

## Meeting Minutes

### February 25, 2015

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#### ***Members***

Ron Ambrosio, IBM T.J. Watson Research Center  
Ward Camp, Landis + Gyr  
David Forfia, Electric Reliability Council of Texas  
(ERCOT)  
Mark Kerbel, REGEN Energy Inc.  
Mark Knight, CGI  
James Mater, Quality Logic  
Tracy Markie, Engenuity  
Tom Sloan, Kansas State Legislator  
Jeff Taft, PNNL  
Ken Wacks, consultant to Sensus Metering  
Systems Inc.

#### ***Members Not Present***

Jeff Gooding, California Edison  
Heather Sanders, CA-ISO  
Doug Houseman, EnerNex

#### ***Associates***

Stephen Knapp, Power Generation Services, Inc.  
Gordon Matthews, BPA  
Farrokh Rahimi, OATI

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

Sherry Kowalski, PNNL

Ron Melton, PNNL  
Abhishek Somani, PNNL

#### ***Speakers and Guests***

Evan Berger, CALMAC  
Ron Bernstein, Ron Bernstein Consulting Group,  
Anto Budiardjo, PointView, Inc.  
Robert Burke, ISO New England Michael  
Ed Cazalet, TeMix, Inc.  
Bruce Coniceros, Sacramento Municipal Utility  
District  
Phil Davis, Schneider Electric  
Mike Danziger, Deloit  
Aryeh Fishman, Edison Electric Institute  
Ali Ipakchi, OATI  
David Katz, IBEX- Energy  
David LeVee, Pwrcast  
Dan Lubar, Relay Services  
Mark Ortiz, Consumers Energy  
Leonard Tillman, Balch, Inc.  
David Wollman, NIST

## Administrative

### Welcome and Administrative Business

***Ron Melton, GWAC Administrator***

Ron Melton called the meeting to order at 10:03AM.

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***

- TE Decision Makers Working Group to continue meeting.
- Doug Houseman and Erich Gunther to continue working on the effort to have the Interoperability Context Setting Framework as an IEEE technical document.
- Doug Houseman and Jason Crabtree are continuing to work on the Transactive Energy Cyber Security paper.
- Ron Melton, Mark Knight and Mark Kerbel have finalized revision/edits on the Transactive Energy Framework and are to distribute to the Council for review. The framework was released the first week of February and is now listed on <http://www.gridwiseac.org/>
- Doug Houseman is continuing to lead the GWAC Mutual Assistance / Emergency Response working group.
- Ken Wacks and Ron Ambrosio are continuing to work on the GWAC Interoperability Context Setting Framework as an ISO/IEC Standard effort. An update on this effort will be provided later in the meeting.

## Approval of Minutes

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

The October 14, 2014, web meeting minutes were distributed to the Council by email for review and feedback. Jeff Taft motioned to accept the minutes as presented, Tom Sloan seconded the motion and the minutes were approved.

The November 11, 2014, web meeting minutes were distributed to the Council by email for review and feedback. Corrections were received by Ken Wacks. Tom Sloan motioned to accept the minutes with corrections, Tracy Markie seconded the motion and the minutes were approved.

## Calendar Review

### GWAC 2015 Web Meetings:

- February 25, 2015, 10AM-12PM Pacific
- April 22, 2015, 10AM-12PM Pacific
- June 24, 2015, 10AM-12PM Pacific

### GWAC Face-to-Face Meetings:

- March 25, 2015, 12PM – 5PM at NIST, Gaithersburg, MD
- May 12-13, 2015, OATI, Redwood City, CA (2 full-days)

Related Events:

- March 24-15, 2015, NIST TE Challenge Preparatory Workshop – Contact: David Holmberg
- March 26-27, 2015, Grid 3.0 Workshop at NIST – Contact: Dave Wollman  
GWAC members that plan to attend the GWAC workshop at NIST need to register for the NIST TE Challenge Preparatory workshop to gain access to the campus. Sherry Kowalski will send out the registration link.

**GWAC Slate of Candidates**

Ron Melton reviewed the selection process.

