

SUSTAINABILITY

The Climate Imperative for Business

by Brian Berkey and Eric W. Orts



Business as usual is no longer an option.

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Scientists agree that we must aim to limit the global mean temperature increase associated with anthropogenic climate disruption. Some scientists believe that we must limit the mean temperature to no more than 2°C above pre-industrial levels. Others insist on a target of 1.5°C. Either goal requires a drastic reduction in net greenhouse gas (GHG)

emission trajectories in the near future if we are to avoid widespread famine, deadly heatwaves, coastal inundation, mass human migration, economic collapse, and global wars for resources.¹

The **Intergovernmental Panel on Climate Change** says “substantial emissions reductions over the next few decades and near zero emissions of CO₂ and other long-lived greenhouse gases by the end of the century” are needed. In a **special report**, it estimates that meeting the 2°C goal requires a 25% GHG reduction from 2010 levels by 2030, and net zero emissions by 2070. The 1.5°C goal requires a 45% GHG reduction from 2010 levels by 2030, and net zero emissions by 2050. Scientists warn that “we are in a state of planetary emergency.”²

In these circumstances, “business as usual” is not an option. Business firms of all kinds must adopt what we call *the climate imperative* as a principle to guide their behavior.³ This moral imperative is incompatible with the traditional business focus on maximizing profits. It demands that firms forego at least some profitable opportunities. It also means that business should support pro-climate public policies and laws, even when they would reduce a firm’s marginal profitability.

1. The Climate Imperative

Business activity contributes a great deal to current GHG emissions. Approximately one-third of emissions result from energy production and use. Transportation, industrial production, and building use and construction account for most of the rest of the total. Agriculture and deforestation account for about one-quarter of global emissions. To meet either the 2° or 1.5°C limits, business firms in the aggregate must reduce GHG emissions substantially.

Certain industries, including fossil fuels (coal, oil, and natural gas), animal agriculture, and cement, have an especially large climate footprint, and so they must achieve especially large reductions. The International Energy Agency concludes that “no more than one-third of proven reserves of fossil fuels can be consumed prior to 2050 if the world is to achieve the 2°C goal.”⁴ Most of these reserves are controlled by 90 organizational entities, which

have been identified as the “carbon majors.”⁵ These entities include 50 private corporations, as well as 31 state-owned enterprises and nine nation-state producers of fossil fuels and cement. Limiting global heating to 2°C or 1.5°C requires the firms and nation-states that control known fossil fuel reserves to leave most of them in the ground, and thus forego the revenue that would otherwise be generated by extracting and selling them. In other words, these resources should become “**stranded assets**.” The continued exploration and exploitation of new fossil fuel resources, such as under oceans and in protected land areas, must also be abandoned.

It is unlikely that the carbon majors will voluntarily reverse course, though they may transition to produce more renewable energy or embrace effective carbon-capture technologies. But other business firms have a moral responsibility to radically reduce their dependence on fossil fuels as a primary source of energy, as well as to change or redesign their own GHG-releasing products and services.

In the face of the climate emergency, every business person individually and collectively should act, at a minimum, according to the following moral principle:

The Climate Imperative for Business: *Business people ought to make decisions that, in the aggregate, limit their firms’ GHG emissions to a level that is compatible with keeping global heating within recommended limits, assuming that other agents, including other firms, also comply with this ethical requirement.*

The scope of this imperative is both internal and external to the operations of a business. Internally, a business should assess its own contributions to the climate emergency in terms of net GHG emissions, and should set ambitious goals to reduce them. Externally, a business should engage in pro-climate sourcing, distribution, education, and policy-making.

2. Profit-Maximizing and the Climate Emergency

The climate emergency threatens to damage a wide range of human interests. Because GHG emissions from business activity cause climate disruption, business people should concern themselves with the climate-related effects of their behavior. To think that they should not is, ethically speaking, roughly the equivalent of thinking that business people need not incorporate a concern for whether their firm's activities result in the deadly poisoning of the drinking water of millions of people.

Severe climate impacts caused by anthropogenic actions have already arrived, but the worst consequences lie in the future. Global heating of 3°C or more by 2100 would likely result in hundreds of millions of deaths and a fundamental reordering of civilization.⁶ It would destroy the natural foundation needed for recovery and restoration, and thus “murder the future.”⁷

To take the climate imperative seriously as an end, the structure of the decision-making of business enterprises and their managers must reliably lead them to behave in ways that are compatible with the end. The jarring but inescapable implication is that the traditional profit-maximizing approach to business decision-making is inconsistent with the climate imperative. This conclusion follows for several reasons.

First, for profit maximization to be compatible with the climate imperative, a remarkable coincidence would have to obtain. Every business person aiming to maximize the profits of their firm, acting with no direct concern for GHG emissions, would somehow have to generate an outcome in which aggregate GHG emissions from all for-profit firms would fall dramatically over the next few decades. This is extremely unlikely. The goal of limiting global heating to either 2°C or 1.5°C requires that a broad and diverse range of actors act consistently in ways that contribute to that goal. It is simply not plausible that acting with no direct concern for this goal can reasonably be relied upon to contribute to its achievement.

