

Drop in power demand coupled with higher renewable output sees EUA and UKA prices retreat

EUAs drift lower and volatility fades as weather and energy markets stabilise. Our outlook: Neutral

- EUAs closed the week at €86.15, down 3.8% with a wider trading range of €4.52 (vs. €3.89 last week). The bears were in control in the first half of the week, pushing the price from €89.85 (weekly high) down to €85.33 (weekly low). From Thursday, EUAs consolidated near the weekly lows on subdued volumes.
- Intraday volatility decreased to €1.77 per session; compared to last week's €2.85 average.
- Higher wind and solar output forecast for the week ahead, but at the same time temperatures of 30+ degrees expected in parts of southern and central Europe; Italy to reach 40 degrees in mid-July.
- Norwegian gas capacity; Nhyamna field remains offline until July 15th; Troll gas field outage extended until July 13th.
- Gas storage increased by 1%, reaching 78% last week significantly above seasonal norms.
- Bi-monthly EUAA auction takes place on Wednesday.
- Macro: German inflation data on Tuesday, followed by US inflation figures on Wednesday. Interest rate decision also on watch from Bank of Canada.
- EUAs have been rangebound for the past 11 days between €85.33 and €89.85. A break out of this range will set the new short-term trend.
- For daily carbon market updates sign up for the DailyRed here

UKA prices reverse swiftly from UK consultation spike as participants focus on short-term energy fundamentals. Our outlook: Bearish

- After Monday's UK ETS consultation response announcement caused the price to spike to £63.51, short-term fundamentals took over once more and price action turned into a one-way street lower. UK carbon finished the week down 7.4% at £50.07. The initial price spike led to a spectacular £13.69 trading range (vs. £3.50 previously). Intraday volatility also spiked dramatically to £3.77 (vs. £1.68 last week).
- Monday's significant price rise meant the UKA to EUA weekly average spread decreased to -€24.97 (vs -€26.59 last week) see third chart.
- Another week of mild and windy weather sees renewable output jump further to 42.1% of the UK energy mix (vs. 21.6% from gas). Gas storage up 8% to 55% of capacity.
- UK data: UK unemployment rate out on Tuesday; UKA auction on watch Wednesday; GDP and industrial production figures due Thursday.
- Only two support levels left at £49.50 (23-month low) and £44.20 (all-time low), while resistance levels above stand at £51.85, £56.00 and £63.51.

Carbon investors leave positions unchanged

• KFA Global Carbon ETF holdings are unchanged for EUAs and UKAs; NAV decreased to \$538 million, down 2%.

Technical near-term outlook

- Futurestechs' next level: €86.13, €85.50, €84.88 on watch below
 OTHER COMPLIANCE MARKET NEWS
- EU needs over €700 billion/year for green transition; European power demand drops to 18-month low

VOLUNTARY CARBON MARKET NEWS

- The GEO and N-GEO jump by over 40% as market sentiment improves **RENEWABLE ENERGY NEWS**
- AIB prices fall 2%; Global energy transition off-track

10 July 2023

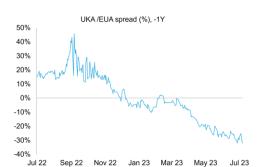
Key performance metrics

Weekly Price Changes				
Product	30/06/23	7/07/23	Change	% Change
EUA Dec 23 (€)	89.57	86.15	-3.42	-3.8%
UKA Dec 23 (£)	54.05	50.07	-3.98	-7.4%
UKA /EUA premium /discount (€) - weekly average	-26.59	-24.97	1.62	6.1%
DE Power Cal24 (€)	144.00	144.15	0.15	0.1%
Coal API2 Cal24 (US\$)	122.90	120.18	-2.72	-2.2%
Dutch TTF Cal24 (€/MWh)	53.10	54.80	1.70	3.2%

Krane Shares Global Carbon ETF (proxy investor interest)				
	30/06/23	7/07/23	Change (units)	Change (%)
EUA holdings (kT)	3495	3495	0	0.0%
UKA holdings (kT)	391	391	0	0.0%
NAV (US\$m)	549	538	-11	-2.0%









EUA Technical outlook



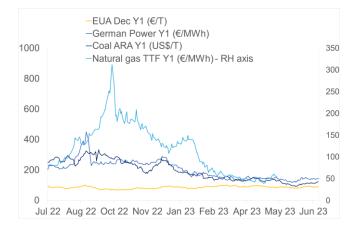
Analysis provided by the award-winning Clive Lambert at <u>Futurestechs Limited</u>. If you would like to receive his full daily commodities report, please contact Clive directly.

