Question 2. Allocation
Submitter's Name/Affiliation: Eileen Claussen/Pew Center on Global Climate Change

Should the costs of regulation be mitigated for any sector of the economy, through the allocation of allowances without cost? Or, should allowances be distributed by means of an auction? If allowances are allocated, what is the criteria for and method of such allocation?

Pew Center Response

The Pew Center believes that the costs of regulation can be mitigated through the free allocation of many allowances, as well as through other measures, as discussed in the section on "Cost Containment" in the Additional Topics.

The responses to the following questions draw from two sources:

- An extensive body of analysis, conference and workshop proceedings, and other work undertaken by the Pew Center from 1998 to the present with input from the Center's Business Environmental Leadership Council (BELC), leading scholars, policymakers, and stakeholder groups. This work provides the foundation for the Pew Center's positions on these design questions. Documentation of this work is available at the Pew center website www.pewclimate.org. Information about the BELC and its 41 member companies can be found at http://www.pewclimate.org/companies_leading_the_way_belc/.

- Opinions expressed to the Pew Center in dozens of hours of discussion over several years with over 30 large corporations regarding design elements of a greenhouse gas (GHG) cap-and-trade program. The companies include several large utilities as well as companies in other sectors, ranging from primary fuels to manufacturing to retail. Although the Pew Center and the companies with which the Center has discussed design elements agree on the broad outlines of a cap-and-trade program, individual company opinions may or may not agree with the Center's positions on particular issues.

Resolving the question of how to allocate emission allowances will be fundamentally an issue of political acceptability. As observed in the successful acid rain trading program and noted in the Pew Center's previous analytical work (see, e.g., Ellerman et al), there is no appreciable difference in environmental effectiveness in using a free distribution, rather than an auction, to start a program. The environmental benefits accrue from the timing and quantity of reductions – recognizing that a program that starts sooner would require less drastic reductions. In other words, the allocation vs. auction debate is more relevant to political feasibility than environmental outcome. However, there are a number of key considerations and tradeoffs among the various approaches to allocation. The Pew Center does not have a position on the method of allocation, but has led workshops and discussions addressing these many considerations in developing an allocation method. The following response lays out these areas of consideration, and in some cases makes recommendations. It also describes the views of the

surveyed corporations on these issues. More detail on the implications of various allocation options can be found in the attached documents (along with a lengthier discussion on the pros and cons of free allocation).

Pew Center Analysis

Covered entities, especially those with significant compliance obligations and those in energy-intensive industries, will bear costs associated with transitioning into a market-based system for emissions allowances. To assist with this transition, a high percentage of allowances (e.g., 90% - 95%) should be allocated at no cost, rather than auctioned, at least in the initial years of a cap-and-trade system. A small initial allowance auction can fund transition assistance and research, development and deployment of climate-friendly technologies. This auction may serve as a price discovery mechanism to give firms an initial idea of the market price for an emissions allowance. Over time, the amount auctioned could increase, as firms successfully transition into the trading system and the associated expenditures decrease. In providing federal funding for technology development, a competitive process, such as a "reverse auction" in which funding is allocated based on emission reduction potential, can reduce program costs. In the early years of the program, the highest priorities for allocation should be transition assistance and technology development; over time the priorities should shift toward rewarding low-emitting technologies and practices.

The choice of allocation approaches may have strong distributional impacts, and thus may be a very contentious decision. For large point sources, allocation can be made either on the basis of historical emissions or against a sector-specific benchmark or set of benchmarks. Power plant allocations, for example, may be made on an input, net output, or gross output basis. The goal of allocation is to encourage the transition to a cleaner, more efficient generation fleet, but to do so in a way that recognizes that players in the industry have different starting points.

If the point of regulation is at the power plant level, policymakers must also decide whether to allocate allowances to non-emitting generators, and whether allocation will be fuel-specific or fuel-neutral. Allocating allowances to non-emitting generation would create incentives for the expansion of these sources, but may increase the burden on emitting generation. Fuel-neutral allocation may promote fuel switching and efficiency, while similarly increasing the burden on higher-emitting generation sources.

