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MARKETS: Entering a brave new world of higher-priced electricity (05/05/2008)

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Preparations that New Jersey's largest energy provider is making as New England's Regional Greenhouse Gas Initiative (RGGI) inches closer to coming online suggest the possibility of a coming nationwide behavioral shift in how companies and consumers use electricity in their daily lives.

Newark-based PSE&G is taking a variety of actions to brace itself for the increased costs that a price for carbon emissions and higher electricity demand will bring.

"We think it's going to be a very good test for working things out," said Anne Hoskins, vice president for federal affairs and policy at parent company Public Service Enterprise Group Inc. "You'll know how the auction works, what kind of price signals is it sending, how people are reacting. There's a lot of value to it."

There is also a lot of uncertainty about how much RGGI will actually add to electricity bills. The designers of the nation's first cap-and-trade system projected an initial price of around \$2 to \$3 per ton coming out of the first auctions for credits in September.



Anne Hoskins. Photo courtesy of Public Service Enterprise Group Inc.

"If it's down to \$2 or \$3 a ton, it's not going to have a big effect on price," Hoskins said. "If it goes up higher, \$7, \$10, \$15, then it does start to affect things."

Whatever it is, PSE&G officials note that a price on carbon dioxide pollution in the Northeast will only add to cost increases that are coming anyway as demand for electricity goes up.

In an interview, Hoskins outlined what PSE&G, servicing three-quarters of New Jersey's population, is doing to prepare for RGGI. The new regulations will bring price spikes to the Northeast much earlier than anywhere else in the country. But rather than see this as a burden, PSE&G is treating RGGI as an opportunity to get ahead of the demand curve as well as to

prepare for a federal cap-and-trade system.

"Obviously, as you look to the future, there will have to be aggressive efforts in efficiency, demand response, and in looking toward future needs for developing power," said Hoskins in an interview. "And we are always looking to ensure that our system is reliable both on the transmission side and the production side."

But meeting future power needs will be more difficult as the backlash against coal-fired power plants grows. Energy efficiency and system-wide improvements will be essential components of companies targeted under greenhouse gas legislation, said Hoskins. The steps her company is taking could paint a good picture of the path forward for the rest of the country.

A preview of coming tests for other utilities

How companies like PSE&G and others adjust as they are forced to comply with RGGI will also serve as a good test case for the evolution of the United States' energy infrastructure, whether driven by carbon legislation, simple supply constraints, or both.

The utility generates more than half of its energy by nuclear power, with coal and natural gas making up most of the remaining portion. Despite the renewable portfolio standards on the books in New Jersey and Democratic Gov. Jon Corzine's recent call for the state to consume 20 percent of its energy from alternative sources by 2020, the power generation arm of PSE&G owns very little renewable generation.

But the immediate issue is the cost increases that all utilities see coming. Aging infrastructure, limits to new coal-fired power plants and surging demand have some utility executives speculating that customer bills in many parts of the country could triple in the next five years.

Hoskins doesn't see price increases happening in New Jersey on that scale, but she admits that big cost increases will be seen in any scenario. Carbon cap-and-trade programs will only increase pain to the pocketbook.

"As you look forward, there is continued growth in demand for electricity, and even with some of the options that we need to look to, whether renewables or new power production ... all indications are the cost of producing energy are going to go up," said Hoskins. "And then RGGI and a carbon price, they are all going to have an effect on prices going up."

But while many utilities remain wary of RGGI and the Lieberman-Warner legislation currently under debate in the Senate, the holding company that owns PSE&G has thrown its support behind both cap-and-trade schemes.

Sensing that the climate change issue is not going away, officials at PSE&G say RGGI is an opportunity to get a head start in structuring their business around coming carbon

constraints, and to press for changes in consumer behavior as demand heats up and the nation's transmission grid ages.

The first push will be for energy efficiency

Adding renewables to its mix, particularly the proposed offshore wind farms that we may see off the Jersey coast soon, is definitely a part of the company's long-term thinking, said Hoskins. But in the interim, PSE&G hopes to make the biggest immediate gains in energy efficiency.