- Short Term trend: Neutral Bearish
- Medium Term trend: Neutral Bullish
- Yesterday's candle: A small splash of green as this decided not to follow the "risk off" money and instead retook the 200-day SMA by the close
- Favoured Trade(s): Keep an open mind. Shorts preferred for now



Energy prices mixed as weather stabilises, energy demand fades and higher renewable output; especially wind generation across UK and central Europe

- The chart below on the left shows the forward year price performance of EUAs, German power, ARA coal and TTF natural gas
 - In the last week, Dec Y1 EUAs closed 3.8% lower, Y1 German power ended up 0.1%, Y1 ARA coal was down 2.2% while Y1 TTF saw a 3.2% increase.
- The chart below on the right shows German forward year power generation margins where coal and gas are the fuel sources
 - o Y1 coal margins now at c. €31.37/MWh (13.7% higher) vs Y1 gas margins at c. €18.68/MWh (down 9.63%).
 - o Coal remains above gas in the power generation merit order.





Auction Timetable: 3 July - 14 July, 2023					
Date	Volume	Auction Platform	Allowance Type	Cover Ratio	Total Bid Quantity
03-Jul-23	2,658,000	EEX	EUA - Phase IV	1.97	5,236,260
04-Jul-23	2,658,000	EEX	EUA - Phase IV	1.87	4,970,460
05-Jul-23	2,676,000	EEX	EUA - Phase IV	1.98	5,298,480
06-Jul-23	2,658,000	EEX	EUA - Phase IV	1.75	4,651,500
07-Jul-23	1,939,500	EEX	EUA - Phase IV	2.22	4,305,690
10-Jul-23	2,658,000	EEX	EUA - Phase IV		
11-Jul-23	2,658,000	EEX	EUA - Phase IV		
12-Jul-23	775,500	EEX	EUAA - Phase IV		
12-Jul-23	3,154,500	ICE	UKA - Phase I		
13-Jul-23	2,658,000	EEX	EUA - Phase IV		
14-Jul-23	1,939,500	EEX	EUA - Phase IV		



OTHER COMPLIANCE MARKET NEWS

EU needs over €700 billion/year for green transition: The EU Commission has stated that Europe will need investments exceeding 700 billion euros annually to achieve its energy transition goals and combat climate change. According to the 2023 Strategic Foresight Report, around €620 billion per year will be required to fulfil the objectives of the Green Deal and REPowerEU plan, while an additional €92 billion will be needed to address the objectives of the Net-Zero Industry Act between 2023 and 2030. The Net-Zero Industry Act, introduced in March, aims to enhance Europe's manufacturing of net-zero technology products as part of the broader Green Deal Industrial Plan, countering subsidies provided by the United States and China. EU Commission Vice President Maros Sefcovic emphasized the need for Europe to transform into a "Europe of investments" to ensure it remains competitive globally. Sefcovic called for increased support from the European Investment Bank and targeted investment from the public sector, including national budgets and EU funding. Concerns have been raised by EU member states regarding over-reliance on imports and the complexity of EU legislation, which could impede innovation and disrupt supply chains.

European power demand drops to 18-month low: Europe's power demand has declined by approximately 6% or 200 TWh in the past 18 months, and it is unlikely to rebound soon following last year's energy crisis, according to Volue's chief analyst. In the first half of 2023, demand dropped by 93 TWh compared to the previous year, primarily due to high gas and power prices. The steady growth of renewable energy capacity and the reduced demand for gas and coal in power generation have had a bearish impact on fuels markets. European electricity demand in June was 17 TWh lower than the same month last year, indicating a lack of immediate recovery.

VOLUNTARY CARBON MARKET NEWS

The GER (Global Emission Reduction) was up 4% last week. The GEO (Global Emission Offset) and N-GEO (Nature-based Global Emission Offset) rose 44% and 41% respectively.

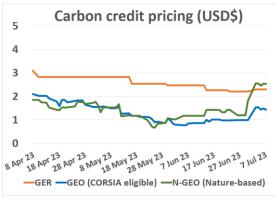
<u>Carbon credit prices continued to rise</u> on the back of improvements in wider market sentiment but there were also contract specific factors at play.

The uptick in market sentiment is mainly attributable to the publication and broadly positive reception of the Voluntary Carbon Market Integrity Initiative's (VCMI) final <u>Claims Code of Practice</u>.

More specifically to the GEO, the VCMI's acceptance of <u>CORSIA</u> <u>eligible credits</u> – albeit only whilst ICVCM (Integrity Council for Voluntary Carbon Markets) approved credits are unavailable – has boosted the desirability of such credits.

The N-GEO rise was driven by the shift of its vintage criteria. The N-GEO now accepts more recent carbon credits from the 2018-2023 vintage range. The vintage range was previously 2016-2022.

