

## Status Report on Biobased Products and Bioenergy Efforts August 2, 2004

### National Events Timeline -

- 1999 USDA Biobased Products and Biobased Energy Strategic Plan
- 1999 Executive Order with goal of tripling bio-based products and bioenergy by 2010
- Stewardship Contracting Pilot Authority, sec 347 of 1999 appropriations (PL 105-277)
- Biomass R&D Act of 2000 (PL-106-224)
- National Energy Policy in 2000 (Chapter 6)
- National Fire Plan 2001
- Farm Security and Rural Investment Act of 2002 (Farm Bill PL 107-171) with it's first-ever energy title and permanent funding for key sections.
- 10-Year Comprehensive Strategy in March, 2002
- Healthy Forest Initiative, August 2002 – focus on gridlock and streamlining action
- Stewardship Contracting 10 year authority, sec 323 of 2003 approps (PL 108-7)
- USDA/DOI/DOE MOU on use of woody biomass – June 2003.
- Healthy Forest Restoration Act (signed by the President 12-03-2003. Legislation authorizes \$760 million a year for tree-thinning projects on 20 million acres of federal land considered most at risk or “catastrophic wildfire. Half of the money is to be spent on WUI.
- USDA/DOI/DOE National Woody Biomass Utilization Conference – Denver, CO January 2004
- Biomass Research and Development Program Funding Awards – July 16, 2004  
(<http://www.usda.gov/Newsroom/0290.04.html>)

### National Initiatives –

Healthy Forests: An Initiative for Wildfire Prevention and Stronger Communities (HFI) -

[www.whitehouse.gov/infocus/healthyforests/toc.html](http://www.whitehouse.gov/infocus/healthyforests/toc.html) and <http://www.fs.fed.us/projects/hfi/>

Healthy Forest Restoration Act Interim Field Guide - <http://www.fs.fed.us/projects/hfi/field-guide/>

National Fire Plan – Managing the Impacts of Wildfires on the Communities and the Environment, [www.fireplan.gov](http://www.fireplan.gov)

USDOJ, USDA & DOE Memorandum of Understanding on Woody Biomass Utilization for Restoration & Fuels Treatments, -

[www.fs.fed.us/fmsc/ftp/sdu/docs/BiomassMOU\\_060303\\_final\\_web.pdf](http://www.fs.fed.us/fmsc/ftp/sdu/docs/BiomassMOU_060303_final_web.pdf)

### States -

**Renewable Energy Portfolio Standards** – increasing number of states are adopting renewable energy requirements. 14 states have Renewable Energy Portfolio Standards

|                               |  |
|-------------------------------|--|
| CA – 20% by 2017              | NV – 15% by 2013 (5% solar annually)                             |
| AZ – 1.1% by 2007 (60% solar) | NM – 10% by 2011   |
| TX – 3% by 2009               | MN – 10.5% by 2006 (minimum requirement for Excel utility)       |
| IA – 2.6% by 1999             | WI – 2.2% by 2011 (applies to regulated, municipal & coops)      |
| PA varies by utility          | ME – 30% by 2000   |
| MA – 4% by 2009               | CT – 13% by 2009 (applies only to customers switching utilities) |
| NJ – 6.5% by 2012             | MD – 1% 2006 to 7% 2018  |

Following states have voluntary standards

|                  |                  |
|------------------|------------------|
| HI – 9% by 2009  | IL – 15% by 2020 |
| MN – 10% by 2015 |                  |

Taken from Union of Concerned Scientists report – [www.ucsusa.org](http://www.ucsusa.org)

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Public Benefits Surcharge Funds – state trust funds collected on fossil energy and fuel bills set aside for renewable energy projects. 16 states have established Renewable Energy Funds  
Oregon’s “Systems Benefits Charges” - resulted in Pacific Power & Light solicitation of proposals for 1400 MW of renewable energy. Over 5000+ MW worth of proposals was received, 85% of which were wind (42 proposals total). Only one biomass proposal was received (Warm Springs Forest Products Industries). Outcome should be known soon.

#### **Current National Biomass Related Efforts -**

##### Farm Bill Title IX:

- USDA-RD grants and loans for energy efficiency and generation projects - \$23 million in 2003
- DOE/USDA grants for biobased products and bioenergy - \$21 million awarded in 2004 (<http://www.usda.gov/Newsroom/0290.04.html>)
- Federal procurement program – Office of Chief Economist (OCE) – Office of Energy Policy and New Uses (OEPNU) working on draft regulations

USDI and National Association of Conservation Districts (NACD) Cooperative Agreement for work in support of biomass utilization.

