

## Meeting Minutes

September 12, 2018

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### GWAC Members

David Forfia, Director, Enterprise Architecture & IT Transformation, Electric Reliability Council, TX

Ron Ambrosio, Chief Scientist, Utopus Insights, Inc.

Ron Bernstein, President, RBCG, LLC

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

Farrrokh Rahimi, Senior Vice President, Open Access Technology International, Inc.

Thomas Sloan, State Representative, State of Kansas

Leonard Tillman, Partner, Balch & Bingham, LLP

### GWAC Members not present

Tanya Barham, Director of Operations, PECE

Gerald R. Gray, Sr. Program Manager, Electric Power Research Institute (EPRI)

Joe Hagerman, Program Director for ICF

Doug Houseman, Grid Modernization Lead, Burns & McDonald

Stephen Knapp, Vice President of Quality Assurance & Energy Markets, Power Analytics Corporation

Lorenzo Kristov, Principal, Electric System Policy, Structure, Market Design

### GWAC Associates & Emeritus

H. Ward Camp, EBC

Ron Cunningham, AEP

Jeff Morris, Principal, Energy Horizon Corp.

Ken Wacks, Home, Building and Utility Systems

### GWAC Guests

Jeff Katz, Grid Technology, IBM

David Katz, Sustainable Resources

David Wollman, NIST

### PNNL Support

Mark Knight, GWAC Administrator

Susan McGuire, GWAC Coordinator

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A quorum was reached but the GWAC minutes had not been distributed for August. They will be sent out to the GWAC after the meeting.

The July minutes have been edited and are posted on the GWAC website. The NIST meetings have been added to the conference list.

The Interoperability Challenge notice from Steve Widergren has been sent out to the GWAC.

Ward Camp with EBC was nominated to be the liaison for the Blockchain consortium.

Gordon Matthews has told Mark Knight that he wishes to remain on as a GWAC Associate.

Ron Cunningham, AEP has been added to the GWAC Associate website.

Ken Wacks greeted the group from an awards ceremony in Washington DC. He noted that he is receiving an "IEC 1906 award" for standards development from the International Electrotechnical Commission (IEC). Ken gave his liaison information, the next ISO/IEC meeting will be held at Tysons Corner, VA, Sep 24-28; anyone interested in attending this meeting should contact Ken at [www.kenwacks.com](http://www.kenwacks.com)

Mark went through the status of the action items from last month.

Leonard Tillman and Mark Knight are planning to discuss TE Framework refresh. Leonard said that he had some comments about soften some things but no major changes. Mark promised to follow up with him on this.

Mark will also follow up with Gerald Gray to get his input.

**Action: Mark Knight to discuss the TE Framework refresh with Gerald Gray and also with Leonard Tillman.**

Mark noted that Roadmap comments are requested from anyone who wishes to contribute.

The NIST newsletter that David Wollman sent to Mark Knight will go out with the August Minutes.

Invitations have gone out for the Grid 3.0 Resilience workshop to be held in Washington DC on Oct. 30, 31.

Farrokh noted that he recently returned from travel out of the country. He will submit an abstract for a GWAC panel on Transactive Energy at the IEEE ISGT. The title is: Grid Connected Buildings as a Transactive Hub. David Forfia has sent him four names. The email gave four names, Mark Knight, Gerald Gray, Ron Ambrosio, and Ron Bernstein. Farrokh will get this submitted before the deadline which is the end of September.

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Mark said we will use the same format that we usually do for the AHR Expo. Farrokh will submit it on behalf of GWAC, he will check with Mark Knight.

**Action: Farrokh to submit a GWAC panel session for the IEEE ISGT after Mark sends out an email to the panelists to confirm their intent to participate on the panel.**

Mark displayed the list of upcoming GWAC related conferences. It is a long list.

Chair David Forfia asked for a motion to accept Ward Camp as the Energy Blockchain Consortium liaison. The vote was taken and there were no objections.

