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Climate Change and Energy Law: Past, Present, and Future Legislation Efforts

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I. Introduction ............................................................................................................................................... 1
II. An Overview of Climate Change Legislation ....................................................................................... 2
III. Federal Legislative Efforts .................................................................................................................... 4
IV. State Legislative Efforts ........................................................................................................................ 7
V. Litigation as an Alternative to Legislation ........................................................................................... 10
VI. Cooperative Federalism and Climate Change ....................................................................................... 13
VII. Problems in Implementing Federal Climate Change Legislation ......................................................... 16
VIII. The Future for Federal Climate Change Legislation ........................................................................ 22
IX. Conclusion ............................................................................................................................................ 29

I. Introduction

Time is not costless in the context of global warming legislation, and so the longer it takes society to address global warming the harder it will be to do so.¹ Nevertheless, in 2010 Richard J. Lazarus, a professor at Harvard Law School, declared that “political pundits of every stripe are writing climate change legislation’s obituary.”² The United States has already fallen behind other established democracies in the European Union in addressing this issue.³ Climate

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² Richard J. Lazarus, Climate Change Law In and Over Time, 2 SAN DIEGO J. CLIMATE & ENERGY L. 29, 30 (2010).

³ Lazarus, supra note 1, at 1190.
change is an important problem that affects both our natural resources and water supply, so why has it been so difficult to address?

This paper will first explore some basics of climate change legislation, in order to establish a foundation. Then, this paper will examine some of the most important federal climate change laws and then several important state legislative efforts. Next, there is a discussion of litigation as a potential alternative to addressing climate change through state and federal legislation. Next, there will be an exploration of several major problems associated with climate change, and a proposal of solutions for each. Finally, this paper will give several recommendations for drafting lasting, effective climate change and for the substance of said legislation.

II. An Overview of Climate Change Legislation

Climate change legislation generally falls into two broad categories: mitigation and adaptation. Mitigation legislation seeks to reduce the emission of greenhouse gases that contribute to climate change. Mitigation strategies primarily affect transportation and electric industries, but may affect others as well, including manufacturing. Adaptation legislation

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6 *Id.* at 231-232.

responds to the effects of climate change, in order to ensure the continued viability of human and animal life should our efforts to mitigate climate change be unsuccessful.\(^8\)

David L. Markell, a professor at the Florida State University College of Law, has noted that any new climate legislation must include efforts to preserve life for humans and animals in the face of climate change.\(^9\) Addressing this problem, however, requires asking certain normative questions: which components of climate change should be addressed, and how?\(^10\) Any remedy would be at least partially inadequate, because climate change affects the world in ways that humans can’t completely mitigate.\(^11\) Robin Craig, a professor at the S.J. Quinney College of Law, has hypothesized that climate change’s impact on the globe has already gone too far for humans to control much of the environment’s reactions, so that passing adaption legislation has become more important.\(^12\) How to implement adaptation climate change legislation will perhaps become more clear through the process of trial and error once more legislation is passed containing both adaptation and mitigation strategies. It is also possible that environmentalists in Congress could use different approaches to addressing this problem as “bargaining chips” in the negotiation phase of legislation; the private sector might be reluctant to pass certain types of remedies for climate change, but more willing to pass others. Whatever the future of climate change

\(^8\) Markell, supra note 5, at 234.

\(^9\) Id. at 232.

\(^10\) Id. at 235.

\(^11\) Craig, supra note 4, at 51.

\(^12\) Id.
legislation, those who draft climate change legislation should consider potential alternatives when addressing the causes and effects of climate change.

III. Federal Legislative Efforts

Climate change law is a rapidly changing field, and only recently has the United States Congress begun to enact legislation to abate it.\(^\text{13}\) One of the oldest debates in climate change legislation deals with whether a federal regulatory “floor” is necessary.\(^\text{14}\) There are two reasons generally proffered for why a federal floor might be needed.\(^\text{15}\) First, allowing each state to decide whether to set their own standards could create a national “race to the bottom” which would provide standards for greenhouse gas emissions far below those of other countries.\(^\text{16}\) Second, the migration of pollution from one state to another might also provide motivation for the government to address climate change nationally, as this problem is unlikely to be solved on the state level alone.\(^\text{17}\) Though these two theories help explain why there is a national push for climate change legislation, this is only part of the debate. As discussed below, regulation at the state level is unlikely to cover a large enough area to make a significant difference in the levels of emissions, and there is not a sufficient mechanism to enact regulatory environmental change at

\(^{13}\) John C. Dernbach and Seema Kakade, Climate Change Law: An Introduction, 29 ENERGY L. J. 1, 2 (2008). Available at: http://works.bepress.com/john_dernbach/1

\(^{14}\) DeShazo & Freeman, supra note 7, at 1503.

