Smart Grid Point/Counterpoint: Is It Better to Be a First Mover or a Follower?

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Editor's note: Andy Bochman and Jack Danahy spend a lot of time thinking and writing about the security of the Smart Grid. It is natural that they will not always agree. In the following, Andy and Jack present very different views of whether it is wiser to wait and see, or to race to the head of the pack.

Andy Bochman: First Mover Disadvantage in the Smart Grid?

It's been proven that it works in chess and as everyone knows, like a charm in tic tac toe. In the business world, according to Wikipedia,



first mover advantage: "... is the advantage gained by the initial occupant of a market segment. This advantage may stem from the fact that the first entrant can gain control of resources that followers may not be able to match."

Well, as you know, in the heavily regulated utility sector, it's not exactly a cut-throat competition. In fact, it's not a competition at all. But that doesn't mean it's not worth watching who's out of the gate first with AMI and Smart Meter deployments, who's received Smart Grid Investment Grant (SGIG) funds and is now obligated to deploy something of significant size, and who's holding back, keeping their powder dry.

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The earliest of early movers (you know who you are in that big state just north of the Rio Grande) who began their own experimenting long before the SGIGs were a twinkle in the current administration's eyes are probably best positioned to make the right Smart Grid technology deployment decisions at the times and places of their choosing. But the new first movers, the 100 or so **SGIG grantees**, who are making deployments now of thousands or millions of residential Smart Meters, are, IMHO, in a less than optimal position.

They are choosing hardware, software and communications tech well before most of the relevant standards (including security) have settled. Are moving before their customers, in some cases, are fully in tune with what's going on and how it will **impact their bills or their service**. They've often asked for rate relief to fully fund these deployments and may well be asking for more in an unfortunately short amount of time when it turns out they've placed bets on the wrong vendor and standards horses.

From speaking with analysts, utilities, and some of their providers, my sense is: laggards may have a real advantage here. How's that you say? Here's how:

- As long as they are active and attentive laggards, waiting, watching and learning, they may come to thank their lucky stars that their SGIG proposals were not selected
- They can tinker with residential pilots that number in the tens or hundreds of meters, vs. thousands and millions
- They'll have a longer lead time to educate and prepare their customers for coming changes
- And laggard utilities will be able to select and deploy, with far more confidence than they can in early 2010, technologies based on a more mature, settled standards landscape

As the Latin proverb says, "Fortune favors the bold." Or maybe Bill Shakespeare has the words most appropriate here: "Discretion is the better part of valor." For the moment, hold your course laggards, but watch, learn, and get ready for your turn.

Jack Danahy: Not the Lead Dog? Get Used to the View

"Audentis Fortuna iuvat" (Fortune favors the bold) - Virgil

Andy led with his thoughts on the risks to the organizations who are acting as the sharp end of the stick as the Smart Grid begins to expand and mature. There is a long tradition of danger for these early movers, whether the front row of sarissa carrying soldiers in Alexander's army, or the unhappy few searching for new titles on their Discovision LaserDisc players.

That said, some upfront thinking and informed planning with built-in checkpoints can make "early mover" a winning proposition, not a eulogy. Not all pioneers take the arrows. Some get the land. Andy notes that the SGIG winners may find themselves regretting their good fortune, as the influx of government funding for shovel-ready projects is driving the installation of tens of thousands of meters, none of which can possibly have met the federal standards for such meters, since those standards don't really exist yet. On Jan. 20, 2010 NIST released the first non-draft version of its **Interoperability Guide**, and tried to make more manageable the release of a wide variety of standards with which it was charged:

Some are needed more urgently than others. To prioritize its work, NIST chose to focus initially on standards needed to address the priorities identified in the Federal Energy Regulatory Commission (FERC) Policy Statement, plus additional areas identified by NIST. The eight priority areas are:

- Demand Response and Consumer Energy Efficiency
- Wide-Area Situational Awareness
- Energy Storage
- Electric Transportation
- Advanced Metering Infrastructure
- Distribution Grid Management
- Cyber Security
- Network Communications

These guidelines are providing adopters with plenty of direction for the likely coming regulations, and every syllable (there are many and we will do some more overviewing for this audience soon), is articulating the siren song of **reduced likelihood of stranded hardware, incompatible systems, and inappropriate security**.

So much of this early growth within the Smart Grid community was already foreseen and planned. I think that the idea of waiting interminably for more data is an overly conservative strategy. To my viewpoint, much of the **SGIG funding is the**



government writing checks to get out in front of a parade that is already moving. Looking for "shovelready" projects is a way for the government to locate initiatives that had already been thought through, that were likely already justifiable from simple cost-savings on labor and system downtime, and which were unlikely to be anything particularly groundbreaking or risky. No bureaucrat is ever looking for the headline, "SGIG Tax Dollars Burnt to Heat Up Smart Grid Market".

Image thanks to letmakerobots.com ...

For those who have intentionally hung back, **I would encourage a little more briskness in their steps**. There are risks, as well, to being overly cautious:

- There truly is a land grab ongoing in the leadership space for Smart Grid adoption, and/or
- There are appreciable cost-savings one can see today with AMR/AMI implementations, and/or
- The standards to come will likely be generated from the experiences of those actually moving the Smart Grid forward, therefore naturally favoring them

Waiting for the decisions to be made and for the risk to be gone may be comfortable, but it is unlikely to spell success for organizations and leaders who take the easy way out.

Jack Danahy and Andy Bochman are authors of the Smart Grid Security Blog.