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Climate Change and the Credibility of International Commitments: What is Necessary for the U.S. to Deliver on Such Commitments?

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Abstract

The engagement of the United States is critical to the success of any international effort against global climate change. Although international climate efforts require long-lasting, credible commitments by participating countries, risk of failure to deliver on such commitments rises with the degree of gap that the domestic institutions permit between the executive and the legislature. The U.S. withdrawal from the Kyoto Protocol indicated that the Clinton administration's effort to bring international solutions into the domestic arena before domestic consensus was obtained was counterproductive. The congressional politics over budgetary allocation regarding the Bush administration's technology policies showed that general preference to a technology-oriented approach to climate change alone did not ensure the credibility of international commitments. These cases revealed that the U.S. climate diplomacy was lacking in domestic institutional mechanisms that bring the executive branch's deal at international negotiations, and the legislators' preferences at home, closer together. Current legislative bills, too, do not adequately address such institutional arrangements. For the U.S. to take leadership in international climate cooperation, domestic institutional frameworks which reconcile the interests of the two branches are necessary.

Keywords: climate change, global warming, United States, international commitment, climate diplomacy

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1. Introduction

The United States is the largest emitter of greenhouse gases (GHG) and has one of the most dynamic and innovative markets in the world, hence its engagement is critical to the success of any international effort against global climate change. One of the important lessons learned from the Kyoto Protocol process, however, is that an effort to introduce international solutions before domestic consensus emerges on climate change is likely to backfire in U.S. domestic politics. It may be, therefore, unwise for the international community to attempt to re-engage the U.S. in international climate policy until it settles on its own course of meaningful domestic action (Harrison 2000; Pizer and Tamura 2004). This line of argument itself sounds reasonable, but is insufficient since it does not investigate the conditions under which American politics deliver on credible commitments to international climate cooperation, and the mechanisms through which such credibility can be sustained for the long term.

This paper focuses on the question of U.S. credibility of international commitments; until now, little attention was given to this subject in the existing literature. Many surveys on the current status and trends of U.S. climate-related policies have been done. Some of them reveal strategies for dealing with the U.S. and briefly point out the credibility issue of U.S. commitments to international climate cooperation (Bodansky 2002; Christenson 2003; Busby and Ochs 2005; Tjernshaugen 2005). However, they do not fully examine the conditions under which the U.S. credibility of commitment would be strengthened or weakened. The U.S. is prone to the problem of credibility of international commitment, though it is not something unique to the U.S. That is to say, negotiating partners do not know whether the U.S. will, in the end, ratify or implement an internationally agreed commitment. Considering the basis for credible commitment, in parallel with developing proposals for international efforts against climate change, should be the immediate policy focus.

If the U.S. is able to deliver on credible commitments in international climate policy, one of the key places to examine the sources of credibility lies in domestic politics; the executive and legislature relations in particular. Executive and legislature relations over foreign policy are sometimes described as a competing, zero-sum game. This leads to a popular image that the Senate often constrains the executive branch in its pursuit of ratification of international

environmental treaties, since any international treaty must be approved by a two-thirds majority in the Senate. Members of Congress, who are likely to focus on myopic, parochial and district-specific concerns, do not have constructive roles to play in foreign policy. The involvement of such Congress members at best leads to deadlock and at worst prevents the executive from making rational and coherent foreign policies. This image of the legislative role in foreign policy suggests that U.S. foreign policies fail to make credible commitments to other states unless the executive effectively closes Congress out of the foreign-policy process.

Contrary to such an intuitional argument, this paper contends that adequate Congressional participation in international cooperation could enhance the credibility of U.S. commitments, thus leading to more stable patterns of U.S. engagement in international climate cooperation. A credibility crisis is likely to occur when legislatures are frustrated by what they view as an inappropriate international deal by the executive branch. What is necessary is not a strategy for leaving Congress on the sideline, but rather one for establishing well-designed domestic institutions that can benefit both the executive and the legislature. It is therefore important to correctly understand what roles the U.S. Congress play in providing constraint and credibility for American climate policies.

