



CARB

Horizons
Carbon Credits ETF (CARB)



HORIZONS ETFs
by Mirae Asset

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What are Carbon Credits

A New Asset Class For ETF Investors

One of the most interesting investment asset classes to appear in the last decade are carbon credits¹. Carbon credits can provide unique exposure to an asset class that historically has low correlation to equity markets and is designed explicitly as a financial tool to help reduce global carbon emissions.

What Are Carbon Credits?

Carbon credits are permits issued through a regulatory organization that provide a market-oriented mechanism designed to reduce mandated participants' output by requiring the use of carbon credits to purchase an allocation of carbon dioxide or equivalent greenhouse gas (GHG) emissions.

The net goal for policymakers is for the carbon credit-based systems to incentivize mandated participants to reduce their own emissions over a period of time without significant operational disruption while also limiting overall emissions and meeting reduction targets. Carbon credits are in use in many marketplaces across the world, including within the European Union, California and China.

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¹ <https://www.wealthprofessional.ca/investments/socially-responsible-investing/how-the-fight-against-climate-change-has-unlocked-a-new-asset-class/363046#:~:text=%E2%80%9CCarbon%20credits%20are%20a%20new,around%20140%25%20for%20the%20year.>

How Carbon Credits Work

Carbon credits operate within a regulated market structure, sometimes referred to as a 'cap and trade' scheme or emissions trading system. The system designed by government and regulatory authorities to reduce pollution in our atmosphere with the explicit goal of reducing the amount of greenhouse gas emissions from businesses ("regulated entities") that historically use a high level of carbon emissions in their day-to-day business activities.

Within a carbon credit issuance system, a cap is set on the total amount of carbon dioxide and certain greenhouse gases emitted by participants required to comply with the system. Over time, the cap is reduced so participants must emit less greenhouse gases unless they purchase additional carbon credits.

The regulator then issues or sells "emission allowances" to regulated entities which may then buy or sell ("trade") the emission allowances on the open market. To cover their output, participants are required to redeem enough carbon credits to cover their emissions, otherwise fines can be enforced.

If a participant reduces its emissions, it can hold onto remaining allowances to cover future needs or sell them to another participant that needs them for their emissions. Regulated entities are thereby incentivized to reduce their emissions; otherwise they must purchase emission allowances on the open market, where the price of such allowances will likely be increasing as caps are reduced. Ultimately, the goal is that the cost of these emission allowances becomes to cumbersome, forcing industries over time to reduce emissions rather than rely on purchasing the allowances .

Potential Benefits of Investing in Carbon Credits

Being long carbon credits can provide key benefits to investors including:



Potential diversification benefits in the form of non-correlated exposure to traditional asset classes



A trend toward tightening carbon emissions regulation globally which increases their usage



Anticipated rising demand for carbon credits as caps reduce which potentially increases their value

European ETS System Overview:

The largest and most liquid carbon credit system is in Europe, referred to as the European Union Allowance (EUA). In Europe, carbon credits are administered under the European Union's (EU) Emissions Trading System (ETS), the world's first cap-and-trade marketplace. It is also currently the world's largest domestic carbon market. The EU ETS operates in all EU countries, as well as Iceland, Liechtenstein and Norway.

The EU ETS oversees emissions from power stations, industrial plants and flights inside the European Economic Area. Within its scope, the EU ETS regulates 40% of EU emissions. Since its launch in 2005, the EU ETS has successfully helped reduce European emissions from power generation and energy-intensive industries by 42.8%.² Due to the tenure and size of this market, the European Carbon Credit market was estimated to be in excess of \$US227 billion (Refinitiv Research, January 2021), and that's before the price of these credits ascended from finishing 2020 at €32.72 a tonne (t) of carbon dioxide, the benchmark EUA, to peaking in intraday trading at €90.75/t on December 8, 2021. The depth of this market has allowed a fairly active futures market to evolve to track these credits allowing more investment globally into the space.

