

Meeting Minutes

February 14, 2024

GWAC Members

Ron Bernstein, GWAC Chair

Ron Ambrosio, Independent Energy
Transformation Professional

Andrew Bordine, Sr. Practice Manager, Grid
Automation, Actalent

Ron Cunningham, IT Enterprise Architect,
American Electric Power

David Forfia, Acting Chair, Principal Consultant,
Utilicast

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

Mark Ortiz, Lead Architect, Snyder Electric

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

Aaron Snyder, Dir. of Grid Technology
Consulting, EnerNex

Leonard Tillman, Partner, Balch & Bingham, LLP

Shawn Chandler

Harry Peterson, Siloxit Inc

Don Hammerstrom, PNNL

Alaa Mahjoub

Stephan MacDonald

Jeremy Roberts, Green Button

Tylor Slay, PNNL

PNNL Support

Jaime Kolln, PNNL GWAC Administrator

Ron Melton, PNNL GWAC Administrator

Susie McGuire, GWAC Coordinator

GWAC Associates & Emeritus

Marc Costa, Associate

Mark Knight, Emeritus

Ken Wacks, Emeritus

GWAC Guest Speaker

Josh Dean, C.E.M., LEED AP with California
Energy Alliance (CEA)

GWAC Friends

Sean Crimmins, EPRI

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Agenda Feb. 14, 2024

Call to Order and Roll Call

- Welcome

GWAC Administrative Business

- Minutes
- Upcoming events
- Council Candidate Slate
- GWAC Accomplishments
- Action Items
 - The Next Big Thing

Guest Speaker – Josh Dean, California Energy Alliance (CEA)

Future Activities

- Planning 2024 GWAC Conference
- GWAC April Face-to-Face - OATI
- GWAC Strategic Outreach Plan

Work Product Status Reports

- GWAC Projects Overview Chart review
- Working Party Status Updates
 - Grid Architecture White Paper
 - Grid Future State White Paper
 - Grid Arch for Regulators White Paper
 - Applying Grid Architecture Concepts to Bridge Back from the Future Grid
 - Grid Architecture Concept Model for Interconnection, Electrification, and Decarbonization
- Liaison Reports

New Business

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Conferences and Events

Date	Event	Location	Attend	Speaker	Topic
February 5 - 8, 2024	Energy Transition Summit	Arlington, VA	Jaime Kolln		Grid Modernization Initiative and Clean Energy Cybersecurity
February 13 - 14, 2024	RE+ Northeast	Boston, MA	Ken Wacks		
February 19-22, 2024	ISGT North America	Washington DC	Mark Paterson, Farrokh Rahimi, Paul DeMartini, Kay Aikin		ISGT North America
February 26-29, 2024	DistribuTech 2024	Orlando, FL	Farrokh Rahimi		
March 12 – 14, 2024	EPRI Electrification 2024 International Conf & Expo	Savannah, GA	Sean Crimmins		
March 26 - 28, 2024	Energy Exchange	Pittsburgh, PA	Ron Bernstein		
Apr. 30 – May 2, 2024	V2G 2024	San Diego, CA	James Mater, Jaime Kolln		
May 6 – 9, 2024	IEEE PES T&D Conference & Expo	Anaheim Convention Center			Accelerate the Grid of Tomorrow
May 14 – 16, 2024	Energy Storage Safety and Reliability Forum	PNNL Campus	Jaime Kolln		
July 21 – 25, 2024	IEEE PES General Meeting	Seattle, WA			
Sept 9-12, 2024	RE+ Anaheim, CA & GWAC Conference	Anaheim, CA			
Jan. 21 – 23, 2025	IEEE PES Grid Edge	San Diego, CA			

Jaime Kolln noted that he attended the Energy Transition Summit in Arlington and DOE’s Gene Rodrigues notably used the term *Transformation* rather than Transition.

Ken Wacks noted that he participated in the RE+ Boston meeting this week, they had a good turnout, he met a lot of people from the solar and renewables industry.