Another important issue is whether subsequent allocations should be fixed at the same level, or should be updated over time. The argument for updating is that a fixed allocation may disadvantage new and growing businesses. However, many economists argue that updating is economically inefficient because it encourages emitters to modify their behavior in order to increase future allocations, rather than simply meet the emissions cap at the lowest cost.[1]

[1] For example, if allowances are distributed per kwh of generation, that would provide an incentive to increase generation, lowering electricity prices and encouraging fuel switching and plant efficiency over end-use efficiency. Some argue that, if allowances are allocated based on average emission rates, updating would not encourage generators with high emissions rates to generate more because they would still have to buy additional allowances to cover their incremental emissions.

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Updating also creates uncertainty for business decisions as well as emissions outcomes. Ultimately, however, the inefficiencies and behavioral consequences of updating are an empirical question. While preliminary evidence on the Ozone Transport Commission NO_X program suggests that behavior is not significantly different in states that update versus those that do not, there is some consensus that the inefficiencies of updating grow as the magnitude of the program grows. (See RGGI Allocation Workshop Summary and Proceedings for more detail on this question.)

A reasonable compromise might be to update over long time periods (e.g., 5 or 10 years), which should not affect economic efficiency significantly and would contribute to a fairer allocation over time.

Another important issue is how to deal with new entrants. Updating automatically does this, but there are other methods that may be useful, especially if updating only occurs infrequently. The simplest is to require new entrants to purchase allowances on the open market. To the extent that allowances are allocated largely to existing sources, this means that new sources would need to purchase allowances from existing sources. Allowances could also be set aside in a "reserve" at a fixed price – this was the approach taken under the U.S. acid rain program. This reserve was never actually used because cheaper allowances were available on the market, but it was an important insurance policy for new entrants. Finally, allowances for new sources could be set aside and given to eligible new sources for free.

A federal cap-and-trade system may either directly allocate allowances, or may "apportion" allowances to the states, which can individually decide how to allocate allowances. (The Regional Greenhouse Gas Initiative does the latter.) Alternatively, the federal government may foster some degree of harmonization by requiring a certain percentage of each state's allowances go to certain purposes or entities, and then permitting states to allocate the remaining percentage as they wish. The Pew Center believes that it is preferable for the federal government to oversee the allocation process. Allocation is politically very difficult; addressing it at the federal level would save considerable state-by-state trouble and create an uneven playing field. In addition, although difficult, federal-level allocation can enable political solutions, which Congress may be able to utilize to reach agreement.[2]

Some analysts believe that a high level of free allocation will result in windfall gains for allowance recipients. The potential for windfall gains depends, for each economic actor, on the relationships between its compliance obligation, its allowance allocation, and its ability to pass along price increases. While windfall gain may accrue to some sectors that are able to pass along price increases (in excess of cost increases); it will not accrue to all firms within that sector and more importantly will not be available to all sectors. Furthermore, because some firms will experience additional costs, free allocation can serve to minimize this impact while still sending the appropriate signal that emission reductions are valuable. There is disagreement among analysts about the degree to which various sectors and firms are able to pass along price increases, and what level of free allocation may compensate those affected.

[2] Further analysis on allocation can be found in Nordhuas, R. 2003. *Designing A Mandatory Greenhouse Gas Reduction Program for the United States.* Arlington, VA: Pew Center on Global Climate Change, pgs. 27 – 29.

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Company Perspectives on Design Considerations

Among the companies the Pew Center surveyed, there was little consensus on the method of allocation. Opinions fell into a small number of distinct "camps" based on financial implications of various allocation methodologies.

