

Powering Vermont's Future by Embracing the Peak-Oil Challenge

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Oil. We're using it up like there's no tomorrow. But there is.

Why is it, then, that nobody wants to talk about peak oil? We're willing to discuss climate change; even send a tripartisan proposal to the governor in an attempt to move Vermont toward a less fossil-fuel driven energy portfolio. But the "P" word hardly ever gets any press. At what cost, this silence?

Peak oil, as many readers of *Vermont Commons* know, occurs when world oil production reaches its peak and starts declining. U.S. oil production peaked in 1971 and is now at about half of what it was then. The resulting gap between production and consumption has been filled by increasing imports from other countries; we now import about two thirds of the oil we use. The actual point at which the world's oil production will decline is in contention; what we do know is that, when world oil production begins declining, there will be no other oil-rich planet nearby to begin importing from.

Earlier this year, the U.S. Government Accountability Office released a report that concluded, "[T]here is no coordinated federal strategy for reducing uncertainty about the peak's timing or mitigating its consequences." Sadly, Vermont has no strategy either, and we are even more vulnerable than the United States as a whole. Vermont imports 100 percent of its oil and is at the end of a long supply chain that begins as far away as Saudi Arabia or Nigeria.

Why should we care? The cheap, abundant energy that has fueled Vermont's economy, heated our homes, and propelled us daily among home, work, and play is about to disappear—not the oil itself, but its affordability. As the era of cheap oil becomes a memory, activities that rely heavily on oil (transportation, agricultural imports, leisure travel) are likely to be scaled back or cease. Whole sectors of the Vermont economy are likely to disappear. How many people will fly or drive here to leaf-peep or ski, with gas at \$5 or \$10 a gallon and/or the world economy in a recession or depression?

Could natural gas, coal, nuclear power, and renewable energy plug the gap left by decreasing oil availability? Natural gas is also near peak; coal contributes more to climate change than oil does per Btu of energy; nuclear power, likely to remain part of energy portfolios everywhere, has no long-term solution to storing high-level waste and no solutions to the risk of weapons proliferation and terrorism; and renewables cannot provide the sheer amount of power that has been exploited by burning half the world's recoverable stocks of oil. (For example, hydrogen can be made by using electricity to split water molecules into hydrogen and oxygen. Powering a single daily New York-to-London round-trip 747 flight with hydrogen generated by this method would require 400 wind turbines the size of those recently approved for Sheffield.)

Such profound and imminent changes cry out for energetic preparation. Unfortunately, most people don't even know what peak oil is, and state leadership is not trying to educate them. We need to get the word out, to ride like Paul Revere to the corners of the state and shout "Peak Oil Is Coming!" Except our task is much more difficult than Revere's; the citizens on the roads to Lexington and Concord in 1775 already understood who the British were and what the consequences could be of redcoats on the march.

Unlike Revere, we need to prepare people by explaining to individuals and local groups why peak oil is important. It's especially important to talk to people who are willing to start writing letters to the editor, calling in to radio shows, and otherwise creating more awareness. Another way is to talk

to leaders directly—both in government and in the private sector, including the press. This latter strategy—combined with the lack of response to peak oil at the state government level—has prompted the creation of the Vermont Peak Oil Report, being prepared by members of the Vermont Peak Oil Political Action Group with the intention of delivering it to the legislators early session 2008. We are cautiously optimistic about the results of this endeavor.

Once people are aware of the challenges associated with peak oil, possible responses vary. Some people simply despair. Among the constructive responses, most are aimed at finding more oil or oil substitutes, or learning to live with less. At their extreme, supply-side policies are aimed at continuing the steady growth in dependence on oil or oil substitutes. For example, drill for oil in the Arctic National Wildlife Refuge or turn coal into liquid fuel. Taken alone, supply-side responses are short-sighted attempts to fill an expanding void. The amount of new natural gas and oil production that must be brought on line by 2015 to compensate for declines in existing oil fields and meet business-as-usual growth is equivalent to ten new Saudi Arabias, or seventy-one Arctic National Wildlife Refuges!

Demand-side responses acknowledge that we humans exercise a lot more control over our demand for oil than we do over the supply of oil or its substitutes. Demand-side responses include such things as investing transportation monies into public transit rather than building new highways, and promoting local agriculture, which cuts down on the diesel-powered miles food travels.

Given the scope of the challenge, we're putting our money on the demand-side approach and in-state production of renewable energy. Since Vermont is 100 percent dependent on imports of fossil fuels, we also see a need for supply-side responses at the local or regional levels, not to continue growth in energy use but to provide us with an alternative to dependence on the global fossil-fuel marketplace.

