

IMPACT AREAS

How Finance Can Fight Climate Change

COIN Team

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Finance is a huge and influential industry around the globe. By financing decarbonization, we'll send a powerful signal that the future is renewable, sustainable, and green.

If we want to fight climate change, it all starts with carbon.

Carbon is the biggest contributor to our warming planet: When we produce energy by burning high-carbon fossil fuels, like coal and oil, we create an abundance of greenhouse gas (GHG) emissions. These GHG emissions trap heat and make the planet hotter, which then lead to the catastrophic effects of climate change.

Recent headlines tell a grim story: Seven years out of the last decade have been the hottest on record. It's anticipated that up to half of the Earth's plant and animal species will lose their habitats and go extinct in the coming years. [Human civilization could crumble by 2050.](#)

But we still have time to change course and make meaningful impacts in [Climate Action](#), especially if we're willing to make aggressive changes in cooperation with others around the globe.

While nations are working toward significant GHG reductions under the Paris Agreement (COP21) by 2030, it may not be enough. The ultimate goal to drive change, according to many climate experts, is decarbonization.

Decarbonization, if you're not familiar with the term, refers to the goal of eliminating our reliance on carbon-based energy sources and getting to net-zero GHG emissions across the planet.

In fact, the United Nations has challenged both the public and private sectors to make decarbonization a priority, through worldwide climate action collaborations that are both innovative and achievable.

Specifically, in the run-up to the [2019 Climate Action Summit](#) in September, UN Secretary-General António Guterres asked all leaders to present “concrete, realistic plans to enhance their nationally determined contributions by 2020, in line with reducing greenhouse gas emissions by 45% over the next decade, and to net zero emissions by 2050.”

If we reach these decarbonization goals, we'll make a major impact in addressing the climate crisis. At the same time, member nations that focus on decarbonization will also become more resilient, better prepared to build and maintain sustainable economies and societies in the years to come.

The changes needed to achieve decarbonization are big and bold, including:

- Ending subsidies for fossil fuels and high-GHG-emitting industries (like agriculture)
- Closing coal power plants, fast, and not investing in building new fossil-fuel burning plants
- Shifting quickly toward renewable energy sources
- Investing in electric transportation, while decommissioning traditional vehicles
- Adopting carbon pricing that incorporates the true costs of GHG emissions, such as climate impacts and health effects.

So, we have the high-level decarbonization goals. Now, what can drive us closer to making these big and bold changes a reality?

In a word, money.

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Here at COIN, we care a lot about how finance can make an impact in building a better world. We've used the [UN's Sustainable Development Goals](#) as inspiration to create our [conscious investment portfolios](#), with climate-focused [Impact Areas](#) including [Climate Action](#), [Clean Water](#), and [Reduce Waste](#). By investing in companies that care about the planet, individuals can ensure their money aligns with their values and prevent their investments from supporting companies making the issue worse.

But individual investments are just one way changemakers are using finance to fight climate change. There are some exciting new large-scale solutions in the works, ideas that provide multiple pathways for how the global financial industry can drive positive change for the climate, and especially with decarbonization.

So, we researched the innovators who've gotten groundbreaking financial solutions to decarbonization already underway. Thanks to their progress, we see how money that targets decarbonization can change the world – and may even save the world.

Check out these three finance-focused climate innovators.

1. Carbon Tracker

What are the risks of continuing to invest in a high-carbon economy? What opportunities exist if we pivot toward low-carbon developments? Finding the ongoing answers to these questions—and telling key decisionmakers about what they've found—is [Carbon Tracker's](#) mission.

Based in London and funded by both American and European foundations, Carbon Tracker helps executives, investors, and regulators make informed decisions on how to sensibly and sustainably transition to a low-carbon economy. Their reports regularly focus on major climate-related risks for capital markets, which fossil fuel companies are most vulnerable in terms of climate risk, and the disruptive impacts of new low-carbon technologies.

By providing leaders with real insights on how carbon impacts our economies and societies, they've empowered movement toward real change. Take a look at some of their key recent findings:

- Burning coal is the “single greatest threat to the climate ... coal-fired generation is responsible for about half of all carbon dioxide emissions globally.”
- Yet 42% of global coal power plants run at a loss, and
- Wind and solar energy will be 96% cheaper than coal by 2030.

In sum, switching out coal makes financial sense as well as ecological sense. Governments, businesses, and possibly investors may lose money by continuing to support the fossil fuel industry.

“[Carbon Tracker] has reinvigorated a global carbon budget debate, forcing both individual and institutional investors to question their continued heavy investment in fossil fuels,” writes journalist Jackie Wills in [The Guardian](#). “Essentially, this small nonprofit organization translated climate risk into energy demand and prices, so that it became relevant to people allocating capital today rather than in five years' time.”

Here are three key terms credited to the Carbon Tracker team, which provide a shorthand methodology for measuring carbon's economic risks.

Term	Defintion/Impacts
Carbon Bubble	Carbon Tracker argues that fossil fuel companies are overvalued. As environmental policies shift and demand for clean energy increases, the value of untapped coal, gas, and oil reserves will drop. Carbon Tracker anticipates the carbon bubble could reach \$6 trillion over the next decade. (For comparison, the subprime housing bubble was \$2 trillion.)
Stranded Assets	Carbon Tracker identifies stranded assets as in-ground fossil fuel reserves and fossil fuel production facilities that will be left behind once a region has transitioned to a low-carbon economy. These assets have already been acquired and paid for, but their owners won't be able to leverage them to turn a profit.
Unburnable Carbon	Carbon Tracker labels the reserves of coal, gas, and oil that won't be usable if the world moves toward reducing GHG emissions. Carbon Tracker estimates 60% to 80% of the current reserves of publicly listed companies could be classified unburnable.