The electric power utilities hold the strongest views, but these differ significantly, based largely on the relative carbon intensity of their generating fleets, which in turn corresponds to their fuel mix. Power companies with a relatively low-carbon fuel mix prefer allocation based on electricity output. Power companies with relatively high-carbon fuel mix prefer allocation based on historic emissions. Some manufacturing companies agree with the latter approach, based in part on their interests as large power users and depending on the carbon intensity of the generators supplying their electricity. Power companies in both camps indicate a willingness to consider compromise approaches depending on other aspects of a regulatory design package. Some utilities note that a compromise approach might involve beginning with an input-focused allocation that transitions over a period of years toward a more output-based allocation. Another utility points out the challenge and importance of reconciling differences between regions and economies fueled primarily by coal and regions with abundant natural gas.

Allocation is just one aspect of the larger picture in which all design elements will be considered. Some note that allowance distribution could serve as a means for awarding credit for early action. One utility holds that it is better to minimize the cost impacts on power customers in advance – i.e., at the allocation stage – rather than through the recycling of allowances. Another company suggests allocating allowances based on technology "benchmarking," which would determine a reasonable baseline level that reflects a balance of technologies used across an industry.

Another company suggests that the allocation system can and should be used to encourage the power generation sector to transition from higher carbon-intensity fleet to a lower one. They believe that instead of viewing allocation as a "compensation" issue, it is important to use the allocation process both to create the bridge to a new energy future and to send a message to the power sector of the overall direction Congress wants the industry to take.

One utility makes the important point that allocation is not the driving force on new plant investment decisions – rather, choice of new plants is based on the overall price signal created by the cap and associated flexibility mechanisms. Finally, there were differing opinions among the surveyed companies as to whether the federal or state government should play the role of deciding how much to allocate to individual emitters.

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Clarifying Questions 2a:

Technology R&D and Incentives

- What level of resources should be devoted to stimulating technology innovation and early deployment?
- What portion, if any, of the revenues from permits or the auction of allowances should be reserved for technology development? If some portion is reserved for this purpose, should that set-aside flow to the federal government with funds spent through the traditional appropriation process? Or should the funds be allocated directly to a non-profit research consortium, chartered by the federal government, which would then administer technology development and deployment projects? Or should there be some combination of these two options?
- What criteria should be used to determine how such funds are spent and which projects are chosen?
- What other mechanisms should be used to promote technology deployment? Options include tax credits, cost-sharing for demonstration projects, assistance to state energy programs, etc.

Pew Center Response

Effective research, innovation, development, and deployment strategies will be critical to enabling a low-carbon energy future. Current levels of federal RD&D need to be significantly increased to reflect parity with other sectors in the U.S. economy (on the basis of RD&D dollars spent per GDP) and with the magnitude of the challenge of enabling a low-carbon energy future. Equally as important, strategies for managing these funds need to be revamped. Current RD&D efforts on low-carbon technologies suffer from a cultural focus on niche markets, inter- and intra-agency "stove-piping," uncertainty caused by the annual appropriations process and cycle, and detrimental Congressional earmarks on scarce funds. The federal government needs a more integrated approach to RD&D in order to focus the appropriate agencies and resources on critical RD&D needs at appropriate times within a long-term R&D framework. Management modeled on the Defense Advanced Research Projects Administration (DARPA) is needed to instill a culture focused on development and commercialization of these technologies, and forward funding would help reduce the level of uncertainty and detrimental earmarks. Public/private partnerships and government procurement have a key role to play as developers and incubators of technology and to foster "learning by doing"—a critical step in bringing down the cost of low-carbon technologies and increasing deployment. While support for breakthrough technologies is often appealing, experts point out that what often appears to be a breakthrough is indeed the result of years of incremental investment and work. Public/private partnerships are an effective vehicle for enabling sustained incremental improvements in the performance and cost of low-carbon technologies.

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Policy-makers should be wary of the dangers of "picking winners" among technologies, but some support to push the likely candidates along can overcome cost barriers that would otherwise be insurmountable.[3] Research has shown that focusing exclusively on technology-push policies (instruments that offer technology funding incentives without motivating a corresponding demand for these technologies) or exclusively on technology-pull policies (mandates that generate demand for advanced technologies without corresponding support for their development) is more expensive than a combination of the two approaches.[4] Opportunities to introduce competition into the incentive process will reduce the costs of the program and avoid picking winners.

