

Abstract Submitted
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Hubbert's Peak: A Physicist's View RICHARD MCDONALD, Retired from LBNL — Oil and its by-products, as used in manufacturing, agriculture, and transportation, are the lifeblood of today's 7 billion-person population and our \$65T world economy. Despite this importance, estimates of future oil production seem dominated by wishful thinking rather than quantitative analysis. Better studies are needed. In 1956, Dr. M.King Hubbert proposed a theory of resource production and applied it successfully to predict peak U.S. oil production in 1970. Thus, the peak of oil production is referred to as "Hubbert's Peak." Prof. Al Bartlett extended this work in publications and lectures on population and oil. Both Hubbert and Bartlett place peak world oil production at a similar time, essentially now. This paper extends this line of work to include analyses of individual countries, inclusion of multiple Gaussian peaks, and analysis of reserves data. While this is not strictly a predictive theory, we will demonstrate a "closed" story connecting production, oil-in-place, and reserves. This gives us the "most likely" estimate of future oil availability. Finally, we will comment on synthetic oil and the possibility of carbon-neutral synthetic oil for a sustainable future.

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