

BP's emissions trading system

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Abstract

Between 1998 and 2001, BP reduced its emissions of greenhouse gases by more than 10%. BP's success in cutting emissions is often equated with its use of an apparently market-based emissions trading program. However no independent study has ever examined the rules and operation of BP's system and the incentives acting on managers to reduce emissions. We use interviews with key managers and with traders in several critical business units to explore the bound of BP's success with emissions trading. No money actually changed hands when permits were traded, and the main effect of the program was to create awareness of money-saving emission controls rather than strong price incentives. We show that the trading system did not operate like a "textbook" cap and trade scheme. Rather, the BP system operated much like a "safety valve" trading system, where managers let the market function until the cost of doing so surpassed what the company was willing to tolerate.

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1. Introduction

In May of 1997 in a speech at Stanford, BP CEO John Browne announced that BP would reduce its greenhouse gas emissions, becoming the first major international oil company to recognize publicly the threat of global climate change (Browne, 1997a). Subsequent to that speech, BP set the goal of cutting emissions 10% below 1990 levels by 2010 and established an internal emissions trading system (ETS) in which BP's individual business units could trade emissions credits as the firm sought to meet its collective goal (Browne, 1997b). Browne returned to Stanford in March 2002 to announce that the firm had met its 10% goal—seven years ahead of schedule while generating \$650 million in new shareholder value (Browne, 2002, 2004).

The stellar performance of BP's emission control program has led many observers, inside and outside BP, to ascribe success to the firm's emissions trading system. As countries and other firms have considered the

adoption of trading systems, they often point to BP's pioneering experience as a guiding star. Yet no study has ever explained the operation and impact of BP's trading system. Which factors truly drove the leaders of BP's business units to cut emissions? What lessons should be learned from BP's experience to guide other trading systems? We focus on these questions, drawing heavily on interviews with key corporate policymakers at BP as well as managers in key business units (BUs) that were actually involved in trading.

The publicly available literature on BP's experience in cutting emissions is surprisingly thin given BP's pioneering role on the climate issue. A few studies, notably business school case studies, focus on emissions controls as part of BP's grand strategy in emphasizing its concern for the environment and its commitment to corporate social responsibility (CSR) (Reinhardt, 2001; Rogan, 2002). Many studies on CSR and on private self-regulation mention BP's experience in passing without much attention to detail (Florini, 2003b; Braithwaite and Drahos, 2000). Several news articles refer to BP's trading scheme as an unqualified success story (Carey, 2004; Welcome to Kyoto-land, 2004). Only one published case study focuses on the actual trading system

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itself—a study written by BP managers and offering a broad overview of the firm’s ETS rules and results without detailed attention to the incentives that affected the actions of BU managers (Akhurst et al., 2003).

When BP announced the creation of its ETS, the firm’s strategists had three goals in mind, each of which we evaluate. First, BP sought to gain experience with the policy instrument that was a likely mechanism to be deployed in a future, economy-wide emissions limitation program. Second, they hoped that a successful demonstration of emissions trading would forestall alternative, more costly policy responses such as an emissions tax. European policy makers had been exploring the imposition of carbon taxes since the early 1990s, and for firms such as BP with large emissions, such policies could be disadvantageous because they would shift revenues from the firm to the taxing governments. Third, the firm sought a decentralized mechanism that would encourage business units to find the most advantageous cuts in emissions. As an organization, BP is geographically and operationally diverse, and business units have varying marginal costs of emissions reductions—exactly the attributes that have drawn many policymakers to use market instruments for cutting emissions rather than central command. At the same time that BP sought an appropriate mechanism for controlling emissions across its business units, it was also growing rapidly and attempting to decentralize control in the allocation of capital resources. The emissions trading system for greenhouse gases, tiny beside the billions of dollars in capital the firm deploys every year, was part of a broader effort to centralize strategic choices (e.g. the setting of an emission cap) but decentralize control over deployment.

Section 1 details the nuts and bolts of BP’s ETS. It covers the program’s origins and key rules, such as those governing allocation of emissions permits as well as enforcement and compliance. Section 2 examines the effect on the incentives of BU managers. We discuss those effects generally and through the stories of two different business units—one an active seller of permits and one a buyer that missed its target—to illustrate how BP’s cap and trade system actually worked on the ground. We also examine several rival hypotheses that may explain BP’s success in reducing emissions. The final section revisits the lessons we derive from BP’s experience and their relevance to future schemes.

2. Origins and rules of the game

Until the mid-1990s, “Big Carbon”—coal miners and utilities, the oil and gas industry, and the automobile industry—staunchly opposed possible government controls on greenhouse gas emissions. They supported a lobbying group, the Global Climate Coalition, that

challenged the integrity of climate change science and questioned the merits of any policy to control emissions (Gelbspan, 1998). Yet a scientific consensus was hardening around the conclusion that greenhouse gas emissions were causing a change in climate.¹ At the same time, private companies were being held accountable for a wider array of public social obligations (Florini, 2003a). Squeezed between these expectations, BP’s executives were finding their position on the issue of climate change increasingly unjustifiable (Reinhardt, 2001).

John Browne’s May 1997 speech at Stanford marked the breach. He said that BP could no longer deny the mounting evidence that greenhouse gas emissions exert an influence on the Earth’s climate, and he pledged that BP would control its own emissions but did not specify any targets or timetables (Browne, 1997a).

Having taken such a maverick position, BP faced the question of how to best deliver on its pledge. Several factors led to the choice of emissions trading. One was the desire to head off a standards-based or a tax-based policy. In Europe at the time, governments preferred these two methods to a system of emissions trading; indeed, the only experience with a large scale cap and trade system was in the United States, where under the 1990 Amendments to the Clean Air Act the US deployed trading to control emissions of sulfur dioxide, the leading cause of acid rain (Ellerman et al., 2003). (The US had also experimented with trading mechanisms for some types of local air pollution, for lead, and a few other effluents.) At the time, diplomats were preparing to meet in Kyoto in late 1997 to finalize a treaty that would strengthen the international commitment to reduce greenhouse gas emissions, and most European governments were opposed to a US-led scheme for unfettered international emissions trading. The EU’s draft for Kyoto envisioned, instead, a complex array of “policies and measures,” not emissions trading (Bodansky, 2003). In the early 1990s, when international rules on controlling carbon had last been the subject of an international treaty negotiation (the 1992 Framework Convention on Climate Change) the EU had strongly advocated a combination carbon and energy tax. (That measure failed over concerns about the impact on EU competitiveness.) To BP, emissions trading was the most favored outcome, and visibly supporting that path with its own actions could help ordain the outcome during the critical policy decisions that were under debate, especially in Europe, in the late 1990s.

As part of its effort to identify a credible response to the issue of climate change, BP partnered with the

¹For example, see the IPCC’s First and Second Assessment Reports at <http://www.ipcc.ch/pub/reports.htm>. Also, Spencer Weart (2003), *The Discovery of Global Warming*, Harvard University Press.

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