"Energy efficiency is the cost-effective step," Hoskins said. "We are trying to aggressively promote that, and that is one area where it appears that a whole lot can be done that isn't going to increase costs."

But getting consumers to adopt energy efficient lifestyles has proven easier said than done, as PSE&G and many other utility companies report.

"There does seem to be a little bit of a market failure here in the sense that people expect very quick paybacks," Hoskins said. "It's kind of an odd, almost psychological dynamic to deal with, and that's one of the reasons we're pushing."

Industry studies show that households generally demand a return on energy savings from the added costs of installing energy efficient lighting, appliances or enhancements such as solar panels within a year in order for them to bear the extra costs of these technologies. Often such returns come so gradually, perhaps over three years, that customers don't notice them.

Although many assume businesses would be more attuned to cost-benefit calculations such as reducing facilities' energy consumption, the same is true for them, as they are reluctant to make investments in efficiency when the returns may take five years or so to materialize.

"It's an even bigger issue with the commercial enterprises," Hoskins acknowledges. "What we find is that businesses are so focused on their core line of business that they don't focus on that. They've got to get a quick return or they are not going to get the allocation for the budget for the building services people to do the change-out."

But PSE&G is pulling out all the stops to prepare businesses and households for higher prices and the coming supply crunch.

The company hosted its first "Global Green Expo" in Jersey City last weekend, an opportunity for businesses and activists to showcase ways that houses can dramatically cut energy consumption. Contractors specializing in everything from household mini-geothermal projects to energy efficient windows were on hand in an attempt to convince skeptical consumers that these technologies would pay for themselves in the long run.

And the company is also boosting its outreach efforts aimed at getting commercial and residential customers to consider calculating their total energy consumption and exploring all ways to reduce it. While some suggest that pricing will be the ultimate motivator, Hoskins doesn't think shockingly high utility bills will be enough.

"What we've seen over the years is that even with the price of gas up to \$3.60 or \$3.70, not everyone is curtailing their use," she said. "So it takes a pretty big price increase to see that, and given the very significant need to get these efficiency investments, we are saying, 'Don't leave it to chance like that.'"

Adjusting to higher-cost electricity will take years

But enhancing energy efficiency and adding renewables to the mix could take years. Meanwhile, carbon allowance auctions are coming this September, and RGGI is slated to go online in January. One hundred percent of RGGI allowances will be auctioned off.

To catch up, PSE&G is adopting a strategy that most utilities in the Northeast will likely take: purchases of allowances at auction that will allow it to continue emitting CO₂ at current levels.

"You've got to buy everything, and we're going to be prepared to do that, to meet our compliance obligations," Hoskins said. "We're going to participate in those processes to make sure that the funds are used to do what they are intended to do and promote efficiency."

So in the short run, emissions will stay the same or even increase. But as prices inch upward, many are hoping that consumers will finally begin to cooperate with the long-term aims that PSE&G is implementing, methods that many other utilities nationwide may find value in copying.

The trick is to get consumers, both business and residential, to stop thinking of electricity as a given and plan their usage more strategically. This means spending more on energy efficient technology even if the improvements don't pay off immediately. Other initiatives will include price structures that charge more for peak hour usage and PSE&G's coming Automatic Metering Initiative, which it says should get people to think more carefully before they flick on a light switch or buy that energy-sucking flat screen television.

"What this technology offers is the ability for customers to have more control over their usage and more knowledge of what the prices are," said Hoskins. "This is really important as you come into the peak period."

Most important of all, said Hoskins, is that RGGI be seen as an interim measure toward a federal cap-and-trade system, ideally Lieberman-Warner. Regional blocs may see coal-fired production decrease in their zone while price incentives push its expansion in other places such as Pennsylvania, where RGGI regulations will not be in force.

"We do believe that there should be one national system," said Hoskins. "What we are supporting is an effort to ensure that once you get that system in place that state and regional efforts that have been developed are phased out."

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