



## Response of the Pew Center on Global Climate Change to Climate Change Legislation Design White Paper: Competitiveness Concerns/Engaging Developing Countries

### Summary

- Competitiveness and developing country engagement are closely related issues, but each requires a different mix of policy responses.
- Competitiveness is a concern not for the economy as a whole, but more narrowly, for energy-intensive industries that compete globally. Studies of the economic effects of past U.S. environmental regulations do not find significant adverse impacts on economic competitiveness. Preliminary findings of an analysis undertaken by Resources for the Future for the Pew Center suggest that the “competitiveness” impact of a mandatory cap-and-trade system, at an allowance price of \$15 a ton, would be about a 2-percent decline in output in energy-intensive industries as a whole, with no discernable effect on employment. Effects on individual industries and firms could vary considerably.
- Unilateral border adjustment measures do not effectively address either competitiveness or developing country action and are potentially counter-productive.
- To effectively address climate change, stronger developing country action is needed across the full range of greenhouse gas-generating activities, not only in areas where their inaction may pose a competitive risk to U.S. industries.
- Once the United States is prepared to assume a binding international target, it will be reasonable to expect that major developing economies also take on some form of binding commitment. As agreed in the Bali Action Plan, stronger mitigation efforts by developing countries are to be “supported and enabled by technology, financing and capacity-building.”
- Competitiveness concerns and the issue of developing country action are best addressed, ultimately, by the same means: a new multilateral agreement establishing binding international commitments for all major economies.
- Toward that end, domestic climate legislation should:
  - Demonstrate U.S. leadership by setting ambitious, achievable, mandatory targets to reduce U.S. GHG emissions;
  - Declare it the policy of the United States to actively seek a new global agreement establishing fair, effective and binding international commitments for all major economies;
  - Provide positive incentives for the participation of major emerging economies in such an agreement; and
  - Establish targeted *interim* measures to minimize potential competitiveness impacts to trade-sensitive U.S. industries.
- Specifically, the Pew Center recommends:
  - Addressing competitiveness concerns through more generous treatment of trade-exposed industries in the emissions allocation process; periodic Congressional reviews to consider adjustments to target levels and/or allocations; and transition assistance to impacted states.

- Encouraging developing country action through market-based incentives; assistance for capacity-building and technology deployment; and a pledge to enhance such support once developing countries assume binding international commitments; and
- Exploring international sectoral agreements as a means of addressing both concerns.

**Response of the  
Pew Center on Global Climate Change  
to the  
Committee on Energy and Commerce and its  
Subcommittee on Energy and Air Quality  
U.S. House of Representatives  
on the  
Climate Change Legislation Design White Paper:  
Competitiveness Concerns/Engaging Developing Countries**

The Pew Center on Global Climate Change commends the Committee for initiating this examination of options for addressing competitiveness and developing country engagement, in the context of domestic climate change legislation, and welcomes the opportunity to provide input on these critical issues. This submission offers a general perspective on these issues and responses to the questions posed by the Committee.

## **OVERVIEW**

The issues of competitiveness and developing country engagement are closely related, and some policy approaches that might be incorporated into domestic climate change legislation could, to some degree, address both concerns simultaneously. However, it is important that these two issues be disentangled and that each be considered in its own right, both in order to understand their full characteristics and dynamics, and to identify policy options that may address one but not the other. Further, it is important to consider whether a particular policy approach that appears to hold promise in addressing one concern may complicate or undermine efforts to address the other.

Competitiveness Concerns – The potential impact of climate change action on economic competitiveness is of concern to all countries; resolving this concern is one key to mobilizing an effective global climate effort. To date, however, there has been little rigorous analysis of the potential scope or magnitude of the competitiveness impacts of mandatory U.S. climate policy.<sup>1</sup>

The competitiveness of the U.S. economy as a whole is not at issue. (According to a recent MIT analysis, for instance, meeting the emission reduction targets of S. 2191 would reduce GDP by less than 1 percent in 2050, by which time the U.S. economy will have more than tripled in size.<sup>2</sup>)

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<sup>1</sup> “Competitiveness” impacts must be distinguished from economic impacts generally. A mandatory climate policy will present costs for U.S. firms regardless of what action is taken by other countries. The “competitiveness” impact is only that portion of the additional cost that results from an imbalance between greenhouse gas constraints in the United States and in other countries.

