Update on U.S. Efforts to Address Climate Change – Regional Programs, ACELA, and EPA Action

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OVERVIEW

This working paper provides an overview of domestic programs that address climate change outside a federal climate bill, including the three regional cap-and-trade programs, the American Clean Energy Leadership Act, and efforts by the EPA to regulate greenhouse gases under the Clean Air Act.

Regional cap-and-trade programs, summary

Twenty-three U.S. states and four Canadian provinces are currently participating in the design and implementation of three regional cap-and-trade programs to reduce greenhouse gas emissions. Participating U.S. states account for around half of U.S. population and one-third of all U.S. greenhouse gas (GHG) emissions.¹

The Regional Greenhouse Gas Initiative (RGGI) – An initiative of ten Northeastern states to reduce CO₂ emissions from large fossil-fuel power plants, RGGI became the first mandatory cap-and-trade emissions reductions scheme in North America when it entered into force on January 1, 2009. It covers 209 power generating facilities that exceed a 25 MW capacity threshold. Cap is two-phase: stabilization at initial level for 2009-2014, and 2.5% reduction per year 2015-2018 for a total reduction of 10% below 2009 levels by 2018. Nearly 100% of allowances are auctioned, except in Delaware where 40% of allowances are freely allocated², and states have pledged to direct allowance revenue to clean energy investments and consumer benefits.

Although RGGI has thus far succeeded in raising $583 million for clean energy investments through seven quarterly auctions, the program suffers from an excess of allowances – a condition that may persist throughout the 2018 reduction schedule. RGGI allowances currently trade around $2/ton, which is considered too low to stimulate significant private investment in clean energy³. An additional issue with RGGI is that some states have attempted to divert their share of auction revenues away from energy programs in order to fill budget gaps. The New York Legislature considered such a move in December, and New Jersey’s new governor Chris Christie made a similar proposal on March 17 of this year.

The Western Climate Initiative (WCI) – Regional agreement between seven U.S. states and four Canadian provinces to collectively reduce GHG emissions 15% below 2005 levels by 2020. Some 90% of regional GHG emissions would ultimately be covered (commonly referred to as economy-wide coverage), beginning in 2012 with the electricity sector and large industrial emitters, and expanding in 2015 to incorporate transportation and domestic fuels as well as smaller industrial emitters. Arizona and Utah recently downgraded their status from participant to observer, and Montana’s participation is questionable given that its next legislative session doesn’t begin until January 2011. That leaves California, New Mexico, Oregon and Washington as the four U.S. states whose participation remains plausible or likely when the program commences in 2012.

The Midwestern Regional GHG Reduction Accord (MGGRA) – signed in November 2007 by six U.S. states and the Canadian province of Manitoba. The accord aims to reduce emissions to 20% below these states’ 2005 levels by 2020. It covers the same sectors as the WCI, making it slightly larger than WCI emissions, and the full economy-wide coverage begins in 2012. Work on the program has all but halted

¹ WRI Fact Sheet, July 2009. Regional Cap-and-Trade Programs, Washington, D.C.
while the federal debate continues to draw significant attention.

Table 1. Regional programs at a glance

<table>
<thead>
<tr>
<th>RGGI</th>
<th>WCI</th>
<th>MGGRA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Participants</strong></td>
<td>CT, DE, MA, MD, ME, NH,</td>
<td>US: AZ &amp; UT (observers),</td>
</tr>
<tr>
<td></td>
<td>NJ, NY, RI, VT</td>
<td>CA, NM, MT, OR, WA</td>
</tr>
<tr>
<td><strong>Program Status</strong></td>
<td>Started in 2009</td>
<td>Expected to start in 2012</td>
</tr>
<tr>
<td></td>
<td></td>
<td>with CA, WA, OR likely</td>
</tr>
<tr>
<td></td>
<td></td>
<td>participants</td>
</tr>
<tr>
<td><strong>Program Scope</strong></td>
<td>CO₂ only. Large electric</td>
<td>All 6 Kyoto gases.</td>
</tr>
<tr>
<td></td>
<td>generators are covered,</td>
<td>50% of GHG emissions in</td>
</tr>
<tr>
<td></td>
<td>capturing 28% of GHG</td>
<td>2012, 90% in 2015.</td>
</tr>
<tr>
<td></td>
<td>emissions.</td>
<td></td>
</tr>
<tr>
<td><strong>Reduction Targets</strong></td>
<td>Stabilization 2009-2014</td>
<td>15% reduction below</td>
</tr>
<tr>
<td></td>
<td>2015-2018 cap declines</td>
<td>2005 levels by 2020</td>
</tr>
<tr>
<td></td>
<td>2.5% per year</td>
<td></td>
</tr>
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</table>