A competitive process to distribute incentives will reduce the costs of the program and avoid picking winners. A "reverse auction", in which bidders compete to provide some technology or service for the lowest cost, would allow reduction projects to compete for these incentives on a level playing field. An auction could specify technology categories as well as offer a broad competition to elicit new, as-yet-unknown technologies. Alternative funding mechanisms include forward funding, technology prizes[5], tax rebates, guaranteed government purchase agreements (i.e., renewable energy or IGCC-CCS energy), green loans and public-private partnerships.

The private sector is generally a more efficient engine of technological innovation than the government. The private sector is particularly good at identifying and allocating resources to those technologies that have the best potential to become financially self sustaining, since private investment is almost uniquely profit-oriented and return-driven. One example raised by companies is in energy efficiency programs. If the government creates frameworks incentivizing but not directing the private sector (tax credits, cap and trade rules that allow efficiency-based offsets, etc.) and allowing private companies and investors to easily monetize the value of efficiency investments, there is ample evidence that the private sector can achieve these at costs per kilowatt or BTU lower than those for which the government is an intermediary.

When it comes to large-scale, longer-term technologies, companies note that it can be effective to match private investment with public funding in some way, as in the case of existing partnerships for clean coal, nuclear power, and fuel cells. Companies expressing a view favor direct government investment and guidance for early stages of research development – the pre-commercial stages of product life cycle. Where infrastructure and programs already exist and are successful, (e.g., NIST grants or the Department of Energy's Industrial Technologies Program) these should be used and consistently funded.

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[3] "The 10-50 Solution: Technologies and Policies for a Low-Carbon Future". Washington DC, March 25-26, 2004. Alic, J.; D. Mowery; E. Rubin. 2003. *U.S. Technology and Innovation Policies: Lessons for Climate Change.* Arlington, VA: Pew Center on Global Climate Change.

[4] Goulder, L. 2004. *Induced Technological Change and Climate Policy.* Arlington, VA: Pew Center on Global Climate Change.

[5] A technology prize grants a monetary award for a specific goal in R&D to spur innovative step-changes in technologies. The best-known example has been the 2004 "ANSARI X PRIZE," which was awarded for the first successful private space flight.

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Given the relative advantages of the private sector in generating innovation, while it is important to fund federal R&D and deployment activities for certain climate-friendly technologies, it is also important to design a GHG cap-and-trade program to leave the greatest share of the money in private hands, where it will be most efficiently spent, rather than flowing to the federal agencies. For example, a cap-and-trade program that sets a meaningful target and allocates a high percentage of allowances for free to a large number of covered emitters would likely foster a robust private market in allowances. The money in such a market would stay in private hands, without the government acting as middle-man, creating with minimum waste a direct incentive for every company to deploy climate-friendly technologies and practices.

In 2004, the Pew Center conducted a workshop called "The 10-50 Solution: Technologies and Policies for a Low-Carbon Future,"[6] and published recommendations in several technology areas for types and levels of investment needed. Some specific funding recommendations included:

- International coordination to plan, fund, and deploy coal gasification with CCS trial projects that focus on remaining technical issues and with publicly shared results (e.g., adequately addressing remaining uncertainties will likely require four to six projects, at an estimated cost of approximately $5 billion, and an estimated project lifetime of 10 years)
- Establishment of carbon sequestration trial projects in the United States to validate the integrity of geologic storage (e.g., such validation will likely require four such projects at an estimated cost of approximately $1 billion, and an estimated project lifetime of 10 years)
- Reinvent the U.S. electricity grid to facilitate distributed power generation and consumption in ways that make this new model attractive to utilities, and promote energy storage technologies. The estimated price of this upgrade is in the $100 billion range.

