GridWise® Architecture Council

Meeting Minutes February 13, 2014

Members

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

Members Emeritus

Erich Gunther, EnerNex Corporation Paul De Martini, Newport Consulting

> Support – Pacific Northwest National Laboratory (PNNL)

Sherry Kowalski, PNNL Ron Melton, PNNL Andrew Steckley, PNNL

Speakers and Guests

Ed Cazalet, TeMix
David Hardin, EnerNOC, Inc.
David LaVee, Pwrcast Inc.
Larry Lackey, TIBCO Software, Inc.
Steve Knapp, Power Generation Services, Inc.
Leonard Tillman, Balch, Inc.
Dave Wollman, NIST

Administrative

Welcome and Administrative Business

Ron Melton, GWAC Administrator

Ron Ambrosio called the meeting to order at 10:10 AM.

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

Ron Melton reviewed the action items from previous meeting.

- Coordinate workshop activities with DOE OE (Chris Irwin and Jack Eisenhauer)
- Publicize the March GWAC workshop

- Gathering Council feedback on the March GWAC TE workshop abstract
- GWAC Members to discuss and define the work needed for the March workshop and make assessments and form subgroups as necessary to continue the work on the Transactive Energy Framework.
- SGIP MOU Comments requested back to Ron Melton and Mark Knight by January 31st.
- Aryeh Fishman to coordinate with Mark Knight about Edison Electric Institute's input on the Transactive Energy Framework

Approval of Minutes

Mark Knight, GWAC Chairman

The meeting minutes from the January 15 web meeting and the face-to-face meeting were distributed to the Council by email for review and feedback.

David Forfia moved to accept the minutes as presented, Ken Wacks seconded the motion and the minutes were approved.

Calendar Review

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

GWAC 2014 Web Meetings:

- April 9, -10:00 AM to 12:00 PM
- May 14 -10:00 AM to 12:00 PM
- June 18 10:00 AM to 12:00 PM
- July 23 10:00 AM to 12:00 PM
- September 10 10:00 AM to 12:00 PM

GWAC 2014 Face-to-Face Meetings:

- March 12-13 Hosted by PJM, Norristown, PA
- August 12-13 Hosted by CA-ISO

Alternate dates available for the August face-to-face meeting are:

- September 9 & 10
- September 22 & 23

Sherry Kowalski will send out a Doodle poll to see if one of the alternate dates will Sherry Kowalski to send out a poll to verify attendance on the tentative web meeting dates and the March 12-13 workshop.

Below is a list of smart grid-related meetings and conferences prioritized for outreach opportunities and GWAC meeting coordination and scheduling.

02/9/2014 – 02/12/2014	2014 NARUC Winter Committee Meeting	Washington, DC
02/17/2014 - 02/19/2014	Smart Energy Summit	Austin, TX
2/24/2014 — 02/27/2014	2013 IEEE PES Innovative Smart Grid Technologies (ISGT)	Washington, DC
01/27/2014 — 1/30/2014	AESP 24th National Conference	San Diego, CA
3/3/2014 – 3/6/2014	TechAdvantage Conference and Expo	Nashville, TN

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03/25/2014 – 03/27/2014	EnergySMART 2014 Conference	Philadelphia, PA
03/30/2014 — 04/1/2014	American Council for an Energy Efficient Economy (ACEEE) 2014 National Symposium on Market Transformation	Baltimore, MD
04/02/2014 — 04/04/2014	IEEE GreenTECH 2014	Corpus Christi, TX
05/11/2014 – 05/13/2014	American Council for an Energy Efficient Economy (ACEEE) Energy Efficiency Finance Forum	Washington, DC
5/19/2014 – 5/21/2014	A National Town Meeting on Demand Response and Smart Grid	Washington, DC
05/19/2014 — 05/21/2014	A National Town Meeting on Demand Response info@demandresponsesmartgrid.org	Washington, DC
08/17/2014 — 08/22/2014	American Council for an Energy Efficient Economy (ACEEE) Energy Efficiency Finance Forum	Pacific Grove, CA

Conference and Event Planning

Ron Melton, GWAC Administrator

IEEE ISGT Transactive Energy Sessions

There will be 2 transactive energy sessions at the IEEE Innovative Smart Grid Technologies (ISGT) Conference on Friday, February 21, 2012

