

**Fire and Forest**  
**A Future to Aim For**  
**by Mike Esnard**

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It looks as if federal funding for fuel reduction in the national forests will be cut in this year's budget. The final budget may include more money, but given the various pressures on the Forest Service for other missions, I expect this cut to stay.

With some recent exceptions, the pattern for fuel treatment dollars is that there is never enough for the work needed. While it is easy to understand why, it is a bad system. We need a system that can free us of Washington politics, and I think the solution lies in biomass utilization.

Allow me to explain. Biomass refers to all the excess fuel that the forest generates—the needles, leaves, branches, fallen trees, as well as the excess green trees crowding into each other with not enough space for healthy development. Before the 20<sup>th</sup> century this excess biomass was handled by fire, sometimes set by summer lightning, sometimes intentionally set by Native Americans. These fires were generally slow, low-intensity fires burning along the forest floor, cleaning out dead vegetation and the smaller trees. The result was a more open forest with fewer and larger trees. Forest animals also benefited from more space and a greener forest floor.

But over the last 100 years we made it a policy to put out wildland fires as soon as possible, thus eliminating fire as a natural feature of the forest. This led to the buildup of fuels, with many more trees per acre, and a great deal of dead vegetation. Not too long ago policy makers realized the mistake and started to allow fire to take back its role in the forest, but now the forests had too much fuel, and the resulting fires burned too intensely and destructively to simply let burn.

Now we are in a predicament. The fuel levels are too high to let fires go, and there are more and more people threatened by fire. A safe option is to treat the forest by mechanical removal of vegetation, but it is expensive, and the need vastly outweighs the available dollars. So what to do?

I am increasingly convinced that the solution will lie in turning the excess biomass into useable energy, and using those resulting dollars to pay for the whole process of fuel removal.

Anyone who has seen a large fire's plume of smoke or walls of flame has had to reflect on the enormous amount of energy being wastefully released, energy that could have been put to good use if it had been released in a controlled manner.

Fortunately, people have been working on this problem for some time. The federal government began to put together an interagency group, the Woody Biomass Utilization Group, around 2003, and to include biomass utilization into its overall strategy for wildland fire management (National Cohesive Strategy). Private companies have designed and built small electricity generating systems which are well suited for rural areas. There are a growing number of successful projects across the US and Canada.

Our Fire Safe Council has been studying this problem for over a year now, and while we are optimistic, we are also sure that it will require the cooperation of several major organizations, and that is our current focus. When it will happen we can't say, but I am fairly sure that it will happen. Someday our excess biomass, as well as our household trash, will be generating electricity.