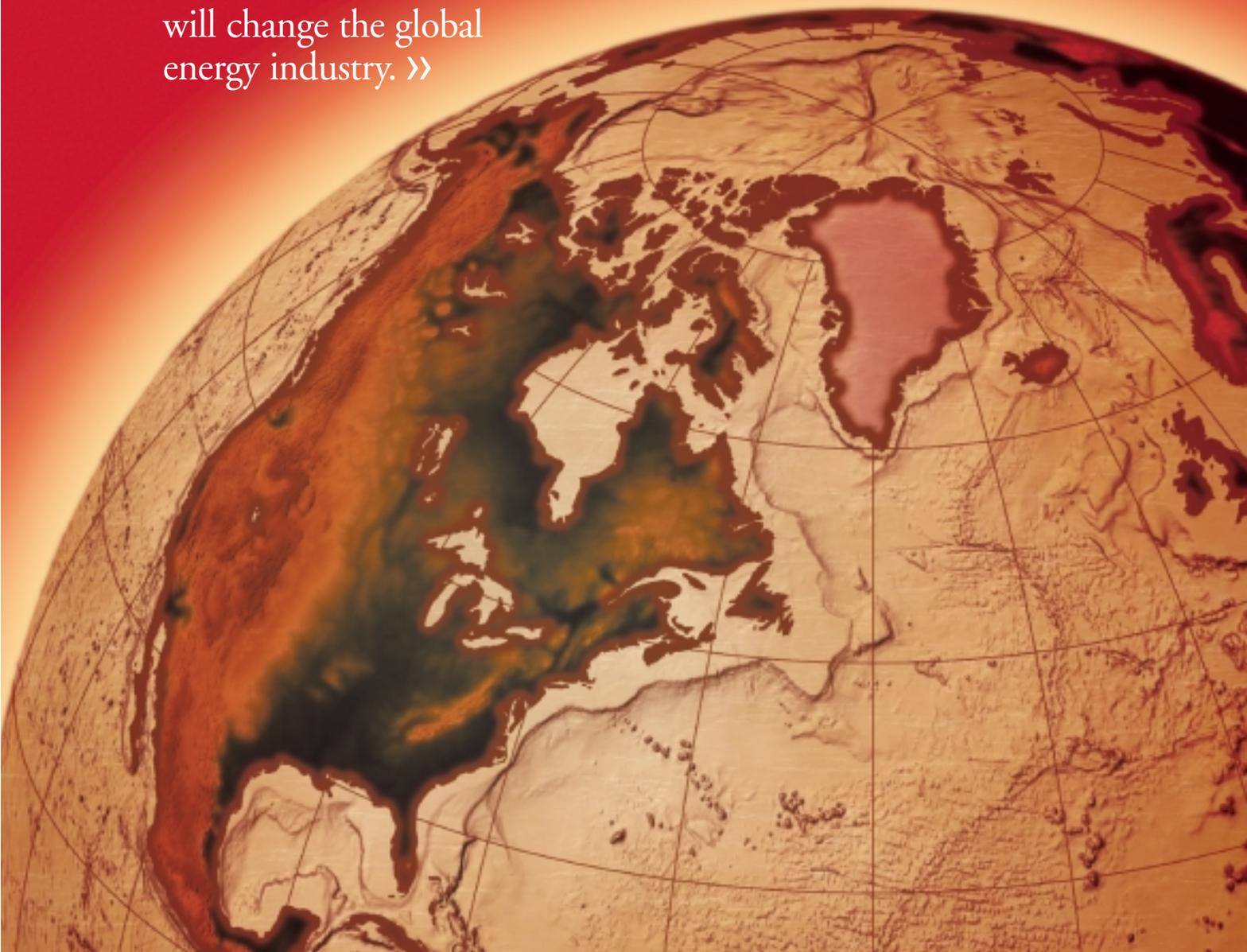


GREENHOUSE-GAS EMISSIONS

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GREENHOUSE-GAS EMISSIONS

A New World Order

Pressure for national legislation builds as the Northeastern U.S. goes it alone and carbon trading takes off in the European Union.

