

## Meeting Minutes May 21-22, 2009

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Chairman Ron Ambrosio led the meeting that was held 9:00 a.m. – 5:00 p.m. on Thursday, May 21, 2009, and 8:30 a.m. – 4:00 p.m. on Friday, May 22, 2009.

### Members

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Ron Ambrosio, IBM T.J. Watson Research Center  
Nora Brownell, ESPY Energy Solutions  
Robert Burke, ISO New England  
Rik Drummond, Drummond Group  
Erich Gunther, EnerNex Corporation  
Stephanie Hamilton, EPRI  
David Hardin, Invensys Process Systems  
Tracy Markie, Engenuity  
Robert Saint, NRECA  
Richard Schomberg, Electricite de France  
Ken Wacks, supported by GridPlex

### Members Emeritus

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Joe Bucciero, Bucciero Consulting, LLC  
Dave Cohen, Infotility

### Support - PNNL

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Steve Widergren  
Ron Melton  
Ron Jarnagin  
Heather Kuykendall

### Speakers and Guests

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Rahim Amerkhail, FERC  
James Bates, Maxim Integrated Products  
Jonathan Booe, NAESB  
Anto Budiardjo, Clasma Events  
Michael Burns, Itron

Gay Byrne, TekTrakker  
Toby Considine, Univ. of North Carolina  
Bill Cox, Cox Software Architects  
Ed Davis, Entergy  
Don Dulchinos, Cable Labs  
Michael Ebert, George Mason University  
Jerry FitzPatrick, NIST  
Susan Gaines, TekTrakker  
Donya He, BAE Systems  
Christine Hunt, The Sustainable Cycle  
Richard Koehl, Kohler  
Jim LeClare, Maxim Integrated Products  
Eric Lightner, DOE  
Ralph Martinez, BAE Systems  
James Mater, QualityLogic  
JJ McCoy, Smart Grid Today  
Rae McQuade, NAESB  
Terry Mohn, Sempra Energy Utilities  
Austin Montgomery, Carnegie Mellon  
Tom Nelson, NIST  
Joelle Ogg, NAESB  
Marty Ogram, Cisco  
Mike Oldak, EEI  
Terry Oliver, Bonneville Power Administration  
James Pace, Silver Spring Networks  
Rob Pratt, PNNL  
Dean Prochaska, NIST  
Kristine Schmidt, ESPY Energy Solutions  
Thomas Simchak, Alliance to Save Energy  
Tim Thompson, Thompson Switch Consulting  
Duminda Wijesekera, George Mason University  
Dave Wilson, Cisco (via phone)  
David Wollman, NIST

## *Members (not present)*

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Lynne Kiesling, Northwestern University  
Alex Levinson, Lockheed Martin

## **Proprietary Information Notice**

The members and guests were reminded of the proprietary information disclosure policy according to the Bylaws.

## **Administrative Business**

- Ron Ambrosio introduced the new members to the Council: Robert Burke, Tracy Markie, and Bob Saint and provided them with letters of recognition signed by Pat Hoffman, Acting Assistant Secretary, DOE Office of Electricity Delivery and Energy Reliability. Ron Melton was welcomed as the new GWAC Administrator. The Chairman thanked Steve Widergren for his administration of the Council since its inception 5 years ago.
- The March 6 meeting minutes were approved.

## **Upcoming Meetings**

### **GWAC Meetings**

- June 12, 2009 – face-to-face meeting co-located with Connectivity Week in Santa Clara, CA.
- August 5-6, 2009 – face-to-face meeting and GI09 planning meeting. Erich Gunther offered EnerNex facilities in Knoxville, TN.
- September 24, 2009 –Afternoon meeting co-located with GridWeek in Washington, D.C. This leaves September 25 open for NIST to arrange a meeting to discuss the roadmap.
- November 17-19, 2009 – Grid-Interop 09 in Denver, CO.

## **NIST Status & Directions**

### **George Arnold**

George Arnold is the National Coordinator for Smart Grid Interoperability at NIST. He reviewed the CEO leadership meeting held with Secretaries Chu and Locke at the White House on Monday, May 18th and major points made. Also, the roadmap workshops and interim roadmap document were reviewed. A list of initial smart-grid-related standards was drafted and will be entered in the Federal Register for comment. A draft roadmap is to be prepared by EPRI in early June. The NIST initial roadmap is scheduled for Sep 2009. A standards panel is to be assembled

by the end of 2009 and a solicitation for administration of this group is being prepared and should be released in June. The Energy Advisory Committee would provide some guidance for this panel.

