

## Perspectives on Innovation: Why “Net Zero” Wins over “Carbon Neutral”

Beth Williamson and Valia Tsoukopoulou

- » There are important differences between net-zero and carbon-neutral strategies, with significant implications for a company’s risk profile and long-term growth prospects.
- » We believe companies with fundamental business strategies that address resource constraints, ecological limits and climate change are positioned to achieve greater market share.
- » Innovators at the forefront of the net-zero movement will have a competitive edge owing to notable advantages such as an enhanced reputation, reduced risks, cost savings, and access to new markets.

Expanding regulations, stewardship commitments, reputational risk and increasing consumer expectations ... companies around the world are compiling a growing list of reasons to improve their carbon profiles. To achieve this, companies may seek to achieve either carbon neutrality or net-zero status. Although both refer to strategies to address greenhouse gases, they are not the same.

**Carbon Neutrality** refers to achieving a state where the amount of carbon released is equal to the amount absorbed by carbon sinks (which take in more carbon than they release—e.g., forests, soils, and oceans).<sup>1</sup> Businesses seeking to achieve carbon neutrality have two choices to offset their own emissions: 1) They can counterbalance their emissions by investing in projects that reduce or remove an equivalent amount of greenhouse gases from the atmosphere. 2) They can buy carbon credits (representing the removal of one metric ton of CO<sub>2</sub> each) as a means to compensate for their emissions.

**Net Zero** is achieved through the actual reduction of greenhouse gas emissions within a company’s operations, without predominately relying on offsets. A company aiming for net-zero emissions would begin by deeply cutting direct and indirect emissions across its value chain, setting science-based targets to minimize all possible emissions by more than 90% by 2050 (note, while 90% reduction by 2050 is typical, specific targets may vary depending on the industry and feasibility). After achieving this initial reduction, the company can use carbon offsets for the remaining emissions that are too difficult or cost prohibitive.

### Net Zero

- » Requires 90% emissions reductions
- » Carbon offsets can only be used for a small percentage of difficult or cost-prohibitive emissions
- » Targets must align with a <1.5°C warming scenario
- » Requires external verification
- » Governed by the Science Based Targets initiative (SBTi)

### Carbon Neutral

- » Allows for offsets
- » Doesn’t mean actual emissions reductions occurred

## The Investment Implications of Net Zero Versus Carbon Neutral

The Sustainable Equities Team recognizes the role carbon offsets can play, but we are also concerned about how carbon offsets can be used to greenwash. As Barbara Haya, a research fellow at the University of California at Berkeley's Center for Environmental Public Policy states, "Offsets don't actually reduce emissions; they just trade where emissions happen."<sup>2</sup> We delve into the drawbacks of using offsets to achieve carbon neutrality at greater length in our Appendix.

Net zero, however, indicates that a company or individual is effectively adding no carbon into the atmosphere. These companies are actively eliminating emissions at their source.

### Conclusion

In our investment approach, we seek out quality companies with above-average growth prospects, reflecting our comprehensive understanding of a company's financial and nonfinancial risks. Accordingly, we seek to identify companies that go beyond buying offsets in favor of companies that target being net zero. When evaluating a company's climate mitigation strategy, we believe it imperative to understand the breadth and depth of the company's targets, implementation strategy and performance. As we've discussed here, a company can set ambitious climate goals that are not always backed by substantive actions.

Companies that authentically embrace net zero and have actionable climate strategies in place offer many competitive advantages such as enhanced reputation, reduced risk, cost savings associated with the transition to net zero, and access to new markets. These are the companies the Sustainable Equities Team seeks to invest in.

## Net Zero and Our Approach

We review a company's business model to determine the extent to which it has changed its overall fundamental business strategy in response to ecological limits, climate change and resource constraints. We believe companies that have a vision for the future will be able to capture a greater market share. As such, the Sustainable Equities Team's investment criteria favor companies, such as Air Liquide, that demonstrate leadership toward achieving net zero.

### Case Study: Air Liquide

Air Liquide is a leader in carbon management. It has set a goal to be carbon neutral by 2050. To achieve this target, the company plans to start decreasing its emissions in absolute value around 2025, followed by a 33% reduction by 2035 from a 2020 baseline.

Air Liquide uses innovation and technologies to decarbonize its assets and has also set ambitious targets for emission reductions. Additionally, it has identified growing customer needs and sees the energy transition as an opportunity to capture growth. It has been offering carbon capture as a service to its clients. An example is, Cryocap,<sup>TM</sup> a cutting-edge technology that employs a cold-based method known as cryogenics to segregate various gases.

