

# Woody Biomass Issue Paper

The development of national programs and policies to encourage woody biomass harvesting and utilization is moving forward rapidly, and is being driven by a number of factors. Energy security, development of renewable energy, combating global climate change, and wildfire risk reduction are national priorities, and the utilization of woody biomass plays a role in each, as well as in the management of long-term forest health. While the policies and programs currently in existence and in development all hold potential to expand a domestic woody biomass sector, they are inadequately addressing issues of scale, environmental impacts, social acceptance, public lands management, and rural economic development.

Increasingly, markets are emerging for woody biomass that is produced as a by-product of forest restoration and fuel reduction management activities on public lands. Utilization strategies resulting from collaborative efforts to restore forest health can help create markets for woody biomass; integrated, community-scaled utilization strategies can offset the costs of forest restoration and hazardous fuel reduction activities while contributing to rural economies, energy independence, and carbon emission reductions. Businesses, non-profit organizations, and community groups across the United States are developing a range of uses for woody biomass including: value-added products, thermal energy production, combined electric and thermal energy generation, bio-fuels, and composites.

The Rural Voices for Conservation Coalition (RVCC) proposes the following vision, strategies, and recommendations to accomplish broad national goals while restoring ecological integrity to public lands and enhancing rural economies across the West. The RVCC believes in a vision and strategy that promotes policies and procedures that will integrate solutions that correspond to the scale of ecological need, scope of potential environmental impacts, public acceptance, and the need to create economic benefits for rural communities and the American taxpayer.

## KEY RECOMMENDATIONS

1. Improve and extend Production Tax Credits and qualify thermal biomass energy when developing Renewable Portfolio Standards.
2. Create and fund a grant program to provide capacity building and technical assistance to communities and micro-businesses, and fund existing biomass grant programs.
3. Revise USFS and BLM performance measures and targets to encourage biomass harvesting from the treatment of priority acres identified through a collaborative process.
4. Grant budget and target flexibility and waive cancellation ceilings to facilitate the development of long-term stewardship contracts.

## RVCC VISION FOR WOODY BIOMASS UTILIZATION

- Biomass harvesting and utilization are used as tools to accomplish collaboratively developed public land management objectives based in forest ecology.
- A diversified woody biomass utilization infrastructure exists in rural communities and is made up of appropriately-scaled integrated facilities that sort woody materials for their highest and best use-values to make a suite of wood and energy products.
- The appropriate scale of these facilities and the associated forest management projects to supply them with raw material resources are determined through collaborative processes.
- At the local scale, these facilities provide a means of economic diversification and development for rural public lands communities while supporting ecological restoration, forest fuel reduction, and community wildfire protection.

## WHO WE ARE

The Rural Voices for Conservation Coalition is comprised of western rural and local, regional, and national organizations that have joined together to promote balanced conservation-based approaches to the ecological and economic problems facing the West. We are committed to finding and promoting solutions through collaborative, place-based work that recognizes the inextricable link between the long-term health of the land and well being of rural communities. We come from California, Oregon, Washington, Idaho, New Mexico, Montana, Arizona and Colorado.

- At the national scale, these facilities contribute to energy independence and could reduce the net release of carbon into the atmosphere through the reduction of intense, prolonged wildfires and through sequestering carbon in durable wood products.

Accomplishing this vision requires comprehensive and progressive federal policies, programs, and investments. Federal and state decision makers should coordinate the range of actions needed on energy policy, tax incentives, competitive grants programs, technical assistance, and regulatory activities to ensure integration and maximum leverage of efforts whenever appropriate.

## **PROBLEMS WITH EXISTING STRATEGIES AND POLICIES**

Most of the existing renewable energy policies and programs encouraging woody biomass utilization are focused on developing larger scale (20 + MW) electric generation or bio-fuel facilities in a few key locations and hauling in fuel from far away.

