

**Use of Biomass for Energy: A Common Sense Thing to Do**  
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**Presentation at Energy from Wood Conference**  
**March 13-14, 2006**

A few months ago I ran across a quote. It made such an impression, I taped it to the edge of my desk so I could see it everyday. It says: “We will not solve the problems of the world from the same level of thinking that created them.” That quote is attributed to Albert Einstein.

Energy issues are a good example. Most Americans have steadfastly refused to look beyond fossil fuels in search of solutions to our energy problems. “We must take a close look at all biomass and work to determine its’ highest and best use. Woody biomass is very abundant, and the portion we’re evaluating for energy production and other uses is mostly waste wood and forest thinnings from which there is no present market or use. Our wasted forest biomass has the potential to drive the technology of the future.”

The vast majority of forest landowners hold a deep affinity for their land. They want to do what’s right. Most own forestland for its family heritage values, or for its greater ecological values. But, most do desire, or require that the land produce income at some point in time.

Maintaining strong markets for all forest products is essential to the future of North Carolina’s forests.

North Carolina ranks ninth in the nation in timberland acres with a total of 17.7 million acres. Timberland occupies nearly 57% of our total land area. Non-industrial private ownerships account for 13.8 million acres or 78% of North Carolina's timberland.

Family forests account for 11.4 million acres of timberland. About 89% of North Carolina's total family forest ownerships are less than 50 acres in size.

North Carolina grows more than 60 different commercial tree species, more than any other state. I've been told that there are more species between Asheville and Mt. Mitchell than exists in all of Europe. We are blessed to be rich in diversity.

Wood energy markets can provide an enhanced economic incentive for landowners to retain their lands in forest cover.

Just as we need to maintain markets for higher valued forest products, such as sawtimber, veneer, poles and pilings, we must have markets for low-value and small diameter products that must be removed in order to create forests, which provide greater ecological and economic benefits.

But in many areas of the state, we have inadequate markets for low-grade wood.

Between 1990 and 2000, North Carolina was among the fastest growing States in the country, with the sixth highest numeric population change. Federal censuses showed that North Carolina's population increased 21%, adding over 1.4 million people. By 2050, North Carolina's population is expected to increase 50%, adding 4 million people, and reaching more than 12 million.

North Carolina ranks first nationally in both the area of land classified as **Intermix**...homes intermingled with forestland...(11.8 million acres), and in the area of land categorized as **Wildland Urban Interface**...homes intermixed with, and bordering forestlands...(12.8 million acres).

North Carolina also ranks 3<sup>rd</sup> nationally for the number of homes intermingled within forestlands...**intermix (1.45 million homes)**. About 85% of all our wildfires involve structures. Structural firefighters experience an even higher rate than that.

Over 1,400 NC communities are at-risk from wildfire.

Over 1 million acres of timberland in NC was converted to other uses between 1990 and 2002. The majority was lost to urban development.

With increased parcelization and fragmentation of our forestlands, and with the alarming rate in which development is occurring within and bordering forestlands in this state, the risk for loss of life and property in North Carolina has never been greater. Removal of hazardous fuels, especially around the 1,400 at-risk communities through North Carolina, is our best defense if we are to avoid the catastrophes that have occurred in Western states.

Wood energy markets would make the removal of small diameter and low-grade trees a possibility. This is imperative if we are to manage wildfire risks in this state.

Since markets for small diameter and low-grade timber are lacking, or insufficient in many areas of the state, many of our forest stands are being left in degraded conditions following the harvest of high value sawtimber. Since these “cull trees” do not have economic value, they are often left to occupy the next generation forest. Biomass markets can help reduce the “high-grading” that is all too common, especially within hardwood stands.

Wood energy markets can help achieve better utilization following final harvests; therefore, reducing the need for expensive site preparation needed to establish the next forest.

The demand for FDP cost-share program greatly exceeds available funding. If we could focus our funding on planting/establishment costs and minimize funds spent on site prep, we could fund more acres of reforestation each year.

Wood energy markets can also help create demand for thinning overstocked stands, which is necessary to maintain healthy forest conditions. Overstocked stands are stressed, underproductive, and at greater risk for insect and disease.

Wood energy markets can help drive economic development, especially in our rural communities.

NC is already experiencing a demand for whole-tree fuel chips to be shipped to Europe to supply their needs for renewable energy. In parts of Europe, utility companies must co-generate with wood and coal to reduce emissions. Wonder what N.C. will do when faced with a reduction of mercury and carbon.

As our population grows NC's energy demand is expected to increase substantially over the coming decades. We need to be looking at meeting that demand with renewable sources. We need to continue to evaluate how forest biomass, (a domestically-produced, renewable natural resource), can be a part of the solution.

Biomass markets can be a win-win for sustaining healthy, working forests.

There is no one silver bullet. Energy feasibility is a function of time and place.

The "Fuels for Schools" initiative in the Western states and Vermont is a good example of switching to wood-energy to help reduce energy costs in school districts. It also helps create jobs in rural areas, helps improve forest health conditions, and reduces wildfire risks. NC faces many of these same challenges, and many of these same benefits could be realized here. While not overwhelmingly embraced, a series of well spaced 30-50 megawatt plants deserve consideration.

I challenge you to not let this enthusiasm and energy drop; to continue to discuss and evaluate the pros and cons of wood energy in NC. To ask the hard questions and work together to come up with workable solutions. We need to be sure everyone is at the table. Wood waste and wood from thinnings for which there is no market must be a part of the equation. Wood alone is not the answer, but wood mixed appropriately with other biomass can hold the key to N.C.'s energy future.

Old Albert's notion of how we should be thinking about issues was wise indeed. He lived it.

Fortunately, many of you are also thinking outside the box on the way to making a better mouse trap. Your grandchildren and my grandchildren will thank you. Without your futuristic thinking our children will no doubt experience an energy crisis we have never known. The issues are broader than electricity and we must move aggressively to address all the issues.

Those who choose to approach problems with the same level of thinking that created them will fall on their own swords. We need a common sense approach. Nothing else will keep the Middle East from dictating our agenda.