

Peak Oil Review

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Commentary:

National Petroleum Council Drills a Dry Hole *Report Condemned for Serious Shortcomings*

On July 18th the National Petroleum Council (NPC) will release a report on oil and natural gas trends out to 2030. Unfortunately, "Facing the Hard Truths about Energy" does not meet the promise of its title. Instead, the NPC artfully camouflages the enormous near-term challenges in producing sufficient oil and gas to fuel the global economy. "Hard truths" are hinted at, but never clearly identified. Troubling trends are referenced, but their ramifications are dodged.

The NPC's rosy scenario laid out in their Executive Summary is contradicted by a study published on July 9, 2007 by the International Energy Agency (IEA), the OECD's energy watchdog. In its Medium-Term Market Report, the IEA forecasts a "crunch" in 2012. Although the IEA does not dub this "peak oil," the phenomenon they describe fits the definition. Why the gulf between the two reports?

<http://online.wsj.com/public/resources/documents/iea20070707.pdf>

In October 2005, U.S. Energy Secretary Samuel Bodman charged the National Petroleum Council with determining "what the future holds for global oil and gas supply" and whether "incremental supplies can be brought on-line, on-time and at a reasonable price that does not jeopardize economic growth."

ASPO-USA commends Secretary Bodman for requesting a thorough analysis of the nation's energy challenges. In hindsight, however, assigning this critical task to a group funded and dominated by oil industry representatives was a mistake. Charging the NPC with analyzing oil and gas is akin to asking the tobacco industry to forecast lung cancer.

With an opportunity to help explain, among other things, why a fill-up now costs up to \$75, the NPC failed to enlighten. The National Petroleum Council's forecasting has been seriously flawed in the past as well. Its 1999 report on North American natural gas predicted stable prices and soaring production; within a few years, the exact opposite occurred. The current report is handicapped by the same sort of group-think. NPC forecasts production (see graph in Sidebar) increasing seamlessly from 86 million barrels/day today to over 115 mmb/day by 2030. Instead of "hard truths", we get "pabulum for the people."

Among the NPC study's most serious shortcomings:

- 1) **The study fails to directly answer the straightforward questions asked by Energy Secretary Bodman.** In its multi-chapter report, the NPC buries the critical issue of peak oil in a rambling discussion of energy supply, energy demand, energy efficiency, and climate change.
- 2) The NPC study **artfully camouflages the huge near-term problem of meeting global demand for liquid fuels.** Mitigating the emerging worldwide shortage of oil will take decades under the best of conditions. Ironically, the Department of Energy's National Energy Technology Laboratory had already commissioned a much more trenchant discussion of this challenge. In their seminal 2005 paper "Peaking of World Oil Production: Impacts, Mitigation, & Risk Management," Robert Hirsch and Roger Bezdek coherently outlined the dire risks of delayed action. http://www.netl.doe.gov/publications/others/pdf/Oil_Peaking_NETL.pdf
- 3) The NPC's Executive Summary contains some **profoundly misleading graphs.** One suggests that petroleum supplies will grow for another two decades, another that five nations in the Middle East are **able and willing** to more than double oil exports. Experts have profound doubts about both assumptions. Today, ten nations produce nearly 75% of oil exports. But as **one senior Saudi puts it**, "There has been a paradigm shift in the energy world whereby oil producers are no longer inclined to rapidly exhaust their resource for the sake of accelerating the misuse of a precious and finite commodity. This sentiment prevails inside and outside of OPEC countries but has yet to be appreciated among the major energy consuming countries of the world."
- 4) The report evades discussion of the economic trauma that is likely once world oil production flattens. According to **Robert M. Gates, current Secretary of Defense**, "It **only requires a relatively small amount of oil to be taken out of the system to have huge economic and security implications....** If we wait until a crisis occurs to act, the nation will have access to

few, if any, effective short-term remedies.” Gates reached this conclusion after participating in the Oil Shockwave, a planning exercise sponsored by the nonpartisan National Commission on Energy Policy. “We **must transcend the narrow interests** that have historically stood in the way of a coherent oil security strategy,” Gates concluded. The **NPC study ignores these and similar warnings from many other sources.**

