

## Meeting Minutes

### November 16, 2016

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#### ***GWAC Council Members***

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David Forfia, Director, Enterprise Architecture  
at the Electric Reliability Council of Texas

Ron Ambrosio, IBM Distinguished Engineer and  
Chief Technology Officer for IBM's Smarter  
Energy Research

Ron Bernstein, President, RBCG, LLC

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

Stephen Knapp, Exec. Director, Power Analytics  
Corp.

Mark Knight, Chief Eng., PNNL

Heather Sanders, Prin. Mgr., So Calf. Edison

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

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

Tom Sloan, State Representative, State of  
Kansas

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

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Gerald Gray, Tech Exec, EPRI

Carl Zichella, Director, Western Transmission for  
NRD

Doug Houseman, Vice President of Technical  
Innovation at EnerNex, LLC.

#### ***GWAC Emeritus***

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Ken Wacks, Sensus Metering Systems

#### ***GWAC Associates***

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Gordon Matthews, Tech. Innovation, BPA  
Jeff Morris, Principal, Energy Horizon Corp.

#### ***PNNL Support***

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Ron Melton, GWAC Administrator  
Susie McGuire, GWAC Coordinator

#### ***Guests***

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Bruce Beihoff  
Ed Cazalet  
Phil Davis  
Terry Hill  
David Holmberg  
Larry Lackey  
Dave LeVee  
Tim Schoechle  
Leonard Tillman  
David Wollman

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### *Administrative*

The meeting was called to order by David Forfia at 10:06am Pacific time.

The minutes for both September and October were presented for comments and approval.

Several comments were made which will be incorporated and the minutes were nominated for approval by David Forfia. Ron Bernstein made the motion for approval and Stephen Knapp gave the second. Both sets of minutes were approved at 10:12am.

Ron Melton reminded everyone about the AHR Expo to be held in Las Vegas from Jan. 30 to Feb. 1 which is concurrent with the ASHRAE Winter meeting; and also about the DistribuTECH meeting to be held in San Diego from Jan. 31 to Feb. 2.

ISGT IEEE meeting to be held in Washington DC April 23-26, 2017. Farrokh Ramimi is the Technical Chairman. Ron Melton is the Secretary, Joe Palladino, DOE is the General Chairman. Ron and Farrokh asked for help letting people know that more papers are needed, symposia chairs are still needed and panel leaders are still needed.

Ron also noted that Paul DeMartini is still talking with San Diego Gas and Electric about hosting the GWAC February Face to Face meeting. The dates will be either Feb. 7-8 or Feb. 8-9.

The next GWAC online meeting will be held Dec. 21 and Susie will schedule it this week.

Mark Knight gave an update on the Decision Maker's Checklist. The comment period has officially closed but comments can still be sent into Mark and Ron. Mark is finalizing the document and it will be ready by the end of the year.

David Forfia noted that the SGIP meeting last week had attendance of over 250 making it very successful. He thanked everyone who participated for their contributions.

Ron reviewed the discussion of the TES Roadmap meeting on Nov. 15.

Ron asked for volunteers for the TES 17 Planning Committee and the following asked to be included: Stephen Knapp, Ron Bernstein, Ken Wacks, David Forfia, Paul DeMartini, Farrokh Rahimi, Heather Sanders. Ron will set up a planning meeting call for Dec. 13.

Ron announced that the upcoming call for GWAC new members is posted on the GWAC website: <http://www.gridwiseac.org/>

There will be seven spots to fill which includes one for Mark Knight who should step down since he is now a PNNL employee. Carl Zichella will not be able to continue on. Stephen Knapp, James Mater, Ron Bernstein, David Forfia, Gerald Gray would all like to remain on.

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New members will need to have their applications in by Dec. 20, 2016. The committee will vote in January. New members will be invited to participate in the next GWAC Face to face meeting in Feb.

Ron also noted that it is time to elect a new GWAC Chair person. David Forfia is nearing the end of his two year term. Ron asked that nominations for a new GWAC Chair be sent to him and copied to the Susie McGuire by November 20. Ron will schedule a special call in January. He also suggested that nominees be asked about their interest and willingness to serve prior to the nomination.

Regarding TES 17, Ron said that the format will be similar to last year with a format of the conference with workshops and panels. Feedback on this format has been very positive.

The focus of the conference will be to examine what will make TE systems real. Our roadmapping efforts will provide direction.

Ken noted Tracking progress as a desired result. This may be a good topic for workshops.

Heather Sanders noted that among her colleagues the thinking is that we are 10 to 20 years from bringing TE to market. TE is not seen as a near term reality. She said that California is still discussing required operational services needed from DER before one considers markets. She said the focus is really on more practical applications.

Heather reminded everyone that in her area the term TE is also used to mean Transportation Electricification. She commented that there is on-going confusion about the definition of TE – some think it means peer-to-peer real time energy market. In California the discussion is about required operation services needed from DER before one considers markets.

Paul DeMartini said there is a spectrum of transactive energy. A lot of people have interpreted it as peer-to-peer transactions in the distribution system. What the GWAC has defined is broader and includes addressing economic and control mechanisms. Perhaps we provide a better sense as to how the spectrum of transactive energy *may* evolve, for example, as being discussed in New York.