- GWAC By-Laws call for a minimum of 20% turnover each year.
- Selection committee: GWAC Administrator, DOE person, GWAC member not up for renewal, outsider.
  - 2015 Selection committee:
    - Ron Melton, GWAC Administrator
    - Chris Irwin, DOE
    - Dave Wollman, NIST
    - Mark Knight, GWAC Member
    - Ken Wacks, GWAC Member
  - Committee reviews applications and selects a “slate”
  - Slate confirmed by the GWAC as a group
- The Proposed Slate of Candidates has been selected from 12 submitted applications and 2 current Council members who expressed their interest to stay on the Council for another two year term.
- Member’s Term Status

Current Members	Term Start	Term End
David Forfia	Jan 2013	Dec 2014
Ron Ambrosio	May 2004	Dec 2015
H. Ward Camp	Jan 2011	Dec 2014
Jeff Gooding	Jan 2013	Dec 2014
Doug Houseman	Jan 2014	Dec 2015
Mark Kerbel	Jan 2014	Dec 2015
Mark Knight	Jan 2012	Dec 2015

Tracy Markie	Mar 2009	Dec 2014
James Mater	Jan 2013	Dec 2014
Heather Sanders	Jan 2014	Dec 2015
Tom Sloan	Jan 2010	Dec 2015
Jeffery Taft	Jan 2013	Dec 2014
Ken Wacks	Jan 2007	Dec 2015

Members who choose not to reapply automatically become emeritus members. Ron Melton, Mark Knight, and David Forfia thanked the Council’s new emeritus members, Ward Camp, Jeff Gooding, Tracy Markie and Jeffrey Taft for their service.

The proposed slate for confirmation consisted of:

- David Forfia - Continuing GWAC Member
- James Mater – Continuing GWAC Member
- Stephen Knapp - Mr. Knapp is the Chief Compliance Officer in the Law, Compliance, and Business Ethics unit of Power Generation Services, Inc., (PoGens™), responsible for overseeing the company’s national compliance organization and the company’s national business ethics efforts. Additionally, Mr. Knapp has been an electrical engineer and compliance officer in the energy sector for over 38 years.
- Ron Bernstein - Mr. Bernstein is President of RBCG, LLC providing consulting services to organizations needing help navigating their energy and automation strategy. RBCG provides building automation standards, specification development support, educational program development, business management consulting, and facility master planning for end users, integrators, and vendors. He also holds the position of LonMark Chief Ambassador supporting the non-profit association with strategic planning, industry stewardship, and management of a team of ambassadors worldwide.
- Gerald Gray - Dr. Gray leads the EPRI enterprise architecture and integration program. In this capacity Dr. Gray also participates in the development of numerous industry standards as a member of International Electrotechnical Committee (IEC) TC57 and MultiSpeak organizations and the technical editor of IEC 61968-14. He also participates in the Smart Grid Interoperability Panel as a member of the Smart Grid Architecture Committee (SGAC).
- Carl Zichella - Carl Zichella is the director for western transmission for NRDC. He is the organization’s lead staff for western U.S. renewable energy transmission siting and serves on a nationwide team working on renewable energy development issues. In this role, he works with stakeholders from environmental organizations, renewable energy development and transmission industries, local, state and national governments, regulatory agencies and the public to find renewable energy transmission solutions that

accelerate renewable energy development while respecting wildlife and land conservation efforts.

Slate of Candidates was reviewed and discussed by the Council. Ron Melton asked if there were any objections to the slate and then polled Council members for the approval of the proposed slate of candidates. All GWAC members present approved the slate as was presented.

## Conference and Event Planning

### Decision Maker's Check List Planning

Mark Knight provided a summary and listed the discussion items from the February 24, 2014 meeting.

