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The Greening of the Corporation

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Changing Markets to Address Climate Change

Peter Lehner

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Abstract: This Keynote Address from the *Boston College Environmental Affairs Law Review* 2007 Symposium, *The Greening of the Corporation*, examines the use of market pressures and incentives to encourage corporations to make more environmentally friendly decisions. Peter Lehner, Executive Director of the Natural Resources Defense Council (NRDC), draws on his experiences as a litigator and his work for the NRDC in explaining that changing markets will help decrease the impact that corporations have on global warming.

Changing Intellectual Property and Corporate Legal Structures to Promote the U.S. Environ-mental Management and Technology Systems Industry

Peter A. Appel & T. Rick Irvin

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Abstract: This Article posits that for the U.S. environmental management and technology industry to enjoy success comparable to the that of the biotechnology and semiconductor industries requires critical examination of current law to enable market-based and regulatory incentives, which would position U.S. industry to compete with equal strength against global competitors in global markets. This Article explains that the legal community, along with the environmental science and engineering disciplines, must guide both growth and market dominance of this industry in the global marketplace. The Article examines three areas of the law critical to

the U.S. Environmental Technology Management System (EMTS) industry—intellectual property, tax, and corporate law—and provides examples of how corporate and governmental lawyers can employ current law, absent any new major legislative initiatives, to promote the U.S. EMTS industry to global success and predominance on par with the commercial success of the U.S. semiconductor and biotechnology industries.

Corporate Responsibility and Carbon-Based Life Forms

Steven Ferrey

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Abstract: Corporations are being monitored as to their carbon base. The level of carbon in the atmosphere is reaching dangerous levels that threaten corporate productivity, as well as human health. Remember that humans are carbon-based life forms. This Article discusses in detail efforts to halt the release of carbon into the atmosphere and mitigate global warming, from state-led initiatives to litigation in lower courts and the U.S. Supreme Court. It concludes that incentivizing corporations to adopt renewable energy practices is the best way to address corporate citizenship and environmental responsibility.

Act Locally, Affect Globally: How Changing Social Norms to Influence the Private Sector Shows a Path to Using Local Government to Improve Environmental Harms

Victor B. Flatt

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Abstract: There has been comparatively little exploration of the importance of local government in addressing large-scale environmental harms, in spite of much activity at the local level dealing with climate change. This Article posits that local governments can affect large-scale environmental harms because they can influence the private sector through targeted *social norm* creation that cannot be accomplished easily at other levels of government. The Article notes that efforts to induce the private sector to take actions without enforcement capability have been problematic, but that connections to private sector decisionmakers and influencing of their internal norms—which can occur more easily at the local level—can create action not just locally, but wherever corporations operate.

Effectiveness of Government Interventions at Inducing Better Environmental Performance: Does Effectiveness Depend on Facility or Firm Features?

Robert L. Glicksman & Dietrich H. Earnhart

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Abstract: Environmental agencies have several options for dealing with alleged noncompliance with environmental regulations. These options include pursuit of administrative or judicial civil penalties and injunctions to prevent future violations. Scholars have begun exploring whether these options induce better performance by regulated entities. This Article addresses a largely neglected question: whether a regulated facility's characteristics affect the efficacy of the different enforcement options. The Article stems from a study of compliance by the chemical industry with federal Clean Water Act permits. It assesses whether facility characteristics, including effluent limit level and type, permit modifications, facility size, capacity utilization, discharge volatility, and ownership structure, theoretically should make a difference and actually appeared to do so at the facilities covered by the study. The findings should be of interest to both facilities regulated under the Clean Water Act and federal and state regulators seeking to maximize the impact of their enforcement actions.

Greenwashed?: Developers, Environmental Consciousness, and the Case of Playa Vista

Matthew J. Parlow

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Abstract: While many businesses are becoming greener, development corporations may have the greatest incentive to integrate environmental values into their everyday business practices. With the effects of urbanization, suburbanization, and sprawl, cities are increasingly requiring environmental mitigation measures for approval of new development. In response, some development corporations may become greenwashed to obtain discretionary land use approvals to build their proposed developments. Others may build greener developments to meet the market demand from environmentally conscious buyers. An increasing number of developers, however, adopt environmentally responsible business practices for, at least in significant part, altruistic reasons. A prime example of this phenomenon is Playa Vista, the more than 1000-acre development in Los Angeles that is currently the largest urban infill project in the country. Playa Vista serves as a useful case study for exploring how developers' inclusion of various stakeholders—particularly environmentalists—may signal a paradigm shift in how development occurs.

Do Voluntary Corporate Efforts Improve Environmental Performance?: The Empirical Literature

Kurt A. Strasser

[pages 533–556]

Abstract: Many companies are adopting environmental performance programs that aim to go beyond regulatory compliance and provide greater environmental protection. How effective are they in doing so? This Article collects and surveys the empirical studies of environmental performance of these programs and presents a picture of mixed results. When companies adopt environmental management systems, their regulatory performance and nonregulated environmental impacts often improve. There is little empirical support, however, for the proposition that these systems are associated with design and implementation of greener products or processes. When companies adopt voluntary environmental performance standards, the evidence is mixed; it seems to suggest that these standards are not associated with improved performance. Yet a qualification is needed here: both the company programs and the empirical studies are relatively new and these results may well change as the programs become more institutionalized within the companies, and the studies have access to better data.

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A Higher Authority: How the Federal Religious Land Use and Institutionalized Persons Act Affects State Control over Religious Land Use Conflicts

Karen L. Antos

[pages 557–592]

Abstract: The Religious Land Use and Institutionalized Persons Act (RLUIPA) provides heightened protections for religious institutions that seek to build or expand their facilities in excess of local zoning regulations. Although RLUIPA claims on its face that it does not preempt state protections for reglious land uses, more and more religious organizations have elected to bring suit under RLUIPA in addition to or in lieu of state laws. This Note focuses on Massachussetts and Washington as representative examples of states' religious land use protections and examines the effect of RLUIPA on those protections. The Note suggest that RLUIPA may unintentionally preempt state laws, particularly where states have chosen not to act.

If You Can't Build It, They Won't Come: Condominium Construction Moratoria and Gentrification

Dara K. Newman

[pages 593–623]

Abstract: The increasing presence of bright, new condominium development in America's cities is changing the composition and appearance of these urban landscapes. Long-time local residents in gentrifying areas are confronted daily with the impacts of development, and are searching for tools to preserve their communities and keep them affordable. One response has been proposed moratoria on condominium construction. This approach aims to stop the influx of more affluent individuals into urban neighborhoods by preventing the construction of higher-end condominiums. This Note examines the validity of such moratoria on condominium construction as an exercise of the police power. Through a comparison to rent control ordinances and condominium conversion moratoria, it argues that valid condominium construction moratoria can be implemented to address social and economic concerns. The Note concludes, however, that valid construction moratoria are not always the most appropriate or effective growth management tool to address a gentrifying community's needs.

CHANGING MARKETS TO ADDRESS CLIMATE CHANGE

Peter Lehner*

Abstract: This Keynote Address from the *Boston College Environmental Affairs Law Review* 2007 Symposium, *The Greening of the Corporation*, examines the use of market pressures and incentives to encourage corporations to make more environmentally friendly decisions. Peter Lehner, Executive Director of the Natural Resources Defense Council (NRDC), draws on his experiences as a litigator and his work for the NRDC in explaining that changing markets will help decrease the impact that corporations have on global warming.

The Greening of the Corporation is a great topic. Although we often look at corporations as a big part of the problem—they are after all responsible for most pollution, deforestation, and natural resource degradation—we must look to them as a big part of the solution if we are to deal with global warming and other major issues.

Of the top 150 largest global economic actors, ninety-one are corporations and fifty-nine are countries. Companies like Wal-Mart, BP, CitiGroup, IBM, GE, and Exxon are bigger than many countries, including significant countries such as Indonesia and South Africa. If we are going to achieve our goals in addressing global warming in the timeframe that we need to, corporations have to be part of the answer.

If we are going to address corporations, however, we are also going to have to address the world in which they operate, that is, the markets in which they operate. There are legal and institutional arrangements in which corporations function, which direct them, for example, to focus on achieving shareholder goals, such as maximizing productivity and profit; all are set to rules. The legal framework is set by the laws within which corporations act. The institutional and financial framework is the particular market in which corporations operate and the incentives established. To really change corporate behavior, we need to address those frameworks.

* Executive Director, Natural Resources Defense Council (NRDC). "NRDC is the nation's most effective environmental action organization. We use law, science and the support of 1.2 million members and online activists to protect the planet's wildlife and wild places and to ensure a safe and healthy environment for all living things." NRDC: About Us, http://www.nrdc.org/about (last visited Apr. 30, 2008).

We can generally think of greening a corporation in three different ways, and the Natural Resources Defense Council (NRDC) is working on all these levels. The first approach is to green a company's operations. Many of these companies have significant footprints themselves. There is a lot that a company can do to change operations, whether it be, for example, Wal-Mart's truck fleet, lights, or heating. Office Depot overhauled the lighting in its North American stores and obtained a ten percent absolute reduction in carbon dioxide (CO_2) emissions.[1] Wal-Mart has a Zero Waste initiative that so far has saved 478.1 million gallons of water, 20.7 million gallons of diesel fuel, many millions of pounds of solid waste, and they did not even calculate their carbon footprint.[2] So greening what corporations do themselves can make a big difference.

The second way that corporations can go green, or act in a more environmentally responsible manner, is through their supply chains. The NRDC reached an agreement with the Bowater Corporation, one of the largest paper corporations, on how it would source its paper,[3] and thus, what the company would demand from the timber companies from which it bought pulp. By working back up the supply chain, we use the power of the consumer. Since Bowater buys all the timber, if it insists on different environmental standards, the producers, the timber companies, will respond. Similarly, when enough law firms commit to buying only post-consumer recycled paper—in addition to recycling, of course—they are working through their supply chain, and will change what the paper companies produce.

We are also working in a similar way right now in China, where there is horrific pollution; you have never seen anything like it in this country. But it turns out that many polluters do not comply with the law, they don't seem to care what the government says. On the other hand, if a company like the Gap says that it will not buy from Chinese companies unless they clean up their environmental performance, they will clean up very fast. So, we are now working on a program with the Chinese government to rank polluters on a scale of one to five—one is

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[1] *See Office Depot Cuts CO2 Emission 10% Through Efficiency Upgrades*, Environmental Leader, Aug. 29, 2007, http://www.environmentalleader.com/2007/08/29/office-depot-cuts-co2-emissions-10-through-efficiency-upgrades ("The company also installed high-efficiency HVAC . . . .").

[2] Steve Hochman, *Green Supply Chains*, Forbes.com, Apr. 20, 2007, http://www.forbes.com/2007/04/20/green-supply-chains-logistics-cx_sho_0420amr.html.

[3] Press Release, Natural Res. Def. Council, Cumberland Plateau Forest Agreement to Protect Forests, Forest Jobs (June 29, 2005), *available at*http://www.nrdc.org/media/pressreleases/050629a.asp (announcing this agreement and its highlights).

good, five is bad—and also with a major American company, so that it will say that it will not buy from any Chinese factory that is a four or five. If we are successful, this approach will have a tremendous impact.

The last way one can green a corporation, the way that I am going to focus on, is to change entire markets: to change the ground rules within which companies are operating so the right incentives are sent throughout the companies' operations. So, let us look at markets for a minute. There is no dispute that markets work extremely well in distributing goods and services. We can see this in the real price drop over the last hundreds of years of many of today's basic staples. Adam Smith talked about this effect, referring to the invisible hand. Everyone's individual actions, acting in self-interest—some might call it progress, others might call it greed—provide an efficient marketplace. But while this freedom has tended to work well for providing for economic prosperity, we have seen now that it works extremely poorly for certain types of goods. In particular, while it works for private goods—those that you can buy or sell and those where ownership of the goods by one person excludes ownership by another—it does not work very well for public goods. Classic public goods are, of course, clean air, clean water, and environmental protection. Another public good, that you can mention if you are ever debating this point with conservatives, is national security. But a public good cannot be bought and sold in the marketplace, the same way a bottle of ginger ale can be bought and sold. In that sense, the market system fails us. I am going to explore a little bit why exactly that is and what we can do about it to address climate change.

Let me focus just a moment on climate change to set the stage for my discussion. The scientific debate, I think we can all agree, is over. Indeed, the scientific debate, I would venture, was largely an industry disinformation campaign for the last fifteen years. I brought a lawsuit in the late 1980s, suing the federal government over its lowering fuel economy standards.[4] I was representing a group of cities focusing on local pollution; the NRDC brought a parallel case focusing on global warming and CO_2. As far as we can tell, this was the very first climate change case. Nobody disputed the science. The judge noted in that case, in the D.C. Circuit, that the federal government did not dispute the science of climate change, that it was caused by human emissions of CO_2, which were rising, and that if we did not address those emissions

[4] *See generally* City of Los Angeles v. Nat'l Highway Traffic Safety Admin., 912 F.2d 478 (D.C. Cir. 1990) (discussing the link between CO_2 and global warming).

soon, climate change was going to be a serious problem.[5] The last fifteen years were really an unfortunate detour on the path to sound policy.

But today, again, we are no longer arguing the science. The Intergovernmental Panel on Climate Change (IPCC), as a group of scientists, always issues their predictions about climate change as a range. It turns out that in almost every instance, we are seeing that the upper end of that range—whether it is temperature, sea level rise, or precipitation changes—is proving more accurate. The last five years have seen the atmospheric concentration of CO_2 grow by almost two parts per million per year, the fastest it has ever grown since records have been kept.

Now, the best we can hope for, the best that the IPCC and others hope for, is to stabilize atmospheric CO_2 levels at about 450 parts per million. The preindustrial level was about 280. That, it is sobering to realize, is just the level that we think is plausible, but by no means certain, for avoiding catastrophe. There will still be very significant impacts around the world, many of which we are seeing now, whether they be the changed weather patterns, the wildfires in the West, the drought in the South, or the heat waves throughout the country. Those impacts will still happen, and they will get worse. But if we can manage to stabilize the atmosphere at a concentration of 450 parts per million, then maybe we can avert catastrophe. We would generally hope for a little better than that, but that is what in fact we are aiming for right now.

To stabilize atmospheric concentrations at that level, we need to cut CO_2 emissions—most of which are emitted by corporations or their products—by eighty percent by 2050, or perhaps even sooner. Let us look at some of the structural market failures that we need to address if we are going to enlist corporations in that battle—onto our side of the battle in fact—on climate change.

The first major market failure is that climate change is a classic externality. Anyone can emit CO_2 without having to pay any of the costs of the environmental damage caused by the emissions. The harms, whether they be rising sea levels, changing weather patterns, changing water supplies, or species extinction—none of those have a price. So companies can continue to emit all the CO_2 they want and not pay a price. Society will pay that price, but the companies doing the emitting will not: a classic externality.

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[5] *See id.* at 493–94 & n.2. A majority of the court found that global warming was real and that there was a basis for standing to challenge automobile fuel economy standards, noting even then that "no one . . . appears to dispute the serious and imminent threat to our environment posed by a continuation of global warming." *Id.* at 493–94.

The problem has worsened in the United States and in many other countries because fossil fuel use is actually subsidized. Not only is CO_2 pollution free, it is actually encouraged. We subsidize oil and gas drilling and coal burning both directly and indirectly. We actually changed the tax treatment and offered direct subsidies for fossil fuels in the Energy Policy Act of 2005.[6] Hopefully we will get a much better energy act in Congress this year.[7] There are currently an estimated nine billion dollars of subsidies for coal, and six billion dollars worth of subsidies for the oil and gas industry.[8]

We subsidize coal indirectly by allowing coal-fired power plants to spew sulfur dioxide, nitrogen oxide, and mercury—in addition to CO_2—into the air, and thus into our lungs almost for free. This pollution causes tens of thousands of early deaths each year and hundreds of thousands of hospital visits. These health effects cost society tens of billions of dollars that coal companies and power companies do not pay at all.

Another example is the real price of gasoline. If you were to truly include all the costs of gasoline—its health costs, its environmental costs, and perhaps even the costs of maintaining our supply of petroleum—it is estimated that gasoline would cost somewhere between five and fifteen dollars per gallon, rather than the three dollar cost that you see at the pump.[9]

Another way that we are subsidizing CO_2 pollution is the tremendous subsidy we have for our highway system. We heavily subsidize the use of motor vehicles so that vehicle miles traveled are going up and up. Of course, cars are responsible for about one-fourth to one-third of U.S. greenhouse gas emissions.

One aspect of the fact that carbon is an externality is that nobody puts a price on it. Companies have no internalized incentive to reduce

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[6] Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594 (codified as amended in scattered sections of 42 U.S.C.A.).

[7] We did. After I gave this speech, Congress passed the Energy Independence and Security Act of 2007, Pub. L. No. 110-140, 121 Stat. 1492 (to be codified in scattered sections of 42 U.S.C.A. and 49 U.S.C.A.). Among its positives: a mandatory Renewable Fuel Standard of at least thirty-six billion gallons of biofuels by 2022, a substantial increase in the national fuel economy standards for automobiles to thirty-five miles per gallon by 2020, and increased energy efficiency standards for appliances.

[8] Energy Policy Act of 2005 §§ 401, 411–415, 421, 962–964, 1307, 1309, 1701–1704 (coal), 342, 344–346, 353–354, 383, 1323, 1325–1326, 1329, 999A–999H (oil and gas). These estimates come from adding the tax breaks and other subsidies for coal and for oil and gas found in various provisions of the Act.

[9] *See* Int'l Ctr. for Tech. Assessment, The Real Price of Gasoline 34 (1998), *available at* http://www.ethanol.org/pdf/contentmgmt/The_Real_Price_of_Gas.pdf.

their carbon footprint. More than that, because there is no price on carbon, it is very hard for new or low-carbon energy systems to take the place of a fossil fuel system. What bank is going to invest in or loan money to somebody saying, "Well, I have a type of energy which is a little bit more expensive than coal, but it does not produce any carbon"? If you are a bank, you are only looking at the income stream and the fact is that if the new energy source is more expensive than coal-fired power, you are not going to loan the money to that wind farm or solar factory. So we have a real problem when carbon has no price.[10]

A second major market failure is that there are both insufficient information and split incentives, particularly for energy efficiency. With standard incandescent lighting, ninety percent of the energy used is wasted. Only ten percent of it is coming out as light. Energy efficiency has tremendous opportunity to reduce our demand and lower pollution. It can also buy us time while we move away from a fossil fuel system.

Yet, our energy efficiency implementation is woeful. Why is that? Partly because of a lack of information. We do not know or trust the information we get when we have an opportunity. For example, should I really pay an extra one hundred dollars for some different refrigerator because it says that it is going to save me money over three years? Is it really? I do not really trust that. I think cash in the hand is worth a lot more.

In addition, there are split incentives, which are significant in this country. If you are a builder of houses who will also sell the houses, you are by and large thinking about the price at which you will sell the house. The buyer is similarly interested in the first price. So you have little incentive to spend extra money on the house to make it very well-insulated because you are the builder and you are not going to pay the heating bill. Similarly, if you are a landlord, you are happy to buy the

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[10] We are making progress here. Citigroup, Morgan Stanley, and JPMorgan Chase recently announced a set of Carbon Principles, the first of their kind in the banking world. *See* Jeffrey Ball, *Wall Street Shows Skepticism Over Coal*, WALL ST. J., Feb. 4, 2008, at A6. Financial institutions that adopt the Principles commit to encouraging their clients to invest in cost-effective energy efficiency measures, renewable energy projects, and other low-carbon energy technologies. *Id.* If properly implemented, these Principles, and the accompanying new *carbon aware* due diligence process, which explicitly takes into account the financial and regulatory risks of investing in new fossil fuel generation, should help dissuade utilities from investing in new dirty coal plants. The Bank of America agreed to these principles on April 1, 2008. Press Release, Bank of America, Bank of America to Announce Adoption of the Carbon Principles at Natural Resources Defense Council Tenth Annual Award Event (Apr. 1, 2008), http://bankofamerica.mediaroom.com/index.php?s=press_releases&item=8124.

cheapest appliance because your tenants, not you, will pay the utility bill. This split incentive applies to large segments of the economy: commercial landlords versus tenants, manufacturers versus users of appliances, and many others. It largely eliminates any incentive for those who are in control to go for energy efficiency.

A third and related problem here is the very unrealistic return expectations most consumers and many businesses have. People often talk about the need to have an energy efficiency program pay for itself in three or five years. Well, think about that. Say you have a three or five year payback for an energy efficiency program, such as insulating your house. You buy a house and you get a thirty-year mortgage; why should energy efficiency pay back over three years? A three-year payback is actually the equivalent of almost a twenty-five percent rate of return. You are not getting that in your invested money anywhere. If you could get an absolutely risk-free ten-percent return, you would be doing well. You cannot do that in the bond market or the treasury bill market. And yet a ten-percent return is a seven-year payback. But, the reality is that most companies and most people do not go for seven-year paybacks. Somehow, they think that doubling their money because of an energy efficient device in seven years is far beyond what is reasonable for them. So, in fact, consumers are acting, in a sense, irrationally. They will thus miss the chance for very effective investments and energy efficiency, while they meanwhile are investing their money or savings at a far less lucrative rate of return.

Another market difficulty is the instability of the oil market. It has gone up and down and up and down. The natural gas market is the same. This fluctuation makes it difficult to finance any alternative energy proposal. Even if it may be profitable today at eighty dollars to one hundred dollars a barrel for oil, that proposal is unlikely to get financing because it is unclear that it will still be able to compete over two or three years when the price of oil may be $150, but also may drop down to forty dollars again. And because of the push in many utility industries and state regulatory commissions to prohibit, or provide disincentives for, long-term contracts forcing utilities to buy energy on the spot market, we have effectively created a major disincentive to long-term investments in clean energy alternatives.

The last market failure is the problem of fast followers. If you invent something new that may be great, but have many others who can quickly follow in your footsteps, it is hard for you to recoup the research and development cost or that initial market advantage that you might have had. If you are the first to go through the legal and administrative hurdles of siting a wind farm, you will have no long-term ad-

vantage over the guy who comes second. There is no brand loyalty here.

One important example of this problem is carbon capture and sequestration, which, as you know, is the technology of taking from a coal-fired power plant the CO_2 stream and pumping it into the ground. That way, it is not released into the atmosphere. This system works, and has a lot of promise, but nobody yet is doing it for a commercial-scale power plant. It is being done with respect to enhanced oil recovery. Part of the reason for that is the tremendous research and development costs that would go into such a system. And, once it has been proven, it is not necessarily the case that you, the coal or energy company that invented this technology, or got this concept working, will stand to be at much of a competitive advantage with respect to your competitors.

So these are all real market failures, and they are all failures that we need to address if we are to enlist corporations in the battle against global warming. As I said earlier, each corporation can and should clean up its carbon footprint. And each company can and should address its supply chain. But, in the policy area, we also have to figure ways to change these incentives (or disincentives).

How are we going to do that? Well, the first and most significant way is to address that first problem I mentioned: we have to put a price on carbon. That is probably the most significant step we can take in the next couple of years. As you probably know, that is indeed the environmental battle going on in Washington right now. Just two or three days ago, Senators Lieberman and Warner introduced a bill that will have a declining cap for carbon emissions.[11] To emit a ton of CO_2, one must have a CO_2 allowance. The cap creates scarcity and scarcity creates a price. The NRDC argues that since the atmosphere should be considered to belong to all of us, to the public, then a private company should pay the public for the right to dump CO_2 into it. The polluter should pay for the allowances. The polluters, however, are very powerful politically so the Lieberman-Warner bill, while it makes polluters pay for some allowances, also gives away many for free to the polluters. Then,

[11] A Bill to Direct the Administrator of the Environmental Protection Agency to Establish a Program to Decrease Emissions of Greenhouse Gases, and for Other Purposes, S. 2191, 110th Cong. (2007); *see* Natural Res. Def. Council, NRDC Legislative Facts, Lieberman-Warner Climate Security Act (Dec. 2007), http://www.nrdc.org/legislation/factsheets/leg_07121101A.pdf. The Senate Environment and Public Works Committee supported the bill, eleven to eight, and the U.S. Senate is expected to consider the bill on the floor in June 2008.

over a twenty-year timeframe, the ratio of those given away for free would change. But fundamentally what this bill would do is to put a price on carbon.

Now, some have said that we should have a carbon tax, which would also directly put a price on carbon. The answer is, that would be fine. And in many ways, a system where the government *auctions* all the allowances—that is, makes the polluter pay for all of them—and a carbon tax, are very similar. The northeastern states have joined in the Regional Greenhouse Gas Initiative, which will cap CO_2 pollution from power plants.[12] Polluters will have to buy all allowances. We strongly support this system. The reality we are always told, however, is that despite the fact that most economists will argue for a carbon tax over a cap and auction system, a tax is not politically feasible in Washington these days. So that is why, you will see, the effort is to put a price on carbon by putting a cap on carbon. It may not seem quite as direct, but in fact it does effectively work that way.

Another way to put a price on carbon, beyond the legislative approach, is seen in the recent leveraged buyout of TXU by several venture funds.[13] TXU owned a number of coal-fired power plants and had plans to build another eleven coal-fired power plants in Texas, and another twenty to thirty in other states in the country. The possible buyers of TXU were concerned that this deal was going to get a lot of environmental opposition and that opposition would make it harder to finance the deal. The issue here is not putting a price on carbon legislatively, but making it harder to finance the deal, making the price of the deal more expensive because of the carbon emissions. So one of the buyers called the NRDC to see if we could reach a deal. We, with Environmental Defense, worked with the buyers of TXU, and they agreed to drop their plans for eight of the eleven plants in Texas and all of the twenty to thirty plants that they were planning in other states. We were allowed to keep going fighting the three that they were going to try to move ahead in Texas. As a result of that deal, much of the opposition to the deal was withdrawn. That exchange effectively put in the private market, not the public market, a price on carbon.

Another example of what we can do is to put new standards in place for energy efficiency. In an area where there are split incentives among landlords and tenants, manufacturers and consumers, and

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[12] Regional Greenhouse Gas Initiative (RGGI), http://www.rggi.org (last visited Apr. 30, 2008).

[13] Michael J. de la Merced, *Financing for TXU Deal Is a Test for Debt Markets*, N.Y. Times, Oct. 15, 2007, at C2, *available at* 2007 WLNR 20213494.

owners and builders, the clear answer is to have policy changes to mandate efficiency. The easiest examples of those types of standards, being debated by Congress now, are vehicle efficiency standards, or corporate average fuel economy (CAFE) standards. We have not had an increase in the fuel economy standards for this country since 1975, for thirty-two years.[14] Now technology, needless to say, has advanced a lot since then. And, unfortunately, most of it has gone into making the cars bigger and bigger. So actually with the advent of SUVs, as I am sure that you all know, the average fuel economy of the American fleet has gone down. That is far more significant in terms of our oil importation than any other factor. Again, the car companies do not pay the gasoline bill, you do. The car companies themselves have relatively little incentive to make their cars a lot more efficient, although perhaps the American car companies are beginning to learn from the fact that Toyota has steadily increased its market share from a relatively small company to now almost the world's largest automobile manufacturer. But, in order to address this split incentive for efficiency, as well as a lack of trust in any information there is, and an unrealistic return rate for efficiency, we need mandated standards to guide the market. There is still plenty of room, with higher standards, for companies to innovate, cut costs, compete, and use different technology. But this market needs new rules.[15]

Another example: I brought a case not too long ago where the U.S. Department of Energy had been mandated to improve the efficiency of a whole range of household appliances. They did not. They were over a decade late for many of these mandates. So, a coalition of states and the NRDC sued the Department of Energy, and, after litigation, entered into a settlement.[16] The Department of Energy is now implementing these standards. These standards, covering household appliances like ovens and fans, will have the equivalent carbon effect of taking twenty million cars and trucks off the road. They will save con-

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[14] After this speech, Congress raised federal CAFE standards in the Energy Independence and Security Act of 2007, Pub. L. No. 110-140, § 102, 121 Stat. 1492 (to be codified at 49 U.S.C.A. § 32,902).

[15] The recent CAFE increase is a very good start, but the miles-per-gallon standard could be even higher and more quickly implemented. We also need a federal standard for CO_2 emissions from automobiles.

[16] *See* New York *ex. rel* Lockyer v. Bodman, No. 05 Civ. 7808, 2007 WL 3238763, at *1 (S.D.N.Y. Nov. 1, 2007) (listing the NRDC as a plaintiff); Press Release, Office of the N.Y. State Attorney Gen. Andrew M. Cuomo, Dep't of Law, Federal Energy Dept. to Improve Appliance Efficiency (Nov. 13, 2006), *available at* http://www.oag.state.ny.us/press/2006/nov/nov13a_06.html (providing a link to the consent decree).

sumers money. They will be virtually invisible to consumers, because consumers will still have their toasters and their fans, but without the equivalent of twenty million cars and trucks on the road—a huge benefit in the global warming battle.

Another market failure I mentioned is the lack of information. If you wanted to build a green building not too long ago, you would not really know what exactly to do. And if you did a green building, you would not necessarily get credit for it; if you say it is green, how does anyone know whether you are being honest or not? To address this problem, the U.S. Green Building Council, the NRDC, and others formed what is now known as LEED, Leadership in Energy and Environmental Design.[17] You can now get your building certified as LEED Platinum if it is really terrific, LEED Gold, or LEED Silver. Builders know what to do and buyers know what they are getting. The NRDC also just recently developed what is called LEED-ND, or LEED for Neighborhood Development, so not only individual buildings, but entire communities can now be certified for their environmental compliance. Market failures can be fixed.

I will mention just one more market change. In most states, utilities make money by selling electricity, and, because of their ratio between fixed costs and variable costs, they make a lot of money with every additional kilowatt-hour they sell. Or phrased differently, if a customer is more efficient, the utility loses revenue, which is almost all profit. They do not like that very much. Utilities, however, are the major players in the energy market. They send you bills every month. They run the system because they buy the energy, they sell it to you, and they control all the wires in between. If we can change the utility rate structure, so that a utility, instead of having a strong economic disincentive towards energy efficiency, has an economic incentive for customers to increase efficiency, we will transform the utilities from being a major opponent of efficiency and clean energy to being a proponent.[18] California was the first state to do that. Idaho, not generally considered an environmental leader, was the second. New York has recently done that. And the NRDC is working with many other states to make similar utility rate reforms. By changing the structure of the market, we take these

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[17] U.S. Green Building Council, LEED Rating Systems, http://www.usgbc.org/DisplayPage.aspx?CMSPageID=222 (last visited Apr. 30, 2008) (providing information on all the LEED rating systems).

[18] *See generally* Richard F. Hirsch, Power Loss: The Origins of Deregulation and Restructuring in the American Electric Utility System (1999) (providing a detailed discussion of energy utility deregulation).

tremendously powerful players and instead of being on the other side, we make them become allies in the battle against global warming.

Reducing global warming will take a lot of work on all levels: individual, academic, governmental, and corporate. We need to get companies to not just be a part of the problem, but actually be a part of the solution. We have to change the rules that they play by. By and large, they will play by the rules. It is our job, as those working in the public policy arena, to change the rules and then it will be their job to address the shareholder needs, employee needs, and community needs within those changed rules in a way that will better affect and address climate change.

CHANGING INTELLECTUAL PROPERTY AND CORPORATE LEGAL STRUCTURES TO PROMOTE THE U.S. ENVIRONMENTAL MANAGEMENT AND TECHNOLOGY SYSTEMS INDUSTRY

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Abstract: This Article posits that for the U.S. environmental management and technology industry to enjoy success comparable to the that of the biotechnology and semiconductor industries requires critical examination of current law to enable market-based and regulatory incentives, which would position U.S. industry to compete with equal strength against global competitors in global markets. This Article explains that the legal community, along with the environmental science and engineering disciplines, must guide both growth and market dominance of this industry in the global marketplace. The Article examines three areas of the law critical to the U.S. Environmental Technology Management System (EMTS) industry—intellectual property, tax, and corporate law—and provides examples of how corporate and governmental lawyers can employ current law, absent any new major legislative initiatives, to promote the U.S. EMTS industry to global success and predominance on par with the commercial success of the U.S. semiconductor and biotechnology industries.

Introduction

Global climate change and sustainable development (GCC/SD) initiatives have already created structural shifts within emissions-intensive industry in the United States and around the globe.[1] Since the 1970s, new environmental protection initiatives in the United States

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[1] *See* U.S. Climate Policy, Climate Change, US EPA, http://www.epa.gov/climatechange/policy/index.html (last visited May 1, 2008).

have traditionally started with comprehensive congressional legislation that provides the U.S. Environmental Protection Agency (EPA) and other federal agencies the authority to design and implement regulatory programs meeting specific legislative objectives, and often invites state governments to take the lead in program design and enforcement.[2] In the case of GCC/SD initiatives however, so far new programs and initiatives have come from state and local governments, or from various members of industrial communities. This latter phenomenon forms the basis for this Symposium on *The Greening of the Corporation.* Discussions on this subject often involve the means corporations can employ to improve their environmental performance and the metrics to use to measure that performance. Thus, the conversation usually discusses how existing corporations can reduce waste, electricity consumption, and their carbon footprints. The conversation on measurement metrics includes debates over whether a corporation has actually become greener or whether it is engaging in *greenwashing.*[3] The popular press thus focuses on the increase of environmentally friendly products at traditional retailers,[4] decreased use of energy or increased use of renewables,[5] or how media giants such as NBC have promoted content related to GCC/SD problems,[6] and in so doing, how these corporations have improved their bottom line through resource conservation, and improved market penetration and performance. Similarly, in this Symposium, there are articles that present case studies of green development[7] and that present empirical studies of whether enforcement ef-

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[2] *See, e.g.*, Clean Water Act of 1977, 33 U.S.C. §§ 1251–1387 (2000 & Supp. 2004); Resource Conservation and Recovery Act of 1976, 42 U.S.C. §§ 6901–6992k (2000 & Supp. 2004); Clean Air Act, 42 U.S.C. §§ 7401–7671q (2000).

[3] Greenwashing is the practice of touting programs of environmental progress that cover up or distract from actual practices that are harmful to the environment. The origin of the term appears to be in the title of an article appearing in *Mother Jones* magazine. *See* David Beers & Catherine Capellaro, *Greenwash!*, Mother Jones, Mar.–Apr. 1991, at 38; *see also* Joshua Karliner, The Corporate Planet: Ecology and Politics in the Age of Globalization 168–75 (1997) (providing examples of greenwashing).

[4] *See* Daniel C. Esty & Andrew S. Winston, Green to Gold: How Smart Companies Use Environmental Strategy to Innovate, Create Value, and Build Competitive Advantage 7–8 (2006) (discussing efforts by Wal-Mart to increase the number of environmentally friendly products).

[5] *See, e.g.*, Andrew Martin, *In Eco-Friendly Factory, Low-Guilt Potato Chips*, N.Y. Times, Nov. 15, 2007, at A1.

[6] *See* Brian Stelter, *At NBC, the Brand Becomes a Slogan*, N.Y. Times, Nov. 5, 2007, at C1.

[7] *See, e.g.*, Matthew J. Parlow, *Greenwashed?: Developers, Environmental Consciousness, and the Case of Playa Vista*, 35 B.C. Envtl. Aff. L. Rev. 513 (2008) (describing the effect of greenwashing and heightened environmental concerns of real estate developers).

forts work, attempting to analyze how enforcement might be improved.[8]

This Article focuses on another piece of the puzzle, namely how lawyers can effectively harness the legal system to enhance the creativity that lies within corporations towards the growth and dominance of the U.S. Environmental Management and Technology System (EMTS) industry. That creativity takes two forms. The first form is creating and encouraging the innovations that allow corporations to improve their environmental footprints. The second form is creating and fostering conditions in which corporations, or others, can form, adopt, and market EMTSs. EMTSs include business and governmental practices that manage environmental emissions and associated impacts, including greenhouse gas (GHG) emissions, as well as enhance the reuse or recycling of natural resources. The ultimate aims of the reforms urged in this Article are to both integrate the EMTS developments of the United States into the global economy and to make the United States a leader, rather than a follower, in the global marketplace.

Table 1: U.S. EMTS Industry: Evolution from Traditional Components to GCC/SD-Driven Components

Element/Aspect	Traditional	GCC/SD-Driven
Construction/Civil Engineering	Waste-site management, remediation	Renovation/design of existing industrial facilities
Process/Chemical/ Mechanical Engineering	Waste-stream generation, management, control, disposal; recycling services	Design/operation of low-carbon technology equivalents for existing industrial manufacturing/process equipment
Mechanical/Design/ Manufacturing Engineering	Air/water-handling systems; packaging & production design	Life-cycle analysis for product design/development/ production
Engineering Management/ Consulting Services	Process design, permitting, regulatory activities	Management of carbon offset/raw material programs; smart growth planning/implementation

Table 1 summarizes just how fundamental these changes will be to the size, scope, and structure of the U.S. EMTS industry in the years to come. The EMTS industry today is, by and large, a consulting industry whereby corporations—as well as federal and state governments as purchasers—obtain custom-designed engineering project needs on a case-

[8] Robert L. Glicksman & Dietrich H. Earnhart, *Effectiveness of Government Interventions at Inducing Better Environmental Performance: Does Effectiveness Depend on Facility or Firm Features?*, 35 B.C. Envtl. Aff. L. Rev. 479 (2008).

by-case basis.[9] Environmental consultancies manage much of the traditional tasks upon which environmental regulation relies—wastewater and air permitting and management, hazardous-waste collection, transportation, waste-site management—and the design and construction of corporate environmental equipment such as air and water pollutant handling systems or operation and process stream equipment.[10]

In the new low-carbon technology environment of the coming decade, however, the EMTS industry will be called upon to provide different goods and services to corporations both in the United States and abroad. Regulatory requirements and customer demands that oblige manufacturers to upgrade their facilities with low-carbon replacement technology will require not only the design and operation of low-carbon technology equivalents for existing industrial manufacturing and processing equipment, but also new advances in the renovation and redesign of existing industrial facilities in a cost-effective manner. Manufacturing, mechanical, and design engineers will be required to conduct life cycle analyses (LCAs) as part of product designs that consider alternatives for raw materials needs, energy requirements, maintenance, disposal, and product recyclability before actual manufacturing begins.[11] Engineering and corporate managers will totally rethink facility site selection, design, construction, operation, and maintenance, as well as the means by which workers, raw materials, and finished products move to and from their facilities.

Although the United States does have the basic technology lead in many of these areas, global EMTS firms—particularly in the European Union (EU)—have over a decade's head start in applying U.S.-bred technologies into a corporate climate driven by GCC/SD concerns.[12] While the United States has the technical and financial resources to make up ground, the time frame to catch up with its global competitors is measured in months and years, not decades.

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[9] *See supra* tbl.1 (providing a summary of examples of the kinds of services included). *See generally* Envtl. Bus. Int'l, The U.S. Environmental Consulting & Engineering Industry (2007) (providing an overview of the environmental consulting industry).

[10] *See generally* Envtl. Bus. Int'l, *supra* note 9 (discussing the current state of the consulting industry).

[11] *E.g.*, Gary A. Davis et al., Extended Product Responsibility: A New Principle for Product-Oriented Pollution Prevention § 3.4.1 (1997), *available at* http://eerc.ra.utk.edu/clean/pdfs/eprn1-4.pdf.

[12] *See, e.g.*, Nicholas Stern, The Economics of Climate Change: The Stern Review 515 (2007) (discussing the Kyoto Protocol); Select Comm. on Climate Change, House of Lords, The Economics of Climate Change, Second Report of Session 2005–06, at 64–65 (2005) (discussing the United States's opposition to the adoption of the Kyoto Protocol).

In this Article, we argue that global success of the U.S. EMTS industry requires critical assessment of current U.S. legal structures. Such an assessment can lead to helping create market-based and regulatory incentives that promote the U.S. EMTS industry, and also position the industry to compete and win against global competitors in global markets. The Article further posits that it will be the legal community, as the leadership partner with the environmental science and engineering disciplines, which will guide the growth and market dominance of the U.S. EMTS industry in the global marketplace. In making these recommendations, we rely on the success of the semiconductor and biotechnology industries, and the legal structures that helped those American businesses flourish here and abroad.

By advancing incremental changes in existing statutes and regulations, lawyers can harness existing legal systems to position the U.S. EMTS industry for global commercial dominance into the next decade. State, local, and federal governments can similarly implement the changes we recommend between now and the next incoming presidential administration in January 2009. Unlike the now-traditional model for environmental regulation, these recommendations require no major federal legislation.

Three overarching observations fuel and inform our recommendations. First, in making arguments that the legal community should focus on incremental changes to existing statutes and regulations, this Article acknowledges that such incremental change is not a panacea that in and of itself will solve GCC/SD challenges, or guarantee global dominance by the U.S. EMTS industry in the years to come. But, contrary to the arguments by other commentators on this topic,[13] incremental changes in existing legal systems are not a distraction or waste of time for leaders of the EMTS industry, or to those addressing GCC/SD concerns. Incremental changes can provide the needed foundations on which U.S. corporations can expand their EMTS business, just as similar incremental changes established the foundation for the U.S. semiconductor and biotechnology industries in years past. Many of the developments from those industries have proven fruitful or socially beneficial, and overall those industries have produced results that have drastically

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[13] *See, e.g.*, Zygmunt J.B. Plater, *Dealing with Dumb and Dumber: The Continuing Mission of Citizen Environmentalism*, 20 J. Envtl. L. & Litig. 9, 62 (2005) (noting that environmental groups "often are bogged down . . . in ineffective Potomac incrementalism, attacking global warming by seeking minor increases in CAFE fuel efficiency standards, without a major vision and ultimately without even incremental success").

changed life for the better, by improving computer technology, as well developing new pharmaceuticals and medical devices.

Second, the proposals presented here accept the scientific and economic reality of the GCC/SD challenge. Regardless of the scientific debates on these issues, the global marketplace, including corporations and governments within the EU and Japan, have already determined that low-carbon industrial technologies and sustainable development will be the dominant global economic drivers in the coming decades.[14] U.S. corporations can be assured that domestic and foreign market demand for sustainable products, and the systems to develop and manufacture them, will create an economic demand of comparable size and scope to the market demand in the semiconductor and biotechnology industries.

Third, corporate and governmental lawyers will play different leadership roles in the exponential growth of the U.S. EMTS industry than in the high-tech, high-growth industries of the past. With regard to the semiconductor and biotechnology industries, lawyers reacted to the corporate legal needs of those industries by developing contractual, common law, and statutory fixes as issues arose, on an as-needed basis.[15] U.S. technology prowess, derived from universities, corporations, and government research facilities, drove U.S. dominance of the global semiconductor and biotechnology industries; by and large, lawyers served as support staff to this industrial growth.[16] In a similar manner, U.S. universities, industry, and government currently dominate global research and development in environmental science, technology, and management, as measured by funding, manpower, and research report metrics:

- *Universities*: American universities lead the international research community in many areas of renewable energy research—including biomass and biofuels—as well as environmental applications of biotechnology.[17]

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[14] *See* STERN, *supra* note 12, at 303, 540, 589.

[15] *See, e.g.*, Dan L. Burk & Mark A. Lemley, *Policy Levers in Patent Law*, 89 VA. L. REV. 1575, 1630–38 (2003).

[16] *See, e.g.*, Aryeh S. Friedman, *Law and the Innovative Process: Preliminary Reflections*, 1986 COLUM. BUS. L. REV. 1, 5 (discussing the American dominance of trade in new technologies).

[17] *See, e.g.*, JUNFU ZHANG & NIKESH PATEL, THE DYNAMICS OF CALIFORNIA'S BIOTECHNOLOGY INDUSTRY 11–12 (2005) ("The biotech industry . . . relies on research universities as a source of technological innovation.").

- *Industry*: U.S. industry, including industrial consortium research centers, maintain leadership positions in the commercialization of recyclable materials, bioplastics, and clean water technologies.[18]
- *Government*: U.S. government laboratories continue to pioneer advances in photovoltaics, fuel cells, and the control of GHGs.[19]

In the case of the global EMTS industry, however, although much of the world's basic EMTS technology finds its home in the United States, much of the commercialization of this U.S. technology is based within industrial countries within Asia, the EU, and in EU-dominated economies.[20] As described above, the U.S. EMTS industry generally employs a different business model as compared to much of the EMTS industry abroad. Early in the genesis of the semiconductor and biotechnology industries, U.S. business embraced a manufacturing technology model and existing intellectual property law to guide the capture, development, commercialization, and licensing of valuable research.[21] U.S. courts, experienced in intellectual property disputes in manufacturing arenas, such as consumer products and pharmaceuticals, quickly adapted existing law to create predictable legal rules under which both industries could expand and flourish.[22] By contrast, traditionally, much of the U.S. EMTS industry is based on trade secret and protected expertise commercialized within a consulting—not a manufacturing indus-

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[18] *See, e.g.*, Ramani Narayan, *Commercializing Technology: From Laboratory to the Marketplace—A Case Study of Starch-Based Biodegradable Plastics Technology*, *in* PARADIGM FOR SUCCESSFUL UTILIZATION OF RENEWABLE RESOURCES 78, 79 (David J. Sessa & Julious L. Willett eds., 1998).

[19] *See, e.g.*, The Unitized Regenerative Fuel Cell, http://www.llnl.gov/str/Mitlit.html (last visited May 1, 2008) (describing the role of Lawrence Livermore laboratories in development of fuel cells).

[20] *See, e.g.*, STERN, *supra* note 12, at 593 box 24.7.

[21] *See* ZHANG & PATEL, *supra* note 17, at 8–15 (describing the growth of the industries and differences between the information technology and biotechnology industries).

[22] *See* Burk & Lemley, *supra* note 15, at 1630–38; James M. Golden, *Biotechnology, Technology Policy, and Patentability: Natural Products and Invention in the American System*, 50 EMORY L.J. 101, 113 (2001). The authors note:

> Under the influence of a new federal appellate court and a series of legislative initiatives, patent law moved with the spirit of the day, producing doctrines and policies sufficiently "modern" to provide enforceable property rights in a substantial share of the purified natural substances that were biotechnology's most characteristic products.

Id.

try—model,[23] which does not draw equally as well on existing intellectual property law protection and guidance. Not surprisingly, much of the ongoing EMTS research and practice has not been captured through patent and other intellectual property mechanisms. This Article argues that American attorneys in corporate and governmental practices must be trailblazers for the EMTS industry, harnessing the existing legal infrastructure, including intellectual property, tax, and corporate law, to ensure that the EMTS industry can grow on a level playing field with corporate competitors in other industrialized countries. Development of the domestic EMTS industry furthers a national interest as vital as the development of the semiconductor and biotechnology industries.

I. Issue 1: Capturing Intellectual Property for the U.S. EMTS Industry

The semiconductor and biotechnology industries experienced booms in the 1970s, 1980s, and 1990s.[24] Much of the credit for that boom lies with American scientists and engineers. At the same time, however, they did not act in a vacuum. As summarized in Table 2, federal and state governments were also active during the genesis of these industries, enacting new legislation to protect U.S. semiconductor and biotechnology intellectual property generated by universities, government labs, and corporate research facilities. The Semiconductor Chip Protection Act of 1984 defined new intellectual property rules aimed to protect semiconductor chip designs.[25] The Biotechnology Process Patent Act of 1995 amended sections of the Patent Act "to make biotechnology processes that use or result in novel and nonobvious compositions of matter *per se* nonobvious under certain conditions," which was critical for those processes to qualify for patent protection.[26] State and local governments were also active in the growth and development of these industries by enacting legislation to establish state technology

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[23] *See, e.g.*, U.S. Census Bureau, U.S. Dep't of Commerce, Management, Scientific, and Technical Consulting Services: 2002, at 1 tbl.1 (2004) (describing the extent of the environmental consulting industry).

[24] *See* Michael E. Kamarck et al., *Biotech Manufacturing Grows Up: The Industry Is Now 30 Years Old, Is Undergoing an Important Transition*, Biopharm Int'l, Oct. 1, 2007, at 1–2, *available at* http://goliath.ecnext.com/coms2/gi_0199-7163275/Biotech-manufacturing-grows-up-the.html. *See generally* Friedman, *supra* note 16 (discussing the ability of intellectual property laws to address technological developments).

[25] *See* Semiconductor Chip Protection Act of 1984, 17 U.S.C. §§ 901–914 (2000); *see also* H.R. Rep. No. 98-781, at 1–4 (1984), *reprinted in* 1984 U.S.C.C.A.N. 5750, 5750–53.

[26] *See* Jeremy (Je) Zhe Zhang, In re Ochiai, In re Brouwer *and the Biotechnology Process Patent Act of 1995: The End of the* Durden *Legacy?*, 37 IDEA 405, 407 (1996).

parks and research centers, as well as consortia among state universities, federal entities, and industrial partners, to target and capture semiconductor and biotechnology intellectual property.[27]

Table 2: 1970s and 1980s—Federal/State Policy Labels These Industries as Vital Federal and State Interests

Government Created Legislation to Support Rapid Growth, and Dominance of the U.S. Industry:
•Federal Intellectual Property Assistance: Semiconductor Chip Protection Act of 1984 Biotechnological Process Patent Act of 1995
•State Initiatives: State Technology Parks, Research Centers
•State/Federal/Industry Consortia: Semiconductor Manufacturing Technology (SEMATECH) Association, California Biotechnology Consortium

Much of the U.S. EMTS industry, however, is based on trade secrets and individual know-how commercialized within a consulting, not a manufacturing, industry model.[28] Such business models do not easily fit within traditional legal regimes seeking to identify and protect intellectual property as part of the capitalization of business activities. Not surprisingly, much of the ongoing EMTS research and development within most U.S. corporations has not been captured through patent and other intellectual property mechanisms. Companies are thus forced to reinvent the same approaches within multiple industry sectors, resulting in the loss of economy and speed of innovation towards GCC/SD targets observed in corporations headquartered in the EU.[29]

While the U.S. Patent and Trademark Office (U.S. PTO) has published guidelines to fast track patent applications for EMTSs,[30] the underlying legal mechanics of patent protection must also be examined to create patent regimes addressing the unique nature and characteristics of EMTSs—just as similar regimes were developed and implemented to support the semiconductor and biotechnology industries. Table 3 summarizes some key starting points under existing U.S. law and intellectual property regimes to tailor in order to fast track the evolution of the U.S. EMTS industry to meet state and local GCC/SD targets as identified in recent state and regional legislative initiatives.

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[27] *See* ZHANG & PATEL, *supra* note 17, at 1, 101–04 (providing examples in the biotechnology industry).

[28] *See* U.S. CENSUS BUREAU, *supra* note 23, at 1 tbl.1, app. B.

[29] *See* STERN, *supra* note 12, at 269–74.

[30] *See* 37 C.F.R. § 1.102(c)(2)(i)–(ii) (2007).

Table 3: U.S. EMTS Industry Issues/Needs—Intellectual Property

U.S. PTO: Build on Fast-Track Patent Review/Approval by U.S. PTO:
•Reconsider interpretations of obviousness/novelty requirements for EMTS patents
•Greater approval of EMTS research and development (R&D) elements as patentable products/processes
U.S. PTO: Broader Acceptance of Business Method Patents for EMTS such as:
•ISO14000-based management systems
•LCA systems
Industry and Government: Promotion of industry-established service/certification marks for products/companies employing EMTS and specific low-carbon technologies in product design, manufacturing, and distribution

First, EMTS could be considered for greater patent protection by modifying the approach provided to biotechnology process systems in the Biotechnology Process Patent Act of 1995.[31] Under such an approach, existing EMTS practices—whether engineering and scientific practices or facility/site management practices—which use or result in novel and nonobvious EMTS elements employed in business and industry could be considered per se nonobvious under specified conditions. Corporate research and development programs, which create EMTS elements targeted to address specific environmental management issues in specific industries, could be reconsidered as patentable products and processes. This approach to EMTS intellectual property would have a twofold effect:

- Much of the intellectual property currently employed within medium- to large-scale industrial facilities could be made available to smaller corporations—particularly startup entities—under normal licensing agreements. Such a development would advance GCC/SD goals by allowing new companies to build their products and processes from the start employing the latest EMTS available, thus increasing the likelihood they achieve even greater EMTS targets as these new firms grow and develop.
- Innovative firms that wish to initiate R&D programs to create their own EMTSs would have greater access to investment capital to support such programs because the fruits of these R&D programs could generate a licensing revenue stream.

Second, business method patents (BMPs) offer existing legal means under which EMTSs developed by U.S. businesses can be captured and promoted within the global marketplace. BMPs are patents

[31] *See* Biotechnology Process Patent Act of 1995, 35 U.S.C. § 103(b) (2000 & Supp. 2005).

for processes or methods for conducting or operating a business activity.[32] Any such process or method is potentially patentable so long as it is not an unapplied abstract idea or concept.[33] For example, a growing number of U.S. businesses have created and implemented an ISO 14000-based environmental management system (EMS) as an outgrowth of their development and implementation of ISO 9000 quality management systems.[34] The ISO 14000 standard series is the first international standard for voluntary environmental management by which corporate and governmental organizations can meet internal and external environmental targets and objectives. Elements of the ISO 14000 standards ensure that organizations adopting sound environmental management strategies realize improved environmental performance.[35] These EMS standards have not replaced state and federal environmental regulations, but act as complements to these regulations by integrating governmental requirements with ongoing and long-term business activities.

While hundreds of U.S. corporations invested significant resources into the implementation of such EMSs, intellectual property regimes such as BMPs have not been employed by these corporations to capture the intellectual property created in their design of ISO 14000 EMSs. Without this reward, developers lack incentive to make their designs public and thus available to other businesses in their industry through licensing programs. Currently, an EMTS consultant stands to make more money redesigning and custom fitting the same EMTS, but lacks a means to capture the potential gains of mass marketing.

One such example is the Murray Corporation, a manufacturer of power lawn equipment.[36] Murray created an ISO 14000-based EMS that

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[32] *See* State St. Bank & Trust Co. v. Signature Fin. Group, Inc., 149 F.3d 1368, 1375–77 (Fed. Cir. 1998).

[33] *Id.*; *see* Robert C. Kain, *Business Method Patents—Defining Your Viewpoints and Your Rights*, 80 Fla. B.J., Apr. 2006, at 40; *see also* U.S. Patent & Trademark Office, A USPTO White Paper, Automated Financial or Management Data Processing Methods (Business Methods) 5, *available at* http://www.uspto.gov/web/menu/busmethp/whitepaper.pdf.

[34] *See* International Organization for Standardization, ISO 14000 Essentials, http://www.iso.org/iso/iso_14000_essentials (last visited May 1, 2008) (describing the purpose of ISO 14000 and its different elements).

[35] *See id.*

[36] *See* Tenn. Pollution Prevention Roundtable, 1998 Report: Pollution Prevention Success Stories 19 (1998), *available at* http://www.p2pays.com/ref/26/25690.pdf. One of the authors of this Article directed the development of the Murray EMS. T. Rick Irvin, Phillip R. Hood & Nelson R. Webb, Development of ISO14001-Based Environmental Management System to Meet EU Vendor Requirements 10–21 (Mar. 16, 2007) (unpublished manuscript, on file with authors).

set internal, self-appointed timelines to identify and minimize toxic chemical usage and waste generation at its manufacturing sites.[37] This EMS was developed, in part, to codify Murray's environmental performance and satisfy the requirements from European vendors that had instituted aggressive environmental and toxic chemical benchmarks for all approved vendors.[38] With an EMS in place that coordinated new product design functions with input from environmental and facility management staff, toxic chemical-intensive finishes and lubricants and energy-intensive processes could be intercepted while a new product was still at the drawing board.[39] While Murray—like other corporations that develop ISO 14000-based EMSs—created the needed codification of their environmental performance as part of their vendor certification process, no intellectual property regimes could be accessed to capture the information and knowledge developed during construction of the EMS and create a product that could be licensed to other firms in their industry.[40] In addition, no program was in place that formally recognized Murray's implementation of an ISO 14000-based EMS as part of an industry- or government-established certification mark system for products employing low-toxic and low-carbon technologies during design, manufacturing, and distribution.[41]

Such refinements and updates of U.S. intellectual property law would promote the transition of key components of the U.S. EMTS industry to a manufacturing industry model with the coordinate benefit of allowing the EMTS industry better access to existing U.S. contract and tort law to promote the growth of technology commercialization in these disciplines. In addition, such intellectual property law refinements would facilitate achieving many large-scale sustainable develop-

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[37] *See* Tenn. Pollution Prevention Roundtable, *supra* note 36, at 19; Irvin, Hood & Webb, *supra* note 36, at 10–21.

[38] *See, e.g.*, B&Q Online: From Kitchens & Bathrooms to Sheds & Paving: Plus Planning Tools, Social Responsibility, http://www.diy.com/diy/jsp/bq/templates/content_lookup.jsp?content=/aboutbandq/social_responsibility_2007/environmental_main.jsp&menu=aboutbandq (last visited May 1, 2008). For example, the B&Q do-it-yourself (DIY) chain in the United Kingdom has established firm environmental benchmarks and guidelines for all suppliers. *Id.* As a vendor of lawn equipment, Murray had to meet these goals or could not sell its equipment at B&Q stores. *See id.*

[39] *See* Tenn. Pollution Prevention Roundtable, *supra* note 36, at 19; Irvin, Hood & Webb, *supra* note 36, at 10–21.

[40] *See* Tenn. Pollution Prevention Roundtable, *supra* note 36, at 19; Irvin, Hood & Webb, *supra* note 36, at 10–21.

[41] *See* Tenn. Pollution Prevention Roundtable, *supra* note 36, at 19; Irvin, Hood & Webb, *supra* note 36, at 10–21.

ment objectives, announced by the United States and other governments, in the shortest period of time.

II. Issue 2: U.S. Corporate Taxation Law Supporting the EMTS Industry: Harnessing Federal and State Tax Law to Accelerate Low-Carbon Technologies

Regional and national initiatives have created significant market advantages for non-U.S. EMTS industries. The EU and Japan have announced significant—and aggressive—market-based initiatives to accelerate growth of their native EMTS industries.[42] These initiatives include targeted government purchase of selected EMTS goods and services and selective tax treatment of specific EMTS industries.[43] Such actions, including targeted tax initiatives, not only create large internal markets for new EMTS products and services, but also provide a rich incubator facilitating basic research commercialization—an incubator not currently available or under development for many emerging U.S. EMTS businesses.

Through incremental authorizations under the existing tax code, the Internal Revenue Service could affect the tax treatment of EMTS research, development, implementation, acquisition, and commercialization under existing regulations and other administrative activities.[44] These possible changes, summarized in Table 4, can enhance the rapid adoption of environmentally beneficial technologies within the U.S. marketplace. Federal agencies alone, or through targeted authorized annual spending programs, could cost-share purchase or tax deductibility of low-carbon replacement technology as older industrial facilities accelerate the replacement of current high-energy, high-carbon technology in the coming years. Similarly, the federal government could accelerate corporate depreciation of EMTS equipment to promote faster corporate reinvestment in low-carbon technology and, in turn, accelerate the progress of GCC/SD targets within specific industries. Lastly, federal tax benefits to corporations that purchase targeted EMTS goods, services, equipment, and technology would provide U.S. EMTS firms with an incubator market within which U.S. firms could grow and prosper as a predicate to competing within the global marketplace.

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[42] *See* Stern, *supra* note 12, at 347–66.

[43] *See id.*

[44] Examples of similar tax treatment include the tax treatment of energy-efficient building expenditures and alternative motor vehicles. *See* I.R.C. § 25C (West Supp. 2006) (energy-efficient building expenditures); I.R.C. § 30B (West Supp. 2006) (alternative motor vehicles).

Table 4: U.S. EMTS Industry Issues/Needs—Federal Tax Law

Necessary alterations to federal tax law:
•Broader deductibility of low-carbon replacement technology
•Accelerate depreciation of U.S. EMTS equipment
•Greater tax benefits for purchasing targeted U.S. EMTS goods, services, equipment, or technology to create needed internal U.S. markets

Similarly, tax programs at the state and local level that reward development and commercialization of new intellectual property and the concomitant growth of jobs can provide support structures for EMTS commercialization. Similar support structures aided growth during the birth of the American semiconductor and biotechnology industries.[45] As summarized in Table 5, state and local governments could employ targeted tax credits and tax abatements to provide local economic stimulus to existing industries and startup businesses that renovate their products and processes to meet GCC/SD goals. States could adopt tax programs linked to the adoption or commercialization of EMTS intellectual property developed by state universities and research centers, commercialized in planned environmental technology parks, or developed by state or local development authorities. State and local governments could institute corporate tax credit programs available to corporations that purchase targeted EMTS goods, services, equipment, and technology to create local and regional incubator markets for startup EMTS firms. This market-enhancing approach is not new; many states have successfully followed this path and created targeted incentives that in turn fostered local venture capital for business formation in semiconductor and biotech industries. For instance:

> States such as Florida, New York, and Texas give tax credits to insurance companies if they invest in certified capital companies. Others such as Arizona and South Carolina directly offer tax credits to venture capital firms. Residents in states such as Iowa, Kansas, and Oklahoma get tax credits for investments in qualified venture capital funds.[46]

Table 5: U.S. EMTS Industry Issues/Needs—State Tax Law

States should implement:
• Targeted tax credits and tax abatements for capital purchases of low-carbon EMTS goods, services, and equipment
• Tax programs to promote joint university-corporate EMTS R&D and commercialization
• Greater tax benefits for purchasing targeted U.S. EMTS goods, services, equipment, and technology to create needed local/regional incubator U.S. markets

[45] *See, e.g.*, ZHANG & PATEL, *supra* note 17, at vii–viii (discussing the biotech industry).
[46] *Id.* at 102–03.

In addition, state technology initiatives, recognized as successful contributors to the growth of the semiconductor and biotechnology industries, provide a number of proven industrial growth strategies, which can be readily adapted to lay the foundation for parallel growth of the U.S. EMTS industry.[47] Many states have created funds targeted at the semiconductor and biotechnology industries' special needs, such as funds for building modern research labs and facilities or venture capital for startup firms.[48] Such programs can be duplicated in the near term—six to twelve months—to jump start nascent U.S. EMTS businesses. Specific programs well recognized as leaders in state initiatives for both industries include Wisconsin, Arizona, and Texas initiatives.[49] Each state spends hundreds of millions of dollars on engineering and life science facilities at state university campuses for collaborative, joint-venture activities.[50] New York, California, Texas, and Colorado constructed research parks and technology transfer incubator facilities for nascent semiconductor and biotechnology firms.[51] Connecticut and North Carolina created state investment funds targeted at startup technology firms.[52]

State governments can also streamline technology transfer from academic institutions to the EMTS industry with incentives to encourage technology transfer from universities to businesses.[53] State and local governments can sponsor EMTS incubators near major research institutions to help accelerate the commercialization of EMTS through entrepreneurship between the university and business communities.[54] A highly educated labor force is needed for the U.S. EMTS industry to compete in the global marketplace; state initiatives can meet this need through targeted special programs within state higher education systems, as they have for the semiconductor and biotechnology industries.

One recent well-advertised state initiative to attract, incubate, and establish a new technology-based industry is the California Stem Cell Research and Cures Bond Act.[55] Adopted as Proposition 71 in November 2004, this state initiative authorized California to provide an aver-

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[47] *See id.* at 1–4, 101–02.

[48] *Id.* at 104–08.

[49] *Id.* at 104.

[50] *Id.*

[51] ZHANG & PATEL, *supra* note 17, at 104, 105–06 tbl.6.7.

[52] *Id.* at 104.

[53] *See id.* at 113 (summarizing efforts by three University of California campuses to form an incubator for biotech research).

[54] *See id.*

[55] *See* CAL. HEALTH & SAFETY CODE § 125291.10–.85 (West 2004).

age of $295 million per year in bonds over ten years to fund stem cell and medical research facilities in California.[56] Stem cell research is expected to provide the next generation of cures for devastating diseases such as Alzheimer's and Parkinson's.[57] Of particular note is that, as of 2003, the annual funding available in California for stem cell research was greater than the amount of funding available for similar research by the federal government.[58] Comparable state tax and funding initiatives on the size and scale of the California stem cell initiative, modeled on earlier California initiatives for semiconductor and biotechnology initiatives, will be needed for the U.S. EMTS industry to achieve global dominance on the scale of earlier high-tech and biotech firms.

Just how significant an impact such state and local initiatives could provide to promote the growth and dominance of U.S. EMTS businesses can be demonstrated by looking at case studies describing how state and local governments have encouraged growth and retained firms in the biotechnology industry. In 1994, San Francisco-based biotech pioneer, Genentech, located a new, quarter-billion-dollar manufacturing plant in Vacaville, about sixty miles from its existing locations.[59] Genentech's decision was based in part on California's incentive package which included:

- state R&D tax credits;
- a state investment tax credit worth up to $6 million;
- a $3.2 million federal economic development grant;
- a $10 million state grant for retraining workers;
- a $4 million property tax rebate by local government;
- a waiver of $1.8 million in permit fees and sewer costs; and
- discounted long-term energy contracts.[60]

California and Vacaville's investments reaped tremendous economic benefits; Genentech subsequently constructed an additional $600 million expansion, making Vacaville the location of one of the largest biotech drug manufacturing locations in the world.[61] State tax initiatives of this size and scale will be needed for the U.S. EMTS industry to achieve the power needed to compete with, and dominate, global EMTS competitors and markets. The same growth potential harnessed by state and

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[56] *Id.* (originally adopted as CA Prop. 71 (2004)).
[57] ZHANG & PATEL, *supra* note 17, at 116.
[58] *Id.*
[59] *Id.* at 108.
[60] *Id.* at 109.
[61] *Id.* at 109 n.10.

local government, as seen in their support of the semiconductor and biotechnology industries, therefore, provides proven tax program strategies by which U.S. EMTS firms can receive the financial support needed, not only to grow and prosper, but also to take over global EMTS markets at a level comparable to that seen by the U.S. semiconductor industry in the 1980s and the U.S. biotechnology industry in the 1990s.

III. Issue 3: Limits to Corporate Environmental/Operational Disclosures: Securities Exchange Commission Regulation Fair Disclosure

The success or failure of GCC/SD initiatives will be determined in part by the ability of governments and third-party nongovernmental organization certifiers, such as Ceres[62] and the Carbon Disclosure Project (CDP),[63] to access information about the extent of a corporation's environmental footprint, including carbon emissions. Current federal regulations, however, have either proscribed the ability of U.S. corporations to disclose critical corporate operational and product information needed to formulate and implement GCC/SD initiatives, or have provided explanatory cover for corporations wishing to avoid such disclosure.

One example is the ability of third-party organizations to obtain information about carbon emissions from publicly traded corporations. Such data are crucial to determine everything from the establishment of a baseline of regulation to the measurement of environmental performance. Nevertheless, recent responses that CDP received from American corporations demonstrate perceived impediments, and show a reluctance by some corporations to participate in such monitoring and data-collection efforts.[64] For example, the 2006 CDP response from the John Deere Corporation of Moline, Illinois reads in part: "[W]e receive many such detailed requests on an ongoing basis from investors, rating groups, socially conscious organizations, academics and

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[62] Ceres is a network of environmental, investor, and advocacy groups. Ceres—Home, http://www.ceres.org (last visited May 1, 2008).

[63] Carbon Disclosure Project: Homepage, http://www.cdproject.net (last visited May 1, 2008). The CDP is a nongovernmental, independent organization that works with corporations and their shareholders to disclose environmental information, including GHG emissions, for public review. As of March 2008, the CDP represented major institutional investors with a combined $57 trillion under their management. *Id.*

[64] *See, e.g.*, Letter from Mark A. Howze, Corp. Sec'y & Assoc. Gen. Counsel, Deere & Co., to Daniel Turner, Project Officer, Carbon Disclosure Project (May 31, 2006), *available at* http://www.cdproject.net/download.asp?file=CDP4_Deere_IN_FT500.pdf.

others. You also may be aware of federal Regulation FD, which prohibits companies such as Deere from selectively providing information."[65]

Securities Exchange Commission (SEC) Regulation Fair Disclosure (Regulation FD) was issued in 2000 to prevent selective disclosure of material, nonpublic information to securities professionals, industry analysts, and institutional investor organizations *before* that information is disseminated to the general investing public.[66] Selective disclosure of corporate information material to the investment community could unfairly benefit financial and investment professionals at the expense of noninstitutional purchasers of particular corporate securities.[67] Regulation FD removed this potential selective benefit by regulating how public companies must disclose material, nonpublic corporate information to members of the securities and investment community.[68]

Corporations laboring under this reading of Regulation FD may be misreading the reach of the rule. Regulation FD requires issuers to make prompt disclosure to the public of material, nonpublic information whenever they make an intentional or inadvertent disclosure of that information.[69] In taking the position that Regulation FD applies to their environmental information, companies that demur from cooperating with GCC/SD-related information gathering efforts believe such information to be *material*, which is an arguably correct interpretation of the regulation. However, corporations may have read too much into Regulation FD. Regulation FD does not prevent corporate officers from providing experienced securities analysts and senior shareholder and investor representatives with corporate information that alone is not material information, but from which experienced securities professionals could extract key environmental and operational performance

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[65] *Id.*

[66] 17 C.F.R. §§ 243.100–.103 (2007); *see also* Selective Disclosure and Insider Trading, 65 Fed. Reg. 51,716, 51,716 (Aug. 24, 2000). The Selective Disclosure and Insider Trading regulation states:

> We believe that the practice of selective disclosure leads to a loss of investor confidence in the integrity of our capital markets. Investors who see a security's price change dramatically and only later are given access to the information responsible for that move rightly question whether they are on a level playing field with market insiders.

