

## **Utilities and Innovation? It's Complicated**

How many of you can name the first major U.S. utility to deploy advanced metering (interval measurement and two-way communications) to all of its 1+ million customers and put hundreds of thousands of those customers on time-of-use rates? Hint: It happened during the 1999-2002 time period.

The answer is Puget Sound Energy (PSE) and the year after the company did that it received the annual Utility of the Year award given by the Edison Electric Institute (EEI). The PSE effort was spearheaded by a CEO who wanted to embrace new technology and have his company seen as being innovative. It was not the best place for introducing the time-based rates, as rates in that area were low, and the difference between peak and off-peak was only 1.5 cents under the new rates was only \$1.5 cents at its highest. But surveys and customer feedback showed that customers liked the rates and liked having the new technology and also the new information on their usage that they were receiving.

After 18 months of the rates being in place, the underlying prices changed and customers were shown on average for that month to be worse off on the rates (by only around one dollar) than they were on their old rate. Now you might think this would be no big deal - but you would be wrong. Because

not everyone in PGE's sphere of stakeholders had originally liked the idea of the meter deployment when it happened and did not "sign off" on it at that time. They had argued that the money should have been spent on traditional energy efficiency. (Note: in the early 00's traditional efficiency advocates and environmental groups had not yet embraced smart metering, demand response etc as they do today)

So regardless of the fact that customers liked the meters, the rates, and the information, the effort was re-examined by the Commission. The result, to cut to the chase, was that PGE had to put up a lot of new money for traditional efficiency, the CEO left, and the utility had to agree in a settlement that it would not talk about the project publicly. (Which is why you have never heard this story before)

Fast forward now to a few weeks ago. The Kansas Commission disapproved expenditures made by Kansas Power & Light for Electric Vehicle Charging Stations that the company had stepped forward (without pre-approval from the Commission) to install. In other words, the utility tried to be proactively innovative and it was told it could not recover that investment.

I have not read the Kansas Commission's Order, and I do not know the details of the case. It may be that the utility did not sufficiently make its case for recovery. But it still serves as another example, along with PGE long ago, that stepping out to be

innovative when you are a utility is not always that easy. Those who are too quick to criticize utilities for not being quick enough to innovate would serve do well to try and understand more about how utilities recover their expenses and investment costs.

So am I endorsing caution on the part of utilities in pursuing new technology options and embracing change - including to their business model? No way. The business model that has made things challenging is not sustainable in the new era where technology wins, no matter who is deploying it - the customer, a third party or the utility itself. Any utility that wants to thrive in the future ought to have a very active team working on how to change things to allow them to not be handcuffed when it comes to innovation. That team needs to be able to solve the following equation:

New technology + happy customers + incentive-based regulation + cost recovery for sunk investments and things that are truly monopolistic + market competition (inside or outside of a regulated regime) for things that do not need to be monopolistic + reasonable risk/reward for being innovative = Happy customers + happy regulators + happy utility.

Simple, right? Well, obviously no, but a utility that doesn't work on these things should not expect much sympathy from its stakeholders, its customers or its

regulators.

Other than the water industry, our industry has probably been the least innovative and least progressive one around. But that is no accident and there is no real place to put the blame on other than on the rules and the business models they fostered and sustained. It's not time to throw out the rulebook, but it certainly needs a rewrite that creates a system that is fair to utilities in that it encourages and/or requires change and provides a way to pay for it.

Utilities as we know them are going to thrive or dive based on technology innovation and how it improves operations and planning once deployed. Utilities should be encouraged and rewarded- not whacked like PSE - for being innovative. Let's all figure out a way for that to happen. Those utilities that don't try and change in this vein will have to deal with what happens.

Best,

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