

## **The Purpose and Value of Successful Technology Demonstrations – The Energy Independence and Security Act of 2007 Demonstrations**

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Our industry has piloted many, many technologies, but truly deployed few. Can we say that we completely understand the value of a single technology piloted in a couple different utilities? Or, must we integrate this technology with other technologies in a real-world environment to discover those additional values and benefits that go beyond its solo application?

When we survey the industry for technology penetration, we find a sad picture...many solo pilots, but little evidence of integrated advanced technologies. The reasons are simple and clear. Deploying new technologies are a risk that utilities and regulators are not willing to shoulder alone. Often the result is a stockholder – stakeholder impasse. The effect is a re-enforced status quo of design and acceptance, which yields a growing lack of knowledge and ability to integrate advancements. That is, a growing inability to deploy technology.

To overcome this impasse and its negative results, the industry must press a different future in relation to skills and abilities. Someone must take this risk.

Fortunately, the government, consumers, and utilities industry have forged a solid plan to move beyond the impasse. In the Energy Independence and Security Act of 2007, Title XIII, a large-scale demonstration program has been authorized for the country. This program enables risk to be shouldered by more than stockholders and stakeholders. Now, the government is sharing the risk of advanced technology integration.

With such a technology demonstration program, there becomes an incentive to create several significant cost-shared projects around the nation where multiple advanced technologies can be proven to operate in concert. From these significant co-funded projects we will see key learnings and experience develop in the science and technology of integration. Risks will be better understood by stockholders and stakeholders alike, reducing the reluctance that comes with change from the status quo.

Real-world data from demonstrations on portions of the nation's electricity grid will provide the most realistic and convincing results on the benefits of the integrated set of advanced technologies. These results will reduce the risk of investment and transition to a modern grid for all stakeholders including the utilities, regulators, and consumers. The demonstration results will clearly distinguish the set of advanced technologies that provide the most benefit for the investment. Demonstration results will be transferrable to other electrical regions with similar characteristics, thus building momentum to deploy advanced sets of technologies.

The demonstration results will provide the credible data needed by utilities and other investors to make the business case to invest in advanced sets of technologies. The data will also assist regulators in creating a regulatory environment that enables utility, consumer, and societal benefits to be fairly recognized and enables utilities and other investors to fairly recover their investment. The data will also educate consumers on the value of the integrated sets of technology and their increased choices for electrical service.

With a robust budget for demonstrations, many partnering organizations across the country will be directly involved in planning, conducting, and evaluating the demonstrations. These organizations will learn first-hand, the value of the integrated sets of technologies and be able to

continue to quickly deploy those technologies within their regions. Other organizations that are not directly involved in the demonstrations will observe the results of the demonstrations and deploy the advanced set of technologies within their regions.

One last hurdle remains. Congressional committees have a decision about appropriating funds for these authorized projects (Energy Independence and Security Act 2007). With this help, the industry will move beyond the current impasse. This catalyst will result in an accelerated modernization of the grid ultimately enabling a stronger, more competitive economy deserving of the 21<sup>st</sup> Century.

Not everyone agrees. There are opponents to such government co-funded programs, labeling them as “industry welfare.” With such a strong linkage between the health of the electric service and domestic production, it is difficult to see this point of view.

Sometimes it’s better to be gracious than right. Sometimes it’s better to be dollar-wise, than penny-foolish.

Next month, we will focus on pathways for modernizing the grid.

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