Id.

[67] *See* 65 Fed. Reg. at 51,716.

[68] *See* 17 C.F.R. § 243.101(e).

[69] *Id.* § 243.100(a).

data.[70] Moreover, Regulation FD does not prevent disclosure provided it is made to the public.[71]

At the same time, U.S. corporations have reason to tread carefully when considering whether disclosures of environmental and operational data triggers the reporting requirements of Regulation FD. Failing to comply with any element of Regulation FD creates immediate exposure to SEC enforcement actions.[72] False or misleading statements or omissions made pursuant to Regulation FD remain actionable under Rule 10b-5—the general corporate anti-fraud rule which governs material misrepresentations made with respect to the sale of securities in a public, as well as a private, corporation—although the SEC has provided within the regulation that failure to make a disclosure will not result in 10b-5 liability if the disclosure is required solely by Regulation FD.[73] In addition, a company can be liable under Regulation FD if it:

- knows of or is reckless in not knowing that information selectively communicated is both material and nonpublic;
- fails to disseminate such information in a prompt manner; or
- fails to employ reasonable methods in order to make broad, nonexclusionary disclosures of material, nonpublic information.[74]

Possible SEC remedies include issuance of a cease and desist order, and civil actions seeking an injunction and/or civil monetary penalties.[75] Individuals, including corporate officers, deemed responsible for Regulation FD violations can personally be subject to SEC actions as either "a cause of" the violation or as an "aider and abetter" of such violations.[76] Potential Regulation FD violations can substantially affect the value of that corporation's securities, as well as possibly limit the ability of individuals to continue as members of corporate management.[77] Therefore, it is not unreasonable that major corporations, like Deere, which depend on the securities markets for ready access to investment capital,

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[70] *See* 65 Fed. Reg. at 51,722 ("At the same time, an issuer is not prohibited from disclosing a non-material piece of information to an analyst, even if, unbeknownst to the issuer, that piece helps the analyst complete a 'mosaic' of information that, taken together, is material.").

[71] *See id.* at 51,719 (stating that Regulation FD "encourages broad public disclosure").

[72] *See id.* at 51,726 (outlining possible SEC enforcement responses).

[73] 17 C.F.R. § 243.102.

[74] *Id.* §§ 243.100–.101.

[75] 65 Fed. Reg. at 51,726.

[76] *See id.*

[77] *Id.* at 51,725; *see* Jon Jordan, *Corporate Issuers Beware:* Schering-Plough *and Recent SEC Enforcement Actions Signal Vigorous Enforcement of Regulation FD*, 58 U. Miami L. Rev. 751, 803–06 (2004).

might sensibly err on the side of caution rather than participate in activities that may create liability in light of these potential SEC actions.[78]

Simple guidance from the SEC or an interpretive rule—which under the terms of the Administrative Procedure Act would not even require notice and comment[79]—can rectify this situation. The SEC has already provided guidance to Regulation FD,[80] and in the rule itself announced that a failure to disclose information required solely by Regulation FD would not result in liability.[81] Although the desire for investors to compete on a level playing field is laudable, regulated corporations can use the additional assurance from the SEC that other laudable activities will not result in unpredictable liability. Such increased information will allow private entities to further activities that promote GCC/SD efforts without extensive governmental involvement.

Conclusion

GCC/SD initiatives by the EMTS industry, as well as by state and local governments, are testing the creativity possible in law on an almost daily basis. The legal academy continues to propose new legal theories addressing the use of comprehensive, national and international legal systems to reverse the impacts of global climate change through enhanced regulation of high-carbon technologies and their associated GHG emissions. Practicing corporate and regulatory lawyers at the same time are grappling with these proposed new legal regimes and jurisprudential theories targeting the transition of all sectors of the U.S. economy from a high-carbon to a low-carbon technology base.

Each of these legal strategies share a common ingredient: they attempt to solve a large global problem using almost exclusively large, global legal approaches. Even proposed state and local responses often try to achieve a global solution. Absent from much of the current GCC/SD legal debate within both business and government are legal approaches founded on mature, small, incremental legal initiatives that

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[78] *See* Letter from Mark A. Howze, *supra* note 64.

[79] *See* Administrative Procedure Act, 5 U.S.C. § 553(b)(A) (2000).

[80] SEC, Division of Corporate Finance: Manual of Publicly Available Telephone Interpretations, http://www.sec.gov/interps/telephone/phonesupplement4.htm (last visited May 1, 2008).

[81] *See* 17 C.F.R. § 243.102 (2007). Institutional investors, including the California Public Employees' Retirement System, and environmental organizations filed a petition seeking a rulemaking requiring corporations to disclose risks presented by GCC. *See* Petition for Interpretive Guidance on Climate Risk Disclosure, No. 4-547 (filed Sept. 18, 2007), *available at* http://www.sec.gov/rules/petitions/2007/petn4-547.pdf. That petition does not raise the issue with Regulation FD described in the text.

can result in near-term GCC/SD and GHG improvements. Tactically, smaller and less obvious legal approaches in support of GCC/SD initiatives will be important to the legal community for at least three reasons: economics, facility in policy design, and the treatment of new entrants to the market.

Economically, smaller, incremental legal initiatives to change laws governing GHGs are far less resource-intensive in terms of time, effort, and money for nongovernmental and governmental legal organizations. Reductions in GHG emissions can be achieved through small, incremental legal systems with greater speed and efficiency than large-scale legal initiatives, global in scale.

From a policy design perspective, smaller, incremental legal initiatives, which can progress with greater speed through the courts and administrative law venues, can provide useful clues in the short-term to calibrate how resistant existing legal systems will be to initiatives targeting GCC/SD and GHG emission regulation.

Finally, smaller, incremental legal initiatives can take advantage of new, emerging participants who are now key players in how the U.S. EMTS industry will respond to emerging GCC/SD initiatives. Groups such as Ceres now provide attorneys and investment managers in both corporate and governmental practices with new information and technology exchange options not previously available as tools to fashion corporate, industry, or local and state EMTS initiatives.

Many in the regulatory community and legal academy believe that years, if not decades, are available to sort out how U.S. industry and government should create legal and regulatory strategies to address GCC/SD initiatives. They presume the end-product of this process will be major new U.S. legislation, as was created to deal with prior initiatives on air, water, and industrial wastes. They also believe that U.S. industry and government have the luxury of a long-term horizon to respond to GCC/SD-related environmental concerns, because U.S. research dominance leads many to expect U.S. businesses will inherit an equally dominant position in the ongoing expansion of global EMTS industries. While the United States enjoys a leadership role in many expanding technology-based industries—such as the biotechnology and semiconductor industries—several dynamics of U.S. and global EMTS industry growth portend U.S. industries will be at a selective disadvantage competing with non-U.S. EMTS industry participants in current markets, and a similar selective disadvantage commercializing EMTS research into new products and services.

This Article has posited that the success of the U.S. EMTS industry—compared to the success of the U.S. biotechnology and semicon-

ductor industries—requires an immediate, critical examination of current U.S. law to enable market-based and regulatory incentives that promote the U.S. EMTS industry and positions U.S. industry to compete with equal strength against global competitors in global markets. The evidence to date clearly indicates that the legal community, as a needed partner to the environmental science and engineering disciplines, will play a significant role in guiding the rate of growth and market dominance of the U.S. EMTS industry in the global marketplace. The three areas of the law examined here—corporate law, intellectual property law, and tax law—provide clear examples of how current U.S. federal and state law, absent any new major legislative initiatives, can promote the U.S. EMTS industry to global success and predominance on par with the level of global commercial success of the U.S. semiconductor and biotechnology industries. In addition, we have provided examples of short-term applications of existing U.S. statutory and common law that attorneys in corporate and governmental practices can utilize to position companies, industries, states, or regions of the United States to become dominant actors in the development of the EMTS industry comparable to the dominance of U.S. corporations and governmental agencies in creating U.S. market dominance in the semiconductor and biotechnology industries in the 1970s, 1980s, and 1990s.

CORPORATE RESPONSIBILITY AND CARBON-BASED LIFE FORMS

Steven Ferrey*

Abstract: Corporations are being monitored as to their carbon base. The level of carbon in the atmosphere is reaching dangerous levels that threaten corporate productivity, as well as human health. Remember that humans are carbon-based life forms. This Article discusses in detail efforts to halt the release of carbon into the atmosphere and mitigate global warming, from state-led initiatives to litigation in lower courts and the U.S. Supreme Court. It concludes that incentivizing corporations to adopt renewable energy practices is the best way to address corporate citizenship and environmental responsibility.

Introduction

As carbon-based life forms, we as humans have become fixated on the carbon dioxide (CO_2) that we exhaust in our modern industrial arc. This self-awareness and collective consciousness about the carbon contrail that we create is certainly the first step to effective, environmentally responsible action on global warming. The environmentally aware corporate citizen must now comprehend the geopolitical reality of the corporate carbon footprint.

I. A Shift in Environmental Values and Focus

A. *A New Vernacular*

The millennial environmental vernacular is shifted forever. Phrases such as carbon footprint, offsets or carbon credits, and carbon neutral are commonplace. Global warming has enveloped the corporate and collective conscience.[1] It is, and will remain, a meta-environmental metric, crowding out a host of other environmental issues regarding how

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[1] *See* David J. Lynch, *Corporate America Warms to Fight Against Global Warming*, USA Today, May 31, 2006, at 1B; Press Release, Conference Bd., 'Carbon Footprint' Gaining Business Attention (Oct. 18, 2006), http://www.greenbiz.com/news/news_third.cfm?NewsID=34145&CFID=5914114&CFTOKEN=36024781.

corporations are measured.[2] According to David Crane, CEO of NRG Energy, "[T]his is the defining business issue of our generation."[3]

How far we have come in just three years! I can bear witness to the quantum leap of the carbon issue into corporate consciousness. Three years ago, I was asked to participate in a symposium at William and Mary School of Law on a similar topic of the greening of American corporate environmental responsibility.[4] It was an excellent assembly of some wonderful academics and other speakers from around the United States. Amid the various topics discussed, however, only one dealt with energy, let alone carbon.[5]

In less than three years, the dialogue in which corporate America—really America as a whole—is engaged, has been significantly transformed. Certainly, the grandeur of the global warming issue is an appropriate focus in the twenty-first century because of both the immediacy of the possibly irreversible damage that is inflicted by greenhouse gas (GHG) emissions and a warming planet,[6] and the collective nature of our dilemma. On the issue of the immediacy, James Hansen, head of the National Aeronautics and Space Administration (NASA) climate office, and one of the most prominently regarded world climatologists, has announced that we have fewer than eight years to radically diminish carbon emissions or face a very different planet.[7]

During the twentieth century, the global average surface temperature increased by six-tenths of a degree Celsius, and the twentieth century was likely the northern hemisphere's warmest in a thousand

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[2] *See* Press Release, Natural Res. Def. Council, Polls Show Voters Around the Country Strongly Support Measures to Reduce Global Warming (July 16, 2007), http://www.nrdc.org/media/2007/070716.asp.

[3] John Donnelly, *Unlikely Allies Advance Global Warming Policy*, Boston Globe, Aug. 22, 2007, at A2.

[4] *See generally* Symposium, *Corporate Governance and Best Practices*, 31 Wm. & Mary Envtl. L. & Pol'y Rev. 1 (2006) (providing a collection of articles on the topics of corporate governance and environmental stewardship).

[5] Steven Ferrey, *Corporate Governance and Rational Energy Choices*, 31 Wm. & Mary Envtl. L. & Pol'y Rev. 113, 113 (2006) [hereinafter Ferrey, *Corporate Governance*]. Even then, to fit energy within what was thought of as a legitimate topic on corporate environmental responsibility, I had to focus on the opportunities to utilize renewable energy and energy efficiency, not on the meta-issue of what was a corporate *carbon footprint*. While then I focused on the advantages of certain on-site distributed energy technologies that could make economic sense, while limiting limit fossil fuel use, now, three short years later, the dialogue is about the corporate carbon footprint.

[6] *See* Jonathan Rauch, *Global Warming: The Convenient Truth*, Atlantic.com, Mar. 13, 2007, http://www.theatlantic.com/doc/200703u/nj_rauch_2007-03-13.

[7] *See* Bill McKibben, *How to Close a Catastrophe*, 53 N.Y. Rev. of Books 18, 19 (2006) (discussing climatologist James Hansen's opinion that we only have until 2015 to reverse carbon emissions or face radically changing the planet).

years.[8] By 2100, the Intergovernmental Panel on Climate Change (IPCC) models project the average global surface temperature to warm anywhere from 1.4 to 5.8 degrees Celsius.[9] This rate of warming is higher than has occurred over the past 10,000 years.[10] The IPCC concluded that it is very unlikely that such warming is natural in origin or the result of internal variability alone.[11]

Carbon will be the worldwide environmental currency of this century, establishing a new metric by which corporate responsibility will be measured and accounted for during the lifetimes of everyone alive today. Given the fickle nature of public opinion and the collectively short memory of the population, how can I be so sure? For three reasons: CO_2's persistence in the environment, measurability, and translatability.

Assuming that the scientific consensus holds, carbon will be a unyielding challenge for centuries.[12] The scientific reality of GHGs indicates that even if we eliminated all anthropogenic carbon emission tomorrow, the problem would not only persist, but worsen progressively over the next few centuries. All forecasts of the U.S. Department of Energy (DOE),[13] the International Energy Agency,[14] and independent forecasters project that GHG emissions will increase exponentially, not decrease, during the foreseeable future.

Figures 1 to 3 depict the scientific linkage between CO_2 emissions, atmospheric concentrations of GHGs over time, and global temperature increase. These relationships will drive carbon policy.

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[8] Alex Kirby, *Twentieth Century "Warmest in 500 Years"*, BBC NEWS, Feb. 16, 2000, http://news.bbc.co.uk/2/hi/science/nature/644859.stm.

[9] Intergovernmental Panel on Climate Change [IPCC], Working Group II Contribution to the IPCC Fourth Assessment Report, *Climate Change 2007: Impacts, Adaptation and Vulnerability*, at 140 (2007), *available at* http://www.ipcc-wg2.org [hereinafter Working Group II Report].

[10] IPCC, Working Group I Contribution to the IPCC Fourth Assessment Report, *Climate Change 2007: The Physical Science Basis*, at 5 (2007), *available at* http://ipcc-wg1.ucar.edu/wg1/wg1-report.html [hereinafter Working Group I Report].

[11] *Id.* at 10.

[12] *See* STEVEN FERREY WITH ANIL CABRAAL, RENEWABLE POWER IN DEVELOPING COUNTRIES: WINNING THE WAR ON GLOBAL WARMING 7–12 (2006) (discussing the scientific debate on global warming and why that debate should not cloud or obscure the policy choices that are pursued to deal with warming issues).

[13] *See* ENERGY INFO. ADMIN., U.S. DEP'T OF ENERGY, INTERNATIONAL ENERGY OUTLOOK: 2007, at 83 (2007), *available at* http://www.eia.doe.gov/oiaf/ieo/pdf/0484(2007).pdf.

[14] *See* Int'l Energy Agency [IEA], *World Energy Outlook 2006*, at 5 (2006), *available at* http://www.iea.org/Textbase/npsum/WEO2006SUM.pdf.

Figure 1: $C0_2$ emissions (billion tons per year)

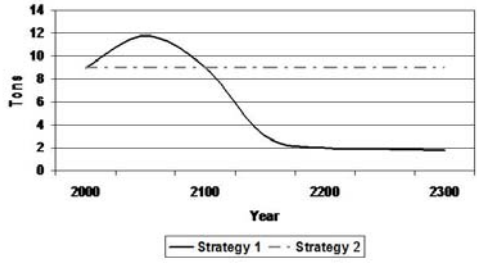


Figure 2: CO_2 concentration (ppm)

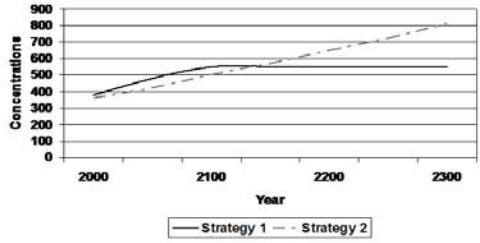
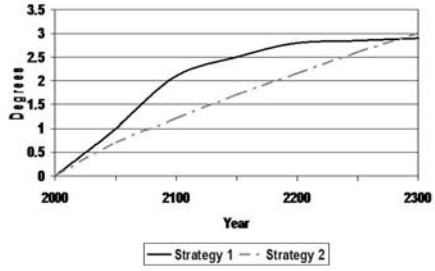


Figure 3: Temperature change (°C)



The conclusion to be drawn from these three Figures is inescapable—even if we were to radically slash CO_2 emissions immediately and forevermore by eighty percent, atmospheric concentrations of CO_2 would continue to mount and temperature would continue to rise for centuries. In other words, there is no quick fix to the course we have inattentively set, but now must navigate. Even with the Kyoto Protocol[15] mandate to reduce CO_2 and other efforts, annual worldwide CO_2 emissions are forecasted to increase, rather than decrease, for the foreseeable future.[16]

The Kyoto Protocol's targets for GHG reduction will not be achieved in the specified time frames. The DOE forecasts that a worldwide carbon increase of 54% over 1990 levels could occur by 2015.[17] While GHGs in the United States since 1990 have increased more slowly than population growth or electric power production, in the twelve years after 1990, U.S. GHG emissions increased by 10.9%.[18] Despite Kyoto, GHG emissions in industrialized European countries also are increasing.[19]

The second reason that carbon metrics will become the metameasure of corporate *greenness* and environmental accountability is the simple universality of the quantitative nature of carbon. Seven compounds affect the process of climate change, and thus are classified as GHGs; most of them contain carbon. Four of these compounds are natural: (1) water vapor, which is not regulated; (2) CO_2, released during combustion; (3) nitrous oxide (N_2O) or laughing gas, which mainly comes from animals; and (4) methane (CH_4).[20] Three other compounds are synthesized by humans. One group consists of perfluorocarbons (PFCs), which are used in aluminum production, semiconductors,

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[15] Kyoto Protocol to the United Nations Framework Convention on Climate Change art. 3, Dec. 10, 1997, 37 I.L.M. 22.

[16] Energy Info. Admin., U.S. Dep't of Energy, International Energy Outlook: 2005, at 77 (2005), *available at* http://tonto.eia.doe.gov/ftproot/forecasting/0484(2005).pdf [hereinafter International Energy Outlook 2005].

[17] *See* Arnold W. Reitze, Jr., *Global Warming*, 31 Envtl. L. Rep. 10,253, 10,266 (2001).

[18] Energy Info. Admin., U.S. Dep't of Energy, Emissions of Greenhouse Gases in the United States 2002, at ix (2003), *available at* http://www.eia.doe.gov/oiaf/1605/archive/gg03rpt/pdf/057302.pdf [hereinafter EIA 2002 GHG Emissions Report]. This difference is a result of increased deployment of renewable resources and cogeneration during this period, and greater energy efficiency in U.S. manufacturing, production, and delivery of services.

[19] U.N. Framework Convention on Climate Change [UNFCCC], *Greenhouse Gas Data 2006*, at 2 (2006), *available at* http://unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/ghg_booklet_06.pdf.

[20] National Climatic Data Center (NCDC), U.S. Department of Commerce, Greenhouse Gases, Frequently Asked Questions, http://lwf.ncdc.noaa.gov/oa/climate/gases.html (last visited Apr. 30, 2008).

and manufacturing.[21] Another is hydrofluorocarbons (HFCs), associated with refrigerants and fire extinguisher products.[22] The final compound is sulfur hexafluoride (SF_6), the most potent GHG, amounting to 22,000 times the warming effect, molecule-for-molecule, of CO_2.[23]

GHG emissions are increasing. Fossil fuel generation results in sixty-four percent of the total atmospheric CO_2, and this amount has increased significantly since 1990.[24] In addition, SF_6, a gaseous dielectric medium, has replaced PCBs in electric switchgear.[25] While CO_2 is not the primary problem in terms of total impact—water vapor has four times the total impact on global warming—it is emitted by the usual suspects of air-emissions regulation.[26] In historical context, even when it became more cost-effective to regulate other entities or mobile sources,[27] the predilection of federal and state regulators has been to continue to demand that the electric power sector achieve greater nitrogen oxide (NO_x) and CO_2 reductions.[28] As a group, electric power generation is a major source of NO_x and CO_2.[29] Notwithstanding this contribution, regulatory practice indicates that we have returned again and again to the same compounds for additional mitigation, while other sources had yet to be tapped for similar reductions.[30]

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[21] EIA 2002 GHG Emissions Report, *supra* note 18, at 68.

[22] *Id.* at 64.

[23] Comparison of Global Warming Potentials from the IPCC's Second and Third Assessment Reports, http://www.eia.doe.gov/oiaf/1605/archive/gg04rpt/global.html (last visited Apr. 30, 2008); ScienceDaily, Science Reference, Sulfur Hexafluoride, http://www.sciencedaily.com/articles/s/sulfur_hexafluoride.htm (last visited Apr. 30, 2008).

[24] Energy Info. Admin., U.S. Dep't of Energy, Emissions of Greenhouse Gases in the United States 2005: Executive Summary 2–3 (2007), *available at* http://www.eia.doe.gov/oiaf/1605/ggrpt/summary/pdf/0573(2005)es.pdf; Frequently Asked Global Change Questions, http://cdiac.ornl.gov/faq.html (last visited Apr. 30, 2008).

[25] Basic Information, SF6 Emission Reduction Partnership for Electric Power Systems, US EPA, http://www.epa.gov/electricpower-sf6/basic.html (last visited Apr. 30, 2008). Polychlorinated Biphenyls (PCBs) "are man-made organic chemicals known as chlorinated hydrocarbons." Basic Information, Polychlorinated Biphenyls (PCBs), Wastes, US EPA, http://www.epa.gov/pcb/pubs/about.htm (last visited Apr. 30, 2008).

[26] *See* Ferrey with Cabraal, *supra* note 12, at 8; Arianne Appel, *Global Warming Supercharged by Water Vapor?*, Nat'l Geographic News, Nov. 10, 2005, http://news.nationalgeographic.com/news/2005/11/1110_051110_warming.html.

[27] J.R. Pegg, *Changes to Clean Air Act Drifting Past the Public*, Env't News Service, Mar. 28, 2003, http://www.ens-newswire.com (search "Changes to Clean Air Act Drifting Past the Public").

[28] *See* 1 Steven Ferrey, Law of Independent Power § 6:90 (2007) (1989) [hereinafter Ferrey, Law of Independent Power] (discussing Alternative Control Techniques (ACTs) and Control Technique Guidelines (CTGs) that have been the focus of the electric utility sector for achievement of NO_x reductions).

[29] Working Group I Report, *supra* note 10, at 259; Ferrey, Law of Independent Power, *supra* note 28, § 2:1.

[30] *See* Pegg, *supra* note 27.

In the United States, electricity demand has continued to increase since 1990,[31] and residential energy consumption is projected to increase by roughly 17% from 1995 through 2015.[32] Near-term energy generation facility capacity shortages are predicted in Texas, New York, California, and New England.[33] More than 100 coal-fired power plants are currently being developed.[34] According to Cambridge Energy Research Associates, there are not enough new power plants planned over the next ten years to meet the projected demand.[35] Over 70% of U.S. power generation is fired by fossil fuel, with more than 50% fired by coal.[36]

As previously stated, GHGs include those gases of most concern: CO_2, CH_4, N_2O, SF_6, HFCs, and PFCs.[37] The most prevalent GHG is water vapor.[38] It alone is the unregulated GHG. The global warming impact, molecule-by-molecule, of many of these secondary and less prevalent GHGs is significantly greater than CO_2.[39] However, because they are released in much smaller quantities and/or have shorter residence times in the atmosphere before they dissipate, CO_2 is the most troubling GHG and, thus, where policy has been focused.[40] The GHGs in Table 1[41] below are displayed in descending order of their impacts on the environment, which are a function of their quantity released, their heat radiation properties, and their residence time in the atmosphere.

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[31] *See* Energy Info. Admin., U.S. Dep't of Energy, Annual Energy Review 2006, at 226 (2007), *available at* http://www.eia.doe.gov/emeu/aer/pdf/aer.pdf.

[32] *See* Solar Energy International, Energy Facts, http://www.solarenergy.org/resources/energyfacts.html (last visited Apr. 30, 2008).

[33] *See, e.g.*, David Lazarus, *Overload: Why the State Can't Keep Up with the Demand for Energy—Even in December*, SFGate.com, Dec. 7, 2007, http://www.sfgate.com/cgi-bin/article.cgi?file=/c/a/2000/12/07/MN150082.DTL&type=printable.

[34] *See* Erick Shuster, Nat'l Energy Tech. Lab., Tracking New Coal-Fired Power Plants 6 (2008), *available at* http://www.netl.doe.gov/coal/refshelf/ncp.pdf.

[35] *See* Cambridge Energy Research Associates (CERA), Press Coverage, Heat Wave, Natural Gas, and Oil: CERA in the News August 2006, http://www.cera.com/aspx/cda/public1/news/pressCoverage/pressCoverageDetails.aspx?CID=8360 (last visited Apr. 30, 2008).

[36] International Energy Outlook 2005, *supra* note 16, at 51; Energy Information Administration, Overview—Electricity Generation, http://www.eia.doe.gov/cneaf/electricity/page/prim2/chapter3.html (last visited Apr. 30, 2008).

[37] *See* EIA 2002 GHG Emissions Report, *supra* note 18, at ix. In 2000, U.S. anthropogenic activities emitted 320 million tons of CH_4 and thirty-three TgN of NO_x into the atmosphere. These levels are rising at a rate of about four percent per year. *See id.* at 25.

[38] National Climatic Data Center, *supra* note 20.

[39] Energy Info. Admin., U.S. Dep't of Energy, Emissions of Greenhouse Gases in the United States 1998, at 6–7 (1999), *available at* http://tonto.eia.doe.gov/FTPROOT/environment/057398.pdf [hereinafter EIA 1998 GHG Emissions Report].

[40] *See id.*

[41] EPA, Inventory of U.S. Greenhouse Gas Emissions Sinks: 1990–1993, at ES-2 (1994); Ferrey with Cabraal, *supra* note 13, at 9.

Table 1: Key Facts About GHGs			
GHG	Global Warming Potential (CO_2 = 1)	Residency Time (years)	Amount U.S. Total GHG Release (%)
CO_2	1	100	85
CH_4	21	12	11
N_20	310	120	2
HFCs	140 to 11,700	varies	< 1
CFCs	6500	varies	< 1
SF_6	23,900	varies	< 1

CO_2 is the main byproduct of fossil fuel combustion. Ninety-eight percent of U.S. anthropogenic CO_2 emissions are from combustion of fossil fuels, and 83% of U.S. GHG emissions are attributed to CO_2.[42] The sheer amount of CO_2 emitted into the environment is enormous, and the gas persists for more than 100 years.[43] In 2001, the world emitted almost seven billion tons of CO_2 into the atmosphere.[44] Global CO_2 emissions are rising at the rate of approximately 10% per year.[45] Atmospheric CO_2 levels now are approximately 33% higher than in pre-industrial times.[46] Given this simple Table assigning relative value to CO_2 and other GHGs, these units are poised to become the environmental yardstick of twenty-first century basic corporate environmental accountability.

Finally, the issue of environmental carbon translates well for both public and media attention and accountability. Various nongovernmental organizations (NGOs) are pressing for mandatory carbon disclosure.[47] This translation is evidenced by the fact that, while five years ago corporate stockholder resolutions on carbon were a rarity, now an increasing number of corporate shareholder resolutions involve envi-

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[42] EIA 2002 GHG Emissions Report, *supra* note 18, at x; EIA 1998 GHG Emissions Report, *supra* note 39, at 13.

[43] *See Global Warming Will Persist At Least a Century Even if Emissions Curbed Now*, ScienceDaily, Feb. 18, 2002, http://www.sciencedaily.com/releases/2002/02/020218094427.htm.

[44] Energy Info. Admin., U.S. Dep't of Energy, International Energy Outlook: 2003, at 5 (2003), *available at* http://tonto.eia.doe.gov/FTPROOT/forecasting/0484(2003).pdf.

[45] *New Global Analysis Shows 400 Percent Increase in Carbon Dioxide Emissions Growth*, Physorg.com, Nov. 10, 2006, http://www.physorg.com/news82381987.html.

[46] Reitze, *supra* note 17, at 10,254. CO_2 levels have increased from between 270 to 280 parts per million (ppm) in pre-industrial times to more than 360 ppm in 1999. *Id.* NO_x levels increased from 270 to 310 ppm, and CH_4 concentrations have increased from 700 parts per billion (ppb) to 1700 ppb over the same period. *Id.*

[47] *See* The Equator Principles, http://www.equator-principles.com (last visited Apr. 30, 2008). The Equator Principles are a set of principles voluntarily adopted by financial institutions that set a "benchmark for the financial industry to manage social and environmental issues in project financing." *Id.*

ronmental issues, with a significant number of them involving global warming.[48]

B. *From Conventional to Global*

The globalization of commerce is manifest. The modern mission of many U.S. corporations is to compete in global markets.[49] Global warming impacts are the side effect to this globalization of commerce. This international focus is truly a paradigm shift, from environmental localism and immediacy, to environmental globalization and indirect impacts. Corporate environmental measurement is transformed by the ascendance of carbon as a form of measurement. As well, global carbon is becoming a meta-environmental metric, overreaching the media specifics of conventional environmental regulation.

Conventional environmental laws and regulations target pollutants that have immediate local and regional impacts. For example, the Resource Conservation and Recovery Act of 1976 (RCRA),[50] the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (Superfund),[51] the Massachusetts Toxics Use Reduction Act (TURA),[52] the Clean Water Act of 1977 (CWA),[53] and various water withdrawal statutes[54] concern pollution that has a point source, and whose impact on citizens is a function of its direct proximity to the point of emission, pollutant release, or its migration. Indeed, U.S. environmental statutes that address conventional pollutants are primarily dotted with local legal operative terms such as "point source,"[55] local

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[48] *U.S. Firms Face Global Warming Shareholder Resolutions*, ENTREPRENEUR.COM, Apr. 1, 2005, http://www.entrepreneur.com/tradejournals/article/130378479.html.

[49] *See* General Motors, Corporate Information—Company Profile, http://www.gm.com/corporate/about/company.jsp (last visited Apr. 30, 2008); Home Depot, Our Company, Global Presence, http://corporate.homedepot.com/wps/portal/!ut/p/.cmd/cs/.ce/7_0_A/.s/7_0_6CD/_s.7_0_A/7_0_6CD (last visited Apr. 30, 2008); Microsoft, Corporate Citizenship, http://www.microsoft.com/about/corporatecitizenship/us/default.mspx (last visited Apr. 30, 2008).

[50] Resource Conservation and Recovery Act of 1976, 42 U.S.C. §§ 6901–6992k (2000); *see* STEVEN FERREY, ENVIRONMENTAL LAW: EXAMPLES & EXPLANATIONS 285–332 (3d ed. 2004) [hereinafter FERREY, EXAMPLES & EXPLANATIONS].

[51] Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §§ 9601–9675 (2000 & Supp. 2004); *see* FERREY, EXAMPLES & EXPLANATIONS, *supra* note 50, at 333–425.

[52] Massachusetts Toxics Use Reduction Act, MASS. GEN. LAWS ch. 21*I*, §§ 1–23 (2006).

[53] Clean Water Act of 1977, 33 U.S.C. §§ 1251–1387 (2000 & Supp. 2004); *see* FERREY, EXAMPLES & EXPLANATIONS, *supra* note 50, 217–58.

[54] *See, e.g.*, Massachusetts Water Management Act, MASS. GEN. LAWS ch. 21G, §§ 1–19 (2006).

[55] *See, e.g.*, 33 U.S.C. § 1317(a)(2).

soil and water categories,[56] designations of *contiguous* property owner status where one is not liable for migrated pollution,[57] and "community response" and "community right-to-know" disclosure requirements.[58] The conventional environmental nomenclature is local, proximate, and earthbound, to reflect the immediate nature of the impact of conventional point sources of emissions or soil and water pollution.

This very focused and proximate conception of environmental values and concern is manifest in the movements for environmental equity that became prominent in the 1990s.[59] Even air pollution is a relatively local environmental concern. Despite recent data showing that conventional air pollutants are drifting from sources in Asia to California, and from sources in California to Massachusetts,[60] conventional criteria and toxic air pollutant impacts and regulation is still a local and regional issue.[61] In Massachusetts and elsewhere, when new, large stationary sources seek required regulatory approvals, they must demonstrate a level of no significant health impact.[62] Similarly, water withdrawal statutes and regulations,[63] National Environmental Policy

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[56] *See, e.g.*, Mass. Gen. Laws ch. 21E, § 2 (2006).

[57] *See, e.g.*, 42 U.S.C. § 9607(q) (2000 & Supp. 2004).

[58] *See, e.g.*, Emergency Planning and Community Right-to-Know Act of 1986, 42 U.S.C. §§ 11001–11050 (2000 & Supp. 2004).

[59] *See* Ferrey, Examples & Explanations, *supra* note 50, at 19–20. I formed one of the very first environmental equity groups in the United States in 1977, when I formed a Chapter of Friends of the Earth in Oakland, California to work with the local community on concerns about local environmental impacts on low-income neighborhoods.

[60] *See* Traci Watson, *Air Pollution from Other Countries Drifts into USA*, USA Today, Mar. 13, 2005, at 1A.

[61] *See* Clean Air Act, 42 U.S.C. § 7401(a)(3) (2000); Ferrey, Examples & Explanations, *supra* note 50, at 163, 168. Air Quality Control Regions (AQCRs) are disaggregated into approximately 264 regions in the country, each of which is required to achieve minimum federal levels of clean air, based on a half-dozen criteria pollution thresholds established by the federal government. *See* 42 U.S.C. § 7401(a)(3); Ferrey, Examples & Explanations, *supra* note 50, at 163, 168; Arnold W. Reitze, Air Pollution Control Law: Compliance and Enforcement 357 (2001).

[62] *See, e.g.*, 310 Mass. Code Regs. 7.01(1) (2005); *see also* Mass. Gen. Laws ch. 164, § 69J1/4 (2006). Air modeling requirements imposed in Massachusetts typically involve air modeling within a twenty kilometer radius of the new emission source. 310 Mass. Code Regs. pt. 7. Massachusetts Energy Facilities Siting Board requirements similarly look to local impact mitigation of air impacts resulting from a new power generating facility of greater than one hundred megawatts of capacity. Mass. Gen. Laws ch. 164, § 69J1/4.

[63] *See* Water Management Act, Mass. Gen. Laws ch. 21G (2006); Ferrey, Examples & Explanations, *supra* note 50, at 259–83 (discussing rights to use water); Water Management Act Permits, Superior Court Rules for Ipswich River, Denies Hamilton Claims in water Case, http://www.crwa.org/releases/2007/hamilton.html (last visited Apr. 30, 2008). In 2007, a Massachusetts Superior Court granted the Ipswich Watershed Association relief with a mandamus action that required the state environmental agency to do safe yield analysis of local watersheds before granting water withdrawal permits for groundwater

Act of 1969 Environmental Impact Statement (NEPA EIS) impact analyses,[64] and certainly all the local environmental authority and regulations[65]—including the local conservation commission, local board of health, local planning board, local zoning board, the licensing authority of the city counsel or town legislature, and the fire chief—are by their very scope and definition, concerned with relatively local environmental impacts.

These elements of environmental protection are firmly established, alive and well. Yet, today, the common metaphor of the environmental challenge and responsibility for the twenty-first century is the global warming of Earth. For some, it was the polar bear isolated and adrift on a sheared ice flow on the cover of *Time* magazine that captured their attention.[66] Even for the most focused jock, the picture of Dontrell Willis of the Florida Marlins, standing knee-deep in a flooded Dolphins Stadium,[67] made the undeniable point that global climate change is more than a game.

For the current generation, the issue of global warming and planetary change resonates unlike any other environmental issue.[68] It is not surprising then, that this year's major cultural event was a Concert for the Planet[69] featuring performers on every continent, or that new charities, such as Computers Across Borders, have arisen to work with corporations on global warming mitigation.[70]

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withdrawal on land exceeding certain limits, as required by the Massachusetts Water Management Act. *Id.*

[64] *See* National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321–4370f (2000 & Supp. 2004); FERREY, EXAMPLES & EXPLANATIONS, *supra* note 50, at 114–17 (discussing NEPA EIS analysis).

[65] *See* FERREY, EXAMPLES & EXPLANATIONS, *supra* note 50, at 427–66 (discussing local environmental controls). These local authorities with environmental or quasi-environmental authority are the major, under-appreciated environmental force in the constellation of environmental controls. *Id.*

[66] TIME, illus. cover, Apr. 3, 2006.

[67] SPORTS ILLUSTRATED, illus. cover, Mar. 12, 2007.

[68] *See* Press Release, Natural Res. Def. Council, Polls Show Voters Around the Country Strongly Support Measures to Reduce Global Warming (July 17, 2007), http://www.nrdc.org/media/2007/070716.asp.

[69] J. Freedom du Lac, *Al Gore to Sound Off on Climate Change with Concert Event*, WASH. POST, Feb. 15, 2007, at C1.

[70] Computers Across Borders, http://computersacrossborders.org/index.html (last visited Apr. 30, 2008). Computers Across Borders (CAB) is a charity, started by an American student, that provides used computer equipment donated by corporations to schools and libraries that are powered by renewable low-carbon energy sources. *Id.* In the program's first year in operation, 2006 to 2007, it donated computers to hydro-powered schools in Ecuador, wind-powered schools in India, and hydro-powered schools in Ghana, and is now seeking computers to donate to schools in New York City that can draw on renewable energy. *Id.*

What are the future impacts of global warming? In 2007, the IPCC Summary Report found multiple particular impacts of global warming on water resources, food production, and ecosystem and human health.[71] A predicted temperature rise of three degrees Celsius would leave up to thirty percent of species facing extinction, and would decimate the marine coral population.[72] Food production and crop yields would likely decrease in lower latitude areas, even if the global temperature increase is small.[73] Crop yields would likely increase in higher latitude areas, even if the temperature increase is between one and three degrees Celsius.[74] Higher temperatures will increase the concentrations of ground-level ozone leading to the more rapid spread of infectious diseases and cardiovascular disease.[75] Competition for dwindling water resources will be exacerbated.[76] Forests will be increasingly affected by pests, disease, and fire, and there will be large increases in burned areas.[77] Sea levels will rise, with more storm surges.[78]

What these predictions mean is more losses, and more litigation as a result. In the utility sector in particular, which is the source of about one-third of global warming gases,[79] certain elements of these forecasts are especially noteworthy. Power plants are often located on the coasts for cooling water purposes,[80] and the coasts are now experiencing greater climate-related storm surges and rising sea level.[81] Low-lying coastal areas may not be the best places to site power plants. In addition, with rising temperature, the efficiency of electric power production and transmission declines. At higher temperatures, it re-

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[71] Working Group II Report, *supra* note 9, at 35–41.

[72] *Id.* at 213.

[73] *Id.* at 275.

[74] *Id.*

[75] *Id.* at 393, 403, 418. Warm temperatures at ground-level can increase air and water pollution, thus increasing the risk to human health. Cimate.org, Impact of Climate Change on Human Health, http://www.climate.org/2002/topics/health/index.shtml (last visited Apr. 30, 2008).

[76] Working Group II Report, *supra* note 9, at 190–91.

[77] *Id.* at 228.

[78] *Id.* at 317.

[79] *See* EPA, Inventory of U.S. Greenhouse Gas Emissions and Sinks, 1990–2006, at ES-7 to -9 (2008), available at http://www.epa.gov/climatechange/emissions/downloads/08_CR.pdf.

[80] Ferrey, Law of Independent Power, *supra* note 28, §§ 2:2 to :4, 6:136 to :139; *see* Heal the Bay, Current Issues, Coastal Power Plants, http://www.healthebay.org/currentissues/powerplants/default.asp (last visited Apr. 30, 2008) (noting that a large number of California's power plants are located on the coast to use ocean water for industrial cooling).

[81] Working Group II Report, *supra* note 9, at 317.

quires more fossil fuel to create a unit of energy,[82] which increases the production of NO_x,[83] and transmission losses increase.[84] Thus, rising temperatures will decrease the efficiency of the existing power generation and delivery system.

II. Carbon Pressures on Corporations

The external environmental pressure on corporations originates from two sources. First, legislative and regulatory action pressures corporate compliance and decisionmaking. As submitted below, this regulation has not been particularly focused, coordinated, or effective.

Second, there has been a significant upturn in litigation involving carbon emissions, even before a recent U.S. Supreme Court case elevated carbon to a significant litigation risk.[85] The prospect and actuality of such litigation is changing the corporate landscape.

A. *Carbon Regulation*

There are international and state regulatory regimes in place. However, these regimes will not solve the problem of global warming. GHGs, specifically CO_2, have been identified by many leading scientists as a significant cause of the increase in Earth's temperature.[86] The potential increase already set in motion has been estimated in different scientific models to be up to eight degrees Celsius within forty years.[87] In response, policies to monitor and restrain the emission of GHGs were adopted in the Kyoto Protocol, requiring participating countries to lower their emissions by eight percent from 1990 levels.[88] After 2012, when the Kyoto Protocol expires, the world community will need to establish additional

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[82] At lower temperatures, the heat rate, measured in amout of Btu energy, required to produde a kilowatt hour of electric power from a fossil fuel-fired generation unit decreases. *See, e.g.*, Commonwealth of Massachusetts, Non-Major Comprehensive Plan Application Conditional Approval, Application No. MBR07COM006, at 2 (Jan. 22, 2008) (describing a 545 million Btu per hour heat rate on natural gas fuel when firing at sixty-six degrees Fahrenheit or lower temperatures).

[83] Ferrey, Law of Independent Power, *supra* note 28, § 6:3.

[84] *Id.* § 10:78.1.

[85] *See* Massachusetts v. EPA, 127 S. Ct. 1438, 1463 (2007).

[86] Joint Science Academies' Statement: Global Response to Climate Change (June 7, 2005), http://royalsociety.org/displaypagedoc.asp?id=20742 (stating that "there is now strong evidence that significant global warming is occurring," and that "[i]t is vital that all nations identify cost-effective steps that they can take now, to contribute to substantial and long-term reduction in net global greenhouse gas emissions").

[87] Wm. Robert Johnston, Global Warming, http://johnstonsarchive.net/environment/wrjp365g.html (last visited Apr. 30, 2008).

[88] Kyoto Protocol to the United Nations Framework Convention on Climate Change art. 3, Dec. 10, 1997, 37 I.L.M. 22, 24.

controls on GHGs.[89] President Bush formally withdrew the United States from participating in the Kyoto Protocol in 2001.[90]

Internationally, there are problems with the Kyoto Protocol.[91] In brief, first, the costs of compliance are very high.[92] Second, only one-sixth of countries are covered by GHG-reduction strategies under the Protocol.[93] Third, the Protocol has generated minimal benefits to date.[94] Further, it offers zero possibility of *reversing* warming, even if fully implemented.[95] In 2012, Kyoto ends and the world will have significantly greater GHG emissions than when the Protocol was originally implemented. Rather than reducing the amount of GHG, as deigned, the amount will have increased significantly, not only in industrialized nations, but also in developing countries.[96] Kyoto does not provide a long-term solution. Even though the United States did not implement the Kyoto Protocol after signing it,[97] there is carbon regulation in the United States.[98]

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[89] Joseph Coleman, *Report: Climate Change Affordable*, ABC NEWS, May 4, 2007, http://abcnews.go.com/Business/wireStory?id=3140559.

[90] Margaret Kriz, *Warm-up Drills*, 37 NAT'L J. 906, 906 (2005).

[91] *See* United Nations Framework Convention on Climate Change, The Kyoto Protocol, http://unfccc.int/kyoto_protocol/background/items/2878.php (last visited Apr. 30, 2008). The Kyoto Protocol created three flexible mechanisms. The first is the Clean Development Mechanism (CDM), including projects in developing countries such as China and India and creating Certified Emission Reductions (CERs). *Id.* The second is Joint Implementation (JI), including projects in developed countries such as Ukraine and Russia and creating Emission Reduction Units (ERUs). *Id.* The third is Emissions Trading, including trading between countries and not to be confused with the European Union Emissions Trading Scheme or other trading schemes. *Id.*

[92] *See* Robert N. Stavins, Professor of Bus. & Gov't & Dir. of the Envtl. Econ. Program, Harvard Univ., Address at the Trilateral Commission's 2006 North American Regional Meeting (Oct. 22, 2006), http://www.trilateral.org/nagp/regmtgs/06pdf_folder/Stavins.pdf. The cost of compliance amounts to an estimated four times the cost of effective levels. *Id.*

[93] Press Release, United Nations Framework Convention on Climate Change, UNFCCC Chief Sees Kyoto Protocol Countries on Their Way to Reach Emissions Targets (Feb. 15, 2006), *available at* http://unfccc.int/files/press/news_room/press_releases_and_advisories/application/pdf/20060215_anniversary_kp_entry_into_force.pdf. Thirty-four of 200 nations in the world are covered by the Kyoto Protocol. *See id.*

[94] Antonio Martino, *Kyoto? Mamma Mia!*, WALL ST. J., Oct. 7, 2005, at A16.

[95] *See id.* The 2012 Kyoto targets will not reduce total GHG emissions, even if they are met, which they will not be.

[96] *See generally* FERREY WITH CABRAAL, *supra* note 12 (addressing issues of global warming in developing countries).

[97] The Senate voted against the Kyoto Protocol ninety-five to zero, and no presidential candidate would have brought it back for another vote. The Senate adopted a nonbinding resolution in July 1997 urging the Clinton administration not to sign the Kyoto Protocol. Byrd-Hagel Resolution of 1997, S. Res. 98, 105th Cong. (1997). The treaty was never submitted for Senate ratification. Moreover, under the structure of Kyoto, there would be no credit for U.S. reductions of GHGs.

[98] *See* discussion *infra* Part II.A.1–4.

1. Domestic Carbon Regulation

National voluntary programs exist. There have been voluntary national corporate carbon reporting regulations since 2006.[99] These regulations, however, require either reporting or registration of carbon, but do not provide a mechanism to reduce it. The Chicago Climate Exchange (CCX) operates a voluntary, legally binding reduction and trade program for corporations that wish to participate.[100] Phase I, spanning 2003 to 2006, calls for a 4% reduction from the 1998 to 2001 baseline.[101] Phase II, 2007 to 2010, calls for an additional 2% reduction for Phase I members.[102] Carbon Financial Instruments (CFIs), which are futures contracts, are surrendered to meet a reduction requirement.[103]

2. The Sun Rises in the East

There is also action at the state level. As U.S. carbon market initiatives go, however, East does not meet West. On the East Coast, to fill the vacuum left by the United States's refusal to participate in the Kyoto Protocol, states have taken direct regulatory action.[104] On December 20, 2005, seven northeastern states—since increased to ten[105]—entered into an agreement to implement the Regional Greenhouse Gas Initia-

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[99] *See* Energy Policy Act of 1992, 42 U.S.C. § 13385(b) (2000).

[100] *See* Chicago Climate Exchange, http://www.chicagoclimatex.com (last visited Apr. 30, 2008).

[101] Chicago Climate Exchange, Key Features, http://www.chicagoclimatex.com/content.jsf?id=25 (last visited Apr. 30, 2008).

[102] *Id.*

[103] *Id.* These CFIs are analogous to European Union Emissions Trading Scheme allocations. *See* Press Release, McMillian Binch Mendelsohn, Emissions Trading and Climate Change Bulletin (July 2007), http://www.mcmbm.com/upload/publication/Emissions Trading_EU_0707.pdf.

[104] For example, prior to joining any formal agreement, Massachusetts had enacted its own regulations to reduce CO_2 emissions. 310 Mass. Code Regs. 7.29 (2007).

[105] Regional Greenhouse Gas Initiative (RGGI): The Pew Center on Global Climate Change, http://www.pewclimate.org/what_s_being_done/in_the_states/rggi (last visited Apr. 30, 2008). Massachusetts and Rhode Island were given the status of observing states, and both have since joined the RGGI agreement. Press Release, Executive Dep't, Commonwealth of Mass., Governor Patrick Signs Regional Pact to Reduce Greenhouse Gas Emissions (Jan. 18, 2007), http://www.mass.gov/?pageID=pressreleases&agId=Agov3&prModName=gov3pressrelease&prFile=reduce_greenhouse_gases011807.xml. Maryland, a predominantly coal-powered electricity generation state in contrast to the other RGGI states, also subsequently joined RGGI in 2006. Press Release, Office of the Governor, Governor Martin O'Malley Signs Greenhouse Gas Agreement, Climate Change Executive Order (Apr. 20, 2007), http://www.gov.state.md.us/pressreleases/070420.html.

tive (RGGI).[106] The principal goal of the Memorandum of Understanding (MOU) signed by the states was to:

> [C]reate a CO_2 Budget Trading Program aimed at stabilizing and then reducing CO_2 emissions within the Signatory States, and implementing a regional budget and allowance trading program that will regulate CO_2 emissions from fossil-fuel fired electricity generating units having a rated capacity equal to or greater than 25 megawatts.[107]

The market-based design of the RGGI MOU is a cap-and-trade program. "Cap-and-trade systems operate by capping the amount of CO_2 emissions allowed, distributing CO_2 emissions allowances to sources up to the cap, and requiring each covered source to have sufficient allowances to cover its CO_2 emissions at the end of each compliance period."[108] This technique is a supply-side, point-of-generation initiative: "CO_2 emission allowances will be allocated to, and traded among, fossil fuel-fired electricity generators within the region that supply electricity to the grid."[109]

The Draft Model Rule, finalized in January 2007 after more than two years of work by the RGGI Staff Working Group, is the foundation upon which the various RGGI states will base their individual rules. One significant aspect of the RGGI model rule is its requirement that each state reserve a minimum of twenty-five percent of the state's allowances for "consumer benefit or strategic energy purpose[s]."[110] Depending on the market for allowances, this requirement could leave states with millions of dollars pouring into an open-ended fund. Consumer benefits could range from using the money to actually supplement consumer electricity bills, to funding state-run energy efficiency programs, to placing the money back into the state coffers.[111]

Power producers lobbied states to auction only the twenty-five percent minimum and to allocate the remaining shares to power produc-

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[106] Regional Greenhouse Gas Initiative, Memorandum of Understanding 1 (Dec. 20, 2005), *available at* http://www.rggi.org/docs/mou_final_12_20_05.pdf.

[107] *Id.* at 2.

[108] Edna Sussman, *New York Addresses Climate Change with the First Mandatory Greenhouse Gas Program*, N.Y. State Bar J., May 2006, at 43, *available at* 78-MAY N.Y. St. B.J. 43 (Westlaw).

[109] Heddy Bolster, Note, *The Commerce Clause Meets Environmental Protection: The Compensatory Tax Doctrine as a Defense of Potential Regional Carbon Dioxide Regulation*, 47 B.C. L. Rev. 737, 744 (2006) (citing the RGGI MOU).

[110] Model Rule § 5.3(a) (Reg'l Greenhouse Gas Initiative 2007), *available at* http://www.rggi.org/docs/model_rule_corrected_1_5_07.pdf.

[111] Press Release, Env't Ne., RGGI Consumer Benefit Allocation (Aug. 1, 2006), *available at* http://ct.gov/dep/lib/dep/air/climatechange/energgiconsumerallo080106.pdf.

ers based on their historical or future energy production levels, without charging for these allocations.[112] It is unprecedented in U.S. environmental regulation that the allocations for emissions are auctioned to pre-existing, operating emission sources.[113] Forcing power producers to pay for all of their allowances for pre-existing emissions could also create a competitive disadvantage for in-state producers, if neighboring RGGI states' generators are given allowances without charge or do not regulate GHGs from power plants. Power producers also expressed their concerns regarding how this new expense will affect their long-term power contracts.[114] The cost of future CO_2 allowances was not factored into any of these existing contracts; generators producing under these long-term deals fear that they will not be able to adjust the contract price to account for such costs.[115] Whether the contract allows pass-through price adjustments will depend on the individual contract.

To date, a number of states have issued proposed state rules and intend to auction allowances, including New York and Vermont.[116] Both the New York[117] and Vermont[118] rules outline procedures for allo-

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[112] One power producer, National Grid, has advocated auctioning 100% of the allowances and then having the state use the money to supplement consumer rates. These generators propose that the costs spent on allowances by the utilities will be passed along to the consumer, resulting in higher retail prices for consumers. Nat'l Grid, Reg'l Greenhouse Gas Initiative, NHDES Stakeholders Meeting (Dec. 14, 2006), http://www.des.state.nh.us/ard/climatechange/docs/NationalGrid.ppt.

[113] Roman Kramarchuk, *All-Out Auctions?*, ENVTL. FIN., Mar. 2007, at 45, *available at* http://www.environmentalmarkets.org/galleries/default-file/Kramarchuk%20ef3marketview_p45.pdf (noting that EPA auctions only one percent of total sulfur dioxide (SO_2) allowances and that this percentage does not include any auction to preexisting sources, which are freely allocated to electric power generators).

[114] Reg'l Greenhouse Gas Initiative, Draft Meeting Summary: of Regional Stakeholder Meeting (May 2, 2006), http://www.rggi.org/docs/stakeholder_meeting_summary_5-2-06.pdf.

[115] *Id.*

[116] VT. STAT. ANN. tit. 30, § 255 (2007); Express Terms, Part 242 CO_2 Budget Trading Program pt. 242 (Dec. 5, 2006), http://www.dec.ny.gov/docs/air_pdf/part242draft.pdf; *see* Air Pollution Control Division, Vermont Department of Environmental Conservation, Proposed RGGI Regulations, http://www.anr.state.vt.us/air/htm/ProposedAmendments.htm (last visited Apr. 30, 2008); Notice of Pre-Proposal of New York RGGI Rule—NYS Dept. of Environmental Conservation, http://www.dec.ny.gov/regulations/26450.html (last visited Apr. 30, 2008). Vermont receives the majority of its power from Vermont Yankee nuclear power plant and Hyrdo-Quebec, two power producers with very low carbon output. Since Vermont will still have a significant amount of allowances allotted to it, the State could sell the allowances to out-of-state power producers. The Vermont proposed rule indicates that 100% of the CO_2 allowances in the State will be allocated to a consumer benefit or strategic purpose set-aside account. *See* Air Pollution Control Division, *supra.*

[117] Notice of Pre-Proposal of New York RGGI Rule, *supra* note 116. The proceeds from this auction will then be used for "energy efficiency and clean energy technology purposes . . . the promotion of energy efficiency measures, promotion of renewable or non-carbon-emitting energy technologies, and stimulation or reward of investment in the development

cating 100% of CO_2 emission allowances. In theory, existing electric power plants emitting carbon during their operations may or may not be successful bidders for the allowances necessary to continue operations.

3. The West's Approach to Carbon Regulation

The California scheme is different than RGGI. It requires that California reduce GHG emissions to 1990 levels by 2020, considering all in-state and out-of-state generation used to serve California's electric load.[119] The program goes into effect in 2012.[120] The California Air Resources Board is authorized, but not required, to establish and enforce a market-based compliance system, which could include credits and banking.[121] The compliance requirement falls on load-serving retail sellers of power, whereas RGGI places the compliance burden on the generators of power. With the restructuring of power resources,[122] a portion of power is not retailed by the power generator.[123] These regulatory distinctions are critical.

The California scheme covers all load-serving entities (LSEs), including municipal LSEs.[124] Electric generators are required to meet a

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of innovative carbon emissions abatement technologies with significant carbon reduction potential." *Id.* (internal quotations omitted). This account will be managed by either the N.Y. Department of Environmental Conservation (DEC) or an agent assigned by the DEC. Express Terms, Part 242 CO_2 Budget Trading Program § 242-1.2(b)(12).

[118] Vt. Stat. Ann. tit. 30, § 255(c)(2). The account will be managed by trustees, appointed by the public service board, to provide the maximum long-term benefit to Vermont electric consumers. *Id.* § 255(d).

[119] *See* California Global Warming Solutions Act of 2006, Cal. Health & Safety Code §§ 38,500–38,599 (West Supp. 2007). The Act sets a firm limit on GHG emissions in California by requiring the Air Resources Board to determine California's GHG emission level in 1990, and then issue regulations causing GHG emissions to be reduced to that level by 2020. *Id.* §§ 38,550–38,551. The Act also requires comprehensive GHG reporting by major sources of GHG emissions. *Id.* § 38,530. Market-based compliance mechanisms are also discussed in the legislation, but left to the discretion of the Air Resources Board. *See id.* §§ 38,570–38,571, 38,574. While this approach regulates all significant sources of GHGs, because electric power production accounts for about twenty percent of California's emissions of GHGs, electric generation has become the primary target for regulation. *See id.* § 38,501. In contrast, RGGI only regulates CO_2, the electric power sector, and then only part of that sector.

[120] *Id.* § 38,562(a).

[121] *Id.* §§ 38,570–38,571, 38,574.

[122] *See* Steven Ferrey, The New Rules: A Guide to Electric Market Regulation 135–60 (2000).

[123] Energy Information Administration, California Electricity Profile, 2006 Edition, http://www.eia.doe.gov/cneaf/electricity/st_profiles/california.html (last visited Apr. 30, 2008). Approximately ten percent of retail electricity sales in California in 2006 were deregulated sales. *See id.*

[124] *See* Cal. Pub. Util. Code § 380 (West 2007).

CO_2 emissions level no greater than that achievable by a combined-cycle natural gas generator.[125] Any new contracts for a term of five years or more for the procurement of baseload generation must comply with a CO_2 emissions performance standard of no more than 1100 lbs. of CO_2/MWh.[126] Baseload generation is defined as generation that is designed and intended to operate an at annualized capacity factor of sixty percent or greater.[127]

The primary impact of this scheme will be to restrict the attractiveness of coal-fired generation for California. While California has little in-state coal generation, various California LSEs, particularly the Los Angeles Department of Water and Power, rely on coal-fired power for a significant amount of electricity.[128] This restriction will have a significant impact, especially with supplies very tight. California peak load growth was 38% between its last energy crisis in 2001 and 2006, an astounding increase in peak demand of more than 6% annually.[129]

California's carbon regulation system differs from RGGI in that the carbon compliance obligation of the former is placed on LSEs, rather than on the generators of power.[130] This distinction between the two programs dictates whether regulation covers the generator of the power or the ultimate distributor of the power. LSEs are distributors of

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[125] S. 1368, 2006 Leg., Reg. Sess. (Cal. 2006) (codified at CAL. PUB. UTIL. CODE § 8340). This legislation only targets electric generation. *Id.* Senate Bill 1368 governs all new long-term energy commitments and establishes a "greenhouse gas emissions performance standard." *Id.* This standard is specific to the electric power role in meeting Assembly Bill 32 goals. The GHG emissions standard creates a specific level of permissible emissions and prohibits new construction, new long-term power contracts, and any major plant investment that will not meet the performance standard. *Id.* This standard prohibits load-serving entities from entering long-term power contracts with out-of-state producers who do not meet California's stringent new emissions standard. California's Public Utilities Commission (PUC) has set the GHG emissions performance standard at the equivalent of the emissions from a combined cycle natural gas plant. *Id.*

[126] Seth Hilton, *The Impact of California's Global Warming Legislation on the Electric Utility Industry*, 19 ELECTRICITY J. 10, 12–13 (2006). This is a level that conventional coal-fired electric generation will not be able to meet. *Id.* at 14.

[127] CAL. PUB. UTIL. CODE § 8340(a).

[128] Hilton, *supra* note 126, at 13. The three major investor-owned utilities import 3% to 15% of their total supply in the form of out-of-state coal-fired power. The Los Angeles Department of Water and Power imports half of its power from these sources. *Id.*

[129] *See* Historic Statewide California Electricity Demand, http://www.energy.ca.gov/electricity/historic_peak_demand.html (last visited May 13, 2008).

[130] *See* CAL. PUB. UTIL. CODE § 8340(h); Regional Greenhouse Gas Initiative (RGGI)—About RGGI, http://www.rggi.org/about.htm (last visited Apr. 30, 2008). The RGGI system governs only the original power producers, whereas the California bill governs any load serving entity, defined as "every electrical corporation, electric service provider, or community choice aggregator serving end-use customers in the state." *See* CAL. PUB. UTIL. CODE § 8340(h).

retail power, such as utilities or retail suppliers.[131] LSEs have an entire portfolio of power generation resources that they can optimize for purposes of GHG compliance. LSEs can continue to purchase carbon-rich generation, and compensate with adding renewable energy resources or other low-carbon generation, to meet the requirement averaged over the entire resource portfolio.

By contrast, the RGGI scheme requires each generator facility to comply individually, penalizes each high-carbon generating resource, and does not allow any optimization among portfolios of generation.[132] In RGGI, each individual generator is responsible for compliance at each facility. Renewable energy projects sited outside the RGGI area do not qualify for RGGI compliance.[133] RGGI only regulates CO_2, the electric power sector, and larger units that are part of that sector. RGGI allows steep fines for those with insufficient allowances,[134] but does not criminalize these failures as does California.[135]

In the West, California regulates all carbon. It also has a different approach than RGGI. California regulates more than just CO_2, and more than just utility sources.[136] It regulates load-serving entities, includes municipal utilities, and requires that electric resource procurement for electric generation emit less than 1100 lbs. of CO_2/MWh.[137] A variety of fossil units will not meet this standard. Yet the California scheme has exceptions and loopholes that will encourage some gaming of the system.[138]

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[131] *See* Cal. Pub. Util. Code § 8340(h).

[132] *See* Model Rule §§ XX-1.2(av)-(aw), XX-1.5(f)(2) (Reg'l Greenhouse Gas Initiative 2007), *available at* http://www.rggi.org/docs/model_rule_corrected_1_5_07.pdf.

[133] *Id.* § XX-6.5(d)(2)(i).

[134] *See id.* § XX-1.5(d)(2); Caiteur Group Inc. & Caiteur Group Climate Change Institute, Comment on Draft of Regional Greenhouse Gas Initiative Model Rule (May 18, 2006), http://www.rggi.org/docs/caiteur.pdf.

[135] California Global Warming Solutions Act of 2006, Cal. Health & Safety Code § 38,580 (West Supp. 2007).

[136] Cal. Health & Safety Code §§ 38,505(g), 38,530(b)(2). The Act sets a goal of achieving 1990 carbon emissions levels by 2020. *Id.* § 38,550. Also, the Western Climate Initiative involves California, Oregon, Washington, Arizona, and New Mexico in a common effort. Western Climate Initiative, http://www.westernclimateinitiative.org (last visited Apr. 30, 2008).

[137] *See* Cal. Health & Safety Code §§ 38,530(b)(2); SB 1368—Emission Performance Standards, http://www.energy.ca.gov/emission_standards/index.html (last visited Apr. 30, 2008).

[138] These loopholes involve a prohibition on high-carbon power import contracts of five years or greater. Cal. Pub. Util. Code § 8341(b)(4) (West 2007). This prohibition will encourage 4.9 year contracts. Some of the carbon limitations also apply only to baseload electric generation resources. *Id.* § 8341(a). There will be recharacterization of the nature of generation resources.

4. Carbon Regulation and the U.S. Constitution

The constitutional issues plaguing RGGI include a claim that the agreement and the means of its implementation may violate the Supremacy Clause of the Constitution, and perhaps the Compact Clause.[139] In order for RGGI to work effectively at reducing carbon emissions, rather than increasing the importation of high-carbon power, states are actively considering surcharging or taxing wholesale power *leaking* from outside the region; this penalty could constitute a violation of the Commerce Clause.[140] Moreover, in certain states, the RGGI scheme may also constitute an unauthorized tax.

Efforts to control so-called leakage of non-carbon regulated power into the RGGI states from outside the region will lead to significant Commerce Clause challenges for these regimes. Leakage describes the possibility that "generators outside the capped region could export power load-serving entities within the region without being covered by the regional carbon cap."[141] This threat to the goals of regional carbon control initiatives is very real. In trying, through RGGI regulation, to decrease the amount of CO_2 emissions by fifty-five million tons over the period from 2009 to 2018, an increase of unregulated power imports from uncapped coal-fired plants in states such as Ohio and Pennsylvania of even 1.5% to 2.0% would eliminate all scheduled emissions reductions from regulated generators within the regulated region.[142]

To stem this inflow, the RGGI states are now discussing implementation of some type of control, regulation, or tax to discourage cheaper power imports from unregulated states external to the RGGI region.[143] Such controls on the free flow of electricity from other states, a commodity or service that is a quintessential article in interstate commerce,[144] may violate the dormant Commerce Clause. This limitation

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[139] *See* Claire Carothers, Note, *United We Stand: The Interstate Compact as a Tool for Effecting Climate Change*, 41 Ga. L. Rev. 229, 236 (2006) ("[A] regional plan or compact regulating emission controls would likely be found as encroaching upon areas typically delegated to the federal government, as well as potentially increasing the powers of the participating states.").

[140] Bolster, *supra* note 109, at 737.

[141] Richard Cowart, Regulatory Assistance Project, Addressing Leakage in a Cap-and-Trade System: Treating Imports as Sources 1 (Apr. 2006), http://www.raponline.org/Pubs/RC-leakage-4-06.pdf.

[142] *See id.* at 3.

[143] *See* Bolster, *supra* note 109, at 745 ("The resulting increase in cheaper, imported electricity will undermine the goal of the program because imported emissions will not count towards the region's emission limits even though they are directly associated with the region's electricity consumption.").

[144] *See* Steven Ferrey, *Inverting Choice of Law in the Wired Universe: Thermodynamics, Mass, and Energy*, 45 Wm. & Mary L. Rev. 1839, 1908 (2004) [hereinafter Ferrey, *Inverting Choice of Law*].

creates problems in trying to track power, which is not so much a commodity as a particular power service.[145] Such regulation by the RGGI states will need to target power flows based on their state of power generation origin, distinguishing between those from RGGI states and non-RGGI states.

Concern about leakage is real. There are multi-billion dollar projects to build electric transmission infrastructure that would allow electricity generated by high emission, coal-fired power plants to travel east into the RGGI region.[146] RGGI states such as New Jersey, New York, Maryland, and Delaware are bordered by states that are not signatories to RGGI and have historically produced a large volume of electricity from coal-fired power plants.[147] Similarly, California imports power from eleven states, including a large amount of coal-fired power.[148]

Wholesale electricity is moving in interstate commerce at the speed of light.[149] Leakage of less-costly power, whose carbon content is not regulated or affected, leaping state boundaries from Pennsylvania, Ohio, Indiana, and other non-RGGI states into the RGGI zone, is going to be restricted.[150] Because the states are attempting to not only regulate carbon produced within their borders, but also create carbon-regulated islands into which externally produced wholesale power can no longer enter freely without penalty, such point-of-origin regulation will create significant dormant Commerce Clause issues.[151]

Second, the decision of most of these states to maximize associated revenues by auctioning all their newly created allocations for power plants to emit carbon triggers Supremacy Clause concerns. In RGGI,

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[145] *Id.* at 1882.

[146] *See generally* Edison Elec. Inst., Transmission Projects: At a Glance (2008), http://www.eei.org/industry_issues/energy_infrastructure/transmission/Trans_Project_lowres.pdf (describing numerous utility regions throughout the United States).