BY PETER FONTAINE

Domestic and international pressures are building rapidly on the United States to enact some form of legislation to curb greenhouse-gas emissions, as a spate of recent developments turns up the heat on the Bush administration. Internal pressure is building on several fronts. First, coalitions of nine Northeast states and three West Coast states are moving forward with their own regional greenhouse-gas cap-and-trade programs, raising the prospect of uneven CO₂ regulation across the nation and electricity market distortions. Second, the bi-partisan National Commission on Energy Policy published a report in December urging the Congress and the White House to implement national legislation establishing a mandatory, economy-wide, tradable-permits program to limit greenhouse gas emissions. The regional greenhouse-gas programs and the recommendations of the National Commission on Energy Policy are likely preludes to the reintroduction in early 2005 of the McCain-Lieberman Climate Stewardship Act. The bill would establish a national greenhouse gas cap-and-trade program to reduce CO₂ to year 2000 emission levels over the period 2010 to 2015.

International pressure on the United States is building as well. In November 2004, Russia defied conventional wisdom by ratifying the Kyoto Protocol, thereby clearing the way for the treaty's long-awaited enforcement. The Protocol will go into effect on Feb. 16, 2005. Also, in November, the Arctic Council published alarming new data showing that global warming is already having a profound impact on the arctic environment, decades earlier than predicted. Then, in December, at the 10th annual meeting of Conference of Parties (COP) of the United Nations Framework on Climate Change, the United States was roundly criticized for blocking efforts to schedule a new round of talks aimed at achieving additional greenhouse gas reductions beyond 2012, and for supporting a Saudi Arabian proposal to compensate oil export nations for the reduction in oil revenue induced by the global effort to reduce CO₂ emissions. Finally, just last month, the EU commenced its Emissions Trading Scheme (ETS), resulting in mandatory CO₂ emissions caps and the trading of CO₂ allowances among 12,000 EU industrial installations.

With Russia's ratification of the Kyoto Protocol and the onset of the EU Emissions Trading Scheme (ETS), overseas trading of emissions allowances has taken off. Analysts predict the market will soon exceed \$100 billion, with CO₂ allowances currently trading at around €8.45 (\$11.52). However, because the United States has not ratified the Kyoto Protocol, U.S. companies will be left out on emissions trading with the EU unless linkage of emissions programs can occur outside the Kyoto Protocol (or the Bush administration decides to ratify Kyoto). Accordingly, the world's greatest capitalist country

could be left out of the world's newest capital market.

