CERA – A 10th Anniversary worth forgetting
In a commentary written for ASPO-USA Steve Andrews takes a retrospective look back at how the forecast by Cambridge Energy Research Associates (CERA) made in 2004 have worked out.

CERA is the media’s go to commentators for forecasts on the oil markets. The firm is led by its founder Daniel Yergin, author of the Pulitzer Prize winning book “The Prize: The Epic Quest for Oil, Money & Power”. CERA is now part of IHS where Yergin is the Chairman of IHS CERA.

Consequently Daniel Yergin’s remarks carry great weight and influence in US policy circles. So examining how the firm has fared in its forecasts is critical in determining if policy maker’s confidence in those forecasts is warranted.

The graph on the right from Steve Andrews’s commentary shows just how far CERA was off the mark in 2004. CERA has a history of being overly optimistic but even by its standards this is huge.

Steve identifies a number of reasons why their forecast was so far off. One of them was their estimation of the decline rates and as Steve points out in the following excerpt it was probably the most significant.

First and foremost, CERA underestimated decline rates from existing oil fields. About the time of its 2004 conference, an oil industry analyst who knew Daniel Yergin asked him, during an elevator discussion, what decline rate for producing fields CERA used when calculating growth in world oil supply in their major studies. Mr. Yergin replied, “oh, in the 1% to 2% range.”

As readers of this report know the IEA puts the decline rates in the 6% range. With the addition of rapidly declining shale and deep water this most likely is beginning to increase in the last few years.

I encourage you to read Steve’s full commentary and when you are done consider the item mentioned in the January 24th issue of this report concerning IHS CERA’s forecast for US shale gas price for the next three decades of $4/mmBtu. Should US policy depend on gas being $4/mmBtu for the next 30 years as IHS CERA has forecast?

A cautionary tale for US LNG exports
Reuters had an article this week that should pique the interest of those concerned about the export of LNG from the US.

Australia has made a major push to become the largest LNG exporter in the world with the unintended consequence of having high domestic natural gas prices. The result of which is a move back to coal.

Reuters: The decision by an Australian power company to mothball a natural-gas plant and restart two coal-fired units seems wrong on many levels, but strangely, it has implications for U.S. liquefied gas exports.

Stanwell Power Corp, an electricity producer owned by Queensland state, said last week it would shut for three years its 385-megawatt (MW) Swanbank E power station, west of the state capital Brisbane, while restarting two coal units with a combined 350-MW capacity at its Tarong plant.
With approval of the Sempra Energy LNG export facility in Louisiana this week the US has six LNG facilities approved. The Sempra Energy facility has already signed a number of 20 year supply contracts with foreign buyers. Maybe some caution on further large scale LNG export approvals would seem a simple and prudent conclusion from what is going on down under in Australia.

Natural gas drilling – The recent price move isn’t enough
This winter’s increase in the price of natural gas is not enough to bring one of the nation’s largest natural gas producers back to the drilling table. This is consistent with comments by other companies over the last couple of weeks concerning their capital expenditure plans for this year. The price just isn’t high enough to see a big jump in activity.

ConocoPhillips wants benchmark natural gas prices to remain over $5 for as long as two years before the company boosts spending on natural gas, Chief Financial Officer Jeff Sheets said in a Jan. 30 interview.

“We won’t be leaders in getting out there and drilling natural gas,” he said.

It is hard to square the LNG export approvals with comments like this from industry. Unless of course you support higher domestic US natural gas prices.

US natural gas storage – The decline continues
As winter continues the decline in natural gas in storage continues its decline to levels not seen since the first week of February 2004. As can be seen in the second graph on the right gas in storage is very near levels only seen at the end of the winter draw down at the end of March. It seems very likely that next week gas in storage will plunge through the 1,500 Bcf level with the weeks still go in the winter heating season.

The top graph highlights the corresponding periods over the last three years compared to their trailing five year averages. Storage is now 27.2% below the current five year trailing average and 33.9% below year ago levels according to data released Thursday by the EIA.

Now consider for a moment where US natural gas storage would be if an extra 6 Bcf per day (30 Bcf/wk) was being exported under long-term contracts for LNG. What price would gas need to climb to bring the required production on line? Clearly it isn’t $4/mmBtu.

