November 1, 2023

Dear Secretary Granholm:

Subject: Sustainable Woody Biomass Critical to Carbon Reduction and Renewable Energy Mix

Sustainable woody biomass is aligned with the Inflation Reduction Act (IRA) objective to fund lower carbon fuels for the future and is essential to President Biden's Administration's long-term strategy for achieving net-zero by 2050.[i]

In response to a recent letter urging the exclusion of woody biomass from the Qualifying Advanced Energy Project Credit (48C) program, we urgently call your attention to the following facts about woody biomass and its critical role in advancing the Administration's goals through the production of lower carbon fuels, improved forest management, and support for rural economies.

Sustainably sourced woody biomass is an essential climate solution that displaces fossil fuels and reduces net CO2 emissions compared to coal or gas. This fact is supported within scientific literature and recognized by the world's foremost authorities on climate science, including the Intergovernmental Panel on Climate Change (IPCC).[ii]

Woody biomass can serve as a drop-in replacement for coal that is not only less carbon-intensive but will also allow these same power plants to keep operating. Power generation using biomass also provides a reliable, clean source of energy that complements the intermittency of wind and solar energy, ensuring a stable grid without relying on fossil-powered backup.

The IPCC notes, "Climate-smart forestry allows production of bioenergy alongside improvements to nature conservation and biodiversity, local economics and carbon storage."[iii] Its reports also show that "Bioenergy could be particularly valuable for sectors with limited alternatives to fossil fuels (e.g., aviation, heavy industry) and production of chemicals and products and carbon dioxide removal via BECCS or biochar."[iii] Indeed, the IPCC's models project bioenergy use to rise significantly, from 30 exajoules at present to between 75 and 248 EJ by 2050, to avoid catastrophic climate change.[iii]

America is at the forefront of advancing these scientific findings and delivering the climate, environmental, and economic benefits of sustainable biomass at home and abroad. It is currently the world's largest exporter of sustainable biomass in the form of wood pellets, producing nearly 9 million metric tons last year, valued at $1.5 billion.[iv]

US biomass is instrumental in helping countries reduce coal consumption, meet national climate targets, and drive innovative applications to decarbonize hard-to-abate sectors where solutions are needed most. Today, US biomass provides renewable, dispatchable power and heat to millions of homes and businesses around the world. It is also used to produce sustainable aviation fuel, green steel, and green cement.

Further, it supports the development of Bioenergy with Carbon Capture and Storage (BECCS) projects that will deliver carbon-negative power while removing millions of tons of CO2 from the atmosphere each year. The US Department of Energy forecasts the US will need between 7-14GW of installed BECCS capacity to achieve the Administration's goal of 100% clean electricity by 2035.[v]

Sustainable biomass also aligns with many of the IRA's forestry-related goals, especially those aimed at mitigating catastrophic wildfire risks, creating jobs, restoring and preserving forests, and helping private

landowners in rural communities improve the general health of their forests. This is particularly true in the US Southeast, where most US biomass is produced, and legacy forest products industries are experiencing a structural transition of consolidation and decline.

Strong markets are key to maintaining forests in this region, which produces nearly a fifth of the world's forest products.[vi] Forests in the US Southeast are particularly responsive to markets because 87 percent are held by private landowners. Reliable timber markets generate the necessary revenue for owners to retain ownership of their forests and invest in management practices that preserve ecosystem services and maximize productivity.[vii]

Crucially, the biomass industry has helped support markets as other forest product industries have continued to wane. Moreover, it has provided a viable market for low-value and underutilized wood fiber and otherwise waste wood, thus helping to reduce dangerous fuel loads in forests and mitigate the risk of devastating wildfires. Because biomass utilizes low-value wood fiber, it provides incremental revenue for landowners, but is insufficient to drive harvest decisions or landscape-scale change.[viii]

Like other forestry-related businesses, biomass facilities are often the financial backbone of rural communities struggling for economic opportunity. The biomass export industry supports more than 10,000 jobs and has invested more than $2 billion in the US over the past decade.

