

## Meeting Minutes April 23, 2012

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### *Members*

Ron Ambrosio, IBM T.J. Watson Research Center  
Robert Burke, ISO New England  
Ward Camp, Landis + Gyr  
Paul De Martini, Newport Consulting Group  
Erich Gunther, EnerNex Corporation  
Alex Levinson, Lockheed Martin  
Bob Saint, NRECA  
Tom Sloan, Kansas State Legislator  
Ken Wacks, consultant to Sensus Metering Systems Inc.  
Mark Knight, KEMA  
Tony Giroti, Bridge Energy Group, Inc.

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

Ron Melton, PNNL & GWAC Administrator  
Todd Halter, PNNL  
Sherry Kowalski, PNNL

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### *Speakers and Guests*

Daniel Livengood PhD, MIT  
Jeff Lamoree, EnerNex, LLC  
Doug Houseman, EnerNex, LLC  
Leonard Tillman, Balch & Bingham LLP  
Naeem Ashan, KEMA  
Anto Budiardjo, Clasma Events  
Paul Boynton, NIST  
John Simmins, EPRI  
Baruch Hecht, Clasma

### *Members – not present*

Tracy Markie, Engenuity  
Rik Drummond, Drummond Group

### *Members Emeritus*

Joe Bucciero, EnerNex, LLC

## Proprietary Information Notice

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

## Welcome and Administrative Business

### *Erich Gunther*

Erich Gunther called the meeting to order at 9:05 a.m. and the quorum was established. Jeffery Lamoree welcomed everyone to the EnerNex facility.

Ron Melton reviewed the agenda, discussed the changes, and asked for any additions. Erich Gunther discussed the changes made to the agenda and the opportunity to expand the meeting to a three day meeting to increase participation with the third day focusing on technical matters. Ron Melton suggested moving to a full two-day meeting and finishing the GWAC

business by noon on the second day, then move to the technical and/or policy issues. GWAC needs to expand outreach opportunities. Discussion continued on ways to increase meeting participation. The result was to make a full two-day meeting and include a workshop in the meeting. The Council will identify workshop topics well in advance and promote prior to the meeting.

Minutes from the face-to-face meeting that was held on March 21, 2012, were presented to the council via e-mail. No comments were received or made. Bob Saint motioned to accept the minutes as presented, Thomas Sloan seconded the motion and the minutes were approved.

Ken Wacks introduced guest speaker, Daniel Livengood from MIT.

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

- **May 16, 2012:** GWAC Web Meeting
- **May 21-24, 2012:** Connectivity Week, Santa Clara
- **June 13, 2012:** GWAC Web Meeting
- **August 29-30, 2012:** GWAC Face-to-Face Meeting, Seattle
- **September 19, 2012:** GWAC Web Meeting
- **October 2-4, 2012:** GridWeek, Washington, DC
- **October 17-18, 2012:** GWAC Face-to-face Meeting, TBD
- **November 14, 2012:** GWAC Web Meeting
- **December 3-6, 2012:** Grid-Interop, Irving, TX

The council decided to move the August meeting to August 28-29, 2012 and make the meeting a full two-day meeting.

Discussion continued on the October 17-18 face-to-face meeting date. Bob Saint offered to have NRECA host the October meeting. Robert Burke has also offered to host the meetings at ISO New England.

Other suggested areas for meetings would be Kanas City or St. Louis for easy accessibility. Other suggestions included MIT, VA Tech, and IBM.

A suggestion was made to pair the October meeting with the Grid-Interop planning meeting which would be cost effective for the participants that need to attend both meetings. The two proposed options were:

1. October 30 – 31: Coordinate with Grid-Interop planning meeting
2. November 13 – 14: Venue to be determined

Ron Melton reviewed the open action items from the previous meeting:

- Completed - GWAC to submit comments on the Ohio PUC Docket. Bob Saint asked why we felt it necessary to provide comments on the OPUC docket. Ron Melton said the

statements that GWAC provided were generic statements on transactive energy. This topic will be discussed more tomorrow.

- Form GWAC planning committee to track tasks and update plan as necessary.
- Completed draft program for non-members to discuss at October face-to-face meeting.
- Council members who volunteered to assist with the GreenButton project to contact Erich Gunther.
- Erich Gunther provided some information regarding the newly formed UCA working group. UCA activity is not a replacement for the PAP, which is doing broad, technical stakeholder requirements. The UCA activity is the “marketing” arm in the form of a user’s group. Will set requirements for using the term “Green Button”. This will include how interoperability requirements will be met by those validated to use “Green Button.” Looking at an OpenADR type model. There is a need for tools and disciplines to manage all the working parts. Erich Gunter would like to incorporate GWAC in this process by using a number of GWAC artifacts and apply the Decision Maker’s Checklist. Erich will report on this at future meetings.

