

## Meeting Minutes

Aug. 19, 2020

### GWAC Members

David Forfia, GWAC Chair

Ron Ambrosio, Independent Energy Transformation Professional

Tanya Barham, Principal, Community Energy Labs

Ron Bernstein, President, RBCG, LLC

Andrew Bordine, VP Energy Mkts & Innovation, Anterix

Ron Cunningham, American Electric Power

Stuart McCafferty, President, GridIntellect

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

Leonard Tillman, Partner, Balch & Bingham, LLP

Aaron Snyder, Director of Grid Technology Consulting, EnerNex

### GWAC Members not present

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

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

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

### GWAC Associates & Emeritus

Kay Aikin, CEO, Introspective Systems

Rahul Bahadur, Mgr. of Engineering, VMWare

Mark Knight, Burns & McDonnell

James Mater, QualityLogic, Inc.

Jeff Morris, Principal, Energy Horizon Corp.

Chris Villarreal, President, Plugged In Strategies

Ken Wacks, Home, Building & Utility Systems

### GWAC Guests

Aaron Smallwood, SEPA

Ramteen Sioshansi

Elizabeth Sisley

Tony Thomas, NRECA

David Toquica, LIREI, Univ. of Quebec

David Wollman, NIST

### PNNL Support

Ron Melton, PNNL, Administrator

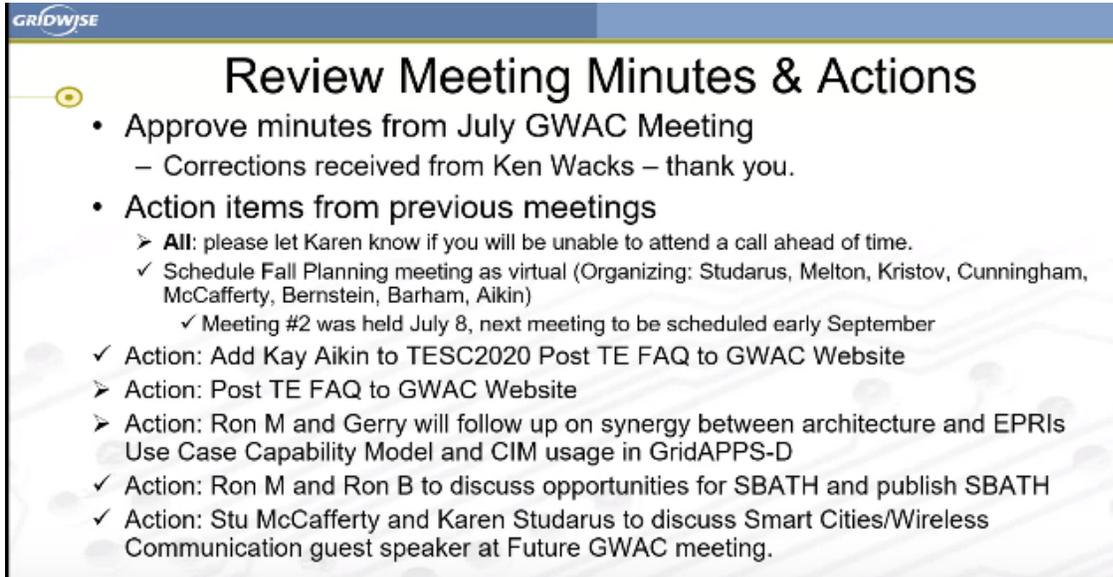
Karen Studarus, PNNL Administrator

Susan McGuire, GWAC Coordinator

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### Administrative



**Review Meeting Minutes & Actions**

- Approve minutes from July GWAC Meeting
  - Corrections received from Ken Wacks – thank you.
- Action items from previous meetings
  - **All:** please let Karen know if you will be unable to attend a call ahead of time.
  - ✓ Schedule Fall Planning meeting as virtual (Organizing: Studarus, Melton, Kristov, Cunningham, McCafferty, Bernstein, Barham, Aikin)
    - ✓ Meeting #2 was held July 8, next meeting to be scheduled early September
  - ✓ Action: Add Kay Aikin to TESC2020 Post TE FAQ to GWAC Website
  - Action: Post TE FAQ to GWAC Website
  - Action: Ron M and Gerry will follow up on synergy between architecture and EPRIs Use Case Capability Model and CIM usage in GridAPPS-D
  - ✓ Action: Ron M and Ron B to discuss opportunities for SBATH and publish SBATH
  - ✓ Action: Stu McCafferty and Karen Studarus to discuss Smart Cities/Wireless Communication guest speaker at Future GWAC meeting.

