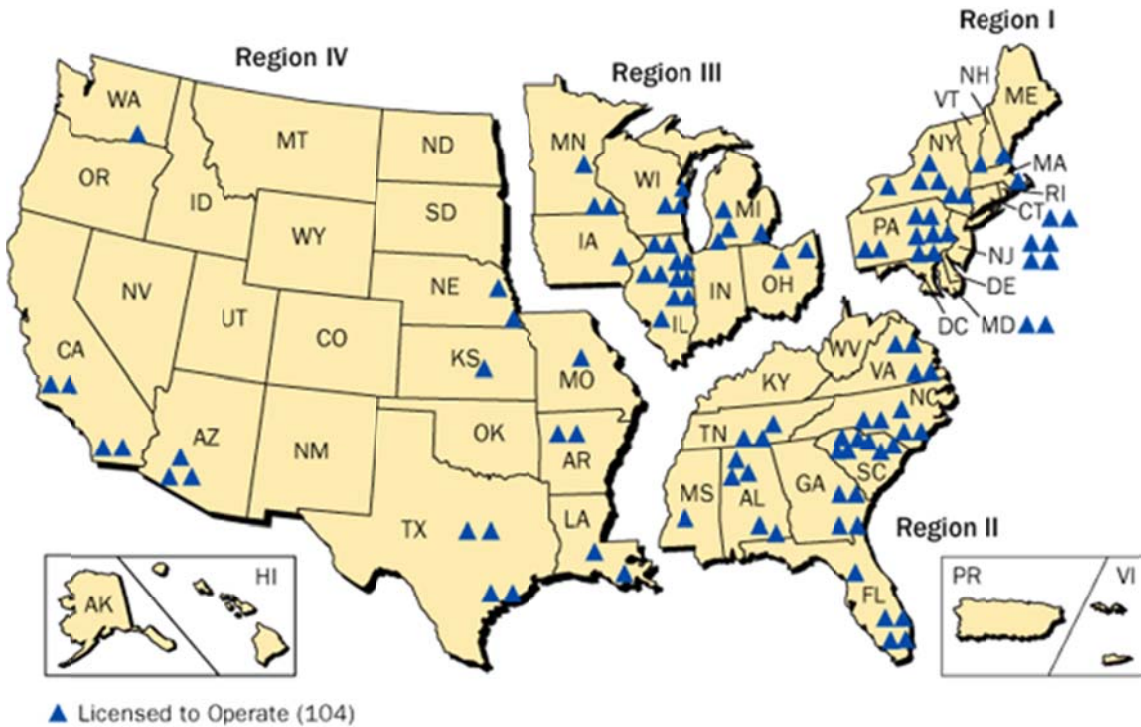


The End of the Nuclear Renaissance and the Future of Natural Gas

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It may be hard to believe, but of all the nuclear power plants currently operating in the United States, every one broke ground prior to 1975. Even the most youthful nuclear facility among the fleet is now approaching 40 years of age. There are currently 104 actively operating nuclear reactors in the United States (see the accompanying map) and despite more than 3 decades without a single new plant constructed, the installed base of nuclear generating capacity still produces 20% of all the electricity consumed in the United States.



For many years now there has been talk of a “nuclear renaissance” in the United States. After being unpopular for so long, nuclear power had recently become one of the few subjects upon which both conservatives and liberals seemed to find common ground. Conservatives liked the fact that nuclear power could reduce our dependence on foreign oil. Liberals liked the fact that nuclear power could reduce greenhouse gas emissions. Such common ground is rare among politicians these days....so the nuclear renaissance appeared to be inevitable.

Unfortunately, nuclear power is not without its own problems. Aside from the obvious issues related to the handling and storage of nuclear waste (read about Yucca Mountain if you want to know more), nuclear power safety considerations contain an asymmetry that make it unpalatable for many people. Things don't go wrong with nuclear power plants very often, but when they do wrong, they tend to go horribly wrong.

Naturally, this brings us to the present situation in Japan. A once-in-a-century-magnitude earthquake created a tsunami that knocked out power at a nuclear facility, which was never designed to withstand such a great earthquake in the first place. The tragic situation in Japan has rekindled nuclear skepticism around the world, not unlike the sentiment in the U.S. in the 1970's, following the meltdown at Three Mile Island. Although the relatively quick change in public mood may appear to be a temporary overreaction, the truth is that the nuclear renaissance in the U.S. was over before it ever began, and the recent events in Japan have only served to strengthen the argument.

You may not believe me at this point. You may think that I'm simply falling into the same reactionary sentiment as the public at large. Well, perhaps you'll believe John Rowe...

