November 30, 2007

Comments of Sightline Institute
on
The Western Climate Initiative's
Design Questions for Stakeholder Review & Comment

These comments offer Sightline Institute's perspective on the "Design Questions for Stakeholder Review and Comment," to which the WCI has invited responses from the public. Sightline Institute is a not-for-profit research center, based in Seattle, whose mission is to promote policies and market solutions that foster environmental health and broadly shared prosperity in the Pacific Northwest.

Sightline's responses to these questions are guided by three core characteristics that we believe any emissions reduction mechanism ought to embody:

- **Effective**: The WCI market mechanism should set strict and declining limits for all emissions attributable to the WCI region. *In particular, the WCI emissions cap must apply to transportation fuels consumed in the region, which represent the largest single category of emissions from WCI member jurisdictions.*

- **Fair:** The WCI market mechanism must not allow unwarranted windfall profits—especially by historic emitters—and must provide a fair and equitable distribution of the economic burdens of meeting emissions-reduction goals.

- **Efficient:** To the extent possible, consistent with the other goals of the program, WCI market mechanism must minimize complexity, administrative costs, and the potential for externalities and unintended consequences.

QUESTION: What Sectors and gases should be covered by the cap and trade program, and within each covered sector, what point of regulation is most appropriate?

DISCUSSION: FOSSIL FUELS

Sightline believes that upstream points of regulation for fossil fuels are generally most conducive to an effective, efficient and fair system for reducing greenhouse gas emissions. ***Most importantly, an upstream point of regulation for fossil fuels would cover virtually all combustion-related CO_2 emissions in the region—including transportation fuels, which represents the largest category of emissions among WCI jurisdictions.***

Upstream regulation also may offer greater administrative efficiencies and lighter burdens for businesses and consumers than downstream points of regulation, while still sending price signals that encourage conservation to fossil fuels consumers throughout the economy.

However, Sightline can only recommend upstream points of regulation as part of a regulatory system in which *allowances are auctioned*, rather than allocated for free; or, more generally, in a system in which the potential for windfall profits is eliminated. Free allocation of emissions allowances to upstream fossil fuel companies will give these firms enormous, unearned, and unwarranted windfall profits, entirely at the expense of consumers. Under no circumstances could Sightline recommend an upstream point of regulation if such windfalls are possible. Fortunately, a system in which emissions allowances are auctioned, or otherwise dedicated to benefit the consumers and general public, eliminates the potential for unwarranted windfalls by fossil fuel producers and importers.

In the table on pages 18 and 19 of the WCI, an upstream point of regulation is best represented by element F: "Fossil fuel carbon content of fuels regulated at the appropriate upstream or midstream choke point for the fuel." This point of regulation would effectively obviate,

and substitute for, elements A, B, C, G, and H in the table, and partially substitute for option D.

Sightline sees two basic ways in which this option could be implemented: one in which the "choke points" are the points of entry into the WCI economy; and a second in which the "choke points" vary somewhat by fuel type and economic sector.

Option 1: Regulate fossil fuels at the point of entry into the WCI economy.

In this option, the first purchasers of any fossil fuels within the WCI region would be required to obtain and retire allowances equal to the CO_2 content of the fuels they purchase. The precise point of regulation could vary among fuel types; for example, the following "choke points" would capture the large majority of fuels consumed and produced within the WCI region:

- Petroleum refineries' purchases of crude oil produced outside the WCI region;
- Imports of refined petroleum products from refineries outside the WCI region;
- First purchases of crude oil and natural gas at any wellhead within the WCI region;
- First purchases of natural gas, oil, or refined petroleum products from pipelines originating from outside the WCI region;
- Coal at the mine gate, if the mine is within a WCI member jurisdiction;
- First purchasers of coal imported from outside the WCI.