- Transactive Energy Paper Session 10:30am 12:00pm
 - Abhisheck Somani chairing
 - Presentations from accepted submitted papers, the IEEE ISGT website indicated that 5 papers were received for this session.
- Panel Session 1:00pm 2:30pm
 - o Ron Melton is chairing this session and presentation will be made by:
 - Chris Knudsen will present on AutoGrid
 - Farrokh Rahimi will present on the end-to-end economics.
 - Jeff Taft will be spooking on architectural considerations
 - Mark Knight is speaking on the Transactive Energy Framework document.

Agrion Transactive Energy Roundtable

Ron Melton, GWAC Administrator

The Agrion Transactive Energy Roundtable will be held in Washington DC on Thursday, February 20, 2014. In this meeting, experts will discuss the definition of transactive energy, a technological framework for the concept, and address some of the associated regulatory hurdles. Doug Houseman will be representing the GridWise Architecture Council. Some of the other panelists of the roundtable include:

- Rob Ruyak, **Booz Allen Hamilton**, Senior Associate, Strategic Innovations Group
- Phil Davis, Schneider Electric, Senior Manager, Demand Response/Smart Grid Resource Center
- Paul Molitor, National Electrical Manufacturers Association (NEMA), Assistant Vice President
- Rich Walsh, Washington Gas Energy Services (WGES), Manager, Technical Energy Sales

More information can be found at the Arigon website: http://www.agrion.org/sessions/agrion-ny-Transactive Energy Next Step In a New Energy Future .htm

Transactive Energy Roadmap Workshop - GWAC March Face-to-Face Planning

Ron Melton, GWAC Administrator

The Transactive Energy Roadmap Workshop and GWAC meeting will be held on March 11-12, 2013 at the PJM Training and Conference Center in Norristown, PA. The workshop will be limited to 50 meeting participants. The purpose of this workshop is to get engagement with the industry and broader community with the work the council is developing on the roadmap. The workshop will focus on gathering input on transactive energy desired outcomes for research, pilot projects, and commercial activity. These desired outcomes will frame the manner in which the community will use the roadmap and guide its further development.

Preparations for the meeting include:

- Work continues on the Monday Transactive Energy calls. The basic approach or focus of
 the meetings were outlined in first meeting and are continuing discussion on the
 nature= of the transactive energy roadmap, materials that will be useful to review
 before the workshop and the focus of the workshop.
- Ron Melton is coordinating work with DOE OE (Chris Irwin and consultant Jack Eisenhauer)
- Sherry Kowalski is continuing to publicize the meeting.

Ron Melton reviewed the workshop's draft agenda that has been developed during the Monday TE calls is as follows:

- Establish common understanding of the problem(s) motivating transactive energy efforts. This links to chapter 2 in the Transactive Energy Framework document.
- Discuss the relevance of transactive energy approaches to the ISO / RTO community.

- Realistic timeframes for the evolution of the system and the way of the transactive energy approaches.
- Discussion of comments received on the TEF in particular comments from the ISO Council.

Heather Sanders and Jeff Gooding discussed what bulk power system needs form the distribution system and how wan they interact in a way that is different in then in the way they have historically.

Utilities are thinking on how they can optimize customer participation, in particular distributed generation, attached to demand in a way that contributes to reliability, allows access to those resources (demand response, distributed generation or energy storage) from the wholesale market to any capacity that is available. California is looking at his particularly in load sheading. The struggle is with the economic model or the utility cost of service model verses the goal of the customer to increase the value of these resources and to identify how the wholesale markets get access to those resources when they need the resources.

Some framed questions utilities have been thinking about include:

- How do the wholesale markets get access to that capacity through the distribution system operator when they need it?
- What does the interchange look like?
- What is the structure?
- How do we communicate the LMP price signals down through the utility to the customer so they are able to respond?
- We want to optimize on reliability but what does that look like?

Utilities are modeling several circuits to define how the devises should technically behave in order to contribute to the overall health of the system. Under their capacity to figure out what economic incentives at the distribution level in order to operate reliability and be able to provide capacity or support how one does put that back into the wholesale market.

