

Challenges of Renewable Power in Compliance Offset Schemes

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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

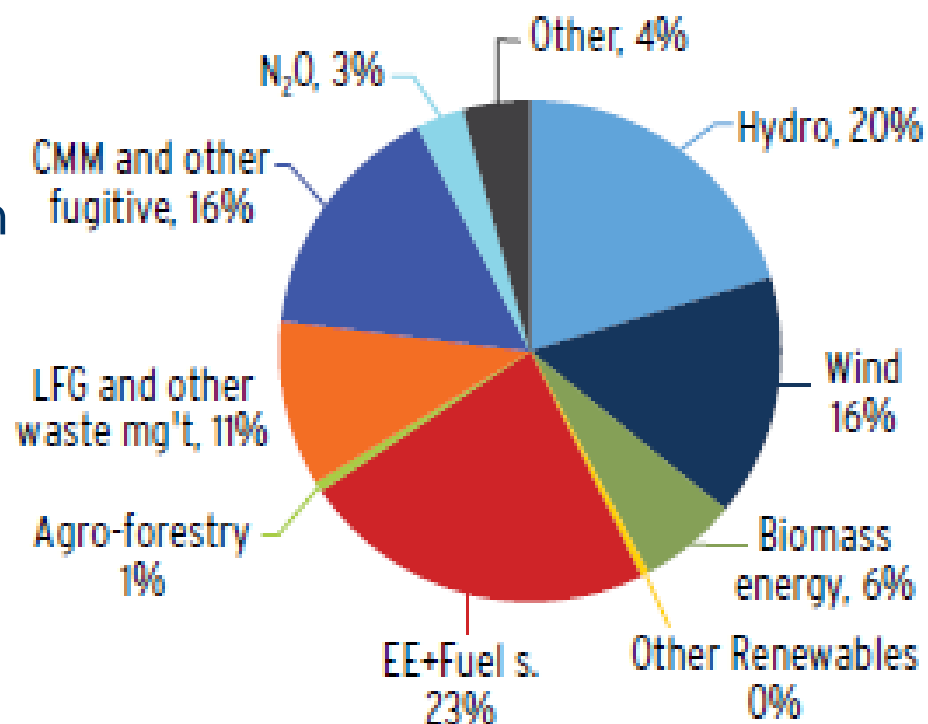
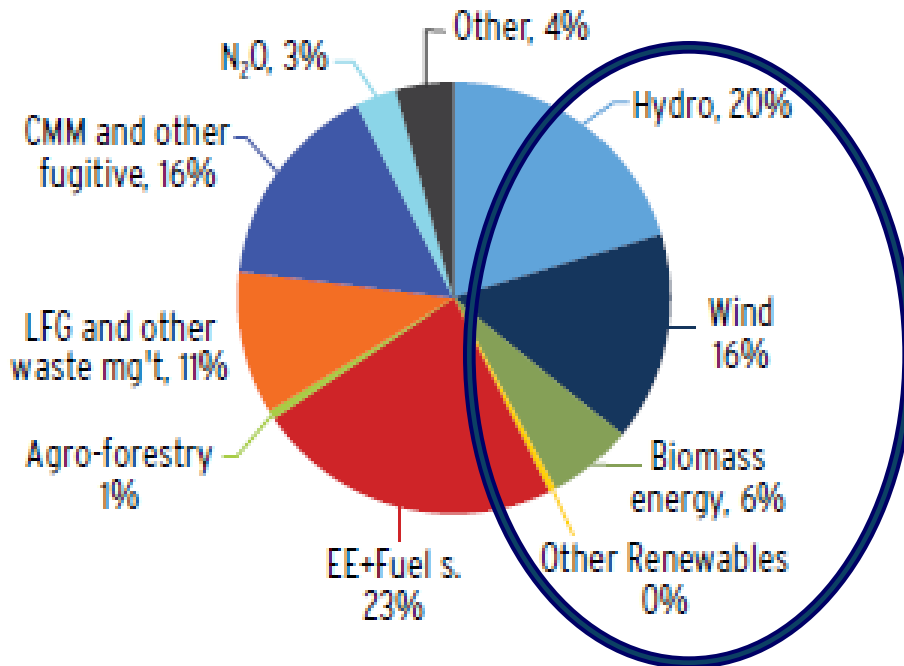


