



D O G W O O D
A L L I A N C E

THE USE OF WHOLE TREES IN WOOD PELLET MANUFACTURING

***EVIDENCE OF THE USE OF WHOLE TREES BY TOP WOOD PELLET EXPORTERS FROM THE US
SOUTH TO EUROPE***

November 13, 2012

Background

European CO2 emission reduction targets have resulted in a number of European utilities shifting from fossil fuels to biomass as a “renewable” energy source. Europe is currently the world’s largest importer

of wood pellets for biomass energy production. European demand for wood has resulted in a proliferation of wood pellet manufacturing facilities across the Atlantic seaboard of the US South.

From [Biomass Magazine 10/9/12](#):

According to a new report by Wood Resources International, the Southern US surpassed Canada this year as the leading exporter of wood pellets to Europe, exporting in excess of 1.5 million tons this year. WRI forecasts that number to reach to 5.7 million tons in 2015. The report predicts that growth to continue, as during the third quarter of 2012, three companies announced plans for new pellet plants in Georgia and six are current under construction in the south, adding as much as 4.2 million tons of exported wood pellets by 2015.

While the stated intent of European utilities in increasing the use of wood as a source of energy is to reduce carbon emissions, recent scientific studies conclude that burning whole trees (as opposed to wood waste or logging residues) could actually result in carbon emission increases. Therefore, it is important to investigate whether wood pellets produced for export to Europe are made from whole trees. The following is a summary of information about the largest wood pellet manufacturers in the US South. This information, derived from company websites, news articles and photographs, provides concrete evidence that whole trees are in fact used to produce wood pellets for export to Europe. The list of companies included in this report may not be an exhaustive list of the wood pellet manufacturers in the South that are exporting to Europe.

This summary does not address any of the significant issues related to forest sustainability in the Southern US, but rather focuses on the evidence that pellet manufacturers are using whole trees in the production of wood pellets. There are significant issues related to forest sustainability in this region of the world, where logging is largely unregulated, including the loss of biodiversity and the degradation of water resources and carbon sinks from indiscriminate clearcutting and the wide-spread conversion of natural forests to plantations.

[Georgia Biomass](#)

Georgia Biomass is a wholly owned subsidiary of RWE Innogy, a German company with offices in the UK that “plans, builds and operates facilities generating power from renewable energies.” Georgia Biomass currently operates the world’s largest wood pellet manufacturing facility, in Waycross, Georgia, with a capacity to produce 750,000 tons of wood pellets/year for export to Europe.

According to a press release issued by the company on 5/26/11:

- “A good portion of the plant's output may be heading to RWE's existing coal-fired plant in Tilbury, United Kingdom, which is being converted to biomass and would become the largest biomass-fired power plant in the world.”
- “With an annual feedstock procurement budget of \$40 million, the plant will take around 250 incoming log loads daily. The facility will take in more than 1 million metric tons of logs annually.”

From the company website:

- “Our pellets are made from sustainably managed forests.”
- “The use of trees as an energy crop fosters the planting of additional forests.”

From [Biomass Magazine](#):

- “The plant will require about 1.5 million metric tons of fresh wood per year, which forests in Georgia can sustainably produce, according to RWE.”

Photograph taken in August of 2012 of trucks carrying whole trees entering Georgia Biomass (credit: Greenpeace US)



Aerial view of the log yard at Georgia Biomass as shown on GA Biomass [website](#)



[Enviva](#)

Enviva is one of the largest manufacturers of wood pellets in the United States and Europe. With U.S. manufacturing facilities and partner facilities in Mississippi, North Carolina and Virginia, Enviva has an annual production capacity of more than 900,000 tons (825,000 metric tons). Enviva also operates a deep water terminal at the Port of Chesapeake, which has the capacity to receive and store up to three million tons of woody biomass annually. Enviva has a multi-year contract with E.ON for the purchase of wood pellets from its facilities in the Southern US. In November of 2011, E.ON announced plans to build a biomass facility in Sheffield England. In addition, according to US Customs data, Enviva is selling pellets to Drax in England.

