

Mike Lorusso, Group Head
CIT Energy

2012 U.S. Energy Sector Overview

“The discovery of shale gas and the new drilling technologies available to economically access the gas has had a tremendous impact on the U.S. energy industry.”

“The primary drivers for clean energy are advances in technology, the economics of these technologies and the public’s interest in environmental issues.”

Q: What impact have new energy discoveries in the U.S. had on the industry?

A: The discovery of shale gas and the new drilling technologies available to economically access the gas has had a tremendous impact on the U.S. energy industry. The abundant gas reserves have contributed to low natural gas prices in the U.S. which, in turn, have also contributed to low electric power prices, where gas is often the price-setting fuel. The availability of gas reserves in combination with its clean fuel characteristics have also contributed to a shift towards natural gas as the fuel of choice for new power generation plants and possibly certain applications as a fuel for commercial transportation fleets. Finally, new drilling technologies developed for gas are being applied to U.S. land-based oil exploration, thus increasing our domestic oil production.

Q: What are some of the key drivers for clean technology?

A: The primary drivers for clean energy are advances in technology, the economics of these technologies versus competing conventional sources, and the public’s interest in environmental issues. There continue to be advances in the efficiency of clean technologies for wind and solar, but these are not sufficient to make them viable alternatives to replace conventional technologies. Although the cost for these technologies continues to improve, it’s still high in comparison to conventional energy sources especially with low natural gas prices. Thus, clean technologies remain an inefficient and expensive alternative to conventional technologies. As a result, there will continue to be a need for some form of economic subsidy to encourage investment and development of clean technologies. These subsidies can come in the form of tax incentives from the government as we currently have in the U.S. or above market prices that get passed on to consumers. Therefore, the continued development and advances in clean technologies will require significant public willingness to either accept government subsidies or pay higher prices for the use of clean technologies.

Q: Shale oil and gas have now started to take a more prominent position among deals in the oil and gas industry. How are companies monetizing shale resources?

A: It is ironic that shale gas gets most of the attention as a boom industry when the majority of money is actually being made in oil production. This is due to the relative low price of natural gas in the U.S. while oil prices have settled into a high range. The drilling technologies developed for shale gas have also expanded the ability to produce oil from previously inaccessible reserves. Shale oil is not as predominant as shale gas, but the relatively high price of oil compared to gas has incentivized producers to use the new drilling technologies to economically drill for oil from both conventional and shale reserves.

“The industry’s primary issues with fracking are public perception and logistics.”

“Natural gas is becoming the fuel of choice for new power plants and possibly as a commercial fleet fuel in certain selective applications.”

Q: How has the private equity community reacted to the recent uptick in oil prices? Are there projects that have found more favor with private equity companies?

A: It’s important to note that oil prices experienced an unprecedented increase and collapse, along with the global economic cycle. However, oil prices have rebounded well. Additionally, surging oil prices following recent developments in the Middle East, combined with improved drilling technologies, have encouraged investment from private equity firms. There have been a variety of ways that these companies have invested in the industry. They have invested directly by purchasing oil and gas exploration and production companies and thus benefit from producing the actual commodity. In some instances, they bought mineral rights for properties and then take royalty payments from other companies who will produce the oil from those properties. They have also been quite active with indirect investments by acquiring companies that provide the support services to the industry, such as drill rig companies, hydraulic fracturing-related companies, equipment manufacturers, etc.

Q: What should the industry be doing regarding fracturing? What are some of the business problems facing companies involved with fracturing?

A: First to briefly explain, hydraulic fracturing, or fracking, is a drilling technique in which sand, along with other material and fluids, is pumped deeply into an oil and gas reservoir under high pressure to create fractures in the shale rock that allows the oil and gas resource to flow more freely through the rock and to the well. This has allowed the industry to access previously inaccessible reserves. The industry’s primary issues with fracking are public perception and logistics. The public perception is centered on the environmental concerns with fracking. There has been some confusion, conflicting facts, and lack of transparency that have contributed to environmental concerns. To address these, the industry must take time and have patience to educate the public and be more transparent in explaining and demonstrating the safety of the methods and techniques used. The logistical issues stem from the explosive recent growth in fracking and the difficulty drilling companies are having to obtain materials, equipment, and trained personnel to keep pace with their business activities.

Q: What’s your outlook for natural gas? What impact, if any, will imported liquefied natural gas (“LNG”) have on natural gas prices?

A: The outlook for natural gas is very positive due to its abundant domestic supply, relatively clean characteristics, and low cost. For these reasons, natural gas is becoming the fuel of choice for new power plants and possibly as a commercial fleet fuel in certain selective applications. Due to the difficulty and expense to liquefy natural gas for tankership transportation, it does not trade as a global commodity, like oil. Thus, its price is more a function of U.S. domestic production and use. Current prices have been in the low \$3 range (per MMBTU as a standard measure) and the forward price expectations are for a modest increase over the next two years. Imports of LNG in the U.S. have decreased dramatically due to the low domestic price compared to prices in Europe and Asia. There has even been some effort to convert import terminals to export terminals to take advantage of the abundant U.S. supply and price difference. However, this would be an expensive and unpopular capital investment since it would be contrary to our objective for energy independence. Thus the market is very bullish on U.S. natural gas with little concern of LNG imports.

