

## **Connect Higher Fuel Taxes to Energy Security**

Stephen V. Arbogast, Executive Professor of Finance  
C.T. Bauer College of Business, University of Houston

The current debate on national energy security is politically stalemated. One camp wants to maximize conservation and move away from burning fossil fuels. Its proponents deride efforts to increase conventional oil/gas production and consider 'energy independence' a chimera. The second camp wants to maximize conventional production in safe locations; it considers 'energy independence' a national economic and foreign policy imperative.

In fact, this debate rests upon the false hope that a 'one-sided' solution can fix America's exposure. Any effective national energy policy will have to combine elements from both camps. Relying on only one approach involves too little new energy, overly painful adjustment costs, or both.

This polarized discussion has obscured important points which indicate that a much improved situation is obtainable sooner than people believe. For example, couching the debate in terms of 'energy independence' obscures the fact that security based upon enhanced diversification of imported supplies is both more feasible and a quicker path to adequate security.

All through the late 1980's and the 1990's, America relied upon growing imported energy supplies; yet, energy security was a non-issue because a) substantial new supplies were coming on stream from non-OPEC sources and b) as a result, OPEC had substantial spare capacity. The cartel found it difficult to share this surplus capacity within the group. Cheating versus assigned quotas was common and eventually open competition broke out among cartel members. The results: any temporary outage or political disruption was readily offset from the available spare, and consumers enjoyed bargaining power in world energy markets.

Recreating this set of circumstances should be the immediate objective of energy security policy. In concrete terms, this means adding about 3-4 MB/d of spare capacity to the global petroleum supply chain. Accomplish this and the terrorists' raids in the Niger delta or Hugo Chavez latest retroactive tax scheme not only will not threaten energy consumers, they will probably disappear as tactics.

The devil in the details here is that recreating this amount of spare capacity via production increases looks difficult. The last generation of 'safe' oil/gas projects, North Sea, North Slope Alaska, and Mexico are all now well into decline. Just replacing their diminishing output from new, safe sources has proved challenging. Meanwhile, once-exuberant hopes for Russia, the Caspian, and Iraq have been dented by disappointing political or geological outcomes. On the demand side, higher prices have, for the moment, merely blunted the explosive growth momentum of a world economy almost all parts of which are expanding. Few are confident that current price levels will constrain demand growth unless/until world economies tip into recession.

Thus, there are difficulties to surmount on both sides of the energy supply/demand equation. This fact underscores the difficulties of employing only 'one-sided' solutions. Clearly, more corrective medicine is needed; here is where policies that work on both sides of the energy equation are required.

Successful design of more ‘two sided’ policies can be guided by two insights into our current predicament: 1) that fears about a future ‘oil price collapse’ (a la 1986) are constraining an all-out response by private energy companies to present supply tightness; and 2) that OPEC’s key swing producers doubt the determination of the US to impose adjustment costs on its consumers. Said differently, US private sector response is impeded by memories of the last price collapse. Meanwhile, an OPEC confident that the US lacks policy discipline has raised its sustainable target price from ~\$40/b to ~\$60/b. OPEC increasingly believes the cartel can calibrate its capacity to keep prices at the higher level without incurring a massive entry of new non-OPEC supplies.

This calculus must be upset. The way to do it is to link policies signaling determination to restrain demand growth with measures that provide a stable price outlook for new energy development.

There is no better place to start than with a revaluation of the federal fuel sales taxes. At present, these amount to \$0.18/gal. for gasoline and \$0.24/gal. for diesel. Both taxes were last adjusted in 1993. Over the intervening 13 years, they have lost ~20% of their value to inflation. Is it any wonder that OPEC ministers take quiet satisfaction in America’s lack of policy discipline?