## **NIST Interface with GWAC**

**Jerry FitzPatrick**

The Council has helped NIST come up to speed on interoperability and pushed the issue into the public eye by joint-hosting Grid-Interop with them. NIST holds Interoperability Working Group meetings each with 20+ participants. The standards roadmap effort is in three stages. GWAC support is desired in the following areas:

1. Roadmap Effort
  - a. Need Council help with review of the draft roadmap through the summer
  - b. The role of the DEWGs will continue through the summer to articulate gaps and priorities, as well as provide connections with standards development organizations (SDOs). GWAC leadership and involvement with the DEWGs needs to continue. Ron Ron A. suggests that DEWGs may need to change shape based on roadmap work.
2. Standards Panel
  - a. Need GWAC help establishing this and identifying appropriate participants
  - b. Asks GWAC to provide common language, foundation concepts to enable communications between the diverse stakeholders
3. Testing & Certification
  - a. Dean Prochaska is leading the development of the certification/test phase
  - b. NIST will also need Council support on this.

## **OpenADR**

**William Cox**

Bill Cox provided an overview of the work being proposed to create a software interface standard in OASIS to integration demand response resources based on the OpenADR work done in California.

## **Smart Grid Policy Center's Interoperability Policy Whitepaper**

**Rob Pratt**

In response to interest from the GridWise Alliance's Smart Grid Policy Center (a non-lobbying arm of the Alliance), Rob Pratt is developing a whitepaper on the concept of a debate between approaches of integrating automation devices and systems that enable smart grid capabilities. The debate centers around a heterogeneous approach that accommodates multiple standards at various interface points in the power system vs. a homogeneous approach that specifies a single set of standards for all the envisioned integrations and interactions. This would be an

informational paper that attempts to contrast the two approaches. A glossary needs to be developed, as well as a library of available standards. Volunteers are needed to write position pieces for the debate.

**ACTION:** Council members to respond to Rob Pratt with comments about the interoperability contrasting approaches paper and volunteer to help identify terms and state contrasting viewpoints for debate.

## **DOE Smart Grid Program Status**

**Eric Lightner**

Eric Lightner reviewed the status of the funding opportunity notices related to the American Recovery and Reinvestment Act. Response to comments on the draft will be coming out as well as a revised notice soliciting proposals.

## **Connectivity Week – GridWise Sessions**

**Anto Budiardjo**

Clasma is aiming for 1000+ attendees at ConnectivityWeek. Erich Gunther is leading Smart Grid 101. Anto gave an overview of the agenda located on the website. The GridWise Expo includes a track on interoperability along with a panel on updating attendees on NIST's interoperability efforts.

## **Grid-Interop Planning**

**Ron Jarnagin**

The program committee meets on Tuesday. A preliminary Notice of Intent to Issue Call for Papers will go out next week. The actual Call for Papers will go out the following week. Some speaking slots have been reserved for last-minute immediate responses to current national activities. David Holmberg mentioned that a meeting is being held in July with SDOs concerning the roadmap. Steve Widergren suggested that 1 ½ days of Grid-Interop be scheduled for presentations of content from papers, and 1-1 ½ days remain flexible in the agenda as NIST's roadmap and next phase actions solidify. Anto suggested that an international perspective as it relates to standards might be a topic of interest to consider adding.

## **North American Energy Standards Board**

**Rae McQuade**

NAESB produces standards for the gas and electric industries. They have mainly focused on business process standards, but they also produce technical standards that support these

processes. NAESB produced 300 standards for natural gas in one year. In the past, standards were not sent through ANSI, although they are beginning to do so now. NAESB has a Memorandum of Understanding with NERC to be their standards organization for related NERC standards. Ms. McQuade reviewed the NAESB process and how people can join subcommittees. There is a Demand Response subcommittee that is developing standards. 70% of the participants are not NAESB members. All meetings are available by phone and web.

## **GWAC Interoperability Maturity Model (GIMM)**

**Ron Melton & Steve Widergren**

Advancing interoperability on the smart grid scale is a community activity. The concept of the GIM is based on the way the maturity model for integration developed by Carnegie Mellon advanced quality in software system integration. The Council reviewed some of the ideas the team is considering. These need to be refined into a proposal for further Council review. The initial audience is expected to be familiar with maturity models; however, other material will be developed that is tailored to specific audiences, such as integrators, regulators, and executives.

## **PLC Standards**

**James Bates, Maxim**

G3-PLC is working on open standards for power line communications (PLC). Richard Schomberg explained that EDF R&D funded the Maxim company to work on a standardized approach that would support a roll out of meters with technology from multiple vendors.

