

Cap & Trade

Accurately
forecasting the
first-ever
Washington
Auction Price



CARBON IS OUR currency

Forecasting Environmental Markets

KEY CLIENT OUTCOME

Accurately forecasted the first Auction of the Washington carbon market, 6-months in advance, enabling strategic planning for companies and investors, optimizing their strategies and understanding of the new market.

EXECUTIVE SUMMARY

In mid 2022, the new Washington Cap-and-Invest Market was due to start in 6 months time, large uncertainty over the price level of this market, with significant risk and opportunity resulting for compliance entities and investors in need of a firm strategy.

Using our deep understanding of the similar California market, we modelled the Washington market and gave an initial WCA price forecast range of \$47 - \$50. In March 2023, the first Washington auction closed at \$48.50.

Entities that valued WCA's at our forecasted value - were able to take action and monetize the opportunity, ahead of time.



Client profile

Investor Fund with a \$100M+ exposure to global carbon markets, with exposure to RGGI, CCA's and EUA's.



Client objective

This fund aims to maximize investor returns from the global expansion of carbon markets, they have a fundamentally 'long-carbon' strategy, through a mix of physically held and future market exposure. They also aim to take advantage of shorter horizon pricing dislocations and opportunities.



Specific problem / opportunity

The client wanted to profit from speculative trading opportunities around the opening of the Washington market and so build up a position in WCAs.



Client headache

There was high uncertainty over where the market would eventually settle, with no historic market data to consult. With no track record, both risks and opportunities are larger. The client needed to form an initial purchasing strategy built on solid fundamental foundations.



OUR SOLUTION

The Company new strategic solution generate significant performance for the client

CCARBON'S 'SECRET SAUCE'

In this instance in Washington, we had a head-start on other market analysts given **our vast accumulated experience forecasting the WCI market**. We already had a detailed understanding of early-market dynamics for both compliance entity behavior, as well as offset market development.

We understood the key variables to track and to build emissions demand around for each of the sectors. Finally, the relationship between carbon price and market tension had been well studied and defined.



"For over 10 years, we've been developing investment strategies for traders of all sizes.

Our mission is to provide the most accurate forecasts and tools to solve our clients problems. "

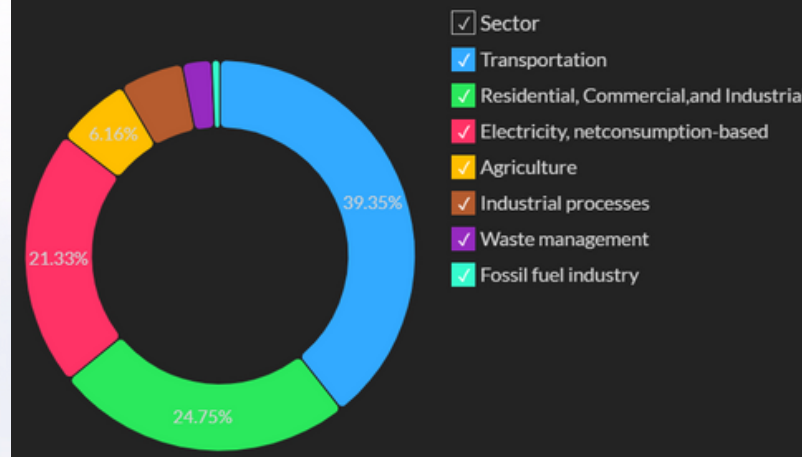
Craig Rocha

CaT Sr. Analyst
cCarbon



www.ccarbon.info

WCA 2019 Emissions by sector



OUR SOLUTION

Mid-way through 2022, we released the Washington Cap-and-Invest market primer, which gave a thorough overview of the state of regulation, and the upcoming market design. This would have been the client's first analytical summary of the market and their first scope of potential opportunities.

Then at the start of 2023, we released our Washington Cap-and-Invest Market Outlook which contained a full demand and supply-side analysis and fundamental forecast, with a pricing layer forecasting through to the 2050 Net-Zero target. Our deep experience of modelling the WCI was crucial in establishing a comprehensive model for Washington – which operates from a similar market design philosophy.

TARGET VARIABLE AND INTENDED PURPOSE

Our tool's key output was the 2050 price forecast scenarios for WCA pricing. The purpose of these market outlook forecast reports is to provide best-in-class future guidance on environmental markets for the full range of market players and stakeholders: compliance entities, traders, investors, regulators, and project developers.

DATA AND TECHNIQUES USED

We combine state-level MRP emissions data with dozens of sector-specific industrial and consumer data, e.g., including but not limited to: Oil refinery production, cement output trends, as well as EV purchasing rates and Vehicle Miles Travelled. We also include abatement cost curves for a longer-term understanding of emissions trajectories, and interactive effects with potential carbon price levels. These combine to form demand-curve scenarios.

