

Peak Oil?
Include Me Out

Thoughts from a Once-Burned Y2K Activist
by Mick Winter

www.drydipstick.com/y2kdipstick.html

On December 31, 1999 when the clocks ticked for the last time in the old year and then proceeded to quite happily keep ticking their chronological way into the new, hundreds of millions of people around the world rejoiced as they welcomed the 21st millennium. At the same time, thousands of people looked at their television sets and the still-glowing lights of their homes and cities, and immediately realized that they now looked like idiots.

These "idiots" were the Y2K activists who had for several previous years been warning their families, their friends, their communities and their countries about the year-end computer problem. They knew the problem was not a computer bug, but a simple programming decision made decades earlier. And that this decision would inevitably lead to errors in computer data beginning January 1, 2000 that could, if not changed, rapidly grow and spread—with disastrous results. They also knew that the Y2K problem was easily fixed. It was the monumental amount of fixing required that concerned them. Many did not think it possible for adequate repair work to be completed in time.

But it was, and the world proceeded nicely into the 21st century (in the eyes of more than six billion people—a few purists still (accurately) refused to accept the new millennium's birth until 2001.)

Most Y2K activists had not enjoyed what they were doing while they were doing it. None of their friends and neighbors really wanted to hear a message of impending doom. The activists had long known that the best they could hope for on January 1, 2000 was that they would end up looking like fools. Fool status would indicate success. It would be proof that The End of The World As We Know It (or TEOTWAWKI in Y2K-speak) had not happened, and that computer systems and society had continued to purr along.

The systems did indeed keep purring along, largely because governments and corporations had spent hundreds of billions of dollars worldwide on programming and new computer systems. Was this expense necessary? A few states and

corporations kept their old "legacy" systems running just to see what would happen after the turn of the millennium. These systems still had the old two-digit date field for the year instead of the new, Y2K-approved four-digit field. What happened to these old systems in the new year? They crashed. They choked. Or, even more insidiously, they kept going, outwardly innocent, but inwardly corrupt. And the testers looked at one another, and the CEOs and the CIOs and the CFOs looked at one another, and they saw what they had done, and they were pleased. The huge expenditures really had been worth it. Spending vast sums to cover their ass had been justified.

Did we say everything continued to purr along? Well, not exactly. There were rumors that some companies, including some very major companies, didn't get the Y2K work done, for whatever reasons. Rumor has it that the various accounting problems and other internal misadventures that lead to the fiscal demise of these companies had been caused by none other than the Y2K problem. But, as we say, these are rumors. And regardless, the planet survived quite nicely, thank you.

For the time being.

Two Digits? Big Deal

Why did Y2K activists get so excited about a little two-digit data entry field? Because of their research. Or at least because of their research into other people's research, because the panic—and probably the successful repair—of the Y2K problem would likely never have happened without the mass communication and information sharing capabilities of the Internet.

Their research made them aware of a sort of technological ecology, the interdependence of complex systems all over the planet, systems on which we rely for information exchange, financial transactions, and the movement of energy and goods from town to town, state to state, and country to country.

The Y2K folks realized that a little computer error could corrupt or bring down a computer system, and that system, whether dead or just dirty, could corrupt or bring down another computer system—even a "clean" one—with which it conducted transactions. And that those two computer systems could...well, as someone once said about history, it's "just one damn thing after another."

The activists also discovered that there is a very delicate dance between computer systems around the planet and the artifacts—both real and virtual—which they help exchange. And that participants in that dance include the factories, offices and consumers who use those artifacts, whether they be dollars, euros, yen, barrels

of oil, watts of electricity, bags of cement, bytes of information, vegetables, cartons of milk, bullets, or video games and Barbie dolls.

Several factors make this global dance both fascinating and perilous. One is that goods used by consumers in industrial societies can—and often have to—travel many thousands of miles from producer to home or supermarket shelf—the so-called "3,000 mile Caesar salad".

