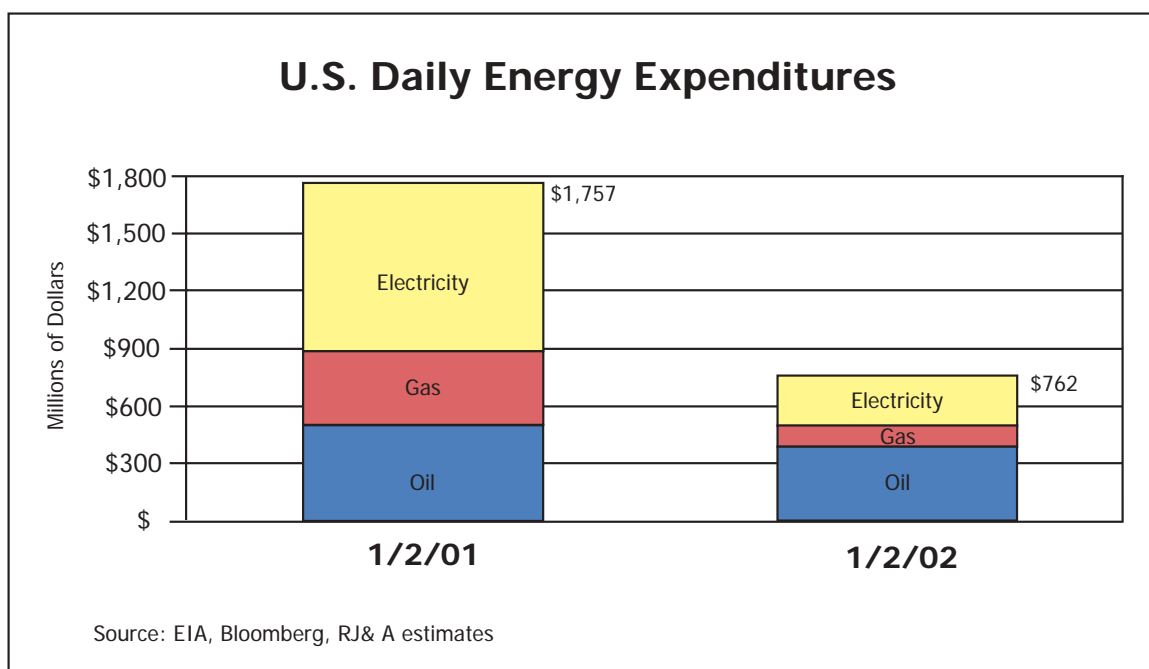


THE ENERGY SECTOR vs. THE REST OF THE ECONOMY

When will the U.S./world economy bottom and begin its recovery? Whatever date or quarter you select for the beginning of the recovery will signal the point in time when the general population will be forced to once again address the need for energy conservation and alternative fuels, and the impact of inadequate long term supplies of both crude oil and natural gas, and their effect on a recovering economy.

“ENERGY STIMULUS PACKAGE”

First, what a difference a year like 2001 makes, as we all now look for an economic upturn. The substantial reduction in the cost of energy is having a very positive effect on the economy and helps expedite the recovery. A recent research piece from Raymond James & Associates concluded that the **PEAK** (January 2001) to **TROUGH** (January 2002) cost of energy was saving the United States economy \$1 billion per day.



High energy prices can be compared to a tax on the economy; conversly reduction of energy costs serves as a stimulus for the rest of the economy.

Provided their methodology is correct (or even close), the “energy savings” is a more significant stimulus to the economy than all of the government policy actions added together. The \$60 billion tax cut last year amounts to about \$165 million per day of stimulus. The impact of lower interest rates, including refinancing of home mortgages, suggests estimates approximating a \$45 billion stimulus during 2001, or \$125 million per day. Combining the government's efforts to stimulate the economy, you achieve maybe \$300 million per day, or less than one-third of the stimulus provided by the current lower energy prices.

The irony of this energy stimulus effect is that in a supply constrained environment it sows the seeds of its own reversal. A rebounding economy needs more oil and gas for industrial production and electricity generation. This incremental demand will turn inventories back down and drag prices back up into the \$22 to \$28/barrel oil and \$3.00 to \$4.00/MCF gas ranges we see as the longer term equilibrium levels.

Our writings from 1999 through 2001 focused primarily on supply issues for both oil and natural gas, as we remain convinced that the great energy cycles (1970-1981, for example) in which prices step up incrementally, are driven by supply factors. These cycles, which we call *Tides*, are the product of wide swings in upstream E&P spending, which ebbs and flows over roughly 25 years, peak to peak, as compared to the almost straight-line growth in demand that tracks along at about 2%±. This paper is focused on the next 18 to 24 months and the interplay of those secular forces with the macroeconomic spasm induced by the IT bust and effects of September 11.

