CHAPTER – 3
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Regime Erosion: U.S. Discarding the Kyoto Protocol

Climate is not an arcane or peripheral question for development. It concerns fundamental issues of energy, transport, land use, and food security that are priorities for developing countries. Development and climate intersect across two broad dimensions. First, the localized impacts of climate change-including water shortages, agricultural disruption, and coastal flooding-pose serious long-term threats to development. These impacts will be felt disproportionately in developing countries. At the same time, development is itself the driving force behind climate change. In the long run, achieving the deep reductions in global emissions necessary to stabilize the climate will require fundamental shifts in development pathways. Vulnerability to climate impacts has been a common concern of all developing countries since the start of the climate effort. Particularly for the least developed countries, assistance in reducing their vulnerability to climate-induced damages will remain a central focus of development policy and an overriding objective in multilateral negotiations. The analysis here, however, concentrates on the mitigation side of the development-climate interaction.

Most plausible emission scenarios suggest that, even with strong efforts in developed countries, developing country emissions must fall below business-as-usual projections if atmospheric GHG concentrations are to be stabilized by 2100.¹ The issues it examines concern primarily advanced developing countries with large and growing emissions and which, therefore have, the most to contribute to the mitigation effort.

The rapid rise in developing country emissions is driven by development imperatives—in particular, the need for energy and economic growth—and is encouraged by flows of

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¹A preliminary finding of the Intergovernmental Panel on Climate Change’s most recent emissions scenarios is that, “assuming CO₂ emission reduction needed for stabilization occurs in Annex I countries only, per capita CO₂ emissions in Annex I countries will fall below per capita emissions in non-Annex I countries during the 21st century. This suggests that, especially for more stringent stabilization targets and/or worlds with relatively high baseline emissions, there is a need for emissions to diverge from baseline levels in developing countries...” Bert Metz, Ogunlade Davidson, Rob Swart, and Jiahua Fan (eds.), IPCC, “Climate Change 2001: Mitigation,” (UK: Cambridge University Press, 2001).
investment and technology that support conventional paths of development. Future climate strategies must explicitly address these fundamental needs of developing countries if they are to be constructively and seriously engaged in common efforts toward climate protection.

There is strong evidence that strategies driven by core development priorities can at the same time produce climate benefits. For instance, China’s rapid improvements in energy efficiency, while motivated principally by economic goals, have significantly slowed the growth of its GHG emissions. Recent analyses identify similar experiences and opportunities in major developing countries. However, to the extent that developing nations regard climate concerns as no more than potential barriers to their ability to reduce poverty and increase income levels, climate issues will not command the attention of core political actors. Since constraining economic growth is not an option for these policy makers, the only politically viable approach to climate mitigation is to devise development strategies that can produce climate benefits ancillary to sustained economic expansion. A principal aim of climate policy must be to influence and facilitate the capacities of developing nations to recognize and meet this challenge.

Economic growth has a dual relationship to emissions. Globally, economic growth, energy use, and GHG emissions have remained coupled through modern history. In developing countries, particularly those with low per capita energy use, sustained growth will require an absolute increase in total energy production and consumption. However, growth also raises the demand for environmental quality and, through improved

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4 In the first half of the 1990s, global commercial energy use grew at roughly the same rate as the economy; however, in the OECD, energy demand grew at roughly the same rate as GDP. In transition economies, energy intensity increased due to a fall in outputs; and in developing countries, energy intensity improved but energy demand followed the high economic growth. N. Nakicenovic, A. Grubler, and A. McDonald (eds.), “Global Energy Perspectives,” (UK: Cambridge University Press, 1998).
technology, creates new opportunities to produce and use energy more cleanly and efficiently. The emission scenarios of the Intergovernmental Panel on Climate Change (IPCC) highlight the potential importance of technology innovation and diffusion in weakening the historical linkages between growth, energy intensity, and carbon output. In the Special Report on Emissions Scenarios (SRES),\(^5\) certain scenarios project both lower emissions and higher economic growth relative to alternative scenarios, with technology choice among the critical underlying variables. Technology patterns, and the organizational and institutional arrangements that encourage and maintain them, emerge as key determinants of future emissions paths—regardless of the rate of economic growth.

**Kyoto Protocol and the United States**

With the protocol adopted at the Kyoto in December 1997, the United States accepted an emissions reduction of seven percent below 1990 levels by the period 2008-2012. Facing the more radical emissions reduction proposal of the European Union, the United States moved from its initial position of merely stabilizing emissions. But many details and loopholes in the addressing the protocol were determined by the U.S. demands. In a press conference shortly after the adoption of the protocol, members of the U.S. administration declared that the official reduction goal of seven percent was nearer to the original U.S. position because of the new composition of the gases and the calculation of the sinks: The seven percent…… is actually very close to our going in position……by having in the agreement three gases that have a 1995 baseline and by the fact that there is a more generous accounting for the use of sinks.”\(^6\)

**The President and Congress**

The separation of powers and the division of authority between the president and the congress for making foreign policy commitments, giving advice and consent, implementing legislation, and establishing regulatory programs, poses tremendous barriers to effective policy—making. The division of power between the president, who

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\(^6\)White House, Office of the Press Secretary, 11 December 1997, MIMEO.
negotiates international treaties and accords, and the Congress, which must pass legislation to implement them, is a recipe for deadlock. The president, and the United States as a whole, cannot assume effective leadership on global environmental issues as long as Congress responds only to narrow domestic interests and constituencies. President must make policy in a kind of two-level chess game, where they must interact with Congress at one level, and with other nations at another. In short, presidents must anticipate how international agreements will be viewed by domestic actors. President and Congress represent different kinds of constituencies, and the broad, national scope of presidential elections aggregates national interests much differently than the decentralized system of congressional representation that gives great deference to those representing local interests. Congress and the White House remain distrustful of each other and are largely unable to move forward in dealing with new environmental problems and concerns. That distrust has roots in the 1980s and the Reagan administration's assault on environmental laws, and its conflicts with Congress over what kind of environmental policy should be pursued.

Furthermore, the decentralized and fragmented structure of Congress poses challenges for addressing issues of environmental policy, such as climate change, that cut across traditional jurisdictions and sectors and must be addressed from a broad perspective. The fragmentation of Congress is also manifest in environmental laws that are poorly integrated, and that often results in pollution being transferred from one medium to another, rather than pollution prevention efforts that are, in the long run, more efficient and less costly. While many in the world are debating what kinds of actions are needed in designing a new generation of policies to promote sustainability Congress is still mired in the debate over whether there should be more or less environmental regulation.

