

Hubbert's Peak – The Impending World Oil Shortage
Kenneth S. Deffeyes
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The major thesis is that world oil production will peak in the next decade, most likely around 2004 but most probably before 2009. Deffeyes uses the methodologies that proved prophetic when M. King Hubbert's 1956 projection that U.S. oil production would peak between 1970 and 1975 proved true. Hubbert, a well respected petroleum geologist, was nonetheless widely criticized by people in the industry who projected a virtually unlimited future for oil. It turned out that 1970 was in fact the peak production year.

Hubbert's peak represents the point of maximum production on a bell curve graph. It would seem that a graph of the buildup and decline of oil production would be asymmetric, driven by the pace of discovery early in the cycle, then by advances in extraction technology later on. This has not proven so in the U.S. since 1970. Exhaustive exploration, additional wells (our ½ million active wells produce less than the 1500 or so in Saudi Arabia) and improved techniques do not offset declining new discoveries. Even early exploration techniques were good enough that all the world's biggest fields were discovered more than 30 years ago, most 60 years ago. It is unlikely we will find any huge sleepers.

With a wonderful sense of proportion, Deffeyes spends the first half of his short book taking the reader on a leisurely tour of oil formation, exploration and production. By the time he gets around to his thesis he has provided the reader with the essential background and thoroughly established his credibility.

Deffeyes' treatment of the solutions to the problems he raises is brief and not terribly optimistic. Two take-home points are that it is not too much work to use natural gas as a substitute for oil and that we should overcome our fears of nuclear energy. Geothermal, wind and hydroelectric are inherently limited resources. By his analysis the energy cost alone of making and installing solar devices almost outweighs the energy they can produce. Unless we make early and radical changes, there will be a painful decade or two of transition after petroleum becomes scarce but before we have developed an alternative.

Probably in the interest of brevity, the book chooses not to touch on many related themes, among them global warming, fuel economy and transportation alternatives. He only teases the reader as far as advice on preparing for the impending oil shortage.

Note: Learn that 400,000 US wells are called "stripper wells", doing less than 10 BBL/day. 15,000 are shut down every year because the electricity to run the pumps costs more than the oil is worth

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