The Supply-side requires a comprehensive understanding of program design, and inclusion of possible reserve sale mechanisms. Offset capacity for supply, and usage on the demand-side, is another whole sub-market which requires its own forecast for accurate work in the 'parent' cap-and-trade market.

The Tension ratio and pricing layer is formed on top of this with a quarterly resolution using a General Equilibrium model to minimize allowance spend each quarterly auction cycle.

THE OUTSET

For the first six months, from the start of Q4 2022 to the end of Q1 2023 the future market prices were consistently trading at \$36, there were very moderate volumes transacting at this price.

However, we were staunchly valuing the WCA on initial fundamentals between \$47-\$50, we predicted price increases up to a maximum of \$80 by 2025.

OUR TOOL'S OUTPUT / RECOMMENDATION

The initial futures market price of \$36 and our forecasted fundamental-led auction price range of \$47-\$50. The recommendation of our forecast in relation to this trading client was to go long on WCAs and secure all volume possible through the futures market before auction, and then to bid within the recommended range at the first auction.

THE ACTION, THE RETURN, & THE VALUE

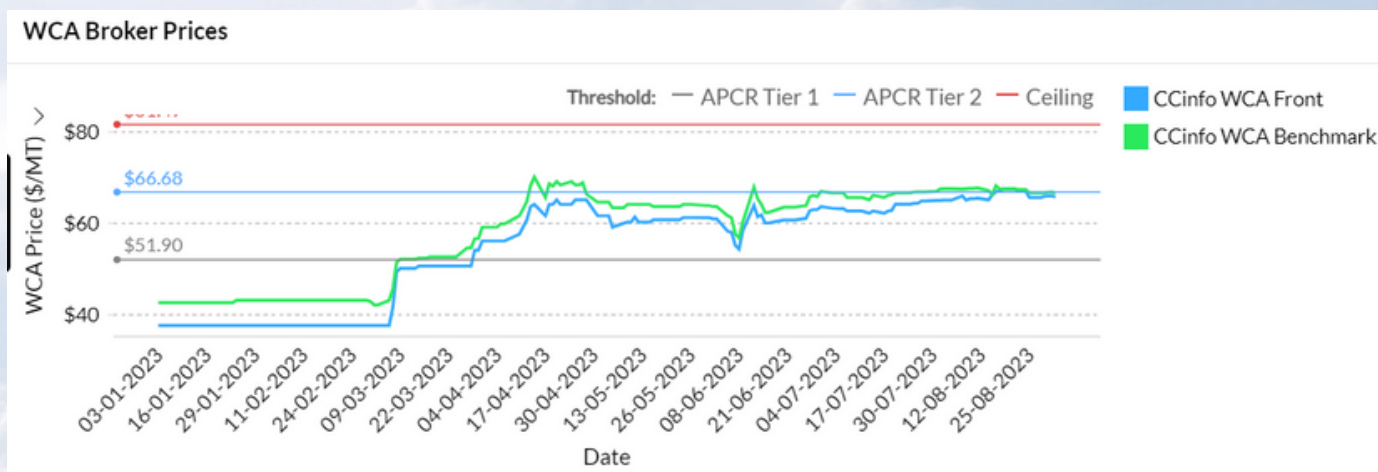
The market now significantly overvalues WCAs compared to our fundamentals, our client has intimated they now are using our work to decide whether to short the market over a two-year horizon, expecting the price to equilibrate over this time frame.

CLIENT'S DECISION & ACTION

The client was able to pick up 300,000 tons in the futures market on the December 23 delivery at an average price-point of \$37. The client then also bid in the February auction at \$50 the upper range of our estimate, for another 500,000 WCAs.

The closing price at the auction was \$48.50, right in the center of our predicted range of \$47-\$50.

The prices are now trading around the APCR 2, at \$67.38 (as of 18/08/23).



CLIENT'S RETURN - \$\$\$ FROM THE DECISION

Our pre-market opening forecast proved exactly right.

When the futures market was beneath this value, our client was empowered to buy all the volume they could find on the futures market. At the auction they could bid confidently in the knowledge of the fundamental value of the asset.

Their current mark-to-market return on the futures trade is \$9.1 million, a return of 82%. For the auction purchase they have a mark-to-market return \$9.4 million, a return of 39%.

Their overall return, due to acting swiftly in line with our advice, now stands at \$18.5 million representing a 52% RoI.

Our advice on the market enabled the client's vision of building a position, but more than this they were able to take advantage of short-term opportunities from the position of greatest confidence.

OUR VALUE - PRICE VS RETURN

Our one-year membership price for Cap-and-Trade markets stood at \$8000, this not only included the Washington market forecast here described, but access to a suite of other interlinking models across the WCI (and CCO offsets) and RGGI, deep-dive analyst notes on the most impactful market dynamics, market tracking dashboards to parse fundamental and pricing data, as well as regular reporting content, articles, interviews, and webinars.

Hence, the return on investment as compared to our cost of our information proved astronomically valuable for our trading client here - a small price to pay to take significant risk in an as yet unproven market.