USDA-DOE Biobased Products and Bioenergy Coordinating Committee – coordinates biobased activities in USDA, including Farm Bill titles, Biomass R&D Act and it’s FACA committee; Howard Rosen, Bryce Stokes R&D are key contacts. Mark Rey is the USDA point of contact for the FACA committee under the R&D Act.

Energy adopted as one of the six goals of the Forest Service, although attempts by FS R&D to increase efforts in energy research were not successful in the budget process for FY05.

Woody Biomass Utilization Team (WBUT) has been chartered by the USFS Ecosystem Management Corporate Team to provide coordination of biomass utilization activities within the agency. The goals are to establish an inter-agency coordination effort, develop an information clearing house, and to recommend comprehensive agency biomass utilization strategy. An interagency Utilization Team is also being organized.

#### **Legislative -**

HFRA, Public Law No: 108-148, an act to improve the capacity of the Secretary of Agriculture and the Secretary of the Interior to conduct hazardous fuels reduction projects on National Forest System lands and Bureau of Land Management lands aimed at protecting communities, watersheds, and certain other at-risk lands from catastrophic wildfire, to enhance efforts to protect watersheds and address threats to forest and rangeland health, including catastrophic wildfire, across the landscape, and for other purposes. The House Rules Committee, [www.house.gov/rules/](http://www.house.gov/rules/) has posted the text of the conference report [www.house.gov/rules/health\\_forest\\_cr.pdf](http://www.house.gov/rules/health_forest_cr.pdf)

#### **Pending Legislation –**

Energy Bill – there was a \$20 per green ton potential subsidy for woody biomass utilization, up to a gross amount nationally.

“Jump Start Our Business Strength” (JOBS) Bill, Sen Grassley, S1637 – Tax incentives consist of a 1.2 – 1.5 cent/kilowatt hour tax credit for existing plants and 2.8 cents/kwh credit for new plants.

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#### **Federal Funding Sources/Mechanisms –**

- USDA Forest Service – Cooperative Forestry Economic Action Programs
- USDA Forest Service Research Biobased Products and Bioenergy Research Program (\$12.45MM in FY 2004)
- USDA/DOI – Healthy Forest Restoration Act of 2003
- USDA Rural Development – Business & Investment and other RD programs
- USDA Rural Development - Section 9006 of the Biomass R&D Act of 2000
- USDA Regional Rural Development Centers
- USDA/DOE Biomass Research and Development Initiative (Section 9008 of the Biomass Research and Development Act of 2000 and as amended by the Healthy Forest Restoration Act of 2003 (\$21MM in FY 2003)
- National Research Institute (NRI) Competitive Grants Program
- USDA Rural Business-Cooperative Service
- USDA Cooperative-State Research, Education and Extension Service
- DOE Financial Assistance

**Success Stories** – does not represent all activities but examples. If you know of stories, please forward to Dan Len.

#### **Arizona –**

Environmental Forest Solutions, Eager, AZ, with Arizona Public Service (APS), has finished the three-megawatt generator. The boiler is on line, operational, and generating three megawatts of electricity. The electricity is sold to Navapache Cooperative and Arizona Public Service purchases the Renewable Energy Certificates.

#### **California –**

Watershed Research Training Center, Hayfork, Calif. – receives \$503,400 for design and early implementation phases of utilization facility in Hayfork, CA. It will include development of stewardship contracts for public lands fuels reduction; a log sort yard; a small log processor, a post & pole operation, a value-added incubator and industrial park and a wood fired electrical generation plant (10-15MW).

USFS Region 5, California, 1/3 of forest restoration or fuels reduction by-products from treatment on National Forests is utilized for producing bioenergy. Roughly up to 50% of wood to electric energy generating capacity in California is not currently utilized.

#### **Colorado –**

Colorado utility, Aquila, plans to apply for renewable energy certification to sell Green Tags. A Green Tag represents the environmental benefits of using alternative power, and therefore provides a way for consumers to expand the use of renewable energy. The purchaser of a Green Tag (also known as Tradable Renewable Certificates) is the owner of the environmental attributes of a specific megawatt hour of energy added to the grid. The sale of Green Tags would help to offset the cost of introducing biomass energy sources. [www.green-e.org/media\\_ed/trc.6.announce.html](http://www.green-e.org/media_ed/trc.6.announce.html)

Nederland Community Center, Nederland, CO, Wood to Energy Project heats community center as of 12/2003.