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Congress and the Politics of Climate Change

Climate change first surfaces as a significant political issue in congressional hearings in 1987 and 1988, led by the efforts of then senators Al Gore and Tim Wirth both Democrats who later came to work on climate change issues in the Clinton administration- and Republican John Chafee of Rhode Island. Wirth was appointed assistant secretary of state for international environmental issues in the Clinton administration. In the summer of 1988, an important breakthrough in political discourse occurred during a record-breaking heat wave, when NASA scientists James Hansen argued before a congressional panel that the warming period was the first sign that global warming had begun.\(^{11}\)

The U.S. Congress plays a key role in determining how the United States responds to the challenge of global climate change. Legislation enacted by Congress will be necessary to reduce U.S. GHG emissions substantially. Any international climate change treaty must be ratified by the U.S. Senate for the United States to be a party to it. The budgets of all federal agencies, which may include funding for programs to curb U.S. emissions, are established in the agencies’ annual spending (or “appropriations”) bills, enacted by Congress. Congress conducts hearings that focus attention on global climate change and shape the national debate over how best to address it. With climate change, as with other issues, congressional action can differ significantly from that proffered by the U.S. President. Once a law is enacted, the President is bound to implement and enforce it. As the scientific evidence of climate change has mounted, so has congressional activity. The number of climate change-related legislative proposals introduced increased from seven in the 105th Congress (1997-1998) to 25 in the 106th Congress (1999-2000) and to over 80 in the 107th Congress (2001-2002). Nearly 70 such legislative proposals were introduced in 2003, the first year of the 108th Congress (2003-2004).\(^{12}\)


Climate change measures are increasingly being offered by members of both the Democratic and Republican parties. Bipartisan support is building for certain legislative proposals, including measures to require the reporting and disclosure of GHG emissions, to protect companies reducing GHG emissions from being penalized under a future GHG reduction program, and to promote carbon sequestration. Addressing the challenge of climate change will ultimately require a more comprehensive set of approaches; however, possibly including a mandatory program to reduce GHG emissions and to allow the trading of GHG emissions credits, and efficiency standards to promote the use of efficient products and technologies.\textsuperscript{13} Enactment of such policies will likely be a longer-term proposition.

The policy of United States government toward climate change poses a puzzling paradox. United State funded research has played a major role in identifying the threat of climate change and in developing climate models, and American scientists have been among the leading voices in drawing attention to the challenges it poses to the global community. Vice President Al Gore, who enjoyed unprecedented power and influence for a vice president in the Clinton administration, focused on climate change in his 1992 book, ‘Earth In The Balance’, calling it the most important environmental problem we face. The U.S. policy commitments to addressing the threat of climate change have been quite weak. The United States has fallen short of its goal of reducing GHGs emission by the year 2000 to 1990 levels, as agreed to in the 1992 Framework Convention on Climate Change, and it led the opposition, until recently binding commitments for reducing emissions. Even though the Clinton administration agreed to a seven percent reduction in GHGs emissions by 2012 in the Kyoto protocol, there has been great opposition to binding emission reductions in Congress.

Research by U.S. scientists contributed to demands for action that led to the first climate change meeting, in Toronto in 1988, where scientists called for a 20 percent reduction in

GHGs emissions by the year 2005. The United States however was not a major player in the Toronto Conference, although the threat of global warming was briefly raised in the 1988 election. Candidate George Bush was initially interested in the problem, telling voters worried about the greenhouse effect that he would as president launch the “White House effect” to solve the problem. In 1989, secretary of state James Baker, in one of his first speeches, suggested that the United States respond to the threat of climate change through a “no regrets” policy. Given the scientific uncertainty surrounding the issue and the seriousness of the potential threat, said Baker, the United states and others should take actions to reduce the threat of warming that would produce other benefits that were more certain: “while scientists refine the state of our knowledge, we should focus immediately on prudent steps that are already justified on grounds other than climate change.”

Investments in emissions reduction and energy efficiency, for example, would reduce local air pollution and save money, and should be pursued, even if the additional contribution they made to reduce the threat of global warming turned out not to be necessary. The Bush administration also led in addressing acid rain 1989, its proposal to reduce sulphur dioxide emissions from power plants by 50 percent was much more ambitious than any plan offered by member of Congress, and became the key provision in the 1990 Clean Air Act amendments.

By the year 1990, however, the Bush administration looked much less green. The 1990 White House International Conference on Scientific and Economic Issues Related to Global Climate Change concluded with a call for more research before taking any action to reduce GHGs emissions. The administration opposed the development of global climate change agreement, as Chief of Staff John Sununu and other senior officials warned that limits on emissions would require major changes in Americans way of life

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and would threaten an already weak economy.\textsuperscript{16} During the 1992 United Nations Conference on Environment and Development, the Bush administration opposed any agreement that imposed binding limits on GHGs emissions, and was successful in ensuring that the FCCC, signed by the United States and other countries at the Earth Summit, provided for only voluntary reductions. The U.S. Senate gave its advice and consent to the convention in May 1992, committing the nation to the nonbinding targets of limiting GHGs emissions in 2000 to 1990 levels.

One of the first policy initiatives announced by the newly-elected Clinton administration, in the spring of 1993, was a BTU tax, aimed at raising the price of gasoline, electricity, and other forms of energy in order to raise new revenue and encourage conservation. But opposition to the proposal from senators representing energy producing states killed the proposal, and the administration could only salvage 4.3 cents per gallon gasoline tax increase as part of its deficit reduction plan.\textsuperscript{17} The rapidity of the administration's retreat in the face of congressional opposition was clear evidence of its unwillingness to take an ambitious and politically controversial response to the threat of climate change.

In October 1993, the Clinton administration released its Climate Change Action Plan, as required by the convention.\textsuperscript{18} The plan promised to reduce levels of greenhouse gas emissions in the year 2000 to 1990 levels, which amounted to about 1.5 billion tons, a reduction of some 110 million tons in 1993 emissions. The Climate Change Action Plan became the basis for the National Action Plan, which the United States submitted to the FCCC secretariat in 1994. Under the plan, U.S. emissions for 2000 were to be about 100 million tons lower than if no plan were implemented. The plan called for gradual shifts from coal and oil to natural gas and, since energy consumption is growing fastest in transportation and industrial uses, the plan proposed a modest effort at conservation of

energy across the major economic sectors, with a smaller reduction in transportation than in other areas.\textsuperscript{19}

The Clinton administration's Climate Change Action Plan was primarily a set of voluntary actions the federal government suggested industries, commercial establishments' energy companies, and consumers take. However, by 1994, carbon dioxide (CO\textsubscript{2}) emissions in the United States exceeded the levels to be achieved by 2000, and in that year Congress only approved half of the funds requested to comply with the convention.\textsuperscript{20} With in a few years of issuing the plan, the Clinton administration acknowledged that the goal of reducing greenhouse gas emissions to 1990 levels by the year 2000 would not be met.

