

PEPPERDINE The Journal of Business, Entrepreneurship & the Law

Volume 3 | Issue 2 Article 2

4-20-2010

It's Not Easy Being Green: Evolving Legal Frameworks to Address the Unanticipated Consequences of New Environmental **Programs**

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Beth S. Dorris, It's Not Easy Being Green: Evolving Legal Frameworks to Address the Unanticipated Consequences of New Environmental Programs, 3 J. Bus. Entrepreneurship & L. Iss. 2 (2010) Available at: https://digitalcommons.pepperdine.edu/jbel/vol3/iss2/2

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IT'S NOT EASY BEING GREEN: EVOLVING LEGAL FRAMEWORKS TO ADDRESS THE UNANTICIPATED CONSEQUENCES OF NEW ENVIRONMENTAL PROGRAMS

BETH S. DORRIS*

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FOREWORD

Taking It Upstream: Collaboration, Consensus Building & Sustainable Development—A Green Leadership (Un)conference was held at Pepperdine University's Graziadio Conference Center on September 25, 2009. In the spirit of collaboration, the symposium marked the first event jointly sponsored by the

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Straus Institute for Dispute Resolution and the Geoffrey H. Palmer Center for Entrepreneurship & the Law.

It was especially fitting that this gathering took place at Pepperdine University's Malibu campus for it was here, three years before on September 27, 2006, that Governor Arnold Schwarzenegger signed California Assembly Bill 32 (AB 32), the Global Warming Solutions Act, on a bluff overlooking the Pacific Ocean. AB 32 was followed on September 30, 2008, with the signing of California Senate Bill 375 (SB 375).

Regarding both of these bills, Pete Peterson, executive director of Common Sense California and one of the principal organizers of the symposium, wrote:

At the heart of these laws is the connection between land use planning decisions and climate change. But while the content of this pioneering legislation was formulated with some clarity in Sacramento, the *process* by which the decisions will be made throughout California remains to be answered. Like no other time in the history of California, relationships between government agencies, and between those agencies and vested "stakeholders," are being re-constituted. We have entered a new era in governance—one that demands greater transparency, collaboration, and participation. To be successful, leaders (both public and private sector) will need to learn and hone the skills necessary for this new policy-making world.

As a Straus Fellow, I first proposed the idea for the *Taking It Upstream* symposium in April 2008. My intention was to explore how we might use collaborative techniques such as consensus building, dialogue and deliberation, civic engagement, and environmental mediation to create more sustainable communities. More particularly, I wanted to examine how (and when) we should do this "upstream," at an early stage, *before* a crisis develops.

Much happened in the year leading up to the symposium that made the *substance* of the symposium timely—most notably, a new president focused on sustainability and more robust forms of civic engagement, and a massive financial crisis.

Beyond the content of the symposium, I also wanted to utilize a highly interactive approach for how participants (both the "panelists" and the "audience") would engage with another (the *process* of engagement). My intention was to avoid the more traditional boring panel format, where panelists face the audience (instead of one another), where each panelist offers a 5-10 minute soliloquy on the topic at hand, and where attendees are left with 2-3 minutes (if that) for a quick Q & A. Instead, I wanted each moment to be as engaging as possible, to allow for a direct and dynamic conversation from the "get-go." I also wanted to honor the wisdom of the entire room, to value the expertise of the audience, and bring them fully into the conversation.

In this way, the overall experience would be similar to the notion of an *un*conference, where the traditional format is challenged, where the walls between those on the podium and those in the audience are intentionally torn down, or at least blurred. Unconferences focus on audience-centered participation. The room is the panel. The main job for those on the podium is to draw out the wisdom in the room. Unconferences work best when the topic is emerging, when the wisdom is still forming—as is the case with the current conversation around climate change.

One of the underlying themes of unconferences is that "everyone is an expert." For those working in emerging fields, our peers are the ones leading the way forward. The intention is to recruit ideas and encourage cross-pollination from the people who are forming the wisdom—*informally*. Unconferences bring the hallway conversations back into the main tent by supporting the emergence of unparalleled peer-to-peer learning opportunities and dynamic, participant-driven discussions.

To this end, the morning framing panels were held "in the round" so that panelists would more inclined to having real conversation with each other as opposed to addressing, or pandering to, the "audience." Questions from the audience were relayed to the panel moderator who would do their best to bring the questions into the discussion at appropriate points in the conversation. Additionally, we employed a variety of innovative interactive engagement techniques (World Café, Movers & Shakers, and Focused Roundtables)¹ to provide for more intimate conversations over lunch and in the afternoon among the various panelists, moderators, and audience members.

My hope was that this approach would help attendees explore the substance of the symposium more effectively, and more richly. My hope was that participants would share in a series of respectful and insightful conversations to shed light on the challenges that lie ahead and to move our practices, and our communities, forward.

Taking It Upstream also marked the first occasion that the Straus Institute's Pepperdine Dispute Resolution Law Journal and the Palmer Center's Journal of Business, Entrepreneurship & the Law have collaborated to feature the same symposium. In this spirit, the two journals have created special symposium editions comprised of papers authored by a number of the panelists, reflecting important trends in the evolution of conflict management and dispute resolution in the areas of multi-party environmental, land use, and public policy matters.

In "Getting the Green Light for Senate Bill 375: Public Engagement for Climate-Friendly Land Use in California," Greg Greenway analyzes the approach to public participation outlined in SB 375, and argues that a critical success factor is the design and execution of strategies by local governments to engage citizens in the implementation of the legislation. The article concludes with an examination of a recent initiative in San Mateo County that offers a promising approach to engaging the public in land use decisions.

Alana Knaster's piece, "Resolving Conflicts Over Climate Change Solutions: Making the Case for Mediation," canvasses the role that mediation can play in resolving the conflicts that are likely to emerge in the climate change arena. She also provides some observations and takeaways from the symposium in this context.

Beth Dorris examines how new environmental measures produce adverse and largely unanticipated impacts of their own, and how legal liability is allocated. The article, "It's Not Easy Being Green: Evolving Legal Frameworks to Address the Unanticipated Consequences of New Climate Change and Sustainability

¹ See Steve Zikman, South Pasadena: A Dialogue on Dialogue, 10 Pepp. Disp. Resol. L.J. 355, 363-65 (2010).

