KC

KODA CONSULTING, Inc.

409 Main Street • Ridgefield, CT 06877

June 15, 2009

Via FedEx Airbill No. 8530 9186 4529

Honorable Jaclyn A. Brilling, Secretary
State of New York Public Service Commission
Three Empire State Plaza
Albany, New York 12223-1350

CASE 09-M-0074 – In the Matter of Advanced Meter Infrastructure

Dear Secretary Brilling:

Pursuant to Notice Seeking Comment, Issued April 14, 2009, International Brotherhood of Electrical Workers ("IBEW"), Locals 83, 249, 966 and 1143 ("System Council U-7"), IBEW Local 97 and Utility Workers Union of America, AFL-CIO, Local 1-2 (collectively referred to as "Local Union") offers the comments on the Proposed Framework for the Benefit-Cost Analysis of Advanced Metering Infrastructure ("Proposed Framework") of the Department of Public Service Staff ("Staff") issued April 14, 2009 in the above-referenced proceeding.

Respectfully submitted,

Richard J. Koda, Principal
KODA CONSULTING, Inc.
409 Main Street
Ridgefield, Connecticut 06877-4511
(203) 438-9045
Consultant to Utility Workers Union of America, AFL-CIO, Local 1-2, International Brotherhood of Electrical Workers, System Council U-7 and Local, 97.

cc: Active Party List as of 4-29-09 in Case 09-M-0074 and KEMA & NYSDEC via e-mail
Harry Farrell, President, UWUA, Local 1-2
Danny E. Addy, President/Business Manager/Financial Secretary, IBEW, Local 83
David Falletta, President/Business Manager/Financial Secretary, IBEW, Local 97

BEFORE THE STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

In the Matter of Advanced Metering Infrastructure) Case 09-M-0074

Comments of International Brotherhood of Electrical Workers, ("IBEW") Locals 83, 249, 966 and 1143 ("System Council U-7"), IBEW Local 97 and Utility Workers Union of America ("UWUA"), AFL-CIO, Local 1-2 Pursuant to Notice Seeking Comment on the Staff Proposed Framework for the Benefit-Cost Analysis of Advanced Metering Infrastructure, Issued April 14. 2009

Introduction

International Brotherhood of Electrical Workers ("IBEW"), Locals 83, 249, 966 and 1143 ("System Council U-7"), IBEW Local 97 and Utility Workers Union of America, AFL-CIO, Local 1-2 (collectively referred to as "Local Union") offers comments on the Proposed Framework for the Benefit-Cost Analysis of Advanced Metering Infrastructure ("Proposed Framework") of the Department of Public Service Staff ("Staff") issued April 14, 2009. The Local Union generally concurs with Staff's Proposed Framework and would like to offer a few additional items that Local Union recommends the Commission include in any evaluation of AMI and/or "Smart Grid" in New York.

Background

On February 13, 2009, the Commission issued an order in this proceeding in which, inter alia, it found that, to address the need for greater consistency in the benefit-cost analysis used by New York utilities, a process is needed to examine the key aspects of advanced metering infrastructure (AMI) benefit-cost analysis, culminating in guidance to the utilities on the methodology to be used to calculate benefits and costs. The Commission, therefore, directed Staff to develop a generic benefit-cost approach for evaluating AMI. Staff developed the Proposed

Framework which was attached to the April 14, 2009 Notice in this proceeding. Also, it is understood that Staff was to organize workshops with the active parties to further refine the Proposed Framework and work with parties to attempt to build consensus on the Proposed Framework before parties file comments, in order to narrow the scope of outstanding issues.

Staff complied with its workshop mandate by establishing a technical conference in this proceeding which was be held on Monday, June 1, 2009, at the Commission's Albany offices, 3 Empire State Plaza, 19th Floor Boardroom with participants on site and on the phone. The principal purpose of the technical conference was to examine the key aspects of advanced metering infrastructure ("AMI") benefit-cost analysis, culminating in guidance to the utilities on the methodology to be used to calculate benefits and costs. The presentations made at this conference were indeed helpful in focusing on the complexity and multi-operational aspects of attempting to determine the variety of costs and benefits which would be engendered by adopting an AMI or "Smart Grid" approach to managing the electric grid in New York.

Local Union offers the following perspective on the Proposed Framework and regarding one of the presentations made at the June 1, 2009 technical conference.

Section 1. – Description of the Scenarios to be Analyzed in the Benefit-Cost Analysis

The Staff's Proposed Framework includes three scenarios to be analyzed: Business as Usual, Full Scale AMI Rollout, and Full Scale AMI Rollout with targeted Direct Load Control.[1] In its overview of the Business As Usual Case, Staff discusses costs to be analyzed, but neglects to mention any potential benefits pertaining to this first scenario as it does regarding the second and third scenarios regarding AMI Rollout.[2] While there may not be as many quantitative benefits in the Business As Usual Case, there are benefits related to this scenario, such as maintaining direct

[1] Proposed Framework for the Benefit-Cost Analysis of Advanced Metering Infrastructure dated April 14, 2009 at 3.

customer contact, as well as, regular inspection of the meter and surrounding environment by meter readers who are sensitized to discovering hazardous conditions. In fact, this benefit is recognized in Section 3. – Review of Benefit Categories to be Included in the AMI Analysis, Item 14.[3] Therefore, it is necessary that both quantitative and qualitative benefits be recognized in all scenarios, including that of Business as Usual.