## **ConnectivityWeek 2012 Planning**

***Ron Melton, PNNL & GWAC Administrator***

Anto Budiardjo updated the council on the status on ConnectivityWeek.

At the opening of ConnectivityWeek, Pat Hoffman and Todd Park will announce the winners of the DOE Apps for Energy Challenge and will be awarded a \$100,000 prize for the best application that targets using GreenButton data. Itron and PG&G are the corporate sponsors.

There will be a “hack-a-thon” starting Tuesday, May 22, in the evening. App developers will create apps between Tuesday and Thursday with the winners announced on Thursday, May 24. Eric Lightner and Dave Wollman will be judges along with a few other people. Eric Lightner has agreed to participate in the hack-a-thon.

Wednesday, May 23 is the GridWise® Expo Track that consists of three panel sessions. Robert Burke is continuing to develop a few components of his track. Eric Lightner will be at ConnectivityWeek to speak about the Smart Grid Task Force. Anto suggested that Robert work him into his track.

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## Grid-Interop 2012 Planning

**Todd Halter, PNNL**

Grid-Interop's theme this year is "Driving to Grid 2020." The SGIP meetings are scheduled for December 2-4, 2012 and the GWAC Interop Forum is scheduled for December 4-6. A meeting with South Korea is also planned for the event, but details aren't finalized which may affect Grid-Interop's schedule.

Anto Budiardjo has the Clasma website ready to launch, but is waiting for the call for papers and GWAC description. The anticipated launch date is April 25, 2012. The call for papers will be announced through emails via Clasma, GWAC, and SGIP distribution lists.

### Call for Papers

PointView will include a list of topics that authors can select from when they submit their abstracts. This will make it easier to discern what tracks the papers should be placed in.

Some possible topic suggestions for the PointView list provided by the council:

- Transactive Energy
- Demand Response
- Markets
- Regulatory
- Risk Management
- Policy
- Technology Maturity
- Business Models
- Consumers
- Benefits

Todd Halter plans on keeping a more aggressive schedule than last year that will allow more time for thorough paper reviews. In addition, Todd Halter has a goal to get Grid-Interop papers fast-tracked into a journal or trade magazine. Ron Ambrosio offered to pass on the papers to EU chair of the architecture group.

PointView has a new application for an iPad to review all event materials.

### Tracks and Workshops

Todd Halter asked for suggestions for possible workshops or boot camps. Please email suggestions to either GWAC or Anto Budiardjo. SGIP has plans for two workshops:

- SGIP 101
- SGIP 202

GWAC has plans for four tracks and four workshops:

- Interop 101
- GWAC 101
- Architecture 101
- To be determined

Tom Sloan asked about the International dimension and what the council can do to increase Grid-Interop relative to international community? Todd Halter was given an action item to discuss on next program committee call.

Discussion continued regarding possible topics and speakers. Collin Harrison from IBM could be a potential plenary speaker on the IBM SmarterCities topic. Specifically, Collin could address the convergence of infrastructures and the fact that the entities that manage the infrastructure don't make connections between shared infrastructure costs and possibilities.

Two other possible topics included a Smart Grid Investment Grant panel session to discuss the success and use of grants and a DOE Plenary panel on the SGIG and possibly the demo projects.

Discussion continued regarding hydro system infrastructures and interplay among the infrastructures.

## **Plug -In 2012 Planning**

### ***Erich Gunther, GWAC Chairman***

ConnectivityWeek will have a smaller version of the plug-in that was at Grid-Interop. Erich Gunther is actively seeking vendors to participate in the plug-in. The events are a combination of technical and marketing focus.

- Focus on end-use related standards, which is Green Button driven
- Having challenges getting the vendors involved
- A lot of plugfests have been going on and there are a lot of implementation activities
- The plug-ins are a combination of technical and marketing so they are a little different

The Grid-Interop plug-in will be a repeat of last year. Last year's vendor seemed to be focused more on demand response and this year's goal is to cover the entire range of the power system.

