

**Pacific Regional Biomass Energy Program
October-November 2005**

Federal Network for Sustainability (FNS) Releases its Biodiesel Webguide: FNS, the West Coast Collaborative and the Far West Regional Laboratory Consortium are pleased to announce the availability of the Biodiesel Technical Reference Guide. The guide is targeted at federal agencies on the West Coast to help them quickly learn the basics about biodiesel including legal requirements and incentives. Although the guide is targeted at federal agencies, it will likely be useful to others as well. Using a navigational tool called the "Biodiesel Wizard," the guide provides references and links to technical information about how to use and store biodiesel and gives case studies of federal agencies/installations who are currently using biodiesel. There are also links that identify where the federal agencies can buy biodiesel fuel. Soon, there will be an online survey for West Coast federal agencies to identify their current biodiesel usage to help identify buying trends. The guide can be found at <http://www.federalsustainability.net/initiatives/biodiesel.htm>.

Montana State Policies and Incentives Favorable to Support Biomass Energy Use:

1. The Montana Department of Environmental Quality (DEQ) provided comment at the Montana Department of Transportation (MDT) hearing on October 18 of a proposed new rule to enact the tax rebate on E10 blends in Montana. SB 293 reduced the tax on ethanol blend to 85% of the current tax rate. The ethanol blend tax rate is currently \$0.2295 per gallon. The overpaid tax will be refunded to distributors after tax reports have been submitted and MDT verifies the fuel came from a terminal that mechanically blends the ethanol with gasoline. The reduced tax will be for all blends of ethanol that is 10% or greater. Apparently, rule limits the incentive only to agricultural equipment. This reduced tax rate became effective on April 28, 2005. Currently, Missoula is the only terminal that qualifies for the reduced tax rate because the rest of the ethanol blend used in Montana is splash blended. Most of the ethanol blend from Missoula would not qualify because only an 8-percent blend is needed (and blended) for winter use. DEQ will continue to monitor the situation and support the use of bio-based fuels. A MTD letter on the new rule was published November 3, 2005.

2. The Montana Governor's Energy Symposium, October 18-19, 2005, was attended by Governors of four other states and hundreds of other attendees at Montana State University in Bozeman, Montana. The E85 Avalanche was prominently displaced to the left of all speakers on the floor of the Field House during all plenary sessions. DEQ's booth was one of the best attended, distributing information on biofuels, renewable energy, and other conservation measures. DEQ also assisted with the biofuels session covering ethanol, biodiesel, and hydrogen. Coal-to-Liquid Fuel and electric power production were two items highly featured in the two-day event. Montana sits atop 10 percent of the world's known coal reserves. Coal, and possibly pre-natal coal, appeared to be part of Montana's energy future and policy making. According to the coal and rail communities (BNSF, MCC) presenting at the event, the impediments to increased Montana energy production and export include:

- a. Lack of physical access to coal reserves.
- b. Needs state policy that facilitates investment in (generation), mining, and transportation
- c. Government incentives to invest in infrastructure
- d. Time consuming environmental approvals for physical access transportation corridors, and construction
- e. Investments in infrastructure, mining and non-highway transportation

Increase Biomass Energy Development through Technical Assistance in Montana:

3. On September 12-15, 2005, DEQ's Howard Haines attended the Renewable Energy Workshop sponsored by Biocycle-DOE Great Lakes Bioenergy Program Partnership Workshop in Madison, Wisconsin in September 2005. We were able to acquire additional information and contacts on several technologies for:
 - a. A landfill gas project to heat project at the University of Montana, College of Technology in Missoula, Montana.
 - b. Several dairy cow manure projects to heat and energy projects in Gallatin County (Pleasant View Dairy, with funds from USDA Rural Development, MT Dept of Agriculture Montana Growth through Agriculture, and utility Universal Systems Benefits Charge (USBC) for this 700-head capacity digester that is still selecting a technology), Ravalli County (Huls Dairy – a 500-head (plus 200-head back-grounding) operation in the Bitterroot is looking to replace propane use and produce a 60 kw of power) and Powell/Deer Lodge County (State Prison Dairy a 350-400 head dairy) Montana.
 - c. A municipal biogas project at the Helena Wastewater Treatment Biogas to heat and 55 kW power project.
 - d. A demonstration combined manure CHP project to firm wind development, the initial one being in Meagher county, with a potential for 16 other Montana locations.