WTI is back to triple digits
OK, the US is producing more oil than at any time since the 1980’s according to the EAI so why is WTI back to triple digits? Just think how much it will go down if we just start exporting….

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It is worth noting that it was probably the opening of the southern leg of the Keystone pipeline from Cushing, Oklahoma to the Gulf Coast that helped bring the price up. The extra capacity south contributed to the 2.7 million barrel drop in inventory in the Cushing storage facilities.

So again with US production at a multi decade high why is oil in triple digits. Exports anyone???
Grid policy
In an example of strange bedfellows “The Natural Resources Defense Council and the U.S. utility industry’s trade group are jointly calling for a new rate structure to account for customers that generate their own power with rooftop solar systems.”

As the Bloomberg article points out “Owners of rooftop solar panels “must provide reasonable cost-based compensation for the utility services they use,” the groups said in the statement. In exchange, utilities must simplify the process of connecting systems to the grid and compensate owners “fairly for the services they provide.”

EIA’s forecast of coal plant closures
In the Annual Energy Outlook 2014 (AEO 2014) the EIA raised its previous forecast of coal-fired power generation to be closed by 2016. The AEO 2014 projects that 90% of the forecast coal-fired generation closures will be accomplished by 2016.

![Graph of electricity generation by fuel, 1990-2040](image)

The graph on the left illustrates the EIA’s forecast of power generation sources through 2040 with natural gas adding the lion’s share of new capacity. However, as the AEO 2014 points out this forecast is very sensitive to fuel prices and policy changes.

It is clear though that the elimination of fossil fuels as sources of power generation is a long ways away based on this forecast. Over two thirds of generation will still be provided by coal and natural gas in 2040 in this reference case forecast.

Fundamental to this forecast is the price (2012 dollars) of natural gas. In AEO 2014 the EIA is using $4.38/mmBtu by 2020 and a price of $7.65/mmBtu in 2040. The 2040 price forecast amazingly is 4% below the forecast price in the AEO 2013. In addition in an acknowledgement of the impact of LNG exports the AEO 2014 said, “A price increase starting in 2033 is far less pronounced than was projected in AEO2013, in part because the growth in net exports from the United States slows significantly.”

Given the comments above by the CEO of ConocoPhillips on the price required to begin further gas development the EIA forecast leaves one wondering how they arrived at a price forecast well below $5.

One thing is certain, as the CERA predictions mentioned on page one demonstrate, the forecasts will be wrong. The unknown part is by how much and in which direction.

More competition for alternative drive trains from the old school
Audi is introducing new “Ultra” diesel models that raise the bar even further for alternative drive trains to beat. The new diesels in the A4, A5 & A6 vehicles will push the mileage up into the 50 to 60 mpg range according to the report by Green Car Congress.

Ultimately electrification wins. For now the road hasn’t ended for internal combustion as manufactures use technology to battle technology.
Wind power on a massive scale
How about 1,000 wind turbines in the heart of the coal mining state of Wyoming? Making it even stranger is the fact Wyoming is the only state to currently tax renewable power generation. But the reality is it makes good business sense despite local ideology that conflicts with it.

The project would produce up to 3 gigawatts of power that would be transmitted to California over a 750 mile transmission line.

However, like most things it is never that easy. The latest problem isn’t resistance that one might expect from the coal industry based in Wyoming. Instead it is from two environmental groups. The groups—the American Bird Conservancy and the Biodiversity Conservation Alliance—told the U.S. Fish and Wildlife Service in a 15-page letter released Wednesday that between 46 and 64 golden eagles would likely be killed every year by the spinning blades of 1,000 wind turbines planned by the Power Company of Wyoming.

No matter how many times we hear it; there really is no free lunch. Every decision has a cost.

Wind isn’t the only renewable facing troubles from birds
The Ivanpah Solar Electric Generating Station which just came online with the capability to supply the electricity needs of 140,000 homes also has a bird problem. The Wall Street Journal reported that birds appear to be getting singed by the high temperatures created by the 350,000 mirrors that shine light on the 40-story concentrating towers at the center of the project.

“Success is a lousy teacher. It seduces smart people into thinking they can’t lose. And it’s an unreliable guide to the future.”
~ Bill Gates, “The Road Ahead”

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