DEMAND

We consider it a testament to the power of energy demand growth that in the midst of the first synchronous world recession since '74/'75, with jet fuel usage sharply contracted, the demand for oil will still be flat to up slightly year over year. Growth is predicted to gradually reaccelerate in 2002, as soon as the world's economy begins to recover. Looking at the last 30 years of oil demand growth variation, we would bet that by the end of 2003 we will be pushing that 2% trend again.

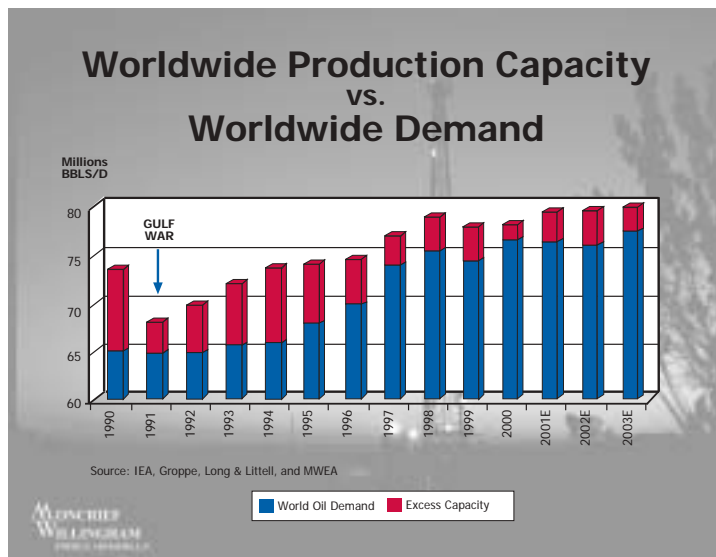
The suppression of demand growth in 2001 has provided a breather in the march toward tight supply/demand conditions. In late 2000, with OPEC basically at full output, the system was so tight that oil prices spiked to the mid \$30's. The new year brought more stable Iraqi production at full output, minimal growth in demand (partly a function of those high prices), and a burst of supply as newly privatized Russian companies got serious about rehabilitating old Soviet fields. Suddenly there was "enough" oil, inventories returned to about normal, and prices began coming down.

INVENTORIES

Our previous Updates have described how the trans-Atlantic shift in inventory has given an exaggerated sense of excess, because most of the total Atlantic basin increase ended up in the very visible U.S. totals reported by the A.P.I. and the D.O.E. So far during this heating season, inventory drawdowns appear normal, with inventories remaining very tight in Europe. There is not "too much" oil, and we still find that total world stocks of oil are not excessive, so we return to supply and demand. The final phase of Russian field rehab, the ramp-up of nitrogen injection at Canterell (Mexico), and a couple of other projects will boost non-OPEC production capacity several hundred thousand barrels per day (B/D) in 2002. OPEC, which has done a surprisingly good job of curtailing production during the recession, has approximately 3 to 4 million B/D that are shut in (with the latest cuts), so, between the two, oil markets should be reasonably well supplied for the immediate future. Our forecast is that as demand reaccelerates, prices will return to OPEC's target in the mid \$20's/barrel and stay there. As long as the cartel accurately assesses demand and resumes production in a timely fashion, we should safely get well into 2003 before inadequate long-term supply growth (our *Tide* thesis) becomes a problem again.

SPARE PRODUCTION CAPACITY

Worldwide demand, on its 2% annual demand growth trend, exceeded 60 million BBLs/D in 1986, rising to approximately 76 million BBLs/D in 2001. The following chart is scaled to emphasize spare worldwide production capacity to demonstrate more clearly how the *Waves* (short term, 2 to 4 year swings) have left the world with successively lower Trough levels of Spare Capacity (1991, 2000), and, similarly, lower Peak levels with each wave (1990, 1994, 2002). These conditions define the start

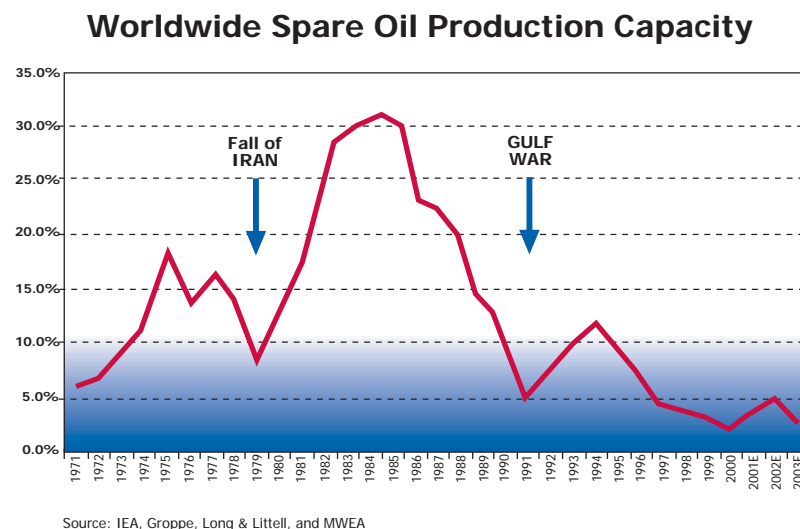


SPARE CAPACITY - Continues to get squeezed with each successive Wave.

