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Replacing Myth with Reality: Oil and Gas Prices, Consumption, Production Issues and How to Discuss Them Effectively with Facts

It can be argued that part of our responsibility as industry professionals is public outreach. Within the next 30 years, tightness in the oil and gas supply and issues of global warming will bring energy policy to the political forefront, if, indeed it is not already there. As a nation, the U.S. is going to have to make some hard choices. An informed public will be the oil and gas industry's best ally in securing a sustainable energy future for all.

Who knows the facts better than we do? During the U.S. energy crises of the 1970's, half the U.S. public was unaware of the country's reliance on oil imports. Today, the world is increasingly reliant on oil and gas from three areas: Russia, West Africa, and the Arabian Gulf States. Only a little more than a third of U.S. secondary school students can correctly identify that renewable energy resources, including hydropower, account for less than 10% of total U.S. energy consumption. Only about half of these students can correctly identify coal as the source of more than half of electric power generation in this country— instead of hydropower, wind or nuclear fission. The U.S. consumes 65% more energy than the next most energy-hungry country, China, whose population is about 4-1/2 times ours. Yet our educational systems evidently have not put a premium on energy literacy. Arming ourselves with a few facts can help us to dispel energy myths.

Myths are rampant. There is the myth that the current oil price is the result of a conscious choice by the industry not to invest sufficiently to meet the growing needs of the world market. Yet worldwide, the top 50 private upstream companies invested over \$550 billion in exploration, development and production between 2000 and 2004. '05 is likely to have seen that total increase by another \$100 billion. There is the related myth that somehow the industry is pocketing huge windfalls of revenue. That idea is based on a very basic misunderstanding of what happens to profits in a capitalist system. In 2005, BP generated \$26.7 billion of operating cash flow last year. We will reinvest \$13.9 billion. The remainder is returned to the shareholder through dividends and buybacks. Last year we returned a total of \$19.2 billion. Who are the shareholders? A large number are pensioners and people saving for their pension. Without the dividends and buybacks that BP and Shell have made in the last 3 years, UK pension funds alone would be \$32.9 billion dollars poorer than they are now. Closer to home, roughly 41% of ExxonMobil stock is owned by retirement funds; private, public (federal, state and local) and individual retirement accounts.

There is the myth that oil and gas are running out, and that renewables will save us. True, oil and gas are getting harder to find. Yet-to-find resources will be deeper, hotter and harder to image than what has been discovered to date, and more remote from markets. Existing conventional resources are concentrated in a small number of places, many of which are not on good political terms with the United States. Yet all credible projections of worldwide energy demand show oil and natural gas as the main

commercial energy sources through the next several decades, with gas actually overtaking coal as the second most important commercial energy source behind oil in about 2015. Not only is renewable energy, excluding hydropower, less than 5% of primary energy consumed in 2030 in the EIA and AEI reference scenarios, a significant fraction of so-called renewable energy may not be renewable at all. For example, recent studies by Cornell and UC Berkeley scientists suggest that, in terms of energy output compared with energy input for ethanol production, corn, the most efficient source studied, requires 29 percent more fossil energy than the fuel produced. Making biodiesel from the crops studied is similarly energy inefficient.

There is the myth that the industry doesn't care about the environment. Perhaps that once was the reality, but today's reality is different. The industry has responded to the challenge of air quality and the effect of increased vehicle use. Almost without exception it has begun to respond to the challenge of climate change and global warming, reducing our own emissions and helping our customers to do the same. Yet while slightly more than half of US high school students know that global climate change focuses on increases in carbon dioxide, as recently as a couple of years ago only ¼ of high-school students could identify hydrogen and carbon as the two elements present in all fossil fuels. Far fewer could then reckon that gas:oil:coal relative pounds of CO₂ emissions per BTU generated are roughly 5:7:9, i.e., burning oil emits 40% more CO₂ to generate the equivalent amount of energy, while burning coal – without benefit of clean coal capture technologies – emits almost 80% more. Without such a rudimentary knowledge, how can the public make informed choices when offered alternatives?

Where can we get more facts or materials? Google is great, but always seek primary, or at least authoritative, sources. Check facts carefully so as to have confidence in them. Many professional societies have educational materials on their websites that are accessible to anyone, not just members. The American Association of Petroleum Geologists has a slide bank of presentation materials at http://www.aapg.org/slide_bank. So does the Society of Petroleum Engineers, at www.SPE.org/web/energied/. Each SPE Section also has a Public Energy Education Coordinator, a person who can provide tips on preparing an effective presentation. An excellent reference on historical energy consumption and supply is the BP Statistical Review of World Energy, available at www.bp.com/centres/energy. The International Energy Agency, <http://www.iea.org> and the US Dept of Energy's Energy Information Administration (EIA), www.eia.doe.gov, publish production and consumption data, and their Outlook reports now forecast future trends to 2030.

EIA also produces a primer on gasoline prices http://www.eia.doe.gov/neic/brochure/oil_gas/primer/primer.htm. This is particularly useful because, when people in the U.S. want to talk about prices, they generally mean gasoline prices. In the U.S., there are approximately 780 vehicles/1000 persons, vs 150 in Mexico and 20 in Angola, and a very low percentage of the U.S. GDP comes from hydrocarbon production. Thus, there is a high sensitivity to the perceived cost of gasoline without seeing job creation directly tied to oil and gas E&P. Never mind that the 2nd highest U.S. Treasury revenue source is lease sales and royalties from oil and gas

properties. If heating oil is your audience's issue, API http://www.factsonfuel.org/heating_oil/index.html and EIA can offer information. Finally and most importantly, we can draw on own experience. Each of us knows how hard our company or organization works to drive out waste, operate efficiently and effectively, and do the right thing for its employees and its customers.

In the United States, the oil industry is not well trusted. Only 3% of adults responded affirmatively when asked by Harris pollsters in October 2005, "Which of these industries do you think are generally honest and trustworthy – so that you normally believe a statement by a company in that industry?" This response rate ranks the industry in last place, slightly below tobacco companies and managed health care companies. Professional societies such as SPE, and trade groups such as COGA are unlikely to be effective in informing the general public as they will be seen by those outside of the oil and gas industry as apologists for it. However, each of us has personal credibility in our community, and we can invest some of this to tell our story. To inform others in a credible way, we have to believe the message we deliver at a visceral level. And even if we are not confident public speakers, having a few facts to hand, and our own personal experiences of the industry, we can dispel energy myths when we overhear them in conversation, and ensure our family and our friends are knowledgeable about energy forms, sources, uses and issues.

Who knows our audiences better than we do? No one. Understanding key stakeholders and personalizing the message for them is important. Effective communication requires knowing what the audience wants to hear, how and when they want to hear it, and why they want to hear it.

Choosing the right subject matter and having the relevant facts is not enough. It takes more than data to dispel myths. We persuade by reason but motivate through emotion. People are motivated by people, not things, so it follows that individual persons like you and I are the ones who can enhance the reputation of the industry and attract the next generation of talent.