\(^{15}\) Id.

\(^{16}\) Id.

\(^{17}\) Id. at 1503-1504.
the international level. Therefore, as federal climate change legislation is likely the best available option for climate change activists, it will be helpful to review previous federal legislation.

The 1970s saw a wave of wide-ranging pollution control legislation.\textsuperscript{18} For example, standards for automobile emissions were initially established in 1975 by the Energy Policy and Conservation Act, and are set by the Department of Transportation.\textsuperscript{19} The standards for automobile emissions were changed significantly in 2007 by the Energy Independence and Security Act.\textsuperscript{20} Under these standards, both passenger automobiles and light trucks must achieve an average of thirty-five miles per gallon for all vehicles manufactured in the United States.\textsuperscript{21}

The National Appliance Energy Conservation Act of 1987 established efficiency standards for appliances and other equipment, and gave the Department of Energy the authority to set new standards for energy compliance for several consumer products.\textsuperscript{22} These standards reduced fossil fuel emissions by 1.7\% in 2000, and could triple those benefits by 2020.\textsuperscript{23}

\begin{itemize}
\item[18] Lazarus, supra note 1, at 1155.
\item[19] Dernbach & Kakade, supra note 13, at 21.
\item[20] Id. at 22.
\item[21] Id.
\item[22] Id. at 21.
\item[23] Id.
\end{itemize}
In 1992, about half of the states adopted the most current regulations over emissions from buildings under the Energy Policy Act, making buildings more energy efficient.\textsuperscript{24} This greatly reduced the amount of greenhouse gas emissions, as greenhouse gas emissions from buildings make up about 40\% of all emissions.\textsuperscript{25}

The Energy Policy Act of 2005 greatly increased the amount of biofuels and renewable resources imported in the United States.\textsuperscript{26} The Energy Independence and Security Act was signed into law in 2007, and was intended to improve energy efficiency in lighting, appliances, and buildings.\textsuperscript{27} Title IV of the Act required that the total energy use in federal buildings be reduced by 30\% by 2015.\textsuperscript{28}

Although a renewed push is underway for national climate legislation, many attempts on the federal level of passing new regulation to reduce greenhouse gas emissions have failed.\textsuperscript{29} Most of the proposed bills have would have only provided short-term change, while only a handful would have created lasting environmental benefits.\textsuperscript{30}

\textsuperscript{24} Id. at 22.

\textsuperscript{25} Id. at 22-23.

\textsuperscript{26} Id. at 23.

\textsuperscript{27} Id. at 21.

\textsuperscript{28} Id.


\textsuperscript{30} David D. Doniger, Antonia V. Herzog, and Daniel A. Lashof, \textit{An Ambitious, Centrist Approach to Global Warming Legislation}, SCIENCE, November 3, 2006 at 764.
IV. State Legislative Efforts

Most of the current effort to combat climate change is occurring at the state level.\textsuperscript{31} Climate change legislation is unique because the most significant changes have been from the “bottom up,” because state legislation can spur change at the federal level.\textsuperscript{32}

California has emerged as the leader in legislative efforts to combat climate change.\textsuperscript{33} Recently, the California legislature passed a bill that would reduce emissions by 25\% by 2020, creating new standards for several large local industries.\textsuperscript{34} California’s efforts to reduce emissions by motor vehicles is one of the most significant in the nation, as it endeavors to reduce emissions from light-duty cars by 18\% in 2020 and by 27\% in 2030.\textsuperscript{35} Ten states have committed to adopting California’s standards once they become effective.\textsuperscript{36} Predictably, California’s significant reform in the area of automobile and truck emissions has spawned litigation by opponents of climate change legislation on a variety of grounds.\textsuperscript{37} California’s laws have been challenged as a violation of the dormant commerce clause, the authority of the federal


\textsuperscript{32} \textit{Id.}

\textsuperscript{33} \textit{Id.} at 1017.

\textsuperscript{34} \textit{Id.}

\textsuperscript{35} \textit{Id.} at 1017-1018.

