

## Meeting Minutes

July 23, 2014

---

### Members

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

### Members Not Present

Jeff Gooding, California Edison  
Heather Sanders, CA-ISO

---

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

Sherry Kowalski, PNNL  
Ron Melton, PNNL  
Abhishek Somani, PNNL

### Speakers and Guests

Bill Cox, Cox Software Architects, LLC  
John Chatterly, Fujitsu  
Rish Ghatikar, LBNL  
Ali Ipakchi, OATI  
Stephen Knapp, Power Generation Services, Inc.  
David Katz, Sustainable Resources Management  
Larry Lackey, TIBCO Software, Inc.  
David LeVee, Pwrcast  
Dan Lubar, Relay Services  
Jeff Morris, Washington State Legislator  
Mark Patterson, CSIRO  
Tim Schoechle, International Center for Standards Research  
Leonard Tillman, Balch, Inc.

## Administrative

### Welcome and Administrative Business

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

Ron Melton called the meeting to order at 10:08 AM.

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

### GWAC Associates

#### ***Ron Melton, GWAC Chairman***

Ron Melton reminded the Council that the nomination period for GWAC Associate Members opened in July. The Associate term is 1 year and the criteria such as:

- Active participation in council activities such as Council initiatives working groups or Attendance at Council meetings for at least one year prior to the nomination
- Technical or other background with skills and experience that is consistent with the purposes of the Council

Privileges of Associate Membership include:

- Listing as an Associate Member on the Council's web site
- Allowed to cite their association with the Council
- May speak on behalf of the Council

All nominations should be emailed to Sherry Kowalski and Ron Melton before July 31, 2014. Ron Melton will contact nominees to confirm their willingness to become an Associate Member. A list of nominees will be sent to the Council for review, the election process will take place via email and the announcement will take place at the August 20<sup>th</sup> web meeting.

## **Review of Action Items**

### ***Ron Melton, GWAC Chairman***

Ron Melton reviewed the status of the following action items from previous meetings:

- Work continues on the Interoperability Context Setting Framework as an IEEE standard. Doug Houseman will provide an update at the August web meeting.
- Work will continue on the Transactive Energy, Policy Paper and Framework revision.
  - Ron Melton reported that the policy paper is nearly complete and the framework revision is proceeding.
- The EnergyBiz article titled "Transactive Energy in 1000 Words" is complete and will be posted on the GWAC website.

## **Approval of Minutes**

### ***Ron Melton, GWAC Chairman***

The June 18, 2014 web meeting minutes were distributed to the Council by email for review and feedback, no corrections were received.

Jeff Taft moved to approve the set of minutes as presented, David Forfia seconded the motion and the motion passed.

## **Calendar Review**

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

GWAC 2014 Web Meetings:

- August 20, 10:00 AM to 12:00 PM
- October and November Dates to be determined

GWAC 2014 Face-to-Face Meetings:

- September 10-11– Hosted by California-ISO in Folsom, CA
- December 9 – Portland, OR

GWAC Events:

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

The web meeting dates and times may change if the Council identifies a new time that would accommodate a greater number of Council members' schedules. Potential options are to move the call to 1:00 PM Pacific Time or perhaps move the date to Thursdays.

## Conference and Event Planning

### GWAC Face-to-Face Meeting/Transactive Energy Workshop at California-ISO

**Ron Melton, GWAC Administrator**

The Transactive Energy Roadmap Workshop and GWAC meeting will be held on September 11-12, 2014 at the California-ISO in Folsom, CA. The workshop will focus on the distribution side of the Transactive Energy Roadmap. Time will also be allotted to finalize assignments for GWAC led panels and presentations at the Transactive Energy Conference in December.

A room block has been established at Lake Natoma Inn in Folsom, CA and reservations can be made by calling 916-351-1500 or online at

<https://bookings.ihotelier.com/bookings.jsp?groupID=1227232&hotelID=13381>

The rough draft agenda is as follows:

#### Day One

- 8:00 AM – 10:00 AM: GWAC Business
- 10:00 AM: Presentation 1
- 11:00 AM: Presentation 2
- Noon – 1:30 PM: Working lunch and Cal ISO presentation
- 1:30 PM – 3:00 PM: Discussion 1
- 3:00 PM – 4:30 PM: Discussion 2
- 4:30 PM – 5:00 PM: – Recap

#### Day Two

- 8:00 AM: Presentation 4
- 9:00 AM: Presentation 5
- 10:00 AM – 11:30 AM: Discussion 3
- 11:30 AM – 12:30 PM: – Lunch
- 12:30 PM – 2:00 PM: Discussion 4
- 2:00 PM – 3:00 PM: Integrated discussion / next steps
- 3:00 PM– 4:00 PM: Review Actions

Presentations:

- DSO Models – Farrokh Rahimi
- DSO Models – Paul De Martini
- Cal ISO Renewable Energy Integration – Mark Rothleder
- GridWise Alliance / DOE Future Grid Summit – Becky Harrison
- A Framework for Flexible Contracts in Wholesale Markets – Lee Testfatsion

Discussions

- How does TE fit into pending state regulatory changes? – Ward Camp / Paul De Martini
- Managing high penetrations of DER
- Control Aspects of TE – Doug Houseman
- The emerging role of the DSO – Farrokh and Paul

Ward Camp suggested adding a discussion on the pending state regulatory changes from New York activity. Ali Ipakchi mentioned the interesting field data on demand energy response from Hawaii and suggested adding case studies with real data presented by OATI. Mark Knight suggested adding a presentation on the California Storage Roadmap by Heather Sanders.

