Meeting Minutes
February 23, 2012

Members

Ron Ambrosio, IBM T.J. Watson Research Center
Robert Burke, ISO New England
Ward Camp, Landis + Gyr
Paul De Martini, Newport Consulting, Inc.
Rik Drummond, Drummond Group
Mark Knight, KEMA
Erich Gunther, EnerNex Corporation Alex
Levinson, Lockheed Martin
Tracy Markie, Engenuity
Ken Wacks, consultant to Sensus Metering
Systems Inc.

Support – Pacific Northwest National Laboratory (PNNL)

Ron Melton, GWAC Administrator
Todd Halter, PNNL
Sherry Kowalski, PNNL
Steve Widergren, PNNL

Speakers and Guests

Gerald Fitzpatrick, NIST
Tom Kerber, Parks Associates
Larry Corman, Oncore
Steve Floek, Zome
Mike Coop, ThinkSmartGrid
Chris Kotting
Scott Crowder

Members – not present

Tom Sloan, Kansas State Legislator
Bob Saint, NRECA
Tony Giroti

Members Emeritus

Joe Bucciero, Executive Consultant

Proprietary Information Notice

Erich Gunther called the meeting to order at 9:03 a.m.

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

Bnp DEWG

Ward Camp, GWAC Member

Ward Camp provided a Business and Policy DEWG update and opened a discussion as to where business and policy fits. Ward believes the Smart Grid Interoperability Panel (SGIP) is struggling with some of the same questions as the council. SGIP has a business and policy domain expert working group and the group is struggling with identifying issues they need to address. The group has addressed issues such as third party access, data privacy, and trying to move states to a constant comprehensive way of protecting and providing access to data. Consequently, the group has worked with NAESB which came up with the third-party access rules. The BnP DEWG will work on other use cases to handoff to NAESB and other organizations will continue to

address privacy and data access. In the standards arena, there are some that don't like a standard development organization that addresses the need for standards and would prefer a different Follow-on Public Offer (FPO) to address these issues. Consequently, a large topic of discussion at the next SGIP face-to-face meeting will be on data privacy and data access. A speaker from the Data Privacy Forum will provide a presentation on what gaps exist on privacy and what type of certifications are necessary to provide confidence information will be protected.

The other major topics that will be discussed at the meeting are the status of the GreenButton initiative and the prices to devices effort. Paul Centolella from the PUC of Ohio and Charlie Smith at General Electric have driven the prices to devices effort and although it is a good effort it may not stay within the BnP effort.

Ward Camp encouraged all members to attend the SGIP Winter meeting because the council is engaging in some of the same discussions.

National Institute of Standards and Technology (NIST) Update

Jerry FitzPatrick, NIST

An update was provided on the NIST Framework and Roadmap Release 2.0. Over 240 itemized comments were received. The document is at the final stages of approval and the expected published/posted date is February 27, 2012.

Jerry FitzPatrick continued with NIST expectations on the Smart Grid Interoperability Panel (SGIP) business model. SGIP transitioned to a self-sustaining legal entity supported by private and public sectors. NIST doesn't envision any diminishment in involvement of NIST staff in the SGIP. NIST staff will continue providing technical support and leadership participation in SGIP, as NIST does in many other standard-related organizations that are consistent with the National Technology Transfer and Advancement Act.

The anticipated timeline is by June 2012. This should include planning information for participants' budgeting for 2013. By January 2013, SGIP should be starting the first year of operation as a legal entity with initial private sector funding.

The final topic of discussion was the NIST Smart Grid Federal Advisory Committee and its purpose. The committee's charter provides input to NIST on the Smart Grid standards, priorities and gaps, on the overall direction, status, and health of the Smart Grid.

- Input to NIST will be used to help guide SGIP activities and also assist NIST in directing research and standards activities
- The duties of the Committee are solely advisory in nature in accordance with the provisions of the Federal Advisory Committee Act.

Pat Hoffman visited NIST the week of February 14, met with NIST management and toured the labs to get a flavor of the smart grid research NIST is undertaking.

University Outreach

Ron Melton, PNNL, GWAC Administrator & Catherine Weldon

Catherine Weldon provided a report summary for the University Outreach survey. The Survey was distributed to the following organizations members:

- Smart Grid Workforce Training and Development Grant Recipients, 54 programs, ARRA funded
- University of Minnesota Consortium, ARRA funded effort reaching 80 programs
- Power Systems Engineering Research Center
- Center for Energy Workforce Development and Florida Energy Workforce Consortium.

