

SCIENTIST EU FOREST BIOMASS SIGN-ON LETTER

To Members of the European Parliament,

As the European Parliament commendably moves to expand the renewable energy directive, we strongly urge members of Parliament to amend the present directive to avoid expansive harm to the world's forests and the acceleration of climate change. The flaw in the directive lies in provisions that would let countries, power plants and factories claim credit toward renewable energy targets for deliberately cutting down trees to burn them for energy. The solution should be to restrict the forest biomass eligible under the directive to residues and wastes.

For decades, European producers of paper and timber products have generated electricity and heat as beneficial by-products using wood wastes and limited forest residues. Since most of these waste materials would decompose and release carbon dioxide within a few years, using them to displace fossil fuels can reduce net carbon dioxide emissions to the atmosphere in a few years as well. By contrast, cutting down trees for bioenergy releases carbon that would otherwise stay locked up in forests, and diverting wood otherwise used for wood products will cause more cutting elsewhere to replace them.

Even if forests are allowed to regrow, using wood deliberately harvested for burning will increase carbon in the atmosphere and warming for decades to centuries – as many studies have shown – even when wood replaces coal, oil or natural gas. The reasons are fundamental and occur regardless of whether forest management is “sustainable.” Burning wood is inefficient and therefore emits far more carbon than burning fossil fuels for each kilowatt hour of electricity produced. Harvesting wood also properly leaves some biomass behind to protect soils, such as roots and small branches, which decompose and emit carbon. The result is a large “carbon debt.” Re-growing trees and displacement of fossil fuels may eventually pay off this “carbon debt” but only over long periods. Overall, allowing the harvest and burning of wood under the directive will transform large reductions otherwise achieved through solar and wind into large increases in carbon in the atmosphere by 2050.

Time matters. Placing an additional carbon load in the atmosphere for decades means permanent damages due to more rapid melting of permafrost and glaciers, and more packing of heat and acidity into the world's oceans. At a critical moment when countries need to be “buying time” against climate change, this approach amounts to “selling” the world's limited time to combat climate change.

The adverse implications not just for carbon but for global forests and biodiversity are also large. More than 100% of Europe's annual harvest of wood would be needed to supply just one third of the expanded renewable energy directive. Because demand for wood and paper will remain, the result will be increased degradation of forests around the world. The example Europe would set for other countries would be even more dangerous. Europe has been properly encouraging countries such as Indonesia and Brazil to protect their forests, but the message of this directive is “cut your forests so long as someone burns them for energy.” Once countries invest in such efforts, fixing the error may become impossible. If the world moves to supply just an additional 3% of global energy with wood, it must double its commercial cuttings of the world's forests.

By 1850, the use of wood for bioenergy helped drive the near deforestation of western Europe even when Europeans consumed far less energy than they do today. Although coal helped to save the forests of Europe, the solution to replacing coal is not to go back to burning forests, but instead to replace fossil fuels with low carbon sources, such as solar and wind. We urge European legislators to amend the present directive to restrict eligible forest biomass to appropriately defined residues and wastes because the fate of much of the world's forests and the climate are literally at stake.

Initial signers:

John Beddington, Professor, Oxford Martin School, former Chief Scientist to the government of the United Kingdom

Steven Berry, Professor, Yale University, former Chairman, Department of Economics, fellow American Academy of Arts and Sciences, winner of the Frisch Medal of the Econometric Society.

Ken Caldeira – Professor, Stanford University and Carnegie Institution for Science, Coordinating lead author or lead author of multiple IPCC reports.

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Felix Creutzig, Chair Sustainability Economics of Human Settlement at Technische Universität Berlin, Leader, leader Mercator Research Institute on Global Commons and Climate Change, Lead author of IPCC V Assessment Report and coordinator of appendix on bioenergy.

Phil Duffy, President, Woods Hole Research Center, former Senior Advisor White Office of Science and Technology Policy, Contributing author of multiple IPCC reports

Dan Kammen – Professor University of California at Berkeley, Director Renewable and Appropriate Energy Laboratory, Coordinating lead author or lead author of multiple IPCC reports.

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