The other factor is that great cost-reducing achievement of inventory-free companies—the "Just In Time" process. Factories and supermarkets no longer need mammoth warehouses to store parts and goods as they await their appearance on the assembly line or supermarket shelf. We now have "rolling warehouses". Inventory is constantly on the road, traveling in huge tractor-trailers from port or manufacturer to the location where it's needed, arriving Just In Time for sale or use. Just In Time could not happen without global communication, scheduling and inventory-tracking, all requiring complex computer systems.

So Y2K activists understood that our societal circulatory and nervous systems are, in reality, based upon a thin and fragile network of intricate actions and relationships. And they believed that it would not take much to screw it up. The immediate threat that they saw was Y2K, but many of them also noticed other threats on the not-so-distant horizon. One of them was Peak Oil.

Peak Oil

Peak Oil. (see www.drydipstick.com) is usually spelled with initial caps to make it look more sensational. That's hardly necessary, but we'll do it to keep with tradition. Peak Oil was low on the radar in 1999, but Y2Kers had sensitive antenna—many would say too sensitive—and Peak Oil fit right in with their paranoia (only they preferred to call it sensible caution) about interdependence, sustainability, and complex systems.

Peak Oil simply meant that oil resources on the planet were finite and that there would come a point in time when one day less oil would be extracted than on the previous day. And the following day even less. And so on, no matter how much exploration was done, no matter how efficient the new extraction technologies developed. There would come a point when less and less oil was available for the industrialized societies of the planet. Oil production would have peaked.

This would be alarming in itself because the needs of already-industrialized countries are increasing—dramatically. Think growing populations. Think ever-increasing demand for power plants. Think SUVs. Think the production of more and more stuff.

But an even greater threat (more objectively—competition) were those previously underdeveloped countries that were now leapfrogging into the 21st century and demanding consumer equity with the long-developed—and perhaps over-developed—countries. Think one billion Indians. Think 1.3 billion Chinese. (Even more useful, think a combined 2.3 billion Indians and Chinese with a relatively small, but by their very existence quite significant, number of nuclear weapons.)

Consumers in the west continued to act as if petroleum resources were unlimited and indeed, in the United States at least, they were assured by their government that resources were unlimited, thanks to the grace of God and the tax-deductible, off-shore wisdom of the oil companies.

However, the underlying concern of Y2Kers is that all resources are finite, and that local communities, whether Gotham City or Hog Hollow, are too dependent on outside resources, and too little dependent on their own resources.

Y2Kers had always dreamed of local sustainability. They wanted local communities to be able to provide their own basic foods, their own basic energy needs, their own basic essentials of life. Projects were proposed for the home, the neighborhood, the city. They involved home and neighborhood gardens; home, neighborhood and city power generation, and neighborhood and city-wide cooperation. In short, their goal was do everything locally that's possible to do locally, and to save the national and global activities for only those things that absolutely have to be done on national and global levels. Yes, they really did want everyone to "Think (and Communicate) Globally, Act Locally."

Activists saw Y2K as a golden opportunity for communities to become self-aware, to realize the vulnerability of long-supply chains, and to jump at the chance to work with their neighbors to create close-knit, cooperative communities that could survive on their own. Not with exuberant riches, perhaps, but the operative word here was survival. That and the very human feeling of satisfaction that comes from cooperating successfully with other humans.

Local community sustainability was a nice dream, but the golden opportunity, with few exceptions, turned to lead. Y2K turned out to be a non-event, and Y2Kers slunk off—albeit often with heads held high, a physically challenging but not inappropriate position—many to endure the ridicule of their communities, the media, and, frequently, their families, including the brother-in-law who had said that Y2Kers were crackpots and nothing was ever going to bring down the good old U.S. of A.

