The Oil Drum
DISCUSSIONS ABOUT ENERGY AND OUR FUTURE

Perception Management -- CERA and IHS Energy

Posted by Dave Cohen on August 12, 2006 - 7:46pm
Topic: Supply/Production
Tags: cera, daniel yergin, ihs energy, peter jackson, robert esser [list all tags]

[Update by Dave Cohen on 08/28/06 at 4:04 PM EDT] Ken Chew of IHS Energy contacted me and told me in part the origin of the 175 Gb number cited below with regard to Esser's testimony. It is not the tar sands. When I know more details, I will revise the text of this article.

[editor's note, by Dave Cohen] This is Part 1 of what I hope will be a 2 part series. The second installment is tentatively titled *Getting to Know Daniel Yergin*. Enjoy and remember what's at stake.

Yet another recent CERA press release World Oil & Liquids Production Capacity to Grow Significantly through At Least 2015 denies that peak oil is a concern.

> Based on the report's extensive field-by-field analysis, [Peter] Jackson and [Robert] Esser conclude that the data reinforce CERA's view that the specter of "peak oil" is not imminent, nor is the start of an "undulating plateau" pattern of supply capacity.

This latest cornucopian summary has been commented upon here at TOD and criticized directly by Kjell Aleklett, President of ASPO in CERA's report is over-optimistic courtesy of the Energy Bulletin.

This story's aim is to investigate the CERA method, provide background for these latest statements and round out Aleklett's critique. The view here is that CERA, which is wholly owned by IHS Energy, is misleading the public and our elected representatives. These two organizations are managing perceptions as they cast aspersions on the peak oil view of reality and present misleading or incomplete analysis to the media.

These half-truths have gone on long enough. A bit more in-depth analysis is required to reveal this charade for what it is. Our future energy need is put in ever greater jeopardy the longer the world waits to mitigate the crisis. One step toward changing perceptions to create a call to action is to refute deceptions, whether they are intentional or not.

A Note on the Latest Press Release

TOD contributor Khebab recently posted this graph.

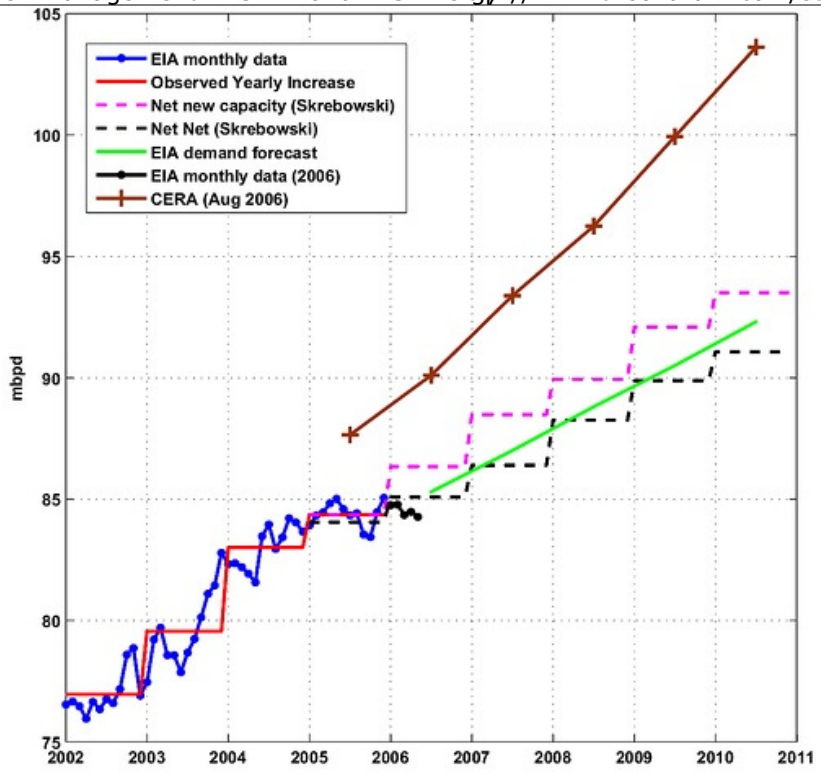

Figure 1 -- Click to Enlarge

From the latest CERA press release.