Immediately restoring the purchasing power of federal fuel taxes and then scheduling future real increases would send a powerful signal confounding to OPEC’s planning assumptions. This course requires immediately instituting about a nickel/gallon tax increase. In the context of pump prices which climbed by over \$1/gallon during 2005, a \$0.05-.06/gallon tax increase in 2006 should be politically digestible. Public opinion data has shown increasing support for paying higher energy prices, so long as consumers could see a bonified link to energy security. This corrective move should also be combined with an adjustment mechanism to prevent future inflationary erosion. Starting from current level, this would involve annual increases of less than one cent per gallon

However, for the tax increases to restrain demand they are going to have to ‘bite’ more than is implied by simply correcting the past. This means a third element, a schedule of ‘real’ fuel tax increases, needs to be included. To modify consumer behavior without unnecessary dislocations, these real increases will have to be phased in. The exact mechanism for accomplishing this will be the subject of a subsequent commentary.

What then to do with this new stream of cash flowing to the federal government? This question is critical to the political acceptability of ‘real’ fuel tax increases – for consumers will only support steadily rising taxes if they feel the money is being well spent on the intended goal – enhanced energy security.

The answer to this question lies in an understanding of the pricing dilemma bedeviling new ‘safe’ supply development. The private sector can be counted on to develop all of the ‘safe area’ conventional resources that are judged economic to produce. Current levels of natural gas drilling, Canadian tar sands development and LNG terminal construction illustrate the point. The ‘price stability’ problem applies to the next increment of ‘safe’ energy supplies. Take the prospects for ‘clean’ coal gasification into liquid fuels as one illustration. Both the technology and the resources are readily available to the US (and to other heavy consumers like China and India). However, the plants are very capital intensive; roughly \$2 billion must be invested to develop a facility that

produces 15 kbd of quality fuel products. While such a facility can later be tripled in size, the initial price 'sticker'/volume output ratio is a huge barrier. Current estimates see crude oil prices of \$30-35/b as needing to be sustained over 15-20 years to 'payout' an adequate return on such an investment. Therein lays the rub. Few prudent energy CEO's want to bet \$2 billion on such a long term price outlook, especially when the initial gain in production is relatively small.

Pricing 'floors' are thus needed to support the commercialization of projects like coal gasification. There is a strong economic case for the Federal Government to be the provider of such 'price floor insurance'. The need for such floors relates to the mitigation of national risks, i.e. those related to physical disruption of energy supplies, sudden pricing spikes and the hostaging of foreign policy to not to offending any 'producer government'. It makes sense for the US Federal government to target the cost of energy supply insurance on users, thereby also spreading the cost over the widest possible pool, i.e. country-wide motor fuel users. It makes even more sense to channel the proceeds from such tax into an efficient promotion of 'safe fuel' production which will reduce the need for such insurance down the road.

The 'charms' of such a two-side policy are many. Gradually rising fuel taxes not only signal consumers to plan around higher fuel costs, but also can provide dedicated funding for the 'price floor insurance' needed to commercialize the next generation of 'safe' energy sources. Many private companies are leery of projects whose economics rest upon government support. The recent experience with MTBE will only reinforce this caution. However, the linking of a Federal insurance program with a dedicated funding source provides more assurance that the government's policy will last as long as the projects it is intended to support.

The Federal Government has ample experience with insurance/guarantee schemes. These already exist, for example, in cases like the Export-Import Bank. Price floor insurance could be purchased by either the project developer or by a customer who has conceded such a term in its purchase contract and is looking to reinsure the risk. Either way, the effect will be to build a floor that mitigates the 'bust' potential in the fuel price cycle. This should unlock a pent-up mass of domestic energy projects, especially on the part of major oil/gas firms eager to show foreign governments that they have alternatives to their current (punitive) fiscal terms.

Once the US has brought into being a viable model for commercializing new safe energy, it is likely that the model can be adopted and adapted by consumers such as India and China. In doing so, those countries would avail themselves of international financing sources already well-versed in the workings of the US model. In this way, America's 'two sided' approach could spread into the biggest sources of global energy demand growth.

The most important thing is to establish new facts that signal clearly America's determination to go down this road. America's ability to optimize and expand once it breaks out of its policy paralysis is well understood. We can hardly get started down this road too soon.