

\*\*\*\*\* BEGINNING OF MESSAGE \*\*\*\*\*

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ORGANIZATION: Union of Concerned Scientists

COMMENTS: COMMENTS OF THE UNION OF CONCERNED SCIENTISTS TO THE MIDWESTERN GREENHOUSE GAS REDUCTION ACCORD ADVISORY GROUP

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The Union of Concerned Scientists (UCS) offers these comments to members of the Midwestern Greenhouse Gas Reduction Accord Advisory Group to convey our views on various cap and trade policy design questions currently before you. These comments supplement those submitted jointly with other nonprofit organizations.

UCS is the leading science-based nonprofit working for a healthy environment and safer world. We represent more than 250,000 activists and members. We have worked on regional cap and trade design issues in both the Regional Greenhouse Gas Initiative (RGGI) and Western Climate Initiative (WCI) contexts. We have played a role in the cap and trade discussion in the Midwest through participation in the state climate planning processes in Illinois, Minnesota, and Wisconsin. UCS has hired Ron Burke as the Midwestern office director and will soon open a Midwestern office (in Chicago) to focus on Midwest climate policy.

#### A. SCOPE

##### Sectoral Coverage

UCS urges the Advisory Group to include not only the power and industrial sectors under the cap but also the transportation sector and building sector (that is, mainly natural gas used in residential, commercial and industrial buildings for space heating, water heating and cooking). There are three reasons for applying the cap to these sectors:

1. Extending a hard cap over a larger part of our economy increases the likelihood of achieving economy-wide reduction targets.
2. Including upstream emissions from the transportation and buildings sectors encourages efficiency via a consistent price signal across all high emitting sectors.
3. A larger market with more actors will be more resistant to attempted manipulation.

(1) A wider cap increases the likelihood of achieving economy-wide targets.

One of the great advantages of a cap and trade system over other regulatory approaches is its focus on the metric that matters most from a climate protection standpoint -- actual greenhouse gas emission reductions. Other forms of regulation, such as vehicle CAFE standards and appliance standards, are important strategies for cost-effectively reducing emissions from what they otherwise would have been, but there is no guarantee they will reduce emissions by the amount needed. For example, even if cars are required to get better mileage per gallon of fuel, if people drive more miles then emissions could still rise or not fall fast enough. A hard cap, on the other hand, ensures that emissions will decline at the rate they must to avoid the worst effects of global warming.

The transportation sector represents 24% of Midwestern emissions, according to WRI's recent analysis. Residential and commercial emissions amount to another 12 percent, most of which would probably be from natural gas use in buildings. A market that covers only power and industrial sources would encompass only 56% of regional pollution (assuming all industrial processes are included). By adding the transportation sector and buildings, the Midwest could expand that coverage to 88% of the region's emissions.

UCS recognizes that there are many other policies that can be used to reduce emissions from the transportation and buildings sectors, many of which we strongly support. However, none of them should be seen as substitutes for including these sectors under the cap and trade program because none of them ensure the necessary emission reductions the way a cap does. Rather, they should be seen as complementary policies that will help ensure these sectors reduce their emissions as cost-effectively as possible, which will allow our society as a whole to comply with the cap as cost-effectively as possible.

With recent spikes in the price of gasoline, diesel, and natural gas, it may be tempting to say that there is no point in including these fuel streams under the cap because consumers are already being sent a strong price signal. However that argument assumes that the only point of a cap and trade program is to send a price signal and overlooks the central environmental importance of the cap. Some argue for omitting upstream transportation fuels and building energy use from under the cap because including them will not achieve significant emissions reductions from within these sectors because they have relatively little emissions reduction potentials. However, if putting the transportation and buildings sectors under a cap did not drive substantial additional emission reductions in those sectors, their inclusion would certainly drive additional emission reductions elsewhere under the cap, and in that way give us much greater assurance of achieving the all-important economy-wide reduction targets. Meanwhile, complementary policies like energy efficiency, vehicle fuel efficiency, and a low carbon fuel standard can help ease potential price pressures in the vehicle and buildings sectors.

We believe it is appropriate to exclude emitting sectors from the cap and trade program only if their emissions cannot be reliably estimated or monitored. For that reason, we would not include emissions related to many agricultural practices under the cap. However, emissions associated with the transportation and buildings sectors do not fall in that category since emissions relate directly to petroleum and natural gas usage (see point of regulation discussion below). We note that the federal Lieberman-Warner bill and the proposed Western

Climate Initiative program would regulate these sectors. Including them in the Midwestern cap and trade program enhances the potential to link carbon markets with western states, and it would help regional industries prepare for the federal regulation to come.

