

## Meeting Minutes

October 14, 2014

---

### Members

Ron Ambrosio, IBM T.J. Watson Research Center  
David Forfia, Electric Reliability Council of Texas (ERCOT)  
Mark Kerbel, REGEN Energy Inc.  
Mark Knight, CGI  
James Mater, Quality Logic  
Tracy Markie, Engenuity  
Ken Wacks, consultant to Sensus Metering Systems Inc.

### Members Not Present

Ward Camp, Landis + Gyr  
Jeff Gooding, California Edison  
Heather Sanders, CA-ISO  
Doug Houseman, EnerNex  
Tom Sloan, Kansas State Legislator  
Jeff Taft, PNNL

### Support – Pacific Northwest National Laboratory (PNNL)

Sherry Kowalski, PNNL  
Ron Melton, PNNL

### Speakers and Guests

Ed Cazalet, TeMix, Inc.  
Bill Cox, Cox Software Architects, LLC  
Rish Ghatikar, Lawrence Berkeley National Laboratory  
Stephen Knapp, Power Generation Services, Inc.  
Larry Lackey, TIBCO Software, Inc.  
David LeVee, Pwrcast  
Dean Prochaska, NIST  
Leonard Tillman, Balch, Inc.  
Michael Danziger, Deloit  
Jarrid Hall, CSG International

## Administrative

### Welcome and Administrative Business

**Ron Melton, GWAC Administrator**

Ron Melton called the meeting to order at 1:06 PM.

Ron Melton reviewed the agenda and read the proprietary information disclosure policy according to the bylaws to the GWAC members and guests.

## Review of Action Items

### **Ron Melton, GWAC Administrator**

- Doug Houseman and Eric Gunther to continue to work on the effort to have the Interoperability Context Setting Framework as an IEEE technical document
- Doug Houseman and Jason Crabtree to continue work on the Transactive Energy Cyber Security paper
- Ron Melton, Mark Knight and Mark Kerbel to continue revision/edits on the Transactive Energy Framework
- Doug Houseman to draft a charter for the GWAC Mutual Assistance / Emergency Response working group
- Ken Wacks to continue to work on the GWAC Interoperability Context Setting Framework as an ISO/IEC Technical Report
- GWAC Communications Plan Working Group to be formed
- Transactive Energy Conference
  - Abstracts to be chosen by October 15th
  - Foundation working group to be formed
  - Keynote speakers to be confirmed
  - Develop possible Regulators Panel Session
  - Continue work on International Panel

## Approval of Minutes

### **Ron Melton, GWAC Administrator**

The August, 2014 web meeting minutes were distributed to the Council by email for review and feedback, corrections were received from Ken Wacks. Ken Wacks moved to approve the set of minutes with editorial corrections from Mark Knight; Ron Ambrosio seconded the motion and the motion passed.

Sherry Kowalski is finishing the proceedings from the September face-to-face meeting and workshop to be approved at the November meeting.

## Calendar Review

Ron Melton reviewed the calendar for the GWAC meetings and the upcoming outreach dates.

GWAC 2014 Web Meetings:

- November 11, 1:00 PM to 3:00 PM

GWAC 2014 Face-to-Face Meetings:

- December 9 – Portland, OR

GWAC 2014 Events:

- December 10-11, International Transactive Energy Conference, Portland OR

2015 Meeting dates will be scheduled soon.

## Conference and Event Planning

### Transactive Energy Conference 2014

Ron Melton provided a status update on the 2<sup>nd</sup> International Energy Conference which will be held December 10-11, 2014, in Portland Oregon. The venue will be hosted by Portland General Electric at the World Trade Center in Portland, Oregon. A GWAC face-to-face meeting will be held half-day the day prior, on December 9, 2014.

#### Logistics:

Special group rates have been established for TEC 2014 at both the Hilton and Marriott downtown locations. Additional information is listed below. Both hotels are close to the World Trade Conference Center, where the conference is located.

1. Hilton Portland, located at 921 SW 6th Avenue. To make your reservation, please call 1-800-HILTONS ([1-800-445-8667](tel:1-800-445-8667)) and mention code SGO. The deadline for registration is October 31st.

2. The Marriott Downtown, located at 520 SW Broadway, Portland OR 97205. To make your reservation call [503-226-7600](tel:503-226-7600) and mention "TEC 2014." The deadline for registration is November 17<sup>th</sup>.

(Note – there was some confusion about the rate since the US Government per diem rate was not finalized until recently.)

The SGIP meeting is the two days preceding the Transactive Energy Conference; December 8-9, 2014.

#### Keynote Speakers:

The Program Committee is continuing their work to finalize TEC's keynote speakers and has confirmed participation of Elliott Mainzer from Bonneville Power Administration and David Owens from Edison Electric Institute. Other potential keynote speakers include a DOE official arranged by Chris Irwin.

#### Panel Session

The TEC Program structure contains two parallel panel sessions each day for a total of four panel sessions. Each session is followed by a workshop. The panelists are to set up the workshop discussions.