While Europe remains the major market in this space, other regions are rapidly growing their carbon credits offerings, including the State of California and China. These markets will likely follow Europe's expansion to offer alternative markets with sufficient depth of liquidity to support futures market investment.

²https://ec.europa.eu/commission/presscorner/detail/en/ip_21_3541



A man wearing a white bicycle helmet, sunglasses, a dark blue suit jacket, a light blue shirt, and a striped tie is riding a bicycle. He is positioned on the left side of the frame, with his hands on the handlebars. The background is a blurred street scene with cars, suggesting a busy urban environment. The overall tone is professional and eco-conscious.

California Carbon Allowance (CCA)

The State of California has a rapidly growing carbon allowance system, these allowances are referred to as CCAs. The CCAs are a central component of the state's broader strategy to reduce greenhouse gas emissions to 1990 levels by 2020, 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050. The program regulated entities include large electric power plants, large industrial plants and fuel distributors (e.g., natural gas and petroleum).

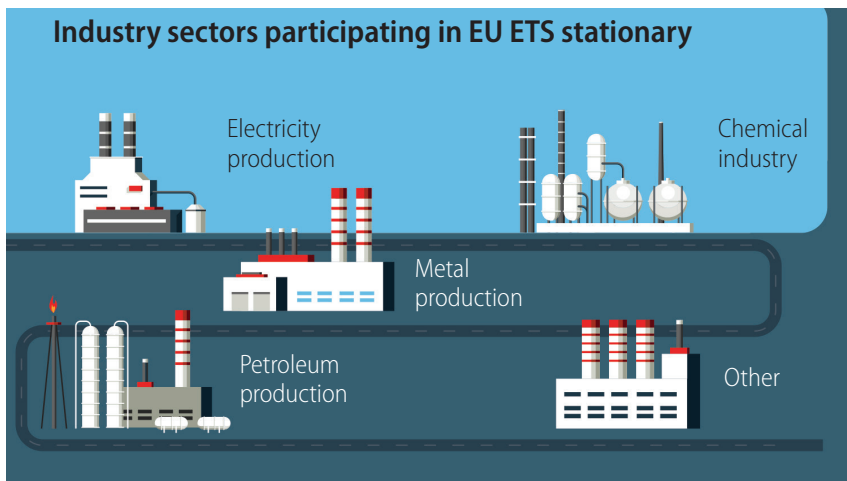
The CCA system is also integrated across North America, as California has linked its system with the Canadian province of Quebec's cap-and-trade program, meaning that businesses in one jurisdiction can use emission allowances issued by the other for compliance. However, from an investment standpoint the California-issued CCA is the underlying exposure of futures contracts that trade in U.S. dollars on multiple global exchanges.

The Regional Greenhouse Gas Initiative (RGGI)

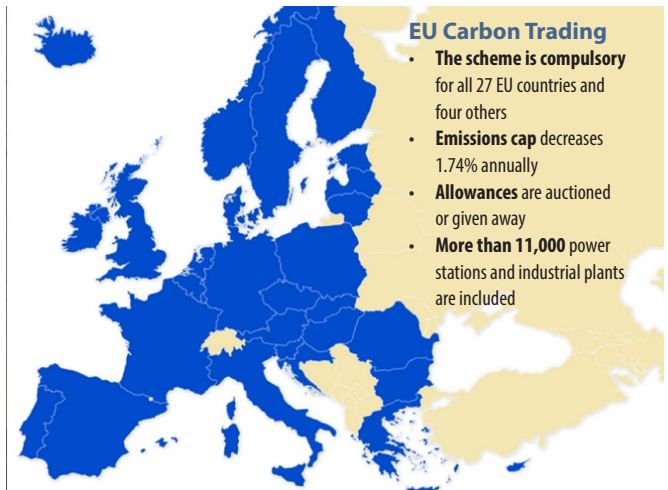
The RGGI is a cooperative, market-based effort among the Eastern United states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, Vermont and Virginia designed to reduce carbon dioxide emissions from that region's power sector. It represents the first multi-state regional initiative implemented in the United States. There are futures contracts that provide exposure to RGGI credits, but it is a relatively small market as of December 31, 2021.

