CAPE COD TIMES

Questions about biomass

Is it better to burn trees than coal to produce power?

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In our headlong rush to develop alternative sources of energy, the push to turn trees into electricity could be a costly stumble.

The state and the nation are pouring taxpayer money into biomass incineration/generation plants — it's said that entrepreneurs can quickly recover the cost of construction thanks to various sources of public funding.

Right now, three substantial biomass power plants are in the permitting process in western Massachusetts: a 50-megawatt $165 million plant at Russell, west of Springfield; a 38-megawatt $150 million plant in Springfield; and a 47-megawatt $250 million plant in Greenfield, north of Springfield. Another facility is proposed for Pittsfield and a small Fitchburg plant may be enlarged. (For context, average Cape Cod use is about 230 megawatts; the proposed Cape Wind project would produce an average of 170 megawatts.)

Local concerns about pollution, traffic and noise have arisen. In Russell, a citizen handbill sounds the alarm about "a ton of air pollutants every minute," "840 diesel tractor-trailer trips each week" and heavy withdrawals from the Westfield River. In Greenfield, a citizen group promises to file suit against Ian Bowles, secretary of Energy and Environmental Affairs, because he didn't require a full-fledged environmental impact assessment.

Meanwhile, the Massachusetts Environmental Energy Alliance is dubious about the supply of fuel. The Russell plant, it says, will burn a ton a minute.

Not to worry, say numerous reports for the state by UMass scholars and consulting firms. They say that western Massachusetts is covered with forest, trees are growing faster than they're being cut and there's plenty of wood. But questions remain.

The mathematical exercises that assess the amount of biomass fuel in Massachusetts forests assume that it will flow into the power plants if the forests are properly managed. But logging in western Massachusetts is mostly small-scale and many owners of private woodlots do not manage their woodlots. What's the plan to encourage sustainable management?

A major source of biomass would be slash — the limbs left behind when sawlogs are taken away. But removing the slash instead of leaving it to rot deprives the soil of the nutrients needed to nourish new trees. How much slash can be safely removed?

Another fuel source could be the byproduct of sawmills — the bark, the slabs, the sawdust. But sawmill residue is already being used for wood chips, stove pellets, bedding and so forth. Can the biomass plants pay enough to divert it for burning?

Well, say the consultants, if we can't get enough fuel from the nearby forests we can get it from forests farther away. Don't New York, Vermont and New Hampshire have their own plans for using their forests?

Also, how will increased tree-cutting affect the capacity of the forests to retain ground water and prevent sedimentation? How will it affect wildlife?

But as these questions linger we're plunging ahead, into a basic irony: burning coal and oil for power puts greenhouse gases into the atmosphere, so we'll burn wood, which also sends greenhouse gases up the smokestack. True, some carbon is recaptured as new trees slowly mature, but is this truly a "carbon-neutral" option as is claimed?