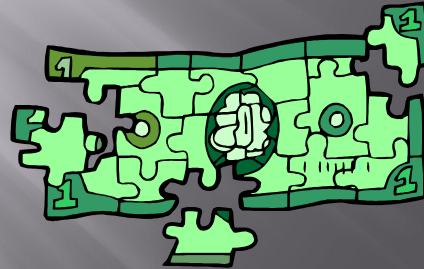


COMMUNITY FORESTS AND CARBON CREDIT OPPORTUNITIES

Are they too good to be true?

If it Looks Too Good To Be True



A Valuable Cedar

- ▣ Paul Willcocks TUESDAY, DECEMBER 29, 2009 (Island Courier)
- ▣ A giant coastal red cedar represents a big carbon sink.
- ▣ An old red cedar could weigh **1,000 tonnes**.
- ▣ Get paid **\$18,000 a year** to put the chainsaw away.
- ▣ How many of these cedar trees are there?
- ▣ Does that make sense?

Is it Too Good to be True!

- ▣ ZeroFootprint Forest Restoration Project Maple Ridge, ISO 14064 verified
- ▣ Since the project began in 2006, it claims to have sequestered over 220,000 tonnes of carbon credits over an area of approximately 83 hectares by planting 433 trees/ha.
- ▣ $220,000 \text{ tCO}_2\text{e} / 1.8333 = 120,000 \text{ m}^3$ of timber, = **1446 m³/ha in 4 years**
- ▣ Total project lifetime reductions =2,234,338 Tonnes of CO₂
- ▣ That equals **14,684 m³/ha** of timber
- ▣ Does that make sense?

Forestry-based Carbon Offset Credits and How They Work?

- ▣ Forest-based carbon offset credits (CCs) are based on trees removing carbon from the atmosphere and storing it.
- ▣ As a tree grows it uses CO₂ from the atmosphere through photosynthesis to create cellulose and other carbon-based molecules such as lignin.
- ▣ CC's are produced when more carbon is sequestered than the base case, or status quo.
- ▣ People's *management* of the forest either results in more carbon being sequestered, or avoids carbon from being released from the forest.

Forestry-based Carbon Offset Credits and How They Work?

Roughly speaking, but pretty close:

- ▣ A tree's biomass and accumulated litter fall is double the merchantable volume,
- ▣ Biomass is 50% carbon by weight
- ▣ Biomass is 2 m³ per tonne.
- ▣ Each tonne of biomass equals 3.667 tonnes of atmospheric CO₂
- ▣ **1 m³ of wood = 1.833 tons of CO₂**

3 Main Categories of Forestry-Based Carbon Offset Credits

- ❑ **Afforestation:** the planting of trees on previously de-forested land.
- ❑ **Improved Management:** Management practices that result in increased carbon sequestration and or storage.
- ❑ **Avoided Conversion:** Preventing deforestation or degradation

Where is This Carbon?

- ❑ Private Land
- ❑ Crown Land
- ❑ IR Land

Protocols and Registries

- ❑ Forestry-based carbon offset credits must be developed according to *protocols* which are the very specific rules of what counts and what does not.
- ❑ Carbon Credits must be verified by a 3rd party to comply with a protocol
 - California Climate Action Registry Forest Sector Protocol
 - TREE CANADA Forest Carbon Project Protocol
- ❑ Carbon Credits must be registered prior to sale to track them and ensure they are only sold once.

The Base Case

- ❑ The production of carbon offset credits is based on carbon sequestered in comparison to the base case
- ❑ The base case is the amount of sequestered carbon without the management action producing the CCs.
- ❑ Through intensive management:
 - The carbon sequestered due to fertilization
 - The carbon sequestered and stored over time by not harvesting a stand of trees. (minus reforested growth)
 - Carbon sequestered by afforesting an old industrial site

Current CFA Situation

- ❑ Community forests are designed to *utilize* merchantable timber for the benefit of the community *not conserve it*.
- ❑ CFAs are a license to harvest and sell crown timber, not water, not deer, not carbon.
- ❑ The Crown owns the carbon resource.
- ❑ Pacific Carbon Trust, the Provincial government's CC procurement corporation, will buy CFA CCs, but only of three types of improved management:
 - Use of select seed (*not eligible as it is already a requirement*)
 - Fertilization (*only since 2007 and many protocols don't support fertilization*)
 - Afforestation (*only carbon sequestered since 2007*)

Current CFA Situation

- ❑ No ex-ante (future sequestration) CCs at this time
- ❑ No improved management options related to conservation

Changes Required for more CFA CC Opportunities

- ❑ Carbon Ownership agreements
- ❑ Provincial policy regarding best use of forest resources (carbon vs timber utilization)
- ❑ Acceptance of additional forestry-based CC categories and ex-ante CCs
- ❑ Stable marketing environment and prices.
- ❑ CFA tenure term extended

Answers to Questions

Can a CFA get paid to not log?

- ❑ Base case must show economically viable harvesting opportunity
- ❑ CFA does not own carbon, PCT only customer
- ❑ PCT does not purchase this type of CC
- ❑ Use it or lose it

Answers to Questions

- ❑ How much are CCs worth?
 - A range of values: Worldwide \$1.00 - \$25.00
 - Negotiate with a customer
 - Canada Voluntary market \$8.00-\$12.00 for large volumes
 - CFAs would have to pay stumpage to non-Crown customers, and not receive full market value from PCT (Crown owns the carbon)
- ❑ Costs:
 - Project development, verification, registration, marketing, sales contracts, maintenance, risk management, opportunity cost...

Answers to Questions

- ❑ Can we get carbon credits for forest out of the THLB?
- ❑ No.
- ❑ It is the management action that develops carbon credits.
- ❑ There is no change to the base case.

More Questions:

- ❑ Can you get CCs for:
 - Riparian Reserves Zones
 - Rehabilitation of forestry roads
 - Afforestation of NPBR
 - Partial harvesting
 - Wildlife habitat areas
 - Marginally operable timber

Do We Want to Sell Carbon?

- ❑ Small relative value compared to logs or timber products
- ❑ Little community employment
- ❑ No Value added opportunity
- ❑ May result in under utilization of land productivity
- ❑ New product, new market
- ❑ Diversification of products
- ❑ New management tool in the kit

Sell timber

- ❑ Good community employer and value generator
- ❑ Subject to market swings
- ❑ Controversial development issues
- ❑ Increasing competition from plantations worldwide
- ❑ AAC is continual

Costs and Benefits CFA Considerations

- Stumpage or Crown share
- Marketable volumes
- Find a customer or use a broker
- Who gets the profits
- Spin off to the community,
- Employment
- Value added
- Income flow or lump sum
- Future income
- Timber supply implications
- Risk of loss
- Time commitment

Summary Points

- ❑ If it sounds too good to be true, it is.
- ❑ Trees do not provide CCs on their own, management does, *You don't get paid for nothing.*
- ❑ Compare all potential projects to the base case
- ❑ Forest carbon is a Provincial resource to be utilized for the benefit of the Province as a whole. Socio-economic benefits of timber utilization must be compared to those of carbon management.
- ❑ Provincial mechanisms are not fully developed – stay tuned.