Programs," then evaluates legal frameworks available to reduce the risks of such liabilities.

I have also contributed a paper entitled "South Pasadena: A Dialogue on Dialogue" which was the project I completed for my LL.M. at the Straus Institute and which I am proud to say received the award for best academic paper by the California Dispute Resolution Council (due in large part to the exquisitely detailed guidance of my faculty advisor, Alana Knaster). The piece explores how communities can improve the ways in which they engage with each other concerning controversial land use issues early on in the process—before the parties are in full crisis mode—through a series of facilitated dialogues.

At the commencement of the *Taking It Upstream* symposium, I described our day together as a journey. With the publication of these two special journal editions, the quest continues and these four thoughtful pieces serve as powerful departure points for further inquiry and revelation. Thank you for joining us, and for participating.

In closing, I would like express my gratitude to Professors Thomas Stipanowich and Peter Robinson, co-directors of the Straus Institute, as well as Professor Janet Kerr, executive director at the Palmer Center. At every step of the way, they and their staff (especially Lori Rushford, Jeannie Jakstis and Shellee Warnes) helped steer this symposium to reality while honoring the integrity of my intentions for the Fellowship. I would also like to offer a heartfelt appreciation to my fellow symposium organizers, Alana Knaster and Pete Peterson, whose caring insight and creativity were invaluable. Finally, I would like to thank journal editors Steven Hwang and Joshua Krebs for committing the symposium and its prescient theme to the written page for further study and collaboration.

Steve Zikman, LL.M., LEED AP Straus Fellow and Symposium Co-Chair "Going green" has become big business. Part of this trend stems from vast amounts of stimulus funding for "renewable energy" or energy efficiency.² Natural market forces are also in play; eco-friendly products have become a \$200 billion market.³ In addition, businesses are finding that at least some environmental measures—especially those taken to reduce wastes, water and energy consumption, packaging, and transport distances—can provide substantial cost savings. As a result, many businesses are *voluntarily* instituting new environmental programs to reduce greenhouse gas emissions and improve the sustainability of their own facilities, operations, and products.

At the same time that this voluntary movement is underway, new laws and regulations *mandating* environmental improvements are being developed.⁴ One might assume that implementing new environmental programs, whether voluntary or mandated, would lessen environmental liability risks overall. The path to "going green," however, is itself a legal minefield. Unintended consequences and shifting legal standards can undermine environmental efforts and result in staggering new legal liabilities for businesses implementing the new environmental controls.

This article first examines ways new environmental measures become vulnerable to producing massive adverse, and largely unanticipated, impacts of their own. This article then evaluates legal frameworks available to reduce the risks of, and liability for, such unintended consequences.

I. LEGAL RISKS AND LIABILITIES INCURRED BY BUSINESSES IMPLEMENTING NEW ENVIRONMENTAL PROGRAMS

The "environment" is, ultimately, everything around us. What constitutes "environmental harm" thus encompasses an extremely wide range of issues. Air quality, climate change, water quality, noise, historic preservation, traffic, urban decay—these are just a few examples of the many ways human activity can impact the environment.

Although the environment can be affected in any number of ways, legislators, regulators, and businesses alike tend to focus on addressing one type of

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² The stimulus bill includes more than \$80 billion in spending and tax cuts aimed at green technologies. Renee Schoof, *Focus on Energy May Create Jobs*, MIAMI HERALD, Feb. 17, 2009, at A4, *available at* 2009 WLNR 3047414.

³ According to the Natural Marketing Institute, as of 2005, the U.S. market for purchasing goods based upon environmental and social impacts exceeded \$209 billion. Janis I. Mara, *Consumers Urged to Scrutinize "Eco-Friendly Claims*," SAN MATEO COUNTY TIMES, Mar. 9, 2008, 2008 WLNR 4689183.

⁴ Pew Center on Global Climate Change, Greenhouse Gas Emissions Targets Map, http://www.pewclimate.org/what_s_being_done/in_the_states/emissionstargets_map.cfm (last visited Apr. 8, 2010). As of September 2009, twenty-two states had greenhouse gas emission targets, with the highest concentration of state legislation in the Western and Northeastern United States. *Id.* In California, the greenhouse gas emissions target is regulated by the Global Warming Solutions Act. California Environmental Protection Agency Air Resources Board, Assembly Bill 32: Global Warming Solutions Act, http://www.arb.ca.gov/cc/ab32/ab32.htm (last visited Mar. 5, 2010) (codified as CAL. Health & Safety Code §§ 38500–99 (West 2006)). The Global Warming Solutions Act requires that by 2020, California reduce its greenhouse gas emissions to 1990 levels, and to still lower levels by 2050. *Id.*

environmental problem at a time. One reason for this trend is the specialized knowledge required to understand even one type of environmental problem. Few persons without a graduate degree in hydrogeological pathways would be able to predict, with even a semblance of accuracy, the potential exposures to drinking water from a shallow pipeline release. But conversely, a PhD in hydrogeological pathways is likely to know very little about the carcinogenic properties of airborne pollutants or the effect of transportation patterns on greenhouse gas emissions.

Political trends and market sympathies generally reinforce the tendency to focus on one type of environmental problem at a time. A business today may be more inclined to advertise a low carbon footprint than to publicize efforts to "save the whales." But ten years ago, the same business was likely to have the exact opposite priorities. Similarly, legislators tend to focus attention on issues at the forefront of public concern at the time. For example, thirty-five bills that passed last year in California were intended to serve as a form of protection against "climate change" or "global warming."

This type of single-issue focus can have the same effect as "blinders" on a horse. The blinders make it easier to stay on path and arrive at the planned destination quickly, but at the expense of not seeing dangers on the sides of the road. Below are some case studies of particular environmental programs that focused on remedying one particular environmental harm, only to create or promote other adverse environmental impacts.

