2010

Anatomy of Industry Resistance to Climate Change: A Familiar Litany

Robert L. Glicksman
George Washington University Law School, rglicksman@law.gwu.edu

Chapter Five
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The industries that generate environmental risks in the United States have long been hostile to regulatory programs that increase their costs of operation and reduce their profits. While industry may have been unprepared for, and thus poorly organized to resist, the first wave of federal environmental legislation enacted during the "environmental decade" of the 1970s,[1] it quickly marshaled its forces. Regulated or potentially regulated entities, their trade associations, and their lobbyists began a concerted effort to defeat, delay, and weaken environmental regulation.

At the beginning of the environmental decade, politicians sought to present themselves as more committed to environmental protection than their opponents. In doing so, they tried to ride the crest of growing public support for strong government steps to deal with the health and environmental risks stemming from industrial activity and land development.[2] In that atmosphere, it was relatively easy for Congress to adopt significant new environmental legislation, and the initial versions of the modern Clean Air and Water Acts passed Congress with virtually no dissent.[3]

By the beginning of the 1980s, however, a significant shift had occurred in the American political environment. That shift, and the neoliberal ideology

that fueled and supported it, produced a federal government that was far more receptive to industry's efforts to stall, obstruct, and weaken environmental law. The arguments industry advanced against environmental regulation, which to that point had fallen largely on deaf ears in Washington, D.C., now found a receptive audience among environmental policy makers. The pivotal turning point was the election of Ronald Reagan as President in 1980, followed shortly after that by Republican capture of the U.S. Senate. The free market ideology to which the Reagan Administration was strongly committed became even more deeply entrenched when Republicans captured control of both houses of Congress in 1994 and of both the executive and legislative branches of the federal government in 2000. The ascendance of this ideology allowed the opponents of regulation to frame their arguments, which previously had relatively little impact, in terms that struck a responsive chord with politicians and provided the arguments with traction that previously did not exist.

This chapter describes the process by which regulatory opponents successfully relied on free market ideology to couch their opposition to health, safety, and environmental regulation in terms that would resonate with the American public in ways it never had before. They portrayed regulation as the product of overreaching, meddlesome, wrong-headed, and power hungry bureaucrats that would almost inevitably detract from rather than enhance

social welfare. In doing so, regulatory opponents enabled politicians to justify their efforts to derail and weaken protective regulation in terms consistent with pursuit of the public interest, rather than as a quid pro quo for the support of narrow, self-interested elements of the regulatory community. The chapter also analyzes how industry and its political supporters have relied on a familiar litany of anti-regulatory arguments generated by conservative ideologues to throttle the efforts of those who support government initiatives to tackle climate change.

I. Laissez-Faire Liberalism Redux

The market-based ideology that increasingly shaped federal regulatory policy beginning in 1981 has been described as "the contemporary reincarnation of the nineteenth century 'laissez-faire' liberalism that advanced the primacy of 'the market' over 'government regulation.'"[4] The proponents of this ideology view "state abstention from economic protection [as] the foundation of a good society."[5] They contend that an efficient market represents the path to public well-being because undisturbed market competition produces incentives to maximize both productivity and individual responsibility. They regard the market as a reflection of neutral, value-free laws and view government as the problem, to which a commitment to the protection of private property rights,

"privatization, decentralization, and deregulation are the answers."[6] This "cultural exaltation of the market"[7] conceives of government regulation as a means of diverting resources from efficiency-maximizing citizens to special interests and bloated government bureaucracies, with the inevitable consequence of shrinking the overall economic pie.[8]

Worse yet, according to the foes of regulation, government regulators tend to be incompetent and regulatory programs often produce unintended adverse consequences, harming the very interests they are designed to protect. According to free market proponents of this ilk, progressive regulatory programs (like environmental protection regimes) are often poorly designed, creating government failures that are worse than the market failures they purport to correct.[9] Regulation often diverts resources away from productive endeavors into compliance efforts whose costs exceed their benefits. Indeed, compliance costs reduce profitability, resulting in reductions in wages, which in turn make it harder for employees to afford a healthy lifestyle. Further, regulation imposes costs on American businesses that make it less competitive in international markets and create incentives for them to relocate overseas where the absence of regulation yields lower operating costs.

As a fallback argument, when the opponents of regulation were unable to completely derail regulation, they argued that regulation designed to redress

market failures (such as the imposition of unwarranted externalities) should nevertheless mimic the operation of a well-functioning free market to the extent possible. They urged regulators to rely heavily on the analytical technique of cost-benefit analysis to determine the appropriate level of regulation. Cost-benefit analysis would send in a regulatory context the same kinds of price signals that the unimpeded free market would provide in the absence of market failure in order to achieve efficient resource allocation. It would prevent government from engaging in excessive and counterproductive amounts of regulation.

II. The Growing Ascendancy of Free Market Ideology

These ideas began to influence federal environmental policy even before the election of President Reagan. The Republican Party's platform in 1980 committed it to alleviating "the crushing burden of excessive regulation," singling out EPA's "excessive" efforts to achieve zero risk. The platform also promised a "war on overregulation."[10] Once Reagan took office, he declared that government is the problem, not the solution to society's ills.[11] Reagan Administration officials and the President himself, who voiced "a long-standing ideological commitment to shrinking the role of the federal government,"[12] railed against "big government," bureaucratic red tape, and the

social policies of "tax and spend liberals." To the extent government had a role to play in restricting the operation of the free market to achieve social policy goals such as protection of health, safety, and the environment, state and local governments were better situated to fulfill this role than the federal government. By thus casting aspersions on the federal government's efforts to protect the public from industry, Reagan encouraged the belief that his administration's opposition to social regulation coincided with the interests of the average American.

