Meeting Minutes

December 21, 2016

GWAC Council Members

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

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

Gerald Gray, Tech Exec, EPRI

Stephen Knapp, Exec. Director, Power Analytics Corp.

Mark Knight, Chief Eng., PNNL

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

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

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

Tom Sloan, State Representative, State of Kansas

Members Not Present

Ron Bernstein, President, RBCG, LLC

Carl Zichella, Director, Western Transmission for NRD

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

GWAC Emeritus

Ken Wacks, Sensus Metering Systems

GWAC Associates

Chris Villarreal, Dir. Policy, MN Public Utilities Commission Jeff Morris, Principal, Energy Horizon Corp.

PNNL Support

Ron Melton, GWAC Administrator Susie McGuire, GWAC Coordinator

Guests

Bruce Beihoff Ed Cazalet Dave LeVee Andrew Nicholls Terry Oliver Tim Schoechle Leonard Tillman Mani Vadari

Tanya Barham

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Administrative

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

The minutes for November 2016 were presented for comments and approval. Two edits were requested. Mark Knight gave a motion to approve the minutes with the edits which was seconded by Stephen Knapp and were approved at 10:12am Pacific time.

Ron looked at actions remaining from the November meeting:

Heather Sanders still needs to locate review materials regarding how DER affects reliability. She is looking for SAIDI/SAIFI type impacts with increasing DER penetration. Mani Vadari will send some information to Heather that he has. Gerald Gray thinks there is an EPRI report that is relevant. The Smart Grid Demo reports may be of help. Heather to check with Don Von Dollen also. Mark Knight referred her to a report on Portugal since the country ran on 100% renewable electricity for 107 hours straight in May 2016. Depending on the degree of distribution of the renewables this may be helpful.. Ken advised that 30% was the tipping point for renewables (from a 2012 meeting). Heather is interested in Safety related information also. Paul DeMartini suggested she look at Hawaii reports (feeders, transient issues, rapid weather changes).

Heather mentioned that Alex Papalexopoulos, ECCO International Inc. is working on a TE platform in the UK. His work is very relevant. Ron will invite him to a future GWAC meeting.

Ron will send out the ENA report and the CSIRO reports. (Heather noted that Paul had sent out links to both documents.

Ron was asked to resend the NARUC Rate and Design Compensation Manual link out from Chris Villarreal. Chris Villarreal agreed that stages is consistent with the NAERS manual and he wants to support this change. Also, the NARUC DER manual can be found here http://naruc.org/rate-design/, the link also includes access to all the comments received on the draft manual.

Upcoming meetings:

Ron Melton will schedule the GWAC F2F planning meeting that was to have been scheduled for Dec. 13 to the first week of January 2017 (Jan. 5). The committee will be Stephen Knapp, Ron Bernstein, Ken Wacks, David Forfia, Paul DeMartini, Farrokh Rahimi, Heather Sanders, and Mark Knight. The dates are Feb 6 & 7 – Monday, Tuesday for the GWAC F2F. We need to decide which day will be the full day and

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which will be the half day. Location will be at the Energy Innovation Center, 4760 Clairemont Mesa Blvd, San Diego, CA 92117.

The GWAC online meeting for January is scheduled for Wed. January 18.

Ron reminded everyone of the AHR Expo Jan 30 – Feb 1 in Las Vegas. Ron Bernstein is helping. http://ahrexpo.com/ and also, the DistribuTECH in San Diego Jan 31 to Feb 2 http://www.distributech.com/event-info/event-info-trans-sgip.html

ISGT April 23 – 26, 2017. Farrokh noted that he could still accommodate 1 or 2 panels if requested but has a good program in place. There will be a TE panel that Ron and Farrokh helped to organize. Jeff Taft, Dave Hardin, Ron Melton will do an architecture tutorial on Sun. http://sites.ieee.org/isgt-2017/

The Transactive Energy Systems Conference will be held June 13 - 15, 2017 in Portland, OR. The Call for Papers has gone out as of Dec. 20. Ron Melton asked everyone to promote this via social media and other means. We need many high quality papers to have a successful meeting. Next the Conference website will be developed with assistance from SGNW and Anto Budiardjo.

2018 Ken Wacks is talking with MIT. Ken will ask some of his MIT contacts to attend TESC 17.

The Roadmap committee has met 3 or 4 times since the last GWAC meeting. David and Ron should schedule a phone discussion with Chris Irwin regarding time intervals to stages as defined in the FUER report (ICF paper) that Paul DeMartini put together. Next we will begin to fill in. We will have the vision statement by Jan 10 and then see what gaps are left. It may not all be done to be reviewed in time for the F2F meeting but the goal is to get as far as we can.

Membership Activities:

Applications closed Dec. 20 for GWAC membership nominations. Ron will schedule selection committee meeting in early Jan, and a council meeting to vote mid-January. Ron wants to do this quickly so that people can attend the F2F in Feb.

Tanya Barham asked if she could submit a GWAC membership nomination in the next day or two. Ron agreed if GWAC members agree, no objections noted. She thanked everyone for their flexibility and said she would get it in this week.

David Forfia has been nominated to continue as the GWAC chairman. Ron could do an email vote or vote in today's meeting. Heather suggested that the GWAC should do it today and this was also approved by several other members and no objections. Ron said that normally it would be a secret ballot but since we have no other candidates voting today seems expedient. This was discussed and an

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exception was agreed to by ...Heather Sanders gave the motion, and Tom Sloan seconded. James Mater noted that David Forifia is an exceptionally fine candidate. There were no objections. David Forfia was renewed as Chairman at 10:40am PST.

Ron will get approval from Chris Irwin on the nomination and that will be followed by a press release written by David Forfia and distributed by Susie McGuire.

Actions:

Chris Villarreal sent the NARUC Rate Design and Compensation Manual NARUC DER manual can be found here http://naruc.org/rate-design/

Ron Melton will schedule the GWAC F2F planning meeting that was to have been scheduled for Dec. 13 to the first week of January 2017 (Jan. 5).

Ron will restart the TES 2017 planning meetings

Ron will send a link to the FUER report

Ron will send out the ENA report and the CSIRO reports (expect from Paul)

Ron will ask for Chris Irwin's approval regarding David Forfia continuing on as the GWAC Chair. Next steps are for a press release.

Ron will schedule the membership selection committee.

ALL – broadcast the TES17 Call for Papers located on the GWAC website www.gridwiseac.org Call for papers link to PDF: http://www.gridwiseac.org/pdfs/tes 2017/tes 2017 call papers.pdf

Closing:

David Forfia called for a motion to adjourn the meeting at 11:00am Pacific time; James Mater gave the motion and it was seconded by Stephen Knapp.