(2) A wider cap creates a more efficient market.

The other key benefit of a cap and trade program (in addition to creating an enforceable limit on emissions) is that it allows us to use market forces to help find and obtain the most efficient emission reductions. It would certainly be more expensive on a societal basis to require all sources to reduce their emissions by an equal proportion regardless of cost. Similarly, it would be more expensive on a societal basis to require all sectors of the economy to reduce their emissions by an equal proportion regardless of cost.

By including the transportation and building sectors under the cap we allow market forces to help determine which sectors can provide the cheapest emission reductions. For example, assume the emissions reduction target is 25% by 2020. If the power sector has cheaper emissions reduction options available to it than the transportation sector, then society will pay less altogether if the power sector reduces by more than 25% and the transportation sector by less than 25%. Including both these (and other) sectors under the same cap creates a market mechanism to find and achieve the cheapest reductions.

However, if the transportation and building sectors are not included under the cap with the power and industrial sectors, it will be up to the government rather than the markets to decide how much each sector must reduce its emissions. And if it is decided that the uncapped sectors should reduce less (or more) than 25% because their reduction costs are higher (or lower) than the capped sectors' costs, it will be up to government to tighten (or loosen) the cap on the capped sectors accordingly.

We believe it is simpler, faster, and ultimately more efficient to include all major emitting sectors (from which emissions can be measured) under the cap. Only then can the market play a role in determining which sectors can provide the lowest cost emission reductions and in obtaining those reductions.

We note that the question of what share of the reduction burden should be borne by each sector is made particularly difficult by the potential that plug-in vehicles could shift transportation emissions onto the power sector. It may be that plug-in vehicles are a cost-effective way to reduce transportation emissions; however, if the power sector is covered by a cap and petroleum is not, it may create a market distortion that could pose a serious barrier to the development of this technology. Similarly, both the power and transportation sectors could find themselves competing for the same organic material for use as biomass or biofuels. If the power sector is capped but not the transportation sector, it could again distort the market and lead to a less-than-optimal use of the available resource.

(3) A wider cap creates a more secure market.

The larger market would make market manipulation more difficult as more players and more allowances would be involved. While other mechanisms can be employed to reduce market manipulation, the bigger the market, the less inherent risk.

#### Point of Regulation

The transportation and buildings sectors should be regulated upstream. The point of regulation for transportation should be at refineries or when petroleum enters the region through pipelines. The point of regulation for the buildings sector should be natural gas processing plants or pipelines entering the region or possibly at the point of natural gas distribution. It would clearly be impossible to regulate these fuel streams at the point of combustion (i.e., at the level of the individual car or home). However, there are a relatively limited number of parties involved in the importing and processing of these fuels upstream, providing a relatively easy point of regulation.

The point of regulation of the industrial sector should be at the point of emissions - i.e., at the industrial facility. Facilities emitting de minimis amounts should be excluded from the cap and trade. Emissions from the combustion of fuels already regulated upstream should also be excluded (i.e., natural gas and petroleum).

The optimal point of regulation for the power sector is more complex. UCS has supported the use of a generator or "first jurisdictional deliverer" approach within the WCI context. This approach would make the electricity generator the point of regulation for generation within the region, and would make the importer the point of regulation for power imported from outside the region. This "supply-side" approach contrasts with a "load-side" cap, which would make load-serving entities the point of regulation.

We note, however, that there are pros and cons to each approach. The supply-side approach allows for easier emissions monitoring, would make it easier to integrate the Midwest market with RGGI, would cover power exported from the region, and would prevent load-serving entities from simply "cherry picking" the low-carbon power from the larger regional market in a way that could prevent real changes in regional power generation. However, a load side cap could be far less expensive overall because load-serving entities will have more options and incentives to pursue low-cost consumer efficiency and conservation options. Moreover, a load-side cap could better prevent large windfall profits that could occur even if all allowances are auctioned and that could greatly increase consumer electric rates. We urge the MGA Advisory Group to carefully assess the windfall profits risk, including through computer modeling of both load- and supply-side caps, before choosing a point of regulation for this sector.

#### B. TARGETS

We understand that the targets subgroup has recommended modeling economy-wide emission reduction targets of 15, 20, and 25 percent below 2005 levels by 2020 (aiming for 60-90% reductions by 2050), with the expectation that the results of this modeling will inform the target to be selected. We believe that the

emissions targets should be determined based on what the science says is necessary rather than driven by modeled cost predictions. The costs of failing to act aggressively in response to climate change promises to greatly outweigh the costs of action, and we assume that the MGA's modeling is not likely to reflect the costs of inaction.

