## **ELECTRICITY:**

## La. eyes future power needs amid gas-driven industrial boom

Edward Klump, E&E reporter
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Electricity experts in Louisiana are pretty sure about a few things.

Demand from industrial users is poised to climb. Natural gas likely will remain a key source of power generation in the state for years. The entrance of a prominent regional transmission organization brings a new level of connection.

What isn't as clear is just how big the wave of industrial demand may be. Or how the expected closure of some coal-fueled power plants in other states will ripple through U.S. power supplies. Or exactly how new transmission and generation will fit together.

Louisiana says it has enough power for now, but it also sees construction work on the horizon as it tries to stay ahead of any supply-demand crunch. Leaders are preparing the state to deal with growth even as questions percolate about the future of the electric business model and some U.S. regions deal with flat or declining demand.

"I would think long term there will be investor-owned utilities building new power plants in Louisiana," said Eric Skrmetta, chairman of the Louisiana Public Service Commission. "I think that as long as things keep moving forward in the regional transmission organization world that we will see more transmission built, which will allow for the potential of merchant power plants coming in that would be possibly outside the parameters of the regulated world."

Estimates from Louisiana State University suggest more than \$61 billion of manufacturing investment is possible in the state, driven by natural gas.

Much of the planned investment is expected in 2014 to 2017, according to presentation slides from David Dismukes, a professor at the Center for Energy Studies at LSU. He said as much as about 10,000 megawatts of capacity may be needed, if all of the projects were built.

Entergy Corp., which has utility operations in parts of Louisiana, Arkansas, Mississippi and Texas, has promoted industrial growth as a big part of its future. Entergy Chief Executive Officer Leo Denault, in a speech in Houston last month, said projects in the company's service territory could lead to almost 40,000 jobs and about 2,500 MW of new load.

If projects become a reality, Denault said Entergy may see a load growth rate of 3 percent to 3.25 percent in coming years, up from a possible 1 percent to 1.25 percent from its legacy business (*EnergyWire*, April 2).

Planned industrial growth in the Gulf Coast region stems from relatively cheap prices for natural gas, which followed the explosion of onshore shale drilling in the past decade. Increased capacity may stem from liquefied natural gas export plans, gas-to-liquid developments, methanol and ammonia proposals, and cracker and polymer projects, according to LSU.

Dismukes said he expects many of the plans to materialize, even as a number of industrial ideas didn't pan out in the past, because current proposals are tied to global markets, not just North American ones.

"These projects are going to be a lot different, I think, than any kind of capital investment we've seen in this area" in recent decades, Dismukes said in an interview.

That has stirred talk of needing to plan. If more generation is required, Dismukes said, one question is whether such plants would be built through utilities or whether other entities would be sought.

"We've been in positions in the past where we've been real long in capacity and have blown it off relatively quickly," Dismukes said. "We do need to be mindful of that and the quick pressures that it could put on our power markets here in the near term."

The Public Service Commission's Skrmetta estimated that eight or more transmission projects may come into play over the

next decade in Louisiana.

"The only thing that's going to constrict us in the future is the ability of companies to produce the power plants in enough time to meet the potential commercial growth," he said.

## **Examining other options**

Everyone isn't convinced that adding a slate of power plants is the way to go, including some who would like to see more focus on energy efficiency. The state's most prominent city is known for its many older and less efficient homes, for example.

"If we insulate all the houses in New Orleans and other cities around the state, we wouldn't need to see a massive building of new plants," said Darryl Malek-Wiley, an organizing representative with the Sierra Club in New Orleans.

Then there's the state's reliance on natural gas for power generation and memories of past price increases before shale resources sent gas prices plunging. Part of the discussion needs to include what happens with aging gas-fired capacity, according to Casey DeMoss, chief executive officer of the Alliance for Affordable Energy in New Orleans.

DeMoss said there isn't enough focus on renewable power and energy efficiency in Louisiana, though she said she's seeking to educate utilities and regulators on the benefits. She cited data that show natural gas accounts for about 75 percent of the state's generation mix.

"Right now, we have plenty of power," DeMoss said. "It's affordable and over the next couple of years we're not going to have a whole lot of issues. Beyond that, though, some decisions need to be made."