A. Illustrative Case Study: The Use of MtBE in Reformulated Fuels Programs

MtBE (methyl tertiary-butyl ether) is a fuel additive used primarily to meet oxygenate requirements for gasoline imposed under the 1990 Clean Air Act Amendments ("CAA Amendments").⁶ At the time Congress adopted the CAA Amendments, several other oxygenates were also available for this purpose, the primary alternative being ethanol. Environmental regulators did not affirmatively mandate use of MtBE as the only oxygenate, but they did review and approve its use for that purpose. Similarly, several states, including California, adopted their own reformulated fuel requirements with oxygen-content minimums, and approved use of MtBE as part of such reformulated fuel. California's Air Resources Board ("ARB") even performed "testing" before authorizing MtBE's use as an oxygenate in reformulated gasoline—albeit this testing focused on MtBE's efficacy as an

⁵ Author performed search on Westlaw for the phrases "Protect! Against /s "Climate Change" "Global Warming" & (2009)." This search, performed on March 3, 2010, turned up thirty-five separate entries for Senate and Assembly bills). *See* Official California Legislative Information, Bill Information, http://www.leginfo.ca.gov/bilinfo.html (last visited Apr. 14, 2010) (identifying 101 bills in the California State Legislature referencing "climate change," as of April 14, 2010).

⁶ See United States Environmental Protection Agency, MtBE, http://www.epa.gov/mtbe/gas.htm, (last visited Mar. 27, 2010). The CAA amendments resulted in MtBE use in over fifteen states to comply with wintertime oxygenate requirements (starting in 1992) and with federal reformulated gasoline ("RFG") requirements (starting in 1995). Refiners began adding up to 15% by volume of MtBE to gasoline (11% in California). See CAL. ENVTL. PROT. AGENCY, BRIEFING PAPER ON METHYL TERTIARY BUTYL ETHER 1, http://www.arb.ca.gov/fuels/gasoline/Oxy/Mtbebp.pdf (last visited Mar. 27, 2010).

oxygenate in reducing air pollutants, and not on MtBE's potential impacts on drinking water resources.⁷

The problem is that this increased use of MtBE, while helpful in addressing air quality concerns, ultimately created a massive water quality controversy. MtBE, along with the rest of the gasoline product, leaked from underground tanks and pipes (among other sources) into soils and groundwater, and from there to drinking water wells. Although no primary drinking water standards for MtBE were then in place, within a few years after the new CAA Amendments went into effect, a number of drinking water wells were shut down, based largely on taste and odor concerns associated with the presence of MtBE.⁸

In response, some of the same governmental agencies, including Environmental Protection Agency ("EPA"), that had endorsed the use of oxygenates such as MtBE to redress air quality impacts, began enforcement actions to require regional and individual site assessment, treatment, and drinking water replacement. Compliance with these orders ultimately exposed the oil companies to billions of dollars in cleanup and water replacement costs. 10

⁷ See, e.g., California Air Resources Board, Testing Underway, http://www.arb.ca.gov/fuels/ gasoline/pub/cbg_fs2.htm (last visited Apr. 8, 2010) (describing ARB's testing of reformulated fuels, including MtBE, prior to California's implementation of its reformulated fuel requirements in 1996, which were more stringent than those imposed under the CAA). Moreover, certain refiners maintain that in the 1980s, Environmental Protection Agency had been informed, in separate proceedings under the Toxic Substances Control Act ("TSCA"), that MtBE as a chemical dissolves readily into groundwater where it may persist (that is, degrade slowly), as part of a recommendation that further testing be done under the TSCA. See, e.g., MTBE Litigation Information, Federal Government's Knowledge of MtBE's Risks to Groundwater When the Government Required Its Use, http://www.mtbelitigationinfo.com/go/doc/942/76610 (last visited Apr. 8, 2010). Defendants in later actions concerning MtBE use also claimed that when EPA approved MtBE for use in compliance with the CAA Amendments, EPA knew that there was not a sufficient nationwide supply of ethanol, or even an infrastructure to create ethanol, to satisfy the program requirements, such that the only way refining companies could meet the requirements of the CAA amendments was to use MtBE as a gasoline additive. See In re MtBE Products Liability Litigation, 379 F. Supp. 2d 348 (S.D.N.Y. 2005) (describing defendants' claims).

⁸ See, e.g., United States Environmental Protection Agency, Notice of Proposed Administrative Order on Consent Pursuant to the Resource Conservation and Recovery Act, http://www.epa.gov/fedrgstr/EPA-WASTE/2000/September/Day-06/f22813.htm (last visited Apr. 8, 2010); see also Press Release, United States Environmental Protection Agency, U.S. EPA and Regional Water Board Order Water Replacement For Santa Monica, Sept. 22, 1999, http://yosemite.epa.gov/opa/admpress.nsf/9e507 70d29adb32685257018004d06fd/56402ccdc5ba97f3852570d8005e135flOpenDocument&Highlight=0, mtbe (describing the City of Santa Monica's closure of its drinking water wells in the Charnock Sub-Basin due to the presence of MtBE); U.S. Geological Survey, National Water-Quality Assessment (NAWQA) Program, http://sd.water.usgs.gov/nawqa/vocns/ (last visited Apr. 8, 2010); Press Release, U.S. Geological Survey, USGS Information Available on Recent MTBE Risk Findings, (Mar. 21, 2000), http://www.usgs.gov/newsroom/article_pf.asp?ID=637 (estimating that 9,000 community water wells in thirty-one states were at risk due to proximity to underground leaking storage tanks).

⁹ See, e.g., Notice of Proposed Administrative Order, supra note 8.

Total cleanup costs just to address MtBE contamination at leaking underground storage tank sites are estimated at \$1-3 billion according to a 2005 study by the Association for Environmental Health and Sciences. See Press Release, Ass'n for Envtl. Health & Scis., MTBE Cleanup Estimated to Cost \$1 to 3 Billion (May 20, 2005), http://www.prweb.com/releases/2005/05/prweb242038.htm; SIGMA, MTBE Cleanup Estimates, May 23, 2005, http://www.sigma.org/wr/reports/05/050523.html #item2. Water replacement costs to just one city, Santa Monica, at one well field in California had cost three companies \$13 million as of 2005, and were ongoing. See Press Release, U.S. Dep't. of Justice, Oil Companies Pay EPA to Settle Santa Monica MTBE Cleanup Costs (Feb. 5, 2005), http://www.justice.gov/opa/pr/2005/February/05_enrd_067.htm.