This option offers the broadest and most comprehensive coverage for fossil fuel combustion, since it incorporates essentially all fossil fuel CO_2 emissions in the WCI region, from all sectors of the economy, into the WCI's market mechanism. In particular, this option implicitly includes transportation fuel emissions in the WCI market mechanisms. *Currently, transportation fuels are the largest category of greenhouse gas emissions in the WCI region.* Any regulatory system that fails to capture transportation fuels will either place the WCI emissions reduction targets perilously out of reach, or else put unwarranted and potentially

expensive emissions reductions burdens on other sectors of the economy.

In some ways, a fully upstream point of regulation fossil flues would function very much like an economy-wide tax on carbon emissions, in that the system would send consistent price signals for emissions reductions throughout all sectors of the economy. Unlike a tax, however, an upstream cap would continually readjust the price of emissions to ensure that the price signal would genuinely achieve the WCI's emissions targets. With carbon taxes level of the price signals would be predictable, but the effectiveness of any given level of tax would be difficult to gauge in advance. Thus, in the absence of an economy-wide cap on fossil fuel emissions, a carbon tax could necessitate continual re-evaluation and readjustment of taxation levels to ensure that desired reductions are being achieved. *Such adjustments would be achieved automatically, without government intervention, by an emissions trading market created by a firm, economy-wide cap*. Carbon taxes provide greater certainty about prices; but a cap would provide greater certainty about results.

It is especially worth noting that a strictly upstream point of regulation would not distinguish between fuel consumption by electricity generators and fuel consumption by other sectors of the economy. Thus, a maximally upstream point of regulation is likely incompatible with a load-based system for regulating emissions from the electricity sector, which would treat emissions from the electricity sector in a somewhat different manner than other economic sectors. Sightline recognizes that there are many complexities inherent in the electricity sector, and many good arguments for a load-based regulatory system; we are not inherently opposed to a load-based point of regulation. Yet we do recommend that the WCI exercise caution in adopting a load-based regulatory system, as we believe that such a system could introduce complexities and unintended consequences that could complicate the WCI emissions reduction mechanism. (The electricity sector is discussed at greater length, below.)

Compared with most other points of regulation, an upstream system would be fairly straightforward to administer. A system focused on first fossil fuel purchasers would involve relatively few firms, predominantly larger firms that handle high volumes of

fossil fuels, and that have the administrative resources to participate in an emissions trading market. In fact, many such firms already participate in energy commodities markets. This system also would be relatively straightforward to audit, since these firms carefully track their fuel sales. Finally, this point of regulation would integrate well with a potential national system that covered all fossil fuels as they entered the North American economy.

Although this option is fairly straightforward, like any regulatory system it may involve some accounting complications:

1. *Fossil fuels that are not intended for combustion.* Significant quantities of petroleum, as well as some natural gas, are not burned for energy, but are rather used to produce lubricants, asphalt, and chemicals such as plastics. However, an upstream point of regulation would treat these products as if their carbon had been emitted into the atmosphere. To deal with this problem, manufacturers and refiners could retain records of the carbon content of any plastics, asphalt, lubricants, and other non-combustible end products, and apply for emissions allowances (or, possibly, offset credits) for the avoided emissions.

2. *Fossil fuels ultimately sold outside the WCI region.* Some fossil fuels produced in the WCI, or products refined in the WCI, may be exported for consumption outside the WCI. As with non-combustion uses, exporters could track the carbon content of the fuels intended for sale outside the WCI, and be granted emissions allowances equivalent to the exported carbon. If the WCI expands, or is subsumed in a larger national or international climate system, this problem would gradually be reduced.

3. *Fossil fuels that are excluded from regulation for political, legal, or accounting reasons.* Should marine bunker fuel, aviation fuel for flights outside the WCI, or other fuels be excluded from a WCI regulatory scheme, an upstream point of regulation would also have to allow downstream purchasers of these fuels to track their sales of these products and be granted allowances or offsets for the carbon content of these fuels.

4. *Fossil fuels that are stored for extended periods before consumption.* In some instances, coal, oil, or natural gas could be mined from, or imported into, the WCI region, and then stockpiled for extended periods of time before it is used. Thus, it is possible that an upstream point of regulation could more accurately reflect production and imports of fuels than actual emissions. A possible solution is for firms that maintain large fossil fuel stocks to track beginning and ending inventories during a compliance period, and submit allowances (or receive offset credits) for the difference between opening and closing inventories.