Second, because the costs of significant energy-efficiency transitions will tend to be higher than the costs of more modest transitions, it is likely that even in many cases in which firms have profit-based reasons to pursue *some* efficiency-improving measures, a profit-maximizing approach will not recommend pursuing large, let alone maximally large,

investment in such measures.⁸ Optimistic estimates of the GHG emission reductions that can be achieved through the adoption of efficiency-improving measures within a profit-maximizing framework are often overstated.

A third reason to be skeptical of energy efficiency as a win-win solution is that the most ambitious energy-efficiency measures would provide only a fraction of the emissions reductions that are necessary to keep global heating within recommended limits. The International Energy Agency reports that energy-efficiency measures could contribute only 35% of the emissions reductions necessary to give us an estimated 66% chance of limiting global heating to 2°C.⁹

In addition, firms that most clearly have profit-based reasons to aim at aggregate emissions reductions, such as those developing climate-friendly energy sources, are in competition with firms, primarily in the fossil fuel industry, that continue to pursue business models that contribute massively to the climate problem. It is projected that major fossil fuel firms will “**flood markets with an additional 7 million barrels [of oil] per day over the next decade,**” amounting to an 8% rise in projected output between 2018 and 2030. Given that burning all of the fossil fuels that the industry is planning to extract in the next ten years would produce 40% of the estimated emissions compatible with keeping global heating under 1.5°C, it is extremely unlikely that their business plans, if successful, can be made consistent with the climate imperative. **By one estimate,** the largest fossil fuel producing firms would have to reduce their GHG emissions by approximately one-third by 2040 to comply with the climate imperative.

To suggest that fossil fuel firms, contrary to their past behavior and a wide range of evidence, have profit-maximizing reasons to pursue strategies that would involve substantial emissions reductions, reflects, we suspect, a certain kind of wishful thinking: a desire to avoid facing up to the severity of the climate threat to human well-being and its inevitable conflict with profit maximization as the *sine qua non* of business decisions. The depth of this conflict requires a revised approach that respects the climate imperative: profits, but within a climate constraint.

One might then suggest that even if profit-maximizing fossil fuel firms may act against the climate imperative, most other profit-maximizing firms may not. This is also implausible, however, because most firms depend on consuming energy, often to a significant degree. To the extent that fossil fuel firms successfully offer their products as the most cost-effective option for other firms' energy needs, those firms will have profit-maximizing reasons to consume fossil fuels instead of cleaner alternatives. Profit-maximizing firms throughout the economy, then, are hostage, at least to a large extent, to the profit-maximizing strategies of the carbon majors.

3. Public Policy, Profit-Maximizing, and the Climate Imperative

The same kind of wishful thinking leads many to claim that profit maximization is compatible with resolving the climate emergency, so long as appropriate public policy measures are adopted. Many economists claim, for example, that if the estimated cost to present and future generations of each measurable unit of GHG emissions could be attributed and then incorporated into the economic cost structure (e.g. via a carbon tax), then the long-term target for reducing GHG emissions could be achieved through market pricing. The cost of using coal, oil, and gas for fuel would rise, as would the cost of all products and services producing GHGs—with an equilibrium reached that would allow for profit-maximizing within a universally imposed climate constraint.¹⁰

There are at least two reasons, however, why profit maximization cannot be defended by pointing to the role that policy measures would ideally play to limit global heating.

First, the policy solutions most commonly endorsed by economists are often not practicable in the real world. For example, it is effectively impossible within our decentralized contemporary global governance structure to set a universal price on carbon and other GHG emissions. Even if an adequate price could be determined and set (with the price changing over time to accord with changing evidence about the effectiveness of the price and the responsiveness of the global climate), the institutional mechanisms for monitoring and enforcement are absent in a fragmented world of many different sovereign governments. Therefore, practical solutions to large-scale climate disruption must be

multi-faceted, involving many different institutions, including business.¹¹ Even with the best practicable policies in place, an essential role would remain for business to limit emissions within the relevant policy constraints.

A second reason that appeal to an ideal policy cannot save the profit-maximizing approach is that many profit-maximizing businesses actively oppose efforts to implement the necessary climate policies.

Reliable reports reveal that major oil companies, including Shell and ExxonMobil, are planning to increase oil production by more than 35% between now and 2030. Despite referring to climate change as the biggest issue facing the oil industry, Shell's CEO, Ben van Beurden, says that he believes that "it is not for energy companies to curtail the use of energy." This claim is potentially compatible with the view that governments should curtail the use of fossil fuels to keep global heating within acceptable limits. However, given that Shell's business strategy for the next few decades involves the production, sale, and burning of increasingly large quantities of fossil fuels, it seems clearly to be assuming that strict regulations on fossil fuels will *not* be implemented. Further, it is not difficult to imagine that Shell and other carbon majors plan to take steps to ensure that government inaction continues. Large firms have the necessary resources to prevent or forestall legislative efforts to address the climate emergency, including by false challenges to climate science.¹² Smaller firms have also formed alliances, such as in the U.S. Chamber of Commerce, which has at least until recently **opposed climate regulation**.