<sup>2</sup> Paltsev S., J. Reilly, H. Jacoby, A. Gurgel, G. Metcalf, A. Sokolov and J. Holak (2007). “Assessment of U.S. Cap-and-Trade Proposals,” MIT Joint Program on the Science and Policy of Global Change Report 146, Appendix D (updated in 2008), Available at <http://mit.edu/globalchange/www/abstracts.html#a146>.

Rather, the concern is whether and to what degree certain sectors of the U.S. economy – namely, energy-intensive industries that compete globally – could be competitively disadvantaged by unilateral mandatory greenhouse gas (GHG) constraints. The potential economic consequences include loss of jobs and market share and the relocation of production facilities to countries with laxer or no GHG constraints; the attendant “carbon leakage” is a potential environmental concern as well.

Generally, the impacts on a given sector or firm would depend on its specific competitive positioning and its ability to substitute and innovate. In examining the economic consequences of past environmental regulation in the United States, most analyses find little evidence of significant competitive harm to U.S. firms. One comprehensive review – synthesizing dozens of studies of the impact of U.S. environmental regulations on a range of sectors – concluded that while the rules imposed significant costs on regulated industries, they did not appreciably affect patterns of trade.<sup>3</sup>

The Pew Center is presently sponsoring an analysis by Resources for the Future to better gauge the potential competitiveness impacts of unilateral mandatory GHG limits. This econometric analysis examines the historic relationship between energy prices and competitiveness indicators such as employment, output, and trade flows, and on that basis projects the potential impacts of a mandatory cap-and-trade system on energy-intensive industries (primary metals, fabricated metals, paper, chemicals and glass). Our preliminary findings suggest that, at a GHG allowance price of \$15 a ton, the “competitiveness” impact on those industries collectively would be about a 2-percent decline in output (value of shipments), with no discernable effect on employment. Effects on individual industries and firms, however, could vary considerably.<sup>4</sup>

Based on the available evidence, we believe competitiveness concerns are best addressed through a framework of binding commitments among the major economies, and are manageable in the interim through transitional domestic measures. A range of available policy options is discussed further below.

Engaging Developing Countries – The question of developing country engagement extends well beyond the confines of the competitiveness issue. Stronger developing country action is critical not only to ensure that U.S. producers are not competitively disadvantaged, but also because the collective goal of stabilizing greenhouse gas concentrations at safe levels cannot be achieved without it. From that standpoint, it is essential to encourage stronger developing country action across the full range of greenhouse gas-generating activities, not only in areas where their inaction may pose a competitive risk to U.S. industries.

Once the United States has enacted mandatory domestic emission limits and is prepared to assume a binding international target, it will be reasonable to expect that major developing economies such as China and India also take on some form of binding commitment. As they bear greater historic responsibility for climate change, and have greater capacity to address it, the industrialized

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<sup>3</sup> Jaffe, A.B., S.R. Peterson, P.R. Portney, and R.N. Stavins. “Environmental Regulation and the Competitiveness of U.S. Manufacturing: What Does the Evidence Tell Us?” *Journal of Economic Literature*. Vol. XXXIII, March 1995.

<sup>4</sup> Aldy, J. and W. Pizer (forthcoming). “The U.S. Competitiveness Impacts of Domestic Greenhouse Gas Mitigation Policies.” Pew Center on Global Climate Change. Arlington, VA.

countries have agreed generally to assist developing countries in their efforts. The United States and other industrialized countries committed in the 1992 U.N. Framework Convention on Climate Change to provide financial and technological assistance. This commitment is underscored in the new Bali Action Plan adopted by the United States and other Convention parties, which says that future mitigation actions by developing countries are to be “supported and enabled by technology, financing and capacity-building.” The United States’ strategy to deepen developing country engagement should, therefore, include the provision of assistance and other positive incentives for stronger action.

Key Recommendations – Competitiveness concerns and the issue of developing country action are best addressed, ultimately, by the same means: a new multilateral agreement establishing binding international commitments for all major economies. Only with such commitments can the United States be confident that all other major GHG-emitting countries – and our major competitors – are contributing equitably to the global climate effort. Securing such an agreement must be an overriding priority of U.S. climate policy.