As drinking water wells were shut down due to the presence of MtBE, public and private drinking water providers began bringing actions against oil refiners, MtBE manufacturers, service station owners, and pipeline owners. ¹¹ They claimed that, among other matters, MtBE not only exceeded taste and odor thresholds under secondary drinking water standards, but also caused cancer, and that MtBE and the gasoline containing MtBE were defective products. ¹² These actions have resulted in hundreds of millions if not billions of dollars in settlement payments and defense costs. ¹³

One way to reduce these liability exposures, at least going forward, is to find another means to meet reformulated fuel requirements, without similar risks of groundwater contamination. Not surprisingly, most refiners have now taken this approach and abandoned most, if not all, use of MtBE (and similar ethers) as an oxygenate. A number of states have even imposed bans of MtBE, including California, New York, Washington, and Missouri. Nonetheless, several years after oil companies abandoned most use of MtBE, litigation and cleanup issues remain. Moreover, because ethanol costs more and is less effective than MtBE as an oxygenate, Lyondell Chemical estimated that the switch to ethanol is costing an additional one to three billion dollars per year (3–7 c/gal. RFG). This cost can be mitigated somewhat by changing refining processes to boost oxygen content

¹¹ See, e.g., Millett v. Atl. Richfield Co., No. Civ. A-CV-98-555, 2000 WL 359979 (Me. Super. Ct. Mar. 2, 2000); Maynard v. Amerada Hess Corp., No. 99-CVS-00068 (filed in New Hanover County, NC); Cmtys. for a Better Env't v. Unocal Corp., No. 997013, 2002 WL 33829809 (Cal. Super Ct. Apr. 16, 2002); S. Tahoe Pub. Util. Dist. v. Atl. Richfield Co., No. 999128 (Cal. Super. Ct. filed Nov. 10, 1998) (filed in San Francisco County); City of Santa Monica v. Shell Oil Co., No. 01CC04331 (Ca. Super. Ct. filed June 19, 2000) (filed in County of Orange); In re Methyl Tertiary Butyl Ether (MTBE) Prods. Liab. Litig. (MTBE I), 175 F. Supp. 2d 593 (S.D.N.Y. 2001); In re Methyl Tertiary Butyl Ether (MTBE) Prods. Liab. Litig. (MTBE II), 342 F. Supp. 2d 147 (S.D.N.Y. 2004).

¹² MTBE I and MTBE II consisted of over 150 consolidated actions by public and private water providers against over seventy-five oil and chemical companies in over fifteen states for the following claims: (1) strict liability for design defective and/or defective product; (2) public nuisance; (3) failure to warn; (4) negligence; (5) private nuisance; (6) deceptive business acts and practices in violation of state statutes; and (7) violation of state environmental statutes. See MTBE II, 342 F. Supp. 2d at 150 (describing plaintiffs' claims). The consolidated litigation originally included claims seeking class certification, but that certification was denied in 2002. See In re Methyl Tertiary Butyl Ether (MTBE) Prods. Liab. Litig., 209 F.R.D. 323 (S.D.N.Y. 2002). Additionally, the putative class actions subsequently settled. See MTBE II, 342 F. Supp. 2d at 148–49 (describing the history of MTBE I).

Just one portion of the MTBE I and MTBE II cases reportedly settled for over \$420 million. See Jeannie Greeley, Battle Against Big Oil Nets Record Settlement for New York Firm, N.Y. MAG., Dec. 4, 2008, available at http://nymag.com/guides/bestlawyers/2009/52884; Janet Wilson, \$423-Million MTBE Settlement Is Offered, L.A. TIMES, May 8, 2008, available at http://articles.latimes.com/2008/may/08/local/me-mtbe08. Three of the companies in the City of Santa Monica case reportedly settled for \$318 million. See City Gets Early Xmas Present from Court, SANTA MONICA MIRROR, Dec. 24–30, 2003, http://smmirror.com/volume5/issue28/city_gets_early.asp.

¹⁴ Energy Information Administration, Status and Impact of State MtBE Bans, http://www.eia.doe.gov/oiaf/servicerpt/mtbeban/table1.html (last visited Mar. 5, 2010).

¹⁵ For example, in 2009, 150 families and businesses in Harford County, Maryland, filed a class action lawsuit against Exxon Mobil Corp. stemming from an MtBE leak that occurred sometime before 2004. Jonathan Pitts, Class Action Sought in Harford Pollution Case, BALT. SUN, Mar. 31, 2009, http://articles.baltimoresun.com/2009-03-31/news/0903300102_1_harford-county-exxon-gas-station-leak.

¹⁶ See U.S. ENVTL. PROT. AGENCY BLUE RIBBON PANEL, LYONDELL CHEMICAL COMPANY SUMMARY OF DISSENTING REPORT (1999), available at http://www.epa.gov/OMSWWW/consumer/fuels/oxypanel/lyondell.pdf.

without having to add significant volumes of *any* oxygenates, but because the CAA Amendments require oxygenate additives, a federal waiver would first be required.¹⁷

There are a number of lessons from this case study of MtBE. First, legislatures, environmental agencies, and private industry groups all need to take a more *comprehensive* look at the effect of proposed new environmental controls. The issue is not just whether the proposed new environmental controls are effective in addressing the particular environmental concern they were *designed* to redress, but also whether the new controls themselves could adversely impact the environment in other ways.

Second, when new environmental measures do result in largely unanticipated or underestimated adverse impacts to the environment, existing tort and environmental laws serve to place much, if not all, of the costs of mitigating or eliminating those unanticipated harms on private "deep pocket" businesses.

Third, in light of this exposure of businesses to staggering costs of unintended harms from environmental programs, it is in the interest of industry groups to promote "blinder"-free evaluation of new programs before they are adopted—not just at environmental agencies and in legislatures, but also in their own board rooms. The more thorough the review of *all* impacts of proposed new regulations, the more protected private companies will be from having to pay for unintended, and underestimated, environmental harms.

B. Illustrative Case Study: Replacing Ozone-Depleting Refrigerants with Greenhouse Gas Refrigerants

In the case of MtBE described above, the private businesses had some theoretical discretion in how they implemented new environmental mandates for reformulated fuels. ¹⁸ The cautionary tale behind refrigerants involves a similar situation and is provided here to demonstrate that the MtBE situation, unfortunately, is not at all unique.