The public at large was not the only audience of the new, anti-regulatory rhetoric. The federal government's increased hostility to social and economic regulation developed at the same time that conservative thinkers such as William Simon, Irving Kristol, and Richard Scaife attacked such regulation. These thinkers preached to the business community the notion that "ideas were important" and that they should promote those that were "sympathetic to the interests of business."[13] They encouraged business to frame opposition to regulation in terms of the detrimental impact it would have on those it was supposed to protect – the general public – and to promote the idea that an unimpeded free market was a superior means of protecting private property and enriching the lives of ordinary Americans. By 1994, the essence of the anti-regulatory credo was captured in Phillip Howard's 1994 book, *The Death of*

Common Sense, which portrayed government regulators as incompetent bunglers whose irrational decrees were suffocating America.[14]

Together, conservative academics, business interests, and their political allies successfully painted a portrait of health, safety, and environmental regulation as worse than the social ills it was designed to ameliorate (even assuming that these ills were legitimate subjects of concern to begin with). As one environmental scholar has put it, "the actions taken by the business community effectively established the political and intellectual foundation for a series of subsequent reform efforts that have challenged the basic tenets of the environmental protection laws that Congress enacted in the 1970s."[15] More specifically, the free market ideology that produced the anti-regulatory sentiments described above, and the federal government's receptivity to that ideology, resulted in a cosmic shift in the burden of proof. It was no longer industry that had to justify being allowed to engage in activities that create risks to the public health and safety and the environment. Instead, it was government that had to justify intervening in the market by demonstrating that, against all odds, regulation would enhance, not diminish social welfare.[16] In this way, the federal policy making process became less responsive to those who urged more effective protection for health, safety, and the environment. By framing opposition to regulation in the rhetoric of free market liberalism,

conservative ideologues succeeded in creating an environment in which government policy makers could wrap their own unwillingness to support regulation in the American flag, rather than appearing to be the lapdogs of narrowly self-interested big business.

III. The Anti-Regulatory Litany

The entrenchment of free market ideology in the federal environmental policy making process made policy makers more receptive to a litany of claims by regulated or potentially regulated entities who sought to prevent or weaken regulation. These anti-regulatory arguments surfaced again and again. Facing regulatory initiatives in Congress or federal agencies that they wished to avoid, industry and its political allies typically began by asserting that there was no problem that warranted regulation or that, even if there was such a problem, they were not responsible for creating it. If those arguments proved insufficient to thwart regulation, industry tended to resort to the claim that no technologically practical solution existed to resolve the problem at issue. If that argument failed, industry usually argued that any attempt to solve the problem through regulation would have unacceptable adverse economic consequences (either for the regulated industry itself or for the nation as a whole), and that, even if regulation was affordable, the costs of regulation would outweigh

anticipated regulatory benefits. The final anti-regulatory salvo sometimes took the form of an effort to portray regulation as an unwarranted intrusion on personal liberty and individual rights (including private property rights). Before 1980, these themes had largely fallen on deaf ears. The rise of free market liberalism afforded them a legitimacy they previously lacked, and provided cover for politicians sympathetic to the opponents of regulation. Particular elements of the litany have been more or less successful in defeating regulation in different circumstances. The strategy of relying on it has remained remarkably stable, however, and it typically delays the onset of regulation even when it does not completely prevent its adoption.

The remainder of this chapter provides examples of industry's invocation of these themes to throttle federal health, safety, or environmental regulation. It then describes how anti-regulatory crusaders have used the same arguments to convince policy makers and the public that climate change regulation is premature, inadvisable, and not worth the heavy costs it is bound to impose on the American economy.

IV. The Litany in Action

A. "Prove It!"

The most obvious strategy for defeating regulation is to deny the existence of a problem worthy of government attention. One example of this strategy relates to the health risks posed by environmental tobacco smoke (ETS), or second-hand smoke. When EPA issued a report in the 1990s in which it concluded that ETS causes lung cancer in humans, the Occupational Safety and Health Administration (OSHA) considered restricting exposure to ETS in the workplace. Internal tobacco industry memoranda describe the industry's efforts to deny that ETS creates health risks by, among other things, attacking the scientific validity of EPA's report. As part of its "decade-long efforts to cast doubt upon EPA's risk assessment initiative,"[17] the industry sought out scientists who would "belittle the risks posed by ETS."[18] These scientists sent letters to prominent medical journals contesting any findings that ETS posed cancer risk. They published their own studies refuting the conclusions in EPA's report. The industry engaged in a major advertising campaign ridiculing EPA's position and it even sued EPA (unsuccessfully) to invalidate EPA's ETS report and force EPA to disavow it.[19]

Another prominent example of industry's invocation of the denial strategy arose in connection with the debate during the 1980s over how to address the phenomenon of acid rain. Two prominent supporters of free market environmentalism claimed that "there is little evidence that acid rain is

causing widespread problems."[20] Politicians supportive of the coal mining industry questioned both the need for and the legitimacy of a regulatory program to control sulfur dioxide, which is emitted by facilities that burn coal. Senator Robert Byrd of West Virginia expressed concern that "reality may very well diverge from [the] theory" advanced in support of the 1990 Clean Air Act's "bold new regulatory approach" for abating acid rain. Dissenting from a Senate Report that accompanied a bill proposing federal controls for acid rain precursors, Senator Steve Symms asserted that Congress should have deferred any decision to regulate in light of the speculative nature of the scientific evidence concerning the existence, causes, and effects of acid rain.[21] The Reagan Administration echoed these themes, refusing to back measures to combat acid rain in light of continuing questions about the extent of the problem.[22] When EPA Administrator William Ruckelshaus proposed a modest regulatory program, OMB Director David Stockman ridiculed it, and action was deferred until the first Bush Administration.[23] The opponents of regulation cited claims by some scientists that acid rain would be beneficial, for example, by increasing soybean productivity and pine needle growth.[24]

B. "It's Not My Fault"

When the evidence of an environmental problem becomes sufficiently overwhelming that credible denials are no longer possible, it is necessary for those wishing to avoid regulation to resort to fallback arguments. Opponents of regulation frequently claim that even if a problem exists, it is not being caused by the anticipated targets of regulation. An oft-ridiculed example in the political arena was President Reagan's suggestion that trees are responsible for more air pollution (nitrogen oxide in particular) than American industry.[25]

A more serious example is the notoriously persistent efforts that the tobacco industry made to deny a causal connection between inhalation of tobacco smoke and lung cancer, heart disease, and other adverse health consequences. The most notorious example of the tobacco industry's campaign of denial may be the congressional testimony of executives from the largest tobacco companies denying any knowledge of the addictive nature of their products. But the industry's entire anti-regulatory campaign was based largely on a denial of proof of a causal link between tobacco use and adverse health effects. The campaign entailed a multi-faceted and "concerted public relations effort to create and perpetuate controversy over the question whether cigarettes are harmful to health," including "careful orchestration and eventual suppression of internal research into the health issues raised by cigarettes." These efforts occurred "despite the industry's extensive knowledge of the

actual health risks of smoking. Tobacco manufacturers have long known that cigarettes cause cancer, emphysema, and lung disease."[26] The tobacco industry's strategy was to "fram[e] consensus as controversy."[27] It sought to generate and perpetuate confusion and uncertainty about any possible link between smoking and illness by "smearing and belittling" scientific studies purporting to establish a causal link between cigarettes and disease, overwhelming those studies with mass publication of studies with opposing results, and challenging the validity of studies finding such a link in public debate.[28] According to one federal district court, the tobacco industry knew for decades that smoking causes lung cancer and other diseases but, "[d]espite that knowledge, they have consistently, repeatedly, and with enormous skill and sophistication, denied these facts to the public, to the Government, and to the public health community."[29] Industry's objectives included avoiding regulation, liability in tort actions brought by smokers and their families, and threats to the industry's economic viability.