Toward that end, domestic climate legislation should:

1. Demonstrate U.S. leadership by establishing ambitious, achievable, mandatory targets to reduce U.S. GHG emissions;
2. Declare it the policy of the United States to actively seek a new global agreement establishing fair, effective and binding international commitments for all major economies;
3. Provide positive incentives for the participation of major emerging economies in such an agreement; and
4. Establish targeted *interim* measures to minimize potential competitiveness impacts to trade-sensitive U.S. industries.

Specifically, the Pew Center recommends:

- Addressing competitiveness concerns through more generous treatment of trade-exposed industries in the emissions allocation process; periodic Congressional reviews to consider adjustments to target levels and/or allocations; and transition assistance to impacted states.
- Encouraging developing country action through market-based incentives; assistance for capacity-building and technology deployment; and a pledge to enhance such support once developing countries assume binding international commitments; and
- Exploring international sectoral agreements as a means of addressing both concerns.

## RESPONSES TO THE COMMITTEE'S QUESTIONS

**1) Do any of the three alternatives discussed in this White Paper – border adjustments, performance standards, or carbon market design – offer clear cut advantages as a legislative policy in terms of encouraging developing countries to limit their GHG emissions and simultaneously protecting U.S. industry in global trade markets? Are there other approaches Congress should consider, and if so, what are their advantages and disadvantages?**

In some form, each of the three alternatives discussed in the White Paper could have utility as part of a broader strategy to address competitiveness and developing country action. Each has disadvantages, however, and none would be adequate on its own. We examine these alternatives and, below, suggest several others.

IBEW/AEP Proposal – The Pew Center believes that the use of unilateral border measures against developing countries is a risky, potentially counter-productive approach that does not effectively address either competitiveness concerns or developing country action. It should be viewed only as one potential element of a broader strategy and invoked only as a last resort.

As noted in the White Paper, the WTO consistency of either this or other proposals for unilateral border adjustment measures is uncertain. A recent analysis by the National Foreign Trade Council, an umbrella organization representing major U.S. producers engaged in international trade, concluded that the IBEW/AEP approach, as reflected in S. 2191, would “very likely” violate international trade law.<sup>5</sup> Its legality probably could be determined only after a likely and lengthy WTO adjudication. WTO consistency, however, is only one issue. Also of concern is the potential impact on diplomatic efforts to address climate change and on trade relations generally.

The message projected by such an approach would be that the United States is prepared to wield a unilateral “stick” to ensure that its efforts to reduce GHG emissions are matched by other countries. Given the history and present context of international climate relations, such a message could produce more harm than good. From the perspective of the international community, the United States has failed to begin honoring its responsibility and commitment to address climate change. Enacting mandatory domestic GHG limits would begin to redress these concerns. But to simultaneously threaten unilateral action against other nations deemed laggards would be regarded as confrontational – rather than cooperative – and not in keeping with the spirit of the Bali accord. Representatives of China and other developing countries have already voiced concerns about the imposition of unilateral border measures.<sup>6</sup>

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<sup>5</sup> “WTO-Compatibility of Four Categories of U.S. Climate Change Policy,” National Foreign Trade Council, Inc., December 2007. Available at <http://www.nftc.org/default/trade/WTO/Climate%20Change%20Paper.pdf>.

<sup>6</sup> “Trade Plan Opposed by China, Brazil, and Mexico,” *Greenwire*. Available at <http://www.eenews.net/Greenwire/2007/09/26/10/>.

