



## HB 2449 – Benefits to Oregon Using Woody Biomass for energy production

The Biomass Producer or Collector tax credit provides incentives for a number of biomass feedstocks, including an incentive for using woody biomass to produce energy or biofuel instead of traditional treatments, such as piling and burning or leaving the material to decompose. The incentive is provided based on the amount of material that is delivered to an energy facility or biofuel producer and is calculated on a \$10 per dry ton basis. From 2010-2013, the BPC program certified \$11,794,000 in tax credits for woody biomass.

Using woody biomass for energy production provides energy, economic and ecological benefits to Oregon and can help the state meet its greenhouse gas reduction goals.

### **Energy Benefits**

BPC incentives supported more than 13 million MMBTUs of energy production from woody biomass from 2010 through 2013. This is enough to power more than 250,000 homes per year.

Public schools in Oregon that have installed biomass boilers report a combined annual savings of more than \$2.5 million (Oregon Forest Resources Institute, 2013).

### **Greenhouse Gas Benefits**

Using woody biomass for energy production results in less greenhouse gas emissions than open burning of this material or allowing it to decompose in the forest.

A paper published in the Journal of Air and Waste Management reported that using biomass as fuel in a cogeneration system resulted in a 17 percent reduction in carbon dioxide equivalent emission compared to traditional open pile burning (Springsteen B., 2011).

In a recent study completed for the Olympic Regional Clean Air Agency, the Stockholm Environment Institute found that the use of woody biomass residues to displace fossil fuels results in reduced greenhouse gas emissions compared to open pile burning or on-site decomposition (Stockholm Environment Institute, 2010).

### **Economic Benefits**

The Oregon Department of Energy commissioned a study regarding the economic impacts of the biomass tax credit program for woody biomass. This study evaluated tax years 2010 and 2011.

The study found that the activities spurred by the tax credit supported between 30 and 70 jobs, between \$1.4 and \$3.29 million in wages and benefits, and between \$5 and \$11.8 million in economic activity. These benefits accrued from a net tax expenditure between \$3.27 and \$3.59 million during those two years.

The results indicate that the value of economic output driven by the program was 1.3 to 3.6 times the value of the foregone tax revenue (White E., 2013).

## Ecological Benefits

Using woody biomass for energy production provides a range of ecological benefits including reduced smoke and particulate emissions from open burning, reduced risk of catastrophic wildfires and promotion of watershed health and productivity. These benefits stem from the ability for biomass utilization to support forest health treatments and hazardous fuels reduction while providing an alternative to open burning of the residuals from those treatments.

A case study from Wallowa County in 2012 found that mechanical treatment with biomass removal cost \$296 per acre, while hand-thinning, piling and burning of the material cost between \$300 and \$900 per acre. (Davis E.J., 2012). Reducing the treatment cost per acre can allow more total acres to be treated within a given budget. Restoration dollars are limited, and providing alternate avenues for biomass may serve to extend the acres on which restoration occurs, which in turn reduces wildfire risk and costs while improving ecosystem health.

Using biomass for fuel in a cogeneration facility reduced particulate emissions by 98 percent compared to open pile burning (Springsteen B., 2011).

## References

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- White E., N.-P. M. (2013). *Impacts of the Biomass Producer or Collector Tax Credit on Oregon's Wood Fuels Market and Economy*. Eugene, OR: Ecosystem Workforce Program, Institute for a Sustainable Environment, University of Oregon.