In March 1995, at the first Conference of the Parties (COP-1) in Berlin, the United States joined other countries in agreeing to the Berlin Mandate, which structured future negotiations and provided that developing countries would not be required to make binding greenhouse gas reduction commitments.\textsuperscript{21} The release of the Intergovernmental Panel on Climate Change's (IPCC's) Second Assessment Report, in December 1995, prompted U.S. officials to accept the idea of new, binding commitments to reduce the threat of global climate change. Many scientists had believed that there would be no definitive links found between human activity and climate change until the twenty first century, but the 1995 report, involving scientists of the world, concluded that the "balance of evidence suggests a discernible human influence on global climate."\textsuperscript{22} The United States rejected as too ambitious the proposal from the small island states to reduce GHG emissions by 20 percent by the year 2005, but it conceded that voluntary commitments to reduce emissions were not working.\textsuperscript{23} In July 1996 at the Geneva climate summit, the United States announced a shift in policy and committed itself to legally

\textsuperscript{21}Ibid.
\textsuperscript{22}Intergovernmental Panel on Climate Change, Climate Change, "The Science of Climate Change," (Cambridge: Cambridge University Press, 1996), pp.4-5.
binding targets and timetables for reducing GHG emissions in the more developed world.\textsuperscript{24}

The new republican Congress, elected in 1994, expressed great hostility toward environmental regulation in particular, and singled out the U.S. EPA for budget cuts and restrictions on regulatory authority, and sought to weaken most of the environmental laws. It opposed new energy efficiency standards and cut spending for conservation and the development of alternative fuels. It tried to impose new procedural requirements on rule-making such as new cost-benefit analyses and increased opportunities for judicial challenges that would have made the process even more cumbersome and slow.\textsuperscript{25}

Congress took on the administration’s climate change policies directly in July 1997 when the Senate unanimously passed Resolution 98, aimed at ensuring that the United States and other developed countries not sign a climate change agreement that did not impose on developing countries at least some (if not similar) commitments to reduce GHG emissions.\textsuperscript{26} The resolution specified two key conditions required for Senate approval: the treaty “should include commitments for the countries under the existing developing economies (termed non-Annex I countries under the existing UN Framework Convention), and should not result in serious harm to the economy of the United States.” When submitting any climate change agreement to the Senate, the resolution requires the president to include two documents: (i) a detailed explanation of legislation or regulations that would required to implement the agreement, and (ii) a detailed analysis of the financial and economic costs to the United States incurred by implementing the agreement submitted to the Senate. Resolutions 98 also included an unusual oversight provision, recommending that a bipartisan group of senators be appointed “to monitor the status of negotiations on climate change and report periodically to the Senate.”


\textsuperscript{26}Senate Resolution 98, The Transcript of the Senate Floor Debate and the Byrd-Hagel Resolution are found in “Expressing Sense of Senate Regarding UNFCCC,” \textit{Congressional Record}, 25 July 1997.
In late 1997, the U.S. Department of Energy reported that emissions in 1996 were 7.4 percent above 1990 levels, and the administration forecast that emissions would be 13 percent above 1990 levels in 2000. Strong economic growth, unusually severe weather, increased coal use by electric utilities, and growing popularity of less efficient sport utility vehicles and light trucks combined to increase carbon emissions. Energy efficiency actually declined by one measure in 1996, energy use increased by 3.2 percent while the economy grew by only 2.4 percent.27

In October 1997, the Clinton administration announced it would support, at the third Climate Summit to be held in December 1997 in Kyoto, Japan, a requirement that developed countries commit only to reduce GHG emissions to 1990 levels between the years 2008 and 2012, and to reduce emissions to an unspecified amount below those levels by 2017. The administration also stated that it would not “assume binding obligations unless key developing nations meaningfully participate in this effort”, but offered no precise explanation of what that required. Other industrialized countries pushed for much more ambitious reduction: Japan proposed a five percent reduction below 1990 levels by 2012, and the European Union proposed a fifteen percent reduction.28 The administration announced that it would not accept binding reduction commitments unless the developing countries also agreed to take such actions, and as long as countries had flexibility in implementing agreements- including the creation of an emissions budget that would allow participating nations to trade emissions in order to meet targets, and to bank emissions for future years.

In October 1997, the Clinton administration issued another plan to combat climate change. It called for a five year, $5 billion program of tax incentives, research and development aimed at reducing CO2 emissions by the year 2008 to 1990 levels, and reducing emissions below that level in the future. The plan would eventually initiate an emissions trading scheme for greenhouse gases that would cut emissions by 30 percent.

from projected levels in 2008. Sources that moved early to reduce emissions would get credits that they could use later when pollution permits were issued. The trading system would eventually expand internationally, so that U.S. companies could buy and sell the allowances given them to emit GHG and encourage the most cost effective ways of reducing emissions. Some industry officials welcomed the proposal because of its incentives for early reductions in emissions, while others warned that GHG reduction efforts would be costly and disruptive to the economy. In order to achieve the plan’s goal, the United States would need to reduce emissions by an average of about one percent a year during the subsequent decade.

However, strong lobbying by environmental groups, and the intervention of Vice President Gore at the Kyoto, resulted in the shift in policy, and the Clinton administration agreed in the Kyoto Protocol to reduce U.S. GHGs emissions seven percent by 2012. The prospects in the United States for ratification of this protocol, however, were bleak because of the failure to gain binding commitments from the developing countries to reduce their emissions. Industry representatives charged that this failure would give the industries of developing countries an unfair advantage in global markets. The Clinton administration also announced it would not submit the treaty to the Senate for ratification until there was both meaningful participation from developing nations, and clear agreements that flexible measures could be used to demonstrate compliance (primarily) market based mechanisms that allowed industrial countries to offset their emission reductions with investments in energy efficiency and other projects in emerging countries.

Domestically U.S. climate policy has been fairly timid for a decade. The issue of binding targets to reduce greenhouse gas emissions has constantly been sensitive. The UNFCCC, adopted at the Earth Summit in 1992, lacked binding targets because the United States,

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under the first Bush Administration (1989-92), conditioned its treaty signature on it. After taking office in 1993, the Clinton Administration implemented the Climate Change Action Plan (CCAP) voluntary measures to curb the country's greenhouse gas emissions. At the time of the first Conference of the Parties to the UNFCCC, in 1995, the United States accepted the "Berlin Mandate" aimed to negotiate binding targets and timetables for industrialized Parties (so called "Annex I" Parties).

In 1997-98, momentum toward binding targets was halting. With a 95-0 vote in July 1997, the Senate passed the infamous "Byrd-Hagel" Resolution, which held a few main messages: the United States should not accept any new emission limitation commitment unless developing countries also accept "specific scheduled commitments" nor should it accept any commitment that would harm the U.S. economy. Despite this resolution and without any developing country commitments, the United States agreed to take on a binding target in the Kyoto Protocol, in December 1997, after the Clinton Administration had obtained so-called international, market-based 'flexibility' instruments that could help countries meet the targets more cost-effectively. Although the United States signed the Protocol in November, 1998, the Clinton Administration knew better than to send to the Senate for ratification what would not pass: the Byrd-Hagel Resolution cast a foreboding shadow.

