

## **Smart grid deployment decisions should be made at state or local level, APPA says**

"Smart grid" should be defined in broad terms, allowing it to develop at the "speed of value" to each community served, instead of the "speed of hype" from manufacturers or vendors, APPA told the Department of Energy. Smart grid deployment is primarily a distribution utility issue so deployment decisions should be made on the state or local level, APPA said in Nov. 1 comments in response to a DOE request for information on policy and logistical challenges to smart grid implementation.

APPA offered two "bumper sticker" messages regarding smart grid installations—"education before implementation" and "crawl before you walk." DOE could help utilities develop effective education campaigns by compiling best practices and lessons learned from the projects that have received agency grants, APPA said.

Installations of smart grid technologies "should only occur at the rate at which they can provide tangible benefits," APPA said. "Customers will adopt new technology when they believe it will benefit them." The marginal benefits from moving from automated meter reading to advanced meters "may not outweigh the costs of the new equipment plus the remaining costs from the utility's prior investment in AMR technology," APPA noted.

Time-differentiated retail pricing holds great promise to reduce peak demand, but this "does not necessarily require an immediate 'flash cut' to full time-of-use pricing at the retail level," APPA said. "Peak period pricing, rebates and other related rate design measures might well find better initial public acceptance at the retail level, and do not require associated equipment installations."

Potentially uneconomic demand response payments at the wholesale level could lead to residential customers subsidizing service to larger retail customers (or groups of such customers aggregated by third-party for-profit aggregators), APPA said. The administration should "take a more 'holistic' approach to [demand response] policy at the federal level, encouraging specific policies that work together with retail-level state and local programs to foster cost-effective and economically efficient smart grid installations and [demand response]," APPA said.

APPA cautioned against presuming that increased demand response alone will result in competitive wholesale market prices. "The basic structures of wholesale power markets in both RTO and non-RTO regions make it very difficult for competition to discipline prices," APPA said. "Demand response is no substitute for effective regulation at both the wholesale and retail levels."

Utilities installing smart grid technology "need to take reasonable and cost-effective measures to keep equipment and the data produced secure," APPA said. State and local utility regulators should work with federal entities with expertise in information technology, communications and utility infrastructure to help utilities "adopt a 'defense in depth' posture towards cyber security. This should start at the equipment and vendor levels, with an insistence that vendors ... take all reasonable measures to ensure that their equipment is resistant to cyber intrusions."

Most importantly, there "need to be robust physical or electronic 'moats' between distribution-level smart grid installations and upstream bulk power system facilities," APPA said.

"The tension between the policy goals of speedy deployment of retail-level smart grid technology and maintenance of the cyber security of such installations is one of the biggest smart-grid related challenges the electric utility industry faces," APPA said.

Source: Public Power Weekly Issue No. 44 (November 08, 2010)