

# Goodbye to carbon neutral: building carbon-stock changes into biomass carbon footprints

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Most guidance for carbon footprinting, and most published carbon footprints or LCAs, presume that biomass heating fuels are carbon neutral. However, it is recognised increasingly that this is incorrect: biomass fuels are not always carbon neutral. Indeed, they can in some cases be far more carbon positive than fossil fuels. This flaw in carbon footprinting guidance and practice can be remedied. In carbon footprints (not just of biomass or heating fuels, but all carbon footprints), rather than applying sequestration credits and combustion debits, a 'carbon-stock change' line item could be applied instead. Not only would this make carbon footprints more accurate, it would make them consistent with UNFCCC reporting requirements and national reporting practice. There is a strong precedent for this change. This same flaw has already been recognised and partly remedied in standards for and studies of liquid biofuels (e.g. biodiesel and bioethanol), which now account for land-usechange, i.e. deforestation. but it is partially or completely missing from other studies and from standards for footprinting and LCA of solid fuels. Carbon-stock changes can be estimated from currently available data. Accuracy of estimates will increase as Kyoto compliant countries report more land use, land use change and forestry (LULUCF) data.