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DallasNews.com -- 06/26/2005

Scott W. Tinker: Of peaks and valleys

Doomsday energy scenarios burn away under scrutiny

10:09 PM CDT on Sunday, June 26, 2005

As senators debate the national energy policy, many are aware of the hype surrounding "peak oil." A Web search of the phrase turns up an array of experts who believe that a pending peak in world oil production will soon lead to global economic collapse.

In their rosier scenarios, experts predict sky-high gasoline prices that will crush oil-dependent economies, such as the U.S. In their darker forecasts, they say people won't be able to obtain food, heat their homes or live securely during a period of global famine and resource wars.

All of this might be entertaining were it another Hollywood film, but it has become almost a subculture (and cottage industry). For those who wonder whether the global production of oil will peak and begin to decline someday, the answer is yes.

The greater question: Should you care? Although talk of peak oil has rightfully focused global attention on the need to find alternatives to oil, the absolute peak of world oil production is an issue of supply and, in many ways, irrelevant. Unlike the 1973 oil embargo, when high prices were the result of an OPEC-orchestrated supply cut, high prices today largely reflect demand-supply imbalance. The global demand for conventional oil has outstripped, or soon will, the global capacity to supply conventional oil.

Does that mean we are all doomed?

While the shock value of doomsday peak oil predictions is entertaining, it is far more important to recognize the reality of high global energy demand and begin to seek solutions – such as the energy policy being debated in the Senate – that could help mitigate the supply-demand imbalance. Solutions abound but will take planning and coordinated investment.

In 1956, geophysicist M. King Hubbert correctly predicted that U.S. oil production would peak in the early 1970s. He incorrectly predicted that world oil would peak in 1995. What he missed was that advances in technology would allow producers to extract oil from known fields far beyond the technology capacity of his day.

Because of these advances, the shape of the oil production curve is not really a peak at all, but more of a bumpy mesa. If there is an important "peak" of oil, it actually occurred in the early 1980s, when oil consumption as a percentage of total global energy topped out just shy of 50 percent. That has declined today to about 40 percent, a trend that has been remarkably consistent and un-shockingly boring.

Dr. Hubbert can be excused for incorrectly forecasting the impact of technology, but today's forecasters should know better. They often claim that oil supply is made worse by modern

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enhanced oil recovery techniques that drain reservoirs faster. In fact, the reverse is true. The combination of higher energy prices and advanced technology will continue to extend the life of conventional oil supplies via enhanced oil recovery processes.

So what are the realistic near-term alternatives to conventional oil?

Most experts recognize that the age of conventional oil will fade during the 21st century. Energy demand in Asia and other developing regions will continue to outpace supply and keep oil prices high and volatile. Fortunately, price and technology will allow for production of heavy oil, tar sands and shale oil, whose combined global reserves far exceed those of conventional oil, as well as coal liquefaction and gasification, improved gas-to-liquids technology and alternatives to oil led initially by conventional and unconventional natural gas.

The challenge of natural gas is not resources, but deliverability. As liquefied natural gas ports are permitted and built, natural gas will become a global commodity and help reduce issues of deliverability that have caused price volatility. Natural gas, combined with other non-coal sources of fuel, will likely surpass oil as a percentage of total global energy consumption between 2015 and 2020. This crossover already happened in the U.S. around 1994.

If no substitute for oil existed, the world would indeed be in for an energy shock, and possibly an economic collapse. Fortunately, that is not the case, but investment must start today. U.S. energy policies must be aggressive, focus on efficiency and conservation measures and lead the world in a smooth transition to an unconventional-oil, clean-coal, natural-gas, nuclear and emerging-energy-supply future.

Our economy and environment will be the prime beneficiary.

This is not a shocking prognosis, but rather a boringly achievable one.

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