Although the complications involved in upstream point of regulation are real, they are likely more modest than for any other point of regulation, and seem largely surmountable. In fact, similar sorts of accounting challenges would arise with downstream points of regulation—but those challenges would likely affect a far greater number of regulated entities. Moreover, these accounting exceptions do not seem unique or unusual, given the relatively complex set of taxation rules that *already* apply to many petroleum products, such as the tax refunds that are currently offered for gasoline and diesel fuels not used on highways.

If the WCI does not make an upstream point of regulation a mandatory requirement for all member jurisdictions, individual jurisdictions should be given the flexibility to choose an upstream point of regulation if they see fit. There is an especially strong case for upstream points of regulation in states, such as Washington, that produce little or no fossil fuels of their own. For Washington, there is a small number of points of entry for fossil fuels into the state, so upstream regulation offers tremendous administrative efficiencies, with few tracking and recordkeeping responsibilities for downstream businesses and consumers.

Option 2: Mixed points of regulation.

This option would place the point of regulation slightly downstream of Option 1, at least for some categories of fuels, but still upstream of most end users of fossil fuels.

For example, rather than placing the point of regulation on petroleum imports or crude oil sales from the wellhead, the WCI market mechanism could apply to many types of refined petroleum products—particularly gasoline and diesel—at the "terminal rack," as in Element B in Table 1. The terminal rack is the current point of taxation for the federal highway fuels tax and many state taxation systems, and may also be an appropriate point of regulation for other fuel products, such as aviation fuel and heating oil. In addition, state "tax at the rack" systems already account for imports and exports of fossil fuels across state borders, so a "cap at the rack" system could also serve the same tracking function. Note, however, that an emissions cap that covers highway fuels should also include other transportation fuels, especially airplane fuel; otherwise, there will be price incentives for some travelers to shift travel and shipping from a capped fuel stream (highway fuels) to an uncapped fuel stream (jet fuels).

As with refined petroleum products, the natural gas storage and delivery system may offer several viable choke points besides the wellhead or point of import, such as sales of purified fuel from natural gas plants, pipelines, or storage facilities.

Mixed points of regulation, in some circumstances, may offer some benefits over a purely upstream point of regulation. For example, regulation of highway fuels at the terminal rack could take advantage of the existing state auditing and taxation infrastructure; and, like an upstream cap, would place tracking, reporting, and related burdens on firms that are experienced with fuel monitoring and reporting requirements. Furthermore, some midstream points of regulation could solve the "storage" problem mentioned in item 4 in the previous section, by moving the point of regulation below the point at which fuels are removed from storage—thus more accurately reflecting current consumption of fossil fuels. Finally, midstream points of regulation could reduce or eliminate problems of tracking non-combustion uses of fossil fuels, as mentioned in item 1 in the previous section, since regulation could be limited to fuel products intended for consumption.

However, a point of regulation downstream from oil refiners would necessitate a separate system for oil

refineries and natural gas plants to track their own consumption of fossil fuels in the refining process. More broadly, the more varied and complex the system—and in particular, the more midstream points of regulation that are included in a predominantly upstream system—the more complicated and unwieldy the system could become. Such administrative and regulatory complexities could, at least in theory, create unwanted market distortions that hinder or delay the adoption of fuel-saving technologies.

Take, for example, combined heat-power (CHP) facilities that use natural gas or petroleum both for electricity generation and for process heat. Currently, unused heat from fossil power plants is the largest single component of energy waste in the North American economy—meaning that CHP offers enormous opportunities for energy efficiency and emissions reductions. However, with mixed points of regulation, each CHP facility might have to keep careful track of the flows of fossil fuels, electricity, process heat, and waste heat in order to accurately apportion emissions to the electricity sector vs. other sectors—a regulatory burden that is not insurmountable, but which could create a "chilling effect" for the uptake of these emissions-reducing technologies. Similar problems might apply to distributed generation systems that provide both electric power and space heating.

