



Steven L. Beshear  
Governor

Leonard K. Peters  
Secretary  
Energy and Environment Cabinet

Commonwealth of Kentucky  
**Public Service Commission**  
211 Sower Blvd.  
P.O. Box 615  
Frankfort, Kentucky 40602-0615  
Telephone: (502) 564-3940  
Fax: (502) 564-3460  
psc.ky.gov

David L. Armstrong  
Chairman

James W. Gardner  
Vice Chairman

Linda Breathitt  
Commissioner

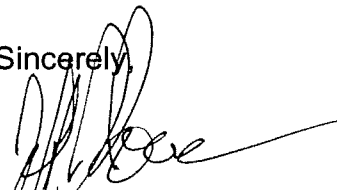
September 9, 2013

## PARTIES OF RECORD

RE: Case No. 2012-00428  
CONSIDERATION OF THE IMPLEMENTATION OF SMART GRID AND SMART  
METER TECHNOLOGIES

Enclosed please find a memorandum that has been filed in the record of the above referenced case for the Informal Conference held on August 23, 2013. Any comments regarding this memorandum's content should be submitted to the Commission within five days of the receipt of this letter. Questions regarding this memorandum should be directed to Quang Nguyen at 502-782-2586.

Sincerely,



Jeff Derouen  
Executive Director

Attachments

## INTRA-AGENCY MEMORANDUM

### KENTUCKY PUBLIC SERVICE COMMISSION

**TO:** Main Case File - Case No. 2012-00428  
CONSIDERATION OF THE IMPLEMENTATION OF SMART GRID  
AND SMART METER TECHNOLOGIES

**FROM:** Aaron Greenwell, Team Leader *AGW*

**DATE:** September 9, 2013

**SUBJECT:** Informal Conference, August 23, 2013

Pursuant to Commission order, an informal conference ("IC") was held on August 23, 2013. A copy of the conference attendance list, including those participating by phone, and a copy of the documents provided at the conference are attached. The conference was held pursuant to the procedural schedule issued in this case for the purpose of discussing issues relating to the Commission's consideration of the implementation of Smart Grid and Smart Meter technologies; however, Commission Staff met with only a subgroup of the Joint Parties' Smart Grid Collaborative ("Collaborative"). The subgroup was identified at the beginning of the conference.

The IC was a follow-up to an August 15, 2013 Collaborative meeting and served as an organizational meeting for Commission Staff with discussion centering on the topics to be addressed by the Collaborative. A conference agenda and report development schedule, as well as each topic set forth in the May 20, 2013 Joint Comments were discussed. Those topics included:

- EISA 2007 Standards
- Customer Privacy
- Opt-out Provisions
- Customer Education
- Dynamic Pricing
- AMI/AMR Deployment<sup>1</sup>
- Cyber Security
- Cost Recovery
- How Natural Gas Companies Might Participate in the Electric Smart Grid

During the conference, three issues that Commission Staff needs to address were identified. Those are:

- How Commission Staff will participate in the efforts of the Collaborative

---

<sup>1</sup> Commission Staff notes that this discussion also addressed the need to include the broad topic of Smart Grid technology deployments, such as distribution automation.

Case No. 2012-00428  
Informal Conference Memo  
September 9, 2013  
Page 2

- How Commission Staff will participate in the development of the Collaborative reports/reporting
- Identification of a potential EPRI speaker.

The IC concluded with a Staff explanation that a memo summarizing the IC will be issued for comment by all parties.

The IC was then adjourned.

Attachments: Discussion Documents  
Sign In Sheets

## 2012-00428 Joint Parties Subgroup

### Objectives

- This subgroup is a representative group of the Joint Parties. It is planned that this group would interface directly with the Commission Staff for education and Commission input.
- The goal is to keep this group small to accommodate schedules and facilitate communication, conversation, and learning.

### Members

Company	Representative	Optional Representative
AG	Dennis Howard	Greg Dutton
BREC	Roger Hickman	Russ Pogue
CAC	Charlie Lanter	
Duke Energy Kentucky	Justin Brown	Rocco D'Ascenzo
EKPC	Isaac Scott	Mark Stallons
Natural Gas Companies	Glenn Jennings	
LGE/KU	Rick Lovekamp	Allyson Sturgeon
Kentucky Power	Lila Munsey	Ranie Wohnhas

#### August 23, 2013 Informal Conference Agenda:

- Update the Commission on report topics
- Ask if the Commission Staff wants to be involved in the following:
  - Drafts review – initial drafts or final.
  - Monthly topic meetings
- Discuss the Commission's expectations from the 2012-00428 collaborative effort
- Discuss if the EPRI and the CRN presentations can be presented using the same format as the Chairman's series, using streaming video and audio?
- Determine Commission availability for:
  - Duke Energy Envision Center Tour
  - EPRI Presentation
  - CRN Presentation

Conference call will be available for the August 23 informal conference.