Industry sectors participating in E.U. ETS stationary?

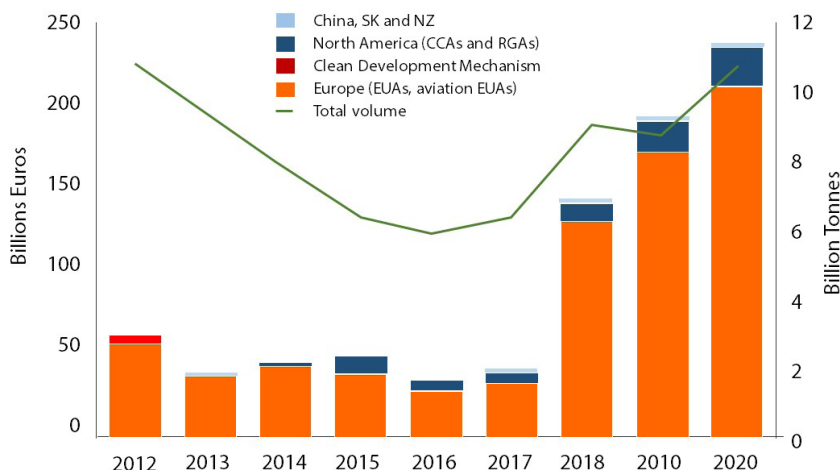
The Underlying Index and the ETF are not currently exposed to CCA or RGGI futures. However, the Underlying Index may also be changed with the addition of other Carbon Credit Futures contracts that may be eligible in the future for inclusion into the Underlying Index subject to liquidity and market cap considerations as defined by the Underlying Index methodology.



Source: <https://www.emissionsauthority.nl> > 2015/12/10



Source: <https://cen.acs.org/articles/91/i7/EU-Carbon-Emissions-Trading-Scheme.html>



Source: <https://www.refinitiv.com/perspectives/future-of-investing-trading/global-carbon-markets-hit-new-highs/>

CARB Horizons Carbon Credits ETF

Harness Carbon Credits in your Portfolio

Ticker	Management Fee	Underlying Index	Index Calculation Agent	Index Provider
CARB	0.75% (plus applicable sales tax)	Horizons Carbon Credits Rolling Futures Index (Excess Return)	Solactive AG	Horizons ETFs Management (Canada) Inc.
Index Ticker	Currency Hedged	Distributions	Launch Date	Eligibility
CARBCNER	Yes All Non-Canadian dollar exposure	Not Expected	February 10, 2022	TFSA, RRSP, RESP & Non-Registered Accounts

CARB seeks to replicate, to the extent possible and net of expenses, the performance of an index that seeks to provide exposure to investments in cap-and-trade carbon allowances. Currently, the ETF seeks to replicate the performance of the Horizons Carbon Credits Rolling Futures Index (Excess Return) (the "Underlying Index"), net of expenses.

The ETF seeks to hedge any non-Canadian dollar portfolio exposure back to the Canadian dollar at all times. As a result, the returns of the ETF are expected to differ from those of its Underlying Index, which does not include currency hedging.

With CARB, you can gain liquid and transparent exposure to carbon credits, primarily through EU ETS-issued carbon credits (EUAs) futures, although there is flexibility for the ETF to expand its exposure to other developed market carbon credit futures as those markets mature.

How Carbon Credit Futures Work

CARB's Underlying Index uses futures to provide exposure to carbon credits; therefore, CARB does not invest directly in EUAs. It provides exposure to EUA futures. CARB will provide exposure to the constituent future contracts tracked by the Underlying Index.

