

Submitted upon request by the Massachusetts Farm Bureau Federation:

Harvesting the New Winds of Massachusetts

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This year the winds of change will be blowing across the farms of Massachusetts. The Commonwealth's Department of Public Utilities is currently writing new regulations to begin implementing the state's new 2008 Energy Bill which was passed last July. This law instantly made Massachusetts the national leader of energy legislation that promotes green, renewable power. As the DPU finishes the task of writing the actual regulations over the next 90 days or so, farmers across the state should be investigating what the new law means to them – and it could mean a lot of money.

Traditionally, wind energy systems used on farms were small devices. Wind driven pumps are iconic reminders of rural America. Over the past 20 years, wind driven electric generators in the 10 to 65 kW range have been used to power irrigation pumps, barns, farmhouses and other outbuildings. Sure, the farmer has the land. But two other factors stopped them from really harvesting significant power. One was economic. The other was regulatory.

The first problem was that farms don't have a real large load. And with wind power, economies of scale are everything. The bigger the system, the lower the cost per kilowatt produced. Unless you had a real big farm, you probably didn't have enough of a load to make it worthwhile.

The second problem was that even if you wanted to make more power than you used, the local friendly electric company didn't exactly make it attractive to push power out onto the grid. They only had to pay you a low 'avoided cost' - if they allowed you to supply power at all. But then the concept of 'Net-Metering' came along. This allowed you to 'bank' your excess power into the grid, and then draw it back when you needed it. The excess power would actually run your meter backwards, and you just paid for the 'net' meter readings each month.

What's about to change all this is a new concept called 'Neighborhood Net Metering'. As part of the Green Communities section of the new energy bill, a farmer (or the turbine operator) should be able to get together with his neighbors (perhaps a hundred of them or so), and assign any excess power that the farm generates to their meters.

This would solve the two big problems with farm generated power. The farmer is now allowed by law to generate revenue from assigning the power to other meters, and because it has a larger load, it can install a larger, more cost effective turbine. In effect,

the farm becomes a local 'micro-utility', harvesting the wind and selling green electricity to the neighbors.

At a meeting last month with the Massachusetts Department of Agriculture, both Commissioner Douglas Peterson and Renewable Energy Specialist Gerry Palano were enthusiastic about the future of green power and farms in the Commonwealth, and offered to assist in getting the process 'right', while ensuring the sustaining of agriculture remains the focal point.

If it does get done right, this will create a significant new energy source, with tens of thousands of homes around the state being supplied locally 'grown' power from neighboring farms, tree nurseries, cranberry bogs, etc. The best thing is that virtually no farm land is removed from productivity during the process, since the footprints of modern wind turbines are quite small (about 10' diameter).

Various financing plans are available for wind turbines. But of course, you still need to have a windy site for it to work. So wind turbine companies like ours are gearing up for a busy year in the farm sector. Energy 'appraisals' are in high demand in order to quantify the opportunities, and information materials are being prepared.

So make a special note about 2009 – it could be the year when electricity becomes your 'second crop'.