America Means Never Having to Say You're On Empty

In 1956, M. King Hubbert, a highly-respected geophysicist in the oil industry, predicted that oil production in the "lower-48" of the United States would peak in the early 1970s. Despite his high standing in the industry, his prediction was greeted with skepticism at best, and, more commonly, with guffaws. It turned out that oil production in the United States did peak—around 1970.

In 1974, Hubbert predicted that worldwide oil production would peak around 1995. It didn't, but many believe that was only because the oil crisis and lowered production of the 1970s slowed the process down.

Scientists who support Hubbert's calculations, and who have done analyses of their own, predict that global oil production will peak no later than 2015, and possibly as early as...2004. (The predictions vary, but all, even the non-doomsayers, recognize that oil is finite and its plentiful end will come.) Just as production in the U.S. peaked around 1970, and Alaska's North Slope did in the late 1990s, so is production peaking in the North Sea. In fact, oil production has already peaked in 50 oil-producing countries around the planet.

Only the Middle East has kept worldwide production figures from peaking. More than 70 percent of remaining oil reserves is in just five Middle Eastern countries: Iran, Iraq, Kuwait, Saudi Arabia, Oman. (Drilling in the Arctic National Wildlife Refuge would give the United States only three months worth of oil, but the destruction would be forever.)

Peak Oil is not the same as running out of oil. It means the end of cheap, plentiful oil. It means there will be less and less oil available at a time when there is more and more demand. Production will be decreasing as demand is increasing.

Global oil production has not yet peaked. Probably. Maybe. Although it does seem to have plateaued in the last few years. As always, it is several years afterwards before it is clear that it has indeed peaked. However, there have been no new significant discoveries of major oil fields since the early 1960s, and discovery of smaller fields has been steadily declining. This year we will consume six times as much oil as we discover.

Interestingly, reported oil reserve capacity has risen, including a dramatic increase in the late 1980s. Skeptics point to the coincidence that those reserves increased at the same time that OPEC ruled that oil production would be limited to a percentage of known reserves. Thus: larger reserves = larger permitted oil production. Thus: six members of OPEC added 300 billion barrels of oil (with percentage increases ranging from 42% to 197%) to their reserve figures without

reporting any new discoveries. Most experts agree that no scientific data have been presented to justify the claimed increases in oil reserve capacity. And then there was the Royal Dutch/Shell scandal of 2004, where the company had to admit that it had knowingly overstated its reserves by more than 20%.

Current global demand is around 80 million barrels per day, which is expected to increase by more than 2/3 by 2015. The International Energy Agency estimated that demand worldwide would grow this year by a record 2.5 million barrels per day, up 3.2 percent from last year. A third of that growth is China, whose need for oil is increasing by more than 20 percent a year. The 2004 China is consuming 830,000 barrels per day more than the 2003 China. (The United States, meanwhile, increased its oil demand by 14 percent.)

China is the second largest importer of oil in the world, followed by Japan in third place, and preceded by the United States, way in first place. China is banning bicycles in cities in favor of automobiles. In 2003 two million cars were sold in China, up 70% from the previous year. China may need 10 million barrels/day by 2025 (it's currently using about 5 million). Meanwhile, the U.S. used 7.2 billion barrels in 2002, (that's over 20 million barrels a day) and had to import more than half of it. It's estimated that the U.S. will need 50% more oil in another 20 years. Does this suggest there might be some possible disagreements between the U.S. and China in the future?

The countries of the world consume more than 1 billion barrels of oil every 11.5 days. In 2003, for the first year since the 1920s, not one megafield (500 million barrels or more) of oil was discovered. The number had been declining. There were 16 in 2000, eight in 2001, three in 2002. This is not a reassuring trend. And keep in mind that a 500 million barrel megafield is only going to provide the world with oil for less than six days.

Oil companies are raking in record profits, but are not translating that into record investment in new facilities. In fact, they haven't built a new refinery in the United States since 1976. Is this just because they're greedy and want to cut expenses so they can maximize share price and corporate officer salaries? Only partially. Perhaps they also recognize that there is no sense in spending a lot of money expanding facilities when the stuff those facilities process is just about to start contracting.

