

Monday Morning

June 9, 2008

# ONE EIGHTY

## Upcoming 2008 Events

- Performance Institute  
Performance Budgeting for Government  
Arlington VA  
August 4-8
- CAM-I Third Quarter Meeting  
Portland OR  
September 7-10

## People in the News

- Thank you to all the collaborators at Wikipedia that provided much of the content for this issue of One Eighty
- Congratulations to Joseph Compofelice (CEO) and Geoff Jones (CFO) of Trico Marine for their strategic acquisition of DeepOcean

## Supply and Demand

Last Friday the price of crude oil shot up over \$10 per barrel and hit an all time high of \$138. It's not just oil prices that are increasing. Coal and natural gas prices have doubled in the last year.

High energy prices impacts each of us and the companies we work for and is not likely to be resolved in the short term.

Energy decisions made in 2007 have long term strategic implications and should be grounded in a basic understanding of the worldwide supply and demand driving energy prices.

The purpose of this **One Eighty** is to provide some of that grounding.

**Supply.** In 2004, the worldwide production of energy was 15 TW (terra watts), 85% of which was supplied with fossil fuels (oil, coal, and natural gas). Hydroelectric and nuclear provided 12% and all other sources combined accounted for the remaining 3%.

Fossil fuels are finite resources. The most abundant fossil fuel is coal with a reserve of 150 years supply at current rates of use.

Crude oil production of about 85 million barrels a day accounts for about one-third of the worldwide energy supply. The Oil & Gas Journal estimated 1.2 trillion barrels of worldwide oil reserves (about 40 years at current rates of production).

**Demand.** In 2004, 37% of the worldwide energy demand was for industrial use. Agriculture, mining, manufacturing and even the generation of electricity requires fossil fuels. About 50% of coal production is used to generate electricity.

20% of energy demand was for private and commercial transportation. Residences and commercial offices used just 16%.

27% of the total energy produced is lost in transmission. It takes

approximately 5 TW of energy from coal to generate and distribute 2 TW of electricity.

Energy consumption broadly tracks GNP. With its 22% share of global productivity, the U.S. consumes 25% of the world's energy (11.4 kw per person).

Economic growth in India and China (consumption rates of .7 kw and 1.6 kw per person), puts pressure on the demand for energy as these economies grow and standards of living increase.

According to the Law of Supply and Demand, either supply must go up or demand must go down for energy prices to decline. Short term, neither is likely to happen (especially on the supply side). Longer term we have opportunity to innovate and conserve.

***Shut out a light and  
save some coal...***

***John A. Miller***

ARKONAS