Other mechanisms can provide incentives for deployment without direct funding. These include:

- Carbon capture and sequestration: Development of a regulatory system for sequestered carbon, including clarity about state-federal split of jurisdiction, and about which agencies at both levels have jurisdiction. In addition, companies note that public-private partnership in the development of private sector insurance products to cover various liabilities would reduce the financial uncertainty for those in the CO2 chain of custody.
- Renewables: Development of a uniform system to track renewable energy credits in a consistent way across the country and facilitate trading between multiple state programs; utilities and other companies with interest in generation, as well as firms in the investment community, note the value of improvements to the national power grid that facilitate distributed generation as a driver for renewable energy technology.
- Nuclear power: Expansion of scope of U.S. Department of Energy nuclear waste R&D to options beyond Yucca Mountain

[6] "The 10-50 Solution: Technologies and Policies for a Low-Carbon Future". Washington DC, March 25-26, 2004.

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- Combined heat and power (CHP) and distributed generation (DG): Support for net metering and incentives for uniform grid interconnection standards at the state level. Development of national test beds for new electricity grid systems.
- End-use efficiency: Promotion of state adoption of building codes. Expansion and tightening of product standards, potentially made tradable between manufacturers.Product standards on emissions will pull technologies into the marketplace by generating demand for them, and can complement a downstream cap-and-trade program by capturing emissions that would not be covered in a large-source system. Combining end-use standards with large-source emissions trading and funding for technology R&D can allow all sectors of the economy to play a role in reducing emissions in a cost-effective way.

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Submitter's Name/Affiliation: Eileen Claussen/Pew Center on Global Climate Change

Clarifying Questions 2b:

Adaptation Assistance

- What portion of the overall allowance pool should be dedicated to adaptation research or adaptation-related activities?
- How should these allowances or funds be administered?
- What is the appropriate division between federal vs. regional, state, and local initiatives?

Pew Center Response

The Pew Center recommends a national adaptation strategy that would assess the range of needs and provide guidelines or standards for infrastructure planning, as well as reform existing policies that promote maladaptive behavior. In addition to the needs outlined in this strategy, funding should be provided for the development of early-warning systems for heat waves and other related threats, enhanced monitoring of infectious diseases, and evaluations of the implications of climate change for disaster management. Support should also be given for efforts at local, state, and regional levels, which is where much of the adaptation measures will be taken. Indeed, because we are already observing effects of climate change (sea-level rise, increased storm intensity, ecosystem impacts), the funding needs for adaptation will grow substantially over time – from funding research and planning to supporting on-the-ground changes in infrastructure and response.

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Submitter's Name/Affiliation: Eileen Claussen/Pew Center on Global Climate Change

Clarifying Questions 2c:

Consumer Protections

- What portion of the overall allocation pool should be reserved to assist consumers?
- Should funds from the sale of permits or allowances be targeted primarily to low-income consumers, or should they be more widely distributed to benefit all consumers?

Pew Center Response

Initially, some portion of auction funds should be used for transition program for affected workers and communities, end-use efficiency investments, and otherwise addressing increased consumer costs as needed.

An earlier Pew Center report, *Worker Transition & Global Climate Change*,[7] indicated that for the average non-supervisory worker in a goods-producing sector (mining, construction, and manufacturing) who does not find a job until having completed two years of training, the total cost of a transition program would be about $106,000 per worker in 2010.

A separate report, *Community Adjustment to Climate Change Policy*,[8] concluded that that a new federal adjustment program for at-risk communities should be part of U.S. climate change policy. The report recommended that the U.S. government take the following actions:

- Designate and fund the Economic Development Administration (E.D.A.) of the U.S. Department of Commerce to design and implement an economic adjustment program for communities;
- Identify and assist communities that are particularly dependent on energy-producing and energy-intensive sectors before dislocations occur;
- Leverage and integrate additional resources by involving multiple federal agencies and state and local governments through federal and regional task forces; and
- Be flexible in addressing community needs by supporting locally determined, comprehensive strategies for five to seven years after the implementation of new climate policies.

