The Oil Drum
DISCUSSIONS ABOUT ENERGY AND OUR FUTURE

Last Week's EIA Conference

Posted by Gail the Actuary on April 18, 2008 - 10:00am
Topic: Miscellaneous
Tags: eia, peak oil [list all tags]

Last week, the EIA held a special conference, celebrating the 30th anniversary of their founding. They have held smaller one-day conferences in the past, but this was an expanded conference for the occasion.

I decided to attend because we use a lot of EIA data, and I thought I might learn more about the behind the scenes process. I also thought I might learn something from the presentations, and meet a few new people.

The conference was held in the Washington Conference Center in Washington DC. We were told that there were 1,600 registrants. The conference was free, so it was "sold out" shortly after registration opened.

The website for the conference can be found here. It now includes links to presentations from quite a few presenters. Below the fold are a few of my take-aways, including some graphs from the session on peak oil and a session on electrical issues.

EIA Itself

Some of the sessions were about EIA itself. I also learned some things at other sessions. These are a few things I learned:

1. Funding for the EIA has been declining in real terms over the years, and is getting to be a concern. The frequency of surveys has had to be cut back, because of inadequate funds. It is not possible to do as much work on investigating how data collection should be changed, to adapt to the way the industry is changing. EIA would like it if its customers would put in a plug for them, to get funds to do the job the way they feel it needs to be done.

2. The EIA prides itself on its independence. In the early days, the EIA had problems with other governmental agencies (like the IRS and those investigating price fixing) wanting to look over its shoulder. It took steps to make certain this could not happen, since this would compromise the integrity of the data. Even with forecasts, I got the impression that the agency is fairly separate from outside influence.

3. A disproportionate share of the staff is approaching retirement age. With the gradual cutback in funding over the years, there has not been a great need to hire new staff. Now, after thirty years of operation, quite a few of the staff are approaching retirement age, and some have retired. One of the purposes of the conference was to try to find people who might be interested in working for

the EIA. This is a list of current staff openings.

Presentations

There were presentations on a variety of topics:

Peak Oil. Although not the main focus of the conference, there was one session on peak oil. Presenters included Matt Simmons, who is well-known for his peak oil talks; Peter Jackson of CERA, and Glen Sweetnam of EIA.

Matt Simmons talk was pretty similar to others he has given recently.

The main graph in Peter Jackson's (of Cambridge Energy Research Associates) presentation was this one:

