

I'm responding on behalf of the American Forest Foundation, a non-profit conservation organization in the U.S. that works with family and individual forest owners, helping them care for their forests. AFF also operates the American Tree Farm System, the largest sustainable family woodlands program in the U.S. that also serves as an internationally recognized, third-party audited certification system. ATFS is endorsed by the Programme for Endorsement of Forest Certification (PEFC).

1. What is the latest evidence on lifecycle GHG emissions of biomass and other biofuels imported into the UK? How could this change over time as a function of scaling up supply?

AFF is a non-profit conservation organization that works with America's family woodland owners. Families and individuals own more than one third of America's forests and supply roughly 50 percent of the wood consumed in the U.S. Based on years of experience working with family woodland owners, we know that as market opportunities increase, so does the good stewardship and investment in family forests. Families need income from their land to do basic things, like pay the taxes or maintain roads. On top of this, they need income to practice good stewardship, to address for health issues, treat invasive species, or improve wildlife habitat. AFF's experience and surveys of landowners show that they want to do right by their land but often can't afford these practices. Biomass markets can help increase income for families, especially income for small diameter materials that often need to be removed to care for a healthy forest. AFF has also found based on landowner surveys that, particularly in the south, landowners that are harvesting are doing more for wildlife and biodiversity than those that aren't harvesting (see <https://www.forestfoundation.org/family-forest-owners-solution-at-risk-wildlife>)

We say all this to point to the fact that as biomass markets grow, supplies on family lands will grow as families invest in their forests and improve the growth and yield of their forests, and avoid conversion of their forests to non-forest uses. This will in turn result in stronger U.S. carbon stocks, and lower GHG emissions from biomass energy derived from these well managed forests.

2. Under what circumstances can imported biomass and other biofuels deliver real GHG emissions savings (considering full life-cycle emissions and indirect/wider market effects)? Conversely, what evidence is there for ruling out certain sources on the grounds of lifecycle GHG emissions or sustainability risks?

Biomass imported from the U.S., derived from well-managed U.S. forests, can deliver significant GHG emissions savings. As noted in Question#1, the more demand there is for wood from well managed forests, the more investment in U.S. forests, resulting in even better GHG emissions savings.

a. What are the wider market impacts of demand for wood pellets on forestry management practices and carbon stocks at the landscape level in North America?

As noted in Question #1, increased demand for wood pellets will not only result in greater investment in forests by family woodland owners, it will also help woodland owners afford good stewardship, stewardship that improves forest health and resiliency and increases carbon stocks.

b. What evidence is there that wood pellet production displaces other uses of forestry products in North America?

From the perspective of family woodland owners, increased demand and production of wood pellets leads to stronger markets for small diameter, low value wood that is often a cost to dispose of. Many family woodland owners in the U.S. are not able to afford the management needed to improve the healthy of their woods. Often the barrier to improving their woods is cost, including the cost of thinning their woods to allow healthier trees to grow for other products like lumber. Wood pellet markets can help offset some of these costs, providing a market to sell the byproducts of thinning, ultimately helping landowners produce wood for other higher value products.

c. What are the most likely alternative/counterfactual uses of forestry products used for wood pellet production?

Most of the wood uses to produce wood pellets is small diameter, low value wood that has few other market outlets. While some of this low quality wood can be used in pulp and paper manufacturing, these markets have shrunk in many parts of the U.S., leaving landowners with few outlets for this material.

d. How are these wider market impacts (sub-questions a-c) likely to change over time if demand for wood pellets significantly increases?

As mentioned in Question #3(c) because there has been a decline in markets in many areas for low value wood, its likely that increased demand for wood pellets from well managed family woodlands, will result in stronger investments in forests, increased management, and therefore increased supply of biomass for the market.

4. Aside from GHG emissions, what evidence is there of other sustainability impacts associated with imported biomass or other biofuels? What evidence is there for how these might change as a function of scaling up supply (from the US, and internationally)?

As noted in Question #1, our experience, working with family woodland owners demonstrates that increased exports of biomass from the U.S., from well managed family forests, will improving forest health, help landowners afford improvements in their forests that increase biodiversity, improve water quality, and also help keep forests as forests.

5. Are there any benefits resulting from importing biomass or other biofuels into the UK (e.g. development benefits)? How might these vary internationally? What are the conditions required for any benefits to be realised?

As noted in Question #4, increased increased imports of biomass from well-managed forests can have significant benefits on sustainability, helping family woodland owners improve the management of their woodlands for a number of outcomes. In addition to the environmental benefits, the wood pellet industry in the U.S., resulting from UK imports is helping support rural communities and grow rural economies, many of which are still struggling to recover from the 2007-2008 market crash

6. What are the strengths, weaknesses and gaps of the current sustainability framework for bioenergy in the UK? How could the current sustainability framework for bioenergy in the UK be improved to address these issues?

