Challenges of Renewable Power in Compliance Offset Schemes

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Point Carbon: a Market Intelligence Provider

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International Renewable Energy Offset Schemes

United Nations: Clean Development Mechanism

- Developing countries implement projects which reduce GHG emissions above and beyond business as usual (a concept known as additionality)
- Certified through the UN Executive Board
- 796 projects have issued credits, leading to $26 Billion traded market in 2009 (Source: Point Carbon)
- Renewable energy is 494 of those projects, or 62% of total registered projects, and 42% of traded credits

2009 CDM Volumes Transacted

Chart Source: World Bank 2010, Carbon Project Manager
It’s a different story here in America though

2009 CDM Volumes Transacted

2009 US Offset Volume Pipeline

Source: World Bank, 2010

Source: Point Carbon CPM NA Sept 2010
### Table 7: Four determinants of offset eligibility

<table>
<thead>
<tr>
<th>Eligibility into a mandatory cap-and-trade regime</th>
<th>Standards</th>
<th>Project type</th>
<th>Location</th>
<th>Vintage year</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>CAR, RGGI</td>
<td>Forestry, Livestock Methane, Coal Mine Methane, Landfill Methane</td>
<td>California</td>
<td>2009+</td>
</tr>
<tr>
<td>Low</td>
<td>Project-Specific Standards</td>
<td><strong>Renewable Energy, Large Scale Energy Efficiency, Carbon Capture and Storage</strong></td>
<td>—</td>
<td>Pre-2001</td>
</tr>
</tbody>
</table>

Source: Carbon Project Manager North America

For Compliance cap-and-trade markets, Renewable Energy is perceived as having a low likelihood of eligibility.
Why would Renewable Offsets not be eligible?

First Reason: Double Counting
- Most cap-and-trade systems cover the power sector
- A utility that owns a wind project could simultaneously report lower emissions and sell offset credits
- The GHG reductions are counted twice:
  → Once, when the utility sold excess allowances (or didn’t need to buy additional ones)
  → Twice, when the offset credit is monetized
An Example: Utility A buys a Wind Farm

An example: Utility A in California closes an inefficient natural gas plant, and purchases a wind farm from a developer.

- Emissions reduced from 1 million metric tons of CO2 to 900k
- Since their cap was set at 950k metric tons and that’s how many allowances Utility A was allocated, they don’t have to buy 50k in allowances, and actually can sell 50k allowances
  - They earn the value of 100,000 allowances
- If credits are also sold separately from the project, the reductions are monetized twice

In most proposed cap-and-trade policies in the US, offset eligibility is exclusively for projects outside of capped Sectors
Second Reason: Additionality

What is additionality?
- The proof that a project is above and beyond business as usual, and that if there were no credits created, the project would not move forward
- Since you are buying the GHG reduction rights, you need assurance that this wouldn’t have happened anyway

Why is it an issue with Renewable Energy?
- Many different incentives go into wind projects (RPS, PTC/1603, MACRS, loan guarantees)
- Very difficult to say that carbon credit sales is what pushes the project forward
- These projects are so complex, that carbon credit sales are a very small piece of the financial valuation
A Difference between RECs and Offsets

100% REC matching for your electricity does not automatically make you carbon neutral

• An offset represents a reduction, which means it represents a counterfactual → something changing from where it was before

• A wind project doesn’t emit CO2, so by itself doesn’t represent a reduction
  • Only when you look at what plant it replaces, or what would have been there otherwise (aka a baseline), do you get a reduction
  • A wind farm built in a place with lots of hydro doesn’t significantly change GHG emissions

The “Where” and “Why” of Renewable Projects Matters
Landfill Gas: An eligible Renewable Power

Why?
- There are two reduction activities: capturing methane and generating renewable power
- They are separate and complimentary, and a LFG project can generate both offset credits and RECs, and there will be no double counting

Still complications:
- The cap-and-trade regime in the northeast (known as the Regional Greenhouse Gas Initiative, RGGI) does not allow LFG offsets from projects that also generate RECs
  - Ostensibly because of additionality concerns
- California is looking to regulate LFG so that all significant sites be capped, and taking away the ability to generate offsets
# Average offset OTC prices, August 2010

<table>
<thead>
<tr>
<th>Standard</th>
<th>Bid</th>
<th>Offer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alberta Eligible</td>
<td>$11.50</td>
<td>$13.50</td>
</tr>
<tr>
<td>CAR certified (CRTs) from landfill gas projects</td>
<td>$3.00</td>
<td>$4.00</td>
</tr>
<tr>
<td>CAR California forestry projects</td>
<td>$6.50</td>
<td>$7.00</td>
</tr>
<tr>
<td>VCS Credits (VCUs)</td>
<td>$2.50</td>
<td>$3.20</td>
</tr>
</tbody>
</table>

*Source: Point Carbon CPM NA Sept 2010*
A role for Renewable Power in Compliance Markets

RGGI and Western Climate Initiative have set aside allowances for RECs and Green power purchases
- In RGGI, each state makes assumptions in terms of green power sold and emission factors
- In effect, tightens the cap and substantiates claims that RECs have a GHG reduction aspect

CEQ provided guidance that RECs can be used to offset GHG emissions to meet the Federal Governments reduction goals

Alberta Offset Regime
- Renewable power is eligible, assuming that the owners and emitters fall outside of the cap (100,000 metric tons)
US Voluntary Renewable Energy Projects

Projects in non-capped areas in the South and Mid-West are also eligible for creating voluntary credits

Point Carbon’s Carbon Project Manager North America database has 9 renewable power projects seeking certification under Voluntary Carbon Standard (VCS)

- 4 biomass projects (Illinois, Mississippi, Florida, Minnesota)
- 5 Wind projects (Texas, Oklahoma, Kansas)
Thank You!

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