

Carbon Offsets: Pricing Data

September 2020

Introduction

Carbon offsetting is becoming increasingly popular as companies and individuals look to minimize their carbon footprint. Despite the sector's emphasis on transparency, however, data on the sector remains surprisingly difficult to find.

We created AlliedOffsets as an aggregator of projects that are listed on four voluntary registries (ACR, CAR, GS, VCS), as well as those on the UN's CDM. The directory makes it easy to find projects from across the registries that are in a specific project type or country. We've also made it easy to analyze the data at a macro level via an interactive dashboard. This is already the most complete data source on the voluntary carbon offsetting markets in the world.

In order to enrich the data, we have also started collecting pricing information on projects that are being sold via resellers. This means we can track in real time what various projects are being sold for across various resellers.

This is only one side of the picture – the one that relates to the consumer retail market. This price is not the same as the wholesale price that a large corporate or a reseller is able to purchase the credits for. However, it's a highly useful metric that will allow anyone to track what consumers are willing to pay for the carbon credits. We will aim to collect data on the wholesale market in the near future and will keep our readers updated.

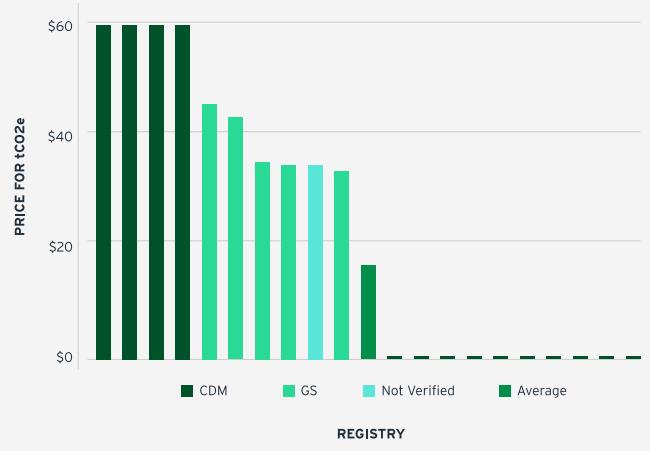
Pricing Data

We've pulled out a sample of nearly 400 project prices across multiple resellers, registries, and geographies. As this data expands, it can be used to help build business plans and proposals, and support a more evidence based approach to project development. The box on the last page explains registries' role.

To place some of these prices in context, a one-way short-haul flight from London to Ibiza emits roughly 200kg CO₂. With an overall average price of \$16.81 per ton of carbon available through carbon offset resellers, a person looking to offset their flight can reasonably expect to pay \$3.36 in order to do so.

Registry	Average Price	Max	Min	Median	Range
ACR	\$10.19	\$11.70	\$9.34	\$10.00	\$2.36
CAR	\$10.39	\$13.18	\$5.00	\$11.00	\$8.18
CDM	\$7.83	\$59.17	\$0.45	\$2.15	\$58.72
GS	\$20.28	\$47.00	\$4.94	\$18.63	\$42.06
VCS	\$10.52	\$21.58	\$3.57	\$10.44	\$18.01

10 Most & 10 Least Expensive Projects



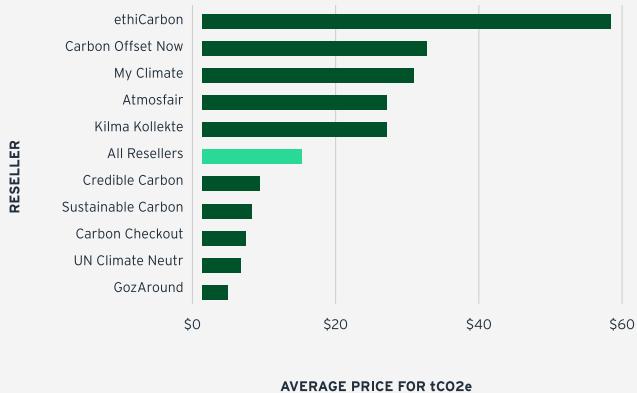
Pricing dynamics vary quite significantly between registries. The credits sold on the CDM exemplify this: the registry simultaneously has the most expensive and cheapest credits, by a large margin. Illustrated in the bar chart, the CDM has the 4 most expensive credits and the 10 cheapest. This culminates in people buying some credits at \$0.45 and other at prices 130x this, at \$59.17, when both provide the same carbon reduction.