4. On October 10, 2005, U. S. Senator Conrad Burns kicked-off the ribbon-cutting ceremony for the Thompson Falls Fuels-for-Schools wood heat project using wood chips and hog fuel from slash piles and fire hazard reduction materials in the urban interface to replace propane. Thompson Falls School is in a PM-10 non-containment area with the emissions monitoring equipment on the school's roof for the past 10 years. Although below permit levels, DEQ received a request and provided analysis to determine the maximum allowable emissions, and provided a letter to the contractors. Emissions reports of similar ChipTech installations illustrate that the Thompson Falls installation should be below the requested amounts. Emissions testing may be conducted at a later date. State funding will continue the ambient air emissions continuous monitoring. After a year or two, DEQ's PPAAD will summarize monitoring findings to hopefully show that the Fuels-For-Schools project improves overall air quality by reducing slash burning and wildfires.

5. The DEQ has provided assistance to other Fuels-for-Schools projects. Townsend School District is dedicating their new pellet-fuel boilers this fall. Economic development interests are now looking at constructing a pellet mill in the area. UM Western has a fuel supply RFP on the streets. They are the largest "Fuels for Schools" project thus far. Troy High School has completed their technology summary and they're now looking at options. Five other public buildings around the state have been selected for preliminary analyses.

6. The Howard Haines and Betsy Hoovda "Buzz About Biofuels" article in the Montana Underground Storage Tank (MUST) Newsletter encouraged the installation of two new B20 retail fuel pumps in Montana, bringing the total to five. Noon's in Missoula and Story Distributing in Belgrade, Montana added B20 pumps in October. The article in MUST described the tax incentives provided by the 2005 Montana legislature for converting fleet and retail fuel tanks to biodiesel and ethanol blends. Owners of each tank cited the article as the reason to "get off the fence." Both are installations of new tanks. Mountain Line in Missoula, the city's bus service provider, and Belgrade School District are two of the new fleets in Montana to be using the pumps to fuel with B20. Other locations are considering E85 and E10 tank conversions or installations.

Increase Biomass Energy Awareness in Montana

7. Ethanol Producers and Consumers' (EPAC) Shirley Ball and DEQ's Brian Spanger attended the Governor's Ethanol Coalition (GEC) Meeting in St. Paul, Minnesota on September 26-28, 2005 and the follow-up telephone conference on November 18, 2005. The GEC discussed an E85 refueling network, recent EPA regulations, had speakers from the railroads, Minnesota's E20 and B20 legislation, and tours of an ethanol and biodiesel plant. GEC is investigating the feasibility of requesting an extension of the GM E85 Avalanche leases for a second year due to the length in developing the individual agreements. Progress is also being made on biomass to ethanol development. Their next meeting will be in Washington DC.

8. DEQ's Howard Haines presented information on new biofuels activities to the Greater Yellowstone Area Clean Air Partnership on October 4-6, 2005 in Gardiner, MT. The group also viewed one of the biodiesel "New Yellow Buses" that were recently delivered to serve as visitor transport year-round. The new buses will use tracks in the winter to serve as snow coaches. Each of the first six will have different interiors, including a "Superintendent's Business Coach" to determine the best arrangement for various assignments.

9. The DEQ attended the booth for the National Biomass State and Regional Partnership with the Western Governors Association at the Woody Biomass Workshop on October 11-14, 2005 in Missoula, Montana. Over 270 attended the event from 16 states and five countries. There were several other booths to handle questions on Fuels-for-Schools projects, so participants asked questions at the booth about power generation, wood gasifiers, biomass-to-ethanol plants, and federal grants for studies and projects.