5) Asking the National Petroleum Council, dominated by representatives from Exxon, Chevron, and ConocoPhillips, to diagnose energy fundamentals isn't the answer. In addition to conflicts of interest in reporting supplies, the IOCs no longer hold all the cards. **Big Oil is not the force it was once and America is no longer in control of its oil destiny.** Today, resource nationalism, guerrilla insurgencies, and soaring Asian demand hold sway. The insatiable appetite for oil in China and India, combined with insurgencies in Nigeria and Sudan, and falling production in the U.S., Mexico, Norway, and Britain, has created a new dynamic that is being eagerly exploited by Vladimir Putin, Hugo Chavez, and Mahmoud Ahmadinejad. It is the decisions made by national oil companies in Venezuela, Russia, Iran, Saudi Arabia and elsewhere—not those made by Exxon, BP, or Chevron—that control the future course of world oil production.

6) By calling for yet another **study of world energy reserves**, the NPC admits the inadequacy of existing reserves data. Yet the critical issue is not how much oil is below ground but how fast it can be produced. The concern is not barrels of reserves but rates of flow. Although the NPC identifies "producibility" as a concern, it seems not to appreciate how depletion is ravaging the world's giant fields. Depletion is tireless, quick, inevitable, relentless, and automatic. Investment is halting, slow, optional, costly, and sporadic. The NPC calls for greater investment. But even if investment had the same characteristics as depletion, it would still not win the race.

7) Although the NPC forecasts no supply shortfall before 2020, other independent observers predict one much sooner. Peak oil is a risk management challenge, and Secretary Bodman and the nation require immediate guidance. The United States has designed its industrial economy, transportation infrastructure, automobiles, agriculture, and land-use patterns around \$20 to \$30 oil. Because oil provides 40% of the globe's energy, and because the energy system is so large and slow to change, the costs of acting immediately to begin mitigating the inevitable supply crunch are dwarfed by the economic penalties of further delay. By failing to urge timely action, the NPC misleads the public and places the nation's future at risk.

8) In its dense prose and detached tone, the NPC study seems oblivious to geopolitical and economic reality. Nowhere in the executive summary do we find the words “Iraq” or “Iran,” “Putin” or “Chavez.” The word “OPEC” appears once, in a footnote. In the final analysis, the NPC Study strikes us as **a smokescreen put up by the major oil companies that hides the hardest truth here**, leaving the Secretary of Energy and the American public with inadequate warning of the huge economic and social risks that many experts believe are just around the corner.

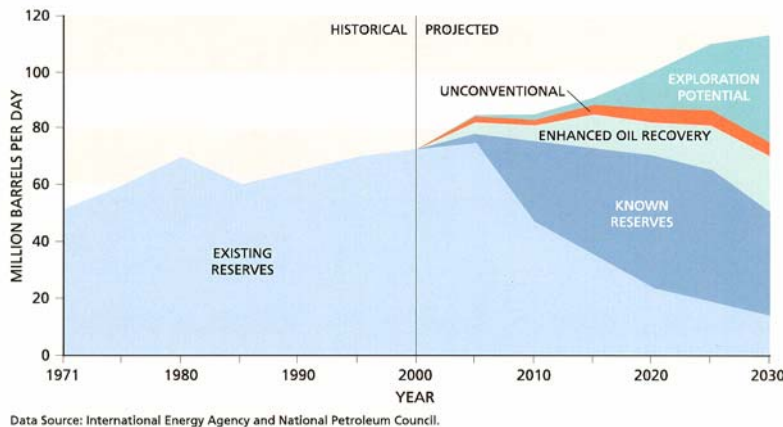
ASPO-USA Board Members Randy Udall, Sally Odland and Steve Andrews assembled these remarks about the NPC’s draft Executive Summary. Last February, Udall and Andrews were invited to participate in the NPC’s exploration into the peak oil portion of the NPC report. Some of the remarks herein also reflect comments made by other participants in that process.

