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It's Settled: Biomass is a Carbon-Saving Fuel

In May, the Biomass Power Association completed and released a yearlong study of the carbon emissions of biomass power. The results were decisive in proving the carbon benefits of biomass.
By Bob Cleaves | July 11, 2017
In May, the Biomass Power Association completed and released a yearlong study of the carbon emissions of biomass power. Working with two highly respected professors, Madhu Khanna with the University of Illinois and Puneet Dwivedi with the University of Georgia, we analyzed the carbon emissions of one 50-MW facility in New Hampshire. Because natural gas is often touted as a cleaner baseload option than coal, we compared the results of biomass carbon emissions to those of a natural gas power facility.

The results were decisive in proving the carbon benefits of biomass. In one year, the biomass-fueled power plant saved 115 percent of the carbon emissions of natural gas. Comparing the two fuel sources for 100 years, the carbon savings held steady at 98 percent, after taking into account the fuel needed to cut, chip and transport the fuel to a biomass facility.

We used what is called a landscape analysis to measure the carbon savings of biomass, meaning that factored in is the carbon that is constantly being consumed by growing trees in a given area or region, in addition to the carbon released when generating power. The study opted for this instead of a stand analysis, which would assume a harvest, and then measure the time it takes to grow back that particular stand of trees. The landscape analysis better reflects how forestry and biomass work in the real world.

The results are not terribly surprising if you think about the time it takes to grow biomass fuel, versus the millennia it takes to create natural gas. Even further, biomass fuel is created as a byproduct of the forest products industry, rather than specifically harvested for energy production. It makes perfect sense to use biomass fuel materials that constantly grow and regenerate within decades, and are among the lowest-value fibers produced in a forestry harvest.

Some environmental advocacy groups have attempted to paint our industry in a bad light, claiming that our forests shouldn't be used for energy. What is clear from this study is that healthy forests, forest products and biomass can coexist, and in fact, they all enhance one another. Proper harvesting and maintenance helps landowners hang onto their land, rather than sell it. Harvests yield lumber and unusable byproducts, which are used for biomass. Biomass is an additional revenue stream that enables loggers to put to use everything that is harvested—the "guts and feathers," as one lumber mill operator recently put it. And it is all carbon friendly, particularly when the alternative is a fossil fuel like natural gas.

Our study was released at an opportune time for the industry, only one week after Congress voted overwhelmingly to approve language recognizing the carbon neutrality of biomass. The vote capped a nearly seven-year process undertaken by the U.S. EPA to determine how to account for emissions from biogenic fuel sources. Our carbon report underscored the obvious wisdom of recognizing the carbon

benefits of biomass. We look forward to moving on, and working with Congress and the administration to develop policies to support existing facilities and spur more biomass development.
Visit our website to view the biomass carbon study in full.

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