PROVISIONS TO PROTECT LOW-INCOME HOUSEHOLDS IN THE REGIONAL PROGRAMS

- **RGGI** – The RGGI memorandum of Understanding⁴, signed by all participating states, calls for 25% of allowance revenue to be allocated for consumer benefit of strategic energy purpose, including the use of allowances “to directly mitigate electricity ratepayer impacts.” Economic modeling by the New York State Department of Environmental Conservation⁵ predicted a very slight increase in electricity prices as a result of RGGI – 1.6% in 205 (78 cents per month for a typical residential customer) and 2.4% ($1.13 per month for a typical residential customer) in 2021. In practice, prices for allowances have been too low to register much if any impact on electricity prices. At the same time, other studies predict that accompanying expenditures on energy efficiency will result in a net decrease in consumer electric bills.⁶

- **WCI** – A 2008 design document⁷ signed by all WCI partners calls for states to consider using a portion of their allowance budget for such objectives as:
  - reducing consumer impacts, especially for low-income consumers;
  - providing for worker transition and green jobs; and
  - achieving emission reductions in communities that experience disproportionate environmental impacts.

California is the only U.S. WCI state thus far to have enacted cap-and-trade legislation (AB32) that can be linked to a wider, WCI trading program. A March, 2010 analysis⁸ from California’s Air Resources Board on the economic impacts of AB32 predicts a rise in household income under AB32 at all levels except the very top, along with a small increase in the number of jobs available to low-income workers. The bill also attempts to direct investment to low-income communities, stating “The state board shall ensure that the greenhouse gas emission reduction rules… to the extent feasible, direct public and private investment toward the most disadvantaged communities in California…” (sec. 38565).

⁴ Available here: [http://www.rggi.org/docs/mou_12_20_05.pdf](http://www.rggi.org/docs/mou_12_20_05.pdf)
⁵ Available here: [http://www.dec.ny.gov/energy/39282.html](http://www.dec.ny.gov/energy/39282.html)
⁸ Available here: [http://www.arb.ca.gov/cc/scopingplan/economics-sp/economics-sp.htm](http://www.arb.ca.gov/cc/scopingplan/economics-sp/economics-sp.htm)
• **MGGRA** – In May 2009, the advisory group charged with developing MGGRA design recommendations released its final report, which recommends that “allowance value should be used to mitigate cap-and-trade program cost impacts to end users (particularly low-income consumers…), including energy price impacts.” (Sec. 3.3.2.1.1). The report is now being reviewed by participating state Governors, but has no legally-binding mandate.

**POLITICS OF THE REGIONAL PROGRAMS**

Since each of the programs was first established, the political winds have shifted in many of the states, with the likely outcome that the regional programs will now be somewhat downscaled, particularly the WCI and MGGA. State and provincial governments will have to adopt any market-based program into their own law for the regional agreement to enter into force, and several state legislatures are wary of signing on to a carbon market, particularly in the West. In addition, many state governments meet infrequently, and thus a decision to become legally bound to a regional program may not come into play for a long time.

**California** – California is the only WCI state to have thus far passed enabling climate legislation. Efforts to bring down California’s AB 32 climate law have started and will be part of the November gubernatorial election, with Democratic front-runner Jerry Brown endorsing AB32 and Republican front-runner Meg Whitman calling for a one-year moratorium on implementation. In addition, a voter referendum sponsored in large part by Texas oil companies Tesoro Corp. and Valero Energy Corp. would suspend the law altogether until California unemployment rates improve dramatically. Point Carbon puts the odds of these efforts to stop AB32 around 1:3.10

**WCI states** – New Mexico’s state legislature is currently considering enabling legislation, however it will likely not be passed out of committee this session11. Arizona’s governor Jan Brewer issued an executive order on February 11th that, while not removing the states outright from the WCI, stated that Arizona will not endorse any cap-and-trade plan.12 Utah, whose legislatures have frequently expressed disapproval or former Governor Huntsman’s (R) decision to join the WCI, withdrew support for a cap-and-trade program in April, with an energy advisor to governor Gary Herbert (R) stating that “we don’t have the state authority that we need to actually implement a cap-and-trade program in 2012.”13 Although the Washington and Oregon state legislatures have sent mixed messages, Point Carbon expects they would be supportive of enabling legislation if California is successful in keeping its AB32 program alive and no federal program emerges.14