This existing strategy is too narrow in focus and is insufficient for the following reasons:

1. Existing incentives to develop renewable energy are weighted heavily towards electricity and bio-fuels, and often exclude thermal applications from qualification towards renewable energy targets. Generating thermal energy is the most efficient conversion possible from woody biomass, exceeding the efficiencies of both electric generation and liquid bio-based fuels.
2. Incentives targeted exclusively on woody biomass electricity production and/or liquid bio-fuels may create disincentives for other traditional and innovative high-value uses of small diameter wood.
3. The language in the Energy Independence and Security Act of 2007 (Public Law 110–140; 121 Stat. 1492) that defines biomass for applicability to the Renewable Fuels Standard does not include woody biomass from federal lands. This disallows rural communities surrounded by federal lands the opportunity to develop appropriately-scaled renewable energy facilities to help address national energy goals.
4. Building high-capacity electricity transmission lines from rural communities to centers of energy demand is costly and time consuming, which makes both government and utilities reluctant to invest in woody biomass as a feedstock for

## **BENEFITS OF A COMMUNITY-SCALE AND INTEGRATION STRATEGY**

A strategy that is environmentally appropriate, socially responsible, and economically equitable will provide many benefits including:

1. Community-scaled and integrated facilities lend themselves to efficient local thermal energy generation and national energy independence and security.
2. Utilization of locally derived energy is cost efficient and keeps energy dollars local where they contribute to rural economies.
3. The number of products and jobs created at integrated facilities will far exceed those created by stand-alone facilities. This results in greater economic activity and contributes to increased domestic manufacturing of both durable wood and energy products.
4. Dispersed systems of community-scaled facilities require little or no investment in additional transmission capacity, expediting the development of biomass utilization infrastructure and the implementation of associated forest treatments.
5. Federal investments in rural development are multiplied through local spending and can help improve community economic conditions.
6. Federal investments to stimulate community-scale and integrated biomass harvesting and utilization result in net tax revenue to the federal government through increased private investments and business activity.
7. Controlled woody biomass combustion is considerably cleaner than non-renewable fossil fuel alternatives and can have net neutral carbon dioxide emissions.
8. Collaboratively supported approaches to forest management coupled with community-scaled energy and economic development build social support and reduce conflict among stakeholders with diverse backgrounds.

renewable power.

5. The additional consumption of fossil fuels for long-distance hauling does nothing to promote local or national energy independence. Also, hauling costs increase with distance, quickly exceeding the value of the biomass as a feedstock to generate electricity.
6. Catering exclusively to large scale facilities means that economic development opportunities for rural communities could be missed due to a lack of locally available supply. Additionally, the financial capital needed for large scale electric generation and liquid bio-fuels plants makes the possibility of local community ownership of such facilities nearly impossible for most rural towns.

## **FIVE PART STRATEGY TO SUPPORT COMMUNITY-SCALED, INTEGRATED WOODY BIOMASS INDUSTRIES**

There are five components of a strategy to support the development of a community-scaled and integrated biomass utilization infrastructure:

### **1. Improve and Extend Production Tax Credits (PTC):**

*Congress should extend PTCs for renewable energy sources to at least 10 years and add language that qualifies thermal energy facilities for PTCs. Also, Congress should place open loop biomass on par with other renewable energy sources at \$.019 per kW.*

Renewable Energy Production Tax Credits (PTCs) currently exist for what is known as “open loop” biomass (open loop meaning unregulated or not farmed). The current credit is valued at \$.008 per kilowatt hour (kWh) and is reauthorized on a 2-year basis. Unless reauthorized, PTCs will expire at the end of December 2008. Biomass developers are seeking to bring this credit up to \$.019 per kWh (on-par with wind and solar PTCs), and to extend its authorization to a duration more appropriate to large-scale capital investments – 10 years. One critical shortcoming of the existing PTCs is that they do not qualify thermal energy facilities for these credits.

### **2. Qualify thermal energy when developing Renewable**

**Portfolio Standards (RPS):** *Congress should require that thermal energy generation qualify as equivalent to electric energy and liquid fuels in a national RPS. The Arizona state RPS should be used as an example.*

Thermal applications are the most efficient conversion

technology for turning woody biomass into energy and should be considered in the development of a national Renewable Portfolio Standard (RPS). Thermal applications for woody biomass can be up to 90% efficient, compared to 20% for electricity and 50-70% for bio-fuels. Thermal systems can be applied at multiple scales, and are often more economically viable, particularly in rural and remote areas, than electrical generation.