Farrok Rahimi mentioned the "federated" microgrids are also emerging in the market.

Transactive Energy Conference 2014

The new dates for the 2nd International Energy Conference range from December 10-11, 2014. Discussion continued on the possibility of linking a GWAC face-to-face meeting the day prior, December 9, 2014. The meeting will be hosted by Portland General Electric at the World Trade Center in Portland, Oregon.

The proposed format will consist of:

- Transactive Energy Roadmap Rollout (DOE focused)
- Set of submitted papers similar to Grid-Interop
- Facilitated workshop (focus to be determined).

Ron Melton asked for volunteers for Transactive Energy Conference planning committees. The following committees were formed:

Planning Committee:

- Ron Melton
- James Mater
- Roger Hicks
- Kelly Cowan
- Joe Barra
- Sherry Kowalski
- Ken Wacks

Program Committee:

- Ron Melton
- James Mater
- Terry Oliver
- Erich Gunther
- Paul De Martini
- Bill Cox
- Ron Ambrosio
- Aryeh Fishman
- Mark Knight

Ron Melton and James Mater discussed getting more prominent industry organizations to lend their support in the form of an endorsement or sponsorship.

Technical and Policy

Transactive Energy Framework Feedback

Ron Melton, GWAC Administrator

The next step for the Transactive Energy Framework is to gather the materials, comments, and feedback received from the December GWAC workshop, and the comments received from those in the transactive community. An online form is being created to collect formal feedback on the Transactive Energy Framework. The form will be listed on the GWAC Transactive Energy webpage. The materials will be used to refine the Transactive Energy Framework at the March workshop at PJM.

Discussion continued on the opportunity for spin-off summaries for target audiences, for example, grid resiliencies. Bill Cox and Jason Crabtree volunteered to assist in writing a TEF spin-off paper on grid resiliency.

David Forfia is coordinating a formal response from the IRC. They are hosting a WebEx on their response on Friday, January 17.

Aryeh Fishman offered to investigate the possibility of Edison Electric Institute providing feedback. Aryeh Fishman and Mark Knight are to coordinate this before the March face to face workshop.

ISO

Andrew Nicholls

Ed Cazalet

SGIP MOU

Mark Knight, GWAC Chairman

Mark Knight and Ron Melton have created a memorandum of understating (MOU) that will formalize a relationship between the GridWise Architecture Council and the Smart Grid Interoperability Panel and calls for formatting a SGIP liaison to the GWAC. The MOU also calls for complimentary affiliate SGIP membership for organization of GWAC members. The draft is based on editing the MOU between GWAC and the GridWise® Alliance.

The MOU draft will be circulated to the Council for review and comments after today's meeting. Mark Knight requested comments be sent back to Ron Melton and Mark Knight on or before January 31st.

Grid Resiliency White Paper

Ron Melton, GWAC Administrator, Mark Knight, GWAC Chairman

Paul De Martini announced that the 2nd Interdisciplinary Workshop on Smart Grid Design & Implementation on March 28 - 29, 2014 at the Warrington College of Business Administration, University of Florida. Additional information can be found at http://ccc.centers.ufl.edu/?q=SG2014

Jerry FitzPatrick reported that GWAC member, Ron Ambrosio, will be on a panel at the January 30 DistribuTech Conference titled, *Real World Application for the Smart Grid*, that focuses on the next release of the NIST framework 3.0.

NIST is in the process of an interoperability test bed that will integrate people from across NIST and their projects in one setting.

NIST is holding a workshop on March 13-14 that will focus on the discussion on the topics confronting the nest-generation of test beds and to gain input on the needs of the test bed facility.

On February 11, 2014, the NIST Presidential Innovation Fellows are holding a workshop in Gaithersburg, Maryland, to discuss the progress being made on the interconnected test beds that were identified at the December 2013 workshop.

Jeff Taft announced that he has a new role as Pacific Northwest National Laboratory's Chief Architect for Electric Grid Transformation. He will be continuing his work with the GridWise Architecture Council.

Action Items Review

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Adjourn

Ron Ambrosio moved to adjourn the meeting, Jeff Taft seconded the motion and the meeting adjourned at 11:45 AM.