A market-based emissions reduction system that creates regulatory disincentives and complications for the adoption of CHP, distributed generation, or related fossil fuel technologies—technologies allow one fossil fuel stream to be used in multiple sectors of the economy—could drive up the economy-wide compliance costs of the program. And higher compliance costs would likely translate into steeper price signals sent to all fossil fuel users. For these and other reasons, we recommend caution in adopting a complex regulatory scheme with multiple points of regulation for different fuel streams; any benefits of mixed points of regulation must clearly outweigh the potential long-term economic costs.

DISCUSSION: ELECTRICITY

As the example of CHP facilities illustrates, electricity presents many complicated challenges for the WCI market mechanism. Other complications include:

- The impossibility of attributing particular generation sources to particular loads served;

- Transfers of electricity between jurisdictions, especially imports of fossil-generated electricity from outside the WCI region;

- The current concentration of renewable power in the Pacific Northwest, and coal in Utah, Arizona, and New Mexico, which may create regional imbalances within the WCI;

- "Rate-of-return" regulations for utility prices, which complicate any analysis of pricing signals and systemic emission reductions.[1]

Potentially, "rate-of-return" regulation of electric utilities may offer excellent opportunity to realize emissions reductions without substantially increasing consumer electricity prices. Under an effective system of rate-of-return regulation, load-serving entities (LSEs), such as consumer utilities, could be granted emissions allowances at no cost, without allowing those utilities to extract windfall profits at consumer expense. In theory at least, effective and well-intentioned rate-of-return regulators could prohibit utilities from raising rates to capture the opportunity costs of unsold allowances.

Paradoxically, however, there may be reasons to be concerned about a system that limits cost pass-through to electricity consumers. In particular, lack of such price signals could undermine incentives for electricity conservation and efficiency measures by end use electricity consumers. And since end use conservation and efficiency are often the least costly path to emissions reductions, a system that limits cost pass-through might actually *increase* the marginal cost of reducing a ton of CO_2 emissions. This, in turn, would push up the cost of emissions allowances, and thus the price signals that are

[1] Under rate-of-return regulation, public utility commissions set consumer electricity prices based the utility's needs to maintain service to its customers, pay adequate dividends to shareholders and interest to bondholders, and maintain and expand plant and equipment.

sent throughout the economy by the emissions cap. In this way, any potential consumer benefits of limiting cost pass-through within the electricity sector could be undermined by increased consumer costs outside the electricity sector.

Moreover, limiting price increases in electricity could encourage fuel switching from other energy sources to electricity. For example, many households in the Pacific Northwest still rely on electric resistance water and space heating, rather than natural gas—a legacy of many decades of low electricity prices. Despite substantial hydropower generation in the region, electric space heating releases prodigious quantities of greenhouse gases, since on the margins coal- and gas-fired generators provide the Northwest's electric power. Burning coal or natural gas to generate electricity, and then using that electricity for resistance heat in homes and businesses, releases far more GHGs than heating with natural gas directly.[2]

However, a regulatory system that effectively raised the price of natural gas for residential consumers, without raising the price of electricity, could lead many consumers to delay the transition from electric to natural gas heat. In some instances, limiting cost pass-through in the electricity sector could actually create incentives for an *increase* in the use of electric resistance heating, and a corresponding boost in GHGs resulting from space heating. Such a shift would undermine the goals of the WCI emissions system, and create higher cost burdens in other sectors for complying with an emissions cap.

Similar situations may arise in other arenas, such as transportation, in which electricity could compete with direct fossil fuel consumption over the coming decades. More generally, *any system that increases the price of direct fossil fuel consumption, without increasing the price of electricity generated from fossil fuels, could favor fuel switching rather than genuine emissions reductions from a given sector*. In such a case, economy-wide price signals from a carbon cap could result in higher consumer prices outside the electricity sector.