However, standardised contract prices typically reflect the lowest priced credits (within the specifications) which are at the bottom of the wide range available in the VCM. For example, a mangrove project in Pakistan recently obtained <u>\$30 per tonne at auction</u>. Consequently, we will soon be updating our price tracking in this report to more accurately reflect the VCM's wide range of pricing.



Sources: Mid-prices from ACX (GER) and CBL (GEO & N-GEO), last price used in absence of bid & mid

Contract/sub-contract	Coverage	07-Jul	30-Jun	US\$ change	% change
© GER	Comprised of the 4 sub-contracts	\$2.30	\$2.21	♠ 0.09	1 4.1%
Base Carbon Contract	Renewables, Energy Efficiency	\$0.79	\$0.75	↑ 0.04	♠ 5.3%
O Forestry Carbon Contract	Agriculture, Forestry, Land Use	\$1.30	\$1.30	→ 0.00	→ 0.0%
OPrime Carbon Contract	Credits achieving 3 SDGs	\$2.83	\$2.60	♠ 0.23	♠ 8.7%
O Carbon Capture Contract	Long-lived removals or EUAs	\$93.14	\$95.50	- 2.37	↓ -2.5%

*Last traded price is used where the bid and ask are not available

The GER and its sub-contracts can be traded on <u>AirCarbon Exchange</u> and <u>Nodal Exchange</u> 3 or purchased on Plannet Zero's <u>website</u>.

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RENEWABLE ENERGY MARKET NEWS

Week 27 AIB Renewables current year:

Mid-price = 6.4250 EUR (-0.1125 EUR/ -1.72%)

Indicative UK RGGO Prices:

Crop: £23.50-25.50; Waste: £30.50-32.50 Indicative UK REGO Prices:

CP23: £8.40; CP24: £6.75-6.90; CP25: £6.40

Global energy transition off-track: According to the International Renewable Energy Agency (IRENA), current investment in the energy transition is overly focused on a few technologies and countries, resulting in an "off-track" energy transition. IRENA's 2023 outlook assessed efforts to meet the Paris accord target of limiting global warming to 1.5 degrees Celsius. The agency called for greater and more diversified investment from both states and private investors. While some environmental organizations argue for focusing available funding on a few promising technologies, IRENA emphasized the need for funding to flow to a broader range of energy transition technologies, including biofuels, hydropower, and geothermal energy, as well as sectors beyond power such as heating and transport.

IRENA noted that investment in renewable energy reached \$500 billion in 2022, which is only about one-third of the average annual investment required to meet the goals of the Paris accord. Additionally, the majority of investments were directed toward solar photovoltaic and wind power, with 95% allocated to these technologies last year. IRENA stressed the importance of public funding to invest in basic energy infrastructure in developing countries and to drive the deployment of less mature technologies.

The agency also highlighted the geographic concentration of energy transition progress, with a few countries and regions benefiting the most. This exclusionary trend has left almost half of the global population, particularly those in countries with significant energy access needs, behind. IRENA called for this disparity the be addressed and to expand the reach of renewable investment to ensure a more equitable energy transition worldwide.

Week 27 GO AIB Renewable					
Product €/GO	Bid	Ask	Mid Price		+/-
2023	6.3800	6.4700	6.4250	-	0.1125
2024	7.1500	7.2500	7.2000		0.2750
2025	6.3150	6.4000	6.3575		0.4075



Breakdown of Redshaw Advisors' full services

Redshaw Advisors' Compliance Carbon Services

INFORM	ADVISE	PROCURE
	Advisory and risk management services to help you manage your carbon exposure and reduce the carbon cost to your business.	With decades of carbon trading experience, our award-winning team can provide a route to market for all carbon emissions products, including:
aspects of emissions trading	Bespoke consulting advice on any aspects of global compliance markets – tailored to your needs.	• EUAs • UKAs

Redshaw Advisors' Voluntary Carbon Market Services

INFORM	ADVISE	PROCURE
Tailored training programmes covering all aspects of the voluntary carbon market – delivered by market- leading experts.		Our market specialists can assist with carbon credit procurement strategies – across all standards, platforms and contract types.
Exclusive market outlook reports – market pricing, analytics, supply and demand trends and developments	achievements Leading carbon credit market insight and analysis The latest pricing intelligence across all carbon credits 	A commitment to transparent pricing with our maximum margin guarantee.

Redshaw Advisors' Renewable Energy Services

INFORM	ADVISE	PROCURE
Latest renewable energy pricing for Environmental Attribute Certificates (EACs) and Power Purchase Agreements (PPAs).	Multi-lingual advisory and unique solution services to help you achieve your renewable energy targets.	Cost-effective EAC procurement to address your Scope 1 and 2 emissions through: • GOs
Custom-made training programmes on global power markets and renewable technologies – delivered by market-leading experts.		 REGOs RECs I-RECs RGGOs PPAs



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