Forest Sector Workgroup — Draft recommendation (10/9/08)
Forest Management

All-Pool Accounting, Including the Harvested Wood Products Pool

The Workgroup recommends that "all-pool" accounting be the basis for estimating and measuring carbon storage for forest management offset projects and for the Complementary Carbon Storage Incentive Program. This will ensure that all in-forest and harvested wood product pools that are significantly affected by an entity's forest management offset project are considered in establishing baseline, additionality, and permanence, and are subjected to appropriate measurement and verification.

The Workgroup spent considerable time discussing how long-term carbon storage in wood product pools and landfills could be reliably estimated and calculated at the entity level or project level, especially for forest management offset projects that emphasize increased storage in the wood product pools. The Workgroup recommends the approach described in this section be used for all forest management offset projects that entail significant changes in wood products pools.

In general, the Workgroup recommends the "100 year" method for accounting for long term carbon storage and additionality in wood products pools. The Workgroup also acknowledges some uncertainty and the need for further work on calculation and accounting methods, and therefore a need for measures to help ensure that estimates and crediting of additional storage are conservative. As one way of ensuring conservative estimates and crediting, the Workgroup at this time recommends not considering carbon in wood products that continue to be stored in landfills, instead using in analysis a conservative assumption that all wood product landfill carbon is immediately emitted.

The Workgroup also understands that uncertainty in estimates of carbon storage over 100-year time periods exist for all pools, and should be treated consistently.

The Workgroup acknowledges that forest landowners can demonstrate carbon offset additionality in the wood product pools based on changes to the estimated 100-year decay rate resulting from forest management, harvest, and marketing actions under the landowners' control. The Workgroup is aware of sample calculations that suggest the baseline 100-year residual carbon storage in wood products is likely to be less than 10% of harvested wood carbon from a forest site.

The Workgroup also recognizes that wood manufacturing facilities may also be able to claim further carbon offset additionality in wood product pools downstream from mills based on actions taken at the manufacturing facility.

Accounting Methodology for including HWP carbon in a forest management protocol:

In this scenario, the baseline is an entity-defined business as usual (BAU). The BAU baseline includes the projected growth and harvesting scenarios for 100 years. For the harvesting scenario, the growing stock that is harvested is categorized as

softwood/hardwood and sawlog/pulpwood. This is then converted to roundwood and products-in-use after 100 years using the proposed 1605(b) methodology. The Beyond BAU scenario (BBAU) will also have a projected harvesting scenario. The same methodology is used to calculate carbon stored in products-in-use after 100 years. The difference in the harvested wood products (HWP) carbon pools between these two scenarios will be added to or subtracted from the overall carbon pool, depending on whether wood product pools increase or decrease over the life of the project.

Brief steps:

1. Model growth and harvest under BAU scenarios for next 100 years.
2. Calculate 100-year storage of products-in-use for harvest projections using proposed methodology.
3. Model projected changes in growth and harvest plans for BBAU carbon project.
4. Calculate 100-year storage of products-in-use associated with new harvest projections.
5. Calculate the difference in the 100-year product pools between the BAU and BBAU scenarios.
6. Calculate the changes in storage in the overall forest pool between the BAU scenario and the BBAU scenario, considering all pools with appreciable changes (See #9).
7. Add or subtract the difference in 100-year product pools to/from the difference in the overall forest pool, depending on whether the wood product pool increases or decreases over the life of the project.
8. Use the monitoring and verification methods recommended elsewhere, including verification of implementation on three-year intervals and re-inventory and "true-up" at ten-year intervals.
9. As a matter of policy, and further hedge against measurement and calculation uncertainties for wood product pools over time, the Workgroup recommends including the constraint that there be no net reduction of in-forest carbon pools over the 100-year period. The Workgroup recognizes that this constraint may affect different types of landowner differently, but believes that for forest-industry-managed lands this no-net-long-term-reduction is likely to be approximately achieved in any case.

Permanence: The methodology calculates a reasonable estimate of the amount of carbon that remains "in-use" for at least 100 years. This is based on current manufacturing and building efficiencies, and it is assumed, if anything, that these efficiencies should be increased over time. As such, the method is set up such that there is no need to monitor the individual fate of each product for 100 years because it accounts for ONLY the average percentage that remains in use (by region and forest type) based on current conditions.

Timing of credits:
Under the BBAU project scenario, offset credits will be given as carbon sequestration accrues (based on models at 3 year intervals and true-up at 10 years). The 100-year value of HWP carbon should be awarded at the time of harvest (or subtracted if the baseline scenario projected a harvest that did not occur).

Accounting Methodology for Improved Recovery at Manufacturing Sites:

The 100-year method subtracts business-as-usual carbon losses during the manufacturing process. For a PNW Douglas-fir, west-side example considered by the Workgroup, the amount of carbon captured in a product leaving a mill accounted for only 53% of the total carbon that entered the mill in the form of roundwood. The remainder of the carbon is assumed to be emitted (either with or without energy capture). If a mill can show a business-as-usual recovery rate (based on an average of the prior 3 years) and demonstrate an improvement to this recovery rate, the 100-year carbon fraction for the increased wood product efficiency should be credited to the mill as an offset.

Brief Steps:

1. Calculate recovery rate per mill for prior three years by dividing fiber in produced products by total fiber coming into mill.
2. Calculate recovery rate for current year.
3. Convert difference in recovery rate to production (tons).
4. Calculate 100-year carbon storage of additional production.

Justification:

Because this protocol only gives credit for an improvement upon business as usual, it does not rely on it's positioning relative to the average recovery rates assumed in the 1605(b) protocol. The assumption is that if you are increasing above and beyond an individual mill's business as usual, you can only be increasing the overall regional recovery rates.

Permanence:

Same as the forest management protocol

Timing of Credits:

Credits can be given each year with demonstration of recovery rates.

Accounting Methodology for Improved Efficiency of Building Construction (Reduction in Waste):

The 100-year method includes assumptions on material waste in the construction of end-use materials (e.g. homes, remodeling, furniture, railroad ties, pallets). Although the Workgroup understands that, in concept, additional carbon storage could be added by the end-user, the Workgroup didn't discuss this in detail and in any case such additionality would not accrue to forest landowners.