#### **Idaho –**

Fodge Pulp, Bonners Ferry, ID, biomass operation plans, secured funding & is completing permitting process for 3 to 6 MW facility, contact Barry Wynsma, [bwynsma@fs.fed.us](mailto:bwynsma@fs.fed.us), [www.fs.fed.us/fmsc/sdu/products/fodge](http://www.fs.fed.us/fmsc/sdu/products/fodge)

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**Louisiana –**

Kisatchee National Forest, Pollock, LA, Stewardship Contract with biomass utilization. Hogfuel to Weyerhaeuser paper plant utilizes material down to 1 inch. Also, Vanguard BiosynFuels, LLC. Vanguard BiosynFuels, LLC. Purchased a Farmland Amonia Fertilizer plant.

**New Mexico –**

Fort Bayard Medical Center, Silver City, NM has received funding from the New Mexico State Legislature to install a wood fired boiler system in the hospital. New Mexico Energy Mineral and Natural Resources is preparing a request for quotes for the system. It is hoped that the system will be operational this winter. Gila Wood Net, the Silver City/Grant County Economic Development Council, and the Gila National Forest are working hard to bring this project to life.

P&M Signs, Mountainaire, NM, is putting in a 4-foot wide extruder to make composite wood sheets ¼ inch in thickness. These can be laminated and are currently intended for highway/forest signs. In addition, P&M is looking at putting in a gasifier to provide heat and power for their plant. They are actively in negotiations with companies for a few different options.

Local Energy Assistance Project, Santa Fe, NM under a \$1.3 million USDA-DOE grant, is doing the study for and designing a downtown heating system in Santa Fe. They have a detailed study with up to 525 total buildings that could be included. They have several satellite systems designed also. The report shows an abundance of fuel, a good need for the energy, and a viable project that has many positive benefits for the city and county of Santa Fe. They unveiled the results of the study to the community July 23, 2004.

Renewable Energy Partners, NM, has a contract for an E-85 ethanol plant from NM Energy, Mineral, and Natural Resources. This plant will provide a transportation fuel of 85% ethanol and 15% gasoline. To do this they are actively moving forward with an ethanol plant in Las Vegas using animal residue, mill residue, and forest residues. They are currently working with the Taos Pueblo to secure the required material to begin development.

Jemez Mountain School, Jemez, NM, has finished design, gotten quotes, and is in the process of signing contracts to begin the retrofit of their boiler system to a wood fired system. They have funds from the New Mexico State Legislature, Economic Action funds, and school district funds. The installation should be complete this fall.

New Mexico Energy Minerals and Natural Resource's Energy Conservation and Management Division and Forestry Division and USDA Forest Service has held a "Biomass to Business" conference and a "Green Fuel (liquid fuel) Conference in the last few months. The Green Fuel Conference was in conjunction with the "Clean Fuel Development Coalition" from Washington DC. This was the first of four planned regional conferences on ethanol and other liquid fuels primarily from woody biomass.

**Montana –**

"Fuels for Schools", Darby, MT uses small diameter material from hazardous fuel reduction projects. Darby School project involves converting the existing fuel oil heating system of the three school campus to a wood chip system. In 5 western states feasibility studies are underway to assess the potential opportunities of converting other school systems.

Darby Library, Darby, MT, uses small diameter roundwood as a building construction material. Several additional projects using small diameter roundwood include a green house in Catron County, NM; a pavilion in Westcliffe, CO; a kiosk in St Mary's ID. FPL provided a cost share challenge grant, as well as the technical expertise to design unique roundwood trusses.

**National & Regional –**

Western Utilization & Marketing Project (WUMP) – inventory and assessment of FY01 & 02 S&PF utilization & marketing grants in Western US (includes Four Corners Partnership).