Section 2. – Common Categories of Costs to be included in the Analysis

The Proposed Framework includes 82 specific cost categories which Staff fits into five groups: Meter System and Installation, Communications System, Information Technology and Application (Meter Data Management System), Customer Services, and Management and Other Costs.[4] Local Union agrees that all of the cost categories in this section are appropriate and recommends that they be adopted with a few adjustments recommended below.

Local Union recommends that Meter Systems and Installation group should include, as a separate item, cost elements of evaluating standards compliance to avoid obsolete technology or interoperability failure, distinct from generic installation and testing equipment costs (Appendix 1, item 3), or as a distinct subcategory thereof. Obsolescence and lack of interoperability would render the smart systems impotent. Also, Local Union recommends that hardware security tests be included as an additional and separate cost item, or a distinct subcategory of Appendix 1, item 3, as the Meter Systems will likely be subject to attempts of physical and/or electronic compromise.

Regarding the Communication System, the Local Union recommends that a cost element be added for testing the components of the system for adequacy/capacity and its interoperability with all systems.

---

[2] ibid. at 3-4.
[3] ibid. at 9.
[4] ibid. at 4-5 and Appendix 1.

Regarding Information Technology and Application, Appendix 1, item 33, the Local Union recommends that this cost component also include a subsection, or separate element, regarding the recovery and repair of "hacked" systems given the current environment's proliferation of attempts to breach computer security. In light of the fact that "smart meters" are virtually PC's with "netrology attached" (a paraphrase of Ron Churba of KEMA during his presentation at the June 1, 2009 Technical Conference), related costs of lost business and damage to customers' property, as a result of power anomalies and/or disruptions due to hacked systems in the Smart Grid, should also be included as a cost element. The probability and impact of potential attacks are elucidated by the following recent commentary:

> In April, IOActive researchers were able to identify multiple programming errors on a series of smart meter platforms ranging from the inappropriate use of banned functions to protocol implementation issues. The research team was able to "weaponize" these attack vectors, and create an in-flash rootkit, which allowed them to assume full system control of all exposed smart meter capabilities, including remote power on, power off, usage reporting, and communication configurations. The initial attack vector could also be leveraged to deploy a worm, much like the Blaster worm that wreaked havoc on computer systems in 2003. The consequences of such threats are potentially widespread and devastating.[5]

Also, the item 37 cost component should include testing for interoperability, not simply development and installation of interfaces to core utility systems.

Regarding Customer Services, Appendix 1, item 50 should contain a separate cost element for security, encryption or other privacy component.

Regarding Management and Other Costs, Appendix 1, item 60 should include the cost of testing and failure of interoperability as a risk contingency for all systems (however, costs should not be double-counted if included elsewhere as suggested above).

---

[5] Building the Smart Grid: Proven Methods to Secure the Future, Joshua Pennell, President and Founder, IOActive and Michael Davis, Senior Security Consultant, IOActive, Energy Central Topic Centers, Grid Security, May 2009, Volume 1, Issue 5.

Section 3. – Review of Benefit Categories to be Included in the AMI Analysis

Benefits Estimation Methods

The Local Union believes that the Benefits Estimation Methods cited in the Proposed Framework[6] also apply to Costs and would be helpful in recognizing and determining all applicable benefits and costs. In addition, the Local Union enthusiastically supports and recommends the use of Cost/Benefit worksheets, an example of which was presented by Mr. Churba of KEMA during the June 1, 2009 Technical Conference.[7] The supporting worksheets for determining all costs and benefits should include a detailed description of the benefit or the cost being determined, all of the relevant assumptions used (including sensitivities and variabilities), all processes and documentation supporting the benefit or costs being determined, and the actual calculations which comprise each benefit or cost total. They should include all quantitative and qualitative elements which have an effect on each cost and benefit examined. These worksheets would be invaluable in assessing and prioritizing AMI projects.

Conclusion

For the all of the reasons cited above, the Local Union recommends that the Staff's Proposed Framework be adopted along with each of the recommended changes noted in the body of the comments above.

---

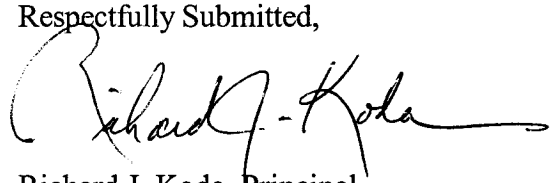
[6] ibid. at 12.

[7] New York State Public Service Commission – Technical Conference on Benefit-Cost Analysis, KEMA's Experiences and Perspectives, June 1, 2009 at 11.

Local Union appreciates the opportunity to comment on the important issues included in the Staff Proposed Framework in this proceeding.

Dated: June 15, 2009
Ridgefield, Connecticut

Respectfully Submitted,



Richard J. Koda, Principal
KODA CONSULTING, Inc.
409 Main Street
Ridgefield, Connecticut 06877-4511
(203) 438-9045
Consultant to Utility Workers Union of America, AFL-CIO, Local 1-2, International Brotherhood of Electrical Workers, System Council U-7 and Local, 97.

To: Honorable Jaclyn A. Brilling, Secretary
cc: Active Party List as of 4-29-09 in Case 09-M-0074 and KEMA & NYSDEC via e-mail
Harry Farrell, President, UWUA, Local 1-2
Danny E. Addy, President/Business Manager/Financial Secretary, IBEW, Local 83
David Falletta, President/Business Manager/Financial Secretary, IBEW, Local 97