Refrigerators and cooling systems are pervasive in the manufacturing, distribution, and retail sectors. This pervasiveness has resulted in a fair amount of attention from regulators. While cooling systems almost never are, on an individual basis, a source of major environmental impact, collectively over a broad region they can have significant adverse effects on air quality. Initially, new regulations demanded owners and manufacturers to stop using ozone-depleting refrigerants ("CFCs"). Many did so early on by replacing them with

¹⁷ See MTBE Worries Widen, CBS NEWS Mar. 3, 2000, http://www.cbsnews.com/stories/2000/03/20/national/main174079.shtml. The State of California sought a waiver from EPA for this purpose. California Air Resources Board, Oxygenates, MtBE, Ethanol, and Other Information, http://www.arb.ca.gov/fuels/gasoline/oxy/oxy.htm#carquwaiver (last visited Mar. 5, 2010) (providing a timeline and corresponding reports for California's request to waive the oxygenate requirements).

¹⁸ As discussed in the text, oil companies claimed in litigation that they had little practical choice in their selection of MtBE as the oxygenate additive. Nonetheless, ultimately they did find a way to meet oxygen-content requirements (and to get around oxygenate addition requirements under the CAA) even without use of MtBE.

¹⁹ 40 C.F.R. § 82 subpt. A, app. A (2010) (listing CFCs as Class I ozone depleting substances); 40 C.F.R. §82.4 (2010) (instituting an accelerated, complete phase out of CFCs by 1996).

Hydrochlorofluorocarbons ("HCFCs"). Although HCFCs are *less* ozone-depleting, they still have some ozone-depleting capacity. ²⁰ On EPA's subsequent urging, companies then switched their cooling systems to HFCs. Now, many HFCs have been reclassified as High Global Warming Potential Gases by EPA, ²¹ and as Greenhouse Gases in California. ²² As a result, non-ozone depleting refrigerants, touted just a few years ago as the new "green" solution, are now proposed for restrictions of their own, at least in California, due to their perceived climate change impacts. ²³

As was the case with MtBE, private businesses were not required explicitly to switch to HCFCs to reduce ozone impacts. Like MtBE, HCFCs simply appeared to be the most practical, and least expensive, means of meeting the new mandates against ozone-depleting emissions. It is not always possible, of course, to predict the next environmental trend as concerns about greenhouse gas emissions are relatively recent. Nonetheless, the lesson is clear: businesses need to look at a much broader range of environmental impacts, even those that are still undergoing governmental study, before investing heavily in new environmental programs, or they risk having to dramatically revise those alternatives, at great expense, within just a few years.

C. Illustrative Case Study: Unilever's Attempt to Market Dove Soap as a "Natural," Eco-Friendly Product Without Consideration of Cradle-to-Grave Impacts

In the two examples discussed above, new environmental controls targeting a certain environmental problem created other environmental issues of a different nature. Unintended environmental harms can also come from focusing only on the direct environmental impacts of an end product, rather than the combined impacts of all the steps leading to the end product (and later disposal or recycling of that product).

One prominent example of the problems associated with the failure to focus on the environmental impacts of the entire production chain is Unilever's woes with Dove soap. Unilever touted its use of only certifiably "natural" ingredients, including palm oil, in Dove soap. But, as *The New York Times* reported in 2007, expanding palm plantations were clearing huge tracts of Southeastern Asian rainforest, overusing chemical fertilizer, and sending huge amounts of carbon into the atmosphere by draining and burning peat land to clear additional space.²⁴ Greenpeace decided to hold Unilever, the world's largest buyer of palm oil,

²⁰ 40 C.F.R. § 82 subpt. A, app. B (2010) (listing HCFCs as Class II ozone depleting substances); 40 CFR 82.16 (2010) (phasing out the production and use of some HCFCs by 2003 and all HCFCs by 2030).

²¹ EPA, High Global Warming Potential Gases, Oct. 19, 2006, http://www.epa.gov/highgwp/scientific.html.

²² CALIFORNIA AIR RES. BD., CLIMATE CHANGE PROPOSED SCOPING PLAN 11 (2008) (approved Dec. 2008), available at http://www.arb.ca.gov/cc/scopingplan/document/psp.pdf.

²³ Id.

²⁴ Elisabeth Rosenthal, *Once a Dream Fuel, Palm Oil May Be an Eco-Nightmare*, N.Y. TIMES, Jan. 31, 2007, at C1.

socially responsible for the environmental damage. In May 2008, Greenpeace organized an aggressive public campaign against Unilever.²⁵ Two weeks into the campaign, Unilever had received tens of thousands of protest emails; suffered through news media events highlighting Greenpeace activists dressed as orangutans and visiting Unilever's facilities; and endured a growing boycott as Greenpeace's protest video, "Dove Onslaughter," gained exposure around the world. Unilever agreed to publicly endorse an immediate moratorium on palmrelated deforestation. Unilever also agreed to exert its influence on other companies in the industry, their palm oil suppliers in Indonesia, and the Indonesian government to make the moratorium a reality.²⁶

It should be noted that the Dove soap example stems from a purely voluntary program on Unilever's part to develop a "natural" or "environmentally-friendly" product. In this respect, Unilever was a forerunner in a growing trend among private companies to "go green," even in advance of actual governmental mandates to do so. Some of this trend comes from market forces. But newly-legislated stimulus spending and other governmental subsidies are also prompting private businesses to adopt environmental measures. Some may seek to take advantage of new subsidized renewable energy programs.²⁷ Fleet conversion programs also are available.²⁸ Governmental environmental subsidies can be, and often are,

²⁵ See Nina Shen Rastogi, Green Lipstick? Making Sense of Natural Bath-and-Beauty Products, SLATE, Feb. 24, 2009, http://www.slate.com/id/2211934/pagenum/1.

²⁶ See Greenpeace International, Public Pressure for Indonesia's Forests Works, Ask Unilever, http://www.greenpeace.org/international/campaigns/forests/asia-pacific/dove-palmoil-action (last visited Apr. 5, 2010); Eric Marx, Unilever Blocking Deforestation for Palm Oil, S.F. CHRON., Feb. 1, 2009, at A6.

²⁷ See, e.g., California Public Utilities Commission, California Renewable Portfolio Standard, http://www.cpuc.ca.gov/PUC/energy/Renewables/ (last visited Mar. 5, 2010) (encouraging corporations to increase renewable energy resource use); American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, 123 Stat. 115 (codified as amended in scattered sections of 26 U.S.C.) (making available money for renewable energy and energy efficiency programs); Go Solar California, The California Solar Initiative Rebates, http://www.gosolarcalifornia.ca.gov/csi/rebates.html (last visited Mar. 5, 2010) (providing rebates for individuals and businesses that install solar electricity systems); California Energy Commission, Alternative and Renewable Fuel & Vehicle Technology Program, http://www.energy.ca.gov/altfuels/index.html (last visited Mar. 5, 2010) (allowing the California Energy Commission to employ incentive programs to promote the use of alternative and renewable fuels by businesses).

