

Draft Recommendations for Forest Offsets In the Regional Greenhouse Gas Initiative

ODF Carbon Working Group
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**Environment
Northeast**



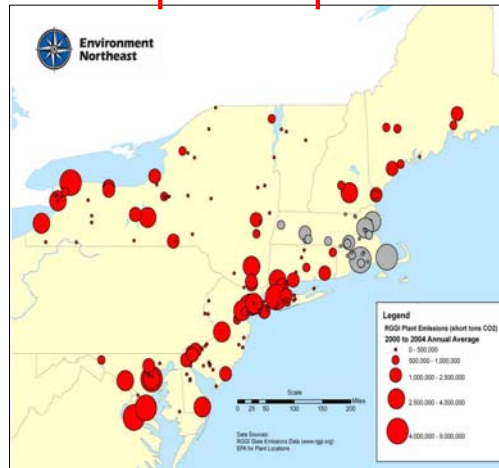
RGGI States



Regional Greenhouse Gas Initiative (RGGI): a state initiated cap-and-trade program for carbon dioxide emissions from power plants over 25 MWs.

- Cap starts in 2009; may expand to other sources and emissions over time
- Hold steady, then 2.5% reductions/year starting 2015 for 10% reduction by 2018

RGGI power plants



Emissions allowances will be auctioned off; money goes into a pool for energy conservation investments.

Only 3.3% of emissions can be as offsets.

RRGI Offset: 5 Initial Types

Initially Eligible Projects

1. Landfill methane capture and destruction;
2. Reduction in emissions of sulfur hexafluoride (SF6);
3. Reduction or avoidance of CO₂ emissions due to end-use energy efficiency.
4. Avoided methane emissions from agricultural manure management operations.
5. Sequestration of carbon due to afforestation.

RRGI Offset 5-Part Test for Offsets

1. **Real:** able to quantify an actual and **measurable** reduction in emissions.
2. **Surplus (additional):** additional or surplus to reductions in emissions that would occur under **business as usual** activities, above and beyond what would have occurred absent any funding for the offset project.
3. **Verifiable:** sufficient measurement and **documentation** to allow independent auditors to assess and confirm project eligibility and performance
4. **Permanent:** be lasting, ensuring that a reduction in emissions is **not capable of being reversed** at some future point in time.
5. **Enforceable:** able to **enforce compliance** or require a return of the offset credit if other requirements are not met.

Basic Types of Forest Offset Projects

- (1) Afforestation: planting trees where trees are not now growing.
- (2) Avoided deforestation: preventing emissions of CO₂ as a result of converting forest to some other land use, e.g., pastureland, ag land, housing development.
 - a) Forest might be designated as reserve, or for active forest management.
- (3) Active forest management
 - a) Reforestation (accelerating regeneration)
 - b) Enhanced growth (through silviculture)
 - c) Enhanced product storage (e.g. lumber) and product energy substitution

The 3 pesky issues:

1. Additionality
2. Permanence
3. Leakage

Additionality and Baseline

Baseline defined: the reference point (or line) against which a project's carbon storage is measured.

1. Business-as-usual
2. Base year

Additionality and Baseline

Additionality defined: the net additional carbon that is removed from the atmosphere as a result of the carbon transaction (it would NOT have been sequestered otherwise).

This is important because a real ton of GHG emission is being "allowed" for each ton offset.

The emitters want their carbon back!

And they want the cheapest, highest-quality ton of carbon they can get.

Additionality and Baseline

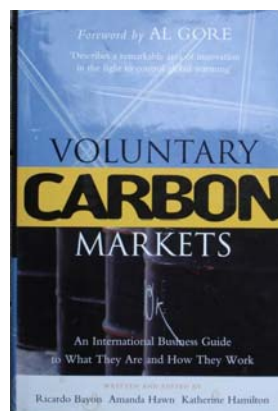
Nobody wants to pay for something that was going to happen anyway, for free.

