

## **Meeting Minutes**

**July 19, 2017**

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### ***GWAC Members***

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David Forfia, Director, Enterprise Architecture & IT Transformation, Electric Reliability Council of Texas (ERCOT)

Ron Ambrosio, Chief Scientist, Utopus Insights, Inc.

Tanya Barham, Director of Operations, PECI

Ron Bernstein, President, RBCG, LLC

Gerald R. Gray, Technical Executive at the Electric Power Research Institute (EPRI)

Farrokh Rahimi, Senior Vice President, Open Access Technology International, Inc. (OATI)

Heather Sanders, Principal Manager, Integrated Grid Strategy & Engagement, Southern California Edison

### ***GWAC Associates & Emeritus***

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Jeff Morris, State Representative, State of Washington and Principal, Energy Horizon Corporation

Ken Wacks, Consultant, Sensus Metering Systems Inc.

### ***Members Not Present***

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Doug Houseman, Grid Modernization Lead, Burns & McDonnell

Stephen Knapp, Executive Director at Power Analytics Corporation

Lorenzo Kristov, Principal, Market & Infrastructure Policy, California Independent System Operator

Paul De Martini, Managing Director, Newport Consulting Group, LLC

James Mater, Co-Founder and Director, QualityLogic, Inc.

Tom, Sloan, State Representative, State of Kansas

### ***Guests***

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John Chowdhury

Ron Cunningham

Phil Davis

David Katz

Larry Lackey

Dave LaVee

Tim Sheckly

Aaron Snyder

Abhishek Somani

Leonard Tillman

### ***PNNL Support***

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Ron Melton, GWAC Administrator

Mark Knight, GWAC Support

Susie McGuire, GWAC Coordinator

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### GWAC Online meeting

David Forfia called the meeting to order without a quorum at 10:06am Pacific Daylight time.

Ron Melton read the proprietary notice.

### GWAC Membership Activities

Ron Melton reminded the group that it is time to put forth nominations for GWAC associates. He also noted that there has been continued discussions to build on TESC 17 outcomes.

### Upcoming Meetings

Discussions are starting for GWAC's future focus and next annual meeting.

**Action:** Ron Melton asked GWAC participants to note the tentative date for the next GWAC Face to Face meeting is October 25, 26, 2017.

David Wollman can offer the GWAC Space at NIST, but not in main building. So escorting would be required.

Doug Houseman, now at Burns and McDonnell – has meeting space reserved in Kansas City, MO and will check the availability of Oct. 25 and 26 and get back to Ron, Mark and Susie.

In response to an inquiry, it was noted that the Burns and McDonnell website provides the following information about the company:

"We are a full-service engineering, architecture, construction, environmental and consulting solutions firm, based in Kansas City, Missouri. Our staff of 5,700 includes engineers, architects, construction professionals, planners, estimators, economists, technicians and scientists, representing virtually all design disciplines. We plan, design, permit, construct and manage facilities all over the world, with one mission in mind..."

Ron Melton asked the group to discuss the two location choices and compare pros and cons. He noted that GWAC met at NIST early last year.

Farrokh suggested that the cost of hotels be considered. Ron noted that Doug can offer a corporate hotel rate within a mile of the location at or below per diem.

Ron Bernstein also noted the travel cost savings with food since Burns and McDonnell has offered to provide meals to the meeting participants.

It was also noted that NIST is in Gaithersburg and hotels are not close, requiring a rental car. Meals would not be provided but there is a cafeteria on site.

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Ron Melton noted a swing towards Kansas City which received 4 approvals.

**Action:** Ron Melton to let Doug Houseman know that GWAC selected Kansas City, MO as the location.

**Action** for Susie to follow up with Doug after that and get logistics including hotel locations. An Outlook notice will follow.

Ron Melton read through the upcoming meeting list:

GWAC 2017 Fall F2F Meeting

Tentative date is 10/25 – 10/26 at either NIST or Kansas City

NARUC Summer Policy Summit – July 16-19, San Diego

SEPA Grid Evolution Summit, July 25-27, Washington DC

Smart Home Energy Management Systems, July 26 – 27, Houston, TX

Ron Bernstein asked about the upcoming IEEE PES meeting.

Ron Melton said it is a core meeting for power and energy society, with new officers seated formally as part of the agenda. It is a fairly academic conference but with industry based panel sessions. There are several committee meetings and publication meetings held as well.