Some of the survey findings indicate that Interdisciplinary programs are the best suited for GWAC materials due to their receptivity and understanding of need to cross academic silos. Academic research into GWAC "concepts" is very low and actual "principles" are virtually unknown across silos. GWAC principles are far reaching, yet academic community lags behind in the ability to provide analysis due to institutional barriers, lack of exposure, and the understanding of the context and importance.

There is an opportunity for GWAC to provide leadership and academic materials to electrical power engineering and to the policy and management audiences. The council should think of the central point to communicate across both audiences and then provide an example of where GWAC vision is or should be and apply and illustrate the policy and business implications of the technical solutions implied by the architectural decisions.

Catherine Weldon recommends conducting a faculty webinar where we have sample materials for participants to review and provide comment. It is expected to not have much dialog during the initial faculty webinar so it would be best to use a webinar polling to ask specific questions on material needs and content.

Smart Grid interoperability Panel (SGIP) Update/Discussion

Steve Widergren, PNNL

Steve Widergren provided an SGIP update starting with the membership growth which consists of over 2,000 members and 50 organizations.

SGIP closed 2011 with Governing Board elections, which resulted in 7 new members of the Governing Board. The Governing Board roughly consists of one-third membership. The SGIP has been conducting international outreach. A important relationship has been established with the European Union and has been given a mandate that is composed of the three major standards organizations in the electric power and communication space that will do smart grid standardization.

Last year the Catalog of Standards was established in which there are now twelve entries in the catalog. There is a backlog of standards that have been identified by NIST for review by the SGIP.

The Implementation Methods Committee was formed which will address the operator input into the workings of SGIP.   The committee has a very strong utility focus, but there are a couple of concerns. A couple of the concerns are how to deploy standards and what are the issues and challenges going to be. These items will identify gap definition and will improve the standards.

The SGIP is currently undergoing the election process. Polls will close on March 1, if you are member please get your votes in.

The next SGIP face-to-face meeting is in Charlotte, NC, March 20 – 22, 2012 and the council participation was highly encouraged. Also, mark your calendar for the July meeting that will be held at Portland General Electric World Trade Center in Portland, OR.

There is an effort for the SGIP to have great longevity and transition to a private/public organization. There will be a significant change in the corporation by this time next year. Discussion continued with the council regarding the SGIP transition and the relationship between SGIP and GWAC.

GridWise Vision/Smart Gird Manifesto Results
Ron Melton, PNNL

Progress is being made on the smart grid vision document. Ron Melton has enlisted the help of Rob Pratt and Landis Kannberg from Pacific Northwest National Laboratory to assist. In fact, Rob Pratt was able to locate a published paper at an IEEE TES conference that is the fully articulated GridWise vision. Sherry Kowalski will circulate this to the council to review.

GridWeek Asia, ConnectivityWeek, GridWise Expo and Other Clasma Events

Ron Melton, PNNL, GWAC Administrator and Anto Budiardjo, Clasma Events

GridWeek Asia was held in January and there were approximately 200-250 participants at the event. Sam Pitroda, Advisor to the Prime Minster was a keynote speaker among numerous people for the Ministry of Power and the utility industry. Overall, it was a great event with rich discussion about the power issues in India.

Ron Melton opened discussion regarding Connectivity Week and The GridWise Expo. The GridWise Architecture Council is responsible for 1 day at the GridWise Expo. The GridWise Expo schedule consists of 3 sessions per day: SGIP Day, GWAC Day, & Cyber security/privacy day.

The 3 topics for Connectivity Week are Demand Response (driven by Open ADR community), Green Button, and Mini Plug-In Meter to Consumption (1/2 of what we did at Grid-Interop). Ron Melton asked the council for ideas on the theme, speakers, and requested volunteers for session leaders. Discussion continued about potential session topics. The council agreed upon the following three topics:

- o Grid 2020

    - o Paul De Martini Chair (needs a co-chair because he will be in Australia during event).

    - o This session will discuss the vision and future of the smart grid.