IMPORTANTLY, it's the atmosphere the carbon market is trying to affect. Not saving forest.

Additionality (cont.)

“...standard additionality tests exclude some of the best projects from an environmental and sustainable development perspective– namely projects that are good for the climate, good for biodiversity, and good for local communities.”

Bayon et al. 2007, p 25



Bayon, B, A. Hawn, and K. Hamilton. 2007. Voluntary Carbon Markets: An international business guide to what they are and how they work. Earthscan. London. 164 pp.

Leakage

Defined: carbon that is wittingly or unwittingly lost to the atmosphere but was supposed to be sequestered by the offset project.

i.e., carbon that you thought was sequestered, really isn't (the carbon that "got away"), .

Permanence

Defined: the time period that the carbon stays sequestered.

Do you lock it up in perpetuity (hard to do, or guarantee, with forests).

This is one of the big issues for forest landowners. Are they locking out opportunities for future uses of their land?

RGGI- Existing Forest Offset

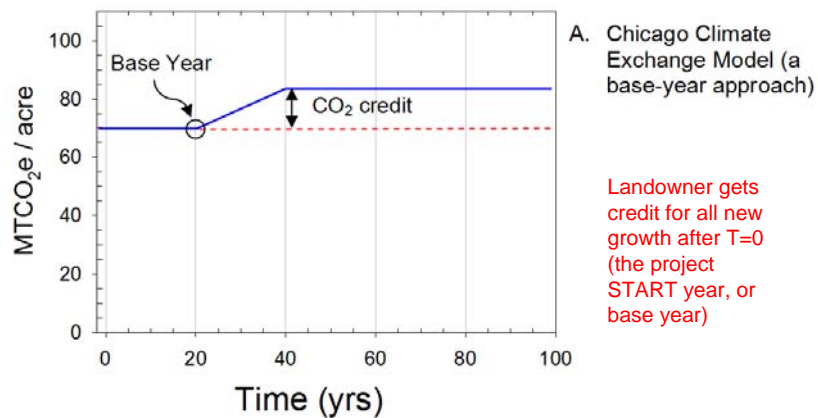
Category: Afforestation

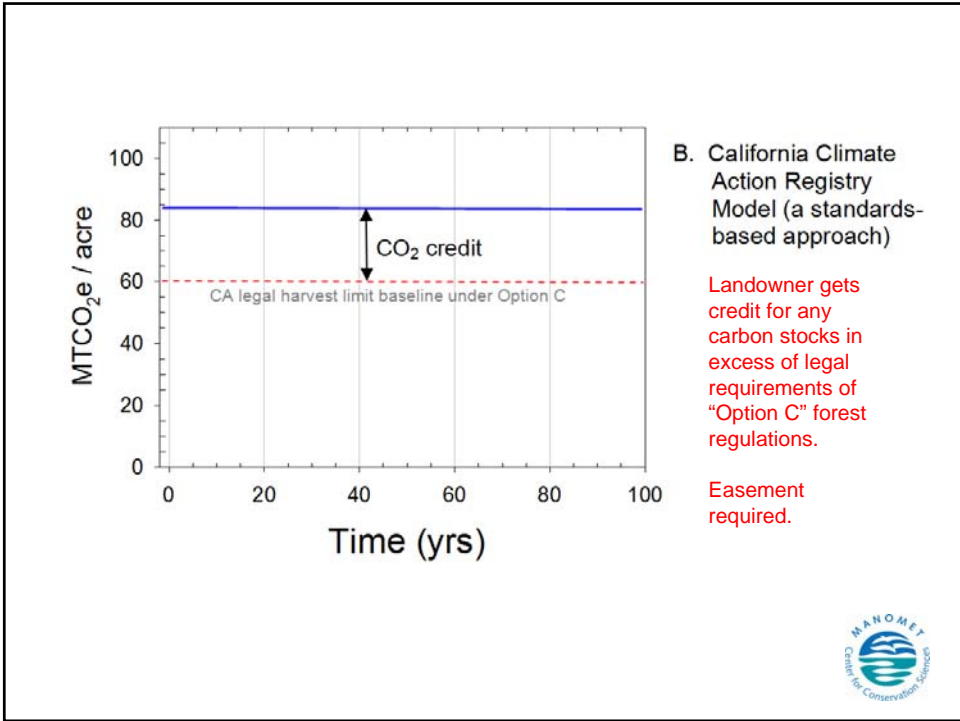
- 1.Landowners can get credit for growth of new trees.
- 2.Site must not have had trees for 10 yrs.
- 3.Periodic 5-year payments (post-growth with documentation).
- 4.All carbon pools must be measured (incl. soil).
- 5.Contract periods of 20 years.
- 6.Can be renewed twice (for total of 60 years).
- 7.Permanent easement required.
- 8.Sustainable certification required (FSC, SFI, ATF, or equivalent)