\textsuperscript{36} \textit{Id.} at 1018.

government to control foreign relations, preemption by federal regulation, and the Sherman Act.\textsuperscript{38}

Several northeastern states have also adopted a cap-and-trade program.\textsuperscript{39} Connecticut, Delaware, Maine, New Hampshire, New Jersey, New York, and Vermont have implemented legislation to cap emissions at their 2009 level and to reduce emissions by 10\% in 2019.\textsuperscript{40} Both Oregon and Washington have adopted emissions caps for new power plants, though plants need only comply with some of the program's requirements in order to be certified.\textsuperscript{41} New Hampshire and Massachusetts have emissions caps for existing plants, with current offsets and carbon trading available in the future.\textsuperscript{42}

Several states take less conventional approaches. Twenty-two states now require that a certain percent of energy revenue come from qualifying renewable energy, contributing to energy diversity in those states.\textsuperscript{43} The percentage required for compliance, however, varies significantly from state to state.\textsuperscript{44} Additionally, at least seventeen states have established plans to stabilize

\begin{itemize}
\item \textsuperscript{38} Id.
\item \textsuperscript{39} Engel, supra note 31, at 1019.
\item \textsuperscript{40} Id. at 1020.
\item \textsuperscript{41} DeShazo & Freeman, supra note 7, at 1523.
\item \textsuperscript{42} Id. at 1524.
\item \textsuperscript{43} Id. at 1523.
\item \textsuperscript{44} Id.
\end{itemize}
greenhouse gas emission levels at 2010 levels by 2020.\(^{45}\) Several states have also filed litigation to reduce emissions.\(^{46}\) Other states use a variety of other methods including: “traditional codes and standards, market-based systems, funding mechanisms and incentives, technical assistance, negotiated agreements, disclosure and reporting, pilots and demos, and information and education.”\(^{47}\)

Several northeastern states that are leaders of state climate change initiatives have adopted the Regional Greenhouse Gas Initiatives (RGGI).\(^{48}\) These states have agreed upon a regional limit for fossil-fuel-fired energy generation.\(^{49}\) The overall cap is modest, and there is a phase-in period.\(^{50}\)

While states have made a great deal of headway in passing climate change legislation, more action is needed. Again, state action alone is unlikely to sufficiently address problems with climate change.\(^{51}\) As the United States has chosen not to participate in the Kyoto Protocol, more activists are looking to the federal level for implementing new legislation.\(^{52}\)

\(^{45}\) Andreen, \textit{supra} note 29, at 264.
\(^{46}\) Engel, \textit{supra} note 31, at 1021.
\(^{47}\) McKinstry & Peterson, \textit{supra} note 37 at 80.
\(^{48}\) DeShazo & Freeman, \textit{supra} note 7, at 1519-20.
\(^{49}\) \textit{Id.}
\(^{50}\) \textit{Id.} at 1529.
\(^{52}\) \textit{Id.} at 794.
As both state and federal legislation can be inefficient in accomplishing the goals of climate change legislation advocates, it is advantageous to consider other avenues for instituting change. One of those avenues is litigation.

V. Litigation as an Alternative to Legislation

In some instances, federal legislation either moves too slowly or is not very effective. This section explores two cases effecting climate change (one at the national level and one at the supranational level) and concludes that, to an extent, litigation can be a valid alternative to climate change legislation. Although neither of the cases mentioned in this paper utilized a public nuisance claim to combat climate change, public nuisance is the simplest and most obvious grounds to abate climate change at both the federal and state levels.\(^{53}\)

*Massachusetts v. E.P.A.* involved twelve states as petitioners: California, Connecticut, Illinois, Maine, Massachusetts, Michigan, New Jersey, New Mexico, New York, Oregon, Rhode Island, Vermont, and Washington.\(^{54}\) The United States Supreme Court held that the Clean Air Act\(^{55}\) provided the E.P.A. with authority to regulate greenhouse gas emissions, and that the E.P.A. could not refuse to enforce such standards.\(^{56}\) The Court held that “[t]he harms associated with


\(^{54}\) *Id.* at 1830.


climate change are serious and well recognized”\textsuperscript{57} and cited a rise in global sea levels.\textsuperscript{58} This case is one example where litigation has produced a significant difference in federal climate change law.

One interesting example of climate change litigation was filed by the Inuit Circumpolar Conference (ICC), which represents Inuits living in the Arctic, against the United States.\textsuperscript{59} The ICC cuts through several national borders, including the United States, Russia, Greenland, and Canada.\textsuperscript{60} The petition was filed before the Inter-American Commission on Human Rights, a regional national organization. The petition claimed that greenhouse gas emissions violated rights articulated in the American Declaration of the Rights and Duties of Man.\textsuperscript{61} As such, the Commission applied supranational human rights law, relying in part upon other supranational law.\textsuperscript{62}

The reason this litigation is worth consideration is because it takes place on an international level. In the international context, successful litigation could produce results on a larger scale than legislation, because legislation cannot exceed national boundaries.\textsuperscript{63} Of course,

\textsuperscript{57} Id. at 499.

\textsuperscript{58} Id.

\textsuperscript{59} Osofsky, supra note 53, at 1843.

