

# The Energy-Climate Crisis is Your Business

## Part IX: Don't Be Fooled By Low Oil Prices<sup>1</sup>



James A. Cusumano, PhD

*"It takes a lot of courage to release the familiar and seemingly secure, to embrace the new. But there is no real security in what is no longer meaningful. There is more security in the adventurous and exciting, for in movement there is life, and in change there is power."*

**Alan Cohen: "Chicken Soup for the Soul"**

Assuming we do not enter a total global economic collapse – which is unlikely – the dramatic fall in the price of oil between July and December 2008 from \$147 to \$33 per barrel is the last time you will see such a precipitous decline in the price of this commodity. In fact, most economic indicators point to a price of at least \$75 per barrel by the end of 2009, and more than \$100 in 2010. The price will then likely continue to climb beyond \$100 thereafter until alternative non-fossil energy sources seriously diminish the world's dependence on oil. **Note to the reader:** As I write this article, the global oil price is \$45 per barrel. With the projected economic and commercial forces that I envision, I would not be surprised if the price is above \$70 by the time this article appears in print.

### TELLTALE SIGNS

The current unrealistically low price of oil has been caused by the impact of the subprime mortgage fiasco and global unfolding of associated so-called "toxic" assets. The U.S. has injected three trillions dollars into the financial system to stabilize Wall Street and the American financial system, and this has led to an increase in the value of the dollar. Since oil is traded primarily in dollars, a major contributor to depressing oil prices has been the rise in the value of the dollar since last July.

There is also a significant negative psychological factor as both private and commercial investors lost confidence in normal market forces as many were forced to liquidate assets at lower than what they would deem as fair value. All this is likely to turn around, however not without further financial pain.

Beyond the obvious, the current state of affairs is unfortunate for two primary reasons. First, low oil prices have diminished the interest and financial commitment of governments and many corporations to develop and commercialize alternate non-fossil-fuel energy technologies. This could have a dramatic negative impact on global energy security and efforts to diminish the effects of climate change. Second, when oil prices begin to rise again – which I believe will occur this year – it will catch investors, governments and corporations by surprise, as it will happen quickly and the economic consequences could eventually be severe (see **Figure 1**). Rising oil prices could easily reverse any economic recovery accrued by the infusion of trillions of dollars into the banking and corpo-

because as one Saudi spokesman pointed out "Prior plans made in an \$80-\$100 per barrel environment don't work at all in a \$45 per barrel world." He warned of a "potentially catastrophic supply crunch<sup>3</sup>." We also know that Iran, the fourth largest producer in the world, is in trouble. Oil production in that country has fallen over the last 18 months from 6.1 million barrels per day (MBD) to 4.4 MBD. Elsewhere in the Middle East, OPEC, which controls 40 % of the world's oil output, has cancelled 35 new production projects and continuously warns that much higher oil prices are needed to stop the collapse in oil production.

A little-known fact is that in some countries, including the U.S., as much as 20 % of their oil comes from thousands of small wells pumping as little as several barrels per day of oil. These wells are not cost-effective at \$40 oil and are currently being shut down and abandoned by the hundreds. In North America alone, the number of operating oil wells has decreased over the last year by 40%.

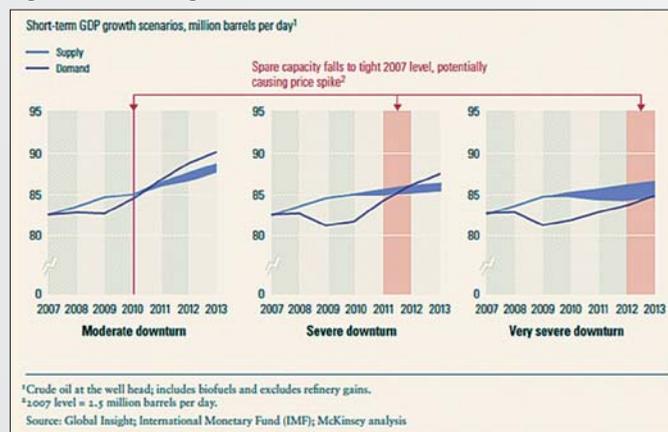
In Mexico, depletion of their giant Cantrell oil field has essentially collapsed oil production in that country, the 6th largest oil producer in the world. This decline was apparently the steepest in 50 years<sup>4</sup>. Elsewhere in Latin America, president Chavez of Venezuela, who last year asked foreign producers to leave the country, and who confiscated their oil properties, is now inviting them back because oil production is falling sharply in Venezuela, the 8th largest producer in the world<sup>5</sup>.