The Energy Blockchain Conference is on the list - Ward can send a discount code to GWAC members who may want to attend: [ward@energy-blockchain.org](mailto:ward@energy-blockchain.org), although he will be out of the country for two weeks but will try to respond when he can. Ward noted that EBC is about applications for the wholesale/distribution level, P2P, behind the meter and includes the world of electricity and gas. The EBC mission is to educate without pre-ordained outcomes. They will look at use cases with a large stakeholder presence. They want to look at standards, integration and interoperability issues. There are a number of EBC technologies out there, they want to look at Interoperability and use cases.

**Action Mark: Farrokh asked Ward to send the EBC meeting notice out to the group and the discount code. Ward will send it to Mark to distribute. People can contact Tony Giroti in Ward's absence.**

Jeff Katz noted that he is giving a talk on microgrids and resiliency at the World Energy Engineering Congress, Charlotte, NC, October 17-19, 2018. He also noted that the conference name is not correct in the GWAC conference list.

Jeff also asked if there would be enough GWAC people at DistribuTECH to have a GWAC F2F. Mark said if we have 4 or 5 people it would make sense to do that.

**Action Susie/Mark: Correct the name of the WEEC in the GWAC conference list. *Completed.***

**Action Mark: Track planned GWAC participation at DistribuTECH to hold a GWAC F2F if feasible.**

### GWAC Website Refresh - 2019

Mark Knight is creating a plan for refreshing the GWAC website in fiscal year 2019. This will be sent to DOE for their consideration regarding funding support.

Ron Bernstein noted that he has created a database model, and he would be happy to help guide the website refresh process. He suggested a survey of what people want on the site and what content should be archived and what can be kept active.

Mark said he likes the idea of a survey. Mark gave an example of when the TE Roadmap was posted on the GWAC website, it was listed under Transactive Energy and also under Publications. He said that the site has things posted in multiple places and it looks somewhat messy. He sees the need for a better plan and wants to move quickly. He agreed with Ron Bernstein, that a survey should be helpful for that.

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Mark noted that on the last call he asked for suggestions related to changing the GWAC website. He is wanting to update both the technology behind the site and to refresh the look and feel of the site. He needs to write up a suggestion to be able to request funds from DOE for this. He wants to focus on current information and set aside some of the older information. Any ideas are welcome.

Ron Ambrosio thought an archive would be good for older material but he didn't want to see it discarded.

Ron Bernstein said he could help suggest a way to search for older info from tags but without clearing them off the site. A way to keep them available. He would be happy to help guide the process, he has a lot of experience.

Ron Bernstein suggested that Mark make an outline what's there as far as documents. He also suggested a survey of GWAC members to get input about what changes are needed.

**Action: Mark and Ron Bernstein to talk later about changes to the GWAC Website and also about how to map out what is currently on the website. They will also put together a survey for the GWAC to provide input about website changes.**

### New Member Call in October

Council members serve as individuals, not as their company. Membership is for a two year period. New members will be in place by Jan. 1 but will be announced in mid to late Feb. The call will go out in October.

Mark is currently talking with council members individually to see who wants to continue on and who does not.

### 2019 TESC Planning

Mark reviewed the planning to date regarding TESC. He has been talking with IEEE and has put some preliminary cost estimates together. He is not sure what IEEE has decided but he is working on setting up a call.

University of Minnesota has said they are interested in hosting the 2019 conference. So they are a potential partner and venue.

SGNW – Mark talked with them as a back up to the IEEE as the organizer and they indicated an interest and connections in the area. They had been a solid partner for the first four years of this conference. They have connections in the Minneapolis area. Mark would like to get SGNW more formally involved.

At this point there are many unknowns but some encouraging signs. If we do move forward with IEEE PES they do have a lot of experience to help us.

David Forfia said he is worried about the time line and hopes we can finalize everything quickly.

The date should be the second week of June, 2019 11, 12, 13 of June looks likely.

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Mark said that based on the tutorial interest this year should have a full day of tutorials such as 2 in the morning and 2 in the afternoon. IEEE was in favor of this.

### TE Framework update

- Additional edits to early sessions
- Updated text for Section 4.1 (Leonard, Chris)
- Updated text for section 4.2 (Lorenzo, Farrokh)
- Gerald sent text to Ron for review for Section 4.3
- Updated text for section 4.4 (Doug)
- Discuss architecture diagram with Gerald Gray
- Needs to be completed by the end of Sept.

