The Question of Priorities in Carbon Offsetting

As the world races to reach net zero carbon in time to slow and eventually halt climate change, a lot of people are asking the question: what is the best way to reach our goal in the time frame available?

Humans are innovative creatures and we've not only worked out some of the most effective natural options available but have also developed a number of technical solutions. Having multiple paths in front of us inevitably leads to a question of what gets prioritized?

We ended up with this climate change mess because we attacked the climate in two ways: we increased carbon emissions while simultaneously reducing nature's ability to remove it. We will only be able to fix this situation with a similarly multi-pronged approach: Reduce existing emissions, eliminate future increases in emissions, and enhance removal and storage (sequestration).

With its headline-grabbing actions, sequestration tends to get the most media attention. If you consider our nature-based options, it sounds far more impressive to reforest thousands of hectares with millions of trees than it does to protect an existing forest from logging. The same goes for coastal blue carbon projects that involve replanting mangroves, tidal marshes and seagrass meadows versus a project that protects a marine biosphere already in place.

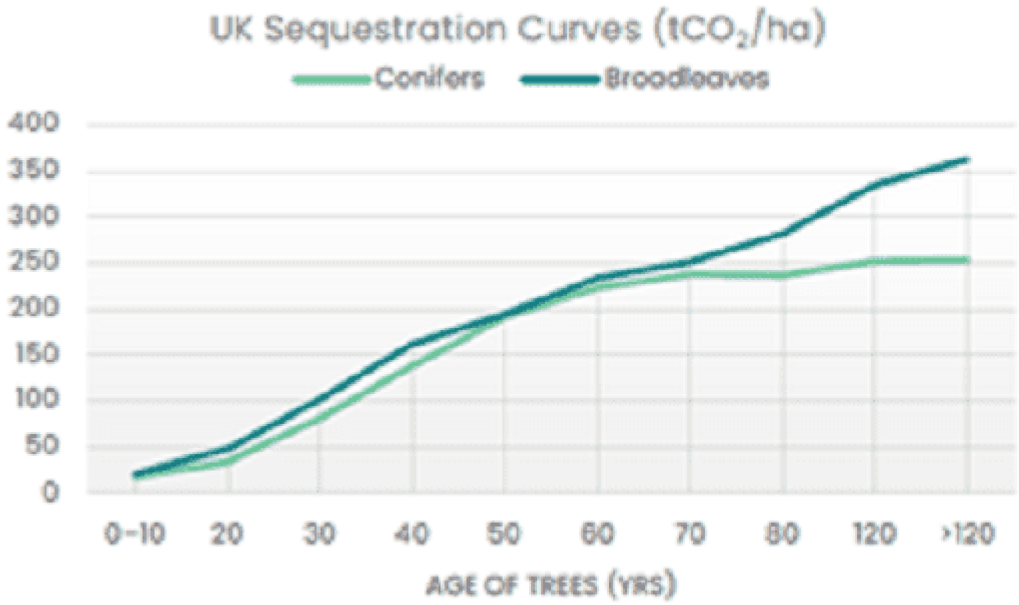
This is partly because there is a feeling of action that goes hand in hand with sequestration projects, a comforting feeling that we are actively solving the problem. Not only that but there is an economic advantage too because sequestration often promises greater levels of employment in regions that adopt these solutions, making it far more attractive from a political perspective.

However, the danger of this debate is the temptation to think sequestration alone will be enough to overcome our climate challenges and perhaps even allow us to go back to business as usual. The reality is more complex.

Let’s continue with the reforestation/afforestation versus protecting an existing forest. Carbon dioxide is a must-have resource for trees. They pull it from the atmosphere, they use it to grow and they also release oxygen. They are one of the best carbon capture and storage solutions we have. There have even been studies proposing that planting an additional 0.9 billion trees globally could result in the sequestration of a whopping 25% of the current atmospheric carbon pool once they matured.

It’s an exciting idea but there are some serious roadblocks. Firstly, note the comment about “once they matured.” When it comes to tree-based carbon sequestration, age is a huge differentiator.

For those of you who may be data driven, here are some figures to consider: Over a 20-year period, estimates put reforestation at 6 tonnes of carbon stored per year for every hectare[i]. Over the same time frame, a standing forest stores 200-400 tonnes per year for every hectare[ii]. Cut down that standing forest and you’re releasing all of the stored carbon built up over the years, as well all of the ongoing sequestration.



Then you have the practicality of such projects. In 2019, Canada announced plans to plant an additional two billion trees to help meet its 2030 climate pledges. As the world's second largest and second most forested country (428 million hectares), Canada has the available land and the forestry knowledge to deliver on major tree planting initiatives. As of September, 2021, not a single tree has been planted. The delays, according to Canada's Natural Resources Minister, were because "seedlings need time to grow, and the project needed nursery space, land to plant them in, and some sort of monitoring to ensure the trees survive".