Few people believe that current supplies of oil can keep up with the projected increase in demand.. A decrease in available oil supplies most certainly could not. The result would be increased demand with decreased production. Prices would rise; the cost of fuel, petroleum-based supplies (think fertilizers and pesticides) and transportation would increase. The cycle would become vicious, as prices

increased and availability of oil and its related products decreased. Advancement of many societies would come to a halt, and already advanced societies would find themselves beginning to backslide.

Do we really need as much oil as we use? Well, for starters, all commercial pesticides are made from petroleum. Almost every internal combustion engine on the planet is powered by petroleum, and that includes more than 600 million vehicles. Each one of the tires on those vehicles take an average of six gallons of oil to produce. Almost all transportation, whether vehicle, plane, ship or train, is powered by petroleum or by electricity generated by petroleum or natural gas (which is also nearing peak). All plastics are produced from petroleum. Forty percent of electricity worldwide is produced by petroleum. Americans use about 3 gallons a day per person. (Your individual needs are probably a bit higher if you drive a 10-mile per gallon Hummer). The U.S. currently uses 26% of the world's oil production every day, even though it has less than 5% of the population.

Peak Oil is not a problem that has a solution. Global society runs on oil—and natural gas—and those fuels cannot be created out of thin air. (There are, however, some who believe that oil is produced not by a long-ago process from organic matter but by a still ongoing "abiotic" process from volcanic magma). While advocates of alternative energy have proclaimed for decades that they have the solution—or rather replacement—with solar power, wind power, tide generators, hydro power, and the like, the reality is that our society and all its many complicated systems are powered by fossil fuel. To totally remake the global infrastructure cannot be done in many decades, let alone a few years. Even the much heralded "hydrogen economy" holds minimal short-range hope. Hydrogen has its place, but that place is not as an energy saver. Fuel cells store energy, they don't produce it. And it takes large amounts of energy to produce those cells. Currently fossil fuels are the primary source of that energy.

Well, then, what are we going to do? How does American society maintain its standard of living?

If that's your question—rather than "How does planetary society maintain (and increase) its standard of living?"—there is a group of people in Washington, D.C. that has an answer. Not an answer that those people have actually shared with the American public, however.

Iraq—Doing the Wrong Thing for the Right Reason?

Let's suppose you are a member of the Bush Administration. Let's suppose you are someone who is familiar with the oil industry. But, as Mark Twain once said about Congressmen and idiots, I repeat myself.

George W. Bush, President - Most of his business background, such as it was, is oil—Texas and Saudi. His family for decades has had close, almost familial, even almost incestuous, contact with Saudi Oil and the Saudi royal family.

Dick Cheney, Vice-President - Former CEO of Halliburton, world's largest oil-services company.

Spencer Abraham, Secretary of Energy - Former senator from the U.S. automobile industry state of Michigan.

Condoleezza Rice, National Security Adviser - Formerly a member of the Board of Directors of Chevron for nine years. Even had an oil tanker named in her honor. (It was renamed the *Altair Voyager*—a much more politically safe name—after she became National Security Advisor.)

Don Evans, Secretary of Commerce - Former CEO of oil company Tom Brown, Inc. and member of the board of Sharp Drilling, an oil industry contractor.

Andrew Card, Bush's Chief of Staff - Former Vice President, Governmental Affairs for General Motors.

Do you really believe that these people don't know about Peak Oil?

Let's suppose you are president of the United States, you're well aware of Peak Oil, and you're responsible for the national security of the country, and the well being of its people. Oh, and for the well being of the boards of directors of its major corporations.

For democratic purposes—that is, to ensure that people keep re-electing you and your friends and colleagues—you need to make sure that American citizens—at least those that vote, who tend to be older, whiter and better off financially—can continue to enjoy their current lifestyle, excesses and all.