**Key Principles Underlying the Proposal**

While rejecting the Kyoto Protocol at least for the years of the Bush presidency, the Administration has yet regularly reaffirmed the United States' commitment to the UNFCCC. Key principles shaping the U.S. climate proposal, coupled to this commitment, include the need for addressing the climate change challenge globally, considering scientific uncertainties, allowing for time, gradualism, economic growth primacy, flexibility, and voluntarism. Because climate change is a global problem,

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33 The Senate Resolution SR-98 is often referred to as the "Byrd-Hagel" Resolution from the names of the co-sponsors Democrat Robert Byrd and Republican Chuck Hagel.
34 The Kyoto Protocol target agreed by the United States at the Third Conference of the Parties is to reduce the country's GHG emissions by 7 percent relatively to 1990 levels by the five-year period 2008-2012.
35 The flexibility mechanisms of the Kyoto Protocol include international emissions trading, the Clean Development Mechanism, Joint Implementation, and Carbon Sinks.
solutions must be global regarding greenhouse gas sources, sinks, and the countries involved. International cooperation is essential. The U.S. climate policy must be based on sound science, which in the Administration’s sense means ‘not like the arbitrarily defined Kyoto Protocol targets’. For that matter, the need for more research is emphasized to reduce scientific uncertainties related to global warming magnitude and impacts. Time is called for, both to improve climate change science knowledge and to implement technologies that will be more cost effective. Therefore the solution advocated must be gradual. In addition, the climate policy should not harm the U.S. economy, that is, it should not jeopardize economic growth and jobs. The target set by the Bush Administration to reduce the GHG emission intensity (the ratio of GHG emissions to the GDP) by 18 percent over the ten-year period 2002-2012 is meant to meet these goals. As President Bush puts it, the reduction target in the GHG emission intensity constitutes a “path to slow the growth of [the] greenhouse gas emissions and, as science justifies, stopping and then reversing the growth of [U.S.] emissions.”

As for the heralded flexibility and cost-effectiveness that market mechanisms provide, the Bush Administration’s position seems a bit curious. It advocates the ‘power of markets’ generally as well as the Clear Skies Initiative, in which electric utilities would have fixed targets or caps on three pollutants (i.e., sulphur dioxide, nitrogen oxides and mercury) and could trade the rights to emit amongst themselves, but not greenhouse gas emissions trading specifically. President Bush’s February 2002 speech is clear in this respect. Two different environmental issues are considered, domestic air pollution stemming from U.S. power plants and global climate change. For the former, President Bush calls for, and praises the merits of, a market-based cap and trade approach to reach the mandatory goals. By contrast, the approach selected for climate change is voluntary and does not refer to permit trading. He merely announces that transferable credits will be issued to companies that can show real reductions. The 2002 CEA annual report holds the key to understanding the paradoxical treatment on market mechanisms the worldwide feature of the greenhouse gas permit system entails “enormous institutional and logistical

37 Ibid.
obstacles." As a result, it "would be dangerous to make any serious U.S. policy or commitment dependent on newly designed and untried international institutions." 38

Internationally, the Bush Administration’s position has shifted regarding developing countries’ commitment to reduce GHG emissions. In March 2001, President Bush announced that the United States will not ratify the Kyoto Protocol because, among other things, the Protocol exempts eighty percent of the world from emission limitation commitments. In February 2002, the Administration no more calls for any commitment from developing countries as a trade-off to its own action. Instead it praises the emissions intensity approach for developing countries. Flipping on his previous requirement, President Bush states that "it would be unfair—indeed counterproductive—to condemn developing nations to slow growth or no growth by insisting that they take on impractical and unrealistic greenhouse gas targets." 39

In March 1998 the Clinton administration released its budget for the Climate Change Technology Initiative, which included $2.7 billion for increased research and development and $3.6 billion in tax credits to encourage energy efficiency. The administration estimated that the cost of implementing Kyoto agreement would be from $7 to $12 billion a year between 2008 and 2012, in contrast to an industry estimate that the cost would be about $50 billion a year. This would mean an increase in costs of from $70 to $110 a year for the average American family, an estimate from Wharton Econometric forecasting Associates concluded that implementing the agreement would cost each family some $2700 a year, which included an increase in cost of gas by 65 cents gallon, and would result in 2.4 million lost jobs. 40

In November 1998, during the Buenos Aires talks on climate change, in an effort to give a boost to the flagging negotiations, the Clinton administration signed the Kyoto Protocol, but repeated its position that it would not submit the treaty to the Senate until

39G.W Bush, "President Announces Clear Skies......" op cit.,
the meaningful participation and flexible measures conditions were met.\textsuperscript{41} The Buenos Aires meeting concluded with the industrialized and emerging economies agreeing to a two-year plan of action aimed at producing binding agreements on flexibility measures, technology transfers, and limits on GHG emissions from all nations.


president want to shove this protocol down the throats of the American people." In October 1999, the House of Representatives again passed a rider to an appropriations bill that would prohibit the use of any funds for implementation of the Kyoto Protocol before it is ratified, but the Clinton administration announced that it would veto the bill.

Despite the weakened position of the Clinton administration resulting from the president's impeachment and Senate trial, the administration was surprisingly successful in warding off many of the more extreme congressional attacks aimed at its support for the Kyoto agreement, but was still sufficiently wounded that it could not provide much leadership on the issue even if it decided to do so. The administration did not submit the Kyoto Protocol to the Senate for approval, and that jeopardized the entire ratification effort, since at least 55 countries, representing at least 55 percent of total GHG emissions, must ratify the protocol before it takes effect.

**Domestic Politics and the Senate**

One of the most distinctive features of the U.S. domestic political institutions is a separation of powers among the executive, the legislature, and the judiciary. Especially, a separation of powers between the executive and the legislature has significant implications for foreign policies. As the executive and legislative branches are elected separately, cooperation between the executive branch and the ruling party in the legislative branch is not quite as common phenomenon as in parliamentary systems. It is critically important to understand the relationship between the two branches in the processes of international negotiations and domestic implementation. With regard to international negotiations over climate change, the U.S. delegation mainly consists of the staff members of the executive branch, and reflects the policy preferences of the president and his administration. This leads to a view that the legislature delegates negotiating authority to the executive and the president dominates foreign policymaking and has the capacity to get his way.

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45 Charles Pope, "Opposition to Global ...", *op. cit.*, p.2108
The modern theories of legislator organizations, however, show that legislators have various tools with which they can influence the behavior of executive-branch actors. One such tool is the rigours of treaty ratification procedures. Once the president signs new international commitments, they are subject to ratification by a two-thirds majority vote in the Senate. This condition has a potential impact on the negotiation behavior of the delegation. Because the negotiating team can anticipate the probability of a Congressional veto, they will consider Congressional preferences at a point in the legislative process prior to actual exercise of the veto. However, if the negotiating team fails to adequately take into account the preferences of the legislature, the likelihood of ratification failure increases. Moreover, legislators play considerable roles at the implementation stage.

As international cooperation is defined as mutual adjustment of policies, for international cooperation to work, an international agreement should not only be ratified but also be effectively implemented at the domestic level. Implementation is thus an integral part of the cooperation process. Both the Senate and the House of Representatives have the responsibility of approving domestic legislation to implement the terms of international commitments. Through the delay and obstruction of introducing legislation for international agreements, Congress can continue to use influence. Legislators also have the power of the purse. For international agreements to be carried out, they need to obtain a budget. It is the legislators that have control over the allocation of budgets. Because of their part in domestic legislation and budget allocation, legislatures exercise influence on the degree of the credibility of international agreements that the executive reach. The importance of implementation means that legislators continue to have the capacity to influence even informal international agreements, including such executive agreements as the Bush administration’s international technology-oriented initiatives.

While international treaties, as provided by the Constitution, need the approval of two-thirds of voting senators to go into effect, executive agreements are not mentioned in the

Constitution but are concluded by the President based upon authority granted by Congress or the Constitution.\textsuperscript{47} The use of such agreements is sometimes seen as the executives’ strategy to circumvent congressional constraints, and increase the scope of discretion available to the executive branch.\textsuperscript{48} However, even such agreements usually require changes in some pre-existing domestic legislation and an appropriation of necessary funds, over which legislators have substantial influence. The choice of executive agreements does not automatically guarantee the high degree of international credibility.