This paper is organised as follows: Section 2 examines the issues involved in the credibility of commitments to international climate cooperation, as well as the role of Congress in affecting the degree of U.S. credibility of international commitments. Section 3 provides a brief history of U.S. climate diplomacy. It argues that the failure of the Clinton administration to narrow the gap between the executive and the legislature led to a situation where there was little prospect of Kyoto Protocol ratification. It also contends that congressional disagreement on how to allocate funds to certain technology development has undermined the Bush administration's international technology-oriented initiatives. Section 4 explores possible ways of improving the U.S. credibility of international commitment. In terms of the credibility problem, the section assesses two sets of domestic climate policy proposals: the McCain-Lieberman bill, and the Hagel bills. The paper points out the importance of well-designed domestic institutional arrangements through which the executive branch's bargaining at international negotiations and the legislators' policy preference at home can become closer. If the existing institutions cannot effectively function as a moderator to

balance the interests of the two political branches, institutional change is necessary.

2. Climate Change, International Cooperation and Credibility Problems

2-1. Credibility Problems in International Cooperation for Climate Protection

The nature of global climate change demands international cooperation in reducing GHG emissions over the current century. The ultimate goal of the U.N. Framework Convention on Climate Change (UNFCCC) is to stabilise "GHG concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system". If the world pursues a path to stabilising at, for example, 550 parts per million (ppm) of atmospheric carbon dioxide (WRE 550), the required peak of net GHG emissions by 2030 and substantial reduction of emissions is necessary over centuries (IPCC 2001). Tackling global climate change essentially requires long-lasting, credible commitments by major actors to reduce their GHG emissions.

Credible commitments pose a political challenge. The nature of global climate change demands some form of international cooperation. Cooperation is not a situation where the common interests of individuals or organisations outweigh conflicting ones, but rather a process of mutual adjustment. In other words, while cooperation is contrasted with discord, it is also distinguished from harmony. "Cooperation, as compared to harmony, requires active attempts to adjust policies to meet the demands of others. That is, not only does it depend on shared interests, but also it emerges from a pattern of discord or potential discord. Without discord, there would be no cooperation, only harmony" (Keohane 1984: 51-54). This distinction means that common interests, such as the prevention of global climate change, do not automatically lead to cooperation.

Any form of inter national cooperation, by definition, requires participating states to adjust their policies according to consensus and make such commitments credible. International efforts against climate change are typically mixed with conflicts over prescriptions of policy solutions, partly because costs of abating GHG emissions and vulnerability to climate change vary considerably across nations. For international climate cooperation to be more stable and

deeper, it should ensure credible and continuous commitments by participating states. Without such commitments, mutual distrust is likely to bring cooperative behaviour to an end or leave it very weak at best. At the heart of international cooperation is whether international agreements actually lead to the mutual adjustment of state policies.

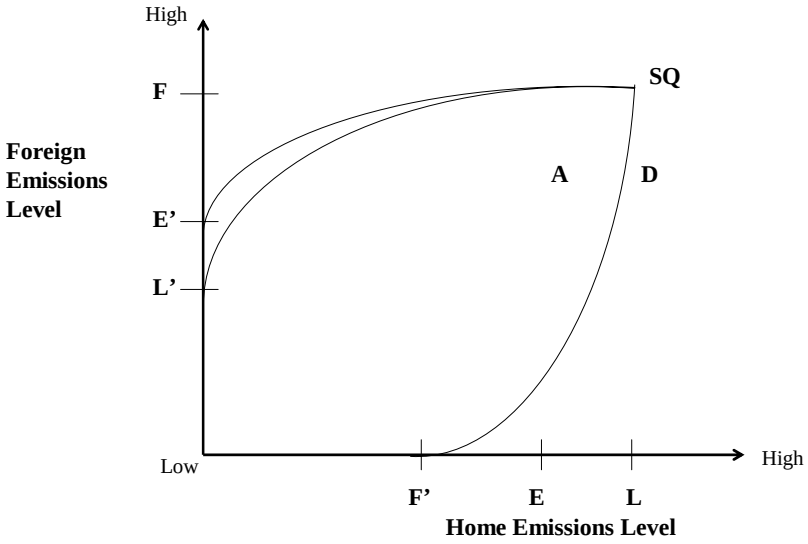
Domestic politics affect the degree of the credibility of international commitments: While domestic groups may override or subvert an agreement apparently supported by a state negotiator in some cases, domestic groups may provide the bedrock of stable commitments to international agreements in others (Underdal 1998; Martin 2000). There is a wide array of interests that influence the climate policy-making process. Such interests may well be pulling in different directions, since climate policy not only provides public goods, but also constructs institutional arrangements that can potentially confer asymmetric advantages upon some and costs upon others.