- o Next Step of Interoperability Case Studies

    - o Robert Burke Chair

    - o This session will include case studies of interoperability where people have adopted standards and measure or point to the benefits they are receiving in different ways from this interoperability.

- o Metrics/Maturity Models

    - o Mark Knight Chair

    - o This session will focus on metrics and the progress that has been made overall with interoperability. Could include an interoperability model, smart grid interoperability model, cyber security maturity model, smart grid systems study talks and a discussion about the issues currently facing California.

Lunch Workshop – GWAC 2012 Planning

Ron Melton, PNNL, GWAC Administrator and Erich Gunther, GWAC Chairman

Ron Melton opened discussion on GWAC planning 2012. Looking at GWAC from the Department of Energy's perspective, what type of impact is GWAC having in the smart grid industry.

Ken Wacks suggested that GWAC focus on helping policy makers understand the broad vision of what smart grid could be and then they could decide what aspects of it they would like to focus on.

The council continued discussions and reviewed the GWAC mission and discussed how and why GWAC was originally formed. The Department of Energy needed an advisory board outside of the DoE to advise to the transition to the new grid. Most of GWAC's original focus has been on interoperability. Paul De Martini suggests the council look at what the next pieces would be that would advance the smart grid beyond interoperability.   Discussion continued regarding the upper levels of the GWAC and the issues that lie within the upper levels such as public policy, privacy, and contractual issues.

Ron Ambrosio stated that GWAC was originally formed to foster discussions and to get the right people, organizations, and the community involved and raise the issues. The council has always agreed that we aren't in the position to solve problems, but rather foster the discussion and provide input. The council has been successful with this endeavor.

Erich Gunther agreed that the first thing the council tackled was interoperability with great success. The community is now at a point where the concept of interoperability is on the verge of a widespread adoption. Erich suggests focusing on the issues that relate to adoption. GWAC was responsible for five stakeholder communities and suggested that the council evaluate these and see if anyone has been left behind in regards to interoperability.

The five stakeholder communities are:

- o Information technology telecom
- o Industrial systems, control
- o Market, trading, economics and regulatory
- o Energy/Electric generation, transmission, distribution
- o Home, residential, commercial, buildings

Tracy Markie discussed how to measure GWACs progress. If GWAC had a clear endpoint to measure progress, this would help the council get very specific on actions. Discussion continued regarding the council's long-term vision and it was suggested that the council look at what the organization wants to accomplish (produce and deliver) in the next three years. For example, the council produced the Smart Grid Maturity Model and the GWAC Stack.

James Mater suggests the issue following interoperability that needs to be addressed is industry structure. Discussion continued on business and public policy.

Paul De Martini asked if the council has compared the GWAC stack against the objectives listed on the GWAC original mission document along with other public policy statues and mandates to see where the industry, the standard or value rate are at a country level. To date there have been no countrywide metrics. Discussion continued regarding a possible reference model.

Erich Gunther requested initial volunteer for the Transactive Energy reference model as the next stage of the GWAC evolution. The volunteers will need to compose a simple one-page document that will define the task and address such a project. Paul De Martini volunteered.

Tracy Markie asked five-year goals that the council can agree upon. The following goals was discussed and agreed upon:

5-Year
- o Interoperability is frequently used to describe projects and implementations and is common terminology in all RFP'
- o Specific transactive energy projects are implemented in all 50 states
- o Distributed generation is a common component on the grid and implemented using an interoperable framework and supports a transactive vision
- o Transactive energy reference model and vision of the grid is fully embraced by the industry

1-Year
- o Regain GWAC's position as the leader regarding SmartGrid vision
- o University outreach program is available
- o Version 1 of IMM is published, several beta trials and evaluations complete and a long-range plan is written
- o Plan and execute GridInterop 2012 including a bigger, better version of the Plug-In
- o Author a transactive energy reference model with specific details about the road map to achieve
- o Impact NIST on the next formation of SGIP (this really aligns with #1 and maybe should not be a separate goal)

Next Quarter:
- o Response to Ohio PUC
- o Kick off planning process for GridInterop 2012 and start weekly recurring meetings
- o Create and execute the GWAC day at Connectivity week including support for the Plug-in
- o Complete work necessary to support initial webinar on the University Outreach

- o Create outline of transactive energy reference model
- o Complete white paper on GWAC overview with deck
- o Complete 2 white papers on the IMM

A suggestion was made to create a small planning committee that would meet regularly to check the status and update the plan as necessary. Ron Melton would administer this committee. Volunteers for the committee are Tracy Markie and Erich Gunther.