> CERA's examination of actual activity and production data covered existing fields and 360 new projects -- 250 new non-OPEC and 110 new OPEC development projects -- expected to start production by 2010. **The analysis points to global productive capacity rising from 88.7 mbd in 2006 to 110 mbd in 2015 (Figure 1)**. CERA's "reference case" analysis projects strong potential growth in both the OPEC (7.6 mbd) and non-OPEC (5.7 mbd) sectors to 2010, with continued expansion of OPEC capacity by 5.3 mbd between 2010 and 2015. Non-OPEC growth is projected to be 2.7 mbd in the 2010 to 2015 time frame, lower than recent high expansion rates.

It is easy to ridicule the 88.7/mbd number until one realizes that CERA is talking about *productive capacity*, not actual production. In a recent TOD comment, sunshine said

> think CERA is doing something like this:
>
> 84.4 (EIA) + 2.3 (disruptions) + 2.0 (Saudi spare capacity)
> = 88.7 total current capacity

in response to some comments by the author. Only a slight correction is necessary. According to the EIA, the Saudi spare capacity is estimated at somewhere between 1.3/mbd and 1.8/mbd. The term *productive capacity* is defined by the EIA link just above as

> "Capacity" refers to maximum sustainable production capacity, defined as the maximum amount of production that: 1) could be brought online within a period of 30 days; and 2) sustained for at least 90 days.

The small correction is this: 84.4/mbd (actual) + 2.5/mbd (disrupted, includes Prudhoe Bay) + 1.8 (maximum Saudi spare capacity) = 88.7/mbd. Why is CERA talking about capacity and not production? Never make something more complicated than it is. The main reason is so they can inflate the numbers. Note the use of the high-end Saudi spare capacity number. Do readers think that NPR's Robert Siegel, talking with Daniel Yergin, knows what *production capacity* is? No, of course not. Only aficionados will know the difference, not members of Congress, the media or the public.

However, there is a deeper reason. CERA uses at least two scenarios, a baseline "reference" case using capacity as presented in the press release and a "above-the-ground disruption" case which pertains in the real world. This latter also includes production delays for new fields or insufficient investment by IOCs or NOCs who should be but are not producing as much as they could (cf. many OPEC countries, Russia). Disruptions are presumably mostly accounted for by the troubles in Iraq and Nigeria. Could lost Iraqi production, for example, be brought onstream within a month and sustained for 3 months? Almost certainly not, even if "peace" should break out instead of incipient civil war. The EIA (link above) lists the OPEC 10 and separately, Iraq. What is Iraq's surplus capacity? It is zero just like that of every other OPEC country except Saudi Arabia. At this point, even the CERA "reference" case makes no sense. What do they mean by *productive capacity*?

By switching back and forth between these scenarios, CERA can "explain" tightness in the supply market and current high prices while simultaneously saying that production is not the problem. It is possible to have your cake and eat it too. As Aleklett discusses, this game can be projected into the future.