Council members provided the following suggestions to enhance this year's plug-in:

- Ken Wacks suggested more visuals and graphics, perhaps something to grab participant's attention. Anto Budiardjo agreed that the story telling aspect of the event needs to be improved for this year.
- Anto Budiardjo said the meeting space will be close to the same side but the layout is different. Anto will explain the layout at the next meeting.
- Provide context for end-to-end scenarios
- Link somehow to the GWAC Benefits Papers
- Demonstrate cost-control on back office if one pays attention to interoperability
- Ditto for ongoing maintenance costs
- May relate to the SGIP implementation and methods committee

## **GWAC Planning Committee / GWAC Friends Program**

### **Ron Melton, PNNL & GWAC Administrator**

The GWAC Planning Committee consists of Ron Melton, Erich, and Tracy. The committee will meet in the future to go over the planning discussions from the Fort Worth GWAC face-to-face meeting.

Ron Melton unveiled the new GWAC Associates Membership proposal. There are several individuals who regularly attend GWAC meetings, participate in the discussions, and also participate in GWAC working groups. At the February meeting, the GWAC members asked the GWAC Administrator to propose a mechanism for establishing a GWAC Associate membership category.

Ron Melton discussed the proposed criteria he created and suggested an explicit criteria needs to be documented stating the applicant had actively participated in 50% or more of the GWAC face-to-face and web meetings during the preceding twelve months. James Mater suggested that the applicant should also be actively engaged or participating in a GWAC initiative or activity such as the Transactive Energy Workshop, Smart Grid Interoperability Maturity Model, or Grid-Interop/Plug-in Planning. Tom Sloan commented that 50% meeting participation for a year shouldn't be necessary if they have a high level of involvement in other areas. Tom Sloan also suggested the corporations or companies should be included in this category to broaden the GWAC labor base. Discussion continued regarding the individual expert vs. corporation participation dimension.

Ken Wacks doesn't like the "Associate Membership" title and would prefer "friends" or "associates" without the following membership title. James Mater inquired if there would be a special status for the associate member after term is up.

Ron Melton presented the application process which would include a general application, information about their technical background, the reason the applicant is requesting membership, and a letter of commitment for 12 months. The council suggested that rather than having individuals apply, that the applicant should be recommended by a council member.

A review committee would be formed that includes two GWAC members and the GWAC administrator. The committee would review the applications. The process and membership criteria should be included in the bylaws if the council wants to establish a membership category.

Discussion continued regarding the privileges that are accrued as a GWAC associate member. The council determined that the benefits would include stating an affiliation with GWAC and being able to speak and present on behalf of GWAC. James Mater also suggested that this is listed on the GWAC website.

The present council members approved the proposed criteria, process, and benefits.

Action: Ron Melton will prepare a proposed set of bylaw changes to be presented via email for final approval within eight weeks.

## **Lunch speaker – The Energy Box: Reasons and Results for Residential Management**

***Daniel Livengood, PhD, Massachusetts Institute of Technology (MIT)***

Ken Wacks introduced the lunch speaker, Daniel Livengood from MIT and provided a brief overview of the energy management agent and the Energy Box.

The Energy Box is a continuous background processor used to silently coordinate and manage energy within and across your home or small business by coordinating flexible, responsive electricity demand using the smart grid while maintaining the consumers comfort preferences. Energy Box functions best in an environment of demand-sensitive real-time pricing which is now feasible because of the smart grid. Daniel stressed that better automation leads to better consumer compliance and behavior. If there is a connection, then there is a benefit to coordinate services. Therefore one can benefit from demand charges, power limits, and time varying pricing.

Discussion continued regarding oscillations caused by price taggers.

Mixed base customers resulted in peak-time rebates. Discussions continued regarding consumer behavior and the full value of the benefits of shifting the energy demand. How do we reconcile these issues with value recognition? Ken Wacks suggested that we have oversold the consumer benefits and we need to educate the policy makers.

## **SGIP Interests vs. GWAC Interests – Leadership and Filling Voids**

***Ron Melton, PNNL & GWAC Administrator, Erich Gunther, GWAC Chairman***

Erich Gunther provided background on SGIP 2.0 and GWAC's previous role with SGIP as co-chairs for Domain Expert Working Groups. Currently, new DEWGs are forming without consideration of GWAC co-chairing the DEWGs. In reviewing SGIP's 2.0 plan, is there a role or relationship described for GWAC? Ron Melton asked the council what role, if any, should be described for the GWAC in SGIP 2.0. How closely should GWAC be linked to SGIP? Should GWAC be working closely with SGIP leadership?

There is some value to maintaining the independence of GWAC. Perhaps SGIP should adopt a requirement to coordinate with the GWAC (in the spirit of the EISA 2007).

Discussion continued regarding GWAC's value of providing strategic view vs. tactical view.