²⁸ California has a long standing incentive program to help fund removal of aging "gas guzzlers" from the road. The ARB offers rebates of up to \$5,000 to consumers who purchase or lease new eligible alternative fuel vehicles between May 24, 2007 and March 31, 2009 or until funding runs out. California Air Resources Board, Air Pollution Incentives, Grants and Credit Programs, http://www.arb.ca.gov/ba/fininfo.htm (last visited Mar. 29, 2010). Federal stimulus funding also has now become available to help upgrade fleets to more fuel efficient and less polluting vehicles. The Federal Highway Administration's Congestion Mitigation and Air Quality ("CMAQ") Improvement Program provides a flexible funding source for state and local governments to fund transportation projects that help achieve the goals of the Clean Air Act. See U.S. Department of Transportation, Administration, CMAQ Improvement http://www.fhwa.dot.gov/environment/cmaqpgs/ (last visited Mar. 29, 2010). The CMAO Improvement Program contemplates funding for private fleet conversions to alternate fuel vehicles. See U.S. Department of Transportation, Federal Highway Administration, CMAQ and Public-Private Partnerships, http://www.fhwa.dot.gov/environment/cmaqpgs/pppartner/index.htm (last visited Mar. 29, 2010); see also New York State Energy Research and Development Agency, New York City Private Fleet Program, http://www.nyserda.org/Programs/transportation/AFV/NYCPrivateFleet.asp (last visited Mar. 29, 2010) (awarding CMAQ funds on a competitive basis to private-sector companies and non-

combined with other perceived economic advantages for businesses to adopt certain environmental measures. For example, businesses commonly attribute cost savings to sustainability plans that include packaging reductions, improved energy efficiency, and reduction of wastes.²⁹

Another legal impetus for certain businesses to develop their own sustainability and climate action plans and to promote products resulting in lower greenhouse gas ("GHG") emissions comes from fledgling new tort actions against large automotive companies and utilities for alleged climate change damages. For example, in *Comer v. Murphy Oil USA*, ³⁰ the United States Court of Appeals for the Fifth Circuit revived a lawsuit against energy, fossil fuel, and chemical companies for alleged climate change damages from Hurricane Katrina. The district court had dismissed the nuisance, trespass, and negligence claims on the ground that plaintiffs had not sufficiently established the connection between defendants' operations and their damages from Hurricane Katrina, and that global warming constituted a nonjusticiable political question best left to Congress and the Executive Branch.³¹ The Fifth Circuit disagreed on both of these points, and reversed and remanded the case for further proceedings.³²

Business concerns about potential tort actions for adaptation costs and damages may be exacerbated by new GHG-emission reporting requirement. Many companies in California are already reporting their GHG emissions under the largely voluntary "California Climate Action Registry" ("CCAR"),³³ and the Obama administration has expressed interest in taking over the CCAR at the federal level.³⁴ The CCAR is publicly available to citizen groups, plaintiffs' attorneys, and others. Accordingly, if a company reports particularly high levels of

profit entities that acquire new vehicles powered by electricity or compressed natural gas, or convert old vehicles to electric, hybrid, natural gas or dual fuel technology). Some CMAQ programs have been allocated federal stimulus funding. See, e.g., Northeast Ohio Areawide Coordinating Agency, NOACA Subcommittee Selects Projects for Federal Economic Stimulus Funding, http://www.noaca.org/rtis31109.html (last visited Mar. 29, 2010).

²⁹ In the early 1990s, Xerox launched a new initiative to take back used copiers and use their parts as a source of material for new machines. XEROX CORPORATION, ENVIRONMENT, HEALTH, AND SAFETY PROGRESS REPORT 12 (2004). Xerox estimates that the program saved 390,000 megawatt hours of energy in 2003 alone, and produces cost savings of "several hundred million" dollars in savings each year. Id. Similarly, by changing to more sustainable, reusable, and less bulky packaging, Pepsi-Cola reportedly saved \$44 million. See U.S. Environmental Protection Agency, Where Are the Biggest Cost Savings?, http://www.epa.gov/epawaste/partnerships/wastewise/wrr/cost.htm (last visited Apr. 7, 2010). Nestle reported saving \$603 between 1991 and 2008. See Nestle, Creating Shared Environmental Sustainability, Packaging, http://www.nestle.com/CSV/EnvironmentalSustainability/Packaging/Packaging.htm (last visited Mar. 29, 2010). By implementing its packaging initiative, Wal-Mart predicted saving \$3.4 billion in direct costs and almost \$11 billion across the supply chain between 2008 and 2013. See Wal-Mart, Wal-Mart Launches 5-Year Plan to Reduce Packaging, Sept. 22, 2006, http://walmartstores.com/FactsNews/ NewsRoom/5951.aspx.

³⁰ 585 F.3d 855 (5th Cir. 2009).

³¹ Id. at 860, reh'g granted, No. 07-60756, 2010 WL 685796 (5th Cir. Feb. 26, 2010).

³² *Id.* Another district court also recently dismissed climate change damages claims against an Alaskan village, basing the dismissal on nonjusticiability and a lack of standing. *See* Native Village of Kivalina v. ExxonMobil Corp., 663 F. Supp. 2d 863 (N.D. Cal. 2009).

³³ California Climate Action Registry, http://www.climateregistry.org (last visited Apr. 7, 2010).

³⁴ See Juliet Eilperin, EPA Plans U.S. Registry of Greenhouse Gas Emissions, WASH. POST, Mar. 11, 2009, http://www.washingtonpost.com/wp-dyn/content/article/2009/03/10/AR2009031001445.html.

GHG emissions in the CCAR, this may become fodder for a challenge of its "sustainability" claims.

In sum, whether propelled by market forces, governmental stimulus funding, or tort concerns, increasingly private companies are developing and implementing environmental measures on their own. In the process, they are making themselves vulnerable to unintended consequences and associated liabilities, as illustrated in Unilever's tangle with Greenpeace.