\textsuperscript{60} Id. at 1844.

\textsuperscript{61} This treatise was adopted by the American Convention of Human Rights, of which the United States was not a member. Id. at 1845.

\textsuperscript{62} Id.

\textsuperscript{63} Id. at 1850.
transnational litigation produces many potential problems. Even if corporate greenhouse gas emissions are illegal internationally, there exists no global governing body to enforce new standards. The very existence of authority to regulate corporations emanates from the authority of individual countries.

Though the Inuits’ petition was later rejected, there are several important lessons to be learned from the suit. The petitioners in that case knew that they did not have the necessary enforcement mechanism to make the United States reduce their greenhouse gas emissions, though they did hope to bring widespread attention to their cause. Even though one country’s pollution might affect humanity on a global level, no bodies exist on the supranational level to force countries to comply. Obviously, in the event that any sort of international governing body (or international organization that has a mechanism to enforce legislation) develops, litigation would be a relatively efficient way to enforce the greatest amount of change quickly. Such an organization does not appear likely in the near future. Even though no enforcement mechanism exists as the supranational level, however, the *Massachusetts v. E.P.A.* case illustrates that significant, lasting change at the federal level can be implemented through litigation.

Considering legislation and litigation separately would likely leave a discussion of climate change incomplete. A more holistic approach to climate change involves cooperative federalism.

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64 Id.

65 Id. at 1851.

VI. Cooperative Federalism and Climate Change

Some have advocated for a cooperative approach between states and the federal government in dealing with climate change, claiming that state and federal legislation can complement each other. A criticism of this approach is that regulations on too many different levels can make compliance by industry difficult, thereby passing additional costs onto the consumer. This problem could likely be solved by a “modified federalism,” in which only two standards are created. Though it would be mandatory for all states to comply with the federal climate change regulations, each state could choose whether to adopt a second, more stringent set of regulations (also called “floor preemption”). Therefore, industry would only have two or three sets of regulations to choose from, rather than fifty.

This approach has utilized major federal regulation in the past, such as the Clean Air Act. Congress allowed some states to waive compliance with a stricter standard, while still complying with the underlying federal regulation. California hoped to establish cooperative federalism to pass stricter state legislation, in order to bypass the federal legislative process.

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68 Id. at 191.

69 Id. at 189.

70 Id.

71 Id. at 190.

72 Id. at 191.

73 Id.
The text of the Clean Air Act provided that the Administrator of the E.P.A. was required to deny California the waiver only if the Administrator finds that: (1) California's determination that its regulations were at least as stringent as federal regulation was not arbitrary and capricious, (2) California does not need separate standards to meet “compelling and extraordinary reasons” and (3) California’s standards for vehicle emissions was inconsistent with federal standards.\textsuperscript{74} In 1977, Congress allowed other states to choose whether to comply with California's standards instead of the national standards.\textsuperscript{75}

Not all attempts at cooperative federalism have been successful. On July 22, 2002, former California Governor Grey Davis signed the Pavely Bill into law, which would have allowed the California Air Resource Board to regulate vehicle emissions.\textsuperscript{76} In \textit{Massachusetts v. E.P.A.}, however, the Supreme Court determined that the authority to regulate automobile emissions rested within the sole purview of the E.P.A.\textsuperscript{77} At the end of 2007, the E.P.A. denied California's exemption from the Clean Air Act for the Pavely Bill, saying that greenhouse gas emissions were a “global problem” and therefore any remedy should only be addressed a federal level.\textsuperscript{78}

\textsuperscript{74} \textit{Id.} at 194.

\textsuperscript{75} \textit{Id.} at 195.

\textsuperscript{76} \textit{Id.} at 199.

\textsuperscript{77} \textit{Id.} at 205.

\textsuperscript{78} \textit{Id.} at 214.
In 2009, the Administrator of the E.P.A. issued its Endangerment Finding, stating that greenhouse gases endangered the public’s health.\textsuperscript{79} Although the finding itself did not impose any new regulation on industries, issuing the finding was a prerequisite for implementing additional emissions regulations for vehicles.\textsuperscript{80}

In 2013, the E.P.A. issued an initiative to develop regulations to control carbon dioxide emissions from power plants.\textsuperscript{81} It derives its authority to impose these standards under section 111(b) of the Clean Air Act for the federal government and under section 111(d) for state governments.\textsuperscript{82} Under this proposal the nation will “continue to rely on a diverse mix of energy sources, including efficient natural gas, clean coal technology, nuclear power, and renewable energy like wind and solar.”\textsuperscript{83} The standards imposed for existing power plants are expected to be less stringent than the standards for new plants.\textsuperscript{84}

Even though cooperative federalism might be an interesting alternative for advocates of climate change legislation, it is likely dead for the time being. Because \textit{Massachusetts v. E.P.A.} likely precludes delegation of environmental regulation to state agencies, it appears that the best

\textsuperscript{79} The Environmental Protection Agency, \textit{Endangerment and Cause or Contribute Findings for Greenhouse Gases under section 202(a) of the Clean Air Act} (2013).

