



## **You may be interested.**

**PIRINC has prepared the enclosed report, *Buy Insurance When It's Cheap: Add to the SPR Now.***

**The immediate oil market effects of the terrorist attacks of September 11<sup>th</sup> and the still-evolving US military and diplomatic response have strong implications for energy security policy. In particular, the sharp decline in oil prices since September 11<sup>th</sup> makes the most immediate action the government could take to enhance energy security much cheaper, namely; buying more crude oil for the SPR. The SPR is the nation's insurance policy against international supply disruption and the economic dislocation that would follow. In recent years, the tendency has been to let this coverage lapse.**

**Now, when oil prices are down and risks of disruption are growing, is the time to buy more insurance. A unique opportunity was missed in 1998-1999 when oil prices were at their lowest levels in decades. But then, the country was complacent about oil supply security. We ought not make that mistake again.**

**If you have any questions or comments, please call John Lichtblau, Larry Goldstein or Ron Gold.**

**October 2001**

---

**Petroleum Industry Research Foundation, Inc.**

3 Park Avenue • 26<sup>th</sup> Floor • New York, NY 10016-5989  
Tel.: (212) 686-6470 • Fax: (212) 686-6558



## Buy Insurance When It's Cheap: Add to the SPR Now

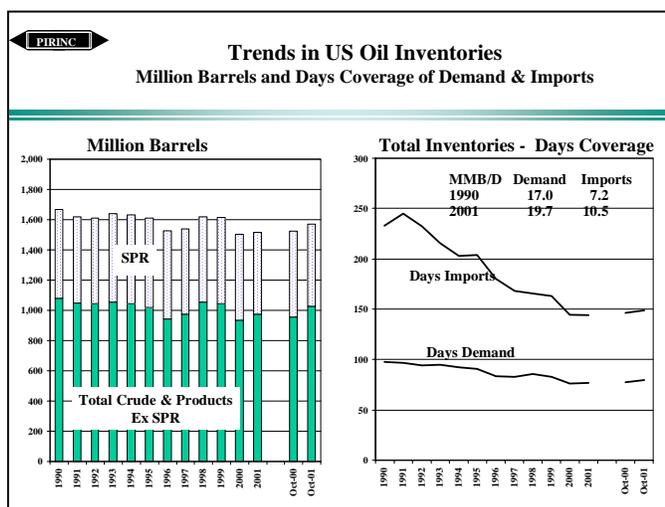
### Executive Summary

The immediate oil market effects of the terrorist attacks of September 11th and the still-evolving US military and diplomatic response have strong implications for energy security policy. In particular, the sharp decline in oil prices since September 11th makes the most immediate action the government could take to enhance energy security much cheaper, namely; buying more crude oil for the SPR. The SPR is the nation's insurance policy against international supply disruption and the economic dislocation that would follow. In recent years, the tendency has been to let this coverage lapse. The SPR was drawn down in the mid-90s as a deficit reduction measure. Last year, the fill from the royalty-in-kind program was suspended and in the autumn, in an attempt to hold down oil prices, the SPR was drawn down by 30 million barrels in an exchange for future repayment (plus a bonus). Earlier this year, the repayment schedule for most of the exchanged crude (plus a bonus) was extended through January 2003.

Now, when oil prices are down and the risks of disruption are growing, is the time to buy more insurance. A unique opportunity was missed in 1998-1999 when oil prices were at their lowest levels in decades. But then, the country was complacent about oil supply security. We ought not make that mistake again.

### Trends in Total US Oil Stocks

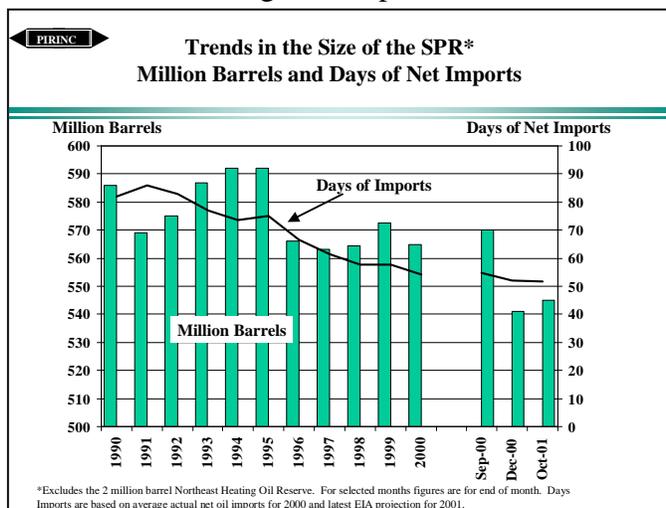
Since 1990, the SPR has accounted for about 35% of total US oil inventories. Both the SPR and private oil industry holdings are lower today than in the first half of the 1990s. Changes appear modest in absolute volumes but are substantial when measured against demand, and especially against imports. This chart summarizes the trends in total US oil inventories since 1990 in terms of volume and in terms of day's coverage of demand and net oil imports. Inventories are measured as annual or monthly averages (average of year to date for 2001). It should be kept in mind that inventory held by industry is primarily operational (in pipelines, at refineries, etc.) and therefore not available for discretionary use. The SPR, on the other hand, is entirely discretionary, and meant for emergency use.