The tobacco industry's long fight to create and sustain doubt about the health risks posed by its products is the most egregious example of an industry's efforts to avoid costly regulation and liability by denying responsibility for a health, safety, or environmental problem. But other examples abound. Businesses that manufacture and use chemicals suspected of

creating a risk that exposed individuals will contract cancer or other serious diseases have often denied that their products are dangerous or that exposure to them could possibly be responsible for adverse health effects. The Lead Industries Association attacked EPA's efforts to limit concentrations of lead in the ambient air by denying that lead concentrations in human blood at the levels deemed unacceptable by EPA were dangerous and that the use of lead as an automotive fuel additive was responsible for unhealthy blood lead levels.[30] In the late 1970s, industry sought to defeat OSHA's efforts to adopt generic regulations limiting workplace exposures to carcinogenic substances by, among other things, contesting the validity of animal bioassay data as predictors of human cancer risk. They also pointed to lifestyle choices such as diet and alcohol consumption, rather than chemical exposure, as primarily responsible for any rise in cancer incidence. In addition, they postulated the existence of safe threshold levels of exposure below which disease would not develop.[31] The Reagan Administration relied on these and related contentions to justify its conclusion that the presence of uncertainty over the effects of exposure to formaldehyde justified refusing to regulate it as an environmental carcinogen.[32]

C. "I Can't Help It!"

The next logical step in the parade of arguments that industry and its political allies often make to forestall regulation is that there is no technologically feasible way to avoid a health, safety, or environmental problem that has been identified and linked to a particular industry or set of activities. The American automobile industry has long been the poster child for this strategy. When Congress authorized EPA in the Clean Air Act of 1970 to adopt restrictions on tailpipe emissions of air pollutants such as carbon monoxide, hydrocarbons, and oxides of nitrogen, industry's response was to claim that compliance by the applicable regulatory deadlines would be impossible.[33] When industry sought an extension of the deadlines for compliance, EPA Administrator Ruckelshaus refused to provide one, concluding that industry had failed to prove that effective control technology would not be available in time to meet the deadlines. A court overturned that decision at industry's behest on the ground that EPA's denial was arbitrary because the risks of an erroneous denial exceeded the risks of an erroneous grant.[34] Industry used the same technological impossibility argument to convince Congress to grant further extensions when it amended the Clean Air Act in 1977. These delays made it impossible for many areas of the country, particularly urban areas with extensive automobile traffic, to achieve timely compliance with EPA's health-based ambient air quality standards.[35]

The remarkable part of this story is that, at least according to the Justice Department in an antitrust suit it filed in 1969, the three major American automakers had conspired among themselves "not to compete in research, development, manufacture, and installation of [automotive pollution] control devices, and did all in their power to delay such [activities]." The Department concluded that the industry "ignored promising inventions, refused to purchase pollution-control technologies developed by others, delayed installing smog controls already available and known to them, and at times disciplined members of the cartel whose adherence to the collective suppression effort might temporarily waiver."[36] Shortly before Congress passed the Clean Air Act of 1970, the industry signed a consent decree with the Justice Department that "at least implied that the big three manufacturers had in fact illegally worked together to thwart air pollution control."[37]

D. "It's Not Worth It!"

Sometimes, the targets of regulation cannot advance a plausible argument that regulation is unwarranted or premature because there is no problem worthy of regulation, that any problem is someone else's fault, or that proposed solutions are beyond society's current technological capacity. Regulatory opponents rarely give up and meekly accept regulation simply because these arguments

are unavailing. Instead, they are likely to move on to the next component of the litany by contending that regulation is too expensive or that the costs of regulation exceed the anticipated regulatory benefits, making regulation counterproductive.[38] Sometimes, industry, conservative regulatory policy analysts, or politicians antithetical to regulation make these arguments in the aggregate, claiming that the total cost of health, safety, or environmental regulation is exorbitantly high,[39] or that the costs of all regulation of a particular kind (such as regulation of activities that contribute to air pollution) greatly exceed the resulting regulatory benefits.[40] These kinds of arguments are more commonly made, and often with greater impact on regulatory policymakers, in the context of efforts to prevent, delay, or weaken particular instances of health, safety, or environmental regulation.

Industry and its political allies routinely claim that regulation will result in dramatic adverse economic consequences. The auto industry, in addition to relying on the alleged unavailability of control technology to delay tailpipe emission standards, asserted that the emission controls authorized by the Clean Air Act would result in "business catastrophe."[41] Industry also asserted that the stratospheric ozone depletion and acid rain control provisions of the 1990 Clean Air Act amendments would cause the prices for a variety of consumer goods made with chlorofluorocarbons and the cost of electricity to increase

precipitously. In retrospect, these kinds of cost estimates often turn out to have been wildly inflated. One study of the economic impact of a dozen major environmental regulatory programs found that in each case, both industry and the federal government overestimated compliance costs. In all but one of those instances, pre-regulatory estimates exceeded the actual costs of compliance by more than 100 percent.[42] The oil industry, for example, claimed that the cost of phasing out lead as a motor vehicle fuel additive would cost billions of dollars more than it did. The coal and electric utility industries greatly overstated the costs of controlling acid rain; while the cost of purchasing an SO_2 allowance was initially estimated at $750 per ton, it fell below $100 within six years of Congress's adoption of the 1990 Clean Air Act amendments.[43]

Another version of this strategy for blocking regulation is to assert that, even if regulation will enhance public health or safety, the costs of regulation will exceed the benefits achieved. A recent example relates to EPA's efforts to control exposure to ground-level ozone, which can cause respiratory tract problems, premature aging of lung tissue, and reduced resistance to infection. When EPA announced in 2007 that it was considering lowering maximum permissible ozone concentrations in the ambient air, Senator James Inhofe of Oklahoma, a frequent and vocal opponent of federal air pollution regulations who serves on the Senate Environment Committee, opposed the proposal on

the ground that it would "impose significant costs on counties and states across the country with too little environmental benefit."[44]

Clearly, those opposed to regulation believe they are more likely to strike a responsive chord with the public if they assert that environmental regulation will create hardships for the American public due to its high cost than if they acknowledge opposition to environmental regulation in general or complain about the impact of costly regulation on corporate profits, shareholder dividends, and executive compensation. Just as clearly, even though the doomsday scenarios painted by regulatory skeptics should not be taken at face value, they present pro-free market regulators inclined to weaken regulation with a plausible reason for doing so.