Mark has a set of diagrams, each one has a different look and feel. He is hoping to get things more consistent. He is working with Gerald Gray on the architecture. Ron Ambrosio and Mark are working with the NIST diagram, and they may simplify it and use a version of it.

### TE Roadmap

Mark is using Stuart McCafferty's suggestions on the Roadmap. So far those are the only recent comments that have come in. Some changes may not fit such as the Cyber – IOT area. It is moving closer to being published once changes are made.

### GWAC F2F/Grid 3.0 Resilience workshop – Oct. 30, 31, Washington DC

Grid 3.0 will be hosted by GWAC. The workshop is by invite only and have gone out by email. EPRI will be doing the registration. Replies to registrations will be responded to by Mark Knight, Ron Melton and/or Don Von Dollen. And reminders will also go out for those who have not responded to the invite. The focus is in improving resilience at the distribution level.

Ron Cunningham said Jeff Taft's presentation at ERCOT about a year ago fired discussions across several groups and this became the basis of the content of this meeting. He added that to leverage this and go forward the planners believe we need to make systems that are more resilient, more than what we have today. Ron is looking forward to contributions from the meeting participants and he emphasized that this will be a participatory event.

Ron Bernstein asked about the registration information so that he can make travel plans. Mark said he thought this would go out on Friday.

Farrokh said that he has made his travel plans to attend the GWAC Face to Face meeting.

Mark noted that after the GWAC meeting lunch will have to be purchased, there will not be a lunch provided.

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Ron Bernstein would like more information on sponsoring the GWAC lunch, Mark said he expects about 15 people to attend.

**Action: Susie to send Ron Bernstein the information on lunch costs for the GWAC. Ron would try to help find a sponsor for this lunch to keep the meeting continuous. Complete**

Farrokh asked if the Resilience workshop is looking for speakers, attendees or sponsors. Mark is wanting GWAC members to help with leading breakout discussions. Farrokh said he has some material relevant to the meeting that he will send to Mark.

**Action Farrokh: send workshop information to Mark Knight for the resilience workshop and Grid 3.0**

**Action: GWAC members interested in speaking at the workshop to contact Mark and he will follow up**

Mark said GWAC is convening the meeting and that it would be appropriate for them to have a couple of speaking roles at the meeting.

Ron Bernstein said he would be happy to facilitate the breakouts and also to record the sessions.

Mark said that with three breakouts it might be difficult and Ron agreed that the quality might not be great. Mark also said that this GWAC meeting will not be an online meeting because of the breakout sessions.

James Mater said he doesn't know much about Resilience. He said he feels he is a novice in this area. He would be happy to help facilitate but he is coming to learn.

Mark noted that everyone has slightly different views on resilience and so James perspective might be helpful in making others aware of this issue.

Mark expects the workshop registration site to be up very soon and he encouraged everyone to make their travel plans now.

### GWAC White papers

The White paper on Smart Buildings as Transactive Hubs is something that Mark will act as the lead for.

Regarding the Valuing Control paper, Stephen Knapp has been leading it but he and Mark have not connected yet.

Ron Bernstein related to on Smart Buildings, by noting that ASHRAE has this week put together a request for participation to create a white paper as a design guide to integrate with a smart grid. They want to know how to design a building to communicate with the grid. Pricing signals, open ADR and control signals are addressed in this request. They asked Ron Bernstein to contribute to it. He said this came from their corporate office. Ron can share the summary with Mark Knight and they will talk later offline.

Ron Bernstein shared the mission statement from ASHRAE in the sidebar:

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*“An Ad Hoc committee has been formed to develop a user’s guide that serves as an education tool to inform building professionals about the smart grid and the role of buildings in it, and to provide practical information about concrete steps to prepare and operate a building in a smart grid environment. As the Ad Hoc prepares a work statement and RFP for this project, they are looking for potential bidders to reach out to for this project.”*

**Action: Mark Knight and Ron Bernstein to talk off line about the new initiative from ASHRAE on Smart Buildings.**

David Wollman gave the name Steve Bushby, NIST as someone who has been working with AHRAE leadership on some of these initiatives and might be able to provide some additional information.