II. EVOLVING LEGAL FRAMEWORKS TO PROMOTE CONSIDERATION OF ALL ENVIRONMENTAL IMPACTS

A. Marketing Standards to Promote "Cradle to Grave" Considerations

The action Greenpeace took against Unilever did not involve litigation or administrative action, but rather focused on boycotts and similar market measures. Nonetheless, new legal frameworks are developing to protect against marketing claims of sustainability that fail to sufficiently consider the entire production and disposal chain.

One such potential new legal framework is an outgrowth of existing marketing claims law. Although there still is a dearth of published appellate decisions setting clear standards for "greenwashing" based on failure to consider full environmental impacts, "greenwashing" claims in the lower courts are becoming increasingly prevalent in the last few decades. In recognition of this trend and the need for at least some guidance, the Federal Trade Commission ("FTC") issued a "Green Guide" in 1992, and updated it in 1998,³⁵ to ensure that "environmental claims are not deceptive and are adequately supported, but they are not law."³⁶

B. "Green Build" Standards.

Still, another evolving legal framework designed to address a broad range of environmental impacts comes from new "green building" codes and associated certification programs. Building materials and design can have significant environmental impacts, and thus are often addressed in voluntary sustainability plans.³⁷ This has led to various attempts to standardize and verify what is truly "green building." California has adopted a new "green building" code.³⁸ In addition, some agencies require LEED certification, or LEED-equivalency, before

^{35 16} C.F.R. §§ 260.1–.8 (2010).

³⁶ See Susan Abram, Angelenos, Find Gray Areas in Claims About What's Green, DAILY NEWS L.A., Mar. 14, 2008, at A1, available at 2008 WLNR 5083522.

³⁷ See Starbucks Coffee, Building Greener Stores, http://www.starbucks.com/responsibility/environment/green-building (last visited Apr. 12, 2010); see also Fresh & Easy Neighborhood Market, Green Building Initiatives, http://www.freshandeasy.com/greenBuilding.aspx (last visited Apr. 12, 2010).

³⁸ See, e.g., CAL. CODE REGS. tit. 24, § 11 (2008) (discussing the California Green Building Standards Code).

approving new development projects.³⁹ LEED and similar green building codes seek to redress not just the greenhouse gas emissions from construction, for example, but also a broad range of potential impacts from construction materials, transport, and operations. In this respect, the new "green build" codes and standards represent an important shift from focusing exclusively on, for example, potential climate change impacts or water quality impacts, and instead considering the many multi-layered potential impacts across the "sustainability" spectrum.

C. NEPA-Type Review Prior to Adoption of New Governmental Programs

As illustrated with the MtBE case study, when governmental agencies focus new regulatory programs on one type of environmental harm, it is easy for them to overlook or ignore other environmental impacts, with potentially disastrous results. Nonetheless, governmental agencies can, and often do, evaluate the full suite of potential significant environmental impacts before approving new plans, programs, and other projects. In fact, they do so routinely under the National Environmental Policy Act ("NEPA"),⁴⁰ and similar state laws.

Under NEPA, a federal governmental agency generally must consider virtually the full gamut of environmental impacts before it can approve or permit a development project, or provide federal funding for a project.⁴¹ NEPA also requires evaluation of environmentally superior alternatives. 42 Most states have their own statutes requiring a similar study of a broad range of potential environmental impacts, feasible mitigations, and environmentally superior alternatives.43

Importantly, these statutes require evaluation of the impacts of not just the base project, but also the mitigation measures that would be implemented in order to address other environmental impacts. In this way, NEPA and its state progeny provide a legal framework to promote evaluation of the full range of environmental impacts, before the government acts.44

NEPA does not typically apply to new federal or state legislation. As a general matter, Congress is not subject to NEPA. 45 Similarly, state legislatures generally are exempt from the sister state laws to NEPA. 46 Accordingly, the

While there are a number of "green build" standards, one of the most prevalent is the U.S. Green Building Council's third-party certification program, Leadership in Energy and Environmental Design ("LEED"). See U.S. Green Bldg. Council, LEED for Commercial Interiors Version 2.0 REFERENCE GUIDE (3d ed. 2006).

⁴⁰ National Environmental Policy Act (NEPA) of 1969, 42 U.S.C. § 4331 (2000).

⁴¹ *Id.* § 4332.

⁴² *Id*.

⁴³ E.g., California Environmental Quality Act (CEQA), CAL. PUB. RES. CODE § 21000 (West 2007).

⁴⁴ CAL. PUB. RES. CODE § 21083 (West 2007) (discussing the environmental review requirements for a proposed project under CEQA).

⁴⁵ 40 C.F.R. § 1508.12 (2010).

⁴⁶ See, e.g., CAL. CODE REGS. tit. 14, § 15378(b)(1) (2009); see also 40 C.F.R. § 1502 (2009) (identifying exemptions to the requirements for an Environmental Impact Statement); California Department of Fish and Game, CEQA Environmental Impact Report, http://www.dfg.ca.gov/habcon/ ceqa/intrnlproced/eir.html (last visited Mar. 5, 2010) (explaining that the decision to draft an

following section discusses a few case studies of how forced consideration of the full suite of environmental impacts, at least at the local level, can help reshape new environmental programs.

1. Illustrative Case Study: Proposed Legislative Mandates for Use of Paper Bags in Lieu of Plastic Bags

Plastic bags may not degrade well in the ocean and tend to blow high into trees where they mar the landscape. In response, a number of cities near the ocean in California have passed ordinances banning plastic bag use at grocery stores. Most of these ordinances have been challenged, and some have already been invalidated, on the basis that the cities failed to adequately consider the environmental impacts. ⁴⁷

Petitioners challenging these ordinances claim that paper weighs far more than plastic and so requires far more carbon-burning fuel to transport and process, more space and building materials to store, and more landfill space on disposal. Paper also requires large amounts of water to make—a serious consideration in California. At least one large grocery store chain shares some of petitioners' concerns. Fresh and Easy Markets has decided, as part of its "green" program, to give shoppers the option of using heavy reusable plastic bags or canvas bags. 48

2. Illustrative Case Study: The Tension Between Implementing Renewable Energy Mandates and Permitting New Wind and Solar Plants

California utilities are scrambling to meet new requirements under the Global Warming Solutions Act to provide 33% of their energy from renewable resources, including wind, solar, and geothermal facilities. To satisfy these renewable energy portfolio requirements, the utilities have been attempting to obtain permits from federal and local agencies to build new major energy plants in desert areas and similar fragile and largely undeveloped locations. The problem is that while these new plants and lines may advance GHG-emission reduction goals, they create other environmental impacts, including impacts to wildlife. For example, wind farms are frequently alleged to pose risks to endangered avian

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Environmental Impact Report is only required if there is substantial evidence that the project may have a significant effect on the environment).