10. Howard Haines presented information and provided materials on biodiesel at a booth on America Recycle's Day on November 15, 2005 at Carroll College in Helena, Montana. The event sponsored by the SAVE Foundation (Student Advocates for Valuing the Environment) demonstrated the production of biodiesel on a lab scale and had speakers from across the state discuss recent activities. Mr. Haines presented information on incentives, regulations, and information sources regarding biodiesel production and use in Montana. David Max, Vice President of Sustainable Systems LLP, described their recent activities including the cold weather field demonstration of biodiesel with the MDT, addition of B20 retail outlets in Missoula, and their recent purchase of Montola Growers Inc facility in Culberston, Montana. Sustainable Systems LLP is now contracting for crops to be grown next season for the production of bioproducts and biodiesel by late 2006 and 2007.

11. In October, DEQ's Program Manager received an activity report on the DEQ bioenergy web browser page for the past program year. During the Montana Biomass Energy Program Year 2004 ending September 30, 2005, there were 50,690 successful hits on the Bioenergy Program pages (4,940 to the home page) with 17,948 visits averaging 18.5 minutes and another 24,803 document views/downloads (usually pdf files). Search engines accounted for 2,944 of the visits with 10,110 unique (non-state of Montana) visitors. August 2005 had the most number of visits on Montana's biodiesel page (over 1,600), possibly as a result of the Montana Public Radio interview aired state-wide in early August giving the web site address. Of note was the increase in ethanol page hits in June-July after the Montana Ethanol Conference (June) and Livingston Sustainability Conference (July 9)—both times accessing "where to find it (ethanol blend fuel)" and the recent conference materials/presentations. This contrasts with the annual number of phone-email-direct inquiries and responses (37 percent of the total of over 5,000 for the program year) where only 5.9 percent of the total requests (16.3 of all ethanol requests) were related to accessibility and use of ethanol blend, and the vast majority of inquiries were related to production, permitting, emissions, and technical feasibility. If this is a true picture, the DEQ web

site might be improved with more state-specific information on production, permitting, feedstock and resource availability, and emissions.

12. Additionally, the DEQ's Clean Snowmobile web site, featuring bio-based fuels, had over 286,287 successful hits during the program year with 88,442 visits averaging 7.08 minutes average per visit (6.82 minutes median) with 64,061 page views (0.33 minutes each) and 86,439 documents viewed or downloaded. There were 17,746 of the visits were generated by search engines. The months of January, February, March, July, and August 2005 each had over 4,500 visits. The increase in visits correlates with announcements about Yellowstone winter use studies and visitation.

Leveraging of State and Federal Funding including Project Implementation and Partnerships in Montana:

13. Governor Brian Schweitzer kicked-off the Montana Bioenergy Program's Biodiesel Outreach Project on October 21, 2005 at the Montana Farmers Union Annual Convention in Great Falls, Montana. Over 175 attended the event covered by all major Montana TV networks and newspapers. The Governor poured the first gallons of biodiesel into a Board Member's pickup truck. The biodiesel was made from Montana-grown canola provided by the Peaks to Prairies Cooperative from the Montana Farmers Union demonstration biodiesel refinery operated at the Convention. DEQ provided \$5,000 of the \$12,000 year-long outreach program on biodiesel. The goal of the project is to educate agricultural producers about biodiesel, and educate potential small biodiesel producers about a number of considerations in making biodiesel safely and legally. (Project summary sent under separate cover). The Montana Young Producers Conference attended by 67 students, all on grants and stipends, was the second event at Fairmont Hot Springs, November 11 and 12, 2005. About 10 other events are planned for this upcoming year around Montana.

14. DEQ's Howard Haines attended the Pacific Regional Biomass Energy Program Technical Peer Exchange meeting and the Rural Alaska Energy Conference on September 22-23, 2005 in Valdez, Alaska.

