

THE PEAK OIL PRODUCTION FORECAST OF CHINA: RESULT AFTER DISTINGUISHING CONVENTIONAL AND UNCONVENTIONAL OIL

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Overview

There is significant difference between conventional oil and unconventional oil. In China, there has been a long time that people did not clearly distinguish these two concepts, it accompanied by some other elements, together caused the inaccuracy of China's oil production forecast. Since China is the world largest oil consuming country and the world 4th largest oil producing country and plays a very important role in the world, accurate forecast of its oil production is necessary. So we should clearly distinguish China's historical production of conventional and unconventional oil; to objectively choose the ultimate recoverable resources (URR); and to select the suitable forecasting model, in order to get accurate results of China's oil production forecast.

The paper is organized as follows: After the introduction the second section introduces the procedure of distinguishing historical production of unconventional oil and conventional oil, and procedure of choosing the proper ultimate recoverable resources (URR). The third section addresses the suitable production forecasting methods that has been chosen by this paper. In section four we describe the production forecasting results for China's conventional oil, unconventional oil respectively. The fifth section gives some analyses and discusses to the results. In the final section, content of this paper is included and some useful advices are suggested.

Methods

Multi-cycle Generalized Weng Model
Random Simulation Model for Unconventional Oil and Gas Production

Results

First, China's conventional oil production estimated in this paper based on corrected historical production and URR data has already peaked in 2010, with the peak production of 167.5million tons.

Second, China's viscous oil production will peak in 2028, with peak production of 51.53 million tons; light tight oil production will peak in the year 2043 with peak production of 62.62 million tons; kerogen oil production will peak in 2059 with peak production of 19.08; oil sands production will peak in 2090, with peak production of 12.03 million tons.

Third, the total production of China's conventional oil and unconventional oil will peak in 2029 (with peak production of 253 million tons), 19 years later than the conventional oil peak year.

Conclusions

China's conventional oil has already peaked in 2010, but most of the publics and the government agencies have confused conventional oil and unconventional oil, hence hold over-optimistic attitude for China's future oil production.

Separation of unconventional oil production from conventional oil production is still not thorough in this paper. If some other controversial oil production are also separated, China's conventional oil production might have peaked even earlier than 2010.

Unconventionoil will delay China's peak oil production by only 19 years. And since constrained by both cost and emission problems, China's unconventional oil development will still meet many challenges. In addition, when the implication of low oil price is considered, there will be even uncertain future for China's unconventional oil.

China's government should change over-optimistic attitude; clearly distinguish conventional oil and unconventional oil as soon as possible to be consistent with the international standard; bravely face the reality that conventional oil production has already peaked and deal with the problem actively; make separate and more suitable policies and strategies to develop unconventional oil.