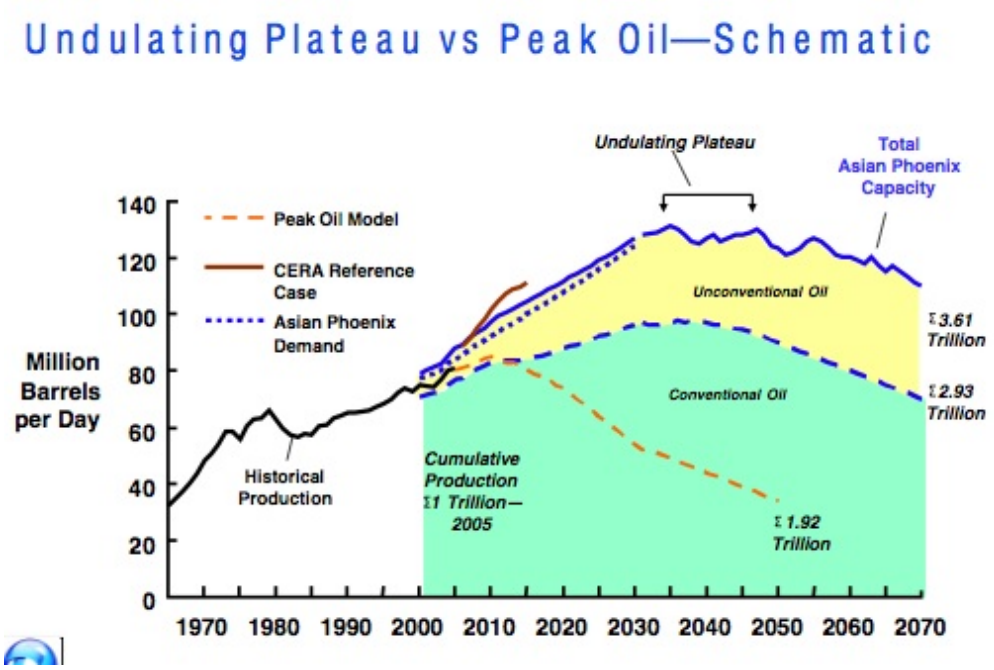

Figure 1

This graph seems to show decline in conventional oil beginning around 2035 or 2040, and decline in total liquids beginning not much later. Total all year production is shown as 1.92 trillion for peak oil forecasts; 2.93 trillion barrels for what appears to be CERA's forecast of conventional oil; and 3.61 trillion barrels for conventional plus unconventional. (I have seen higher CERA amounts quoted in the press. This article claims the CERA's amounts are 3.74 trillion barrels *remaining* for conventional, and 4.82 trillion barrels *remaining* on a combined basis.)

The third presentation was by Glen Sweetnam of EIA. He presented a forecast that went out beyond 2030. The forecast was characterized as “preliminary”, so probably has not at this point been used for official purposes. The model uses three candidate paths for demand:

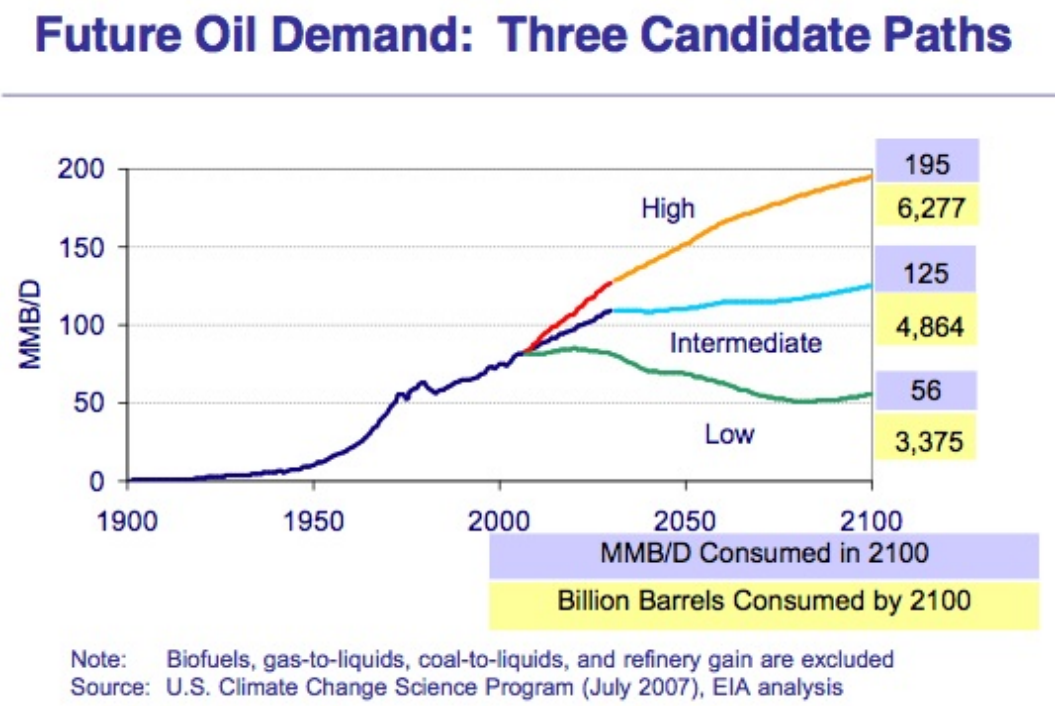

Figure 2

It might be noted that all of these three demand curves use far more oil than the peak oil estimates would suggest is available. The amount of oil required until 2100 is shown in the boxes to the right, in billions of barrels. Peak oil estimates would suggest something like 1,900 to 2,200 billion barrels of oil are available for all years, not just to 2100 (see Figure 1 above). All of these demand curves require considerably more oil than that - as much as 6,277 billion barrels, for the high demand curve. The low demand curve is more or less in line with CERA's supply forecast shown in Figure 1, if the timing is right.