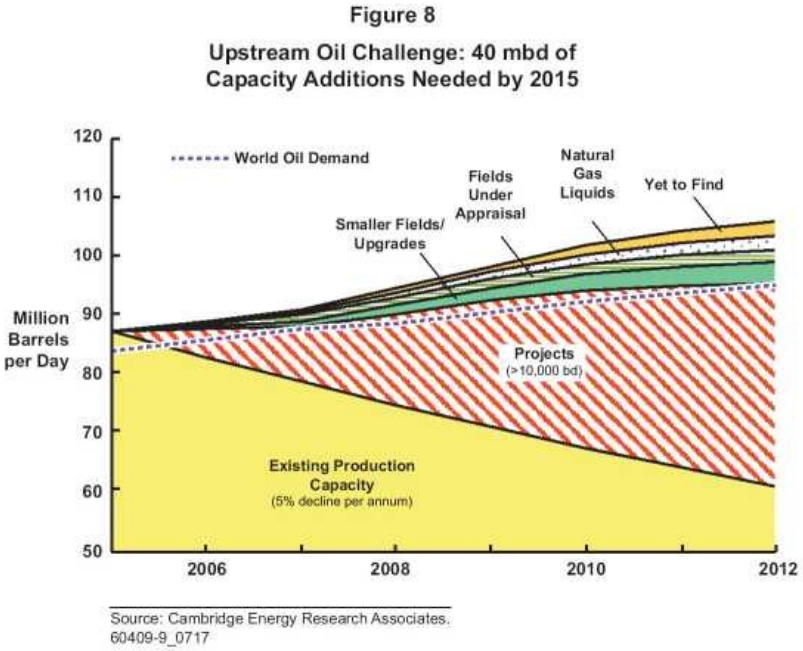

Figure 2 -- Click to Enlarge

Please read Aleklett's critique. It is certainly ironic, if not outright contradictory, that CERA employs a *bottom-up analysis* using the IHS database but ignores the current daily *flow rates* (all liquids) in their latest press release. The *whole point* of such databases (also see Skrebowski's Megaprojects) is to calculate such flows given a depletion rate—here, 5%—, new supply coming onstream and perhaps a disruption fudge factor. Speaking of the IHS database, let us now turn to that part of this analysis.

Robert Esser Testifies Before the House

There is a misperception, even among some of those who take peak oil seriously, that Daniel Yergin is the most important figure in the debate. He is *a* prominent person, especially in the media, but behind Yergin are two geologists, Peter Jackson and Robert Esser.

> With a combined 70 years of experience in the oil fields, report authors Robert Esser and Peter Jackson bring extensive knowledge of petroleum geology to this study. Trained as geologists, both spent many years in the oil industry, analyzing projects, drilling oil wells, and conducting geological studies before coming to CERA.

Jackson (left) and Esser

It is illuminating to focus on Esser's testimony before the House Energy and Air Quality Subcommitee in December of 2005. PG wrote up a summary at the time. Here's the part which will be examined.

> The Committee has asked us to address the question of Peak Oil. In our view, this is not a very helpful concept, nor one that provides much descriptive power. Rather than an imminent "peak," we envision an "undulating plateau" two to four decades away....
>
> **Canada**. Major expansion is expected. The main story is the oil sands projects, where capacity is expected to increase from 1.2 mbd in 2005 to 2.4 mbd by 2010 and 3.4 mbd by 2015. Conventional crude capacity of 2.3 mbd will decline to 1.9 mbd by 2015.
>
> The question of a worldwide peak in oil production continues to stimulate debate. Our outlook shows no evidence of a peak in worldwide oil production before 2020. It is true that total annual global production has not been replaced by exploration success in recent years, but production has been more than replaced by exploration plus field reserve upgrades. **In 1995-2003 global production of 236 billion barrels was more than compensated by exploration success and field upgrades that collectively added 144 billion barrels and up to 175 billion barrels, respectively**. Although oil is a finite resource, we still do not have an exact estimate of total reserves; meanwhile global resources should continue to expand. Many basins, even those producing significant volumes of oil, remain underexplored.

Where do the numbers come from in the bolded text? Behind Jackson and Esser is the IHS database. The 236 Gb of oil produced and consumed in the 1995 - 2003 period as well as the 144 Gb discovered appear in IHS Energy presentations. Look at this graphic from Pete Stark of IHS entitled Role of Mature Fields in Meeting the Global O&G Supply Problem (pdf).