Ron Bernstein said if this does flow through it can be discussed at the January ASHRAE meeting and noted it seems very timely and he suggested that GWAC try to get Steve Bushby, NIST to come to the January ASHRAE meeting and talk about this new initiative.

**Action Mark: Prioritize this possibility, follow up with Steve Bushby and Ron Bernstein on it.**

Rahul Bahadur on the Valuing White paper he will follow up with the team members in the next couple weeks.

Mark said that if Rahul could get a call together and create a title, then discuss a work scope it would really help to move this paper along. Stephen Knapp has seemed to be very busy so if Rahul as a team member could help move it forward that would be a good thing.

**Action: Rahul Bahadur to schedule a meeting on the Valuing Control white paper**

David Wollman provided side comments about a meeting tomorrow as his Liaison reports to be sent to the group. **Completed**

### GWAC Related Conferences and Events

- ISO/IEC Tysons Corner, VA, Sep 24-28
- Microgrid & DERS Summit, Sept. 25 – 26, 2018 in Alexandria, VA
- Solar Power International (SEPA), Anaheim, California, Sept. 24-27, 2018
- Anaheim Smart Grid Conference hosted by CEATI on Oct 2-3 2018
- Smart Grid Northwest Conference, “Grid FWD,” Oct. 10 – 11, 2018, Vancouver BC, Canada
- 5<sup>th</sup> Annual Demand Response and Distributed Energy Resources Oct. 16 – 17, Costa Mesa, CA
- World Energy Engineering Congress, Charlotte, NC, October 17-19, 2018
- 4 Regional NIST meetings

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- September 12 at the Georgia Public Service Commission in Atlanta, Georgia (Southeast)
  - September 27 at the Indiana Utility Regulatory Commission in Indianapolis, Indiana (Midwest)
  - October 16 at the California Public Utilities Commission in San Francisco, California (West)
  - November 29 at the Rhode Island Public Utilities Commission in Warwick, Rhode Island
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- GWAC / Grid 3.0 Resilience Workshop, DC, Oct. 30 – 31, 2018
  - Energy Blockchain Consortium, Nov. 1 – 2, 2018, Hilton, Orlando Florida
  - POWER-GEN International, Orlando, FL, December 4 – 6, 2018
  - ASHRAE Winter Conference, Atlanta, GA, Jan 12 - 16, 2019
  - DistribuTECH, New Orleans, Feb 5 – 7, 2019
  - Smart Energy Summit, Austin, TX, Feb. 18 – 20, 2019
  - IEEE ISGT, Washington DC, Feb. 18 – 21, 2019

### Liaison Reports

NIST – David Wollman – will send email about the message above

SEPA David Forifa – SEPA TAC is next Tuesday, nothing changed since the last call.

EPRI - Gerald Gray is helping with the Grid 3 resilience workshop on behalf of EPRI

ASHRAE – Ron Bernstein – the GWAC spot at ASHRAE has been accepted in January (2 hours are reserved). Speakers are still needed, that is the next step. We will focus on the model of building to grid integration and how to design the specifications.

GWAC will be sending an email blast out about the AHR Expo.

**Action: Mark K to follow up with Ron B on this GWAC session in Jan. at ASHRAE**

IEEE - Farrokh Rahimi said that for ISGT and PES for next year, they are in need of a 4 or 8 hour tutorial. Now is a good time to be planning for these opportunities. The IEEE application is the same for ISGT, or PES general meeting or both. The deadline is the end of Sept. There are opportunities available.

EBC – Ward Camp not on the call now but Mark or Susie will send out an email with the discount available for GWAC members for their upcoming meeting.

NARUC – Chris Villarreal not on the call,

Ken Wacks (ISO/IEC) gave his input earlier about the meeting at Tyson's corner which is listed on the GWAC conference list. Anyone wanting to attend should contact Ken.

### Adjourn

Chair David Forfia asked for a motion to adjourn the meeting 42 minutes early.

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Ron Ambrosio gave the motion. Farrokh Rahimi seconded the motion.

The motion to adjourn at 11:19am was made by David Forfia.