

**Commonwealth Edison Company's
Quarterly Smart Grid
Test Bed Report**

November 14, 2013

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Introduction

This report summarizes the test bed activities, customers, discoveries, and other information deemed mutually relevant from July 1, 2013, through September 30, 2013 as described in subsection (i) of Section 16-108.8 of the Public Utilities Act (“Act”).

ComEd Quarterly Smart Grid Test Bed Report

During the third quarter of 2013, ComEd received two Test Bed Applications for deployment in the Smart Grid Test Bed. Descriptions of the applicants, their respective technologies, and application status are included below.

Sentient Energy: www.sentient-energy.com

Develops a line monitoring device that captures critical operating characteristics and event data from multiple points on the distribution system. These monitoring locations are made up of sensors and embedded applications that gather data related to real-time operating current, conductor temperature and voltage characteristics. At the heart of this line monitor is a high-resolution waveform capture capability that detects faults and other network “anomalies”. All data is sent wirelessly back to the utility in near-real time. Data is used for real-time control as well as planning, engineering and power quality to enhance network reliability.

Status of application: Discussions continue between ComEd and Sentient Energy to define potential scope and desired outcomes for a Test Bed demonstration. Multiple options have been reviewed and ComEd anticipates receiving a refined scope proposal from Sentient Energy during the 4th quarter of 2013.

3M Company: www.3M.com

Develops a “retrofittable” sensing device for underground cable systems. Designed for installation at cable transformation points in distribution transformers, the device is capable of measuring current, voltage, reactive power and can detect cable faults. Measurement data is communicated back to the utility using a variety of methods including interface with remote terminal units.

Status of application: After reviewing the application and discussing the proposed technology, 3M Company and ComEd jointly determined that the technology, in its current form, is not compatible with ComEd equipment. Therefore, ComEd notified 3M Company that cannot accommodate a test of this product in its current form on the ComEd system. 3M Company has indicated that it is developing a version of the technology that would be compatible with the ComEd system, but has not provided a development time frame.

AllCell Technologies: www.allcelltech.com

In addition to the two applicants discussed above, ComEd also held discussions during the 2nd quarter of 2013 with AllCell Technologies, a company that designs and manufactures lithium-ion battery packs for portable, stationary, and transportation applications. AllCell Technologies has not elected to submit a Test Bed application at this time.