

# (How can we already be) looking at the end of the age of oil and abundant energy

Contributed by Jan Lundberg  
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## Culture Change Letter #141

Grist, 9:35 AM on 22 Sep 2006: "Following is a guest essay by Jan Lundberg, who, in search of depaving opportunities, lives in San Francisco with no car. He founded Culturechange.org and organizes Petrocollapse Conferences. He can be reached via email. The essay may find its way into his forthcoming book."

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As a petroleum industry analyst who gave up material security for a career as an activist against petroleum industry expansion, I've developed a unique understanding of the global peak in oil extraction. Questioning society's energy needs has always been my tendency. But I gained further understanding of our culture by giving up affluence and many conveniences. This was an attempt to get closer to nature and live by my wits with the support of activists and my growing community of friends far and wide.

In 2004 I hit the road (the rails, usually) to spread the word about the plastic plague, petrocollapse, and the positive future that culture change will present. It was fitting that the nonprofit organization I founded in 1988, Fossil Fuels Policy Action, eventually became known as Culture Change. I was delighted to learn last year that geologist M. King Hubbert, who discovered peak oil, identified the fact that we do not have an energy crisis but a culture crisis:

Our culture is built on growth and that phase of human history is almost over and we are not prepared for it. Our biggest problem is not the end of our resources. That will be gradual. Our biggest problem is a cultural problem. We don't know how to cope with it.

Hubbert and I served the opposite ends of the oil industry. My experience concerned the market, understanding supply and how to predict shortage or glut. A firm I once ran, Lundberg Survey, accurately predicted the Second Oil Shock in 1979 by anticipating a 9% shortfall of gasoline deliveries. That helped me gain awareness of how resources are virtually unavailable once the oil market goes crazy with skyrocketing prices that cause massive hoarding. My expectation is that our house-of-cards economy may not recover from what might be the Final Energy Crisis.

I don't debate peak oil itself, as I've tried to move on to addressing effects (petrocollapse) and solutions (mitigation response). As for when the oil crash will hit, it is possibly imminent considering geopolitical instability, extreme weather events, and the demand-driven "industry fundamentals" of supply strain and high utilization of capacity. With falling production from key mega-oilfields, our days as oil guzzlers are numbered. It's not going to change because of some big find.

Oil and its close cousin natural gas aren't the only forms of energy with a poor outlook during and after the brewing energy crash. The dirtier alternatives to petroleum, which I'll get to in a moment, will not substitute for conventional petroleum. Nor will renewable resources come on line suddenly to save the consumer economy. This flies in the face of seductive logic -- that there's so much sunlight we must be able to harness it, if only we're clever enough to improve technology and get the oilgarchy out of the way.

All forms of energy are not equal. Cheap oil was maximum extraction for very little energy input. Those days of cheap energy are gone forever.

Also, oil and gas give us more than liquid fuels and electric energy: synthetic petroleum materials (toxic and less toxic) are part of our daily lives and survival. The worst part of petroleum dependence is that it is how modern societies feed themselves -- entirely. It is no mere coincidence that population growth has mirrored petroleum consumption's huge rise.

We must conclude that alternative energies, overall, don't "make the grade," although they will have roles to play on a local basis if they're renewable and there's excess land not needed for food or ecological restoration.

In my travels I'm called upon to answer difficult questions on energy supply and how today's complacent U.S. population will cope with petroleum famine. While there are technical answers and a crying need for skills like permaculture and revived handcrafts of all kinds, the key to our survival post-peak oil will be cultural, not technological. I've benefited from going around the country to speak and learn about our petroleum reality and how our ecosystems and communities will have to quickly adapt. I'm known to ask, "Where's your ecovillage?"

I occasionally encounter members of audiences who believe all our problems are due to the internal combustion engine,

and that we should be able to drive around forever -- regardless of the problem of pavement covering up farmland, regardless of the dangers and gross inefficiency of driving. Ivan Illich calculated the average speed of the U.S. motorist at only 5 mph, when all the time associated with the car and its upkeep is compared to miles driven.

Believers in biodiesel, and, less often, fans of ethanol, usually acknowledge that biofuels are not a feasible fix in large scale. It is forgotten that burning these fuels still gives off carbon dioxide to add to global warming.

Solar and wind are strong contenders for serious applications for energy production, but problems remain: imbedded petroleum energy in these systems, their transport by oil, and their petroleum-plastic composition are never addressed. And, although their energy production ratio has improved slightly, they are not comparable to cheap oil. As electric-power technologies, they don't solve the liquid fuels crisis we have barely started to experience.

Anyway, transmission of electric power easily loses energy after significant distance; this limits solar and wind to local applications. As mentioned earlier, the lack of materials from these non-petroleum sources of energy leave them unable to address the petroleum crisis that has begun.

Tar sands? The oil PR machine calls them oil sands now, but they are never going to deliver more than 5%, eventually, of today's 85 million barrels per day global oil consumption. And the massive amounts of dwindling natural gas and fresh water to mine and process tar sands make the process questionable.

There is no such thing as "clean coal." Mountaintop removal, whether in West Virginia or Venezuela, is unacceptable. The other aspects of coal mining and transportation should disqualify coal as a "solution" to dwindling petroleum, if people and clean water matter. Energy-intensive coal gasification and liquefaction will depend on sequestering tremendous amounts of carbon.

A better solution is to question the supposed need for this energy, and get down to the task of redesigning our lifestyles to share the Earth with all species and peoples. This viewpoint must help us reject the exaggerated temptation of nuclear power, which Al Gore reminds us is completely tied to nuclear weapons.

We don't need energy at any cost. We need to conform to ecological reality and start enjoying what it is to be fully, beautifully human instead of cogs in the machine of consumerism for corporate profit.

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The above is on the following original webpage.

[grist.org](http://grist.org)

The forum responses on that page include my own, the gist of which is something that improves the column:

At the end of the column's fourth paragraph, the following statement was to have been included:

"So, Hubbert's and others' assumptions about resources slowly disappearing may be flawed. Dr. Colin Campbell, the geologist who revived interest in peak oil in the 1990s, says peak oil means we are entering 'the second half of the Age of Oil.' Not so. The Stone Age did not end for lack of stones."

Just as the above passage was too late for the Grist deadline, a deletion was too late as well. In what was to be the final version, the line "I'm known to ask, 'Where's your ecovillage?'" was deleted.

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The Bioneers By The Bay conference is in Dartmouth, Mass. and linked with the Bioneers main conference in Marin County, Calif. In Dartmouth the Oct. 20-22 event should be major as well, and Jan Lundberg will give a 90 minute workshop on Oct. 21 titled "Petrocollapse and Mitigations for the U.S. Northeast." To learn more and register, visit

<http://www.connectingforchange.org/>

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