Active Forest Management...

Two existing models for active forest management...

1. The Chicago Climate Exchange (CCX)
2. The California Climate Action Registry (CCAR)





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1. Using the FIA (federal forest inventory dataset) mean stocking level for a given forest class as a benchmark for "business as usual," forest landowners can get carbon credit for new carbon growth and/or preserving existing carbon stocks according to the criteria below.

(for a given eco-region, forest type)

A. If starting with carbon stocks below FIA mean for region.

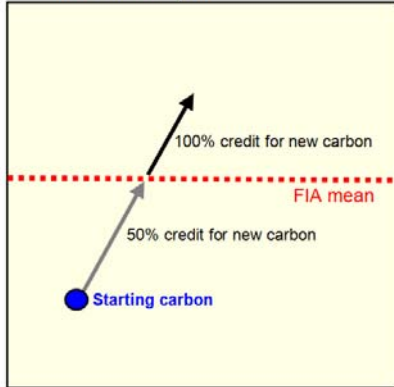
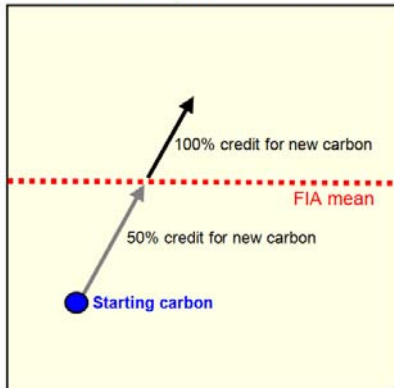


Figure 1. Recommended carbon credit for projects that start (A) **below** the FIA mean carbon stocking level for the forest type and region, and (B) **above** the FIA mean.

A. If starting with carbon stocks below FIA mean for region.



B. If starting with carbon stocks above FIA mean for region.

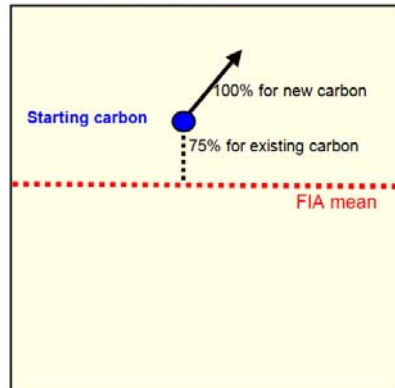


Figure 1. Recommended carbon credit for projects that start (A) **below** the FIA mean carbon stocking level for the forest type and region, and (B) **above** the FIA mean.

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NOTES:

1. Once a landowner has been paid for carbon stocks, the landowner (and subsequent owners) must agree not to drop below the sold stocking level for 99 years. A reserve pool of carbon or insurance may be required to guard against unforeseen loss.

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NOTES:

2. To guard against leakage (carbon loss in areas outside of the project area caused by displacement of harvest activities), landowners will be **required to actively manage the forest for forest products**. Landowners must document that they are managing their forest in one of two ways:

- i. Be **certified sustainable** by a third-party under a generally accepted certification system that requires long-term management plans (e.g., SFI, FSC, American Tree Farm), **or**
- ii. **Verify that they are harvesting at a rate** that approximates the business-as-usual harvest rate for the appropriate geographic area.