David Forfia asked for a motion to approve the July meeting minutes. Ron Ambrosio gave the motion and Andrew Bordine seconded the motion. There was no further discussion, no objections, and the July minutes were approved.

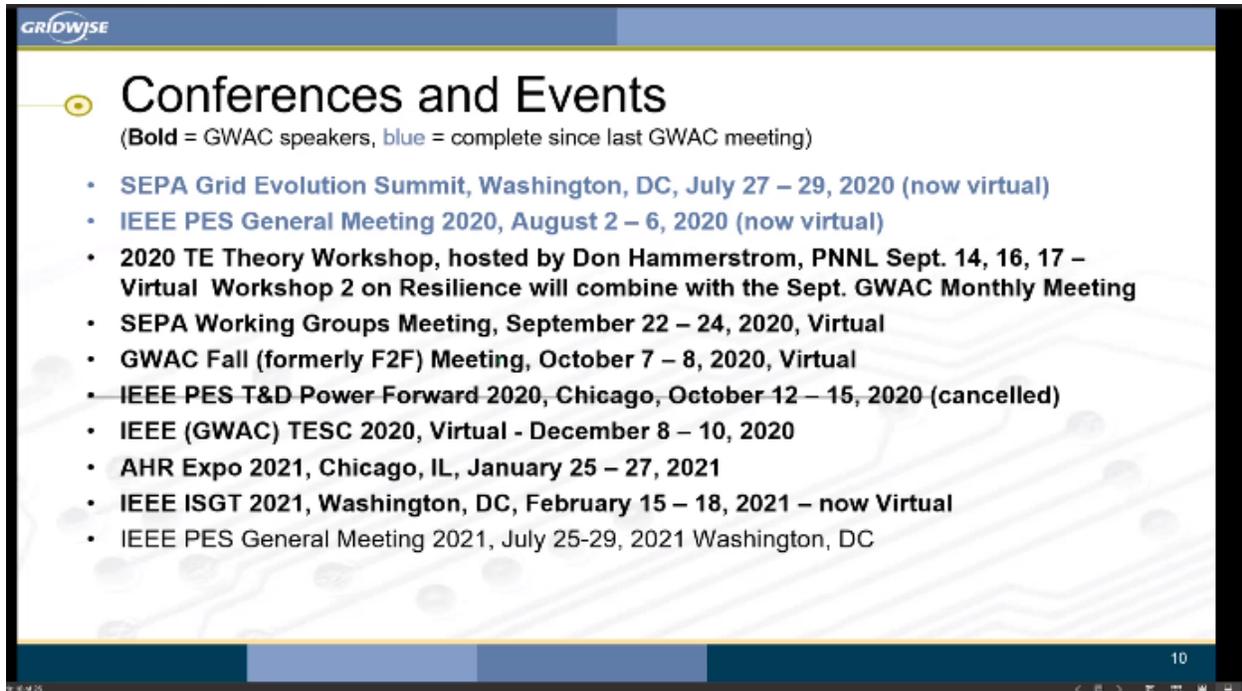
Karen Studarus noted that all five GWAC associates were nominated to continue for another term. There were no new associate nominations. David Forfia asked for a motion to approve them. Ron Ambrosio gave the motion and Tanya Barham seconded the motion. There was no further discussion. The motion was approved with unanimous support.

The five GWAC Associates, Kay Aikin, Rahul Bahadur, Jeff Morris, Mark Paterson, and Chris Villarreal will all serve another term.

An installation ceremony is planned for the GWAC Fall Virtual meeting.