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[2] Unlike electric resistance heating systems, ground source heat pumps typically release lower levels of climate-warming emissions than do natural gas furnaces, provided that the marginal electricity to power the heat pump comes from natural gas.

Despite these concerns, Sightline does not oppose a load-based system for electricity regulation. Yet we do believe that load-based regulation could create significant complications in a comprehensive emissions reduction system that covers the entire WCI economy—complications that might not arise if the system just covered the electricity sector, and not other fossil fuel streams. Thus, Sightline strongly recommends the WCI not adopt a load-based regulatory system for the electricity sector without careful, thorough, and comprehensive study of the potential economic effects of such a system. This study should include econometric modeling of load-based, generator-based, and upstream points of regulation for electricity; and it should look broadly at the potential effects of each system on consumer prices and compliances costs, and any counterintuitive effects on prices, technology adoption, and fuel choices.

Regardless of the point of regulation for emissions from electricity generators within the WCI region, electricity imports from outside the WCI region pose a special challenge. To ensure genuine, economy-wide emissions reductions from the WCI region, the market mechanism ought to subject out-of-region generation to the same emissions reduction goals as in-region generation. Otherwise, reductions in emissions from generators within the WCI could be matched by increases in emissions from generators outside the WCI—with no actual net reductions in emissions.

However, it is impossible in practice to determine the specific GHG emissions that result from any particular interstate power purchase—which, quite obviously, complicates the calculation of emissions from the WCI economy. One possible solution to this problem is to assign a default emissions value to all electricity purchases from outside the WCI. Sightline offers no advice on the proper default value—except to note that any value lower than the per-megawatt emissions rate of the *most polluting generator in the exporting state or region* offers opportunities for electricity purchasers to engage in "contract shuffling," or other attempts to conceal high-emissions electricity generation from the WCI's emissions cap.

DISCUSSION: NON-COMBUSTION EMISSIONS

The ability to reliably measure emissions is central to an effective emissions market mechanism. Without accurate measurement, there is no way to determine how many allowances any emitter must obtain, nor any way to ensure that the overall emissions reduction goals are truly being met. Thus, Sightline believes that the WCI emissions market mechanism should cover *only those emissions that can be reliably quantified*. Emissions that cannot be reliably quantified can be addressed through complementary or auxiliary policies, or possibly be eligible for a system of offsets.

Although emissions from fossil fuel combustion represent the large majority of CO_2 emissions within the WCI, substantial additional emissions result from fugitive releases of CO_2, methane, and high-global-warming potential gases. These emissions include Elements D, E, and K in the table on pages 18 and 19. Sightline believes that, to the extent that these emissions can be reliably measured and quantified, they should be included on equal footing with fossil fuel combustion emissions. Once included in the program, such non-combustion emissions should be subject to the strict, declining limits required by WCI emissions reduction schedule.

Sightline is unsure of the extent to which net emissions from the agriculture and forestry sectors can be reliably quantified; opinions differ on the subject, and Sightline won't venture to adjudicate the debates. But clearly, both sectors—particularly the forest sector in British Columbia, Oregon, California, and Montana—play an important role in overall, net greenhouse gas emissions from the WCI. Ideally, the WCI market mechanism should work to encourage emissions reductions and carbon storage in these sectors.

However, if it is determined that net emissions or sequestration from the agriculture and forestry sectors are difficult to quantify in the aggregate—or, alternatively, that long-term uncertainty about carbon storage overwhelms any short-term certainty about annual carbon flows—we suggest that it may be appropriate to treat these sectors somewhat differently from measurable fossil fuel emissions and point sources. To provide incentives for carbon storage in agricultural soils and forestlands, these

sectors may be ripe for eventual inclusion in a rigorous, carefully constrained system of emissions "offsets." Incentives and standards for agriculture and forestry may also be viable options for auxiliary policies, outside the WCI emissions market mechanism. Beyond these comments, Sightline takes no position on whether these sectors are appropriate for inclusion in some form of cap and trade system.