- Phone Number: (502) 782-2663
- Passcode: 43940#

**Case No. 2012-00428**  
**Joint Parties**  
**Report Development Schedule**

	<b>Customer Privacy</b>	<b>Opt-out Provision</b>	<b>Customer Education</b>	<b>Dynamic Pricing</b>	<b>AMI/AMR Deployment</b>	<b>Cyber-Security</b>	<b>Cost Recovery</b>	<b>Natural Gas</b>
Meeting Date	9/10/2013	10/8/2013	11/12/2013	12/10/2013	1/14/2014	2/11/2014	3/11/2014	4/8/2014
Initial Draft Issued	9/24/2013	10/22/2013	11/26/2013	12/23/2013	1/28/2014	2/25/2014	3/25/2014	4/22/2014
Conference Call	10/1/2013	10/29/2013	12/3/2013	1/7/2014	2/4/2014	3/4/2014	4/1/2014	4/29/2014
Submit Final Changes/Comments	10/2/2013	10/30/2013	12/4/2013	1/8/2014	2/5/2014	3/5/2014	4/2/2014	4/30/2014

**Complete Report**

Date	Activity
5/12/2014	Issue Draft of Complete Report
5/23/2014	Conference Call to Discuss Report
5/30/2014	Submit Final Changes/Comments
6/4/2014	Issue Final Draft of Complete Report
6/11/2014	Meeting to Sign-off on Final Report
6/30/2014	Submit Report to KPSC

## EISA 2007 Standards Framework

**Note: This framework is preliminary. Actual scope, objectives, and deliverables may vary as Collaborative engages in substantive discussions of this and other topics.**

### Background

- PSC Case 2008-00408: Recommendation that EISA 2007 Investment and Information standard are not necessary and urge the commission to not adopt the standards.
- PSC Adopts the EISA 2007 Investment Standard on October 6, 2011
- Case Participants file for reconsideration
- PSC amends the October 6<sup>th</sup> order on July 24, 2012, stating that the Investment Standard would not be adopted at that time and a decision on whether to adopt that standard would be deferred to the completion of a new Smart Grid/Smart Meter administrative case and opens administrative case 2012-00428
- In 2012-00428, the Joint Parties ask the Commission order not to adopt either EISA 2007 standard.
- Commission rules it is premature to make a decision on the standards.

#### The Information Standard Requires:

- **Prices:** Purchasers and other interested persons shall be provided with information on time-based electricity prices in the wholesale electricity market, and time-based electricity retail prices or rates that are available to the consumers.
- **Usage:** Purchasers shall be provided with the number of electricity units, expressed in kWh, purchased by them.
- **Intervals and Projections:** Updates of information on prices and usage shall be offered on a daily basis, shall include hourly price and use information, where available, and shall include a day-ahead projection of such price information to the extent available.
- **Sources:** Purchasers and other interested persons shall be provided annually with written information on the sources of the power provided by the utility, to the extent that it can be determined, by type of generation, including greenhouse gas emissions associated with each type of generation, for intervals during which such information is available on a cost-effective basis.
- **Customer data:** Customers shall be able to access their own information at any time through the internet and by other means of communication elected by the electric utility for smart grid applications. Other interested persons shall be able to access information not specific to any custom through the Internet. Customer-specific information shall be provided solely to that customer.

#### The Investment Standard:

- In General section requires that - Each State shall consider requiring that, prior to undertaking investments in Non-advanced grid technologies, an electric utility of the State demonstrate to the State that the electric utility considered an investment in a

## **EISA 2007 Standards Framework**

**Note: This framework is preliminary. Actual scope, objectives, and deliverables may vary as Collaborative engages in substantive discussions of this and other topics.**

qualified smart grid system based on appropriate factors, including (i) total costs; (ii) cost-effectiveness; (iii) improved reliability; (iv) security; (v) system performance; and (vi) societal benefit.

- Rate Recovery requires that - Each State shall consider authorizing each electric utility of the State to recover from ratepayers any capital, operating expenditure, or other costs of the electric utility relating to the deployment of a qualified smart grid system, including a reasonable rate of return on the capital expenditures of the electric utility for the deployment of the qualified smart grid system.
- Obsolete Equipment requires that - Each State shall consider authorizing any electric utility or other party of the State to deploy a qualified smart grid system to recover in a timely manner the remaining book-value costs of any equipment rendered obsolete by the deployment of the qualified smart grid system, based on the remaining depreciable life of the obsolete equipment.