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The screenshot shows a presentation slide from the GridWise Architecture Council. The slide is titled "Conferences and Events" and includes a legend: "(Bold = GWAC speakers, blue = complete since last GWAC meeting)". The slide lists several events, some in blue text and some in bold text. The events listed are:

- SEPA Grid Evolution Summit, Washington, DC, July 27 – 29, 2020 (now virtual)
- IEEE PES General Meeting 2020, August 2 – 6, 2020 (now virtual)
- 2020 TE Theory Workshop, hosted by Don Hammerstrom, PNNL Sept. 14, 16, 17 – Virtual Workshop 2 on Resilience will combine with the Sept. GWAC Monthly Meeting
- SEPA Working Groups Meeting, September 22 – 24, 2020, Virtual
- GWAC Fall (formerly F2F) Meeting, October 7 – 8, 2020, Virtual
- IEEE PES T&D Power Forward 2020, Chicago, October 12 – 15, 2020 (cancelled)
- IEEE (GWAC) TESC 2020, Virtual - December 8 – 10, 2020
- AHR Expo 2021, Chicago, IL, January 25 – 27, 2021
- IEEE ISGT 2021, Washington, DC, February 15 – 18, 2021 – now Virtual
- IEEE PES General Meeting 2021, July 25-29, 2021 Washington, DC

The slide also features the GridWise logo in the top left corner and a navigation bar at the bottom right with the number 10.

James Mater noted that DistribuTech has been moved to the end of March 2021 and will be held in Orlando, FL.

James requested to add the Solar Power International (SPI) to the meeting and conference list. It is a SEPA involvement. The technical content will be virtual and during the meeting it was confirmed that the trade show portion of the meeting will now also be virtual.

<https://www.solarpowerinternational.com/> Virtual Tradeshow Oct 21-22, Virtual Education Micro - conferences, Sept. 14 - Oct. 27

Mark Knight mentioned the NARUC affiliated meeting, NCEP, an annual meeting that will overlap a bit with TESC20 on Dec. 7 - 9 and will be a virtual event. Mark Paterson, Mark Knight and possibly Jeff Taft are involved.

Karen said the GWAC refresh is still underway. It is taking a bit longer than expected but is still on track. GWAC feedback has been incorporated. They are working on some technical issues related to ease of maintenance.

Ken Wacks asked about the AHR expo. Ron Melton thought it was still on but there is some uncertainty. AHR <https://www.ahrexpo.com/covid>

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GWAC Projects – July 2020 Update

Project	TE FAQ	Smart Buildings as Transactive Hub White Paper	TESC Conference	Grid Future States Update
Scope	Final document reviewing key features of TE systems as documented in TE Framework, etc.	Discuss use cases for building integration with grid and how/what a TE model might look like	Annual GWAC sponsored conference focused on Transactive Energy and related topics	Update Grid 3.0 Future States
Audience	Policy, Regulators, Legislators, TE Practitioners	Building owners, energy managers, utilities, and ISOs	Decision makers, solution providers, info, academics, policy, solution providers	Industry Stakeholders
Status	Short term complete	Reviewed	Program structure created for virtual or FTI	Started in January. Now meeting regularly. Coordinating with GWAC Core Architecture needs
Actions	Post to new website	Address peer review comments	Promote conference, work on identifying and recruiting keynotes and primary panels	Working group is gathering inputs and organizing material and has a work plan
Leadership	Tanya Berman	Ron Mallon, Ron Bernstein	Various – Ron Mallon Lead	Ron Cunningham, Karen Gossens

Karen reviewed the GWAC active work products.



