



Recognizing Excellence in Smart Grid Development:

The Perfect Power Seal of Approval™ Program

THE PURPOSE

As the nation moves toward developing a smarter electricity system, consumers are asking, “What will ensure that the smart grid delivers value to me?” Tools such as the Smart Grid Maturity Model have been developed to provide utilities with a common pathway for smart grid projects, and the National Institute of Standards and Technology is working to identify and define a core set of interconnectivity and security standards to ensure that the diverse set of smart grid projects that is emerging can interact seamlessly. However, performance measures are needed that will verify that specific consumer benefits or outcomes are being realized from smart grid investments.

The Galvin Electricity Initiative is developing a program called the Perfect Power Seal of Approval™ (PPSoA) to fill this gap by applying a standard set of criteria and a scoring system to assess the performance of grid systems in four categories (see Figure 1). The intent is to establish a standard of excellence that recognizes the best in class for microgrids (or local distribution systems) and smart grid development, and, like the Leadership in Energy and Environmental Design (LEED) program has done in the construction industry, raise the bar for the electricity industry.

THE NEED

For 50 years, quality processes have been helping industries such as health care, telecommunications and manufacturing maximize the value of their improvements and investments. The metrics used in the PPSoA scoring system draw from Six Sigma continuous improvement methods and reflect what is known about consumers’ needs and expectations. For example, we know that consumers are looking for their power system to:

- Be cost-competitive and offer greater cost transparency;
- Do no harm, eliminate interruptions and improve power quality;
- Increase system efficiency and significantly reduce environmental impacts; and
- Enable and encourage consumer and community participation.

From these needs and expectations, the Initiative developed the four performance categories on which the metrics focus. These performance standards have guided the development of the Initiative’s prototype smart microgrid systems that are serving as models for smart grid transformation nationwide.





THE PROCESS

The PPSoA scoring system, which is outlined through Figure 1, is designed specifically to:

- establish common consumer-focused goals for smart grid development;
- encourage competition to meet them;
- emphasize that the most important beneficiaries of the smart grid are consumers and business end-users of electricity; and
- give those end-users a system for evaluating their electricity supplier performance.

The Perfect Power Seal of Approval will be awarded by the Initiative on a limited and selective basis to recognize outstanding performance and innovation in electricity system design and operation. The Initiative's catalytic focus is on community-based smart distribution microgrid projects. These projects feature local generation plus the range of intelligent technologies necessary to maximize consumer benefits. Candidates could include:

- Microgrids or grid sub-systems that serve local governments or specific constituents such as universities, mixed use developments and other privately owned microgrids
- Municipally operated grids
- Utility-operated grids
- Electricity suppliers

Applying quality processes to the electricity industry could ensure that smart grid investments deliver multiple benefits as well as ongoing savings. Given the pace of the federal smart grid stimulus funding program, as well as the need to ensure that taxpayer dollars are well spent, the time for establishing this rating system is now.

For more information, visit www.galvinpower.org/perfect-power-seal.

The Galvin Electricity Initiative was launched by former Motorola CEO Robert W. Galvin to transform our electric power system into one that is reliable, efficient, secure and clean, and meets the needs of 21st century consumers. In 2011, the Initiative continues to spark a migration toward a consumer-driven electric power system that is based on quality leadership. The goal is to promote grid modernization through policy reform and the development of Perfect Power smart microgrids that place top priority on serving consumers and businesses with reliable, high-quality, clean power. For more information about the Galvin Electricity Initiative, visit www.galvinpower.org, "like" the Initiative on Facebook (www.facebook.com/galvinpower) and follow the Initiative on Twitter at <http://twitter.com/perfectpower>.





FIGURE 1: Performance Categories and Metrics Overview