actively deploying capital in the energy sector to generate supply for the years after 2002. With a return to 2% demand growth, supply/demand tightens very quickly in a world where drilling is still at very low levels relative to the last 20 years. The current condition should provide a superb window of 18 to 24 months to achieve a core invested position in energy without the disruptive impact of chaotic price spikes, such as in late 2000.

of a new incoming *Tide*. The chart also captures the aspect of the current situation (the near term rebuilding of spare capacity) that has been the primary focus of most investors. During 2001, the pressure on oil prices abated as spare capacity moved back toward 5% from the extreme tightness of late 2000. With 2002 looking much the same, concern about supply disruption or "too little" supply has been replaced by thoughts of price wars. Note, however, how a very temporary geopolitical supply disruption in '91, when we had over 10% spare capacity, tightened the system dramatically. Prices spiked to \$40/barrel then. Our belief is that we should be

This chart brings the big picture supply question back into focus by presenting the spare capacity back to the beginning of the last *Tide* in 1970. The 2001/2002 easing shows up, but it is a molehill in the greater scheme of oil cycles. Short-term inventory swings (the API'S) are not the issue for energy investors – long-term supply adequacy is! (Note: For those interested in a deeper look into the challenge of growing supply, we would strongly recommend reading the very enjoyable Hubbert's Peak ©2001 by Princeton geology professor Kenneth S. Deffeyes.) The chart also points out how much more spare capacity existed when the 1991 disruption occurred, which emphasizes our vulnerability currently.



OPEC exercises varying degrees of pricing control as spare capacity tightens, notwithstanding geopolitical events such as the fall of Iran and the Gulf War.

NATURAL GAS

We also think 2002 is likely to be a much more stable year for natural gas (compared to the \$10/MCF to \$2/MCF gyration of 2001) with weather a wild card. Currently, as a result of extremely mild early winter weather, there are large storage inventories. We expect no violent price spikes, with even very cold periods, because of this inventory. This is the opposite of late 2000, when very low inventories and early extreme cold meant that prices had to rise high enough to eliminate a great deal of industrial demand to rebalance supply/demand. Winter may or may not end up being normal, and summer AC demand the same, but it is not the investment issue. In the third quarter we reported that U.S. production had started to fall due in large part to over a 20% reduction in North American rig count year to year. First pass at the fourth quarter, through both company reports and state reporting agencies, points to a quarter-to-quarter decline over 2%. That starts to look like 8% to 10% year-over-year declines in gas production. For example Exxon Mobil is down 6% year to year, Burlington Resources is down 8% year to year, and Amerada Hess fell 6% sequentially in the fourth quarter alone! The cumulative result, ± 5 BCF/D less supply by late 2002, is about the same amount as the decline in demand in 2001 from mild weather and less industrial usage. In other words, in 12 to 18 months, or so, the system will begin to tighten up again, regardless of weather or economic recovery.

We conclude that we have a temporary respite (12-24 months), but the problem outlined in our *Tide* pieces still exists – the sector needs more capital. The year 2002 is probably a period of relative calm, unless the weather is weird or we have a supply disruption in the Middle East. However, the end of the year looks a lot like the end of 1999. Gas inventories will have rebalanced, however, at a level of production considerably lower than ongoing demand. Oil demand will be moving back toward trend line growth, which leaves precious little slack. This respite period provides a chance to start ramping up capital deployment in the energy sector while there is the opportunity to acquire assets at reasonable prices. The trigger is recovery in economic activity which brings demand back to trend growth. That recovery, which many will use as a signal for another try at T/N/T, will set the stage for the next upwave on the new incoming energy *Tide*.

Moncrief Willingham Energy Advisers, L.P.

1100 Louisiana, Suite 4848

Houston, Texas 77002

Tel: (713) 658-9900

Fax: (713) 654-0015

<http://www.energyadvisers.com>

Lee P. Moncrief
General Partner

B.J. Willingham, CFA
General Partner

George W. Matcek
Senior Associate

The opinions, estimates, and projections contained herein are those of Moncrief Willingham Energy Advisers, L.P. ("MWEA") as of the date hereof and are subject to change without notice. MWEA makes every effort to ensure that the contents herein have been compiled or derived from sources believed to be reliable and contain information and opinions which are accurate and complete. However, MWEA makes no representation or warranty, express or implied, in respect thereof, takes no responsibility for any errors and omissions which may be contained herein and accepts no liability whatsoever for any loss (however arising and whether direct or consequential) arising from any use or reliance on this report or its contents. Information may be available to MWEA which is not reflected herein. This report is not to be construed as an offer to sell or solicitation for or an offer to buy any securities. MWEA, its affiliates and/or their respective officers, directors, or employees may from time to time acquire, hold, or sell securities mentioned herein as principal or agent. MWEA may have an investment banking relationship with certain of the corporations or issuers mentioned herein and may receive remuneration for same.