Next GWAC 16 Sep 2020 12:30 ET/9:30 PT

- Held Jointly with [Transactive Energy Theory Workshop #2](#) (program linked)
- **Starting 30 minutes early** for GWAC business: 12:30 ET/9:30 PT
- GWAC’s usual 2 hour timeslot will contain the workshop session:
- Enhancing Grid Resilience using Transactive Energy Systems,
  - Farrokh Rahimi, Open Access Technology International, Inc. (OATI); Donald Hammerstrom, Battelle, Pacific Northwest National Laboratory (PNNL); Rahul Bahadur, VMware, Inc.; and Mark Knight, 1898 & Co., Part of Burns & McDonnell. “Reliability and Resilience Considerations for Transactive Energy Systems”
  - Sarmad Hanif and Vishvas Chalisehar, Pacific Northwest National Laboratory. “Modeling of Resilience Metrics Functional Form”
  - Mark Knight, ARSM, SMIEEE, MIAM, 1898 & Co., Burns & McDonnell. TBD
  - Sumittra Ganguli, Abhishek Somani, and Trevor Hardy, Pacific Northwest National Laboratory. “Allocation Mechanisms in Rationed Markets”

Karen noted that several GWAC members will be speaking on the TE Theory Workshop on Sept. 16 which coincides with the time of the Sept. GWAC meeting. The group agreed to shorten the GWAC meeting to 30 minutes and to start it 30 minutes earlier so that GWAC can attend this virtual workshop.

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**Action: Susie to reschedule the Sept. GWAC meeting**

### TESC 2020



- Conference now VIRTUAL 7-11 December 2020
- Two two-hour sessions each day for four days + plus more pre-recorded content.
- IEEE Advanced Technology -PSOPE Power Systems Operations, Planning & Economics and SBLC as partners, and AMPS – *sent the conference description*
- TESC20 Organizing Committee: *David Forfia, Farrokh Rahimi, Gerald Gray, Leonard Tillman, Ron Bernstein, Mark Knight, Jeffrey Morris, Ron Ambrosio, Stephen Knapp, Tanya Barham, Mark Paterson, Karen Studarus, Ron Melton, Roseanne Jones, Susie McGuire*
- Theme – “Architecting a Resilient Transactive Grid”
- Status:
  - **Discussion: What workshop/panels do we need to round out the program and reach our audience?**
  - 50+ abstracts received and reviewed. (MORE REVIEWERS WELCOME for full papers due 8/31)
  - Keynote speakers
    - Plenary panel of DOE program managers (Irwin, Gupta, Moreno)
    - Keynote Speaker (TBD)
    - GWAC Foundational Session – built from Future States Work
  - Working with IEEE to identify new budget structure
    - Lower registration fee and new sponsorship structure
    - Costs of software platform, publication, registration
- **Promotion needed**

Karen reviewed the progress on TESC20. The group will identify panel moderators, keynote speakers and finalizing the agenda.

Farrokh noted that 50 paper and panel abstract submissions were submitted, and all have been reviewed. There were 24 panel submissions and 31 paper submissions. There were 18 panel accepted panel submissions and 3 were borderline but will be offered the opportunity to submit a paper.

Paper presenters have been notified and they are writing their full papers now.

Karen feels there should be a session chair for each panel based on how things were done previously. This role will ensure a high-quality panel session.

Farrokh noted that we need to assist panelists with guidance on how to prerecord their sessions.

Kay asked about the regulatory panel. Kay had submitted a paper on that topic which was rejected but would be interested in doing it as a panel on regulatory and policy. Kay has 30~ people from the Maine climate change council and they would likely attend since it’s virtual. Maine is in the middle of a massive policy change that will push grid modernization and TE, real-time pricing and more. Kay has been working with the Maine climate change council. Since the conference is now all engineering, she will not invite them. She would like to see the great ideas of the GWAC get out into the mainstream.

Tanya is concerned that we are getting too detailed and it may slow the progress of the conference. She also noted that a comprehensive effort to promote the conference needs to be underway. If we could create a content calendar and starting to promote specific panels on social media now that it will help us to gain participants. She suggested sending specific topic suggestions directly to the abstract committee for them to sort. She feels we should be recruiting participants now with a content calendar and social media announcements about topics and speakers.

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Ken Wacks said the abstract selection committee does not choose topics. He asked if the group could address Kay's concern that we should do more outreach to regulators.

Farrokh confirmed that there were no abstracts on regulatory and policy submitted for a panel session. He would like to consider teaming with NARUC to fulfill that topic for this conference.

Kay said there are a lot of people who could be encouraged to put in panel presentations including Lynn Kiesling. Kay said this topic for a panel was discussed in Orlando at the January meeting.