E. "That's Not Fair!"

One final strategy for avoiding regulation is to assert that it will interfere with or preclude desirable lifestyle choices for average Americans, interfere with cherished American freedoms, or impair individual rights such as private property rights. Conservative commentators such as Irving Kristol have claimed that interference with the free market through economic and social regulation will ultimately cause "the destruction of freedom"[45]

One good example of this phenomenon involves the federal government's efforts to reduce air pollution from automobiles and encourage the production and use of energy efficient vehicles. The auto and highway construction industries have engaged in public relations campaigns designed to convince consumers that pollution controls and fuel efficiency standards will not only cause sharp price increases for new cars, but also reduce consumer choice by eliminating or restricting access to the larger vehicles that some drivers prefer.[46] The industries and their lobbyists also have argued that the smaller vehicles that fuel economy standards will force consumers to use are less safe than larger vehicles. Public opposition to more direct restrictions on personal use of automobiles, fueled by the opponents of regulation within industry and government, have contributed to the federal government's inability to restrict commuting by automobile, compel carpooling, and require rigorous vehicle emissions testing.[47]

The federal environmental regulatory programs that tend to be at the greatest risk tend to be those that are most easily portrayed as invasive of private property rights. Legislative hearings on the controversial dredge and fill permit program under the Clean Water Act have featured small property owners (called at the behest of congressional opponents of the program) who testified that regulation crushed their dreams of owning their own homes or

profitably operating the farm that the family has owned for generations. Similarly, the public face of the real estate industry's virulent opposition to the Endangered Species Act's prohibition on the modification of the habitat of listed species is not the corporate developer whose plans to build and sell huge and expensive vacation homes or the timber companies whose logging efforts were upset by regulatory restrictions. Instead, the anti-regulatory campaigns orchestrated by lobbies for these industries feature individual landowners whose small tracts are subject to regulatory restrictions. Regulatory opponents assert that the government is engaged in unfair treatment of private property owners in these instances and, in some cases, that regulation amounts to an unconstitutional taking of private property without just compensation. Politicians who would never express outright opposition to the protection of clean water supplies or the value of protecting endangered species may feel comfortable opposing regulation if they are able to couch their opposition as a crusade to protect unfair government infringement on sacrosanct private property rights.

V. Using the Litany to Thwart Efforts to Address Climate Change

The opponents of health, safety, and environmental regulation have not always succeeded in derailing it by making the arguments described above.

Frequently, however, they have provided handy justifications for policymakers antagonistic to regulation in their efforts to block or water down regulatory initiatives. Industry and its political allies have resorted to the same strategy to fight the adoption of federal climate change policy initiatives. Segments of industry that would likely be primary targets of climate change regulation, such as the energy industry, have advanced the familiar, sequential, anti-regulatory litany. So have officials in both the executive and legislative branches of the federal government who oppose doing anything other than more study to address the risks of climate change. These policymakers have responded to the advice provided in a remarkable document prepared by a Republican Party political consultant, Frank Luntz, which provides a road map for justifying opposition to climate change legislation. The Luntz memorandum is a striking example of an effort to convince politicians to frame anti-regulatory policy positions in the garb of the free market liberalism that has historically served the opponents of regulation so well.

VI. Industry Resorts to the Litany to Block Climate Change Regulation

Not surprisingly, industry's first line of defense against the adoption of climate change regulation has been to deny the existence of the problem. Industry's fallback argument has been that, even if the problem exists, humans in general

and their own activities in particular are not responsible for causing it. One journalist has described a "well-coordinated, well-funded campaign" begun in the late 1980s and patterned after the tobacco industry's denial that cigarettes are dangerous. The campaign involved efforts

> by contrarian scientists, free-market think tanks and industry [to create] a paralyzing fog of doubt around climate change. Through advertisements, op-eds, lobbying and media attention, greenhouse doubters . . . argued first that the world is not warming; measurements indicating otherwise are flawed, they said. Then they claimed that any warming is natural, not caused by human activities. Now they contend that the looming warming will be miniscule and harmless.[48]

In portraying warming as a fleeting natural phenomenon rather than one caused by human activity, these groups claimed that increased energy output from the sun or increased sunspot activity may be the culprit, and that "sound science" has not yet identified man-made greenhouse gas emissions as the definitive cause, or even a significant contributing factor.

The public pronouncements of industries most likely to be targeted by climate change regulation have exemplified this strategy. The Business Roundtable is a group made up of some of the nation's top business leaders

(including the energy and auto industries). It represents about one-third of the total value of U.S. stock markets. The Roundtable has recommended "prudence" before taking any steps to address climate change because "the science continues to evolve."[49] In particular, it has opposed the adoption of any mandatory reductions in greenhouse gas emissions.

As the existence of climate change and the human contribution to it have become harder and harder to deny, industry has shifted its focus to other elements of the well-worn anti-regulatory litany. Industry has fueled fears that the cost of addressing climate change will be exorbitant and unacceptable. The U.S. Chamber of Commerce has warned that federal climate change legislation will cause a huge increase in energy prices and force U.S. businesses to relocate to countries without climate change regulation. Indeed, federal legislators have warned that "unilateral" adoption of greenhouse gas controls by the United States would induce nations such as China and India to resist controls in order to enhance their own position in world markets.[50] Spokespersons for the coal industry have criticized support for climate change legislation among some corporate leaders by charging that they "have demonstrated a willingness to devastate the overall American economy for their own short-term gains."[51]

Industry also has argued that climate change regulation would be unduly intrusive and require unnecessary sacrifices that likely would do little if

anything to abate climate change. Representatives of the auto industry have used this tactic in expressing opposition to the adoption by California and other states of standards to control greenhouse gas emissions from motor vehicles. They have claimed that the controls would be "counterproductive" in that they would increase the price of cars, narrow the choice of vehicles available to consumers, sacrifice auto safety, and cause job losses. In addition, they have claimed that there is no proof that California's approach to controlling greenhouse gas emissions would actually help slow global warming.[52] Auto industry spokespersons predicted that the Big Three U.S. car manufacturers would have to quit the passenger car and small truck markets entirely if states were allowed to adopt their own, disparate mandatory caps on greenhouse gas emissions.[53]

VII. The Luntz Memorandum

The arguments against taking action to tackle climate change might not have taken root but for the willingness of politicians friendly to industry to endorse the arguments in the policy making arena. The blueprint for politicians opposed to climate change regulation was laid out bluntly in a memorandum written by Republican Party consultant Frank Luntz early in the first term of President George W. Bush and subsequently leaked to the press. The

memorandum, titled "The Environment: A Cleaner, Safer, Healthier America," was written to provide advice to Republican candidates to help them counter claims by Democrats that climate change regulation was imperative.[54] It began with general advice before providing specific guidance on how Republican candidates should justify their opposition to federal programs to address climate change.