Figure 1 provides a stylised example of how the divide in preferences between the executive and legislature causes the credibility problem in international cooperation.[2] Imagine bargaining between two countries, Home and Foreign, on GHG emissions reduction. SQ indicates the status quo level of GHG emissions. E and L indicate the preferred outcomes of Home executive and legislature, respectively. Both prefer greater emissions reduction of Foreign, while E prefers a modest level of Home emissions reduction. For simplicity, assume Foreign as a monolithic actor has a preferred outcome of F. The range of possible bargains is found by considering each actor's indifference curves running through SQ. E and L would prefer any outcome to the right of the curves SQ-E' and SQ-L', respectively, to SQ. F would prefer any outcome above the curve SQ-F'. This configuration of preferences makes a point like A possible as the outcome of international negotiations, since all three actors prefer it to SQ. If Foreign lives up to the terms of A but Home fails to do so due to a political battle between E and L, Foreign will be worse off, at least in the short run, than the status quo (a point like D). If Foreign expects the probability of such reneging behaviour by Home, Foreign is likely to be unwilling to enter into negotiations. This simplified example underscores the value of being able to make credible commitments. From the Home's view, while both E and L prefer A to SQ, they cannot attain the benefits of moving SQ to A. In other words, whereas

[2] This argument is indebted to Martin (2000: 39-41).

both E and L can benefit from making a deal, they disagree about the exact terms of the deal and fail to close the gap between themselves.

Figure 1 The Commitment Problem in International Cooperation



Notes: Points E, F, and L indicate the preferred levels of GHG emissions of Foreign, Home executive, and Home legislature, respectively. SQ indicate status quo, A the international agreement, and D the outcome if Home fails to make credible commitments. This figure is indebted to Figure 2.1 of Martin (2000: 40).

Bridging the divide between the executive and legislature branches (E-L in Figure 1) is, therefore, a pre-condition for most countries to be engaged in international efforts against climate change. Such content never emerges from a political vacuum, but rather it is shaped through a political process where various social groups interact. As domestic institutions structure the interaction of various interests, political institutions are a key variable in affecting the way through which domestic sources of international credibility emerge.

When the future international climate regime comes up for discussion, however, its focus will be on how to devise international institutions that can encourage countries to make climate commitments (For concise reviews, see Aldy, Barrett and Stavins 2003; Bodansky *et al*. 2004). So far, most discussions have focused on an institutional framework at the international level or some normative principles around which an international institution will evolve. Furthermore, some argue the pros and cons of a specific form or process of

international climate architecture, for example, a global United Nations-based process, a coalition of most willing nations, or a combination of them. Others consider the type (or types) of mitigation commitments to be employed in a future international framework (Baumert and Kete 2002; Bodansky 2003). Little attention, however, has been given to domestic politics in the light of the future climate regime in the existing literature. Given the importance of the U.S. in international climate efforts, it is necessary to consider the U.S. domestic political institutions and their implications for the credibility problem.

2.2 U.S. Domestic Politics and Credibility Problems

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 a 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.

The modern theories of legislator organisations, however, show that legislators have various tools with which they can influence the behaviour of executive-branch actors.[3] 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 behaviour 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

[3] See Milner (1997) and Martin (2000) for concise reviews of modern theories of legislator organisations.

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.[4] 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 (for example, see *The Economist*, 27 June 2002). 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

[4] Millett (1990) argues that executive agreements can get the status of law without explicit legislative ratification, and have the same legal effect as treaties.

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 minimise legislative participation in the international cooperation process, or when legislators are frustrated by the executive branch's deal in international negotiations.

The next section looks at a brief history of U.S. climate diplomacy and shows how domestic politics (i.e., the immaturity in domestic consensus on both GHG emissions control and technology policies) indeed undermined the U.S. credibility of international commitments.

3. Immaturity in Domestic Consensus and Credibility Problems in U.S. Climate Diplomacy

3.1. Withdrawal from the Kyoto Protocol: When an External Pressure Strategy Failed

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 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 (COP2) 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.[5] 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 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 exempted 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 COP6 in November 2000 at The Hague (Grubb and Yamin 2001). Deadlock at The Hague gave the impression that there would be little prospect of a ratifiable protocol.