UPCOMING EVENTS IN MONTANA:

Biogas CHP site visits, Renton WA and Bellingham WA, November 29, 2005
Diesel Retrofit Boot Camp, November 30-December 1, 2005, Crown Plaza Hotel, Seattle, WA
16th Annual Montana Ethanol Conference, June 13-15, 2006, Whitefish, Montana

Please be aware that all State of Montana email addresses are changing suffixes from "@state.mt.us" to "@mt.gov" Although the change began January 1, 2005, a grace period was provided and is now ending. Please update my email address (and web pages) to hhaines@mt.gov and the web site to www.deq.mt.gov select "bioenergy/biodiesel" or "ethanol" under "what are you looking for."

Alaska Municipal Waste Request for Proposal (RFP): The Denali Commission issued a new RFP for \$2.5 M for waste combustion and other measures for managing waste in rural villages. See http://www.denali.gov/Program_Documents.cfm?Section=Solid%20Waste for details. The Alaska Energy Authority (AEA) is part of the team for planning and assessing responses from the RFP. Other partners are Alaska Department of Environmental Conservation, Alaska Native Tribal Health Consortium, and the Denali Commission.

Wood Gasifier-Gensets Demonstration Project in Alaska Announced: At the statewide Alaska Federation of Natives Conference on October 19-21, 2005, the Alaska Villages Initiatives (AVI), a non-profit corporation, announced it is working with Community Power Corporation (CPC) in Denver, Colorado to deploy CPC's wood gasifier-gensets in Alaska. Alaska Energy Authority (AEA) met with AVI and CPC staff after the conference to begin planning this project. The first step will be a demonstration project off-grid near University of Alaska Fairbanks.

Fischer-Tropsch Fuel Proposal: Alaska Energy Authority (AEA) staff met with Alaska Natural Gas to Liquid Company to discuss a proposed small biomass fischer-tropsch plant in the regional Yukon hub of Galena. The first step involved will be a feedstock survey to be contracted to a local forestry consultant.

Craig Wood District Heating: The City of Craig received one bid response for a wood boiler system from Chiptec Wood Energy Systems in Vermont. The bid was \$344,270 FOB project site. Craig wood system engineer CTA is working with Chiptec to incorporate the wood system design into the overall project for the construction bid package to be released in January.

Biomass Projects in the State of Oregon: Oregon has been assisting the following developers of biomass projects to access Oregon tax credit incentives, understand the new U.S. biopower incentives, to access Energy Trust of Oregon incentives, and find project financing through the Oregon Small Scale Energy Loan Program.

1. Douglas County Forest Products has converted its four natural gas-boiler heated dimensional lumber dry kilns to highly efficient kilns that will use steam from a new hogged fuel boiler. The boiler will principally drive an 8 mW turbine and low pressure steam will serve the dry kilns. The kiln loads were reduced so that the new load match met the amount of hogged fuel produced by their on-site barking and saw operations and the 8mW of electric generation. Power purchase contracts are in place, construction is underway, and completion is expected soon.

2. Oregon serves on the Governors Community Solutions Team assisting Lakeview County to develop a 20 mW co-generation facility with Collins Pine lumber operations in Lakeview, Oregon. The meeting in November finalized each of 15 participants in the Community Solutions Group. Jim Walls of Lakeview expects to have a Winema-Freemont National Forest Stewardship Contract for a ten year period shortly. Oregon is working to make that agreement as transferable as possible to other National Forests and Bureau of Land Management. The Oregon Department of Energy confirmed this month that it will provide a 35% Business Energy Tax Credit worth some \$3.5 million towards the project starting in early 2006.

4. The Swanson Lumber biomass facility is on track for spring 2006 completion. It is a co-generation facility running on hogged fuel produced at the site and purchased from nearby facilities with saw and barking residue. The project will serve dry-kilns and a 6 mW facility. Oregon Department of Energy staff worked with Swanson to integrate the tax credit with their financing scheme and informed the financiers of the strategy and timing of tax incentives.

5. Hampton Lumber is in the process of designing its biomass plant to replace a gas boiler at its Tillamook dimensional lumber plant. It is expected to have co-generation on-site and a power sales agreement with the local Public Utility District. Wellons, Inc. is the designer and developer of all three of these forest products co-generations projects. Wellons is headquartered in Vancouver, Washington with manufacturing facilities for its biomass boilers in Sherwood, Oregon.