## **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.

The focus of the workshops and program have been defined and the call for papers released.

The TEC Program structure contains 2 parallel panel sessions each day for a total of 4 panel sessions. Each session followed by a workshop. The panelists are to set up the workshop discussions.

The Program Committee continues to seek out keynote speakers and has confirmed participation of Elliott Mainzer from Bonneville Power Administration and David Owens from Edison Electric Institute. Potential keynote speaker Cheryl La Fleur had a conflict and declined the invitation. Other potential keynote speakers include FERC Commissioner Phillip Moeller and a DOE official arranged by Chris Irwin.

The conference's international panel has Mark Paterson from CSIRO confirmed and the program committee is seeking suggestions for other potential panelists.

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

Ron Melton reminded the Council to help publicize the TEC call for papers via social media and word-of-mouth. Ron Melton plans to discuss the call for papers at the IEEE PES General Meeting Transactive Energy Panel Session.

Discussion continued on extending the call for papers deadline and the Council decided to extend the deadline through Friday, September 5, 2014.

## Technical and Policy

### Mutual Assistance / Emergency Response

#### ***Doug Houseman GWAC Member***

Doug Houseman reported that there are two topics on emergency response / mutual assistance that are currently floating around in the industry. The first has to do with staffing levels which is out of GWAC's current scope. The second topic is more in line with GWAC's scope and deals with communications and data exchange between the various external crews. The current mutual assistance model is to assign a supervisor to take 3-10 crews to an area for repair. All necessary communications goes through that assigned supervisor. Doug sees an opportunity for GWAC to weigh in on opportunities to optimize communications based on existing technology and standards that could be applicable, focusing on the interoperability aspects for these external crews. Doug proposed a GWAC working group on this topic to survey the landscape to see what type of inputs GWAC might be able to provide in this industry discussion. Doug will draft an abstract that will be distributed to the Council to see who would be interested in participating in the GWAC Mutual Assistance / Emergency Response working group.

Discussion continued on the materials the Council can draw from if they decide to undertake this endeavor, such as the report on the Toronto ice storm and the Wise Alliance debriefing on super storm Sandy.

Dan Lubar volunteered for the working group and has knowledge that 83MHz has been set aside in Canada for utilities. David Katz also volunteered offering his Canadian knowledge for cross boarder harmonization.

### Transactive Energy Policy Paper

#### ***Mark Knight, GWAC Chairman***

Transactive Energy Framework Summary for Policy Makers is a three- page summary focused on the broad concepts of transactive energy. Mark Knight and James Mater are leading this project. A final draft is titled "Transactive Energy in 1000 Words" was circulated to the Council for review and feedback, which a few comments and suggested were incorporated into the document. The paper has been turned into an article that will be published in the September issue of the EnergyBiz magazine. The paper will also be posted on the GWAC website in the near future.

Mark Knight suggested that the council 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.

Tom Sloan suggested that we add a link to the transactive Energy Infographic at the end of the EnergyBiz article.

## **SGIP – GWAC TE Webinar Reminder**

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

Ron Melton reminded all that there is an upcoming SGIP / GWAC webinar Thursday, July 24, 2014 at 10:00 AM – 2:00 PM EDT titled "Transactive Energy: A Moderated Discussion". Steve Widergren will be the moderator and panelists include Ron Melton, Ward Camp, David Holmberg, and David Forfia. To hear a recording of the webinar, please see the below link.

<http://sgip.org/Transactive-Energy-A-Moderated-Discussion-Webinar>

## **Cyber Security / TE Paper Update**

### ***Doug Houseman GWAC Member***

Jason Crabtree and Doug Houseman have been working together on the security paper. Jason is responsible for producing the first draft of the outline.

## **GridWise Architecture Council Interoperability Context-Setting Framework as an ISO / IEC Standard**

### ***Mark Knight, GWAC Chairman***

Ken Wacks and Mark Knight met to discuss the possibility of the GridWise Architecture Council Interoperability Standard being accepted as an International ISO/IEC Standard. Discussions followed on the benefits and process of submitting a proposal. David Forfia moved to proceed and to make a formal submission of the *GridWise Architecture Council Interoperability Context-Setting Framework* to be considered as an ISO/IEC technical report; Ken Wacks seconded the motion, and the motion was carried unanimously.