Erich Gunther suggested we submit a proposal SGIP should embody in their plan that the SGIP body should coordinate with GWAC. Paul De Martini suggested comments should be submitted requesting a technical advisory role to SGIP. James Mater proposed GWAC should be referred to as an ex-officio member of the SGIP Board of Directors (possibly as a member of a third category of industry stakeholders). Another possibility is an ex-officio member of the technical committee. Bob Saint said we should comment regarding interoperability and ask to be an advisory group regarding interoperability.

Bob Saint's observation of the plan is that interoperability isn't mentioned in the statement of purpose sections, and if we submit comments, GWAC should state the plan doesn't emphasize interoperability enough.

Discussion continued regarding the funding and being related to a private sector.

Ron Melton asked if GWAC should continue to support the co-chair to the Domain Expert Working Groups. James Mater suggested a new category that reinforces the independent nature of GWAC as an advisory group. There should be a category that GWAC represents. This would be a nonaligned category. Erich Gunther suggested we submit a proposal that the SGIP should embody in their plan that the SGIP body should coordinate with GWAC.

Erich Gunther asked for a volunteer to help draft formal comments to the SGIP planning group for the SGIP 2.0 plan. The comments are to be submitted this Friday.

James Mater mentioned the role of utilities in the SGIP. If you don't have utilities actively engaged, they cannot reach their objectives.

## **GWAC Stack as an IEEE Standard?**

### ***Ron Melton, PNNL & GWAC Administrator***

Steve Widergren had a conversation with Roger Fujii, who is the new director of the community society regarding the GWAC Stack. Roger is aware of the multiple references of the GWAC stack in the smart grid community and would like to have the stack defined as an IEEE standard. This new standard would build on the GWAC stack, but as soon as the process started, it would be out of GWAC's hands. This approach was used for the Intelligrid methodology.

Erich Gunther suggested an equivalent process to get the stack published as a technical work. Doug Houseman suggested the PES and IES as a dual logo, which would accomplish the same without being a long timeframe. Some advantage of IEEE-PES as a dual logo by ISO/IEC would be that work could be coordinated with Richard Schomberg. Additionally, the GWAC Stack would become a document to be used in the ongoing standards activities and expanding the impact of the GWAC activities. GWAC would also receive recognition of our efforts.

Action: Erich Gunther and Doug Houseman to approach IEEE-PES. Doug Housman to have discussion with Richard Schomberg and figure out the best path forward. Action plan to be provided by Erich Gunther by May 31, 2012.

## GWAC Metrics and Value Story

*Erich Gunther, GWAC Chairman*

Mark Knight and Paul De Martini discussed ways GWAC can measure the organization's success. Paul would like to gather information to develop a value story for GWAC's efforts. The results of this project will be used for workshops, forums, and presentations. The results of this project may also have some impact on the SGIP 2.0 plan. Tom Sloan asked who the audience is. Erich said the metrics are how we measure our successes and the lifecycle of GWAC's products. Discussion continued on the target audience for the value story.

Ron Melton suggested the audience is the smart grid industry, which consists of:

- Information
- Industrial
- Commercial
- Energy/Electric
- Markets

Doug Houseman has reviewed a couple of hundred conference papers so far this year. About 40% of them reference the GWAC stack (these are IEEE-PES conference papers self-selected as being about smart grid). 60% of the papers were foreign. Roughly 25% of the papers reference the NIST Framework. 12 months ago the GWAC stack showed up about half as much. The IMM material is already being referenced – 2 papers without GWAC authors referenced the work in the context of characterizing interfaces. Doug Housman suggested that this is a metric that can be compared to illustrate how GWAC's products are impacting the industry.

The council continued to discuss and identify possible areas for measurement:

- Reference the GWAC stack in published papers and conferences
- Reference GWAC materials in international conference/publications
- State use of decision makers check list (utilities, vendors, and regulators)
- Have adopted one or more constitution principles
- Have implemented GWAC framework principles in products and/or service
- Using the IMM for internal assessments
- Using the IMM for external assessments for fun and profit
- Number of downloads of interoperability value papers (or any other documents)
- GWAC speakers engagements or invitations
- Attendance at our events – Grid-Interop/Transactive Energy
- Universities using our training materials
- Quoted in new media/press

Ron Melton asked how we capture this information. Erich Gunther suggested a survey that asks the questions in several ways to get an accurate estimate.

Discussion continued regarding H-Index. The GridWise Architecture H-Index on Google Scholar is 21.

## Transactive Energy Results

**Ron Melton, PNNL & GWAC Administrator**

Ron Melton provided a report on the second Transactive Energy Workshop that was held on March 28 – 29, 2012, at IBM's T. J. Watson Research Center. The theme of the workshop was "Closing the Gap between Transmission and Distribution." There were 21 participants from 13 separate organizations including industry, government, and academic backgrounds. Of the 21 participants, 11 presentations were given on the first day with discussions, planning, and wrap-up of the workshop on the second day.