In short, even though legislators delegate negotiating authority to the executive, they have the potential to influence the process of delivering on international commitments by exercising control over both the ratification and the implementation processes. The credibility of international commitment is most likely to be eroded when the executive and the legislature do not share common sets of policy preferences regarding the terms of an international agreement. Such a situation is caused, for example, when the executive branch tries to minimize legislative participation in the international cooperation process, or when legislators are frustrated by the executive branch’s deal in international negotiations.

What stands out from tracing U.S. policy responses since the 1970s is the dominant role political and economic factors have played in policy instrument prominence. Segmenting history into administrations is useful since changes in the administration are co-related with shifts in the types of policy instruments considered and promoted. Republican administration have occupied the White House in 12 of the last 20 years, perhaps reflecting of the general trend toward more conservative views in the United States-this shifts towards more conservative views has led to increased acceptance of market – based environmental policy instruments.\textsuperscript{49} Some market–based instruments such as


\textsuperscript{48} The Economist, 27 June 2002.

environmental taxes however are not acceptable politically. Instead a policy of less centralized government and deregulation of industry- where desired actions of private business are induced through market mechanisms rather than through government regulation- has received greater support.

In the U.S. system of “checks and balance,” the senate has a decisive influence on international treaties because ratification is dependent on its approval. On July 25, 1997 the senate adopted the nonbinding Byrd-Hagel resolution, calling on the government to refrain from signing any protocol that could damage the economy and that did not contain new emission commitments for developing countries. During the discussion of the resolution, the dominating arguments were economic and trade related, not environmental. Members of the Senate attacked the Kyoto protocol because of the lack of commitments from developing countries.

Prospects of Domestic Proposals
Although the position of the Bush administration seems entrenched, there are several enterprises to introduce domestic climate policies in Congress. If the U.S. succeeds in settling on its own course of domestic climate policy, its international climate policy will naturally flow from such a domestic basis. It is, therefore, important to examine how each proposal addresses the credibility problem of international commitments. What follows is the evaluation of two key climate policy proposals: the McCain-Lieberman and Hagel bills.

First, the McCain-Lieberman bill (Climate Stewardship Act, S.139) is a bipartisan legislative bill sponsored by Senators John McCain (Republican, Arizona) and Joe Lieberman (Democrat, Connecticut). The bill would have imposed mandatory caps on the GHG emissions of 2010 at the 2000 level for the major energy, transportation and manufacturing industries covered by the bill, and would have established an economy-wide, cap-and-trade scheme. The bill was voted in the Senate and rejected by a 55-43 majority in October 2003. That was the first time that the Senate voted on climate policy

50 For the full detail see, http://www.theorator.com/bills108/s139.html
that would place binding control of emissions. While some said that the 43 positive votes included many "free votes", those who never expected the bill to pass but wanted to claim that they were "pro-environment", many others said that it was a sign of growing legislative interest in adopting some sort of mandatory limits on emissions. The two senators reintroduced their bill in February 2005. A similar legislative bill was introduced in the House of Representatives (Climate Stewardship Act of 2004, H.R.4067) in March 2004, but so far there is no intention to immediately seek a vote on the bill.

The McCain-Lieberman bill does not explicitly address the credibility problem, since the bill focuses on the domestic design of an emissions trading scheme. Despite the rejection in October 2003, the bill still remains as the leading bill for domestic GHG emissions control. The passage of the bill through Congress would mean that Congress would succeed in establishing a basis for domestic climate policy, thereby forging the first step for international climate policy. However, it is not clear how the executive branch and the legislative branch would work together under the bill. The building of domestic consensus is a necessary condition for making credible commitments to an international agreement, but it is not adequate. As argued previously, the U.S. needs domestic institutional mechanisms that bridge differences in foreign policy between the executive and legislative branches. The McCain-Lieberman bill alone seems unable to provide such institutional mechanisms. For the U.S. to take international leadership based upon McCain-Lieberman type of domestic policies, additional political endeavors to establish such domestic institutions will be necessary.

The second proposal is the comprehensive climate change legislation introduced by Republican Senator Chuck Hagel (Nebraska), who helped lead a Senate effort against the Kyoto Protocol. The legislation ruled out any mandatory control to GHG emission and essentially codified the Bush administration’s approach on climate change, but it would

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51 For the full detail see, http://thomas.loc.gov/cgi-in/bdquery/D?d108:300./temp/~bdhhU0:
53 Again, the politics over the post-war international trading system has some implications. At that time, the U.S. forged a general consensus on free international trade. However, the failure to narrow the gap in specific policy preferences between the executive branch and the legislative branch partly contributed to the failure to ratify the ITO. John S. Odell, "Negotiating the World Economy," (Ithaca, New York: Cornell University Press, 2000).
provide the executive branch with new authority as well as give long-term financial incentives for technology R,D&D.\textsuperscript{54} Hagel's plan consists of three pieces of legislation: the Climate Change Technology Deployment in Developing Countries Act; the Climate Change Technology Deployment Act; and the Climate Change Technology Tax Incentives Act. The first measure would direct the State Department to assist developing countries in reducing their GHG intensity. It would also allow the USTR to negotiate the removal of trade-related barriers to the export of climate-friendly technologies. The second and the third measures would provide incentives for U.S. business to accelerate technology innovation and deployment. These incentives include five and seven-year loans, investment protection, and the permanent extension of R&D tax credits, many of which are currently extended annually. This, in turn, is a disincentive for companies making long-term investments.

The Hagel bills address the credibility problem in two ways. First, the bills would allocate new authority and accountability to the executive agencies in terms of international negotiations with developing countries. This arrangement would help to develop rapport between the executive and the legislative branches and tighten the relationship between the executive and legislative branches. Second, the bills would explicitly address long-term commitments to technology-oriented initiatives. By encouraging the private sector to make long-term investment decisions, the Hagel bills partly mitigate the credibility problem of Bush's technology-oriented initiatives whereby designated funding is expected to come from the public-private partnership. These domestic institutional mechanisms may be able to contribute to a higher degree of U.S. credible commitments to technology policy.

Withdrawal from Kyoto
At the early stage of international politics over global climate change, the U.S. remained careful in taking action to control GHG emissions, arguing that scientific evidence was not enough to determine specific GHG emissions reduction targets. During international

\textsuperscript{54}Senator Hagel outlined his bills at a Brookings Institute event on 9 February 2005. For the partial transcript of his remarks, see http://www.brookings.edu/comm/events/20050209climate.pdf
negotiations in 1991 and 1992, which led up to the UNFCCC, the U.S. delegation successfully blocked any proposals for setting legally-binding targets for emission reductions in the convention. Under the UNFCCC, developed countries, including the U.S., made a non-binding pledge to reduce their emissions to 1990 levels by the year 2000.