The following TE Checklist Working Group Members met to prepare for the March 25, 2015 workshop at NIST:

- Mark Knight, CGI, GWAC
- Ken Wacks, Sensus Metering Systems, GWAC
- James Mater, QualityLogic, GWAC
- Larry Lackey, TIBCO
- Dave LeVee, PwrCast

Some key takeaways from the meeting were:

- How does transactive energy look from a risk management perspective?
- The importance of communicating the value of transactive energy at a high level to help decision makers. There was discussion on starting high level concepts so people can relate to other topics to drill down into transactive energy specifics.
- Larry Lackey circulated an article titled "Getting Science into the Hands of Policy Makers" focused on the potential audience and the challenges they may be facing.
- Mark Patterson provided CSIRO research on behavioral economics and decision making that may be helpful in creating the Decision Maker's Checklist.
- Looking at a way to categorize the checklist similarly to the Interoperability Decision Maker's Checklist. Perhaps categorize the checklist based on audience needs as listed in the Transactive Energy Framework document.
  - Foundation Principles
  - Architectural Guidelines
  - Attributes of Transactive Energy
  - Layers of Transactive Energy (Chapter 4 in the Transactive Energy Framework)
- Utilizing the CSIRO behavioral research, the Council needs to review the policy and psychology of the end customer. Stressing less on the benefits and more on the ability to avoid risk as a path forward with communications.

Discussion continued on renewals and how to fill gaps that suddenly occur. Robert Buke mentioned that there will be a Partial Solar Eclipse experienced in Europe, northern and eastern Asia and northern and western Africa. The eclipse starts at 07:41 UTC and ends at 11:50 UTC. It will be interesting to see what impacts the eclipse will have on the Central European system and operators.

### **GWAC half-day meeting at NIST on March 25, 2015, 1PM – 5PM.**

Face-to-Face Transactive Energy Decision Makers Checklist Workshop is planned for May 12-13, 2015, and will be hosted by OATI in Redwood City, California. Hotel arrangements are currently underway and Sherry Kowalski will provide the details to the Council as they become available. Expected attendance is approximately 50 participants, so seats will be limited. PointView will be used to manage the conference.

The focus of the meeting will be to:

- Determine the desired outcome of OATI Workshop
- What topics at OATI workshop
- Decide who we need to invite, and panel speakers and workshop participants
- Define the workshop structure - seeking to create a nice balance between presentations, discussions and brainstorming.

Jeff Morris, a State Representative for the State of Washington, posted a LinkedIn discussion with link to legislation he is proposing to the State of Washington. It includes an element which lays the groundwork of transactive systems related to feed-in tariffs and roof-top solar panels integrated into the electrical system. Ron Melton encouraged the Council to follow the discussion on the [LinkedIn Transactive Energy Association](#) page.

David Forfia asked meeting participants to please send GWAC any discussion items that they feel should be addressed when creating the Transactive Energy Decision Maker's Checklist. Aryeh Fishman from EEI (Edison Electric Institute) is working on a white paper focusing on the utility of the future that is expected to be published in June, 2015. If there is an opportunity for EEI to engage and provide input, please contact them.

## **Communication Matrix**

The purpose of the communication matrix 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. Mark Knight suggested that we reschedule 30 minute monthly calls. Meeting attendance seems to be waning. Heather Sanders was originally the work group lead but due to work obligations, she is no longer able to continue this task. Mark Knight asked for a volunteer, and hearing none, he offered to take over as the lead and keep the Communications Matrix current.

Recent active included:

- February 15, 2015 – GWAC Administration, Ron Melton presented at the National Association of Regulatory Utility Commissioners (NARUC) meeting.
- A webinar on “The Future of the Electric Grid” will be held March 5, 2015, with the National Council of State Legislators. This was a repeat of the webinar on December 3, 2014, for the Council of State Governments. The webinar will be focused on commercial, industrial and residential consumers that are investing in technologies to increase energy efficiency, generate their own energy and shape energy demand. GWAC Chairman Emeritus, Mark Knight, GWAC Administrator Ron Melton, and GWAC Member Tom Sloan will present “A Day in the Life of a Transactive Grid”.

## Technical and Policy

### Mutual Assistance / Emergency Response

***Ron Melton, GWAC Administrator***

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. A small core team is now meeting via phone on Friday every other week. Nine high level use cases were circulated for discussion. Doug Houseman, Ron Ambrosio and Mark Knight discussed the use cases at the Working Group Call on January 16, 2015. They are currently reviewing the use cases with utilities for further comments. There was a plan to have a face-to-face meeting at the DistrubuTech conference on February 2, 2015, but due to bad weather, the meeting was cancelled.