4. How Business Can Save the World

Here are some general business strategies in keeping with the climate imperative. In general, they embrace a revised business "purpose" of "producing profitable solutions to problems of people *and* planet."¹³

Climate Action 1. Measure and Reduce Your Own Carbon Footprint

Business firms should "manage what they measure" in terms of GHG emissions and other climate-related activities. Social and environmental reports that include climate

performance have become commonplace. More firms can and should join in this effort. To avoid greenwashing, firms should establish and verify through third-parties that they are making progress on their internal goals.

Climate Action 2. Join with Other Firms to Advance International Objectives

Firms should actively participate in the Paris Agreement, developing standards, policies, and technologies to address the climate challenge. Business coalitions can provide momentum toward progress, and stabilize and guarantee progress made. The force of many firms acting in accordance with global standards can catalyze change and transformation from the “bottom up.”¹⁴

Climate Action 3. Invent Products and Innovate Services for Climate Preservation

Business firms that create and sell climate-friendly products and services are already contributing profitable solutions. Renewable energy companies that focus on solar and wind power, as well as battery technology and smart grids, are leading examples. Energy efficiency remains one of the most cost-effective methods of reducing GHG emissions,¹⁵ and many companies are developing innovative materials and services along these lines. In transportation, **electric and hydrogen-powered vehicles** are the wave of a climate-friendly future. Sustainable building technology and design are booming, as construction materials such as **negative-carbon cement** and **cross-laminated timber** have also gained traction. These examples, as well as new technologies for **direct carbon capture from the atmosphere**, illustrate the emergence of **a circular economy** that includes GHG cycling.

Climate Action 4. Get Political and Lobby Governments for Pro-Climate Legislation

The climate imperative requires business to “get political” and to lobby and speak out in favor of pro-climate policies,¹⁶ especially given that fossil fuel interests lobby and support candidates in an anti-regulation direction.¹⁷ In other words, the imperative supports pro-climate “corporate political responsibility.”¹⁸

Concluding Remarks

“There is no polite way to say that business is destroying the world,” said Paul Hawken in 1993.¹⁹ Despite some technological and practical progress, his sad assessment remains true. The **best scientific estimates** give us only about a decade to begin to turn the global trend toward climate sustainability. The climate imperative requires business to take direct responsibility rather than, for example, looking only to government to solve the problem. Governments will not save the climate, at least not governments acting alone.

Unlike some moral principles (e.g. “thou shalt not kill”), the climate imperative does not state one principle applicable to everyone’s actions in equal measure. Different kinds of business firms have different levels of responsibility.

The carbon majors, including large fossil fuel, cement, and some agricultural firms, play a disproportionate role in the production of GHG emissions. In order to comply with the climate imperative, they must change their business strategies radically. Oil and gas firms must begin to invest in and plan for a transition to renewable energy sources (as well as carbon capture when and if viable). Cement firms must shift to carbon-input alternatives. Agricultural interests must adopt and further develop GHG-sequestering technologies. Subsidies for GHG-polluting firms must be eliminated, and all firms are ethically obligated not only to refrain from lobbying against climate legislation, but to support it.

At the other end of the spectrum, businesses that promote renewable energy, energy-efficiency, and other climate solutions may already comply with the climate imperative, given their business objectives. Given the focus and core competencies of these firms, they often face limited or no conflicts between profits and the climate imperative.

Most business firms are in the middle, and for them adherence to the climate imperative comes in degrees, and requires the careful exercise of judgment. Any business must turn a profit to stay viable, and then whatever climate solutions a business can afford to adopt can contribute to overall climate sustainability.

Firms that fail to make efforts to comply with the climate imperative, including especially the carbon majors, deserve sanctions: both legally and in the marketplace. Business firms, other institutions, and individuals should shun, boycott, or divest from these firms.

Derek Parfit wrote that:

“We are the animals that can both understand and respond to reasons. These abilities have given us great knowledge and power to control the future of life on Earth.

. . . What now matters most is ceasing to overheat the Earth’s atmosphere, and taking care of this planet in other ways, so that it continues to support intelligent life.”²⁰

Following the climate imperative as a constraint on profit-making puts this wisdom into practice.

► References



Brian Berkey [Follow](#)

Brian Berkey is an assistant professor in the Legal Studies & Business Ethics Department at the Wharton School of the University of Pennsylvania. His work is in moral and political philosophy, including business ethics and environmental ethics.



Eric W. Orts [Follow](#)

Eric W. Orts is the Guardsmark Professor in Legal Studies & Business Ethics and Management at the Wharton School of the University of Pennsylvania. His writings and teaching have recently focused on business responsibility, environmental sustainability, and democracy.