Notably, the strategy was cast in explicitly ideological terms. In particular, it relied heavily on the anti-government, pro-market rhetoric that had long served the opponents of regulation so well and that allowed them to pitch positions that otherwise would likely have been unpalatable to the public. The memorandum thus employed framing to make reliance on the litany of industry objections politically feasible.

The Luntz memo urged candidates to emphasize the same themes that had characterized opposition to environmental regulation since 1980 and that reflected a commitment to free market ideology. It urged candidates to "[p]rovide specific examples of federal bureaucrats failing to meet their responsibilities to protect the environment"; stress the need for freedom, accountability and responsibility; "specify and quantify the number of jobs lost because of needless, redundant regulation"; demand that "Washington . . . disclose the *expected cost* of current and all new environmental regulation"; and

urge an emphasis on "common sense" and the use of "realistic assumptions."[55] Candidates were urged to "explain how it is possible to pursue a *common sense* or *sensible* environmental policy" that preserves past gains "without going to extremes." "Give citizens the idea that *progress is being frustrated by over-reaching government*."[56] The suggested message was clear: government is the problem, not the solution; out-of-control bureaucrats are irrational zealots who have a hidden and self-serving agenda that does not correspond to the interests of the general public; and the direct and indirect costs of environmental regulation are unacceptably high.

The memo encouraged Republican candidates to think of environmental issues as "compelling stories," and stated that what matters most is "how you frame your argument, and the order in which you present your facts." The objective of this story-telling exercise is to convince the public that its salvation lies in acceptance of "the conservative, free market approach to the environment."[57] The memo advised candidates to stress the desirability of a limited role for the federal government in protecting the environment. Although "the public demands at least some federal guidelines, . . . people don't want an intrusive federal bureaucracy dictating local enforcement."[58]

The Luntz memorandum included a separate section entitled, "Winning the Global Warming Debate – An Overview." The implication is obvious – the

ultimate objective is not to actually prevent the adverse effects of climate change but to "win the debate" by convincing the public that the optimal federal climate change policy is to do nothing. The arguments suggested in the memo were designed to respond to Democratic criticism of President Bush's renunciation of the Kyoto Protocol on climate change in 2001. It listed several essential points that should provide the foundation for Republicans' positions on climate change.

The first argument, not surprisingly, was to declare that the existence of global climate change remains unproven:

> The scientific debate remains open. Voters believe that there is *no consensus* about global warming within the scientific community. Should the public come to believe that the scientific issues are settled, their views about global warming will change accordingly. Therefore, *you need to continue to make the lack of scientific certainty a primary issue in the debate* . . . .[59]

Similarly, the Luntz memo urged its audience to "[e]mphasize the importance of '*acting only with <u>all</u> the facts in hand*,' and '*making the right decision, not the quick decision*.'" The major federal environmental laws rest on the premise that environmental policy makers should err on the side of caution by acting to prevent environmental risk even in the face of scientific uncertainty. Despite

that precautionary thrust, the memo urged Republicans to rely on a version of the "dead bodies" standard – regulation is inappropriate until a pile of dead bodies definitively proves that there is a problem – that had been soundly rejected by both Congress and the courts beginning in the 1970s. To make the argument more palatable, the memo stressed that *"[t]he most important point in any discussion of global warming is your commitment to sound science*" and common sense. It issued an ominous warning, however, that "*[t]he scientific debate is closing [against us] but not yet closed. There is still a window of opportunity to challenge the science*."[60] Thus, the memorandum provided a sound science framing device to justify acceptance of the first part of the litany, the denial of a problem.

The Luntz memo recommended raising the specter of economic ruin by portraying climate change regulation as another example of big government taxing the people to death: "Remember, Americans already think they are an overtaxed people. Treaties such as Kyoto would have been just another tax on an already overburdened population."[61] Nor did the memo neglect the argument that regulation precludes important choices to which U.S. citizens are entitled. It urged its readers to "[t]alk about the real world day-to-day effects that proposed environmental remedies would have on their everyday lives,"[62] and to scare people by predicting that "major lifestyle changes" would result

from regulation.[63] If climate change, improbably, turns out to be for real, the market would provide the optimal response. Regulation was unnecessary, costly, and inevitably would not work.

The memo also suggested that politicians opposed to regulation play the "fairness" card by arguing that the United States should not take any steps to address climate change until nations such as Mexico, China, and India commit to do so. Indeed, the memo characterized the "international fairness issue" as "the emotional home run." Any hint that the U.S. climate change policy should continue the tradition of U.S. leadership on environmental issues was entirely absent. Another fairness argument turned on the disproportionate impacts that climate change regulation would have on the disadvantaged: "Yes, the fact that Kyoto would hurt the economic well being of seniors and the poor is of particular concern."[64]

The Luntz memorandum closed by listing several "principles" of environmental policy and global warming.[65] First, "sound science" must govern decisions on which problems to tackle and how to approach them. Second, it is necessary to identify "real risks" to human health and safety before deciding how to address a problem. Both these principles reflect the most fundamental element of the anti-regulatory litany: "Prove it!" Third, "[t]echnology, innovation and discovery" are the keys to providing a clean

environment. In other words, the market will supply superior solutions to any real environmental problems if only left to its own devices. Fourth, environmental policies should take into account the economic impact on the elderly, the poor, and those with fixed incomes. In other words, "It's not fair!" Fifth, "[t]he best solutions to environmental challenges are common sense solutions," implying that solutions dictated by the government rather than chosen by the market will be irrational. This point reflects the litany's claim that regulation is too expensive both in absolute terms and in comparison to the resulting environmental benefits. Sixth, "[a]ll nations must share responsibility for the environment." In other words, "It's not fair (again)!" Finally, changes in national policy should be "fully discussed in an open forum" with opportunities for public input. In other words, the government can't be trusted and they must be hiding something from the rest of us.