QUESTION: What factors should be considered in determining the relative role of the cap-and-trade program as compared with complementary policies in reaching regional emission reduction goals.

For emissions that can be reliably measured, *complementary policies should not substitute for including those emissions in a strict, declining emissions regulatory system*. Sightline believes that complementary policies—such as vehicle and appliance efficiency standards, carbon taxes, and the like—may provide many benefits, particularly by cushioning increases in energy prices. But such policies cannot, by themselves, guarantee compliance with WCI goals and emissions targets.

For example, improving vehicle fuel economy standards may help conserve fuel; but if improved vehicle efficiency is also coupled with increased vehicle travel, the improved standards may not reduce actual greenhouse gas emissions from the transportation sector.

Only by including transportation fuels in an emissions reduction system can WCI jurisdictions *guarantee* that emissions levels will actually meet the WCI targets. If complementary policies are successful in themselves at reducing transportation emissions, this will have the effect of reducing the price signal sent by the emissions cap—potentially softening the energy price impacts of the program on consumers.

QUESTION: How should the allowances be distributed?

In theory, the method of distributing allowances has little or no bearing on the effectiveness of the program; both free and auctioned allocation of allowances will send largely identical price signals throughout the economy.

However, *the method of allowance distribution determines the basic economic fairness of the system.* In most market situations, firms that receive allowances for free will have the opportunity to reap unwarranted and unearned windfall profits, entirely at consumer expense. The economic literature clearly shows that, in both theory and practice, the lion's share of the opportunity cost of allowances used by a firm can be passed on as higher prices to consumers. Firms that receive free allowances will thus receive higher prices for their goods, without any corresponding increase in the costs of production—which is a perfect recipe for profit windfalls.

Auctioning, however, could help prevent such windfalls, by matching price increases with cost increases. Auctioning would also provide the public with a stream of revenue that can be used to cushion the consumer and employment impacts of an emissions reduction system.

For these reasons, Sightline generally feels allowances should be auctioned, rather than distributed freely. Exceptions could be made for cases in which allowances are granted to entities that are unable to pass on costs to consumers, such as rate-of-return regulated utilities (though, as discussed above, we believe that careful modeling of systemic cost impacts should be undertaken before such a system is adopted). Similarly, some free allocation to entities that operate on the behalf of consumers or affected workers could help cushion the effects of rising prices or economic shifts resulting from carbon emissions limits. Nonetheless, full auctioning of allowances would be the most transparent method for preventing profit windfalls, and would allow for a revenue stream that could meet many of the equity goals of the program.

QUESTION: What roles and key objectives, if any, should an offsets mechanism play in WCI?

The primary object of an offset mechanism should be to enable the cap-and-trade program to meet its emissions-reductions targets. Emissions in sectors not covered by the WCI cap may account for 10 to 20 percent of the region's total emissions (or possibly more, if some categories of fuels are excluded from the cap for political

reasons—a course we would not recommend). Thus, realizing profound reductions in emissions could be extremely difficult without a system of offsets encouraging reductions in sectors outside the cap.

A well-designed offset mechanism should also reduce the potential for price spikes, and allow for lower-cost emissions reductions. Some emissions reductions projects outside the capped WCI sectors will likely cost comparatively little per ton of CO_2 reduced. Thus, inclusion of offsets as a substitute for reductions in the capped sectors would likely reduce the marginal cost of emissions reductions in the program overall. In addition, careful design of an offset system could increase the supply of offsets available as prices rise—thus reducing the chances of severe price spikes.

QUESTION: How should the WCI design principles that reductions be real, surplus/additional, verifiable, permanent, and enforceable be translated into practice?

Some imprecision in emissions reductions is likely to be present in almost every offset project. Yet, to guarantee that WCI emissions targets are met, it is vital that offsets provide some certainty that stated emissions reductions for offset credits are actually achieved. One solution to the problem of uncertainty would be to apply a "discount" to offsets that varies with the uncertainty inherent in different types of offset projects: greater uncertainty in emissions reductions would be matched with a steeper discount. This could help ensure that reductions meet or exceed their specified per-ton value, even given the inherent uncertainty in any particular project.