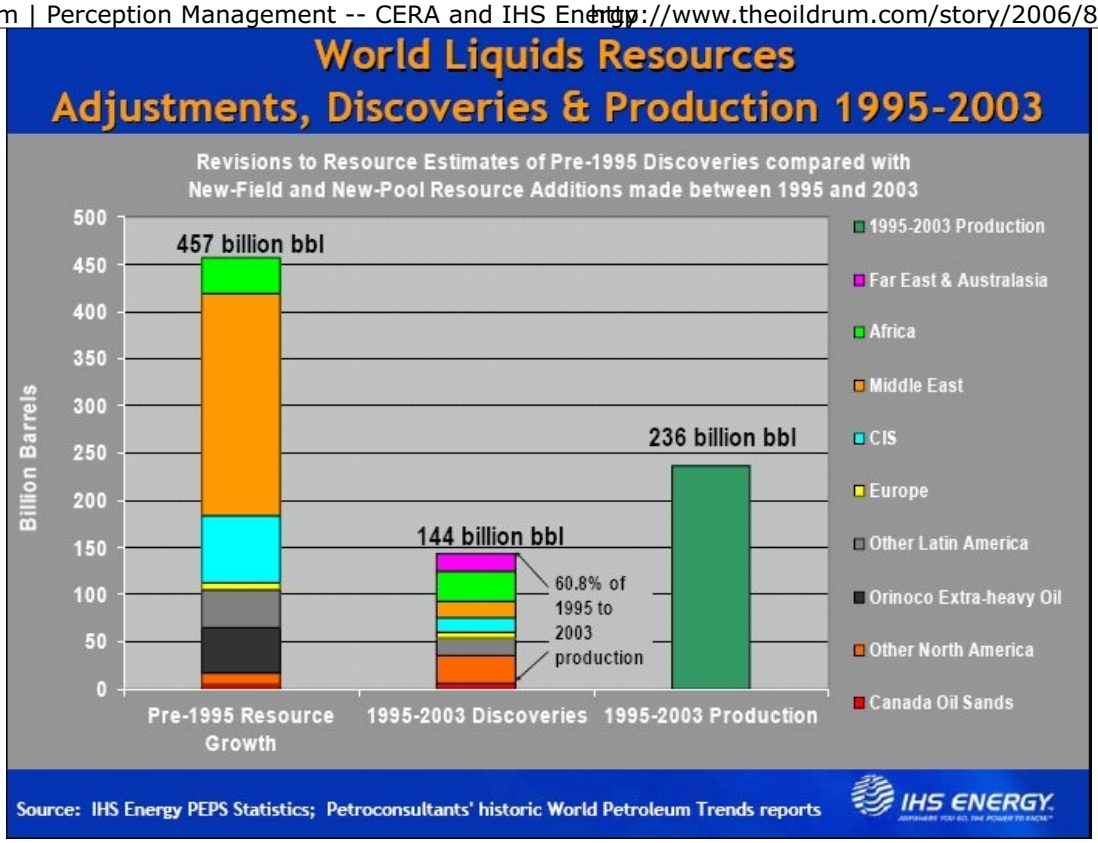

Figure 3 -- Click to Enlarge

As the slide reveals, the discoveries comprised only 60.8% of what was produced and consumed during the period. Nevertheless, Esser is able to reassure the House subcommittee that there was indeed a surplus of new oil. As he puts it: "Our views about the peak oil debate have been reinforced by a detailed new audit of our own analysis and also further evidence that has come to light concerning the enormous scale of field reserve upgrades of existing fields". Specifically, he is referring to the "at least 175 [Gb]" of field reserves upgrades.

Where does the 175 Gb number come from? No doubt some of you have guessed the likely answer because in 2002, the *Oil & Gas Journal* recognized the tar sands of Canada as reserves (pdf) and these were "booked" by OGJ as reserves in 2003.

> In 2002, the Oil & Gas Journal accepted Canada's classification of 174 billion barrels of oil sands as established reserves and Canada became the second largest oil reserve-holding nation in the world after Saudi Arabia.

To be exact, the reserves increase was 174.4 Gb. This rough equality seems to be more than happenstance. It is easy to contend that Esser's testimony is misleading, perhaps even deceptive, accounting on a number of grounds. Intentions are not considered here because they can not be known.

1. There is the troubled status of the tar sands production itself, as the author has pointed out in Extreme Production Measures regarding economic and logistical problems in Alberta. Another story focusing on natural gas usage there was documented in Oh, Canada! -- Natural Gas and the Future of Tar Sands Production . Many other editors, contributors and commenters at TOD have added to our knowledge describing the problems at the tar sands. Although Esser is testifying at the end of 2005 whereas some tar sands problems arose only this year, one must ask where the realism of his assessment lies.

2. The 175 Gb figure is cited without specifying the source. How could House committee members know the origin of the number?