### **Scope of Discussion**

- EISA 2007 Investment Standard
- EISA 2007 Information Standard

### **Objectives**

- To the extent not already addressed in topical discussions, address the issues in Administrative Case No. 2012-00428 sufficiently for the Commission to rule on the EISA 2007 standards.

### **Deliverables**

### **Project Completion/Key Deliverable Dates**

- Complete on or before May 11, 2014

### **Assumptions**

**Customer Privacy  
September 10, 2013  
Framework**

**Note: This framework is preliminary. Actual scope, objectives, and deliverables may vary as Collaborative engages in substantive discussions of this and other topics.**

**Background**

- Collection of interval consumption data can reveal information about a customer not publicly available. Consequently, many customers are concerned who has access to the data being collected by the utility.
- The 2007 EISA Information standard, in part, states **(emphasis added)**:
  - Customer data: Customers shall be able to access their own information at any time through the Internet and by other means of communication elected by the electric utility for smart grid applications. **Other interested persons shall be able to access information not specific to any customer through the Internet. Customer-specific information shall be provided solely to that customer.**

**Scope of Discussion**

- Define who can do what with the information and under what circumstances.
- Define “customer awareness” of what information is being recorded (voltage, usage, messages, harmonics, etc.), what is being shared with whom, and how the data is being used.
- 3<sup>rd</sup> party access to data.
- Data aggregation policies

**Objectives**

- Determine if a uniform customer-privacy policy is needed.

**Deliverables**

- Review of existing legal requirements already applicable to utilities
- Either:
  - Uniform policy or set of standards for customer privacy; or
  - Clear explanation of why uniform standard is inadvisable

**Project Completion/Key Deliverable Dates**

- Complete prior to October 8th Meeting.

**Assumptions**



**Opt-Out Provisions  
October 8, 2013  
Framework**

**Note: This framework is preliminary. Actual scope, objectives, and deliverables may vary as Collaborative engages in substantive discussions of this and other topics.**

**Background**

- In some states where utilities are providing smart meters, some customers do not want to have this type of meter installed.
- States have handled opt-out issue in different ways.
- Utilities in Kentucky have handled opt-out issue differently

**Scope of Discussion**

- Availability of opt-outs
- Cost impacts of opt-outs
- Operational impacts on utilities of opt-outs
- Technology realities and whether utilities are obligated to offer same services and technology to all customers

**Objectives**

- Evaluate pros and cons of opt-outs, including consequences of opt-outs.
- Identify service and cost impacts associated with opt-outs.

**Deliverables**

- Develop list of opt-out topics to consider when utilities implement smart meters.

**Project Completion/Key Deliverable Dates**

- Complete on or before November 12, 2013.

**Assumptions**

**Customer Education  
November 12, 2013  
Framework**

**Note: This framework is preliminary. Actual scope, objectives, and deliverables may vary as Collaborative engages in substantive discussions of this and other topics.**

**Background**

- Customer education about the benefits of smart technology is critical to gaining customer acceptance and use of this technology.

**Scope of Discussion**

- Need for, and value of, customer information
- Means to educate customers
- Health effects of smart technology
- Privacy concerns
- General education on consumer benefits and use of new technology related to smart meters

**Objectives**

- Identify key topics for customer education

**Deliverables**

- Develop a plan to address the key education areas or topics.

**Project Completion/Key Deliverable Dates**

- Complete prior to December 10, 2013

**Assumptions**

**Dynamic Pricing  
December 10, 2013  
Framework**

**Note: This framework is preliminary. Actual scope, objectives, and deliverables may vary as Collaborative engages in substantive discussions of this and other topics.**

**Background**

- Dynamic pricing refers to pricing that varies according to the time at which the energy is used. It is normally tied directly or indirectly to prices in the wholesale market or to system conditions (peaks) and normally is delivered to the customer via time-based rates or tariffs. Types include Time-of-Use or Time-of-Day Pricing, Critical Peak Pricing, and Real-Time Pricing.

**Scope of Discussion**

- Definition of dynamic pricing
- Criteria for participating in dynamic pricing
- Educational needs of residential customers who participate in dynamic pricing
- Discuss rate, revenue, costs, technical impacts, and benefits of customer adoption rates

**Objectives**

- Develop educational topics for residential customers, specifically related to the personal tools and sophistication required to manage their usage and costs.

**Deliverables**

**Project Completion/Key Deliverable Dates**

- Complete by or before January 14, 2014

**Assumptions**

**AMI / AMR Deployment  
January 14, 2014  
Framework**

**Note: This framework is preliminary. Actual scope, objectives, and deliverables may vary as Collaborative engages in substantive discussions of this and other topics.**

**Background**

- Some utilities have implemented AMI or AMR in their service areas. Deployments, capabilities, and technologies have varied from utility to utility.