[147] RGGI Emissions Multi-State Staff Working Group, Reg'l Greenhouse Gas Initiative, Potential Emissions Leakage and the Regional Greenhouse Gas Initiative (RGGI): Evaluating Market Dynamics, Monitoring Options, and Possible Mitigation Mechanisms, at ES-1 (2007), http://www.rggi.org/docs/il_report_final_3_14_07.pdf [hereinafter Multi-State Working Group].

[148] *Id.* RGGI states, such as New Jersey, New York, Maryland and Delaware, are bordered by states that are not signatories to RGGI, and historically have produced a large volume of electricity from coal-fired power plants. Similarly, California imports power from eleven states, including a large amount of coal-fired power. *See* 2006 Gross System Electricity Production, http://www.energy.ca.gov/electricity/gross_system_power.html (last visited Apr. 30, 2008) (showing that California imports approximately ten percent of its total electricity from out-of-state coal plants).

[149] *See* Ferrey, *Inverting Choice of Law*, *supra* note 144, at 1910.

[150] Multi-State Working Group, *supra* note 147, at ES-1.

[151] *See* Ferrey, Examples & Explanations, *supra* note 50, at 140–49.

only larger electric power generators are regulated.[152] RGGI states are moving to a 100% auction versus free allocation of CO_2 emissions allocations.[153] This approach is contrary to how other pollution emission allocations have been handled over the history of air regulation in the United States.[154] This auction scheme will lead to constitutional challenges from those regulated, with a reasonable chance of success. The purpose of state auctions is to increase the price for certain high-emitting carbon power plant operations—coal in particular—as a way to change the dispatch order under which plants are operated by the independent system operator.[155] This auction scheme thus potentially crosses the line—individually or collectively—between what states are and are not allowed to regulate. Finally, there are constitutional issues with the Compact Clause of the U.S. Constitution, raised by the carbon compact binding the ten eastern states.[156]

Even if the RGGI scheme survives constitutional and other legal challenge, it has other idiosyncrasies. Offsets are limited to a small percentage of compliance options.[157] MOUs to move offsets into the RGGI region from projects undertaken outside RGGI borders could prove cumbersome.[158] East does not meet West. The RGGI scheme does not match up with the California regulation, or Kyoto. These differences create tremendous uncertainty in the carbon markets.

B. *Litigation*

The second element is the evolution of the common law as a driving force on corporate decisionmaking. A new wave of litigation focuses on carbon. All corporations have general counsel who are concerned about liability, risk, and exposure. Very recently, the color of such exposure has turned green and is denominated in carbon-equivalent units.

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[152] *See* Multi-State Working Group, *supra* note 147, at ES-3. Only facilities greater than twenty-five megawatts are regulated by RGGI. *Id.*

[153] *See* Notice of Pre-Proposal of New York RGGI Rule, *supra* note 116.

[154] *See* Ferrey, Law of Independent Power, *supra* note 28, §§ 6:78, :81–:82, :93.

[155] *See* Notice of Pre-Proposal of New York RGGI Rule, *supra* note 116; Regional Greenhouse Gas Initiative, "Very High Emissions" Scenario: Plausibility of Modeled Outcomes 1 (Nov. 15, 2005), http://www.rggi.org/doc/vhe_scenario_11_15_05.pdf.

[156] Carothers, *supra* note 139, at 236.

[157] *See* Regional Greenhouse Gas Initiative, Regional Greenhouse Gas Initiative—Overview 4 (Dec. 16, 2005), http://www.rggi.org/docs/mou_rggi_overview_12_20_05.pdf.

[158] *See* Edison Electric Institute Comments on the Regional Greenhouse Gas Initiative Memorandum of Understanding 11–12 (Mar. 20, 2006), http://www.rggi.org/docs/rggi-eeimou_comments032006final.pdf.

1. At the U.S. Supreme Court

Litigation and liability risk are now, for the first time, comprised of carbon issues. These risks are extensive and accelerating. In the recent Supreme Court case of *Massachusetts v. EPA*, a suit was filed by twelve states and several cities against the U.S. Environmental Protection Agency (EPA) to force it to regulate CO_2 and GHGs.[159] The Court held that EPA has authority under the Clean Air Act (CAA) to regulate GHG emissions from new motor vehicles, and that even indirect harm from climate change can confer standing to sue EPA for failure to comply with CAA mandates.[160] Notably, the Court did not hold that GHG emissions from stationary sources such as power plants are regulated by the CAA, that auto companies are liable for the harm caused by GHG emissions, or that EPA is required to regulate GHG emissions from mobile sources.[161]

The decision was a closely divided five to four.[162] The impact of this case on climate change issues is more psychological when it comes to forcing immediate carbon regulation, although it has affected standing issues for NGO litigation on environmental, particularly carbon, issues.[163] This Supreme Court decision has the psychological impact of creating a certain consciousness about carbon and the role of litigation to mitigate the impacts of carbon emissions. This psychological factor is extremely important. There is now tremendous momentum behind carbon litigation and regulation.

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[159] Massachusetts v. EPA, 127 S. Ct. 1438, 1446 (2007). On April 2, 2007, the U.S. Supreme Court issued an opinion reversing the U.S. Court of Appeals for the D.C. Circuit. *Id.* at 1463. The Court held that: (1) Massachusetts had standing to petition for review; (2) EPA has statutory authority under the Clean Air Act to regulateGHG emissions; and (3) EPA acted arbitrarily and capriciously in denying the petition on grounds outside those delineated in the Clean Air Act. *Id.* at 1458, 1459–60, 1463.

[160] *Id.* at 1457, 1459. Shortly after EPA's denial in 2003 of a 1999 petition asking that it regulate GHG emissions from new motor vehicles, several states and environmental groups petitioned the D.C. Circuit, requesting review of EPA's decision. *Id.* at 1450–51. In 2005, the court panel held that the EPA Administrator acted lawfully in exercising his discretion to deny the original petition. *Id.* at 1451.

[161] *See id.* at 1463. EPA is not forced to regulate these emissions, but it may only avoid doing so if it determines that these emissions do not contribute to climate change or if it provides some reasonable explanation as to why it cannot, or will not, exercise its discretion to do so. *See id.* For example, EPA would have to provide justification as to why GHG emissions do not cause or contribute to global warming, which the majority interprets to be encompassed within air pollution. *See id.*

[162] *Id.* at 1444.

[163] Even if EPA were to immediately move to try to regulate carbon under this decision, the history of EPA rulemaking and subsequent challenge for other pollutants under the Clean Air Act suggests that one would not expect to see an enforced carbon regulation for at least a decade.

A second, but very important, impact of the *Massachusetts v. EPA* decision is to lower the standard for demonstrating causation and redressability for environmental standing.[164] The Court found that although the effects of global warming are "widely shared," Massachusetts had standing because Massachusetts could show some modicum of harm, thereby rejecting EPA's argument that global warming's widespread effects negated standing for any particular individual plaintiff.[165] The Court found that because Massachusetts owned or had interests in significant land that would allegedly be affected by global warming, it showed the requisite particularized harm.[166] The reduction of new vehicle emissions was significant enough to affect global warming, given that the transportation sector alone contributed close to one-third of the GHGs emitted in the United States.[167] The Court explained that while regulating motor vehicle emissions may not itself reverse global warming, redressability requirements were met where regulation would impact the emission of global warming gases.[168] The Court noted that while the risk of catastrophic harm was remote, it was nevertheless real, and could be reduced if relief were afforded.[169]

The additional prudential factors that the Supreme Court has been adding in a string of decisions[170] since the 1990 opinion in *Lujan v. National Wildlife Federation*[171] have been turned back. There is now standing of certain state governments or groups asserting extremely indirect damages from global warming gas production.[172] The *Massachusetts v. EPA* holding makes certain that public plaintiffs have a lesser burden to demonstrate standing, and imposes a lower requirement to demonstrate that granting the relief sought would redress the asserted harm. Especially with global pollutants, such as CO_2, this causal link is difficult to demonstrate because of the indirect relationship between

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[164] *See* 127 S. Ct. at 1457–58; Ferrey, Examples & Explanations, *supra* note 50, at 48–53.

[165] *Massachusetts v. EPA*, 127 S. Ct. at 1456.

[166] *Id.* Massachusetts owns, operates, and maintains fifty-three coastal parks and numerous coastal recreational facilities with significant infrastructure, combined with roads, walkways, sea walls, pump stations, and piers, as such petitioners were able to allege damages from global warming could run into the hundreds of millions of dollars. *Id.* at 1456 & n.19.

[167] *Id.* at 1457–58.

[168] *See id.* at 1458 (stating that because other countries such as China and India are poised to increase GHG emissions does not mean a reduction in the United States would have no effect).

[169] *See id.* (holding that risks to Massachusetts are real and reducible to some extent if given the relief sought).

[170] *See* discussion *infra* Part II.B.2.

[171] Lujan v. Nat'l Wildlife Fed'n, 497 U.S. 871 (1990).

[172] *See Massachusetts v. EPA*, 127 S. Ct. at 1438.

CO_2 emissions and measurable local impacts, so the holding makes bringing suit possible.

2. In the Lower Courts

The status of climate change litigation in the United States was such that no stakeholder was immune even *before* this recent Supreme Court decision. Several types of defendants were facing litigation before the decision. In point of fact, everyone was the target of carbon litigation long before *Massachusetts v. EPA*.

Federal governmental regulators were the target of suit in *Korsinsky v. EPA*, a 2005 case before the U.S. District Court for the Southern District of New York.[173] A complaint was filed by a New York resident who claimed that global warming was a public nuisance under federal common law and New York statutory and/or common law.[174] In *Korsinsky*, a pro se plaintiff alleged that global warming would physically injure him over time, causing him to suffer sinus-related diseases enhanced by the risk of contaminated drinking water resulting from increased floods.[175] The plaintiff claimed that he "developed a mental sickness" because he was so worried about what might happen to him because of global warming.[176] As relief, the plaintiff requested that the defendants be held jointly and severally liable and, also, that the court require the defendants to implement his invention.[177]

The court dismissed the plaintiff's claims on the ground that he lacked standing.[178] The plaintiff's physical injury did not rise to the level of a "*certainly* impending" injury required for Article III standing and his alleged mental injury was not specific enough, nor would implementing the plaintiff's invention redress the harm of global warming.[179] The U.S. Court of Appeals for the Second Circuit affirmed, holding that the plaintiff had not established standing because he had not explained exactly what possible injury had been caused by the appellants' actions, nor did he show how the injury could be redressed,

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[173] Korsinsky v. EPA, No. 05 Civ. 859 (NRB), 2005 WL 2414744, at *1 (S.D.N.Y. Sept. 29, 2005).

[174] *Id.*

[175] *See id.* at *2.

[176] *See id.* (internal quotations omitted).

[177] *See id.* at *1.

[178] *See id.* at *2–3.

[179] *See Korsinsky*, at *2–3 (quoting Lujan v. Defenders of Wildlife, 504 U.S. 555, 564 n.2 (1992)) (internal quotations omitted).

and therefore, the court could not grant jurisdiction.[180] As a pro se plaintiff, Korsinsky's complaint enjoyed a lower level of scrutiny from the court.

Coke Oven Environmental Task Force v. EPA,[181] and its later proceeding *New York v. EPA*,[182] both cases tried in the U.S. Court of Appeals for the D.C. Circuit, involved claims filed against federal permitting agencies. In *Coke Oven*, at issue was a petition for review challenging EPA's decision not to regulate CO_2 emissions for the purposes of global climate change.[183] The case was stayed pending the Supreme Court's decision in *Massachusetts v. EPA*.[184]

State or local government permitting agencies were targeted in the recent case in San Bernardino Superior Court of *Center for Biological Diversity v. San Bernardino County*.[185] Two environmental citizen groups filed a lawsuit against San Bernardino County, alleging violations of the California Environmental Quality Act (CEQA), attributable to the County's failure to address the impacts of its long-term land-use planning document on climate change, global warming, and GHG emissions. The groups asserted that the County ignored requests from the California Attorney General and various conservation groups to assess climate change issues in the development of the plan and the CEQA process.

California sued companies that made products that burned fossil fuels in *California v. General Motors Corp.*, in the U.S. District Court for the Northern District of California.[186] The State of California filed

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[180] *See* Korsinsky v. EPA, 192 F. App'x 71, 71–72 (2d Cir. 2006) (explaining that to establish standing a plaintiff must show that the injury is "'actual' or 'imminent,' rather than 'conjectural' or 'hypothetical.'" (quoting *Lujan*, 504 U.S. at 560)).

[181] Coke Oven Envtl. Task Force v. EPA, No. 06-1131, 2006 U.S. App. LEXIS 23499, at *1–4 (D.C. Cir. Sept. 13, 2006) (per curium). A number of environmental groups, states, and cities originally petitioned the EPA to enact standards regulating GHG emissions for new stationary sources. *Id.*

[182] New York v. EPA, No. 06-1148, 2007 U.S. App. LEXIS 30013 (D.C. Cir. Dec. 26, 2007) (per curium).

[183] *See* 2006 U.S. App. LEXIS 23499, at *1–4.

[184] The court issued a per curiam order holding the matter in abeyance pending the Supreme Court's decision in *Massachusetts v. EPA*. *Id.* at *4.

[185] Ctr. for Biological Diversity v. San Bernardino County, No. 07–00295 (San Bernardino Super. Ct. filed Apr. 11, 2007); Press Release, Ctr. for Biological Diversity, Attorney General Challenges San Bernardino County General Plan: Joins Conservationists in Global Warming Concerns (Apr. 13, 2007), http://www.biologicaldiversity.org/news/press_releases/sanbernardino-04-13-2007.html.

[186] California v. Gen. Motors Corp., No. C06-05755 MJJ, 2007 U.S. Dist. LEXIS 68547, at *2–3 (N.D. Cal. Sept. 17, 2007). The State of California filed suit against six automobile manufacturers—General Motors Corporation; Toyota Motor North America, Inc.; Ford Motor Company; Honda North America, Inc.; Chrysler Motors Corporation; and Nissan North America Inc.—under both the federal and California common law of public nui-

suit against six automobile manufacturers requesting compensation for damage inflicted by their vehicles' GHG emissions. In 2004, the CO_2 emissions from personal vehicles totaled 314 million metric tons.[187] Although Americans own 30% of the world's cars, these cars account for 45% of the entire global CO_2 emissions attributable to vehicles.[188]

This suit was dismissed under the political question doctrine in September 2007.[189] The plaintiff requested that the defendant automakers be held "jointly and severally liable for creating, contributing to, and maintaining a public nuisance," and requested monetary damages for future damages and expenses incurred by the State of California in connection with global warming.[190] The plaintiff further asserted that it should not have to wait for Congress to mandate a comprehensive solution to global warming because such a solution was unnecessary for tort liability under federal common law.[191]

Similar to the decision in *Connecticut v. American Electric Power*, discussed *infra*, the court in *General Motors* held that the plaintiff lacked standing because the issue was nonjusticiable.[192] In contrasting *General Motors* with *American Electric Power*, the court explained that deciding the claims would force the court to balance competing policy interests, which is the type of decision that should be made by elected political branches, rather than the courts.[193] Unlike *American Electric Power*, this case was decided after the Supreme Court opinion in *Massachusetts v. EPA*. The court refused to allow the plaintiff to make the leap from *Massachusetts v. EPA*, where a state waived its sovereign immunity to challenge a rejected rule making through administrative procedures, to the

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sance, requesting compensation for damages allegedly inflicted by their vehicles' GHG emissions, as well as a declaratory judgment that the manufacturers would be held liable for any further damages caused by climate change. *See id.* at *1–2, *4. California asserted that the vehicles the defendants manufactured accounted for thirty percent of California's emissions, and that such emissions—a public nuisance—harmed the coastline, water supply, and treasury of California. *See id.* at *3–4. The automobile manufacturers defended on the grounds that: (1) the case raised nonjusticiable political questions, meaning that this was the type of issue for the legislative and executive branches, not the judiciary, to decide; and (2) federal legislation has displaced federal common law on this topic. *Id.* at *5, *49.

[187] *See* Tallying Greenhouse Gases from Cars, Global Warming, Environmental Defense Fund, http://www.edf.org/article.cfm?contentID=5300 (last visited Apr. 30, 2008).

[188] *Id.*

[189] *Gen. Motors Corp.*, 2007 U.S. Dist. LEXIS 68547, at *38, *51.

[190] *See id.* at *4.

[191] *See id.* at *19.

[192] *See id.* at *35, *37–38.

[193] *Id.* at *23–24.

empowerment of a state claiming interstate tort damages from global warming.[194] Citing a veritable logistical nightmare, the court stated:

> Plaintiff's global warning [sic] nuisance tort claim seeks to impose damages on a much larger and unprecedented scale by grounding the claim in pollution originating both within, and well beyond, the borders of the State of California. Unlike the equitable standards available in Plaintiffs cited cases, here the Court is left without a manageable method of discerning the entities that are creating and contributing to the alleged nuisance. In this case, there are multiple worldwide sources of atmospheric warming across myriad industries and multiple countries.[195]

Large industrial CO_2 emitters were the target of litigation in *Northwest Environmental Defense Center v. Owens Corning Corp.*, in the U.S. District Court for the District of Oregon.[196] Three environmental groups filed a complaint alleging Owens Corning was constructing a manufacturing facility that would emit 250 tons of greenhouse, and ozone depleting, emissions without obtaining a required Air Contaminant Discharge Permit.[197]

Several state attorneys general sued utility companies that emitted GHGs in *Connecticut v. American Electric Power Co.*[198] The State of Connecticut and others filed suit against five utility companies under federal common law and/or statutory common law of the states alleging

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[194] *See id.* at *36–37 (distinguishing *Gen. Motors. Corp.* from *Massachusetts v. EPA*).

[195] *See Gen. Motors Corp.*, 2007 U.S. Dist. LEXIS 68547, at *47–48.

[196] Nw. Envtl. Def. Ctr. v. Owens Corning Corp., 434 F. Supp. 2d 957, 957, 959–60 (D. Or. 2006).

[197] *Id.* at 959–60. On July 8, 2005, Owens Corning filed a Motion to Dismiss, which the court denied in full on June 6, 2006. On June 8, 2006, the parties executed a Stipulated Order of Dismissal, which was incorporated into the court's judgment and order on June 8, 2006. *Id.*

[198] Connecticut v. Am. Elec. Power Co., 406 F. Supp. 2d 265, 267 (S.D.N.Y. 2005). Plaintiffs were the states of Connecticut, New York, California, Iowa, New Jersey, Rhode Island, Vermont, and Wisconsin; New York City; the Open Space Institute, Inc.; the Open Space Conservancy, Inc.; and the Audubon Society of New Hampshire. *Id.* Defendants were six major power companies: American Electric Power Corp., American Electric Power Service, The Southern Company, Tennessee Valley Authority, Xcel Energy Inc., and Cinergy Corp. *Id.* Plaintiffs claimed that U.S. electric power plants were responsible for ten percent of all man-made GHG emissions worldwide, that these emissions were causing climate change, and that this climate change was harming their sovereign interests as well as those of their citizens. *See id.* at 268. For example, they assert potential property loss through rising sea levels and public health injuries based on stronger summer heat waves. *See id.*

the tort of public nuisance stemming from global warming issues.[199] The plaintiffs alleged that the defendants annually emitted 650 million tons of CO_2, amounting to one-quarter of the electric power sector's CO_2—America's electric power sector is responsible for ten percent of worldwide man-made CO_2 emissions.[200] The plaintiffs requested equitable relief, asking that the defendants be held "jointly and severally liable for contributing to an ongoing public nuisance" of global warming, and be enjoined to cap their emissions of CO_2 and then to decrease emissions by a specified percentage each year.[201]

The defendants in turn filed a motion to dismiss on several grounds.[202] The court granted the defendants' motion, calling the issues in the case nonjusticiable political questions.[203] The court held that it needed to strike a balance between the interests of those who were seeking to reduce pollution against the hindering of economic development.[204] The court determined that this balance would be impossible without an initial policy determination from Congress and the President.[205] This case was dismissed two years prior to the Supreme Court decision in *Massachusetts v. EPA*. The matter is now on appeal.[206]

Insurers were defendants in the case of *Comer v. Nationwide Mutual Insurance Co.* (the Hurricane Katrina Litigation) in the U.S. District Court for the Southern District of Mississippi.[207] A class action complaint for damages and declaratory relief against several insurance com-

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[199] *Id.* at 267.

[200] *Id.* at 268.

[201] *Id.* at 270 (internal quotations omitted).

[202] *Id.* The court stated: Defendants contend that Plaintiffs have failed to state a claim upon which relief can be granted because: (1) there is no recognized federal common law cause of action to abate greenhouse gas emissions that allegedly contribute to global warming; (2) separation of powers principles preclude this Court from adjudicating these actions; and (3) Congress has displaced any federal common law cause of action to address the issue of global warming. Second, Defendants contend that this Court lacks jurisdiction over Plaintiffs' claims because: (1) Plaintiffs do not have standing to sue on account of global warming and (2) Plaintiffs' failure to state a claim under federal law divests the Court of § 1331 jurisdiction.
Id.

[203] *Id.* at 274.

[204] *Am. Elec. Power Co.*, 406 F. Supp. 2d at 272.

[205] *Id.* at 272–73 (defining political questions that the court would be forced to answer).

[206] The case was appealed on September 22, 2005, and oral arguments on briefs were held on June 7, 2006 before the U.S. Court of Appeals for the Second Circuit. To date, a decision is pending by the Second Circuit. Connecticut v. American Electric Power Company—Endangered Environmental Laws, http://www.endangeredlaws.org/case_connecticut.htm (last visited Apr. 30, 2008).

[207] Comer v. Nationwide Mut. Ins. Co., No. 1:05 CV 436 LTD RHW, 2006 WL 1066645, at *1 (S.D. Miss. Feb. 23, 2006).

panies and oil companies was filed, alleging claims of insurance coverage issues and global warming issues, based in part on the defendants' emissions, which were alleged to have enabled Hurricane Katrina to develop unprecedented strength and, as a result, allowed the class to suffer a common set of damages.[208]

Even U.S. financial institutions have been carbon litigation defendants.[209] In *Friends of the Earth v. Mosbacher*, the plaintiff alleged that the Overseas Private Investment Corporation (OPIC) and the Export-Import Bank (Ex-Im) failed to comply with NEPA, and that global warming was caused by GHG emissions that resulted from the failure of OPIC and Ex-Im to comply with NEPA when providing assistance to fossil fuel projects worldwide.[210] Ex-Im provides financial support for U.S. exports.[211] Ex-Im has adopted its own environmental review procedure for large and long-term loans or guarantees, although ultimate funding discretion lies with the Board of Directors.[212] Ex-Im and OPIC track and report aggregate GHG emissions from their respective projects.[213]

The plaintiffs identified seven projects funded by OPIC and Ex-Im, asserting that they should have prepared NEPA EISs.[214] The plaintiffs claimed that under NEPA both agencies were required to prepare an environmental assessment, at a bare minimum, as a prerequisite to lending.[215] The plantiffs argued that, while OPIC's handbook required a review of whether OPIC credit support would violate any OPIC requirement, this review did not conform to a NEPA review.[216] The court

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[208] *See id.* *1–2. The court dismissed the class action suit against the insurance company defendants in early 2006. *See id.* at *4–5.

[209] *See* Friends of the Earth, Inc. v. Mosbacher, 488 F. Supp. 2d 889, 891 (N.D. Cal. 2007).

[210] *Id.* at 892. Pursuant to NEPA requirements, Friends of the Earth claimed that both agencies failed to analyze the degree to which these projects contributed to global climate change. *See id.*

[211] *Id.* at 895.

[212] *See id.* at 895–96.

[213] *Id.* at 895, 897.

[214] *See id.* at 897.

[215] *See Friends of the Earth*, 488 F. Supp. 2d at 897, 910. Particularly, plaintiffs claimed that each defendant had an "energy program" subject to NEPA requirements. *Id.* at 910.

[216] *See id.* at 893–95; Ferrey with Cabraal, *supra* note 12, at 311–34. The OPIC handbook provides in relevant part:

> [T]o provide some degree of [environmental assessment] to every project considered for insurance or finance in determining whether to provide support for the project. OPIC cannot provide a final commitment to a project . . . until its environmental assessment is complete and a determination is made by OPIC that the environmental health and safety impacts of the project are acceptable.

held that no programmatic EIS was required because the projects were too scattered geographically and the approval of one project did not guarantee the approval of subsequent or similar projects.[217]

Finally, the Inuit Petition to the Inter-American Commission on Human Rights, filed in December of 2005, claimed that CO_2 emissions constituted a violation of fundamental human rights.[218] In sum, even before the recent Supreme Court decision on carbon, every type of entity was at litigation risk, a risk that is now growing.

It is true that several of these suits have been dismissed, some prior to the 2007 Supreme Court decision in *Massachusetts v. EPA*, as nonjusticiable, involving political questions, or for failure to state a claim.[219] However, some of these claims have survived or are on appeal.[220] The first wave of litigation against institutions and companies often is not successful, with prospects evolving over time as the science progresses, documents are discovered, and public opinion changes. The Supreme

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Friends of the Earth, 488 F. Supp. 2d at 893 (second alteration in original) (citations omitted). OPIC categorizes Category A projects as "likely to have significant adverse environmental impacts that are sensitive (e.g. irreversible, affect sensitive ecosystems, involve involuntary resettlement, etc.), diverse, or unprecedented." *Id.* at 894. Category B projects are "likely to have adverse environmental impacts that are less significant than those of Category A projects, meaning that few if any of the impacts are likely to be irreversible, that they are site-specific, and that mitigatory measures can be designed more readily than for Category A projects." *Id.*

[217] *Friends of the Earth*, 488 F. Supp. 2d at 911–12 (concluding that neither defendant had the requisite "program"). Neither OPIC nor Ex-Im had "adopted 'a group of concerted actions to implement a specific policy or plan' nor engaged in 'systematic and connected agency decisions allocating agency resources to implement a specific statutory program or executive directive.'" *Id.* at 911.

[218] *See* Martin Wagner & Donald M. Goldberg, An Inuit Petition to the Inter-American Commission on Human Rights for Dangerous Impacts of Climate Change (Dec. 15, 2004), http://www.ciel.org/Publications/COP10_Handout_EJCIEL.pdf. The Inuit claim that the failure of the United States to reduce GHG emissions and its refusal to adopt the Kyoto Protocol has resulted in climate change, causing human rights violations toward the Inuit people, including violations of their right to culture and property. *See id.*

A petition was submitted on behalf of Sheila Watt-Cloutier and sixty-two other named individuals, all Inuit of the Arctic regions of the United States and Canada, claiming human rights violations resulting from the impacts of climate change. *See id.*; Ctr. for Int'l Envtl. L. (CEIL), *Inuit File Petition with Inter-American Commission on Human Rights, Claiming Global Warming Caused by United States Is Destroying Their Culture and Livelihoods*, Dec. 7, 2005, http://www.ciel.org/Climate/ICC_Petition_7Dec05.html. The Inter-American Commission on Human Rights refused to hear the Inuit Petition. Watt-Cloutier indicated that she would not give up the fight and asked the Commission for further information on why the petition was not going forward.

[219] *See, e.g.*, Connecticut v. Am. Elec. Power Co., 406 F. Supp. 2d 265 (S.D.N.Y. 2005); California v. Gen. Motors Corp., No. CO6-05755 MJJ, 2007 U.S. Dist. LEXIS 68547 (N.D. Cal. Sept. 17, 2007).

[220] *See* Connecticut v. American Electric Power Company—Endangered Environmental Laws, http://www.endangeredlaws.org/case_connecticut.htm (last visited Apr. 30, 2008).

Court decision in *Massachusetts v. EPA*, while surely not resulting in any immediate, judicially imposed carbon restrictions, has opened the doors more widely for judicial standing of parties to raise carbon-related claims. While litigation is just beginning, it is possible that GHG emissions could become the next tobacco, asbestos, or MTBE[221] litigation.

Conclusion: Corporate Action

Global climate change rapidly and recently took a prominent place in the world equation and among corporate citizens. The scientific consensus is that carbon emissions must be drastically cut to prevent dramatically altering the planet and human health. Though the United States did not adopt the Kyoto Protocol, steps are being taken, primarily at the state level, to regulate the country's CO_2 emissions. State-led initiatives such as RGGI are buttressed by court litigation going well beyond cases like *Massachusetts v. EPA*. The need to regulate carbon is now moving forward in about half the states. Exactly how corporations respond to new levels of regulation remains to be seen. What cannot be ignored is that GHG regulation is now an issue in the global consciousness and in business decisionmaking.

As carbon emerges an a new environmental meta-issue, what will be the physical and policy fix? Developed nations employ fire to manipulate the universe. This manipulation makes CO_2 emissions the great bulk of the global warming challenge. About forty percent of U.S. carbon emissions contributing to climate change are attributed to coal-fired power generation. This percentage can be reduced by focusing on how we produce and use energy, particularly in the corporate sector. Concrete actions by corporate America to mitigate GHG emissions are essential. Here, the dialogue has not changed in recent years. Constants in the firmament of viable corporate options are those same renewable energy and energy efficiency solutions that were the foundation of an intelligent response on the warming issue. In fact, these solutions have not altered fundamentally since the energy crises of the 1970s.[222] Two strategies that have enjoyed widespread adoption by the states are the systems benefits charge and renewable portfolio standard. The carbon footprint of all would have been palpably reduced if only cost-effective renewable energy conservation and cogeneration imple-

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[221] Methyl Tertiary Butyl Ether (MTBE), US EPA, http://www.epa.gov/mtbe (last visited Apr. 30, 2008).

[222] *See* Steven Ferrey, Opinion, *The Energy Problem: Now What?*, Boston Globe, Oct. 16, 1979; Steven Ferrey, Opinion, *Solar Power—It Could Help Revivify Inner Cities*, L.A. Times, May 7, 1978, pt. VI, at 1, 3 [hereinafter Ferrey, *Solar Power*].

mentation, recommended or set in motion then, had been adopted.[223] While improved, and in some cases lower in price,[224] the basic technological fix has been relatively constant for a generation. These strategies are discussed extensively in the treatise I authored, *The Law of Independent Power*.[225]

When I spoke at the symposium on corporate environmental responsibility three years ago at the William and Mary School of Law, I noted that it was not that corporations were making incorrect decisions, but that the incentives to operate with greater environmental consciousness had not been compelling.[226] I noted then that states were taking the lead to provide a number of then-new, and extremely attractive, incentives to make green action more attractive. Today, those incentives at the state level have blossomed into a virtual cornucopia of opportunity, waiting to be realized.[227] Rather than voluntary reduction, mandatory reductions will be painful to the economy. First, at current, not future, levels of demand for energy, the known world oil reserves will last approximately four decades, known natural gas reserves will last approximately seven decades, and known coal reserves will last slightly more than sixteen decades. Second, a report by the National Association of Manufacturers forecasts that a federal carbon cap-and-trade system, similar to the Warner-Lieberman carbon regulation bill, by 2030 will increase gasoline prices by 60% to 144%, increase electricity prices by 77% to 129%, increase natural gas prices by 84% to 146%, eliminate three to four million jobs, and reduce GDP by half a trillion dollars.[228] Duke Energy, a major U.S. power company, predicted that consumer retail electric bills would jump 50% due to the costs of compliance with the Warner-Lieberman U.S. carbon legislation.[229] Fitch Ratings estimated in 2006 that the initial phase of U.S. cap-and-trade CO_2 emission

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[223] *See* Steven Ferrey, *Solar Banking: Constructing New Solutions to the Urban Energy Crisis*, 18 HARV. J. ON LEGIS. 483, 545, 550–51 (1981); Steven Ferrey, *But Some Won't Bask*, N.Y. TIMES, May 30, 1978, at A17; Steven Ferrey, *Solar Power*, *supra* note 223, pt. VI, at 1, 3.

[224] *See* American Wind Energy Association, Investing in Wind Power, http://www.awea.org/pubs/factsheets/InvestingInWindPowerFS2005.pdf (last visited Apr. 30, 2008). The cost of wind power has been dramatically reduced since the earlier energy shortages. *See id.*

[225] FERRY, LAW OF INDEPENDENT POWER, *supra* note 28, §§ 10:95–:96.

[226] *See* Ferrey, *Corporate Governance*, supra note 5, at 113.

[227] Steven Ferrey, *Sustainable Energy, Environmental Policy and States' Rights: Discerning the Energy Future Through the Eye of the Dormant Commerce Clause*, 12 N.Y.U. ENVTL. L.J. 507, 507–08, 522–39 (2004).

[228] Gerald Kerry, *Manufacturers Association Report Sees Dire Outcome Under Senate GHG Bill*, PLATTS ELECTRIC UTILITY WK., Mar. 17, 2008, at 7.

[229] Cathy Cash, *Coal Utilities Say They Do Not Rear Risk to Credit, Despite Carbon Warning*, PLATTS ELECTRIC UTILITY WK., Mar. 3, 2008, at 1, 32.

reductions would cost electric utilities approximately $6.5 billion annually,[230] which would be passed on to consumers. Creative solutions and incentives must be implemented to stave off the negatives of carbon regulation.

The problem of carbon emissions has not abated: in 2007 the rise in carbon emissions from power plants in the United States was greater than in any year in the past decade.[231] Economist Joseph Stiglitz has noted that there is a problem in incentivizing private corporations because "private incentives are often not aligned with social costs and benefits."[232] The technique of incentivizing the use of renewable energy should continue to be encouraged and is a way to increase corporations' awareness that they too are carbon-based.

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[230] *Fitch Puts Utilities' Initial CO2 Program Cost at $6.5 Bil; It Sees Cap-and-Trade Imminent*, Platts Electric Utility Wk., Nov. 13, 2006, at 10. This report was modeled on a RGGI-capped model, with carbon allowances trading at ten dollars per allowance. It also concluded that thousands of megawatts of electric generation capacity would have to be replaced with zero-emission energy sources. *See id.*

[231] Leora Falk, *Climate Change: Study Finds Rise in Carbon Emissions from Power Plants Largest Since 1998*, 39 Env't Rep. (BNA) No.12, at 552 (Mar. 21, 2008).

[232] Joseph E. Stiglitz, Making Globalization Work 190 (2006).

ACT LOCALLY, AFFECT GLOBALLY: HOW CHANGING SOCIAL NORMS TO INFLUENCE THE PRIVATE SECTOR SHOWS A PATH TO USING LOCAL GOVERNMENT TO CONTROL ENVIRONMENTAL HARMS

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Abstract: There has been comparatively little exploration of the importance of local government in addressing large-scale environmental harms, in spite of much activity at the local level dealing with climate change. This Article posits that local governments can affect large-scale environmental harms because they can influence the private sector through targeted *social norm* creation that cannot be accomplished easily at other levels of government. The Article notes that efforts to induce the private sector to take actions without enforcement capability have been problematic, but that connections to private sector decisionmakers and influencing of their internal norms—which can occur more easily at the local level—can create action not just locally, but wherever corporations operate.

INTRODUCTION

The title of the *Boston College Environmental Affairs Law Review* Symposium, *The Greening of the Corporation*, of which this Article is a part, makes a statement and asks a question. The statement is that corporations and the private sector generally have been taking steps to help the environment outside the traditional regulatory system; the question—why? Though the answer is clearly multifaceted, much seems to be related to changing social norms in their various incarnations: public

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demand, advertising, shame. While most people pay some homage to the power of social norms, these norms are rarely thought of as a policy implementation tool. I believe, however, that the nature of local governments' relationship to social norms means that local governments can in fact be vehicles for the use of such norms as policy tools. Scholars have long ignored the possibilities that local—that is, *sub-state*—governments can make significant contributions to environmental protection, or indeed, be significant in policy at all.[1] There are obviously many reasons for this oversight, including the fact that localities are not necessarily sovereign entities with a full panoply of sovereign powers. There is no *uniform* type or model of local governance,[2] and the environmental arena since 1970 has been dominated by federal legislation that makes the states significant partners in the administration of the law, but generally sidelines local government.[3] Thus, there is little systematic analysis of what particular structural factors would favor the use of local governance in controlling environmental harms.[4]

The recent efforts to affect the environment by local governments, particularly in the area of climate change, however, suggest that there is more possibility of power at the local level than first meets the eye. Because at the local government level there is personal contact between government actors and the regulated parties, local government may be able to effectively advance environmental protection with what has come to be called public-private partnerships, or cooperative environ-

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[1] *See* Richard C. Schragger, *Can Strong Mayors Empower Weak Cities? On the Power of Local Executives in a Federal System*, 115 YALE L.J. 2542, 2545 (2006) ("The primary form of American political decentralization is regional rather than municipal, states—not cities . . . ."); Kathleen M. Sullivan, *From States' Rights Blues to Blue States' Rights: Federalism After the Rehnquist Court*, 75 FORDHAM L. REV. 799, 809–10 (2006) (commenting that, typically, discussion of *local* control means control at the state level).

[2] *See* Schragger, *supra* note 1, at 2546.

[3] One notable exception to this legislative model is the granting of local oversight of Publicly Owned Treatment Works (POTWs). 40 C.F.R., § 501 (2007). The federal statutes also generally preserve common law, which might be characterized as local, since it may be successfully invoked by municipalities. *See, e.g.*, Clean Air Act, 42 U.S.C. § 7412(d)(7) (2000).

[4] Kirstin Engel and David Adelman have recognized the importance of local government as one of many players to address complex, multifaceted environmental problems, but have not fully explored whether local government is particularly good at a particular role. *See* Kirstin Engel & David Adelman, Adaptive Federalism: Lessons from the Study of Complex Adaptive Systems 2 (2007) (unpublished manuscript, on file with author). Their analysis concerning the importance of multitiered governance is indeed persuasive; in this Article, however, I focus more on why local government may be appropriate for large-scale environmental concerns and ways to enhance local government's effect.

mentalism with business.[5] It is the thesis of this Article that, while separately public-private partnerships and local government action as ways to control environmental harm may not be effective methods, together they in fact do create a legitimate and powerful tool for environmental protection by using local government to create social norms which effectively influence the private sector.

This Article will first explore the role and powers of local government in environmental regulation, including how local government can be affected by state government.[6] Second, it will examine the use of public-private partnerships, business cooperation, and voluntary efforts as models for environmental control.[7] The Article will also explore the literature surrounding the power of social norms to bring about policy change.[8] Finally, this Article will demonstrate how local government can use its power to influence social norms in a manner that realizes the potential of public-private partnerships, while not succumbing to their weakness.[9]

I. Local Government Regulation of Environmental Harms: A Renaissance?

Most local governments have the power to protect general health and safety through the traditional police power, and historically local governments were the first-line of defense against environmental harm.[10] Through the concepts of public nuisance and later zoning, the most obvious environmental harms of the past, whether they were raw sewage or choking smoke, were dealt with by local government.[11] The role of local government, however, began to wane as environmental harms themselves changed or came to be seen differently.[12] The paradigmatic modern environmental harm is anything but local. It is generally a transboundary harm caused by products or processes in a national or international market, whose profits are far removed from its harms. Such problems are logically seen as requiring regulation from a jurisdic-

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[5] Professor Schragger might characterize this influence as the *real* power of mayors as opposed to *formal* or legal power. *See* Schragger, *supra* note 1, at 2546.

[6] *See infra* Part I.

[7] *See infra* Part II.

[8] *See infra* Part III.

[9] *See infra* Parts IV–VI.

[10] *See* Robert L. Glicksman et al., Environmental Protection Law and Policy 65 (5th ed. 2007); Craig N. Johnston, William F. Funk & Victor B. Flatt, Legal Protection of the Environment 3 (2d ed. 2007).

[11] *See* Johnston, Funk & Flatt, *supra* note 10, at 3.

[12] *See id.* at 5.

tion that can control all causal aspects of the harm: the purchase of raw materials, the manufacturing process, and the transport of the pollutants caused by the process, or the transport of the product itself. The economic theory of environmental harm envisions a sovereign that has power and reach to successfully *price* and, therefore, control the externalities of environmental harm.[13] The far-flung aspects of environmental harm were so important that a new kind of cooperative federalism was spawned, which moved beyond the traditional reliance on states to deal with such issues in favor of a state-federal mix of controls.[14]

Though examples of local government regulation of environmental harm still exist, our current conception of environmental law is very difficult to accomplish at the local level. The powers of local governments are limited. General police power may be sufficient for local governments to control pollution within their borders, but in some places, even the use of the police power can be preempted by the state.[15] As opposed to state-federal joint regulation, in which states are often free to create more stringent health and safety regulations than a federal floor,[16] in some states, local governments are explicitly preempted from taking actions that are different or inconsistent with state regulators' actions.[17] States also can actively preempt local actions with which they do not agree.[18] Witness the strong reaction to the *Kelo v. City of New London* takings case, in which several state laws were passed to preempt local government from exercising its takings power in a traditional manner.[19] The truth is that if particular states are slow or recalcitrant about regulating polluting entities directly, there is no reason to expect these states to allow their sub-jurisdictions to do so.

This result is exacerbated by the politicization of environmental control, wherein environmental positions may be perceived as Democ-

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[13] *Id.* at 24.

[14] *Id.* at 9–10.

[15] Paulette Wolfson & Ceil Price, *Watch Out for the City: Local Governments Can Enforce*, 36 St. B. Tex. Envtl. L.J. 65, 65 (2006).

[16] Johnston, Funk & Flatt, *supra* note 10, at 9–10.

[17] In Texas, local government regulation of the environment cannot be inconsistent with state law, state regulations, or rules and orders of the Texas Commission on Environmental Quality. Tex. Health & Safety Code Ann. § 382.113 (Vernon 2001).

[18] *See* Wolfson & Price, *supra* note 15, at 65. In Texas, the power of a local government to criminally prosecute environmental harms was taken away by the state after much lobbying by private corporations in Harris County. *See* 30 Tex. Admin. Code §§ 70.201–.206 (2006).

[19] Marcilynn A. Burke, *Much Ado About Nothing:* Kelo v. City of New London, Babbitt v. Sweet Home, *and Other Tales from the Supreme Court*, 75 U. Cin. L. Rev. 663, 666–67 (2006); *see* Kelo v. City of New London, 545 U.S. 469 (2005).

ratic rather than Republican.[20] States with Republican majorities that are powerful in rural areas, may reflexively reject additional environmental regulations from large cities, which tend to be more Democratic.[21] Thus, disputes can arise in local government over differences in politics as much as substance.

The main drawback to using local government for environmental regulation to protect the citizens of that locality, however, is that most modern pollution migrates extensively, and the local government cannot enforce its laws beyond its boundaries. Certain toxic pollution is an important exception to this result, and in this arena we have seen some action from local government.[22] For the most part though, modern environmental problems are too geographically dispersed to be addressed by local government through traditional sovereign powers.[23]

This geographical limitation makes the local government foray into climate change all the more perplexing, since climate change is truly global in dimension.[24] Certainly, no local government can hope to reduce harm to its own citizens from climate change solely through its own regulation. Yet there is unprecedented activity at the local level.[25]

In their article exploring the phenomenon of local governments engaging climate change problems, Professors Engel and Saleska propose that public choice analysis might explain why politicians pursue a particular agenda, and the authors suggest that local actions may foreshadow or spur national action.[26] The phenomenon of local activities spurring action by larger entities can be explained by many economic theories, such as the private sector's desire for uniform regulations, a particular kind of regulation that works better on a larger scale, such as tradable permits, or seeking protection from a *race-to-the-bottom* phenomenon.[27] These justifications are certainly logical explanations that can be supported by economic theory, but there may be another important factor that has not been fully explored or exploited: the power

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[20] *See, e.g.*, GLICKSMAN ET AL., *supra* note 10, at 69.

[21] Samuel Issacharoff, *Judging Politics, the Elusive Quest for Judicial Review of Political Fairness*, 71 TEX. L. REV. 1643, 1683 (1993) (discussing voting rights and noting that large cities tend more towards the Democratic Party).

[22] There are, however, attempts to limit local government action as much as possible. *See* Dina Cappiello, *Bills Filed to Block White's Clean Air Campaign*, HOUSTON CHRON., Mar. 10, 2007, at A1.

[23] *See* Kirsten H. Engel & Scott R. Saleska, *Subglobal Regulation of the Global Commons: The Case of Climate Change*, 32 ECOLOGY L.Q. 183, 187 (2005).

[24] *See id.*

[25] *Id.* at 184–86.

[26] *Id.* at 189.

[27] *Id.* at 223–24.

of norm creation at the local level. Leading by example could have impacts on the creation of norms that affect behavior.

Currently, norm creation in environmental policy has been best appreciated with respect to altering the behavior of individual actors.[28] In turn, the impact of affecting individual behavior can also interact with other factors to support action on a larger scale. As public opinion changes in response to local actions, publicity over an issue can bolster the possibilities of it being taken up on a national scale.

Norm creation also can be used in a less dispersed and more effective way. If norm creation were used at the local government level to specifically target influential, private-sector decisionmakers in a focused way, this tactic might be the powerful bullet to control some environmental harms, particularly climate change. Based on the assumption that norm creation as a policy control device can be more powerful the closer a party is to the community in which he or she seeks acceptance,[29] local government and its leaders have power not available to state and national governments to target particularly large sources of environmental degradation in the private sector, and convince them to make changes not only within the localities' boundaries, but also globally. Indeed, local government may be the only entity that can truly use public-private partnerships for effective environmental regulation.

II. Public-Private Partnerships and Environmental Protection by Engaging with the Private Sector

In the 1980s, and accelerating into the 1990s, there were debates and discussions about the role that the private sector could and should play in controlling environmental harms and the shape this role should take. Although they take different forms, one of the most common is the use of a *cooperative* or semi-voluntary enforcement scheme for private sources of pollution.[30] One example of this solution is the creation of many audit shield laws that protect a party from enforcement for an environmental problem if that problem is quickly corrected.[31] The development of many of these proposals was motivated by a concern in the business community that environmental regulation up to that time

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[28] Michael P. Vandenbergh, *Order Without Social Norms: How Personal Norm Activation Can Protect the Environment*, 99 Nw. U. L. Rev. 1101, 1101–03 (2005).

[29] *See* Richard A. Posner, *The Problematics of Moral and Legal Theory*, 111 Harv. L. Rev. 1637, 1690 (1998).

[30] *See* Clifford Rechtschaffen & David L. Markell, Reinventing Environmental Enforcement and the State/Federal Relationship 70 (2003).

[31] *See id.*

had been overly punitive, and the related position that helping entities comply would actually do more for the environment than punishing only a few.[32]

The Clinton administration embraced of this concept to a limited extent, and the concept formed the backbone of the George W. Bush administration's environmental policy in both Texas, when he was governor, and nationally, while president.[33] In particular, the Bush administration has pioneered so-called *voluntary compliance* programs and voluntary initiatives, particularly for climate change.[34]

Such voluntary compliance ideas reject the notion that all decisionmakers use rational choice in a formal sense when deciding whether to comply with a law; voluntary compliance may encompass some rational choice ideas, but must also assume the theory of norm creation, particularly the idea that people would feel a powerful personal reason to comply with law.[35] Though government embrace of voluntary environmental compliance rarely used terms such as *rational choice theory*, it may have been no coincidence that ideas of cooperative environmentalism flourished at the time that social norm literature was burgeoning.[36]

The other strand of support for more cooperative work with the private sector stems from the realization that many multinational companies control vast amounts of resources that are not subject to any one jurisdiction.[37] It has long been assumed that such behemoths do not necessarily submit to the legal and policy choices of any one jurisdiction.[38] Thus, in a globalized economy, which has global environmental and other concerns, we would have to find some way to get the private sector to engage in environmental protection without the force of traditional nation-state law.

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[32] *See id.* at 68.

[33] Matthew D. Zinn, *Policing Environmental Regulatory Enforcement: Cooperation, Capture, and Citizen Suits*, 21 STAN. ENVTL. L.J. 81, 82–83 (2002); *Business Group Readies Voluntary Initiative on Climate Change*, INSIDE EPA, Nov. 15, 2002, at 2 [hereinafter *Business Group Readies*].

[34] Zinn, *supra* note 33, at 82–83; *Business Group Readies*, *supra* note 33, at 2.

[35] *See* Michael P. Vandenbergh, *Beyond Elegance: A Testable Typology of Social Norms in Corporate Environmental Compliance*, 22 STAN. ENVTL. L.J. 55, 77 (2003).

[36] The standard theory is that cooperative environmental enforcement is a "conservative, pro-business, idea" in a political sense, and, as such, might seem far from the academic world of the power of social norms. To the extent that both embrace the importance of law abiding behavior, however, they share a common provenance.

[37] *See* James R. Silkenat, *Regulating Global Companies*, 28 STAN. L. REV. 381, 381 (1976) (reviewing GLOBAL COMPANIES: THE POLITICAL ECONOMY OF WORLD BUSINESS (George W. Ball ed., 1975)).

[38] *See id.* at 382.

The record of engaging the private sector on environmental protection other than as a regulated entity shows mixed success at best.[39] There has been positive review, particularly from the private sector, of President Bill Clinton's engagement with logging interests in the Pacific Northwest and the increased use of habitat conservation plans with a No Surprises Policy under the Endangered Species Act.[40] The use of private-party-generated environmental plans under Project XL, also under the Clinton administration, however, was not heavily utilized, indicating limited applicability.[41] Of the two projects, the one most subscribed to by the private sector was the one in which enforcement would be greatly diminished at the point of the voluntary agreement.[42]

The record for pure voluntary compliance or compliance without enforcement oversight from any level of government is abysmal. For instance, the California Regional Clean Air Incentives Market (RECLAIM) program, for the trading of nitrogen oxides between stationary and mobile sources, was well behind in its touted environmental benefits ten years into the program and was plagued by serious compliance problems.[43] Likewise, the national Voluntary Emissions Trading Scheme started by the Bush administration for climate change has not been well-subscribed or particularly effective since its inception.[44] If

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[39] Rechtschaffen & Markell, *supra* note 31, at 242–43.

[40] Robert B. Keiter, *Public Lands and Law Reform*, 2005 Utah L. Rev. 1127, 1206–07; Graham M. Lyons, *Habitat Conservation Plans: Restoring the Promise of Conservation*, 23 Environs Envtl. L. & Pol'y J. 83, 93 (1999).

[41] Rena I. Steinzor, *Reinventing Environmental Regulation: The Dangerous Journey from Command to Self-Control*, 22 Harv. Envtl. L. Rev. 103, 124–25 (1998). Project XL stands for "eXcellence and Leadership" and allows state and local governments, businesses, and federal facilities to work with the U.S. Environmental Protection Agency (EPA) in issuing regulatory programs, policies, or procedural flexibilities in order to more effectively achieve environmental and public health protection. EPA, What is Project XL?, http://www.epa.gov/projectxl/file2.htm (last visited May 1, 2008).

[42] *See* Lyons, *supra* note 40, at 93; Steinzor, *supra* note 41, at 124–25.

[43] *Trading Foes Hail EPA Region IX Report Criticizing RECLAIM Program*, Inside EPA, Nov. 22, 2002, at 7. RECLAIM stands for The Regional Clean Air Incentives Market program and was adopted by the South Coast Air Quality Management District in 1993. EPA's Evaluation of the RECLAIM Program in the South Coast Air Quality Management District, Region 9: Air, US EPA, http://www.epa.gov/region09/air/reclaim/index.html (last visited May 1, 2008). The program sets emissions caps and reduction standards for nitrogen oxides (NO_x) and sulfur oxides (SO_x) in the South Coast Air Basin. *See id.*

[44] *See* Victor B. Flatt, *The Enron Story and Environmental Policy*, 33 Envtl. L. Rep. (Envtl. Law Inst.) 10,485, 10,492 (2003); Press Release, White House, President Announces Clear Skies & Global Climate Change Initiatives (Feb. 14, 2002), http://www.whitehouse.gov/news/releases/2002/02/20020214-5.html. The initiative calls for voluntary cuts in greenhouse gas (GHG) emissions per unit of economic activity with the "commitment to reduce our greenhouse gas intensity by 18 percent by the year 2012," which is "the equivalent of taking 70 million cars off the road." *Id.*

government does not create incentives for the private sector to comply, voluntary good behavior is unlikely.[45]

From these examples, it seems that public-private programs may only be successful in combination with the threat of enforcement or regulation, or some other incentive to comply.[46]

This conclusion does not bode well for the idea that the private sector can be trusted to accomplish environmental policy initiatives without oversight. As noted above, some corporate actors, due to their size and power, are not subject to any oversight with respect to actions associated with truly global environmental problems, like climate change. How then can the private sector be engaged in environmental protection without a threat of punishment? I believe that the answer is to be found in one particular kind of social norm creation.

III. The Power of Social Norms

As noted above, theories of cooperative or voluntary-based enforcement must assume to some extent that people and entities comply with the law not just out of self-interest, but because of some other outside imperative.[47] The scholarship surrounding the importance of social norms in controlling behavior burgeoned in the 1990s, with many scholars explaining the impacts that social norms have on legal compliance or their roles as independent ways to achieve policy goals.[48] These results have been explained by two basic theories: people care about the esteem of others, and they seek to avoid internalized norms, such as shame, which occur when others know of their bad deeds.[49] This research demonstrates the importance of social norms to society's functioning.[50] In addition, biological research seeking to explain altruistic behavior in human societies has concluded that the roots of internal human morality are evident in all social primates and are, thus, necessary for their species' functioning.[51]

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[45] *See* Brigham Daniels, *Emerging Commons and Tragic Institutions*, 37 Envtl. L. 515, 529 (2007).

[46] *See id.*

[47] Russell B. Korobkin & Thomas S. Ulen, *Law and Behavioral Science: Removing the Rationality Assumption from Law and Economics*, 88 Cal. L. Rev. 1051, 1127 (2000).

[48] *See, e.g.*, Cass R. Sunstein, *Social Norms and Social Roles*, 96 Colum. L. Rev. 903, 914–21 (1996).

[49] *Id.* at 914–16.

[50] *See id.* at 914–21.

[51] Nicholas Wade, *An Evolutionary Theory of Right and Wrong*, N.Y. Times, Oct. 31, 2006, at F1.

Though explained in differing manners, both lines of research support the basic idea that has intuitively driven all human societies—people do not like to be law breakers. Research also shows that this simple idea is subject to many complications and exceptions. For instance, to feel moral shame about law breaking, people must feel that they have done something wrong.[52] This notion may be particularly problematic in an environmental context. When dealing with a commons, cheating often results in incremental harm, and the overall harm is only noted when many engage in the activity.[53] The commons analysis suggests that purely voluntary compliance with environmental requirements with no other incentives is itself a commons problem, and so cheating and noncompliance may be rampant.[54] Commons users attempt to *free ride*, and this tendency decreases the effectiveness of commons control.[55] In fact, with a commons issue, competing *fairness* norms suggest that people will be even less likely to take voluntary *good* action because of the perception that others will be riding on their coattails.[56] As stated more prosaically by Professor Carol Rose, no one wants to be a "sucker."[57]

Additionally, corporate structure wreaks havoc with the power of norms, as individual power must be squared with corporate incentives. In an examination of players in corporate governance, Professor Renee Jones has noted that social norms alone seem unable to curb corporate behavior, primarily because of the complexity of competing norms and responsibility.[58] In the environmental context, Professor Rena Steinzor thoroughly analyzed many of the new cooperative enforcement mechanisms in her groundbreaking 1999 article on enforcement, explicitly acknowledging that the mechanisms must to some degree depend on the role of moral suasion.[59] She noted that moral suasion as it affects individual people seems not to work as well in the corporate en-

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[52] *See* Robert C. Ellickson, *Law and Economics Discovers Social Norms*, 27 J. Legal Stud. 537, 539–40 (1998).

[53] S*ee* Engel & Saleska, *supra* note 24, at 187.

[54] *See* Carol M. Rose, *Rethinking Environmental Controls: Management Strategies for Common Resources*, 1991 Duke L.J. 1, 4–5 [hereinafter Rose, *Rethinking*].

[55] Daniels, *supra* note 45, at 526.

[56] *See* Rose, *Rethinking*, *supra* note 54, at 4.

[57] *Id.*

[58] Renee M. Jones, *Law, Norms, and the Breakdown of the Board: Promoting Accountability in Corporate Governance*, 92 Iowa L. Rev. 105, 108 (2006).

[59] *See* Steinzor, *supra* note 41, at 158–64.

vironment, most likely because of the enormous pressure for short-term profits.[60]

Thus, for several reasons, environmental programs that are purely voluntary, with no other incentives, seem unable to depend on social norms alone to create compliance. Nevertheless, the research on social norms does suggest that education on how individual or corporate actions affect the environment could change behavior, at least at the individual level.[61] Certainly, education may be enough to overcome the fairness or free rider problem, because of the internalization of a norm and the creation of other perceived benefits. For instance, a recent survey indicates that most people buy a Prius car, not for any direct economic benefit, but because it sends a signal that they are good and environmentally conscious.[62] Clearly, internalizing that perception can be very powerful.

But what about the concerns with corporate governance? Can the power of social norms over individuals affect the actions of corporations? Where is the environmental norm-creating opportunity to affect corporate action?

IV. How Local Government Can Create the Social Norms Necessary to Affect Corporate Behavior

Aside from the experiments with voluntary compliance discussed above, government powers, such as the state and federal government, have used traditional incentives to enforce corporate behavior. Enforcement incentives are generally compensatory or punitive in nature. If you do not comply with the law, you may be charged some amount of money. Economists can apply a cost-benefit analysis to this situation to determine whether it makes sense to break the law.[63] As such, enforcement penalties that do not capture the benefit of the violation to the violator may be considered ineffective and problematic.[64] Also, individuals can be criminally charged in extreme cases.[65] This sanction, involving the loss of freedom for individuals, may be far stronger than any

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[60] *See id.*

[61] *See supra* notes 47–60 and accompanying text.

[62] Micheline Maynard, *Toyota Hybrid Makes a Statement, and That Sells*, N.Y. Times, July 4, 2007, at A1.

[63] Korobkin & Ulen, *supra* note 47, at 1064–66.

[64] *See* Zinn, *supra* note 33, at 96.

[65] What Is an Environmental Crime?, Criminal Enforcement, Compliance and Enforcement, US EPA, http://www.epa.gov/compliance/criminal/investigations/environmentalcrime.html (last visited May 1, 2008).

monetary sanction, and some evidence suggests that this credible threat may compel much legal compliance.[66]

In the environmental arena, such a threat is rarely used, but the possibility may make it effective in corporate contexts. Certainly, Professor Jones seems to believe that corporate control requires "external accountability mechanisms."[67] Traditional penalties, however, only work because of their effects on individual behavior. It is a person who goes to prison, not a corporation. Moreover, it is people who are hurt by the loss of money and income, not a disembodied legal entity. Though we think of civil and punitive penalties as deterrent-based or hard enforcement, they depend no less on human reaction to incentives than do social norms. Thus, if corporate behavior can be affected by altering the incentives for individuals in this traditional manner, it should also be affected by altering incentives related to social norms. It may simply be that we have not discovered the proper vehicle.

One vehicle that might be plausible is the importance of reputation to decisionmakers within companies. The reputation can be a corporate reputation or an individual reputation. The issue of corporate reputation has been examined in some circumstances, and most commentators note that the importance of corporate reputation is related to money—for instance, being perceived as *green* may increase market share.[68] This attention to market share is usually the kind of *reputation* incentive many point to as the best way to get the private sector to protect the environment.[69] Reputation incentive has led to certification standards and advertising, and has been growing.[70]

In the last two years, many private entities have been changing positions or processes that could help reduce climate change.[71] Some ap-

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[66] *See* Robert W. Adler & Charles Lord, *Environmental Crimes: Raising the Stakes*, 59 GEO. WASH. L. REV. 781, 787 (1991). *But see* David C. Fortney, Note, *Thinking Outside the "Black Box": Tailored Enforcement in Environmental Criminal Law*, 81 TEX. L. REV. 1609, 1628–29 (2003).

[67] Jones, *supra* note 58, at 108.

[68] *See* James Salzman et al., *Regulatory Traffic Jams*, 2 WYO. L. REV. 253, 260 (2002).

[69] *See id.*

[70] Katherine Renshaw, *Sounding Alarms: Does Informational Regulation Help or Hinder Environmentalism?*, 14 N.Y.U. ENVTL. L.J. 654, 659–60 (2006).

[71] *See, e.g.*, Michael Barbaro, *Home Depot to Display an Environmental Label*, N.Y. TIMES, Apr. 17, 2007, at C1; Micheline Maynard & Nick Bunkley, *Detroit Decides to Help Shape, Not Resist, Regulation of Emissions*, N.Y. TIMES, Apr. 7, 2007, at C1; Anne Thompson, *Studios Go Green, Scene by Scene*, VARIETY, Apr. 30, 2007, at 6; *see also* About Shell, Livio Accattatis, Shell Energise™ Programme, http://www.shell.com (search for "Livio Accattatis Shell Energise") (last visited May 1, 2008) (Livio Accattatis, a principal consultant on Energise, a Shell initiative geared toward reduction of carbon dioxide emissions, has already cut emissions by 620,000 metric tonnes a year from eight Shell manufacturing plants).

pear to do so because of the likelihood of regulation,[72] but other actions are clearly designed to appeal directly to consumers in the hope of helping the companies' bottom lines.[73] Even changes in anticipation of regulation may be seen as a way of preemptively appealing to the marketplace in advance of being forced to act.[74]

Though less predictable in its application and outcome, the alteration of private actions to appeal to market forces in the hopes of increasing profit is not really different from alteration of private actions in response to traditional enforcement. Both can be explained by economic incentives and traditional rational actor theory. Such action can also presumably be shaped by government forces in some ways. Some action is also explained by social norm theory. As detailed in many of the papers in this Symposium, by both regulating an area of the law and educating the public about consequences, government action may create social norms that induce private actors to respond to marketplace pressures.

Depending on the private sector to alter its behavior to accommodate changing public desires does not work for everything. In some cases there may not be a *reputation* market, in which case there would be no monetary incentive for environmental compliance. Examples include polluting entities that do not have advertising budgets, do not sell a product, or whose products are otherwise regulated. Also, social norms of the general public only positively affect corporate action to the extent the public really understands the complexity of the corporate action.[75] Saying a corporation is *green* may or may not translate into environmental benefits. Changing the social norms of the decisionmakers themselves addresses these issues.

This outcome suggests a focus on the other *reputation* incentive—that is *personal reputation.* How do those people whose opinions you care about—your spouse, your religious leader, your colleagues, your parents, your children, your friends—feel about your actions? Personal reputation, and the need for connections with others, is a powerful mo-

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[72] *See* Maynard & Bunkley, *supra* note 71, at C1.

[73] *See* Steinzor, *supra* note 41, at 165; Barbaro, *supra* note 71, at C1; Maynard & Bunkley, *supra* note 71, at C1; Livio Press Ad, http://www.shell.com/static/aboutshell-en/downloads/about_shell/what_we_do/corporate_advertising/climate_change/livio/livio_accattatis_energise.pdf.

[74] *See* Maynard & Bunkley, *supra* note 71, at C1.

[75] Renshaw, *supra* note 70, at 665.

tivator in controlling negative behavior.[76] Thus, the incentive associated with this personal reputation may be powerful.

Every person has a community and this community exerts power. Social scientists have noted the power that social influence can have on personal action.[77] This influence has exerted itself in the environmental movement, from societal norm creation surrounding littering and recycling, to pressure in some social strata to drive gas-efficient cars.[78] However, we rarely think of using this power beyond individuals. Can a multinational corporation feel shame and peer pressure? The answer to that is obviously "no," but the people who run and make decisions for these corporations can. These leaders also have friends and are invested in every manner of human emotion and interaction. It is this *personal connection* to the rich and powerful theory that drives both the concepts of charitable fundraising and lobbying.[79] A person is more likely to give to a charity if she knows or has a connection with the person who is asking.[80] Likewise, spending on legislative lobbying nears two billion dollars in the belief that actual connections with people who have power can be used to induce the powerful to take action.[81]

But to tap this reputation or human interaction incentive, one must have actual connections with people, and so, it is generally at the local level where social norms are exerted most powerfully.[82] As stated by Judge Posner, "[N]orms are more effective when people are under the observation of their peers."[83] Proximity enhances the effectiveness of social control as it facilitates observation of, and by, the community.[84] Moreover, local connection assists in controlling free rider problems, thereby bolstering the perception of fairness when engaging in good

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[76] *See* Richard H. McAdams, *The Origin, Development, and Regulation of Norms*, 96 MICH. L. REV. 338, 355–57 (1997); Eduardo M. Peñalver, *Property as Entrance*, 91 VA. L. REV. 1889, 1919–21 (2005).

[77] Dan M. Kahan, *Social Influence, Social Meaning, and Deterrence*, 83 VA. L. REV. 349, 356 (1997).

[78] *See* Maynard, *supra* note 62, at A1.

[79] *See* Robert H. Jerry II, *A Primer for the First-Time Law Dean Candidate*, 49 J. LEGAL EDUC. 564, 589 (1999); Meredith A. Capps, Note, *"Gouging the Government": Why a Federal Contingency Fee Lobbying Prohibition Is Consistent with First Amendment Freedoms*, 58 VAND. L. REV. 1885, 1886 (2005).

[80] *See* Jerry, *supra* note 79, at 589.

[81] *See* Capps, *supra* note 79, at 1886.

[82] *See* RICHARD A. POSNER, THE PROBLEMATICS OF MORAL AND LEGAL THEORY 74–75 (1999); Tiana S. Mykkeltvedt, Note, *Common Benefit and Class Actions: Eliminating Artificial Barriers to Attorney Fee Awards*, 36 GA. L. REV. 1149, 1151–52 (2002).

[83] POSNER, *supra* note 82, at 75.

[84] *See* Daniel J. Solove, *A Taxonomy of Privacy*, 154 U. PA. L. REV. 477, 493 (2006).

works.[85] Even in very large cities, the circles of private and public power may be relatively small and overlapping, and those that hold the reins of local power are likely part of this interconnected web. For example, New York City's current mayor, Michael R. Bloomberg, was a business and philanthropic powerhouse before he assumed the mayoralty.[86]

Because we are talking about a relatively small geographic area, many interactions and connections occur between the public and private sector. Even the largest cities tend to have only one major opera house that local business and municipal leaders may attend on the same opening night. The same is true for museums, fundraisers, programs, and even restaurants, stores, and friends. These decisionmakers may be global travelers, but they also exist in some kind of local culture which teaches them to like and value certain things and to interact with others in a certain manner.

At a national level, at least in most developed countries, the leaders of the most important private sector players and the leaders of the country are not always in the same geographic area, and national leaders may be more protected from interactions with the public. Proximity is critical to connection and influence.[87] Some might even be turned away from the desired social norm by hearing a message from someone they do not respect in government, rather than from a personal acquaintance.[88]

Municipalities often depend more directly on services and philanthropy from the private sector, so the leaders of municipalities have more reason to keep and maintain prior connections with people from the private sector. Moreover, local government legislation and regulation often occurs at the face-to-face level.[89] In fact, Professor Richard C. Schragger has postulated that the primary power of mayors lies in political connection—the power to influence—not in inherent power.[90] Personal connections also fuel the use of local government power, as in

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[85] Daniels, *supra* note 45, at 526–27.

[86] NYC.gov, Office of the Mayor, Biography, http://www.nyc.gov (follow "Biography" hyperlink under "Office of the Mayor") (last visited May 1, 2008).

[87] *See, e.g.*, Randall Stross, *It's Not Who You Know. It's Where You Are*, N.Y. Times, Oct. 22, 2006, § 3, at 3.

[88] The issue of climate change legislation at the national level has already come to be associated with *personalities*, as many people resist the message because of the messenger. Take for example, Al Gore. *See, e.g.*, Steven Milloy, *Al Gore's Inconvenient Electric Bill*, Fox News.com, Mar. 12, 2007, http://foxnews.com/story/0,2933,257958,00.html.

[89] Carol M. Rose, *What Federalism Tells Us About Takings Jurisprudence*, 54 UCLA L. Rev. 1681, 1688 (2007) [hereinafter Rose, *Federalism*].

[90] *See* Schragger, *supra* note 1, at 2546.

zoning, to benefit particular interests.[91] Though this reality would usually be perceived as a negative, the writing about the problem illustrates the personal interconnections of government leaders and members of the private sector at the local level.[92]

Judge Posner notes that social norms have waned in modern times because of the dispersal of people and their communities, but his observation recognizes the importance of the community to norm creation.[93] Every person has a community, and for most it is geographic in nature. In modern times, the need for local connection may be even stronger than in the past, as people seek face-to-face contact in an increasingly isolating world.[94]

Though not stated in the context of the importance of local community to social norms, Professor Rena Steinzor identified the power of local norms to influence the behavior of corporate actors when she noted the existence of particularly enlightened corporate leaders, who understood and implemented desired environmental outcomes.[95] This paradigmatic enlightened corporate chieftain is exactly the outcome we should seek by targeting social norms.