## **Liaison Reports**

### **Council Members**

- David Forfia
  - Attended a Smart Grid Interoperability Panel (SGIP) board strategy session last week in Atlanta.
  - ISO/RTO meeting planned for October in San Antonio, TX.
- Doug Houseman
  - Doug has been asked to do several IEEE sessions on transactive energy, including a presentation to the Arizona Commerce Commission on August 18, 2014. Doug is working with Ward Camp developing the presentation.
  - Doug is facilitating a transactive energy workshop in Philadelphia in November, 2014.

- IEEE is considering developing a transactive energy tutorial. This task will be discussed further and decided upon at the education meeting at IEEE Power and Energy Society meeting.
- Ron Ambrosio
  - Industrial Internet Consortium was launched earlier this year, this is an active architecture working group. Ron is attempting to leverage products that GWAC and the Smart Grid Interoperability Panel have been working on for the past several years.
  - Ron will be authoring a chapter in a new multi-volume smart grid book that will be published by Wiley. The chapter/section on information technology communication will discuss new approaches to interoperability and will contain some of the Council's work.
- James Mater
  - OpenADR Alliance membership meeting held in June. The meeting held a transactive control / transactive energy discussion and demonstration that was well received.
  - Smart Grid Oregon became Smart Grid Northwest and the launch of its first meeting is planned for July 24, 2014.
- Mark Knight
  - GridWise Alliance Grid National Summit was held in Washington, D.C. in early July. Council members Mark Knight, Jeff Taft, Erich Gunther and Ward Camp were in attendance. The Summit consisted of 4 panel sections; Evolution of grid operations, evolution of business models, evolution of regulatory models and a path forward to transition to a future grid. Each session was comprised of a set of prepared questions. PJM provided handsets that allowed participant voting of a group of questions that are similar to what the Council is exploring with transactive energy. Mark invited Becky Harrison from GridWise Alliance to come and give us a debriefing and the responses to the questions at the GWAC working in Folsom.
- Tracy Markie
  - The Council will participate in ASHRAE activities again this year and Tracy will get that moving forward and report back to the Council.
- Ken Wacks
  - Six standards based on LONTalk were just approved for the SGIP catalog of standards (ANSI/CEA-709, Parts 1-4, ANSI/CEA-852, 2 parts). Also, the international versions of these standards, ISO/IEC 14908, Parts 1-4, are included. The review and approval process took 3 years because of various changes in the structure of SGIP.
  - SGIP Home to Grid Domain Expert Working Group
    - H2G DEWG is close to publishing a paper entitled "Barriers to Responsive Appliances at Scale." This paper analyzes what is holding back appliances back from participating in demand response programs. SGIP has agreed to make this publicly available. The document went through a formal review process as it evolved through 14 versions and was finally approved without objection by the H2G DEWG participants.
    - H2G DEWG published a paper titled "Broadcast Communications for Home Energy Management" and the group is working on 2 follow-on papers being written in parallel entitled:
      - "Smart Grid Systems Stability with Broadcast Communications"

- “Smart Grid System Security for Broadcast Communications”
  - In Addition, the H2G DEWG is writing papers on “The Economic Value of the Integrated Consumption Preferences in Electric Systems” and “Home Nano-Grids Meets Smart Grids.”

## Guests:

- Ali Ipakchi
  - Ali has the first presentation at the Transactive Energy session at the IEEE PES meeting and requested one or two slides he can use to frame transactive energy
- David Katz
  - David is on the Building to Grid Domain Expert Working Group which is developing a new framework in the Smart Grid Interoperability Panel B2G DEWG that is expanding on the issues of the future. David recently presented on transactive energy to Centre for Energy Advancement through Technological Innovation (CEATI) in New Jersey. The presentation was well received and David suggested that we collaborate with CEATI.
- Dan Lubar
  - Rock Mountain Institute recently released a paper on Grid Defection which is an interesting paper that relates strongly to the transactive energy discussions.
  - IEEE 802's plenary meeting was held mid-July. There is worthwhile effort to sync up with companies that are doing silicon for transactive models.

## Action Items Review

- Council find a more suitable time for future web meetings; possibly changing the time to 1:00 PM Pacific - October 15<sup>th</sup> for possible date
- Doug Houseman will provide an update on The Interoperability Context Setting Framework at the August web meeting.
- Work will continue on the Transactive Energy Framework revision.
- CA-ISO TE Workshop: Contact Heather Sanders and add the CA Storage Roadmap to the agenda.
- Extend the Transactive Energy Call for Papers to Friday, September 5, 2014.
- Doug will draft an abstract and information for a Doodle Poll 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 in 1000 Words” will be placed on the GWAC website.
- Mark Knight to send a formal request to Ken Wacks to have the GWAC interoperability framework, including the GWAC stack, as an ISO/IEC Technical Report.
- Council to forward the Transactive Energy call-for-papers to interested to parties.

## Adjourn

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