As an economic “incentive,” it is not at all apparent that such an approach would be sufficient to induce stronger climate action by developing countries. The added cost of meeting a border allowance requirement would apply only to goods exported to the United States. Trying to avoid that cost by reducing emissions, however, would likely be costlier, as the necessary measures would as a practical matter apply to production more broadly, not just for goods exports to the United States. Economically, it may appear more sensible to simply pay for the allowances. Or, exporting countries might choose to challenge the import requirements before the WTO, or to retaliate with import restrictions on U.S. goods, risking escalating trade conflicts. As U.S. Trade Representative Susan C. Schwab recently noted, “The unilateral imposition of restrictions can lead to retaliation, and dramatically impact economic growth and markets worldwide – while accomplishing nothing or worse when it comes to advancing environmental objectives.”<sup>7</sup>

Threatening or invoking unilateral trade measures also would lend legitimacy to those advocating similar action toward the United States. Some European officials have called for border measures targeted in particular at the United States, and the European Commission recently proposed that such measures be among the options weighed to address carbon leakage.<sup>8</sup> In the absence of an international agreement, the U.S. would likely remain vulnerable to such measures even once it adopts mandatory emission limits, as these limits are certain to be less stringent than Europe’s (relative to a 1990 baseline).

Finally, border measures would have only limited effectiveness in addressing competitiveness. As they would apply only to goods imported into the United States, any “leveling” effect between U.S. and foreign producers would be only with respect to the U.S. market. The field of competition is global, however, and future growth in demand for many energy-intensive goods will be strongest in markets outside the United States. Unilateral trade measures would not address any competitive disadvantage U.S. producers may face in the larger global marketplace.

Performance Standards/Regulations – The Pew Center believes that a standards-based approach could help address both competitiveness concerns and developing country action, but should be pursued by way of international sectoral agreements, not unilaterally at the border.

A number of industries, including aluminum, cement, and steel, have begun exploring sectoral approaches as a means of addressing climate mitigation internationally. With broad enough participation, multilateral sectoral agreements could address the competitiveness concerns of energy-intensive industries by ensuring equitable effort by all

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<sup>7</sup> Remarks to U.S. Chamber of Commerce, January 17, 2008.

<sup>8</sup> Commission of the European Communities (2008). “Proposal for a Directive of the European Parliament and of the Council amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading system of the Community,” Brussels, COM(2008) 16 final; 2008/0013 (COD).

major producing countries.<sup>9</sup> Sectoral commitments could take many forms, including targets and standards. One option being explored is the use of international benchmarks to establish performance standards (such as emissions per unit of output), which could be differentiated across countries and could be a basis for emissions trading. Sectoral agreements could be a means of promoting action by developing countries, which are more likely to assume such commitments than a binding economy-wide emissions limit. If confined to globally competitive sectors, however, they will not address the major sources of emissions growth in developing countries – power and transportation.

Congress can seek to encourage international sectoral agreements through its design of a domestic cap-and-trade system. For instance, sectors subject to a performance standard under a sectoral agreement could be assured of emission allocations based on that standard, rather than transition to a full auction. (Allocations would have to be pegged to historic or projected production levels, and producers exceeding those levels would have to buy additional allowances.)

Environmental Defense “Carrots and Sticks” Proposal – The Pew Center believes strongly in the use of market-based mechanisms such as emissions trading to reduce U.S. emissions cost-effectively and to provide incentives for emission reduction in developing countries.

Incentives could be provided to developing countries in two ways: 1) by recognizing emission credits generated through the international Clean Development Mechanism (with some exceptions) and through parallel procedures pursuant to a U.S. cap-and-trade system; and 2) by setting aside a portion of U.S. allowances to be allocated for verified reductions in developing countries. Both approaches would encourage private investment in lower-GHG activities in developing countries. The first also would provide lower-cost compliance options for U.S. emitters.

Market-based incentives should be targeted to activities or technologies that will contribute most quickly or significantly to emission reduction in developing countries, such as avoided deforestation and carbon capture-and-storage. Discounting emission credits over time (i.e., gradually requiring more than one ton of reduction for every ton of credit generated), as proposed, would strengthen the incentive for developing countries to assume commitments. However, we would caution against explicitly conditioning access to the U.S. market to pressure developing countries to adopt binding economy-wide emission caps. As a political matter, developing countries are unwilling to accept economy-wide caps; as a practical matter, most lack the technical and administrative capacity to credibly enforce them. Instead, the United States should seek a post-2012 framework allowing the major emerging economies to assume alternative forms of binding commitments, such as sectoral targets or policy-based commitments.<sup>10</sup>

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<sup>9</sup> Bodansky, D. (2007). “International Sectoral Agreements in a Post-2012 Climate Framework.” Pew Center on Global Climate Change. Arlington, VA.

