

From: Dietz, Sidney  
Sent: 5/29/2013 8:54:12 AM  
To: 'Zafar, Marzia' (marzia.zafar@cpuc.ca.gov)  
Cc: Dasso, Kevin (/O=PG&E/OU=CORPORATE/CN=RECIPIENTS/CN=KXD4);  
Redacted  
Bcc:  
Subject: RE: FPL is done with their smart grid deployment?

Marzia –

I've copied Kevin and Kate, who is the RegRel person on Smart Grid these days.

yours,

sid

**From:** Zafar, Marzia [mailto:marzia.zafar@cpuc.ca.gov]  
**Sent:** Wednesday, May 29, 2013 8:53 AM  
**To:** Ikrevat@semprautilities.com; John.Minnicucci@sce.com; Dietz, Sidney  
**Cc:** Villarreal, Christopher; O'Donnell, Arthur J.  
**Subject:** FPL is done with their smart grid deployment?

Hi,

I read this article today. See below. It says that Florida Light and Power are done with the Smart Grid deployment. How can that be? Are they using a more narrow parameter when it comes to defining smart grid or are they on the same page as you guys?

Btw, I would also like to include Kevin Dasso from PG&E, but I don't have his email address, Sid?

Marzia

## Here Come the Apps: Florida Power & Light Finishes \$800M Smart Grid

“It’s been transformational.”

Katherine Tweed: May 28, 2013

That lonely and idle Maytag repairman could be getting some company in Florida. Last year alone, service personnel at [Florida Power & Light \(FPL\)](#) sat tight more than 42,000 times as smart grid technology identified and solved power outages, many of them caused by problems inside of a home instead of by a fault on the utility’s system.

Although servicemen aren’t rolling out in trucks as often, that does not mean FPL has not been busy. The utility, a subsidiary of NextEra Energy, Inc. (NYSE: NEE), completed its \$800 million [Energy Smart Florida](#) project last month.

The Southeast U.S. is rarely touted as a hotbed of smart grid activity. Compared to other regions, many Southern states do not have [renewable portfolio standards](#) that drive the need for additional intelligence on distribution circuits. Utility prices are generally low, making the business case for some smart grid technologies even harder to justify, since customer bills are not sky-high.

Even though the Southeast isn’t California, there are a few utilities that shine through for their progressive smart grid projects, according to a recent report from GTM Research, [Utility Smart Grid Outlook in North America 2013: Technologies, Strategies & Case Studies](#). Florida Power & Light and [EPB Chattanooga](#) are the two utilities in the South that made the top-ten list for smart grid maturity.

FPL is one of the first in the nation to complete its entire smart grid modernization project, which was bolstered by a \$200 million grant from the U.S. Department of Energy.

Now that the technology is deployed, the fun can begin. FPL did not install any completely new systems, but did install 4.5 million smart meters and more than 10,000 new intelligent devices across its territory. “Over the past year and a half, we’ve

created a lot of applications,” said Bryan Olnick, VP of smart grid.

Like other utilities that are making use of smart meters, FPL is able to remotely “ping” the meter to see if it’s working. If a meter sends out a last-gasp signal, the outage management system creates a new event before a customer calls. But if a customer does call, the utility can check to see if the outage is caused by the utility or something in the home, such as a breaker that’s open. Before the digital meters, the service personnel would have to go to the home, only to then find out the problem was inside of the home. Not anymore.

“We knew that the number [of problems being inside the home] existed,” said Olnick, “but we had no idea it would be as high as it was.”

### **Customer Love**

The reduction in truck rolls is not just good for field crew workflow. Olnick noted that the average outage for a customer that actually has a problem in the home would traditionally have been about two hours. Now, it’s minutes.

When there are outages from storms, service personnel can also ensure that the power at each residence in the entire neighborhood is back on before leaving. Historically, service personnel would repair a fault only to get back to the utility and find that some customers were still experiencing outages. Now, the workers can open an app on their iPads and ping every customer’s meter.

“In just the past six months, it’s been a real saver,” said Olnick. “Not only for [service personnel’s] time, but also for customer satisfaction.”

FPL has also tried to work closely with different customer segments to ensure that the energy dashboard delivers what they want. Fixed-income groups asked for help managing bills, so FPL delivered a system for customers so they can get bill alerts online or through text messages. For the less internet-savvy customers, they can pick up the phone and call the utility for an estimate at any time. FPL has already seen high bill complaints go down significantly.

For some utilities, the move to smart meters is ultimately about empowering customers while also driving down summer peak. But that’s not the case for FPL. The utility has a robust, old-school load control program that connects to 900,000 devices, which is still quite popular. Although FPL looked at critical peak rates and smart thermostat in various pilots, nothing really made sense for customers, who have relatively low rates.

### **Change Management**

As customers enjoy more insight and control over their electricity bills, the real shift has come within FPL. “It’s been transformational,” Olnick said of the way the company is functioning. “The technology has been embraced by all parts of the business.”

Employees are working as teams to develop new apps, whether for transmission control or the customer call center. The utility prides itself on smart grid employee teams. The teams brainstorm applications that leverage data coming off the central EMC platform and bring them to an executive steering committee for evaluation. Olnick estimated that at least 75 percent of the company has been significantly impacted by new capabilities from the smart grid investment.

The utility's distribution performance and diagnostic center, for instance, brings together engineers, software developers and business analysts to leverage the reams of data coming off of the smart grid. A transmission performance and diagnostic center is monitoring 500 substations remotely. Engineers are also using algorithms to measure voltage for predictive maintenance of transformers.

The top-down approach to bringing IT to all silos of the business was critical for a project of this size. "If you don't do change management well," said Olnick, "it can derail large projects like this."

While many of the tools have been built in-house and sit on top of a platform provided by EMC, FPL is also leveraging apps and expertise from various vendors. The utility was the first to use Itron's meter data management system, and also uses Silver Springs Networks' UtilityIQ as the advanced meter platform. Space-Time Insights and DataRaker (now part of Oracle) provide further insights, while Google Earth Reader allows grid operators to drill down further into areas that might have problems.

The \$800 million investment, however, is just the beginning. "A lot of the focus is now trying to leverage the information," said Olnick. "We're developing applications to develop new insight and knowledge."

**Marzia Zafar** - Director, Policy & Planning Division

California Public Utilities Commission | [zaf@cpuc.ca.gov](mailto:zaf@cpuc.ca.gov) | 415-703-1997