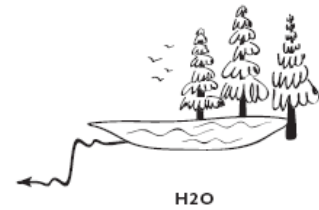


ENVIRONMENTAL FOOTPRINT COMPARISON TOOL

A tool for understanding environmental decisions related to the pulp and paper industry



EFFECTS OF DECREASED GREENHOUSE GAS EMISSIONS ON WATER USE

Avoiding Emissions Elsewhere in Society

Reducing emissions through practices that avoid emissions elsewhere in society can be a co-benefit resulting from the manufacture of forest products, especially through a) the burning of used paper and wood products that are not economically recycled and b) exports of “green” electricity from pulp and paper mills.

Burning non-recyclable used wood, paper, and paperboard products as a source of biomass energy will not have a significant impact on life cycle water use. The water use co-benefits associated with exports of “green” power, however, may be more significant. This is because the electricity exported by a pulp and paper mill will often be produced in a biomass boiler using a combined heat and power (CHP) system. In these systems, steam is first used to produce electricity and then used in the mill for process heat. To produce the same electricity at a typical power company, the steam must be condensed with cooling water after it is used to produce electricity because there is no use for it. As a result, in many cases, one would expect a water use co-benefit when a mill exports CHP-derived electricity to the grid, displacing electricity from a conventional power plant. Wood products plants rarely operate CHP systems due to relatively small boiler sizes.