\textsuperscript{80} \textit{Id.}

\textsuperscript{81} The Environmental Protection Agency, \textit{Reducing Carbon Pollution from the Power Sector} (2013).

\textsuperscript{82} \textit{Id.}

\textsuperscript{83} \textit{Id.}

\textsuperscript{84} \textit{Id.}
option for lasting regulation is at the federal level. There are many obstacles that need to be overcome to enact any major federal legislation, however, and climate change is no exception.

**VII. Problems in Implementing Federal Climate Change Legislation**

As mentioned earlier, time is not costless in the context of global warming,\(^8^5\) and the time-sensitive nature of climate change requires that its proponents be proactive.\(^8^6\) Future technological advances would have to achieve exponentially greater reductions than what we are currently achieving in order to make up for lost time.\(^8^7\) In other words, the longer we put off the problem the harder it will be to fix.

The problem of time-sensitivity is exacerbated by the fact that our legislative system was intentionally designed for lawmaking to take place slowly and deliberately.\(^8^8\) Our lawmaking system is also built upon bargaining and compromise, and for climate change legislation advocates this is not always the best option.\(^8^9\) The complex and widespread distribution of greenhouse gas emissions also undermines the likelihood of a powerful political coalition to push through meaningful legislation, and those in opposition to additional legislation would likely be

\(^8^5\) Lazarus, *supra* note 1, at 1160.

\(^8^6\) Doniger, Herzog, & Lashof, *supra* note 30, at 764.

\(^8^7\) *Id.* at 765.

\(^8^8\) Lazarus, *supra* note 1, at 1180.

\(^8^9\) *Id.*
Those drafting climate change legislation must be creative in order to come up with solutions to these complex problems.

It has been argued that delay in the context of climate change legislation is cheaper in the long-term, because in the interim technology has the potential to make significant headway and greatly reduce costs. Furthermore, wouldn’t it be possible for increases in technology to completely solve any future Malthusian crises which might arise, climate change included? The outcome of this argument is uncertain, because of the absence of market signals to indicate the development of climate change technology in the distant future. Obviously, it would be foolhardy to simply do nothing about climate change in the hopes of it solving itself in the future, because of the potential catastrophic consequences if we are wrong.

A second major problem in passing climate change legislation is that the actors who can most easily address climate change are not only the ones who contributed the most to the problem, but are also the ones who have the least incentive to address it. Major polluters have little profit motivation, without government intervention, to make any headway dealing with climate change. Even on a global scale, many powerful nations choose not to address climate change.

\[90\] Id. at 1185.

\[91\] Id. at 1175.

\[92\] Id. at 1185-1186.

\[93\] Id. at 1160.

\[94\] Id.
change in order to stay economically competitive.\textsuperscript{95} Additionally, even though some parts of the world will suffer dramatic consequences quickly, other parts of the world will suffer few short-term consequences.\textsuperscript{96} This reduces the incentives for the unaffected parts of the world to act even further.\textsuperscript{97} Third, there appears to be no existing governmental framework to address a problem with such a large temporal and spatial scope.\textsuperscript{98}

The easiest answer to these problems lies in advocating for climate change regulation on the federal level. First, passage on the federal level would allow for a new “floor,” so states would not have to worry about losing business to other states by passing new regulations.\textsuperscript{99} Although the federal government could also pass a “ceiling,” which might be the preferred option for corporations, some environmentalists oppose passing ceilings because it would preempt the passage of additional state regulation.\textsuperscript{100} Second, the drafters of the legislation could include emission trading programs in order to make it more palatable for businesses.\textsuperscript{101} The importance of forming well-organized interest groups must also be stressed.\textsuperscript{102}

\begin{footnotes}
\footnote{3}{Id.}
\footnote{4}{Id. at 1168.}
\footnote{5}{Id. at 1160.}
\footnote{6}{Id. at 1160-1161.}
\footnote{8}{Lazarus, \textit{supra} note 1, at 1228.}
\footnote{9}{Id. at 1191.}
\footnote{10}{DeShazo & Freeman, \textit{supra} note 7, at 1539.}
\end{footnotes}
activists wish to have an impact on the legislative process, it is imperative that they pool their resources together in order to match the private sector’s influence.\textsuperscript{103}