Northeastern Regional Greenhouse-Gas Initiative

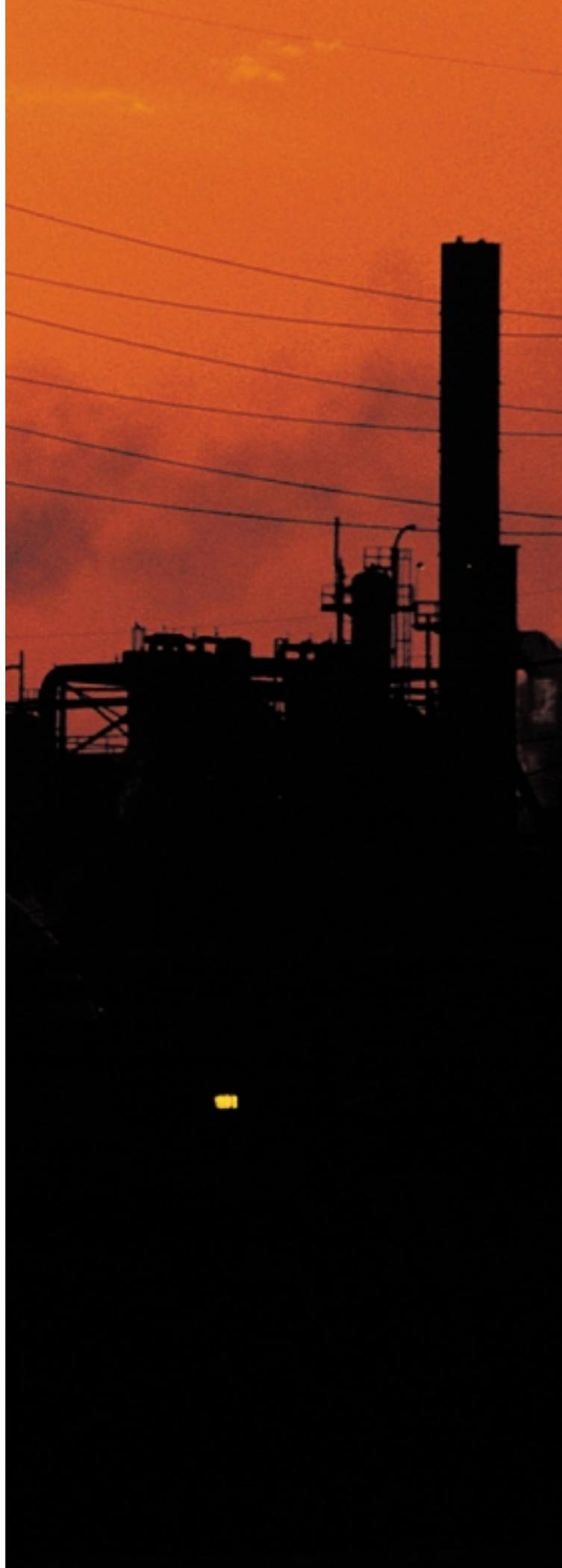
Perhaps the most far-reaching climate-change development in the United States to date is the Regional Greenhouse-Gas Initiative (RGGI), a mandatory CO₂ cap-and-trade program being developed by the Northeastern states of Connecticut, Delaware, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont. Two additional states, Pennsylvania and Maryland, as well as the District of Columbia, the Eastern Canadian Provinces and New Brunswick, are official "observers" of RGGI, meaning they may elect to join at a later date. Collective CO₂ emissions from the RGGI states are substantial in the global context, according to 2001 data from the Oak Ridge National Laboratory. The states have combined emissions of 527 million metric tons of CO₂ (MMTCO₂)—9.3 percent of total U.S. CO₂ emissions and nearly the emissions level of the United Kingdom. Collectively, the states are the fifth highest CO₂ emitter in the world.

The RGGI program currently covers CO₂ emissions from some 758 fossil fuel-fired electricity generating units (EGUs) having a nameplate capacity of 25 MW or more within the nine member states. Under the model rule being developed, CO₂ emissions from EGUs will be capped at specified levels that have not yet been determined. The model rule—due in April 2005—will outline the conceptual framework for the cap-and-trade program. After the program is up and running in 2006, participants may choose to expand the program to other carbon-intensive sectors to achieve further reductions.

Not surprisingly, recent modeling of the impact of RGGI on electricity prices conducted by Connecticut predicts that average wholesale electricity prices will increase significantly over the forecast period. Similar electricity price increases in the EU are forecast as a result of the EU ETS.¹

EU Emissions Trading Takes Off

On Jan. 1, 2005, the EU commenced CO₂ emissions trading under the ETS. The program applies to some 12,000 installations, namely producers of energy, steel, cement, glass, ceramic, brick, pulp, and paper. The first phase of the EU ETS runs from Jan. 1, 2005, to Dec. 31, 2007. The second phase runs from 2008 to 2012. Under the ETS, each covered facility is required to hold a sufficient number of "allowances" (one allowance equals one metric ton of CO₂) representing its authorized level of CO₂ emissions, or its "cap." Each EU member is allocated allowances to its covered facilities pursuant to each country's National Action Plan. Before April 30 of each year, subject facilities are required to surrender a sufficient



number of allowances covering their actual emissions for the year. To meet their emission caps, facilities can either reduce their CO₂ emissions down to their specified level, or purchase allowances from the emissions allowance market.