However, the Clinton administration took the initiative in proposing legally-binding GHG emissions reduction targets at the second Conference of Parties (COP-2) of 1996. This shift of the U.S. position caused new political dynamics in international climate negotiations, and the prospect of a legally-binding protocol gathered momentum. In parallel, the U.S. delegation proposed a comprehensive approach embracing a wide range of greenhouse gases, sources and sinks, as well as the principle of market-based flexible mechanisms, allowing countries to trade emissions permits and credits across borders. These measures were expected to considerably reduce the cost of the U.S. to comply with the legally-binding GHG emissions reduction target. Despite the Clinton administration’s efforts to make an agreement less costly, its consent to the idea of legally-binding emissions reduction targets sparked off strong reactions from Congress and industry. Industry established the Global Climate Coalition, a powerful lobbying group, and launched a series of massive campaigns against the proposed legally-binding protocol.

The domestic opposition resulted in the Byrd-Hagel resolution, passed a few months before the COP3 of 1997 (known as the Kyoto Conference). The resolution stated that the Senate should not ratify any protocol which (A) would request developed countries to make emission reduction commitments without commitments from developing countries, and (B) would cause serious harm to the U.S. economy.\textsuperscript{55} The Byrd-Hagel resolution had significant implications, since it reduced the scope of potential agreements that would be accepted by the Senate. Although being tied up with the Byrd-Hagel resolution, however, the Clinton administration signed the Kyoto Protocol and agreed on a legally-binding obligation of reducing the U.S. GHG emissions by seven percent below the 1990 level during the period of 2008-2012. As the Kyoto Protocol left open many procedural issues

\textsuperscript{55} For the full detail, see, http://thomas.loc.gov/cgi-bin/query/z?r105:S25JY7-15:
regarding the rules for the flexible mechanisms, for taking into account carbon sequestration in calculating Kyoto targets, and for dealing with non-compliance with the Kyoto Protocol, there was still room to manoeuvre and make the Protocol more ratifiable domestically. U.S. diplomatic efforts following the Kyoto Conference, however, produced only modest results. Although the Clinton administration called for meaningful participation from key developing countries, they remained exempt from new emissions reduction commitments.

In addition, the U.S. delegation failed to get large sinks crediting enough to make the U.S. target at the COP-6 in November 2000 at The Hague.\textsuperscript{56} Deadlock at The Hague gave the impression that there would be little prospect of a rectifiable protocol. Talks reconvened at a resumed session of COP-6 in Bonn, Germany, in July 2001. The governments struck a political deal – the so-called Bonn Agreements – signing off on the most politically controversial issues under the Buenos Aires Plan of Action. A few months later at COP-7 (Marrakech, October/November 2001), negotiators built on the Bonn Agreements to finally adopt a comprehensive package of decisions – known as the Marrakech Accords – containing a detailed rulebook for the Kyoto Protocol, as well as important advances in the implementation of the Convention and its rulebook.

At the COP-7 meeting in Marrakech, Morocco October 29-November 10, 2001, negotiators in effect completed the work of the Buenos Aires Plan of Action, finalizing most of the operational details and setting the stage for nations to ratify the Protocol. The United States delegation continued to act as observers, declining to participate in active negotiations. Other parties continued to express their hope that the United States would re-engage in the process at some point, but indicated their intention to seek ratification of the requisite number of countries to bring the Protocol into force (55 countries representing 55 percent of developed country emissions of carbon dioxide in 1990). A target date for bringing the Protocol into force was put forward — the August-September 2002 World Summit on Sustainable Development (WSSD) to be held in Johannesburg.

South Africa — but this target was not met. The main decisions at COP-7 included operational rules for international emissions trading among parties to the Protocol and for the CDM and joint implementation; a compliance regime that outlines consequences for failure to meet emissions targets but defers to the parties to the Protocol after it is in force to decide whether these consequences are legally binding; accounting procedures for the flexibility mechanisms; and a decision to consider at COP-8 how to achieve to a review of the adequacy of commitments that might move toward discussions of future developing country commitments. When COP-8 was held in 2002, few major decisions were made, and developing country commitments were not significantly addressed.

The adoption of the Marrakech Accords thus marked the close of a major negotiating cycle. Climate change is a long-term problem, however, and the climate change process is far from over. Governments will continue to meet to discuss how best to implement the Convention and the Protocol, and to decide on next steps to combat climate change.

COP-8 (New Delhi, India, 2002), COP-9 (Milan, Italy, 2003), COP-10 (Buenos Aires, 2004)
These cops were not as important as U.S. merely played the role of spectators from sidelines. All three of these meetings centered on largely technical issues, and avoided major substantive declarations; what “next steps” involving developing countries should be remained a controversial issue, and was not resolved.

At these three meetings of the conference of parties to the UNFCCC, attempts were made to consider next steps after the 2008-2012 commitment periods, but these attempts encountered resistance from developing countries and some other parties. The announced reluctance of Russia at the Milan COP-9 to undertake ratification of the Kyoto Protocol called into question whether or when the Protocol might enter into force. Without U.S. participation, the required 55 percent of baseline emissions of parties would not be achieved if Russia did not ratify. However, just before the COP-10 meeting, Russia did ratify the Protocol on November 18, 2004. Thus this meeting in Buenos Aires was the
last meeting of the UNFCCC parties before the Kyoto Protocol entered into force on February 16, 2005.

When George W. Bush took office in 2001, it was obvious that the Kyoto Protocol did not meet the Senate’s criterion for ratification. Equally important, President Bush and his administration had a strong preference for an energy policy that would not easily correspond to the goals of the Kyoto Protocol. Bush rejected the Kyoto Protocol, describing it as “fatally flawed in fundamental ways”. His administration announced domestic voluntary measures based upon a carbon intensity target, GHG emissions per unit of output (DGP), as an alternative to internationally-negotiated absolute targets for emissions reduction. With regard to federal policies on technology, the emphasis was shifted from renewable energy and energy efficiency to hydrogen energy.

After his 2004 re-election for a second term, President Bush made it clear that he did not expect to review his stance on climate policy. The case of the US withdrawal from the Kyoto Protocol suggests that legislative action can undermine the executive-driven diplomatic effort to reach an international agreement that is inconsistent with the preferences of legislators. The Clinton administration favored the Kyoto Protocol and endeavored to seek international solutions before Congress hammered out a common ground. In essence, the Clinton administration took the strategy of bringing international solutions to the domestic scene where consensus on climate policy was still immature. Such a strategy turned out to be counterproductive and resulted in furious opposition from industry and Congress members. Throughout the international negotiations over the Kyoto Protocol, the Clinton administration could not close the gap in policy preferences between the administration and Congress. Ultimately, this strategy backfired and led to a domestic political situation where the chance of ratification was slim. The U.S. decision to repudiate the Kyoto Protocol not only caused a serious deterioration of its environmental effectiveness, but also threw international efforts to address climate change into confusion.