It is also possible that industry might push at the federal level for climate change regulation if it has enough incentive, because in some instances regulation at the state level has prompted action at the federal level. The U.S. Climate Action Partnership, a co-operative group of businesses and environmental organizations, has stated: “We believe local, state, regional and federal programs can and must be complementary. The aim is to achieve compatibility and avoid conflicts between local, state and federal programs that unnecessarily drive up compliance costs and make achieving our nation’s environmental goals more difficult.”\textsuperscript{104}

One way to provide an incentive for industry is to regulate only products instead of “end-of-pipe” pollution at the state level.\textsuperscript{105} End-of pipe pollution consists of “Methods used to remove already formed contaminants from a stream of air, water, waste, product or similar [channels]. These techniques are called ‘end-of-pipe’ as they are normally implemented as a last stage of a process before the stream is disposed of or delivered.”\textsuperscript{106} Industry is more likely to push back against product regulations because product regulation could effectively push a business out of an entire market.\textsuperscript{107} End-of-pipe pollution regulation allows industry considerably

\textsuperscript{103} \textit{Id.}

\textsuperscript{104} U.S. Climate Action Partnership, \textit{A Blueprint for Legislative Action} (2009).

\textsuperscript{105} DeShazo & Freeman, \textit{supra} note 7, at 1506-1507.

\textsuperscript{106} Greenfacts, \textit{End-of-pipe techniques definition} (2014).

\textsuperscript{107} DeShazo & Freeman, \textit{supra} note 7, at 1507-1508 (2007).
more leeway. As such, states increase the chance that industry will appeal to the federal government when they engage in product regulation.

If many states began passing inconsistent regulation, this might also create enough legislative uncertainty for a corporate push for climate change legislation as a defensive mechanism. This has happened at least three times so far. Congress passed the Motor Vehicle Pollution Control Act of 1965 at least in part due to industry concerns, and the private sector helped push for the passage for the Air Quality Act of 1967 to preempt new state legislation. Finally, industry acted in a similar way regarding the acid rain provisions in the Clean Air Act. Industry sees scenarios such as these as a means to pass a federal regulatory ceiling in order to “pick off” states with the highest amount of regulation and preempt other states from enacting similar legislation. Indeed, climate change advocates must be weary of the legislation advocated by industry, because even when it is advocating for additional legislation industry is still serving its own interests.

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108 Id. at 1508.

109 Id. at 1509.

110 Id. at 1509.

111 Id. at 1512.

112 Id. at 1536.

113 Id. at 1534.

114 Andreen, supra note 29, at 267.
One interesting problem in climate change legislation involves protecting the impoverished from higher utility and product costs. Increased environmental regulations are likely to drive up the cost of some types of goods, which in turn might drive some Americans deeper into poverty. The Center on Budget and Policy Priorities devised a two-pronged system to address this problem. The first prong involves giving a “climate-change rebate” to low-income households through the already-existing E.B.T. system, in combination with tax relief through the Earned Income Tax Credit. Second, low-income Americans would have their income supplemented by an increase in the Low-Income Home Energy Assistance Program. It remains to be seen whether such a program would be effective, but climate change advocates must be cognizant of how additional legislation must affect the impoverished.

Although many obstacles in the path of climate change legislation may seem difficult to overcome, it is important to remember that sometimes an obstacle can be transformed into a catalyst for change. Understanding the unique problems that climate change legislation faces can help advocates to be ready to address them during the legislative process.

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116 Id.
117 Id.
118 Id.
119 Id.
120 Id.
 VIII. The Future for Federal Climate Change Legislation

Proponents of state legislation proffer several arguments regarding the need for state legislation in addition to federal legislation. First, individual states are more likely to address their unique concerns than the federal government.121 Furthermore, the United States government has not been proactive in drafting new climate change legislation.122 Finally, the United States Congress generally uses state legislation as a measuring post, expanding on plans that had already been enacted by states they deemed to be successful.123

The need for federal climate change legislation, as opposed to state legislation, can hardly be called into question. State legislation is generally unable to address problems at the national level.124 There are several other significant problems with climate change legislation on the state level. State legislation creates the problem of “free riders,” where states seek to benefit from the increased environmental protection offered in other states without spending any of the associated costs.125 Some states also likely have different “costs” associated with different problems, and so legislate in some areas but not others.126 Additionally, many types of pollution that affect climate

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121 Yee, supra note 67, at 194.

122 Id. at 195.

123 Id. at 196.

124 Kaswan, supra note 51, at 794.

125 Id. at 795.

126 Id. at 795-796.
change are not within the boundaries of any state.\textsuperscript{127} For example, a river might run through many states, and all states share the same air.