The focus of the workshops and program have been defined and the call for papers has been closed and a committee created to review abstracts. Abstracts will be chosen by October 15 and authors notified by October 20.

Panel Session Leadership assignments are as follows:

- Business and Policy Barriers: Lead – Forfia; Deputy – Camp
- Customer Engagement: Lead – Kerbel; Deputy – Markie
- From Demand Response to Transactive Energy Systems: Lead – Taft; Deputy – Ambrosio
- Cyber-physical, Security and Risk Management Challenges: Lead – Houseman; Deputy - Mater

### **International Panel Session:**

The conference's international panel includes:

- Mark Paterson from CSIRO
- Koen Kok, TNO, The Netherlands
- Bartosz Wojczyk, Manila Electric Company (not confirmed)

Ron Ambrosio has an action to contact Pedro Rodriguez from Abengoa and invite him to be a panelist. Other panelists may be pulled from the paper session.

### **Foundational Session**

A GWAC working group was formed and a basic outline was developed that includes the following elements:

- Summary of workshops since last conference
- Transactive Energy Principle
- Functional view of a transactive grid
- Future view / next steps / roadmap

The working group will continue to meet and create the slide deck for the Foundational Session.

### **Paper Sessions**

The TEC Call for Papers closed and review is in process and scheduled to be completed by Wednesday, October 15, 2014. The paper sessions will include two sessions each day for a total for four sessions. The session presentations are to set up the workshop discussions which follow each session.

GWAC session assignments are as follows:

- Business and Policy Barriers: Lead – Forfia; Deputy – Camp
- Customer Engagement: Lead – Kerbel; Deputy – Markie
- From Demand Response to Transactive Energy Systems: Lead – Taft; Deputy – Ambrosio
- Cyber-physical, Security and Risk Management Challenges: Lead – Houseman; Deputy – Mater

### **International Panel**

- Mark Paterson, CSIRO, Australia (confirmed)
- Koen Kok, TNO, The Netherlands (confirmed)
- Bartosz Wojczyk, Manila Electric Company (not confirmed)

Ron Ambrosio to invite Pedro Rodriguez from Abengoa to be a speaker for the TEC International Panel.

## Communication Matrix

At the Cal-ISO GWAC workshop, it was determined that the Council needs to convey a consistent message in regards to transactive energy as well as other topics. A GWAC group was formed, and developed the GWAC Communication Matrix. The matrix is on the GWAC SharePoint site under the outreach tab. Mark Knight reviewed the components of the matrix with the Council. The group is meeting on a bi-weekly basis.

GridWise GWAC Communications Matrix <https://www.gridarch.org/outreach/Forms/AllItems.aspx>

The screenshot shows a spreadsheet titled "GWAC Communications Matrix" with several columns and rows. Annotations with arrows point to specific parts of the spreadsheet:

- What supports the message (gives it substance), proof points**: Points to the "Supporting materials" column.
- Ask / What do we want target audience to do (action)**: Points to the "Who / target audience(s)" column.
- Communication (pull) opportunities (upcoming events, calls for papers, etc.)**: Points to the "Where (push) - channel(s)" column.
- Who carries message**: Points to the "Who carries message" column.
- Date**: Points to the "Date" column.
- Status**: Points to the "Status" column.
- What do we want to say**: Points to the "What do we want to say" column.
- Target Organization / Publication / Event (optional)**: Points to the "Target Organization / Publication / Event (optional)" column.
- Why - Value to target audience to take action**: Points to the "Why - Value to target audience to take action" column.

The spreadsheet has the following columns: What do we want to say, Supporting materials, Who / target audience(s), Ask / What do we want target audience to do (action), Where (push) - channel(s), Who carries message, Date, Status, and Why - Value to target audience to take action. The rows contain various communication items, such as "Member to contact at..." and "Member to contact at...".

Ken Wacks suggested that all Council members send in what they have written on transactive energy over the last year. The intent of the matrix is a means for planning and developing material with specific messages about topics the Council is working on, such as transactive energy, but it could also include other topics such as mutual assistance and emergency response. Ron Melton suggested that the Council accumulate materials that can be distributed without restriction. Mark Kerbel asked that the Council also include where the materials have been distributed, so the Communications Group can come up with the best strategy on who to approach.

## Technical and Policy

### Mutual Assistance / Emergency Response

**Doug Houseman, GWAC Member**

A GWAC working group on mutual assistance and emergency response has been created to survey the landscape to see what type of inputs GWAC might be able to provide in this industry

discussion. Doug Houseman has created a charter and is currently seeking involvement from other sources. Doug Houseman has contacted several utilities about joining the discussion and has contacted the Utilities and Transportation Commission (UTC) about the possibility of a joint discussion or working group. The Council should receive a Doodle Poll in October in a scope statement that will be distributed to the Council to see who would be interested in participating in the GWAC mutual assistance / emergency response working group.

## **Transactive Energy**

***Mark Knight, GWAC Chairman***

### **Function View Document**

The Council is to write a transactive energy framework follow-on paper that describes the functional view of transactive energy. This paper would take a different look to make it more easily understood for utility executives.