The EU allowance market will be supplied by excess allowances generated by facilities that have reduced their emissions below their caps. While allowances will be generated primarily by facilities within the EU, allowances may also be supplied by other non-EU CO₂ trading systems, pursuant to the EU's so-called Linking Directive. The Linking Directive allows EU ETS installations to purchase allowances from outside the EU to satisfy their emissions caps.² The Directive states that CO₂ emissions reduction undertaken outside the EU pursuant to the Kyoto Protocol's Joint Implementation (JI) and Clean Development Mechanism (CDM) programs may qualify for allowances that can be bought and sold within the ETS. Thus, an installation within the EU that needs to reduce its CO₂ emissions can obtain the needed allowances through the lowest-cost option available. In lieu of undertaking expensive pollution reductions, this might involve funding an emissions project outside the EU in a nation that has adopted Kyoto, either in a non-EU industrialized country like Russia (through the JI mechanism) or in a non-EU developing country like a Caribbean nation (through the CDM mechanism). In this way, the most economically efficient option for emission reductions can be pursued. However, because the United States has elected not to ratify Kyoto, American companies with installations in the EU are subject to CO₂ emissions caps but cannot take advantage of low-cost emission reductions at their facilities in the United States or elsewhere. This disadvantages American companies in the EU.

Trans-Atlantic Emissions Trading: The Future of RGGI

Because the impact of CO₂ emissions and similar pollutants, like ozone-depleting substances, are global in scope, the location of emission reductions is immaterial. The nature of CO₂ is such that cap-and-trade programs can be linked together to expand the number of opportunities for efficient emissions reductions and thereby reduce cost. In recognition of this, the EU's recently adopted Linking Directive expressly directs that the EU Environmental Commission to explore opportunities for mutual recognition of CO₂ allowances generated by other mandatory greenhouse-gas emissions trading schemes. Talks on linkage began in May 2004, when the Northeast states met with a British delegation. More recently, at the December 2004 COP 10 meeting in Buenos Aires, RGGI and EU representatives discussed their desire to link CO₂ allowance trading programs. The EU also is exploring the possibility of

linkage with the CO₂ allowance program of the Australian state of New South Wales.

It is possible that states located outside the Northeast region will join the RGGI effort. The most likely candidate states are the West Coast states of California, Oregon, and Washington. In November 2004, they announced their own regional global warming initiative that will likely include a regional CO₂ cap-and-trade program similar to RGGI. In fact, representatives from the West Coast initiative are participating in the RGGI meetings. Collectively, the West Coast states' CO₂ emissions of 491 MMTCO₂ are roughly comparable to the RGGI states. Combining both the Northeast and the West Coast into a single cap-and-trade program would represent 1,018 MMTCO₂ emissions, according to the same 2001 Oak Ridge National Laboratory data, or nearly the emissions level of Japan. Linking emissions trading systems on the West and East Coasts is therefore logical. Most of the RGGI states, and California and Oregon have adopted mandatory CO₂ reduction legislation. Nearly all of the RGGI states also have adopted California's tough new tailpipe standards for cars and light-duty trucks. RGGI offers the prospect for other states and nations to join in a larger cap-and-trade program that would force the United States to adopt federal legislation to avoid severe electricity market distortions and the disruption of interstate commerce.

All told, the past three months have witnessed a succession of political, scientific, and economic developments in the climate-change arena that have substantially increased pressure on the United States to enact federal legislation to deal with global warming. Recent events signal the emergence of a carbon-constrained global economy. If the United States is to be a player and not a spectator in this new economic paradigm, it will have to adopt some form of national legislation to cap emissions. ■

Peter Fontaine co-chairs the Energy, Environmental & Public Utility Practice Group of the Cozen O'Connor law firm. He was formerly a Clean Air Act enforcement lawyer with the U.S. Environmental Protection Agency in Washington, D.C. Contact him at PFontaine@cozen.com.

Endnotes:

1. Some observers predict that these competitive impacts will prompt the EU to seriously consider imposing a carbon tax on imported goods manufactured in the United States without carbon controls. See "Global Warming: The Gathering Storm," *Public Utilities Fortnightly*, August 2004.
2. See EC Directive 2004/101/EC of the European Parliament and of the Council, Oct. 27, 2004, http://europa.eu.int/smartapi/cgi/sga_doc?smartapi!celexapi!prod!CELEXnumdoc&lg=EN&numdoc=32004L0101&model=guichett#top.