

Biomass to biofuels meeting
Economy and Market subgroup, ODF biomass working group
9 a.m., Wednesday, August 16
Oregon Dept of Forestry, Clatsop room
2600 State Street, Salem

The meeting began with introductions of the 23 people who attended the meeting. Martin Desmond briefly talked about an effort to develop an Oregon BioProduct Research Center that, in part, would focus on helping to develop a biofuels industry in the state. The group developing the bioproducts center will be asking the Oregon State Legislature for funding of \$10 million in the next legislative session.

Warren Shoemaker updated the group on Don Brelsford's cellulose-to-ethanol proposed commercial demonstration facility. Don is estimating that the hydrolysate sugar slurry can be manufactured for \$1.10 to \$1.30 per gallon which would put his process competitive with the corn in the Midwest.

Martin Desmond discussed the economics of two-million-gallon cellulose-to-ethanol facility, based upon the research of two Minnesota professors who analyzed existing corn-to-ethanol facilities in Minnesota and a National Renewable Energy Lab report that analyzed the cost of building cellulose-to-ethanol facility. Martin used assumptions of \$2.75 per gallon ethanol wholesale, a 50-gallon yield per bone dry ton, a \$2 per gallon capital cost to construct the facility. The proposed facility had a net profit return of greater than 20percent.

John Scahil, a principal researcher with the National Renewable Energy Lab, joined the group by telephone conference call. John discussed two primary biomass conversion pathways to ethanol: thermal and biological. He described a number of the technological issues facing the thermal approach which uses sulfuric acid to break down the cellulose and hemicellulose. He said that one limitation of the thermal process is that it requires approximately three gallons of water for every gallon of ethanol produced. He discussed the pyrolysis approach that the oil companies have apparently been taking an interest in. He described a process of how the oil refineries would be able to utilize this method in their existing facilities. John said that the pyrolytic route is the least energy intensive. He added that the gasification route is a more energy-intensive process. When asked if oil companies would begin to buy up forest and agricultural lands, he said that the oil company representatives have told him that they do not want to get involved with solids. When asked about the potential economic returns, John estimated that biofuels can generate six to seven times as much income per biomass ton as bio-energy. He noted that wholesale kilowatt prices in the Pacific Northwest are very cheap due to hydroelectricity, which makes it difficult for bio-energy to compete against other forms of electrical generation.

The group discussed whether there was interest to submit a Small Business Innovative Research grant. Many in the group felt that the short deadline of September 1 was too quick to put together an intelligent SBIR grant for the US Dept of Agriculture.

Martin Zone of the USDA Rural Development Agency discussed the 9006 loan and grant program and the B & I industry loan program. The 9006 loan and grant program does not fund unproven technologies, so there is an issue of whether and what types of biofuels facilities might be considered under the program.

Diane Gasaway talked about the purpose of the Northwest Cooperative Development Center. Maura Schwartz, also representing the center, described new types of legal structures that allow for cooperatives to raise equity funds from non-members. She described a number of different taxation strategies that could be pursued.