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

[5] For the full detail, go online to http://thomas.loc.gov/cgi-bin/query/z?r105:S25JY7-15:

to the goals of the Kyoto Protocol (Lisowski 2002). 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 favoured the Kyoto Protocol and endeavoured 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.

3.2 Technology-oriented Initiatives: Congressional Battle over the Budget Pie

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

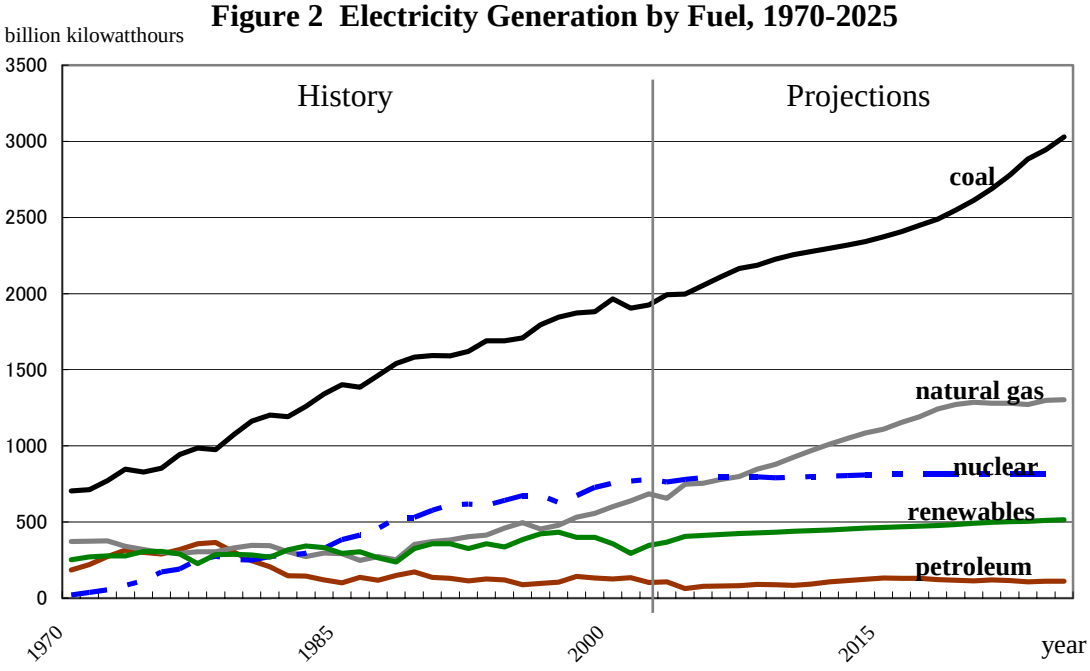
commitments simultaneously, the Bush administration no longer encourages developing countries to adopt such commitments. The administration is against the idea of legally-binding commitments. In this political situation, therefore, technology research, development and deployment (R,D&D) are the areas 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 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 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 (EIA 2004). In the electronic sector, switching from coal to a cleaner energy has not substantially taken place yet. Dana Fisher (2004) argues that a broad range of geographical distribution of coal, and the high level of labour 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

