

sci.physics: Re: last week talked about oil shale; news release that talks about Canada oil sand

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From: Jo Stein ([jstein\\_at\\_broadpark.no](mailto:jstein_at_broadpark.no))

Date: 09/15/04

Date: Wed, 15 Sep 2004 17:27:25 +0200

On Wed, 15 Sep 2004 11:33:14 +0200, Rolf Martens  
<[rolf.martens@mailbox.swipnet.se](mailto:rolf.martens@mailbox.swipnet.se)> wrote in  
<[r%T1d.5324\\$LV3.7462@nntpserver.swip.net](mailto:r%T1d.5324$LV3.7462@nntpserver.swip.net)>:

>If some people rally fear nuclear energy, then because  
>of the massive media anti-nuclear-energy scare campaign,  
>coupled also with certain arch-reactionary manipulations.  
>  
>Here in Sweden for instance, an "argumentation" with  
>"people's fear" was tried too. But obviously, it did  
>not succeed. In the end, the politicians were "forced to"  
>set up a "referendum" on nuclear power, in 1980. And  
>they "had to" put "the choice" to people only of "NO",  
>"NO" or "NO". (Sounds fantastic, but it's true.) This  
>showed too that in reality, they themselves very well  
>knew that a majority was *\*not\** against nuclear energy,  
>quite on the contrary.  
>  
>In the USA there was an "opinion poll" on nuclear energy  
>in 1996. The result was 66% in favour, 34% against. (Probably,  
>the "pro" majority in reality was even bigger.) But one  
>interesting thing in this context is, that most of those  
>asked *\*thought\** that there was "a majority against"  
>nuclear energy.  
>  
>All in all, that "fear on the part of ordinary people"  
>is another piece of reactionary bullshit. In reality,  
>it's *\*the establishment\** that hates nuclear energy.  
>Because it's "much too modern" for their outdated  
>social "order".

People are stupid and do not understand science.

They are stupid like you. I hope that you will read this book:

<http://www.wwnorton.com/catalog/fall03/005857.htm>

"David Goodstein, professor of physics at Caltech, explains the

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underlying scientific principles of the inevitable fossil fuel shortage we face. He outlines the drastic effects a fossil fuel shortage will bring down on us. And he shows that there is an important silver lining to the need to switch to other sources of energy, for when we have burned up all the available oil, the earth's climate will have moved toward a truly life-threatening state."

The book is 126 pages, filled with good physics and it is written by a person that know the subject. Read it, and stop using language such as "reactionary bullshit" when posting to this group.

<http://www.americanscientist.org/template/InterviewTypeDetail/assetid/34501>

"Do not some reasonable minds differ on your central point about rapidly running out of fossil fuel? For example, don't some believe that exploitation of unconventional sources of fossil fuel (say, Venezuela's heavy oil or Canada's oil sands) will delay the turn-down in production for a few decades yet?

I'll answer by offering an excerpt from a postscript I've drafted for the paperback edition (due out from W. W. Norton next February):

Some experts doubt there will be an oil crisis in the near future. They have been dubbed the "antidepletionists." In my experience they are intelligent, well-informed people, and most of them are employed by the oil industry. That doesn't automatically make them wrong. After all, people who work in the oil industry are the ones most likely to be interested and knowledgeable about it. We should keep in mind, though, that the oil industry has a very strong incentive to deny that there is any looming shortage of oil. The reason is to keep down the price of oil properties they would like to acquire.

As we have seen, the worldwide "proven reserves" of oil now stand at just over 1 trillion barrels, and the R/P (reserves-to-production) ratio is about 40 years. Nothing alarming about that, say the antidepletionists; the R/P ratio hovered around 40 years through most of the 20th century. That is true, but to understand what the ratio really means we have to reexamine the term "proven reserves." To most of us, "proven reserves" would consist of all the oil that's been discovered minus all the oil that's already been extracted. But that is not how the oil industry uses the term. Oil companies and petroleum-producing nations alike report as "proven reserves" only a portion of what they believe themselves to have in reserve. When a new field is discovered, geologists use various techniques to measure its length and width, its depth and the porosity of the rock and so on, finally coming up with an estimate of how much oil the field might contain. That estimate gets turned over to officials of the company or country, who can report as "proven" whatever fits their current needs, saving the rest for a rainy day. That leeway is what permits "proven reserves" to go on growing and the R/P ratio to remain essentially constant no matter what is happening in real oil fields.

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What is actually going on in real oil fields is sobering. Worldwide, the rate of discovery peaked around 1960 and has been declining ever since. Meanwhile, the worldwide rate of consumption of oil has continued to grow, and first exceeded the rate of new discovery around 1980. The gap between the two has grown steadily during the last 25 years. That should mean that proven reserves have declined by some 150 billion of barrels over that period. Instead, the reserves have steadily increased. Why? Because companies and countries continue to pull out new reserves that they've kept up their sleeves. In fact, in the late 1980s the proven reserves of OPEC nations jumped by nearly 400 billion barrels without the benefit of any new discoveries. To reach that new height OPEC merely changed its quota rules for how much oil each member nation was permitted to pump, based in part on their reported proven reserves, and the new proven reserves magically appeared.

Add the growing gap between rate of discovery and rate of consumption to the giant jump in OPEC reserves and we see that something like 500 billion barrels of oil have been brought out of the shadows by these methods and added to worldwide proven reserves over the past 25 years—an amount equal to roughly half of all existing reserves. Obviously this game can't go on much longer. Either the industry will run out of hidden reserves or they will simply start lying—reporting reserves that don't exist at all. That may have already started to happen. The once-proud Royal Dutch Shell Group recently made headlines when it was forced by outside auditors to reduce its claims of proven reserves, and correspondingly the value of its stock shares.

Antidepletionists are fond of saying that discovery has been declining since 1960 because so much oil had already been found that no more was needed; thus exploration dwindled to a standstill. That is most certainly not the case. For example, 1999 and 2000 were spectacular years for oil discovery, driven by giant findings at Azadegan in Iran and the Kashagan East field in the North Caspian Sea. But even in those years, new discovery fell far short of consumption. In truth the world is consuming oil at such a breathtaking rate—more than 25 billion barrels per year and rising rapidly—that no discoveries, past, present or future, are going to keep up with demand. And remember, the people of China are just beginning to drive.

Economists believe that the demand for anything can never exceed its supply. The mechanism of price assures that the supply will show up when it's needed. Of course, that has pretty much never been true of the oil industry, which has nearly always been governed by cartels, first the Texas Railroad Commission, then OPEC. When world oil production peaks, OPEC will lose control, and the price mechanism will kick in with a vengeance, making it economically feasible for other sources of fuel to replace the missing oil. In a sense, that has already happened in the case of Canadian oil sands, which are now being mined at a profit. But the product that comes out of the ore is not rich enough to make gasoline, so hydrogen must be added. As a

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result, some of the world's largest plants for extracting hydrogen from natural gas have been built in Alberta. In other words, oil from oil sands is not only more costly in money than conventional oil, it is also more costly in energy. That will be increasingly true as other hydrocarbon resources are exploited."

— jo

"Some people will do anything to save the Earth, except taking a science course" P.J. O'Rourke