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NOTES:

3. Development rights would **NOT be extinguished** with this recommendation. Landowners or aggregators must maintain the total additional carbon stocks sold within the project area for 99 years.

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2. Landowners may receive extra credit for carbon stored in **enduring wood products** or for displacement of fossil fuel energy (i.e., biomass), but **only for production in excess of business-as-usual** production levels for the appropriate geographic area (i.e., the mean production level per acre of forestland).

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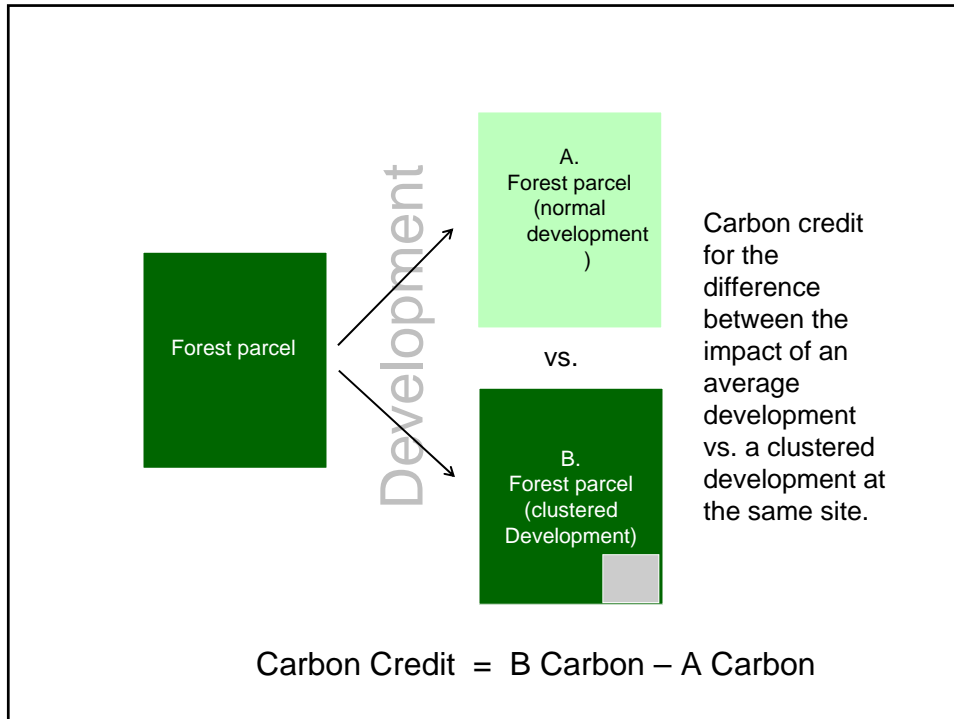
Category: Avoided Deforestation

1. At the present time, we do not recommend that RGGI give offset credit for avoided deforestation projects that involve permanently protecting forestland on which no residential or commercial development will be allowed.

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Category: Avoided Deforestation

2. However, development projects that reduce the amount of forestland (carbon) lost per housing unit can receive credit based on the difference between total land clearing in traditional development projects and “clustered” development.



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Category: Afforestation/Urban and Community Forestry

1. Communities can receive credit for afforestation of urban areas through planting of street trees and park trees.

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Category: Active Forest Management/Biomass Plantations

1. Newly established biomass plantations (using woody species or other energy crops, such as switchgrass) can receive credit for displacement of fossil fuels used for residential and commercial heating.

Characteristics of our approach

1. Simple
2. Common data reference (FIA)
3. Inventory-based for landowner (no growth modeling).
4. Should “pull up” carbon on the landscape, but addresses leakage issue by requiring continued forest management.



"Sorry, Harold, but I'm reducing our carbon footprint."