“Relocalization” is the frame that most members of the Vermont Peak Oil Network have adopted to describe their work. Relocalization emphasizes strengthening social and economic communities close to home. It keeps the means and benefits of production and decision-making in the community, creating jobs and reducing the need for transportation of goods and people. For example, buy your food from local farmers and bakers instead of national chains that source ingredients from China. Heat your home with wood grown nearby instead of oil from the Middle East, and superinsulate your home so there's enough wood grown in Vermont to keep all of us warm. Instead of sending money out of state to fuel your car for a long commute, live close to your job and bicycle or walk there. Encourage the development of sustainable local enterprises within your community.

There are many sectors in which relocalization of goods and services makes sense and would reduce Vermont's demand for oil: land use planning; conservation work; natural resources management/restoration; organic food production/distribution; place-based education; public transportation planning/enhancement (including rail); sustainable forestry and related products (management/manufacturing/distribution); green building and design; energy conservation and efficiency; local entertainment; nontoxic clothing and textiles manufacturing (employing growers, artisans, weavers, seamstresses, and entrepreneurs); conflict resolution and local health services; emergency preparedness; community-generated energy; citizen government; intergenerational care programs; citizen media; and locally owned businesses and services of every sort. Relocalization strengthens people's ties to one another and the land; it elicits collaboration rather than competitiveness. Relocalization outwits peak oil, and a good many other things as well.

Cheap energy has allowed us to seek jobs and interests apart from our communities, reducing our time for community life. No wonder Americans are among the loneliest of the world's citizens. In *Deep Economy* (2007), Bill McKibben describes how self-reported happiness peaked in the United States in the 1950s and has declined ever since, despite a tripling of our national wealth. He blames much of the decline on the loss of contact with other people, which parallels the growth in automobile ownership and suburban sprawl. In Vermont, the additional pressure of local jobs

disappearing creates its own special problems; dependence on distant jobs (and therefore cars) grew as job opportunities at home dwindled. New economic opportunities on a community scale are needed: good jobs, with dignity, right here at home.

Relocalization offers the opportunity to create economies and policies as if friendships and communities mattered, and gives individuals more control over the decisions that shape their lives. Supporting relocalization can also help people accept, even embrace, one of the keys to a transition to a postpeak world: buying and using less stuff. “Put down your Playstations and get to know your neighbors” could be a rallying cry. Or, as the Center for the New American Dream puts it, make time for “More of What Matters.”

There is no magic elixir, no silver-bullet approach to the successful mitigation of peak oil. One doomed attempt at a silver bullet is what Richard Heinberg calls the “Last One Standing” response, a military-industrial grab for control of remaining resources. A better alternative is a combination of local responses, both individual and collective. Once people are aware of the peak-oil challenge, there are many things they can do immediately, like start growing more of their own food, insulate their homes, reacquaint themselves with their neighbors, install wood heat, build up their bicycling muscles, etc. But individuals alone cannot meet all the challenges; we need to respond collectively, through good policy, informed by and responsive to citizen input.

It’s time to start a conversation about how we as a state are going to respond to peak oil. In Brattleboro, the selectboard has authorized an eleven-member Peak Oil Task Force to educate itself about the nature and consequences of peak oil, and to recommend mitigation strategies as appropriate. The Task Force is a logical and necessary extension on a continuum of community engagement that Post Oil Solutions, the local peak oil and relocalization group, has been involved with for more than two years. Such efforts have worked in other places. The city council of Portland, Oregon, appointed a twelve-person Peak Oil Task Force, which issued a report in March urging Portland to “Act big, act now.” Recommendations included reducing oil and natural gas consumption by 50 percent over the next twenty-five years, and they include strategies for doing that. This is the type of fundamental shift in thinking that creates effective responses to the peak-oil challenge, and we hope that the Vermont Peak Oil Report will offer the same opportunity to Vermont.

We recommend that a Peak Oil Task Force be formed here in Vermont, to examine the consequences of peak oil for Vermonters and to recommend response strategies. It should, like the Governor’s Commission on Climate Change, be drawn from a cross section of Vermont interests. It should also include many people already involved in relocalization efforts, who know what they entail and how valuable they are. Let’s, as a state, recognize the scope of the peak-oil challenge and coordinate our strategies to mitigate its consequences. And, as individuals, let’s take up our civic responsibilities and create resilient communities right where we live.

Peak oil is everybody’s challenge.