Jeff Morris said he and Chris had offered to put a panel together for this. They would still be willing to work to put a panel together. Jeff has talked with some people from Maine also and he would be willing to work on this if the Council wants it to happen. He said there is still enough time to do it.

Ron Melton said that it should be discussed further at the next TESC20 organizing committee meeting.

**Chris Villarreal** said he would be happy to help on regulatory; the challenge is the conflict with the [NCEP](#) meeting (affiliated with NARUC), which is why he and Mark Knight have been working on trying to have a shared meeting. The NCEP is also a 3-day meeting.

Chris also noted that for NCEP, the potential joint Session for Dec. 8 would be from 12:15pm to 2:30pm and would be live. He and Mark would be happy to coordinate with TESC20.

Kay said that regulatory legislators must understand what the play space is with TE.

Karen thought it best to defer a decision until the TESC20 Organizer meeting on Monday.

David recognized that we now have enough volunteers willing to work to make this happen.

Farrokh said he welcomes the suggestions and appreciates the enthusiasm. He is supportive.

**Andrew Bordine** also expressed his experience in this area and offered his help. He knows some of the technical commissioners. He feels it is a great idea to include this in TESC20.

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### TESC 2020 Schedule

Pre-Conference Tutorials - Monday December 7, 2020				
Session 1		Session 2		
8am-10am Pacific Time	11am-1pm Eastern	12-2pm Pacific	3-5pm Eastern	
Tutorial Part 1: Transactive Energy Fundamentals		Tutorial Part 2: Grid Architecture Fundamentals		
Conference Day 1 - Tuesday December 8, 2020				
Session 1 (single track)		Session 2 (single track)		
8am-10am Pacific	11am-1pm Eastern	12-2pm Pacific	3-5pm Eastern	
Keynote GWAC Foundational Session		Drivers of Change Panel and Workshop		
Conference Day 2 - Wednesday December 9, 2020				
Session 1 (two parallel tracks)		Session 2 (two parallel tracks)		Session 3 (single track)
8am-10am Pacific	11am-1pm Eastern	12-2pm Pacific	3-5pm Eastern	4-5:30pm Pacific 7-8:30pm Eastern
System Design and Architecture Panel and Workshop		Business Models and Value Realization Panel and Workshop		Virtual Poster Session with Live Chat
or		or		
Implementation Examples Panel and Workshop		Resilience Panel and Workshop		
Conference Day 3 - Thursday December 10, 2020				
Session 1 (single track)		Session 2 (single track)		
8am-10am Pacific	11am-1pm Eastern	12-3pm Pacific	3-6pm Eastern	
Regulatory and Policy Panel and Workshop		Visions for Participation Panel and Workshop		
Conference Closing Session				

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Karen noted the agenda and other technical topics.

Ron M. noted that the panels will be recorded, and the Q&A workshops will be live. We will need 1 or 2 moderators for each topic area. Also, we need to develop key questions for discussions for the workshop that will be needed to guide the discussion.

**Kay Aikin** offered to moderate the Regulatory and Policy topic.

GWAC members are asked to volunteer to lead or support a session. Please let us know now or the organizers will assign members to panels.

**Andrew Bordine** asked to assist Kay with the Regulatory and Policy Session.

Tanya suggested that we feature a topical area of the conference each week and send it to the group to put on their social media on a regular basis.

The budget should be coming out soon with the reduced registration cost and once approved by IEEE we can open registration.

**Andrew Bordine** asked to also be on the promotional group. His company has a large marketing department and maybe able to help with social media coverage to a larger audience.

Ken asked about sponsorship opportunities and Karen said those are being worked out.