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Sidebar

**Two Misleading Graphs
From the National Petroleum Council Report**

NPC Graph #1

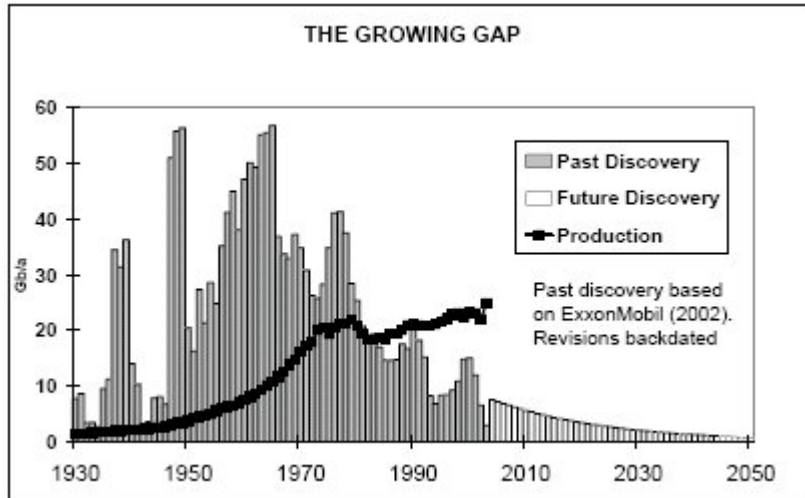


How Much Longer Can Oil Production Grow? Between 1950 and 2000, global oil production increased sevenfold. This exponential growth is now coming to an end. An illustration from page 7 of the Executive Summary of the National Petroleum Council’s (NPC) reveals today’s stark reality and an unrealistic review of the solutions to the challenges of tomorrow.

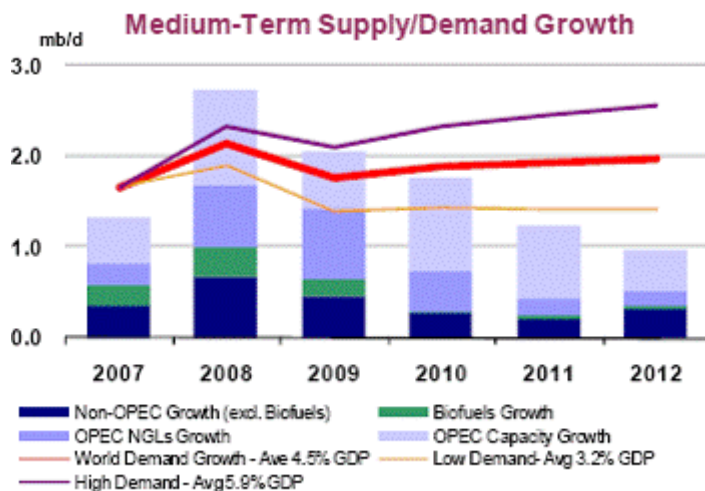
The decline of existing production from about 75 million barrels in 2005 to about 15 million in 2030 illustrates the sobering depletion rates of older fields. Looking ahead, the NPC suggests that bringing known reserves into production, enhancing recovery from older fields and exploiting “unconventional” oil, will result in a bumpy plateau of approximately 90 to 95 million barrels per day. The International Energy Agency (IEA) concurs with this judgment.

Beyond 2015 or so, the continued expansion of world oil supply depends entirely on fields not yet discovered. The NPC does not acknowledge the “growing gap” between discovered oil and production (see Figure 1). Discoveries have been falling for 20 years, and thus the notion that “exploration potential” will grow dramatically over the next 25 years is suspect. Land-based oil production is already declining. Many experts predict offshore production is likely to decline by 2020-2025.