## Appendix: A Closer Look at Carbon Offsets

Carbon offsets are a form of trade. When a company, organization or individual buys an offset, they're essentially funding projects that reduce greenhouse gas (GHG) emissions.

There are two types of carbon offsets: Avoided emissions and removals. Avoided emissions projects aim to prevent the release of emissions. Examples include renewable energy projects that substitute polluting energy production with cleaner alternatives: e.g., wind and solar.

Removals do not address the initial problem of GHG emissions entering the atmosphere and involve actions like tree planting that sequester CO<sub>2</sub>. However, the CO<sub>2</sub> is eventually released back into the atmosphere. Permanent removals involve carbon capture and storage (CCS) or direct air capture (DAC) technologies. If certified, both removal and avoidance projects can generate carbon credits and assist a company in achieving carbon neutrality.

### Carbon Avoidance

Preventing carbon emissions from being released into the atmosphere

### Carbon Removal

Eliminating carbon emissions by absorption after they have entered the atmosphere

## Potential Mismanagement, Compliance Failures and Fraud Create Investment Risk

Offsets are a way to achieve carbon neutrality but do not ultimately address the underlying issue of emission generation. Many carbon offset projects violate the "additionality requirement," which mandates that a project only counts toward carbon neutrality if the project would not have happened without the offset. A Bloomberg Green analysis of over 215,000 carbon offset transactions in the past decade revealed that many companies leaned heavily on offsets related to renewable energy projects that violated the additionality requirement.

This is not the only issue with carbon offsets. Research by The Guardian into Verra,<sup>3</sup> the world's leading carbon standard for the voluntary offsets market, found that 90% of its rainforest offset credits—some of the most common credits used by companies—are "phantom credits" and do not contribute to actual carbon reductions.

### Case Studies: Carbon Offsets Gone Awry

Companies are learning—the hard way—that seeking carbon neutrality through carbon offset claims can lead to negative publicity and even lawsuits. Recently, a large airline has faced legal action due to allegations it claimed credit for projects lacking additionality. In essence, the lawsuit alleges that the airline made "false and misleading" assertions of being the world's first carbon-neutral airline when it was actually relying on invalid carbon offsets.

Companies are also coming under scrutiny for publicizing large carbon offset plans but continuing to partner in various ways with companies profiting from fossil fuels. "The Banking on Climate Chaos 2023" report reveals a troubling gap between banks' stated commitments and their financing activities in the fossil fuel sector. Forty-nine of the 60 banks profiled in this report made net-zero commitments while financing \$122 billion to the top 100 companies expanding fossil fuels production/use in 2022. Additionally, 27 of these banks rely on unproven carbon offsets or carbon capture and storage (CCS) technologies to reach their targets.<sup>4</sup>

## About the authors



Beth Williamson is a member of the investment team managing the Calamos Sustainable Equities suite, including Calamos Antetokounmpo Global Sustainable Equities ETF (SROI) and Calamos Antetokounmpo Sustainable Equities Fund (SROIX), as well as separately managed portfolios. This team has been at the forefront of sustainable investing since 1997 and launched one of the first fossil-fuel-free funds in the United States. Prior to Calamos Investments, Beth was a portfolio manager for the Trillium ESG Global Equity Fund Retail (PORTX).



Valia Tsoukopoulou is a junior research analyst who assists the Sustainable Equities team in conducting material environmental, social and governance analysis of companies, portfolio-level impact assessments and other related research projects.

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<sup>1</sup>Tara Bernoville, “What is the difference between carbon-neutral, net-zero and climate positive?” June 8, 2022, [www.plana.earth.com](https://www.plana.earth.com).

<sup>2</sup>JD Shadel, The Washington Post, “Airlines want you to buy carbon offsets. Experts say they’re a ‘scam’,” April 17, 2023, [www.washingtonpost.com](https://www.washingtonpost.com).

<sup>3</sup>Patrick Greenfield, The Guardian, “Revealed: more than 90% of rainforest carbon offsets by biggest certifier are worthless, analysis shows,” January 18, 2023, [www.theguardian.com](https://www.theguardian.com).

<sup>4</sup>Rainforest Action Network, et al. “Banking on Climate Chaos, Fossil Fuel Finance Report, 2023,” [www.ran.org](https://www.ran.org).

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Calamos Financial Services, LLC, Distributor  
2020 Calamos Court | Naperville, IL 60563-2787  
Tel: 866.363.9219 | [www.calamos.com](https://www.calamos.com)

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