GridWise® Architecture Council

Meeting Minutes January 15, 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
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 Rolf Bienart, OpenADR William Cox, Cox Software Architects, LLC Jason Crabtree, US Army Aryeh Fishman, Edison Electric Institute Gerald FitzPatrick, NIST Matt Gillmore, Itron Jarrid Hall, CSGI Chris Irwin, US Department of Energy Larry Lackey Brent Marsh, Eutricity Nicholas Oberle, Black & Veatch Corporation Terry Oliver, BPA Dean Prochaska, NIST Tim Schoechle, International Center for Standards Research Ed Sutton, Utility Automation Leonard Tillman

Welcome and Administrative Business

Ron Melton, GWAC Administrator

Mark Knight called the meeting to order at 10:06 AM.

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

The meeting minutes from the November 13 web meeting and the December 12, 2013 face-to-face meeting were distributed to the Council by email for review and feedback. James Mater moved to accept the minutes with his corrections, Ward Camp seconded the motion and the minutes were approved.

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

GWAC 2014 Web Meetings:

- February 13, 10:00 AM to 12:00 PM
- April 9, 10:00 AM to 12:00 PM
- May TBD (May 14?)
- June TBD (June 11?)
- July TBD (July 9?)
- September TBD (Sept. 10?)

GWAC 2014 Face-to-Face Meetings:

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

Sherry Kowalski to send out a poll to verify attendance on the tentative web meeting dates and the March 12-13 workshop.

Outreach Opportunities

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

| 01/21/2014 - 01/23/2014 | AHR Expo | New York |
|-------------------------|---|--------------------|
| 01/28/2014 - 01/30/2014 | DistribuTech 2014 | San Antonio, TX |
| 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 |
| 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 |

Review of Action Items

Ron Melton, GWAC Chairman

Ron Melton reviewed the action items from previous meeting.

- Sherry Kowalski to contact Sue Covino to confirm that PJM will host the March GWAC Transactive Energy Workshop and begin planning.
- Sherry Kowalski to reschedule Transactive Energy web meetings.
- David Forfia to inquire about the possibility of an IRC; a formal Response on the GWAC Transactive Energy Framework.
- Ron Melton and Mark Knight to continue their work drafting a memorandum of understanding with the Smart Grid Interoperability Panel (SGIP).
- Sherry Kowalski to develop an online form or method to gather formal feedback/comments on the GWAC Transactive Energy Framework.

Call for Candidates

Ron Melton, GWAC Administrator

Ron Melton thanked Paul De Martini, Erich Gunther and Alexander Levinson for their many years of service and contributions as they transition to emeritus status.

Ron Melton reviewed the call for candidates' process and status. The Proposed Slate of Candidates has been selected from nine submitted applications and four current Council members who expressed their interest to stay on the Council for another two years. Ron Melton thanked all that applied and encouraged them to participate in GWAC activities and meetings.

The proposed slate for conformation was as follows:

- Ron Ambrosio
- Doug Houseman
- Mark Kerbel
- Mark Knight
- Heather Sanders
- Tom Sloan
- Ken Wacks

New candidate information

Mark Kerbel

Founded and cultivated two companies in the energy sector

REGEN Energy: Provides unique swarm-logic wireless energy management controllers & systems to facility operators, enabling energy efficiency & demand response services.

The SPi Group: Provides software and services to utilities and energy marketers, providing the central electronic clearinghouse for the Province of Ontario's Retail Electricity Market.

Mark has experience in commercial and industrial, in particular buildings and management systems.

Doug Houseman

Doug is well known in the industry and has been an Associate Member of the GWAC for more than a year. Doug is EnerNex's Vice President of Technology Innovation and has been involved in a number of projects that focus on modernization of the electric power system. Doug is currently Vice Chairman for the IEEE PES Intelligent Grid Coordinating Committee and other industry standards efforts.

Heather Sanders

Heather is the Director of Regulatory Affairs, Distributed Energy Resources at California Independent System Operator (ISO) where she oversees regulatory and other public interactions related to distributed energy resources and leads the ISO Grid Evolution Readiness strategic initiative. Heather also leads several cross-cutting initiatives with the California Public Utilities Commission and California Energy Commission. Heather offers a combination of technical expertise and experience advancing state policy for reliable and efficient management of the California electric grid.

Ron Melton asked if there were any objections to the slate of candidates and none were stated. Ward Camp moved to accept the proposed slate of candidates, Jeff Taft seconded the motion and the motion carried and the slate was accepted.

The bylaws state the selection of GridWise Architecture Council associate members is in July. If a Council member is thinking of a candidate for associate membership, please hold your nomination until July.

Chair Nominations

Ron Melton, GWAC Administrator

As a reminder Mark Knight was unanimously reelected as the GWAC Chairman.

Conference and Event Planning

Ron Melton, GWAC Administrator

GWAC March Face-to-Face Planning

March11-12, Workshop/Meeting (2 Full Days)

- Workshop Venue: PJM in Norristown, PA
- Limit to ~ 50 people

The workshop on March 11th and 12th 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. The workshop activity will take place on the afternoon of March 11th and morning of March 12th. Please plan to join the Council in this workshop activity.

The GridWise Architecture Council (GWAC) released a draft of the "Transactive Energy Framework" document in November 2013. The Council is now working on both incorporating comments into the existing document and expanding the document to include a Transactive Energy Roadmap.

The purpose of the roadmap is to identify near term (0-5 years), medium term (5-10 years) and longer-term activities needed to apply transactive energy methods in the ongoing modernization and evolution of electric power systems and end-uses of electric power. As described in the Transactive Energy Framework these efforts are driven by the changing nature of electric power systems brought about by the increased use of variable generation resources, the increased use of distributed resources, the increase in intelligent components and loads, and preparation for further penetration of new loads such as electric vehicles.

The Council seeks to involve a broad cross-section of stakeholders, including industry, academia, government entities, non-government organizations, and the international community in understanding the needs for further development and application of transactive energy systems.

Action items for workshop planning include:

- Coordinate with DOE OE (Chris Irwin and Jack Eisenhauer)
- Publicize the meeting
- Gathering Feedback on the Abstract
- Next Transactive Energy meeting scheduled for Monday, January 20 will be
 rescheduled and sent to GWAC Members to discuss and define the work needed
 before the March workshop, and make assessments and form subgroups as
 necessary. The meeting invitations will be expanded to a larger group for future
 meetings

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.

Smart Grid Interoperability Panel (SGIP) Memorandum of Understanding (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.

Transactive Energy Framework

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.

Open Discussion

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

- 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.

Adjourn

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