AFF believes the current sustainability framework as it relates to forest biomass, is a strong framework for addressing sustainability. U.S. family owned forests in the U.S. are a key source of supply for the wood pellet industry. Ensuring biomass for pellets is sourced from well-managed family forests is essential for sustainability. The current framework recognizes and supports biomass

from family forests certified by the American Tree Farm System (ATFS), the nation's oldest and largest sustainable family woodland system that also serves as a internationally recognized, third-party audited, forest certification system. AFF operates ATFS, which currently supports over 74,000 family woodland owners who own and care for more than 20 million acres of U.S. forests. ATFS is the only certification program in the U.S. focused exclusively on family and individually owned forest land. Because of the importance of family forests supply for wood pellets, its essential the UK sustainability framework continue to recognize and support ATFS as incentive for family woodland owners to participate in sustainable management and certification through ATFS.

7. Ofgem has identified a number of certification schemes that it considers appropriate for demonstrating compliance with the 'Land Criteria' under the Renewable Obligation sustainability standards. Are these certification schemes adequate? Why/why not? How could they be improved?

Even while its important to recognize and support biomass from family forests certified by ATFS, with a limited number of family forests certified, its important that sustainability standards also support landscape level, risk-assessments that ensure that across a landscape, not just on an individual property, forests are sustainably managed. Such landscape level assessments can help identify risks in wood baskets and can help focus certification in areas where its needed to address sustainability issues.

AFF is currently building a new tool, Forest in Focus, designed to provide a transparent tool to assess sustainability of forests in wood baskets. Forest in Focus will identify risks in wood baskets and opportunities for improvement to increase sustainability. This tools is intended to shed more light on sustainability of family forests in particular. As this tool is built, we look forward to working with leaders in the UK to incorporate into sustainability frameworks.

For more information visit <https://www.forestfoundation.org/-sustainable-solutions-sourcing-family-forests>

8. What certification schemes currently represent 'best practice'? Why?

As mentioned in Question#6, AFF's ATFS forest certification represents the best opportunity to promote sustainability and certify family forests in the U.S. AFF's eight Standards of Sustainability that ATFS certifies to, which are updated and improved upon every 5 years, reflect best forestry practices for family woodland management. AFF engages an expert panel to review our Standards, accepts public comment, and works to continuously improve the Standards. In addition to these Standards, ATFS promotes continuous improvement on the land, through regular monitoring, verification and third-party auditing of forests certified to ATFS

11. Some large UK users of imported biomass use a risk-based approach to assess the sustainability risks associated with importing biomass from specific jurisdictions. What is the role for these approaches?

See response in Question #7 regarding AFF's new Forest in Focus tool. AFF supports using risk-based approaches combined with promoting of certification of individual forest parcels.

12. What are the most credible and up-to-date estimates for global bioenergy resource potential through to 2050, broken down by feedstock type? What key assumptions underpin these estimates?

The U.S. Department of Energy's Billion Ton Report (see <https://energy.gov/eere/bioenergy/2016-billion-ton-report> ) provides a credible estimate of the potential of bioenergy feedstocks, including forests.

a. What lifecycle GHG emissions savings can be achieved by using WIC? Under what circumstances does WIC fail to deliver GHG emissions savings?

Wood use in construction is a highly effective strategy for both storing carbon as well as reducing emissions when used as a substitute for more high energy intensive materials. Additionally, just as wood use in bioenergy helps encourage investment and retention of forests, so does wood use in construction, providing significant long-term carbon benefits. AFF has long been an advocate of wood use in building construction and is joined in support by many members of the Forest Climate Working Group, a diverse coalition of interests advocating for forests role in mitigating climate change. FCWG policy recommendations can be found at <https://www.forestfoundation.org/policy-strategies-forest-carbon>, including recommendations pertaining to wood use in building construction.

31. What are the risks, in terms of GHG emissions, associated with importing biomass or other biofuels from countries that have not committed to limiting or reducing emissions under the Kyoto Protocol or Paris Agreement? How can these risks be managed?

Regardless of the U.S. position on Kyoto or Paris, the U.S., through programs like the US Department of Agriculture's Forest Service Forest Inventory and Analysis program, the U.S. regularly monitors U.S. forests including forest carbon stocks. Additionally, as mentioned in previous responses, regardless of the U.S. position, increased demand for wood from well-managed family woodlands will result in carbon benefits and lower GHG emissions from biomass energy.

33. What key areas should be reflected in these indicators?

As noted in response to previous questions, because of the importance of supply from family woodlands, its important these indicators reflect this and support family woodlands.