

The New York Forest Owners Association

» POSITION STATEMENT «

Policy On Woody Biomass Energy

Overview

Worldwide increases in oil and gas prices are spurring research and development of alternative sources of energy — including trees. This year (2006) \$20 million in state funding was approved to develop a pilot cellulosic ethanol facility in New York State. Cellulosic ethanol is made from plant tissue (woody biomass) by a process that breaks down a fraction of the plant fiber into sugars which are then converted into ethanol. Cellulose materials are the most common organic sources on earth, and can be derived from: willow, switchgrass, agricultural and forestry residues, pulp and paper mill wastes, and corn stalks. Since these plants and organic wastes are abundant in New York, their use in making ethanol could significantly increase the volume of ethanol production.

Woody biomass resources include waste materials derived from conventional forest operations, wood process residues and purpose-grown fuel wood plantations. There are numerous ways to convert these feedstocks into useful forms of energy like heat, electric power, gaseous fuels and liquid fuels.

The College of Environmental Science and Forestry is working on several projects to make a variety of products from biomass. These include: a collaborative effort with International Paper (IP) to take sugars extracted from the pulping process at the IP mill in Ticonderoga to be fermented into ethanol in Central New York; and a joint effort with Catalyst Renewables to explore the use of dedicated willow crops and forest grown wood for extraction of sugars-to-ethanol, while burning the rest of the material in wood-to-energy plants.

The State Department of Agriculture and Markets also recently announced the following grants for production of feedstocks for cellulosic ethanol production:

- \$60,000 for SUNY-ESF to develop its first commercial willow plantation, to be located in the Tug Hill region and managed in cooperation with Lyonsdale Biomass; and
- \$22,385 for Dutchess County Cornell Cooperative Extension and Cornell University to begin 15-acre growing trials of switchgrass.

Impacts and Opportunities

1. Ecological and social impacts

The development of new markets for woody biomass may result in more

- frequent cutting,
- whole tree harvesting, and
- replacement of forests with monocultures of a single species.

Currently, woodlots are typically harvested every twenty or thirty years because there are limited markets in most parts of the state for smaller, low grade trees. Furthermore, only the main part of tree trunk is removed, and only the largest trees are cut. This type of cutting typically leaves a residual stand of smaller and/or low grade trees behind, as well as the tops, branches and leaves of trees that have been removed. The remaining residual stand and the woody debris left on the ground provides wildlife habitat as well as a source of nutrients. Strong markets for woody biomass would make it economically feasible to cut more frequently, to remove the entire tree, and to utilize small, low grade trees. This could result in:

- Nutrient depletion, since most tree nutrients are located in leaves and branches and would be removed from logging sites.
- Loss of wildlife habitat.
- Forest soil compaction, nutrient depletion, and erosion which are all associated with greater and more frequent cutting intensities.
- Loss of biodiversity, which is important for ecological stability, if large blocks were converted to evenaged stands of a single species.
- Aesthetic impacts if many acres of mature forest are cleared within the view of public highways, housing developments and hiking trails.
- Clearcutting since markets for woody biomass will make clearcutting more economically attractive in New York State. Although recognized as a legitimate forestry practice under certain conditions by professional foresters, clearcutting is often controversial.

2. Opportunities

New York forest resources are ideal for biomass production because there is a large volume of wood (62% of the state is forested) and there are limited markets in many regions for smaller sized, low grade trees (biomass). With the development of biomass production, there is a potential for new markets for trees that currently have little or no economic value to the landowner. Better markets with careful management strategies could enable landowners to improve forest growing conditions by thinning out weed trees which could be utilized for cellulosic feedstock and generate additional income from harvesting operations. Locally produced biomass would also create additional employment opportunities in New York State, increase energy supplies, and reduce dependence on imported oil and gas.

Position Statement

NYFOA supports the responsible use of woody biomass to produce energy and other products provided that it is done on a sustainable basis with appropriate consideration for protecting other forest values. We support incentives to inspire public utilities and private enterprise to produce electricity, gas, and other forms of energy from woody feedstocks. We also support research into the effects of growing and harvesting woody biomass on the soil and forest ecosystem. NYFOA supports the increased use of New York's renewable forest resources to make forestland a more attractive investment, and to deter conversion of forests into non-forest uses. NYFOA believes that increased use of woody biomass for energy production and other products is consistent with the public interest in: (1) lessening dependence on foreign oil and finite domestic fuel sources; and (2) seeking environmentally friendly means of energy production.