6. Oregon has been developing a loan and tax credit package for a 3 mW landfill gas recovery system at Findley Butte landfill, near Hermiston, Oregon. The prospect for an early 2006 project start is good given that the entire project can be financed with a power sales agreement and an agreement to use the net present value of Oregon tax credits as a bridge financed equity. The power purchase agreement falls under Oregon's recently updated PURPA standard requiring utilities to purchase up to 10mW for up to 20 years at avoided cost. Findley Butte has a gas collection system in place.

7. The Dry Creek landfill project is on a parallel path with the Findley Butte project. Oregon Department of Energy staff are in contact with them on their financial position, needs, tax credit timing issues and technical capacity assessment. Dry Creek has a gas collection system in place.

8. The Pendleton Grain Growers are in the process of developing a canola based crushing and biodiesel production on behalf of its Eastern Oregon wheat grower cooperative. They have received authorization from their Board to proceed and are investing in screw presses. The biodiesel reactors will be installed in the coming year. Growers are planning to establish crop rotation schedules to assure consistent canola crop supply and the Oregon Department of Energy staff has helped them access the Business Energy Tax Credit which may provide financing.

Update on Oregon Biomass Policy:

This month staff updated the U.S. EPA Landfill database with current information about Oregon's landfill gas and wastewater gas potential.

Oregon Department of Energy (ODOE) Business Energy Tax Credit program interpretations were updated with regards to producing biofuel crops. In November, an ODOE staff team identified that the seed and pro-rated cost of any equipment (tractor, disc, rake, baler, silo...) newly purchased as necessary for development of a fuel crop is eligible for the tax credit. Developing a communication strategy with producers on this updated interpretation is now a priority.

Promotion of Biomass in Oregon:

Oregon Department of Energy staff is working with the Harvesting Clean Energy conference planners at Climate Solutions to secure panel speakers and plenary presenters for their upcoming conference in February 2006.

The development of a Carbon Footprint between Oregon Department of Energy and Lake and Klamath Counties is ongoing. The plan will include biomass strategies among other renewable resource and energy efficiency goals.

Clatsop County, Astoria, River Watch and a coastal Women's voting group are developing an early spring workshop on energy efficiency, renewable resource development, and general energy strategy. The towns of Warrenton, Clatskanai, Seaside, Cannon Beach and other smaller communities will be invited to participate. Oregon Department of Energy staff are developing the biomass and other presentations and contacting presenters.

Oregon Environmental Council has developed and is presenting two workshops in Salem and Pendleton, Oregon in the early spring regarding on-farm-biodiesel. The Oregon Department of Energy is presenting at both, providing technical assistance and other support.

Web documents are being updated with siting advice for biofuels plants and considerations for small (under 3 million btu) woody biomass boiler users. Other work conducted under other funding regarding the biomass working groups is developed for the web site and will be added in the following month.

Energy Legislation in Hawaii: The Hawaii Energy Office is drafting a comprehensive energy bill including a number of provisions to increase the use of renewable energy and energy efficiency measures including funding mechanisms, and Renewable Portfolio Standard (RPS) statute modifications. With regards to biomass energy, the legislation provides for incentives and mandates to increase the use of biofuels.

Catalog of Potential Sites for the Development of Renewable Energy in Hawaii: The Hawaii Energy Office is providing funding and resource assessments, and is coordinating with State's Geographic Information System (GIS) staff for the production of a *Catalog of Potential Sites for the Development of Renewable Energy in Hawaii (Catalog)*. The *Catalog* is required by Hawaii's RPS statute to be published by December 31, 2006. The *Catalog* will incorporate information from the *2002 Biomass and Bioenergy Resource Assessment* prepared with funding support from the Pacific Regional Biomass Energy Partnership.