Basically, you have two options. Both lead to maintaining the current lifestyle of the voter—as long as possible.

1. You appear in a televised talk before the country and inform its citizens about Peak Oil. You announce a dramatic new project to create not only a sustainable country, but sustainable cities, neighborhoods and homes. Crash programs are to be initiated with massive funding and tax-incentives to provide all homes, offices and factories with alternative, sustainable sources of energy. Automobile production will be stopped, and not allowed to proceed until vehicles meet

stringent gas economy standards. Energy conservation will be mandated and all possible efforts will be made to reduce the oil, natural gas and electricity requirements of the country. You announce also that energy is a worldwide problem, not just an American one, and that you will work closely with all governments of the world to ensure that all peoples of the world have sufficient energy resources. While you're at it, you throw in programs for clean air and water as well.

OR

2. You use your military forces to attack countries with large oil reserves, under whichever pretext seems to work at the moment, in order to gain and maintain control of those reserves to ensure that their priority customer is the United States. This includes using false threats (Weapons of mass destruction, Al Qaeda connection, nuclear weapons) as an initial cover. (When those later don't work, you can switch to the "cover within a cover", i.e., bringing The Magic of Democracy, Freedom and Free Enterprise to the Downtrodden [fill in the blank] People. This is helped by the efforts of neo-conservatives, who know nothing about Peak Oil, but think they're using you for their purposes but are in fact being used by you as cover for your own oily purposes).

Okay. You're rich, you've come out of the oil industry, you have a strong belief that the wealthy deserve their privileges and bank accounts, and you don't much care what happens to people in other countries, let alone know anything about them. You also think it wouldn't hurt to throw a few billion dollar contracts to friends and colleagues who have looked after you in the past.

You'd also like to make sure that the owner of some valuable oil real estate doesn't switch his oil sales over to euros from dollars, which could put your economy into a tailspin. And you have the certainty that whichever choice you make, God is on your side. (If you happen to believe in God. If not, it works anyway as good PR.) Which choice do you think you'll make?

Possibly you might wonder why not everyone appreciates your choice. Where are the rose petals and cheering crowds in the streets of your own country, let alone the ones you liberated from whomever was the Evildoer of the Month? But when it comes down to it, you don't much give a damn. They only have to like you once every four years.

Does the Bush Administration really think that Peak Oil is a serious threat? Think Iraq, with the second largest oil reserves in the world. Think Saudi Arabia—right next to it—with the largest oil reserves in the world. Think that country in-between U.S.-controlled Iraq and U.S.-controlled Afghanistan. (Hint: It used to be

called Persia, has almost as much oil as Kuwait and has the third largest natural gas reserves in the world.) Think neighboring Mexico, with larger oil reserves than the U.S.. Think Venezuela, whose oil reserves place it sixth or seventh place in the world and whose natural gas reserves come in seventh. Think planned pullout of 70,00 U.S. troops from Europe. Think whether U.S. forces are closer to Venezuela and Mexico if they are based in Germany or in the United States. For that matter, think of "good neighbor" Canada, which is required by NAFTA to sell the United States oil and natural gas even if it doesn't have enough for its own use.

Of course, not everyone agrees with choice #2, particularly since the words "Peak Oil" have never been officially mentioned to the American public, let alone explained.

But many of the now-retired Y2K people do know about Peak Oil. They do know what's going on. And they do see the dangers inherent in Peak Oil. But are they going to come out of retirement, dig their soapboxes out of the attic or garage, stand tall in the public square and once again warn that their communities are imperiled? After what happened last time? How much credibility do you think they have left as apocalyptic prophets? Could they preach to the multitudes and proclaim the Second Coming of Potential Disaster? Maybe even proclaim that the Bush Administration, while it might have made the wrong choice, at least had somewhat—God help us—noble intentions. (Or at least quasi-noble.)

Not bloody likely.