John W. Rowe is the Chairman and CEO of Exelon Corporation, the largest owner of nuclear power plants in the United States, including 17 of the 104 aforementioned reactors. John Rowe is widely considered to be an expert in the energy and utility industries and is a self-described "nuclear guy" – which probably comes as no surprise given his employment as the CEO of Exelon. On March 8, 2011, precisely three days before the earthquake and tsunami in Japan, Mr. Rowe gave an interview and speech before the American Enterprise Institute. During the interview Mr. Rowe said the following (edited slightly for readability):

" [Natural gas] is the probable source of supply for any new generation that we might build...natural gas is 50-60% the price of new nuclear, it's cheaper and much cleaner than new coal...its cheaper than wind and much cheaper than solar. Natural gas is queen right now...it is going to be the dominant source of energy for electricity, on the margin, for the next 10 and almost surely for the next 20 years. It simply is more economic than all the alternatives and is likely to be so for every year within a 20 year period."

Mr. Rowe went on to say that this isn't some theoretical ideal, which may or may not happen. The transition is underway at this very moment due to free markets at work:

"Natural gas has already jumpstarted the transition to clean energy...18 companies have announced their plan to retire or mothball nearly 12 gigawatts of coal-fired generation nationwide – they are simply no longer economic. Gas usage in the utility sector was up an average of 6% year over year for the first half of 2010 compared to 2009."

Looking beyond the next 20 years, Mr. Rowe had the following things to say:

"Up until 2 or 3 years ago, I simply could see no alternative to a major nuclear resurgence at some time, but as we look at a world with relatively slow growth in demand for electricity, wind that actually works, solar that has gone from 40 cents per kilowatt-hour to 20 cents...you do begin to envision that there may be a more complex technology base out there that might be economically competitive with nuclear and socially thought to be preferable."

Mr. Rowe went on to describe his “vision” of a future technology base for electricity generation and it focused on a combination of wind, solar, and natural gas, with natural gas being the “bridge technology” that alleviates our reliance on coal, oil, and nuclear power.

Now, if all of these comments were coming from wind, solar, or natural gas company executive, it wouldn't be particularly newsworthy. But, as I said, Mr. Rowe happens to be the CEO of the largest nuclear power plant operator in the United States, and that makes his comments very interesting indeed, even more so when you keep in mind that he made these remarks three days before the tragic events in Japan.

We can ask a fundamental question: If Mr. Rowe won't build a new nuclear plant in the U.S., who will? The answer is – nobody. There may be an energy renaissance in the United States over the coming decades, but new nuclear facilities won't be part of the solution. This obviously creates a lot of interesting investment opportunities in those sectors that do stand to benefit from the decline of the nuclear power industry in this country, and thoughtful investors should focus their attention accordingly.

At first glance, this sort of investment opportunity may seem like a lay-up, of sorts: just go out and buy the stocks of natural gas producers. However, I believe that owning natural gas producers in this environment is a losing strategy, at least for the next few years. All of the credible long-term price forecasts suggest that there is so much excess supply of natural gas in the U.S., that prices will be flat for the next decade, and perhaps longer. Any investment that requires a higher gas price in order to do well is likely to be an investment that disappoints.

Frankly, I don't know if the price of natural gas will be higher or lower in the next 5 years and I don't really care. Prices could go up, but probably not too much because there is so much supply. As a result, any investment related to natural gas should focus on consumption volume, not market price trends. This means that our investments in this area need to avoid the gas producers, and focus on the transportation companies – the infrastructure of the natural gas industry. This leads us primarily to master limited partnerships, and a handful of public infrastructure pipeline companies. Each company has different merits depending on an investor's views and risk tolerance, but many of the gas-oriented master limited partnerships have fee-based assets with inflation-adjusted rate escalators, attractive distribution yields and growth opportunities

There are a few important points that need to be understood about my perspective on the energy industry and my belief in the inevitability that natural gas will be the most attractive new fuel source for the next two decades, or longer. First, although this may seem like a U.S. centric investment, it really isn't. The U.S. economy doesn't need to grow at all for these investments to do very well. Even in the absence of any economic growth whatsoever, U.S. demand for natural gas will continue to grow because we will see, on the margin, a decline in coal-fired and nuclear electricity generation in this country. Coal and nuclear are far less economic, and coal is much more damaging to the environment. Second, it is highly probable that the price of oil will continue to march steadily higher over the next 10 to 20 years. Even if U.S. oil consumption remains flat, emerging market economies will continue to grow

and consume more oil, therefore the global price of oil will continue to rise. With every increase in the price of crude, natural gas becomes much more economically attractive as a transportation fuel.

Finally, because of the global nature of the crude oil market and instability in the Middle East, we will always be at risk of price and supply shocks in global oil markets. By having investments that are focused on domestic natural gas, investors are inherently hedging some of the risk that stems from adverse developments in the Middle East. It is impossible for the U.S. to achieve energy independence, but natural gas will make us less dependent and thereby improve the nation's energy security, and the security of investors' portfolios.