QUESTION: Should there be limits on the extent to which offsets can be used to meet compliance obligations? Should such limits change over time?

There are good reasons to move cautiously with offsets at the outset of an economy-wide emissions cap. Allowing program participants to meet their emissions reduction goals primarily through the use of offsets, rather than by reducing emissions within the capped sector, would mute incentives for end-use efficiency and low-carbon alternatives to fossil fuels. Thus it may be important,

especially at the beginning of the program, for the use of offsets to be limited, to ensure that economic and infrastructure adjustments in the capped sectors are commenced as soon as possible.

There are at least two types of limits that might be considered in designing an offset program:

1) Limits on offsets as a share of total allowances: Such limits would be designed to ensure that there are genuine emissions reductions from within the capped sectors. The Regional Greenhouse Gas Initiative (RGGI) employs such limits: it permits the use of offsets for 3.3 percent of total emissions (roughly 50 percent of the projected emissions reductions resulting from the imposition of a cap, compared with business-as-usual). Note that adopting RGGI's offset limits might help harmonize two programs, facilitating emissions trading between the two systems.

2) Limits on a single firm's use of total offset supply: It may also be reasonable to prevent individual program participants from taking too many of the program's offsets, thereby preventing other participants from using offsets at all. Such a limit may help provide equity and cost relief across all program participants, by preventing a few firms from "cornering the market" on offsets in any given compliance period.

Conceivably, once the WCI emissions reduction system is firmly established and emissions reductions in the capped sectors are well underway, the use of offsets could be increased. Indeed, as total emissions from covered sectors declines, it will be of growing importance for the WCI market mechanism to stimulate reductions outside the capped sectors in order to meet long-term emissions reductions goals. However, raising the offset limits should be premised on genuine reductions from covered sectors. Furthermore, it would likely be prudent to delay setting a timetable for such increases until long after the emissions reduction program is established. Otherwise, individual firms could try "game the system" by delaying efficiency upgrades until more offsets are made available.

A carefully designed offset program could also help limit price spikes in the emissions market. For example,

the WCI could lift restrictions on the supply of offsets if allowance prices remain above specified "trigger prices." Such supply increases, in response to real-time market conditions, could provide flexibility, price certainty, and some insurance against price spikes, without eroding the integrity of the cap. They also could obviate a so-called "safety valve" mechanism,[3] which, unlike offsets, would almost certainly undermine the integrity of the WCI emissions cap. Obviously, however, a system of warrants caution, careful planning, and ample flexibility for adjustments in future years, in order to prevent unintended consequences, such as an unintended over-reliance on offsets rather than emissions reductions from the capped sectors.

QUESTION: What project types and locations should be eligible, and on what basis should eligibility be determined? Should offsets from other programs be eligible (e.g. Clean Development Mechanism, Regional Greenhouse Gas Initiative)?

Sightline believes that the WCI should determine qualifying categories of offset projects at the outset of the program, rather than deciding about individual projects on a case-by-case basis. Within each qualifying category, individual projects can be evaluated for their conformance to WCI's offset guidelines. The RGGI offset program provides a useful model; it includes four categories of offset projects—landfill gas, agricultural methane, sulfur hexafluoride, and afforestation—with the potential for additions to that list over time.

Within each qualifying category, the WCI should provide clear guidelines describing how individual projects can become eligible; already-approved projects should be identified as examples of successful project design. In addition, the offset program should strive to develop clear guidelines that spell out how additional categories of projects can become eligible, including perhaps coal bed methane capture and difficult-to-monitor fugitive emissions.

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[3] As the term is commonly used, a "safety valve" mechanism would put price controls on emissions allowances, by allowing firms to pay a flat per-ton fee on carbon emissions should market or auction prices on the allowance market rise above a certain trigger price.

In the interest of improving cost-effectiveness and liquidity, WCI could accept offsets from other programs that can be demonstrated to meet the same high standards and rigorous accounting as does the WCI.