Report concludes US pellet exports no threat to southern forests

By Katie Fletcher | November 23, 2015
Despite a declining demand, stumpage prices have increased to a 15-year high of $11.57 per ton due to a decline in available residual chip and pulpwood supply.  

**U.S. Endowment for Forestry and Communities**

A report commissioned by the U.S. Endowment for Forestry and Communities, National Alliance of Forest Owners and U.S. Industrial Pellet Association, finds the U.S. export of industrial wood pellets to meet renewable energy goals in the European Union does not pose a threat to the sustainability of southern U.S. forests. The report was conducted by independent forest analysts and economists using U.S. government and marketplace data.

Due to the recent advent of the export pellet mill marketplace, some question the impact these mills are having on pine and hardwood pulpwood forest inventory and wood fiber prices in the U.S. South. The report’s data finds that these impacts are minimal and that export pellet demand in and of itself does not drive price changes.

“This report puts to rest concerns that wood pellet export markets pose threats to the sustainability of U.S. Southern forests or the viability of other forest products manufacturers,” said Carlton Owen, president and CEO, U.S. Endowment for Forestry and Communities. “Markets are vital to keeping working forests as forests. At the Endowment, we are committed to retaining our nation’s rich forest cover for the full range of ecological benefits they provide from clean water to recreational opportunities while at the same time supporting family-wage jobs that communities so desperately need. Whether those jobs are from traditional lumber and paper products or from renewable energy options such as those provided by wood pellets, each is vitally important to America’s heavily challenged rural communities.”

The report reveals that industrial pellet exports represent a very small part of forest harvests in the U.S. South and will continue to do so into the future. Total removal of wood in the U.S. South for all
markets is 3.3 percent of the total forest inventory. Pellet exports represent 0.08 percent of the total inventory. In 2014, pine removals for industrial pellet production totaled 3.7 million tons or 0.3 percent of the pine pulpwood inventory and 0.09 percent of the total pine inventory. In 2014, hardwood removals for industrial pellet production totaled approximately 2.4 million tons or 0.2 percent of the hardwood pulpwood and 0.06 percent of the total hardwood inventory.

In 2014, pellet exports from the U.S. South to Europe, which represent the vast majority of U.S. pellet exports, were 3.6 million metric tons, or 40 percent of Europe’s 9-million-metric-ton industrial pellet consumption.

Future industrial demand for U.S. pellets overseas represents 0.3 percent of total forest inventory in the U.S. South. Realistic demand and market share outlooks show that U.S. industrial exports of biomass pellets to Europe could eventually rise to 10.8 million metric tons. Annual removals to meet this demand would total 25 million tons, which represents 1 percent of pulpwood inventory and 0.3 percent of total forest inventory in the South.

“The value society has placed on goods and services from our forests is the reason the volume of growing trees in our forests has increased by 50 percent since the early 1950s. The strong, positive relationship between markets and tree growth is why our forests remove 13 percent of our nation’s carbon emissions from the air each year,” said Dave Tenny, NAFO president and CEO. “This report should put any concerns about the fate of our Southern forests to rest and allow landowners to continue doing what they do best—stewarding our forests to provide forest products and renewable energy while contributing to cleaner air and water and more abundant wildlife habitat.”


Overall, forest inventory supply in the U.S. South has increased by approximately 1.2 billion tons—409.1 million tons in the Atlantic Region and 790.4 million tons in the Gulf Region—from 2000 to 2014. Sawtimber inventory makes up the majority of the increases, but the report finds that even pine pulpwood inventory has increased. A noticeable decrease in inventory was found with hardwood pulpwood, which was a result of decreased demand for hardwood sawtimber. If harvested, the fiber would have been regenerated, creating higher hardwood pulpwood inventory. In response to the recovery of the U.S. housing market, non-pellet demand for pine pulpwood has increased. This increase from non-pellet manufacturers has coincided with pellet mill demand entering the market, according to the report.

Both pine pulpwood and hardwood pulpwood harvest removals, prices and demands were provided in the report. Harvest removals for pellet consumers in the combined Atlantic and Gulf regions totaled 3.7 million tons. In comparison, harvest removals for non-pellet consumers in the South totaled 117.6 million tons.

Since the advent of pellet mills, total demand for pine pulpwood from pellet producers in the South has reached 3.7 million tons in 2014—1.7 million tons in the Atlantic Region and 2 million tons in the Gulf Region. During the same period, demand for pine pulpwood from non-pellet mills increased by 4 million tons.

Hardwood pulpwood harvested in the combined Atlantic and Gulf regions for non-pellet mills has declined 31 percent from 48.9 million tons harvested in 2000 to 33.6 million tons in 2014. Since 2010, total demand for hardwood pulpwood from pellet producers in the South has risen to 2.4
million tons, primarily in the Atlantic Region. On the other hand, demand from non-pellet mills decreased by 2.5 million tons.

The report found that the total number of active mills, both non-pellet and pellet, has stayed fairly consistent since 2000. There have been significant changes, however, with 38 facilities opened, 35 closed permanently and three additional pellet facilities that are under construction. Contributing to the changes is the addition of 19 export pellet mills, which have opened or are under construction in the U.S. South, none of which have closed. The report states that no compelling evidence exists indicating pellet mills have forced competitive mills to close. Over the course of 2015, two pellet mills have commenced construction—Enviva’s Sampson County, North Carolina, plant and Portucel’s Greenwood, South Carolina plant—and German Pellets has begun expansion of its mill in Urania, Louisiana. The current footprint of mills is 125 active and in-construction, including phase two of German Pellets’ Urania mill.

Results from the case studies examined in the report suggest that multiple market drivers combine to influence price. Any change in demand has a direct price impact, and supply restrictions can have long-term and short-term impacts on prices.

The study includes a comprehensive survey of the market factors affecting wood fiber supply and demand in the U.S. South that shows changes are due to a combination of land ownership change, sawmill ownership change, decline in newsprint and paper demand and increase in containerboard, fluff pulp and performance fiber demand, the housing market crash and the Great Recession, precipitation events, and pellet mill demand. The changes are not solely attributed to the rise of the industrial pellet market.

“This study demonstrates in an independent, data-driven manner that the industrial wood pellet industry is using an extremely small portion of the available inventory of sustainable low grade wood fiber in the U.S. Southeast,” said Seth Ginther, executive director, U.S. Industrial Pellet Association. “It also demonstrates that the industrial wood pellet industry is taking the lowest value sustainable wood fiber for use as feedstock and that the industry is a complement to some of the more traditional forest product industries. Accordingly, we hope that it will be helpful to policy makers when considering the positive role the industry can play in supplying secure, sustainable base load renewable power to the grid in Europe—which ultimately will enable Europe to meet its renewable energy goals.”