



NCASI

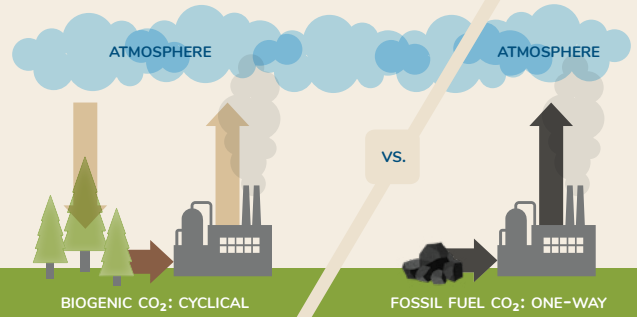
IMPACT. SCIENCE. SOLUTIONS.

Biomass Carbon Neutrality in the Forest Products Industry

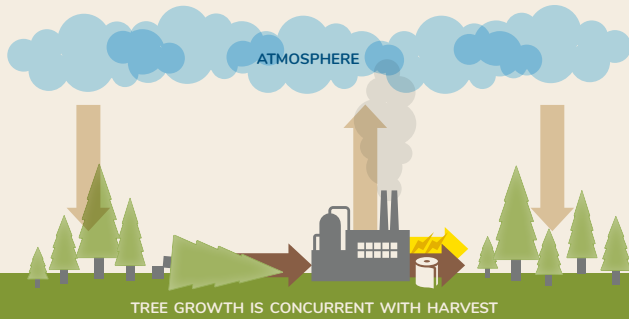
Biomass carbon neutrality is when biomass carbon emissions are completely offset by forest growth, or when the carbon in the biomass would have returned to the atmosphere even if it had not been used for products or fuel. Different accounting approaches can be used to assess biomass carbon neutrality, with wildly varying results. Understanding these options will assist the forest products industry in communicating with stakeholders.

BIOGENIC VS. FOSSIL CARBON

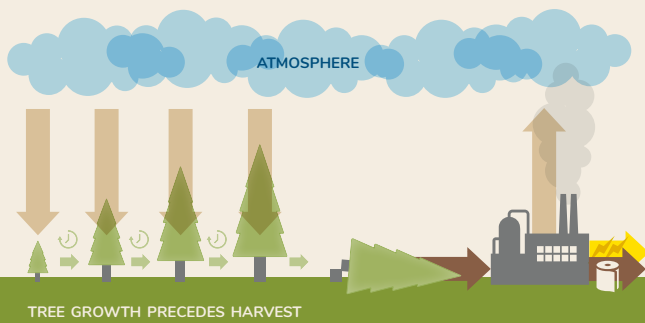
If the biogenic carbon cycle is in balance, atmospheric CO₂ levels do not change over time. Fossil carbon emissions always increase atmospheric CO₂.



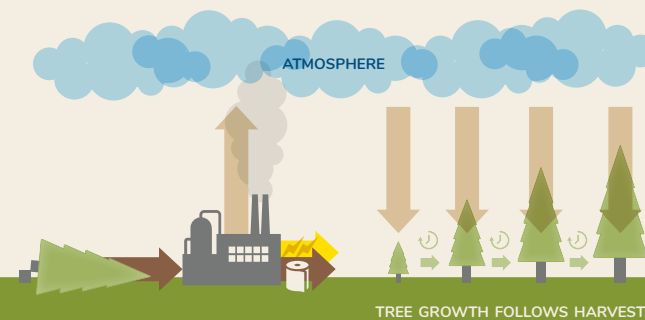
HARVESTED MATERIALS



FOREST APPROACH 1: Compare carbon lost due to harvesting to flows of carbon from the atmosphere into the remaining, growing trees within a specified area. Carbon is “neutral” if the flows into growing trees completely offset concurrent losses of carbon due to harvest within that area.



FOREST APPROACH 2: Compare the carbon removed from the atmosphere during tree growth to that returned to the atmosphere following harvest. With this approach, under most circumstances biogenic carbon is “neutral.” In some cases (e.g., if there is land use change), biogenic carbon may not be “neutral”.

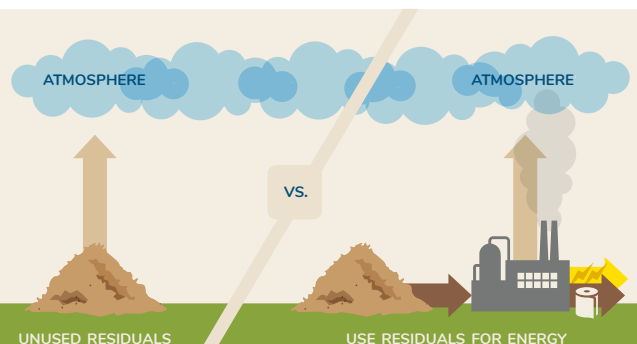


FOREST APPROACH 3: Compare the carbon lost due to harvesting to flows of carbon into trees that regrow after harvesting. With this approach, “neutrality” of the carbon depends primarily on what is regrown, its growth rate and the future time horizon used to calculate CO₂ removals from the atmosphere.

A variation of this approach is to also consider the carbon that would have been removed from the atmosphere had the tree not been harvested.

RESIDUAL MATERIALS

RESIDUALS APPROACH: Compare carbon emissions from use of products or residuals (e.g., branches, bark, pulping liquor) to the amount that would have otherwise returned to the atmosphere via decay or combustion. In this case, the biomass will often be carbon “neutral” because its use does not result in additional emissions.



INFORMATION TAKEN FROM:

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