### 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.

Would like to translate foundational session example into some sort of infographic – the “day in the life of a transactive grid” slides into some sort of infographic.

Mark Knight asked the Council to send in suggestions and ideas for this document's content and format. Discussion continued on a possible infographic and storyboard vs. infographic. Erich Gunther is working on turning his "Behind the Meter" presentation into a Prezi presentation and offered his presentation as inspiration.

### **TE Framework**

The Transactive Energy Framework updates have been completed, and version 1.0 can be found at the GWAC website at <http://www.gridwiseac.org>. A press announcement is scheduled to be released by the end of February.

## **GridWise Architecture Council Interoperability Context-Setting Framework**

### **IEEE Update**

Erich Gunter reported that work is continuing on this task, but on a different path. The plan is to create a temporary task force within a working group that can review, and hopefully publish the document. Erich will update the Council on the progress at the next meeting.

### **ISO / IEC Standard Update**

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

Update: A response was received from the IEC TC 57/WG 21 that they were overall happy with the mapping from the GWAC Stack to the SGAM model, and that it may be useful to other working groups with a different scope. Ken Wacks wrote a New Work Item Proposal for the Technical Report which will get reviewed at the U.S. Technical Advisory Group to Working Group 1 and will discuss at their meeting in Tokyo, March 16-2, 2015.

## **Liaison Reports**

### **ISO/IEC**

General call for individuals that would like to participate in formation of United States positions, or to be an expert to write world standards in home to grid automation, including energy management, please contact Ken Wacks.

## **Smart Grid Interoperability Panel - SGIP**

David Forfia reported the board restructure and election will open the first week in March. Every member of the SGIP is up for election this quarter. A one day face-to-face open meeting is scheduled for March 5, 2015, in Phoenix, Arizona. Two parallel sessions will be held on Open

Field Message Bus and Cybersecurity, as they relate to grid modernization. SGIP is also kicking off the new Field Messaging Group.

A white paper on Model Interoperable Transactive Retail Tariff was developed by the SGIP Building-to-Grid and Industry-to-Grid Joint Domain Expert Working Groups, and published the week of February 23, 2015.

Ken Wacks reported that the Home to Grid Domain Expert working Group is continuing to develop white papers on micro grids and economics of customer involvement with smart grids, and broadcast communications.

Erich Gunther reported that the Testing and Certification Committee is working this year to develop some guidance on IEC 61850 Standard Implementation, as well as helping engage an alliance in the group for Green Button activities.

### **Consumer Electronic Association**

The Modular Communication Interface Standard, which was published two years ago, received authorization to revise the standard, and efforts are currently underway.

### **AHR Expo**

Ken Wacks reported that Tracy Markie organized a session at the AHR expo on transactive energy where four Council members spoke. The presentations were received well and generated many questions.

### **Industrial Internet Consortium**

Ron Ambrosio reported that the industrial Internet Consortium (IIC) has grown to well over 100 organizations and is receiving members from Europe and Asia. IIC is beginning collaborations with SGIP to define pilot smart grid test bed projects.

### **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.

## **Action Items Review**

- Erich Gunter and Ron Ambrosio are to send presentations to David Forfia and Ron Melton for work on the functional view storyboard.
- Add Function View task on May agenda.
- Council members are to reach out to potential speakers and participants for the May face-to-face Transactive Energy Decision Maker's Checklist Workshop at OATI.
- Eric Gunther to continue work on the effort to have the Interoperability Context Setting Framework as an IEEE technical document.
- Doug Houseman and Jason Crabtree to continue work the Transactive Energy Cyber Security paper.
- Doug Houseman to continue work on the GWAC Mutual Assistance / Emergency Response working group.
- Ron Ambrosio to continue to work on the GWAC Interoperability Context Setting Framework as an ISO/IEC Standard effort
- Monthly Communication Matrix calls to continue and be led by Mark Knight.
- Ron Melton to reach out to the newly elected Council members
- Sherry Kowalski will send out the registration link for the GWAC workshop at NIST in March.

## **Adjourn**

Mark Knight moved to adjourn the meeting, James Mater seconded the motion and the meeting adjourned at 11:56AM.