On average, total inventories this year have averaged about 90 million barrels or about 6% below their average level over the 1990s and lower than any year shown except for 2000. The decline appears greater when measured against demand, and especially measured against imports, as shown in the right panel. Inventories have fallen from the equivalent of nearly 100 days of demand in the early 1990s to about 77, a decline of about 21%. Relative to net oil imports, coverage has fallen from about 235 days to about 145, a decline of nearly 40%. The steeper declines in days coverage of demand and net imports come about because demand this year is about 1.7 MMB/D, or 16% higher than in 1990 while net imports are up nearly 3.4 MMB/D or nearly 50%. The reduction has come both in the amount of oil held by industry and in oil held in the SPR. However, the motivations behind the reductions, and their consequences are very different.

The oil industry holds inventory to meet operational needs, and to a certain extent, in response to signals regarding future versus current prices. Holding inventories involves costs and, therefore, minimizing operational levels of inventories, has been a part of the ongoing restructuring of the industry in response to low profitability. In the first half of the 1990s, the return on investment for the US majors in domestic refining and marketing averaged about 2.5%.<sup>1</sup> Most of the reduction in industry inventories occurred in this period. In the second half of the 90s, the return on investment improved, although despite all the restructuring, still averaged only 7.5%. While industry returns improved, most of the gains from restructuring appear to have been passed on to consumers. Average reported marketing, energy, and other operating costs for the majors fell by about 90 cents/barrel between the two halves of the 1990s while net margins improved by a reported 38 cents/barrel. Gains for consumers from restructuring have not come without a cost. In particular, as has been demonstrated in recent years, a leaner industry offers less of a cushion against the unexpected and leaves more of the immediate adjustment to unanticipated events to consumers. The past two years have witnessed instances of unanticipated high levels of demand and temporary supply problems (including problems with natural gas that spilled over to oil markets) that in turn produced short-lived surges in prices that were reversed as more supply became available. In 2000 and the first half of 2001, refining and marketing returns rose sharply but have since fallen back as supply problems were resolved.

There are some risks however that are beyond the trade-off of lower average prices for somewhat higher price volatility.<sup>2</sup> These are the strategic risks of economic dislocation that can result from a curtailment of world crude supplies. We have seen these risks materialize three



<sup>1</sup> This and subsequent figures for the U.S. Majors come from detailed tables published for FRS companies.

<sup>2</sup> These risks can be insured against to a significant extent via the futures market.

times in the past 30 years (1973-74, 1979-80, and again in 1990-91) and, especially in the aftermath of September 11th, it would be foolhardy to minimize such risks today. Only government can be the insurer of last resort against such risks and does so through the SPR but in recent years, the amount of insurance available has fallen significantly. The chart above focuses on the volume of oil held in the SPR and days of import coverage provided.

Currently, the volume of oil in the SPR amounts to about 545 million barrels, about 47 million barrels below its peak levels in 1994-95. In terms of import coverage, the SPR volume amounts to just over 50 days of imports, down from a peak of nearly 90 in 1992.

There have been two significant drawdowns of SPR, each for questionable purposes. In the mid-1990s, the SPR was drawn down for budgetary reasons. While the savings were meant to help finance improvements in SPR operational capability, the net result was a slightly smaller Federal budget deficit and a significant loss of protection for the U.S. economy. In late September of last year, the Clinton Administration directed the Department of Energy to put 30 million barrels of oil via an “exchange” of current oil for future delivery during 2001 plus a bonus. While crude markets were tight and prices high, there were no international supply curtailments. World supplies were moving up. Indeed, the Clinton Administration action came only a few weeks after OPEC, at the urging of the U.S. and other consuming countries, had announced its agreement (the third so far that year) to raise production by 800 MB/D. A further, 500 MB/D increase in OPEC production was authorized in October under their price band mechanism. In November prices peaked and the issue for OPEC began to shift toward risks of potential oversupply. In March 2001, the repayment terms of the exchange were renegotiated, postponing over two-thirds of the repayment to 2002 and early 2003.

### **What next?**

Repayment of exchanged oil will itself raise the amount of oil in the SPR. About 1 million barrels are due to be returned by the end of the year. Over the course of 2002 through January 2003, about another 33 million barrels will be returned to the SPR under the latest exchange terms. In addition, collection of previously suspended royalty in kind oil has been resumed with approximately 17 million barrels of oil to be delivered, most of it over the course of next year. Together, these volumes would bring the SPR back to about its level in 1994-95. At that time the SPR covered about 75 days of net imports. The same volume today covers about 55 days. Moreover, the replenishment is at a modest rate, only at about an average of 150 MB/D through early 2003.

Resuming the royalty in kind program has been proposed as a means of adding further to the SPR but the program could not start until next year and the fill rate, about 100-125 MB/D, is tied to levels of oil production from Federal waters. Early significant gains in volume can be achieved only if the government goes into the market and buys it. The timing for doing so is good. As noted in the next chart, in 2000 and through early September of this year, crude prices were relatively high compared to their averages over the 90s and adding further demands on the market at such a time did not seem reasonable. But since September 11th, oil prices have moved



down to about their average since 1990. While oil prices have weakened, security concerns have intensified, with both factors supporting buying now.

In 1998, when oil was selling at its lowest levels in nearly 30 years, some argued against buying oil for the SPR on the grounds that it would prop up the OPEC producers (others favored buying as a means of assisting domestic producers). In the end, no purchases were made and OPEC, in the face of financial disaster, began a series of successful efforts to push

prices up. It is certainly true that entry of the SPR into the market would add certain strength to the market and perhaps make it easier for OPEC to sustain its price objectives. But OPEC may act to strengthen markets in any case and right now, the priority should be to enhance our energy security by raising the amount of oil in place in the U.S. Moreover, with oil markets weak and OPEC spare producing capacity at 4.5-5 MMB/D, the immediate market impact of SPR purchases would be measured in nickels and dimes, not dollars.