A stark example of the power of social norms to affect business culture can be seen in an examination of the *Big Five* energy companies.[96] Two, BP and Royal Dutch Shell, are based in Europe though they have significant operations and many employees in the United States, notably near Houston, Texas.[97] The other big three, ExxonMobil, Chevron, and ConocoPhillips, are based in the United States, with many decisionmakers based in Texas.[98] These companies are the very definition of large,

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[91] *See* Richard Briffault, *Our Localism: Part I—The Structure of Local Government Law*, 90 COLUM. L. REV. 1, 112 (1990).

[92] Rose, *Federalism*, *supra* note 89, at 1688.

[93] *See* POSNER, *supra* note 82, at 75–76.

[94] *See* Glenn Rifkin, *Making a Profit and a Difference*, N.Y. TIMES, Oct. 5, 2006, at C5.

[95] Steinzor, *supra* note 41, at 163.

[96] The *Big Five* are ExxonMobil, Royal Dutch Shell, BP, Chevron, and ConocoPhillips. Rice University, '*Big Five*' *Oil Companies Limit Exploration*, SCIENCEDAILY, Nov. 13, 2007, http://www.sciencedaily.com/releases/2007/11/071112140720.htm.

[97] *See* Shell, Shell in the U.S.: A Century of Innovation and Investment (Jan. 2007), http://www.shell.com/static/us-en/downloads/about_shell/about_us_brochure.pdf [hereinafter Shell in the U.S.]; About Shell, The History of Shell, 1980s to the New Century, http://www.shell.com/home/content/aboutshell-en/who_we_are/our_history/1980s_to_new_century/1980s_to_new_century_22112006.html (last visited May 1, 2008) [hereinafter Shell, 1980s]; BP Global, About BP, Where We Operate, http://www.bp.com (follow "About BP" hyperlink; then follow "Where we operate" hyperlink) (last visited May 1, 2008).

[98] *See* Chevron, Contact Us, http://www.chevron.com/contact (last visited May 1, 2008); ConocoPhillips, Who We Are, http://www.conocophillips.com/about/who_we_are/index.htm (last visited May 1, 2008); ExxonMobil, Business Headquarters, http://

multinational corporate players. They are valuable—ExxonMobil vies for the highest valued company by stock price in the world[99]—control enormous assets, operate globally, and their decisions have large effects on the environment. Nothing impacts environmental issues more than energy exploration, extraction, and utilization.

Moreover, for purposes of comparisons between them, these companies effectively deal with the same fungible product—petroleum products—and with many of the same players—national governments, small businesses, and a similar employee pool. The public face of these companies with respect to the issue of climate change, however, could not be more different. The European-based companies are famously known for embracing the science of climate change and the need to act on it,[100] whereas the American companies, particularly ExxonMobil, have fought regulation on climate change and even funded climate change skeptics.[101] Recent corporate reporting periods show that the European-based companies also spend more on renewable fuel research, with ExxonMobil and ConocoPhillips spending the least amount.[102]

These differences cannot be attributed to anticipated gains from publicity or anticipated regulation; otherwise, since these are large, multinational companies with similar economic inputs, their reactions should be remarkably similar. The only obvious difference between the companies is the culture of those who make policy decisions for them. The difference is so obvious that we sometimes neglect to explore it further. It is easy to say that BP and Shell are different because they are European, and Europe has a different view of energy and environmental issues.[103] But what is it about being based in Europe that would make them different if not for different cultural and social norms? Remember, most of their employees are in the United States, and many are in Texas, where ExxonMobil is headquartered.[104] What

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www.exxonmobil.com/Siteflow/SuppInfo/Contacts/SF_CT_BusHeadquarters.asp (last visited May 1, 2008).

[99] *See* Danielle Sessa, *Exxon Passes GE to Become World's Biggest Company*, BLOOMBERG.COM, Feb. 18, 2005, http://www.bloomberg.com/apps/news?pid=10000103&sid=aFHCp9i0LE9U.

[100] Salzman et al., *supra* note 68, at 260 n.23; Livio Press Ad, *supra* note 73.

[101] Heather Timmons, *British Science Group Says Exxon Misrepresents Climate Issues*, N.Y. TIMES, Sept. 21, 2006, at C2.

[102] Daniel J. Weiss & Anne Wingate, *Money Guzzlers: Big Oil Prepares to Announce Profits*, CENTER FOR AM. PROGRESS, July 23, 2007, http://www.americanprogress.org/issues/2007/07/money_guzzlers.html.

[103] William Underhill, *When Is Big Too Big?*, NEWSWEEK INT'L, Dec. 18, 2006, at 32.

[104] *See* Shell in the U.S., *supra* note 97; Shell, 1980s, *supra* note 97; BP Global, *supra* note 97; ExxonMobil, *supra* note 98.

is different is the location of their Chief Executive Officers and those that have the authority to make decisions.

Lest we think this geographic disparity is associated only with national cultures, we can see similar differences within the United States as well. When Kohlberg Kravis Roberts & Co., the private equity firm, sought to execute the largest private buyout in history of TXU Energy, the different environmental philosophies between New York City and Texas—specifically the control of greenhouse gases (GHGs) in power plant construction—became the main issue in the deal.[105]

These examples suggest that changing the opinions of a few individuals could drastically change environmental outcomes around the world. Some use this theory to justify the importance of zoos and aquariums to educate those in charge of environmental outcomes.[106] This theory has motivated Ceres, a coalition of environmentalists and investors, to seek to educate corporate directors about the science of climate change and its peril.[107] Ceres tries to inculcate its values in the corporate executives.[108] The discussion in this Article suggests that the power of local norms should be even stronger than mere education.

Of course, not all localities are created equal with respect to how much influence they can have over the private sector's effect on the environment. The decisionmakers of the most powerful companies in the world, those that influence environmental effects, may live in diverse places, but not in every city in the world. In fact, some types of private sector activities may be very concentrated in particular places. We think of *high tech* as associated with Silicon Valley, Seattle, and a few other locations in this country—such as *Silicon Alley* in New York, Route 128 in Boston, and Austin, Texas. Large financial organizations may have high concentrations in New York City, London, and Tokyo, and secondarily in another tier of cities. People often associate insurance with London, and energy with Houston. But, noting the diffuse nature of environmental harms, it may be that efforts in many places,

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[105] *See* Posting of Victor Flatt to University of Houston Law Center Faculty Blog, Saving the Environment One Transaction at a Time, http://www.uhlawblog.com (Apr. 2, 2007); *see also TXU Agrees to Go Private*, PLATTS.COM, Feb. 26, 2007, http://www.topplants.platts.com/Electric%20Power/Resources/News%20Features/txu/index.xml (noting the details of the deal).

[106] *See* Shaila Dewan, *Can Man Improve on Nature's Fishbowl?*, N.Y. TIMES, Apr. 8, 2007, § 4, at 12.

[107] Claudia H. Deutsch, *Global Warming Subject for Directors at Big Companies*, N.Y. TIMES, Sept. 21, 2006, at C2.

[108] *See id.*

on many companies large and small, may be useful and feasible, if the basic premise of interconnection is correct.

V. How Does Affecting Social Norms Work?

How do local governments affect these social norms, and is the process replicable? I believe that connected, charismatic leaders are necessary for local government to affect environmental social norms, which in turn affect the environment itself. Charisma may not be replicable, but connection can be created.

The importance of the charisma and popularity of a leader cannot be overstated. The efforts of a city leader percolate through the community, particularly the business and regulatory community. When the cause is personal as well as political, the reach is even more extensive. A city's charismatic mayor or city councilmembers may be the personal actors with whom many business leaders have social and commercial contacts. They are the equivalent of the priest in the medieval cathedral. They do not directly control all capital or assets, but their influence reaches those who do. Thus, reaching these charismatic leaders can affect the most critical social norms of a community.

Former Mayor Rudy Giuliani claims to have altered New York City society by his powerful vision of what should be in terms of crime and livability. With respect to the environment, Mayor Bill White of Houston has made controlling air toxics a high priority, with pleas to polluters and citizens alike.[109] Although the problem goes on, Mayor White's involvement has changed the dynamic of the debate.[110]

Of course, this shift depends on a leader who is popular and influential with the people in the private sector who have the ability to affect change. These prior connections and trusting relationships are not directly reproducible. It appears, however, that good, old-fashioned engagement and community building can bridge the norm gap from a leader to the community that needs to change. London is a valuable example with respect to climate change.

By 2000, climate change had risen to the top of the agenda of both Prime Minister Tony Blair and, even more vociferously, the Lord Mayor of Greater London, Ken Livingstone.[111] Mayor Livingstone, a socialist

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[109] Bill White, Mayor of Houston, 2005 State of the City Speech, http://billwhitefor houston.com/000011.html (last visited May 1, 2008).

[110] *See* Posting of Carolyn Feibel to NewsWatch: City Hall, http://blogs.chron.com/cityhall/archives/2007/11 (Nov. 27, 2007, 17:01 CST).

[111] *See* John Vidal, *Plane Speaking*, Guardian, Nov. 1, 2006, at P2, *available at* http://www.guardian.co.uk/environment/2006/nov/01/travelsenvironmentalimpact.loca

not particularly known for his friendship with the private sector, decided to take an engagement approach with the private sector anyway.[112] In 2001, the City of London, working with other public and private entities, created the London Climate Change Partnership (LCCP or Partnership).[113] The goal was to help the City of London, its environs, and the United Kingdom cope with the effects of climate change as well as reduce the production of GHGs.[114] The Partnership has produced many papers and publicity on ways for the private sector to help with adaptation to and mitigation of climate change in the London area.[115] According to an LCCP spokesperson, initially the Partnership offered incentives to companies, such as energy-efficient materials and sources, to get them involved in discussions about climate change; over time, many of the representatives of these companies were inculcated to the importance of the issue and became some of its standard bearers.[116] They, in turn, went back to their companies and convinced many of the companies' personnel to change the methods to both adapt to the changing climate and reduce their own contributions.[117]

Particular attention has been paid to the financial services sector in London, which, due to its preeminence in financial services worldwide, provides a way to affect actions worldwide.[118] Lloyd's of London, for example, has given advice to its global market to include climate change in capital modeling.[119] Publications from the LCCP, based on recommendations of its business partners, now encourage all companies with substantial assets under their control to manage them to reduce the impacts of climate change.[120]

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lgovernment; Reuters, *Kyoto Greenhouse Gas Goals Face Tough Test in Hague*, CNN.com, Nov. 9, 2000, http://archives.cnn.com/2000/NATURE/11/09/hague.preview.reut/index.html.

[112] *See* Mayor of London, London Climate Change Partnership, http://www.london.gov.uk/climatechangepartnership (last visited May 1, 2008).

[113] *See id.*; Mayor of London, London Climate Change Partnership, London's Warming: The Impacts of Climate Change on London, http://www.london.gov.uk/climatechangepartnership/impacts.jsp (last visited May 1, 2008).

[114] *See* Mayor of London, London Climate Change Partnership, Aims, http://www.london.gov.uk/climatechangepartnership/aims.jsp (last visited May 1, 2008).

[115] *See* Mayor of London, London Climate Change Partnership, Consultation Responses, http://www.london.gov.uk/climatechangepartnership/con_res.jsp (last visited May 1, 2008).

[116] London Vice-Mayor, Presentation to the London Climate Change P'ship (Apr. 12, 2006) (contemporaneous notes by author, on file with author).

[117] *Id.*

[118] *See* Finance Sub-Group, London Climate Change P'ship, Mayor of London, Adapting to Climate Change: Business As Usual? 12–13 (2006), *available at* http://www.london.gov.uk/climatechangepartnership/docs/business-as-usual.pdf.

[119] *See id.* at 14.

[120] *See id.*

The Partnership also established the London Climate Change Agency, which formally involved large businesses such as BP, and advanced the cultural acceptance of the notion that to maintain your reputation among your peers, you had to work to reduce the effect of climate change.[121] Because of London's size and centrality to finance, insurance, and energy, the Partnership's activities have had enormous impact on reducing GHG production in only a few years. The United Kingdom, and London in particular, have been leaders in highlighting the importance of reducing GHGs, and many British companies, such as Virgin Airways, continue to be the ones that introduce innovative programs for GHG reductions, which can be adopted by other industries and countries.[122]

VI. Generalizable Lessons

The LCCP example provides a good primer on harnessing the influence of locality and culture to effectuate specific change. The necessary ingredients include a strong local leader who is willing to both take a stand on the importance of an environmental position and get other powers in the community to agree.

The leader need not be from the private sector directly, though this may help the process. In many U.S. urban areas, the political power base may be separate from the business base. Some of this separation may be related to how political leaders arise, especially in Democratic strongholds—i.e., from grassroots or educational organizations—or the Democratic tilt of localities—due to higher percentages of reliable Democratic voters—coupled with the perceived antipathy of the Democratic Party to businesses. Those urban mayors that have aggressively courted business interests, however, can win their trust, as Ken Livingstone did, in order to start a dialogue.[123]

The next step is for that leader to provide an incentive for the private sector to get involved with the issue. In London and in many U.S. localities, the answer has been energy efficiency, which promises inde-

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[121] Press Release, BP, BP Backs London Climate Change Initiative (June 28, 2005), *available at* http://www.bp.com/genericarticle.do?categoryId=97&contentId=7006960.

[122] *See* Jay Boehmer, *Virgin Leading Effort to Reduce CO2 Emissions*, Bus. Travel News Online, Oct. 9, 2006, http://www.btnmag.com/businesstravelnews/headlines/frontpage_display.jsp?vnu_content_id=1003221668.

[123] *See, e.g.*, Aaron Lazenby, *Mile-High E-Government*, Profit Online, Aug. 2006, http://www.oracle.com/profit/features/p36denver.html.

pendent economic gain.[124] Due to the lack of national leadership on this issue in the United States, many private sector participants would probably like to have a centralized location that can provide information and incentives to reduce energy bills: cities could fill this role. Another economic incentive that can be used by a city is the promise of examining issues that are important to business because of secondary economic impacts, such as zoning strategies, public improvements, or traffic and parking policies. Each of these issues also has a natural connection to environmental concerns.

Once the private sector becomes involved, the social norm creation of this rarefied group begins. There is a chance to educate group members about important issues, such as climate change, which is itself an incentive. For instance, what should every business know about predicted changes due to climate change—such as higher insurance rates—in order to save money on future investments, and what can these businesses do together with that knowledge?

Though considered a dirty word, it is at this point that one may begin to *co-opt* the private sector parties into understanding why it is important to *do the right thing*, and why they will feel a personal reputational incentive to do so. They in turn will further *spread the gospel* to their colleagues, leading to changes in business management and decisionmaking. This result is, of course, the supposed arc of any type of advertising, and in this instance is a more direct and powerful means of connecting a person's decisions to peer judgments about how those decisions are made.

While this strategy might not work to convince the whole world of any particular position—after all, if there were such a magic formula, it would already be used in politics—it is particularly adapted to situations in which many of the problems in behavior actually lie in the lack of knowledge about an issue: a central problem in the environmental context. While you might not be able to convince all businesses to support a repeal of the Second Amendment by showing them examples of people being shot, it might be possible to convince them that climate change is occurring and is affecting their world and the world of others.

Creating a targeted social norm in the private sector that has control over environmental effects will of course supplement, and be supplemented by, a change in social norms in the general community. Here, the impact of community social norms is so obvious that we usu-

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[124] *See, e.g.*, State of New Jersey, Global Warming, What Is NJ Doing About Climate Change, http://nj.gov/globalwarming/initiatives (last visited May 1, 2008).

ally do not think about it. Berkeley and Boulder are *green, liberal* cities. Atlanta and Houston are *pro-business.* These labels have power, and also point out how local social norm creation can vary and may be more effective if tailored at the local level. Different approaches can lead to similar, positive outcomes—the benefit and province of local control. Seattle and Houston provide examples related to climate change.

Seattle and Houston have both become involved with climate change issues recently, as have many cities in the country; but, their differing approaches illustrate how locally tailored social norm creation is more effective than a national approach. In Seattle, the approach is centered around the idea of doing what is right, and controlling bad corporate behavior.[125] The centerpiece was the mayor's letter, which Mayor Greg Nickels created to encourage cities to pledge to reduce climate change actions.[126] The program has since expanded to engagement with the private sector and a Seattle Climate Action Plan.[127] The Seattle mayor traded on the culture of the city by connecting the city's tradition of environmentalism to climate change.[128] He also showed a willingness to engage with the business community.[129]

The mayor of the City of Houston has not signed Mayor Nickels' letter.[130] However, the Houston mayor has asked city personnel to inventory GHGs in the city and has supported assisting businesses with reducing climate change impacts through energy efficiency.[131] He proposed that the city begin purchasing large amounts of wind power and gave as a public reason that it was cheaper and more reliable, i.e., better for business, while secondarily touting its benefits to the environment.[132] Moreover, as the leader of the city at the center of the worldwide energy industry, he has directed the city to become a member of

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[125] *See* Seattle Climate Action Plan Homepage, http://www.seattle.gov/climate (last visited May 1, 2008).

[126] *See* Letter from Greg Nickels, Mayor of Seattle, to U.S. mayors (Mar. 30, 2005), *available at* http://www.seattle.gov/mayor/climate/pdf/uscm_6-page_climate_mailing_all.pdf; Seattle Mayor Nickels, US Mayors Climate Protection Agreement, http://www.seattle.gov/mayor/climate/default.htm#cities (last visited May 1, 2008).

[127] Seattle.gov, Office of Sustainability and Environment, Climate Protection, http://www.seattle.gov/environment/climate_protection.htm (last visited May 1, 2008).

[128] *See id.*

[129] *See id.*

[130] *See* Mayors Climate Protection Center, US Conference of Mayors, Cities That Have Signed On, http://usmayors.org/climateprotection/cities.asp?state=tx (last visited May 1, 2008).

[131] City of Houston, What We Do, Climate Change, http://www.houstontx.gov/environment/whatwedo.html#cc1 (last visited May 1, 2008).

[132] *See* Matt Stiles, *Wind Behind City's New Power Plan*, Houston Chron., July 13, 2007, at A1.

the International Council of Local Environmental Initiatives (ICLEI) and has met with Mayor Livingstone of London to discuss climate change initiatives.[133] The Houston mayor took his city's pro-business reputation and connected it to climate change.[134]

Both mayors are active on the issue, but their actions are shaped by their community. In Seattle, the mayor appeals to the local norm of environmentalism, while in Houston, the mayor appeals to the business advantages of controlling GHGs.[135] Both were strategies of the City of London, and both seem to be effective.[136]

Conclusion

The use of persuasion and personal connections to influence the behavior of those who make important decisions in the private sector may seem too fuzzy to make much sense as an environmental policy strategy. From a distance, such ideas can seem part bullying, part debate, part social pressure, part Stockholm Syndrome, and part voodoo. Indeed, the power of social norms in general as a form of policy implementation was not seriously examined until the 1990s, probably because the very nature of social impacts was antithetical to traditional legal doctrine. *Targeted, local social norms* may seem even more disconnected from law. There seems to be an uncomfortable focus on class, money, and connections. We have not typically thought of this tactic as a way to effectuate policy. But, as noted in this Article, the need to actually influence the private sector to protect the environment when they are not forced to do so is an important one. The process of creating such influence is not all foreign. Much of the process relies on education, which has always been part of the environmental movement. Moreover, the power of social norms to influence human behavior is well documented. I hope this Article spurs discussion on influencing social norms as a viable strategy and, through the example of London, shows that it is a strategy that can be broken down into pieces and replicated. It may not work everywhere, but if it works in just a few key cities and places, the difference to the environment could be profound.

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[133] *See* Press Release, City of Houston, Mayor Bill White Announces City Membership in Group to Help Cut Greenhouse Gases (June 30, 2006), *available at* http://www.houstontx.gov/mayor/press/20060630a.html; State of London Debate (May 12, 2007) (on file with author); Large Cities Climate Summit, Who's Coming, http://www.nycclimatesummit.com/who.html (last visited May 1, 2008).

[134] *See* Stiles, *supra* note 132, at A1.

[135] *See id.*

[136] *See supra* notes 117–126 and accompanying text.

EFFECTIVENESS OF GOVERNMENT INTERVENTIONS AT INDUCING BETTER ENVIRONMENTAL PERFORMANCE: DOES EFFECTIVENESS DEPEND ON FACILITY OR FIRM FEATURES?

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Abstract: Environmental agencies have several options for dealing with alleged noncompliance with environmental regulations. These options include pursuit of administrative or judicial civil penalties and injunctions to prevent future violations. Scholars have begun exploring whether these options induce better performance by regulated entities. This Article addresses a largely neglected question: whether a regulated facility's characteristics affect the efficacy of the different enforcement options. The Article stems from a study of compliance by the chemical industry with federal Clean Water Act permits. It assesses whether facility characteristics, including effluent limit level and type, permit modifications, facility size, capacity utilization, discharge volatility, and ownership structure, theoretically should make a difference and actually appeared to do so at the facilities covered by the study. The findings should be of interest to both facilities regulated under the Clean Water Act and federal and state regulators seeking to maximize the impact of their enforcement actions.

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Introduction

In October 2007, the U.S. Senate approved by unanimous consent a "sense of the Senate" resolution commemorating the thirty-fifth anniversary of the adoption of the federal Clean Water Act (CWA).[1] The resolution noted the tremendous value and importance of clean water to the United States; the substantial improvements in water quality that have resulted from a partnership among government, the private sector, and the public; the "resounding public support for the continued protection" of the nation's surface water bodies; the link between maintenance and improvement of water quality and protection of the public health and wildlife; and the availability of abundant opportunities for public recreation and economic development.[2] The resolution sounded a cautionary note, indicating that "water pollution problems persist throughout the United States, and significant challenges lie ahead in the effort to protect and restore the water resources of the United States."[3] It also enumerated the portions of the nation's surface waters that remain impaired.[4] Nevertheless, the Senate invited all citizens and all levels of government to "celebrate the accomplishments of the United States" and "recommit to achieving" the statutory goals of restoration and maintenance of "the chemical, physical, and biological integrity of the waters of the United States."[5]

Amidst all the mirth and revelry, there was one notable omission: the resolution made no reference to either compliance with or enforcement of the provisions of the CWA.[6] The omission is troublesome because recent reports reveal that noncompliance rates with the CWA are disturbingly high. According to a report by the U.S. Public Interest Research Group (PIRG) Information Fund issued in the same month in which the Senate adopted its laudatory CWA resolution, more than 3600 major facilities—fifty-seven percent of the total number of such regulated facilities—exceeded their CWA permits at least

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[1] S. Res. 354, 110th Cong. (2007). The CWA is the current name of the statute adopted in 1972 called the Federal Water Pollution Control Act Amendments. Clean Water Act of 1977, 33 U.S.C. §§ 1251–1387 (2000 & Supp. 2005) (originally enacted as Federal Water Pollution Control Act Amendments of 1972, Pub. L. No. 92-500, 86 Stat. 816).

[2] S. Res. 354, 110th Cong. (2007).

[3] *Id.*

[4] *Id.*

[5] *Id.*; *see also* 33 U.S.C. § 1251(a).

[6] S. Res. 354, 110th Cong. (2007). Three days before adoption of the Senate resolution, the House passed a similar resolution. H.R. Res. 725, 110th Cong. (2007). It too omitted any reference to compliance or enforcement. *Id.*

once during calendar year 2005.[7] More than 600 facilities exceeded their permit limits for at least half of the monthly reporting periods during 2005, and, on average, the facilities reporting violations discharged more than four times the amounts allowed by their permits.[8] Despite the frequency with which CWA permit violations occurred, the total budget of the U.S. Environmental Protection Agency (EPA) fell by 13%, adjusted for inflation, between 1997 and 2006.[9] During the same period, EPA's enforcement funding fell by 5%.[10] Enforcement funds for the Agency's regional offices, which carry most of the enforcement load under the CWA, fell by 8%.[11] The result of these funding cuts was a decline in regional enforcement staffing of about 5%.[12] Further, EPA grants to the states to implement and enforce environmental programs generally fell by 9% between 1997 and 2006, and by 22% between fiscal years 2004 and 2006.[13]

The compliance figures provided by the PIRG report for 2005 do not appear to be anomalous. According to EPA, for example, more than half of all major facilities violated their CWA permits during fiscal year 1998 and more than twenty percent of these dischargers were in significant noncompliance.[14] A 2001 report issued by EPA's Office of Inspector General revealed compliance rates for major dischargers of less than seventy-five percent in twenty states in fiscal year 2000 and more than one-third of the states reported that more than half of the

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[7] Christy Leavitt, U.S. PIRG Educ. Fund, Troubled Waters: An Analysis of 2005 Clean Water Act Compliance 1 (2007), *available at* http://www.uspirg.org/html/troubledwaters07/troubled_waters07.pdf. The 3600 facilities reported more than 24,400 exceedances of their CWA permit limits during 2005. *Id.*; *see infra* note 57 and accompanying text (defining major facilities).

[8] Leavitt, *supra* note 7, at 2. Eighty-one facilities reported violations for every monthly reporting period in 2005. *Id.*

[9] *Id.* at 15.

[10] *Id.*

[11] *Id.*

[12] *Id.*

[13] *Id.* (citing U.S. Gov't Accountability Office, GAO-07-883, EPA-State Enforcement Partnership Has Improved, but EPA's Oversight Needs Further Enhancement 15 (2007)).

[14] For purposes of the CWA, EPA defines significant noncompliance (SNC) with respect to conventional pollutants, such as total suspended solids, as "exceeding an average monthly limit by 40% in any two months of a six-month period." Clifford Rechtschaffen, *Enforcing the Clean Water Act in the Twenty-First Century: Harnessing the Power of the Public Spotlight*, 55 Ala. L. Rev. 775, 781–82 (2004) (citing U.S. Gen. Accounting Office, Water Pollution: Many Violations Have not Received Appropriate Enforcement Attention 3 (1996)).

major facilities with significant violations in fiscal year 1999 had recurring violations in 2000.[15]

As one attorney involved in environmental enforcement matters has stated, "Although an appropriate metric for measuring the effectiveness of enforcement is elusive, low compliance rates are indicative of ineffective enforcement."[16] Moreover, "[R]egulatory law and compliance are so systematically intertwined that neither can be understood without understanding both. This is surely the case with environmental protection law."[17] If Congress, EPA, the states, and the American public are indeed as concerned about *recommitting* to the achievement of the CWA's goals as the October 2007 Senate resolution indicates, they should be analyzing ways to make the government's environmental enforcement activities more effective than they seem to have been in recent years.

This Article is designed to provide information that may enable the federal and state agencies involved in enforcement of environmental requirements—particularly requirements derived from the CWA—to make their enforcement activities more effective at improving environmental performance by regulated entities. Environmental agencies at both the federal and state levels have a variety of options when faced with alleged noncompliance with environmental statutes, regulations, and permits. These options, which we refer to as government interventions, or simply interventions, include inspections of regulated facilities, actions to impose administrative or judicial civil penalties for past violations, efforts to enjoin ongoing violations, and the approval of supplemental environmental projects. Scholars have begun to explore whether some of these enforcement options are more effective at inducing better environmental performance by regulated entities than others.[18] They have also assessed whether a traditional deterrence-based approach to enforcement or an approach based on co-

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[15] Richard Webster, *Federal Environmental Enforcement: Is Less More?*, 18 Fordham Envtl. L. Rev. 303, 314 (2007) (citing Office of Inspector Gen., EPA, Rep. No. 2001-P-00013, Water Enforcement: State Enforcement of Clean Water Act Dischargers Can Be More Effective 55, 57 (2001)).

[16] *Id.*

[17] Peter Cleary Yeager, *Industrial Water Pollution*, 18 Crime & Just. 97, 99 (1993) [hereinafter Yeager, *Water Pollution*].

[18] *See generally* Robert L. Glicksman & Dietrich H. Earnhart, *The Comparative Effectiveness of Government Interventions on Environmental Performance in the Chemical Industry*, 26 Stan. Envtl. L.J. 317 (2007) (providing examples of methods of government intervention and discussing their effectiveness).

operation and the provision of compliance assistance is more likely to result in greater improvements in environmental performance.[19]

One question that has by and large been neglected to date is whether the features of a regulated facility are likely to affect the efficacy of government interventions, such as inspections, civil penalty proceedings, or actions for injunctive relief, in improving environmental performance. This Article addresses that question by examining a study of compliance with CWA permits by major facilities in the chemical industry. It assesses whether the following factors should make a difference in the effectiveness of interventions as a theoretical matter: (1) facility features relating to the regulatory program, such as the effluent limit level; (2) facility characteristics related to the production process of the facility being regulated, such as facility size, as measured by flow capacity; and (3) firm ownership structure. The Article also evaluates whether those factors appear to have made a difference at the facilities covered by the study. The findings should be of interest not only to facilities regulated under the CWA, but also to federal and state regulators seeking to maximize the impact of their enforcement actions, improve compliance rates, and minimize the adverse effects of regulatory violations on the environment.

Part I of the Article describes the insights provided by previous theoretical and empirical studies on the influence of either facility or firm features on the effectiveness of the government interventions we explore. For each of the facility and firm features we analyze, we rely on these previous studies to explain the anticipated effects of each feature on environmental performance following an intervention. Part II describes our sample selection and data collection techniques. In Part III, we explain our statistical analysis and interpret the results of our study of environmental performance by facilities in the chemical industry. As part of this interpretation, we determine whether these results conform to, or deviate from, the expectations we generate in Part I of the Article.

Our empirical results provide only weak or mixed support for the identified expectations. For example, larger facilities are expected to be more responsive to actual or threatened government interventions, yet only one of the eight empirical results supports this expectation. As an-

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[19] *See* Clifford Rechtschaffen & David L. Markell, Reinventing Environmental Enforcement and the State/Federal Relationship 60–61 (2003). *See generally* Robert L. Glicksman & Dietrich H. Earnhart, *Depiction of the Regulator-Regulated Entity Relationship in the Chemical Industry: Deterrence-Based vs. Cooperative Enforcement*, 31 Wm. & Mary Envtl. L. & Pol'y Rev. 603 (2007) (comparing deterrence-based governmental intervention with a cooperative approach).

other example, higher effluent limit levels—in other words, less stringent limits—are expected to improve the effectiveness of government interventions. Yet, only one of the eight empirical results is consistent with this expectation, while five of the eight results are inconsistent with it. As the final example, greater discharge volatility is expected to improve the effectiveness of government interventions. Only two of the eight empirical results, however, support this expectation, while four of the eight results run directly counter to it. We suggest that further empirical studies be conducted to determine whether facility and firm features, including but not limited to the ones analyzed in this Article, influence the effectiveness of government interventions on environmental performance.

I. Insights from Previous Studies: Expectations About the Influence of Facility/Firm Features on the Effectiveness of Government Interventions

We assess the influence of three categories of facility features on the effectiveness of government interventions at inducing better environmental performance. The first category includes three features that relate to the nature of the regulatory program: limit level, limit type, and permit modification. We also assess the influence of three features that are inherent to a regulated facility's production process: flow capacity, which serves as a proxy for facility size; the flow-to-flow capacity ratio, which serves as a proxy for capacity utilization; and discharge volatility. Finally, we assess the influence of one facility feature that is more accurately described as a firm characteristic: ownership structure.

In this Part, we summarize previous studies that bear on the relevance of these seven facility features for capturing the full effect of government interventions on environmental performance, measured in our study by the amounts actually discharged divided by the amount of discharge authorized by an applicable permit. For each of the seven features, we develop a set of expectations—or, in some cases, a set of alternative expectations—as to how the effectiveness of government interventions should be affected by the presence or greater magnitude of these features. In Part III, we compare these expectations to the performance of facilities in the chemical industry during the period of our study to determine whether they conform to, or deviate from, the expectations.

A. *Facility Features Related to the Regulatory Program*

1. Limit Level

The first facility feature we assess is the stringency of the effluent limit to which a particular facility is subject. The question addressed is whether a facility subject to an effluent limit under the CWA is likely to be more or less responsive to an intervention than a similarly situated facility with a less stringent limit. We found no previous studies that assessed the relationship between limit level and responsiveness to government interventions. Previous studies have addressed a related question: the relationship between limit level and environmental performance. One study summarized literature postulating that under higher levels of regulation, facilities were less likely to perceive economic incentives to engage in the development of environmentally innovative technology.[20] Another study focusing on the behavior of regulatory agencies, rather than the performance of regulated entities, inquired whether systematic biases operated in regulatory law enforcement. The study found that permit stringency under the CWA affected the frequency of violations. In particular, "[W]here the legal requirements [were] most substantial, violations [were] more common."[21] Neither of these studies, however, sought to assess whether regulatory stringency affected the degree to which a regulated entity responded to government interventions.

Although neither of these two studies addresses the precise question at issue in our study, their findings are consistent with the supposition that it is more difficult for facilities subject to stringent limits to improve their performance than it is for facilities subject to less stringent limits. The costs of reducing discharges to the levels needed to comply with stringent limits may be higher, for example, than the costs of making reductions needed to comply with more lenient limits. Similarly, a facility operating with pollution-control technology that is capable of achieving compliance with stringent effluent limits may find it more difficult to improve its performance in response to an interven-

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[20] Mark Sharfman, Regulation and Sustainable Development: The Management of Environmentally Conscious Technological Innovation Under Alternative Market Conditions (June 4, 2001), *in* BEYOND COMPLIANCE: WHAT MOTIVATES ENVIRONMENTAL BEHAVIOR? 1–2 (Sylvan Envtl. Consultants ed., 2001), *available at* http://es.epa.gov/ncer/publications/workshop/bynd_com_sess2.pdf (editor's summary of presentation).

[21] Peter C. Yeager, *Structural Bias in Regulatory Law Enforcement: The Case of the U.S. Environmental Protection Agency*, 34 SOC. PROBS. 330 (1987) [hereinafter Yeager, *Regulatory Law Enforcement*].

tion following noncompliance than a facility operating with similar technology but subject to a higher and more easily achieved limit. These considerations induce us to test the proposition that the tougher a facility's limit is, the harder the regulated source is already being pushed, and thus, the harder it will be for the facility to reduce discharge levels in response to an intervention.

2. Effluent Limit Type

The second feature related to the regulatory program we seek to assess is the type of limit to which a regulated facility is subject. Some limits are initial or interim. These interim limits represent weigh stations on the road to the imposition of a final effluent limit. Under other federal regulatory programs, interim limits are typically less stringent than final limits. Under the Resource Conservation and Recovery Act, for example, some facilities for the treatment, storage, and disposal of hazardous waste that qualified for interim status were allowed to comply for a limited time with a set of waste management standards that were less stringent than the standards that went into effect after the expiration of interim status.[22] Under the CWA, facilities are sometimes required to comply with interim limits while they are undergoing treatment technology upgrades.[23] In our study, however, we controlled for the level of the limit. Our interest is in determining whether the label placed on the limit, interim versus final, is itself a significant factor in the nature of a facility's performance following an intervention.

One previous study found that publicly owned treatment plants subject to final limits under the CWA outperformed those subject only to an interim limit.[24] That study concluded that regulators could improve performance by avoiding the issuance of interim limits.[25] That aspect of the study, however, did not involve an effort to assess the impact of interventions on facilities with different features. We did not locate other studies with findings relevant to the question of whether

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[22] *See* Adam Babich, *Too Much Science in Environmental Law*, 28 COLUM. J. ENVTL. L. 119, 163 (2003) ("'[I]nterim status' facilities operate pursuant to generic regulations, which are lax in contrast to the detailed and stringent permits that apply to non-grandfathered operations.").

[23] *See, e.g.*, Notice of Lodging of Consent Decree Under the Clean Water Act, 69 Fed. Reg. 68,979, 68,979 (Nov. 26, 2004); *see also* 40 C.F.R. § 131.41(f)(7) (2007).

[24] Dietrich Earnhart, *Regulatory Factors Shaping Environmental Performance at Publicly-Owned Treatment Plants*, 48 J. ENVTL. ECON. & MGMT. 655, 676 (2004).

[25] *Id.*

interventions affect performance differently at facilities subject to interim and final limits.

Because an interim limit does not represent the long-term, final regulatory obligation with which a regulated facility must comply, regulated sources may not take interim limits as seriously as final limits. If facilities do not, they are not likely to react as seriously to interventions directed at interim limits as they would to interventions directed at final limits. If interim limits are not taken as seriously, performance improvements should be relatively greater after interventions directed at noncompliance with final limits than after interventions directed at noncompliance with interim limits. Our study seeks to determine whether the performance of facilities in the chemical industry in response to deterrence from government interventions is consistent with this explanation of likely facility performance.

3. Permit Modification

The third facility feature that relates to the regulatory program is the presence or absence of a permit modification. Regulators may be willing to modify a facility's permit following a determination that the facility has not complied with the obligations reflected in the permit in lieu of imposing sanctions at that time. We are interested in determining whether the fact that a facility's permit has been modified is likely to affect the responsiveness to interventions.[26] We regard the presence or absence of a permit modification to be a proxy for the degree of cooperation between regulators and regulated facilities.[27]

Once again, we found few previous studies that are relevant to this question. Previous research supports the notion that a facility's reputation with its environmental regulator may affect the regulator's willingness to be flexible in crafting and enforcing permits.[28] Facilities that have built up *reputational capital* with the regulator may be treated more

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[26] Once again, we controlled for the limit level in testing for the influence of permit modifications on the effectiveness of interventions at inducing better performance so that our results are independent of limit level; only the context in which the interventions take place or are threatened is different, that is, either a facility's permit has been modified or it has not.

[27] The proxy is less than perfect because we cannot tell from the data the nature of a particular permit modification, for example, whether it reflects a significant or insignificant modification and whether it was unilaterally imposed by the regulator or the product of negotiations between the regulator and the regulated facility.

[28] Robert A. Kagan et al., *Explaining Corporate Environmental Performance: How Does Regulation Matter?*, 37 Law & Soc'y Rev. 51, 74–75 (2003).

leniently or flexibly than those that have not.[29] Another study found that plants regulated under the federal Clean Air Act (CAA) that had fewer instances of noncompliance received permits from regulators more quickly than did plants with more instances of noncompliance.[30]

One nonempirical, theoretical study is more directly on point, and it supports the analysis in the preceding paragraph. One of the norms described in Professor Michael Vandenburgh's study of social norms in environmental compliance is the norm of reciprocity.[31] Vandenburgh defines this norm as expressing the idea that "[a]n individual should give benefits to those who have given her benefits."[32] He provides one example of the manner in which this norm may operate in the context of environmental compliance, suggesting that the provision of compliance assistance by a regulator "may trigger a sense of obligation to reciprocate by the managers of the regulated entity."[33] The reciprocity

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[29] *Id.*

[30] Christopher S. Decker, *Corporate Environmentalism and Environmental Statutory Permitting*, 46 J.L. & Econ. 103, 106, 126 (2003). Both of these studies deal with the manner in which compliance or noncompliance affects the behavior of regulators. Our concern, however, is the manner in which facility features affect the responsiveness of regulated facilities to interventions. Nevertheless, the anticipated behavior of regulators may impact the manner in which regulated facilities respond to interventions. If a facility believes that it is likely to be treated more harshly by regulators if it has already squandered its reputational capital as a result of past noncompliance, it may be more committed to improving its performance following an intervention directed at a modified permit than if the intervention had not followed a modification triggered by a previous violation.

EPA guidance documents on enforcement of the CWA may reinforce the motivation of regulated entities to avoid antagonizing regulators. EPA determines the size of the civil penalties it assesses against regulated facilities found to be in noncompliance with their regulatory obligations by calculating the amount necessary to recover from the violator all of the economic benefits of noncompliance. *See, e.g.*, Calculation of the Economic Benefit of Noncompliance in EPA's Civil Penalty Enforcement Cases, 70 Fed. Reg. 50,326, 50,326 (Aug. 26, 2005). It then adds to that amount a gravity factor that can either mitigate or enhance the amount of the penalty. *See* EPA, Interim Clean Water Act Settlement Penalty Policy 12–13 (1995), *available at* http://www.epa.gov/Compliance/resources/policies/civil/cwa/cwapol.pdf [hereinafter Interim CWA Settlement Penalty Policy]. EPA has indicated that it will increase the gravity factor based on lack of cooperation; bad faith; unjustified delay in preventing, remedying, or mitigating the violation; or past noncompliance. *Id.* at 12. Conversely, EPA will reduce the gravity factor based on cooperation by regulated facilities, such as negotiations leading to quick settlement. *Id.* at 13. Regulated facilities may be highly motivated to avoid noncompliance with a modified permit if the modification resulted from an instance of past noncompliance because they may fear that another violation will trigger an enhanced gravity factor in the calculation of administrative civil penalties. *See id.* at 12–13.

[31] Michael P. Vandenburgh, *Beyond Elegance: A Testable Typology of Social Norms in Corporate Environmental Compliance*, 22 Stan. Envtl. L.J. 55, 108–12 (2003).

[32] *Id.* at 108.

[33] *Id.* at 109.

norm thus suggests that if a regulator has already afforded slack to a regulated facility by modifying its permit, the facility's managers may believe that it is important for the facility to provide a quid pro quo in the form of future improvements in environmental performance to maintain a good working relationship with the regulator. Put in slightly different terms, a facility with a permit that has been modified may feel that it has used up its storehouse of goodwill with regulators and that regulators will not respond favorably to future noncompliance. As a result, a facility with a modified permit may be more committed to improving performance in response to interventions, or their threat, than a facility with an unmodified permit.

It is possible, however, that a permit modification may send quite a different signal to the managers of regulated facilities. If the response of the regulator to a facility's past noncompliance has been to modify its permit to make it more lenient, the facility's managers may conclude that all regulatory obligations are open to negotiation and that none should be taken too seriously. As a result, interventions do not warrant much concern because, should the modified permit be violated, the facility is likely to be able to persuade the regulator to modify the permit again, with a still more lenient effluent limit. Therefore, facilities with permits that have been modified may be no more likely, and may even be less likely, to improve performance in response to interventions, or their threat, than facilities with permits that have not been modified. This line of reasoning runs directly opposite to the analysis suggested by the reciprocity norm. One question we address in Part III is whether the results of our study are more consistent with one or the other of the expectations outlined in this subsection.

B. *Facility Features Inherent to the Production Process*

1. Facility Size

The first of the three features that are inherent to a facility's production process in which we are interested is the size of the facility. One way to measure the size of the facility is to count the number of employees. Because we lack information about the number of employees at the facilities for which we have performance data, we are unable to use the number of employees as a proxy for facility size. Instead, we chose to use a facility's flow capacity—the amount of wastewater it is capable of discharging over the course of an entire day—as a proxy for its size.

Some researchers have produced empirical studies of the impact of firm size on environmental compliance, and some of it has even related to the effect of government interventions. One study of compliance with air pollution controls by U.S. pulp and paper mills found that plants owned by large firms, whether measured by number of firm employees or number of other mills owned by the firm, are less sensitive to inspections but more sensitive to other enforcement actions than those owned by smaller firms.[34] That conclusion related to firm size rather than facility size.

The theoretical literature suggests a reason to expect that larger facilities are more responsive to government interventions or their threat than are smaller facilities. One study postulated that larger facilities are likely to enjoy "regulatory economies of scale" that are not available to smaller facilities to the extent that they can amortize compliance costs over larger volumes of production.[35] Similarly, researchers have asserted that larger firms, as opposed to facilities, tend to be better environmental performers than smaller firms because the former have more resources to spare for environmental engineering and management.[36]

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[34] Wayne B. Gray & Ronald J. Shadbegian, *When and Why Do Plants Comply? Paper Mills in the 1980s*, 27 Law & Pol'y 238, 255–56 (2005).

[35] Yeager, *Regulatory Law Enforcment*, *supra* note 21, at 340. Larger facilities also may be able to pass on regulatory compliance costs to their customers more easily than smaller facilities operating in more competitive environments. *Id.*; *see* Yeager, *Water Pollution*, *supra* note 17, at 130. Another study suggests that "administrative economies of scale" may also affect regulatory compliance efforts in that smaller organizations may have fewer resources to discover and interpret the regulations and that these disadvantages can affect ability to comply. Thomas J. Dean & Robert L. Brown, *Pollution Regulation as a Barrier to New Firm Entry: Initial Evidence and Implications for Future Research*, 38 Acad. Mgmt. J. 288, 291 (1995). *But cf.* Earnhart, *supra* note 24, at 675 (reporting that publicly owned treatment plants experience diseconomies of scale in treatment of biological oxygen-demanding material); Louis W. Nadeau, *EPA Effectiveness at Reducing the Duration of Plant-Level Noncompliance*, 34 J. Envtl. Econ. & Mgmt. 54, 75 (1997) (postulating that there may be no economies of scale in CAA compliance by the pulp and paper industry). "Firms that can spread these administrative compliance costs over a larger volume of production will likely gain a per unit cost advantage." Dean & Brown, *supra*, at 291.

[36] *See* Daniel J. Fiorino, *Toward a New System of Environmental Regulation: The Case for an Industry Sector Approach*, 26 Envtl. L. 457, 481 (1996) (asserting that "[l]arger firms have greater access to capital, better economies of scale, [and] greater sources of technical advice and support," providing them with greater capacity to avoid noncompliance with environmental requirements); Kagan et al., *supra* note 28, at 80. The authors found empirical support for the proposition that pulp and paper mills owned by larger corporations, and those with larger current profits and rising stock prices, had better environmental performance than those owned by corporations with lower sales, smaller earnings, and declining share prices. *Id.*; *cf.* Shameek Konar & Mark A. Cohen, Why Do Firms Pollute (and Reduce) Toxic Emissions 31 (2000), *available at* http://sitemason.vanderbilt.edu/files/

Accordingly, our results permit us to assess whether interventions in the chemical industry tend to induce greater improvements in environmental performance at larger facilities than at smaller ones. If so, that result would be consistent with the expectation that larger facilities find it easier to make cost-effective reductions than smaller facilities because they have greater economies of scale. A larger facility may have unexhausted economies of scale that it chooses not to take advantage of because of the low risk of getting caught. If the risk rises or the facility is actually caught, the facility may decide to improve its performance to take advantage of those economies of scale. Those unexhausted economies of scale are less likely to be available at a smaller facility, making improvements in performance in response to actual interventions, or their threat, more costly and more difficult to achieve.[37]

Additional considerations support the expectation that larger facilities respond better to interventions than do smaller ones. A facility's owners may choose to avoid making the expenditures necessary to produce compliance in order to bolster the facility's profitability and hope that the facility does not become the subject of an enforcement action. If the employees who implement the decisions that result in either compliance or noncompliance do not share the owners' concern for maximizing profitability, they may choose to take the steps necessary to comply, notwithstanding the owners' wishes. They may do so for altruistic reasons, a commitment to the goals of environmental protection laws, or a general preference for compliance with the law. Professor David Spence has suggested that "in smaller firms the organizational distance between owners and employees who make actual compliance decisions is shorter, offering fewer opportunities for these kinds of agency losses. According to this logic, we would expect to see more noncompliance among smaller firms than larger ones."[38] This logic ought to extend to decisions concerning whether to improve environmental performance following an intervention. Professor Spence's analysis, however, applies at the firm, not the facility level, and there is likely to be less of a difference in *organizational distance* at the

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fnddVm/why%20do%20firms%20pollute.pdf ("Firms in more concentrated industries and with higher cash flows tend to be lower baseline emitters of toxic chemicals.").

[37] As we use the term in this Article, a firm refers to the corporation or other business entity that owns a facility. A facility is a particular discharging plant. A firm may own more than one facility.

[38] David B. Spence, *The Shadow of the Rational Polluter: Rethinking the Role of the Rational Actor Models in Environmental Law*, 89 CAL. L. REV. 917, 971 (2001) (footnotes omitted).

facility than at the firm level.[39] If so, this explanation for why we might expect larger facilities to respond more effectively to interventions than smaller facilities appears to be less significant than the economies of scale rationale.

Yet another factor provides an alternative explanation for greater responsiveness to government interventions at larger facilities. Larger facilities may be more sensitive to negative publicity surrounding noncompliance with environmental responsibilities. Local public interest groups may pay more attention to the compliance status of larger facilities and, therefore, exert more pressure on larger facilities to remedy noncompliance than they do at the smaller facilities, where noncompliance may not have as great an impact on the surrounding environment. In addition, larger facilities will have more employees than smaller ones and may depend on a positive image within the community to attract and retain a qualified workforce. For these reasons, larger facilities may have a larger reputational stake in compliance status than smaller facilities do and may, therefore, have stronger incentives to avoid repeat noncompliance events. Various researchers have noted this greater reputational stake as a possible reason that larger firms and facilities may be better environmental performers than smaller firms and facilities generally, although they have not addressed the question in the specific context of the impact of government interventions on environmental performance.[40]

Another set of considerations, however, may generate the opposite expectation—that smaller facilities are more likely to respond to interventions than are larger facilities. If plant managers and other decisionmakers concerning environmental compliance at larger facilities believe that those facilities are less likely to become the subjects of government interventions than smaller facilities with less political clout, they may have less incentive to avoid noncompliance. In this vein, one study found that larger companies had a degree of *insulation* from interventions that was not available to smaller companies because they had greater resources to take advantage of available legal remedies, such as appeals to challenge or slow down government ef-

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[39] *Id.* at 919 (discussing "the idea of the firm as a rational polluter").

[40] *See, e.g.*, Konar & Cohen, *supra* note 36, at 11–12 (claiming that large firms have more at stake concerning negative publicity about environmental compliance due to their size and visibility); Kagan et al., *supra* note 28, at 66 (noting the "greater visibility and reputational concerns" of larger firms).

forts to impose liability on them.[41] The study suggested that if larger facilities feared interventions less than smaller ones because larger facilities believed regulators were loathe to intervene against regulated entities with the resources to fight the charges vigorously, these larger facilities saw less need than smaller facilities to avoid noncompliance. This argument would seem to be weaker, however, if a larger facility has already been the subject of an intervention, because the intervention indicates that regulators are at least sometimes willing to tackle large and well-funded facilities.[42]

We can test the validity of the theory that larger facilities have less to fear from interventions than smaller ones and, therefore, will tend to be less responsive to the threat of interventions than smaller facilities, by comparing the general deterrent effect of an inspection with the general deterrent effect of the imposition of a judicial or administrative sanction. All facilities are inspected. Further, the size and resource position of larger facilities is likely to be less effective in blocking inspections than in impeding government interventions that require administrative or judicial proceedings before a sanction may be imposed. Accordingly, if the belief by larger facilities that they are not likely to be targeted by government interventions does in fact lessen the incentives of such firms to improve performance relative to smaller facilities, we would expect to see a greater degree of responsiveness by larger facilities to the threat of an inspection than to the threat of a sanction.

In summary, the size of the regulated facility may make a difference in how it responds to interventions, or their threat, for several reasons. The environmental compliance literature most strongly supports the view that larger facilities will respond more strongly to interventions than will smaller ones because larger facilities have economies of scale

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[41] *See* Yeager, *Regulatory Law Enforcement*, *supra* note 21, at 338, 340; *cf.* Yeager, *Water Pollution*, *supra* note 17, at 130–31, 136 (finding that larger firms are more likely to participate in adjudicatory hearing procedures available in CWA enforcement proceedings and that use of those procedures was associated with lower violation rates). One source describes the "belief of many close observers," not adequately subject to empirical examination, "that serious enforcement efforts . . . are rarely directed at large corporations deserving of them and instead are focused on smaller firms less likely to put up formidable resistance." *Id.*

[42] In our empirical analysis, we measure the number of inspections completed at specific facilities and the dollar value of sanctions imposed against those facilities as our measure of specific deterrence. If larger facilities are less likely to receive interventions, then the size of a facility and the degree of intervention are strongly correlated. In this case, the empirical analysis will not be able to discern effectively the separate effects of facility size and specific deterrence and the influence of facility size on the effectiveness of specific deterrence.

not available to smaller facilities. The greater distance between ownership and environmental management at larger facilities or firms, and the likelihood that larger facilities will experience adverse publicity and public pressure, may provide additional, though perhaps less important, reasons to expect greater responsiveness from larger facilities as compared to smaller ones. Finally, the relatively greater ability of larger facilities to exercise the political clout needed to block interventions or to force the government to spend more resources pursuing interventions has the potential to weaken the incentives of larger facilities to avoid noncompliance in response to the threat of interventions.

2. Capacity Utilization

The second characteristic we choose to study that is related to features inherent in a facility's production process is the flow-to-flow capacity ratio. This feature serves as a proxy for capacity utilization by providing information that indicates whether a facility is operating at or below full capacity. We found no studies that address the relevance of capacity utilization to environmental performance, either generally or in the specific context of government interventions. Our study is, therefore, the first one of which we are aware that empirically evaluates the relevance of this characteristic to environmental performance.

Our expectation is that facilities with a relatively low flow ratio—those not operating at or near full capacity—ought to be more responsive to government interventions than those with a relatively high flow ratio. As capacity utilization increases, a facility's ability to adjust operations in ways that improve environmental performance ought to decline because a plant operating at or near full capacity generally has less operational flexibility than one operating at a lower degree of capacity utilization. Our results permit us to test that expectation.[43]

[43] EPA's enforcement policies seem to favor facilities operating with low rather than high flow ratios because EPA's civil penalty calculation methodology includes a reduction in the gravity factor corresponding to flow reduction. Under that methodology, the greater the reduction in average daily wastewater discharge flow, in gallons per day, the greater the percentage reduction of the gravity factor. *See* Interim CWA Settlement Penalty Policy, *supra* note 30, at 12. Perhaps EPA seeks through that approach to discourage facilities from seeking to present a misleading picture of their discharges by diluting wastewater to decrease concentrations of regulated pollutants.

3. Discharge Volatility

The third and final feature relating to the production process that we measure in our study is discharge volatility. This characteristic measures the degree of variation in discharge levels at a facility from month to month over the course of a calendar year. We found a series of studies by a pair of researchers that analyze the impact of discharge volatility, or variability, in the context of CWA compliance.[44] The studies do not involve, however, the effects of government interventions on compliance. The authors of the studies describe the relevance of volatility to compliance status as follows:

> Plants are posited to pollute below their permitted level, on average, to provide a safety margin in the case of an unexpectedly large discharge. We call this the *safety margin* explanation of overcompliance. Plants reduce their average discharge so that they are more likely to fall below a discharge rate of 1.0 during a very bad month.[45]

The authors further stated:

> The claim that discharges are low on average to compensate for discharge variability implies that discharges will be lower, relative to the permit level, for plants with more variable discharges. A plant with highly variable discharges should aim for lower average discharges than a plant with low discharge variability. This is a straightforward hypothesis, but its import has not been recognized to our knowledge.[46]

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[44] Sushenjit Bandyopadhyay & John Horowitz, *Do Plants Overcomply with Water Pollution Regulations? The Role of Discharge Variability*, B.E. J. Econ. Analysis & Pol'y, Jan. 2006, at 1, 1, *available at* http://www.bepress.com/cgi/viewcontent.cgi?article=1486&context=bejeap. The authors state that "[n]o other studies have explicitly modeled discharge variability to our knowledge." *Id.* at 4.

[45] *Id.* at 3. The authors found that "[d]ischarges exhibit considerable variability on a month-to-month basis," and that "[v]ariability arises due to natural variability in the composition of complex organic wastes, environmental factors, and operational factors." *Id.* at 6 (citations omitted); *see also* Sushenjit Bandyopadhyay & John K. Horowitz, *Overcompliance with the Clean Water Act?*, *in* Beyond Compliance: What Motivates Environmental Behavior?, *supra* note 20, at 10 ("Because plants cannot control discharges exactly, they aim to pollute below their permitted levels, so that when they have a stretch of exceptionally high discharges they will still likely be in compliance with their permits. This factor leads discharges to be below the permitted level on average."). The authors in their 2001 paper found an inverse relationship between discharge variability and median discharges. *Id.* at 14.

[46] Bandyopadhyay & Horowitz, *supra* note 44, at 11–12 (footnote omitted).

The authors ultimately found "strong evidence that uncontrollable discharge variability leads water-polluting plants to reduce their average discharges. Plants pollute below—sometimes far below—their permitted levels to reduce the chance of a violation."[47]

The previous studies on discharge volatility do not assess the impact of government interventions on facilities with high and low levels of discharge volatility. Their explanation for how facilities are likely to respond to volatility, however, is useful in formulating expectations for the impact of discharge volatility on the effectiveness of interventions. As described above, facilities will attempt to maintain safety margins to minimize instances of noncompliance. To maintain the same margin of safety as the volatility of discharges increases, a facility must push down its chosen level of discharges relative to the amounts allowed by its permit to create the same probability of being at or below the permit level. A facility with greater discharge volatility is, therefore, more likely to reduce discharges in response to interventions, or their threat, than one with less volatility. In other words, when a facility is facing greater volatility, a greater reduction in the mean discharge level is needed to demonstrate the same degree of commitment to compliance in some probabilistic sense—when, for example, the probability of an effluent limit exceedance drops from five percent to one percent. Our results enable us to test whether discharge volatility is linked to reduced responsiveness to government interventions.

C. *Ownership Structure*

The sole characteristic relating to the firms rather than the facilities that we address in this study is ownership structure. We distinguish exclusively between publicly held and privately held firms. We choose not to explore this characteristic in depth. The literature, both theoretical and empirical, relating to the impact of ownership structure on environmental performance is far more extensive than it is for most of the facility features described above. This literature makes it possible to offer a variety of competing hypotheses, angles, and perspectives concerning the relevance of ownership structure. We choose to describe a limited range of these hypotheses without providing much insight into their significance or strength. For the purposes of our empirical analy-

[47] *Id.* at 25–26. The authors suggest that, because of differences in the variability of measures over different time periods, enforcement of standards over a shorter time, such as daily limits, "would likely reduce discharges further; while a move to enforce standards over a longer time (say, annual quantity) would likely raise discharges." *Id.* at 26.

sis, we include ownership structure and its interactions with the various government intervention measures as regressors in our multivariate regression analysis in order to avoid omitted variable bias so that we can properly and accurately assess the other interactions.[48] Even though the interactions between ownership structure and interventions are not our primary interest, we nevertheless include these interactions as regressors in order to isolate properly the interactions between interventions and the facility-related features addressed in our study.

Our assessment of expectations is brief. On the one hand, investor pressure might be expected to induce greater responsiveness to actual or threatened interventions from a privately held firm than from a publicly held firm.[49] The relative susceptibility of privately held and publicly held firms to agency costs may tend to support the same expectation. On the other hand, the desire to avoid a fall in stock prices seems to provide reason to expect greater responsiveness to actual or threatened government interventions from publicly held facilities.[50] These considerations, however, are hedged with qualifications that weaken the theoretical reason to believe that privately held and publicly held firms respond differently to a significant extent.

II. Empirical Analysis: Sample Selection and Data

In this Part, we describe our empirical analysis. The first subsection describes our reasons for choosing to analyze the relationship

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[48] Omitted variable bias occurs when a regression fails to include, or *omits*, a variable, other than the one being tested, upon which the decisionmaker actually based a decision. Under those circumstances, the regression can erroneously indicate that the decisionmaker relied on the variable being tested. *See, e.g.*, Stuart T. Rossman, *Analyzing Disparate Impact Credit Discrimination in the Subprime Lending Market*, 1533 PLI/Corp 601, 609 (2006).

[49] *See* Konar & Cohen, *supra* note 36, at 16 (arguing that "firms whose managers and directors have a higher percentage ownership of the firm are more likely to be responsive to shareholder needs"; those firms tend to be privately held firms).

[50] *See* Rechtschaffen, *supra* note 14, at 806–07 (citing studies finding that stock prices rise and fall in response to the release of positive or negative information about firms' environmental performance and asserting that "the stock market also can create strong incentives for firms to improve environmental compliance as investors increasingly look to environmental performance as a relevant investment criterion"); Spence, *supra* note 38, at 969; *cf.* Jérôme Foulon et al., *Incentives for Pollution Control: Regulation or Information?*, 44 J. Envtl. Econ. & Mgmt. 169, 175 (2002) (citing evidence that investors are increasingly scrutinizing environmental performance in investment decisions); Madhu Khanna & William Rose Q. Anton, *Corporate Environmental Management: Regulatory and Market-Based Incentives*, 78 Land Econ. 539, 541 (2002) (stating that reputation among shareholders is contributing to the growth of "corporate environmentalism" and that "bankers are beginning to include environmental considerations in their lending decisions and viewing poor environmental performers as financially risky").

between government interventions and facility features in the context of the performance of chemical manufacturing facilities regulated under the CWA. The second subsection explains the manner in which we selected our sample of regulated facilities and the reasons why we anticipate that the sample will be representative of environmental performance in the chemical industry. Subsequent subsections describe the multiple sources of our data and how we integrate these sources, while explaining our sample selection criteria.

A. *Scope of Empirical Analysis*

Our study assesses the efficacy of various government interventions on facilities in the industrial sector of chemical and allied products that are regulated under the CWA's National Pollutant Discharge Elimination System (NPDES) permit program.[51] The study is based on statistical analysis of performance displayed by individual chemical manufacturing facilities. Our analysis relates to a specific type of environmental performance: wastewater discharges by facilities in the chemical industry that are regulated under the CWA. We choose to focus on this measure of environmental performance because federal and state regulators systematically record both wastewater discharge limits, which are critical for calculating the level of compliance or noncompliance, and actual discharges. We choose the industrial sector of chemical and allied products as the focus of our study because it serves as an excellent vehicle for examining the efficacy of government interventions on corporate environmental performance. EPA has demonstrated a strong interest in this sector,[52] and regards one of the subsectors, industrial organics (Standard Industrial Classification or SIC-code 2869), as a priority industrial sector.[53] The chemical industry is responsible for a significant component of the nation's industrial output and a significant portion of all wastewater discharges by facilities subject to

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[51] *See* Clean Water Act of 1977, 33 U.S.C. § 1342 (2000 & Supp. 2005) (authorizing the program and governing its operation).

[52] *See, e.g.*, EPA & Chem. Mfrs. Ass'n, EPA-305-R-99-001, EPA/CMA Root Cause Analysis Pilot Project: An Industry Survey 3 (1999), *available at* http://www.epa.gov/Compliance/resources/publications/assistance/sectors/rootcauseanalysis.pdf; Office of Enforcement & Compliance Assurance, EPA, EPA-305-R-96-002, Chemical Industry National Environmental Baseline Report 1990 to 1994, at ES-4 (1997), *available at* http://www.epa.gov/compliance/resources/publications/assistance/sectors/chembaseline9094.pdf [hereinafter Chemical Industry Baseline Report].

[53] *See, e.g.*, Paul S. Farber et al., *EPA's Multi-Media Enforcement & Inspection Program*, Kerley Ink, Jan. 1999, http://www.kerleyink.com/technology/epas_multi-media_enforcemen.html.

CWA regulation.[54] Nevertheless, the chemical industry is not necessarily representative of all industrial sectors. Indeed, its unique attributes contribute to our interest in studying it. Some firms in the chemical industry, for example, have demonstrated an interest in promoting pollution reduction and prevention through efforts prompted by the Responsible Care program, which is a voluntary management initiative supported by the American Chemical Council.[55]

Finally, our study focuses on discharges of the pollutant most common to regulated facilities—total suspended solids (TSS)[56]—thereby maximizing the number of facilities for which data on wastewater discharge levels are available, while avoiding the need to combine potentially disparate measures of pollution. We examine an adjusted measure of TSS discharges, in which each level of discharge is scaled relative to its relevant TSS-specific effluent limit; we denote the resulting measure as relative discharges. Given our focus on compliance, this adjustment with respect to the effluent limit is needed since the level of the effluent limit varies across facilities and varies over time for several facilities in the sample. TSS-related discharges represent a comprehensive measure of environmental performance because they capture the full extent of both noncompliance and over-compliance. This latter dimension is important since the sample reveals a strong prevalence of substantial over-compliance.

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[54] *See, e.g.*, James L. Beebe, *Inherently Safer Technology: The Cure for Chemical Plants Which Are Dangerous by Design*, 28 HOUS. J. INT'L L. 239, 242 (2006) (stating that the chemical industry in the United States "is a $450 billion business, one of the largest sectors in the economy," and that "the more than 66,000 chemical facilities across the nation employ more than one million workers"); *cf.* James T. Hamilton, *Is the Toxic Release Inventory News to Investors?*, 16 NAT. RESOURCES & ENV'T 292, 294 (2001) (finding that the chemical industry was responsible for more than half of the toxic releases reported as part of the Toxic Release Inventory in 1989).

[55] *See* Dow, Our Commitments, Responsible Care, http://www.dow.com/commitments/care (last visited Apr. 30, 2008) (describing Responsible Care as "a voluntary initiative within the global chemical industry to safely handle our products from inception in the research laboratory, through manufacture and distribution, to ultimate disposal, and to involve the public in our decision-making processes"); *see also* CHEMICAL INDUSTRY BASELINE REPORT, *supra* note 52, at 58 (providing examples of environmental initiatives sponsored by trade associations and industries).

[56] *See* Clean Water Act of 1977, 33 U.S.C. § 1314(a)(4) (2000) (describing conventional pollutants, including TSS). Conventional pollutants have been the focus of EPA's control efforts. *See* Glicksman & Earnhart, *supra* note 18, at 324 n.20.

B. *Selection of Sample*

To examine the effectiveness of government interventions at inducing better environmental performance—lower relative discharges—from facilities in the chemical industry, we examine wastewater discharges by the 499 major chemical manufacturing facilities operating across the United States during the years 1995 to 2001. We choose major facilities for several reasons. First, EPA focuses its regulatory efforts on facilities that it classifies as *major*—in other words, those that either possess a discharge flow of one million gallons per day or that cause a significant impact on the receiving waterbody.[57] According to one source, "The distinction between a major and minor permit is of critical importance because it has a direct impact on the subsequent enforcement process. Enforcement priority is given to major permittees, meaning that NPDES personnel generally act first on major permittees."[58] Second, EPA's Permit Compliance System (PCS) database only systematically records wastewater discharges and effluent limits for major facilities in the NPDES program. Information on wastewater discharge levels is unavailable in any reasonably accessible form for minor facilities. Third, the 499 major facilities represented 20.1% of the 2,481 chemical facilities in the NPDES program in 2001. Moreover, they represented the bulk of wastewater discharges from this sector. The results from this sample of facilities, therefore, should be strongly representative of the chemical industry as far as pollution control is concerned.

C. *Data Collection*

To examine the effectiveness of government interventions on the environmental performance of U.S. chemical manufacturing facilities, we gather data from various databases maintained by federal and state environmental agencies and private entities. The PCS database

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[57] *See* Marilyn Lee Nardo, *Feedlots—Rural America's Sewer*, 6 ANIMAL L. 83, 98 (2000); *see also* SUSAN HUNTER & RICHARD W. WATERMAN, ENFORCING THE LAW: THE CASE OF THE CLEAN WATER ACTS 36 (1996) ("The main distinction between [major and minor] permits involves the amount of water discharged into nearby waters."). *But cf.* Definitions, 40 C.F.R. § 122.2 (2007) (defining "major facility" as "any NPDES 'facility or activity' classified as such by the Regional Administrator, or, in the case of 'approved State programs,' the Regional Administrator in conjunction with the State Director"). There are far fewer major facilities than minor facilities that are subject to effluent limits under the CWA. As of January 1999, for example, there were 6749 major facilities with NPDES permits and 82,560 minor facilities. David L. Markell, *The Role of Deterrence-Based Enforcement in a "Reinvented" State/Federal Relationship: The Divide Between Theory and Reality*, 24 HARV. ENVTL. L. REV. 1, 56 (2000).

[58] HUNTER & WATERMAN, *supra* note 57, at 36.

maintained by EPA provides information about effluent limits applicable to individual facilities under NPDES permits as well as amounts actually discharged by those facilities.[59] The PCS database also includes data on inspections performed by federal and state regulators.[60] Both the PCS and EPA Docket databases include data on federal fines imposed by federal administrative agencies and courts. In addition, the EPA Docket database includes data on federal injunctive relief sanctions and supplemental environmental projects (SEPs).[61] Our study integrates these two databases.