Aside from the aforementioned problems, there are other reasons why regulation on the federal level would be more economical. Federal legislation would force states to consider interests outside of their own jurisdiction.\textsuperscript{128} It would also be more efficient for the federal government to spend money on technology and research, instead of several states spending the resources to do the same thing.\textsuperscript{129} Furthermore, the federal government has more resources to do so than individual states.\textsuperscript{130} Finally, if the federal government adopted a cap-and-trade program, a larger market would lower costs and allow for more market fluidity.\textsuperscript{131}

Perhaps the reason that climate change legislation has been more difficult to pass recently is that the American public remains skeptical. Justice Scalia no doubt captured many Americans’ feelings on the subject when he said that he was “not a scientist” and that “that’s why I don’t want to have to deal with global warming, to tell you the truth.”\textsuperscript{132} Public opinion on climate change legislation might be difficult to sway because most climate change legislation asks for

\textsuperscript{127} Yee, supra note 67, at 194.

\textsuperscript{128} Kaswan, supra note 51, at 802-803.

\textsuperscript{129} Id. at 826.

\textsuperscript{130} Id.

\textsuperscript{131} Id. at 797.

increasing short-term cost in exchange for long-term benefits, many of which are difficult to measure.\footnote{133}

Dealing with climate change legislation is a daunting task, and one that would require a great deal of time and energy. Of course, this is not the first time that many assumed that future climate change legislation in the United States had a bleak outlook.\footnote{134} Indeed, the legislative “moment” that spurred the election of Barack Obama to the presidency may portend things to come in terms of federal climate change legislation. President Obama has renewed talks to reduce greenhouse gas emissions, as he made it a large part of his campaign for reelection.\footnote{135} He also appointed a “Climate Czar” to address the matter and issued a memorandum to the E.P.A., directing the agency to revisit past decisions on climate change.\footnote{136}

One of the most important problems facing climate change legislation is that, even should sweeping legislation pass, the political climate is so volatile that it is possible that significant pieces of any legislation could be repealed.\footnote{137} Even apart from inevitable ideological swings in our congressional makeup, many members of Congress could see climate change legislation as an easy target in times of budgetary crisis.\footnote{138} Should any amount of significant climate change

\footnote{133}{Lazarus, supra note 1, at 1172.}

\footnote{134}{Lazarus, supra note 2, at 30.}

\footnote{135}{Lazarus, supra note 1, at 1189.}

\footnote{136}{Id.}

\footnote{137}{Id. at 1156.}

\footnote{138}{Id.}
reform from Congress come to fruition in the near future, environmentalists should consider which strategies to employ in order to ensure that any new legislation would be lasting.\footnote{Lazarus, supra note 2, at 34.}

Perhaps the key to lasting climate change legislation is drafting statutes to be flexible, because flexibility would necessarily allow the law to change with evolving environmental standards.\footnote{Id.} Flexibility is necessary because of climate change’s spatial and temporal reach; however, the legislation must also be steadfast enough to be maintained over the long term.\footnote{Lazarus, supra note 1, at 1157-1158.} Robin Kundis Craig, a Professor of Law at Florida State University College of Law, claims that flexibility alone in drafting legislation is not enough to ensure that the proponents of environmental legislation maintained versatile legislation, but that environmentalists must adopt a “principled flexibility.”\footnote{Craig, supra note 4, at 17.} This would mean that “both the law and the legislators (1) distinguish in legally significant ways uncontrollable climate change impacts from controllable anthropogenic impacts on species, resources, and ecosystems that can and should be actively managed and regulated, and (2) implement consistent principles for an overall climate change adaptation strategy, even through the application of those principles in particular locations in response to specific climate change impacts will necessarily encompass a broad and creative range of adaptation decisions and actions.”\footnote{Id. at 17-18.}
A “precommitant strategy” is one employed to take a decision away from oneself in the future. Lasting climate change legislation should include precommitant strategies which would make it very difficult (but never impossible) to change the legislation in response to certain kinds of concerns. Furthermore, the legislation should contain other precommitant strategies that make it easier to change to the law in response to longer-term concerns, thus ensuring the legislation’s viability. Another option would be to include strong financial incentives for businesses to support the legislation (such as an emissions trading program) which would make it less likely that the private sector would seek changes in the law. It is also likely that any sweeping climate change legislation would need to include programs which would alleviate the potentially serious adverse economic effects of implementing sweeping environmental reform, in order to ensure both the passage of the bill and that our country’s continued economic livelihood. Another potential strategy would be to engage in clever drafting techniques to insulate climate change legislation from potentially fatal unpopular earmarks.