In Russia, the world's largest oil producer, a senior oil executive has warned that production in that country will shrink this year and that this combined with other decreases around the world will lead to an increase of 50-100 % in oil price<sup>6</sup>.

The U.S. Energy Information Agency recently studied decreased production in some 800 oil fields around the world, and concluded that due to natural geological effects, oil fields produce 9% less oil each year. This implies that oil production is decreasing each year by about 7.6 million barrels per day. This is supported by the table shown in **Figure 2**, which shows that in the decade from 1981 to 1991, global oil reserves increased by 43%, but in the subsequent decade, the figure is only 3%<sup>7</sup>.

The essence of the global problem can also be seen

**Figure 1: The Next Big Oil Shock is Just Over the Horizon<sup>(10)</sup>**



rate systems by Western and Asian economies. Let's take a look at some of the indicators leading us in this direction.

### THE FACTS

Low oil prices are forcing companies and governments to abandon numerous oil wells and projects that were directed at increasing oil production. Nine of the largest integrated oil companies have cut a total of \$36 billion of planned capital expenditures over the last 6 months<sup>2</sup>. For example, Shell, Petro-Canada and Statoil each have cancelled major projects in Alberta's oil sands, diminishing the potential for at least 500,000 barrels per day of oil. Saudi Arabia cancelled the development of a large new oil field



from a study by the International Energy Agency (IEA). This study concludes that global oil consumption which was at 85 MBD in 2008 will shrink by about 1 MBD in 2009. However, as shown above, production is falling more than 7 times faster than that, so unless we do something immediately, the world is headed for a significant shortfall in oil availability within the next 12–18 months, even though we are in a serious recessionary period.

### THE CHINDIA CHALLENGE

There is another complicating factor brewing in Asia, which will escalate over the next 5 years. Oil consumption in that sector is growing rapidly, especially in China and India, even though their economies have slowed to some degree during the current recession. In January of this year, China surpassed the U.S. as the largest buyer of automobiles, despite the fact that only 1 in 20 people in China own a car. In India it's 1 in 100 people, and in the U.S. 3 out of 4 people own a car. However, this is about to change as Tata introduces their new NANO car, which will sell for \$2,000 (see **Figure 3**). This will likely do for Asia what Henry Ford did in the U.S. when he introduced his mass-produced Model-T Ford. His inexpensive mass manufacturing methods made automobiles cheap enough for ordinary people to afford them. This will significantly increase oil consumption in Asia, in particular in China and in India. For example, in Taiwan the average person consumes about 17 barrels of oil per year, whereas in China and India individual oil consumption is approximately 1.6 barrels per year. The \$2,000 NANO car will push the latter number much closer to the consumption rate in Taiwan. Even at 25% of this number, the world would require at least two more "Saudi Arabias" to meet this demand. This just can not happen.

In summary, there is a low-cost automobile about to unleash a major increase in oil demand while oil production is falling 7 times faster than oil demand. In the short term, this should drive the price of oil to at least \$75 per barrel by year end and to at least \$100 per barrel within 18 months. Thereafter, oil prices will continue to rise in triple-digits until alternative non-fossil fuels displace them at a significant level.

### THE SAUDI INFLUENCE

These prices are literally a certainty when one considers two key global supply and demand factors. On the supply side, there exists uncertainty in Saudi Arabia's published oil reserves. The last time Saudi

reserves were subjected to an independent audit was in 1978, the year before they took complete control of production from their western partners. At the time, their known reserves were 110 billion barrels. The very next year their stated reserves increased to 160 billion barrels and stayed flat for nine years. In 1988, they abruptly increased their reported reserves again, this time by over 100 billion to 263 billion barrels, the number they report today. It is peculiar that Saudi reserves have remained flat for the last 20 years, yet during this period, they have supplied the world with more than 50 billion barrels of oil. How can their reserve base have remained unchanged? Where did these 50 billion barrels come from? It is further disconcerting that in 1979, Oil Minister, Sheik Yamani apparently concerned that the west would have a clear picture of the declining condition and pumping rates of the Saudi fields, slammed the door shut on all further releases of oilfield data and any independent audits. It is no wonder that western oil analysts are nervous as to what the actual oil reserves are for Saudi Arabia and for each of the other OPEC countries. This issue is particularly critical today when production and demand have cast the world into a shadow of uncertainty with respect to its future energy supply<sup>8</sup>.