**Scope of Discussion**

- Pre-paid metering
- Remote connections and disconnections
- 

**Objectives**

- Protection from technology obsolescence

**Deliverables**

- A list of items to consider concerning pre-paid metering, remote connections and disconnections.

**Project Completion/Key Deliverable Dates**

- Complete prior to February 11, 2014

**Assumptions**

**Cyber Security  
February 11, 2014  
Framework**

**Note: This framework is preliminary. Actual scope, objectives, and deliverables may vary as Collaborative engages in substantive discussions of this and other topics.**

**Background**

- National Institute of Standards and Technology (NIST) defines cyber security as something that encompasses “measures to ensure the confidentiality, integrity and availability of the electronic information communication systems and the control systems necessary for the management, operation, and protection of the Smart Grid’s energy, information technology, and telecommunications infrastructures.”<sup>1</sup>
- Several cooperatives and the Commission are engaged in cyber-security pilot program, with a final report to issue by the end of 2013 (Kentucky Public Service Commission / NARUC Solicitation # NARUC-2013-RFP032-DEOE0000123, Cyber Security Risk Assessment and Risk Mitigation Plan Review for Kentucky Public Service Commission).
- NARUC has issued “Cybersecurity for State Regulators 2.0,” which identifies utility cyber-capacities and accompanying cyber-vulnerabilities that must be managed by regulators and the infrastructure operators they regulate.

**Scope of Discussion**

- Already-applicable standards

**Objectives**

- Provide assurance to the Commission and AG office that each utility has business plans in place to handle cyber contingencies.

**Deliverables**

**Project Completion/Key Deliverable Dates**

- Complete on or before March 11, 2014

**Assumptions**

---

<sup>1</sup> “NIST Framework and Roadmap for Smart Grid Interoperability Standards, Release 1.0.” NIST, January 2010

**Cost Recovery  
March 11, 2014  
Framework**

**Note: This framework is preliminary. Actual scope, objectives, and deliverables may vary as Collaborative engages in substantive discussions of this and other topics.**

**Background**

- EISA 2007 Smart Grid Investment Standard
- Kentucky Smart-technology deployments to date

**Scope of Discussion**

- Recovery of assets with remaining book life. Refer to cases approved by the Commission.
- Recovery mechanism
  - Reconfirm that recovery through base rates, DSM, or a separate rider is acceptable.
  - Pursue an above the standard rate case return for implementing technology which may adversely affect the utilities revenue.

**Objectives**

- Review of existing statutes and standards related to utility needs for cost recovery.

**Deliverables**

**Project Completion/Key Deliverable Dates**

- Complete prior to April 8, 2014

**Assumptions**

**How Natural Gas Companies Might Participate in the Electric Smart Grid  
April 8, 2014  
Framework**

**Note: This framework is preliminary. Actual scope, objectives, and deliverables may vary as Collaborative engages in substantive discussions of this and other topics.**

**Background**

- EISA 2007 Investment Standard
- EISA 2007 Information Standard

**Scope of Discussion**

- Information available to natural gas customers
- Natural Gas Smart Technology

**Objectives**

- Information available to natural gas customers
- Natural Gas Smart Technology
- Discuss and determine Natural Gas role in the development of Smart Grid in Kentucky.

**Deliverables**

**Project Completion/Key Deliverable Dates**

- Complete on or before May 11, 2014

**Assumptions**

**ADMINISTRATIVE CASE NO. 2012-00428, SMART GRID  
INFORMAL CONFERENCE  
FRIDAY, AUGUST 23, 2013**

NAME	REPRESENTING
Anna Greenwell	PSC
Virginia Gregg	PSC
Quang D. Nguyen	PSC
Kyle Willard	PSC - Engineering
Chuck Hunter	CAC
Rick LOEKAMP	LG&E / KU
Allison Sturgeon	LG+E / KU
[Signature]	KPCo
Rocco D'Ascenzo	Duke Energy Kentucky
Ivan J. Javid	EKPC
Glenn Jennings	Delta Natural Gas
Mark Stollens	Bowen Electric
RICHARD RAFF	PSC-LEGAL
Daryl Newby	PSC F/A
Aaron Ann Cole	PSC Legal
Roger Hickman	Big River



ADMINISTRATIVE CASE NO. 2012-00428, SMART GRID  
INFORMAL CONFERENCE  
FRIDAY, AUGUST 23, 2013

NAME	REPRESENTING
<i>David Huff</i>	<i>KU/LC+E</i>
<i>Mike French</i>	<i>Meade Co. RECC</i>
<i>Justin Brown</i>	<i>Duke Energy Ky</i>
<i>Russ Peque</i>	<i>Big Rivers</i>
<i>Rick Cardell</i>	<i>Jackson Energy</i>
<i>Darrick Dean</i>	<i>Jackson Energy</i>