## **NIST Roadmap / DEWG Coordination**

- Smart Grid Conceptual Model – Erich Gunther presented the smart grid conceptual model developed as a result of an architecture meeting following the first roadmap workshop. of the conceptual model diagrams include bulk generation, transmission, distribution, customers, operations, markets, and service providers. The material also incorporates GWAC context-setting framework interface concepts and how the interoperability layers relate to the model. The Council thought it was a great representation of the system. Nora Brownell would like to see the regulatory system added, to illustrate the possible complication, perhaps comparing “as-is” regulation to alternatives. Ken Wacks cautioned that the model is a very good macro view of the industry for engineers, but may have difficulty with other audiences. The models should be helpful by providing a common understanding to DEWG participants from different backgrounds.

**ACTION-** The Council is to comment and provide feedback to Erich Gunther about the Smart Grid Conceptual Model.

- I2G – The Industrial to Grid DEWG is holding a summit in October, and is involved with a track at IndConn as part of ConnectivityWeek. Dave Hardin presented the I2G Interoperability Assessment, Roadmap and Recommendations Draft, which is available on the internal GWAC SharePoint site.
- B2G – No recent activity to report.
- H2G – The Home to Grid DEWG has been meeting weekly and has produced two documents, one on H2G Requirements, and another on interoperability testing. OpenHAN has some issues with perceived conflicts with their work.

ACTION- Jerry Fitzpatrick will work with OpenHAN leaders Chris Newton and Brent Hodges as well as the leaders of H2G DEWG to resolve coordination concerns.

- T&D – The Transmission & Distribution DEWG has doubled in size and regrouped into two separate teams, transmission and distribution, respectively. The smaller teams hold weekly calls, and the combined teams hold monthly calls. Frances Cleveland is leading a whitepaper on distribution and automation, and Floyd Galvin is leading a whitepaper on wide area measurement.
- B&P - The Business & Policy DEWG was involved with GridEcon in March, and has been preparing for the NIST workshop.
- Cyber Security – The cyber security team includes representatives from across all DEWGs, with 120 participants. They are working on a risk management framework, a list of requirements, and a list of vulnerabilities. They have two teams – a “bottom up” team that analyzes specific security requirements, and a “top down” team that is identifying the number of standards and mapping the standards.

Jerry commented that the purpose of the DEWGs is to improve the roadmap and eventually implement the resulting actions. The DEWGs may eventually transition to a standards panel, but currently need input on the roadmap directions. Some voiced concerns that since the DEWGs have an open and loose structure, that voting may not represent a balanced view of the relevant stakeholders.

## **Interoperability Benefits Papers**

The financial and environmental benefits papers are completed and ready for a council vote for approval. The review team worked with the contractors for over a year, and recommends them for publication. Heather will send out a request for an electronic vote for approval, and will post the latest paper versions on the SharePoint site.

Erich made a motion that publications directly or indirectly published for the Council be branded primarily as a GWAC branded document. Rik seconded. The motion passed unanimously.

PNNL will create a template strawman to pass to the Council for approval. Steve mentioned that a notice about the ability to reproduce aspects of the document while providing suitable GWAC recognition, similar to the context-setting framework paper, should be added as well. A press release will be developed announcing the papers.

ACTION- Heather will send a request for electronic approval of the benefits papers, and post them on the SharePoint site. A response is due 29 May 09.

ACTION- GWAC Administration will create a paper template strawman to pass to the Council for approval.

ACTION- A press release will be distributed, announcing the publication of the benefits papers.

## **Outreach & Liaison Reports**

**FERC** – Rahim Amerkhail reported that FERC is reviewing how they can react to smart grid standards recommendations from NIST. They are coordinating with NIST and DOE on this. They continue working with state regulators through the NARUC/FERC Smart Grid Collaborative.

**GridWise Alliance** – The Interoperability Working Group has added a cyber security working group, which is being led by Ron Ambrosio and Sharla Artz.

**UCA International Users Group** – Erich Gunther expressed their desire to build a relationship with GWAC.

**ISO/IEC JTCl** – Ron Ambrosio and Ken Wacks are working on product interoperability in this group.

**IEC** – Richard Schomberg reported that they have been working on smart grid for 3 years, with 90 national committees and representatives from 13 countries. They are developing a whitepaper that clarifies the IEC position on smart grid, with an inventory of smart grid standards. Their next group meeting will be held in conjunction with GridWeek in September. It is a closed meeting with highly enforced governance.

