

Carbon Investing & Bloomberg User Guide

Carbon Allowances (Compliance Market)

- Sometimes referred to as carbon credits, represents the legal right to **emit one metric ton of carbon** dioxide or equivalent greenhouse gas.
- Issued to companies and organizations participating in a mandatory regional, national, or international carbon **emissions trading system (ETS)**.
- Carbon allowances are either purchased by regulated emitters, often by auction or allocated for free based on forecasted carbon emissions.
- The largest markets include: EU allowances (EUAs), California allowances (CCAs), UK allowances (UKAs), and the Northeastern US Regional Greenhouse Gas Initiative (RGGI).

Carbon Offsets (Voluntary Market)

- Offset credits are generally outside of an ETS but can be imported into an ETS depending on the market's regulations.
- One offset credit represents one ton of carbon dioxide or equivalent greenhouse gas (GHG).
 However, it is generated by a reduction in emissions made by a voluntary project designed specifically for that purpose.
- Projects typically include building wind turbines or a solar farm, supporting methane reduction projects, planting a tree, or preserving forests.



Bloomberg Carbon Market Monitor: CO2E

CO2E includes carbon prices (allowances and offsets), relevant energy indicators, related news and reports, and additional market tools. With a Bloomberg Anywhere account, users get access to tools like a Fuel Switching Monitor, EU ETS Hedging Calculator, EU ETS Market Stability Reserve Model, and more.

The latest **auction results** can be found either under the tools tab or by entering **AUCT** function. The frequency of when auctions are held differs with each market. For example, the EU market holds auctions throughout the week while California's are quarterly.

Fundamentals • Tools •					S (Carbon Market Mo
Carbon Allowance Prices COI	MM »		Bloc	mberg Analysis More »		
Carbon Allowance Prices	Unit	Last Price	%1D 101)	BNEF Signposts, 10 2023	NE	F 03/29
1) EU	EUR/t	90.96	.74% 102)	India's Renewables Market Holds Hopes and Troubles: BNEF Chart	ŇE	F 03/29
2) EU Aviation	EUR/t	90.81	.74% 103)	Carbon Market Pressure Eases for China Coal Power: BNEF Chart	NE	F 02:02
3) UK	GBP/t	73.69	.93% 104)	NextEra, PG&E, Southern Behind Another Record Year for Utilities	BI	08:03
4) California	* USD/t	31.08	.75% 105)	Carbon Market Pressure Eases for China Coal Power: BNEF Chart		F 02:02
5) RGGI	* USD/st	13.18	.61% 106)	China Policy Bulletin: Modest Growth Goal Set for 2023		F 02:00
6) New Zealand	NZD/t	56.18	.00% 107)	French Day-Ahead Power Prices Decrease 28%: BNEF Daily Wrap	BN	00:00
7) South Korea	KRW/t	12,800.00	.00% 108)	German Day-Ahead Power Prices Decrease 30%: BNEF Daily Wrap	BN	00:00
8) China National	CNY/t	56.70	1.25% 109)	South Korea's Power Use, Carbon Prices Presage Global Recession		03/29
			110)	India's Renewables Market Holds Hopes and Troubles: BNEF Chart		F 03/29
Carbon Offset Prices COMM »			111)	BNEF Signposts, 10 2023		F 03/29
Carbon Offset Prices	Unit	Last Price	%1D 112)	German Day-Ahead Power Prices Increase 3%: BNEF Daily Wrap	BN	03/29
21) CBL Core	USD/t	.65		French Day-Ahead Power Prices Decrease 7.4%: BNEF Daily Wrap	BN	03/29
22) CBL Global	USD/t	2.07		✓BNEF Downloadable Excel Models		
23) CBL Nature-Based	USD/t	1.98	4.21%			
24) ICE Nature-Based	USD/t	3.19	1.92% New	s More »		
25) California	* USD/t	19.61	.87% 201)	UK Turns to Big Oil in £20 Billion Carbon Capture Push (1)	BN	10:56
20 Australia	AUD/t	38.50	65% 202)	EU Commission Balks at Idea of Carbon-Market Position Limits (2)	BN	09:44
			203)	EU Agrees Nuclear Has Role in Meeting Ambitious Climate Goal (2)	BN	08:20
			204)	Long-Awaited Rules for Carbon Offset Market Disappoint Experts (1)	BN	11:56 🖳
			205)	Sustainable Business: Carbon Credits Face New Quality Test	DJ	11:42
Indicators COMM » Indicators	Unit	Last Price	%1D 206)	UK Turns to Big Oil in £20 Billion Carbon Capture Push (1)	BN	10:56 🖳
		Last Price 5.44	.04% 207)	EU Commission Balks at Idea of Carbon-Market Position Limits (2)	BN	09:44 🖳
31) Global Average CO2 Price 32) EU Gas (TTF)	USD/t EUR/MWh	5.44 43.61	1.88% 208)	Independent Group Stakes Out Position as Arbiter of Carbon-Offset Quality -	DJ	09:20
32) EU Gas (TTF) 33) EU Coal (ARA)	EUR/MWN EUR/t	43.01	7.28% 209)	EU Agrees Nuclear Has Role in Meeting Ambitious Climate Goal (2)	BN	08:20 🗐
33) EU COAL (ARA)	EOK/ L	129.00	1.200 210		-	00.00

Source: Bloomberg

Charting Prices:

For either funds or underlying futures contracts, enter **GP** for a line chart of historical prices, **HP** for a table listing historical prices and volumes, and **HCP** for historical prices with percentage change/ net change. Additionally, **COMP** allows you to compare performance of the funds vs. the index as well as the futures contracts in both a chart/ table format.



Fund Holdings: MEMB

To find the breakdown of positions held in our carbon funds, enter fund name: [Fund Ticker]→ MEMB

The tickers for the current carbon futures contracts held in the fund can be found there. By right clicking on the ticker names, you can find more info on the contracts including pricing, related news, and ownership data.

Breaking down the ticker:

EU allowances (EUA): "MOZ23 Comdty"

"MO" = EUA contract code; "Z" = month code, in this case December; "23" = year, 2023

US carbon futures also have different vintages. For example, California allowances (CCA): "LUDZ23 Comdty" = CCA Vintage23 Dec23. The CCA contract code changes with the different vintages. For vintage year 2024, the ticker is "CDBZ24 Comdty".

Note, the current positions held in our funds can also be found at <u>www.kraneshares.com</u>.

Contracts Table: CT

After entering the ticker code (e.g. "MOZ23 Comdty"), go to the **CT** function to view a table of all currently trading futures contracts under that code and their last price, volume, open interest, bid-ask, etc.

Commodity Curve Analysis: CCRV

With the **CCRV** function, the specified futures contract and prices are charted to show the steepness of the contango/ backwardation curve. Contango is where the futures price is higher than the spot price, which indicates that traders expect prices to rise and results in an upward-sloping forward curve. Backwardation, the opposite of contango, is where the futures price is below the spot price and is represented by a downward sloping forward curve.



Source: Bloomberg

Additional Resources:

For more information on the carbon markets, including their market structures and outlook, see our research/insights and product presentations on <u>www.kraneshares.com</u>.



Sign up to our climate market blog www.climatemarketnow.com

Coverage includes carbon allowance pricing analysis, voluntary carbon offset highlights, policy reform updates, and company/industry watch within the energy transition movement.