Marc Costa provided a link:

<https://www.aceee.org/2024-summer-study-energy-efficiency-buildings>

2024 Summer Study on Energy Efficiency in Buildings, Aug. 4 – 9, 2024, Pacific Grove, CA

Action: Add Ron Melton and David Forfia to the ISGT Attendees

Jaime also reminded the group that the PES General Meeting this year will be held in Seattle, Washington, not far from PNNL. The dates are July 21 – 25, 2024.

IEEE PES Grid Edge will be held January 21 – 23, 2025 in San Diego, California. Jaime urged the GWAC to consider participating in a panel for this meeting. Submissions will close March 15, 2024. [link](#)

Jaime also noted the 2024 IEEE PES T&D Conference to be held in Anaheim, California May 6 to 9, 2024.

Jaime introduced the 2024 GWAC member slate including two new faces, Shawn Chandler, and Marc Costa.

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Jaime asked Shawn Chandler to introduce himself. Shawn greeted the group and said that he has been in the utility and telecommunications industry for almost thirty years. He participates in activities within the industry, particularly with IEEE. He has been a technical committee chair since 2015 leading the smart buildings, loads and customer systems committee. He's also done work with blockchain, most recently as the chair of the Interoperability Work Group for the IEEE Standard 2448.5. He was also chair of the IEEE Smart Cities Global Consortium have LED multiple conferences and the like.

Jaime Kolln also noted that Shawn Chandler had been involved with the DOE Smart Grid Demo some years back that along with some other GWAC members.

Jaime noted that Marc Costa has been a GWAC associate and is now moving to full member status. Marc declined to do an introduction in the interest of moving the meeting forward.

Jaime told the GWAC members to check their email, Susie just sent out an email with a request for an up or down vote during the meeting, to be sent by email as directed in the message.

Jaime gave the members some time to vote. Some posted in the chat once they had voted. Jaime read through the votes and announced that the slate of candidates had been approved.

GRIDWISE Architecture Council



RON CUNNINGHAM PAUL DE MARTINI

GWAC recognizes the many contributions of newly emeritus members Ron Cunningham and Paul DeMartini

Jaime announced that Paul DeMartini and Ron Cunningham would be stepping down from their GWAC membership and he thanked them for their many contributions to the Council. Both have contributed to many GWAC activities and publications. Ron Cunningham has just finished up the Future States paper.

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GWAC Accomplishments

2007-2012 Grid-Interop Forum

2011 – [GWAC Interoperability Constitution Whitepaper](#) PNNL-20728

2011 – [Smart Grid Interoperability Maturity Model](#) Beta Version
Electrical Power Engineering Academic Landscape

2010 - [Interoperability Decision Maker's Checklist](#) update

2009 – Interoperability Benefits Papers

- [Environmental Benefits](#)
- [Financial Benefits](#)
- [Reliability Benefits](#)

2008 – [Interoperability Context-Setting Framework](#) PNNL-17399

2007 – Interoperability Decision Maker's Checklist

2006 – [Interoperability Constitution](#):
- [GWAC Constitution: Summary of Constitution Interview Process and Feedback January 2006](#)

Documents available internationally through the ISO/IEC:

ISO/IEC TR 15067-3-2:2016 -- Information technology -- Home Electronic System (HES) application model -- Part 3-2: GridWise interoperability context-setting framework

ISO/IEC TR 15067-3-7:2020 -- Information technology -- Home Electronic System (HES) application model -- Part 3-7: GridWise transactive energy systems research, development and deployment roadmap

ISO/IEC TR 15067-3-8:2020 -- Information technology -- Home Electronic System (HES) application model -- Part 3-8: GridWise transactive energy framework



Jaime reviewed the GWAC accomplishment slides.

Chair Ron B. suggested adding the GWAC speaker videos to the accomplishment slide as a 2023 action that is ongoing.

Action Jaime – Add GWAC speaker videos as 2023 accomplishment on this slide and QR code

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Guest Speaker



Josh Dean, C.E.M., LEED AP
Executive Director at California Energy Alliance

Executive Director for the California Energy Alliance with over 12 years of experience in the sustainability, construction, and real estate industries with projects ranging from energy retrofits and LEED certifications to supervising commercial new construction and residential development. Extensive experience working with multiple government agencies, businesses, and nonprofits to deliver projects and education around sustainability.