### Discussions

Mark Knight reviewed the TESC meeting highlights:



130+ attendees

Much positive feedback

Keynotes and plenaries were well received.

Panels and interactive workshops were very well attended, only one speaker cancelled

Block Chain at the end of the meeting seemed to keep people at the conference, and was well attended.

The feedback sheets from the luncheon gave some good insights.

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The Foundational Session provided ideas for the Roadmap.

Proceedings are currently being developed.

Several possibilities for next year are being discussed.

Summary slides on the Roadmap have been developed.

A Roadmap discussion with Chris Irwin, DOE is coming up next week. Ron Melton and Mark Knight will attend and hopefully David Forfia.

Ron Ambrosio asked for TESC17 presentations. Mark Knight sent the Point View link to him for this purpose.

Ron Bernstein took all TESC17 audio and sliced into the order presented and created a directory with audio files. He will consider making the link available on his own site. He will need to talk with Mark Knight about which presentations were not marked for distribution before he releases his site for access

Added by Ron Bernstein – post meeting action item completed: ALL TESC presentations including audio and slide decks are now online and available to download from this link:

[www.rb-cg.com/GWAC](http://www.rb-cg.com/GWAC)

Ron Melton thanked Ron Bernstein for creating the audio files and PowerPoints for sharing.

Ron Melton noted that Duke Energy and Georgia Power (Leonard Tillman) have approached Ron Melton regarding hosting the next GWAC conference.

Steve Hauser with Gridwise Alliance is talking with Ron about combining with GWAC for the meeting. In the first week of December they will host an event similar to GridWeek called gridCONNEXT 2017. They would like GWAC to be a part of that. GWAC can discuss what might be good for that meeting. Then the Alliance would like to team with GWAC for the larger conference in 2018 but they preferred a West Coast location in late spring or early summer. However, they would consider a southwest location.

Link to the GridWise Alliance meeting gridCONNEXT 2017 registration site here:

<http://www.gridconnext.com/>

**Action:** Leonard Tillman will talk more with Ron Melton, Mark Knight and David Forfia before the next GWAC meeting about the gridCONNEXT 2017 and about options for TESC18.

Ron Melton noted that he, Mark Knight and Steve Widergren will be at the SEPA meeting next week in Washington DC.

David Forfia motioned to get the meeting minutes approved subject to final spellcheck suggested by Ken Wacks. Ron Bernstein gave the motion and Farrokh Rahimi seconded the motion at 10:37 a.m. PDT.

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Mark Knight provided a review of the current status of the Roadmap. A six page summary has been created. There was an interesting exchange of emails just before the conference but nonetheless it is coming together. A PNNL staff member has been assisting with the review. There is an idea to add summary overviews from the TESC 17 conference to the document. Mark is planning some more skype discussions with a few GWAC members in the next two weeks. Mark and Ron are keeping Chris Irwin in the loop on the progress.

Ron Melton found some inconsistencies in the summary overviews and requested some additional reviewers. Farrokh Rahimi, David Forfia, and Ron Ambrosio, were asked and agreed to help. A call will be scheduled in the next three weeks. Ken Wacks also offered to help, perhaps after the next round.

Tanya Barham, David Forfia, Lorenzo Kristov, and Mark Knight have been talking about how to simplify the TE definition. They have taken a “what’s in it for me?” approach. In the last call they ended while referring to a paper that Ron Melton and others had developed with six use cases. Those use cases will be used as an example.

Tanya Barham noted that she was just in a meeting with engineers at IEEE PES and some of them are questioning TE, and noting there are real problems now at the transmission and distribution level. People want to understand how this will be useful in the future and also how it can be applied to problems today. We can try to move the language to something more understandable to a regulator or council person.

Ron Melton noted that not only is it valuable to better articulate the value of TE, but the more specific question in a defined application is the TE value. At PNNL we have been making progress on practical applications and are able to show the challenges through modeling and simulation that show the value in a broader application.

Tanya Barham asked if this is a new report available.

Ron Melton said it's a project for a utility but is not yet written up. But it will be shared in the future. The results are very interesting. Abhishek Somani, PNNL has worked on it.

Tanya Barham would like to see the report when it is out.

