

## Crude Oil and Alternate Energy Production Forecasts for the Twenty-First Century: The End of the Hydrocarbon Era

By

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Predictions of production rates and ultimate recovery of crude oil are needed for intelligent planning and timely action to ensure the continuous flow of energy required by the world's increasing population and expanding economies. Crude oil will be able to supply increasing demand until peak world production is reached. The energy gap caused by declining conventional oil production must then be filled by expanding production of coal, natural gas, unconventional oil from tar sands, heavy oil and oil shales, nuclear and hydroelectric power, and renewable energy sources (solar, wind, and geothermal).

Declining oil production forecasts are based on currently estimated ultimate recoverable conventional crude oil resources of 329 billion barrels for the United States and close to 3 trillion barrels for the world. Peak world crude oil production is forecast to occur in the year 2020 at 90 million barrels per day. Conventional crude oil production in the United States is forecast to terminate by about 2090, and world production will be close to exhaustion by 2100.