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CEA: California's Energy Stakeholder Advocates

GridWise Architecture Council Meeting
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Jaime Kolln introduced today's guest speaker, Josh Dean with the California Energy Alliance.

Josh Dean

CEA was started in 2020. They are predominately focused on the building sector.

New energy and climate policy from the national level

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Net Zero by 2050: A roadmap for the global energy system
International Energy Agency

DOE Issues Roadmap for Grid-Interactive Efficient Buildings
Environment + Energy Leader
The guidance, titled "A National Roadmap for Grid Interactive Efficient Buildings," outlines the DOE's goal for the nation to triple the energy ...
6 days ago

Biden decarbonization focus shifts to buildings, with goal to ...
Utility Dive
DOE's GEB goals include tripling the energy efficiency and demand flexibility of the buildings sector by 2030, relative to 2020 levels.
6 days ago

California's Big 2021 Decision on Grid Reliability: Expand Supply or Manage Demand?
Greentech Media
Right now, the California Public Utilities Commission is moving more ... sources of load flexibility to participate in California's power markets, ...
Jan 5, 2021

Why the US Inflation Reduction Act is an important step in the transition to clean energy | World Economic Forum
The World Economic Forum
On August 16, 2022, American President Joe Biden signed the Inflation Reduction Act (IRA) into law. The IRA is the most meaningful climate...

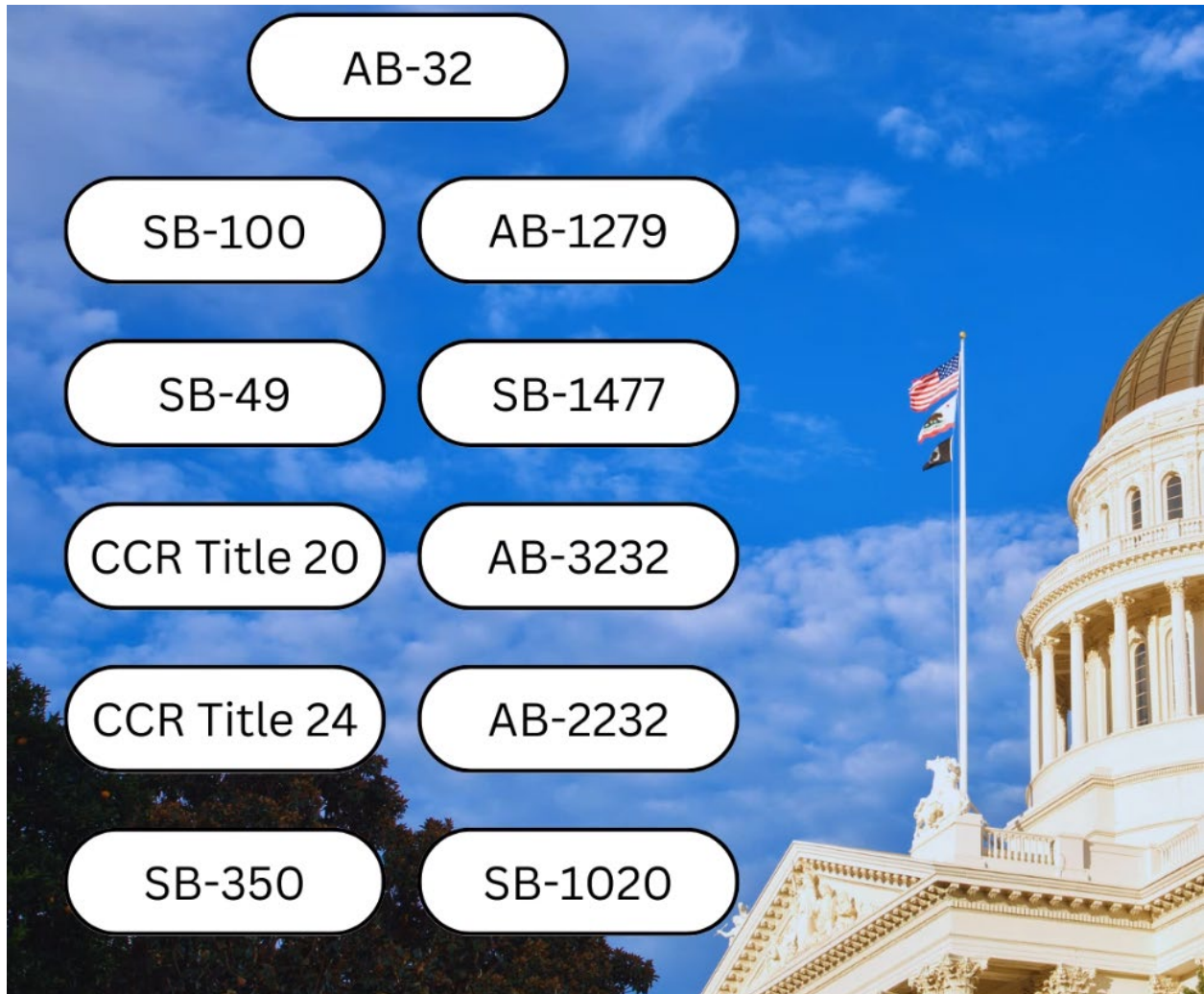
It's Hard to Quantify the Value of Resilience Accurately, but California is Trying
Electrek
EGEB: California governor earmarks \$3.2B to boost EV adoption
California governor Gavin Newsom's new proposal devotes \$3.2 billion to boost EV adoption goals. John Kerry says technology to reduce ...
1 week ago