Looking to the future, the team at Carbon Tracker is getting even more sophisticated in how it will conduct its studies: It recently announced a [partnership with Google.org](#) that will use satellites to measure power plant emissions, specifically studying thermal infrared heat indicators (which mark heat and cooling activity) and visual spectrum recognition (which monitors smoke emissions) from space. All findings will be shared with the public, with the expectation that their learnings will empower leaders and citizens to make educated policy and investment decisions that positively impact the climate.

Of course, Carbon Tracker's research isn't happening in a vacuum. There's another group making gains in understanding how finance impacts decarbonization, too.

2. The Rocky Mountain Institute's Capital Stock Transformation Initiative

~~Founded in 1982~~, the nonprofit Rocky Mountain Institute (RMI), another think tank working on decarbonization, aims to move the public and private sectors away from fossil fuels and toward efficient renewable energy sources. In 2017, RMI established the Global Climate Finance Program, which uses finance as a driver for decarbonization, specifically to retire carbon-based energy sources worldwide. The program's recent endeavor, the [Capital Stock Transformation Initiative](#), is working to change the global economy's capital stock (or assets, aka the buildings, equipment, and vehicles that generate most of the world's GHG emissions).

Why is focusing on capital stocks important? In short, this attention gets to the root of the climate crisis. By attacking GHG emissions at the source, the reasoning goes, we'll be able to make change and decarbonize faster.

The proposed changes urge leaders to take a bigger-picture view of what's impacting the climate. In the past, when financial experts analyzed their impact on GHG emissions, they mainly looked at "clean finance flows." Clean finance refers to investing in climate-friendly initiatives and infrastructure, like renewable energy or climate resilience programs. On the flip side, they also looked at "dirty finance flows", or investments in the status quo: oil and gas production, new fossil fuel plants, short-term solutions that aren't resilient.

With the Capital Stock Transformation Initiative, however, RMI argues that while measuring both clean and dirty finance flows is a good start, it doesn't go far enough—and change won't happen fast enough—to address the looming climate crisis.

Their new framework recommends that leaders continue to increase clean finance flows and decrease dirty finance flows, while also incorporating the following two capital stock priorities into their policy plans:

- Decarbonizing global capital stocks – This means using finance to encourage the retiring of high-GHG-emitting assets, like coal-fired power plants and fossil fuel vehicles.
- Improving the efficiency of existing capital stocks – This means using finance to underwrite major breakthroughs in technology and new business models. Preferential financing, for example, could go to policy solutions that focus on getting traditional cars off the road en masse through widespread adoption of shared, efficient, autonomous vehicles.

By adding these two extra criteria in decision-making processes, leaders will be in a better position to reduce dependencies on outdated high-GHG-emitting assets and sectors, while simultaneously developing more effective climate finance strategies that get us closer to achieving global climate goals.

So, when business and government leaders use the new framework, they'll have a fast way to evaluate and determine financing priority: Preference will go to initiatives that meet the four criteria. Lesser funding, or no investments at all, will be left for those that don't.

And if the public and private sectors follow the money, they'll quickly learn that the way to get investments is to align with climate action goals. Proposals that don't take the climate, resiliency, or sustainability into consideration won't be viable, now or in the future.

And speaking of future viability...

3. Sustainable Finance Initiative, Stanford University

In late 2018, the Precourt Institute for Energy at Stanford University announced its [Sustainable Finance Initiative](#), or SFI, which will sponsor partnership studies that develop finance and policy tools to enable large-scale, long-term transitions to low-carbon models, while also managing risk during the decarbonization transition periods. Bank of America is a major partner, and the initiative has a special focus on studying funding solutions needed to make these transitions possible in some of the highest GHG-emission industries, including agriculture, energy, and transportation.

To start, SFI's decarbonization finance research will focus on four key areas:

- *Fast-tracking private spending*: Experts estimate there's a \$1.5 trillion gap to actually limit global warming to 2°C. To close this gap, SFI's research will look at how financial products and business strategies can support "commercially realistic" low-carbon opportunities, remove barriers to investing in new resource-efficient assets and infrastructure, and underwrite innovative decarbonization mechanisms and models at a global scale.
- *Using a measure/disclose/manage approach to climate risk*: SFI believes that investors, insurance companies, and taxpayers are already facing greater costs because of climate change. These financial losses come from costs from critical decarbonization policy changes, transitions to new low- or no-carbon technologies, or simply the physical and economic impacts of severe climate events. SFI encourages looking at both voluntary and mandated disclosures about sustainability risks including using new methods to measure, like AI and big data analytics.

- *Finding solutions for stranded assets:* Like Carbon Tracker, SFI is concerned about stranded assets. To encourage transition to more sustainable fuels, it's exploring how stabilization funds and green bonds can help. Additionally, SFI's research in this focus area will seek to better understand the liabilities associated with jobs and communities that could suffer under decarbonization policies, and the ways finance can offset these impacts.
- *Overhauling existing systems and processes:* The planet is in crisis, SFI says, and our current ways of conducting business are contributing to our peril. Nothing short of a complete and fundamental transformation of our economic systems is needed. In this focus area, SFI analysis will focus on transitioning legacy industries and infrastructure to resource-efficient systems through intelligent market design with sophisticated risk and business models. Research areas will look at ways that early adopters/first responders could "generate outsized returns" and one interesting focus is how emerging economies may be able to bypass old systems entirely, giving them great market positioning in future economies that favor sustainability.

Looking beyond the UN Climate Action Summit, we recognize that finance can be a huge driver for change, especially when it's used to support decarbonization efforts. By prioritizing funding for low-carbon innovations, actively steering money away from high-polluting assets and infrastructure, and championing sustainability and resilience policies, we can reverse the course of climate change.

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