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[59] Our data collection process focused on certain information within this database. Facilities monitor their discharge levels and facility-specific effluent limits and restrict discharges according to two pollution measures: monthly average and monthly maximum. Both conversations with government officials and EPA's definition of SNC, however, suggest that regulators especially care about the average limit. *See, e.g.*, U.S. Gov't Accounting Office, GAO/RCED-96-23, Water Pollution: Many Violations Have Not Received Appropriate Enforcement Attention 3 (1996), *available at* http://www.gao.gov/archive/1996/rc96023.pdf.

> According to the EPA, SNC is "not regulatory," but is used by the agency "solely for management purposes and contains those instances of noncompliance . . . that EPA feels merit special attention from NPDES administering agencies. These priority violations are tracked through the Strategic Planning and Management System (SPMS) to ensure timely enforcement."

Glicksman & Earnhart, supra note 18, at 327 n.31 (quoting Office of Water, EPA, The Enforcement Management System: National Pollutant Discharge Elimination System, ch. VII, pt. B, at iv (1989)). Further, facilities may monitor discharge levels and facility-specific effluent limits, and may restrict only quantities, only concentrations, or both. By focusing on compliance levels, our study is able to compare across all facilities regardless of the form of their discharge measurement and effluent limit. The analysis calculates relative discharges—the ratio of absolute discharges and effluent limits—regardless of the type of discharge and limit. If both quantity and concentration limits apply, the analysis calculates the mean level of compliance.

[60] The PCS database provides the following data elements for each permitted chemical facility: (1) permit issuance dates; (2) type of discharge limit: initial, interim, or final; (3) indication of changes to a permit during the current five-year issuance period; (4) monthly wastewater flow in millions of gallons per day; (5) TSS monthly discharge limits; (6) TSS monthly discharges; (7) four-digit SIC-code; and (8) location.

[61] Rechtschaffen & Markell, *supra* note 19, at 65 ("SEPs are 'environmentally beneficial projects which a defendant/respondent agrees to undertake in settlement of an enforcement action, but which the defendant is not otherwise legally obligated to perform.'" (quoting EPA, Supplemental Environmental Projects Policy 79 (1998))); *see also* Steven Bonorris et al., *Environmental Enforcement in the Fifty States: The Promise and Pitfalls of Supplemental Environmental Projects*, 11 Hastings W.-Nw. J. Envtl. L. & Pol'y 185, 187 (2005) (describing SEPs as "environmentally beneficial projects voluntarily undertaken by violators of environmental laws, for which EPA may partially mitigate the civil penalties they would otherwise face").

D. *Selection of Sample: Revisited*

The broadest sample of facilities includes all major chemical facilities for all months across the entire sample period: January 1995 to October 2001. This sample includes 499 facilities that were active at some point during the sample period. Even though most major chemical facilities discharge TSS, some do not. To remain in the sample, a given facility must have discharged TSS at least once during the seven-year sample period. Based on this restriction, the sample drops to 475 facilities. Moreover, not all facilities discharging TSS possess a permit that imposes an effluent limit on this specific pollutant. Given the focus on compliance level as a measure of environmental performance, to remain in the sample, a given facility must have been subject to an effluent limit for the relevant pollutant in the particular month of discharge.[62]

III. Statistical Analysis of Collected Data and Interpretation of Analytical Results

In this Part, we describe the statistical analysis of the collected data described in Part II above and interpret the results of our statistical analysis. We first describe the statistical methods used to analyze the data and the two forms of deterrence—specific and general—in which we are interested, as well as explain the interactions between government interventions and facility features. The second subsection summarizes the results of our analyses, providing a description of whether particular facility or firm features had a positive or negative influence on the deterrent effect of various government interventions.

A. *Statistical Analysis*

We seek to gauge the effectiveness of various government interventions using multivariate regressions, which attempt to isolate and identify the effects of government interventions on the level of wastewater discharges relative to the facility-specific effluent limit. By employing regression analysis, we are able to assess the specific and gen-

[62] *See* Dietrich Earnhart, Donald Haider-Markel, Tatsui Ebihara & Robert Glicksman, Shaping Corporate Environmental Behavior and Performance: The Impact of Enforcement and Non-Enforcement Tools § 5.2 (2006), *available at* http://www.ipsr.ku.edu/CEP/EPA/finalreport.pdf (providing a more complete description of the data collection process). This report also includes a full description of the statistical approach used to analyze the effects of government interventions on environmental performance. *See id.* § 5.3.

eral deterrent effects of various interventions on TSS discharges relative to permit limits. Moreover, we wish to assess whether these specific and general deterrent effects depend on the features of the facilities discharging the TSS-related wastewater. In particular, we assess whether the effectiveness of government interventions depends on permit conditions, including permitted effluent limit level, permit limit type, and the presence of a permit modification; facility size as measured by flow design capacity; capacity utilization as measured by the flow-to-flow capacity ratio; discharge volatility; or ownership structure. While most of these features apply to specific facilities, ownership structure is not a facility-level characteristic. Instead, ownership structure represents a firm-level characteristic. Nevertheless, we describe the set of features as facility features as a matter of convenience.

Our study measures deterrence in two forms: specific deterrence and general deterrence. First, consider inspection-related deterrence. Our study measures inspection-related specific deterrence as the count of inspections completed at a specific facility in the preceding twelve-month period. In a parallel fashion, our study measures inspection-related general deterrence as the count of inspections completed at all *other* similar facilities, divided by the number of all other similar facilities. By considering inspections at other facilities, the general deterrence measure does not overlap with the specific deterrence measure. In this way, the general deterrence measure is more likely to reflect the facility's perceived threat of an inspection independent of its own recent experience with inspections. The analysis generates two separate regressors for each type of inspection-related deterrence. One regressor reflects only state inspections, while the other regressor reflects only federal inspections. In total, the analysis generates and utilizes four regressors related to inspections.

Second, consider sanction-related deterrence. Our study measures sanction-related specific deterrence as the sum of sanctions—measured in dollars—imposed against a specific facility in the preceding twelve-month period. In a parallel fashion to the inspection-related analysis, our study measures sanction-related general deterrence as the sum of sanctions—measured in dollars—imposed against *other* similar facilities, divided by the number of other similar facilities. The resulting measure represents the unconditional average sanction amount imposed against other similar facilities. The analysis generates two separate regressors for each type of sanction-related deterrence. One regressor reflects only administrative sanctions, while the other regressor reflects only civil sanctions. In total, the analysis generates and utilizes four regressors related to sanctions.

In order to appreciate whether the effectiveness of these various deterrence measures depends on facility features, our study interacts the various measures of specific and general deterrence with various facility features. Our analysis creates the interactions between the intervention measures and facility features by multiplying each deterrence type with each feature. The resulting product is denoted as an interaction term. For example, to create the interaction term involving state inspection-related specific deterrence and the effluent limit level, denoted as *C*, we multiply the regressor that captures state inspection-related specific deterrence, denoted as *A*, and the regressor that captures the effluent limit level, denoted as *B*. Thus, $C = A \times B$. After creating these interaction terms, we include these interactions as regressors in our estimation of TSS-relative discharges. These interactions help to indicate whether different types of facilities or facilities facing different corporate conditions respond differently to government interventions. In other words, the analysis tests whether the effects of deterrence differ according to facility features. To test for these differences, the analysis assesses whether the coefficients on the interactive terms are significantly different from zero, as described in more depth below.

Due to insufficient variation, the analysis is not able to estimate certain interactions. For administrative sanction-related specific deterrence, our analysis cannot estimate interactions with limit type and permit modification. The lack of variation is not surprising since most facilities face a final limit type and hold a permit that lacks modification. The lack of variation indicates that no administrative sanctions were imposed against facilities facing initial or interim limits and no administrative sanctions were imposed against facilities possessing permits lacking modification. For civil sanction-related specific deterrence, our analysis cannot estimate interactions with limit type, permit modification, and ownership structure. Again, the lack of variation for limit type and permit modification is not surprising. Even though facilities owned by privately held firms represent over thirty percent of the sample, civil sanctions are sufficiently infrequent that the lack of variation for the interaction between civil sanctions and publicly held ownership structure is not surprising.

Table 1 reports the estimation results for the interaction terms relating to facility features.[63] We do not report the actual coefficient

[63] Each facility in our sample is represented by multiple observations in the dataset used for multivariate regression. This feature of the data structure implies that the dataset is actually a panel dataset, that is, the dataset extends across both facilities and time. Three primary regression estimators address this data structural feature: pooled ordinary least

magnitude estimates along with their associated standard errors. Instead, Table 1 simply indicates whether or not a particular interaction is statistically at significance levels at or below accepted levels, for example, a ten percent significant level. We assess statistical significance based on the *p*-value associated with the *t*-test of whether the null hypothesis of a zero coefficient magnitude can be rejected. In Table 1, a zero (0) indicates a statistically insignificant coefficient, regardless of the sign of the coefficient. A plus sign (+) indicates a positive statistically significant coefficient, while a minus sign (–) indicates a negative statistically significant coefficient.

Table 1: Interactions between government interventions and facility features based on multivariate regression of TSS relative discharges

Facility Characteristic Interacted with Government Interventions	Government Intervention							
	Federal Inspections		State Inspections		Administrative Sanctions		Civil Sanctions	
	SD	GD	SD	GD	SD	GD	SD	GD
Effluent Limit Level	0	+	+	–	+	+	0	+
Final Limit Type	0	0	0	–	N/A	0	N/A	+
Permit Modification	0	–	+	0	N/A	–	N/A	–
Facility Size	0	0	0	0	0	0	0	–
Capacity Utilization	+	–	0	0	0	+	0	0
Discharge Volatility	–	+	–	+	0	+	+	0
Publicly Held Ownership	0	+	0	0	0	0	N/A	0

SD = specific deterrence
GD = general deterrence
"0" indicates a statistically insignificant interaction ($p>0.10$)
"+" indicates a positive, statistically significant interaction ($p\leq 0.10$)
"–" indicates a negative, statistically significant interaction ($p\leq 0.10$)
"N/A" indicates that the interaction term lacks variation in the sample

B. *Interpretation of Interactions Between Interventions and Facility Features*

In this subsection, we examine the interactions between interventions and facility features. We assess whether the deterrent effects of government interventions depend on features of facilities in the chemical manufacturing industry. For the purposes of interpretation, a positively signed interaction indicates a positive connection between a particular deterrent effect and a given characteristic. A positively signed

squares (OLS) estimator, fixed effects estimator, and random effects estimator. We use two tests to identify the *best* estimator from this set. Based on an *F*-test of facility-specific fixed effects, the fixed effects estimator dominates the pooled OLS estimator. Based on a Hausman test of random effects, the fixed effects estimator dominates the random effects estimator. Thus, the fixed effects estimator is *best*. Accordingly, the analysis focuses on results generated by the fixed effects estimator.

interaction is recorded as a plus sign in Table 1, indicating that the relevant coefficient sign is positive and the associated *p*-value lies at or below ten percent. This *positive connection* in turn indicates that the particular deterrent is *less effective at inducing better environmental performance* when the given characteristic is relevant or greater in magnitude. In other words, a positive interaction indicates that the particular deterrence type generates a more positive, or less negative, effect on relative discharges when the given characteristic is relevant or greater in magnitude. A deterrence type is effective at inducing better environmental performance when it drives down the level of relative discharges, which implies a negative effect. Obviously, a less negative effect implies less success at inducing lower relative discharge levels. Conversely, a *negatively signed interaction* indicates a negative connection between a particular deterrent effect and a given characteristic, which in turn indicates that the particular deterrent is *more effective at inducing better environmental performance* when the given characteristic is relevant or greater in magnitude. Such a negatively signed interaction is recorded as a minus sign in Table 1, indicating that the relevant coefficient sign is negative and the associated *p*-value lies at or below ten percent.

When assessing interactions between interventions and facility features, we examine whether the effectiveness of government interventions depends on permit conditions, facility size, capacity utilization, discharge volatility, or ownership structure. From this perspective, we assess each type of intervention-related deterrence in turn. For each deterrence type, we analyze whether its effectiveness depends on any of the identified facility features. For example, we may find that the effectiveness of state inspection-related specific deterrence depends on effluent limit level and facility size. In particular, we may find that this effectiveness is enhanced by higher effluent limit levels, yet undermined by greater facility size.

We first assess the interactions relating to federal inspections. First, consider federal inspection-related specific deterrence. The effect of federal inspection-related specific deterrence is positively influenced by increases in the flow-to-flow capacity ratio. Thus, a facility utilizing a greater share of its flow capacity responds less strongly to the completion of federal inspections at its own facility. In other words, actual federal inspections are less effective against facilities pushing their wastewater treatment systems more greatly, as expected. Second, the effect of federal inspection-related specific deterrence is negatively influenced by increases in discharge volatility. Thus, a facility facing greater volatility responds more strongly to the completion of federal inspections at its own facility, as expected.

Next, consider federal inspection-related general deterrence. First, the effect of federal inspection-related general deterrence is positively influenced by increases in the effluent limit level. Thus, facilities facing higher—meaning less stringent—effluent limits respond less strongly to the threat of federal inspections against facilities in general, contrary to our expectation. Second, the effect of federal inspection-related general deterrence is positively influenced by the presence of a permit modification. Thus, facilities enjoying a modification to their permit respond more strongly to the threat of federal inspections, consistent with our primary expectation. Third, contrary to specific deterrence, the effect of federal inspection-related general deterrence is negatively influenced by increases in the flow-to-flow capacity ratio. Thus, facilities utilizing a greater share of their flow capacity respond more strongly to the threat of federal inspections, contrary to our expectation. Fourth, in contrast to specific deterrence, the effect of federal inspection-related general deterrence is positively influenced by increases in discharge volatility. Thus, facilities facing greater volatility respond less strongly to the threat of federal inspections, contrary to our expectation. Fifth, the effect of federal inspection-related general deterrence is positively influenced by the presence of publicly held ownership. Thus, facilities owned by publicly held firms respond less strongly to the threat of federal inspections than do facilities owned by privately held firms.

We next assess interactions relating to state inspections. Initially, consider state inspection-related specific deterrence. The effect of state inspection-related specific deterrence is positively influenced by increases in the effluent limit level. Thus, a facility facing a higher—meaning less stringent—effluent limit responds less strongly to the completion of state inspections at its own facility, contrary to our expectation. Second, the effect of state inspection-related specific deterrence is positively influenced by the presence of a permit modification. Thus, a facility enjoying a modification to its permit responds less strongly to the completion of state inspections at its own facility, contrary to our primary expectation, but consistent with the notion that facilities perceive modifications as signals of greater future regulatory flexibility. Third, similar to federal inspection-related specific deterrence, the effect of state inspection-related specific deterrence is negatively influenced by increases in discharge volatility. Thus, a facility facing greater volatility responds more strongly to the completion of state inspections at its own facility, as expected.

Next, consider state inspection-related general deterrence. First, the effect of state inspection-related general deterrence is negatively

influenced by increases in the effluent limit level. Thus, facilities facing higher effluent limits respond more strongly to the threat of state inspections against facilities in general, as expected. Second, the effect of federal inspection-related general deterrence is negatively influenced by the presence of a final limit type. Thus, facilities facing final limits respond more strongly to the threat of state inspections, as expected. Third, similar to federal inspection-related general deterrence, the effect of state inspection-related general deterrence is positively influenced by increases in discharge volatility. Thus, facilities facing greater volatility respond less strongly to the threat of state inspections, contrary to our expectation.

Next, we assess interactions relating to federal administrative sanctions.[64] Consider administrative sanction-related specific deterrence. The effect of administrative sanction-related specific deterrence is positively influenced by increases in the effluent limit level. Thus, a facility facing a higher effluent limit responds less strongly to the imposition of administrative sanctions at its own facility, contrary to our expectation.

We also consider administrative sanction-related general deterrence. First, the effect of administrative sanction-related general deterrence is positively influenced by increases in the effluent limit level. Thus, facilities facing higher effluent limits respond less strongly to the threat of administrative sanctions imposed against facilities in general, contrary to our expectation. Second, the effect of administrative sanction-related general deterrence is negatively influenced by the presence of a permit modification. Thus, facilities enjoying a modification to their permits respond more strongly to the threat of administrative sanctions, consistent with our primary expectation. Third, the effect of administrative sanction-related general deterrence is positively influenced by increases in the flow-to-flow capacity ratio. Thus, facilities utilizing a greater share of their flow capacity respond less strongly to the threat of administrative sanctions, as expected. Fourth, the effect of administrative sanction-related general deterrence is positively influenced by increases in discharge volatility. Thus, facilities facing greater volatility respond less strongly to the threat of administrative sanctions, contrary to our expectation.

We also assess interactions relating to federal civil sanctions. First, consider civil sanction-related specific deterrence. The effect of civil

[64] For purposes of this analysis, sanctions include judicial or administrative penalty assessment proceedings, the imposition of injunctive relief in court, and the imposition of SEPs approved by a court.

sanction-related specific deterrence is positively influenced by increases in discharge volatility. Thus, a facility facing greater volatility responds less strongly to the imposition of civil sanctions at its own facility, contrary to our expectation.

Finally, consider civil sanction-related general deterrence. First, similar to administrative sanctions, the effect of civil sanction-related general deterrence is positively influenced by increases in the effluent limit level. Thus, facilities facing higher effluent limits respond less strongly to the threat of civil sanctions imposed against facilities in general, contrary to our expectation. Second, the effect of civil sanction-related general deterrence is negatively influenced by the presence of a final limit type. Thus, facilities facing final limits respond less strongly to the threat of civil sanctions, contrary to our expectation. Third, the effect of civil sanction-related general deterrence is negatively influenced by the presence of a permit modification. Thus, facilities enjoying a modification to their permit respond more strongly to the threat of civil sanctions, consistent with our primary expectation. Fourth, the effect of civil sanction-related general deterrence is negatively influenced by increases in flow capacity. Thus, larger facilities, as measured by their flow capacity, respond more strongly to the threat of civil sanctions, consistent with our primary expectation.

Conclusion

If the noncompliance figures cited at the beginning of this Article[65] are indicative of larger trends in environmental compliance status, both under the federal CWA and elsewhere, the federal and state governments seem to have much to learn about how to go about inducing regulated entities to improve their environmental performance track records. The empirical work described in this Article is designed to provide insights into the influence of seven particular facility and firm features on the effectiveness of government interventions at improving environmental performance of major facilities in the chemical industry regulated under the CWA.

In some instances, our findings correspond to the expectations generated by our analysis of the theoretical literature and previous empirical studies on environmental performance and compliance. We expected to find, for example, that interventions directed at facilities with a great deal of volatility in discharge levels would improve perform-

[65] *See supra* notes 6–15 and accompanying text.

ance, by reducing discharges relative to permitted levels, more than interventions directed at facilities with less volatility. We found that a facility facing greater volatility responds more strongly to both federal and state inspections at its own facility. Other findings confound our expectations. The general deterrent effect of both federal and state inspections was weaker, for example, at facilities with volatile discharges than at those not experiencing as much volatility. In still other cases, our findings are consistent with one of two or more alternative expectations we generated, but inconsistent with others. Facilities with permits that have been modified respond more strongly to the threat of federal inspections, administrative sanctions, and civil sanctions than facilities without such modifications. These findings are consistent with the expectation that the norm of reciprocity will influence facilities whose permits have been modified—inducing them to improve performance—to a greater extent than it will affect firms that have not experienced permit modifications.[66] They conflict, however, with the theory that facilities with permits that have been modified are less likely to take interventions seriously than facilities without modified permits because the former may believe that all permit limits are subject to negotiation.

The findings described in Part III do not provide definitive answers to the question of how facility and firm features relate to the effectiveness of government interventions on environmental performance. This conclusion is true even with respect to the influence on performance by major facilities regulated under the CWA of the seven features we choose to study, in part because of the inconclusive nature of some of our findings, and in part because data from a different period might provide different results. We hope that our study illustrates, however, the potential utility to both regulators and regulated entities of considering the influence of facility and firm features on environmental performance. Regulators may be able to allocate their enforcement resources more effectively if they direct interventions at facilities with features that make them likely to respond strongly to interventions. They may be able to predict what facilities are likely to respond to a greater or lesser extent to different kinds of interventions and shape their interactions with regulated facilities accordingly. Regulated facilities may be able to assess whether certain features make it easier or more difficult for them to improve performance and plan accordingly.

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[66] *See* discussion *supra* Part I.A.3.

If our study is to serve as an effective starting point in providing these kinds of insights, more work needs to be done to assess the influence of facility features on environmental performance, both in and outside the context of government interventions. Our study can provide guidance on both the design—by providing examples of the kinds of questions to ask—and implementation—by describing the methodology we use to answer these questions—of future empirical work. Perhaps when legislators and agency officials celebrate the CWA's fiftieth anniversary, they will be able to toast high rates of compliance with regulatory obligations, instead of ignoring evidence of troublesome compliance figures.

GREENWASHED?: DEVELOPERS, ENVIRONMENTAL CONSCIOUSNESS, AND THE CASE OF PLAYA VISTA

MATTHEW J. PARLOW*

Abstract: While many businesses are becoming greener, development corporations may have the greatest incentive to integrate environmental values into their everyday business practices. With the effects of urbanization, suburbanization, and sprawl, cities are increasingly requiring environmental mitigation measures for approval of new development. In response, some development corporations may become greenwashed to obtain discretionary land use approvals to build their proposed developments. Others may build greener developments to meet the market demand from environmentally conscious buyers. An increasing number of developers, however, adopt environmentally responsible business practices for, at least in significant part, altruistic reasons. A prime example of this phenomenon is Playa Vista, the more than 1000-acre development in Los Angeles that is currently the largest urban infill project in the country. Playa Vista serves as a useful case study for exploring how developers' inclusion of various stakeholders—particularly environmentalists—may signal a paradigm shift in how development occurs.

INTRODUCTION

Corporations increasingly are becoming more environmentally conscious in their products and operations. Some are doing so in response to government regulation, while others are doing so voluntarily.[1] But perhaps no type of corporation has greater incentives to be-

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[1] *See generally* Robert L. Glicksman & Dietrich H. Earnhart, *Effectiveness of Government Interventions at Inducing Better Environmental Performance: Does Effectiveness Depend on Facility or Firm Features?*, 35 B.C. ENVTL. AFF. L. REV. 479 (2008) (analyzing the effectiveness of environmental regulation); Kurt A. Strasser, *Do Voluntary Corporate Efforts Improve Environ-*

come more environmentally conscious in its operations and products than does the real estate development corporation.[2]

Scholars have bemoaned the negative environmental consequences and externalities of urbanization, suburbanization, and urban sprawl—urban runoff, poorer air quality, degraded water quality and availability, unsustainable energy consumption, and the like.[3] In response, local governments[4] are requiring environmental mitigation measures for approval of new development projects. This change in land-use decisionmaking has led many developers to become proactively green to secure discretionary—yet necessary—land use approvals to build their new developments.[5] While there may be many plausible impetuses behind these voluntary efforts, the new environmentally responsible business practices in real estate development are nevertheless noteworthy and warrant further scholarly exploration.

Part I of this Article provides a general overview of local governments' land use approval processes and powers, and the various mitigation—including environmental—measures required for approval of new development projects. Part II details the ways in which real estate development corporations have become more proactively green in anticipation of cities' land use approval processes. Part III explores the impetuses behind developers' proactivity in adopting more environmentally responsible business practices. Finally, Part IV uses the case of the Playa Vista development project in Los Angeles, California as an example of how developers' voluntary adoption of greener standards and practices and engagement of community stakeholders—environmentalists, in particular—in the development design process can lead to the success-

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mental Performance?: The Empirical Literature, 35 B.C. Envtl. Aff. L. Rev. 533 (2008) (reviewing the successes and limitations of voluntary corporate efforts at improving environmental performance).

[2] In this Article, I use the terms "real estate development corporations" and "developers" interchangeably.

[3] *See* Robert D. Bullard et al., *The Costs and Consequences of Suburban Sprawl: The Case of Metro Atlanta*, 17 Ga. St. U. L. Rev. 935, 952–60 (2001) (detailing the environmental problems associated with suburban sprawl); Edward H. Ziegler, *Urban Sprawl, Growth Management and Sustainable Development in the United States: Thoughts on the Sentimental Quest for a New Middle Landscape*, 11 Va. J. Soc. Pol'y & L. 26, 37–45 (2003) (noting the quality of life concerns brought about by urban sprawl). *See generally* F. Kaid Benfield et al., Once There Were Greenfields: How Urban Sprawl Is Undermining America's Environment, Economy and Social Fabric 1 (1999) (explaining the environmental and societal problems of urban sprawl).

[4] In this Article, I use the terms "local governments," "cities," and "localities" interchangeably and broadly to refer to local government entities with land use authority.

[5] In this Article, I use the term "green" to refer to environmentally conscious practices.

ful approval of development projects. Moreover, this useful case study may signal a paradigm shift in how development occurs.

I. The Land Use Approval Process, Mitigation Measures, and an Environmental Focus

A. *An Overview of Zoning and Planning*

The modern system of zoning and planning did not take root until the beginning of the twentieth century. Throughout the eighteenth and nineteenth centuries, cities did not engage in much land-use regulation, instead relying on the courts to resolve conflicting land uses through nuisance law.[6] With the advent of the Industrial Revolution and other significant changes in society, including the growth of major urban centers, cities found nuisance law inadequate to deal with the new land use conflicts that had arisen.[7] Accordingly, cities began to develop land use regulatory schemes, largely through zoning ordinances, that divided their boundaries into zones, thereby segregating incompatible land uses from one another.[8] Such zoning laws dictated what structures could be built and what uses were permitted on an individual's property.[9] Property owners challenged local governments' ability to enact such zoning laws, but the U.S. Supreme Court upheld the laws' constitutionality in the landmark case *Village of Euclid v. Amber Realty Co.*[10] With this decision, Euclidean Zoning was born, a concept that forms the foundation for today's land use regulatory regime.[11]

In theory, under Euclidean Zoning, a city would divide its land into zones, stating the permitted uses and physical and spatial building requirements or limitations for each zone; property owners would then build on and use their property accordingly.[12] This zoning scheme provided exceptions for unique circumstances through discretionary land use regulatory tools such as variances and special use permits.[13] Unsurprisingly, like any rational actor in the marketplace, landowners and developers sought to secure such discretionary approvals to enable

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[6] Eric R. Claeys, Euclid *Lives? The Uneasy Legacy of Progressivism in Zoning*, 73 Fordham L. Rev. 731, 731 (2004).

[7] *Id.*

[8] Daniel P. Selmi & James A. Kushner, Land Use Regulation 50 (2004).

[9] *See id.*

[10] Vill. of Euclid v. Amber Realty Co., 272 U.S. 365, 397 (1926).

[11] *See* Selmi & Kushner, *supra* note 8, at 52.

[12] *See id.* at 57 n.1.

[13] *See id.* at 51.

them to do more with their property than the zoning laws allowed, and more than others similarly situated were permitted to do.[14] As a result, this discretionary approval process has seemingly become the norm in today's land use system. So while most cities use zoning laws to set an overall plan for the city's land use development, a significant portion of a city's planning and land use efforts arise in connection with such special requests.[15]

In considering and granting requests for discretionary approvals, city officials must consider the various impacts that new developments will have on their community.[16] These externalities include increased traffic, impacts on existing infrastructure, and environmental effects, to name but a few. As a condition of development approval, city officials may require developers to provide exactions, pay impact fees, and/or limit the use of their property.[17] It has been said that "[e]xactions are the concessions local governments require of property owners as conditions for the issuance of the entitlements that enable the intensified use of real property."[18] These exactions are often dedications of land that are used to offset the negative impacts of the proposed project or to meet the infrastructure needs of the new development.[19] They may include roads, sidewalks, bike paths, and the like. Impact fees are monetary conditions imposed on developers to pay for the proposed development's proportional increased demand on existing infrastructure.[20] They may include everything from school impact fees, anticipating an increase in school-aged children from the new development, to sewer impact fees for expanded sewer capacity needs.[21] Local governments also impose conditions on the landowner's actual use of the property, such as limiting the types of uses or the hours during which a business can operate.[22]

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[14] *See id.* at 50.

[15] Shelley Ross Saxer, *Planning Gain, Exactions, and Impact Fees: A Comparative Study of Planning Law in England, Wales, and the United States*, 32 Urb. Law. 21, 27 (2000).

[16] *Id.* at 43.

[17] *See id.*

[18] Mark Fenster, *Takings Formalism and Regulatory Formulas: Exactions and the Consequences of Clarity*, 92 Cal. L. Rev. 609, 611 (2004).

[19] *See id.* at 623 & n.57.

[20] *See* Robert E. Deyle & Mary Kay Falconer, *Revenue Options for a Risk-Based Assessment of Developed Property in Hurricane Hazard Zones*, 18 J. Land Use & Envtl. L. 299, 309 (2003).

[21] Daniel J. Curtin, Jr. et al., *Exactions Update: The State of Development Exactions After* Lingle v. Chevron U.S.A., Inc., 38 Urb. Law. 641, 648 (2006); Sara C. Galvan, *Wrestling with MUDs to Pin Down the Truth About Special Districts*, 75 Fordham L. Rev. 3041, 3061 (2007).

[22] *See* Edward H. Ziegler, *Partial Taking Claims, Ownership Rights in Land and Urban Planning Practice: The Emerging Dichotomy Between Uncompensated Regulation and Compensable*

Local governments impose exactions, impact fees, and conditions on the use of property either through an individualized, ad hoc analysis of a proposed development or through legislatively determined criteria that apply to different proposed developments, depending on size.[23] Despite broad authority to condition development, constitutional protections—namely the Fifth Amendment Takings Clause—place a limit on what and how much local governments can require of developers through such means.[24] The Supreme Court introduced a two-pronged constitutional test in *Nollan v. California Coastal Commission* and *Dolan v. City of Tigard*. First, there must be an "essential nexus" between the mitigation measure imposed and a valid governmental goal. Second, there must be "rough proportionality" between the amount or degree of the mitigation measure and the impacts created by the new development that the measure seeks to allay.[25]

B. *Environmental Mitigation Measures Generally*

As many cities have become more environmentally conscious, they have started to impose exactions, impact fees, and conditions on their approval of new development in order to address various environmental impacts. Some states mandate that cities ensure that developers dedicate land and/or pay impact fees to provide open space within both residential and commercial developments before approving developments.[26] In other states, cities are merely encouraged and empowered, though not required, to incorporate open space requirements into their discretionary land use approvals, such as subdivision applications.[27] For example, Longmont, Colorado requires all new de-

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Benefit Extraction Under the Fifth Amendment Takings Clause, 22 J. Land Resources & Envtl. L. 1, 10 & n.54 (2002) (noting various conditions imposed by local governments in granting discretionary approvals).

[23] *See* Fenster, *supra* note 18, at 645.

[24] U.S. Const. amend. V; Dolan v. City of Tigard, 512 U.S. 374, 386 (1994); Nollan v. Cal. Coastal Comm'n, 483 U.S. 825, 831–37 (1987).

[25] *See Dolan*, 512 U.S. at 391 (adopting the rough proportionality test); *Nollan*, 483 U.S. at 837 (setting forth the essential nexus test); Mark Fenster, *Regulating Land Use in a Constitutional Shadow: The Institutional Contexts of Exactions*, 58 Hastings L.J. 729, 741–43 (2007). *But see* Richard Duane Faus, *Exactions, Impact Fees, and Dedications—Local Government Responses to* Nollan/Dolan *Takings Law Issues*, 29 Stetson L. Rev. 675 (2000) (discussing how some states require a dual rational nexus test, which seems at odds with the *Nollan/Dolan* test).

[26] *See* John R. Nolon, *In Praise of Parochialism: The Advent of Local Environmental Law*, 26 Harv. Envtl. L. Rev. 365, 394 (2002) (noting Washington and New Jersey laws for subdivision development that help to preserve open space).

[27] *See id.* at 393–95.

velopment projects to set aside a certain percentage of land for open space use, usually ranging from 10% to 30% for residential developments and 20% to 30% percent for nonresidential developments.[28] In Louisville, Colorado, residential developers must dedicate at least 15% of their subdivided land for park, school, or other related purposes, while nonresidential developers must dedicate a minimum of 12%.[29]

Other localities have focused environmental mitigation efforts on preservation of farmland, forests, wildlife habitats, and other natural areas. For example, Montgomery County, Maryland developed a successful transferable development rights program to protect its agricultural land.[30] In Davis, California, developers must pay an impact fee so that the City can purchase land to create a buffer zone between the new development and the remaining agricultural land.[31] Other states, such as Vermont, have authorized their local governments to impose impact fees or off-site mitigation measures to protect agricultural land and critical wildlife habitats.[32] Concord, New Hampshire has created a shoreline protection district to better control water pollution, maintain water quality, and protect natural habitats for birds, fish, and other aquatic life.[33] These examples of environmental mitigation measures are representative of the types of activity occurring at the local and state levels throughout the country.

C. *Environmental Mitigation Measures for the Building of New Developments*

The most notable area of environmental mitigation measures imposed by states and localities may be in the green building arena.

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[28] Longmont, Colo., Land Development Code § 15.05.040(c) (2002), *available at* http://www.ci.longmont.co.us/planning/dev_code/documents/chapter15.059-26-06amendments.pdf.

[29] Louisville, Colo., Municipal Code § 16.16.060 (2007), *available at* http://www.ci.louisville.co.us/CityClerk/municode.htm (follow "Louisville Municipal Code" hyperlink).

[30] *See* Julian Conrad Juergensmeyer et al., *Transferable Development Rights and Alternatives After* Suitum, 30 Urb. Law. 441, 450–51 (1998).

[31] *See, e.g.*, Anne E. Mudge, *Impact Fees for Conversion of Agricultural Land: A Resource-Based Development Policy for California's Cities and Counties*, 19 Ecology L.Q. 63, 72 (1992).

[32] *See id.* at 67. Some cities in Vermont have adopted approval requirements to protect agricultural land and wildlife habitat. *See, e.g.*, Bennington, Vt., Land Use & Development Regulations § 8.11(A)–(B)(3) (2006), *available at* http://www.bennington.com/government/zbrp.PDF (requiring that subdivisions "be designed to preserve . . . fragile features . . . and rural conservation resources," and to ensure open space for agricultural and forestry use); Brandon, Vt., Land Use Ordinance § 711(i)(1)–(2)(c) (2006), *available at* http://www.town.brandon.vt.us/Ordinances/BLUO_May_2006.pdf (expressing the town's intent to preserve farm and forest land by possibly requiring management plans for farmlands, forests, wildlife, and other natural areas).

[33] *See* Nolon, *supra* note 26, at 409.

Green building, or "sustainable construction," has been defined as "creating a healthy built environment based on ecologically sound principles" that "look[] at the entire life cycle of the built environment: planning, design, construction, operation, renovation and retrofit, and the end-of-life fate of its materials."[34] These principles are perhaps most widely recognized as manifested in the Leadership in Energy and Environmental Design (LEED) standards created by the U.S. Green Building Council (USGBC), a private, nonprofit organization with a goal of promoting and standardizing green building methods.[35] The LEED standards are based on building performance in the following categories: site selection; water efficiency; energy and atmosphere; materials and resources; indoor environmental quality and innovation; and design quality.[36]

According to the USGBC, nine states and more than forty local governments have passed legislation requiring LEED certification for some forms of new development.[37] Cities such as Austin, Texas; Eugene, Oregon; and San Jose, California require new municipal buildings to meet LEED certification standards.[38] The City of Austin also extends this certification requirement to include certain new private, nonmunicipal buildings.[39] Some cities have gone even further. In 2005,

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[34] Charles J. Kibert, *Policy Instruments for a Sustainable Built Environment*, 17 J. Land Use & Envtl. L. 379, 383 (2002) (internal quotations omitted).

[35] *See* U.S. Green Building Council, LEED http://www.usgbc.org/DisplayPage.aspx?CategoryID=19 (last visited Apr. 29, 2008).

[36] Christopher P. Perzan, *What You Should Know About Green Building*, CBA Rec., Nov. 2006, at 29, 38, *available at* http://www.brownfieldcounsel.com/article.pdf.

[37] *Developers, Managers See Green Building Perks*, Realtor Mag. Online, June 20, 2007, http://www.realtor.org (search "Developers, Managers See Green Building Perks"); *see* Christopher D. Montez & Darren Olsen, *The LEED™ Green Building Rating System and Related Legislation and Governmental Standards Concerning Sustainable Construction*, Construction L., Summer 2005, at 38, 39–42 (discussing how LEED standards have influenced or been adopted by federal, state, and local governments).

[38] *See* Montez & Olsen, *supra* note 37, at 41–42.

[39] *See* Austinenergy.com, Energy Efficiency, Residential Green Building Program, For Homeowners and Building Professionals, http://www.austinenergy.com/Energy%20Efficiency/Programs/Green%20Building/Programs/residential.htm (last visited Apr. 29, 2008). These developments include mixed-use projects in the City's central business district and downtown areas; multifamily residences in the City's university neighborhood overlay district; single-family residences, multifamily residences, and commercial and institutional buildings with an area greater than 25,000 square feet in the City's Mueller redevelopment district; Planned Unit Developments; SMART housing projects; and houses in the City's traditional neighborhood district. *See* Austinenergy.com, Energy Efficiency, Projects Requiring an Austin Energy Green Building™ Rating, http://www.austinenergy.com/Energy%20Efficiency/Programs/Green%20Building/Participation/requirements.htm (last visited Apr. 29, 2008).

Scottsdale, Arizona became the first city in the United States to require that all new city buildings be certified at the LEED Gold standard level.[40] As evidenced by these trends, more states and cities are encouraging or requiring LEED standard certification for new developments within their boundaries.[41]

II. Developers Become More Proactively Green

In response to the rise and increase of such environmental mitigation measures and requirements, many developers voluntarily have become proactively greener in their new developments. For example, some developers propose more open space in their projects than a locality would normally require. Many developers include energy-efficient appliances in new homes, even if local requirements do not mandate their inclusion. Other developers use recycled materials such as scrap metal, concrete, wood, and the like in their new developments without the local government requiring them to do so. Some developers propose more pedestrian-friendly developments to lessen residents' use of cars. Many developers build more energy-efficient homes than required by local and state standards. They include, among other things, effective insulation, solar panels, radiant floor heating, high-performance windows, rainwater collection systems, tight construction and ducts, and energy-efficient heating and cooling systems. Many commercial developments also boast environmentally friendly qualities: individualized temperature controls at work stations, waterless urinals, faucets with automatic sensors, computerized blinds that respond to outdoor weather conditions, and roof gardens designed for added insulation and to help control nonpoint source runoff pollution.[42] As discussed further below, while there may be many impetuses for this trend, the results of such proactivity in exceeding current environmental mitigation standards and requirements are nevertheless impressive and noteworthy.[43]

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[40] *See* Montez & Olsen, *supra* note 37, at 42.

[41] *See id.* at 39–42. Recently, the City of Los Angeles adopted a new green development program that required certain larger new developments to be fifteen percent more energy efficient. *See* Margot Roosevelt, *Bid to Make Buildings Greener OKd*, L.A. Times, Nov. 16, 2007, at B1, *available at* 2007 WLNR 22700969.

[42] Theodore C. Taub, *Materials for Discussion Regarding Green Buildings*, 2006 A.L.I.-A.B.A. Course of Study 399, 403–04, *available at* SM004 ALI-ABA 399 (Westlaw).

[43] *See* discussion *infra* Part III.

III. The Potential Impetuses Behind Developers' Environmentally Responsible Business Practices

There may be many explanations as to why developers voluntarily propose such environmentally friendly new developments. Some may be straightforward and monetarily based. For example, it is likely that by anticipating and controlling for the environmental mitigation measures in advance, developers can better approximate the associated costs and build them into their business models with greater certainty. In addition, by exceeding the local standards and requirements, developers can better ensure a more expeditious approval process and, thus, limit costs for delays in the process that might normally arise when city officials consider what exactions, impact fees, and conditions to impose.

Many developers may lean toward greener developments because of financial incentives that various levels of government provide for developing greener buildings. For example, the federal government offers a credit of $2000 for developers who construct homes that are projected to save a minimum of fifty percent of the heating and cooling energy of a comparable home that meets or exceeds the standards of the 2003 International Energy Conservation Code.[44] In addition, the Internal Revenue Code provides a tax deduction to property owners for the costs of certain "energy efficient commercial building property placed in service during the taxable year."[45] States and cities also provide financial incentives for greener building by, among other approaches, waiving certain application fees, providing expedited review of the proposed development project, and offering tax increment financing.[46]

In an increasingly competitive political marketplace for securing discretionary land use approvals, developers may be proposing greener developments to ingratiate themselves to local government decisionmakers. In many cities—particularly those on either coast—environmental consciousness has become a community value, and thus, residents expect their local government officials to incorporate this value

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[44] *See* The Tax Incentives Assistance Project: Builders & Manufacturers Tax Incentives, http://www.energytaxincentives.org/builders/new_homes.php (last visited Apr. 29, 2008).

[45] I.R.C. § 179D (2006). This deduction applies to both new and retrofitted developments. *See id.*

[46] *See, e.g.*, Perzan, *supra* note 36, at 42 (noting the City of Chicago's financial incentives for green development). Moreover, states such as New York, Maryland, Massachusetts, and Oregon provide tax credits for LEED-certified buildings. *See* Montez & Olsen, *supra* note 37, at 39–40.

in their land-use decisionmaking. This incidence increases the possibility that a development project that barely meets the locality's environmental standards and requirements may be rejected by the city or may be denied preferential treatment, such as financial incentives and expedited review, in favor of greener developments. By voluntarily and proactively exceeding environmental mitigation standards and requirements with their proposed projects, developers increase the likelihood of securing the necessary approvals to construct their development.

Developers may also be attempting to meet an increasing market demand for environmentally friendly buildings or homes, and there are sensible reasons for doing so. According to a recent study, residential green building is expected to grow from $7.4 billion in 2005 to somewhere between $19 and $38 billion by 2010.[47] Green buildings also seem to improve worker productivity. As one scholar noted, "[N]umerous studies of sustainable design have concluded that a structure's interior thermal environment, which includes temperature, humidity levels, and ventilation control, influences worker productivity and performance, the building's overall air quality, and acoustics."[48] Thus, greener buildings have the potential to save millions, if not billions, of dollars for the American economy based on "increased productivity and reduced absenteeism."[49] In addition, a recent study found that a group of students in Orange County, California improved their test scores in environmentally conscious buildings that maximized natural light.[50] Moreover, as environmental consciousness grows in many communities, so does the market for greener homes.

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[47] *See* Brian D. Anderson, *Legal and Business Issues of Green Building*, WIS. LAW., Aug. 2006, at 10, 10 (citing a study conducted by McGraw-Hill and the National Association of Home Builders). Moreover, green building construction costs—which have been grossly overestimated upwards of 300%—are estimated at only 2% to 7% more than normal construction costs, due mainly to architectural and engineering design. *See* Perzan, *supra* note 36, at 39; *'Green Building' Costs Grossly Overestimated Says Study*, EURACTIVE.COM, Aug. 23, 2007, http://euractive.com/en/sustainability/green-building-costs-grossly-overestimated-study/article-166070.

[48] Stephen T. Del Percio, *The Skyscraper, Green Design, & the LEED Green Building Rating System: The Creation of Uniform Sustainable Standards for the 21st Century or the Perpetuation of an Architectural Fiction?*, 28 ENVIRONS ENVTL. L. & POL'Y J. 117, 136 (2004).

[49] *See* Taub, *supra* note 42, at 405–06 (citing California's Sustainable Building Task Force's October 2003 study, which found that green building could save up to $250 billion by preventing the "sick building syndrome").

[50] BLDG. DESIGN & CONSTR., WHITE PAPER ON SUSTAINABILITY: A REPORT ON THE GREEN BUILDING MOVEMENT 34 (2003), *available at* http://www.usgbc.org/Docs/Resources/BDC WhitePaperR2.pdf (noting that students in classrooms with the most "daylighting" progressed 20% faster on math tests and 26% faster on reading tests in an academic year than those students with the least "daylight").

Finally, while developers are clearly motivated by profit, they may also be proposing greener development, at least in part, for altruistic reasons. Indeed, as noted below with the case of Playa Vista,[51] some real estate development corporations have inculcated a culture of environmental consciousness in their businesses and developments.

IV. The Case of Playa Vista

A. *The History*

The Playa Vista development project in Los Angeles, California is the largest urban infill project in the country, at approximately 1087 acres.[52] Although the project is one of the greenest in the country, it did not start out that way. The story of Playa Vista is, thus, an instructive example of how developers may adopt and embrace greener standards, in part, by partnering with environmental groups to secure the approvals for, and ultimately construct, a development that at one point appeared impossible to achieve. Moreover, the story demonstrates how this change in approach may have led to a transformation into the greener culture that now defines Playa Vista.

The land now referred to as Playa Vista was originally owned by Howard Hughes.[53] Hughes left the property largely undeveloped, save for a few structures, including a large airplane hanger.[54] After Hughes died intestate, the Summa Corporation—one of the two corporations that took most of Hughes's property as successors-in-interest—became the owner of the property.[55] In January 1978, the Summa Corporation began plans to develop the property.[56] It proposed an elaborate development plan that called for 3246 residential units; 2,950,000 square feet of office and light industrial use, including high-rise office towers; 2,050,000 square feet of regional mixed-commercial use, including mas-

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[51] *See* discussion *infra* Part IV.

[52] Joan Hartmann, *The Southern California Wetlands Recovery Project: The Unfolding Story*, 30 Golden Gate U. L. Rev. 885, 952 (2000); *see* Business Wire, *Mayor Jerry Brown Offers Oakland Renaissance Proposal to Nation's Builders*, AllBusiness, June 30, 2000, http://www.allbusiness.com/government/government-bodies-offices-regional/6542250-1.html.

[53] *See* Corrie M. Anders, *Cities: The New Promised Land After Generations of Suburban Buildup, the Metropolis Is Chic Again, with Buyers and Builders Alike*, S.F. Examiner, Aug. 8, 1999, at E9.

[54] *See* John F. Lawrence, *Nice Profits from Better City Life*, Fortune, Oct. 9, 1989, at 117; Michael Stremfel, *Buildings Rise as End to Years of Bitter Dispute Nears*, L.A. Bus. J., Oct. 29, 2001, at 34.

[55] *See* Lawrence, *supra* note 54, at 117; Stremfel, *supra* note 54, at 34.

[56] *See* Stremfel, *supra* note 54, at 34.

sive shopping centers; 600,000 square feet of retail and commercial use for mixed-use development; and 600 hotel rooms.[57] The project contemplated little, if any, environmentally friendly building design.[58] Moreover, the Summa Corporation ignored environmentalists and alienated other community groups that were concerned about, among other things, the proposed project's environmental impacts.[59]

Although the Summa Corporation received approvals in September 1984 to develop the property, two significant lawsuits followed.[60] In late 1984, the Friends of Ballona Wetlands filed a lawsuit claiming that the Summa Corporation violated the California Coastal Act by not setting aside enough acreage to preserve the coastal wetlands.[61] About a year later, local community groups collectively known as the Venice Town Council filed suit challenging the Los Angeles City Council's approval of the Playa Vista environmental impact report (EIR).[62] The Venice Town Council alleged that the EIR, which the City Council approved in November 1985, failed to adequately consider the traffic and sewage impacts and other problems that the proposed development would create.[63] These lawsuits coincided with a Los Angeles County grand jury report that claimed that the transportation plan for the proposed development was not adequate to meet the increased traffic attributable to the project.[64] These lawsuits led to increased opposition to and political pressure against the proposed development. When a new city councilmember unseated an incumbent on an anti-Playa Vista platform, the project was stalled indefinitely.[65] The Summa Corporation's arrogance and, at best, indifference to community and environ-

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[57] L.A., Cal., Ordinance 160,523, Playa Vista Area D Specific Plan § 5 (Nov. 21, 1985), *amended by* L.A., Cal,. Ordinance 176,235 (Nov. 16, 2004).

[58] *See id.*

[59] *See* Lawrence, *supra* note 54, at 117; Jeffrey L. Rabin, *Playa Vista Back on Track as Praise Replaces Hostility*, L.A. Times, Jan. 29, 1990, at A1.

[60] *See* Stremfel, *supra* note 54, at 34.

[61] *See* Ida Picker, *California Schemin'*, Institutional Investor, Aug. 1, 1998, at 59; James Rainey, *Residents File Suit: Reversal Sought on Playa Vista Impact Report*, L.A. Times, Jan. 2, 1986, at B1, *available at* 1986 WLNR 1229326. The Ballona Wetlands constitute a significant portion of the westernmost part of the Playa Vista property. *See* Being a Good Neighbor, Restoring Wetlands, Playa Vista, http://www.playavista.com/about/good-neighbor/wetlands-restoration.php (last visited Apr. 29, 2008) [hereinafter Playa Vista, Good Neighbor].

[62] *See* Rainey, *supra* note 61, at B1. The Summa Corporation had agreed to set aside 175 acres for wetlands preservation, while the Friends of Ballona Wetlands claimed that 325 acres were necessary. *Id.*

[63] *See id.*

[64] *See* James Rainey, *Grand Jury Criticizes Summa, County Plans for Marina del Rey*, L.A. Times, Mar. 24, 1985, at B1, *available at* 1985 WLNR 958525.

[65] *See* Rabin, *supra* note 59, at A1.

mental concerns led to its inability to construct the proposed development.[66] The situation had degenerated to the point where many thought that Playa Vista would never be constructed.

In 1989, after years of unresolved litigation, the Summa Corporation sold Playa Vista in part to Maguire Thomas Partners, a major real estate developer in Southern California.[67] Maguire Thomas adopted a very different approach from the Summa Corporation in attempting to develop the property.[68] Maguire Thomas reached out to environmentalists and community members to try to build consensus on what type of development would be politically tenable.[69] Maguire Thomas held scores of community outreach meetings to listen to the concerns of community members and to attempt to address them in reconceiving the proposed development.[70] Community stakeholders expressed reservations about traffic, air pollution, the wetlands, as well as other environmental concerns, and sought to redesign the development to address these concerns.[71] In addition, Maguire Thomas approached the Friends of Ballona Wetlands, agreed to set aside more acreage for wetlands preservation in exchange for their support of the project, and ultimately settled the lawsuit that had been filed years earlier.[72] In incorporating community concerns into the project and settling the lawsuit, Maguire Thomas established a very different relationship with community groups and opponents, and its actions signaled a cultural change within Playa Vista that was deeply rooted in environmental consciousness.

In response to community feedback and input from the Friends of Ballona Wetlands and other environmental groups, Maguire Tho-

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[66] *See id.* (quoting Summa Corporation president John Goolsby, commenting on how company officials realized after the fact that they should have approached the project differently: "If we learned a lesson, it is to be more sensitive to the concerns of the community.").

[67] *See* Picker, *supra* note 61, at 59–60.

[68] *See* Jeffrey L. Rabin, *Battle over Developing Wetlands Is Nearing an End*, L.A. Times, Dec. 11, 1989, at B1.

[69] *See id.*

[70] *See* Julio Moran, *Playa Vista Developers Win Friends*, L.A. Times, Mar. 23, 1989, at B1, *available at* 1989 WLNR 2562308; Jeffrey L. Rabin, *Vast Community Takes Form at Playa Vista Workshops*, L.A. Times, July 15, 1990, at B1, *available at* 1990 WLNR 3671993.

[71] *See* Rabin, *supra* note 59, at A1.

[72] *See* Picker, *supra* note 61, at 60–61. Maguire Thomas agreed to set aside more than 250 acres for wetlands restoration. Rainey, *supra* note 61, at B1. The settlement agreement allowed the Friends of Ballona Wetlands to oppose the project if Playa Vista did not keep its promises with regard to the wetlands and other environmental concessions. *See* Ruth Lansford, *Playa Vista Plan's Impact*, L.A. Times, Oct. 11, 1992, at B6, *available at* 1992 WLNR 4025982.

mas proposed a revised development that was significantly scaled back in comparison to the one advanced by the Summa Corporation.[73] The new proposal—an anti-urban sprawl community that provided mixed-use design centered around pedestrian-friendly streets, public parks, and open spaces—was also far more environmentally friendly than its previous iteration.[74] Even after the release of the revised project plan, Maguire Thomas continued to meet with environmentalists and community members to solicit further feedback and make additional adjustments to the development.[75] Despite some residual opposition in the community, Maguire Thomas's collaborative approach earned it the respect and good will of many involved in the Playa Vista development process.[76] In 1990, the Los Angeles City Council unanimously approved the revised plan for development of Playa Vista.[77]

Shortly thereafter, two significant forces again derailed the building of Playa Vista. Southern California experienced a significant recession that particularly affected the real estate market.[78] The recession impacted Maguire Thomas's financial ability to move forward with the development of Playa Vista.[79] In addition, the revised EIR for Playa Vista, released in late 1992, drew additional critics and opposition from those who claimed that the EIR failed to properly address the significant increase in traffic attributable to the new development.[80] At public hearings conducted to discuss the adequacy of the EIR, environmentalists voiced concerns regarding traffic mitigation, flood precautions, stormwater runoff, and other such concerns.[81] In addition, City Councilmember Ruth Galantar publicly opposed the project in its current state because of the inadequacies of the EIR in properly addressing the environmental impacts.[82]

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[73] *See* Julio Moran, *Scaled-Back Playa Vista Building Plan Is Released*, L.A. Times, June 30, 1989, at B1, *available at* 1989 WLNR 2580821 (detailing the revised project).

[74] *See* Rabin, *supra* note at 59, at A1.

[75] *See id.*

[76] *See* Moran, *supra* note 70, at B1.

[77] *See* Picker, *supra* note 61, at 60.

[78] *Id.*

[79] *Id.*

[80] Mathis Chazanov, *Judge Upholds City Approval of Playa Vista Project*, L.A. Times, Aug. 25, 1994, at B2.

[81] *See* Greg Krikorian, *Hearing Reveals Growing Optimism About Playa Vista Project*, L.A. Times, Dec. 6, 1992, at B3, *available at* 1992 WLNR 4063071.

[82] *See* Jeffrey L. Rabin, *Galantar Voices Opposition to Playa Vista Plan*, L.A. Times, Jan. 1, 1993, at B1.

Maguire Thomas reacted to the opposition and criticism by making concessions to address the environmental impacts.[83] Among them was a promise to increase the amount of park space in the development, and to install and maintain filters and catch basins to filter stormwater created by the development.[84] These changes earned the endorsement of Councilmember Galantar, who joined a broad array of civic, labor, and business groups in supporting the project.[85] But opposition to the project did not subside.[86] An environmental group called Save Ballona Wetlands filed a lawsuit alleging that the EIR failed to adequately consider the traffic, air pollution, and other environmental consequences of the proposed development.[87] The court found, however, that the City properly followed the California Environmental Quality Act in approving the EIR for Playa Vista.[88] In addition, in early 1994, the Friends of Ballona Wetlands agreed to abandon their lawsuit against the City of Los Angeles and the State of California when Maguire Thomas agreed to dedicate $12.5 million to restore the saltwater marsh on the property and to abandon the proposed highway that would have run through the wetlands.[89]

Despite these advances, Maguire Thomas still faced significant hurdles to beginning construction.[90] Maguire Thomas was having problems funding the Playa Vista project.[91] In addition, another environmental group, the Wetlands Action Network, filed a lawsuit alleging that the U.S. Army Corps of Engineers performed an inadequate as-

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[83] *See* Jeffrey L. Rabin, *Builder Alters Vast Playa Vista Project*, L.A. TIMES, May 27, 1993, at B1.

[84] *Id.* Other concessions included a promise to limit the amount of office space in future phases of the development if the corporation could not reduce rush hour traffic in the area, a commitment to set aside fifteen percent of the residential housing for affordable housing, and an agreement to reduce the maximum height of buildings in the development from nine to six stories. *Id.*

[85] *See* Ron Russell, *Playa Vista Casts Shadows Across Galanter's Future*, L.A. TIMES, Sept. 26, 1993, at J1, *available at* 1993 WLNR 4192922.

[86] *See id.*

[87] *See* Ron Russell, *Opponents of Playa Vista Sue over Environmental Report*, L.A. TIMES, Oct. 24, 1993, at B3, *available at* 1993 WLNR 4196163.

[88] California Environmental Quality Act, CAL. PUB. RES. CODE §§ 21,000–21,177 (2005); *see* Wetlands Action Network v. U.S. Army Corps of Eng'rs, 222 F.3d 1105, 1110 (9th Cir. 2000); Chazanov, *supra*, note 80, at B2. A year later, Save Ballona Wetlands dropped its appeal in exchange for a payment of $23,000 in attorney's fees. *Westside Group Drops Fight over Development*, L.A. TIMES, June 28, 1995, at B5.

[89] *See* Picker, *supra* note 61, at 60–61.

[90] *See id.* at 62.

[91] *See id.* (noting the dissipation of the Maguire Thomas partnership and the reticence of investors to invest in the project because of the string of lawsuits that Playa Vista faced).

sessment of the development.[92] Due to financial strains, Maguire Thomas sold its controlling interest in Playa Vista to a group of investors led by Morgan Stanley and Goldman Sachs.[93] These investors formed a new entity called Playa Capital Company LLC for the purpose of building Playa Vista.[94] Finally, bulldozers and graders cleared the property and construction began.[95]

B. *The Project Today: A Model of Environmental Consciousness*

Despite additional delays resulting from lawsuits and methane gas concerns,[96] construction continued, and in May of 2002, Playa Vista welcomed its first residents.[97] Phase one of the revised project that Maguire Thomas and Playa Capital proposed, advanced, and built in collaboration with environmentalists and other community stakeholders has proven to be one of the most environmentally conscious large-scale developments in the country.[98] The anti-urban sprawl plan highlights a pedestrian-oriented, mixed-use design, where people can work, live, and recreate.[99] Playa Vista has received recognition for this innovative design.[100] In 1999, the project received the Ahwahnee Award in recognition of its higher-density, mixed-use design.[101] In 2001, the U.S. Environmental Protection Agency awarded Playa Vista one of its Clean Air Awards for "creating a community where residents [were] able to manage their household needs without getting into their

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[92] *See Wetlands Action Network*, 222 F.3d at 1109. While the Wetlands Action Network prevailed in the district court, the U.S. Court of Appeals for the Ninth Circuit overturned the decision on appeal. *Id.* at 1122. Nevertheless, the time and money spent on this lawsuit further delayed construction of the project. *See* Picker, *supra* note 61, at 62.

[93] *See* Picker, *supra* note 61, at 62–63.

[94] *See id.* at 63.

[95] *See id.* at 64.

[96] After an extensive study of the methane gas issues related to the property, the City of Los Angeles Department of Building and Safety required the installation of gas mitigation systems that consisted of a membrane shield under the buildings, vents, and a series of alarms. Martha Groves, *Playa Vista Buyers Will Test Capability of Methane Shield*, L.A. Times, Jan. 6, 2003, at A1, *available at* 2003 WLNR 15115733.

[97] *See* Martha Groves, *Playa Vista Views Shared*, L.A. Times, Dec. 13, 2002, at B3.

[98] *See Brea, Playa Vista Win Role Model Awards*, L.A. Times, Nov. 28, 1999, at 12, *available at* 1999 WLNR 6610380.

[99] *See id.*

[100] *See id.*

[101] *Id.* The Ahwahnee Award recognizes developments that are "designed with housing, jobs and daily shopping and recreation venues within easy walking distance. . . . [A]nd as many mass transit connections as possible." *Id.*

cars."[102] The reconceived development has also reduced the original traffic projections. Playa Vista provides bus services for traveling to different points within the development and a clean fuel shuttle service for traveling to the nearby beaches.[103] Playa Vista also partnered with Global Electric Motors, a DaimlerChrysler company, to provide incentives for residents to purchase or lease zero-emission electric vehicles.[104]

Playa Vista has also focused on recycling in its construction. The project has had a ninety percent average recycling rate during construction thus far.[105] Many buildings either have been constructed from materials that contain a high percentage of recycled content or from certified sustainably grown lumber.[106] In 2005, the State of California's Waste Reduction Management Program recognized Playa Vista for its use of recycled materials in construction.[107] Residential units also contain one built-in bin for waste and one for recycling.[108]

The residential units are twenty-eight percent more energy efficient than California's 1998 Title 24 Building Energy Efficiency Standards require.[109] Playa Vista ensured such sustainable development when it adopted its Residential Sustainable Performance Guidelines in 1999, which require all builders in the development to adhere to environmentally responsible principles.[110] In addition, the development uses solar power to heat community swimming pools.[111]

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[102] Clean Air Advisory Committee, EPA, 2001 Clean Air Excellence Awards Recipients, http://www.epa.gov/air/caaac/2001awar.html (last visited Apr. 29, 2008).

[103] Sustainable Design, Transportation, Playa Vista, http://www.playavista.com/about/sustainable-design/transportation.php (last visited Apr. 29, 2008).

[104] *Id.*

[105] *See* Sustainable Design, Recycling, Playa Vista, http://www.playavista.com/about/sustainable-design/recycling.php (last visited Apr. 29, 2008) [hereinafter Playa Vista, Recycling].

[106] *Id.*

[107] *See* California Integrated Waste Management Board, Waste Reduction Awards Program, http://www.ciwmb.ca.gov/WRAP (last visited Apr. 29, 2008) (follow "all previous winners" hyperlink; search "Playa Vista" in the year 2005; then follow "Playa Vista" hyperlink).

[108] Playa Vista, Recycling, *supra* note 105. The waste generated from the development is sent to a materials recovery facility where it is sorted, processed, and, to the degree possible, recycled. *Id.*

[109] *See* Sustainable Design, Energy Efficiency, Playa Vista, http://www.playavista.com/about/sustainable-design/energy-efficiency.php (last visited Apr. 29, 2008) [hereinafter Playa Vista, Energy Efficiency].

[110] *See* Partnership for Advancing Technology in Housing (PATH), Path National Pilot: Playa Vista Releases Guidelines Directing Environmentally Responsible Residential Development (Mar. 25, 1999), http://www.pathnet.org/sp.asp?id=1630 (providing an overview of Playa Vista's Residential Sustainable Performance Guidelines).

[111] *See* Playa Vista, Energy Efficiency, *supra* note 109.

The drastically scaled-back version of Playa Vista, compared with the original plan of the Summa Corporation, is underscored by its incorporation of parks and other open space uses. Approximately seventy percent of the original planned development area, for a total of more than 750 acres, is now, or will be, devoted to parks and open space.[112] This dramatic increase in open space occurred because, in addition to the original acreage that Maguire Thomas and Playa Capital agreed to set aside for wetlands restoration and preservation, Playa Capital sold 192 acres to the State of California for $140 million.[113] The Trust for Public Law, a nonprofit organization, assisted in negotiating the deal.[114] Playa Capital also agreed to waive its right to purchase and eventually develop sixty-four acres adjacent to the Playa Vista property.[115] This concession brought the total amount of Playa Vista land that had been deeded to either the public or to environmental groups for restoration and preservation of the wetlands to more than 600 acres.[116]

Playa Vista has also restored most of the Ballona freshwater marsh.[117] The restoration and preservation of these wetlands will serve a variety of environmental purposes and benefits, including habitat creation and maintenance, flood control, and stormwater quality management.[118] The California Stormwater Quality Association recognized Playa Vista's wetlands restoration work by naming the project its Stormwater BMP (Best Management Practice) Implementation Project of the Year.[119]

Phase two of the Playa Vista project has also been significantly scaled-back from Summa Corporation's original proposal.[120] Phase two

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[112] *See* More than 750 Acres of Parks Available for Recreation at Playa Vista, http://www.playavista.com/living/parks.php (last visited Apr. 29, 2008) (noting that more than 750 acres of parks and open space will be available for recreation in the development).

[113] *See* Martha Groves, *Funds OKd for Ballona, Ahmanson*, L.A. Times, Oct. 1, 2003, at B1, *available at* 2003 WLNR 15133173.

[114] *See id.*

[115] *See id.*

[116] *See id.*

[117] *See* Playa Vista, Good Neighbor, *supra* note 61 (stating that twenty-four of the 26.1 acres of Ballona freshwater marshes have been restored to date).

[118] *See* Richard H. McNeer, *Nontidal Wetlands Protection in Maryland and Virginia*, 51 Md. L. Rev. 105, 108 (1992).

[119] *See* California Stormwater Quality Association, 2006 Conference, http://stormwaterconference.com/PastConferences/2006/tabid/136/Default.aspx (last visited Apr. 29, 2008).

[120] *See* City of L.A., Final Environmental Impact Report (FEIR): Village at Playa Vista 3 (2004), http://cityplanning.lacity.org/EIR/PlayaVista/PlayavistaFEIR/issues/Vol_I.pdf.

encompasses 111 acres of the Playa Vista property and will contain 2600 residential units; 175,000 square feet of office space; 150,000 square feet of retail space; and additional environmental benefits such as a riparian corridor and restoration of the Westchester bluffs on the southern portion of the property.[121] With phases one and two combined, Playa Vista will have fifty-five percent fewer residential units and seventy percent less retail square footage than originally envisioned.[122] The Los Angeles City Council approved phase two on September 22, 2004, but the City of Santa Monica and some environmental groups filed a lawsuit claiming that the EIR for phase two failed to sufficiently analyze the impacts that the phase would have on the treatment of wastewater generated by the project, increase in traffic congestion, and disruption to Native American burial sites.[123] So, the saga of Playa Vista continues.

Conclusion: Lessons Learned

Much can be gleaned from the Playa Vista experience. In many localities, the model of a developer pushing a development through a city council with little, if any, regard for community or environmental concerns seems to be on the decline. The Summa Corporation's travails, which are by no means unique, suggest as much. Indeed, the collaborative approach that Maguire Thomas and Playa Capital took with environmentalists and other community stakeholders may signal a paradigm shift in how developers approach discretionary land use approval processes.

The story of Playa Vista also demonstrates how some developers are surpassing the environmental mitigation requirements of their respective localities in proposing greener developments. Maguire Thomas and Playa Capital may have been motivated by political forces to obtain the discretionary land use approvals to build the project. They may also have been focused on the emerging market for greener development. But one need only peruse Playa Vista's website to see that the company has fully embraced sustainable development and environmental consciousness.[124] Indeed, much of Playa Vista's marketing and advertising campaign centers around its green development.[125] In

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[121] *See id.*

[122] Martha Groves, *Playa Vista Views Shared*, L.A. Times, Dec. 13, 2002, at B3.

[123] *See* City of Santa Monica v. City of Los Angeles, Nos. B189630, B189722, 2007 WL 2677035, at *3 (Cal. Ct. App. Sept. 13, 2007).

[124] *See* Playa Vista, http://www.playavista.com (last visited Apr. 29, 2008).

[125] *See id.* The website displays one of its marketing slogans on its main page, "Can Playa Vista Residents Really Run For Miles Without Leaving Their Front Yard?"

addition, its website contains information regarding the project's sustainable design, including details of the energy-efficiency and recycling aspects of the development. Playa Vista's decision to exceed the environmental requirements imposed by the City of Los Angeles and make environmental consciousness a part of how it defines the development demonstrates that developers may be becoming more green for altruistic reasons, in addition to the more business-driven reasons detailed above. Regardless, the case of Playa Vista and similar trends in land-use development suggest that we will likely see more developers becoming proactively and voluntarily green in their projects—a significant shift from traditional approaches in Euclidean Zoning.

DO VOLUNTARY CORPORATE EFFORTS IMPROVE ENVIRONMENTAL PERFORMANCE?: THE EMPIRICAL LITERATURE

KURT A. STRASSER*

Abstract: Many companies are adopting environmental performance programs that aim to go beyond regulatory compliance and provide greater environmental protection. How effective are they in doing so? This Article collects and surveys the empirical studies of environmental performance of these programs and presents a picture of mixed results. When companies adopt environmental management systems, their regulatory performance and nonregulated environmental impacts often improve. There is little empirical support, however, for the proposition that these systems are associated with design and implementation of greener products or processes. When companies adopt voluntary environmental performance standards, the evidence is mixed; it seems to suggest that these standards are not associated with improved performance. Yet a qualification is needed here: both the company programs and the empirical studies are relatively new and these results may well change as the programs become more institutionalized within the companies, and the studies have access to better data.

INTRODUCTION

Corporations are increasingly making voluntary efforts to protect the environment. These efforts are sometimes undertaken as part of a governmental initiative, sometimes as part of a trade association program, and sometimes they are undertaken by an individual company. Whatever the structure, they all share the feature of voluntariness, at least in the sense that they are not required as part of an environmental

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regulation. Do these voluntary efforts actually result in improved environmental performance by the companies that make them? A number of scholars have done empirical studies of this question, and this Article will review them.