“I believe our objective is to lessen our energy dependence outside of North America, but realistically not achieve complete independence since our vast energy needs simply outstrip our ability to adequately supply from our resources.”

“Innovation and advances in technologies should allow us to continue to improve our ability to efficiently and effectively take advantage of our resources in the long-term.”

Q: How feasible is it that the United States will ever achieve energy independence, or something very close to it?

A: The U.S. has been improving on our ability to supply our own energy needs and we will continue to do so. This has been achieved through a combination of sources, such as increased production of oil and gas from conventional and shale resources, imports of oil through pipelines from Canada to take advantage of Canada’s abundant oil sand resources, growth in renewable energy sources, and energy efficiency programs that reduce consumption. I believe our objective is to lessen our energy dependence outside of North America, but realistically not achieve complete independence since our vast energy needs simply outstrip our ability to adequately supply from our resources.

Q: What are some of the biggest concerns facing the energy industry, short- and long-term?

A: The major issues facing the energy industry have been the confluence of opposing forces, including:

- The constant growth in energy consumption;
- The desire for energy independence;
- Environmental and safety concerns; and
- Pricing

The “Holy Grail” would be to solve all of these issues with a clean, cheap, and reliable domestic energy supply. However, that is not practical, so the industry is constantly struggling to address each issue individually while not negatively affecting the others. In the near term, we will expand our use of natural gas, which is a reasonably clean fuel, and currently the most abundant and cheapest energy source available. In the medium term, I would expect advances in clean energy technologies such as renewable energy use, cleaner ways to use fossil fuels, energy management, and the acceptance of nuclear power will all contribute to a balanced and responsible energy use. Finally, in the long term I wouldn’t rule out innovation for a new abundant and clean energy source.

Q: What’s the controversy surrounding the Keystone XL Pipeline?

A: This is a very complex and controversial matter. First, let’s explain the facts; the Keystone XL pipeline is sponsored by TransCanada Corporation, and will physically run from western Canada to Cushing, Oklahoma (site of a major mid-continent oil hub) and continue down to the gulf coast in Texas. The primary purpose of the pipeline is to allow Canada to transport oil from its oil sand regions to the U.S. markets. It will additionally serve the purpose of allowing “shut-in” U.S. oil reserves in the mid-continent to reach the market more economically.

The controversies stem from various interest groups and their perspectives. Support comes from factions including Canadian oil companies and certain U.S. oil companies who could gain access to U.S. markets, U.S. pipeline companies who would benefit from additional volumes, U.S. refiners and terminals who would also benefit, and union groups advocating the 20,000 jobs that would be created. Opposition comes from groups, especially environmentalists, who are concerned that the pipeline would harm the environment from potential spills and disruption of the ecosystems on the land it will cross. These groups also believe that it will further our dependence on dirty fossil fuels and that the production of oil from oil sands is an energy intensive and environmentally unfriendly process. There is also opposition from certain Native American tribes whose land the pipeline will cross. Even some Canadians oppose it, since it will

“Energy consumption is fairly constant and there is a continuing need to meet that demand so notwithstanding a disruptive event, we see a continuation of most of the activity experienced during 2011.”

benefit the U.S. with more jobs than Canada. There have been so many disputes on approvals and appeals that a ruling will be required by President Obama to either grant or deny permission to construct the pipeline. It basically comes down to a matter of pro-energy advocates versus environmentalists.

Q: What are some of the trends you expect to see in 2012?

A: It is always difficult, if not dangerous, to predict trends. What we try to do is analyze the recent business activity we experienced in 2011 and extrapolate what has momentum to carry through in 2012. For the gas industry, we know the shale reserves will continue to see activity in U.S. gas and oil exploration and production. This will result in the continued need for the support services for this industry such as rigs, equipment, and materials and the potential for fracturing to become more widely utilized. In the power sector, we see a shift towards natural gas as the fuel of choice. This is creating value in existing gas power plants and a movement towards construction of new facilities. In the renewable power sector, the expiration of government subsidies will reduce the ability for deals to be economically feasible unless consumers are willing to pay higher associated energy costs. However, we expect a growth in solar activity as prices for solar panels decrease and penetration of solar as a power source continues. The major variables in energy tend to be geopolitical or environmental events that affect the industry through commodity price fluctuations or legislation. In conclusion, energy consumption is fairly constant and there is a continuing need to meet that demand so notwithstanding a disruptive event, we see a continuation of much of the activity experienced during 2011.



Mike Lorusso is Managing Director and Group Head for **CIT Energy**. The group provides value-added financing products and advisory services to higher growth, entrepreneurial companies throughout the energy and power sector.

To learn more about CIT Energy, visit cit.com/energy. Members of the press who have an interest in speaking with Mr. Lorusso can contact Curt Ritter at Curt.Ritter@cit.com. Additional CIT Executive Spotlights can be found here: cit.com/executivespotlight.