<sup>10</sup> Lewis, J. and E. Diringer (2007). “Policy-Based Commitments in a Post-2012 Climate Framework.” Pew Center on Global Climate Change. Arlington, VA.

In addition to, or in place of, the three alternatives identified in the White Paper, the Pew Center would encourage Congress to consider the following options:

### **Addressing Competitiveness**

Two options, particularly if pursued in tandem, could effectively address competitiveness concerns without engendering the risks associated with border adjustment approaches. These are: 1) making provision for trade-exposed sectors in the allowance allocation process; and 2) allowing further adjustment of emission targets and/or allowances based on a periodic review of pertinent criteria.

Allowance Allocations – While the Committee has noted its intention to consider this option in a subsequent White Paper, we believe it should play a central role in addressing competitiveness and therefore should be examined alongside the options already presented.

As a general approach to allocation, the Pew Center favors providing most allowances for free at the start and over time moving toward full auctioning. Among the strongest rationales for free allocation is that it allows Congress to apportion allowances in ways that ease the transition for regions and sectors facing disproportionate costs to meet mandatory GHG limits. Specific options for trade-exposed energy-intensive industries include more generous allowances relative to historic baselines than for other sectors and/or a slower phase-out of free allocations.

Other governments have weighed this type of approach in their design of their domestic cap-and-trade systems. In Australia, for instance, a Prime Ministerial Task Group on Emissions Trading recommended free allowances for trade-exposed energy-intensive sectors, transitioning over time to allocation based on global benchmarking of best practice low-emissions technology.<sup>11</sup> Similarly, the European Commission, in its proposed rules for the EU's Emissions Trading Scheme after 2012, indicates that “energy-intensive industries which are determined to be exposed to a significant risk of carbon leakage could receive a higher amount of free allocation...”<sup>12</sup>

Periodic Review – The Pew Center believes that, given both the stakes and the uncertainties, legislation establishing a mandatory economy-wide cap-and-trade system should provide for a periodic, broad-based review by Congress to assess new information and to consider adjustments.

Among other objectives, the reviews should assess whether U.S. firms are suffering competitive harm and, separately, should evaluate the emission reduction efforts of other major economies. In assessing relative levels of effort across this group, it would not be reasonable to apply strict notions of “comparability.” (The Bali Action Plan calls for “comparability of effort” only among developed countries.) Rather, the criterion should be “equitable” effort, taking into account differences such as level of development, emissions intensity, per capita GDP, and per capita and historic emissions.

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<sup>11</sup> Commonwealth of Australia (2007). “Report of the Task Group on Emissions Trading,” Prime Ministerial Task Group on Emissions Trading, Canberra.

<sup>12</sup> Commission of the European Communities (2008).

The reviews also should take account of new knowledge on climate science, the state of technology, and the cost and efficacy of enacted emission reduction policies. Based on these reviews, Congress could consider whether to adjust overall target levels. More narrowly, to address specific competitiveness concerns, Congress could adjust allocations for trade-exposed industries, for instance by slowing the phase-out of free allocations.

It is imperative, however, that a review provision also allow for a strengthening of emission targets should science demonstrate that the risks of climate change are more immediate or severe than previously thought, or should new technology enable a stronger response. A similar provision in the Montreal Protocol led recently an accelerated phase-out of ozone-depleting substances, which also are potent greenhouse gases.

Transition Assistance – As a further measure to avoid and to ameliorate competitiveness impacts, Congress should assign a portion of the proceeds from auctioning emission allowances for use as transition assistance in affected states. Funds could be used to help firms in trade-exposed sectors adjust to emission requirements and, where competitiveness impacts are felt, to help affected workers and communities. Options include:

- Incentives to firms to deploy cleaner or more efficient technologies, such as accelerated depreciation of existing stock or tax credits to deploy specific technologies or produce less emissions-intensive products.
- Transition assistance to displaced workers, including retraining and education, income support, and maintenance of health and pension benefits.<sup>13</sup>
- Economic development assistance to affected communities, including targeted incentives to spur private investment in alternative lower-GHG industries.<sup>14</sup>

### **Promoting Developing Country Action**

In addition to measures addressing competitiveness, domestic climate legislation should provide a range of incentives for stronger action by developing countries. Private investment, both domestic and international, will be the primary means of meeting the costs of climate mitigation in developing countries. Any incentives provided by the United States should be designed, to the maximum degree feasible, to leverage private finance, for instance through market-based mechanisms as discussed above. However, other types of incentives and assistance are needed. Options include: 1) support to build the capacity of developing countries to measure, reduce, and verify emissions; 2) financing mechanisms to accelerate the deployment of critical technologies; and 3) a pledge to strengthen such support once developing countries have assumed fair and binding commitments.