While the amount of resources required for program implementation is difficult to determine, the authors suggested that an appropriate federal commitment might be $550 million ($50 million for planning, $500 million for implementation), and that resources be allocated so that a community has five to seven years to pursue adjustment.

[7] Barrett, J. 2001. *Worker Transition & Global Climate Change*. Arlington, VA: Pew Center on Global Climate Change
[8] Greenwald, J.; B. Roberts; A. Reamer. 2001. *Community Adjustment to Climate Change Policy*. Arlington, VA: Pew Center on Global Climate Change

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Note that, while transition programs are not formally part of the RGGI allocation process, the program does set aside 25% of the allowances for energy efficiency and strategic energy investments.

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Clarifying Questions 2d:

Set-Aside Programs

- What portion of the allocation pool should be reserved for the early reduction credit program and the offset pilot program?
- Are other set-aside programs needed?

Pew Center Response

The Pew Center believes early reduction credit and offsets need not be treated as set-aside programs, but rather as cost-containing flexibility mechanisms. Early reduction credit provides temporal flexibility, while offsets may provide geographic and sectoral flexibility to covered entities, and will be evaluated as part of the overall legislative package.

The Pew Center and nearly every company surveyed by the Center feel that credit or recognition should be given for GHG emission reductions achieved before the program becomes mandatory. The system should be designed so that the many companies that have voluntarily reduced their GHG emissions (as urged by the last three presidents) will not be implicitly penalized for doing so. Without such credit, companies that have taken early action could face higher costs for future emissions reductions than companies that did not pursue early voluntary reductions and thus have more "low hanging fruit" to harvest – therefore putting the early actors at a competitive disadvantage.

Credit should be provided not only to companies that registered their reductions under the U.S. Department of Energy's Voluntary Reporting of Greenhouse Gases Program (established under section 1605(b) of the Energy Policy Act of 1992), but also to those conforming to U.S. EPA Climate Leaders guidelines, the reporting protocol developed by the World Business Council on Sustainable Development and the World Resources Institute, the protocol developed by the World Economic Forum, and equivalent state and private registries, such as the California Climate Action Registry. The test should be whether the reductions were real and verifiable.

Note that the establishment of a "set-aside" program is by no means the only way to provide recognition of early action. Companies could be directly allocated allowances based on their registered emissions reduction. Some companies have suggested that covered emitters be allocated allowances as a function of their "baseline" emissions levels – the default baseline level being the amount emitted during a given year (or period of years). Emitters who could document beginning their emission reductions earlier than the default baseline year (or years) could move their baseline to that earlier period, leading to their being allocated a greater number of allowances. Such a program could either use set-aside credits or direct allowance allocation.

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Offsets are generally defined as out-of-system GHG reductions achieved by non-covered entities. Examples include greenhouse sequestration projects or verifiable credits from the programs of other countries with capped emissions. The use of offsets to meet allowance submission requirements should not be restricted, as long as the offsets reflect real, measurable, and verifiable reductions. In general, offset programs have significant benefits, because they provide flexibility in the geographic and sectoral location of emissions reductions. Inclusion of an offset program expands incentives for emissions reductions beyond those entities covered by the cap. These reductions opportunities will lower the overall cost of program compliance, and motivate a continuous search for low-cost, verifiable reduction opportunities.

Most companies note that offsets are a fundamental tool to efficiently lower the cost of emissions reductions both for firms and for the economy as a whole. They are also a critical market-based mechanism for directing investment to promising technologies and approaches for energy efficiency, low or no-carbon energy, low GHG manufacturing, and carbon sequestration. Offsets specifically expand the scope of the program and serve to unleash the power of the market to stimulate innovation and cost-effectively reduce emissions. One company notes that it will take decades to transition capital stock of power generating plants to low carbon sources, so there is a critical need for offsets as a way of cutting net emissions affordably in the short and medium term. Several companies note that the very function of a market-based system that allows offsets with firm rules regarding verifiability and liability for actual reductions will by its nature favor sources of offsets (all the way down to the specific project level) that are real and verifiable, and steer investment away from projects for which the expected reductions must be discounted due to risk factors (technical, commercial, political, etc.)