Importantly, the forest sector has realized these economic benefits while maintaining or improving forest ecosystems and their functions.[viii] As timber output has grown, so have US forests. The Southeast region's forested area has remained stable since the middle of the 20th century, while forest carbon stocks have doubled over this period, despite record-breaking population growth and urban development.[ix]

Given these facts, we urge the Administration to continue basing its bioenergy policies on established science and economic reality. Moreover, we ask that there is an appreciation for the investments in sustainable forestry that our sector has made, which includes our investments in conservation, as well as the many sustainability certification frameworks that we demonstrate compliance with globally.

Calls to arbitrarily penalize the woody biomass sector are inconsistent with the goals of the IRA, run counter to scientific consensus, and undermine the Biden Administration's commitment to climate mitigation. Sustainable biomass is a proven and essential climate solution, deserving of continued support to enable America and the world to achieve a successful and rapid clean energy transition.

Thank you for your continued leadership on these important issues, and please contact us if we can be of assistance.

- Alabama Forestry Association
- Arkansas Forestry Association
- Auburn University, College of Forestry, Wildlife and Environment
- Forest Landowners Association
- Georgia Forestry Association
- Louisiana Forest Products Development Center
- Mississippi Forestry Association
- Mississippi State University, College of Forest Resources
- National Association of State Foresters
- National Alliance of Forest Owners
- North Carolina Forestry Association
- South Carolina Forestry Association
- US Endowment for Forestry and Communities
- US Industrial Pellet Association
- Virginia Forestry Association
- Warnell School of Forestry and Natural Resources, University of Georgia

[i] The United States Department of State and the United States Executive Office of the President. (2021) Long-Term Strategy of the United States: Pathways to Net-Zero Greenhouse Gas Emissions by 2050. https://www.whitehouse.gov/wp-content/uploads/2021/10/US-Long-Term-Strategy.pdf

[ii] Nabuurs, G., Junginger, M., Meyer, L., Werf, G., Strengers, B. (2021) Opinion: Activism against biomass could lead to more climate change. *De Volkskrant*. https://www.volkskrant.nl/columns-opinie/opinie-activisme-tegen-biomassa-kan-leiden-tot-meer-klimaatverandering~bb6a3ce2/

iii Nabuurs, G-J., R. Mrabet, A. Abu Hatab, M. Bustamante, H. Clark, P. Havlík, J. House, C. Mbow, K.N. Ninan, A. Popp, S. Roe, B. Sohngen, S. Towprayoon, 2022: Agriculture, Forestry and Other Land Uses (AFOLU). In IPCC, 2022: Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [P.R. Shukla, J. Skea, R. Slade, A. Al Khourdajie, R. van Diemen, D. McCollum, M. Pathak, S. Some, P. Vyas, R. Fradera, M. Belkacemi, A. Hasija, G. Lisboa, S. Luz, J. Malley, (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA. doi: 10.1017/9781009157926.009

[iv] Voegele, E. (2023) USDA: US Wood Pellet Exports At 8.89 Million Metric Tons In 2022. *Biomass Magazine*. https://biomassmagazine.com/articles/usda-us-wood-pellet-exports-at-8-89-million-metric-tons-in-2022-19734#

[v] Denholm, P., Brown P., Cole, W., et al. 2022. Examining Supply-Side Options to Achieve 100% Clean Electricity by 2035. Golden, CO: National Renewable Energy Laboratory. NREL/TP- 6A40-81644. https://www.nrel.gov/docs/fy22osti/81644.pdf

[vi] Wear, D., Bartuska, A. (2021) Forest Carbon 201: Land Use Effects of Wood Product Markets. *Resources for the Future*. https://www.rff.org/publications/explainers/forest-carbon-201-land-use-effects-of-wood-product-markets/

[vii] Kim, T., Wear, D, Coulston, Li, R. (2018) Forest land use responses to wood product markets. Science Direct. Volume 93. Pages 45-52.

[viii] Aguilar, F., Mirzaee, A., McGarvey, R., Shifley, S., Burtaw, D. (2020) Expansion o fUS wood pellet industry points to positive trends but the need for continued monitoring. *Journal of Scientific Reports*. Article number: 18607

[ix] Favero, A., Daigneault, A., Sohngen, B. (2020) Forests: Carbon sequestration, biomass energy, or both? *Science Advances*. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7096156/