"Slash Bundler" Demonstrations, "Forest Residue Bundling Evaluation", a 3 month demonstration and evaluation of forest residue (slash) bundling technology of fuel reduction treatments was

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conducted on 8 National Forests, BLM & private sites, report due soon, contact Dan Len, [dlen@fs.fed.us](mailto:dlen@fs.fed.us), [www.fs.fed.us/fmhc/sdu/biomass/bundling](http://www.fs.fed.us/fmhc/sdu/biomass/bundling)

Western Biomass Assessment estimates tonnages of biomass available from 15 western states by condition class, accessibility, suitability for harvest, and availability, based on a thinning regime tiered to stand density index by diameter class, contact Bryce Stokes, [bstokes@fs.fed.us](mailto:bstokes@fs.fed.us), [www.fs.fed.us/research/pdf/Western\\_final.pdf](http://www.fs.fed.us/research/pdf/Western_final.pdf)

USFS S&PF-FPL demonstrations under way involving forest fuel reduction materials include: Siting 3 BioMax 15 systems which use wood chips to produce combined heat and power at the 15kW level. These systems have been sited at North Park High School in Walden, CO; the Zuni Furniture Manufacturing facility on Zuni Pueblo, NM, and SBS Wood Shavings in Ruidoso, NM. There is also one home-biopower unit, the BioMax 5, which will be tested at the FPL's Advanced Research Center demo house and later installed at Indigenous Communities Enterprises Navajo Hogan Project in Cameron, AZ.

Examining the feasibility of wood fired cooling systems that could be jointly installed with a wood chip heating system. Providing both heating and cooling systems using wood energy would be very cost effective since wood cooling systems are approximately one-fifth the cost of electrical cooling systems.

Participating with the National Renewable Energy Lab in a project to develop and deploy a 50kW combined heat and power gasification system. The first system will be deployed at Mt Shasta California and the second system will be deployed on the San Bernadino National Forest in Southern California.

**Upcoming Biomass Related Conferences** - [www.fs.fed.us/fmhc/sdu/events](http://www.fs.fed.us/fmhc/sdu/events)

**Challenges and Solutions to Forest Biomass Utilization in Colorado**, July 29-30, 2004, Denver, CO, [http://www.state.co.us/oemc/events/other/Forest\\_Biomass\\_Utilization\\_Workshop.pdf](http://www.state.co.us/oemc/events/other/Forest_Biomass_Utilization_Workshop.pdf)

**Southwest Renewable Energy Conference**, August 3-7, 2004, Flagstaff, AZ, <http://www.swrec.org/index.html>

**Biomass Thinning for Fuel Reduction and Forest Restoration**, September 8-9, 2004, Redding, CA, <http://ucce.ucdavis.edu/files/filelibrary/5098/15246.pdf>

**Southern Alliance for the Utilization of Biomass Resources Conference**, October 25-26, 2004, Tuscaloosa, AL, <http://saubr.ua.edu/events.htm>

**Past Biomass Related Conferences** -

**Smallwood 2004**, Creating Solutions for Using Small Trees, May 18-21, 2004, Sacramento, CA, <http://www.forestprod.org/>, go to conferences & meetings

**DOI-USDA-DOE Bioenergy and Wood Products Conference** considered a step in the implementation of the USDA-DOI-DOE MOU on biomass utilization. January 21-22, 2004, Denver, CO, presentations available at [www.nifc.gov/biomass\\_conf.html](http://www.nifc.gov/biomass_conf.html)

**Smallwood 2002**, Proceedings available at [www.forestprod.org](http://www.forestprod.org), go to conferences & meetings, past conferences, Smallwood 2002 – Community and Economic Development Opportunities in Small Tree Utilization

**Small Diameter Timber Symposium**, 2002, proceedings available at <http://smalldiametertimber.wsu.edu/>

**Residue to Revenue**, Nov, 2003, Vancouver, BC, [www.forestnet.com/woodconference](http://www.forestnet.com/woodconference)

**Eastern Oregon Small Diameter Wood Products Fair**, March 2-3, 2004, La Grande, OR, [www.wallowaresources.org/woodfair/index.htm](http://www.wallowaresources.org/woodfair/index.htm)

**National Fire Plan and Wildland Fire 2004, Surviving the Interface Danger Zone**, March 2-5, 2004, Reno, NV, [www.fs.fed.us/fmhc/sdu/events/documents/WF04\\_flyr.pdf](http://www.fs.fed.us/fmhc/sdu/events/documents/WF04_flyr.pdf)

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**Small Log Conference – Creating Capacity to Compete**, March 31-April 2, 2004, Coeur d'Alene, ID, [www.fs.fed.us/fmnc/sdu/events/documents/small-log2.pdf](http://www.fs.fed.us/fmnc/sdu/events/documents/small-log2.pdf)

**Green Fuels Symposium**, May 12-13, 2004, Albuquerque, NM,  
<http://www.emnrd.state.nm.us/ecmd/html/biomasstobusiness.htm>

**Inter-agency Biomass Directory –  
Department Of Energy (DOE) –**

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