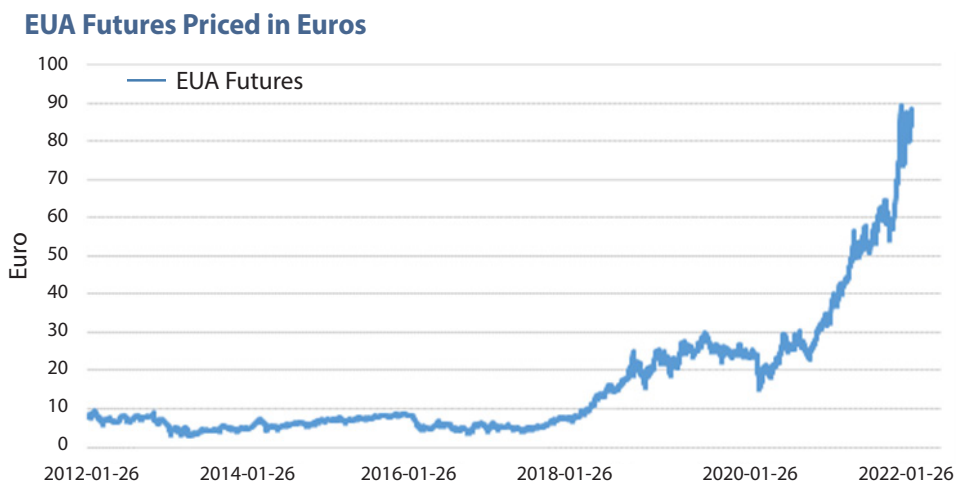
A futures contract is a legal agreement to buy or sell a particular commodity, asset or security at a predetermined price at a specified time in the future. Futures contracts are standardized and trade on a futures exchange. Futures are cash-settled based on the settlement value of the contract and can be traded electronically. More generally, futures are widely used by a variety of participants, including institutions, investors, traders and investment funds.

The terms and conditions of futures contracts of a particular commodity are standardized and, as such, are not subject to any negotiation between the buyer and the seller.

Currently, the Underlying Index of the ETF will hold a notional position of Carbon Credit Futures. The Underlying Index is calculated based on the daily returns of the settlement price of European Union Allowance (EUA) emission futures contracts, as determined by the Manager. The settlement prices are generally determined at 11:15 am (EST). The Index Provider has the discretion to change the roll period of futures contracts of the Underlying Index, including, but not limited to, adjustments made from time to time because of various events affecting the replication of carbon allowances.

The Underlying Index may also be changed with the addition of other Carbon Credit Futures contracts that may be eligible in the future for inclusion into the Underlying Index, subject to liquidity and market cap considerations, as defined by the Underlying Index methodology.

Futures have historically been an efficient way for investors to capture the upside price performance of EUA prices, for example, as shown below in the futures price chart.



Source: Bloomberg as at December 31, 2021



Investment Potential of Carbon Credits

- Since 2019, the EU ETS has operated a Market Stability Reserve (MSR), which addresses market imbalances by temporarily adjusting allowance supply
- As requirements on carbon credit allowances decrease, there will be a need for emitters to purchase more and more allowances to cover their GHG emissions. This could drive up costs of these credits further
- Consider that increases in energy prices will spur excess emissions, but the higher profits earned from carbon emissions in areas such as crude oil extraction and refinement will likely increase interest in carbon credits to increase production. In some ways, the recent resurgence in energy prices could result in further upside price pressure on the credits.
- As requirements on carbon credit allowances decrease, there will be a need for emitters to purchase more and more allowances to cover their GHG emissions. This could drive up costs of these credits further

Spot Price of European Carbon Credits (EUAs)



Source: Bloomberg as at December 31, 2021

EU ETS: History and Future Plans

Phase 1 (2005-2007)³

- Covered only CO2 emissions from power generators and energy-intensive industries
 - Almost all allowances were given to businesses for free
 - Established a price for carbon, free trade in emission allowances across the EU, and the infrastructure needed to monitor, report and verify emissions
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Phase 2 (2008-2012)³