The price may also be affected by the credibility of the verifiers who are meant to oversee the projects' progress. We have analyzed some of this data, and will share more in the coming weeks. In brief, there is much overlap among who says that a project is credible. Below is a table showing 10 of the 70+ listed verifiers, ranked by the number of registries they are certified for. (The box on the last page explains the verifiers' role.)

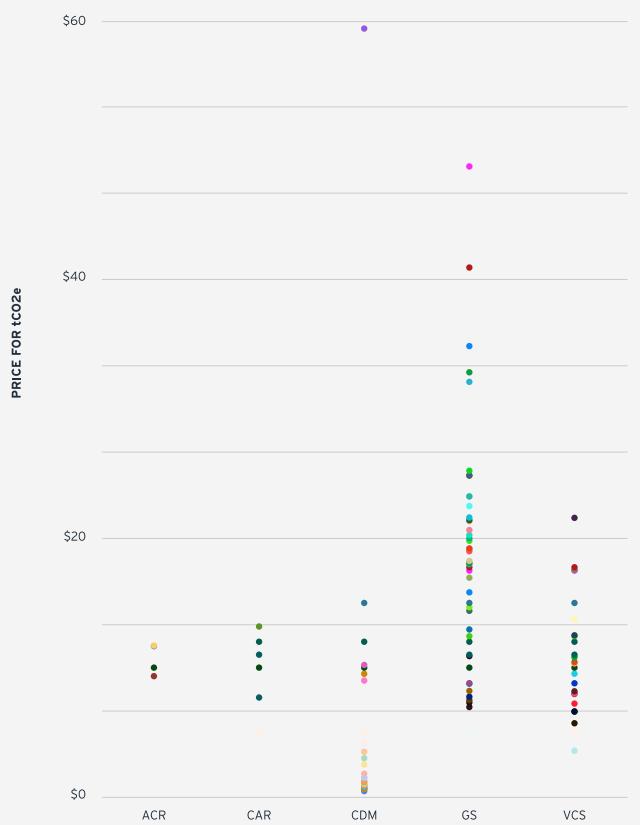
Shared Verifiers Across Registries

	ACR	CAR	CDM	GS	VCS
GHD Services	■	■	■		■
Aster Global Environmental Solutions	■	■			■
Carbon Check			■	■	■
China Building Material Test and Certification Group			■	■	■
China Classification Society Certification Company			■	■	■
Earthhood Services			■	■	■
EPIC Sustainability Services			■	■	■
First Environment	■	■			■
KBS Certification Services			■	■	■
LGAI Technological Center (Applus)			■	■	■

