



Peak Oil, Peak Food, Peak Risk

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This is a guest post by Rick Munroe, an Ontario farmer.

There is no substitute for energy. The whole edifice of modern society is built upon it.... It is not "just another commodity" but the precondition of all commodities, a basic factor equal with air, water and earth.

E. F. Schumacher (1973)

As humanity climbs toward the global peak in oil production and the oil industry squeezes out a few more barrels per day, we should all take a moment to view life from the summit.

This is life at the top. If we aren't careful, this may be "as good as it gets."

Energy Slaves

Canadians are the most voracious users of energy in the world, and it is estimated that each of us has about a hundred cheap 'energy slaves' to serve us. Each barrel of oil provides the energy-equivalent of a dozen humans working for an entire year. With the turn of an ignition key and the flick of a switch, these slaves transport, feed, clothe and water us. They warm & cool us, and even fly us to the moon.

But the days of cheap energy are rapidly drawing to a close, and our extraordinary reliance on fossil fuels puts us at great risk, particularly when it comes to our food supply. Our entire food system is based primarily on diesel fuel. We use diesel to till the fields, plant & harvest. Diesel transports food for processing and delivers finished products to supermarkets.

But although we can use alternative forms of energy to generate electricity and heat our homes, we clearly cannot propel a tractor with solar, wind, firewood or uranium. When it comes to the energy needed to produce food in the volume required by our urban populations, the options are very limited. Nothing comes close to the wondrous power of petroleum.

Biofuels to the Rescue?

As the world rushes to embrace biofuels as a solution, there are some obvious and immediate concerns. For corn-based ethanol, the ratio of energy returned on energy invested is marginal at best. The recent demand for ethanol has contributed to a rapid increase in the price of basic grains and a decline in global grain reserves during the past two years. There are detrimental environmental and social effects from mono-cropping corn, sugar cane and oil palms. Despite consuming 20% of the US corn crop in 2006, the resulting ethanol contributed only 3% (5 billion gallons) of the US gasoline supply. Clearly, biofuels are utterly incapable of replacing petroleum in

Overnight Conversion?

Family farmers have a problem: When -- not if -- diesel fuel climbs to \$2 and \$3 a litre, farmers will almost certainly have to scale back their activities. Farmers are historically on the lower end of the income scale. Taxpayers fail to appreciate that farmers themselves are the number one source of farm subsidies, since most of them rely on off-farm income to support their operations. Very few are in a position to absorb a doubling or tripling in energy costs.

Collectively, Canadian farmers have millions of hard-earned dollars invested in combines, tractors and large implements. This equipment will sit idle if farmers cannot afford to fuel it, and then much of it would be repossessed by the banks.

But if farmers have a looming problem, their non-farming neighbours surely have a much bigger one. When fuel costs skyrocket, intercontinental shipping will quickly diminish and prices of all goods will escalate. Without the steady flow of far-off food that we have all become reliant upon, our urban neighbours will quickly turn to a relative handful of local farmers to start feeding them again.. These farmers, however, will themselves be facing unprecedented costs and uncertainties

Farmers will be faced with practical issues on several fronts. First, they must obtain reliable and affordable sources of mobile energy. Electric tractors exist as prototypes, but they cannot generate the sustained horsepower which is required for heavy field-work. An extreme option is a return to draft animals, but this presents a multitude of obvious concerns. An obvious interim scenario is fuel rationing, where farmers receive some allocation at a subsidized cost, but this would probably be tied to production quotas (which would present farmers with a new set of pressures). Certainly the agri-food sector would be need to be fundamentally reorganized and administered.

Aside from fuel concerns, farmers would also need to consider crop conversion to meet personal and local food requirements. Should hay or corn fields be converted to market gardening? Such conversion often requires irrigation and specialized equipment which most farmers cannot afford. Furthermore, many farmers have limited experience with intensive vegetable production, and there will suddenly be an urgent need for information and resources. Another limitation is that many soils are not optimal for market gardening. Indeed, much of Ontario's most versatile acreage has been paved over, lost forever.

In short, if people think that there will be a seamless transition from the present diesel-based food system to a local model based on a yet-undeclared source of energy, they are in for a "crude awakening."

As we approach the peak of oil production, there appears not to be a cloud on the horizon. People still idle their SUVs in parking lots, fly to Florida for spring break and roar around lakes in muscle boats. Politicians and the media apparently have no interest in addressing peak oil issues. But as the great literary works repeatedly remind us, it is precisely at moments of complacency and hubris that mankind is at greatest risk.

Local Vulnerability

We in eastern Canada are surely at peak risk. Like all Canadians, we endure cold winters and long distances. But unlike Canadians who live west of Toronto, we who live east of Toronto rely on overseas tankers for 90% of our petroleum supply. People who think that we will simply switch to Alberta crude in an emergency fail to understand that presently there is no practical way to deliver Alberta crude beyond the refineries at Sarnia and Nanticoke. Indeed, even these refineries are partly supplied by overseas oil.

When it comes to petroleum, Canada has been effectively split in half, with the eastern half now

almost entirely reliant on countries like Algeria (presently our #1 supplier). When it comes to petroleum supply, there are few people in the world who are more vulnerable than eastern Canadians. There are none who appear so oblivious to their own plight.

As many analysts have pointed out, we are only a couple of competent terrorists away from an unprecedented “oil shock.” There are two facilities in Saudi Arabia, for instance, which handle over five million barrels per day. Al Qaeda has identified them as preferred targets, and there have already been several attempts to attack them.

Virtually every analyst expects that the crippling of the facilities at Abqaiq or Ras Tanura in Saudi Arabia would result in at least a tripling of global oil prices. This would be profoundly problematic for the entire world. It could be life-threatening for eastern Canadians in January. Yet despite our extreme vulnerability there appears to have been no formal analysis or planning for the domestic effects of an overseas oil shock.

How farmers would manage under these circumstances is of course unknown. How millions of low-income citizens would heat their homes at \$3/litre has not been considered. But one thing is sure: eastern Canadians need to be informed about their own vulnerability, they need to discuss it, and they certainly need to mitigate it.

Personal Responsibility

As Aric McBay pointed out in the last edition of *The Local Harvest*, citizens could start by becoming more self-reliant. Grow your own food or make arrangements to be supplied by a reliable local producer. Obtain even a minimal back-up system for heat and electricity.

As the residents of New Orleans discovered, if we count on “government” to provide for us during a major emergency, we may be bitterly disappointed. Each of us must take some responsibility to provide for our own basic needs. It is unreasonable to expect emergency responders to somehow serve millions of us during a crisis, particularly when the problem is as fundamental as a shortage of energy.

To quote James Kunstler,

“The age of the 3,000 mile Caesar salad is coming to an end.... [Peak oil] is not just going to be a matter of not being able to drive to the mall. It’s going to be a matter of not knowing how you will feed your children..”



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