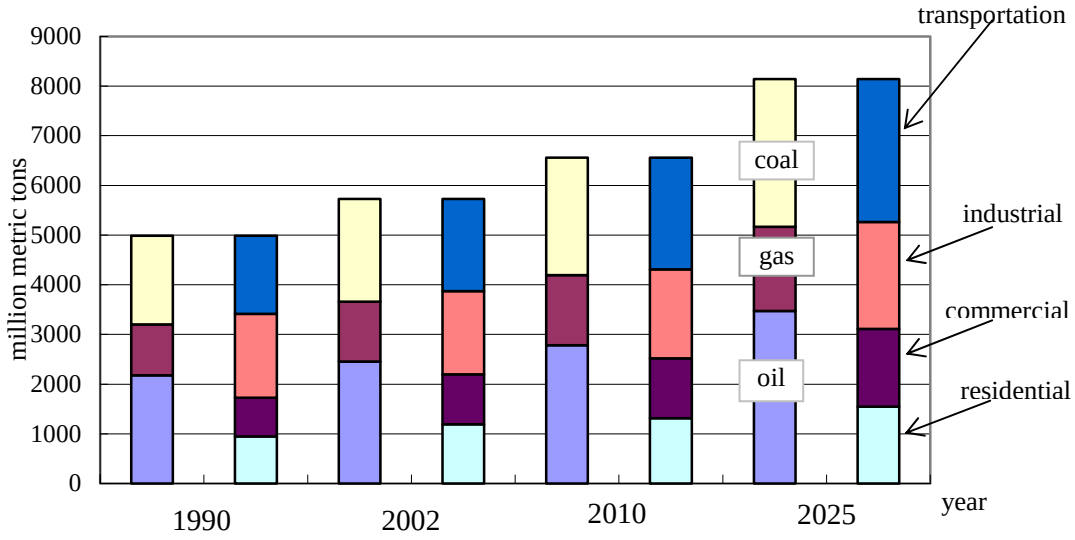
where politicians have a significant personal interest in protecting their states' economic welfare.

Figure 2 Electricity Generation by Fuel, 1970-2025



Source: Energy Information Administration. 2004. "Energy Outlook of 2004 with Projections to 2025".

Figure 3 Projected U.S. CO2 Emissionsby Sector and Fuel, 1990-2025



Source: Energy Information Administration. 2004. "Energy Outlook of 2004 with Projections to 2025".

Furthermore, a large portion of the transportation sector, in terms of energy consumption, is

another feature of the U.S. energy structure. Transportation accounted for 44% of the U.S. energy primary consumption by end-use sectors in 2001. This portion is very large, compared with the EU's 30% and Japan's 27%. Accordingly, CO_2 emissions from the transportation sector accounted for 32.3% of total U.S. energy-related CO_2 emissions in 2002 (EIA 2003). As Figure 3 shows, between 1990 and 2002 CO_2 emissions from the transportation sector increased by 17.7%, 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. Table 1 shows the budgetary proposal and enactment of hydrogen technology and fuel cell programs in the Department of Energy under the Bush administration. 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 (*Environment & Energy Daily*, March 4, 2004). This kind of pork-barrel politics caused a slowdown in the administration's research agenda.

Table 1. Hydrogen Technology and Fuel Cell Programs under Bush Administration

(million of dollars)

Program	FY2002E	FY2003E	FY2004P	FY2004E	FY2005P
Hydrogen Technology	28.9	40.0	88.0	82.0	95.3
Fuel Cell Technology	46.7	55.5	77.5	65.2	77.5
Sub-total	75.6	95.5	165.5	147.2	172.8
Other DOE or DOT items included by administration	n.a.	n.a.	16.2	11.8	55.0
Total	n.a.	n.a.	181.7	159.0	227.8

Notes: The other items included from DOE and DOT were: coal-based hydrogen production, nuclear-based hydrogen production, basic science, and safety codes/standards (DOT).

Source: Table 6.10 Hydrogen Technology and Fuel Cell Programs in the Department of Energy, Thomas L. Brewer and Christian Egenhofer, "The Political Economy of US Responses to Climate Change Issues" Final Report, Prepared for Environmental Studies Group, Economic and Social Research Institute, Cabinet Office, Government of Japan, March 2005.

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 FutureGen "at the expense of most of the ongoing fossil energy research programs" (*Environment & Energy Daily*, June 22, 2004). 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” (*Point Carbon*, June 22, 2004).

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 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&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.

4. Enhancing U.S. Credibility

Immaturity in domestic consensus in general, and the tension between the executive and the legislative branches in particular, increase the risk of failure to deliver on international commitments. How to reconcile the differences and enhance the U.S. credibility is a key policy question.

4.1. Institutionalising Legislative Participation

One way of bridging the divide between the executive and the legislature is to establish institutional mechanisms that allow legislators to engage in the international cooperation process. Well-designed domestic institutions can benefit both the executive and the legislature. That is to say, such domestic institutions allow the executive and the legislature together to benefit from moving from SQ to A in Figure 1. While the absence of such institutional arrangements can leave the executive branch unable to deliver on credible international commitments, it leaves frustrated legislators with little power except to block the ratification and implementation of international cooperation. Therefore, strategies to detract from legislative influence in the interests of “efficiency” are misguided. It is necessary for the two branches to find ways to work with one another in order to pursue goals that can only be achieved through international cooperation, such as climate protection.