**IEEE PES IGCC** – Erich co-chairs this IEEE coordinating committee with Don Von Dollen. Right now they are focused on coordinating with the IEEE 2030 smart grid activity, and are collecting all PES standards related to smart grid. This will be released soon.

**EEI** – Mike Oldak said that smart grid issues are on the agenda of every utility, and they want to ensure that visions are aligned.

**Bonneville Power Administration** – They are developing a regional demonstration project, with 40+ interested utilities. An RFI has been sent to vendors.

**NARUC Winter Meeting** – Ron Ambrosio, Steve Widergren, and Jerry FitzPatrick attended this meeting where considerations for regulators making smart grid project decisions were discussed. Education is an important concern. Nora Brownell said that the next steps for the Council on this topic should be 1) governor’s education and 2) education on business community efficiency gains.

**ACTION-** Nora Brownell, Ron Ambrosio, and Ron Melton to develop education concepts based on next step discussion from the NARUC Winter Meeting.

**2009 Power Systems Conference & Exposition** – The “GWAC Stack” was referenced at this conference on March 15-18 in Seattle, WA.

**Smart Grid Symposium** – Richard Schomberg will speak on GWAC behalf on April 7 at the Southern California University.

**GridWeek** – Richard Schomberg, Erich Gunther, and Lynne Kiesling are on the planning committee for this September event.

## **Other Current and Future Activities**

- Business Process Modeling – Alex proposed this at the January meeting, and this will be added to the August agenda.
- UCC for Interoperability – This was presented at the January meeting, and discussed further within the B&P DEWG. No action needed from the Council at this time.
- GridWise Applied Awards – A nominating committee needs to form quickly to propose awardees to the Council. Nora, Ron A., Richard volunteered for this purpose. Ken Wacks will be an alternate for Richard in case he is on travel.
- FERC “Staff Discussion Draft on Demand Response National Action Plan” – FERC would like feedback by the end of June on this document. Two calls will be scheduled to discuss this further.
- GWAC Future Directions – Ron Jarnagin will facilitate a ½ day discussion at the August meeting to review the GWAC objectives and direction.
- Smart Cities – Erich would like to add the smart grid city and sustainable infrastructure topic to the August meeting.

Action Item	Assigned To	Due Date
Distribute OpenADR meeting info to Council	Kuykendall	29 May 09
Work with Clasma Events for Sept 24 afternoon meeting at the end of GridWeek.	Kuykendall	26 Jun 09
Respond to Rob Pratt with comments about the interoperability contrasting approaches paper and volunteer to help identify terms and state contrasting viewpoints for debate	Council	29 May 09
GridWise Applied Award Nominations Committee will meet to discuss the nominees. May 29 teleconference.	Ambrosio, Brownell, Schomberg, and Wacks (alternate)	28 May 09
Follow-up with Erich Gunther re: Grid-Interop Program Committee	Melton	29 May 09
Send Notice of Intent for Grid-Interop Call for Papers	Melton, Program Committee	29 May 09
Send Call for Papers	Melton, Program Committee	05 Jun 09
Someone on the Council will represent GWAC at a NAESB web conference	Melton	Next meeting is May 29 in Richmond, VA. Available by webcast.
Provide feedback on Conceptual Model of Interoperability. It is posted on the TWiki site.	Council	05 Jun 09
Work with Chris Newton and Brett Hodges to bridge the gap between the paper written by the H2G DEWG and the OpenHAN standard.	FitzPatrick	12 Jun 09
Add the interoperability benefits papers to the GWAC SharePoint site for review by Council.	Kuykendall	29 May 09
Send ballot to Council for acceptance of the papers as officially sponsored GWAC documents	Kuykendall	29 May 09
Create a strawman template with GWAC branding for papers with	GWAC Admin	29 May 09

appropriate disclaimers and recognition of authors.		
Send out press release announcing published papers located on GWAC website.	GWAC Admin	05 Jun 09
Forward editorial contact information for press releases and media communications to Council for additions. Council to respond with known contacts.	Kuykendall, Council	29 May 09, 03 Jun 09
Develop informational material ideas.	Brownell, Ambrosio, Melton.	30 Jun 09
Provide comments on FERC's draft National Action Plan. (Heather will resend the document)	Council	Hold teleconference the week of June 15. 2 <sup>nd</sup> teleconference held with FERC the week of June 22.
Schedule ½ day at the August meeting to discuss future direction of the Council. Ron Jarnagin will facilitate.	GWAC Admin, Jarnagin	05 Aug 09
Add "Smart Cities" to agenda at August meeting. Find speakers from Oak Ridge Laboratory and others on this topic.	GWAC Admin, Ambrosio	05 Aug 09