California Building Decarbonization Assessment
DRAFT STAFF REPORT
CALIFORNIA ENERGY COMMISSION

CEA is involved with changes in California, some of their work may not be pertinent to some sections of the US.

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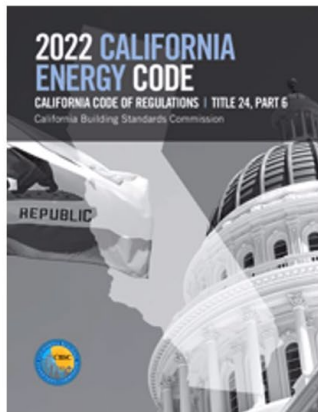


Josh reviewed recent California legislation.

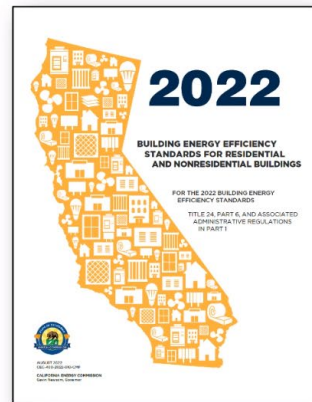
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Title 24, Part 6 – California Energy Code



<https://codes.iccsafe.org/codes/california>



<https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency>

There is public participation. They work with stakeholders, others to facilitate.

