Meeting Minutes

March 8 - 9, 2016

Members

Ron Ambrosio, IBM T.J. Watson Research Center
Ron Bernstein, Ron Bernstein Consulting Group, LLC
David Forfia, Electric Reliability Council of Texas (ERCOT)
Gerald Gray, Electric Power Research Institute (EPRI)
Stephen Knapp, Power Analytics Corporation
Doug Houseman, EnerNex
Mark Knight, CGI
James Mater, Quality Logic
Farrokh Rahimi, OATI
Heather Sanders, Southern California Edison
Ken Wacks, consultant to Sensus Metering Systems Inc.
Carl Zichella, Natural Resources Defense Council

Members not present

Mark Kerbel, REGEN Energy Inc.
Tom Sloan, Kansas State Legislator

US DOE

Chris Irwin, US DOE

GWAC Associates

Gordon Matthews, Bonneville Power Admin

GWAC Members Emeritus

Erich Gunther, EnerNex
Alex Levinson

Support – Pacific Northwest National Laboratory (PNNL)

Ron Melton, PNNL
Steve Widergren, PNNL

Guests

John Caldwell, EEI
David Wollman, NIST
Ray Palmer, FERC

Administrative

Welcome and Administrative Business

Ron Melton, GWAC Administrator

Meeting was called to order at 8:30 a.m. Ron Melton reviewed the agenda and read the proprietary information disclosure policy according to the bylaws to the GWAC members and guests.

Calendar Review

May 17 - 19, 2016: 3nd Transactive Energy Conference, World Trade Center, Portland, Oregon

Minutes

Location: Gaithersburg, MD, NIST

Day 1

Chris Greer, NIST welcomed participants.

Chris Irwin, DOE Office of Electricity addressed the group which he described as being known for thought leadership. Chris proposed they consider a refresh of the GWAC agenda to focus primarily on key issues for advancing the electric system. Chris introduced his view of the Transactive Systems (market-based control) program. He is hoping to see participating organizations implement actions related to the objectives of this program. Aspects include, Architecture/Interoperability/Outreach, Hybrid Economic-Control Theory, Valuation of Transactive, and Simulation. Chris noted that GWAC should to continue work on interoperability and he stressed that Architecture needs to be clarified and directions aligned.

Additional points given:

- TE has been a focus because it is new and at the edges GWAC has provided the leadership to get things started
- Others will pick up the effort, for example, GWAC won't do the conference forever
- What is the exit strategy?
- FY16 DOE now has actual money for TE

TE Program Summary
- $5M budget for market based controls
- 4 or 5 buckets
- GWAC
- Simulation and modeling – what is missing, what is not missing – go to where the stakeholders are – provide a level playing field for evaluating various Transactive systems
- Architecture, Interoperability and Outreach
- Theory
- Valuation of Transactive Systems

GWAC Role

- Grid Integration is steadily increasing complexity
- Where is the complexity gathering?
- Where can GWAC fulfill its traditional thought leadership role looking at the edges of the problem?
- Continuing role for GWAC in interoperability
- Heather Sanders – "Everybody supports interoperability but nobody agrees on what it is"
- Need more thought leadership – what is undone?
- IMM resurfaces

Architecture – "Grid Architecture"
- o   Rethinking what we mean
- o   Anticipate merging issues
- o   Still needs clarity
- o   GWAC can convene, be conciliatory, etc.

Presentations

An overview of related GMLC projects was presented.

Steve Widergren presented a talk summarizing the GMLC Interoperability Project which called for both GWAC and SGIP acting as ongoing partners in the effort.

- On grid side SGIP is a key partner
- There doesn't appear to be a similar partner on the buildings side
- Ken Wacks' ISO/IEC committee has been addressing buildings interoperability Stakeholders
- include
  - Regulators
  - X to Grid communities
  - Utilities
  - Vendors
- Question - seems to be an emerging issue of interoperability between transmission and distribution, e.g., how to aggregate from distribution to wholesale? (From Carl Zichella) Steve - there is an element of interoperability in this and also this is an architectural question. It provides an example of where there needs to be cross-tie between interoperability and architecture. Chris mentioned the EMS - DMS - BMS effort too.
- IMM to SGIP? - Yes, under this umbrella.
- What has changed since 2009 that makes industry more receptive?
  - There are successes to point to since then - 61850, Green Button, CIM derived results, etc.
  - CIM user group kicking off a CIM compliance organization
  - DER growth is driving business and technical change requiring more attention to interoperability
- Need to consider IP policies as they relate to interoperability and product strategies (open vs. closed)
- Partners - don't forget organizations such as EEI, NEMA, etc.

