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Go ahead and mark your calendar for the arrival of Peak Oil. But what date will this event take place when the world reaches the maximum point of oil production and takes the downward slope of decline? Conflicting opinions of sooner versus later were conceptualized during the 1950s with the introduction of geoscientist Dr. M. King Hubbert's theory of peak oil production.

Hubbert proposed his peak oil theory in a paper presented to the American Petroleum Institute in 1956. Using a bell-shaped curve model, Hubbert made his predictions with the assertion that peak oil production would occur in the United States (lower 48 states) by the early 1970s. Hubbert's theory rang true as U.S. oil production has been decreasing since that time. The U.S. now imports two-thirds of its oil supply.

Hubbert also predicted that world peak oil production would occur "about half a century" from his publication; however, he later revised the estimate to 1995. Some analysts believe peak oil has already occurred, some think it will hit within this decade, and some predict dates as late as the 2030s. As companies are attempting to develop and secure alternative energy resources, many believe those efforts will not cushion the economic blow to come.

NOW THE QUESTION ARISES NOT IF WE WILL REACH PEAK OIL PRODUCTION, BUT EXACTLY WHEN IT WILL HAPPEN DUE TO CURRENT PRODUCTION DECLINE RATES.

VIEW: NOT TODAY

Experts at Cambridge Energy Research Associates (CERA) recently stated in a press release that peak oil would not be reached as soon as some think, due to the rate of production decline. Upon examination of past industry research, projections were cited to be around an 8 percent decline. Analysts have readjusted this figure to represent a 4.5 percent decline rate, based upon production characteristics of 811 oil fields analyzed by CERA.

In the press release, CERA oil industry activity director Peter M. Jackson was quoted as saying, "Some of the more gloomy, pessimistic 'peak oil' views about the future of oil supplies that are current today result from an assumption of high decline rates. This new analysis provides the basis for more confidence about the future availability of oil."

Jackson added, "The absence of definitive, comprehensive analysis of production timelines and decline rates has led to widely differing estimates of the potential future availability of oil: an information vacuum that has contributed to the peak oil theory of future liquids production capacity. We hope this study will contribute to a more informed understanding of the issues, both below ground and above ground."

CERA's analysis covers database information developed and managed by IHS, an oil and gas information, analysis and software company that acquired CERA in 2004. The analysis includes the 811 separate oil fields that Jackson said "account for about two-thirds of current global production and half of the total proved and probably conventional oil reserve base." The final outcome showed "the aggregate global decline rate for fields currently in production is approximately 4.5 percent per year, and that annual field decline rates are not increasing with time."

PRIMARY FINDINGS - *The primary conclusions drawn from CERA's analysis of* ***811 fields*** *during the production build-up, plateau and decline stages in the oilfield life cycle include:*

Aggregate decline rate – The **4.5 percent** per year aggregate global decline rate among fields in production (FIP) is much lower than the eight percent rate cited in many studies and projections. This pessimistic estimate may be a function of the generally more rapid decline rates observed in small fields – increasingly being developed in mature non-OPEC countries – and the rise of deepwater projects, which tend to flow at high rates as a requirement of commerciality, but which also decline rapidly.

Fields in decline stage – Only **41 percent** of production is from fields in the data base that are beyond the plateau stage and into the decline phase of their production lives.

Low decline rate, longer lives – Annual field decline rates are not increasing but, as a result of increased investment, improved planning and technology, can be maintained at low decline rates in many fields for prolonged periods, and field life is very often longer than originally projected.

Offshore vs. onshore fields – Individual offshore fields are declining at a **10 percent** annual rate compared with **6 percent** for onshore fields, and deepwater fields decline at **18 percent** annually compared with **10 percent** for shallow-water fields. Non-OPEC offshore fields decline **5 percent** per year compared with **12 percent** for those in OPEC.

CERA's world capacity conclusion was made by Jackson: "The results of this new study reinforce CERA's existing bottom-up global liquids capacity model showing that liquids capacity of around 91 million of barrels per day (mbd) in 2007 could climb to 112 mbd by 2017. This outlook is supported by a key conclusion of this study: there is no evidence that oilfield decline rates will increase suddenly. It is important, though, to continue to research and understand evolving decline trends and further develop insight into the declines."

**Source: "No Evidence of Precipitous Fall on Horizon for World Oil Production: Global 4.5 Percent Decline Rate Means No Near-Term Peak: CERA/IHS Study" Cera.com. 17 Jan. 2008 <http://www.cera.com>*

REVIEW: HERE IT COMES

According to an article by *Wall Street Journal* oil reporter, Neil King Jr., CERA's study may not depict such a promising future for the oil industry. In his article, "New Fields May Offset Oil Drop," King takes a second look at CERA's findings.

King writes, "Output from the world's existing oil fields is declining at a rate of about 4.5 percent annually, a new study concludes, depriving the world of the same amount of oil that No. 4 producer Iran supplies in a year. Yet the study's authors, Boston-based Cambridge Energy Research Associates, argue that their assessment supports a generally rosy view of the industry's future, given that new projects in the works will make up for the decline."

Although CERA reports the lesser 4.5 percent decline in production, this equals a loss of nearly four million barrels a day throughout this year. King states one of the major issues of oil depletion rates is the data collection of verifiable numbers.

"Oil-field depletion rates are a key barometer of the health of the world's oil market, and thus are hotly debated among factions feuding over the relative stability of future supply," King writes. "That debate is made all the more intense because analysts have limited access to reliable data on field-by-field production rates from key suppliers such as Saudi Arabia, Iran, Venezuela and Russia."

King asserts CERA data is bolstered by promises of restoration in oil production through projects being conducted in Brazil, Saudi Arabia, West Africa, the Caspian Sea and the Gulf of Mexico. King quotes CERA Chairman Daniel Yergin as saying, "This is a daily, hourly and minute-by-minute challenge for the world's oil industry. But for every Iran you are losing, you are gaining almost two Irans in return."

CERA, who King says "has drawn fire among skeptics for being one of the most optimistic forecasters in the industry" predicted in June that world oil production could multiply to 112 million barrels a day by 2017.

King examines the quantifiable logistics of new oil production using CERA's predictions, which may not offer an industry vote of confidence to an increasingly questioning public.

"According to CERA's own rate of decline, the world's existing fields by 2017 will be producing about 33 million fewer barrels a day than they are now," he writes. "So hitting a production level of 112 million barrels a day within a decade would require adding 59 million barrels a day in new capacity — or more than six times today's daily output from Saudi Arabia, the world's largest oil exporter."

**Source: King Jr., Neil. "New Oil Fields May Offset Oil Drop." Wall Street Journal Online. 17 Jan. 2008. <http://online.wsj.com>*

When do you think we will reach Peak Oil? Visit www.baylor.edu/bbr to cast your vote.