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<sup>13</sup> Barrett, J. (2001). “Worker Transition and Global Climate Change.” Pew Center on Global Climate Change. Arlington, VA.

<sup>14</sup> Greenwald, J., B. Roberts, and A. Reamer (2001). “Community Adjustment to Climate Change Policy.” Pew Center on Global Climate Change. Arlington, VA.

As the Bali Action Plan calls for support to developing countries, specific commitments to provide such support multilaterally may well be one component of a comprehensive post-2012 agreement. Domestic legislation should anticipate this outcome and should, in addition, provide for immediate support on a bilateral basis. As a general approach, Congress could authorize certain types and levels of assistance and grant the executive branch discretion, subject to Congressional review, to determine year-to-year the appropriate split between bilateral and multilateral means of delivery.

Support for Capacity-Building – The Bali Action Plan calls for nationally appropriate mitigation action by developing countries that is “measurable, reportable, and verifiable.” It is in the interests of the United States to help ensure that developing countries have the capacity to develop and implement programs and policies that meet those criteria. As a positive incentive to developing countries, Congress should authorize immediate bilateral assistance to build stronger capacity in four priority areas:

- Emissions measurement – Strengthening capacity to accurately monitor and measure GHG emissions in key sectors and, ultimately, economy-wide as a basis for policy development, crediting and other market-based responses, and assessing progress.
- Economic modeling – Strengthening capacity to project emissions and economic conditions under different scenarios, and to evaluate the costs and emission reduction potentials of alternative mitigation approaches.
- Policy development – Strengthening capacity to design, implement, and enforce nationally appropriate policies that would contribute to emission reduction and could form the basis of international commitments.
- Technology assessment – Strengthening capacity to assess available mitigation technologies and to identify those best suited to national circumstance.

Support for Technology Deployment – Wide-scale deployment of low-GHG technologies in developing countries – particularly, high-cost technologies such as carbon capture-and-storage that deliver no ancillary benefits – will likely be feasible only with some form of international support. An effective program of support would employ a number of instruments, both bilateral and multilateral, which could be tailored to the specific technology needs of individual countries, and should be geared toward leveraging private finance to the maximum degree feasible. Options within domestic legislation include:

- Multilateral contribution – Appropriating funds or designating revenue sources to support U.S. contributions to a fund, administered by the World Bank and/or other international finance institutions, to provide low-cost loans and grants for technology deployment. Such a fund has been proposed by President Bush and is now under discussion with the governments of Britain and Japan.

- Conditional support – Making assistance conditional on the adoption by developing countries of climate-relevant goals and periodic reporting on progress toward achieving them.
- Export support – Providing low-interest financing through the Export-Import Bank and/or similar institutions to support the deployment of U.S.-manufactured low-GHG technologies in developing countries.

A Trigger for Increased Support – Whatever incentives or assistance are made available, they could be explicitly structured in ways to encourage developing countries to assume binding international commitments. For instance, Congress could clearly signal its intent to increase support upon entry into force of a comprehensive new climate agreement. Specific options include:

- Allowing U.S. emitters greater user of international offsets through the CDM or other mechanisms to meet their obligations under a U.S. cap-and-trade system.
- Declaring Congress’ willingness to accept a binding international target more stringent than the domestic target set under cap-and-trade legislation, with the additional reductions to be achieved through international offsets. (The European Union has pledged to strengthen its emissions target if an international agreement is reached, and has proposed to achieve half the additional reductions through international credits.<sup>15</sup>)
- Pre-authorizing an enhanced level of assistance to be provided by the United States bilaterally or multilaterally.