Rejecting the Kyoto Protocol

As it became clear that the voluntary 1992 greenhouse gas emission reduction goals would not be met, parties to the UNFCCC began negotiations that culminated in the 1997 Kyoto Protocol to the UNFCCC. This protocol outlined legally binding emissions reductions for developed countries to specified amounts below 1990 levels, averaged over the years 2008 to 2012. The Clinton Administration committed to a 7 percent reduction below 1990 levels. The Kyoto Protocol, if it had been submitted to the Senate and ratified, would have changed the U.S. commitment from a voluntary one to a binding commitment. Critics of the Kyoto Protocol raised concerns similar to those debated in connection with the UNFCCC in 1992, concerns about cost, comprehensiveness, and competitiveness. The possibility of failing to comply with a binding commitment intensified the focus on potential costs of the U.S. global climate change policy. The United States, along with most of the world, failed to meet the goal set at Rio of returning 2000 emissions to the level that existed in 1990, a fact that raises questions about the premise that significant greenhouse gas reductions can be achieved at little or no costs. 58

For those who believe substantial reductions in greenhouse gas emissions would entail substantial costs, the Kyoto Protocol’s potential costs lead to concerns about its effects on the country’s competitiveness and its exclusion of developing countries from mandatory emission reductions (comprehensiveness).

That cost, competitiveness, and comprehensiveness remain pivotal factors in climate change policy is illustrated by the current Bush Administration’s rejection of the Kyoto Protocol early in 2001. In his June 11, 2001 speech on global climate change, the President stated that the Kyoto Protocol was “fatally flawed in fundamental ways.” A primary flaw outlined by the President is the exemption of China and other large developing countries from its emissions reduction provisions. This “comprehensiveness” concern was closely followed by “cost” and “competitiveness” concerns. President Bush stated:

Kyoto is, in many ways, unrealistic. Many countries cannot meet their Kyoto targets. The targets themselves are arbitrary and not based upon science. For America, complying with those mandates would have a negative economic impact with layoffs of workers and price increases for consumers. And when you evaluate all these flaws, most reasonable people will understand that it's not sound public policy.\textsuperscript{59}

To respond to global climate change, President Bush called for a new approach focused on science and on flexible control mechanisms that employ market-based incentives. Among the principles that the President argued should guide such a program were the following:

We must always act to ensure continued economic growth in prosperity for our citizens and for citizens throughout the world.... And finally, our approach must be based on global participation, including that of developing countries whose net greenhouse gas emissions now exceed those in the developed countries.\textsuperscript{60}

The Administration’s 2001 proposal initiated a new voluntary greenhouse gas reduction program, similar to ones introduced in previous administrations. The plan focuses on improving the carbon intensity of the economy, reducing current emissions of 183 metric tons of carbon equivalent per million dollars of GDP to 151 metric tons per million dollars of GDP by 2012. The plan proposed several voluntary initiatives, along with increased spending and tax incentives, to achieve this goal. However, the Administration stated that three-quarters of the projected reduction would be achieved through current efforts underway, not by new initiatives. The Administration projected that by 2010, the program could result in an emissions reduction of approximately 4.5 percent relative to “business as usual.” However, this level would still be approximately 28 percent higher than the 1990 level defined by the UNFCCC. Further, without explicit requirements, it is unclear whether the targets set by the Administration will be met.

\textsuperscript{59} President George W. Bush, President Bush’s Speech on Global Climate Change, June 11, 2001.
\textsuperscript{60} Ibid.
A key piece of the Administration’s proposal was announced on February 12, 2003. Climate, Voluntary Innovative Sector Initiatives: Opportunities Now (Climate VISION) was created in response to President Bush’s goal of reducing greenhouse gas intensity of the U.S. economy. Climate VISION aims to assist energy-intensive sectors in developing plans to reduce greenhouse gas intensity, and to publicly recognize the efforts of those sectors.

**Congress and Budget**

There is little prospect of presidential leadership in the U.S. for ambitious GHG emissions controls in the short term. The position of the present Bush administration against a binding cap on GHG emissions seems entrenched. In Congress, efforts to introduce legislation for mandatory GHG emissions controls began to gain more support, but there is no majority at present. Furthermore, the 2004 elections were a setback for proponents for such efforts. While the Byrd-Hagel resolution stipulated that the Senate would not accept legally-binding internationally commitments unless major developing countries also made similar commitments simultaneously, the Bush administration no longer encourages developing countries to adopt such commitments. The administration is against the idea of legally-binding commitments. In this political situation, therefore, technology research, development and deployment (R,D&D) are the areas of climate policy where the potential cooperation with the U.S. looks best.

Indeed, after the withdrawal from the Kyoto Protocol, the Bush administration launched a series of international initiatives for energy technology R,D&D. During 2003 and 2004, the Bush administration initiated three multilateral agreements on international collaboration: the Carbon Sequestration Leadership Forum (CSLF), which coordinates carbon capture and storage technology research and development; International Partnership for the Hydrogen Economy (IPHE), which coordinates international efforts to

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62 Greenhouse gas intensity is a measure of emissions per unit of economic activity (often expressed as tons of emissions per thousand or million dollars of Gross Domestic Product). For more on greenhouse gas intensity, see CRS Report 98-235, *Global Climate Change: U.S. Greenhouse Gas Emissions-Status, Trends, and Projections.*
develop a hydrogen economy by stimulating collaborative R&D and developing common standards for hydrogen fuel; and, the Methane to Markets Partnership (MMP), which is an international collaboration to promote the collection of methane from landfills, coal mines, natural gas and oil systems in order to provide a clean energy source. The future generation (FutureGen) Initiative, a proposed $1 billion, zero-emissions coal-fired power plant, is one of the administration’s premier efforts against climate change, as it would employ carbon capture and sequestration, and would provide hydrogen fuel for use in fuel cells.

These initiatives for long-term technology development contrast sharply with the Kyoto Protocol that requested Annex I countries to reduce their GHG emissions in a relatively short term (i.e., the first commitment period of 2008-2012). The U.S. preference for long-term technology R,D&D reflects its natural resource endowments and political muscle in the energy sector. Notably, the huge domestic coal reserves influence the structure of energy supply and demand. As Figure 2 shows, coal has been a dominant energy source for electricity generation in the U.S., accounting for 50 percent of electricity generation in 2002, and its share is projected to steadily increase for the time being. In the electronic sector, switching from coal to a cleaner energy has not substantially taken place yet. Broad ranges of geographical distribution of coal and the high level of labor intensity in the coal extractive industry are two key factors in giving the coal industry political muscle. The interests of the coal industry have a powerful voice in Congress, another feature of the U.S. energy structure. Transportation accounted for 44 percent of the U.S. energy primary consumption by end-use sectors in 2001. This portion is very large, compared with the EU’s 30 percent and Japan’s 27 percent. Accordingly, CO2 emissions from the transportation sector accounted for 32.3 percent of total U.S. energy-related CO2 emissions in 2002.

The period between 1990 and 2002 marks CO₂ emissions from the transportation sector increased by 17.7 percent, and a steady rise is projected. These characteristics of the U.S. energy structure, including an abundance of cheap domestic coal, the entrenched coal interests, and the steady growth of transportation-related energy consumption, show how difficult it is for the U.S. government to commit to near-term actions to reduce GHG emissions, unless technological innovations in hydrogen energy, clean coal, and carbon sequestration and storage take place. It should be noted, however, that though the U.S. has general preferences for long-term technology developments, there is no consensus on how to allocate resources to specific technologies. Equally important, budget allocation in technology policy is frequently subject to pork barrel politics in Congress.