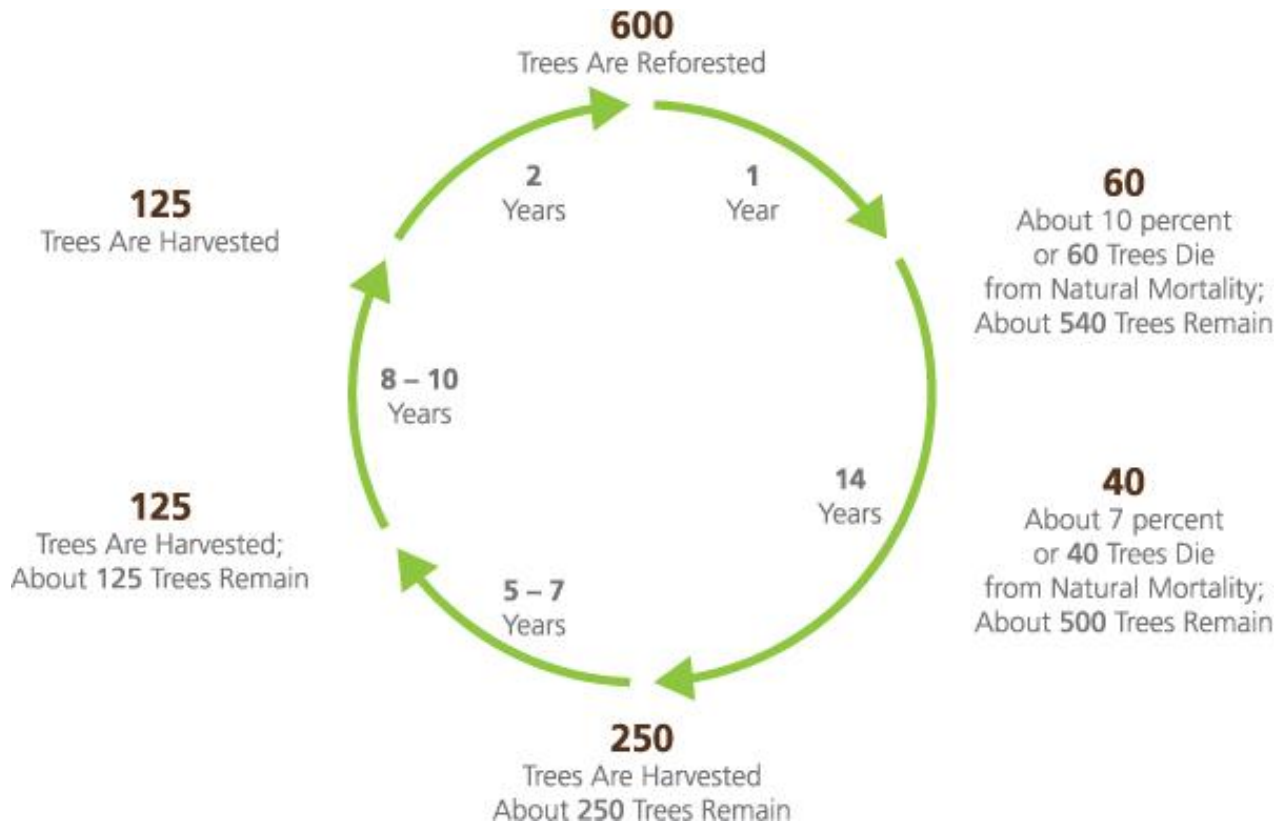
From Enviva's [Sustainability Policy](#)

“Currently, Enviva’s biomass sources include primarily processed residues: chips, bark and sawdust, and unprocessed residues: tree tops, branches, and other forestry debris remaining after the primary biomass (tree trunk) has been processed and shipped from the forest. These unprocessed residues would most likely otherwise go unused as a resource. Additional biomass sources currently include low-grade wood fiber and commercial thinnings.”

From Enviva’s website:

“The majority, approximately 99 percent, of our raw materials (processed and unprocessed residues and low-grade wood fiber) come from timberland that is then reforested by either direct replanting or natural re-growth.”

The following graph documenting the use of trees in Enviva’s wood pellet facilities can be found on the company’s website:



From a 10/23/12 [news article](#):

- “What we consider as biomass is wood. Those pellets are incredible. We use residue from sawmills, chips from other facilities, tree tops, limbs and round (forested) logs to produce our product,” Woodworth (Enviva’s Director of Marketing and Sustainability) explained.
- “You’re blessed here in North Carolina with an abundance of forests, about 18 million acres,” she observed. “In the United Kingdom, they have about 6 million acres. The United States has about 750 million acres, about 200 million of that is in the southeastern states. So that gives us an opportunity to supply some of Europe’s energy needs.”

The following is an aerial photo of whole trees stacked in Semi-circle at Enviva’s facility in Ahoskie, NC (Photo taken in June of 2012 on Southwings Flight):



[Green Circle Bio Energy](#)

Green Circle Bio Energy's wood pellet facility is located in Cottondale, Florida and has a pellet production capacity of 560,000 tons/year for international markets. According to US Customs data, Green Circle is selling pellets to markets in the UK.

