



Biomass: New Jersey's Unrecognized Resource

As the most densely populated state in the country, New Jersey could take the lead in converting biomass into clean energy

By Tom Johnson, November 11 in Energy & Environment

New Jersey is ignoring all sorts of resources that could be converted to renewable fuels to power vehicles or run power plants, ranging from yard waste, to trash in garbage dumps, to livestock manure, to name just a few.

At least that is what a special panel advising the Christie administration suggested, recommending the state target resources to develop public and private partnerships to build renewable biomass facilities to produce electricity or fuel in the next two to three years.

The more than 4 million tons of "practically recoverable" biomass resources in New Jersey would yield enough renewable energy each year to supply 9 percent of the state's electricity or up to 5 percent of its highway vehicle fuel.

That would go a long way to meeting the state's aggressive renewable energy portfolio standard, which wants 22.5 percent of New Jersey's electricity to be generated from renewable energy sources, not to mention equally ambitious goals to reduce greenhouse gas emissions that contribute to global climate change.

"It's the most promising area we have in facing the oil challenge," said Joanna Underwood, president of Energy Vision, a national nonprofit group committed to promoting the most rapid transition for the U.S. to sustainable energy and transportation.

Noting that New Jersey is the most densely populated state in the nation -- with an overwhelming waste burden -- Underwood pointed out that the state has an enormous opportunity to be a leader in the development of biomass renewable fuels to help generate the electricity it needs or to run vehicles on a cleaner burning fuel.

"If you want a state where you want to harvest the organic wastes it generates, this is the state," Underwood said.

Others states and Europe are capitalizing on those resources, according to proponents.

For example, in the San Francisco Bay area, a landfill in Altamont is supplying enough renewable fuel to run more than 400 garbage hauling trucks, serving more than 20 towns,

Underwood said.

There is no shortage of potential resources here, according to a 2007 report on the assessment of biomass energy potential in New Jersey, prepared by the Rutgers New Jersey Agricultural Experiment. It identified more than 40 biomass resources, ranging from food waste to forest and crop residues.

Unfortunately, the state's record in extracting those resources is largely limited to generating electricity from methane gases recovered at landfills, according to Gail Richardson, a vice president at Energy Vision, and a co-chair of the Biomass Working Group set up by the New Jersey Board of Public Utilities (BPU) to help advise it on its draft energy master plan.

"The state should take a role to jumpstart the industry," Richardson said, in detailing its recommendation to have the state nurture public/private partnerships to build and operate biomass-to-power and fuel facilities.

This could happen even without a commitment of new state financial aid to the effort, the panel concluded. There already are available resources through state and federal programs to make it a reality, the report said.

In the short-term, many buses and trucks can be switched from much more polluting diesel fuel to cleaner-running natural gas from conventional sources, advocates said. Eventually, one in four trucks and buses in New Jersey currently running on diesel fuel could be converted to renewable natural gas, according to Richardson.

That view was echoed by a Renewable Natural Gas working group also studying the issue. It argued RNG, along with conventional natural gas, is the only fuel pathway today that can break the oil dependence of trucks and buses; reduce health-endangering urban air pollution; lower greenhouse gas emissions; and reduce fuel costs and price volatility.

The panel also investigated potential hurdles. These include ways to compensate farmers for converting crop residues, such as corn stalks and low-grade hay, into agricultural biomass, and partnering with farmers to produce biomass feedstocks on the 2 million acres of state-owned land.

"Biomass is the emerging industry across the U.S.," Richardson said. "This is really an opportunity for New Jersey to stand up and be a leader in this area."

In a recommendation that disappointed the waste-to-energy industry, which burns trash to produce electricity, the working group recommended against upgrading the sector as a Class I renewable, which potentially could have created more incentives to expand the use of trash-burning in New Jersey.