BIOMASS UTILIZATION IN THE SIERRA NEVADA: CHALLENGES AND OPPORTUNITIES

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May 20, 2008

INTRODUCTION:

- **Thanks for invitation to speak today about this important topic. You will hear from many speakers far more knowledgeable about the technical aspects of biomass utilization than I. My intent is just to get us thinking about the nature of the problem, and maybe be a bit provocative in the process.**

- **This issue is not only relevant to the Sierra Nevada or California but throughout the Western U.S. and much of the rest of the country. For example, we are seeing increasing dead and dying forests in Colorado, eastern Oregon, Arizona, Montana, at the same time that urban encroachment is rapidly expanding into previously undeveloped lands on the wildland interface.**

- **The scope and scale of the issue is mind-boggling and consequently there are no easy answers….and no ONE answer. It will take an array of creative approaches to begin to get a handle on the problem.**

- **First off it is important to DEFINE the problem. Is it strictly a question of finding uses for forest biomass that needs (by CA statute) to be removed from within 100 feet of structures? If so, then we do a problem, but to be frank, it's not a very big problem.**

- **How about a ¼ mile from communities? Or a mile? Mile and half? How about across large fire-prone landscapes?**

- **And just what IS this "biomass" that we're here to talk about? Is it just brush species? Just trees under 6" diameter? 12"? 20"? 30"?**

- **And WHY do we feel this biomass needs to be removed? Simply to protect individual structures or communities? Or are there**

broader forest health implications? Is it to prevent large, landscape-scale stand-replacing fires? Should we be considering economic issues including protection of water resources, air resources, wildlife and fisheries, the increasingly-popular "carbon" resources, and yes, even timber resources? What are the values at risk and what are we willing to pay to protect them?

- **Is utilization of woody biomass for economic development purposes a primary goal? And if so, why is this any more "green" than utilizing medium-sized trees for the same purpose?**

- **And, by extension, if these multiple objectives can be achieved by leveraging the value of commercial-sized trees, is this not a logical course of action?**

- **Keeping these questions in mind, let's consider some of the challenges we face as we attempt to tackle the problem.**

CHALLENGES:

- **Perhaps our biggest challenge is public perception…and how it equates to political will. There is still a widely held perception that we really don't have much of a problem.**

- **Fires like Angora at South Lake Tahoe, and many others across the West in recent years, have provided "teachable moments." However, the publics' memory seems to be remarkably short-lived. And unless the fire happened to be in YOUR neighborhood, there is still the perception that it can't happen to me.**

- **And then there is the perception that if we clear within 100 feet of our homes that we have protected our communities.**

- **The perception that biomass cogen power plants are significant polluters and therefore should be regulated to the point that they are difficult/impossible to develop in some counties is a concern. The link to the polluting aspect of wildland fires and the political will to ease cogen plant implementation should be addressed.**

- **Unfortunately (like so many societal issues), the ultimate challenge is primarily economic. It can cost $2000-$3000 per acre to do initial fuels reduction treatments, and more for necessary follow-up maintenance treatments. It is unrealistic to expect direct federal and/or state appropriations to cover these costs across tens of millions of acres. So what are the alternatives?**

- **One option is to tie biomass removal to forest management projects through timber sales and stewardship contracting, which you will hear more about at this conference. Ironically, it can actually sometimes cost MORE to remove forest biomass in cases when there IS some infrastructure in place to utilize the biomass. On the Stanislaus NF the presence of cogen plants (and air quality concerns) generally led the FS to require biomass to be removed from the woods during forest management activities at a cost of $500-$700 per acre. The Eldorado NF often allows burning of huge piles of forest biomass for under $200 per acre, thus making timber offerings and stewardship contracts more attractive.**

- **The currently depressed lumber markets (tied to housing markets) have also made it very difficult to accomplish fuels management objectives. The FS has been pursuing a course of action whereby we tried to "leverage" the value of the commercially valuable trees to remove non-commercial (or low value) biomass. As the value of the medium size trees declines, so does our ability to accomplish other biomass reduction goals.**