Louisiana's electric rates are relatively inexpensive, DeMoss said, while bills are relatively high. Part of that is because of the housing stock in the state, meaning "there's a lot of potential" with energy efficiency, she said.

Renewables can be harder to pencil out by comparison, but she said gas will fluctuate in the future as it has before, meaning more diversification is needed.

"We're so heavy on natural gas that when it's cheap obviously we just want to build gas plant after gas plant," DeMoss said. She has suggested that industrial users may need to pay for new generation if demand rises and they're not participating in efficiency programs seen among residential users.

Coal, which is prominent in some other parts of the country, is under scrutiny for emissions, and some plants may be shuttered following additional regulations.

"In terms of trying to further diversify the fuel mix, no, if anything it seems like it's going the other direction," said Emory Belton, a principal with Belton Consulting LLC in Baton Rouge. He said: "Gas is our thing here."

Belton, who also is energy council chairman for the Louisiana Association of Business and Industry, said power companies tend to build the infrastructure they need. Future planning will need to contemplate transporting power, he said.

"When you have big increases in demand like this ... they're going to have to step up not only from a resource planning standpoint -- you know, the sourcing of the power -- but also the transportation of it and making sure that the grid is robust enough to get it here," he said.

There is still some talk about net metering rules for distributed generation such as solar. Skrmetta said regulators will continue to examine possible alterations. Backers of renewable energy have sought to prevent changes that they said would deter use of distributed options (*EnergyWire*, March 13).

But Belton said that discussion is different from one based on a surge in power use by companies.

"These expansions that are really driving things that we're talking about -- I mean, this is at the industrial level," Belton said.

## **Joining MISO**

Part of Louisiana's ongoing power discussion involves the Midcontinent Independent System Operator, or MISO. It's the regional transmission organization for a large swath of the central United States, and it has added Entergy and other companies to form a south region.

MISO leaders said the group takes a broad look at needs in the area and can help guide transmission projects and identify generation needs. That includes Louisiana's outlook.

"We've got to keep a very close eye on that as well because that growth and development can happen much faster than transmission can get built," said Todd Hillman, vice president of the MISO south region. "You can get a steel mill up in two years. Sometimes it takes as much as five for siting, routing, construction, testing and development of transmission."

Skrmetta of the Public Service Commission said the state is dealing with "a bit of a new world" with a new setup for possible power exports, and he said an allotment of costs for infrastructure may need to go to other states as well as Louisiana.

Phillip May, chief executive officer of two Entergy companies in Louisiana, touted being part of MISO and a pool of power generators and users that runs from Canada to the Gulf of Mexico.

"Entergy's Louisiana companies can buy, sell and transmit electricity within this giant marketplace, and pass along the resulting savings," May said in an emailed statement.

May said Entergy has sought to manage costs and energy demands amid a growing business in a "thriving industrial economy" in Louisiana.

The company has moved to make upgrades to modern generation technology, he said, and in recent years acquisitions "added several generating plants at a fraction of their original costs." It's working to add a new combined-cycle gas-fired unit that costs more than \$700 million to help reliability and lower fuel costs, he said.

The economic outlook remains uneven in some states, however.

PNM Resources Inc., which operates in New Mexico and Texas, illustrated the contrast during its first-quarter earnings conference call this month. The power company cited lower loads in New Mexico, including for industrial users.

"New Mexico still lags the nation in post-recession recovery," Pat Vincent-Collawn, PNM's chief executive officer, said during the call. "The local economy continues to show signs of a rebound, but it has not been able yet to build momentum."

Vincent-Collawn said PNM increased its support of economic development and job training initiatives, and it's seeking to help find ways to "jump-start the local economy."

In Texas, "the economy keeps charging ahead," she said, noting residential and commercial gains.

Entergy is coming off a first quarter that Denault, its CEO, called "extremely successful" during an earnings conference call last month, in part because of cold weather for its competitive plants in the Northeast and Southern utility operations.

But Denault also cited "solid" weather-adjusted sales growth for residential, commercial and industrial customers. The next phase of regional industrial expansion may have a bigger effect, he said, noting plans in Louisiana as well as nearby states that will benefit multiple parties.

It follows, he said, that "economic development is central to our utility strategy, and we are looking into all areas to support and promote it."

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