I. Varieties of Voluntary Programs

For the purposes of this Article, voluntary programs will be grouped into two principle types. The first type is comprised of environmental management systems (EMSs), which have become increasingly popular and more familiar over the last several years.[1] EMSs are management systems designed to structure a corporation's environmental protection efforts and, hopefully, to move the company into regulatory compliance and beyond. As management systems, however, they do not in and of themselves entail a commitment to any specified level of environmental performance, although one hopes that better performance will follow the management effort.[2]

These EMSs typically incorporate a statement of company policy about environmental protection, and they generally are set up with a degree of involvement by top management of the firm. EMSs also usually establish a system for evaluating a company's environmental impacts and for managing these impacts throughout the entire company hierarchy, based on the familiar management idea "plan, do, check." A core justification for establishing an EMS is that conscious attention to environmental management throughout the organization will generate better environmental performance. Companies can obtain certification of their EMSs through the International Organization for Standardization (ISO) by applying the standards set forth in ISO 14001.[3] This certification involves monitoring the company to

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[1] *See* Cary Coglianese & Jennifer Nash, *Management-Based Strategies: An Emerging Approach to Environmental Protection*, *in* Leveraging the Private Sector: Management-Based Strategies for Improving Environmental Performance 3 (Cary Coglianese & Jennifer Nash eds., 2006). Professors Florida and Davison estimate that "roughly a quarter (24%) of manufacturing plants with more than 50 employees have adopted an EMS." Richard Florida & Derek Davison, *Why Do Firms Adopt Advanced Environmental Practices (And Do They Make a Difference)?*, *in* Regulating from the Inside: Can Environmental Management Systems Achieve Policy Goals? 82, 86 (Cary Coglianese & Jennifer Nash eds., 2001).

[2] *See* Coglianese & Nash, *supra* note 1, at 3–8 (providing a good, short introduction); Jennifer Nash & John R. Ehrenfeld, *Factors That Shape EMS Outcomes in Firms*, *in* Regulating from the Inside: Can Environmental Management Systems Achieve Policy Goals?, *supra* note 1, at 61, 62–68.

[3] *See generally* Susan Summers Raines & Christian Haumesser, *ISO 14001 in the United States: Good News on the Question of Hype Versus Hope*, 4 Envtl. Prac. 163 (2002), *available at* http://journals.cambridge.org/download.php?file=%2FENP%2FENP4_03%2FS14660466

ensure that there really is a management system and that it is being implemented. This check is typically done by third-party auditors, although a company may use its own employees if they have been trained and certified as auditors. Finally, EMSs often incorporate public reporting of the company's environmental efforts.

The second type of corporate environmental program considered in this Article is a voluntary commitment to achieve a specified level of performance. For example, a company or industry trade association might commit to reducing its toxic waste discharges, or its energy use, by twenty percent over the next five years. These voluntary commitments can be made through one of three different categories of programs. The first category consists of government-sponsored programs, such as Performance Track or WasteWise.[4] Under the terms of these programs, companies that join commit to a specified level of environmental action or reporting, or both; in exchange they receive public recognition, technical advice and networking opportunities, and sometimes fewer regular inspections or other regulatory concessions. The goal is to encourage companies to take their environmental performance beyond regulatory compliance. A second category of voluntary performance program includes those programs that are sponsored by trade associations or other industry groups. The Responsible Care program of the International Council of Chemical Associations is one of the most familiar of these types of programs.[5] Companies that commit to these programs typically promise specific environmental activities and performance, receiving industry recognition as well as technical assistance and advice. A third category is made up of company efforts undertaken by an individual company simply committing itself to a specific environmental performance target, such as a twenty-five percent reduction in carbon dioxide (CO_2) emissions.[6] Whatever their organizational structure, a key question is whether these voluntary performance standards are actually associated with improved environmental performance by the companies. This Article will survey the empirical litera-

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02021257a.pdf&code=6b7b66eee565fe4a9a01ec5fab104dcd (providing an introduction to the ISO system).

[4] National Environmental Performance Track, US EPA, http://www.epa.gov/perftrac (last visited May 6, 2008); WasteWise, US EPA, http://www.epa.gov/wastewise (last visited May 6, 2008).

[5] International Council of Chemical Associations, Responsible Care, http://www.responsiblecare.org (last visited May 6, 2008).

[6] *See* BSDglobal.com, Business and Sustainable Development: A Global Guide, Voluntary Schemes, http://www.bsdglobal.com/issues/climate_voluntary_schemes.asp (last visited May 6, 2008) (providing examples of individual company programs).

ture; unfortunately, it concludes that for the most part this association has not been shown.

II. What Is Environmental Performance?

This Article will consider studies that measure any of the three major aspects of performance. First, it will consider studies that measure how well companies succeed in minimizing their regulated discharges into the environment, typically discharges into air or water, or toxic releases.[7] As part of this analysis, the Article will consider the extent to which voluntary efforts are associated with improved company compliance with environmental regulation. The second aspect of environmental performance that this Article will consider is how well a company performs with nonregulated uses of resources, such as minimizing energy use, water use, and raw materials inputs. Third, this Article will examine what the empirical literature conveys about the impact of voluntary programs on company attempts to adopt cleaner production processes and to design cleaner products.

In measuring the impact of company adoption of voluntary programs, it is necessary to have a point of comparison for environmental performance, and the studies considered here have used different ones. The preferred measure is a comparison of company performance to an external standard, such as the performance of a control group of similar companies that did not adopt the program or, as an alternative, comparison to the average performance for the industry. Several of the studies use this measure and are, therefore, the most illuminating. On occasion, however, studies compare a company's current performance to its own earlier performance, measuring it before and after adoption of the voluntary program. This Article will consider these studies as well. While these studies are useful, their utility is limited because they do not allow for other factors influencing the company's performance, such as the well-known tendency for reported Toxic Release Inventory (TRI) releases to decline industry-wide—and indeed economy-wide—over time.[8] To understand the impact of voluntary programs on any TRI reduction, one would like to

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[7] This analysis will emphasize studies of measured environmental performance. While there is substantial literature that uses opinion surveys to determine performance, it will be used only sparingly here.

[8] *See* Press Release, EPA, EPA Releases Most Recent Community Right-to-Know Data on Toxic Releases (June 18, 1998), http://www.epa.gov/newsroom/index.htm (search "Right-to-Know Data on Toxic Releases").

allow for consideration of the industry-wide changes that take place simultaneously and presumably result from other causes.

Do voluntary programs improve environmental performance? This Article will start by considering the extent to which adoption of an EMS is associated with improved performance.

III. Do EMSs Improve Performance?

A. *Regulated Discharges: Air, Water, and Toxic Releases*

Most of the empirical studies find that implementation of an EMS is associated with better performance on regulated discharges, namely air, water, and toxic releases.[9] A leading study by the National Database on Environmental Management Systems (NDEMS) found this result to be the case for firms whose performance was measured on indicators chosen in advance by the companies: "[T]he introduction of an EMS can be expected to be at least somewhat beneficial to the environmental performance of most facilities, as well as to their operating and management efficiencies, and in some cases to their regulatory compliance patterns."[10] This conclusion resulted from an in-depth study of

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[9] Richard N.L. Andrews et al., *Environmental Management Under Pressure: How Do Mandates Affect Performance?*, *in* Leveraging the Private Sector: Management-Based Strategies for Improving Environmental Performance, *supra* note 1, at 111, 117–19 ("Empirical studies to date report modest but predominantly positive impacts of EMS's on environmental performance."). Similar conclusions are reported by European studies. *See* Julia Hertin et al., *Are "Soft" Policy Instruments Effective? The Link Between Environmental Management Systems and the Environmental Performance of Companies* 14–15 (SEWPS–SPRU Electronic Working Paper Series, Paper No. 124, 2004), *available at* http://www.sussex.ac.uk/spru/documents/sewp124.pdf.

Professors Florida and Davison evaluated survey data and concluded, "The results are clear: EMS plants are nearly twice as likely to report P2 [pollution prevention] as a source of plant level improvement (93.5% versus 69.7%) and three times more likely to view EMS as the source of significant in plant improvements (79% versus 28.3%)." Florida & Davison, *supra* note 1, at 90. Other sources of improvement found in the study included recycling (93.5% versus 69.0%), air emissions reduction (88.7% versus 53.5%), solid waste reduction (75.8% versus 54.5%), and decreased electrical use (67.7% versus 43.4%). *Id.* at 90–91.

The Performance Track program of the U.S. Environmental Protection Agency (EPA) is difficult to categorize, as it requires adoption of an EMS, but has additional requirements. Office of Inspector Gen., EPA, Evaluation Report: Performance Track Could Improve Program Design and Management to Ensure Value 4–5 (2007), *available at* http://www.epa.gov/oig/reports/2007/20070329-2007-P-00013.pdf (evaluating the program); *see* discussion *infra* note 40 and accompanying text.

[10] Nat'l Database on Envtl. Mgmt. Sys., Dept. of Pub. Policy, Univ. of N.C. at Chapel Hill, Environmental Management Systems: Do They Improve Performance?, Project Final Report, Executive Summary, at ES-25 (2003) (emphasis omitted),

data reported by participating firms. The extensive data covered a two-year baseline period prior to adoption of the EMS, as well as a three-year period of operating under it. Eighty-one firms originally began the study, although only thirty-one reported throughout the entire period. The data collected was quite comprehensive, and the analysis found EMS adoption to be generally associated with better performance.[11] This study considered firms that had adopted EMSs and volunteered to participate in NDEMS; many of the volunteers had been recruited by state and federal regulators.[12] The study's depth of information makes it useful, but to obtain this much information, the NDEMS used a non-random sample and ultimately had a small sample size. These limitations must be noted in evaluating the study's conclusions.

Similar conclusions emerged from several studies that evaluated reported TRI data. One substantial study used regression analysis to evaluate TRI data on 500 firms for the years 1994 and 1995.[13] It found that EMS adoption was associated with lower toxic emissions and, further, that this result was stronger for firms that had more comprehensive EMSs, supporting the inference that the EMSs had substantial effects.[14] In this study, "comprehensiveness" of an EMS was determined by considering a large number of different variables covered by the EMS, including inspections, number of Superfund sites, public disclosures, and toxic releases.[15] Firms with more comprehensive EMSs tended to have greater improvement in overall environmental performance. The result is particularly persuasive because the study controlled for changes in the firms' production levels by calculating the

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available at http://www.c2e2.org/documents/completeexecutivesummary.pdf [hereinafter NDEMS].

[11] More than two-thirds of the tracked Environmental Performance Indicators (EPIs) showed improvement, and approximately 56% of the reporting facilities experienced improvement. *Id.* at ES-4. However, 18% of the EPIs produced worse outcomes than before the EMS was adopted, although in only one facility did more than half of the EPIs decline. *Id.* In contrast, over 60% of facilities reported improvements in at least half the indicators associated with their EMS objectives and targets, and less than one-third experienced deterioration of the same indicators. *Id.* at ES-4 to –5.

[12] *Id.* at ES-24.

[13] Wilma Rose Q. Anton et al., *Incentives for Environmental Self-Regulation and Implications for Environmental Performance*, 48 J. Envtl. Econ. & Mgmt. 632, 634 (2004).

[14] *Id.* The study examined firms that were included in the Corporate Environmental Profile Directories, which was compiled from firm surveys by the Investor Responsibility Research Center for 1994 and 1995. *Id.* at 632–34. The results were strongest for the firms that discharged the most pollution prior to adopting EMSs and subsequently adopted the most comprehensive EMSs. *Id.* at 652. The study compared a firm's performance before and after adopting an EMS. *Id.* at 634–40.

[15] *Id.* at 635–36.

ratio of toxic emissions to sales. Several other studies have reached similar results, looking at TRI data to compare an individual company's releases before and after adoption of an EMS.[16] These general results are reflected in outcomes reported in survey-based studies of Austrian[17] and Mexican companies[18] as well. An earlier study found that firms with more environmental management activities had better performance on environmental spills.[19]

After a company adopts an EMS, is further improvement associated with taking the next step and having it certified for ISO compliance? Most of these studies do not purport to answer this question. The two studies that did consider it both found that EMS adoption was the important factor for environmental performance, and that certification in and of itself was not associated with further improvements.[20] The most persuasive explanation, offered by both studies, is that certifica-

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[16] Andrew A. King et al., *The Strategic Use of Decentralized Institutions: Exploring Certification with the ISO 14001 Management Standard* 30 (Corporate Soc. Responsibility Initiative, John F. Kennedy Sch. of Gov't, Harvard Univ., Working Paper No. 15, 2004), http://www.hks.harvard.edu/mrcbg/papers/seminars/Lenox_october_05.pdf (comparing actual toxic releases with predicted releases for the firms); *see* Matthew Potoski & Aseem Prakash, *Covenants with Weak Swords: ISO 14001 and Facilities' Environmental Performance*, 24 J. Pol'y Analysis & Mgmt. 745, 763, (2005) ("These analyses provide some evidence that, compared to noncertified facilities, ISO 14001-certified facilities experienced significantly *larger* reductions in pollution emissions, controlling for other factors and the endogeneity between facilities' decisions to join ISO 14001 and their environmental performance."); Michal Szymanksi & Piyush Tiwari, *ISO 14001 and the Reduction of Toxic Emissions*, 7 J. Econ. Pol'y Reform 31, 41–42 (2004) (examining TRI data linked with 264 ISO-certified manufacturing facilities in the United States from 1996 to 2001).

[17] Elisabeth Schylander & André Martinuzzi, *ISO 14001—Experiences, Effects and Future Challenges: A National Study in Austria*, 16 Bus. Strategy & Env't 133, 139 (2007) (surveying companies for their evaluations of EMS effectiveness and summarizing the results). Waste and recycling were reported to have shown the greatest improvements, with air and water discharges somewhat lower, although the absolute level of improvement was not shown. *Id.*

[18] Susmita Dasgupta et al., *What Improves Environmental Compliance? Evidence from Mexican Industry*, 39 J. Envtl. Econ. & Mgmt. 39, 61–62 (2000) (using regression to analyze data from a World Bank sponsored survey of 236 facilities chosen to represent Mexican factories by sector, size, class, and location).

[19] Jonathan Naimon et al., *Do Environmental Management Programs Improve Environmental Performance Trends? A Study of Standard & Poors 500 Companies*, Envtl. Quality Mgmt., Autumn 1997, at 81, 81 (using regression analysis to compare data on environmental management features collected in a 1992 survey of S&P 500 firms by the Investor Responsibility Research Center with environmental trend data for S&P 500 firms from 1994).

[20] NDEMS, *supra* note 10, at ES-25; King, *supra* note 16, at 30. Another study that compared the effects of four different U.S. voluntary programs found, however, that ISO 14001 certification was the most effective tool in improving performance. S.A. Melnyk et al., *Assessing the Effectiveness of US Voluntary Environmental Programmes: An Empirical Study*, 40 Int'l J. Production Res. 1853, 1875 (2002).

tion is done primarily as a representation to outside stakeholders, while it is adoption of the EMS that actually impacts performance.

Yet, as is so often the case with empirical work, this consensus is not complete. One important recent study reached conclusions that are inconsistent with the results reported above.[21] This study found no statistically significant difference between the environmental performance of firms with ISO-certified EMSs and a control group of similar firms that had not implemented EMSs.[22] This study used a more nuanced measure of performance than most. Rather than looking solely to the volume of TRI materials released, as the studies reported above had done, this study used a toxicity ranking system to allow for risk of harm created by the relative toxicity of all materials released, as well as their volumes. Thus, it measured the total relative toxicity of releases rather than just the aggregate number of pounds of toxic materials released. This control allowed for a change in the composition of a company's toxic waste stream discharge to be reflected. The study also normalized releases for production volume. It considered toxicity measured over five- and ten-year periods. The care with which the study was constructed—allowing for relative toxicity and production volume, and using a control group of firms for comparison—should be noted. Its results are an important qualification to the general consensus presented above, and the study certainly deserves to be counted in the overall survey of the literature.

Finally, one must consider what these studies say about whether companies that implement EMSs also show better regulatory compliance. Unfortunately, straightforward conclusions are not possible because the work done on this question, while quite substantial, reports conflicting results. One of the most careful efforts used regression analysis to look at the compliance performance of 3700 firms, four percent of which had ISO-certified EMSs.[23] It found that the firms with

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[21] Ryan A. Harding et al., The Role of ISO 14001 in Environmental Management at U.S. Manufacturing Facilities 51 (Apr. 7, 2003) (unpublished Group Project in Master's Program, Bren School, U.C. Santa Barbara), *available at* http://www.bren.ucsb.edu/research/2003Group_Projects/iso/Final/iso_final.pdf. The study sought to examine 484 facilities, although only 198 responded with data. *Id.* at 25. The toxicity ranking system was based on Occupational Safety and Health Administration (OSHA) permissible exposure limits and likely pathways of exposure. *Id.* at 21–22.

[22] *Id.* at 51.

[23] Matthew Potoski & Aseem Prakash, *Green Clubs and Voluntary Governance: ISO 14001 and Firms' Regulatory Compliance*, 49 Am. J. Pol. Sci. 235, 240 (2005). The facilities studied were some of the 3700 firms that had their air pollution regulated and performance reported in EPA's Integrated Data for Enforcement Analysis database. *Id.*

EMSs spent less time out of compliance with air toxic regulations—about twenty-five days per year on average—and concluded that "joining ISO 14001 does improve regulatory compliance beyond what likely would have occurred had the facilities not joined the program."[24] One problem in studying this question is determining whether the EMS improves performance, whether better performance influences the decision to implement an EMS, or whether both changes are determined by other company factors and management strategies. This study allowed for such a consideration by using sophisticated statistical methods to "isolate the impact of facilities' ISO 14001 membership on regulatory compliance from other factors that induce facilities to join ISO 14001 and comply with regulations in the first place."[25] Thus, the result is more reliable because the study controlled for this endogenous problem. Other studies have reached consistent conclusions.[26]

Yet several substantial studies reach the opposite conclusion, finding that implementing an EMS is not associated with improved regulatory compliance. For example, the NDEMS study discussed above, admittedly an in-depth look at a small sample, found no statistically significant reduction in regulatory violations after implementing an EMS, although it did note that the number of facilities reporting violations declined from fifteen to six.[27] One European study looked at the measured environmental compliance of a group of small- and medium-sized companies and similarly concluded that implementing an EMS was not associated with better regulatory compliance.[28] While these studies are substantial, variations in sample size and composition, measurements of regulatory compliance, and the inevitable imperfections of social science empirical research surely contribute to the difference in results. From a policy perspective, this difference means that, while cur-

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[24] *Id.* at 246.

[25] *Id.* at 240.

[26] Dasgupta et al., *supra* note 18, at 61 (reviewing Mexican companies, and finding that "[p]lants which institute ISO 14001-type internal management procedures exhibit superior environmental compliance"); Melnyk et al., *supra* note 20, at 1875–76 (comparing various voluntary programs); *see* Hertin et al., *supra* note 9, at 7 (citing two German studies).

[27] NDEMS, *supra* note 10, at ES-15 to -16. (finding improvement "in some cases," but not overall); Andrews et al., *supra* note 9, at 116–20 (reaching a similar, negative conclusion in their study of 617 responding facilities that were all TRI reporters). Professors Darnall and Carmin report that only twenty-five percent of the voluntary programs in their study use regulatory compliance as a screening device for participation. Nicole Darnall & Joann Carmin, *Greener and Cleaner? The Signaling Accuracy of the U.S. Voluntary Environmental Program*, 38 Pol'y Sciences 71, 78 (2005).

[28] Kristina Dahlström et al., *Environmental Management Systems and Company Performance: Assessing the Case for Risk-Based Regulation*, 13 Eur. Env't 187, 199 (2003).

rently there is a significant amount of intriguing data, a workable empirical answer to whether implementing an EMS is associated with improved regulatory compliance is not yet available. When the inquiry shifts to the effect of nonregulated environmental impacts, the answer becomes clearer.

B. *Nonregulated Resource Use*

In addition to the regulated discharges discussed above, company facilities have many other impacts on the environment, ones that are not directly regulated for environmental effect. For example, facilities discharge ordinary wastes and use energy, water, storage, and transportation. All of the studies to date that have considered these kinds of environmental impacts have found that firms that implement EMSs have better performance in these areas. While the specific environmental impacts considered have varied somewhat among the studies, energy and water use reductions were most consistently found, followed by improved waste management practices and better materials use.[29] One Swedish study of joint EMS programs among twenty-six mostly small- and medium-sized enterprises also found a forty-four percent decrease in energy use and a thirty-two percent reduction in materials use. This study looked further, however, and also found broader benefits, including improved waste handling and recycling procedures, the spread of district heating schemes, improved storage, decreased transportation needs, and some substitution of goods.[30]

Although these studies did not purport to measure empirically why these kinds of improvements appear so consistently, they do offer some reasonable interpretations of the data. Better performance on nonregulated resource uses are likely to result in immediate, direct cost savings and, thus, will clearly be visible and attractive targets for the facility's managers. In addition, because these environmental impacts have not been subject to direct environmental regulation before, they

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[29] NDEMS, *supra* note 10, at ES-13 (finding improvements in energy, water, and materials use); Andrews et al., *supra* note 9, at 117–19 (reporting improved energy use); Hertin et al., *supra* note 9, at 6 (finding improvements in energy, water, and waste management); *see also* Jonas Ammenberg & Olaf Hjelm, *Tracing Business and Environmental Effects of Environmental Management Systems—A study of Networking Small and Medium-Sized Enterprises Using a Joint Environmental Management System*, 12 Bus. Strategy & Env't 163, 164–65 (2003). The Ammenberg study used self-reported performance data gathered in interviews with company environmental coordinators and is limited by its admittedly small sample of twenty-six participating enterprises. *Id.* It reported the results of the interviews without statistical analysis. *Id.* at 166–70.

[30] Ammenberg & Hjelm, *supra* note 29, at 170.

may have received less management attention in the past, and so, there may be more room for improvement in the initial effort. Of course, to the extent that this second interpretation is correct, it would imply that these consistently positive results have been influenced by first-time efforts, making the results harder to duplicate over time. Certainly, future empirical studies should be sensitive to the possibility that performance improvements may be a one-time result of directed management attention, rather than an indicator of future improvements. That said, these results do offer a convincing policy rationale for supporting EMSs: they may be a way to reach important environmental impacts that have not been controlled by traditional regulatory tools.

In addition to resource use, it is important to determine if implementing an EMS is associated with environmentally superior operating changes, such as designing and adopting environmentally superior products and processes. Here the empirical results to date have been consistent; unfortunately, they have not been positive.

C. *Nonregulated Operating Changes: Greener Products and Processes*

Finding ways to motivate companies to develop greener products and processes is particularly important to environmental policy. Yet the task is challenging; developing greener products and processes requires innovative, creative efforts by companies, as well as consistent, sustained financial and other support throughout the decisionmaking levels of the organizations. Our traditional regulatory system has made real progress over the last forty years in controlling emissions and other environmental impacts by regulating harmful behavior and thereby providing cleaner air, water, and land. This regulatory system, however, has been less successful at inspiring innovative change that improves environmental performance beyond the improvement required for regulatory compliance. Such change is needed. In environmental policy circles, there is widespread concern that the traditional regulatory system will have increasing trouble attaining further environmental improvement, and that the traditional system may be inadequate to effectively require the next generation of improvements that are necessary to pursue real sustainability.[31] Current environmental regulation works reasonably well to control harmful behavior, but it is a blunt and imperfect tool when used to inspire and motivate creative responses that lead to greener products and processes—and eventually to a more sustainable

[31] *See, e.g.*, Daniel J. Fiorino, The New Environmental Regulation 59–120 (2006) (chapters three and four).

society. Additional policy tools are needed to achieve this larger goal, and many have hoped that EMSs would be such tools.

Unfortunately, the empirical studies to date have not found that EMSs can achieve the desired result. Each of the studies that have evaluated this question have found that EMSs are not associated with the development of cleaner, greener products or processes.[32] A Swedish study focused specifically on the process of product design. This small but interesting study concluded that implementing EMSs did not influence product design decisions because EMSs were too rigid and specific for this turbulent process.[33] Considering the extensive individual and institutional thinking required for far-reaching product design innovation, the result is not surprising.

More generally, these studies argue that company decisions to fundamentally change products and processes are not made at the level where an EMS has its greatest impact. The focus of attention in implementing an EMS is on the particular facility, because it is within a particular facility that most of the real work for an EMS takes place. Yet, the argument runs, fundamental redesign of products or processes requires sustained creative effort, sustained financial commitment, and a willingness to confront the substantial business risks that are presented by the processes. These requirements must have support within the facility, but they also require top management support at the national level. While this explanation is certainly plausible and persuasive, it goes beyond the empirical results. Whatever the merits of the rationale, the empirical findings to date are illuminating, though not conclusive given the difficulty of measuring the motivations for innovation. That said, the current group of EMSs have not been shown to be effective in requiring or inspiring the necessary fundamental product and process innovations.

A most interesting case study by Professors Gunningham, Kagan, and Thornton offers useful insight on this problem.[34] This study was

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[32] *See* NDEMS, *supra* note 10, at ES-25; Andrews et al., *supra* note 9, at 117–20. It must be acknowledged that innovation is a difficult question to study empirically, and even more so when one is trying to determine what motivates it. The evidence available, while illuminating, cannot be taken as definitive at this time.

[33] Petrus Kautto, *New Instruments—Old Practices? The Implications of Environmental Management Systems and Extended Producer Responsibility for Design for the Environment*, 15 Bus. Strategy & Env't 377, 383 (2006). This study looked in-depth at three firms as case studies and evaluated survey responses from 101 firms, which represented fifty-three percent of the group originally solicited. *Id.* at 382.

[34] *See* Neil Gunningham et al., Shades of Green: Business, Regulation, and Environment 135–56 (2003).

an in-depth examination of fourteen pulp and paper mills located worldwide.[35] In general, all the mills in question had good records of compliance with environmental regulation, and such regulation had in fact driven significant positive technological change and performance improvement.[36] This study went further and specifically considered why some mills made the investment to go beyond regulatory compliance, while others did not.

The study found that the style of environmental management was the most important factor, more important than the national regulatory regime, the mill's corporate size, or its earnings. Yet there was a great deal of variation in the extent to which mills went beyond compliance and the reasons they did so. The study found that management style was the best explanatory variable. "By management style we refer to a combination of managerial attitudes and actions that mark the intensity and character of each management's commitment to environmental compliance and improvement."[37] Style was measured by structured interviews with individual members of management, which were scored and compared.[38] This approach was important, as it enabled the study to separate the evaluation of management style from the evaluation of facility environmental performance.

This intensive study offers a much deeper look into the specific mills and management styles studied, although the in-depth look was obtained at the cost of a larger sample size. This careful look inside the facilities does offer substantial conceptual support for the idea that green products and green processes grow out of deeply imbedded characteristics of a particular managerial culture and that adopting an EMS, while useful, is by itself not likely to lead to such changes. Of course, one must also consider that most EMSs in place today are still relatively new, as are the studies measuring their impact, and that over time implementing EMSs may lead to deeper changes in the environmentally responsive management culture. Thus, EMS studies completed five or ten years from now may find some contribution to cleaner operations and products that we cannot establish today.[39]

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[35] *Id.* at 5–6.

[36] *Id.* at 6.

[37] *Id.* at 96.

[38] *Id.*

[39] Beyond EMSs, there is a broader question of what other policy tools might inspire or provoke such changes, but this question is beyond the scope of this Article.

D. *EMSs—Conclusion*

The empirical evidence to date supports the conclusion that EMSs are generally associated with better environmental performance on regulated discharges and on nonregulated resource use. In view of the fact that most EMSs are relatively new, as are the studies that have evaluated them, there is reason to hope that their environmental performance impacts will increase over time, leading to more good news. The news today is, however, less positive when one asks whether facilities that implement EMSs have improved records of compliance with environmental regulation. On this point the evidence is simply in conflict and more research is necessary. What of greener products and processes for industry? Here the evidence, while limited to date, is consistent and negative: EMSs are not associated with greener products or processes. While industries are still in the early stage of EMS implementation, and more work is needed, at this point one must face the prospect that EMSs will not be the means to achieve greener products and processes objectives and that other policy tools will be necessary.

In addition to EMSs, many companies are taking part in voluntary performance standards, and the Article next considers the empirical studies of these standards.

IV. Do Voluntary Performance Standards Actually Improve Environmental Performance?

A. *Varieties of Voluntary Standards*

Because the number of empirical studies of voluntary performance standards is limited, this Article will discuss the empirical measures of their environmental performance together. There is substantial variation, however, in the different types of voluntary performance standards programs and a brief summary of these various types will enhance the empirical literature discussion below. The most visible and familiar type of performance standards program consists of government-sponsored programs, such as the well-known Performance Track program.[40] Performance Track seeks to identify and recognize corpo-

[40] *See* National Environmental Performance Track, US EPA, http://www.epa.gov/perftrac (last visited May 6, 2008). WasteWise and Climate Challenge are other programs of this type which are evaluated in the empirical studies discussed below. Climate Challenge, DOE's Energy Partnerships for a Strong Economy, Notice, http://www.climatevision.gov/climate_challenge/climatechallenge.html (last visited May 6, 2008); WasteWise, US EPA, http://www.epa.gov/wastewise (last visited May 6, 2008). Professors Darnall and Carmin

rate and other environmental leaders.[41] Companies must apply to join the program, but most are accepted, as is often the case for programs of this type. Participants make a commitment to environmental performance improvement as measured by one or more specific metrics. Typically these metrics require quantified improvement in some aspect of performance. Participants receive public recognition, technical advice and assistance, and in some cases, they may be rewarded with fewer regulatory inspections.[42] Other government-sponsored programs sometimes offer additional regulatory benefits. Public reporting of results is typical, although many programs allow firms to simply leave the program, for either poor performance or failure to report, without sanction.

A second group of voluntary performance standards programs include those programs that are established by an industry trade association or other trade group. The chemical industry's Responsible Care program and the Sustainable Forestry Initiative of the forest products industry are two well-known examples.[43] In these programs, companies commit to environmental performance standards, usually stated qualitatively rather than quantitatively, as a condition of membership in the sponsoring organization. Technical advice and assistance from the organization and other members of the group are often included in the program, as are public recognition and an improved public image for the company and the industry.

In the third type of program, an individual company adopts performance standards on its own initiative. A company might commit to a specific level of environmental performance beyond regulatory requirements, such as a twenty-five percent reduction in toxic waste discharge. These individual company commitments appear to be increasing, but to date, no systematic empirical evaluation of their environmental performance effects exists.

Taken together, these programs may have the potential to substantially improve environmental performance, particularly as their numbers and participation levels increases. They have received little

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survey the different types and structures of voluntary environmental programs. Darnall & Carmin, *supra* note 27, at 72.

[41] National Environmental Performance Track, US EPA, http://www.epa.gov/perftrac (last visited May 6, 2008).

[42] *Id.*

[43] *See* International Council of Chemical Associations, Responsible Care, http://www.responsiblecare.org (last visited May 6, 2008); SFI: Sustainable Forestry Initiative, http://www.sfiprogram.org (last visited May 6, 2008).

systematic empirical study, however, and the limited evidence of their performance impact is mixed.

B. *The Weight of the Evidence: Voluntary Performance Standards Have Not Been Shown to Improve Environmental Performance Generally*

Most of the studies in this area find that voluntary performance standards are not associated with better environmental performance. The number of studies is small, however, and this conclusion tentative. Thus, the point cannot be taken as conclusively established today. Many of these programs are relatively young, and the studies of them are relatively recent, so this result may change over time. Subject to these qualifications, the conclusions of studies completed to date are reasonably consistent. For example, a study of the Climate Challenge program found that "Climate Challenge voluntarism seems to either have no effect (in the case of program adoption) or to contribute negatively to emission reductions (in the case of specified levels)."[44] The Climate Challenge program was a voluntary effort established to encourage the largest electric utilities to reduce their CO_2 emissions; in the program, participating firms set their own reduction targets.[45] This study looked at the emissions of the fifty largest electric utilities east of the Rocky Mountains from 1995 to 1997, thirty-five of which participated in the program, and it found that membership in the program was not associated with emissions improvements.[46] The authors hypothesized that the weak regulatory program for CO_2 emissions was the culprit, making emissions reduction an environmental performance criterion that did not receive serious attention by the companies.[47] Of course, to the extent that this hypothesis is correct, it substantially undercuts the idea that voluntary programs can improve environmental performance beyond regulatory requirements.

Similar results were published in a 2000 study of the chemical industry's Responsible Care program in which the authors concluded that improved environmental performance, measured by other reports outside of the program, was not associated with program member-

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[44] Eric W. Welch et al., *Voluntary Behavior by Electric Utilities: Levels of Adoption and Contribution of the Climate Challenge Program to the Reduction of Carbon Dioxide*, 19 J. Pol'y Analysis & Mgmt. 407, 421 (2000). Emissions data was reported by the Natural Resources Defense Council. *Id.* at 416.

[45] *Id.* at 416.

[46] *Id.* at 422.

[47] *Id.*

ship.[48] Responsible Care membership required specified performance efforts, as well as management activities. Yet, the program called for neither monitoring nor enforcement, and the study's authors hypothesized that the absence of these two elements was the reason for its poor performance showing.[49] Since the date of the study, the Responsible Care program has been restructured to incorporate both monitoring and program sanctions, and future studies may find improved performance.

The absence of improved overall performance was also the conclusion of a study of the Sustainable Slopes Program (SSP) of the U.S. Environmental Protection Agency (EPA), a voluntary effort to encourage ski areas to improve their environmental performance.[50] The study concluded:

> Additionally our five-year study found no statistical evidence to conclude that compared to nonparticipants, SSP ski areas have higher overall environmental performance or higher scores in the following individual dimensions of environmental protection: expansion management, pollution management, and wildlife and habitat management. SSP participants only appear to show a statistically significant correlation with higher natural resource conservation performance rates.[51]

Interestingly, the study found that ski areas wholly or partially on public land had poorer performance records. The authors hypothesized that the program's poor results flowed from its lack of either third-party monitoring or sanctions for violations.[52]

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[48] Andrew A. King & Michael J. Lenox, *Industry Self-Regulation Without Sacrifice: The Chemical Industry's Responsible Care Program*, 43 ACAD. MGMT. J. 678, 713 (2000).

[49] *Id.*

[50] Jorge Rivera et al., *Is Greener Whiter Yet? The Sustainable Slopes Program After Five Years*, 34 POL'Y STUD. J. 195, 215 (2006).

[51] *Id.* The study covered a five-year period and used regression analysis to evaluate the data on 110 of the 178 ski areas in the western United States. *Id.* at 201. Performance data was reported by the Ski Area Citizens Association, a partnership of nonprofit environmental organizations that evaluated the ski areas. *Id.* at 196. This work built on the authors' earlier study. *See* Jorge Rivera & Peter de Leon, *Is Greener Whiter? Voluntary Environmental Performance of Western Ski Areas*, 32 POL'Y STUD. J. 417 (2004). Both of these studies were limited by small sample size.

[52] Jorge Rivera et al., *supra* note 50, at 213.

These results are broadly consistent with the EPA Inspector General's study of some of the firms in the Performance Track program.[53] As noted above, the Performance Track program consciously sought to identify and include environmental leaders. This 2007 study was a broad review of the whole program; the portion of interest here looked carefully at the environmental performance of forty randomly selected program participants.[54] The study has both good and bad news: while many member-firms had better toxic release performance than their respective industries as a whole, a substantial minority of member-firms performed worse than their industries.[55] The same was true for regulatory compliance: while twenty-two of thirty-five facilities had no compliance problems, "Thirteen of the 35 facilities which had inspections had more compliance problems than their sector average for one or more compliance measures."[56] These examples of poor performance are particularly discouraging for a program that has consciously targeted environmental leaders.

The broad conclusion of these studies is that voluntary performance programs generally have not been shown to be associated with better environmental performance. There are, however, some rays of light shining through this generally cloudy picture.

C. *Some Limited Evidence of Improved Environmental Performance from Voluntary Performance Standards*

In the mix of largely negative evidence reported above, there are some reported bright spots in which voluntary performance standards are associated with better environmental performance. Two studies found that firms that joined a voluntary program at its early stages tended to show better environmental performance than the industry as a whole, even though this result was not the case for firms that joined later or for the program overall. One study examined firms that participated in EPA's Climate Challenge program.[57] As noted above, this

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[53] Office of Inspector Gen., *supra* note 9, at 15–22. This study considered many additional aspects of program design and implementation beyond environmental performance. *Id.*

[54] *Id.*

[55] *Id.*

[56] *Id.* at 24.

[57] Magali Delmas & Maria J. Montes, *Voluntary Agreements to Improve Environmental Quality: Are Late Joiners Free Riders?* 7 (Inst. for Social, Behavioral and Econ. Research (ISBER), U.C. Santa Barbara, Working Paper No. 7, 2007). The study used regression analysis to control for other variables, including proxies for political pressure, regulatory pressure, legislative pressure, relative state commitment to environmental protection, and relative

voluntary program sought to encourage reductions in CO_2 emissions by the largest electric utilities. The early joiners were good prospects for improvement; as a group, they had undertaken more emission reduction efforts prior to joining, and they were subject to greater political pressure regarding their emissions.[58] An earlier study of EPA's WasteWise program by one of the same authors reached broadly consistent conclusions.[59] The WasteWise program sought to encourage voluntary reductions in waste generation. While it required annual reporting on results, there was no sanction for not reporting. This study found that the firms that first joined the program were more likely to report their results than late joiners. Interestingly, it also found that other factors, such as having an EMS, overall firm size, or the firm's industry segment, were not related to reporting rate.[60]

Taken together, these studies offer some support for the idea that voluntary performance programs may make a difference for the firms that first join them, but that these positive initial results may be swamped by a larger group of free riders who subsequently join. The studies were not able to evaluate the counterfactual situation—what would have been the environmental performance of the early joiners if they had not joined? Thus, it may be that joining the program was an effect of actual or prospective improvement in environmental performance, rather than a cause. Even so, the result supports the idea that the voluntary program was associated with improved performance, though it resulted from, rather than caused, the improvement.

One early study found that firms were more likely to join EPA's 33/50 voluntary program when confronted with the prospect of regulatory controls as an alternative.[61] This program encouraged companies joining the program to reduce their discharge of seventeen specified chemicals by thirty-three percent, and subsequently by fifty

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environmental contamination of the state, as well as company-specific factors including environmental effort, productive efficiency, and size. *Id.* at 4–9. It looked at all 124 companies that signed agreements to participate in the program. *Id.*

[58] *Id.*

[59] *See* Magali Delmas & Arturo Keller, *Free Riding in Voluntary Environmental Programs: The Case of the U.S. EPA WasteWise Program*, 38 Pol'y Sci. 91, 104–05 (2005). This study used a regression analysis to evaluate survey data from the 106 companies that responded, which represented 11.2% of the 947 companies in the program. *Id.*

[60] *Id.* at 101–02. While useful, this study is limited because it only measured whether firms reported, not whether they reported positive results. *Id.* at 96–97. As noted in the previous footnote, it was based on a survey of 947 firms, but had only an 11.2% response rate (106 firms), further qualifying its results. *Id.*

[61] Madhu Khanna & Lisa A. Damon, *EPA's Voluntary 33/50 Program: Impact on Toxic Releases and Economic Performance of Firms*, 37 J. Envtl. Econ. & Mgmt. 1, 23 (1999).

percent over the term of the program.[62] In a study of the chemical industry firms that joined, the authors concluded:

> Expected gains due to public recognition and technical assistance offered by the program and the potential to avoid liabilities and high costs of compliance in the future under mandatory environmental regulations provided incentives for participation in the program. This suggests that participation in voluntary programs depends to a considerable extent on the existence of a regulatory framework that would impose penalties on firms that do not undertake proactive measures for self-regulation. Voluntary programs are likely to be less effective without the backstop of mandatory regulation.[63]

There was also good performance news. The study compared the member companies' environmental performance on releases of the seventeen toxic chemicals to their predicted releases prior to joining the program. Even after controlling for sample selection bias, the impact of regulations, and firm specific factors, the study found:

> While the amount of pollution reductions that can be attributed to the program is less than the total observed reduction by participants, the program is estimated to have led to a reduction of 28% in expected 33/50 releases relative to the preprogram level over the period 1991–93.[64]

Thus, the voluntary program was associated with some of the positive performance results.

One review of EPA's Strategic Goals program also found some qualified good news.[65] The Strategic Goals program was a voluntary program aimed at improving the environmental performance of firms in the metal finishing industry. EPA's mid-term report showed reductions by participating firms, with a 58.7% reduction in air and water emissions, a 3% reduction in sludge production, and a 15% reduction

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[62] *Id.*

[63] *Id.* This study used regression analysis to evaluate TRI data on 123 firms that were in the chemical industry and eligible to participate in the program during its first three years, 1991 to 1993, the time period of the study. *Id.* at 4–7.

[64] *Id.* at 23.

[65] Jason Scott Johnston, *The Promise and Limits of Voluntary Management-Based Regulatory Reform: An Analysis of EPA's Strategic Goals Program, in* Leveraging the Private Sector: Management-Based Strategies for Improving Environmental Performance, *supra* note 1, at 167, 180–84.

in land disposal of toxic wastes.[66] Yet this good news was qualified by the study's overall conclusion that the program's low participation rate and failure to meet its goals provided good reasons for discontinuing it.[67] Whatever the reason, the Strategic Goals program was neither renewed nor extended when it reached the end of its initial term in 2003.

As discussed above, some positive results were reported in the EPA Inspector General's study of the Performance Track program.[68] Of the forty entities that were randomly selected for study, most members in the program had better performance on toxic waste emissions and on regulatory compliance than their respective industries. Overall, this study was critical of the program and its results, but this positive data should be noted.

Despite these individual bright spots, the composite picture is gray. Why are these voluntary performance programs not associated with better environmental performance? The programs and these studies are all relatively recent, so perhaps better performance is coming and will be revealed in future performance improvements, which the next generation of studies will find. In the current group of studies, the consensus explanation is that the programs are not very successful because, in general, they do not have effective monitoring and sanctions for poor program performance. Indeed, most do not have any monitoring or sanction. Thus, the argument runs, firms can join them without either a demonstrated history of real environmental effort or a real contemporary commitment to sustained environmental improvement in the future. When real effort is required to improve environmental performance, there is insufficient company commitment for the program to succeed.

One interesting study offers results that are generally consistent and supportive. It was not a study of environmental performance, but rather a study of what firms join what kinds of voluntary programs. Specifically, this study of 400 firms compared the environmental performance of firms that join different kinds of voluntary programs. It found that firms that pollute less join programs that have monitoring

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[66] *Id.* One Minnesota study of its participating firms was reported to have concluded that they performed better than nonparticipating firms. *Id.* at 182–83.

[67] *Id.* at 180–83. Professor Johnston also notes that the standards set were not very demanding, as they were below the standards set by an industry best practices group, and that the program back dated its baseline performance period to 1992, in effect counting as improvements many gains that were achieved before the Strategic Goals Program began. *Id.*

[68] Office of Inspector Gen., *supra* note 9, at 23–26.

and that actually sanction violators by expulsion, such as the Sustainable Forestry Initiative. In contrast, the firms that join programs that do not monitor or issue sanctions, such as the former Responsible Care program, have worse pollution records than their industry averages.[69] These findings suggest that firms choose programs, and thus, program design may be quite important to observed environmental performance results.

Conclusion

Do voluntary environmental programs improve environmental performance? The studies do not definitively answer the question. To be sure, there is substantial support for the point that implementation of an EMS is associated with better environmental performance, both on regulated emissions and on the use of resources that are not directly regulated. Unfortunately, the studies to date do not offer support for the hope that EMSs will be associated with adopting greener products and processes. For this important environmental policy objective, the evidence to date argues that other policy tools will be needed. Taken together, the studies are still too few, qualified, and diffuse to consider either of these conclusions to be well enough established that they can serve as an acceptable basis for making new policy that either promotes or discourages EMSs.

With voluntary performance standards, the data is both more limited and less conclusive. While some bright spots can be found, the overall picture is a gloomy one. There is limited support for the position that the participants in these programs can be reasonably expected to have better environmental performance. When considering both EMSs and performance standards, one must remember that the programs are relatively new, and the limited number of studies are recent. Further work is needed.

One final methodological note is necessary. Many of these studies have had to work with less than ideal data sets, presumably because the needed information is difficult to collect. While data on regulated emissions and discharges is reasonably available, data on other kinds of environmental impacts is not, and must typically be gathered by third parties or directly from the companies that are willing to disclose such information. This observation is also true for information

[69] Michael J. Lenox & Jennifer Nash, *Industry Self-Regulation and Adverse Selection: A Comparison Across Four Trade Association Programs*, 12 Bus. Strategy & Env't 343, 348–355 (2003).

regarding the existence and content of EMSs, and for voluntary programs, unless they have a government sponsor that requires data collection and disclosure. Thus, studies must often use survey evidence, and they frequently have smaller sample sizes than is preferable. Many have been successful in addressing these problems, but these are limitations that must also be considered in conducting the necessary work in this area in the future.

For the present, a policy of benign neglect by the traditional regulatory system seems to be appropriate. Voluntary efforts offer a tantalizing prospect of real improvement in environmental performance, and they should continue. There is only limited and conflicting empirical support for the possibility of improvement, however. Better program design, with real monitoring and performance sanctions, and new and better studies, may provide empirical support for incorporating voluntary efforts into the public regulatory system for containing environmental risks. The empirical support is not yet there.

A HIGHER AUTHORITY: HOW THE FEDERAL RELIGIOUS LAND USE AND INSTITUTIONALIZED PERSONS ACT AFFECTS STATE CONTROL OVER RELIGIOUS LAND USE CONFLICTS

Karen L. Antos*

Abstract: The Religious Land Use and Institutionalized Persons Act (RLUIPA) provides heightened protections for religious institutions that seek to build or expand their facilities in excess of local zoning regulations. Although RLUIPA claims on its face that it does not preempt state protections for reglious land uses, more and more religious organizations have elected to bring suit under RLUIPA in addition to or in lieu of state laws. This Note focuses on Massachussetts and Washington as representative examples of states' religious land use protections and examines the effect of RLUIPA on those protections. The Note suggest that RLUIPA may unintentionally preempt state laws, particularly where states have chosen not to act.

Introduction

Although conflicts between religious institutions and local land use regulations have existed for nearly as long as local governments have been implementing zoning regulations, the frequency of such conflicts has escalated in the past decade.[1] Previously, Congress had intervened to balance the competing concerns of religious groups and local governments through sweeping federal legislation.[2] However, Congress's latest attempt, the Religious Land Use and Institutionalized Persons Act

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[1] *See* Euclid v. Ambler Realty Co., 272 U.S. 365, 373 (1926); Attorney Gen. v. Dover, 100 N.E.2d 1, 3 (Mass. 1951); Julie M. Osborn, *RLUIPA's Land Use Provisions: Congress's Unconstitutional Response to City of Boerne*, 28-FALL Environs Envtl. L. & Pol'y J. 155, 162 (2004); Cheryl Runyon et al., *Religious Land Use—State and Federal Legislation*, N.C.S.L. St. Legis. Rep., Dec. 2000, http://www.ncsl.org/programs/natres/SLR2514.htm.

[2] *See* Religious Freedom Restoration Act (RFRA) of 1993, Pub. L. No. 103-141, 1993 U.S.C.C.A.N. (107 Stat.) 1488, *invalidated by* City of Boerne v. Flores, 521 U.S. 507 (1997); H.R. 1691, 106th Cong. (1st Sess. 1999); H.R. 4019, 105th Cong. (2d Sess. 1998).

of 2000 (RLUIPA), is a narrowly tailored statute that only addresses religious protections in conflicts involving land use and prisoners' rights.[3] Despite its effort to allay conflicts between religious institutions and local governments, and notwithstanding its limited applications, RLUIPA often exacerbates conflicts between these groups.[4] Conflicts arise because RLUIPA enables religious groups to receive approval for construction projects in situations where state law would have allowed local governments to prevent the construction.[5]

Since its inception, several interest groups have funded litigation under RLUIPA to encourage religious institutions to fight adverse land use decisions.[6] While not all challenges under RLUIPA have been successful, many religious facilities have been able to use RLUIPA, or even the mere threat of litigation under the Act, to persuade municipalities to grant special use permits that were originally denied.[7] As a result of such litigation, religious institutions are able to engage in large-scale, multi-use construction to a much greater extent than nonreligious institutions would have been able to on the same parcels of land.[8]

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[3] Religious Land Use and Institutionalized Persons Act of 2000, 42 U.S.C. §§ 2000cc–2000cc-5, 2000cc-1 (2000). Only the land use provisions of RLUIPA will be addressed in this Note.

[4] Marci A. Hamilton, God vs. the Gavel: Religion and the Rule of Law 97–98 (2005).

[5] *Id.* at 98.

[6] *Id.*; *see* RLUIPA.com, http://www.rluipa.com (last visited Apr. 27, 2008). This site, operated by the Becket Fund for Religious Liberty, provides updates on media coverage, published briefs, scholarships, and current and future cases involving RLUIPA. *Id.*

[7] Hamilton, *supra* note 4, at 98–99; *see* RLUIPA.com, *supra*, note 6.

[8] *See* Hamilton, *supra* note 4, at 82. Even without relying on RLUIPA, several churches were able to include bookstores, coffee houses, hotels, theaters, and even a McDonald's within religious facilities. *Id.* at 80; *see* Scott Thumma, *Exploring the Megachurch Phenomena: Their Characteristics and Cultural Context*, Hartford Inst. for Religion Research (1996), http://hirr.hartsem.edu/bookshelf/thumma_article2.html. Using RLUIPA, religious institutions have successfully gained permission for a 5050-square-foot religious institution in a single-family residential district, appealed an adverse ruling that prevented the religious institution from building a 650-student Christian school located in a semi-rural area, and received $72,214.24 in attorney's fees for the denial of a permit to operate a religiously affiliated bed and breakfast near a hospital. DiLaura v. Twp. of Ann Arbor, 471 F.3d 666, 668–69 (6th Cir. 2006); Hamilton, *supra* note 4, at 104; Pamela A. MacLean, *Courts Struggle over Definition of 'Undue Burden' in Zoning Act*, Nat'l L.J., Feb. 19, 2007, at 1, 1; *see* RLUIPA.com, *supra*, note 6 (listing many other conflicts resolved through the use of RLUIPA). Additionally, religious institutions have sought permission for construction of the following in residential neighborhoods: a hundred-child day care facility, a forty-person homeless shelter, and a religious institution that would increase traffic dramatically. Hamilton, *supra* note 4, at 99–101.

Without RLUIPA, these land use conflicts would be decided according to state laws.[9] Several states have extended heightened protections to religious land uses similar to those available under RLUIPA.[10] Other states simply have never considered whether to extend special protection to religious land uses.[11] Finally, several states have declined to extend heightened protections to religious land uses after considering laws resembling RLUIPA.[12] Claims under RLUIPA are available to religious groups in all states, even those states that intentionally did not pass laws offering heightened protections for religious uses.[13]

This Note seeks to demonstrate that although RLUIPA states that it does not preempt state laws, the result of its implementation is essentially the same as if it had specifically preempted state control over religious land use laws in states without land use protections resembling RLUIPA. Part I of this Note examines the scope of local control over land use issues and the intersection of land use and religious issues. It then provides an overview of protections for religious land use issues that existed prior to 2000. Part II gives an overview of the creation and implementation of RLUIPA. Part III describes the various religious land use protections available at the state level, with a particular focus on Massachusetts and Washington. Part IV uses the cases from Part III to demonstrate how RLUIPA dramatically changes religious land use analysis, particularly in states without any religious land use protections in place. Finally, Part V concludes that, while RLUIPA creates nationwide consistency, it thrusts religious land use issues outside the traditional realm of state and local control.

I. Local Land-Use Regulation

Compared to other areas of modern law, land-use regulation is unusual because control is exercised primarily at the local level.[14] The creation and modification of zones, as well as exemptions or exceptions to a particular zone, have "always been treated as . . . local matter[s]."[15] For land use controls to be enacted at the local level, the state government must delegate power to the local government because "local gov-

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[9] *See* Hamilton, *supra* note 4, at 104.

[10] Runyon et al., *supra* note 1.

[11] *See id.*

[12] *Id.*

[13] *See* Hamilton, *supra* note 4, at 109.

[14] Daniel P. Selmi & James A. Kushner, Land Use Regulation: Cases and Materials 29 (2d ed. 2004).

[15] Pendergast v. Bd. of Appeals, 120 N.E.2d 916, 918 (Mass. 1954).

ernments do not have inherent powers but are limited to those granted by a state constitution or legislature."[16] Land use regulation is an aspect of the state's police power—the ability of the state to protect public health, safety, morals, and general welfare.[17] The state government, rather than investing the power in administrative agencies, grants decisionmaking power to local officials who make most land use decisions.[18] A zoning regulation is an appropriate use of the police power when it reasonably and substantially relates to the "police power objectives of protecting public safety, health, morals and welfare."[19]

There are three circumstances in which a municipality can exercise its police power: (1) when an activity is expressly authorized through a delegation of power from the state; (2) when an activity is reasonably necessary to perform a delegated activity; (3) and when an activity is "essential to the declared objects and purposes" of the local government.[20] Because "there is no inherent municipal power to zone," a municipality must have directly or indirectly received a grant of power from the state before passing zoning ordinances or bylaws.[21]

A. *Limitations to Local Control of Land Use Regulations*

The U.S. Supreme Court has recognized that local control of zoning provides a method for achieving "a satisfactory quality of life in both urban and rural communities."[22] By permitting a local government to exercise domain over its community, local control of land use regulations provides for the creation of "zones where family values, youth values, and the blessings of quiet seclusion and clean air make the area a sanctuary for people."[23] While the umbrella of land-use regulation applies to zoning and historic preservation laws, its scope is not

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[16] Brian W. Blaesser et al., Land Use and the Constitution: Principles for Planning Practice 16 (1989) [hereinafter Blaesser et al., Land Use and the Constitution]. The concept that a local government must be delegated its powers by the state is known as Dillon's Rule. *Id.*

[17] *E.g.*, Penn. Cent. Transp. Co. v. New York City, 438 U.S. 104, 125 (1978); Blaesser et al., Land Use and the Constitution, *supra* note 16, at 16; Barlow Burke, Understanding the Law of Zoning and Land Use Controls 3 (2002).

[18] Selmi & Kushner, *supra* note 14, at 29.

[19] *See* Runyon et al., *supra* note 1.

[20] Burke, *supra* note 17, at 5.

[21] Blaesser et al., Land Use and the Constitution, *supra* note 16, at 16; Burke, *supra* note 17, at 5, 7.

[22] Schad v. Borough of Mount Ephraim, 452 U.S. 61, 68 (1981).

[23] Vill. of Belle Terre v. Boraas, 416 U.S. 1, 9 (1974); *see* John M. Baker & Mehmet K. Konar-Steenberg, "*Drawn from Local Knowledge . . . and Conformed to Local Wants": Zoning and Incremental Reform of Dormant Commerce Clause Doctrine*, 38 Loy. U. Chi. L.J. 1, 39 (2006).

unlimited.[24] For example, construction of roadways is not considered a form of land-use regulation and, thus, is not affected by statutes limiting local discretion in land-use regulation.[25]

Moreover, while local governments have typically had great discretion in their land use decisions, local officials do not have unlimited authority to shape and apply zoning restrictions.[26] Rather, zoning authority must be "exercised within constitutional limits."[27] A determination of whether an authority exceeded constitutional limits is based on a review of the nature of the right "assertedly threatened or violated," not the power used by the government in threatening that right.[28]

B. *Land-Use Regulation and Religion*

Most confrontations between land-use regulation and religion arise because of the different levels of government responsible for the creation and implementation of regulations.[29] Specifically, state or local governments enact land use regulations and control land use through the police power, while federal law resolves conflicts involving burdens on religious freedoms.[30] Laws designed to ensure fair treatment for religious institutions have proliferated as a form of "religious affirmative action."[31] In some cases, legislatures passed laws favoring religion specifically to address "an actual incident of discrimination."[32] In the land use context, these laws generally either reduce or streamline the requirements that a religious institution must follow when building or renovating religious facilities.[33]

The conflict between land-use regulation and religion has led to several common clashes between religious institutions and local governments.[34] Some disputes focus on historic preservation laws: where

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[24] *See* Brian W. Blaesser et al., Federal Land Use Law & Litigation 615 (2008) [hereinafter Blaesser et al., Federal Land Use].

[25] Prater v. City of Burnside, 289 F.3d 417, 422–34 (6th Cir. 2002); *see* Blaesser et al., Federal Land Use, *supra* note 24, at 619 & n.12.

[26] Wendie L. Kellington, *Historical Evolution of the RLUIPA*, *in* Proceedings of the Institute on Planning, Zoning and Eminent Domain 12-1, § 12.08, at 12-24 (Safia Ahmed ed., 2006).

[27] *Schad*, 452 U.S. at 68 (internal quotations omitted).

[28] *Id.*; Kellington, *supra* note 26, at 12-25.

[29] *See* Runyon et al., *supra* note 1.

[30] *Id.*

[31] Jerold S. Kayden, *Statutory Preference for Religious Land Use: Divining What Is Religious and What Is Reasonable*, Land Use L. & Zoning Dig., Sept. 2001, at 3, 4.

[32] Boyajian v. Gatzunis, 212 F.3d 1, 8 (1st Cir. 2000); *see* Kayden, *supra* note 31, at 4.

[33] Blaesser et al., Federal Land Use, *supra* note 24, at 708.

[34] *See id.*

a religious institution wants to renovate a building that, if used for a nonsectarian purpose, would be prohibited from undergoing renovation because of its location within an historic preservation zone.[35] Other conflicts center on the application of basic zoning restrictions to the construction of new buildings, such as churches and peripheral facilities.[36] Finally, many cases focus on whether to give religious exemptions from zoning laws to nonreligious facilities run by churches, such as office buildings and treatment centers.[37]

Challenges that religious institutions bring to land use regulations are litigated under either the Establishment Clause or the Free Exercise Clause of the U.S. Constitution.[38] The Establishment Clause and the Free Exercise Clause are frequently in tension and are the source of friction between freedom of religion and protection against governmental establishment of religion in the federal government.[39] These two clauses, by nature of their disparate protections, require regulators to avoid both laws limiting the free exercise of religion and laws appearing to favor the establishment of religion.[40]

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[35] *E.g.*, Keeler v. Mayor of Cumberland, 940 F. Supp. 879, 880 (D. Md. 1996); First Covenant Church v. City of Seattle (*First Covenant II*), 840 P.2d 174, 177 (Wash. 1992).

[36] *E.g.*, Castle Hills First Baptist Church v. City of Castle Hills, 2004 WL 546792, at *2 (W.D. Tex. 2004); Martin v. Corp. of the Presiding Bishop of the Church of Jesus Christ of Latter-Day Saints, 747 N.E.2d 131, 133 (Mass. 2001).

[37] *See, e.g.*, N. Pac. Union Conf. Ass'n of Seventh Day Adventists v. Clark County, 74 P.3d 140, 142 (Wash. Ct. App. 2003); Blaesser et al., Federal Land Use, *supra* note 24, at 707–09.

[38] Blaesser et al., Federal Land Use, *supra* note 24, at 593, 603; Robert A. Sedler, *The First Amendment and Land Use: An Overview*, *in* Protecting Free Speech and Expression 1, 10 (Daniel R. Mandelker & Rebecca L. Rubin eds., 2001). The Establishment Clause states, "Congress shall make no law respecting an establishment of religion." U.S. Const. amend. I. The Supreme Court has interpreted this language to require a separation of church and state. Selmi & Kushner, *supra* note 14, at 350. The determination of whether a law violates the Establishment Clause is guided by the *Lemon* test, which requires legislation to have a "secular legislative purpose," to have a "principal or primary effect" that "neither advances nor inhibits religion," and to avoid "excessive government entanglement with religion." *Id.*; *see* Lemon v. Kurtzman, 403 U.S. 602, 612–13 (1971). The Establishment Clause only applies to land use cases when a "regulation has the effect of preferring religion over non-religion." Sedler, *supra*, at 10. For the purposes of this Note, the primary importance of the Establishment Clause is that it is frequently in tension with the Free Exercise Clause.

[39] Blaesser et al., Federal Land Use, *supra* note 24, at 603; *see* David L. Callies et al., Cases and Material on Land Use 441 (4th ed. 2004). Although this tension exists, as of now, no court has found RLUIPA to violate the Establishment Clause. Blaesser et al., Federal Land Use, *supra* note 24, at 627–28.

[40] Blaesser et al., Federal Land Use, *supra* note 24, at 593, 603; Callies et al., *supra* note 39, at 441.

The Free Exercise Clause, which provides that "Congress shall make no law . . . prohibiting the free exercise" of religion, limits a state's control over matters of religious freedom.[41] To violate the Free Exercise Clause, a government action must force the claimant to either disobey a belief of his religion or abstain from a requirement of his religion.[42] Prior to 1990, courts held that the Free Exercise Clause required a review of infringements against religious practices using strict scrutiny.[43] For a decision disfavoring religious practices to be upheld, the government was required to show that the chosen method of enforcement was "the least restrictive means of achieving some governmental interest."[44]

The application of strict scrutiny in cases involving the Free Exercise Clause ended with the Supreme Court's decision in *Employment Division v. Smith.*[45] There, two employees were denied unemployment benefits because of their use of peyote, an illegal drug, at a Native American Church ceremony.[46] The Court found that the employees could legally be denied unemployment benefits because the Free Exercise Clause was not intended to protect illegal conduct undertaken within a religious ceremony.[47] As long as a law prohibiting an activity did not specifically target religious activities for disparate treatment, the states were "free to regulate."[48] In *Smith*, the Court altered its standard of review for free exercise cases, requiring the government to show only a rational basis for passing a generally applicable law.[49] As a result of the changes in Free Exercise Clause jurisprudence created by the Court's decision in *Smith*, exceptions to neutral laws could only be granted by a full legislative process, rather than through the permitting process.[50] The Court determined that this was the appro-

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[41] U.S. Const. amend. I; Selmi & Kushner, *supra* note 14, at 350.

[42] Blaesser et al., Federal Land Use, *supra* note 24, at 603.

[43] Thomas v. Review Bd. of the Ind. Employment Sec. Div., 450 U.S. 707, 718 (1981); Selmi & Kushner, *supra* note 14, at 351.

[44] *Thomas*, 450 U.S. at 718; Selmi & Kushner, *supra* note 14, at 351. The requirement that the government show a compelling interest and lack of restrictive alternative has been acknowledged by the Supreme Court to be the "most demanding test known to constitutional law." City of Boerne v. Flores, 521 U.S. 507, 534 (1997).

[45] *See generally* Employment Div. v. Smith, 494 U.S. 872 (1990) (altering the standard of review for Free Exercise Clause cases).

[46] *Id.* at 874. The Court did recognize that the use of peyote was part of the religious traditions of the respondent's Native American culture. *Id.*

[47] *Id.* at 878–79.

[48] *Id.* at 879.

[49] *See* Runyon et al., *supra* note 1.

[50] *See* 494 U.S. at 898 (O'Connor, J., concurring); Selmi & Kushner, *supra* note 14, at 351. For a regulation to undergo the full legislative process, it must be introduced, ap-

priate procedure, despite the increased burden on minority religious groups to seek popular support to gain protections.[51]

Four years later, Congress reacted to the *Smith* decision's reduction of protections for the free exercise of religion by passing the Religious Freedom and Restoration Act (RFRA) of 1993.[52] RFRA reinstated the strict scrutiny standard for review of free exercise challenges, and was generally viewed as a direct response to the Supreme Court's decision in *Smith*.[53] However, RFRA existed for only four years before it was struck down by the Supreme Court in *City of Boerne v. Flores*.[54] In *City of Boerne*, the Court found that RFRA exceeded the power granted to Congress under the Fourteenth Amendment.[55] Specifically, the Court held that Congress overreached its powers when it applied RFRA to the states.[56] By changing the standard associated with the Free Exercise Clause, Congress moved beyond enforcement and attempted to change the meaning of an amendment.[57] In overturning RFRA, the Court returned to the free exercise analysis established in *Smith*.[58]

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proved by both the House of Representatives and the Senate, and signed into law by the President. *See Smith*, 494 U.S. at 890. Prior to *Smith*, even if a court found that a law was neutrally applicable, the court was permitted to balance the government's interests against the effect of the regulation on the religious practices. *See* Robin Cheryl Miller, Annotation, *What Laws Are Neutral and of General Applicability Within Meaning of* Employment Div., Dept. of Human Resources of Oregon v. Smith, *494 U.S. 872, 110 S. Ct. 1595, 108 L. Ed. 2d 876*, 167 A.L.R. Fed. 663, § 2(a) (2001). After *Smith*, courts may no longer balance the harm to religion if a law is generally applicable. *Id.*; *see* 494 U.S. at 890.

[51] *Smith*, 494 U.S. at 890; *see* Selmi & Kushner, *supra* note 14, at 351.

[52] Selmi & Kushner, *supra* note 14, at 352; *see* Religious Freedom Restoration Act (RFRA) of 1993, Pub. L. No. 103-141, 1993 U.S.C.C.A.N. (107 Stat.) 1488, *invalidated by* City of Boerne v. Flores, 521 U.S. 507 (1997).

[53] Religious Freedom Restoration Act (RFRA) of 1993; Selmi & Kushner, *supra* note 14, at 352; Alan C. Weinstein, *Land Use Regulation of Religious Institutions: Balancing Planning Concerns with Constitutional and Statutory Safeguards for Religious Freedom*, *in* Protecting Free Speech and Expression, *supra* note 38, at 145, 145.

[54] 521 U.S. at 536. The Court in *City of Boerne* found that enacting RFRA exceeded the scope of Congress's powers under section five of the Fourteenth Amendment because Congress did not have the power to overturn the Supreme Court precedent set out in *Smith*. *Id.*; Patricia E. Salkin, *Anderson's American Law of Zoning, § 12:21A: The Religious Land Use and Institutionalized Persons Act (RLUIPA)*, 2 Anderson's Am. Law Zoning § 12:21A (4th ed. 2006).

[55] 521 U.S. at 536.

[56] *Id.* at 516, 536.

[57] *Id.* at 519; Weinstein, *supra* note 53, at 152.

[58] Selmi & Kushner, *supra* note 14, at 352.

II. RLUIPA: Statutory History and Overview

In 2000, Congress enacted RLUIPA, another regulation designed to protect the free exercise of religion, this time specifically in land-use regulation and the religious rights of prisoners.[59] Like RFRA, RLUIPA statutorily reinstates strict scrutiny analysis for review of conflicts between land use regulations and religion.[60] Unlike RFRA, however, RLUIPA is narrowly tailored, as it only addresses land use regulations and rights of the imprisoned, in an effort by Congress to avoid exceeding its powers.[61]

RLUIPA prohibits the government from imposing or implementing a substantial burden on a religious exercise through a land use regulation.[62] To defeat a challenge under RLUIPA, the government must show that it acted in furtherance of a compelling governmental interest and used the least restrictive means of furthering that interest.[63] RLUIPA applies to any land use regulation where the "government makes, or has in place formal or informal procedures or practices that permit the government to make, individualized assessments of the proposed uses for the property involved."[64] In effect, any discretionary permit, such as a variance or special permit, would fall within RLUIPA's scope.[65]

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[59] Religious Use and Institutionalized Persons Act of 2000, 42 U.S.C. §§ 2000cc, 2000cc-1 (2000).

[60] *See* Selmi & Kushner, *supra* note 14, at 352; Kayden, *supra* note 31, at 4.

[61] 146 Cong. Rec. S6678-02 (daily ed. July 13, 2000) (statement of Sen. Hatch). Unlike the narrowly tailored RLUIPA, RFRA applied to every type of regulation. *Id.* Although RLUIPA addresses both land use laws and conditions for institutionalized persons, this Note will only address the Act as applied to land-use regulation. *See id.* RLUIPA applies in three circumstances: (1) where a "state program receives Federal financial assistance"; (2) a substantial burden "imposed by a local law affects or would affect" interstate commerce; or (3) "the substantial burden is imposed in the implementation of a land use regulation or system of land use regulations" where the government makes "individualized assessments of the proposed uses for the property involved." 42 U.S.C. § 2000cc(a)(2)(A)–(C); *see* Int'l Church of the Foursquare Gospel v. City of San Leandro, No. C 07-3605 PJH, 2007 WL 2904046, at *10–11 (N.D. Cal. Oct. 2, 2007).