- Lower cap on allowances (some 6.5% lower compared to 2005)
 - Three new countries joined – Iceland, Liechtenstein and Norway
 - The proportion of free allocation fell slightly to around 90%
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Phase 3 (2013-2020)³

- Single, EU-wide cap on emissions in place of the previous system of national caps
 - Auctioning is the default method for allocating allowances (instead of free allocation); in 2013, allowances for more than 40% of all verified emissions were auctioned
 - Harmonized allocation rules applying to the allowances still given away for free
 - More sectors and gases included
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Phase 4 (2021-2030)⁴

- On July 14, 2021, the European Commission adopted a series of legislative proposals setting out how it intends to achieve climate neutrality in the EU by 2050, including the intermediate target of at least 55% net reduction in greenhouse gas emissions by 2030
- To increase the pace of emissions cuts, the overall number of emission allowances will decline at an annual rate of 2.2% from 2021 onwards, compared to 1.74% currently
- To achieve the EU's overall greenhouse gas emissions reduction target, the sectors covered by the EU Emissions Trading System must reduce their emissions by 43% compared to 2005 levels

³https://ec.europa.eu/clima/eu-action/eu-emissions-trading-system-eu-ets/development-eu-ets-2005-2020_en

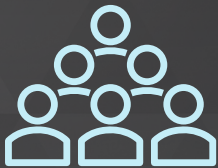
⁴https://ec.europa.eu/commission/presscorner/detail/en/IP_21_3541

Key Reasons to Consider CARB



Carbon Credit Exposure

Canada's first ETF to provide exposure to carbon credits



Growing Global Demand

Carbon credits can potentially benefit from increased demand to meet carbon credit allowances



Liquid Exposure

Futures market for carbon credits allows for capital markets investment and has daily settlement



Tax-Efficient

CARB is held in our innovate corporate class ETF structure so all returns from CARB are anticipated to be taxed as capital gains as opposed to income from derivatives



For more information on CARB
including its top holdings, visit:
HorizonsETFs.com/CARB

Commissions, management fees and applicable sales taxes all may be associated with an investment in the Horizons Carbon Credits ETF managed by Horizons ETFs Management (Canada) Inc. (the “ETF”). The ETF is not guaranteed, its value changes frequently and past performance may not be repeated. The prospectus contains important detailed information about the ETF. **Please read the prospectus before investing.**

The ETF is an alternative mutual fund within the meaning of National Instrument 81-102 Investment Funds (“NI 81-102”), and is permitted to use strategies generally prohibited by conventional mutual funds, such as the ability to invest more than 10% of their net asset value in securities of a single issuer or the ability to borrow cash. While these strategies will only be used in accordance with the ETF’s investment objectives and strategies, during certain market conditions they may accelerate the risk that an investment in the ETF Shares decreases in value. The ETF will comply with all requirements of NI 81-102, as such requirements may be modified by exemptive relief obtained on behalf of the ETF.

The Underlying Index is calculated by an independent calculation agent, Solactive AG. The financial instrument is not sponsored, promoted, sold or supported in any other manner by Solactive AG nor does Solactive AG offer any express or implicit guarantee or assurance either with regard to the results of using the Index and/or Index trade name or the Index Price at any time or in any other respect. The Index is calculated and published by Solactive AG. Solactive AG uses its best efforts to ensure that the Index is calculated correctly. Irrespective of its obligations towards the Issuer, Solactive AG has no obligation to point out errors in the Index to third parties including but not limited to investors and/or financial intermediaries of the financial instrument. Neither publication of the Index by Solactive AG nor the licensing of the Index or Index trade name for the purpose of use in connection with the financial instrument constitutes a recommendation by Solactive AG to invest capital in said financial instrument nor does it in any way represent an assurance or opinion of Solactive AG with regard to any investment in this financial instrument.

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