

## **Response to Michael Klare's articles:**

<http://www.thenation.com/bletters/20071112/klare>

### **Beyond the Age of Petroleum**

**Michael Klare | As peak oil passes, prices are hitting new highs and supplies are sinking to new lows.**

**Editor's Choice (The Nation Online)**

**11/22/2007 @ 10:50pm**

Klare is right to emphasize the looming challenge of Peak Oil, more accurately the imperial project to control oil reserves and the huge investments needed to keep liquid petroleum fuels flowing in the coming decades. But we and the world can't afford to let this happen, permitting the fossil fuel regime to continue because it will guarantee global warming ecocatastrophe. The latter is imminent unless we force a shift to solar starting now (see latest IPCC report and Jim Hansen's papers). The peak in fossil fuel production and consumption must come as soon as possible, driven by a rapid conversion to renewable energy and more efficient use of energy, rather than the reserves still in the ground. In other words catastrophic climate change will likely come sooner than any hypothetical extension of the fossil fuel regime.

Klare still does not take the issue of climate change seriously enough. His main reference to global warming in this article is misleading: "Although determined to keep expanding the supply of conventional petroleum for as long as possible, government and industry officials are aware that at some point these efforts will prove increasingly ineffective. They also know that public pressure to reduce carbon dioxide emissions--thus slowing the accumulation of climate-changing greenhouse gases--and to avoid exposure to conflict in the Middle East is sure to increase in the years ahead. Accordingly, they are placing greater emphasis on the development of oil alternatives that can be procured at home or in neighboring Canada." But the required reduction carbon dioxide emissions must include avoiding these oil alternatives, including fossil fuel and greenhouse intensive biofuels such as ethanol from corn (note its nitrous oxide emissions). We must act now to start a radical reduction in carbon emissions from burning fossils fuels, especially coal and oil, to avoid irreversible change of global climate to an ecocatastrophic state.

In an article last spring (The Pentagon v. Peak Oil), Klare asserted that " it is apparent that the world faces a profound shift in the global availability of energy, as we move from a situation of relative abundance to one of relative scarcity." But there is certainly no prospect of real scarcity of energy when the sun supplies in one hour the entire world's energy consumption in one year. Tapping into the sun's immense energy flux to Earth by the myriad technologies of solar power (wind, photovoltaics, solar thermal etc.) would provide abundant energy for global society for the foreseeable future. But we must start now! Solarization, demilitarization and conversion of fossil-fuel intensive industrial agriculture to agroecologies are necessary and achievable.

The biggest obstacle is the one Klare identifies, the nuclear military industrial fossil fuel complex. Its radical reduction will insure a much more peaceful, just and sustainable world for our children and grandchildren. Otherwise, perhaps as soon as one or two decades, the world will be even more dangerous and miserable than the living hell for hundreds of millions we now experience.

Klare cites an estimated \$20 trillion cost for new infrastructure needed to prolong the fossil fuel regime. How much will a global solar energy transition cost? One rough estimate of the cost can be inferred from the Trans-Mediterranean Interconnection for Concentrating Solar Power Plan, which focuses on using the Sahara for high efficiency solar conversion. The projected cost to provide 700 trillion Wh/year of electricity production capacity by 2050 is about 400 billion euros. Scaled to global electricity consumption now of about 15,000 trillion Wh/year, a likely upper limit considering the vast savings of energy from implementing efficiency, gives a cost estimate of about \$8 trillion euros, [typo; it should be 8 trillion euro, not \$8 trillion euro!] roughly half the projected cost for fossil fuel dependence. Of course, solarization will entail the appropriate regional mix of many technologies already mentioned, but this transition at the tempo required appears impossible without the free up of resources from rapid demilitarization, starting with Imperial USA. The global military budget is now about \$1.4 trillion.

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And my response to **Michael Klare's The Pentagon v. Peak Oil** that was recently published on Portside (Saturday, June 16, 2007). (I take back my last sentence and change it to "Otherwise, perhaps even in a decade, the world will be even more dangerous and miserable than the living hell for hundreds of millions we now experience."):

### **Is Peak Oil is the real threat or is it Ecocatastrophe from Global Climate Change?**

Michael Klare is right on target to assert that the Pentagon is a "global oil-protection service" for the benefit of U.S. corporations and consumers, ignoring for the moment the very problematic benefit to the latter because of the huge negative health and environmental impacts of oil consumption. But Klare also argues that wars over control of petroleum reserves will be fought to fuel the U.S. military itself as Peak Oil looms in the near future, i.e., the prospect of diminishing oil reserves and therefore production capacity while global consumption climbs. However, the estimates of the Pentagon's yearly oil consumption he provides are quite small compared to total U.S. consumption, about 2% of about 8 billion barrels/year, or 0.4% of the annual global consumption of about 31 billion barrels. Further, as Klare points out there are signs of real interest in conserving

energy among Pentagon modernizers.

Invoking the threat of Peak Oil is misleading for several reasons. The reserves of heavy oil are likely at least as large as the proven reserves of ordinary crude (e.g., Venezuela alone may have a heavy oil reserve roughly equal to the less viscous global crude reserve). At the likely near future price of \$70-80 per barrel, extraction of this supply will be quite profitable. Tar sands are already being mined in Canada. Further, global extractable coal reserves would supply the world with energy at the present consumption levels for 600 years, with the U.S. proven reserves some 25% of the global. Considering only energy reserves, once the production of ordinary oil peaks, there is plenty to replace it, especially since coal can be converted by the process of liquefaction to oil, now a favorite technology of many Democrats including Obama, in spite of its amplified carbon emission. But the world cannot afford this energy transition within a fossil fuel regime. The peak in fossil fuel production and consumption must come as soon as possible, driven by a rapid conversion to renewable energy and more efficient use of energy, rather than the reserves still in the ground. This conversion is imperative because of the prospect of climate change catastrophe ("C3", thanks to Walter Teague for this abbreviation), curiously not mentioned in Klare's article.

We must act now to start a radical reduction in carbon emissions from burning fossil fuels, especially oil and coal, to avoid this likely irreversible change of global climate to an ecocatastrophic state. James Hansen, a leading climate change scientist and director of NASA's Goddard Institute for Space Studies in New York, now thinks his recent targeted 450 ppm ceiling in the atmospheric carbon dioxide level may be too high to avoid ecocatastrophe, especially from sea level rise from accelerating icecap melting. In April, the "Step it Up" mobilization used Hansen's old target to press for 80% reduction in carbon emissions by 2050. But this goal may well be far from being as "radical as reality itself". Even the best bill in Congress, that of Sanders and Boxer, provides for a very late reduction.

Finally, Klare asserts that "it is apparent that the world faces a profound shift in the global availability of energy, as we move from a situation of relative abundance to one of relative scarcity". But there is certainly no prospect of real scarcity of energy when the sun supplies in one hour the entire world's energy consumption in one year. Tapping into the sun's immense energy flux to Earth by the myriad technologies of solar power (wind, photovoltaics, solar thermal etc.) would provide abundant energy for global society for the foreseeable future. But we must start now! Solarization, demilitarization and conversion of fossil-fuel intensive industrial

agriculture to agroecologies are necessary and achievable.

The biggest obstacle to C3 prevention is likely the one Klare identified, the nuclear military industrial fossil fuel complex (go to the website No war, no warming). Its radical reduction will insure a much more peaceful, just and sustainable world for our children and grandchildren. Otherwise, perhaps as soon as mid century, the world will be even more dangerous and miserable than the living hell for hundreds of millions we now experience.

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