Figure 1.

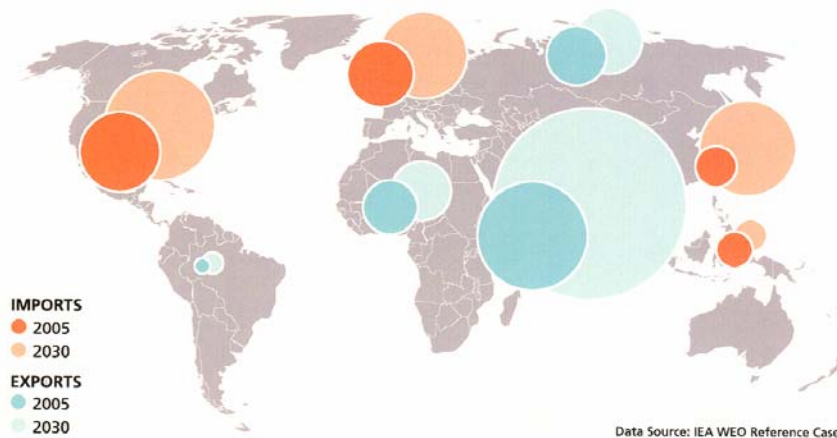


The graph below summarizes the problems described in the IEA’s July 2007 MT-OMR. It shows that through 2012 most net new growth comes from OPEC countries, and by 2011/2012 world production struggles to get new growth from anywhere. New demand is way ahead of new supplies. While 2012 can seem like a long way ahead, work by Chris Skrebowski indicates that “mega-projects” are now taking an average of seven years or so between discovery and first production. Since 2012 is only five years away, most of the fields to be brought on stream that year should have already been discovered.



From the IEA’s Mid-Term Oil Market Report (July 2007)

NPC Graph #2



OPEC to the Rescue? Figure ES-6 on page 9 of the NPC's Executive Summary shows global oil demand (orange circles) growing dramatically by 2030. The NPC forecasts that the vast majority of this new demand will be met a doubling of exports (blue circles) from Saudi Arabia, Kuwait, Iraq, Iran and the United Arab Emirates. Many, if not most, industry analysts think an expansion of this scale is highly unlikely if not impossible. What this figure does accurately reflect, however, is the growing dependency of importing nations on exporting countries, and how that dependency will grow over time. Sixty percent of the world's remaining conventional oil is held by five Middle East countries.

What Others Are Saying

Dr. Fatih Birol, Chief Economist, IEA: "From here until 2015, the market and the oil industry will be put severely to the test. Starting now, and for the next five to ten years, oil production outside of OPEC will reach a maximum before starting to decline, for lack of sufficient reserves. Each day brings new evidence of this fact."

James Mulva, CEO ConocoPhillips: "I question whether the supply will be developed to meet the (Department of Energy's) 2030 demand expectations. I believe demand is going to be constrained by supply."

Sadad Al-Husseini, retired Saudi Aramco: "There has been a paradigm shift in the energy world whereby oil producers are no longer inclined to rapidly exhaust their resource for the sake of accelerating the misuse of a precious and finite commodity. This sentiment prevails inside and outside of OPEC countries but has yet to be appreciated among the major energy consuming countries of the world."

Matt Simmons: energy banker, National Petroleum Council member, and author of *Twilight in the Desert*: (When asked about the NPC's suggestion that global oil production could reach 120 million barrels a day): "We don't have any idea where those reserves are going to come from or how we are going to get them out of the ground. The odds of this ever happening are zero."

Claude Mandil, Director, International Energy Agency: “Recent global energy trends present a disturbing picture...While energy demand surges, driving up prices and dependence on imports, CO2 emissions continue to rise...Our energy future is insecure and unsustainable.”

Dave O'Reilly, CEO Chevron: “The era of easy oil is over...Energy will be a defining issue of the coming century.”