

Oil, Gas, and Steel at a WATERSHED

Importance of energy efficiency at all-time high

The prices of oil, natural gas, and steel have been increasing dramatically. In the case of steel, they have risen vertically, with no peak in sight (see guest editorial on Page 9).

I view the steel situation as a crisis because it is so unpredictable at a time when our industry is hoping to recover from years of recession. That it is impacting both current and future projects and orders is a real headache.

We're much more used to fluctuations in energy prices, but what if the "peaks" become the new status quo and new and unexpected peaks arise from there? Would a doubling of the cost of oil, electricity, or natural gas constitute a crisis? It could happen.

Oil is near record prices at about \$38 a barrel, which is \$13 more than the \$25-per-barrel cost esteemed by economists. Oil production has seen no growth since 2000. Some predict it will begin to fall in 2005. (Visit www.hubbertpeak.com to learn more.)

Natural gas costs about \$5 per million cubic feet, which is \$2 above the \$3 per million cubic feet economists say is ideal. No one argues that American natural-gas production has peaked, so expect more imports of liquefied natural gas and the costs of building infrastructure and the problems of additional foreign dependency that come with it. Natural-gas reserves have the same problem as oil reserves: They are finite, subject to questionable accounting, and going to be competed for.

The price peaks will come because both oil and gas systems are running with "just-in-time" logistics and are highly sensitive to changes in weather, terrorist attacks, accidents that lead to shutdowns, intentional curtailments, and work stoppages resulting from political strife. In other words, strong demand will keep energy systems fully engaged, while unforeseeable incidents will cause supply events that lead to price shocks.

According to Matthew R. Simmons, chairman of Simmons & Company International (www.simmonsco-intl.com), an independent investment bank specializing in the energy industry, and with supporting statistics from the Institute for the Analysis of Global Security (www.iags.org), oil demand is around 80 million barrels per day. By 2030, it's expected to be at 130 million barrels per day. That's an increase of more than 50 percent long after production from the world's major oil fields has peaked. Helping fuel demand is China, which has doubled its use over the last seven years, making it the second-largest oil consumer behind the United States. China imports 32 percent of its oil. By 2010, its oil imports are expected to double. How far behind can India be?



In January, *The New York Times* reported that the Royal Dutch/Shell Oil Co. "recategorized" 3.9 billion barrels of oil equivalent—20 percent of its proven reserves. Although this begs the question of whether other oil giants are engaged in similar practices, it is small potatoes if OPEC's proven reserves are much less than OPEC is reporting.

Energy efficiency, which always has been important, is now extremely important. Increasing energy efficiency increases energy security and resiliency to change. Also, it reduces operating costs, benefits the environment, and reduces geopolitical tension.

Simply put: We need to conserve oil and natural gas using energy-efficient technologies while investing in renewable-energy research and development.

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