[62] 42 U.S.C. § 2000cc(a)(1).

[63] *Id.* § 2000cc(a)(1)(A)–(B).

[64] *Id.* § 2000cc(a)(2)(C).

[65] *See id.*; Blaesser et al., Federal Land Use, *supra* note 24, at 633–37. RLUIPA does not specifically define what type of burden on religious exercise would constitute a substantial burden. Daniel J. Curtin, Jr. & Cecily T. Talbert, Curtin's California Land Use and Planning Law 55 (25th ed. 2005). In *Civil Liberties for Urban Believers v. City of Chicago*, the U.S. Court of Appeals for the Seventh Circuit imposed a more narrow definition of substantial burden. 342 F.3d 752, 761 (7th Cir. 2003). In order to constitute a substantial burden on religion, a land use regulation must make religious exercise "effectively impracticable." *Id.* The U.S. Courts of Appeal for the Third, Fourth, and Ninth Circuits

Under RLUIPA, the burden of proof first rests on the religious institution to demonstrate that a substantial burden exists.[66] Once the religious institution makes that showing, the burden shifts to the municipality to prove that the regulation falls under the compelling governmental interest exception.[67] RLUIPA is not intended as preemptive law; it neither preempts state law nor repeals federal law, provided that such laws are at least as protective of religious exercise as RLUIPA.[68]

Opponents of RLUIPA criticize the loss of local control over zoning resulting from what they view as federal preemption of local control and an "assault on . . . federalism."[69] Opponents argue that land-use regulation is a local issue and that federal religious protections from land use laws conflict with the Establishment Clause because religious uses are placed in a special class.[70] Anti-RLUIPA sentiment can be summed up by a statement published by the National Association of Counties: "We fully support religious freedom, but this bill is not about addressing discrimination. It's about taking control away from neighborhoods and giving it to Washington."[71] Critics also argue that *Employment Division v. Smith* was wrongly decided and that legislation is not the correct way to protect religious beliefs.[72]

There have been numerous challenges to the constitutionality and application of RLUIPA since its passage.[73] For example, in *Civil Liberties for Urban Believers v. Urban Believers of Chicago,* the U.S. Court of Appeals for the Seventh Circuit avoided an inquiry into the constitutionality of RLUIPA by finding that it did not apply to an association of religious groups challenging the Chicago Zoning Ordinance as a violation of

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appear to have adopted this standard as well. MacLean, *supra* note 8, at 1. However, Supreme Court decisions also provide guidance in interpreting what would constitute a substantial burden on religion. Curtin & Talbert, *supra*, at 55; s*ee* Lyng v. Nw. Indian Cemetery Protective Ass'n, 485 U.S. 439, 449–50 (1988); Thomas v. Review Bd. of the Ind. Employment Sec. Div., 450 U.S. 707, 717–18 (1981); *see also* Midrash Sephardi, Inc. v. Town of Surfside, 366 F.3d 1214, 1227–28 (11th Cir. 2004) (holding that a finding of a substantial burden under RLUIPA requires a zoning ordinance to do more than inconvenience the religious institution).

[66] 42 U.S.C. § 2000cc(a)(1).

[67] Curtin & Talbert, *supra* note 65, at 55.

[68] 42 U.S.C. § 2000cc-3(h).

[69] *See* Runyon et al., *supra* note 1.

[70] *Id.*

[71] *Id.*

[72] *Id.*

[73] *See* RLUIPA.com, *supra*, note 6; *see also* Sara Smolik, Note, *The Utility and Efficacy of the RLUIPA: Was It a Waste?*, 31 B.C. Envtl. Aff. L. Rev. 723, 730 (2004) (noting that courts often avoid inquiries into RLUIPA's constitutionality).

RLUIPA.[74] The Supreme Court has yet to hear a case on the constitutionality of the land use provisions of RLUIPA, and thus far, all lower courts have found it constitutional.[75] In a recent case to consider RLUIPA's constitutionality, the U.S. Court of Appeals for the Second Circuit held that RLUIPA was a valid exercise of Congress's power under the Commerce Clause and violated neither the Tenth Amendment nor the Establishment Clause.[76]

III. State Religious Law

In addition to federal religious exemptions, states employ various methods to ensure that the government does not violate the free exercise rights of religious facilities.[77] Several states have promulgated legislation to provide additional protections to religious facilities from state laws, including those laws regulating land use.[78] Massachusetts has expressly protected religious institutions since 1920.[79] Several other states have interpreted their constitutions to provide additional protections for the free exercise of religion from land use laws, including Michigan, Minnesota, Ohio, Pennsylvania, Vermont, Washington, and Wisconsin.[80]

After the Supreme Court declared RFRA unconstitutional in *City of Boerne v. Flores*, eleven states passed their own versions of RFRA to reinstate the strict scrutiny standard stated in the Act.[81] These statutes,

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[74] Civil Liberties for Urban Believers v. City of Chicago, 342 F.3d 752, 762 (7th Cir. 2003).

[75] Kellington, *supra* note 26, at 12-38 to -39; *see* Smolik, *supra* note 73, at 730. *See generally* Caroline R. Adams, Note, *The Constitutional Validity of the Religious Land Use and Institutionalized Persons Act of 2000: Will RLUIPA's Strict Scrutiny Survive the Supreme Court's Strict Scrutiny?*, 70 Fordham L. Rev. 2361 (2002) (discussing the constitutional debate over RLUIPA); Ada-Marie Walsh, Note, *Religious Land Use and Institutionalized Persons Act of 2000: Unconstitutional and Unnecessary*, 10 Wm. & Mary Bill Rts. J. 189 (2001) (suggesting RLUIPA is unconstitutional). For a brief period of time, one district court in California held that the land use provisions of RLUIPA were unconstitutional. *See* Elsinore Christian Ctr. v. City of Lake Elsinore, 291 F. Supp. 2d 1083, 1102 (C.D. Cal. 2003) (finding RLUIPA unconstitutional because it exceeded Congress's powers under the Commerce Clause). However, the U.S. Court of Appeals for the Ninth Circuit rejected this argument in *Guru Nanak Sikh Society of Yuba City v. County of Sutter*. 456 F.3d 978, 981 (9th Cir. 2006).

[76] Westchester Day School v. Vill. of Mamaroneck, 504 F.3d 338, 354–57 (2d Cir. 2007).

[77] *See* Runyon et al., *supra* note 1.

[78] *Id.*

[79] Mass. Gen. Laws ch. 40A, § 3 (2006).

[80] *See* The Council on Religious Freedom and Sidley Austin Brown Wood's Religious Institutions Group, Questions and Answers About State Religious Freedom Acts 3 (2d ed. 2001) [hereinafter Council on Religious Freedom].

[81] *See* Ariz. Rev. Stat. Ann. §§ 41-1493 to -1493.02 (2005); Conn. Gen. Stat. § 52-571b (2000); Fla. Stat. §§ 761.01–.05 (2006); Idaho Code Ann. §§ 73-401 to -404 (2006); 775 Ill. Comp. Stat. 35/1-99 (2003); Mo. Rev. Stat. §§ 1.302, .307 (Supp. 2007);

however, are not uniform. For example, the Texas and Oklahoma RFRAs address zoning in separate sections from other uses and, thus, may provide that zoning is exempt from free exercise.[82] Specifically, the Texas RFRA states that local governments do not lose authority with regard to "zoning, land use planning, traffic management, urban nuisance or historic preservation."[83] This provision, as well as a similar law in Oklahoma, was enacted to reduce the confusion of local land use advocates and to avoid a loss of municipal control.[84]

Several states have considered, but not passed, similar legislation, while others have not introduced RFRA-like legislation at all.[85] Prior to RLUIPA, states without specific legislative protection for religious institutions generally relied on the potentially unclear combination of the *Smith* standard and state case law to determine whether free exercise of religion was unduly burdened by land use laws.[86] Proponents of state RFRAs have argued that many states have not sufficiently interpreted their constitutions in terms of religious freedom protections.[87] Massachusetts and Washington offer instructive examples of how states address free exercise challenges to land use without RLUIPA.

A. *Religious Zoning Exemptions in Massachusetts*

1. The Dover Amendment

Prior to the enactment of RFRA and RLUIPA, Massachusetts passed its own version of legislation providing religious exemptions from land-

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N.M. STAT. §§ 28-22-1 to -5 (Supp. 2002); R.I. GEN. LAWS §§ 42-80.1-1 to -4 (Supp. 2006); S.C. CODE ANN. §§ 1-32-10 to -60 (2005). Alabama employed another tactic, passing an amendment to the state constitution that provided similar protections. ALA. CONST. art. I, § 301 (2006).

[82] *See* OKLA. STAT. tit. 51, §§ 251–258 (Supp. 2007); TEX. CIV. PRAC. & REM. CODE ANN. §§ 110.001–.012 (Vernon 2006); Daniel N. Price, Note, *The Constitutional Standard for Zoning Cases Under the Texas Religious Freedom Restoration Act*, 6 TEX. F. ON C.L. & C.R. 365, 370 (2002).

[83] TEX. CIV. PRAC. & REM. CODE ANN. § 110.010.

[84] Price, *supra* note 82, at 371; *see* HAMILTON, *supra* note 4, at 109.

[85] *See* Runyon et al., *supra* note 1. Legislatures in Arizona, California, Louisiana, Michigan, Maryland, Missouri, New York, and Oregon introduced bills that would have implemented additional state protections for religious free exercise. *Id.* All bills were either withdrawn or failed to pass. *Id.*

[86] *See* Douglas Laycock, *State RFRAs and Land Use Regulation*, 32 U.C. DAVIS L. REV. 755, 763–69 (1999); Roman P. Storzer & Anthony P. Picarello, Jr., *The Religious Land Use and Institutionalized Persons Act of 2000: A Constitutional Response to Unconstitutional Zoning Practices*, 9 GEO. MASON L. REV. 929, 944 (2001).

[87] COUNCIL ON RELIGIOUS FREEDOM, *supra* note 80, at 3.

use regulation.[88] Massachusetts General Law chapter 40A, section 3, commonly known as the Dover Amendment, enumerates these exemptions.[89] The purpose of the Dover Amendment is to prevent discrimination by prohibiting municipalities from giving a nonreligious facility preference over a religious facility.[90] The Dover Amendment states:

> No zoning ordinance or by-law shall . . . prohibit, regulate or restrict the use of land or structures for religious purposes . . . provided, however, that such land or structures may be subject to reasonable regulations concerning the bulk and height of structures and determining yard sizes, lot area, setbacks, open space, parking and building coverage requirements.[91]

While the Dover Amendment provides leeway for protected uses, including religious uses, developers of such projects are still required to comply with basic zoning regulations unless a developer of a religious use project can demonstrate that it would be too burdensome for the religious institution to comply.[92] A municipality may not provide a religious institution with blanket exemptions from zoning laws or prevent a religious institution from complying with all land use controls.[93]

The burden of proof in a Dover Amendment challenge to a zoning restriction falls on the plaintiff, typically the religious institution.[94] A plaintiff must prove that "compliance with the requirements would substantially diminish or detract from the usefulness of a proposed structure, or impair the character of the institution's campus, without

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[88] *See* Mass. Gen. Laws ch. 40A, § 3 (2006).

[89] *Id.*; *see* Bible Speaks v. Bd. of Appeals, 391 N.E.2d 279, 283 n.10 (Mass. App. Ct. 1979). *Attorney General v. Inhabitants of Dover* was the first case to test Massachusetts General Laws chapter 40A, section 3, the namesake of the Dover Amendment, where the Attorney General of Massachusetts challenged the town of Dover's bylaw that permitted only nonsectarian educational uses in residential zones. 100 N.E.2d 1, 2 (Mass. 1951). The U.S. Court of Appeals for the First Circuit invalidated the portion of the Dover bylaw that conflicted with the statute, finding that the Dover Amendment was "intended as an expression of a general policy to take away from all municipalities all power to limit the use of land for church or other religious purposes or for religious, sectarian, or denominational educational purposes." *Id.* at 3.

[90] *Bible Speaks*, 391 N.E.2d at 283 n.10.

[91] Mass. Gen. Laws ch. 40A, § 3.

[92] 18A Douglas A. Randall & Douglas E. Franklin, Massachusetts Practice, Muncipal Law and Practice § 17.6 (5th ed. 2006).

[93] Campbell v. City Council, 616 N.E.2d 445, 449 (Mass. 1993).

[94] *See* 28 Arthur L. Eno, Jr. & William V. Hovey, Massachusetts Practice, Real Estate Law § 23.32 & n.4 (4th ed. 2004).

appreciably advancing the municipality's legitimate concerns."[95] In seeking a balance between municipal concerns and prevention of discrimination, courts have enforced restrictions consistent with "promoting public health or safety, preserving the character of [a] neighborhood, or . . . other purposes" served by local zoning.[96]

While legal analysis of the Dover Amendment's protections is performed on a case-by-case basis, some factors exist to guide a court in its review.[97] For example, a court must consider the religious institution's overall use of the structure, not merely the function of each part of the structure, when conducting an analysis of whether that structure is protected by the Dover Amendment.[98] This approach ensures that separate functions within a religious facility are protected, including kitchens, parking lots, and steeples.[99] Another factor relevant to the inquiry is whether the regulation would impair the character of the use.[100]

Although judges are not permitted to determine whether a specific aspect of a structure serves a religious function, they may inquire whether the entire structure serves a religious purpose.[101] For example, in *Needham Pastoral Counseling Center, Inc. v. Board of Appeals*, the Massachusetts Court of Appeals found that a counseling center run by the Congregational Church of Needham that was open to the general public did not serve a religious purpose, but instead resembled a mental health center.[102] Because a determination of religious purpose depends on the use of the facility, not on the sponsoring organization, the Needham Pastoral Counseling Center did not qualify for zoning exemptions under the Dover Amendment.[103] The Court of Appeals also provided some guidance regarding what could be considered a religious activity or purpose.[104] It stated that religious activity is not merely prayer and worship, but rather some "system of belief, concerning

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[95] Trs. of Boston Coll. v. Bd. of Aldermen, 793 N.E.2d 387, 391–92 (Mass. App. Ct. 2003); *see* ENO & HOVEY, *supra* note 94, § 23.32 & n.4.

[96] RANDALL & FRANKLIN, *supra* note 92, § 17.6.

[97] *See* Trs. of Tufts Coll. v. City of Medford, 616 N.E.2d 433, 438 (Mass. 1993); RANDALL & FRANKLIN, *supra* note 92, § 17.6.

[98] Worcester County Christian Commc'ns, Inc. v. Bd. of Appeals, 491 N.E.2d 634, 637 (Mass. App. Ct. 1986).

[99] Martin v. Corp. of the Presiding Bishop of the Church of Jesus Christ of Latter-Day Saints, 747 N.E.2d 131, 138 (Mass. 2001).

[100] *Trs. of Tufts Coll.*, 616 N.E.2d at 439; *Trs. of Boston Coll.*, 793 N.E.2d at 396.

[101] *Martin*, 747 N.E.2d at 139; Needham Pastoral Counseling Ctr., Inc. v. Bd. of Appeals, 557 N.E.2d 43, 47 (Mass. App. Ct. 1990).

[102] 557 N.E.2d at 46.

[103] *Id.* at 47.

[104] *See id.* at 45, 47.

more than the earthly and temporal, to which the adherent is faithful."[105]

The Dover Amendment does not prevent a municipality from exercising discretion in the special permit process.[106] Reasonable zoning regulations may be applied to a religious or educational institution that seeks a special permit.[107] A municipality, however, is forbidden from discriminating against a special permit application under the "guise of regulating bulk and dimensional requirements."[108] One recent case decided under the Dover Amendment may have further extended the scope of religious protection in Massachusetts to rival protections granted under RLUIPA.[109]

2. Massachusetts's Example: *Martin v. Corporation of the Presiding Bishop of the Church of Jesus Christ of Latter-Day Saints*

The Massachusetts Supreme Judicial Court (SJC) directly addressed the application of the Dover Amendment to restrictions placed on a proposed religious construction project in *Martin v. Corporation of the Presiding Bishop of the Church of Jesus Christ of Latter-Day Saints.*[110] *Martin* involved a challenge to a maximum height restriction for parcels zoned as single residence-A (SR-A) in Belmont, Massachusetts.[111] A religious structure is a use by right in SR-A, but the religious institution must still comply with numerous zoning restrictions.[112] The Church of Jesus Christ of Latter-Day Saints sought to develop a nine-acre wooded lot into a new temple.[113] The temple, as approved by the zoning board, was eighty-three feet high, including a ten-foot tall statue of the Angel Moroni.[114] The Belmont zoning bylaws for parcels

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[105] *Id.*

[106] Trs. of Boston Coll. v. Bd. of Aldermen, 793 N.E.2d 387, 393 (Mass. App. Ct. 2003). Thus, a special permit allows the zoning board to attach conditions to a use that is built into a zone. BURKE, *supra* note 17, at 143.

[107] *Trs. of Boston Coll.*, 793 N.E.2d at 393.

[108] Bible Speaks v. Bd. of Appeals, 391 N.E.2d 279, 285 (Mass. 1979); *Trs. of Boston Coll.*, 793 N.E.2d at 393.

[109] *See* Martin v. Corp. of the Presiding Bishop of the Church of Jesus Christ of Latter-Day Saints, 747 N.E.2d 131, 134 (Mass. 2001); Edith Netter, *The View from Belmont, Massachusetts*, 53 LAND USE L. & ZONING DIG., Sept. 2001, at 8, 9.

[110] 747 N.E.2d at 133.

[111] *Id.* at 133–34.

[112] *Id.*

[113] *Id.* at 133.

[114] *Id.* at 134. As the court notes, the Angel Moroni is a central religious symbol for the church, similar in importance to the Christian cross. *Id.* at 134 n.7. Further, the zoning

of comparable size permitted a building height of no more than sixty feet with steeples of no more than eleven feet, two inches.[115]

The Church petitioned the Belmont zoning board for either a special permit to allow its steeple to exceed the maximum height requirement or for "a determination that application of the bylaw's height restriction to the steeple would violate the Dover Amendment."[116] After several months of public hearings, the zoning board determined that the height restriction would violate the Dover Amendment as applied to the Church.[117] It found that there was "no grave municipal concern" and that the Church should be accommodated under the circumstances.[118] Once the board granted a special permit to the Church, plaintiffs, who owned properties abutting the proposed temple site, filed suit in Massachusetts Superior Court.[119] The Superior Court judge ruled in favor of plaintiffs, finding that "neither the presence nor the height of the steeple represents a necessary element of the Mormon religion."[120]

The SJC granted certiorari and reversed the decision of the Superior Court.[121] It found several reversible errors.[122] First, the trial judge improperly focused on whether the steeple itself was a religious use; the SJC determined that the Dover Amendment applied to the use of the land as a whole or a structure thereon, rather than a portion thereof.[123] The SJC noted that if it employed a narrow construction of the Dover Amendment and analyzed each part of a structure, elements such as church kitchens and parking lots would not be protected.[124] Thus, the SJC held that although the trial court may have focused on the steeple because it was the only part of the temple that did not comply with zoning requirements, this narrow approach was an improper interpretation of the statute.[125]

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board recognized that the ascension toward heaven is a part of Mormon theology. *Id.* at 137.

[115] *Id.* at 133–34.

[116] *Martin*, 747 N.E.2d at 134.

[117] *Id.*

[118] *Id.*

[119] *Id.* at 135. A person aggrieved by a zoning board decision may appeal to the superior court. Mass. Gen. Laws ch. 40A, § 17 (2006).

[120] *Martin*, 747 N.E.2d at 137 (internal quotations omitted).

[121] *Id.* at 133.

[122] *Id.* at 137–38.

[123] *Id.*

[124] *Id.* at 138.

[125] *Id.*

Moreover, the SJC found error with the trial judge's determination that the proposed temple's steeple did not serve a religious purpose.[126] The court held that the trial judge correctly determined that a religious purpose is "something in aid of a system of faith and worship," but that the inquiry into whether the steeple served a religious purpose was prohibited by the First Amendment.[127] The SJC held that the trial judge should have taken the inquiry only as far as was necessary to determine that temples are "places where Mormons conduct their sacred ceremonies."[128] Further inquiry required the judge to determine the validity of tenets of the religion, and the First Amendment prohibited such an inquiry.[129]

Additionally, the SJC found that the Superior Court erred in requiring that the church prove that the height restrictions placed on the temple by the bylaw were unreasonable.[130] A requirement is unreasonable when it "detracts from the usefulness of a structure[,] impose[s] excessive costs[,] or . . . impair[s] the character of the proposed structure."[131] While the lower court determined that the church should not receive an exemption because it had not shown that the height restriction would prevent or diminish the temple's usefulness, the SJC held that the judge should have considered whether the height restriction would reduce the character of the temple with respect to its exempted use as a religious facility.[132]

In conducting its inquiry under the Dover Amendment, the SJC found that the lower court incorrectly dismissed aesthetic and architectural beauty as valid factors in making a determination about the inclusion of the steeple.[133] The SJC determined that, rather than a steeple being a minor facet of a temple, "[A] steeple is the precise architectural feature that most often makes the public identify the building as a religious structure."[134] Moreover, the SJC decided that even if the steeple

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[126] *Martin*, 747 N.E.2d at 138.

[127] *Id.*

[128] *Id.*

[129] *Id.*

[130] *Id.* at 138–39.

[131] Peter A. Spellios, *Zoning: The Dover Amendment:* Martin v. The Corporation of the Presiding Bishop of the Church of Jesus Christ of Latter-Day Saints, 87 MASS. L. REV. 128, 129 (2003); *see Martin*, 747 N.E.2d at 139.

[132] *Martin*, 747 N.E.2d at 139.

[133] *Id.*

[134] *Id.* at 140.

were not central to Mormon religious doctrine, this inquiry should not be a defining factor in a Dover Amendment case.[135]

Under the language of the Dover Amendment, the inquiry into the reasonableness of the requirement is typically balanced against a legitimate municipal concern.[136] In *Martin*, however, the SJC and the Belmont Zoning Board balanced the reasonableness of the requirement against a critical or grave municipal concern.[137] According to one critic of the SJC's decision in *Martin*, this higher standard is not found in the text of the law, but instead resembles RLUIPA's requirement that the government show a compelling governmental interest.[138]

B. *Religious Exemptions from Land Use Controls in Washington*

Unlike Massachusetts, Washington relies on a series of three cases to form the backbone of analysis for conflicts between land use regulations and religious freedom.[139] These cases work in concert with the Washington State Constitution, which provides broader protections to land use regulations than the U.S. Constitution.[140] Two of the three cases originated from a single lawsuit filed by the First Covenant Church, which sought to overturn a decision by the City of Seattle that designated the church as an historic landmark and prevented the church from making changes to the exterior of the structure.[141]

In *First Covenant Church of Seattle v. City of Seattle* (*First Covenant I*), the Washington Supreme Court (WSC) held that the historic landmark designation burdened the free exercise of First Covenant Church.[142] The Supreme Court, however, granted certiorari and vacated the deci-

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[135] *Id.*

[136] Mass. Gen. Laws ch. 40A, § 3 (2006); *see* Netter, *supra* note 109, at 9.

[137] 747 N.E.2d at 134, 140; *see* Netter, *supra* note 109, at 9.

[138] Religious Land Use and Institutionalized Persons Act of 2000, 42 U.S.C. § 2000cc(a)(1)(B) (2000); *see* Netter, *supra* note 109, at 9.

[139] *See generally* First United Methodist Church v. Hearing Exam'r, 916 P.2d 374 (Wash. 1996); First Covenant Church of Seattle v. City of Seattle (*First Covenant II*), 840 P.2d 174 (Wash. 1992); First Covenant Church of Seattle v. City of Seattle (*First Covenant I*), 787 P.2d 1352 (Wash. 1990), *vacated*, 499 U.S. 901 (1991) (together, providing the framework for Washington's free exercise protections).

[140] Wash. Const. art. I, § 11; Darren E. Carnell, *Zoning Churches: Washington State Constitutional Limitations on the Application of Land Use Regulations to Religious Buildings*, 25 Seattle U. L. Rev. 699, 703 (2002). The Washington State Constitution reads, in relevant part, "Absolute freedom of conscience in all matters of religious sentiment, belief and worship, shall be guaranteed to every individual, and no one shall be molested or disturbed in person or property on account of religion." Wash. Const. art. I, § 11.

[141] *First Covenant II*, 840 P.2d at 177; *First Covenant I*, 787 P.2d at 1353.

[142] 787 P.2d at 1353–54.

sion of the WSC following the change in free exercise jurisprudence in *Employment Division v. Smith.*[143] In *First Covenant Church of Seattle v. City of Seattle* (*First Covenant II*), the WSC distinguished *First Covenant II* from *Smith* and relied on the state constitution to reinstate its holding in *First Covenant I*—that the historic landmark designation interfered with First Covenant Church's right to free exercise of religion.[144] In a third case, *First United Methodist Church v. Hearing Examiner,* the WSC held that the church's lawsuit was ripe for review, even though First United Methodist Church filed when the city began the historic landmark designation process, rather than waiting for its conclusion.[145]

In analyzing a religious land use case in Washington, the courts apply strict scrutiny to the actions of the municipality accused of burdening the religious institution.[146] First, Washington courts must determine whether the "parties have a sincere religious belief."[147] This standard does not allow a judge free rein to determine whether a religious belief is reasonable.[148] Instead, the religious institution "must prove only that their religious convictions are sincere and central to their beliefs."[149] Washington relied on Supreme Court precedent to establish this standard of review for a sincere religious belief.[150]

The second test under the Washington analysis is "whether the challenged enactment or action constitutes a burden on the free exercise of religion."[151] Here, the courts rely on the analysis from the three cases, particularly *First Covenant II.*[152] If a statute is found to have a coercive effect on the practice of a person's religion, then it unduly

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[143] City of Seattle v. First Covenant Church of Seattle, 499 U.S. 901, 901 (1991). *See generally* Employment Div. v. Smith, 494 U.S. 872 (1989) (eliminating the applicability of strict scrutiny analysis in free exercise cases where a generally neutral law is at issue).

[144] *First Covenant II*, 840 P.2d at 177; *see Smith*, 494 U.S. at 872.

[145] First United Methodist Church v. Hearing Exam'r, 916 P.2d 374, 376–378 (Wash. 1996).

[146] Munns v. Martin, 930 P.2d 318, 321 (Wash. 1997).

[147] *Id.*

[148] *Id.*

[149] Backlund v. Bd. of Comm'rs of King County Hospital, 724 P.2d 981, 985 (Wash. 1986).

[150] *See* Thomas v. Review Bd. of the Ind. Employment Sec. Div., 450 U.S. 707, 714 (1981); Barnette v. W. Va. State Bd. of Educ., 47 F. Supp. 251, 253 (S.D.W. Va. 1942), *aff'd*, 319 U.S. 624 (1943); *Munns*, 930 P.2d at 321.

[151] *Munns*, 930 P.2d at 321.

[152] *Id.*; First Covenant Church of Seattle v. City of Seattle (*First Covenant II*), 840 P.2d 174, 187 (Wash. 1992); *see* First United Methodist Church v. Hearing Exam'r, 916 P.2d 374, 378 (Wash. 1996); First Covenant Church of Seattle v. City of Seattle (*First Covenant I*), 787 P.2d 1352, 1357 (Wash. 1990), *vacated*, 499 U.S. 901 (1991).

burdens that person's free exercise of religion.[153] A statute can be unduly burdensome even if it is facially neutral, so long as the petitioner can show that it is burdensome on his particular religious practice.[154]

Finally, if a petitioner can show that the government action is unduly burdensome on his religious beliefs, then the government may offset the burden by showing a compelling state interest.[155] In *Munns v. Martin*, the WSC acknowledged that there are numerous compelling governmental interests, some of which have not yet been tested by the courts.[156] However, the court noted that compelling state interests are "based in necessities of national or community life such as clear threats to public health, peace, and welfare."[157] Even if the state shows that it has a compelling state interest, this third inquiry does not immediately end—the state must also demonstrate that it used the least restrictive possible means to achieve its purpose.[158]

Most cases in Washington that have addressed the conflict between land use regulations and religious freedom have involved challenges to historic preservation laws.[159] However, in a recent case concerning a church's application for a special permit, the WSC held that the local government has some discretion when land use regulations encounter religion.[160]

1. Washington's Example: *Open Door Baptist Church v. Clark County*

The parcel of land at issue in *Open Door Baptist Church v. Clark County* was located in a rural estate (RE) zoning district.[161] The conflict arose after Open Door Baptist Church failed to obtain a conditional use permit.[162] Open Door received a notice of RE violation, which required the church to either "cease all business activities or apply for a

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[153] *First Covenant II*, 840 P.2d at 187; Witters v. Comm'n for the Blind, 771 P.2d 1119, 1123 (Wash. 1989).

[154] *Munns*, 930 P.2d at 321; *First Covenant II*, 840 P.2d at 187.

[155] *Munns*, 930 P.2d at 321.

[156] *Id.*

[157] *Id.*; *see First Covenant II*, 840 P.2d at 187.

[158] *Munns*, 930 P.2d at 321; *First Covenant II*, 840 P.2d at 187.

[159] Carnell, *supra* note 140, at 705; *see* First United Methodist Church v. Hearing Exam'r, 916 P.2d 374, 378 (Wash. 1996); *First Covenant II*, 840 P.2d at 177; First Covenant Church of Seattle v. City of Seattle (*First Covenant I*), 787 P.2d 1352, 1353 (Wash. 1990), *vacated*, 499 U.S. 901 (1991).

[160] Carnell, *supra* note 140, at 705; *see* Open Door Baptist Church v. Clark County, 995 P.2d 33, 41 (Wash. 2000).

[161] 995 P.2d at 35.

[162] *Id.* at 34.

conditional use permit within ten days."[163] Although a church originally occupied the parcel, the structure had been used as an art school for the twelve years prior to Open Door's purchase of the land.[164] In a hearing where Open Door disputed the need for a conditional use permit, the hearing examiner found that the building's right to be considered a nonconforming use without a conditional permit expired when it ceased to be used as a church during the twelve years prior to Open Door's purchase.[165]

Open Door appealed the decision of the hearing examiner to the Clark County Superior Court.[166] The Superior Court found that the permitting process improperly denied Open Door its rights because the hearing examiner did not observe the appropriate legal standards.[167] Clark County appealed the decision, and a panel of the Second Division of the Washington Court of Appeals reversed, finding that the requirement of obtaining a conditional use permit did not impose an unconstitutional burden on Open Door.[168] The Court of Appeals held that if Open Door were denied a conditional use permit, then it could again challenge the decision.[169] Open Door petitioned the WSC for review.[170] After granting review, the WSC affirmed the appellate court's decision, finding that requiring the church to obtain a conditional use permit did not constitute a burden on Open Door's freedom of religious exercise.[171]

The WSC held that requiring a church to merely alert its neighbors of its intent to relocate into the neighborhood is the same standard that any construction project necessitating a special use permit must meet.[172] Because nonconforming uses are not permitted to convert into another type of nonconforming use, it was not unreasonable to require Open Door to obtain a conditional use permit.[173] The court reached this conclusion even though the Washington Constitution provides broader protection for free exercise than the U.S. Consti-

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[163] *Id.* at 35.
[164] *Id.* at 37.
[165] *Id.* at 35.
[166] *Id.*
[167] *Open Door Baptist Church*, 995 P.2d at 35.
[168] *Id.* at 36.
[169] *Id.*
[170] *Id.*
[171] *Id.* at 48.
[172] *Id.* at 37.
[173] *Open Door Baptist Church*, 995 P.2d at 37; Anderson v. Island County, 501 P.2d 594, 601 (Wash. 1972); Coleman v. Walla Walla, 266 P.2d 1034, 1036 (Wash. 1954).

tution.[174] Applying the factors enumerated in *Munns*, the WSC found that there was no question as to whether Open Door had a "sincere religious belief."[175] The WSC did find, however, that Open Door's petition failed under the second prong of *Munns* because there was not a burden on the free exercise of religion.[176] Open Door's suit was too prospective because the church had not even applied for a special permit before filing its claim; it had merely speculated that that the permit would not be granted.[177]

To establish a successful claim, Open Door first would have needed to exhaust its administrative remedies by applying for an administrative permit.[178] The church could continue its nonconforming use until the resolution of the permit process.[179] Because the Court of Appeals found that the county must reduce or waive the permit fee if Open Door showed an inability to pay, the church's burden was "a bit threadbare and based upon little more than the inconvenience of filling out paperwork."[180] Finally, the WSC found that even if Open Door suffered a burden on its free exercise of religion, a less restrictive alternative to requiring Open Door to file an application and follow the administrative process did not exist.[181] By requiring religious institutions to follow the administrative process, the WSC sought to ensure that religious institutions did not end up "exempt from zoning . . . as a practical matter."[182] The WSC concluded by reiterating that a denial of Open Door's conditional use permit application might enable the church to prevail on a future free exercise claim.[183]

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[174] *Open Door Baptist Church*, 995 P.2d at 38; First Covenant Church of Seattle v. City of Seattle (*First Covenant II*), 840 P.2d 174, 189 (Wash. 1992).

[175] *Open Door Baptist Church*, 995 P.2d at 38; Munns v. Martin, 930 P.2d 318, 321 (Wash. 1997).

[176] *Open Door Baptist Church*, 995 P.2d at 42; *Munns*, 930 P.2d at 321.

[177] *Open Door Baptist Church*, 995 P.2d at 42.

[178] *Id.*

[179] *Id.*; *see* First Covenant Church of Seattle v. City of Seattle (*First Covenant I*), 787 P.2d 1352, 1356 (Wash. 1990), *vacated*, 499 U.S. 901 (1991).

[180] *Open Door Baptist Church*, 995 P.2d at 43.

[181] *Id.* at 46.

[182] *Id.*

[183] *Id.* at 48.

IV. Is RLUIPA Necessary, or Can States Handle Religious Land-Use Jurisprudence on Their Own?

Since the enactment of RLUIPA in 2000, at least fifty separate cases have raised issues that concern its statutory provisions.[184] This number is in addition to the many conflicts where the mere mention of RLUIPA was sufficient to encourage local governments to concede to religious facilities to avoid litigation.[185] Critics of RLUIPA have argued that its passage has spurred churches to test their boundaries, creating unnecessary religious land use litigation.[186] However, many of the vocal critics of RLUIPA represent interest groups affiliated with planning and local government.[187] Although RLUIPA expressly states that it does not preempt state laws, its existence may result in religious land uses receiving different treatment from other land uses.[188]

Interactions between RLUIPA and local religious land use regulations vary greatly between states that protect religious land uses through legislation or other protective measures and states that have not created protections for religious land use.[189] In states that have protections for religious land uses, there are few differences, if any, in the analysis and outcome of religious land use issues.[190] However, in states without additional protections for religious land uses, religious groups may reach more favorable results under RLUIPA than under state law analysis.[191] In these states, not only is the analysis entirely different, but the outcomes under RLUIPA may be directly contrary to the outcome of litigation analyzed solely under state laws.[192]

While RLUIPA provides states with broad federal protection of religious land use, it also removes states from the process of addressing religious land use issues by effectively preempting state law.[193] Even though RLUIPA specifically states that it does not preempt other laws, religious institutions can choose to raise a claim under RLUIPA, rather than risk the uncertainty of their own states' RFRA provisions or case law when

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[184] *See* RLUIPA.com, *supra* note 6.

[185] *See* Hamilton, *supra* note 4, at 98; RLUIPA.com, *supra* note 6.

[186] *See* Hamilton, *supra* note 4, at 97–98; Runyon et al., *supra* note 1.

[187] Runyon et al., *supra* note 1.

[188] Religious Land Use and Institutionalized Persons Act of 2000, 42 U.S.C. §§ 2000cc, 2000cc-1 (2000); Hamilton, *supra* note 4, at 97.

[189] *See* Council on Religious Freedom, *supra* note 80, at 3.

[190] *See* discussion *infra* Part IV.A.

[191] *See* discussion *infra* Part IV.B.

[192] *See id.*

[193] *See* Runyon et al., *supra* note 1; *see also* Hamilton, *supra* note 4, at 78–110 (providing a harsh criticism of religious land use laws, including RFRA and RLUIPA).

dealing with religious land use conflicts.[194] Moreover, this difference in state and federal protections is even greater in states that considered, but did not pass, their own RFRAs, thereby choosing not to extend heightened protection to religious land uses.[195] Without RLUIPA, land use decisions in states that intentionally did pass state RFRAs would be guided by the rational basis review under the *Employment Division v. Smith* test instead of the strict scrutiny of RLUIPA.[196] Unless a law was specifically targeted at discrimination against religion, a religious property would be guided by the same regulations as any secular property.[197]

A. *States That Have Protections for Religious Land Uses in Place*

1. Comparing the Policies Behind RLUIPA, the Dover Amendment, and the Washington Analysis

Most states with statutory or case law protections of religious land use share the objective articulated in RLUIPA: to provide religious organizations with protection from discriminatory land-use regulation.[198] For example, both RLUIPA and the Dover Amendment are intended to protect religious land uses from discrimination by local government or

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[194] Religious Land Use and Institutionalized Persons Act of 2000, 42 U.S.C. § 2000cc-3(h) (2000); *see* OKLA. STAT. tit. 51, §§ 251–258 (Supp. 2007); TEX. CIV. PRAC. & REM. CODE ANN. § 110.010 (Vernon 2006); Price, *supra* note 82, at 366. Before RLUIPA's passage, local governmental lobbyists attempted to include a provision in RLUIPA that required religious institutions to exhaust the local land use process before a RLUIPA suit ripened. HAMILTON, *supra* note 4, at 104–05. This provision was not included in RLUIPA; thus, a religious institution invoking RLUIPA does not necessarily have to exhaust all local options to have a ripe suit under the Act. *Id.* at 105.

[195] *See* Laycock, *supra* note 86, at 757. In Texas, Illinois, and California, land use lobbyists fought against state RFRA enactments because of concern for the changes to state land-use law that a state RFRA would create. *Id.* at 757 & nn.2, 3. Although Illinois passed a state RFRA, California has not done so. Governor's Veto Message for Assembly Bill No. 1617 (Sept. 28, 1998), 8 Assemb. J. 9647, 1997–98 Reg. Sess. (Cal. 1998), *available at* http://www.leginfo.ca.gov/pub/97-98/bill/asm/ab_1601-1650/ab_1617_vt_19980928.html; Laycock, *supra* note 86, at 757.

[196] *Compare* 42 U.S.C. § 2000cc(a)(1), *with* Employment Div. v. Smith, 494 U.S. 872, 895 (1990) (demonstrating the changes in standards of review brought about by RLUIPA).

[197] *See* HAMILTON, *supra* note 4, at 95–96.

[198] *See* MASS. GEN. LAWS ch. 40A, § 3 (2006); 146 CONG. REC. S7774-01 (daily ed. July 13, 2000) (statements of Sens. Hatch & Kennedy); *see also* Runyon et al., *supra* note 1 (providing examples of state protections). For the purposes of this Note, the protections of religious land use established in Massachusetts and Washington will serve as representative examples. Massachusetts will be representative of states with RFRA-like statutes, and Washington will be representative of states with case law protections in place.

zoning boards.[199] RLUIPA was intended to protect against the "highly individualized and discretionary processes of land use regulation."[200] Similarly, the Dover Amendment strives to protect religion from discrimination by municipalities by limiting the ability of the local government to give preference to a secular use over a nonsecular use.[201]

The protections created by case law in Washington serve a similar purpose.[202] The Washington case law analysis seeks to prevent burdens on religious exercise by protecting religion from laws having a coercive effect on religious practice, including facially neutral laws.[203] The WSC recognized that although freedom of religion is not an absolute right, its protections do have a preferred position.[204] Although most Washington religious land use cases have dealt with repercussions from historic land use designations, such cases present a framework of protection similar to the framework found in RLUIPA and the Dover Amendment.[205]

Like RLUIPA, the Dover Amendment strives to strike a balance between allowing religious uses and "honoring legitimate municipal concerns."[206] Courts that have applied the Dover Amendment have rec-

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[199] *See* MASS. GEN. LAWS ch. 40A, § 3; 146 CONG. REC. S7774-01 (daily ed. July 13, 2000) (statements of Sens. Hatch & Kennedy). Specifically, legislatures sought to ensure that churches were not excluded from locating in places where other large groups congregated for secular purposes. *Id.* One of the primary concerns in enacting RLUIPA was to ensure that local governments could not avoid prohibitions against exclusionary religious zoning by stating some illusory basis for the denial of a permit. *Id.* By subjecting actions of local government to strict scrutiny, RLUIPA not only ensures that there must be a compelling governmental interest, but that the interest could not be protected through a less restrictive means. 42 U.S.C. § 2000cc(a)(1)(A)–(B); 146 CONG. REC. S7774-01 (daily ed. July 13, 2000) (statements of Sens. Hatch & Kennedy). Further, state and local governments are not permitted to circumvent the intent of RLUIPA by defining the scope of terms within RLUIPA. Konikov v. Orange County, 410 F.3d 1317, 1324–25 (11th Cir. 2005) (per curiam); Midrash Sephardi, Inc. v. Town of Surfside, 366 F.3d 1214, 1229–31 (11th Cir. 2004).

[200] 146 CONG. REC. S7774-01 (daily ed. July 13, 2000) (statements of Sens. Hatch & Kennedy).

[201] Bible Speaks v. Bd. of Appeals, 391 N.E.2d 279, 283 n.10 (Mass. App. Ct. 1979).

[202] *See* 42 U.S.C. § 2000cc(a)(1); Munns v. Martin, 930 P.2d 318, 321 (Wash. 1997).

[203] First Covenant Church of Seattle v. City of Seattle (*First Covenant II*), 840 P.2d 174, 187 (Wash. 1992); *see* First United Methodist Church v. Hearing Exam'r, 916 P.2d 374, 378 (Wash. 1996); First Covenant Church of Seattle v. City of Seattle (*First Covenant I*), 787 P.2d 1352, 1357 (Wash. 1990), *vacated*, 499 U.S. 901 (1991).

[204] *First Covenant I*, 787 P.2d at 1356; *see* Murdock v. Pennsylvania, 319 U.S. 105, 115 (1943).

[205] 42 U.S.C. § 2000cc(a)(1); MASS. GEN. LAWS ch. 40A, § 3 (2006); *First Covenant II*, 840 P.2d at 183.

[206] Martin v. Corp. of the Presiding Bishop of the Church of Jesus Christ of Latter-Day Saints, 747 N.E.2d 131, 137 (Mass. 2001); *see* Trs. of Tufts Coll. v. Medford, 616 N.E.2d 433,

ognized that local zoning regulations are designed to be uniformly enforceable; just as local governments should not uniformly discriminate against religious uses, they should not uniformly allow religious uses to be built without exercising discretion.[207] Washington courts have also recognized the need to balance the concerns of religious institutions with those of the local government.[208] In *Open Door Baptist Church v. Clark County*, the court determined that allowing the plaintiff to proceed without a conditional use permit would "add too much weight to one side of the scale."[209] Thus, although RLUIPA, the Dover Amendment, and the Washington cases express their protections for religious land uses in different ways, each strives to reduce discrimination against religious land uses by providing an additional measure of protection from the individualized and discretionary processes of local land-use regulation.[210]

2. Would *Martin v. Corporation of the Presiding Bishop of Jesus Christ of Latter-Day Saints* Be Decided Differently Under RLUIPA?

Martin v. Corporation of the Presiding Bishop of Jesus Christ of Latter-Day Saints is particularly suitable to scrutiny under RLUIPA because of the manner in which the Massachusetts SJC chose to analyze the case.[211] Although claims were brought under both RLUIPA and the Dover Amendment, the SJC declined to address the RLUIPA claim because it found that the decision was clear under the Dover Amendment.[212] The SJC's analysis in *Martin* was guided by the text of the Dover Amendment, which prohibits regulation or restriction of "the use of land or structures for religious purposes."[213] Within this prohibition, the Dover Amendment specifically notes that "reasonable regulations concerning the bulk and height of structures and determining yard sizes, lot area,

438 (Mass. 1993); 146 Cong. Rec. S7774-01 (daily ed. July 13, 2000) (statements of Sens. Hatch & Kennedy).

[207] *See Martin*, 747 N.E.2d at 137; Campbell v. City Council, 616 N.E.2d 445, 449 (Mass. 1993).

[208] Open Door Baptist Church v. Clark County, 995 P.2d 33, 48 (Wash. 2000); *see* Munns v. Martin, 930 P.2d 318, 326 (Wash. 1997).

[209] 995 P.2d at 48.

[210] *See* 42 U.S.C. § 2000cc(a)(1); Mass. Gen. Laws ch. 40A, § 3; *Munns*, 930 P.2d at 321; 146 Cong. Rec. S7774-01 (daily ed. July 13, 2000) (statements of Sens. Hatch & Kennedy).

[211] *See* 747 N.E.2d at 140.

[212] *Id.* Because this Note centers on the question of whether state or federal control of religious land use is more appropriate, it is helpful to examine what differences, if any, would have occurred if the SJC had chosen to examine *Martin* under RLUIPA, rather than under the Dover Amendment.

[213] Mass. Gen. Laws ch. 40A, § 3.

setbacks, open space, parking and building coverage requirements" are still applicable.[214] In conducting its case-specific inquiry, the SJC determined that the steeple height was reasonable because: (1) the steeple was part of a larger structure that served a religious purpose; (2) the structure served a religious purpose as far as the court was permitted to determine; and (3) the zoning board found that controlling the steeple height of churches served no municipal concern.[215]

Had the SJC analyzed *Martin* under RLUIPA, the court would first have examined whether the land use regulation placed a substantial burden on religion.[216] If the religious institution demonstrated that a substantial burden existed, then the SJC would have examined whether the local government could show that its regulation fulfilled a compelling governmental interest.[217] Finally, if the government established a compelling governmental interest, then the court would have considered whether the method of furthering that interest was achieved by the least restrictive means.[218]

If the SJC had chosen to use RLUIPA to analyze *Martin*, only the first two steps of analysis under RLUIPA would have been necessary.[219] The SJC likely would have determined that the restriction on steeple height placed a substantial burden on the institution's religious practice.[220] Further, unless a belief is "so bizarre, so clearly nonreligious in motivation," courts employing RLUIPA analysis will generally defer to a religious institution's determination of what constitutes a religious be-

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[214] *Id.*

[215] *Martin*, 747 N.E.2d at 138–40.

[216] 42 U.S.C. § 2000cc(a)(1).

[217] *Id.* § 2000cc(a)(1)(A).

[218] *Id.* § 2000cc(a)(1)(B).

[219] *See id.* § 2000cc(a)(1); 747 N.E.2d at 140.

[220] *See* 42 U.S.C. § 2000cc(a)(1); *Martin*, 747 N.E.2d at 138. This conclusion assumes that the court would have found that separating a building into its individual elements, each requiring a specific religious use, would not be a feasible analysis for courts to undertake. *See id.* It is possible, though unlikely, that because the SJC relied on state law to conclude that separating a building into each rudimentary element leads to impossible results, the court would reach a different answer under RLUIPA. *See id.* There is no evidence that any case decided under RLUIPA has broken a structure into individual elements and conducted its inquiries based on whether each individual element served a religious purpose; rather, the cases have looked at the structure as a whole. *See* BLAESSER ET AL., FEDERAL LAND USE, *supra* note 24, at 621–79. However, if the SJC were to employ the "effectively impracticable" standard found in *Civil Liberties for Urban Believers v. City of Chicago*, but not adopted by the U.S. Court of Appeals for the First Circuit, then it is unlikely that the church could show a substantial burden. *See* 342 F.3d 752, 761 (7th Cir. 2003).

lief.[221] In *Martin*, the church emphasized that ascendancy toward heaven is a specific value of the Mormon religion.[222] The court likely would have concluded that limiting the Mormon temple congregation's ability to express its "inspirational value" would place a substantial burden on religious exercise.[223]

Assuming that the SJC were to find that the limitation on the church's steeple design placed a substantial burden on religion, it would then have analyzed whether there was a compelling governmental interest in regulating the height of the steeple.[224] Here, the zoning board itself did not allege a municipal concern, nor did the SJC determine that there was evidence of one.[225] Instead, the zoning board concluded that the steeple height exemption was reasonable "in light of the function of a steeple, and the importance of proportionality of steeple height to building height."[226] It is unlikely that the SJC would have drawn a different conclusion under RLUIPA, as the zoning board did not take issue with the proposed height of the steeple.[227]

Because the zoning board did not allege a compelling governmental interest and the SJC would have been unlikely to find one under RLUIPA, it would not have been necessary for the court to determine if restrictions on steeple height were the least restrictive means of furthering a compelling governmental interest.[228] Based on the similarities between the protections under the Dover Amendment and RLUIPA, as well as the nature of the SJC's analysis in *Martin*, the SJC probably would have reached the same conclusion under RLUIPA: that the zoning board correctly granted the special permit allowing the taller steeple.[229]

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[221] Thomas v. Review Bd. of the Ind. Employment Sec. Div., 450 U.S. 707, 715 (1981); Scott v. Rosenberg, 702 F.2d 1263, 1273 (9th Cir. 1983); Blaesser et al., Federal Land Use, *supra* note 24, at 645.

[222] 747 N.E.2d at 137. The SJC determined that it was inappropriate for the trial judge to determine that ascendancy toward heaven was "not a matter of religious doctrine" and, thus, concluded that a steeple could in fact be an expression of a religious belief. *Id.*

[223] *See id.*

[224] *See* 42 U.S.C. § 2000(a)(1)(A); *Martin*, 747 N.E.2d at 137.

[225] *Martin*, 747 N.E.2d at 140.

[226] *Id.*

[227] *See* 42 U.S.C. § 2000cc(a)(1)(A); *Martin*, 747 N.E.2d at 140.

[228] *See* 42 U.S.C. § 2000cc(a)(1)(B); *Martin*, 747 N.E.2d at 140.

[229] *See* 42 U.S.C. § 2000cc(a)(1); Mass. Gen. Laws ch. 40A, § 3 (2006); 747 N.E.2d at 140.

3. Would *Open Door Baptist Church v. Clark County* Be Decided Differently Under RLUIPA?

Unlike in *Martin*, where the SJC applied a state statutory scheme similar to RLUIPA, in Washington, courts apply a three-part test developed by the WSC.[230] When a religious land use case arises in Washington, the court first determines whether the religious institution has a sincere religious belief.[231] Then, if the court concludes that the religious convictions at stake are "sincere and central to their beliefs," the court determines whether the land use regulation has a coercive effect that burdens the religious practices at issue.[232] Finally, if the court finds that the regulation is unduly burdensome, the state or municipality may defeat the claim by showing a compelling state interest, and that the government is implementing this interest through the least restrictive means possible.[233] Although the WSC relies on its own case law precedent to decide religious land use cases, the test resembles that of RLUIPA.[234] The primary difference between RLUIPA and Washington's test appears to be that the latter explicitly permits the judge some, albeit small, discretion in determining whether a religious belief is sincere.[235]

The conflict in *Open Door Baptist Church v. Clark County* involved a church that failed to apply for a conditional use permit that would have allowed it to continue as a nonconforming use.[236] The WSC, applying its three-part test, found that the mere requirement that Open Door file for a permit did not constitute a burden on religion.[237] The WSC left open the possibility, however, that denial of a conditional use permit might constitute a burden on religion.[238]

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[230] *See generally* First United Methodist Church v. Hearing Exam'r, 916 P.2d 374 (Wash. 1996); First Covenant Church of Seattle v. City of Seattle (*First Covenant II*), 840 P.2d 174 (Wash. 1992); First Covenant Church of Seattle v. City of Seattle (*First Covenant I*), 787 P.2d 1352 (Wash. 1990), *vacated*, 499 U.S. 901 (1991) (providing the three-case basis for Washington's free exercise jurisprudence).

[231] Munns v. Martin, 930 P.2d 318, 321 (Wash. 1997).

[232] *First Covenant II*, 840 P.2d at 187; Witters v. Comm'n for the Blind, 771 P.2d 1119, 1123 (Wash. 1989).

[233] *Munns*, 930 P.2d at 321.

[234] *See* 42 U.S.C. § 2000cc(a)(1); *Munns*, 930 P.2d at 321.

[235] *See* 42 U.S.C. § 2000cc(a)(1); *Munns*, 930 P.2d at 321.

[236] Open Door Baptist Church v. Clark County, 995 P.2d 33, 35 (Wash. 2000).

[237] *Id.* at 48.

[238] *Id.* The WSC specifically noted that if the denial of a conditional use permit required the church to close, then the state must show a compelling state interest in denying the permit. *Id.* at 48 n.16. *Open Door Baptist Church* was decided less than three months

If a RLUIPA analysis had been applied to the facts in *Open Door Baptist Church*, the court first would have determined whether the restrictions placed a substantial burden on the religious exercise of Open Door.[239] Here, the court would probably have found that there was no burden placed on Open Door's religious exercise because Open Door sought to avoid "even *applying* for a permit that would allow an otherwise disallowed use."[240] Open Door raised two additional claims for a substantial burden on religion in the original case, both of which would also have failed under a RLUIPA analysis.[241] First, Open Door claimed that a conditional use permit "would *probably* not be granted."[242] Because Open Door had not filed a permit application, the WSC, applying RLUIPA, likely would have reached the conclusion that it did using its three-part test; namely, that this claim was too prospective to analyze.[243]

Finally, Open Door claimed that the cost of applying for a permit was a financial burden.[244] This argument also would have failed under RLUIPA, as the Court of Appeals had ordered Clark County to reduce or eliminate the permitting fee if Open Door showed a financial burden.[245] Under RLUIPA, municipalities have the option of avoiding the Act by "changing the policy or practice that results in a substantial burden on religious exercise" through various means.[246] However, even if the court found a substantial financial or other burden on Open Door's religious freedom, it probably would still have found that Clark County had a compelling governmental interest.[247] The court in *Open Door Baptist Church* recognized that local governments have a compelling interest in upholding the residential character of a neighborhood.[248] Further, the court found that it was reasonable to require the church to go through a public permitting process where neighbors

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before the passage of RLUIPA; thus, the WSC did not address the potential for a RLUIPA analysis in the case itself.

[239] *See* 42 U.S.C. § 2000cc(a)(1); 995 P.2d at 40.

[240] *Open Door Baptist Church*, 995 P.2d at 40.

[241] *See* 42 U.S.C. § 2000cc(a)(1); *Open Door Baptist Church*, 995 P.2d at 42.

[242] *Open Door Baptist Church*, 995 P.2d at 42.

[243] S*ee* 42 U.S.C. § 2000cc(a)(1); *Open Door Baptist Church*, 995 P.2d at 42; First Covenant Church of Seattle v. City of Seattle (*First Covenant I*), 787 P.2d 1352, 1356 (Wash. 1990), *vacated*, 499 U.S. 901 (1991).

[244] *Open Door Baptist Church*, 995 P.2d at 42.

[245] *Id.* at 42–43.

[246] 42 U.S.C. § 2000cc-3(e).

[247] *See* 42 U.S.C. § 2000cc(a)(1)(A); *Open Door Baptist Church*, 995 P.2d at 47.

[248] 995 P.2d at 47.

would have the opportunity to receive notification and to comment at a public hearing.[249]

Finally, under the RLUIPA analysis, the court would have determined whether a less restrictive means existed for Clark County to protect its compelling governmental interest.[250] Had Open Door filed for a conditional use permit, Clark County would have allowed it to continue operating its nonconforming use throughout the conditional use permitting process.[251] Moreover, although there was a lengthy application process, this process was no more burdensome than it was for a secular organization.[252] Because local governments have an interest in being alerted when new nonconforming uses come into their jurisdiction, it is unlikely that a Washington court that was applying RLUIPA would have found that there was a less restrictive means available than the typical permit application process that still protected the governmental interest.[253]

B. *States That Rely on Federal Law in Deciding Religious Land Use Cases*

States that do not codify or otherwise articulate the appropriate test for protection of the free exercise of religion in land use cases must rely on the federal statutory or case law to determine whether a land use regulation infringes on the free exercise of religion.[254] These states remain at the mercy of the federal statutory laws, so their religious land-use law standards have changed drastically since the Supreme Court decided *Smith*.[255]

In the time between the demise of RFRA and the enactment of RLUIPA, courts relied on the analysis set forth in *Smith* to determine whether a law infringed upon freedom of religion.[256] The Court in *Smith* held that states are free to regulate laws that do not specifically

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[249] *Id.*

[250] *See* 42 U.S.C. § 2000cc(a)(1)(B).

[251] *Open Door Baptist Church*, 995 P.2d at 42.

[252] *Id.* at 47.

[253] *See id.*

[254] *See* 42 U.S.C. § 2000cc-3(h). States in this position include: (1) states with yet-to-be interpreted RFRA provisions that specifically address religious land use; (2) states that considered but failed to pass state RFRAs; and (3) states that have not considered RFRA or case law tests to address this issue. *See* OKLA. STAT. tit. 51, §§ 251–258 (Supp. 2007); TEX. CIV. PRAC. & REM. CODE ANN. § 110.010 (Vernon 2006); HAMILTON, *supra* note 4, at 109; Runyon et al., *supra* note 1.

[255] *See* discussion *supra* Part I.B, II (discussing changes in standards and jurisprudence).

[256] Employment Div. v. Smith, 494 U.S. 872, 879 (1990); *see* Miller, *supra* note 50, § 2(a).

target religious activities for disparate treatment.[257] The only means by which exceptions to neutral laws—including land use regulations—may be granted is through the full legislative process.[258] No court has found that typical land use regulations target religious activities; therefore, the *Smith* standards drastically reduce the ability of religious institutions to fight what they perceive to be discriminatorily applied laws.[259]

Instead, *Smith* limits the laws that religious institutions are able to challenge to those that facially target religious activities, an extremely difficult standard to meet.[260] Few land use cases decided after *Smith* have been able to establish disparate treatment of religious uses to a degree sufficient for a court to find that the challenged law was not generally applicable.[261] If a court were to find that a law targeted a religious practice under the *Smith* analysis, then that law would be required to protect compelling governmental interests through the least restrictive means feasible or it would be found unconstitutional.[262]

At least one critic of the *Smith* analysis notes that what constitutes a generally applicable law actually seems to be a law that was "enacted without a constitutionally forbidden motive."[263] Simply put, laws that are not motivated by hostility to religion in general, or hostility to a particular faith, appear to be sufficiently neutral to withstand the *Smith* analysis.[264] Laws upheld under *Smith* include those that "enact[] special rules for churches, deliberately exclude[] all new churches, pick[] and choose[] among religious practices or appl[y] through individualized assessments that select churches with gross disproportion."[265]

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[257] *See* 494 U.S. at 879.

[258] *Id.* at 890; Selmi & Kushner, *supra* note 14, at 351.

[259] *See* 494 U.S. at 890; Blaesser et al., Federal Land Use, *supra* note 24, at 607–08.

[260] *See* Church of the Lukumi Babalu Aye v. City of Hialeah, 508 U.S. 520, 546 (1993); 494 U.S. at 888; Blaesser et al., Federal Land Use, *supra* note 24, at 607–08.

[261] *See* Miller, *supra* note 50, §§ 2(a), 26(b). In fact, two of the three cases Miller mentions in the ALR annotation are *First Covenant Church of Seattle v. City of Seattle* (*First Covenant II*) and *First United Methodist Church of Seattle v. Hearing Examiner*, both of which comprise the basis for Washington's religious land-use jurisprudence and were decided based on the greater protection of free exercise found in Washington's State Constitution. *See* Munns v. Martin, 930 P.2d 318, 321 (Wash. 1997); First United Methodist Church v. Hearing Exam'r, 916 P.2d 374, 381 (Wash. 1996); First Covenant Church of Seattle v. City of Seattle (*First Covenant II*), 840 P.2d 174, 189 (Wash. 1992). *But see* Miller, *supra* note 50, § 26(b).

[262] *Church of the Lukumi Babalu Aye*, 508 U.S. at 546.

[263] Laycock, *supra* note 86, at 768.

[264] *Id.*

[265] *Id.* at 768–69; *see* Cornerstone Bible Church v. City of Hastings, 948 F.2d 464, 468 & n.2 (8th Cir. 1991); St. Bartholomew's Church v. City of New York, 914 F.2d 348, 355 (2d Cir. 1990).

The passage of RLUIPA—as well as RFRA—shifted the burden in religious land use cases to local governments.[266] Rather than giving the religious institution the heavy burden of proving religious discrimination, the local government has the burden of defeating strict scrutiny by showing a compelling governmental interest.[267] This test, regarded as the "most demanding test known to constitutional law," requires the local government to show that any limitations placed on the practice of religion are as minimal as possible while still protecting a compelling governmental interest.[268]

1. Illustrating the Difference: *Martin* Under the *Smith* Standard

As illustrated in the previous subsection, it is likely that the outcome in *Martin* would have remained the same if the Massachusetts SJC had elected to employ RLUIPA instead of the Dover Amendment in its analysis.[269] However, the result of the case likely would have been quite different if the circumstances in *Martin* occurred in a state without its own protections and without RLUIPA.[270] If neither RLUIPA nor the Dover Amendment provided greater protections than the *Smith* analysis, it is extremely likely that the steeple height would have remained capped at the limit found in the zoning ordinance, unless the church was able to push an exception through the legislative process.[271]

Under the *Smith* analysis, the court would first have examined the law at issue in *Martin*.[272] Although one court found that the targeted application of a local zoning law discriminated against a particular religious group, in general, zoning laws are considered to be laws of neutral application.[273] Assuming that the SJC found the restrictions on

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[266] *See* Religious Land Use and Institutionalized Persons Act of 2000, 42 U.S.C. § 2000cc(a)(1) (2000); City of Boerne v. Flores, 521 U.S. 507, 534 (1997).

[267] 42 U.S.C. § 2000cc(a)(1)(A)–(B); HAMILTON, *supra* note 4, at 96–97.

[268] *See City of Boerne*, 521 U.S. at 534.

[269] *See* discussion *supra* Part IV.A.2.

[270] *See* Employment Div. v. Smith, 494 U.S. 872, 872 (1990); Miller, *supra* note 50, § 26(a).

[271] 494 U.S. at 890; SELMI & KUSHNER, *supra* note 14, at 351.

[272] *Smith*, 494 U.S. at 879.

[273] Cam v. Marion County, 987 F. Supp. 854, 859 (D. Or. 1997); s*ee* Civil Liberties for Urban Believers v. City of Chicago, 342 F.3d 752, 763 (7th Cir. 2003). In *Cam*, the conflict arose over an offshoot of a local church that sought to create a worship space in a local farm building. 987 F. Supp. at 855. The court noted that a law that merely appeared to be facially neutral, but used to target religious groups, was not a facially neutral law similar to the controversy in *Smith*. *Id.* at 862; Miller, *supra* note 50, § 26(b). Because the court found that the decision of the hearing officer favored one religious sect over another, the denial of the permit did not apply a generally neutral law. *Cam*, 987 F. Supp. at 862.

building height to be generally applicable and facially neutral, the *Martin* case would likely have proceeded no further.[274] Because *Smith* held that states are free to regulate through generally applicable laws that do not target religious practices, the church in *Martin* would have been required to show that the building height restrictions were a pretext used by the government to prevent religious uses, or the court's inquiry would have ended.[275]

2. Illustrating the Difference: *Open Door Baptist Church* Under the *Smith* Standard

Unlike *Martin*, the result of Open Door's actual suit would remain the same if analyzed using *Smith's* rational basis test.[276] The prospective nature of Open Door's claim would make it difficult for the church to prevail under any test, as success on the merits would require a court to determine that any permitting or notification requirement whatsoever constitutes an excessive burden on religion.[277] While there is no difference in outcome on the actual merits of Open Door's case under the *Smith* analysis, if Clark County were to deny Open Door the special permit, the *Smith* analysis would not provide the church with a remedy.[278]

Under both Washington case law and RLUIPA, a future suit based on the denial of a special permit probably would have succeeded.[279] Under the *Smith* analysis, however, Open Door's success in challenging the denial of a special permit is improbable.[280] First, the court would have examined the law at issue—here, the requirements for a special permit.[281] As in the *Smith* analysis of *Martin*, the court would have determined that the laws concerning special permits were generally applicable and facially neutral.[282] A court using the *Smith* analysis would

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[274] *See* 494 U.S. at 885.

[275] *See* Church of the Lukumi Babalu Aye v. City of Hialeah, 508 U.S. 520, 531 (1993); *Smith*, 494 U.S. at 885. If the church was able to show that the regulations were a pretext to discriminate against religious practice, the same result would occur as when the Dover Amendment or RLUIPA were utilized. *See Church of the Lukumi Babalu Aye*, 508 U.S. at 546; *see also* discussion *supra* Part IV.A.2 (discussing the outcomes under RLUIPA and the Dover Amendment).

[276] *See Smith*, 494 U.S. at 879; Miller, *supra* note 50, § 2(b).

[277] *See* Open Door Baptist Church v. Clark County, 995 P.2d 33, 42 (Wash. 2000).

[278] *See Smith*, 494 U.S. at 879, 885; *Open Door Baptist Church*, 995 P.2d at 48.

[279] *See Open Door Baptist Church*, 995 P.2d at 48 n.16.

[280] *See Smith*, 494 U.S. at 890; *Open Door Baptist Church*, 995 P.2d at 48 n.16.

[281] *See Smith*, 494 U.S. at 879; *Open Door Baptist Church*, 995 P.2d at 36.

[282] *See Smith*, 494 U.S. at 885; *Open Door Baptist Church*, 995 P.2d at 36.

have ended its inquiry there.[283] Thus, even though the resolution of the litigated issue in *Open Door Baptist Church* would remain the same, the results would be quite different if Open Door were denied a permit and filed a second suit as recommended by the WSC.[284]

Conclusion

Control of land-use regulation by local government has been recognized as a means for a community to achieve "a satisfactory quality of life in both urban and rural communities," while utilizing great discretion.[285] Although the free exercise of religion remains a constitutionally protected right, the increase in megachurches, offering an entire range of activities, from worship to education and support groups, has arguably created more negatives for their neighbors. If land-use regulation is truly to be utilized to create "zones where family values, youth values, and the blessings of quiet seclusion and clean air make the area a sanctuary for people," then perhaps those people, through state and local government action, are best able to determine its implementation.[286]

While the constitutionality of RLUIPA has not been tested, several scholars have questioned whether RLUIPA would pass muster if the Supreme Court chose to analyze its constitutionality.[287] As long as RLUIPA remains in effect, it is clear that religious land use cases will be relatively consistent between states with and without their own protections in place. By allowing religious groups to avoid state limits on religious exemptions to land use, RLUIPA somewhat removes state and local governments from decisions on regulating religious land use conflicts. Particularly in states without their own protections, RLUIPA effectively preempts the states' determination of the appropriate balance between land use regulations and religious institutions. In effect, RLUIPA exacerbates conflicts between local governments and religious groups by allowing religious groups to avoid state law when it conflicts with their goals.

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[283] *See Smith*, 494 U.S. at 885.

[284] *See id.* at 879, 885; *Open Door Baptist Church*, 995 P.2d at 48 & n.16.

[285] *See* Schad v. Borough of Ephraim, 452 U.S. 61, 68 (1981); Kellington, *supra* note 26, at 12–24.

[286] *See* Vill. of Belle Terre v. Boraas, 416 U.S. 1, 9 (1974); Baker & Konar-Steenberg, *supra* note 23, at 39.

[287] *See* Smolik, *supra* note 73, at 730. *See generally* Osborn, *supra* note 1; Adams, *supra* note 75; Walsh, *supra* note 75 (questioning RLUIPA's constitutionality).

IF YOU CAN'T BUILD IT, THEY WON'T COME: CONDOMINIUM CONSTRUCTION MORATORIA AND GENTRIFICATION

Dara K. Newman*

Abstract: The increasing presence of bright, new condominium development in America's cities is changing the composition and appearance of these urban landscapes. Long-time local residents in gentrifying areas are confronted daily with the impacts of development, and are searching for tools to preserve their communities and keep them affordable. One response has been proposed moratoria on condominium construction. This approach aims to stop the influx of more affluent individuals into urban neighborhoods by preventing the construction of higher-end condominiums. This Note examines the validity of such moratoria on condominium construction as an exercise of the police power. Through a comparison to rent control ordinances and condominium conversion moratoria, it argues that valid condominium construction moratoria can be implemented to address social and economic concerns. The Note concludes, however, that valid construction moratoria are not always the most appropriate or effective growth management tool to address a gentrifying community's needs.

