Forest Thinning Residues as a Potential Fuel Source

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Northern New Mexico forests are characterized predominantly by small (i.e. around 10 cm diameter), densely populated conifers. Land managers, both private and government, often thin the forests to reduce the risks from wildland fire. Thinned residues typically amount to approximately 20 to 50 tons per acre. With no obvious market use for these small thinning residues, they are presently either discarded on the ground, or burnt as waste. Through a small business assistance initiative, Sandia National Laboratories is performing an economic analysis and helping to identify and promote process improvements. The concept of a mobile pyrolysis unit is presently being examined to help understand how it may be used to address the problem. We have constructed and are testing a scale system. Pyrolysis can extract a significant fraction of the biomass as a dense liquid that could be shipped to a refinery for conversion to a fossil fuel additive or substitute through existing technologies. And it is a process that is sufficiently well self contained that it could be reasonably sized for a mobile system. Present issues with the concept are addressed, including yield, benefit, and cost.

I'm happy to present in the "Technologies for Energy Use of Waste Byproducts" session, or in a poster session, or both. I have a well received 20 minute overview presentation I gave at an ASME meeting I can use, and a poster I made several months back.