Most & Least Expensive Reselles



Prices Across Registries

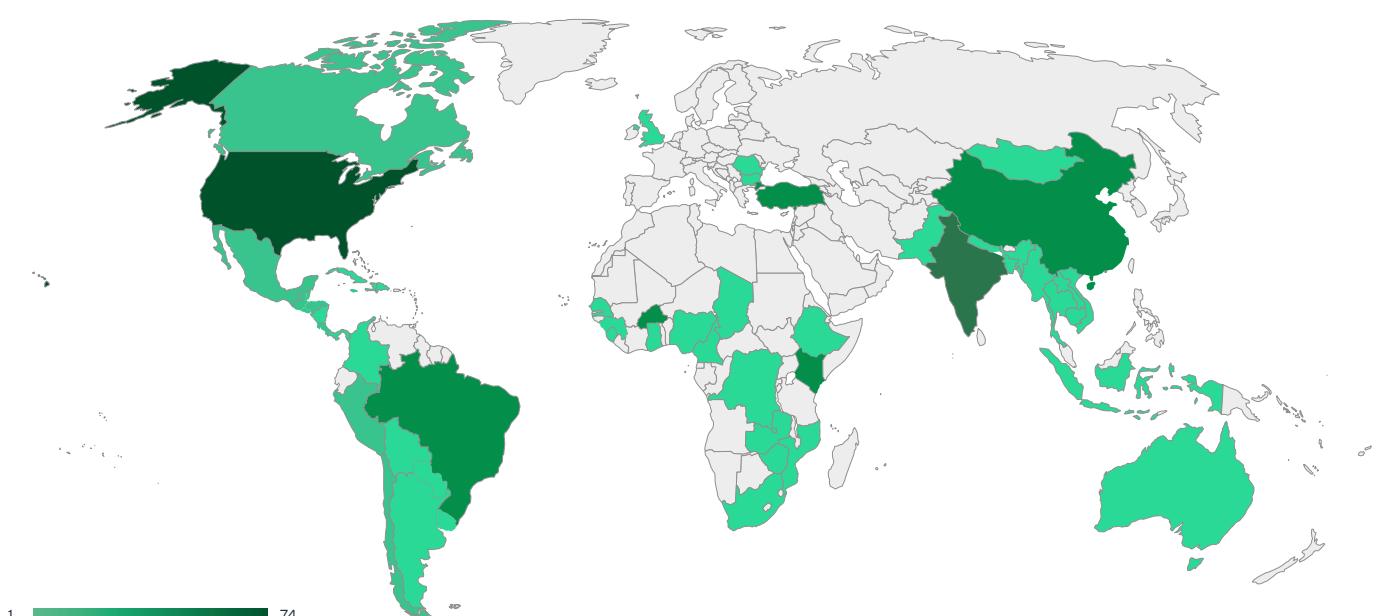


The pricing disparity encapsulates some of the broader evidence that market forces of supply and demand are not the only determinants of prices. Gold Standard justify their prices being almost double on average than anyone else's by arguing that each credit also tackles a further SDG. In theory, the SDG co-benefits are an added benefit, increasing the price of the credit. It is important to keep in mind the underlying factors behind a credit's price that go deeper than simple market forces; credits are not perfectly substitutable, and their non-carbon co-benefits can lead to significant price differences.

If you're unsure about what some of these terms mean, the box on the following page explains the role of each entity involved.

Countries with Most Projects Sold via Reseller Sites

Geographically, our data is distributed across 73 countries, with most projects coming from the US, India, Kenya, Brazil, and China. Unlike the heatmap on our [interactive data dashboard](#), which tracks all projects, the map below shows where resellers are selling projects to consumers.



Of the 5 largest sample nations, the US stands out for having the lowest price range. This is a product of its not being a part of the CDM, whose turbulence drives extreme variance in pricing. Instead it predominantly features credits from ACR and CAR, the two registries with the lowest variances. India, Brazil, and China on the other hand (being 3 of the largest CDM countries) display significant ranges in pricing.

Country	Average Price	Max	Min	Range	Median
US	\$8.12	\$13.18	\$5.00	\$8.18	\$10.00
India	\$10.59	\$42.62	\$0.45	\$42.17	\$10.00
Brazil	\$9.87	\$31.00	\$1.00	\$30.00	\$10.00
Kenya	\$16.26	\$31.00	\$7.96	\$23.04	\$12.50
China	\$13.61	\$31.00	\$0.70	\$30.30	\$12.00

Countries have their own unique pricing dynamics, but the national role is somewhat limited. Rather, registry dynamics dominate, and the national context inputs variation on top of this.

Our database makes it easier for companies to buy credits, potentially matching the purchase of credits with location of pollution and relevant supply chain sectors. In particular, users will be able to search for credits by filtering for their registry, reseller, and geography. For example, if one filters for the US, then looks specifically for offsets resold by Cool Effect, they can find credits at \$9.34 and others at \$13.18 – a difference of over 40%.

Conclusion

This is only an introductory glimpse of our work into the pricing data on the carbon offsetting market. We are continuing to build our database of pricing and evolve the valuable analysis that comes with this. In order to keep the market updated on the latest developments, we will create a monthly newsletter that will track the movement of carbon offset prices, as well as other additional data points.

Visit [AlliedOffsets](#) to stay up to date on the most recent developments. If you are interested in the data and would like to learn more, please reach out to carbon@alliedcrowds.com.

Who Is Involved in Carbon Offsetting?

Several parties work together to bring carbon offsets to market. Here is a brief overview of the players:

Project developers: These are entrepreneurs, organizations, and firms who carry out the emission reduction work. In other words, they are the ones who plant the trees, build the solar farms, etc.

Registries: In order to receive carbon credits for their work, project developers must list their project on a registry. The registries keep track of carbon credits sold and are responsible for the validity of the projects.

Verifiers: Each registry has a list of approved verifiers that they approve to validate that project developers are carrying out the work that they claim to carry out. For instance, for a forestry project, verifiers check to make sure that trees are not being cut down. Project developers hire and pay the verifiers to audit their project.

Resellers: Resellers are brokers who purchase carbon credits in bulk from project developers; the sale is recorded on the registry. The resellers then sell credits to consumers who are interested in buying credits.