For Fiscal Year 2004, the first fiscal year after President Bush announced the Hydrogen Fuel Initiatives in January 2003, the administration proposed a total of $165.5 million, and Congress enacted $146.2 million. For Fiscal Year 2005, the administration proposed $172.8 million, Congress enacted nearly that much. These figures show that the two branches shared general interests in substantially increasing the amounts being spent. However, it was reported that during the FY 2004 budgetary process, House appropriators earmarked more than half of the budgetary expenditures, some of which were unrelated to DOE programmes, for their home districts. This kind of pork-barrel politics caused a slowdown in the administration’s research agenda.

Another example of Congressional intervention during the budgetary process was found in the FutureGen project. In the appropriations process for the 2005 budget, the House of Representatives did not approve the entire budget for international cooperation on hydrogen energy technology, which was initially demanded by the White House. On the one hand, the House rejected Bush’s request to fund the FutureGen with $237 million left over from clean coal projects. On the other hand, the House provided major funding boosts for other fossil energy research programmes, including oil and natural gas research. The Fiscal Year 2005 Interior appropriations bill explained the rejection by arguing that the administration would attempt to provide $237 million to fund the

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FutureGen "at the expense of most of the ongoing fossil energy research programs".\textsuperscript{67} Who gets how much of the budget pie turns out to be an example that does not conform to the executive branch's negotiations in international cooperation. The technology-oriented initiatives of the Bush administration are non-binding agreements with other governments, and do not demand financial or other commitments from the signatories. In addition, those initiatives are largely built upon a public-private partnership. Despite the non-binding nature of the agreement, it is expected that private utilities and other countries will pitch in about one-third of FutureGen's cost. An annual cycle of the normal budgeting process does not correspond with the long-term vision of technology-oriented international and public-private initiatives. A Senate Democratic aid said, "Without a strong funding commitment from Congress, the DOE will have a tougher time selling electric utilities and international participants on FutureGen". Although long-term development of climate-friendly technology is seen as one of the most politically benign options, its policies emerge in the budget process as a result of \textit{ad hoc} political interactions between the administration and Congress. While the budgetary process is sometimes subject to pork-barrel politics, Congress has yet to build a consensus on the fund allocation regarding technology R,D&. Without such a consensus, as well as institutional mechanisms to alleviate pork-barrel politics, there is no domestic basis for the credibility of international partnerships. Technology-oriented cooperation, which is seen as the most possible option for U.S. international leadership, is not immune to the credibility problem.

\textbf{The Governance Pattern of the U.S. Economy}

In fact, the Bush Administration's climate proposal and its current status may be further explained by the governance pattern of the U.S. economy, namely the constitutional framework, the weight of interest groups in policy-making, the historical reticence for government intervention, the U.S. unilateralism, and the overall trust in technology.\textsuperscript{68}

Thus far, the Bush Administration’s proposal has not been enacted, even in partial Acts, for institutional purposes. To become an Act, any domestic climate policy requires close cooperation, first between several executive agencies that may have conflicting views the Environmental Protection Agency (EPA) as well as the Departments of Energy, State, Agriculture, and Commerce), and secondly within Congress. Any bill introduced in either house of Congress (the Senate and the House of Representatives) has to go through several committees and amendments before being sequentially adopted by both branches, and signed into an Act by the President (unless over-ridden by super-majorities). During the 107th Congress, the Republicans held the majority in the House of Representatives, whereas the Democrats controlled the Senate. Consequently, political posturing and ideological contrasts thwarted agreement.

Among interest groups, the energy industry is the most powerful to influence the design of the Bush Administration’s energy policy, and in the background climate policy. Reports from various environmental non-governmental organizations (NGOs) point to the strong link between the energy industry and the White House energy task force. Furthermore, the official support of the United States for Dr Pachauri in the run-up to IPCC chairman election may have been induced by the recommendations of some energy lobbyists, including Exxon Mobil.
The energy lobby can take well-earned credit for the voluntary (instead of mandatory) measures advocated by President Bush and his Administration to address the climate issue. Still, such a policy is also the evidence of the historical reluctance of the U.S. corporations and citizens to governmental intervention. In the oil and car manufacturing sectors, the ever-postponed tightening of Corporate Average Fuel Economy (CAFE) standards of road vehicles as well as the low gasoline prices (due to relatively low petrol taxes) illustrate both strong interest-group pressure and minimal governmental interference. In this latter case, the interest groups do not only involve the oil industry and the car manufacturers but also all the U.S. citizens, for which the car is a cultural symbol of freedom.

"What goes on inside the state is critical in understanding foreign policy". Decisions at the federal level on climate change issues are made according to what best serves the United States' interests, or even the interests of who are in power. Powerful business and individual interests influencing the Bush Administration differ from the pluralist interests (including environmental NGOs) that were shaping the Clinton Administration’s climate policymakers. The former may be considered close to those of the G. H. W. Bush Administration in the early nineties. Still the overall context has changed. The United States clearly held leadership in the climate negotiations for several years during the nineties, because climate change was perceived at that time as an important environmental threat to national interests. The rejection of the Kyoto Protocol and the current Administration’s go-it-alone climate proposal mainly reflect the primacy of U.S. economic and energy security.

The last driving force of the Bush climate proposal is technological optimism. The United States has favored research and technology innovation for decades. On balance, this

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74 For example, the Climate Convention did not commit Annex I countries to binding targets due to the U.S. refusal to accept any. Similarly, various flexibility mechanisms were embedded in the Kyoto Protocol on U.S. proposal.
strategy has paid handsome dividends. The steadfast confidence that technology can
tackle any problem may be reflected in the Bush Administration’s calling for time in
order to drive market-based innovations and science-based actions. The underlying
assumption may be that, should climate change prove to be a serious threat (for which the
Bush Administration still requires further evidence), the new technologies will probably
‘solve’ the problem more cheaply and more quickly than the current technologies. Thus,
the Bush climate plan announces funds for research and development programs, such as
the Freedom Cooperative Automotive Research (CAR)\textsuperscript{76} for fuel cell-powered cars, as
well as for investments in renewable energies and carbon sequestration. The National
Hydrogen Energy Roadmap released by the Department of Energy in November 2002 is
also part of this research effort to reduce dependence on foreign oil and to meet the future
need for carbon-free energy.\textsuperscript{77}

United States preferred a convention with commitments that could be reached without
decisive domestic action. The United States was especially opposed to measures that
would force it to reduce emissions of CO$_2$ originating from the burning of the fossil fuels.
During the first phase of negotiations, United States rejected binding emissions
limitations on principle. And United States tried to formulate convention text in such a
way that the source of CO$_2$ emissions was not explicitly mentioned. The United States
demanded a comprehensive approach for the climate approach for the climate change
convention: all GHG should be viewed together. With this method of calculation, the
United States hoped to achieve the stabilization of all GHG by the year 2000, although it
assumed that there would be an increase in CO$_2$ emissions of 15 percent.

\textsuperscript{76} Available at http://www.energy.gov/HQPress/releases02/janpr/pr02001.htm.
\textsuperscript{77} Available at http://www.eren.doe.gov/hydrogenandfuelcells/pdfs/national_h2_roadmap.pdf