

President

William H. Schlesinger

April 24, 2014

The Right Honourable Edward Davey MP
Secretary of State for Energy and Climate Change
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Professor David MacKay
Chief Scientific Advisor to the Department of Energy and Climate Change
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Re: Problems with burning wood from Southern US forests to generate electricity in the UK

Dear Secretary Davey and Professor MacKay:

We, the undersigned scientists from across the US, are concerned about the rising use of wood sourced from Southern US forests as a fuel for electricity-generating power plants in the UK and Europe and urge you to take swift action to develop and adopt sustainability criteria and carbon accounting requirements to ensure adequate protections for forests and the climate.

Mounting demand for wood pellets in the UK and Europe has led to an explosive growth in facilities across the Southern US that are manufacturing wood pellets for export to supply the European electricity market. In 2012, the Southeastern US emerged as the world's largest exporter of wood pellets for biomass electricity generation. With continued investments throughout the southern US, export volumes reached an estimated 1.75 million tons in 2012 and are expected to jump to 5.7 million tons in 2015, according to the North American Wood Fiber Reviewⁱ.

Demand for wood pellets in the UK and Europe is fueled by misguided energy policies, which incorrectly assume that burning wood will lower carbon emissions and help address climate change. These policies appear to subscribe to the wood pellet and power industry claim that burning wood is a carbon neutral process because new trees will eventually absorb and store the carbon that was released when wood is burned. In addition, industry claims of sustainability are often based on citing positive growth to harvest rates in the South. We dispute these claims for the following reasons:

First, a growing body of evidence suggests that trees rather than wood waste are the primary source of the wood pellets exported to the UK from the Southern US. Recent advances in science and accounting for pollution from different types of woody biomass have clarified that burning trees to produce electricity actually increases carbon emissions compared with fossil fuels for many decades and contributes to other air pollution problemsⁱⁱ. In fact, published research examining the growth rates of trees in the southeastern US has concluded that it may take thirty-five to fifty years for these new trees to

offset the carbon released by harvesting and burning the forests that preceded them, even in scenarios involving the burning of small-diameter trees from fast-growing pine plantationsⁱⁱⁱ. Further, a study by Dartmouth College published in 2013 suggests that current estimates of carbon impacts may understate the problem because disturbances created by logging may result in far more rapid and extensive transfer of carbon from the forest mineral soil to the atmosphere than previously thought^{iv}.

Second, arguments for the eventual carbon neutrality of burning wood assume that the harvested trees will be replaced by sustainably managed new forests. However, nearly 90 percent of southeastern US forests are privately owned and, unlike most of Europe, there are no laws or regulations in this region that require these private landowners to regrow or sustainably manage their forests to maintain vital carbon sinks. Cutting down and burning trees for energy production can disrupt vital carbon sinks and impede ongoing forest carbon sequestration. From the perspective of the atmosphere, diminishing a carbon sink has the same impact as creating an equivalent-sized smokestack.

US forests currently serve as a net carbon sink, offsetting a significant amount of US carbon emissions. This is often cited as justification for claims about carbon benefits associated with burning wood pellets made from US forests. However, taking credit for forest growth and carbon sequestration that would be happening anyway or that is already accounted for in calculating US carbon emissions would represent a major carbon accounting error.

Moreover, there are numerous compelling ecological and economic reasons to protect and preserve the remaining forested ecosystems of the Southern US. For example, in addition to storing substantial amounts of carbon in the standing trees and soil, the slow-growing bottomland hardwood forests along the US Atlantic Coastal Plain and Gulf Coast buffer natural and human communities from storms and floods, maintain water quality of rivers and estuaries, and provide critical habitat for birds, fish, and other wildlife. Yet, the bottomland forests that once covered this region have been reduced to a mere fraction of their original extent, and some of the remaining stands are now being logged to supply the wood pellet export industry. Recent reports have documented that Enviva, the largest exporter of wood pellets from the Southern US, sources wood at its mill in Ahoskie, North Carolina, from clear-cut wetland forests in the Mid-Atlantic Coastal Ecoregion^v. This is only one example of native forest ecosystems threatened by Europe's growing demand for wood as a fuel source for electricity.

As scientists and concerned citizens, we thus urge you to reconsider the policies that are driving this demand for wood pellets as a fuel source for generating electricity in Europe. We urge you to take prompt action to remedy the adverse climate and biodiversity impacts of the current misguided policies.

Thank you for your consideration of this request, and please do not hesitate to contact us if you would like more information and/or to discuss these issues further.

Sincerely,



William H. Schlesinger, Ph.D.
President

WHS/dmf

With cosignatories:

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ⁱ “Global Timber and Wood Products Market Update,” Wood Resources International LLC, news brief, October 11, 2012, www.wri-ltd.com/pdfs/US%20Canada%20wood%20pellet%20exports%201H%202012.pdf (accessed July 31, 2013).

ⁱⁱ See, Thomas Walker et al., Biomass Sustainability and Carbon Policy Study, Manomet Center for Conservation Sciences, June 2010; Joshua Clark et al., Impacts of Thinning on Carbon Stores in the PNW: A Plot Level Analysis, Oregon State University, May, 2011; Stephen R. Mitchell et al., Carbon Debt and Carbon Sequestration Parity in Forest Bioenergy Production, Duke University and Oregon State University, May 2012.

ⁱⁱⁱ Andrea Colnes, David Saah, et al., Biomass Supply and Carbon Accounting for Southeastern Forests, The Biomass Energy Resource Center, Forest Guild, and Spatial Informatics Group, February 2012

^{iv} Thomas Buchho, “Mineral soil carbon fluxes in forests and implications for carbon balance assessments” <http://onlinelibrary.wiley.com/doi/10.1111/gcbb.12044/abstract>

^v Justin Scheck and Ianthe Jeanne Dugan, “Europe’s Green Fuel Search Turns to America’s Forests”, Wall Street Journal, May 27, 2013