For example, when the president wishes to engage in a long-term public-private partnership in technology R,D&D, such as a zero-emission coal plant initiative of the FutureGen, which requires commitments that will persist for at least a decade, he or she needs to gain the specific support of Congress as well as private utilities. Such support may be accomplished by engaging Congress in the process of appropriating necessary funds in terms of both amount and timing. The commitment can also become more credible by Congressional efforts to encourage private utilities to make long-term investment decisions.

Transaction-cost economics provides logical support for this line of argument. Transaction-cost economics explains the form of economic organisations in terms of how the organisation minimises the costs of the transaction. One of the sources for high transaction costs is the possibility of partners reneging on promises. Transaction-cost economics argues that actors create institutions - sets of implicit or explicit rules and decision-making procedures - which reduce or eliminate the opportunities for reneging or other transaction costs. By applying this argument to the political arena where collective action is difficult even if common interests exist, some debate that institutionalised interactions among individuals help to reduce individuals' fears of others' defection by enhancing the transparency of information, including policy preferences, thereby contributing to cooperative relationship and making collective action possible (see, for example, Keohane 1984).

Institutional literature based upon transaction-cost analysis is sometimes criticised for its naivety of distributive effects caused by institutional changes or creation. Under the current political configuration, indeed, neither presidential nor congressional leadership exists to make substantial institutional changes regarding climate policies. However, once the U.S. settles on its own course of domestic action against climate change, regardless of whether it is short-term emission-cap-oriented or long-term technology-oriented, it is likely to see that the U.S. will propose a new international regime based upon the domestic action in order to meet their interests. That is to say, if a cap-and-trade system becomes the centrepiece of U.S. domestic climate policy, American politicians are likely to design an international framework to, for example, minimise its negative effects on international competitiveness of American firms being capped by emissions control. If a technology-oriented approach continues to be pursued, American politicians may propose an international framework that maximises the

advantage of specific technology developments. In any case, for such international institutions favourable to the U.S. to work, the U.S. needs to fulfil its international commitments and domestic institutions need to gear up for such international leadership.

There are also empirical cases in which the legislature created new domestic institutional mechanisms and tried to balance the interests between the legislature and the executive. They include such disparate areas as international trade, food aid, and economic sanction. One of prominent examples can be found in the area of international trade. The international trading system is a "bottom-up" regime: countries maintain considerable control over their own national trading systems, and interactions between the systems have been established according to bilateral content. Some scholars attribute the success of the post-war international trade regime to this structural feature and argue for the applicability of such a bottom-up approach to the international climate regime (Victor 2004).

It should be noted, however, that changing domestic institutions also played an important part. In the international negotiations over the post-war international economic system in the late 1940s, the U.S. delegation proposed and signed the Charter of the International Trade Organisation (ITO). Like the fate of the Kyoto Protocol, however, the ITO was never ratified by the Senate. As a result, the post-war international trade regime began with a more moderate international institution, the General Agreement on Tariffs and Trade (GATT), which was signed as an interim measure before the establishment of the ITO. It took more than fifty years for the U.S. to ratify and implement an agreement to create a stronger international institution with provisions for multilateral enforcement, the World Trade Organisation (WTO), in 1994. Between the 1940s and the 1990s, U.S. domestic institutions were changed to close the gap between the negotiating agent and its principals at home (i.e., legislators), so that the agents' deal and the principals' preferences were closer together at the end of the WTO negotiation (Odell 2000). The institutional changes included, for example, the establishment of the U.S. Trade Representative (USTR) and the use of fast-track procedures in the 1980s and 1990s.[6] The importance of these domestic institutional changes

[6] The Trade Expansion Act of 1962 established a formal interagency process for the formulation of U.S. trade policy, requesting the president to establish an interagency trade organisation. Since then, USTR, initially founded as an Office of Special Trade Representative in 1963, has been playing the leading role in the development of trade-related policies and in the coordination of the interagency process of trade policy

for achieving deeper international cooperation should not be overlooked.