The U.S. Senate Committee on Environment and Public Works, headed by Barbara Boxer, released its own guidelines for passing climate change legislation in 2009, some of which mirror

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145 Lazarus, supra note 2, at 34.

146 Lazarus, supra note 1, at 1158.

147 Id. at 1191.

148 Id. at 1155-1156 (2009).

149 Lazarus, supra note 2, at 36.
the recommendations discussed above by legal scholars. These “principles” recommended to (1) reduce emissions to levels guided by science to avoid climate change,\(^{150}\) (2) set short and long term emissions targets that are certain and enforceable, with periodic review of the climate science and adjustments to targets and policies as necessary to meet emissions reduction targets,\(^{151}\) (3) ensure that state and local entities continue pioneering efforts to address global warming,\(^{152}\) (4) establish a transparent and accountable market-based system that efficiently reduces carbon emissions,\(^{153}\) (5) use revenues from the carbon market in order to accomplish various objectives, such as keeping consumers.\(^{154}\) Furthermore, as the United States shifts to using additional green energy, we should invest in clean energy technology and measures to produce efficient energy, assist states and local areas to adopt ways to sufficiently address global warming, take economic measures to assist businesses in transitioning to green energy, conserve wildlife threatened by climate change, and work with the international community in order to ensure that other countries also develop lasting efforts to combat climate change.\(^{155}\) Finally, (6)
the United States should provide intentional incentives so that other countries will contribute to the fight against climate change.\textsuperscript{156}

The Natural Resource Defense Council, a large environmental activist group, has called for similar initiatives for climate change legislation in: promoting investment in energy efficiency and green energy, setting a cap on greenhouse gas emissions, building on existing climate change legislation at the federal and state levels, and supporting international efforts to curb climate change.\textsuperscript{157}

The White House's website offers an additional set of goals for enacting global warming legislation.\textsuperscript{158} First, the website suggests the need to develop and secure America's energy resources by producing safe domestic gas and oil and by increasing America's energy independence.\textsuperscript{159} Second, America should provide consumers with choices to reduce costs and save energy, by ensuring that the United States produces more efficient cars, trucks, homes, buildings, and factories.\textsuperscript{160} Finally, legislation should ensure that we are able to continue to support developing new technology.\textsuperscript{161}

\textsuperscript{156} Id.

\textsuperscript{157} Natural Resources Defense Council, \textit{We Cannot Wait Any Longer to Put Our Nation on a Path to Cleaner Energy} (2014).


\textsuperscript{159} Id.

\textsuperscript{160} Id.

\textsuperscript{161} Id.
Even if environmentalists are unable to pass climate change legislation in the near future, it is likely that eventually America will experience another legislative “moment” in which to pass additional greenhouse gas emissions regulations. When that time comes, environmentalists need a strategy to make sure that said regulation will be lasting and effective. In order to do this, the legislation should involve precommitant strategies and be flexible enough to adapt to changes. While it is a good idea for environmentalists to organize their agenda by putting forth “principles,” these principles will not do much good if future legislation is unable to withstand the passage of time. As far as content is concerned, future climate legislation should include international incentives to reduce greenhouse gas emissions, insulate some of the effects of passing additional regulation from the private sector and build on existing regulation.

**IX. Conclusion**

Although many states have made significant efforts towards climate change mitigation and adaptation, it is unlikely that states can make much of a difference on the global scale. Furthermore, there exists no mechanism at the international level to implement changes. The most efficient way to make major policy changes is at the federal level, yet there are several major problems with enacting lasting climate change legislation. First, the longer we delay addressing climate change, the more difficult it will be to address the problem in the future. Obviously, this problem can be overcome by acting immediately.

Climate change legislation is opposed by corporations (with notable exceptions, such as the U.S. Climate Action Partnership), which have a great deal of financial resources and political influence. Perhaps the easiest way to spur corporations to join with environmentalists in order to pass additional climate change legislation is for states to pass inconsistent regulation.
Inconsistent regulation creates market uncertainty, thereby incentivizing corporations to pass “ceiling” regulation in order to preempt arbitrary environmental standards.

However, even if environmentalists are able to pass federal climate change legislation then it must be both effective and lasting. Perhaps the best way to accomplish this is to include precommitant strategies and make the legislation flexible enough to withstand political change. Any additional climate change regulation should likely include incentives for the intentional community to reduce greenhouse gas emissions, build on existing federal and state legislation and insulate the private sector against some of the effects of passing sweeping environmental legislation. Assuming that Congress is unable to pass climate change legislation in the immediate future, environmentalists should know ways to pass effective and lasting legislation for the next legislative “moment.”