Introduction

America's cities and towns are constantly changing, complex environments.[1] Growth and development in urban areas are influenced by many different forces, such as economic trends, new immigrant populations, local residents, and local businesses.[2] Urban planners and state regulators strive to develop land use regulations that interact with outside development forces in a way that creates desirable and livable local communities.[3]

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[1] *See* Jane Jacobs, *Foreword* to Chester Hartman, Between Eminence and Notoriety: Four Decades of Radical Urban Planning, at xiii, xiv (2002); Jane Jacobs, The Death and Life of Great American Cities 6 (Vintage Books 1992) (1961).

[2] *See* David L. Callies et al., Cases and Materials on Land Use 1 (4th ed. 2004); Hartman, *supra* note 1, at 120.

[3] *See* Callies et al., *supra* note 2, at 13; Jacobs, *supra* note 1, at 8. Zoning is an important tool that regulators use to control the growth and development of a city. *See* Daniel J. Curtin, Jr. & Cecily T. Talbert, Curtin's California Land Use and Planning Law 43 (26th ed. 2006). Regulators enact zoning laws to prescribe the particular uses that are al-

Over the past two decades, a resurgence of economic activity in urban areas resulted in population growth in the country's cities.[4] One aspect of this growth, especially in the past ten years, has been a surge in the development of high-end condominiums in lower-income urban communities.[5] This development is changing the demographic compositions and economies in areas where new condominiums are prevalent.[6] As a result, local communities are concerned with the effects of this new growth and residents are looking for ways to address the increasing impacts on their neighborhoods.[7] One tool that is being explored to slow new condominium development and its effects is the imposition of moratoria on their construction.[8]

Planners routinely use moratoria as growth management devices.[9] Moratoria that specifically prohibit new condominium construction as a way to confront the social conditions of an area, however, are a recent development.[10] The condominium construction moratoria now being proposed have the broad goals of preserving the character and composition of local communities.[11] This Note analyzes the issue of whether cities can legally regulate growth and development based on social grounds, such as gentrification resulting from an overabundance of higher-end development. Specifically, it addresses this issue by examining the validity of potential moratoria on condominium construction as a mechanism for discouraging gentrification and stabilizing high volumes of condominium development plans.

Part I of this Note describes the extent of condominium development in American cities over the past decade and the gentrification process that frequently coincides with this new construction. This part also introduces the concept of condominium construction moratoria

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lowed within different city districts. *See id.* Exactions are another tool used to ensure that development forces have a positive impact on local communities. *See id.* at 325. With exactions, "The developer, in return for [development approval,] . . . agrees to donate to the city an amount of land or money needed to provide certain services and amenities necessitated by the anticipated influx of new residents . . . as a result of such development." *Id.*

[4] *See* Boston Redev. Auth., *New Century Begins with Building Boom: 90s End with Strong Development in Many Sectors*, 01-1 INSIGHT 1 (2001), *available at* http://www.cityofboston.gov/bra/PDF/ResearchPublications/newcentury.pdf.

[5] *See* Christine McConville, *Growing Pains in Southie: Building Boom Brings an Earful of Complaints About Noise*, BOSTON GLOBE, Oct. 9, 2006, at B1.

[6] *See* HARTMAN, *supra* note 1, at 120–21.

[7] McConville, *supra* note 5, at B1.

[8] *Id.*

[9] BRIAN W. BLAESSER & ALAN C. WEINSTEIN, FEDERAL LAND USE LAW & LITIGATION 128 (2006).

[10] *See id.*

[11] *See* McConville, *supra* note 5, at B1.

and examines community responses to these proposed regulations. Part II examines land use regulations, with a focus on moratoria, as a proper exercise of the police power. It reviews the history of land-use regulation and discusses the standards for evaluating the validity of a moratorium ordinance. Part III reviews the history of rent control ordinances and condominium conversion moratoria to develop a framework for assessing condominium construction moratoria. Part IV considers condominium construction moratoria in light of the framework established in Part III, and draws analogies to predict how a court would examine a challenged construction moratorium. Part IV also discusses the efficacy of condominium construction moratoria and suggests alternative growth management approaches to use when moratoria are not the most effective solution to a community's needs.

I. Rapid Real Estate Growth and Its Effects: Condominium Construction Moratoria as a Response

A. *The Condominium Construction Boom*

Beginning in the early 2000s, many American cities experienced a boom of construction, including new condominium construction.[12] The impact of this rapid and large-scale growth is a major issue confronting cities and towns throughout the country.[13] While the real estate market slowed in some cities in mid-2006 and has continued to slow in 2007 and early 2008, as of the time of publication, there is still rapid condominium construction underway and planned for the future in many large urban areas.[14] In early 2006, Boston's planning agency projected that

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[12] *See* Tom Acitelli, *Mayor Trumpets Building Boom, But We're Still Bursting at the Seams*, N.Y. Observer, Feb. 26, 2007, at 30, *available at* http://www.observer.com/node/36793; James R. Hagerty & Ruth Simon, *Housing Glut Gives Buyers Upper Hand: As Spring Home-Shopping Season Looms, Supply Mounts and Prices Fall in Some Areas; Builders See Slow Recovery*, Wall St. J., Jan. 25, 2007, at D1; Robert Andrew Powell, *Amid the Shipyards and Lobster Traps, Condos*, N.Y. Times, Oct. 10, 2003, at F1; Boston Redev. Auth., *supra* note 4, at 1.

[13] *See* Curtin & Talbert, *supra* note 3, at 409.

[14] Kimberly Blanton, *Developers Throw in Extras to Seal Condo Deals*, Boston Globe, Feb. 22, 2006, at A1; Les Christie, *Shiller: Real Estate Is Risky Business: Economist Robert Shiller Points to Several Indicators That Suggest Prices Are Out of Whack*, CNNMoney.com, June 16, 2006, http://money.cnn.com/2006/06/16/real_estate/buying_selling/Shiller_weighs_in_on_housing; Steve Kerch, *The Frenzy Fizzles: Condo Market Runs Aground for Investors, But Core Buyers Remain*, MarketWatch, Feb. 8, 2007, http://www.marketwatch.com/news/story/condo-market-runs-aground-investors/story.aspx?guid=%7B9BDFBE64-9DF0-4FDA-B08E-FA9DCF9059A8%7D&dist. The large number of condominiums on the market indicates slowing sales: the number of condominium listings have increased from January 2006 to January 2007 eighty-six percent in Las Vegas, forty-three percent in Washington, D.C., and twenty-one

14,000 condominium units were under construction or approved for construction and that approximately 1000 new condominium units would be placed on the Boston market annually for the following five years.[15] Cities and towns must now assess how to manage this growth.[16]

B. *Condominium Construction and Gentrification*

New construction in urban areas often attracts an influx of new residents and can lead to gentrification.[17] Gentrification is the process by which relatively more affluent individuals move into lower-income areas.[18] An increase in wealthier residents often results in displacement of the area's existing residents due to rising housing costs.[19] The concept of gentrification emerged in the United States in the 1960s, when private-market investment in cities' downtown areas expanded urban economies.[20]

Gentrification studies show that a surge in a group of new residents impacts an area by replacing the existing population.[21] Local government officials and planners often view this process as a positive development "because of the perceived social and economic benefits that may accrue from [gentrification]."[22] As new residents with higher incomes enter a community, they introduce more capital and buying power into the local economy, which can bring new businesses and jobs to the area.[23] Higher-priced housing and residents with higher incomes

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percent in the Northern Virginia suburbs of Washington, D.C. Hagerty & Simon, *supra* note 12, at D1.

[15] Blanton, *supra* note 14, at A1.

[16] *See* CURTIN & TALBERT, *supra* note 3, at 409.

[17] *See* CALLIES ET AL., *supra* note 2, at 671.

[18] *Id*; HARTMAN, *supra* note 1, at 109.

[19] Peter J. Macdonald, *Displacement in Gentrifying Neighborhoods: Regulating Condominium Conversion Through Municipal Land Use Controls*, 63 B.U. L. REV. 955, 955 & n.6 (1983).

[20] Sharon Zukin, *Gentrification: Culture and Capital in the Urban Core*, 13 ANN. REV. SOC. 129, 129 (1987). The displacement described by the term gentrification is currently understood as displacement due to private market forces. HARTMAN, *supra* note 1, at 120. This understanding "represents a shift from the 1950s and 1960s, when government programs, particularly urban renewal and construction of the interstate highway system, were the primary displacement forces." *Id.* at 120–21.

[21] Zukin, *supra* note 20, at 135.

[22] Henry W. McGee, Jr., *Afro-American Resistance to Gentrification and the Demise of Integrationist Ideology in the United States*, 23 URB. LAW. 25, 30 (1991) (quoting James H. Johnson, *Gentrification and Incumbent Upgrading: Benefits and Costs*, UCLA CENTER FOR AFRO-AM. STUD. NEWSL. (UCLA Ctr. for Afro-Am. Studies, L.A., Cal.), Nov. 1981, at 10).

[23] *See id.*

also increase the local tax base, infusing previously blighted areas with more capital for public services, facilities, and infrastructure.[24]

Conversely, opponents of gentrification assert that local, often minority, residents suffer detrimental social and economic consequences as a result of the influx of new development and new residents.[25] The increased density of rapid gentrification can add excessive stress to local infrastructure, such as sewers, streets, and sidewalks, and strain services such as fire and police coverage.[26] It can also drastically reduce affordable housing options in a neighborhood and increase residential property taxes.[27] Strong community populations that may have been living in an area for generations can be displaced as housing costs rise and long-time residents are forced to move in search of more affordable neighborhoods.[28]

C. *Too Many Condominiums on the Market*

In mid-2006 the condominium markets in large cities—such as Washington, D.C., Las Vegas, Miami, and Boston—collapsed, resulting in an overabundance of new condominiums on the market.[29] In February 2006, there were 1369 condominiums for sale in downtown Boston, compared to only 880 in February 2005.[30] In the Washington, D.C. area there were 24,200 condominium units on the market at the end of 2006, compared to 13,000 at the beginning of 2005.[31] This increase in

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[24] *See id.*; Matt Viser, *Breaching Mass. Ave.; Gentrification that Touched the East Side of Boston's South End is Finally Expanding Across an Imaginary Dividing Line Towards a Once Neglected Neighborhood*, Boston Globe, Jan. 14, 2007, at H1 (commenting that new condominium development in a "gritty" neighborhood led to cleaner sidewalks, buildings painted in subtler colors, and a restaurant changing its name to sound more upscale).

[25] McGee, *supra* note 22, at 30.

[26] *See* Christina Pazzanese, *Not Open Studios, But Fort Point Draws Crowd*, Boston Globe, Apr. 1, 2007, at City Weekly 4.

[27] *Id.*

[28] Hartman, *supra* note 1, at 121; Shaila Dewan, *Gentrification Changing Face of New Atlanta: Historic Black Share of Population Declines*, N.Y. Times, Mar. 11, 2006, at A1 ("[A]lthough gentrification has expanded the city's tax base and weeded out blight, it has had an unintended effect on Atlanta . . . . For the first time since the 1920s, the black share of the city's population is declining and the white percentage is on the rise.").

[29] Vikas Bajaj, *Buyers Scarce, Many Condos Are for Rent*, N.Y. Times, Jan. 16, 2007, at A1; Blanton, *supra* note 14, at A1. The National Association of Home Builders/Fannie Mae Multifamily Condo Market Index, which tracks builder confidence in the condominium housing market on a scale of zero to 100, fell to 19.7 in the third-quarter of 2006, compared to 47.1 in the third-quarter of 2005. *Builders Remain Worried About Condo Market Weakness*, Mortgage Banking, Jan. 2007, at 131.

[30] Blanton, *supra* note 14, at A1.

[31] Bajaj, *supra* note 29, at A1.

D.C. condominiums corresponds to slowing sales, which dropped from 3520 in the first quarter of 2005 to 663 in the fourth quarter of 2006.[32]

As a result of the overabundance of condominiums on the market, some developers have decided to rent their units until the condominium surplus shrinks.[33] There is no national data source of new condominium sales; however, overall condominium sales fell 13.6% from November 2005 to November 2006.[34] If regulation is found to be an appropriate response to the impacts of the high volume of condominium construction, then imposing condominium construction moratoria is one regulatory approach that addresses this issue.[35]

D. *Condominium Moratorium Regulations*

A condominium construction moratorium prohibits the construction of new condominiums in a certain area for a specified period of time.[36] Local governments and residents in some urban communities support condominium construction moratoria as a means of addressing the social and economic impacts of new condominiums on local neighborhoods.[37] For example, in Austin, Texas, long-time residents of the city's east side asked the City Council in December 2006 to institute a moratorium on condominium construction.[38] The east side is home to a large portion of Austin's Latino community, and residents viewed the moratorium as a way to prevent population displacement.[39] One resident explained, "We're trying to preserve and maintain the charac-

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[32] *Id.*

[33] *Id.*; Kerch, *supra* note 14.

[34] Bajaj, *supra* note 29, at A1.

[35] *See* McConville, *supra* note 5, at B1; Leslie Coons, *East Austin Residents Seek 90-Day Condo Moratorium*, CBS 42 Morning News, Dec. 14, 2006, http://www.keyetv.com/news/local/story.aspx?content_id=9192724A-7538-443A-97CE-BCC7386C5F23&gsa=true.

[36] *See* 10 Patrick J. Rohan, Zoning and Land Use Controls § 53C.08[10] (Eric Damian Kelly ed., 2003). A condominium *construction* moratorium is different from a condominium *conversion* moratorium. *See* discussion *infra* Part III.B. The conversion moratoria do not address new construction of condominiums, but the conversion of existing rental apartment buildings into condominium buildings. *See* Callies et al., *supra* note 2, at 671.

[37] *See* McConville, *supra* note 5, at B1; Coons, *supra* note 35. While not the focus of this Note, condominium moratoria are also used as a growth management tool outside of urban areas. Denny Lee, *Time Catches Up with a Georgia Eden*, N.Y. Times, Aug. 20, 2004, at F1. In the Georgia beach community of Tybee Island, the City Council imposed a moratorium on condominium construction in 1999 to fight a building surge that was replacing wooden cottages with multi-story condominiums. *Id.*

[38] Coons, *supra* note 35.

[39] *Id.*

ter and culture of the neighborhoods."[40] The situation in Austin exemplifies typical community reaction to the gentrification process.[41]

Similarly, in late 2006, residents in South Boston advocated for a moratorium on new development in response to the recent building boom of high-end condominiums.[42] A state representative, Brian P. Wallace, agreed to work with residents to address their concerns and consider the building moratorium.[43] The new construction in the area was attracting more affluent young adults, while displacing members of South Boston's historically Irish Catholic working class community.[44] Residents viewed the moratorium as a way to preserve the character of the neighborhood and fight concerns of overdevelopment, increased congestion, and displacement of low-income and elderly residents.[45]

Critics of development moratoria assert that such moratoria can unintentionally result in increased development by motivating developers to fast-track otherwise dormant or slow-moving development plans.[46] Robert D. Yaro, president of the Regional Plan Association in Manhattan explained, "At the first mention of a moratorium . . . you shake out . . . development proposals that might not have been ready for years. And in many cases these end up getting far enough into the process that they are vested."[47] If this result occurs, the moratorium adds to the problem that it was implemented to resolve.[48]

Condominium construction moratoria are also criticized by parties affected by the development freeze.[49] Prohibiting or limiting development can elicit strong negative responses from landowners, developers, and businesspeople, making moratoria politically charged topics.[50] For

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[40] *Id.*

[41] *See* Macdonald, *supra* note19, at 960; Coons, *supra* note 35.

[42] McConville, *supra* note 5, at B1.

[43] *Id.*

[44] *See id.*

[45] *Id.*

[46] John Rather, *Do Moratoriums Help or Hinder?*, N.Y. Times, July 28, 2002, at LI1.

[47] *Id.* The courts have not directly addressed the validity of condominium construction moratoria.

[48] *See id.*

[49] *See* Ann E. Marimow, *Leaders Offer Alternative to Building Moratorium*, Wash. Post, Jan. 26, 2007, at B4 [hereinafter Marimow, *Moratorium Alternative*]; Miranda S. Spivack, *Rockville Weighs Moratorium on Construction: Council Debates a Less-Sweeping Plan to Stop Development While Zoning Rules Are Reviewed*, Wash Post, Nov. 9, 2006, at Montgomery Extra 1.

[50] *See* Editorial, *A Flexible Moratorium? Don't Let the Pendulum Swing Too Far Back*, Wash. Post, Jan. 16, 2007, at A18 (commenting on a proposed moratorium in Montgomery County that would freeze building permits in the county, criticizing moratorium generally as unappealing means of controlling growth, and stressing the importance of limiting the length of moratorium to a "brief" period of time); Ann E. Marimow, *Council Forgoes Morato-*

example, a proposed moratorium on new building projects in Montgomery County, Maryland received such strong opposition from developers and other community members that the County abandoned the moratorium ordinance.[51] As an alternative, the County stated that it hoped to achieve the goals of the moratorium through less drastic growth controls, such as impact fees and more stringent permit approval requirements.[52]

II. Land Use Controls as a Proper Exercise of the Police Power

A. *Growth Management Tools*

Planners and regulators use growth management tools to steer urban growth.[53] Some of these regulations directly address infrastructure needs, while others tackle broader social aspects of growing municipalities.[54] The development moratorium is one way that regulators manage growth.[55] Moratoria are one of the "most drastic of all the growth management techniques" because they completely prohibit certain development, or limit development permit approval, for a certain period of time.[56]

B. *Moratorium Ordinances*

A moratorium is "an authorized delay in the provision of government services or development approval."[57] Municipalities adopt mora-

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rium in Favor of Compromise, Wash. Post, Jan. 31, 2007, at B7 [hereinafter Marimow, *Council Forgoes Moratorium*]; Marimow, *Moratorium Alternative*, *supra* note 49, at B4.

[51] Marimow, *Council Forgoes Moratorium*, *supra* note 50, at B7.

[52] Marimow, *Moratorium Alternative*, *supra* note 49, at B4.

[53] Curtin & Talbert, *supra* note 3, at 405 (explaining that growth management tools include, but are not limited to, a general plan, specific plans, zoning ordinances, and development moratoria).

[54] *Id.* at 404 (explaining that some growth management regulations address "limited sewer capacity, water shortages, revenue shortages, school overcrowding, and traffic congestion," while others are used to maintain "the community's unique character, the preservation of open space, lower densities, and preservation of scenic views").

[55] *Id.* at 405.

[56] *Id.*

[57] Rohan, *supra* note 36, § 53C.08[10] (quoting Robert Meltz et al., The Takings Issue: Constitutional Limits on Land Use Control and Environmental Regulation 266 (1999)). A municipality adopting a moratorium must have the authority to do so. *Id.* § 22, at 22-1. In some states, local municipalities have express statutory authority to adopt such growth management regulations. *Id.* In other states, however, the authority is not as clear. *Id.* This Note does not examine the issue of authority for enactment; its examination of moratoria assumes that authority exists.

torium ordinances to address a number of different problems, such as strained infrastructure, sprawling growth, housing needs, diminishing open space, and detrimental environmental impacts.[58] Los Angeles, for example, implemented a moratorium to address an affordable housing issue.[59] In May 2006, the City Council banned the demolition of single-room occupancy dwellings in a fifty-square-block area of downtown, which housed close to 10,000 low-income residents, for a year while city officials determined how to preserve the availability of affordable housing in the rapidly gentrifying area.[60]

Development moratoria, which prohibit or limit development approval, are often used to allow municipalities time to review comprehensive land use plans, to develop and implement new zoning ordinances, or to increase needed public facilities.[61] Moratoria are designed to freeze development while the municipality determines appropriate ways to ensure that future growth positively, rather than negatively, impacts the area.[62]

It follows from the typical goals of development moratoria that valid regulations will have a definite time frame and will end once the purpose for the moratorium's enactment has been addressed.[63] The municipality implementing the moratorium must have an analytically supported plan of action and must make reasonable efforts to address the purpose during the course of the moratorium.[64] For example, a traditionally suburban area facing a spike in the construction of new homes could implement a moratorium on new housing development until the planning department completed a growth management plan that dictated where new construction could take place, in order to preserve open space in the community.[65] There is no standard outer limit on an acceptable time frame for a moratorium; the requirement is only

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[58] *See* BLAESSER & WEINSTEIN, *supra* note 9, at 128; ROHAN, *supra* note 36, § 22.01[1]; Spivack, *supra* note 49, at Montgomery Extra 1 (reporting that Rockville, Maryland Mayor Larry Giammo supported a proposed moratorium on new development while the city examined its zoning laws because he was "concerned about weaknesses in local zoning laws that . . . [did] not require enough open space, wide enough sidewalks or recessed upper floors of high rises to allow more light to filter to the street").

[59] Andrew Glazer, *Los Angeles Moratorium Puts Skid Row Gentrification on Hold: Affordable Housing for Thousands Endangered by Development*, WASH. POST, May 20, 2006, at F32.

[60] *Id.*

[61] BLAESSER & WEINSTEIN, *supra* note 9, at 128; ROHAN, *supra* note 36, § 22.01[1].

[62] BLAESSER & WEINSTEIN, *supra* note 9, at 129.

[63] ROHAN, *supra* note 36, § 53C.08[10].

[64] BLAESSER & WEINSTEIN, *supra* note 9, at 129.

[65] *See id.*

that the moratorium have a reasonable time limitation.[66] In many states, however, the legislation authorizing moratoria and other interim ordinances includes specific time limits for these growth management tools.[67]

A moratorium ordinance can be challenged as an invalid exercise of the police power.[68] Moratoria based on substantiated health, safety, or general welfare needs, however, are unlikely to be struck down by courts.[69] In addition, a moratorium with restrictions that taper off or terminate as certain goals or outcomes are attained has a strong chance of surviving legal attacks.[70] Moratoria are generally upheld as long as they address a valid purpose under the police power and have a temporary timeframe linked to the completion of certain needs or goals.[71]

C. *The Police Power as the Basis for Land Use Ordinances*

States have the power to enact regulations as an exercise of their police power.[72] The concept of the police power is so broad and flexible that it is difficult to define.[73] U.S. Supreme Court Justice William Douglas commented that "[a]n attempt to define [the police power's] reach or trace its outer limits is fruitless, for each case must turn on its own facts."[74] Generally stated, the police power allows states to enact regulations that relate to the safety, health, or general welfare of the public.[75] Common regulations under the police power address issues such as "[p]ublic safety, public health, morality, peace and quiet, [and] law and order."[76]

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[66] *See* Tahoe-Sierra Pres. Council, Inc. v. Tahoe Reg'l Planning Agency, 535 U.S. 302, 353–54 (2002) (discussing different time-periods for moratoria and noting that various moratoria of 120 days, eighteen months, and two years were acceptable to the Court, but a moratorium "lasting nearly six years—bears no resemblance to the short-term nature of traditional moratoria"); CURTIN & TALBERT, *supra* note 3, at 297.

[67] CURTIN & TALBERT, *supra* note 3, at 297.

[68] *See* JOHN J. DELANEY ET AL., HANDLING THE LAND USE CASE § 28:5 (3d ed. 2007). Moratoria are also challenged on substantive due process and constitutional takings grounds, but these challenges will not be addressed in this Note. BLAESSER & WEINSTEIN, *supra* note 9, at 128.

[69] CURTIN & TALBERT, *supra* note 3, at 298.

[70] *Id.*

[71] DELANEY, *supra* note 68, § 28:5.

[72] STEVEN J. EAGLE, REGULATORY TAKINGS 223 (3d ed. 2005).

[73] MARKUS DIRK DUBBER, THE POLICE POWER 120 (2005); Donna Jalbert Patalano, Note, *Police Power and the Public Trust: Prescriptive Zoning Through the Conflation of Two Ancient Doctrines*, 28 B.C. ENVTL. AFF. L. REV. 683, 707 (2001).

[74] Berman v. Parker, 348 U.S. 26, 32 (1954).

[75] EAGLE, *supra* note 72, at 224 (quoting Lochner v. New York, 198 U.S. 45, 49 (1905)).

[76] *Berman*, 348 U.S. at 32.

A court will give great deference to the legislature when reviewing a regulation or ordinance that is challenged as an abuse of the police power.[77] Courts have noted that it is the role of the legislature to identify and address the public's needs, and thus, "The role of the judiciary in determining whether [the police power] is being exercised for a public purpose is an extremely narrow one."[78] Given the broad interpretation of the police power, there are a wide range of purposes served by valid land use regulations.[79]

In *Euclid v. Ambler Realty Co.*, the Supreme Court acknowledged that the growing size and impact of urban areas in the United States necessitated land use regulations as a new application of the police power.[80] *Euclid* established that zoning ordinances "must find their justification in some aspect of the police power, asserted for the public welfare."[81] Therefore, challenges to zoning ordinances require an examination of the particular police power underlying the ordinance's enactment.[82] The Court in *Euclid* stressed that the line between legitimate and illegitimate uses of the police power was not clearly delineated but, rather, must be based on a case-by-case assessment in light of the circumstances and conditions of the challenged zoning ordinance.[83] The Court stated:

> [T]he question whether the power exists to forbid the erection of a building of a particular kind or for a particular use . . . is to be determined, not by an abstract consideration of the building or of the thing considered apart, but by considering it in connection with the circumstances and the locality.[84]

In *Berman v. Parker*, the Supreme Court examined the police power as the legal basis for land use regulations.[85] In *Berman*, the appellants, who owned land within a blighted area slated for redevelopment, brought an action to enjoin the condemnation of their property under the District of Columbia Redevelopment Act.[86] While the majority of the property within the area designated for redevelopment consisted of

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[77] *Id.*

[78] *Id.*

[79] *See* John Donnelly & Sons, Inc. v. Outdoor Adver. Bd., 339 N.E.2d 709, 717 (Mass. 1975) ("[A]esthetics alone may justify the exercise of the police power.").

[80] Euclid v. Ambler Realty Co., 272 U.S. 365, 386–87 (1926).

[81] *Id.* at 387.

[82] *See id.*

[83] *Id.* at 388.

[84] *Id.*

[85] Berman v. Parker, 348 U.S. 26, 32–33 (1954); CURTIN & TALBERT, *supra* note 3, at 1.

[86] 348 U.S. at 28.

rundown housing, a department store was located on the appellants' property.[87] The Act called for the elimination of substandard housing and blighted areas in D.C. to promote public welfare, and established that it was a public use to acquire and improve property within the "slums."[88] The appellants argued that the condemnation of their property pursuant to the Act was unconstitutional because their property was not being taken to rid the area of "slums," but "merely to develop a better balanced, more attractive community."[89]

The appellants in *Berman* challenged the application of the Act to their property as beyond the limits of the police power, arguing the Act did not promote public welfare.[90] The Supreme Court rejected this argument, concluding that "[t]he concept of the public welfare is broad and inclusive."[91] The Court reasoned that because of the broad scope of the police power, it was within the power of the legislature to determine that beautiful and well-balanced communities promote public welfare and, thus, to enact legislation based on this determination.[92]

It follows from *Berman* that growth management regulations such as moratoria can be a lawful exercise of the police power.[93] For a growth management regulation such as a moratorium to fall within the police power, however, it must reasonably relate to the public health, safety, or welfare of a municipality's residents.[94]

D. *Standards for Evaluating the Validity of Moratoria*

An analysis of a land use regulation must determine whether the regulation is appropriate under the police power.[95] This analysis should assess the purposes of the land use regulation based on judicial precedent.[96] The Supreme Court of California thoroughly discussed the evaluation of growth management ordinances in *Associated Home Builders, Inc. v. City of Livermore.*[97] There, the court assessed a challenge to a local zoning ordinance that prohibited the issuance of residential building permits until local education, sewage disposal, and water sup-

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[87] *Id.* at 30, 31.
[88] *See id.* at 29–30.
[89] *Id.* at 31.
[90] *Id.*
[91] *Id.* at 33.
[92] *Berman*, 348 U.S. at 33.
[93] *See id.*; CURTIN & TALBERT, *supra* note 3, at 409.
[94] CURTIN & TALBERT, *supra* note 3, at 409.
[95] *See id.*
[96] *See id.* at 410.
[97] Associated Home Builders, Inc. v. City of Livermore, 557 P.2d 473, 475 (Cal. 1976).

ply facilities complied with specified standards.[98] The plaintiffs argued that the moratorium on building permits exceeded the municipality's authority under the police power.[99]

The court reaffirmed the principle that land use ordinances that substantially limit immigration into a community are constitutional if they are "reasonably related to the welfare of the region affected by the ordinance."[100] In assessing whether the growth restriction related to the general welfare, the court adopted the U.S. Supreme Court's view in *Euclid*.[101] It explained that as long as it is fairly debatable that the ordinance has a reasonable relationship to general welfare, the ordinance will survive a constitutional attack.[102]

The court in *City of Livermore* also established that if the ordinance will affect regions beyond the enacting community, an evaluation of public welfare must include an evaluation of the impact on residents in surrounding areas.[103] Through this evaluation the court incorporated the Supreme Court's stance in *Euclid* that a police power determination requires the development to be considered "in connection with the circumstances and the locality."[104] The court articulated a three-step process for determining whether a growth management ordinance is a valid exercise of the police power.[105] The court explained:

> The first step in [the] analysis is to forecast the probable effect and duration of the restriction. . .
>
> The second step is to identify the competing interests affected by the restriction.
>
> . . . [T]he final step is to determine whether the ordinance, in light of its probable impact, represents a reasonable accommodation of the competing interests.[106]

As long as the ordinance bears a relationship to health, safety, or welfare after consideration of the three-step process, then the ordinance is a valid exercise of the police power.[107]

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[98] *Id.*

[99] *Id.* at 483.

[100] *Id.* at 476.

[101] *Id.* at 483; *see* Euclid v. Ambler Realty Co., 272 U.S. 365, 388 (1926).

[102] *City of Livermore*, 557 P.2d at 483.

[103] *Id.*

[104] *See Euclid*, 272 U.S. at 388.

[105] *City of Livermore*, 557 P.2d at 488; Robin S. Myren, *Growth Control as a Taking*, 25 URB. LAW. 385, 390–91 (1993).

[106] *City of Livermore*, 557 P.2d at 488.

[107] *Id.*

In summary, for a land use ordinance to be found unconstitutional, the regulation must be "arbitrary and unreasonable, having no substantial relation to the public health, safety, morals, or general welfare."[108] The courts give great deference to the legislature in evaluating whether a moratorium is reasonably related to public welfare.[109] In *Euclid*, the Supreme Court suggested that it would serve the public welfare to enact zoning regulations that preserved the residential character of a neighborhood.[110] The Court reinforced its broad interpretation of the meaning of legitimate purposes under the police power in *Village of Belle Terre v. Boraas*.[111] There, the Court reasoned that "[t]he police power is not confined to elimination of filth, stench, and unhealthy places. It is ample to lay out zones where family values, youth values, and the blessings of quiet seclusion and clean air make the area a sanctuary for people."[112]

III. Land Use Regulations Addressing Social and Economic Concerns

A. *Rent Control Regulations*

Rent control ordinances provide an illustrative example of economically motivated regulations that courts have held to be valid exercises of the police power.[113] These ordinances stabilize rental prices to protect tenants from rapid increases in prices and are popular in urban areas with large renter populations.[114] Rent control initially emerged as a wartime measure.[115] The earliest form of rent regulation in the United States arose during World War I with the passage of the Soldiers' and Sailors' Civil Relief Act of 1918, which, among other things, precluded

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[108] *Euclid*, 272 U.S. at 395. Although not the focus of this Note, it is important to acknowledge that because a moratorium is constitutionally valid does not guarantee that it will be an effective growth management tool. Myren, *supra* note 105, at 387.

[109] *Euclid*, 272 U.S. at 388.

[110] *Id.* at 394.

[111] Village of Belle Terre v. Borass, 416 U.S. 1, 9 (1974).

[112] *Id.*

[113] Curtin & Talbert, *supra* note 3, at 3; Terence J. Centner, *Governments and Unconstitutional Takings: When Do Right-to-Farm Laws Go Too Far?*, 33 B.C. Envtl. Aff. L. Rev. 87, 133–34 (2006) (explaining how rent controls were enacted in "furtherance of public welfare").

[114] 49 Laura Hunter Dietz et al., American Jurisprudence § 906 (Joseph J. Bassano et al. eds., 2d ed. 2006); Jack C. Harris, The Rent Control Controversy: Background, Debate and Alternatives 8 (1982).

[115] Harris, *supra* note 114, at 9.

eviction of military families from rental housing costing a certain, specified amount.[116]

In 1920, New York enacted the Emergency Housing Laws of the State of New York, which were an interrelated group of acts intended to address a shortage of housing toward the end of the War.[117] In *Levy Leasing Co. v. Siegel*, landlords challenged the constitutionality of these laws, specifically the rent control regulations.[118] The Supreme Court upheld the state court's finding that the laws were a valid exercise of the police power.[119] The Court stated:

> The warrant for this legislative resort to the police power was the conviction on the part of the state legislators that there existed in the larger cities of the State a social emergency, caused by an insufficient supply of dwelling houses and apartments, so grave that it constituted a serious menace to the health, morality, comfort, and even to the peace of a large part of the people of the State. That . . . unless relieved, the public welfare would suffer in respects which constitute the primary and undisputed, as well as the most usual, basis and justification for exercise of [the police] power.[120]

Rent control significantly expanded during World War II, when economic stimulation created the potential for rapid increases in rental prices.[121] The rent controls enacted during the two world wars were justified by the economic wartime conditions.[122] Eventually, these federal controls were lifted in the years following World War II.[123]

In the 1970s, the Nixon administration instituted nationwide price regulations that included provisions for controlling rental prices in response to inflation concerns.[124] These rent controls became permanent when they were adopted by state and local governments.[125] While the wartime controls were a response to emergency wartime conditions,

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[116] Soldiers' & Sailors' Civil Relief Act of 1918, Pub. L. No. 65-103, § 300, 40 Stat. 440 (codified at 50 U.S.C. app. §§ 101–104); Harris, *supra* note 114, at 9.

[117] Emergency Housing Laws of the State of New York, 1920 N.Y. Laws 2477–90; Levy Leasing Co. v. Siegel, 258 U.S. 242, 243 (1922).

[118] *Levy Leasing Co.*, 258 U.S. at 243.

[119] *Id.* at 244, 250.

[120] *Id.* at 245.

[121] Harris, *supra* note 114, at 9.

[122] Dietz et al., *supra* note 114, § 906.

[123] Harris, *supra* note 114, at 10.

[124] *Id.* at 11.

[125] *Id.*

these new rent controls were based on a legal exercise of the police power to address more permanent public welfare issues.[126] Municipalities enacted rent control ordinances for a variety of reasons, including "protect[ing] tenants from landlord abuses[,] . . . reinforc[ing] housing code compliance[,] . . . [and] limiting the rate at which rents are allowed to rise."[127]

Under the police power, rent control ordinances must have a substantial relationship to the public health, safety, or welfare of the residents of a state or municipality.[128] A California rent control measure, the Cotati Rent Stabilization Ordinance, was upheld by the California Court of Appeal as reasonably related to a legitimate governmental purpose.[129] Here, as with other rent control ordinances, the purpose was to "prevent exploitation of housing shortages by the imposition of excessive rent charges."[130] The court determined that for ordinances advancing a purely economic interest—as with rent control ordinances—local governments may impose a distinction in treatment based on economic measures as long as the distinction has a "rational relationship" to a "legitimate public purpose."[131] The court noted that it was "at least debatable" that the challenged rent control ordinance's economics-based standard had a rational relationship to a legitimate public purpose.[132]

An examination of whether a rent control ordinance relates to public health, safety, or welfare requires a "reasonable factual basis to support the legislative determination" for the regulation.[133] The Supreme Court examined a rent control ordinance in *Pennell v. City of San Jose.*[134] There, a landlord association brought suit alleging, *inter alia*,

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[126] DIETZ ET AL., *supra* note 114, § 906.

[127] HARRIS, *supra* note 114, at 12.

[128] DIETZ ET AL., *supra* note 114, § 907.

[129] Cotati Alliance for Better Hous. v. City of Cotati, 195 Cal. Rptr. 825, 827 (Cal. Ct. App. 1983).

[130] *Id.* at 833.

[131] *Id.*

[132] *Id.*

[133] *See* Gross v. Superior Court, 217 Cal. Rptr. 284 (Cal. Ct. App. 1985); DIETZ ET AL., *supra* note 114, § 907.

[134] Pennell v. City of San Jose, 485 U.S. 1, 4 (1988). This case included an examination of the constitutionality of the ordinance. *Id.* The majority of courts have upheld rent control ordinances against constitutional Due Process Clause and Takings Clause challenges. *See* Note, *The Constitutionality of Rent Control Restrictions on Property Owners' Dominion Interests*, 100 HARV. L. REV. 1067, 1067–69 (1987). Courts have held that rent control restrictions do not violate the Due Process Clause because the regulations are reasonably related to a legitimate goal—preventing extreme rent escalation—under the police power. *Id.* at 1071.

that the ordinance was not a legitimate exercise of the police power.[135] The ordinance's stated purpose was:

> [A]lleviat[ing] some of the more immediate needs created by San Jose's housing situation. These needs include but are not limited to the prevention of excessive and unreasonable rent increases, the alleviation of undue hardships upon individual tenants, and the assurance to landlords of a fair and reasonable return on the value of their property.[136]

The Court evaluated this purpose to determine whether it was "arbitrary, discriminatory, or demonstrably irrelevant to the policy the legislature is free to adopt;"[137] the Court found that it was not, and that the ordinance was a legitimate exercise of the police power.[138] One aspect of the Court's holding was the recognition of the validity of governmental intervention to regulate artificially inflated rates or prices.[139] The Court reiterated that price regulation, such as rent control, has the legitimate and rational goal of protecting consumer welfare.[140]

There are instances where courts found rent control ordinances to be invalid, despite the broad reach of the police power and the high level of deference given to the legislature.[141] In *Birkenfeld v. Berkeley*, the Supreme Court of California determined that a city rent control ordinance was not constitutional.[142] The assessment of the *Birkenfeld* ordinance, based on the relationship between the purpose of the control and the valid goals of the police power, took a similar approach as the ordinances discussed above.[143] The court did not question the ordinance's objective of alleviating the "ill effects of the exploitation of a housing shortage."[144] Nevertheless, the court affirmed the lower court's declaration that the regulation was unconstitutional and void because it did not bear a reasonable relationship to the regulation's purpose.[145] Specifically, the court concluded that provisions in the ordinance that

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[135] *Pennell*, 485 U.S. at 12.

[136] *Id.* at 4–5 (quoting San Jose, Cal., Code of Ordinances § 5701.2 (1979) (recodified at ch. 17.23)).

[137] *Id.* at 11 (quoting Permian Basin Area Rate Cases, 390 U.S. 747, 769–770 (1968)).

[138] *Id.* at 13.

[139] *Id.*

[140] *Id.*

[141] Birkenfeld v. City of Berkeley, 550 P.2d 1001, 1006 (Cal. 1976).

[142] *Id.*

[143] *See id.* at 1023.

[144] *Id.*

[145] *Id.* at 1029–30.

imposed unreasonably low rent ceilings with an indefinite duration and required an unnecessarily time-intensive procedure for rent adjustments were problematic.[146] Since these provisions were not reasonably related to the proper objectives of the regulation—addressing the exploitation of a housing shortage—the court held that the rent control ordinance was unconstitutional.[147]

B. *The Validity of Condominium Conversion Moratorium Regulations*

1. Condominium Conversion Moratoria

Condominium conversion regulations are another area where courts have held that regulations affecting economic interests in property are a valid exercise of the police power.[148] There are two types of condominium conversion laws: those that impose disclosure requirements on the conversion processs, and those that impose outright moratoria on the conversions.[149] This discussion addresses the validity of conversions generally, but focuses primarily on conversion moratoria.

Condominium conversion is most common in low-income urban areas with proximity to desirable urban amenities.[150] Opponents of condominium conversion argue that such conversions create a shortage of affordable housing and displace tenants from their homes and neighborhoods.[151] Condominium conversion regulations first appeared in the 1970s, in response to a condominium building boom.[152] In Chicago, for instance, the city council passed a moratorium on conversions in 1979 after approximately 70,000 apartments were converted to condominiums during the decade, the largest number of any metropolitan area in the United States.[153]

Condominium conversion regulations and moratoria on conversion remain a relevant issue today.[154] These conversions still occur

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[146] *Id.* at 1030.

[147] *Birkenfeld*, 550 P.2d at 1030.

[148] CURTIN & TALBERT, *supra* note 3, at 3.

[149] Note, *The Validity of Ordinances Limiting Condominium Conversion*, 78 MICH. L. REV. 124, 125 (1979).

[150] CALLIES ET AL., *supra* note 2, at 672.

[151] Note, *supra* note 149, at 124.

[152] *See* Alby Gallun, *Daley Seeks to Slow Condo Conversions*, CHICAGOBUSINESS, Oct. 23, 2006, http://chicagobusiness.com/cgi-bin/article.pl?article_id=26696.

[153] *Id.*

[154] *See* Press Release, Bill Rosendahl, City Councilman, Rosendahl Combats Loss of Rental Housing (Aug. 8, 2006), http://www.lacity.org/council/cd11/press/cd11press12839722_08082006.pdf.

throughout the country and can result in increased rental prices by taking rental buildings off the market.[155] In Los Angeles, City Council member Bill Rosendahl called for a moratorium on condominium conversions in August 2006.[156] Rosendahl introduced the moratorium as a way to confront the loss of rental and affordable housing in parts of Los Angeles.[157] He explained that "[w]e are at the point of crisis. Longtime residents are being forced from their homes in epidemic numbers. They can no longer continue to live in their neighborhoods. Our communities are being ripped apart."[158] Chicago is once again addressing the issue of condominium conversion.[159] In the fall of 2006, Mayor Richard M. Daley assembled a task force to examine ways to preserve affordable housing in the face of wide-spread condominium conversions.[160]

2. Validity of Condominium Conversion Moratoria

Enabling statutes or provisions are required in order to enact condominium conversion restrictions.[161] Valid restrictions on condominium conversion must be rationally related to a legitimate public purpose.[162] In most instances, the public purpose validating a condominium conversion ordinance is the protection of prospective purchasers or existing tenants.[163]

A common argument against condominium conversion moratoria is that land use regulations should not be based on the form of ownership.[164] In *Maplewood Village Tenants Ass'n v. Maplewood Village*, the Superior Court of New Jersey held that land use controls "cannot be employed by a municipality to exclude condominiums or discriminate against the condominium form of ownership, for it is the use rather

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[155] David Leonhardt, *Rents Head Up as Home Prices Put Off Buyers: Ebb Seen in Housing Boom*, N.Y. Times, Aug. 25, 2005, at A1.

[156] Rosendahl, *supra* note 154, at 1.

[157] *Id.*

[158] *Id.*

[159] Gallun, *supra* note 152.

[160] *Id.*

[161] Edward H. Ziegler, Jr. et al., *Regulation of Occupancy, Ownership, Rental Housing, and Conversions*, Ratnkopf's The Law of Zoning and Planning, 2006, at 1, *available at* 5 RLZPN § 81:15. This Note does not examine issues involving authority for enactment of these regulations.

[162] *Id.*

[163] *Id.*

[164] *See* Maplewood Vill. Tenants Ass'n v. Maplewood Vill., 282 A.2d 428, 431 (N.J. Super. Ct. Ch. Div. 1971).

than form of ownership that is the proper concern and focus of zoning and planning regulation."[165]

In *Griffin Development Co. v. City of Oxnard*, the Supreme Court of California considered whether a city could regulate the conversion of apartments into condominiums.[166] The court looked to past cases to establish the standard of judicial review for condominium conversion ordinances as economic regulations.[167] The standard employed was that "legislation regulating prices or otherwise restricting contractual or property rights [was] within the police power if its operative provisions [we]re reasonably related to the accomplishment of a legitimate governmental purpose."[168]

Accordingly, the court conducted a thorough inquiry into the specific provisions of the ordinance to determine whether it was reasonably related to a legitimate governmental purpose.[169] The court found substantial rationale for the provisions.[170] For instance, the parking space requirement reflected statistics on the quantity of cars owned by homeowners and the required number of bedrooms was based on family size of likely occupants.[171] From this examination, and through reiteration of the elasticity of the police power, the court found that the regulations were plainly related to a legitimate governmental interest.[172] The court concluded that "the [condominium conversion] regulations—reasonably related to the legitimate governmental purpose—[we]re a valid exercise of the city's police power."[173]

The California Court of Appeal evaluated a challenge to a San Francisco condominium conversion moratorium in *Leavenworth Properties v. City of San Francisco,* a case raising both equal protection and police power issues.[174] The plaintiff, an apartment building owner hoping to convert his property into condominiums, argued that the city's ordinance was arbitrary and denied him the equal protection of the law.[175] The challenged ordinance imposed a three-year moratorium on con-

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[165] *Id.*

[166] Griffin Dev. Co. v. City of Oxnard, 703 P.2d 339, 339 (Cal. 1985).

[167] *Id.* at 342.

[168] *Id.* (quoting Birkenfeld v. Berkeley, 550 P.2d 1001, 1022 (1976)).

[169] *Id.* at 344.

[170] *Id.*

[171] *Id.* at 343.

[172] *Griffin Dev. Co.*, 703 P.2d at 344.

[173] *Id.*

[174] Leavenworth Props. v. City of San Fransisco, 234 Cal. Rptr. 598, 600 (Cal. Ct. App. 1987).

[175] *Leavenworth Props.*, 234 Cal. Rptr. at 599–600.

dominium conversion.[176] While the plaintiff's challenge was not based on an abuse of the police power, the court still emphasized that, in California, condominium regulation is consistently treated as a lawful exercise of the police power.[177] The court then examined the equal protection claim based on the rational basis test.[178] The rational basis standard was used, rather than the strict scrutiny standard asserted by the plaintiff, because the ordinance was economic legislation.[179]

The court in *Leavenworth Properties* determined that the goal of the ordinance was to maintain available rental housing.[180] The ordinance itself stated that part of its purpose was "[t]o preserve a reasonable balance of ownership and rental housing within the City and County of San Francisco."[181] The court held that this purpose was rationally related to a legitimate state interest and, thus, upheld the constitutionality of the ordinance.[182]

IV. The Best Tool for the Job: Can Condominium Construction Moratoria Validly and Effectively Confront Gentrification and the Condo Boom?

This Note examines whether an ordinance that imposes a moratorium on new condominium construction is an appropriate use of the police power.[183] The analysis addresses condominium construction moratoria generally and considers how different purposes for the moratoria could lead to different outcomes in an assessment of their validity.[184] Before determining the appropriateness of the purposes of these ordinances, however, authority must exist to enact the regulations.[185] Once municipal authority to enact a development moratorium is established, the next step is to determine whether the purpose, or purposes, of a moratorium sufficiently relate to the public's health, safety, or welfare.[186] Since the courts have not directly addressed the validity of condominium construction moratoria, this Note looks to ap-

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[176] *Id.* at 599.

[177] *Id.*

[178] *Id.* at 600.

[179] *See id.*

[180] *Id.* at 600–01.

[181] *Leavenworth Props.*, 234 Cal. Rptr. at 600 (quoting S.F., Cal., Mun. Code art. 1, § 1302(c)(1) (1979)).

[182] *Id.* at 600, 603.

[183] *See* Curtin & Talbert, *supra* note 3, at 1; Eagle, *supra* note 72, at 223.

[184] *See* Rohan, *supra* note 36, § 53C.08[10].

[185] *Id.* § 22, at 22-1.

[186] *See* Berman v. Parker, 348 U.S. 26, 32 (1954).

plicable court decisions in related matters to predict how a court might address a challenge to a condominium construction moratorium.[187] Analogies to rent control and condominium conversion ordinances, thus, provide a helpful framework for assessing the validity of condominium construction moratoria.[188]

A. *Municipalities May Enact Land Use Moratoria*

A municipality must have the authority to enact a land use regulation, including a condominium moratorium; without authority, the regulation is invalid.[189] Authority to enact land use regulations comes from the police power and, thus, requires that the regulations relate to the general health, safety, or welfare of the public.[190] The Supreme Court established that use-focused ordinances addressed health, safety, and welfare concerns and were proper applications of the police power in *Euclid v. Ambler Realty Co.*, when it upheld challenged zoning regulations.[191] The Court expanded the *Euclid* holding beyond zoning ordinances in *Berman v. Parker*, when it determined that an ordinance regarding the redevelopment of a deteriorating area was constitutionally sound.[192] *Euclid*, *Berman*, and many other cases since, have established that the police power may be used to enact land use regulations.[193]

As a result, it is now an accepted principle that municipalities have the authority, through the police power, to enact ordinances and regulations affecting the use of land.[194] This principle provides the first step in establishing condominium construction moratoria as valid regulations.[195] Still, the Court in *Euclid* emphasized that evaluations of zoning ordinances must be considered on a case-by-case basis because of the difficulty in precisely defining the police power and the lack of a clear

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[187] *See generally* Levy Leasing Co. v. Siegel, 258 U.S. 242 (1922) (upholding constitutionality of wartime rent control laws); Griffin Dev. Co. v. City of Oxnard, 703 P.2d 339 (Cal. 1985) (holding that regulating condominium conversion accomplishes a legitimate government purpose); Cotati Alliance for Better Hous. v. City of Cotati, 195 Cal. Rptr. 825 (Cal. Ct. App. 1983) (upholding a rent control ordinance with a purely economic interest as rationally related to a legitimate public purpose).

[188] *See Levy Leasing Co.*, 258 U.S. at 243; *Griffin Dev. Co.*, 703 P.2d at 339; *Cotati Alliance for Better Hous.*, 195 Cal. Rptr. at 827.

[189] *See* ROHAN, *supra* note 36, § 22, at 22-1.

[190] *See* DIETZ ET AL., *supra* note 114, § 907.

[191] *See* Euclid v. Ambler Realty Co., 272 U.S. 365, 386–87 (1926).

[192] *See, e.g.*, Berman v. Parker, 348 U.S. 26, 33 (1954); *Euclid*, 272 U.S. at 387.

[193] *See Berman*, 348 U.S. at 32–33; *Euclid*, 272 U.S. at 387.

[194] *See Berman*, 348 U.S. at 32–33.

[195] *See id.*

delineation between uses that are acceptable and unacceptable.[196] While zoning and other land use regulations are valid applications of the police power, this validity does not provide a blanket approval for all such regulations.[197] Thus, the inquiry into the validity of condominium construction moratoria must go further to determine whether such ordinances sufficiently relate to the health, safety, or welfare of a municipality's residents.[198]

B. *Examination of Land Use Moratoria as a Valid Exercise of the Police Power*

A municipality's authority to enact moratoria and other land use regulations does not guarantee that all such regulations will be valid—the particular purpose of a regulation must be a valid exercise of the police power.[199] Because the municipal authority to regulate land use stems from the police power, the purpose of any particular land use moratorium must relate to the health, safety, or welfare of the public.[200] Land use regulations, however, are enacted to achieve many different goals, and can have a broad range of purposes.[201] It is the role of state legislatures to develop and adopt these regulations in response to the needs of their communities.[202] Since land use regulations are enacted through the legislative process—and not enacted by the courts—judicial review gives great deference to the legislature's determination of needed regulations and their purposes.[203]

Accordingly, the courts view themselves as having a very narrow, limited role in determining whether the police power is being exercised for a proper public purpose.[204] The Supreme Court exemplified this view in *Euclid*, when it explained that finding an ordinance unconstitutional under the police power requires that the regulation be

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[196] 272 U.S. at 388; DUBBER, *supra* note 73, at 120.

[197] *See Berman*, 348 U.S. at 32–33; *Euclid*, 272 U.S. at 388.

[198] *See Euclid*, 272 U.S. at 387; CURTIN & TALBERT, *supra* note 3, at 409. The need for a case-by-case assessment of the validity of land use ordinances requires that each condominium construction moratorium be individually assessed and considered in terms of "the circumstances and the locality." *See Euclid*, 272 U.S. at 388. This Note, however, looks more broadly at condominium construction moratoria and elements that could contribute the validity or invalidity of an ordinance of this kind.

[199] *See Euclid*, 272 U.S. at 388.

[200] *See* EAGLE, *supra* note 72, at 224.

[201] *See* CURTIN & TALBERT, *supra* note 3, at 3. Land use regulations can address such issues as housing density, street width, community aesthetics, and economic interest in real property, among other things. *Id.*

[202] *See Berman*, 348 U.S. at 32.

[203] *Id.*

[204] *Id.*

"arbitrary and unreasonable" with "no substantial relation to public health, safety, morals, or general welfare."[205] An analysis of the various purposes for condominium construction moratoria must consider the great deference that a court would give the legislature in reviewing a challenge to a moratorium regulation.[206]

1. Rent Control: Regulations with an Economically Driven Purpose

Like moratoria, municipalities enact rent control regulations as an exercise of the police power.[207] Therefore, these regulations are only upheld if they have a substantial relationship to the public health, safety, or welfare: the same standard that applies to condominium moratoria.[208] Rent control ordinances provide a useful reference point for evaluating condominium construction moratoria because rent control ordinances have economically oriented purposes, such as stabilizing rental prices.[209]

Rent control and condominium construction regulations have illustrative similarities in their purposes and goals.[210] While dealing with the issues in different ways, rent control and condominium construction regulations address impacts on housing in specific neighborhoods or areas.[211] These two types of regulations share the goal of preventing housing shortages for lower-income residents.[212] Additionally, both types of regulations can serve as a response to an influx of more affluent individuals into a traditionally lower-income area.[213] Finally, each demonstrates instances where regulation is used to counteract the effect of market forces on the land use and housing availability in an area.[214]

The Supreme Court's decision in *Levy Leasing Co. v. Siegel* links insufficient housing with public welfare.[215] The rent control ordinance challenged in this case was enacted in response to the housing shortage

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[205] Euclid v. Ambler Realty Co., 272 U.S. 365, 395 (1926).

[206] *See Berman*, 348 U.S. at 32.

[207] DIETZ ET AL., *supra* note 114, § 907.

[208] *See id.*

[209] *See* CURTIN & TALBERT, *supra* note 3, at 3; DIETZ ET AL., *supra* note 114, § 906.

[210] *See* Cotati Alliance for Better Hous. v. City of Cotati, 195 Cal. Rptr. 825, 827 (Cal. Ct. App. 1983); McConville, *supra* note 5, at B1; Coons, *supra* note 35.

[211] *See Cotati Alliance for Better Hous.*, 195 Cal. Rptr. at 833; McConville, *supra* note 5, at B1.

[212] *See Cotati Alliance for Better Hous.*, 195 Cal. Rptr. at 833.

[213] *See* McConville, *supra* note 5, at B1; Coons, *supra* note 35.

[214] *See Cotati Alliance for Better Hous.*, 195 Cal. Rptr. at 833; McConville, *supra* note 5, at B1; Coons, *supra* note 35.

[215] Levy Leasing Co. v. Siegel, 258 U.S. 242, 245 (1922).

following World War I.[216] The Court explained that the legislature resorted to the police power in this instance based on its strong belief that there was a "social emergency[]caused by an insufficient supply of dwelling houses and apartments."[217] The Court went on to discuss the rent control ordinance's purpose of relieving the serious housing problem and, thus, preventing harm to the public welfare.[218] Once the Court linked relieving a housing shortage to the public welfare, it stated strongly that the ordinance addressed aspects of the public welfare, "[W]hich constitute the primary and undisputed . . . basis and justification for exercise of [the police] power."[219]

While examination of rent control ordinances does provide insight into evaluating condominium construction moratoria, drawing analogies between the two kinds of regulations must be done cautiously.[220] Both kinds of regulations share a common goal of addressing housing needs in an area with changing populations or market pressures.[221] While these long-term and broad goals may be the same, the immediate purposes and effects are different.[222] The differences between rent control ordinances and condominium construction moratoria prevent the direct application of cases analyzing the former to the latter.[223]

Rent control ordinances directly regulate the amount of lower-priced housing by requiring the stabilization of rental prices.[224] The connection to more affordably priced housing is not as direct in the case of condominium construction moratoria.[225] The moratoria effectively prevent the development of higher-priced housing, but this restriction does not necessarily correlate to an increased amount of lower-priced housing.[226] For example, if the moratoria were enacted in neighborhoods where new condominiums were being built on vacant lots or open land, a construction moratorium would not result in more

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[216] *Id.* at 243–44; *see* HARRIS, *supra* note 114, at 9.

[217] *Levy Leasing Co.*, 258 U.S. at 245.

[218] *Id.*

[219] *Id.*

[220] *See* DIETZ ET AL., *supra* note 114, § 906; McConville, *supra* note 5, at B1; Coons, *supra* note 35.

[221] *See* DIETZ ET AL., *supra* note 114, § 906; McConville, *supra* note 5, at B1; Coons, *supra* note 35.

[222] *See* DIETZ ET AL., *supra* note 114, § 906; McConville, *supra* note 5, at B1; Coons, *supra* note 35.

[223] *See* DIETZ ET AL., *supra* note 114, § 906; McConville, *supra* note 5, at B1; Coons, *supra* note 35.

[224] DIETZ ET AL., *supra* note 114, § 906.

[225] *See* Coons, *supra* note 35.

[226] *See id.*

lower-priced housing unless an aspect of the moratorium was to develop a plan for creating affordable housing during the construction freeze.[227] Thus, an analysis of condominium construction moratoria, based on an analogy to rent control ordinances, must carefully assess the similarities and differences between the purposes and effects of these respective regulations and draw comparisons accordingly.[228]

2. Condominium Conversion Moratoria

In addition to rent control ordinances, condominium conversion moratoria also provide a helpful analytical framework for assessing the validity of the purposes of condominium construction moratoria.[229] Like construction moratoria, condominium conversion moratoria involve the issue of economic interests in property.[230] Both types of moratoria originated in response to large influxes in condominium building booms, one to new construction and the other to conversion of apartment buildings into condominiums.[231]

Many of the arguments currently made by communities in support of proposed condominium construction moratoria have been made in relation to conversion ordinances.[232] For instance, the local discussion surrounding both types of regulations focuses on displacement of current residents, a shortage of affordable housing, and changing neighborhood character as reasons to enact these land use controls.[233]

While the courts have not ruled on condominium construction moratoria, they have examined condominium conversion moratoria.[234] In *Griffin Development Co. v. City of Oxnard*, the Supreme Court of California determined that a city could regulate the conversion of apartments into condominiums.[235] In its analysis, the court stressed that the legislature could restrict economic or property interests as long as the "operative provisions [of the regulation] [we]re reasonably related to the accomplishment of a legitimate governmental purpose."[236] It does

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[227] *See* McConville, *supra* note 5, at B1.

[228] *See* DIETZ ET AL., *supra* note 114, § 906; McConville, *supra* note 5, at B1; Coons, *supra* note 35.

[229] *See* CURTIN & TALBERT, *supra* note 3, at 3.

[230] *See id.*

[231] *See* McConville, *supra* note 5, at B1; Coons, *supra* note 35; Gallun, *supra* note 152.

[232] *See* Note, *supra* note 149, at 124; McConville, *supra* note 5, at B1; Coons, *supra* note 35.

[233] *See* Note, *supra* note 149, at 124; McConville, *supra* note 5, at B1; Rosendahl, *supra* note 154, at 1; Coons, *supra* note 35.

[234] *See* Griffin Dev. Co. v. City of Oxnard, 703 P.2d 339, 339 (Cal. 1985).

[235] *Id.* at 339–40.

[236] *Id.* at 342 (quoting Birkenfeld v. City of Berkeley, 550 P.2d 1001, 1022 (1976)).

not directly follow from this ruling that limiting the construction of condominiums could be a legitimate governmental purpose as well, but it does suggest that this kind of regulation could also be valid as an exercise of the police power.[237]

In addition to economic interests, condominium conversion regulations touch on the issue of maintaining the character or composition of a community.[238] In *Leavenworth Properties v. City of San Francisco*, the California Court of Appeal examined a conversion moratorium with the purpose of "preserv[ing] a reasonable balance of ownership and rental housing within the City."[239] The court held that this justification was a legitimate state interest relating to public welfare and, thus, upheld the constitutionality of the ordinance.[240] This holding suggests that condominium construction moratoria with a similar purpose would also be found to promote a legitimate state interest and fall within the police power.[241] A condominium construction moratorium based on this premise would have the goal of preserving a social balance in the area by limiting the number of newcomers moving into the community as homebuyers of new condominiums.[242]

3. The *Associated Home Builders v. City of Livermore* Analysis

Rent control and condominium conversion ordinances supply useful analogies for examining condominium construction moratoria. Examining past court evaluations of growth management ordinances also provide examples of useful processes to assess the validity of such ordinances.[243] One way to evaluate the validity of condominium construction moratoria is to analyze them under the three-step process articulated in *Associated Home Builders v. City of Livermore*.[244]

First, this analysis predicts the likely effects of prohibiting condominium construction in the designated area, taking into account the probable time frame for the moratorium.[245] The analysis then identifies

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[237] *See id.* at 344.

[238] *See* Leavenworth Props. v. City of San Francisco, 234 Cal. Rptr. 598, 600–01 (Cal. Ct. App. 1987); CALLIES ET AL., *supra* note 2, at 672; Note, *supra* note 149, at 124.

[239] *Leavenworth*, 234 Cal. Rptr. at 600 (quoting S.F., CAL., MUN. CODE art. 1, § 1302(c)(1) (1979)).

[240] *Id.*

[241] *See id.*

[242] *See id.*

[243] *See* Associated Home Builders v. City of Livermore, 557 P.2d 473, 488 (Cal. 1976).

[244] *Id.*

[245] *See id.*

the competing interests that are affected by the moratorium.[246] Finally, based on the prior two determinations, the analysis requires evaluating whether the moratorium reasonably accommodates the competing interests.[247]

The need for a case-by-case evaluation of land use regulations precludes a general application of the *City of Livermore* analysis to condominium construction moratoria.[248] Still, the analysis is helpful in predicting how various common factors of the construction moratoria would be considered by a court.[249] For instance, as part of the *City of Livermore* analysis, potential impact on both the area directly regulated by the moratorium and the areas surrounding the moratorium boundary must be considered.[250] This aspect of the *City of Livermore* analysis broadens the *public* that must be considered in assessing a moratorium's relationship to public health, safety, and welfare.[251] Thus, a condominium moratorium with the goal of slowing or eliminating the gentrification process in the regulated community might also have the unintended effect of shifting the flood of construction and individuals to a surrounding area.[252] Depending on the interests of the surrounding area, this shift could have either a negative or positive effect.[253] Alternatively, a condominium construction moratorium that reduces the rate and scale of economic development in the regulated area could similarly impact the local economy in surrounding areas.[254] These examples are just a few instances where a *City of Livermore* analysis would require weighing of the differing effects on the health, safety, and welfare of individuals in the area regulated by a moratorium ordinance and those in surrounding areas.[255]

4. Moratoria Timeframes: What Happens During the Freeze?

Crucial aspects of any condominium construction moratorium are its duration and what occurs while construction is put on hold.[256] There is no definitively established outer time limit for moratoria be-

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[246] *See id.*
[247] *See id.*
[248] *See* Euclid v. Ambler Realty Co., 272 U.S. 365, 388 (1926).
[249] *See City of Livermore*, 557 P.2d at 488.
[250] *See id.*
[251] *See id.*
[252] *See* CALLIES ET AL., *supra* note 2, at 671.
[253] McGee, *supra* note 22, at 30.
[254] *See id.*
[255] *See City of Livermore*, 557 P.2d at 488.
[256] *See* ROHAN, *supra* note 36, § 53.C08[10].

yond which the regulations will be invalid.[257] An evaluation of the duration of a moratorium would examine whether there is a reasonable relationship between the purpose of the moratorium and the steps to be taken during the moratorium, as well as the length of the hold on construction.[258]

Comparing these moratoria to rent control and condominium conversion regulations suggests that a court would find that the purposes behind the moratoria—preserving neighborhood character and addressing the effects of gentrification—could have a rational relationship to public welfare.[259] But the evaluation of the moratoria does not stop there. Even if the goal of the moratorium is valid, the regulation itself will not survive scrutiny unless it includes provisions establishing the steps that will be taken during the moratorium to address the problems targeted by the regulation.[260] A court's evaluation of moratorium provisions would likely be similar to the California Supreme Court's examination of a condominium conversion ordinance in *Griffin Development Co.*[261] There, the regulation was valid because it served a legitimate governmental interest, and the operative provisions had a reasonable relationship to the accomplishment of that interest.[262]

Thus, a moratorium cannot put a hold on condominium construction solely to prevent changes to neighborhood character.[263] The purpose for freezing construction must be to allow the municipality time to take steps that address the adverse impacts of the construction.[264] For example, if rapid condominium construction was displacing lower-income residents in a neighborhood, it could be appropriate for the city to institute a moratorium while it developed a plan to provide more affordable housing in the area.[265] It could also be appropriate to have a moratorium on condominium construction—where a building boom was stressing a neighborhood's infrastructure or encroaching on open space—while the city assessed implementing new land use controls or

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[257] *See* Tahoe-Sierra Pres. Council, Inc. v. Tahoe Reg'l Planning Agency, 535 U.S. 302, 353–54 (2002).

[258] *See id.*

[259] *See* Griffin Dev. Co. v. City of Oxnard, 703 P.2d 339, 342 (Cal. 1985); Cotati Alliance for Better Hous. v. City of Cotati, 195 Cal. Rptr. 825, 827 (Cal. Ct. App. 1983).

[260] *See Griffin Dev. Co.*, 703 P.2d at 342 (examining provisions of condominium conversion moratorium for their relationship to a legitimate governmental purpose).

[261] *See id.*

[262] *Id.* at 344.

[263] *See id.*

[264] *See* ROHAN, *supra* note 36, § 53C.08[10].

[265] *See id.*

developed an overall land use plan to guide future construction.[266] A proper moratorium will end once the indicated steps are taken, at which point development may resume, but with new controls in place to manage the impacts of the new development.[267]

5. Effectiveness of Valid Condominium Construction Moratoria

The effectiveness of a condominium construction moratorium is another important consideration for cities exploring the use of this land use tool.[268] Establishing the validity of a moratorium targeted at gentrification under the police power does not guarantee that the regulation will effectively and efficiently address the needs of the community.[269] Moratoria are temporary in nature and are limited in the role they can play in slowing and controlling condominium development in an area.[270] Moratoria cannot permanently limit growth in an area; zoning or other long-term growth management controls must be put in place during the moratoria for them to achieve long-lasting effects.[271] Proposed moratoria should be carefully considered to determine whether freezing development is necessary, or whether other long-term controls can be implemented without moratoria.[272]

Conclusion

Condominium construction moratoria provide a potential way for municipalities to confront the impact of rapid condominium development. By limiting the number of condominiums built in a certain area, these moratoria may prevent the displacement of local residents due to rising property costs and may preserve local community character. In order for legislatures to enact these regulations—through the exercise of the police power—the regulations' purposes must have a sufficient relationship to public health, safety, or welfare.

Each condominium construction moratorium must be evaluated individually to determine its validity. An assessment of the purposes and impacts of a moratorium must consider the effects to both the area tar-

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[266] *See id.*

[267] *See id.*

[268] *See* Myren, *supra* note 105, at 387.

[269] *See* Berman v. Parker, 348 U.S. 26, 32–33 (1954); Euclid v. Ambler Realty Co., 272 U.S. 365, 387 (1926).

[270] *See* Rohan, *supra* note 36, § 53C.08[10].

[271] *See id.*

[272] *See id.*

geted by the regulation and the surrounding areas likely to be indirectly impacted. Based on determinations of the validity of rent control ordinances and condominium conversion moratoria, a construction moratorium with the purpose of preserving the economic and social composition of a community would most likely be valid under the police power as long as its operative provisions were related to its proper purpose.

Despite the strong likelihood of validity of condominium construction moratoria, planners and regulators should only resort to this drastic land use control when the circumstances in a local community cannot be addressed through other growth management measures. Moratoria are politically charged tools that elicit strong responses from community members. Because of their volatile nature, they should only be used when a community must quickly freeze development to address pressing needs, such as insufficient infrastructure or the availability of affordable housing. A moratorium's effectiveness turns on what is accomplished during the development freeze, rather than the halt in construction itself.

Thus, while community members may view a moratorium as a perfect solution to stopping rapid construction and social change in the neighborhood, a moratorium is not a permanent solution. A moratorium cannot last indefinitely, and once it is lifted the economic and social forces will continue to impact the community. A valid and effective moratorium will use the time during the building freeze to develop growth management controls that will steer these forces and new growth in a positive direction.