Erich Gunther recommends establishing a special group for friends of GWAC who participate regularly and find a way to formally recognize and utilize them for outreach opportunities. The council recommended GWAC "Associates or Affiliates". Ron Melton was asked to develop criteria and a mailing list for membership. This information will be presented and voted on at the March web meeting.

GreenButton and GWAC

Erich Gunther, GWAC Chairman

Erich Gunther asked the council what role or involvement GWAC wants to have on items related to GreenButton. Green Button is a policy initiative, a description of basic functionality and a collection of standards to support that functionality. Currently, they are working to get a user committee together to describe what constitutes a GreenButton implementation. This discussion will occur at the SGIP GreenButton Workshop on February 29, 2012.

Next week, an announcement will be made that 26-27 utilities are ready to implement something around the GreenButton concept. This is a specific approach addressing one of the key elements defined in ESA and the original Modern Grid Initiative and in the GridWise Architecture Council's work, which is being able to empower consumers to better manage their energy use.

Paul De Martini suggested mapping GWAC's success to the other non-interoperability related aspects.

Ron Melton recommends the council to define success criteria for the GreenButton Initiative. This metric could include an interoperability dimension that was discussed earlier in the planning session. A simple thing would be to apply the Decision Makers Check List (as well as other GWAC tools) to the GreenButton. Council members, who would like to be involved with this process, contact Erich Gunther.

Interoperability Maturity Model – Path Forward

Steve Widergren, PNNL

Steve Widergren provided a quick status update and the plans to move forward for the Smart Grid Interoperability Maturity Model. The SG IMM beta document was introduced at Grid-Interop last December and now is pursuing trial opportunities. The plan is to hold a SG IMM workshop in May to review and revise the beta document. Publish the SG IMM v1.0 document by June 2012. After the model is published the goal is to hold trials. Beta trials that have been identified are:
- o Pac NW SG Demo
  - o James Mater interviewing project team on transactive interface

- o Eugene Water & Electricity Board
  - o Tony Giroti interviews on-hold
- o Potential trials
  - o Phil Slack considering for FP&L
  - o Randy Lowe considering for AEP's gridSMART®

From the trials, papers will be developed for Grid-Interop SG IMM Workshop that will be held in December, 2012.

A suggestion was made to work with DOE to get the ARRA funded demo projects to apply the IMM.

The SG IMM team is currently seeking possible journal opportunities at the following:
- o Journal of System of Systems paper (Tolk)
- o SG IMM & SGMM synergies paper (Knight, Montgomery)
- o IEEE Power & Energy Society and Computer Society
- o International Conference on Software Engineering for Smart Grid (Gorton)

The team will then develop a long-range plan that will include:
- o Clarifying relationship with the Smart Grid Maturity Model.
- o Select targeted customers, users, partners, and evaluators.
- o Actively seek out evaluation opportunities.
- o Identify evaluation tools and other derivative works.
- o Coordination and collaboration with the Smart Grid Maturity Model (SGMM) and Software Engineering Institute (SEI).

Review of Action Items

Ron Melton, PNNL, GWAC Administrator

- o GWAC to submit comments on the Ohio PUC Docket. Council members to submit comments to Ron Melton by COB, Friday, March 2nd. Ron will consolidate the comments and send the comments out for review the week of March 5.
- o Sherry Kowalski to circulate the IEEE PES conference vision document.
- o Form GWAC planning committee to track tasks and update plan as necessary.
- o Ron Melton to draft a program for non-members to discuss at April face-to-face meeting.
- o Council members who volunteer assist with the GreenButton project to contact Erich Gunther. Erich Gunther to have the GWAC Decision Makers Check List applied to the GreenButton Initiative and provide a report to the council at the April face-to-face meeting.
- o Ken Wacks to assist with possible speakers for the GWAC face-to-face meeting in April.
- o Paul De Martini to assist with possible lunch speakers from the Auto Industry.

Adjourn

Ward Camp motioned to adjourn, Tracy Markie seconded the motion. The meeting adjourned at 3:00 p.m.