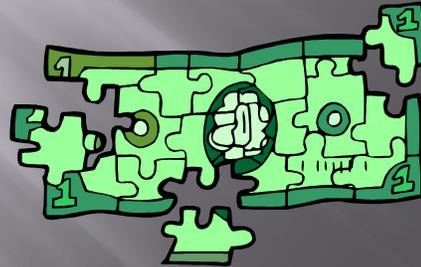


## COMMUNITY FORESTS AND CARBON CREDIT OPPORTUNITIES

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 m<sup>3</sup>/ha in 4 years
- ▣ Total project lifetime reductions = 2,234,338 Tonnes of CO<sub>2</sub>
- ▣ That equals 14,684 m<sup>3</sup>/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 CO<sub>2</sub> 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 m<sup>3</sup> per tonne.
- ▣ Each tonne of biomass equals 3.667 tonnes of atmospheric CO<sub>2</sub>
- ▣ 1 m<sup>3</sup> of wood = 1.833 tons of CO<sub>2</sub>

### 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 3<sup>rd</sup> 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.