

FORETHOUGHT CLIMATE STRATEGY

Start Thinking About Carbon Assets—Now

by Alex Rau and Robert Toker

Reprint [F0809C](#)

Start Thinking About Carbon Assets—Now

by Alex Rau and Robert Toker

Many U.S. companies, particularly midsize firms, have been avoiding the carbon-credit markets. Delaying participation is understandable—the markets are predominantly overseas and are still evolving. But it's risky to wait until greenhouse gas regulations emerge from the U.S. Congress.

The opportunity cost of ignoring an asset that's sitting there waiting to be created is significant. And it's likely that competitors are already learning how to generate carbon credits; once U.S. regulations are finally in place, those companies will be way ahead. Perhaps most important, businesses need to understand how carbon markets will affect the competitive landscape and many investment decisions.

In the interest of getting apprehensive companies to think about greenhouse-gas-reduction assets, we present here a FAQ-format pocket guide that we developed in collaboration with Joanne Howard and Lindsey Bartlett of the British Consulate-General in Houston.

How much is a carbon credit worth?

The value of a carbon credit, a financial contract representing a verifiable annual reduction or avoidance of one metric ton of greenhouse gas emissions, currently ranges from a few dollars to more than \$40, depending on various factors. The credit is issued by a regulatory organization—specifically, by a branch of the United Nations in countries that have signed the Kyoto Protocol, or by a nonprofit in voluntary carbon markets. In “Kyoto countries,” companies surrender accumulated credits to regulators in order to comply with emissions limits. That will happen in the United States, too, once carbon-emission caps are established.

My company replaced its incandescent lightbulbs with compact fluorescents. Does that count as a carbon asset?

Sorry—probably not. For midsize companies (those with revenues up to \$1 billion), such an initiative is likely to be too small to generate

much value. Besides, the carbon savings from operational efficiency improvements are not yet well documented, and it's also not clear who would own the right to the carbon reduction—you or the power company. But don't give up. There are other carbon-related assets to consider.

What are the other initiatives my company can take?

Focus on the most common. Those include switching to less-carbon-intensive inputs, converting to cleaner-burning fuels, generating renewable energy, and capturing methane, industrial gases, or waste energy. A cement company could generate credits by replacing traditional feedstocks with fly ash from coal power plants. A brewery could capture methane produced during fermentation. Using well-established methodologies for turning those types of projects into carbon assets increases your likelihood of receiving credits, and it avoids the cost of developing new methodologies.

How much money are we talking about?

Tried-and-true approaches typically cost \$50,000 to \$150,000 per project in up-front development expenses for navigating the regulatory approval process and preparing contracts and other documentation, beyond any underlying capital expenses. Developing a new methodology could set you back an additional \$50,000 to \$200,000. In both cases, carbon-related transaction costs usually don't vary with the size of the project, so initiatives producing more credits end up being more lucrative. Recovering waste heat and gas at a steel factory, for instance, could generate 200,000 credits a year, worth up to \$5 million.

Let's say I adopt a new, emission-friendly technology and package the resulting CO₂ reduction as a carbon credit, but then revert to my old polluting ways. What happens to the credit?

It goes away. The reduction underlying a carbon asset must be verified annually by an accredited auditor. Audits cost roughly \$10,000.

If I don't want the financial risk of holding carbon credits, can I sell them and take the cash?

Yes. Credits are fully tradable. In the United States, where regulatory compliance isn't yet an issue, many companies with overseas operations don't need all the credits they generate abroad, so they sell them, usually to banks, brokers, or investment funds, which resell them to companies that need them for compliance.

Once I've figured out how to create and sell carbon credits, am I done?

Definitely not. Carbon reduction will be more than an operational or regulatory problem—it will become a strategic issue, because of the po-

tential for asset creation and the need to examine every investment's long-term carbon ramifications. Emissions reductions will generate new revenue streams; emissions-intensive assets will lose value. The most successful companies will be those that quickly figure out carbon's strategic implications.

Alex Rau (alex.rau@climatewedge.com) is a San Francisco-based principal at Climate Wedge, a carbon-finance advisory firm. **Robert Toker** (rob.toker@fco.gov.uk) is the head of UK Trade and Investment for Texas and Florida; he is based at the office of the British Consulate-General in Houston.

Reprint [F0809C](#)

To order, see the next page
or call 800-988-0886 or 617-783-7500
or go to www.hbr.org

Further Reading

The *Harvard Business Review* Paperback Series

Here are the landmark ideas—both contemporary and classic—that have established *Harvard Business Review* as required reading for businesspeople around the globe. Each paperback includes eight of the leading articles on a particular business topic. The series includes over thirty titles, including the following best-sellers:

[Harvard Business Review on Brand Management](#)

Product no. 1445

[Harvard Business Review on Change](#)

Product no. 8842

[Harvard Business Review on Leadership](#)

Product no. 8834

[Harvard Business Review on Managing People](#)

Product no. 9075

[Harvard Business Review on Measuring Corporate Performance](#)

Product no. 8826

For a complete list of the *Harvard Business Review* paperback series, go to www.hbr.org.

Harvard Business Review

To Order

For *Harvard Business Review* reprints and subscriptions, call 800-988-0886 or 617-783-7500. Go to www.hbr.org

For customized and quantity orders of *Harvard Business Review* article reprints, call 617-783-7626, or e-mail customizations@hbsp.harvard.edu