**Stuart McCafferty** said he would prefer “Drivers of Change or System Design and Architecture.”

**Tanya Barham** said she would like Vision for Participation.

**Rahul Bahadur** said he could do “Drivers of Change” if it is still available.

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**Aaron Snyder** offered to lead Regulatory and Policy. (Per Karen's notes)

**Jeff Morris** said that he would like to stay with the Policy Regulatory track if it moves.

**Chris Villarreal** said to include him on Regulatory and Policy.

**Action: incorporate all volunteers into their appropriate groups. Kay Aikin, Chris Villarreal, Andrew Bordine, Aaron Snyder and Jeff Morris all volunteered to chair or assist with the Regulatory and Policy Panel. Stuart McCafferty and Rahul Bahadur offered to lead the Drivers of Change or System Design and Arch panel. Tanya Barham offered to lead Vision for Participation. Andrew Bordine offered support promotional activities and social media.**

**UPDATE: a special session on Regulatory and Policy was held on Aug. 21. Karen lead the session; attendees: Farrokh Rahimi, Kay Aikin, Chris Villarreal, Lorenzo Kristov, Andrew Bordine and Susie McGuire**

David Forfia suggested a virtual lunch and lanyards for participants. He also suggested that we agree to go broader and then to discuss this issue more in depth in the organizing committee meeting.

Kay noted that Regulatory and Policy had been discussed at the GWAC Orlando meeting earlier this year noting that the goal is to get policy and regulation conversations started for people who need to implement changes at the policy level.

Jeff Morris said he recalled the discussion and said he would be willing to work more on this issue. He has talked with his contact in Maine about this. He feels we can put a panel together on this if Kay agrees.

Ron M. reminded the group that the next TESC20 organizing committee is scheduled for this Monday. We can discuss this on that meeting.

David Forfia acknowledged the interest level and enthusiasm from the group and feels there will be enough people to make this change.

Farrokh Rahimi thanked the group for their interest and welcomed their participation to make this happen.

Andrew Bordine offered to join the Monday meeting.

Ken Wacks commented it's not out of the GWAC scope to have a regulatory panel for IEEE.

David also noted that he sees it as within scope for IEEE.

Ron M. added that GWAC is a component of TESC20 and can generate topics in the interest of GWAC.

Promotional materials were discussed, and Karen noted that IEEE may be able to help but the council needs to provide support.

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Tanya B. said that she will not be able to help this year with the promotion effort.

Karen noted that the IEEE registration fee structure is forthcoming and then registration can begin.

Andrew Bordine said his company has a large marketing group and he offered to assist with promotion and opportunities. He mentioned Linked In and may be able to help with fees.

Ron M. commented that Andrew's company and others may wish to be an official sponsor of the conference.

### **GWAC Activity Matrix**

Ron M. commented that the SBATH white paper is now final and is posted on the GridWiseAC website.

He and Ron Bernstein will be looking at ways to use this document further.

Tanya said that the FAQ committee is now working on a longer format. They are meeting weekly and in the next couple months they hope to have the final first draft for the council. The plan is to have it out on the GWAC website.

Karen reminded everyone that the next GWAC meeting will begin 30 minutes earlier than scheduled and will last for only 30 minutes so that the GWAC can join the Transactive Energy Systems Theory Workshop 2. The workshop will be hosted by Don Hammerstrom, PNNL. This workshop has been held in previously during TESC conferences.

**Action: Susie to resend the GWAC meeting with the new time and to send the invitation to TE Theory Workshop 2 (complete).**

David Forfia thanked Karen for leading the meeting today.

Stuart McCafferty noted that he has spoken with Karen S. about the CTIA briefing to be on the GWAC November call. Michelle James, VP with CTIA will be the guest speaker. It would be a 30-minute presentation.

David said he has a concern about the timing. Stuart said it could be pushed out if needed but he would like to get back to Michelle about scheduling.

**Action: Susie - Schedule November GWAC meeting (complete)**

### **Future States update**

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### ⦿ Electric Industry Visions – Statements of the Future White Paper

- Continues discussions carried over from Grid 3.0 group that took place during last GWAC F2F meeting
- Working Group: Cunningham, Studarus, Ambrosio, Forfia, Melton, Wollman, Bordine, McCaffrey, Kristov
- Meeting monthly (or more often as needed)
- Status
  - Objectives Defined, Deliverables set in moldable clay
  - Putting out Formal Request to industry stakeholder groups for source material
  - Characterization / Assessment of material to start late summer
  - Initial findings at GWAC fall meeting (with invite for balance of GWAC review/comment)
  - Findings and Next Steps for TESC 2020 GWAC Foundational Session

Ron Cunningham said the Future States group will meet this Friday. They are starting to take input and do the assessment and characterization of it. They hope to have something to share with GWAC for the Fall meeting. They will build from there for the December meeting.