Chart Source: World Bank 2010, Carbon Project Manager

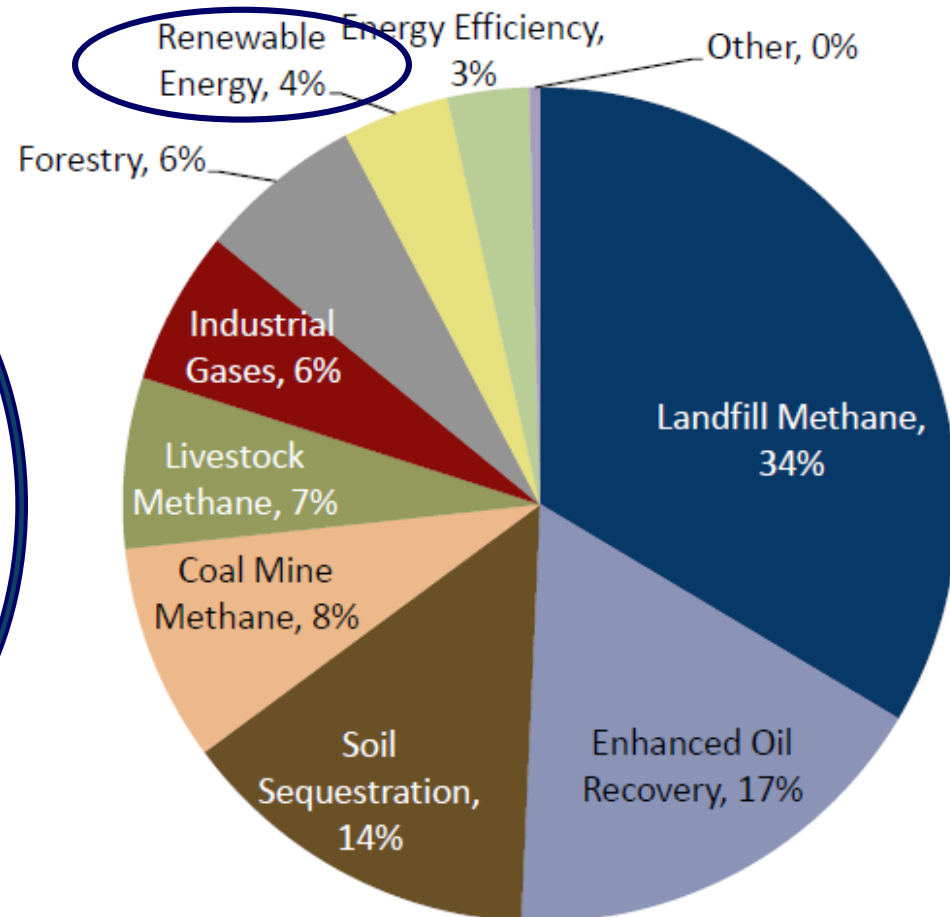
It's a different story here in America though

2009 CDM Volumes Transacted



Source: World Bank, 2010

2009 US Offset Volume Pipeline



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

		Standards	Project type	Location	Vintage year
Eligibility into a mandatory cap-and-trade regime	High	CAR, RGGI	Forestry, Livestock Methane, Coal Mine Methane, Landfill Methane	California	2009+
	Medium	VCS, CCX, ACR, Gold Standard, CDM	Soil Sequestration, Small scale Energy Efficiency, Fuel Switching, Industrial Gases	Rest of the country	2001-2009
	Low	Project-Specific Standards	Renewable Energy, Large Scale Energy Efficiency, Carbon Capture and Storage	—	Pre-2001

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

Standard	Bid	Offer
Alberta Eligible	\$11.50	\$13.50
CAR certified (CRTs) from landfill gas projects	\$3.00	\$4.00
CAR California forestry projects	\$6.50	\$7.00
VCS Credits (VCUs)	\$2.50	\$3.20

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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