

RUDDEN'S ENERGY STRATEGIES REPORT

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insights to the energy industry

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More Green Business?

No, it is not the newest version of the dot.com bubble. That is not a judgment on stock prices, but rather a statement that big, profitable firms are in the business, and they make money selling green products.

Clearly the trading people see opportunities. A Commodities Futures Trading Commission (CFTC) member predicted a \$2 trillion carbon market, saying, "... it is certainly possible that the emissions market could overtake all other commodity markets."¹ Well, if you figure that the United States emits more than 6 billion tons of carbon every year, at \$50 per ton (that's not a prediction) that produces the need for \$300 billion of credits per year. The permits will trade many times over, so even if the CFTC man is wrong, the number looks big. Add on other countries, and the CFTC prediction starts to look reasonable. So, the financial world can count on a lot of business. Take a look at the volume on NYMEX's Green Exchange to see how volume has been moving upward. American traders have begun to get the hang of environmental trading. I'd expect the financial industry to lobby hard for global climate change mitigation, especially if trading credits make up part of the package.

In the industrial rivalry front, General Electric's ecomagination PR campaign seems to have annoyed management at Siemens, GE's giant German rival. Siemens just claimed that it sold €17 billion of environmentally friendly products vs. only \$14 billion

for GE. As for GE's target of \$25 billion in 2010, Siemens aims for €25 billion in 2011. So there!!! Sounds like two little kids in a boasting contest, but it shows how big the market is, and why these giant firms invest in it. The CEO of Siemens, incidentally, admitted that "German groups have failed in marketing."² Somehow, racking up €17 billion in sales does not sound like a marketing failure has taken place. The fact that the Siemens man feels impelled to tell us about it, though, indicates that, perhaps, a public relations failure has taken place.

Then there are the automobile manufacturers. They need batteries for electric cars. Toyota has a deal with Mitsubishi, Nissan with NEC, GM with Hitachi, VW with Sanyo. (Notice anything about those names?) The push to use lithium-ion batteries will raise the stakes because of the high cost of setting up the production lines. While the manufacturers labor and the public relations people spin their stories, what are the electric companies doing to firm up their neglected networks, the regulators to figure out how to price the electricity, and the grid operators to work out how to take advantage of (or prepare for) a world in which location might count more than time of use?

What do investors think about all this? The article, aimed at the most sophisticated professional investors, begins, "It took a while, but green tech may have finally found, um, its place in the sun."³ Then the next line reads, "Capital is pouring into virtually every niche that promises renewable energy or greater efficiency or less pollution."⁴

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¹ Fiona Harvey, "Carbon Trading Set to Dominate Commodities," *Financial Times*, June 26, 2008, p.24.

² Richard Milne and Fiona Harvey, "Siemens Tackles GE in Green Push", *Financial Times*, June 24, 2008, p.19.

³ John Rubino, "Salad Days: Is Green Tech the Next Big Thing in Investing?", *CFA Magazine*, Jan.-Feb. 2008, p.41.

⁴ *Ibid.*

The meeting ended with what in could best describe as a universal moan. I know that utilities like to call Wall Streeters before meetings with regulators in order to plant questions or thoughts. I know that Wall Streeters with big positions in utility stocks like to insert certain favorable thoughts into the heads of regulators. (Why regulators believe what they are told is beyond me.) I know that the energy industry feeds a lot of stuff to Wall Street, and that stuff may serve as a substitute for research. I know that regulators want investors to think that they are reasonable people who would never think of issuing an unfavorable rate order because they do not want to see utility lobbyists bombard the governor with complaints about their strictness. Given how much information comes from the same source, essentially, no surprise that Wall Streeters, industry people, and regulators sing from the same page.

The topic was climate change, what else? One regulator tried to steer the discussion, saying that it looked as if Congress would do something, eventually, the train seems to have left the station, and the government will take action, but the moan drowned him out. Too expensive to do anything. How do we pay for it? Bills will go up. Industry will leave the country. People don't understand. The technology to do the job does not exist. Everyone agreed: too expensive, not possible, nobody understands the facts, boo hoo, nobody understands us. It sounded just like all the arguments industry people used before passage of the Clean Air Act. Back then, industry people said, with a straight face, that their customers did not want to pay for cleanup, which ignored the question of why the people downwind had to pay the costs of the pollution, instead. Congress passed the law, and the industry managed to find means of compliance that cost less than the pre-passage predictions. Surprise. Surprise.