Some extensive discussions and questions that came from the workshop included:

- Can industry evolve?
- Is some sort of tipping point to drive significant change necessary?
- Real-time retail prices appear to be inevitable so how should they be determined?

Ron Melton discussed the path forward. Ward Camp suggested GWAC needs to include the regulatory and policy community so they can begin the discussion within their circles. What are the business and policy objectives we are trying to achieve within the context of transactive energy? A suggestion was made to look at the problem thoroughly.

James Mater is concerned about the term "transactive energy" because it's not easily understandable by consumers. James encouraged the council to consider rebranding. Doug Houseman reports that there are \$1M homes off the grid now and the numbers are growing.

Bob Saint pointed out that retail suppliers and regulators are not mentioned a lot in transactive energy.

The transactive energy activity is important and will need a great amount of attention over the next decade. Interoperability will not receive or even need as much attention as the issue has been receiving over the past several years. It is anticipated that the level of interoperability attention will drop back to the amount it was receiving in 2007/2008. It will take a while to sort out the transactive energy discussion.

## Outreach & Liaison Updates

**Ron Melton, PNNL, GWAC Administrator**

- Ron Ambrosio – GridWise Alliance
  - Webinar series focusing on policy. Lee Cravet spoke about the unintended consequences of metering. The Webinars are related to alliance members only. Ron Ambrosio will check to see if GWAC liaison relationship can attend the webinars.
  - GridWise Global Forum is cancelled for 2012.

- Ron Ambrosio – ISO/IEC JTC1
  - Submitted liaison report and standards related to smart grid. Now JTC has a seat on SJ3.
  - 3 main activities near future
    - Develop a harmonization and liaison strategy with other organizations (other industry organizations and SDOs)
    - Develop an internal smart grid education set of material and set up webinars with JTC1 subcommittees so they understand how their work applies to smart grid
    - Create an outreach plan to make people more aware of the JTC1 activities.
- Ken Wacks – ISO/IEC JTC1 Sub Committee 25 Working Group 1
  - Working on a family of standards for home automation and energy management
    - Gateway, product interoperability, energy management standards
    - Standard is out for final ballot with voting complete in early June. Ken Wacks will email a copy of the standard to the council for review to see if we should comment.
  - GWAC has a liaison relationship with this committee. Ron Ambrosio is the official liaison representative and receives the documents. This relationship was established several years ago. Discussion continued regarding the liaison relationship and GWAC. The working group wishes to maintain a relationship, which allows GWAC to be able to review materials and submit comments to the working group.
  - JTC1 would be a natural place for the GWAC Stack (Interoperability Context Setting Framework) Technical Report
- Ken Wacks – Smart North America
  - Organization located in Alabama contacted Ken Wacks regarding training workers for a remote energy call center to help building energy managers.
- Ken Wacks – CABA
  - CABA is a non-profit trade association that is launching a research project on the impact of smart grid initiatives in the “connected”. If there is an interest, there is an approximate cost of \$10k to \$15k to participate.
- Erich Gunther – UCAUIG
  - GreenButton voted to open ADE to separate technical activities from the branding activities.

- John Simmins - EPRI
  - Smart Grid Demonstration is approximately half completed and runs through 2014.
  - There is an IEEE SG Visioning meeting at IEEE T&D meeting with some seats to attend available from Doug Houseman. This is coordination among the four separate IEEE SG Vision activities.
  - EPRI will be doing a plug-in at ConnectivityWeek and will be participating in Grid-Interop.
  - EPRI is currently engaging with NRECA on CIM/Multispeak harmonization, PAP 61968.
- Ward Camp – GridWise Alliance
  - Webinar series on various topics. Very policy oriented. One was the “Unintended Consequences of Net Energy Metering”. The webinar series is only available to GridWise Alliance members. Ron Ambrosio will check and see if GWAC members can have access through our liaison with the GridWise Alliance.
  - GridWise Alliance Forum will not be held in 2012 due to fatigue amongst the vendor community.
- Doug Houseman – IEEE
  - There is an IEEE SG Visioning meeting at IEEE T&D meeting on May 7, with some seats to attend available from Doug Houseman. This is coordination among the four separate IEEE SG Vision activities. Please call Doug Houseman and he will facilitate the opportunity for you to attend the meeting.

## **Adjourn**

Erich Gunther adjourned the meeting for the day at 4:45 p.m.