When it comes to technology-based sequestration, used at the sort of scale that could affect the course of climate change, there are a variety of challenges which include implementation across multiple industries, as well as the social and political will to fund it all.

These technologies vary in scope, cost, longevity, and storage capacity, and some have limited potential unless integrated with complementary solutions. For example, Direct Air Capture (DAC) can be employed to remove carbon dioxide from ambient air and concentrate it for storage or for use in various products. If that carbon is to be stored rather than utilized by manufacturing, you need one or more accompanying storage solutions, which all come with their own set of challenges, but which all share the hurdles of funding, legislation and permitting. In other words, the solutions exist but just like reforestation and afforestation, you’re looking at long time frames before these innovative technologies can be up and running.

The Natural Order

Does all of this mean that carbon emission avoidance should be prioritized over sequestration? Not exactly. The biggest lesson of recent years is that there is a natural order of prioritization.

Carbon offset projects that protect land and marine forests, and other critical biospheres, translate into the capture and storage that we need right now. Sequestration projects will deliver the additional capture and storage that we need as we move forward.

As a global community, our first priority is to take the quick wins that are in front of us. Realistically that means projects that protect our planet’s existing carbon removal and storage engines such as forests. While that is happening, we can be rolling out the longer-term plays.

What does all of this mean for investors? Well, the bulk of carbon offset projects being rolled out globally are also used to generate carbon credits that can be sold on the voluntary carbon credit markets. This approach is key for financing each project and those that are planned for the future. At its current stage of development, the voluntary carbon credits sector means that investors need to carry out significant due diligence all the way down to the project level. Understanding the role of each project, time to implement, time to generate credits, over what period of time and so forth, is key to helping achieve your planned ROI.

[i]

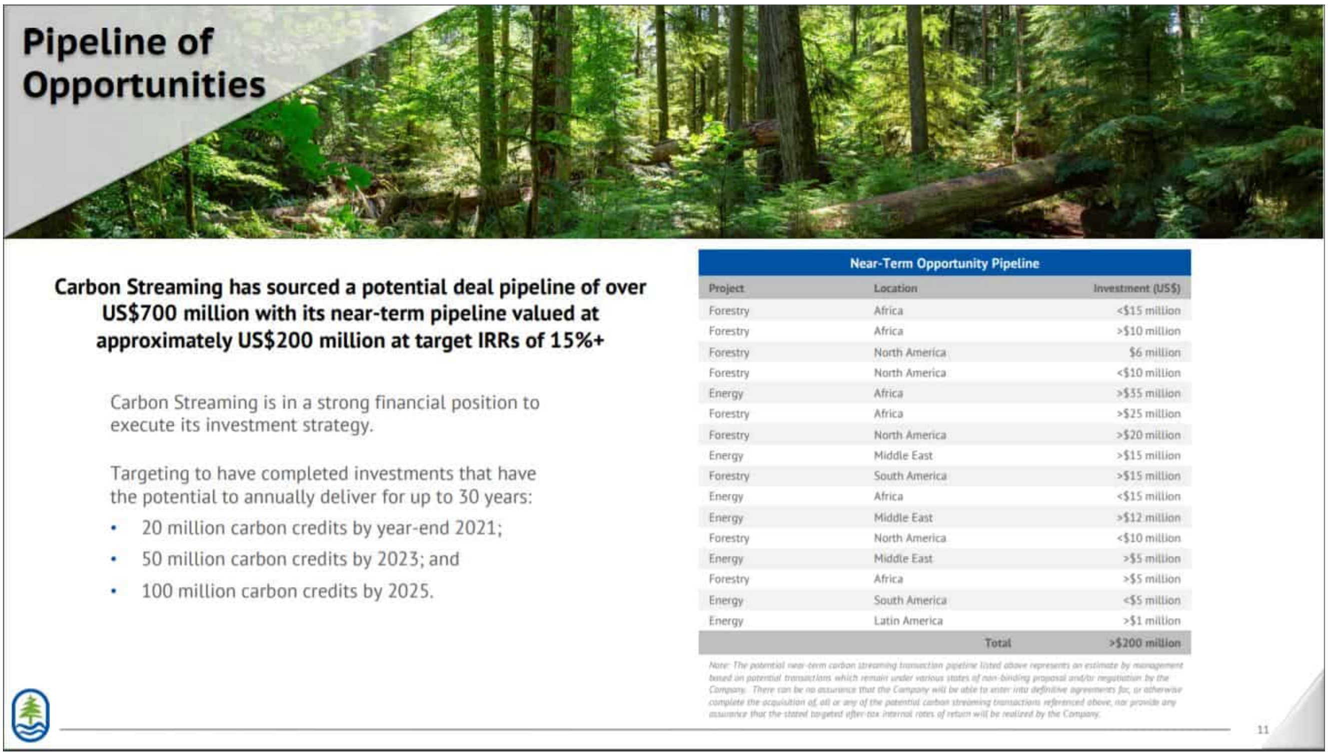
https://vertree.earth/knowledge-centre/carbon-offsets-avoidance-and-removals/
[ii]
https://vertree.earth/knowledge-centre/carbon-offsets-avoidance-and-removals/

