

The Smart Meter Revolution

By Bill Melendez

In the old days of walk-by systems it was not uncommon to see a meter reader walking through my yard to read my electric meter. In fact, outside my new home, the meter readers still walk by to do their data gathering.

One would think that the days of walk-by would be about over with all the emphasis being placed on smart meter deployment. Yet the mechanical-electric meter is still unsurpassed in cost and efficiency; hence their tenacity to dominate the metering environment within residential homes. Smart meters will eventually replace mechanical-electric ones but not for many years. Part of the reason is cost. The other reason can be best defined as a tendency for utilities to implement smart metering as a means of reducing their cost of collecting billing data or for remote disconnect and load management (see *The Path to Perfect Power: New Technologies Advance Consumer Control*, January 2007, Galvin Electricity Initiative).

While neither reason prohibits the implementation of smart metering, it does show a need for an AMI strategy that encompasses a broader perspective and understanding of AMI business models and resource implementation. Until the utilities move on beyond this perspective to embrace the multiple options smart metering brings to the table, the deployment of smart metering will not have the profit generation impact many are seeking. The implication will be that of a tremendous public cost and long learning curve as our society absorbs smart metering methodologies.

We can surmise that deploying smart meter is but a step towards full AMI implementation that automates energy usage. This being the case, then deploying these devices indicates the beginning of a new approach towards consumer involvement in energy management and control. Future consumers may choose among electric retailers for the best price options on the market and therefore make many business models and schemes being now implemented and decided completely obsolete. Automated systems AMI/HAN technologies may also make some of the argument that pricing should be based on anything but "time of use" (TOU) a mute point since these systems would be interactive with the pricing markets. Net Zero solutions also can have an impact on pricing schemes and therefore revenue generation even though today that is not the case with regulated pricing.

At the rate that technology and social change is going, the energy providers may very well be out of the business of controlling how end users consume electricity. It is foreseeable that there will be more involvement and control on the part of consumers as more choices become available. It isn't that far fetched that consumers may someday buy and sell power independently of the grid entity while using the grid itself -- therefore creating more supply and demand issues and requiring more solutions than what the

energy industry is currently embarked on. If the grid becomes another "internet" scaled system, then regulators and providers alike are really in the dark ages of change. Smart meters may well be the Pandora box to regulated energy. In initiating the smart meter revolution as a means to control overhead costs associated with metering, the public utilities commissions and utilities may inadvertently opened an avenue for further automation making the smart meter and price controls obsolete. The smart meter could well find itself as an endangered species needing government rescue as automation continues to evolve within the smart home of the future and consumers become wise to energy schemes and mechanisms. Utilities would discover that old business models no longer apply – that being innovative and prudent in partnering with energy consumers genders a win-win proposition for all and for the environment.



About the Author: Bill Melendez has a background in RF systems, both management and product R&D. He received officer training in tactical mobile communications systems. Bill has a combined experience of over 23 years in the utility AMR/AMI market. He holds an MBA from the University of Maryland.

About the Company: HEMS Technology provides a Demand Side Management / Demand Response (DSM/DR) solution designed as open architecture. The company's solution enables a utility to get past the meter for monitoring and controlling home demand at a reasonable price point while providing a potential means of managing rolling blackouts and peak demand.