Well-designed domestic institutional mechanisms through which legislators can adequately engage in the process of international cooperation can take up the looseness of domestic rules requiring consultation and accountability, thereby enhancing the credibility of international commitment and therefore the level of cooperation achieved (Martin 2000; Odell 2000). The U.S. climate diplomacy is lacking in such domestic institutional mechanisms. Admittedly, the strategy of institutionalising legislative participation does imply a risk that negotiation positions and the final agreement become less ambitious. However, what may be lost in the negotiation phase seems to be recovered at the ratification and the implementation stages. For the U.S. to deliver on credible commitments to international climate cooperation, domestic institutional frameworks that reconcile the interests of the two branches are in order.

4.2 Prospects of Domestic Proposals: How Are They Addressing the Credibility Problem?

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 (Democratic, Connecticut).[7] 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 that would place binding

formulation. USTR also has kept close consultation with Congress. Five members from each House are formally appointed as Congressional advisors and additional members are appointed, depending on issues.

[7] For the full detail, go online to http://www.theorator.com/bills108/s139.html

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,[8] but so far there is no intention to immediately seek a vote on the bill (*Environmental and Energy Daily*, 31 March 2004).

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.[9] 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 endeavours 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 provide the executive branch with new authority as well as give long-term financial incentives

[8] For the full detail, go online to http://thomas.loc.gov/cgi-bin/bdquery/D?d108:300:./temp/~bdhhU0:

[9] 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 (Odell 2000).

for technology R,D&D.[10] 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.

Table 2 presents a comparison of the two climate policy proposals in the U.S. in terms of domestic policy designs and credibility issues.

[10] 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

Table 2 Comparison of Two Climate Policy Proposals in the U.S.: Domestic Policy Designs and Credibility Issues

	Domestic Policy Designs	Credibility Issues
McCain-Lieberman bill	Mandatory caps on 2010 CO_2 emissions at the 2000 level Cap-and-trade scheme	Does not explicitly address the credibility issue
Hagel bills	Gives the executive agencies authority to negotiate with developing countries Provides financial incentives for technology R, D&D	Allocates new authority and accountability to the executive agencies Provides incentives for business to make long-term investment

5. Conclusions

This paper contributes to our understanding of the credibility problem in U.S. climate diplomacy and argues for the necessity of domestic institutional mechanisms that can benefit both the executive and the legislature. Although international efforts against climate change require long-lasting, credible commitments by participating countries, risk of failure to deliver on such commitments rises with the degree of gap the domestic institutions permit between the legislature and their bargaining agents (the executive branch negotiators). The withdrawal from the Kyoto Protocol indicated that the Clinton administration's effort to bring international solutions into a domestic arena before domestic consensus did not emerge and was counterproductive. The congressional politics over budgetary allocation regarding the Bush administration's technology policies showed that general preferences to a technology-oriented approach to climate change alone did not ensure the credibility of international commitments. These cases showed that U.S. climate diplomacy was lacking in domestic institutional mechanisms that make the executives' bargaining at international negotiations, and the legislators' preferences at home, become closer. For the U.S. to take leadership in international climate cooperation domestic institutional frameworks that reconcile the interests of both branches are necessary.

Domestic consensus on how to address climate change in general, and the divide in policy preferences between the executive and the legislative in particular, have raised concerns about

the U.S. credibility of international commitments. There is no effective domestic institutional mechanism for reconciling the interests of the two political branches. At present, there is little prospect of presidential leadership in this issue. The Bush administration has little interest in taking initiatives in institutional re-arrangement. There are Congressional efforts to develop a domestic climate policy. The two leading proposals, the McCain-Lieberman bill and the Hagel bills, do not adequately address the credibility problem, while the Hagel bills include several elements that may improve the credibility of U.S. commitments.

The engagement of the U.S. is critical to the success of any international effort against global climate change in the long run. Without the credible engagement of the U.S., any international regime for climate protection cannot be sustainable. Moreover, once the U.S. develops its own domestic policy, it is in the U.S. interests to accommodate an international climate regime. International cooperation is not possible without credible commitments by all parties. Discussion about a future international climate regime tends to focus on the institutional design of that regime. The findings of this paper suggest that more attention should be paid to domestic sources of the credibility problems in international climate protection regime. Also, attention to U.S. domestic politics cannot be ignored. The question of whether the U.S. can find such domestic institutional mechanisms is critical to the development of a future international climate regime.

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