The challenge is to be as neutral as possible relative to specific implementation approaches, yet convey a functional understanding of transactive systems, which is a difficult task. Ron Melton recommended that the Council can build upon the transactive control infographic work that PNNL has started.

David Forfia, Ron Melton and David Homberg are part of an informal working group. The group is building upon the SGIP presentation to further refine the document to develop an easily understandable document. The group is attempting to translate information into an infographic or an animation.

### **TE Decision Makers Check List**

***Mark Knight, GWAC Chairman***

A topic that came from the GWAC face-to-face meeting in Cal-ISO was the need for a transactive energy checklist that could be used by policy makers and decision makers. Mark Knight created a [slide](#) with a collection of materials from GWAC work and other related materials. The Council was in agreement to begin work to develop a decision maker's checklist. Ron Melton suggested that the Council utilize the Transactive Energy Conference's regulator panel to ask what information is needed to drive transactive energy forward.

### **TE Framework**

Mark Knight, Ron Melton and Mark Kerbel are actively working on the Transactive Energy Framework edits and revisions and are meeting on a weekly basis. A revised draft document will be distributed to the Council for review and comments.

## GridWise Architecture Council Interoperability Context-Setting Framework

### IEEE Update

No update provided.

### ISO / IEC Standard Update

#### ***Ken Wacks, GWAC Member***

Mark Knight offered the GridWise Architecture Council Interoperability Context Setting Framework as an ISO/IEC Technical Report on August 1, 2014. Ken Wacks prepared and posted a document titled “The GridWise Interoperability Setting Framework submitted by the GridWise Architecture Council” on the International ISO/IEC Standard distribution board. The document requests that the GWAC Context-Setting Framework be considered as an ISO / IEC Technical Report. Ken Wacks and Ron Ambrosio presented and explained the request to the ISO/IEC experts in Beijing on September 15, 2014. The Framework was received positively by the ISO/IEC experts and the ISO/IEC administrator asked for a review by the IEC committee developing grid interface standards, which will start in November.

## Liaison Reports

### Smart Grid Interoperability Panel - SGIP

David Forfia has been elected Vice Chair to the SGIP Transactive Energy Coordinating Council.

### ISO/IEC

A new work item proposal for ISO/IEC 18012 on Lexicon and event coding interoperability was approved. The new work item had to be approved by a majority of countries and also have five countries agree to provide experts to work on it. There is now cooperation with the consumer electronics industry.

### CEA

Work was recently started on standards on APIs for developers to interface with consumer appliances. Ron Ambrosio suggested that this work could provide a lexicon for his work.

### Gartner

David Forfia reported that there was a great deal of discussion time focused on transactive energy at the last Electric Utility Industry Briefing. David also noted that similar terminology was used. And transactive energy was identified as an emerging area for Gartner Utility Services.

## **Industrial Internet Consortium**

Ron Ambrosio is IBM's Governing Board representative to the Industrial Internet Consortium. The Consortium is looking at different industry solutions use cases, which includes energy related use cases that are being developed in coordination with NIST. Ron is educating this community about GWAC and our work with transactive energy, along with other Consortium founding members General Electric, Cisco, ATT and Intel. The consortium has grown and now consists of 80 members.

## **AHR**

Tracy Markie will facilitate a session at the AHR show in January on transactive energy as it applies to buildings. Tracy is seeking four to six panelists to participate in the session, and those interested were instructed to contact Tracy directly.

## **TNO**

PNNL recently had a meeting with TNO and Flexible Power Application Infrastructure (FPAI) from the Netherlands and a productive discussion where TNO shared the work they are doing building on the powered match technology. Kohn Kok will be at the Transactive Energy Conference so the Council will have the opportunity to learn more.

## **Announcements**

Dr. Ed Cazelet, founder and CEO of TeMix, Inc. and Doug Houseman, VP of Technical Innovation, EnerNex are to present at [Smart Grid Educational Webinar Series](#) on October 30, 2014.

## **Action Items Review**

- Ron Ambrosio to invite Pedro Rodriguez from Abengoa to be a speaker for the TEC International Panel
- The Council to submit past presentations and articles that need to be included in the GWAC communication matrix
- TE Decision Makers working group to meet
- Doug Houseman and Eric Gunther to continue to work on the effort to have the Interoperability Context Setting Framework as an IEEE technical document - Ongoing
- Doug Houseman and Jason Crabtree to continue work the Transactive Energy Cyber Security paper
- Ron Melton, Mark Knight and Mark Kerbel to finalize revision/edits on the Transactive Energy Framework and to distribute to the Council for review
- Doug Houseman to continue work on the GWAC Mutual Assistance / Emergency Response working group
- Ken Wacks to continue to work on the GWAC Interoperability Context Setting Framework as an ISO/IEC Technical Report

## **Adjourn**

David Forfia moved to adjourn the meeting, Ron Ambrosio seconded the motion and the meeting adjourned at 2:40 PM.