⁴⁷ Oakland and Manhattan Beach both passed plastic bag bans in 2007 and 2008, respectively. Both ordinances were invalidated by the Superior Court for failing to comply with CEQA. *See* Californians Against Waste, Plastic Litter and Waste Reduction Campaign, http://www.cawrecycles.org/issues/plastic_campaign. This decision as to the Manhattan Beach order was recently upheld on appeal. *See* Save the Plastic Bag Coal. v. City of Manhattan Beach, 181 Cal. App. 4th 521 (Ct. Ct. App. 2010)..

⁴⁸ See Fresh and Easy Neighborhood Market, Green Building, http://www.freshandeasy.com (last visited May 15, 2010).

⁴⁹ See supra note 4.

⁵⁰ See Ed Humes, Flare Ups over the Future of Solar Power, CAL. LAW., Nov. 2009, available at http://www.callawyer.com/story.cfm?eid=905180&evid=1 (describing examples of solar projects taking up more than fifty square miles each of California desert).

species; solar farms in California deserts may interfere with endangered desert tortoise habitat; and both take over large tracts of previously undeveloped, fragile, and often pristine areas.

Accordingly, as the utilities have been attempting to obtain entitlements from federal and local agencies for the new renewable energy power plants and lines, they are encountering significant pushback from environmental and citizen groups, both during the public review under NEPA and its state progeny, and in litigation after governmental permits are obtained. In at least one instance, court action has led a court to invalidate authorizations for a new wind farm for failure to adequately study the impacts of the wind turbine farm on an endangered bat.⁵¹

Moreover, all the attention during the environmental review process to the non-climate change impacts has put legislators on alert. In December 2009, months and even years after the original applications, California Senator Dianne Feinstein proposed legislation to put more than one million acres of the Mojave Desert off limits to development, even for renewable energy purposes.⁵²

Utilities are no doubt frustrated that their attempts to implement renewable energy requirements are being stymied due to consideration of non-climate change impacts.⁵³ Yet to some extent, this situation could be viewed as the way our environmental laws *ought* to interact. By forcing consideration of the full gamut of environmental concerns, and not just climate change, NEPA and its state progeny are helping to avoid unintended consequences with all the later liability exposures. In addition, as in the reformulated fuel and refrigerant examples described in Part I, when forced to consider alternatives, utilities may find creative alternative solutions to providing energy from renewable sources. Germany, for example, has successfully installed photovoltaic solar cells into existing and new building structures, with plans to acquire 10,000 megawatts of power in that fashion by 2012.⁵⁴

3. Lessons from NEPA

As discussed, NEPA and other state law equivalents generally do not require a full environmental study prior to new federal and state legislation.⁵⁵ This may help explain how water quality issues were overlooked, underestimated, or ignored when MtBE was approved for use as an oxygenate additive, and how climate change impacts were not considered when HCFCs were approved to address ozone concerns. This issue does not mean that our legislators and regulators should

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⁵¹ On December 8, 2009, a federal district court granted an injunction against construction of a Virginia wind turbine farm for unlawfully "taking" Indiana bats without an incidental take permit in violation of the Endangered Species Act. Animal Welfare Inst. v. Beech Ridge Energy LLC, 2009 U.S. Dist. LEXIS 114267 (D. Md. Dec. 8, 2009) (mem.).

⁵² See Rebecca Smith, Green Battle Rages in Desert; Mojave Protection Bill Would Put Prime Solar-Power Sites Off Limits, WALL ST. J., Dec. 23, 2009, at A6, available at http://online.wsj.com/ article/SB126144129302900923.html.

⁵³ *Id*.

⁵⁴ See Alliance for Responsible Energy Policy, Renewable Energy: The Better Way (2008), available at www.allianceforresponsibleenergypolicy.com/The%20Better%20Way.pdf.

⁵⁵ See CAL. CODE REGS. tit. 14, § 1508.12 (2009).

necessarily be subjected to formal NEPA-type requirements to do comprehensive environmental studies prior to taking legislative actions. What it does mean, however, is that private businesses and industry groups need to be more aware of the fact that, prior to instituting new environmental controls, the government may not have considered the new program's potential to cause other serious environmental impacts of its own—and then attempt to compensate for this gap during comment periods prior to adoption and when later developing their own protocols to implement the new governmental mandates.

III. CONCLUSION

Increasingly, private businesses are adopting new environmental programs. In some instances, the programs are in response to new regulatory mandates at the state or local level to reduce greenhouse gas emissions, promote energy conservation, or protect drinking water resources. Federal stimulus programs and market forces also are at work. Whether mandated or voluntary, implementing a new environmental program can itself result in unanticipated or unrecognized harms to the environment. As illustrated in the case of MtBE, the liabilities associated with such unintended consequences can be staggering.

While there is no certain path to eliminate all unintended consequences of new environmental controls, there are ways to reduce the risks and liabilities. One of the best ways to help protect against unanticipated environmental harm is, quite simply, to look for it beforehand.

This logical approach is not nearly as prevalent as it ought to be. Nonetheless, there are a number of pre-existing legal frameworks that promote consideration of the full suite of environmental concerns before adopting new environmental programs or controls, such as the newly evolving "greenwashing" marketing standards, new "green building" codes, and NEPA. It is reassuring that such legal frameworks exist, and have clearly helped avoid unintended consequences (as illustrated in the case of local plastic bag bans).

The legal frameworks described above have only limited applicability and do not apply at all to federal and state environmental legislation. Accordingly, private businesses implementing new environmental controls, whether voluntarily or under new governmental mandates, need to recognize the fallacy of single-issue environmental controls developed in a vacuum, and work harder to help fill this void. After all, it is the regulated community—the very community attempting to be environmentally protective by implementing the new environmental controls—that is most likely to bear liability for the unintended consequences.