Carbon Streaming is cashed up and ready to save the world

You may have heard numerous companies around the world talking about setting net-zero carbon emissions goals, in fact over 1,500 companies have announced plans to be carbon net-zero by 2050 or sooner. But how will they get to net-zero? In the interim, the plan is to offset the carbon they put into the atmosphere by buying carbon credits. A carbon credit represents one tonne of carbon dioxide or the carbon dioxide equivalent of another greenhouse gas (defined by the amount of heat it traps in the atmosphere) that is prevented from entering into or being absorbed from the atmosphere. Carbon credits are anticipated to be integral to meet global net-zero goals, especially in hard-to-abate sectors such as oil, aviation, steel and cement.

No matter how you slice it, the carbon credit world is big now and destined to get a lot bigger. The estimated size of the compliance/regulated market was US$261 billion in 2020, a five-fold increase from 2017. The voluntary carbon market was a much more modest US$473 million in 2020, although UN Special Envoy for Climate Action, Mark Carney, the former Governor of the Bank of England, has said that the voluntary market "needs to be $50-100 billion per annum." And that's where Carbon Streaming Corporation (NEO: NETZ) comes to the rescue, so to speak. Carbon Streaming is a unique, ESG principled, investment vehicle offering investors exposure to carbon credits. Its stated business model is to focus on acquiring, managing and growing a high-quality, diversified portfolio of investments in projects and/or companies that generate or are actively involved with carbon credits. The Company invests capital through carbon credit streaming arrangements, with project developers and owners, to accelerate the creation of carbon offset projects by bringing capital to projects that might not otherwise be developed.

Carbon Streaming has been raising capital and signing up projects to build up an inventory of carbon credits. In fact, in July the Company was able to raise an impressive US$104.9 million based on the momentum they had been gaining over the first half of 2021. The latest information from the website shows the Company has a near term opportunity pipeline of 16 projects around the world totaling roughly US$200 million in investments. Longer term the deal pipeline is over US$700 million and the best part is, the target IRR for these projects is greater than 15%.



Source

The value proposition at Carbon Streaming is three fold:

1. Enter into streaming agreements with individuals, companies, and governments to stream carbon credits from their asset or property that can be sold in either the voluntary or in the compliance markets;
2. Purchase carbon credits in the voluntary and compliance markets for long-term price appreciation with selective trading as opportunities arise; and
3. Invest in or acquire companies, assets or properties involved in the origination, generation, monitoring or management of carbon credits (in other words M&A).

Strategy #1 is pretty straight forward, you simply sell your earned carbon credits to whatever market is willing to pay the most. Strategy #3 is probably similar to almost every publicly traded company on the planet. However, strategy #2 intrigues me the most from an upside potential. Having spent plenty of time in the trenches of commodity trading, I know that being long a commodity that is in demand can be very lucrative. If you are of the opinion that demand for carbon credits is potentially going to grow faster than supply, then having an enormous pipeline of carbon credits coming on stream (targeting 100 million per annum by 2025), can be a very good thing. A modest price swing can create huge leverage. Just look at natural gas prices over the last 4 months as an example for a much more than modest price swing.

The carbon emission contract that trades on the Intercontinental Exchange (ICE) known as EUAs (European Union Allowance) has a 52 week trading range of €23 to just under €66 on a per tonne of CO_2 equivalent basis. If you have an inventory of 100 million of annual credits being generated each year, imagine if you keep 5% to float with the spot price (preferably with a floor in place to assure breakeven). A \$5 move could add \$25 million to your top line. That’s why I think Carbon Streaming could be in the right place at the right time, depending on how they manage their "selective trading".

Upon the exercise of the special warrants issued to raise the above noted US$105 million, the Company will have roughly 231 million shares outstanding. Based on yesterday's close of $2.38 that puts the market cap at $550 million with approximately $141 million (US$112) in cash at the end of August. Back of the envelope math suggests that with 20 million in carbon credits by year end, that could generate roughly $1.7 billion (US$1.36 billion) in top line revenue based on yesterday's EUA close of €59. I don't know what carbon price assumption Carbon Streaming is using to calculate their 15%+ IRR but it might be worth digging a little deeper to find out.