Regarding the special case of carbon sequestration, a broad "results-based" program — which provides rewards to project developers in proportion to the amount of additional carbon sequestered — has the potential to improve the cost-effectiveness of a national GHG mitigation program. A results-based program is also likely to result in more innovative solutions than "practice-based" approaches – approaches that give credit for certain practices without verifying the amount of carbon sequestered by each project. Nevertheless, some observers believe the government—in cooperation with researchers, landowners, and project developers—may be able to develop project-measurement and monitoring methods that are sufficiently accurate and reproducible to protect the environmental integrity of a large-scale program that allocates rewards on the basis of evaluations of individual projects.

The following would be needed to provide such integrity:

- A description of accepted practices for sampling and measuring carbon stocks at the project site;
- Methods to develop reference cases or baselines against which observed changes in carbon levels can be compared. Several different approaches to reference case development may be needed to accommodate the wide range of potential activities and settings.
- Methods to estimate or address the leakage effects, including permanence, geographical, and trade-offs among different GHGs;

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- Program methodologies designed to provide results that are reproducible by competent, independently-operating evaluators.

In general, offset programs have significant benefits, because they provide flexibility in the geographic and sectoral location of emissions reductions. Inclusion of an offset program expands incentives for emissions reductions beyond those entities covered by the cap. These reduction opportunities will lower the overall cost of program compliance, and motivate a continuous search for low-cost, verifiable reduction opportunities.

In order to verify emission reductions that are fungible with reductions made within the capped sectors, a robust system of measurement and verification is required. The Clean Development Mechanism in the Kyoto Protocol initially provided for a project-by-project review of proposed offsets that presents significant burden and uncertainty for entities seeking offsets. The Pew Center prefers the "standards" approach to offsets taken by the northeast Regional Greenhouse Gas Initiative (RGGI). RGGI's standards approach seeks to balance reduction verification with regulatory burden. Rather than reviewing projects one at a time, making judgments as to whether the project baseline is appropriate, whether project reductions are additional and real, etc., standards are set for a specific category of offsets, and project applications are assessed against that standard. This approach has two benefits: it makes program administration easier and project approvals more predictable, thus benefiting governments, environmental advocates and offset project developers by lowering the risk premium for such reductions. In the case of RGGI, the program is starting with the following offset categories: natural gas, heating oil, and propane efficiency; landfill gas capture and combustion; methane capture from animal operations; forestation of non-forested land; reductions of sulfur hexafluoride (SF_6) emissions from electricity transmission & distribution equipment; and reductions in fugitive emissions from natural gas transmission and distribution systems. RGGI expects to add project categories over time.[9]

The RGGI offset categories are not necessarily the right categories for a national program; they make sense for RGGI because RGGI only covered power plants. Offsets should be in source categories not covered by the cap-and-trade program; therefore, once the scope of the trading program is determined, one can evaluate which offsets are appropriate.

[9] Further information on offsets can be found in "Summary of RGGI Stakeholder Workshop on Greenhouse Gas Offsets", accessed at http://www.rggi.org/docs/offsets_workshopsummary.pdf.

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Clarifying Questions 2e:

Special considerations for fossil-fuel producers?

- Would some upstream fossil fuel producers be unable to pass the cost of purchasing permits or allowances through in fuel prices if they are the regulated entity?
- Is there a sufficient policy rationale for addressing these costs to justify the complexity of setting up and administering an allocation system for these entities?
- What other options exist to address the inability of fossil fuel producers to pass through these costs?

Please begin your response HERE. (no page limit)

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Clarifying Questions 2f:

Allocations for downstream electric generators?