James Mater noted that the IEEE 2030.5 standard (?) – DER management focus.

Perhaps having tutorials about the spectrum and techniques such as things being done today such as those that introduce market competition that do not need real-time markets.

Farrokh asked about tutorials. This would be good to discuss with the program committee.

One objective might be to bring the relevancy to today's state of the industry.

The goal is to align discussions with the states. They have outlined their activities planned over time. There is an opportunity to see how these policies and plans are driving. There is resource material from

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both California and New York that lays out the structure that is being considered by the states. Minnesota's staff report that Chris led is similar.

Link to CA/NY on market development. Both states have activity on methodology for valuing DER. Utilities and DER provider participants. There will be further work on DER procurement for wholesale. There is potential for 1 or 2 plenary panels. Perhaps a tutorial on what is going on in those states.

Perhaps we could have a summit element for NY/CA. Simon Baker is the CA-PUC person for integrated DER proceeding. Tammy Mitchell is the NY PSC lead for something similar. Chris Villarreal has been looking at this too.

DSPx normalized the view of the current state activities.

We may also want to consider the different end-users as a dimension.

Do we want specific dates or rather stages or time-frames? Stages can be defined. The starting point are the stages that Paul and Lorenzo defined. We can refine based on that. The stages are characterized by some set of characteristics.

Farrokh Rahimi suggested that we say something such as "near term" and "long term" instead of specific sets of dates in the future which may vary amongst various plans.

Ron Melton said the thing we want is clarity on the stages such as:

Stage 1 – Grid Modernization

Stage 2 – Operational Markets

Stage 3 – Distributed Energy Markets

Paul DeMartini has a FUR report (ICF paper) on DER that will be available later this week. Also there is one for the supplemental NY utilities.

There is an SCE pilot with Ed Cazalet. We might want him to present on that at one of our gWAC web meetings. The devices is lead by Universal Devices and Ed is the PI. Ed has also some views regarding TE that differ from some of the conclusions of the GWAC. Ron Melton suggested that Ed give a talk at one of the upcoming online meetings or even the Face to Face meeting in San Diego.

Ron noted that the GWAC Face to Face meeting at OATI in October was productive toward building the TES Roadmap. David Forfia thanked Farrokh Rahimi and OATI for their hospitality in hosting the meeting. Ron noted that having a separate breakout session for those who called into the meeting, which were led by Mark Knight were very successful.

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Ron Melton will host a meeting on Nov. 22 on GWAC TE Roadmap Stages / Vision Definition working party with along with Mark Knight, Paul DeMartini, Stephen Knapp, Heather Sanders and Ron Ambrosio. In the meeting the goal will be to describe the drivers and the scenario. What will cause the transformation? That will then be inserted into each topic area.

The first two topics are drivers (or things that need to change. DER adoption is one of the primary drivers)

The second two topics are responses to the drivers (in general).

Ron Melton posed the following timeline:

Dec. 15 Ron will host a meeting on the Vision States working group.

Jan. 6 Working group to meet to discuss Gaps to achieve vision.

Jan. 27 Ron plans to have a Draft ready for the GWAC

Feb. 1 Ron will have a draft for meeting attendees.

### *Action Items*

Heather Sanders will provide some background material on where she identified the stages for California.

Heather was also asked to send an interpretation by SCE. (There are also MN adaptations.)

Susie McGuire will send out GWAC online calendar announcements for December and January.

Susie will talk with Srinivas Katipamula about his participation in ASHRAE/AHR and let Ron Bernstein know.

Ron Melton will schedule the Vision Planning meeting on Tues. Nov. 22

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Ron Melton will set up a GWAC planning meeting call for Tues. Dec. 13. The Planning Committee is: Stephen Knapp, Ron Bernstein, Ken Wacks, David Forfia, Paul DeMartini, Farrokh Rahimi, Heather Sanders.

TE Panel proposal for ISGT – follow up with Farrokh, Ron Melton, Ron Knight for discussion and then submission

Mark Knight will incorporate edits next week. Most edits came from Ken Wacks and Tom Sloan. Mark will finalize the Decision Maker’s checklist. Stephen Knapp said that he would send in some comments.

Ron will scheduled Ed Cazalet to speak on the TE Mix at a future GWAC meeting.

Paul DeMartini will send Ron the report on the NY Utilities Market.

Ron will send a link to the FUER report

ALL – send nominations for open GWAC council meetings and the GWAC Chair position by December 20.

ALL – anyone who can help Heather Sanders locate review materials regarding how DER affects reliability please let her know. She is looking for any historic information. David Forfia will ask his planning group but anyone else with information is asked to work with Heather.

Ron Bernstein said he is waiting for a date for the call. This will be a full committee call.

### *Closing*

Mark Knight recognized the outstanding efforts provided to the GWAC by Chairman David Forfia and thanked him on behalf of the Council.

There was a question about whether David Forfia could serve a 2<sup>nd</sup> consecutive term. Ron Melton noted that this is allowed.

David Forfia wished everyone a happy Thanksgiving next week and moved to adjourn the meeting at 11:44 Pacific time. Ron Bernstein motioned to adjourn and Ron Ambrosio gave the second motion.