

LETTER

On Oil Peak or Peaks

Dear Editor,

I read with interest your article on Peak Oil in the most recent *Energy Forum*, and would like to provide some additional reflections on this subject. Primarily, the trends in oil (and gas) continue to surprise the majority of experts in the energy sector. Our industry is still unable to design a model that can explain what has actually occurred during the many years in which the Peak Oil debate has intensified, but failed to materialise. There are at least two reasons for this, one being we simply can't model human creativity and that we are unable to predict major events and their consequences; just two major examples that most modellers did not see coming – the fall of the wall and the attendant collapse of supply from Russia (and its rise) and the rise of China.

The Peak Oil debate needs to be discussed considering the dynamics of resources, supply, demand, and oil prices. It is no secret that since modern exploration of hydrocarbons began in the early 1900s, the estimates for global resources and reserves have been increasing – at present economically available resources exceeded 10 trillion barrels of oil in place and 25,000 trillion cubic feet of gas in place. Recoverable reserves, currently estimated at 10 percent of the resources in place, have also been increasing. In the last three years, we have had major upward revisions as a result of the US shale gas boom, the Australian coal bed methane boom, the discovery of oil and gas in Brazil's sub-salt formations in ultra deepwater and access to Iraq. And all of these

have 'suddenly appeared! Why were we not able to model or predict any of these developments and discoveries or why could the industry not see 10 trillion barrels of oil in place in 1900? History shows that there has never been a shortage of resources, only a temporary shortage of human creativity and plenty of inadequate models and predictions.

Oil and gas production capacity has continued to expand at varying rates and to hold even as some countries and NOCs lost control of their operations – global oil capacity is now above 91 mbp/d and gas capacity above 50 mboep/d. Some major oil-producing countries which had experienced historical peaks in the past, such as the USA, Russia, Saudi Arabia, Iraq, Canada and Colombia, are now once again expanding and in some cases exceeding or about to exceed their historical peaks. Curiously, decline rates, one of the most important parameters in the Peak Oil equation also seem to be the least understood phenomena. Analysts and CEOs have 'simplified' relevant factors such as geology, wells drilled, recovery methods, marginal economics, investment trends, politics, and economics (to name a few) of some 80 countries and 800 companies in the globally accepted 5 percent factor for decline rate. But when one looks at how much liquids capacity has expanded in the last ten years and how much new capacity has come on-stream, the 5 percent simply is not comprehensible; it has been much lower. Growing supply has always been a long-term challenge, not only since 2000. All Peak Oil models have been, undoubtedly, far too simplistic on the supply side.

Finally, demand, a central factor in the Peak Oil debate continues to surprise us and to transform this debate. Following the recent re-rating of the oil price, global oil demand has been flat for the last three years. Prior to which, oil demand growth had been strong, driven by China and developing countries, but today the world consumes 12–13 mbp/d less oil than what the top modellers were predicting some ten years ago. In fact, in the last decade major downward revisions have been made to long-term demand prospects with profound implications (no one expects OECD demand to ever recover), but the Peak Oil alarmists have cared to not notice this trend. We are now told that global oil demand in 2025–2030 is expected to be around 100 mbp/d, but this is 40 mbp/d less than expectations a decade ago. The story for gas demand is similar, particularly in the USA, where major downward revisions have been made over the years, and the world is now facing a major glut. One can only concur that the impact of price, technology (especially), consumer patterns, and substitution (to name a few) has also proven difficult to model.

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