EIA then put together various forecasts for supply. There are four supply forecasts for the intermediate demand case:

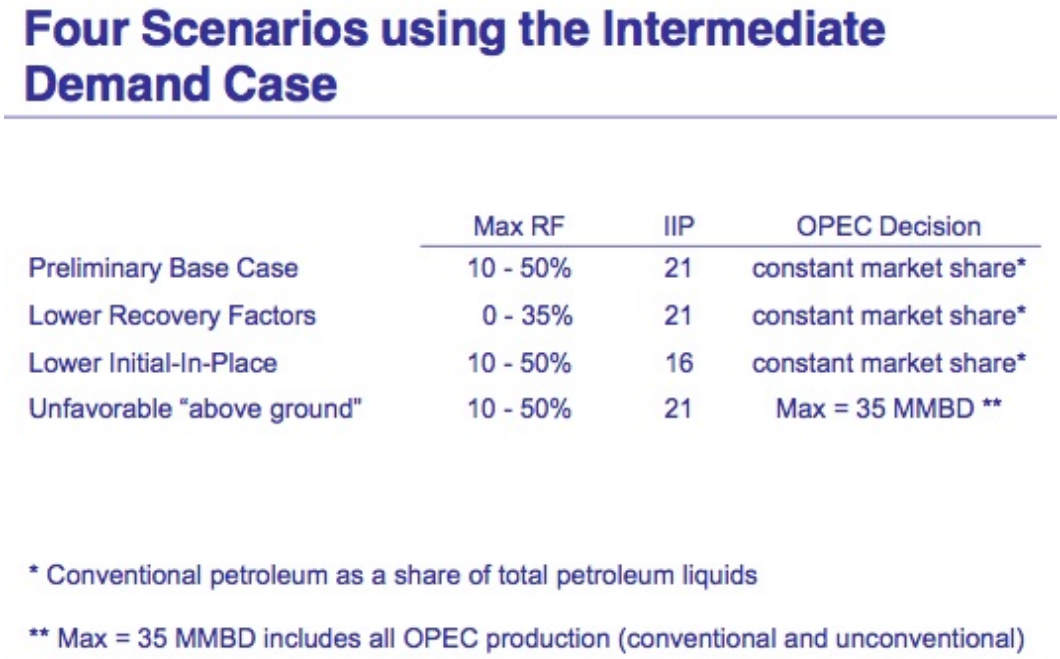

Figure 3

In Figure 3, the amount shown as "IIP" is oil initially in place. In the scenarios used, these range from 16 trillion to 21 trillion, and the recovery factors are as shown. The oil IIP estimates are very high; Nansen Saleri, a former officer of Saudi Aramco, only assumes a base of 12 to 16 trillion barrels, in his Wall Street Journal Editorial, The World Has Plenty of Oil, and he was clearly looking for as high a number as he could justify. The discussion indicated the recovery percentages applied to the oil IIP are based on the assumption that technology would be improving, and lead to higher recoveries.

When one sees the results of the simulations, it becomes clear the supply models generate a *lot* of expected future oil. When supply in the base case is matched up with intermediate demand, the model indicates that there will be enough oil to last until 2190, before demand outstrips supply:

