“Peak Oil” and the current high oil price

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Introduction

The “peak oil” discussion has drawn a lot of attention recently and particularly after the significant rise of the crude oil price over the last few years.

I first discuss the original concept of “peak oil” as introduced by Hubbert (1956), illustrate some weaknesses in the concept, suggest an alternative reason for the typical peak profile and also explain why so many forecasts of oil production within an area forecast the peak to occur too early and at a too low level.

Thereafter I discuss the outlook for global conventional oil and briefly visit un-conventional sources for fuel production.

At the end I discuss the current high oil prices in relation to the concept of “peak oil”.

Conclusions:

The remaining conventional oil resources in ground are much bigger than the reported reserves and large areas of the world are under-explored and could come up with surprises, as we have seen recently offshore Brazil. However, the annual oil consumption is now at such a high level that reserves are being tapped quickly and new finds cannot compensate.. Also, it will take time to develop new-found reserves, so even big new finds cannot contribute to avoid a tightening of the market for conventional oil over the coming years.
However, we use oil products and various types of fuels in our cars and machines, not crude oil. There is no lack of resources from which man-kind can produce liquid fuels. It only a question of costs and lead time..

Neither can we conclude that the oil price climb over the last few years is an indication of “near the peak” of conventional oil. It is rather a result of the rapid increase in demand the last years. The expansion of production capacity could not easily follow due to the lead time. The observed price hikes of oil are more connected to the marginal utility of oil for the consumer than to the marginal cost of producing the oil.

After a relatively long period where the oil price has been influenced by OPEC, the oil industry and society have got the impression that the oil price by nature is rather stable, barring political events. However, now, when OPEC has virtually no idle production

capacity left, the oil market is left on its own and will experience much higher price volatility, similar to what we can observe in other industries with long lead times.

References:

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