- **Not only has the market made this approach increasingly difficult, a recent 9th Circuit Court of Appeals ruling on three projects on the Plumas NF has made the strategy tenuous at best.**

- **Without such tools, we need to take advantage of existing technologies and develop new technologies to make it more economically viable to remove forest biomass.**

- **Most of the existing markets such as cogen plants not-so-jokingly say that they will take all the biomass that we can deliver free to their door……preferably cleaned and dried.**

- **The economics of cellulosic ethanol and even compressed wood products such as pellets and compressed logs also generally require subsidies to make them sustainable using forest biomass.**

- **So, how big of an economic problem is this? Again, it comes back to public perception and political will.**

- **The production of corn-based ethanol is subsidized to the tune of $6-$9 BILLION in the U.S. Even in a time when a billion ain't what it used to be, this is BIG money. It equates to about $22 million per day. And as you know, the production of corn ethanol has tremendous societal consequences (or externalities to use the economic jargon), unintended or otherwise.**

- **At the risk of making this sound political (it is certainly not the intent) I also offer for context that the wars in Iraq and Afghanistan cost about $12 billion per month…or over $140 billion per year.**

- **To break this down further, the War is costing approximately $400 million per day (some experts put the figure closer to $700 million).**

- **Yet, on their "Pork Barrel" project website, the Citizens Against Government Waste have identified the $6.4 million spent last year on "wood utilization research" as a significant "pork" project……about a *quarter* of the DAILY cost of corn ethanol production. The site notes that since 1985, $86 million (approx. $4 million per year) "has been sapped from the taxpayers for this purpose."**

- **To repeat, public perception and political will are among our biggest challenges.**

Opportunities:

- **Lest I turn this over to Ramiro on a down note, I do want to talk about the opportunities offered by recent events.**

- **The simple fact that we are here talking about this issue today (and at like workshops around the state), and that similar conversations are being held across the country and around the globe, is cause enough for optimism.**

- **The societal concerns over corn ethanol production have been resulting in increased attention to cellulosic ethanol, including the use of woody biomass for this purpose. The 2008 Farm Bill includes increased support for this program. Improved technologies could make this an exciting future opportunity. Synthetic fuel production from biomass also has potential.**

- **Cogen plants using biomass should be increasingly attractive. The level of price supports necessary to move these ventures from red ink to black ink is certainly within the range of reason….some would say insignificant compared to many other federal and state programs. Air pollution regulatory concerns must be addressed and put in context with wildland fire smoke pollution.**

- **Demand for compressed wood products such as pellets and compressed logs continues to rise. These products are generally not made from forest biomass direct from the woods, but again, with relatively minor transportation support, they can be an important contributor to the solution. New technology such as mobile pelletizing equipment may also be important. Sweden, Finland, Austria and other countries are meeting substantial portions of their energy needs with wood pellets.**

- **Other, smaller-scale woody biomass utilization projects are also being developed and implemented, some of which you will hear about today. Although none provide a panacea, they all offer examples that show growing public enthusiasm for solutions.**

- **Opportunities presented by partnerships with diverse entities including local, State and Federal agencies, the Sierra Business Council, Sierra Nevada Conservancy, Sierra Economic Development Corp., Resource Conservation Districts, Fire Safe Councils, and many others are encouraging steps forward.**

- **Perhaps the greatest cause for optimism comes from the change in the political rhetoric. There is increasing recognition that getting woody biomass out of the woods is largely a white-hat proposition regardless of which side of the aisle you sit. We can protect communities from fire; we can enhance forest health; and we can protect the myriad social and economic values that flow from healthy forests. AND, we can accomplish these important objectives while providing economic stimulus to rural communities. This win-win proposition is being increasingly embraced by those with the political and financial wherewithal to help do something about it.**

- **In announcing an incentives program for woody biomass utilization in Colorado, Governor Bill Ritter articulated it well:**

"By offering financial and technical assistance, we are helping our communities participate in the New Energy Economy while addressing forest health issues and promoting local economic development. The long-term benefits are greater energy security, environmental security and economic security for our communities and our state."

That doesn't sound like "pork barrel" politics to me. Thanks for your attention.