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

**August 8, 2013**

## Table of Contents

Introduction .....	3
ComEd Test Bed Quarterly Report .....	3

## **Introduction**

This report summarizes the test bed activities, customers, discoveries, and other information deemed mutually relevant from April 1, 2013, through June 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 second quarter of 2013, ComEd did not receive any Test Bed Applications for deployment in the Smart Grid Test Bed. However, ComEd held discussions with multiple interested parties regarding potential applications during the quarter.

Descriptions of these parties and their respective technologies are included below.

### **AllCell Technologies:** [www.allcelltech.com](http://www.allcelltech.com)

Designs and manufactures lithium-ion battery packs for portable, stationary, and transportation applications. AllCell’s thermal management technology is based on the use of phase change materials (PCM) to surround each lithium-ion cell, absorbing and conducting heat away to dramatically extend the life of the cells and prevent fire or damage to the battery. Their patented thermal management technology allows production of compact, lightweight, and long-lasting batteries.

### **Sentient Energy:** [www.sentient-energy.com](http://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.

**3M Company:** [www.3M.com](http://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.