The science indicates that we must reduce emissions by at least 80% below 2000 levels by the year 2050, which will require emission reductions on the order of 20% below 2000 levels by the year 2020.

The cap should require emissions to peak as quickly as possible and then maintain a steady downward trajectory toward its emission targets. The cap should go into effect as soon as possible and decline every year to establish a smooth reduction pathway.

As we discuss above, the cap must reflect the anticipated reductions from sectors outside the cap in order to achieve the economy-wide reductions. If, for example, the transportation sector is not capped, and if reductions of less than the required percentage are anticipated from that sector, then the cap must be adjusted downward to compensate. Otherwise, we will be setting ourselves on a pathway that will fail to meet the economy-wide reduction targets.

#### C. MODELING

It is critical that the modeling conducted for the MGA make the most realistic assumptions about the future. There are four cost assumptions we are particularly concerned about:

(1) Future federal carbon costs. It is very likely that a federal cap and trade program will be established within a few years of the MGA cap and trade program, ultimately assimilating or replacing the MGA program. If the MGA modeling does not assume any price for CO<sub>2</sub> emissions apart from the price created by the MGA market (that is, if it assumes no federal cap and trade ever), then it will overestimate the cost of creating this market. It is important, therefore, that at least one of the sensitivities modeled by the MGA make realistic assumptions about future federal CO<sub>2</sub> regulatory costs as part of its business as usual cost estimates, in order to more accurately estimate the incremental cost of creating the MGA cap and trade program. We refer the Advisory Group to CO<sub>2</sub> price forecasts published by Synapse Energy Economics and to the CO<sub>2</sub> cost assumptions made by Xcel Energy in its most recent Integrated Resource Plan filing to the Minnesota Public Utilities Commission for examples of reasonable CO<sub>2</sub> cost forecasts.

(2) Escalating capital and fuel costs. There have been striking increases in the costs of constructing new generating resources, particularly power plants. These cost increases, along with fuel price increases, must also be included in the analysis.

(3) Emerging energy efficiency and renewable energy policies. With respect to energy efficiency and renewable energy, the base case modeling should assume that the region succeeds in goals set forth in its Platform of meeting at least 2% of annual retail sales of natural gas and electricity through energy efficiency

improvements by 2015, and of obtaining an increasing percentage of electricity from renewable energy, reaching 30% by 2030.

(4) Beneficial use of auction revenues. We also urge the Advisory Group to model scenarios where revenue from auctioning allowances is reinvested into complementary measures that reduce emissions cost-effectively, and thereby reduce the overall cost of adopting a cap and trade program. Energy efficiency is a particularly important focus of this modeling. We know that many cost-effective energy efficiency investments are not made today because of market barriers and flaws (like lack of consumer information, split incentives between renters and landlords, etc.). These barriers will continue to exist even after a cost is imposed on CO<sub>2</sub>, so complementary policies will be needed to achieve an optimum level of efficiency investments. The Illinois analysis and the RGGI states' analysis of these issues showed that directing auction revenues into energy efficiency is highly cost-effective, which is why they are channeling virtually all of their auction revenues in that direction. Failure to include such beneficial investment of auction revenues would mean assuming we will not take advantage of our most effective cost-reducing policies.

If the modeling fails to reflect recent cost increases or likely future state and federal energy policies it will estimate a cost for establishing a regional cap and trade program that is artificially high. The MGA Accord is not proceeding in a vacuum; it is part of a dynamic landscape of shifting energy and climate policies that will all help move our economy in the same direction. The MGA's modeling must make reasonable assumptions about that shifting landscape.

#### D. ALLOWANCES

UCS supports 100% auctioning of allowances for the reasons stated in the comments jointly submitted with other nonprofit organizations. UCS is particularly interested in seeing the auction revenues invested in energy efficiency and other emission-reducing measures that a price signal alone will not fully achieve. Responding effectively to global warming will require large-scale capital investments to make our buildings, appliances, vehicles and industries more energy-efficient; to improve mass transit, electricity transmission lines and other infrastructure; to deploy much more renewable power generation; and to otherwise build a low-carbon economy and reduce the impact on consumers and workers along the way. While a strong price signal created by a cap and trade program will help drive this investment, we do not believe private investment alone will be sufficient. There is also an important role for public investments and auction revenues represent a vital source of funding to support those investments.

#### E. OFFSETS

UCS has serious concerns about the potential for offsets to undermine overall emission reduction goals and we urge the Advisory Group to recommend rigorous limits on the use of offsets. For a detailed analysis of our concerns and recommended approach, we refer the Advisory Group to comments dated July 8, 2008, which were jointly submitted with other nonprofit groups to the Offsets Subgroup.

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