But Wouldn't It Be Fun? [sigh]

There's no doubt that for Y2Kers nostalgic for the good old days, Peak Oil does offer much of the same allure.

1. Peak Oil could affect the planetary infrastructure, impacting transportation, communication, and the shipment of goods, something Y2K folks are already well familiar with and for which they have long lists of preparations for Things That Could Go Wrong.
2. Activists would have to rely on specialized experts, rather than their own experience and knowledge, just as they had had to depend on the knowledge of experts for Y2K. It's the intellectual equivalent of "I'm only following orders".
3. There is still time for Y2Kers to get ahead of the pack, and become Admired Peak Oil Leaders in their communities.
4. Peak Oil might actually happen, giving activists the opportunity to Do Good and possibly even Save Lives.

5. There are qualified experts on both sides who violently disagree whether or not there is a real, immediate threat. This immediately sets up the Lying Establishment versus Truth-telling Maverick dichotomy that Y2Kers love so well.

6. Peak Oil has a short time frame (Sure, it's vague. "Sometime between 2004 and 2015 (or maybe 2025)" is not as precise as midnight, December 31, 1999, but it's better than "sometime in the next few centuries" which is all that global warming, or maybe even the Gulf Stream Shutdown, can offer.)

7. Disaster is promised, which really gets the old adrenaline going.

8. Preparations can be taken, which means lots of Things To Do and Buy.

9. Community-focused sustainability will be useful (maybe even essential)—a concept dear to the hearts of Y2Kers.

10. Multinational corporations could be badly hurt or even destroyed, which is always a plus.

11. Evil governments could be brought down. Of course good ones could too, but there are far fewer of those.

12. Because so many of the likely effects could be exactly the same as Y2K was supposed to have produced, Y2Kers could become Peak Oil activists with only minimal retraining.

13. Y2Kers can dig out all their old Y2K fact sheets, essays and manuals and, with simple Find and Replace word processing, bring them quickly up to date.

14. It gives them an excuse to spend lots of time on the Internet.

There is no doubt Peak Oil has a lot to offer. The downside offers far less. Unfortunately, for some it could be a show-stopper.

1. Who would believe a former Y2K activist about Peak Oil, when he'd already been wrong about Y2K?

2. Who would believe anyone about Peak Oil, when apparently almost everybody had been wrong about Y2K?

3. What if the experts who predict Peak Oil are wrong, just as the computer experts who said the Y2K problem couldn't be remediated in time were wrong. Why does it feel like déjà vu all over again?

4. Why would a former Y2K activist want to look like an idiot again?

Start (and Finish) the Party Without Me

Bummer. That downside really is a downer. So, what to do? Well, Y2K veterans could quietly move to small towns and villages in the countryside and equally quietly work with their new communities to increase local self-reliance and sustainability. Or they might move to warmer, slower, cheaper and less oil-dependent climes such as much of Mexico and Central America (see www.boomersabroad.com)—to name just a few areas close to the U.S.—where

farmers grow crops without natural gas-based fertilizers, have no use for petroleum-based pesticides, nor need heating oil for the non-existent winters. Or they could simply stay where they are, forget they ever heard about Peak Oil, and go about their lives, just as almost everyone else did for Y2K.

These now quietly retired Y2K activists were successful fools once, but most have no particular desire to repeat the experience. They were no shepherd boys playing a prank on villagers. Their original cry of wolf was legitimate. And the villagers that mattered responded and sent the wolf packing. But few people really got the deep, underlying message of sustainability that first time, and these former activists see no chance of success from a second cry. Other, newer activists can give it a try if they wish.

Besides, crying wolf is of value only when the wolf is still in the distance and there's time for the villagers to take action.

This time, however, the wolf might be right at the door.

Mick Winter is a former Y2K community activist who currently suffers from chronic déjà vu and still hasn't figured out what to do about Peak Oil. But he did create Dry Dipstick at www.drydipstick.com.

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