By not including thermal energy, one of the most efficient uses of woody biomass energy is put at a disadvantage to generating electricity and processing liquid bio-fuels. This runs counter to the goals of displacing fossil fuels, promoting energy efficiency, and minimizing carbon emissions.

Excluding thermal applications in a national RPS will continue to focus both federal and private investments on large-scale electric generation and/or liquid bio-fuels development, bypassing opportunities for efficient community-scaled projects.

3. **Build capacity and provide technical assistance:** *Congress must establish and fund a new competitive grants program which provides capacity building and technical assistance services to communities and businesses comparable to those offered through the U.S. Forest Service Economic Action Program (EAP). Federal land management agencies should also designate additional biomass coordinators at the Forest and/or Region level who are funded to work with communities and businesses to provide these critical services.*

*Congress must appropriate no less than \$5 million per program per year to fund existing biomass grant programs. These dollars will be used to effectively leverage private funds to increase domestic biomass harvesting and the utilization infrastructure necessary to address the scale and scope of challenges identified.*

Many communities and businesses are strategically situated in terms of forest resources, and potential business locations, but are lacking in social and institutional capacity to implement woody biomass utilization projects. Existing fledgling rural manufacturing infrastructure must also be maintained and enhanced to overcome cost barriers associated with lost industry capacity.

Previously, programs like the Economic Action Program (EAP) administered through USFS State and Private Forestry (S&P) provided the assistance needed to help rural

communities and entrepreneurs develop and maintain their capacity and access necessary technical resources. The absence of a program like EAP leaves the federal agencies with no other direct funding source, such as a budget line item (BLI) to provide technical assistance or capacity building support.

Continued support for biomass grant programs is necessary to provide opportunities for infrastructure development, capacity building, and technical assistance to communities and businesses. Two programs currently exist to support woody biomass infrastructure development. The USFS Woody Biomass Utilization Grants (authorized under Sec. 203, Healthy Forest Restoration Act of 2003) have funded the purchase of critical equipment to improve both the harvesting and utilization of woody biomass. The Improved Biomass Grants Program (authorized under Sec. 210, Energy Policy Act of 2005) has yet to be funded, but could also provide for the development of utilization infrastructure, while giving some technical assistance to recipients to build local capacity.

- 4. *Revise performance measures and output targets:*** *Federal land management agencies, in cooperation with the Office of Management and Budget (OMB), must revise their performance measures. The focus must shift from exclusively measuring outputs, to measuring both outputs and outcomes. Correlating outputs with other factors can aid in measuring meaningful outcomes. For example, the agencies could correlate the treatment of priority acres (identified through collaborative processes, Community Wildfire Protection Plans (CWPP), Forest Plans, etc.) with volumes removed of both saw logs and biomass, and the resulting change in condition class per entry. This would create an incentive for both biomass utilization and the treatment of priority acres.*

USFS and BLM performance measures that are based upon the number of acres treated drive managers to use hazardous fuel dollars for treatments that yield the most acres per unit cost. This forces managers to focus on treating the “easy acres” to meet their targets. This approach does not account for the benefits provided by treatments that thin the highest priority acres in and adjacent to the wildland urban interface (WUI) or in areas identified as high priorities for ecological restoration. Under current performance measure targets, costs and benefits are not fully accounted for by the agencies in making management decisions.

- 5. *Ensure consistent wood supply from federal lands:*** *OMB and Congress must provide the agencies with budget and target flexibility to plan and implement long-term stewardship projects targeted at biomass harvesting and utilization. Congress must allow the federal land management agencies to waive cancellation ceilings on long-term integrated resource service contracts under the Federal Acquisition Regulation (FAR).*

Obtaining a consistent supply of woody biomass from federal lands is one of the primary impediments to developing a biomass utilization sector that would reduce costs of forest treatments and wildfire suppression. The USFS and BLM currently lack the workforce capacity and budget flexibility to plan and administer long-term stewardship contracts. In the instance of the White Mountain 10-year Stewardship Contract in Arizona, a large proportion of the National Forests’ funding and staff resources are required for successful implementation, leaving other districts in the region without the capacity to develop similar contracts. Congress needs to realize that achieving positive results like those of White Mountain are an investment rather than a cost.

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