By establishing in law the United States’ intent to provide the support called for in the Bali Action Plan, such approaches could significantly enhance the prospects for a post-2012 agreement. Entry into force is an appropriate trigger for increased support for two reasons. First, it provides a direct incentive to developing countries to assume equitable commitments. Second, the agreement would enter into force only if the United States, through its own ratification process, had assessed those commitments and deemed them acceptable.

**2) Are the various policies mutually exclusive, or can they be combined in some fashion to achieve the best balance between reducing global GHG emissions and protecting U.S. industry and jobs?**

As discussed above, effective strategies to address competitiveness concerns and to encourage global climate action require a mix of policies, some determined in the context of designing a mandatory cap-and-trade program, and others developed on a multilateral basis.

**3) In terms of timing, how closely should legislation link commencement of a U.S. domestic cap-and-trade regime with policies to induce developing countries to limit their GHG emissions?**

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<sup>15</sup> Commission of the European Communities (2008).

The United States should begin to provide incentives for developing countries to limit their GHG emissions simultaneous with the establishment of a domestic cap-and-trade regime. If legislation provides for border adjustment measures, these should be invoked no sooner than 10 years after mandatory domestic GHG limits take effect.

**4) Should U.S. legislation distinguish between the “least developed” countries and other “developing” countries?**

Both in setting expectations for developing country action, and in delineating types and levels of assistance to developing countries, U.S. legislation should differentiate among the approximately 150 countries bearing that designation.

For a post-2012 agreement to be effective, binding commitments are needed only from those developing countries that are among the major economies. (Ten countries account for 71 percent of global emissions.<sup>16</sup> This group includes five developing countries: China, India, Brazil, Mexico and Indonesia.) These same countries are likely to be the largest beneficiaries of any market-based incentives provided under U.S. legislation, as they have the largest mitigation potential. Capacity-building and technology support also should be directed to these countries so they are better positioned to reduce emissions and take commitments, but should be available to lower-emitting countries as well.

**5) Which approach is most likely to satisfy WTO requirements? Which approach is most likely to result in the prompt resolution of any WTO challenge, and there by provide more certainty with respect to both global environmental benefits and the long-term impact on U.S. industry and jobs?**

The Pew Center has not closely examined, and has no position on, the issue of WTO consistency.

**6) How can climate legislation that includes both domestic and international components be drafted to align with any post-Kyoto Protocol accord the U.S. agrees to under the UNFCCC? How might U.S. adoption of climate change legislation affect the likelihood that such an agreement is concluded and influence the formulation of a U.S. international negotiating position?**

The fact – and the nature – of U.S. legislation establishing a mandatory domestic regime will have a very significant bearing on the prospects for an effective post-2012 climate agreement. Few if any countries will commit to reducing emissions without concrete action and commitments by the United States; the stronger the U.S. effort, the stronger will be the commitments of others.

The specific design of a U.S. cap-and-trade system will help determine the practicality of linking to other national/regional programs, and may heavily influence the shape of the post-2012

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<sup>16</sup> Includes energy-related CO<sub>2</sub> and non-CO<sub>2</sub> greenhouse gases; excludes land use emissions. IEA (2007) CO<sub>2</sub> Emissions from Fossil Fuel Combustion: 1971-2005, International Energy Agency, Paris; EPA (2006) Global Anthropogenic Non-CO<sub>2</sub>, Greenhouse Gas Emissions: 1990-2020, Washington D.C.

international trading system. Linkage and, ultimately, full global trading will ensure that emissions are reduced cost-effectively. Congress should therefore avoid design features, such as a safety valve, that would preclude linking the U.S. GHG market to others. On the other hand, innovations such as alternative approaches to crediting, if proved viable through the U.S. experience, could later be replicated at the international level.

Beyond setting the United States on a mandatory emissions reduction pathway, U.S. legislation could further enhance prospects for agreement by: beginning to deliver the support anticipated in the Bali accord; signaling a clear intent to strengthen that support upon the agreement's entry into force; and setting the stage for a stronger U.S. effort, provided all major economies assume binding commitments. Such provisions would give U.S. negotiators significant leverage to secure a fair and effective post-2012 agreement.