3. More misleading information involves the use of the 1995 - 2003 period, which appears to have been cherry picked to include the tar sands reserves increases—although the testimony was given on December 7th of 2005, Pearl Harbor Day.

What was not shown was this graphic from this presentation New Frontiers -Where will Tomorrow's Oil & Gas Come From? (pdf) by Tim Zoba, IHS director of business development.

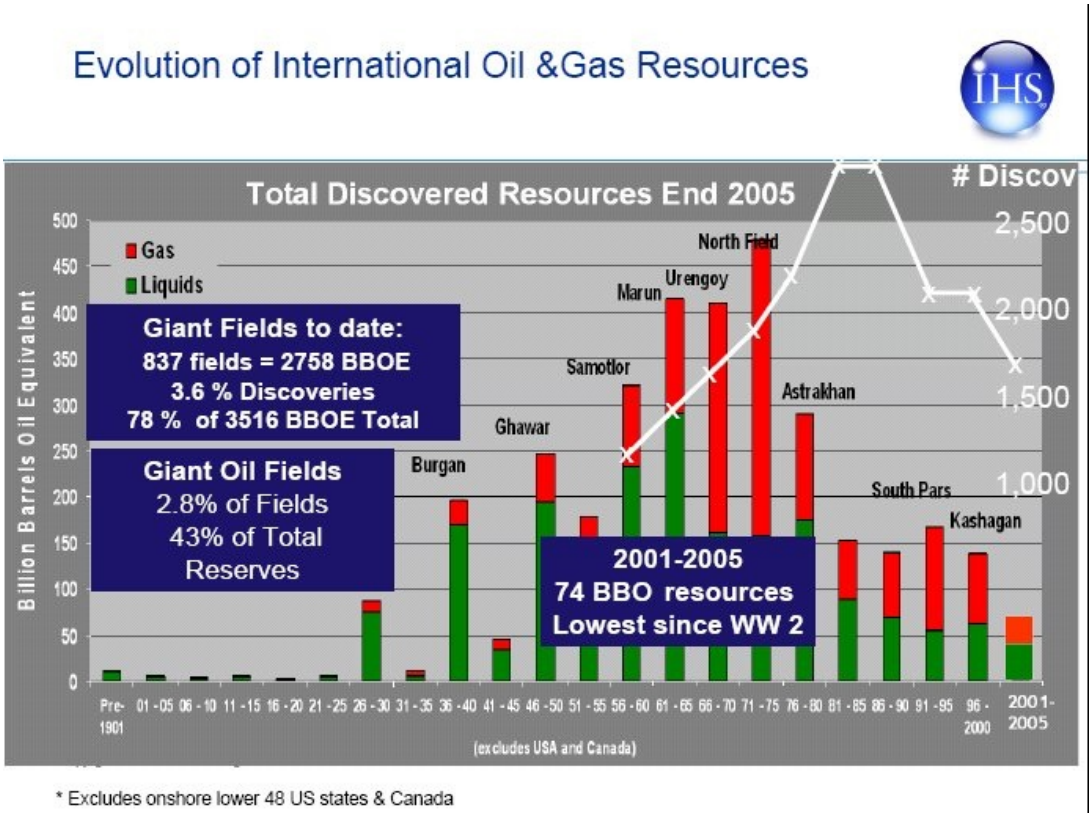

Figure 4 -- Click to Enlarge

According to *Figure 4*, less than 50 Gb of recoverable liquids were discovered in the 2001 - 2005 period (excluding onshore lower 48 & Canada). *Figure 5* below lists the leading countries where discoveries were made but includes the year 2000 as well, thus including the biggest discovery of the last 6 years—Kashagan in Kazakhstan. The cited total is 76 Gb discovered.