VIII. The Political Response

The advice set forth in the Luntz memorandum found a receptive audience among politicians opposed to government action to address climate change. The impact of the Luntz memorandum is illustrated by their repeated reliance on the theme that sound science supports neither the assertion that a serious problem exists nor the conclusion that human activities are largely responsible

for causing it if it does. Senator Inhofe, for example, suggested on more than one occasion that global climate change might be "the greatest hoax ever perpetrated on the American people," making the advocates of government action on climate change seem no different than those who claim they have been abducted by aliens or seen the Loch Ness monster. Inhofe's position amounts to a particularly crude version of the "Prove it!" strategy.

The Bush Administration's approach has been slightly more subtle. Vice President Cheney predicted a "big debate" on the question of whether climate change is due to natural climate cycles or human activity.[66] In an effort to support the claim that scientific uncertainty over the causes of climate change makes regulation premature, the Administration sought to generate confusion over the science surrounding climate change. Two political scientists at the University of Illinois describe those steps:

> The Bush Administration has developed statutory and regulatory mechanisms designed to limit the flow of scientific information to the public, and implemented a legal framework to legitimize these mechanisms. The actions of the Bush Administration in restricting the public's access to government sponsored climate change research is unprecedented, affecting the relationship between science and policy in a way that changes the traditional

> independent role that scientists have played in the United States. These actions of the Bush Administration also negatively affect the media's access to government scientists who are recognized experts in the field.[67]

White House officials edited scientific documents on climate change prepared by government scientists to reinforce the idea that the scientific community has not yet provided sufficient evidence to produce consensus on the link between greenhouse gas emissions and warming global temperatures. According to a former Republican chief of staff for the House of Representatives science committee, opponents of climate change regulation "settled on the 'science isn't there' argument because they didn't believe they'd be able to convince the public to do nothing if climate change were real."[68] The head of the National Aeronautics and Space Administration in mid-2007 characterized the view that humans should take steps to affect the world's climate as "arrogant" and questioned whether climate change is serious enough to warrant concern among policymakers.[69] According to some reports, the Smithsonian Institute watered down an exhibit on the impact of climate change in the Arctic and avoided any reference to the cause of those changes due to fear of adverse reactions from the Bush Administration and Congress.

A. A Change in Corporate Culture?

As the evidence of the dangers of climate change become increasingly irrefutable, all but the most shameless opponents of government action to address it have curtailed their invocation of at least some elements of the litany. Some corporations have conceded that the problem is real and announced their support for doing something about it. In some cases, businesses such as Wal-Mart have taken steps to cut their own consumption of electricity and encouraged consumers to purchase energy-efficient products. Other firms, such as Dow Chemical, have invested millions of dollars in research and development of technologies and products intended to reduce greenhouse gas emissions. Such positions do not necessarily translate into support for regulation, but some businesses have even supported the adoption of mandatory emissions controls on greenhouse gases. The inducements for supporting either voluntary corporate initiatives or more systematic regulatory programs to address climate change may include taking a socially responsible position or burnishing the corporation's public image by placing a green sheen on its activities.

Some businesses have realized that supporting climate change initiatives is in their own self interest. Some insurance companies, for example, support

regulation to mitigate climate change because unabated climate change will cause them to incur significant liabilities to insureds injured by the consequences of climate change, such as coastal flooding or extreme weather events.[70] Timber companies may benefit from climate change regulation if it presents opportunities for them to sell credits generated by the preservation of carbon sinks to industrial emitters of greenhouse gases who wish to avoid making their own reductions.[71] Segments of the energy industry that do not rely on the production or consumption of fossil fuels clearly have much to gain if restrictions are placed on greenhouse gas emissions. Some companies, such as Dow Chemical, see opportunities to profit from the manufacture and sale of energy-saving products, such as insulation, lightweight plastics, and solar technologies.[72] Some companies support climate change regulation because they believe they can comply more quickly or efficiently than their competitors, providing them with at least a short-term market advantage.[73] Some support regulation because they have already begun lowering their greenhouse gas emissions and stand to profit by selling emission allowances if federal climate change regulation includes an emissions trading regime.

Despite this movement toward support for dealing with climate change, industry has not abandoned its reliance on the litany described in this chapter. Some business support for climate change legislation is based on the fear that

delaying its adoption is likely to produce more onerous regulation, either because the evidence of the adverse consequences of climate change will continue to accumulate or because of a change in the balance of political power in Congress and the White House. Businesses that have reluctantly begun to support climate change regulation for these reasons can be expected to invoke some elements of the litany as they push politicians toward policy solutions least likely to adversely affect their interests. Some will assuredly argue, for example, that particular policy options are technologically unrealistic, too expensive, or not worth the ensuing costs of compliance. They will also assert that policy options under consideration unfairly require them to make sacrifices not being demanded of other significant contributors to climate change.

The willingness of portions of corporate America to accept the reality of global climate change and take responsibility for avoiding or mitigating its adverse effects is a welcome development. It creates unique opportunities for the United States to become a world leader in developing both technological and regulatory solutions to climate change problems. Government programs, whether they are incentive-based or of a more traditional regulatory character, stand a greater chance of succeeding if the affected industries adopt a cooperative rather than an antagonistic posture.

The abandonment of some elements of the litany by a segment of the business community, however, by no means indicates that the litany has run its course or that the strategies laid out in the Luntz memorandum are no longer relevant to the political discourse on climate change. Some industries – segments of the fossil fuel production industry come quickly to mind – remain entrenched in their virulent opposition to any government efforts to address climate change. They almost certainly will continue to assert that important scientific questions remain unsettled with respect to both the existence and causes of climate change and that government efforts to mitigate the adverse effects of climate change must wait resolution of these questions. Just as assuredly, even if those arguments become even more untenable than they already are, they will predict economic ruin in an effort to convince environmental policy makers to adopt weak versions of climate change regulation.

B. Government Clings to the Litany

The willingness of some portions of industry to accept the need for meaningful action on climate change is a promising sign that the debate on how to deal with climate change has the potential to move beyond the stale rhetoric of free market liberalism. Tragically, the federal government thus far has not

demonstrated a similar willingness to address the problem in constructive terms. Too many officials responsible for dictating the timing and content of federal climate change policy seem stuck in the mindset that the unimpeded free market provides the only legitimate means for protecting Americans against environmental, health, and safety risks. They continue to regard government as the principal problem rather than as a vehicle for enhancing the quality of life of the American people by helping to mitigate environmental risks such as those posed by climate change. Some, such as Senator Inhofe, even persist in denying that climate change is due to human activity and that restrictions on greenhouse gas emissions can play a useful role in mitigating climate change.

