

# *Wood Bioenergy Development*

Ensuring Forest Sustainability in the Development of Wood  
Biofuels and Bioenergy in the Interior West

October 7-8

Ft. Collins, Colorado

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## *Rural Voices for Conservation Coalition*

- Working together to promote policy solutions to the ecological and economic problems facing the rural West.
- More than 60 rural, regional and national organizations.
- Community-based natural resource advocates, conservationists, business owners, contractors, elected officials, state and federal government



# Sustainable Wood Bioenergy Development

- Vision for woody biomass
- Wood bioenergy development at the community scale
- Biomass harvesting guidelines
- Perspectives on renewable energy policy



# Vision for Woody Biomass Utilization

- WBU is a management tool: Ensure forest management needs drive prescriptions, not the need for supply
- Having an appropriately-scaled infrastructure that sorts woody biomass for highest & best use
- Appropriate scale is developed through a collaborative process
- A diversified WBU infrastructure: Manufactures a suite of products, including on-site energy
- Support economic, ecological and social goals of rural communities.



# Wood Bioenergy Development at the Community Scale

- Broad stakeholder input and support
- Able to adapt to changes in forest management and resulting supply
- Adjusts to ecological and economic changes over the life of the project
- Promotes local ownership, business development, and employment
- Keeps energy dollars local



# Promoting Efficiency

- Wood to energy efficiencies:
  - Stand-alone thermal: 65-90%
  - Small-scale CHP: 65-80%
  - Cellulosic ethanol: 20-35%
  - Stand-alone electricity: 15-35%
- Wood to generate thermal and natural gas to generate electricity
  - Equivalent thermal energy efficiency
  - Electricity: NG ~ 65%, wood ~30%
  - Switch results in 35% more electricity

# Community Economics

- Local energy is a source of wealth capture
  - Avoids “leakage” of energy dollars
- Enterprise, OR School example
  - Saving \$90,000 annually (heating oil)
  - Wood fuel sourced from within the county
  - Putting \$24,000 into local economy
- Use production of thermal energy to attract manufacturing
  - Wood pellets, potato processing, food packaging
- Wood is only renewable with a supply chain
  - Provides long-term jobs
  - Adds value to upstream manufacturing



# Biomass Harvesting Guidelines

Good biomass harvesting practices can enhance and improve forest land; poor practices can damage and devalue it (PA Guidelines)

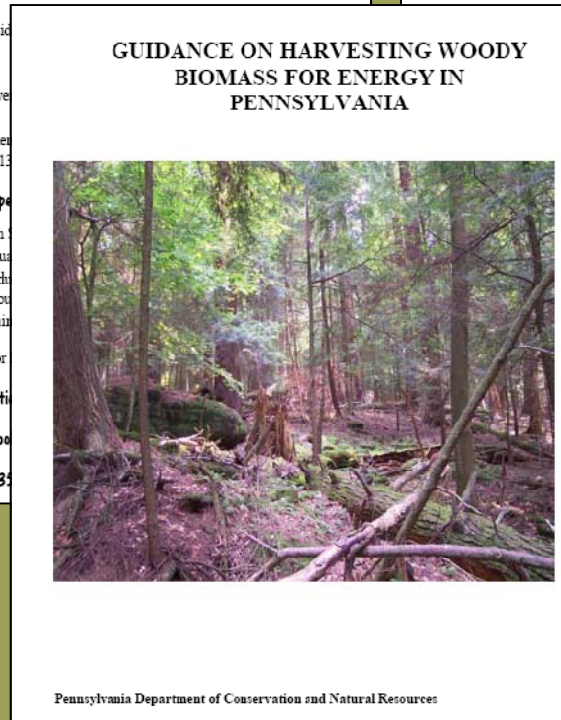




# Biomass Harvesting Guidelines

- Maine
- Minnesota
- Missouri
- Pennsylvania
- Wisconsin

Forest Biomass Harvesting 1
<b>Biomass Harvesting on Forest Management Sites</b>
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Missouri

Woody Biomass Harvesting  
Best Management Practices  
Manual  
Date, 2008

# Recommendations for Developing Guidelines

- Sound science AND wide stakeholder engagement
- Define terms clearly
- Base recommendations on local ecology and conditions
- Include clear recommendations for removal of dead wood
- Use guideline development as an opportunity to improve forest management.
- Change and adapt

## Renewable Energy: Problems with Existing Policies & Strategies

- Federal renewable energy policy is fractured – transportation, electricity, and thermal (?)
- Policy incentives are weighted toward electricity and bio-fuels
- Lack of consideration for system efficiency
- Integrated utilization is put at a disadvantage
- Limited definition of biomass in current renewable energy legislation



# Policy Recommendations

- National Energy Policy is not comprehensive until it includes thermal energy
- Fund capitalization and technical assistance programs
- Promote highest efficient uses of woody biomass in energy policies
- Include woody biomass from NFS lands, allowing public-lands communities to participate
  - with appropriate ecological safeguards and defined through a place-based collaborative process

# Climate Bills

- Definition of Renewable Biomass
  - H.R. 2454: American Clean Energy and Security Act of 2009 – Waxman-Markey Bill
  - Clean Energy Jobs and American Power Act – Boxer-Kerry discussion draft
  - Senate ENR definition from Renewable Electricity Standard
- Material from public and private land
- Sustainable management provisions?

# Thermal Bills

- S. 1626: Thermal Energy Efficiency Act of 2009 (Sanders)
  - Creates a fund to support district energy and CHP systems
  - Mandates efficiency
- S. 1094 - Renewable Energy Alternative Production Act (Wyden)
  - Subsidizes fuel production, not energy generation
- Stand alone thermal standard?



# New tools? Or existing programs

- Woody Biomass Utilization Grant program
  - Utilization of material from hazardous fuel reduction projects
- Community Wood Energy Program
  - Community wood energy plans and systems
- Biomass Crop Assistance Program (BCAP)
  - Cost share payments for transportation
- EISA of 2007
  - Planning grants for District energy and CHP
- Forest Landscape Restoration Act



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