Jeff Taft presented a talk on Architecture

- Question / concern - coordinate with current utility activities such as the SCE activity briefed at DistribuTECH - from Erich Gunther
- Intent is to be collaborative and inclusive
- New SGIP group - Grid Modernization Operations Working Group - was announced at DistribuTECH after SCE's workshop unveiling their architecture. There is an organizing call next week. There are 26 utilities signed up to be a part of it.
- SCE architecture document and concept of operations - Heather Sanders asked that it be reviewed. Action for Erich Gunther to send the link to the document.
- Steve Knapp - NYSERDA work recently – is still a disconnect with the utilities. How can we try to bring some synergies to get everyone in the same room? Utilities are realizing that things are moving forward - the utilities cannot push back anymore. How do we better engage the utility world?
- Ray Palmer - Architecture seems to be a deductive process. If you don't start with the same desired attributes how do you ever get convergence? Mentioned some IEEE attributes that go beyond what the DOE QER covered. - Jeff Taft mentioned the Grid Architecture 2 document that does cover some of the question about addressing attributes and how to compare different architectures.
- Ken Wacks re Outreach. He has given 25 presentations or papers.

Chris Irwin - Summarized other GMLC projects

- Bringing the DOE labs together.
- Large numbers of connections and opportunities for coordination. Given the large number we'll be picking specific points of interaction.
- Co-Standards and interconnection valuation
- Another project that Chris is involved in related to machine learning – distributed analytic

Day 2

Discussion of possible role of GWAC on Distribution grid modeling. Question to Doug Houseman about why he put all his votes on cross-cutting

- Industry doesn't seem to understand the importance of the distribution grid modeling.

  Doug doesn't see the temporal or topological pieces or the data exchange formats. (Common export formats for various classes of tools.)

- Need for high level use cases and a framework document to bring it to the attention of the industry across the various industry silos. Overarching view is missing. This is what Doug thinks the GWAC could tackle.

N61968 - Interface reference model used by utilities WG13

model exchange definitions

GWAC could convene a discussion. Would need a short framing document. Can be put into the context of Grid 3.0.

What does GWAC bring to the table? We need to consider this question.

SGIP AC is continuing to work on the list of services, etc. Focus now is on the list of actors. Need to make sure we recognize the grid is a business. Intent is to describe the business services independent of the entity that is providing them

GWAC Role - visioning concept of the importance of coming up with composable services that can be used within the industry.

Proposal is that GWAC frame the higher level framing of the approach.

First step - scoping paper, concept of services, how this approach can be used to bridge the gap between the grid architecture representations and enterprise / IT / architectures.

Erich and Doug propose to draft a white paper for review by the Council. Helping translate the grid architecture work into application.

What we can do with the Grid as currently instrumented? Need is to point out what could be done with the current capabilities. Not clear why this is something that GWAC should do.

GWAC in relation to other organizations

- There is a progression of the way GWAC works on issues
- Begin with an awareness of the partners - target handoffs to others, exit strategy in mind
- SGIP is a particular partner - more detailed work as compared to GWAC

Note - SGIP conference is tentatively planned for week of October 24th.

John Caldwell - EEI did some scenario analysis about 5 years ago but it never got much traction. Not sure why, but thinks it is still important.

TE Decision Maker's Checklist – Houseman to rework proposal to group by stakeholders

- Industrial, large commercial customers, involved in regulatory process and end-user of a TE system
- Regulators and related who would be involved in implementing, overseeing and operating - the "what" of TE

- The "how" of TE

General agreement of Doug's proposed reorganization of section 2.

Doug will send slides from today with some additional information – David Forfia made a first cut at this - Doug will review

Doug will circulate the reorganized material via e-mail and collect input from the Council. Especially needs links to articles that can be included as references.

Actions: PowerPoint file and five questions about consumer's side will go out tonight. Reorganization of material should be ready middle of next week.
Would like to have responses in one week.

Houseman - move to adjourn
Levinson – second
Meeting Adjourned at 1:10PM