Ron M. said he got a response from the Canadians and he forwarded it to Ron Cunningham.

**Farrokh Rahimi** sent an email saying that he would like to be included in future planning meetings for this topic.

**Action: Karen S. or Ron C. to add Farrokh Rahimi to the Future States planning committee.**

### ➤ GWAC Fall Virtual F2F

- Theme: Electric Industry Visions – Statements of the Future
- Format: 2 days, 2 sessions per day (dry run for TESC 2020)
- Dates: Oct. 7 – 8; 8AM – 10AM (PT) & 1PM – 3PM (PT)
- Planning group met and roughed out schedule
  - What is pre-recorded
  - What is live, etc.
  - What interactions do we try out as a test for TESC 2020?

The GWAC Fall Virtual F2F next planning meeting will be held Sept. 2

Ron M. noted that details for breakout sessions with Zoom or Teams will be discussed. If anyone has tips on breakouts it would be appreciated.

David F. said he is participating on another virtual conference and they decided not to do the breakout rooms in Zoom after reviewing it. He said you can't preassign people to rooms. He recommends practice session in advance of the December meeting.

### **Liaison Reports**

NIST - David Wollman noted that the draft framework 4.0 was sent to GWAC. They are still working on getting the federal register notice. He said comments that come in for the initial posting will be

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addressed in an organic way and then later comments will be taken in a more traditional way. They are hoping for lots of feedback.

David provided a link to a recent NERC bulletin - it includes a schedule for cybersecurity framework to map to their liability standards.

[https://www.nerc.com/pa/comp/news/Documents/2020\\_07\\_27\\_StandardsCompliance\\_Bulletin.pdf](https://www.nerc.com/pa/comp/news/Documents/2020_07_27_StandardsCompliance_Bulletin.pdf)

ISO/IEC JTC 1/SC 25 - Ken Wacks thanked Mark Knight for his help with the TE Framework. All tech reports must be put in the format of a standard. Certain words like shall and must have to be deleted. So work is still going on the framework. Mark gave an opinion about a remaining word "must." Richard Cook is the current editor.

Ken said the next ISO/IEC International meeting will be held on Sept. 14. He is chairing the committee and can invite guests. Anyone wanting to become a member or to participate please contact Ken.

SEPA - Aaron Smallwood; SEPA held the virtual grid evolution summit. It was the first one they have done as virtual. Attendance was 541. The online and on demand content was released on July 12. On Sept. 22 - 24 the working groups will meet. Non-SEPA members will have a registration fee of \$199.

Aaron noted that the SPI meeting will be all virtual this year. Content will be spread out. The program is coming together very well.

The SEPA catalog of standards is coming along and a press release will go out. From SGIP there was a nice user interface that is the inspiration for the user interface for the catalog of standards.

<https://sepapower.org/knowledge/sepa-updates-key-industry-resource-for-smart-grid-standards/>

Aaron noted "Standards are the necessary first step towards interoperability. "Each standard in the Catalog has undergone a thorough industry stakeholder vetting process focused on interoperability, grid architecture, cybersecurity and other elements."

Ward Camp EBC - no updates

NARUC - Chris Villarreal: The next NARUC meeting will be Nov. 8 - 11. He said the next policy meeting is scheduled for Dec. 7 - 9 and he is working on the agenda. The plan is to team with the TESC 2020 meeting. All meetings will be in the afternoon Eastern time. Topics will continue from last year's meeting. They will focus on the development of distribution level market; how they are paid for and what cost analysis should be considered. The DER standard practice manual is also a topic.

Karen asked if any guests would like to introduce themselves. There were no new guests.

David Forfia began the adjournment and noted that the meeting is ending 34 minutes early.

Stuart McCafferty gave a motion to end the meeting and Ron Ambrosio seconded the motion.

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