What has happened to old-fashioned American ingenuity? Has it been replaced by lobbyists? Are we really such a bunch of whiners? I imagined the people who told Edison that electricity was too expensive to take the lighting market from gas, who told the Wright Brothers that heavier-than-air machines could not fly, who told Mr. Toyoda that he would never make a car that Americans would buy, etc. Imagine the scene in Philadelphia in 1776: What's wrong with English tea? We'll lose unless we can get the Canadians on board. Paying for a militia costs too much money. George Washington is a big stiff who hasn't proven his worth as a commander. We'll bankrupt the colonies. Not enough people believe in the cause. Let's wait until we have exhausted all means of negotiation. Well, maybe I'm overdramatizing the picture. But not by a lot.

Transmission Business School

Every year, the Transmission Business School meets in Chicago, where determined faculty stuffs a massive number of ideas into the heads of the attendees. Just a few highlights:

The head of a transmission operation not only discussed the inadequacy of the existing network, but also showed photographs of buckled joints and places where the bolts had fallen out. Something like 60 to 70 percent of transmission plant transformers and circuit breakers are 25 to 30 years old. Transmission losses have doubled between 1970 and 2001. Wind power will require transmission. But the economical way of meeting the wind demand is to build a big line for the region, not do a one-line-at-a-time job. Transporting energy by wire uses a fraction of the energy required to ship the coal.

Plug-in hybrid cars probably would benefit from the existence of battery aggregators. The average commute is 28 miles. Ten thousand vehicles equals 30 to 40 megawatts. On an energy basis, plug-ins do the equivalent of 99 miles per gallon.

Did I detect shifts in attitude? Understand that the experts at this sort of conference make a good living from the status quo, whatever it is. So I was surprised by some comments. For instance, that the non-profit regional transmission organization does not have the proper motivation for a market. People don't like to say

that. Or that the market needs more long-term contracts. Market designers went out of their way to discourage long-term contracts, remember?

What's the difference between the old regulated situation, in which the utility made a long-term commitment (such as building a power station) and customers paid for it, and the new situation in which the utility puts a contract out for bidding and the customer pays for it? I asked that question. Answer: by putting the contract up for bidding, the market determines its value, not the utility, and the utility's customers get the benefit of the competitive price. Good answer? What if the market is not really -- as opposed to definitionally -- competitive? Is the customer still better off?

Do I sense some unease in the transmission world?

Nuclear Revival?

Moody's issued a sober review of the nuclear revival.⁸ The report does its estimates based on a cost of \$7,000 per kilowatt. Continuing, with or without nuclear projects, electric rates for the average utility consumer will arise 7 percent per year. The nuclear projects, however, generate different financial ratios for the utility, compared to other projects, including coverage ratios 40 percent lower.

Furthermore, nuclear costs more than the alternatives (other than solar) on a kilowatt-hour basis, but taking an optimistic but not implausible view of their trajectory, solar costs could move below those of nuclear within a few years. The report, however, points out that climate change policies will make the difference, and that "nuclear power appears to represent the most compelling large-scale base-load and emissions-friendly supply alternative."⁹

That gets us to government policy. Nuclear does not look like a cheap alternative. Within a few years, it might look even more expensive, relatively speaking, as R&D and scaled-up production reduces the costs of alternatives. If we need nuclear, we need it for national security or environmental reasons. So far, Congress has handed out its usual hodge podge of goodies to subsidize all those deserving people who believe in free markets but won't consider building nuclear plants without handouts. The subsidies, however, won't necessarily cause prospective builders to put those shovels into the ground. Prospective builders will want indications that the public sees the need for the facilities, which might require some leadership rooted in a reasoned energy strategy for the country.

To sum up, Moody's analysis won't cause me to jump up and down with joy if my local utility announces a nuclear program, so that utility had better have a better reason to act than the collection of subsidies. That's another way of saying that I don't expect something tangible on the U. S. nuclear front until after the presidential election.

Financial Corner

Financial meltdown!! So, who cares if bankers and brokers lose their jobs? They deserve it, you think. And who cares if short sellers start rumors, destabilize firms, and then make profits off the carcass? Not my company. I work for a solid business. Those financial sharks don't care about my company.

Leaving aside sympathy for bankers, what happens when a company's stock collapses?

⁸ Jim Hempstead, et. al., "New Nuclear Generating Capacity", Moody's Investors Service, May 2008.

⁹ Hempstead, p.16.