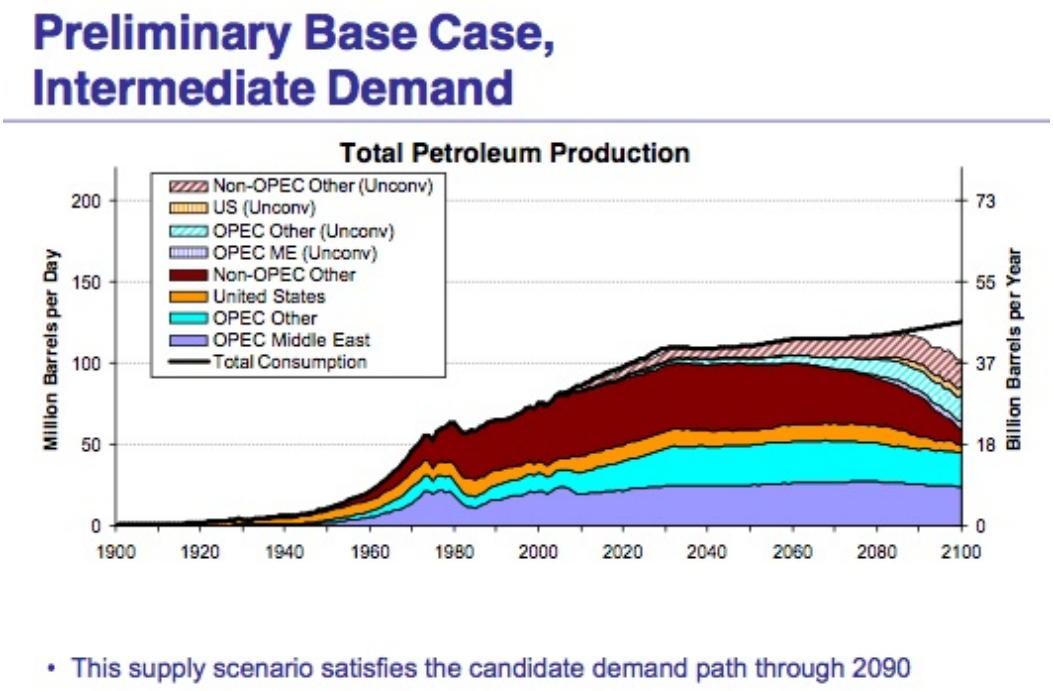

Figure 4

It would be nice if the world were really like this! If you want to learn more, the full presentation is at this link. Fortunately, the EIA forecast is still at a preliminary stage, and there is at least some possibility that it will be revised before the final version is developed.

Electrical Supply. Quite a few of the conference participants were from the electrical industry. I would characterize the electrical supply folks as being very concerned about the future of electricity -- more so than the people from the oil side of things, who often thought speculators were the main source of problems. This is one presentation that summarizes some of the electrical supply issues.

One graph from that presentation shows the projected year when margins are expected to fall below minimum target levels:

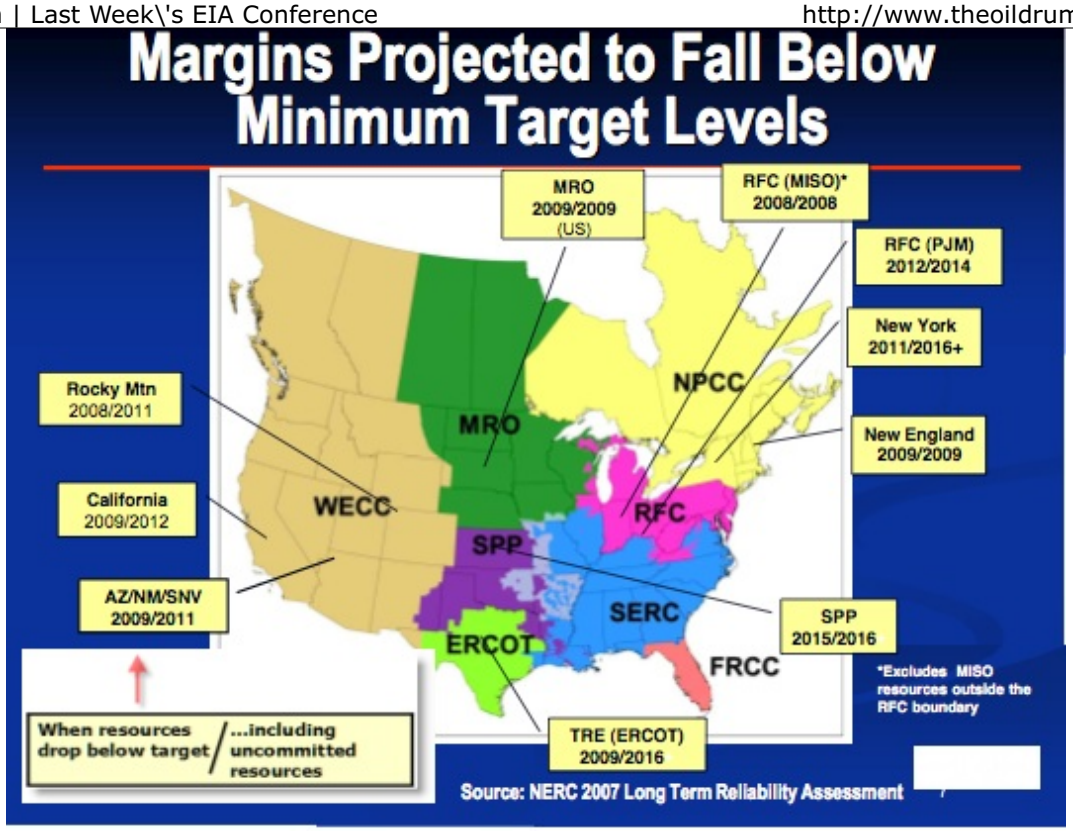

Figure 5

From this map, It does not look good for RFC (MISO) which I believe is Michgan and Indiana and the Rocky Mountain Region. New England, California, the great plains, and Texas are not much farther away in time when electrical capacity is expected to be bumping up against limits.

