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Minnesota vs $100 Barrel Oil

By Don Arnosti

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Last week, $100 a barrel oil hit the nation harder then another Minnesota sub zero day. The timing couldn't have been worse for our limping economy. Fortunately, Minnesota has a chance to break away from $100 oil toward greener fuel and energy that creates jobs, protects the environment, slows climate change, and establishes the state as a national and international leader.

Twenty-five years ago, Minnesota helped pioneer corn-based ethanol in what has become known as the "Minnesota Model." Incentives for ethanol production and assistance to farmer-owned facilities helped assure that economic benefits stayed in Minnesota's rural communities. The original Minnesota Model was essentially an economic development plan designed to take advantaged of low-priced corn. It achieved that goal and then some.

But much has changed in agriculture and energy over the last 25 years and corn-based ethanol is rapidly reaching its environmental limits. Farmers in Minnesota and other corn belt states are plowing up land that used to be protected under the federal Conservation Reserve Program to take advantage of record-high corn prices. Corn production is expanding into hay, pasture and marginal farmland. And increased corn production is increasing our use of fossil fuels, through more diesel fuel, fertilizer and pesticides, which in turn is increasing pollution in our rivers, lakes and waterways.

It's time for a Minnesota Model 2.0 to move us from corn-based ethanol toward biofuels made from feedstocks that expand economic development and support the environment. The need to transition away from corn-based ethanol is nearly universally recognized. Last year, Congress passed a new Renewable Fuel Standard that requires the U.S. to use 5.5 billion gallons of non-corn based biofuel by 2015, and 21 billion gallons by 2022.

The race to meet this emerging market is on and Minnesota is at the forefront. Researchers at the University of Minnesota have identified native, perennial grasses as the next generation feedstock that has the most potential for both economic and environmental benefits. These native perennial energy grasses can substitute for natural gas and coal in energy production today, while helping replace oil tomorrow as the cellulosic ethanol industry emerges. The advantages of shifting to native grasses as a feedstock are many. Native grasses and other perennials need only be planted once. After establishment they minimize the need for fossil-fuel based diesel use, pesticides and fertilizer. Perennial grasses have deep root systems that lock large quantities of carbon in the soil,

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reducing our global warming footprint. Perennials require less water than most commodity crops, and provide permanent cover to reduce nutrient and chemical run-off and soil erosion into our lakes and rivers. And finally, just as they did when they were part of the prairie, they provide habitat for nesting birds and other wildlife.

Biomass from native grasses are already used to help power an electricity plant in Iowa. The Chippewa Valley Ethanol Cooperative in Benson, MN is constructing a biomass energy system that will use perennial grasses and agricultural byproducts to ultimately replace its natural gas needs. Other ethanol plants are looking to do the same.

The problem is we don't grow enough energy grasses to make the transition. Farmers are jumping at historic high prices for corn, soybeans and wheat – and who can blame them? To get farmers to shift toward native grasses, and help establish and grow that market, it's going to take government incentives.

Fortunately, Minnesota already has the RIM-Clean Energy program, designed specifically to help spur these changes. Passed by the Minnesota Legislature in 2007, this program offers farmers near ethanol facilities and other energy markets payments for growing native, perennial crops for energy in ways that promote better water quality, wildlife habitat, and carbon sequestration. Farmers will receive an upfront payment from the state for meeting these environmental requirements, while the energy market will pay for the biomass.

Authorized in 2007, the program has yet to be funded. The original funding request to make this program viable was $46 million. Unfortunately, the Governor's budget short-changed the program by allocating only $3.3 million – essentially a single small demonstration project. We need multiple larger-scale pilot projects to work with farmers, ethanol plants and energy facilities simultaneously.

A fully-funded RIM Clean Energy program is supported by a remarkable array of organizations including the Minnesota Farm Bureau and the Minnesota Farmers Union, the Sierra Club and the Audubon Society, and the Minnesota Waterfowl Association and Pheasants Forever. This broad support illustrates the balance this program strikes between environmental, energy and economic objectives.

If Minnesota wants to become a regional and national leader on the next generation of bioenergy crops, a small pilot project won't cut it. One hundred dollar a barrel oil tells us we need to be bolder.

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