There was a discussion on what GWAC should focus on next. The results of a member poll on a similar discussion last year were presented and discussed. Resilience seems like a good topic to look at since it leverages the GWAC's expertise in both interoperability and transactive energy. As well as resilience GWAC also needs to do an update to the transactive energy framework soon.

Ron said it's also about the functional ability of the system to perform under stress. So it possibly goes beyond design.

Ron Melton provided observations he made while at IEEE PES this week, including different approaches to architecture, different definitions of architecture, within the industry. This is an area that GWAC

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might be able to do some building on - Grid Architecture development with DOE and with SEPA. Could GWAC look at some dimensions of this like addressing interoperability? It's not a fully formed idea yet. It might apply in context with one of these bulleted topics.

Ron Melton gathered this observation from various PowerPoint presentations.

Heather Sanders said this is similar to what she has seen. Some groups don't understand IT in terms of the systems of systems. Such as with DERMS, outage management, customer satisfaction. Being IT based has been a criticism. She said maybe we can draw what has been done before. She sees this as a big need, how it's related, how it works together, what is the importance of this "Architecture thing."

Gerald Gray said he recently deputized power operators as Grid Architects at a meeting in San Diego. He asked, what do we have that already does this?

Heather Sanders said nobody knows. She added a comment from Chris Shelton (AES) from a DOE meeting, "Resilience is about design, and reliability is about operations."

Gerald Gray said the power engineers don't understand IT but if they can ask the fundamental question about architecture, then the other questions come with arch in mind. He gets utility architects to adopt arch diagramming standards. They have gotten other groups such as cyber and generation to use it also. The gen sector was all in to using a standard to diagram how artifacts can be generated.

Ken Wacks said he thinks the training for power engineers has been primarily concerned with operational issues rather than system issues.

Gerald Gray said he has seen power engineers at a meeting actually make a face and say "this is too IT-ish."

Ron Melton said we don't want to go where Jeff Taft is headed but we need to think above and beyond enterprise IT. We need to provide thought leadership that looks to the future, beyond what exists today.

Ron Melton noted that he, Mark and hopefully David will discuss this with Chris Irwin next week and will report back to the council once they get Chris's input.

### **Liaison Reports**

David Forfia mentioned the SEPA Grid Evolution meeting next week.

Ken Wacks will chair the Home Building meeting to the SEPA Grid group on Friday.

It was asked if non-SEPA members can attend the meetings on Tuesday and Friday. David will check but is pretty sure any registered attendee can attend these meetings.

NIST– David Wollman was not on the call.

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Ron Bernstein noted the ASHRAE meeting in Long Beach last week on Cyber Security. There is an action to develop cyber for building automation systems. He will pass any relevant info onto the group.

Ken Wacks noted the next ISO meeting will be Sept 11 – 14 in Belgium. Either Ron Melton or Mark will let him know if there is something to share.

Gerald Gray - EPRI has helped set up a CIM (Common Information Model) compliance testing task force. He noted that CIM adoption has dragged. In standards there is a struggle from standards to implementation. There will be a meeting Oct 10 - 12 in Knoxville to roll it out. It's like a beta test for CIM compliance.

Tanya Barham asked when nominations close for GWAC associates.

Ron reviewed the process regarding nominations from GWAC members for new associate members. Generally what is needed are active meeting attendees who have been engaged and are able to speak on behalf of the council. Associate status is good for one year and associates should be re-nominated after that.

Nominations are due at the end of July.

**Action:** Ron and Mark will ask nominees if they would like to be recognized before the vote.

The call for GWAC member candidates will come out in three months. Self -nomination is the norm for that and the selection process is different.

Ron Melton reminded everyone that GWAC meetings are open to the public and comments from attendees are welcome. Ron has sent Susie some new names recently to add to the Friends of GWAC list.

Tanya Barham has some names to add.

GWAC members are asked to send new names to Susie or to the [Gridwiseac.coordinator@pnnl.gov](mailto:Gridwiseac.coordinator@pnnl.gov)

Mark noted that only one standing associate has been nominated to continue so far. So far just Jeff Morris has been re-nominated.

Heather asked Ron Melton to give her a call after the meeting

### Closing

David Forfia asked for a motion to close the meeting at 11:23 a.m. PDT. Gerald Gray made the motion and Ken Wacks seconded the motion.

The meeting was adjourned.

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