Another graph shows trends in electrical transmission congestion:

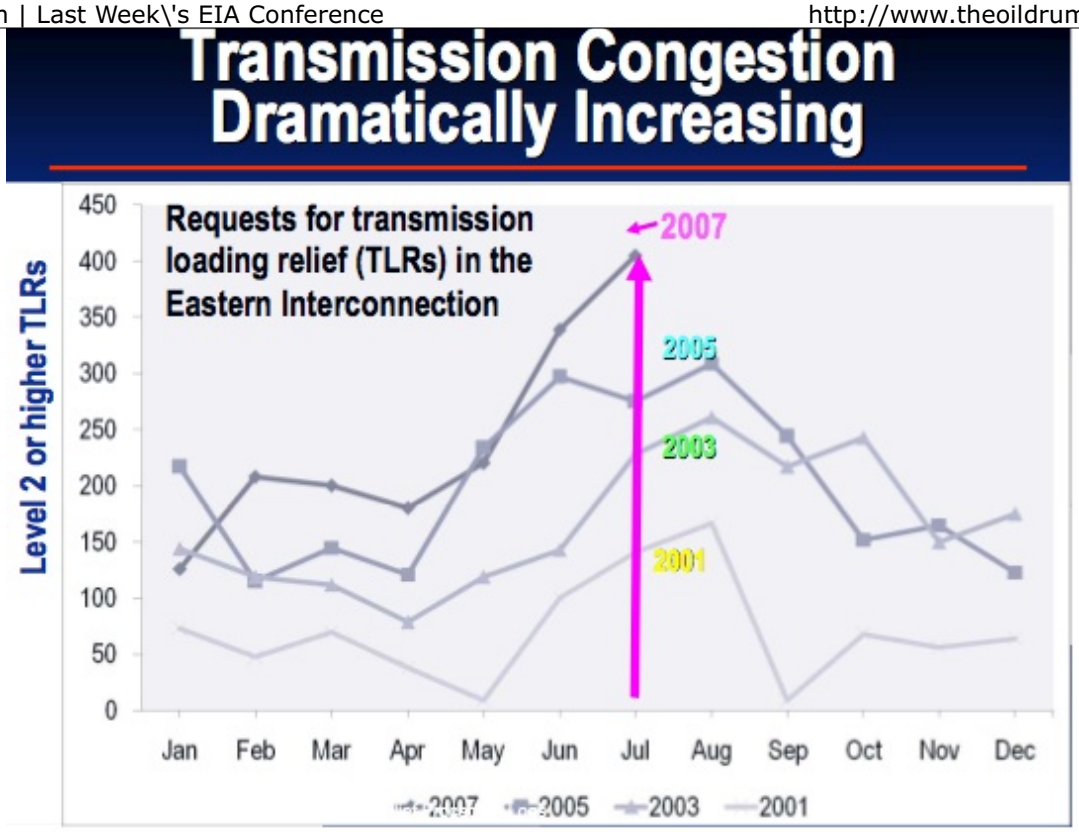

Figure 6

If you expect that plug in cars will save the day, you may want to check out what the electricity people are saying about the current state of electrical supply.

Climate Change Legislation. The major session the second day was devoted to climate change legislation. It was pretty clear from the discussion that nothing is likely to pass this year. It was also clear from electrical discussions that no utility would be able to get funding for coal fired power plants, until it was clear what type of carbon legislation would be passed in the future. Thus, it looks like coal is off the table as on option until climate change legislation is passed.

There is not a lot on the internet about the content of this session. This is a link to the remarks by John Dingell.

Energy and the Macroeconomy Model. We got to hear from Steven Brown of the Federal Reserve Bank of Dallas talk about their oil shock model. Oil shocks are modeled as *temporary* events in a model of the economy. Lucia Guerrieri of the Federal Reserve Board observed that Steven Brown's model likely overstated the impact of oil shocks, because we now have experience with oil price spikes, and know how to deal with the situation better. High oil prices wouldn't cause a recession this time.

I'm afraid I couldn't agree with these folks. I thought it was sad that the people in the Federal Reserve are this far removed from what is really going on in the world - haven't considered the fact that oil price shocks might be more than temporary and that learning from experience isn't really sufficient.

Summer Transportation Fuels. If you are interested in the summer fuel situation, there were several presentations on this subject.

This list is not exhaustive. There are a number of other topics covered by the presentations given. Check out the EIA Conference Website!