

Why it's past time to move to the smart... no, make that the value-added grid



By David O'Brien



“Safe, reliable service” – that is the North Star by which utilities navigate. It is found in state utility statutes around the country. It is an important measuring stick for regulators to assess utility performance. In some jurisdictions the term is “safe and adequate.”

Adequate... ponder that for a moment. Utilities are expected to make prudent investments in physical assets and deploy human resources that yield this fundamental outcome. I wonder how many of my kindred “smart gridders” see the mismatch between the term “safe and reliable” and a modern grid of interconnected digital endpoints, 15-minute interval data and such things as conservation voltage regulation (CVR). The modernized grid is analogous to the modern car – Yes, it is safe, yes it is reliable... but it is a whole lot more.

Is safe and reliable just a holdover?

It would seem that the “safe and reliable” standard is another holdover from the bygone era of this industry. Under this traditional mindset, expectations have been met when the system is not a threat to anyone’s safety and operates on a consistent basis. This standard had real meaning during rural electrification in the 1930’s. And coming out of major blackouts in the 1960’s and 70’s. But in the digital world of today with increasing expectations regarding renewables, storage and electric vehicles, it’s a mismatch. I cannot imagine the public being too interested in a product that is pitched to them as merely “safe and reliable.”

Rotary telephones were certainly reliable and performed “adequately.” But they were a far cry from the products that followed the explosion of innovation in the telecom industry over the past twenty years. Once we got a taste of enhanced features and functionality we wanted more. We were once thrilled with simple cell phones but now expect app-laden smart phones.

Likewise, in commercial relationships it’s all about delivering the value-add. We all expect value and are willing to pay for it. But not for goods and services seen as cheap or average. We either avoid those or pay as little as possible.

To a large extent that is the lot that the electric utility faces today. I would posit that a sophisticated, customer-friendly electric grid could be the difference maker for an industry at a crossroads.

As a practical matter, any utility that seeks to implement a digital grid (AMI, DA, etc.) will be best received if there is a shared understanding of the value equation, the compelling reasons to invest beyond the current safe and reliable standard. And that is precisely what we hear from consumer advocates. “Why spend more, what will be different?” they ask.

The two critical steps for our future

Meanwhile on the policy front we would be well served to revisit our assumptions. For decades we have layered in mandates to increase renewables, energy efficiency and the penetration of distributed generation. These goals require much more than an analog grid. Collectively there are two critical next steps to move to the top of our “to do list:”

- 1) Vendors (devices, software, consultants too) and utilities must focus on how they are delivering a “value-added grid” and be able to convey clearly the benefits in measureable terms, i.e. performance metrics.
- 2) Policymakers must revisit the statutory expectations regarding grid performance. We can set the bar higher than safe and reliable

The value-added grid harnesses interoperability, where vital systems are integrated to deliver broad customer and grid-facing benefits. To date regulators have expressed frustration that so-called smart grid deployments have done little beyond tightening the utility's revenue cycle.

To fix that, we must capture, understand and share functional value. We must develop performance metrics that both matter and are easy to understand. We must be willing to have a scorecard and provide it to a wide audience of customers, stakeholders and of course regulators.

There is room here to build increased credibility with fans and skeptics alike by truly building the value-added grid, one that delivers increasing benefit over time – above and beyond the baseline of “safe and reliable.”

*David O'Brien is Director of Regulatory Strategy and Compliance at **BRIDGE Energy Group**, where he works with utility clients to help them develop regulatory petitions for grid modernization projects. Mr. O'Brien was Commissioner of Public Service in Vermont from 2003-2011*



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