woody material from the Yonezawa area. The partners aim to start operations in December 2025.

The project is financed by the country's feed-in-tariff scheme, with electricity produced at the site to be sold at

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a fixed price of ¥32/kWh(\$207/MWh) for 20 years after it is commissioned.

Takuma has so far built more than 600 biomass power plants and handled their maintenance. It is also [building a 7.1MW biomass power plant](#) in Yamagata's Shinjo city, targeting to begin commercial operations in mid-October 2026.

By Takeshi Maeda

Private sector lags net zero targets: Report

Large private-sector firms are falling behind public companies on setting net zero targets and emissions reduction plans, the Net Zero Tracker consortium found today.

Net Zero Tracker compared the world's 100 largest private companies with the 100 largest public firms. Of former, 38 have set net zero targets – up by just six since October 2022. This compares with net zero targets set by 70 of the world's 100 largest public companies. The combined annual revenue of the public and private companies assessed is around \$23 trillion – \$18.1 trillion and \$5 trillion for public and private, respectively, the consortium said.

Of those 38 private sector firms with net zero targets, just eight have published plans to reach that goal "and even most of these lack key details", the report found. Just over half cover the full value chain, including scope 3 emissions, while the majority – 24 – do not specify "whether or how they plan to use external carbon offset credits", the consortium found. Of the public companies assessed, 69pc had targets covering scope 2 emissions, while 39pc did not specify whether they planned to use offsets.

"Private firms not only continue to trail behind their publicly-owned counterparts by around half on net zero intent, they also trail behind on the integrity of their strategies to get there... our findings suggest many of those that have chosen to set net zero targets are not credibly pursuing them," Net Zero Tracker said. The combined annual revenue of the private companies assessed without a net zero target is \$2.82 trillion, it added.

The report noted substantial regional differences. Of the 100 private companies assessed, 50 operate in the US, and just 11 – 22pc – of these have a net zero target, it found. Of the 16 headquartered in China, 25pc, or four, had a net zero target. Of the 21 companies based in the EU and UK, 68pc had a target.

Countries including China and the US have recently announced new climate and sustainability disclosure guidelines or rules, while in the EU, a directive will require large companies in the public and private sector to make climate-related disclosures. Around 50,000 EU and non-EU companies

will have to report emissions and climate impacts from 2025, as the regulation requires "full value chain emissions" reporting. The European parliament will take a final vote this week on a due diligence regulation, which would require companies to act to remove their negative effect on human rights and the environment.

Net Zero Tracker includes UK non-profit the Energy and Climate Intelligence Unit, US-based research group Data-Driven Lab, the Oxford University-hosted net zero platform and research group NewClimate Institute.

By Georgia Gratton

Europe 2.6°C above pre-industrial era in 2023

Temperatures in Europe stood at 2.6°C above pre-industrial levels in 2023, data from the World Meteorological Organisation (WMO) show.

Europe last year experienced either its joint-warmest or second-warmest year on record, the WMO and EU earth-monitoring service Copernicus found today, in a joint report, *European State of the Climate 2023*. The organisations use datasets covering different geographical domains for Europe. WMO includes Greenland, the South Caucasus and part of the Middle East in its dataset. Copernicus put the temperature in Europe last year at between 2.48-2.58°C above pre-industrial levels.

The Paris climate agreement seeks to limit global warming to "well below" 2°C and preferably to 1.5°C. Europe is warming roughly twice as fast as the rest of the world. The global average temperature in 2023 was 1.45°C above the pre-industrial average, [the WMO said earlier this year](#). It confirmed 2023 as the hottest on record. Climate scientists use the period 1850-1900 as the baseline for a pre-industrial average.

Temperatures in Europe in 2023 were above average for 11 months of the year, and there was a record number of days with "extreme heat stress", the report found. The three warmest years on record for Europe have occurred since 2020, and the 10 warmest since 2007, it said.

Electricity generation from renewables in Europe last year reached the highest proportion on record, at 43pc up from 36pc in 2022, the WMO and Copernicus said. Increased storm activity between October-December and above-average precipitation and river flow resulted in higher potential for wind power and run-of-river hydropower generation, respectively.

Atmospheric concentrations of CO2 and methane – the greenhouse gases (GHGs) causing the most warming – continued to increase in 2023, "reaching record levels", the

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report found. It put CO₂ concentrations at 419 parts per million (ppm) and methane at 1,902 parts per billion (ppb) on average last year.

“Only around half of anthropogenic emissions of CO₂ have been absorbed by land vegetation and oceans”, the organisations said.

GHGs from human activity are driving climate change, but the El Niño weather phenomenon also typically leads to higher temperatures. The El Niño weather pattern, which started in July 2023, [peaked in December](#), the WMO said previously, but could still affect temperatures this year. There is a 60pc chance of La Niña conditions – which typically lead to lower temperatures – developing in June-August, the US National Oceanic and Atmospheric Administration said earlier this month.

By Georgia Gratton

MDBs plan to lend more, increase action

A group of 10 multilateral development banks (MDBs) including the World Bank and the European Investment Bank (EIB) have set out steps they plan to take to increase lending and boost action on climate finance.