These policy makers have stuck to their story, no matter how much it strains credulity and ignores the facts. The story is that climate change is not occurring; that it is not caused by human activity even if it is real; that there is no viable technological fix; that the adverse economic consequences of engaging in efforts to address climate change will be monumental, and certainly not worth the meager benefits (if any) likely to flow from climate change regulation; and that efforts to restrict activities that contribute to global warming and replace those activities with more environmentally friendly alternatives will impose unfair burdens on innocent and helpless Americans

and fundamentally alter the American lifestyle in ways that most Americans will find unacceptable, if not abhorrent. Little progress can be made in enlisting the assistance of industry in working with government to reduce the risks of climate change and to endorse necessary progressive solutions as long as the free market ideology that has generated these responses controls the debate. Characterizing climate change as the "greatest hoax ever perpetrated on the American people" is hardly the way to craft constructive environmental policy that meets the needs of the American people and provides the kind of leadership the United States once provided in dealing with all sorts of worldwide social problems.

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[1] David Vogel, *Fluctuating Fortunes: The Political Power of Business in America* (New York: Basic Books, 1989), pp. 67-69, 72-4 (describing lack of opposition by the business community to the adoption of the National Environmental Policy Act, the creation of EPA, and the adoption of the 1970 Clean Air Act Amendments, and its surprise at the "significant escalation of the federal government's regulatory role"). *Cf*. Lincoln L. Davies, "Lessons for an Endangered Movement: What a Historical Juxtaposition of the Legal Response to Civil Rights and Environmentalism Has to Teach Environmentalists Today," *Environmental Law* 31, (2001): 229-370 (describing absence of industry presence

at state and local hearings on air pollution as a product of industry surprise at popular support for regulation).

[2] Richard J. Lazarus, *The Making of Environmental Law* (Chicago, IL: University of Chicago Press, 2004), pp. 75-78.

[3] Ibid., 69.

[4] Martha T. McCluskey, "Efficiency and Social Citizenship: Challenging the Neoliberal Attack on the Welfare State," *Indiana Law Journal* 78, (2003): 783-876.

[5] Ibid., 784.

[6] Ibid.

[7] Douglas A. Kysar, "Sustainable Development and Private Global Governance," *Texas Law Review* 83, (2005): 2109-2166.

[8] Martha T. McCluskey, "Thinking with Wolves: Left Legal Theory After the Right's Rise," *Buffalo Law Review* 54, (2007): 1191-1297.

[9] Sidney A. Shapiro, "Administrative Law After the Counter-Reformation: Restoring Faith in Pragmatic Government," *University of Kansas Law Review* 48, (2000): 689-750.

[10] Lazarus, *Making of Environmental Law*, p. 100.

[11] Shapiro, Counter-Reformation, 697, 702.

[12] Richard N.L. Andrews, *Managing the Environment, Managing Ourselves: A History of American Environmental Policy* (New Haven: Yale University Press, 1999), p. 257.

[13] Lazarus, *Making of Environmental Law*, p. 95.

[14] Phillip K. Howard, *The Death of Common Sense: How Law is Suffocating America* (New York: Warner Books, Inc. 1994).

[15] Lazarus, *Making of Environmental Law*, p. 97.

[16] Shapiro, Counter-Reformation, 702 (citing Vogel, *Fluctuating Fortunes*, pp. 230-1).

[17] Thomas O. McGarity, "On the Prospect of Daubertizing Judicial Review of Risk Assessment," *Law and Contemporary Problems* 66 (Aut. 2003): 155-225.

[18] Thomas O. McGarity, "Our Science Is Sound Science and Their Science Is Junk Science: Science-Based Strategies for Avoiding Accountability and Responsibility for Risk-Producing Products and Activities," *University of Kansas Law Review* 52, (2004): 897-937.

[19] *Flue-Cured Tobacco Cooperative Stabilization Corp. v. United States Envtl. Prot. Agency*, 313 F.3d 852 (4th Cir. 2002). *See* McGarity, Daubertizing Judicial Review, 178-99.

[20] William Funk, "Free Market Environmentalism: Wonder Drug or Snake Oil?", *Harvard Journal of Law & Public Policy* 15, (1992): 511-516.

[21] Michael R. Bosse, Comment, "George J. Mitchell: Maine's Environmental Senator," *Maine Law Review* 47, (1995): 179-222.

[22] Jeff Trask, Note, "Montreal Protocol Noncompliance Procedure: The Best Approach to Resolving International Environmental Disputes?", *Georgetown Law Journal* 80, (1992): 1973-2001. *See generally* James L. Regens & Robert W. Rycroft, *The Acid Rain Controversy* (Pittsburgh: University of Pittsburgh Press, 1988), pp. 41-47.

[23] Robert V. Percival, "Checks Without Balance: Executive Office Oversight of the Environmental Protection Agency," *Law & Contemporary Problems* 54, (Aut. 1991): 127-204.

[24] Stuart N. Keith, Note, "The EPA's Discretion to Regulate Acid Rain: A Discussion of the Requirements for Triggering Section 115 of the Clean Air Act," *Cleveland State Law Review* 36, (1987/1988): 133-155.

[25] *See* Lazarus, *Making of Environmental Law*, p. 99.

[26] Jon D. Hanson & Douglas A. Kysar, "Taking Behavioralism Seriously: Some Evidence of Market Manipulation," *Harvard Law Review* 112, (1999): 1420-1572.

[27] Jonathan Miles, "Tobacco Road," *N.Y. Times*, May 6, 2007, Book Review Section, 6 (reviewing Allan M. Brandt, *The Cigarette Century: The Rise, Fall, and Deadly Persistence of the Product that Defined America* (New York: Basic Books, 2007)).

[28] Thomas O. McGarity, "Proposal for Linking Culpability and Causation to Ensure Corporate Accountability for Toxic Risks," *William & Mary Environmental Law and Policy Review* 26, (2001): 1-65.

[29] *United States v. Philip Morris USA, Inc.*, 449 F. Supp. 2d 1, 28 (D.D.C. 2006), stay granted, 2006 WL 4608645 (D.C. Cir. Nov. 1, 2006), order clarified, 477 F. Supp. 2d 191 (D.D.C. 2007).