- Should electricity generators be included in the allocation if they are not regulated? (Clarification: We mean to ask if an electric generator should be included in the allocation if the greenhouse gas regulation occurs at a point of regulation that is upstream or downstream from the generator, but not the generator itself.)
- What portion of the total allocation should be granted to the electric power sector? Should it be based on the industry's share of greenhouse gas emissions or some other factor?
- Should generators in competitive and cost-of-service markets be treated differently under an allocation scheme?
- How should permits or allowances be distributed within the electric sector? Should it be based on historic emissions? Electricity output? Heat input?

Pew Center Response

The Pew Center disagrees with the white paper's assertion that "All told, these costs would be offset completely by an allocation of roughly 5 to 10 percent of the total permit or allowance pool to fossil fuel producers," and would support a much larger free allocation, as described at the beginning of the response to Question 2.

The Pew Center supports allocating most allowances at the same point that regulation takes places in order to compensate those who are required to comply.

Power companies with a relatively low-carbon fuel mix prefer allocation based on electricity output. Power companies with a relatively high-carbon fuel mix prefer allocation based on historic emissions. Some manufacturing companies agree with the latter approach, based in part on their interests as large power users and depending on the carbon intensity of the generators supplying their electricity. Power companies in both camps indicate a willingness to consider compromise approaches depending on other aspects of a regulatory design package. They also generally agree that the most critical goal in reducing power sector GHG emissions in the medium and long term is to facilitate new plant investment in low-carbon and no-net-carbon technology, and many agree that the system should aim to phase out the highest-carbon plants in the generating fleet.

One utility notes that a compromise approach might involve beginning with a relatively input-focused allocation that transitions over a period of years toward a more output-based allocation. This sort of approach is one under consideration by a number of industry players. Another utility points out the importance of fairly reconciling differences between regions and economies dependent on coal and regions with abundant natural gas.

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Submitter's Name/Affiliation: Eileen Claussen/Pew Center on Global Climate Change

Clarifying Questions 2g:

Allocations for energy-intensive industries?

- Is there a sufficient policy rationale to have an allocation to selected energy-intensive industries? What industries should be included in the allocation?
- What portion of the overall allocation framework should be reserved for these industries?
- What are the appropriate metrics for determining allocations across different industries?

Pew Center Response

Allocation as a policy vehicle can serve multiple purposes – reducing costs, motivating and compensating early action, addressing transition issues, etc. However, it will also likely be the most contentious element of the trading system development. Implementation may be made more straightforward by using a consistent rule for allocation across all sectors. On the other hand, sectoral tailoring may be necessary to address concerns about global competitiveness. Allowance allocation may be a particularly effective way of accounting for the relative price insensitivity of different sectors.

For vulnerable stationary sources that face intense competition that could lead to offshoring (and even higher GHG emissions), allowances can be provided to help ease the transition of capital stock to newer, more efficient technologies and cleaner fuels.

In transportation, while there is no clear consensus on how to reduce emissions from private vehicles, many observers believe that demand from U.S. private vehicle drivers is inelastic in the short term, i.e., that vehicle drivers will be willing to pay a very high price for gasoline without significantly modifying their travel behavior (with the exception of short term reaction to dramatic price spikes) or vehicle preferences. One serious negative effect of this price inelasticity is that if vehicle drivers are essentially included in a national cap-and-trade program — for example, by requiring allowance submission by the importers and refiners of petroleum products burned for transportation — they might bid the emissions allowance prices very high, to the detriment of the more price-sensitive manufacturing sector. As is the case with any potential damage to certain industries, allowance allocation might be a mechanism to make whole those requiring relief — and to do so in a way that changes over time to increase pressure for those industries to reduce emission at a pace they can afford.

Question 2. Allocation
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Clarifying Questions 2h:

Allocations to other industries/entities?

- What other industries/entities (e.g. agriculture, small businesses, etc.) should be considered in the allocation pool?
- What should be the basis for their share of the total allocation as well as for the distribution among such industries/entities?

Please see response to Question 2g.