MDBs expect to “generate additional lending headroom in the order of \$300bn-400bn over the next decade, with strong contributions from shareholders and development partners”, they wrote in a joint declaration, released on 20 April. The banks also plan further action on climate finance, including by taking a common approach to measuring climate results on mitigation – cutting emissions – and adaptation – adjusting where possible to climate change. MDBs will continue to “align operations” to Paris climate agreement goals and will produce a joint report on climate finance by July, they said.

The MDBs “are implementing new innovative climate finance approaches”, including guarantees, sustainability-linked bonds, disaster clauses and mechanisms to access emergency finance, they said. The private sector has also drawn their focus. The banks are working to “address regulatory and other barriers to private sector investment... and provide crucial early-stage investments”, they said. The MDBs mobilised more than \$65bn of private finance in low and middle-income countries in 2022, up by 12pc on the year.

The declaration was jointly released by the African Development Bank, the Asian Development Bank, the Asian Infrastructure Investment Bank, the Council of Europe Development Bank, the European Bank for Reconstruction and Development, the EIB, the InterAmerican Development

Bank, the Islamic Development Bank, the New Development Bank and the World Bank Group. The latter has taken [a new approach to climate change](#) since its new president, Ajay Banga, took the reins last year.

MDBs are often called on by governments to do more to tackle climate change. The banks have a unique role and capabilities, think-tank E3G associate director Kate Levick told *Argus*. They are “not only channels of finance but multipliers and catalysts for investment”, Levick added.

MDBs “can do better with their existing funding by shifting it from fossil fuels to clean energy”, non-profit IISD senior associate Tara Laan told *Argus*. MDBs and G20 governments provided \$142bn in international public finance for fossil fuel projects over 2020-22, [a report from civil society organisations found](#) earlier this month.

Climate finance will be the dominant topic at the UN Cop 29 climate summit, scheduled for November in Baku, Azerbaijan. Countries must decide on a new climate finance target – the next step from the \$100bn/yr that developed nations pledged to deliver to developing countries over 2020-25.

This year is likely to see the set-up of the loss and damage fund, which countries [agreed to establish at Cop 27](#). The fund, which will address the unavoidable and irreversible effects of climate change in developing countries, is scheduled to have its first board meeting on 30 April-2 May in Abu Dhabi, UAE. The World Bank will act as the fund's interim host, but there are conditions, according to a document filed today by UN climate body the UNFCCC. The fund must be able to apply its own eligibility criteria and “all developing countries” must be permitted to “directly access resources” from the fund, the document showed.

By Georgia Gratton

New technologies aim to boost SAF production

A likely rise in global demand for sustainable aviation fuel (SAF), underpinned by mandates for its use, is encouraging development of new production pathways.

While hydrotreated esters and fatty acids synthesised paraffinic kerosine (HEFA-SPK) remains the most common type of SAF available today, much more production will be needed. The International Air Transport Association (Iata) estimated SAF output at around 500,000t in 2023, and expects this to rise to 1.5mn t this year, but that only meets around 0.5pc of global jet fuel demand.

An EU-wide SAF mandate will come into effect in 2025 that will set a minimum target of 2pc, with a sub-target for synthetic SAF starting from 2030. This week the [UK pub-](#)

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lished its domestic SAF mandate, also targeting a 2pc SAF share in 2025 and introducing a power-to-liquid (PtL) obligation from 2028.

New pathways involve different technology to unlock use of a wider feedstock base.

US engineering company Honeywell said this week its hydrocracking technology, Fischer-Tropsch (FT) Unicracking, can be used to produce SAF from biomass such as crop residue or wood and food waste. Renewable fuels producer DG Fuels will use the technology for its SAF facility in Louisiana, US. The plant will be able to produce 13,000 b/d of SAF starting from 2028, Honeywell said.

The company said its SAF technologies – which include ethanol-to-jet, which converts cellulosic ethanol into SAF – have been adopted at more than 50 sites worldwide including Brazil and China. Honeywell is part of the Google and Boeing-backed United Airlines Ventures Sustainable Flight Fund, which is aimed at scaling up SAF production.

German alternative fuels company Ineratec said this week it will use South African integrated energy firm Sasol's FT catalysts for SAF production. The catalysts will be used in Ineratec's plants, including a PtL facility it is building in

Frankfurt, Germany. The plant will be able to produce e-fuels from green hydrogen and CO₂, with a capacity of 2,500 t/yr of e-fuels beginning in 2024. The e-fuels will then be processed into synthetic SAF.

Earlier this month, ethanol-to-jet producer LanzaJet said it has received funding from technology giant Microsoft's Climate Innovation Fund, "to continue building its capability and capacity to deploy its sustainable fuels process technology globally".

The producer recently signed a licence and engineering agreement with sustainable fuels company Jet Zero Australia to progress development of an SAF plant in north Queensland, Australia. The plant will have capacity of 102mn l/yr of SAF.

Polish oil firm Orlen formed a partnership with Japanese electrical engineering company Yakogawa to develop SAF technology. They aim to develop a technological process to synthesise CO₂ and hydrogen to form PtL SAF. The SAF will be produced from renewable hydrogen as defined by the recast EU Renewable Energy Directive (RED II) and bio-CO₂ from biomass boilers, Orlen told Argus.

By Evelina Lungu

New: Quick access to price history and charts

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Global emissions pricing, 25 Apr

	Price	±
Global compliance carbon index \$/t	59.43	1.39
Global green power index \$/MWh	3.50	0.03



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