[30] *Lead Industries Ass'n, Inc. v. Environmental Prot. Agency*, 647 F.2d 1130 (D.C. Cir. 1979), cert. denied, 449 U.S. 1042 (1980).

[31] *See* Howard Latin, "Good Science, Bad Regulation, and Toxic Risk Assessment," *Yale Journal on Regulation* 5, (1988): 89-148.

[32] Howard Latin, "Real Regulatory Efficiency: Implementation of Uniform Standards and 'Fine-Tuning' Regulatory Reforms," *Stanford Law Review* 37, (1985): 1267-1332.

[33] Lazarus, *Making of Environmental Law*, p. 95.

[34] *International Harvester v. Ruckelshaus*, 478 F.2d 615 (D.C. Cir. 1973).

[35] Thomas O. McGarity, "Regulating Commuters to Clear the Air: Some Difficulties in Implementing a National Program at the Local Level," *Pacific Law Journal* 27, (1996): 1521-1627.

[36] Walter Adams & James W. Brock, "The Antitrust Vision and Its Revisionist Critics," *New York Law School Law Review* 35, (1990): 939-967.

[37] David Vogel, *National Styles of Regulation: Environmental Policy in Great Britain and the United States* (Ithaca, N.Y.: Cornell University Press, 1986), 258 (quoting J. Clarence Davies III and Barbara S. Davies, *The Politics of Pollution* (Indianapolis: Bobbs-Merrill, 1975), 53)).

[38] This set of arguments is often made in conjunction with one or more of the three arguments – nonexistence of a problem, lack of causation, and the infeasibility of fixing the problem – discussed above. Albert Hirschman describes this set of arguments as the "perversity thesis," the "futility thesis," and the "jeopardy thesis." The first reflects the contention that "any purposive action to improve some feature of the political, social, or economic order only serves to exacerbate the condition one wishes to remedy." The second argues that "attempts at social transformation will be unavailing, that they will simply fail 'to make a dent.'" The third holds "that the cost of the proposed change or reform is too high as it endangers some previous, precious accomplishment." Albert O. Hirschman, *The Rhetoric of Reaction: Perversity, Futility, Jeopardy* (Cambridge: The Belknap Press of Harvard University Press, 1991), p. 7.

[39] Sidney A. Shapiro & Robert L. Glicksman, *Risk Regulation at Risk: Restoring A Pragmatic Approach* (Stanford, CA: Stanford Univ. Press, 2003), 74.

[40] Ibid., 77.

[41] Lazarus, *Making of Environmental Law*, p. 95.

[42] Christopher T. Giovanazzo, "Defending Overstatement: The Symbolic Clean Air Act and Carbon Dioxide," *Harvard Environmental Law Review* 30, (2006): 99-163. *See also* Eban Goodstein, "Polluted Data," *The American Prospect* (Nov. 30, 2002), *available at* http://www.prospect.org/cs/articles?article=polluted_data.

[43] Joseph A. Siegel, "Terrorism and Environmental Law: Chemical Facility Site Security vs. Right-to-Know?", *Widener Law Symposium Journal* 9, (2003): 339-385; David M. Driesen, "Is Emissions Trading an Economic Incentive Program?: Replacing the Command and Control/Economic Incentive Dichotomy," *Washington & Lee Law Review* 55, (1998): 289-350.

[44] Daniel Cusick, "EPA Ozone Proposal to Face Scrutiny on Hill," *E&E News PM*, June 21, 2007, *available at* http://www.eenews.net/eenewspm/2007/6/21.

[45] Shapiro & Glicksman, *Risk Regulation*, p. 9.

[46] Andrews, *Managing the Environment*, p. 239.

[47] *See generally* McGarity, Regulating Commuters.

[48] Sharon Begley, "The Truth About Denial," *Newsweek*, Aug. 13, 2007, at 20, 22.

[49] Dean Scott, "Business Roundtable Urges Emissions Curbs, Calls for Expanded Greenhouse Gas Registry," *Environment Reporter* (Bureau of National Affairs) 38, July 20, 2007, at 151.

[50] Dean Scott, "Costs Imposed by U.S. Greenhouse Gas Cap May Be Offset by Projected Economic Growth," *Environment Reporter* (Bureau of National Affairs) 38, March 2, 2007, at 481.

[51] Margaret Kriz, "Hot Opportunities," *National Journal*, July 7, 2007, at 14, 16.

[52] John M. Broder, "California Wants Strict Auto Emissions," *N.Y. Times*, May 23, 2007, at A16.

[53] Danny Hakim, "Challenge to Emissions Rule Is Set to Start," *N.Y. Times*, Apr. 10, 2007.

[54] "The Environment: A Cleaner, Safer, Healthier America," *available at* http://www.prwatch.org/node/1765/print.

[55] Ibid., 131. The memo also pointed out that "[e]very year, excessive environmental regulations cost the United States thousands of jobs. . . . Talk about the professions and industries that will be hurt the most." Ibid., 140.

[56] Ibid., 136.

[57] Ibid., 132-3.

[58] Ibid., 135-6.

[59] Ibid., 137.

[60] Ibid., 138

[61] Ibid., 139.

[62] Ibid., 139.

[63] Ibid., 140.

[64] Ibid. The memo also stated: "Stringent environmental regulations hit the most vulnerable among us – the elderly, the poor, and those on fixed incomes – the hardest. Say it." Ibid., 139.

[65] Ibid., 143.

[66] Sharon Begley & Andrew Murr, "Which of These Is Not Causing Global Warming Today?", *Newsweek*, July 9, 2007, at 48.

[67] Robert F. Rich & Kelly R. Merrick, "Use and Misuse of Science: Global Climate Change and the Bush Administration," *Virginia Journal of Social Policy and the Law* 14, (2007): 223-252.

[68] Begley, Truth About Denial, 24.

[69] "NASA Leader: Who Says Warming Is A Problem?", *N.Y. Times*, June 1, 2007, *available at* http://www.nytimes/com/2007/06/01/science/earth/01griffin.html?.

[70] Peter H. Stone, "Feeling Storm-Tossed," *National Journal*, July 7, 2007, at 28.

[71] Jerry Hagstrom, "Nature's Storage System," *National Journal*, July 7, 2007, at 31.

[72] Kriz, Hot Opportunities, 16.

[73] *See* Elise Zoli and Aladdine Joroff, "Making Silver Linings," *The Environmental Forum* 24, no. 3 (May/June 2007), 22-26.