Facilitation of Renewable Energy Support of the Private Sector's Attainment of the Renewable Portfolio Standard: The Hawaii Energy Office is preparing a biennial report to the Legislature on its "Facilitation of Renewable Energy Support of the Private Sector's Attainment of the Renewable Portfolio Standard." The report summarizes activities in support of RPS as of December 31, 2005. Completed projects funded by the Pacific Regional Biomass Energy Partnership (PRBEP) are included in the report as follows:

- *Study Relating to Used Cooking Oil Generation and Biodiesel Production Incentives in the County of Hawaii, December 2004* (\$10,000)
- *County of Kauai Landfill Gas Analysis for the Kekaha Landfill, March 2005* (\$10,000)
- *City and County of Honolulu Kapa'a Landfill Gas Analysis, December 2004* (\$10,000)
- *Physicochemical Analysis of Selected Biomass Materials in Hawaii, 2005*
- *Preliminary Gasification Testing of Mixed Eucalyptus Derived Fuels, 2005* (\$21,500.00)

On-going PRBEP projects to be reported to the Legislature and activities for the current reporting period, are as follows:

- *County of Hawaii Biodiesel Education and Outreach Program, Dec. 2005* (\$10,000) - The County of Hawaii's Department of Environmental Management has finalized the design of its biodiesel tri-fold brochure and is in the process of procuring publishing services for 2,500 copies for dissemination to educational institutions and the general public. The department will also distribute results of the survey of waste oils completed in 2004.
- *Landfill Gas Production Model and Preparation of RFP, December 2005* (\$20,000) - The City and County of Honolulu (C&C) is finalizing work on the gas production model and RFP to resume production at the Kapa'a landfill. The C&C has requested an extension to 1/31/06.

- *Hawaii Biomass Resource Maps, December 2005* (\$7,389 - PRBEP; \$14,111 - other) - The University of Hawaii's Hawaii Natural Energy Institute is preparing statewide biomass resource maps, based on a 2002 biomass assessment inventory (conducted with prior program funds) which focused on available feedstocks. The University has requested an extension to 1/31/06.

Idaho Biodiesel Educational Mural: John Crockett, IDWR Biomass Program Manager, met with Craig Ballhgen on November 1st to discuss his proposal to promote biodiesel with an educational mural in downtown Boise. Mr. Crockett provided a letter of support, dated November 14th, to include with his request to Willie Nelson's management company asking their permission to have Mr. Nelson's represented on a portion of the mural. Mr. Crockett also provided comments on this request and responded to Senator Crapo and Congressman Simpson's staff who were also developing letters of support. Mr. Nelson subsequently indicated his support contingent on his approval of the design.

Biodiesel in the Treasure Valley: John Crockett, IDWR Biomass Program Manager, continued working with the B20 Project partners and potential project partners to increase to use of biodiesel in the Treasure Valley. A second Pacific Pride fueling station was opened on Chinden Boulevard in Garden City. Mr. Crockett also authorized payment of \$1,068.24 to the City of Boise for the purchase of 12,600 gallons of B20 in conjunction with the B20 Buydown Program.

Biofuels Presentation at the Carbon Sequestration Advisory Committee: John Crockett, IDWR Biomass Program Manager, presented an update of biofuel activities in Idaho for the Carbon Sequestration Advisory Committee, Biofuels Subcommittee on November 9th at the Idaho State Department of Agriculture.

Update on the Treasure Valley Biodiesel Feasibility Study: John Crockett, IDWR Biomass Program Manager, met with Dr. Charles Peterson, University of Idaho Engineering Interim Dean, and Paul Mann on November 7th and 21st regarding the Treasure Valley Biodiesel Feasibility Study they are currently completing for the Energy Division under Contract CON00642. The focus of these working sessions was to edit the draft report.

Presentation at the Pacific Northwest Grains Conference: Presented the Idaho Report for Renewable Energy Opportunities at the Pacific NW Grains Conference, November 30-December 2 in Coeur d'Alene. The session was a panel that also included representatives from Oregon and Washington updating current legislation, resources, and developments in their respective states with specific emphasis on opportunities for farmers/growers. Each "educational session" lasted 45 minutes, and both sessions were well attended.