From the company website:

- "Product Specification: [Produced from Southern Yellow Pine.](#)"

The two photographs below of whole trees stacked for processing at this facility can be found at the official website of the company [here](#).



- The company brochure “From the Forest to the Power Plant” can be found [here](#).

Enova Energy Group

Atlanta-based Enova Energy Group has [plans to build three new pellet facilities](#) in the Southern US, one in South Carolina and two in Georgia. Each facility will produce 450,000 tons of pellets annually for a total annual capacity of 1.3 million tons that will be exported to Europe.

It’s first wood pellet project is [First Georgia BioEnergy](#).

First Georgia BioEnergy, LLC is a locally owned and operated Georgia based renewables company with operations targeted in the Southeast Georgia area. It’s facilities have an annual production capacity of 375,000 tons.

From First Georgia Bioenergy’s [blog](#):

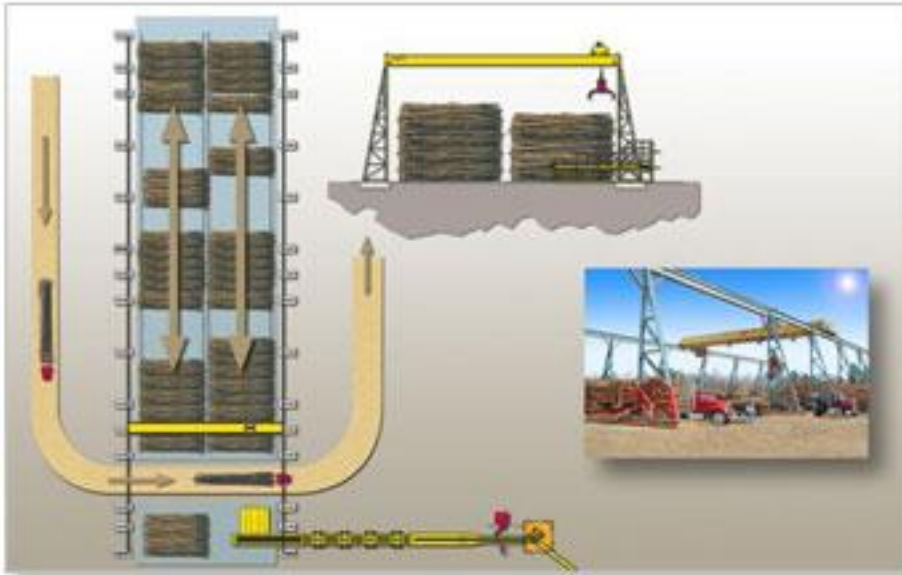
“In March 2011, representatives from First Georgia BioEnergy visited over a dozen major European Utility companies to discuss proposals to provide biomass fuel to those companies in the form of white wood pellets and fuel chips” (Map of places visited below)



“[Draft Agreements](#) are in place with multiple European utility companies...”

The company’s website shows whole trees as the source of wood. [Q and A](#):

FAQs



“How is a pellet mill similar to or different from other timber processing plants in the area today?”

Pellet Mills can use saw mill residues like sawdust or chips or they can use full length trees as their feed stock.”

General Biofuels

Based in California, General Biofuels has a 440,000 ton/year capacity wood pellet facility under construction in Sanderson, GA that is expected to begin shipment in early 2014.

From a [news article dated 9/18/12](#)

- “The plant will manufacture industrial-grade wood pellets for sale to a major European utility under a long-term contract.”
- “Renewable feedstock will come from Georgia timberlands.”

The official website of General Biofuels <http://www.generalbiofuels.com/news.html> shows large whole trees to be the source of the pellets. (This picture is cut and pasted below). Nothing on the website purports to use residues.



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CONCLUSION

This paper has presented official material from the websites of the five largest wood pellet producers in the United States, all of whom claim either to already be supplying or to have contracts to supply wood pellets to European utilities. None of the facilities claim to be avoiding whole trees entirely. Four of the five companies include pictures on their websites showing the use of large whole trees. Only one company, Enviva, makes any effort to claim heavy reliance on residues and to downplay the quality of its whole trees, but an aerial photograph of one of its facilities shows the large-scale reliance on whole trees. In the absence of any requirements to track and account for the carbon emissions associated with the burning of whole trees for electricity, there is no way to ensure that burning biomass in Europe is not have the undesired effect of increasing rather than decreasing carbon emissions.