**MGGA** – Despite the promise of a regional program with the largest gross emissions coverage and the greatest potential for low-cost abatement through fuel switching in the power sector (among the three regional programs, MGGA states are the most heavily reliant upon coal)15, the likelihood of MGGA establishing a carbon market by 2012 is considered low – 1:10 by Point Carbon analysts.16 Minnesota’s Republican governor Tim Pawlenty, who was instrumental in launching the program and made frequent speeches about the need to jumpstart a clean ‘energy revolutions,’ is expected to seek the Republican nomination for president in 2012, and has since become cool to the issue.18 That leaves Wisconsin’s

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10 Ibid (2).
13 ClimateWire, April 4, 2010. *Utah pulls out of WCI cap-and-trade program, and 3 other states lag*
14 Ibid (2).
16 Ibid (2).
17 Ibid (2).
18 NYTimes, August 24, 2009. *Aggravation Mounts in Minnesota Over Governor’s Shift on Climate.*
governor Jim Doyle (D), who as chairman of the Midwestern Governors Association is the most ardent backer of moving ahead with MGGA. Doyle was a member of the Governor’s delegation in Copenhagen, and is known for having stated “I want the Midwest to become the Saudi Arabia of renewable energy,” at the signing of the MGGA.”

FOUR EMISSION REDUCTION SCENARIOS UNDER THE REGIONAL PROGRAMS

Point Carbon, in its February 2010 analysis, developed four scenarios for regional program development and modeled the level of total U.S. abatement that would result. Emissions modeling is based on the EIA’s 2010 Annual Energy Outlook, and accounts for the full impact of the recession in 2008-2009 on emissions, as well as recently enacted policies on mobile sources and energy efficiency, but not for other proposed federal actions like increased funding for nuclear and renewable sources. Reductions are compared against the U.S. Copenhagen commitment, which calls for a 17% reduction below 2005 levels by 2020. Results are summarized below and shown in table 2.

- **Business as usual** – RGGI continues as is, neither WCI or MGGA gets off the ground, and California’s AB32 is dismantled at the polls. Point Carbon gives this scenario a 30% chance of success. Total U.S. 2020 emissions abatement relative to 2005 under this scenario is 5.1%, or 30% of the U.S. Copenhagen commitment.

- **RGGI and CA only** – RGGI continues as is, California establishes its own cap-and-trade program, but other states and regional programs focus on direct regulation rather than market-based mechanism. Point Carbon gives this scenario a 20% chance of success. Total 2020 emissions abatement relative to 2005 under this scenario is 5.9%, or 35% of the U.S. Copenhagen commitment.

- **Revised RGGI (RGGI 2.0) and small WCI** – WCI is launched without UT, MT, and AZ together with a revised RGGI. Structural changes to RGGI, which are consistent with RGGI’s MOU19 include tightening of the cap to a level consistent with the WCI (15% below 2005 levels by 2020), expansion of scope to include the industrial sector, and alignment of offset rules with WCI rules to allow linkage with the WCI. Point Carbon gives this scenario its highest chance of success, at 40%. Total U.S. 2020 emissions abatement relative to 2005 under this scenario is 6.9%, or 41% of the U.S. Copenhagen commitment.

- **MGGA, substantially revised RGGI (RGGI 3.0) and large WCI** – In this unlikely scenario, all states that are currently members of the WCI and MGGA proceed with implementation, and RGGI is substantially revised to include not only a tighter cap, but an expanded economy-wide scope. All three programs are linked. Point Carbon gives this scenario a 10% chance of success. Total U.S. 2020 emissions abatement relative to 2005 under this scenario is 9.4%, or 55% of the U.S. Copenhagen commitment.

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19 The RGGI Memorandum of Understanding, provides for a comprehensive 2012 review, including but not limited to considering additional reductions.
Table 2. Regional program implementation scenarios, probabilities, and attendant total U.S. emission abatement in 2020 relative to 2005.

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Probability</th>
<th>U.S. 2020 emissions abatement relative to 2005 baseline</th>
<th>Percentage of U.S. Copenhagen commitment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business as usual, RGGI only</td>
<td>30%</td>
<td>5.1%</td>
<td>30%</td>
</tr>
<tr>
<td>RGGI &amp; CA</td>
<td>20%</td>
<td>5.9%</td>
<td>35%</td>
</tr>
<tr>
<td>RGGI 2.0 &amp; small WCI</td>
<td>40%</td>
<td>6.9%</td>
<td>41%</td>
</tr>
<tr>
<td>MGGA, RGGI 3.0 &amp; large WCI</td>
<td>10%</td>
<td>9.4%</td>
<td>55%</td>
</tr>
</tbody>
</table>

Source: Point Carbon 2010

THE AMERICAN CLEAN ENERGY LEADERSHIP ACT

The American Clean Energy Leadership Act (ACELA), sponsored by Senator Jeff Bingaman (D-NM), was passed out of the Senate Energy and Natural Resources Committee on June 17, 2009 on a bipartisan vote of 15 to 8, but also had bipartisan opposition. It contains provisions related to increased energy production, energy efficiency, renewable energy standards, technology R&D, energy market stabilization, and transmission network improvements, among others. Key features include:

- Would allow oil and gas drilling up to 10 miles off parts of the Florida coast, lifting a ban on drilling in the eastern Gulf of Mexico that Congress instated three years ago.
- Includes a renewable electricity standard (RES) requiring utilities to draw 15 percent of their electricity from renewable sources or energy-efficiency measures by 2012. That’s weaker than the ACES RES, which calls for 20 percent of power from renewables and efficiency by 2020. Even that number is considered too weak by renewable-energy advocates.\(^{20}\)
- Establish a Clean Energy Deployment Administration (CEDA), an independent body within the Department of Energy that would give out loans for R&D of energy technologies. Several environmental groups, including the Sierra Club, Greenpeace, the League of Conservation Voters, and the Union of Concerned Scientists object to CEDA as it stands, arguing that CEDA provisions do not adequately take into account the GHG emissions of technologies it would fund.\(^{21}\)
- Expand use of renewable energy on public lands.
- Improve energy efficiency in appliances, buildings, and manufacturing.
- Require more study of water use in energy production.
- Expand federal authority for siting electricity transmission lines.

Low income provisions in ACELA

- Provides $1.7 billion in weatherization assistance each year from 2011-2015 for low-income persons. (Subtitle C, Sec. 251)

If the Bingaman bill passed on the Senate floor, it would have to be reconciled with ACES, forcing the House to either strip its bill of the economy-wide cap-and-trade program, or leave it in, setting up a difficult vote in the Senate. Prospects for ACELA looked exceedingly unlikely before the recent oil spill

\(^{20}\) Grist, June 17, 2009. Enviros cringe as Senate committee approves energy bill

\(^{21}\) IBID (19).
off the east coast of Louisiana, and now even more so. Senator Kerry has strongly opposed an energy-
only approach, and he’s joined by other Democratic lawmakers who fear the bill could kill momentum
and limit incentives for addressing climate change. An additional obstacle is the lack of funding for the
bill’s energy measures if there is no income from carbon allowances.

Nonetheless, the Obama Administration has reiterated the importance of energy security and green jobs.
If the White House determines that a climate bill is not feasible before the next presidential election cycle,
it may decide to move forward with an energy bill that includes a renewable portfolio standard, support
for carbon capture and storage, and incentives for energy efficiency.

EPA EFFORTS TO REGULATE GHGS UNDER THE CLEAN AIR ACT
The EPA is currently undergoing a tiered approach to regulating the GHGs under the Clean Air Act. The
first step was completed on April 1, 2010, with the finalization of GHG emission rules for cars and light
trucks. Those rules, issued in tandem with the Transportation Department’s CAFÉ mileage standards,
affect 2012-2016 model vehicles and call for a combined fuel economy average of 35.5 miles per gallon
by 2016 – an efficiency improvement expected to cut GHG emission by 30% from 2012 to 2016.22

The decision to issue GHG regulations for mobile sources legally requires the EPA to also regulate GHGs
from stationary sources, which is a much more complex task. Current thresholds for regulated harmful
pollutants like lead and sulfur dioxide are 100 to 250 tons. Where those same thresholds applied to GHGs,
even small emitters (hotdog stands) would require permits to operate.23 To avoid this unwieldy scenario,
on May 13, 2010 the EPA released its so-called “tailoring rule,” which limits coverage to sources emitting
100,000 tons of GHGs (or existing facilities that increase their emission of GHGs by 75,000 tons or more)
annually, beginning on July 2011. A lower threshold of 50,000 tons is expected to follow beginning on
July 2011. A lower threshold of 50,000 tons is expected to follow beginning in 2013.24 There are
questions as to whether the tailoring rule will survive court challenges that may come from both sides of
the political spectrum, however for now, most mainstream environmental groups and free market think
tanks have signaled their intention to refrain from suing the EPA.25 One difficulty with using the
existing Clean Air Act framework for regulating GHGs is that permitting rules call for affected facilities
to incorporate the best available control technologies for the pollutant. Unfortunately for GHGs, there is
no one best way to reduce emissions from all facilities, hence the appeal of using a cap-and-trade
approach, whereby the market will dictate the choice of technology based on the lowest-cost abatement
option for affected firms. It remains an open question as to whether the EPA can or will establish a cap-
and-trade system under the Clean Air Act.

23 Point Carbon, February 5, 2010. Will the EPA go all the way?
25 ClimateWire, May 4, 2010. EPA: The usual suspects aren’t lining up to block agency’s pending ‘tailoring rule’.