On the demand side, The Energy Information Administration (EIA) has projected that even with the current recessionary period, the demand for global oil will climb from last year's 85 MBD to 115 MBD by 2030. How is this possible, when most analysts are beginning to recognize that oil production may finally have reached its peak production? The fact is that this can not happen, and unless we implement a global strategy to conserve significant levels of oil and rapidly replace it with non-fossil alternatives, there will be a substantial increase in the price of oil, and much greater recessionary and inflationary pressure than we are currently experiencing.

What can we do to minimize the consequences of this scenario? There are a few things that can be done immediately:

1. Governments and industry leaders can educate the public as to the severity of the issues at hand and provide short and long-term plans that address the issues without disengaging from addressing the current global financial challenge. Properly done, these issues can be addressed in parallel.
2. Any energy efficiency strategy must encompass a cost on carbon. Although carbon-trading is favored by corporations and government officials,

**Figure 2: Increase in Global Oil Reserves by Decade<sup>(7)</sup>**

Year	Global Oil Reserves (Billions of Barrels)	Percent Increase
1981	700	-
1991	1000	43
2001	1030	3
2011	?	?

a carbon tax, though a political challenge would be much more effective and easier to manage.

3. Governments must not be short-sighted during this recessionary period and turn their backs on alternate energy projects, especially those which could have an impact within 2–3 years. This includes tax advantages and initial subsidies for fuel-efficient vehicles, such as hybrids, wind and solar energy systems, and commercial use of cellulosic bio-fuels.
4. The case for climate change continues to mount and therefore, any strategy for energy security must take this into account. One approach has been outlined in a prior issue in this series<sup>9</sup>.

A few courageous political and corporate leaders are all it will take.

**James A. Cusumano, PhD** ■

<sup>1</sup> Parts I and II of this series outline the Global Energy Security and Climate Change issues, respectively; Part III provides a summary of a workable solution; Part IV presents an analysis of nuclear power; Parts V and VI describes the role of vehicular transportation with a focus on hybrid, electric and fuel-cell cars; Part VII details the potential of wind power, and Part VIII treats the potential impact of solar energy. See [www.LeadersMagazine.Cz](http://www.LeadersMagazine.Cz), volumes 2, 3, 4, 5, 2008 and 1, 2, and 3, 2009.

<sup>2</sup> Mina Kimes, "Time to Bet on Oil Again," *Fortun*, April 27, 2009, pp. 23–25.

<sup>3</sup> Robert Czeschin, *Oil & Energy Investment Report – Newsletter*, March 30, 2009.

<sup>4</sup> *Ibid*

<sup>5</sup> Joe Wiesenthal, "Chavez Begs Western Oil Companies to Come Back" *Business Insider*, January 15, 2009, <http://www.businessinsider.com/2009/1/hugo-chavez-begs-western-oil-companies-to-come-back>.

<sup>6</sup> Robert Czeschin, *Op. cit.*

<sup>7</sup> Jerry Brown, Rinaldo Brutoco and James A. Cusumano, "Freedom From Mid-East Oil," *World Business Press*, 2007.

<sup>8</sup> James A. Cusumano, "A Workable Solution," *Prague Leaders Magazine*, volume IV, 2008.

<sup>9</sup> *Ibid*

<sup>10</sup> [http://paul.kedrosky.com/WindowsLiveWriter/NewOil-ShocksInevitable\\_E639/oil-shocks\\_2.png](http://paul.kedrosky.com/WindowsLiveWriter/NewOil-ShocksInevitable_E639/oil-shocks_2.png).

<sup>11</sup> [http://upload.wikimedia.org/wikipedia/commons/5/54/Tata\\_nano.jpg](http://upload.wikimedia.org/wikipedia/commons/5/54/Tata_nano.jpg).



**Figure 3: Tata's New NANO Car Sells for \$2,000<sup>(11)</sup>**

**About the Author:** James A. Cusumano is Chairman and owner of Chateau Mcely ([www.ChateauMcely.Com](http://www.ChateauMcely.Com)), chosen in 2007 by the European Union as the only "Green" 5-star luxury hotel in Central and Eastern Europe and in 2008 by the World Travel Awards as the Leading Green Hotel in the World. He is a former Research Director for Exxon, and subsequently founded two public companies in Silicon Valley, one in clean power generation, the other in pharmaceuticals manufacture via environmentally-benign, low-cost, catalytic technologies. While he was Chairman and CEO, the latter – Catalytica Pharmaceuticals, Inc. – grew in less than 5 years, to a \$1 billion enterprise with 2,000 employees. He is co-author of "Freedom from Mid-East Oil," recently released by World Business Academy Press ([www.WorldBusiness.Org](http://www.WorldBusiness.Org)) and can be reached at [Jim@ChateauMcely.Com](mailto:Jim@ChateauMcely.Com).

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