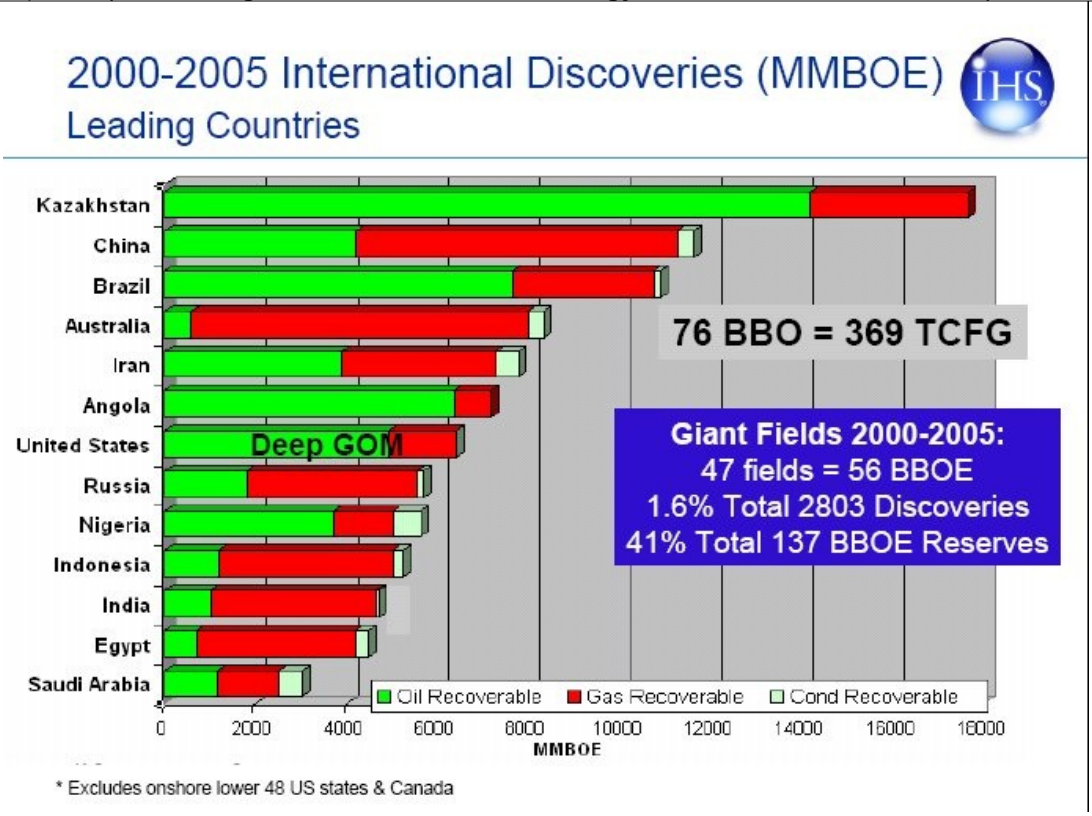

Figure 5 -- Click to Enlarge

Using the EIA supply data, the amount of liquids produced between 2001 and 2005 inclusive was approximately 146 Gb. Astonishingly, when the 2000 production is added in, the tally becomes 175 Gb—the same amount as the entire OGJ tar sands reserves endowment all used up in 6 years! Perhaps one of us at TOD ought to testify before the House energy subcommittee.

CERA's Perception Management

This story has touched on a number of aspects of what was termed *perception management*. Instances of CERA promulgating misleading information have been documented above. Perhaps the most important problem, however, is cited by Aleklett.

> On August 8, 2006, CERA (Cambridge Energy Research Associates) released a new private report with the title "Expansion Set to Continue - Global Liquids Capacity to 2015". "Private report" means that CERA expects you to purchase the report for $2,500. The data files used in the report are also "private" rather than being audited or refereed like the data in normal scientific articles....
>
> More things can be said about the report, but it is obvious that it is not worth $2,500....

In fact, the real debate ought to be whether it is worth the paper it is printed on. Lack of data transparency for oil production is one of the most serious problems in the oil industry. CERA offers their version of "transparency"—for a price. This *privatization* of E&P data based on the IHS database is understandable from a business point of view; to be sure, CERA is a corporation supporting a staff of about 250 people responsible for putting out misleading information. Yet, the lack of transparency is also reprehensible due to what is at stake in the world today. Now, it

appears that attacking those concerned about peak oil is part of the business plan.

Rock Hammer
The author's mark