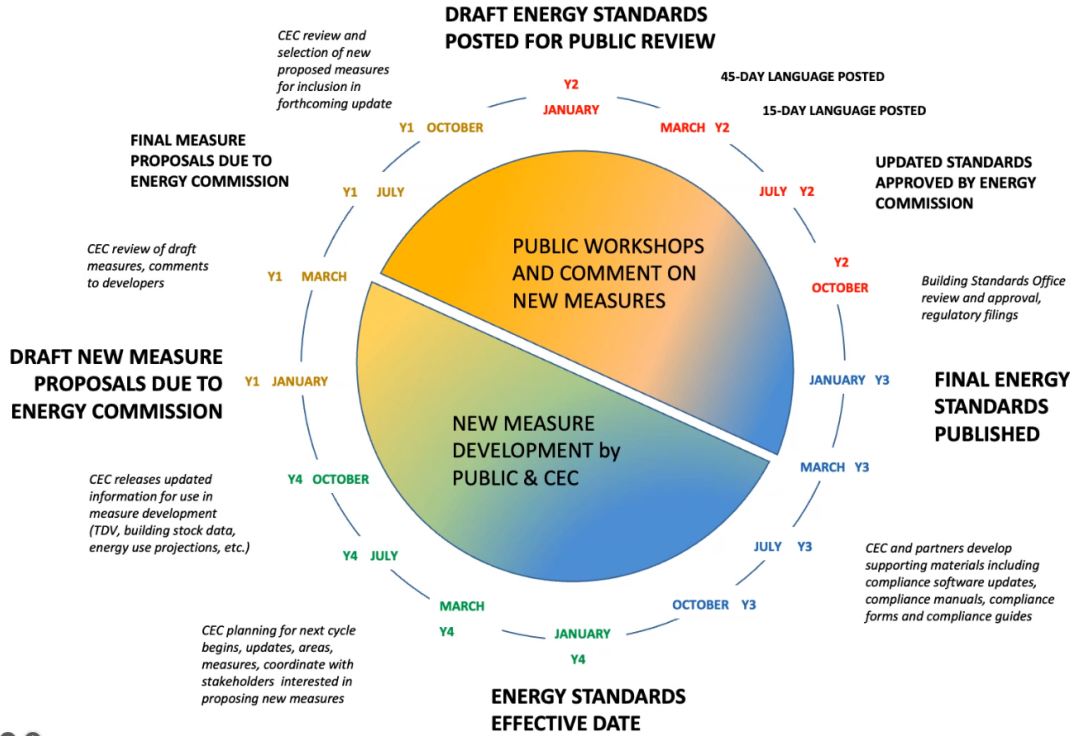
They work with investor-owned utilities and get people involved to have an industry perspective. It is a complex system and timing is the key to codes and standard work.

He explained that it is a 3-year cycle but “feels like” a four-year cycle.

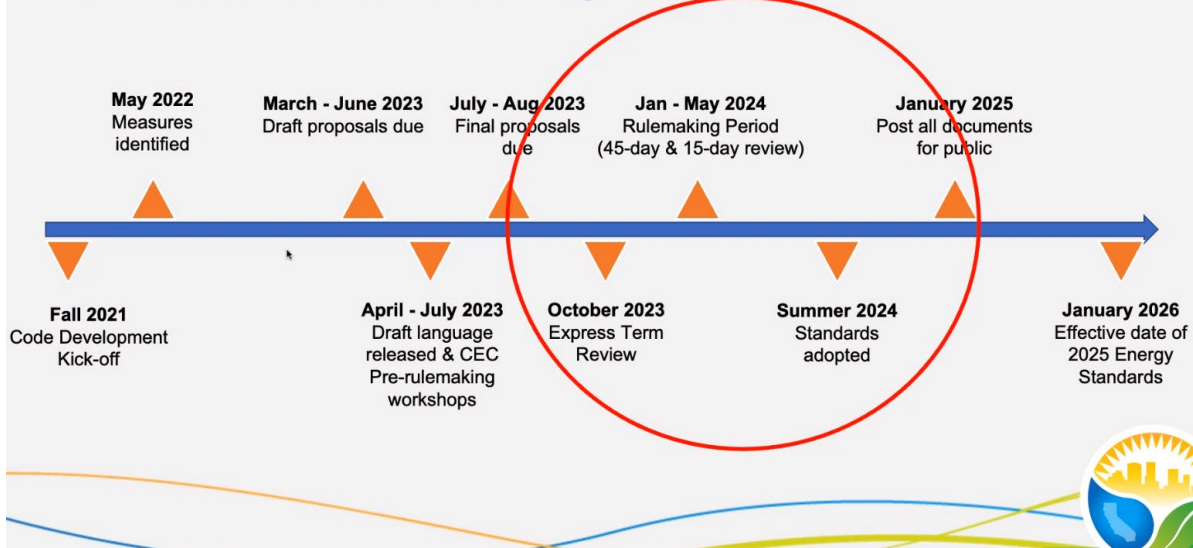
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2025 Standards Development Timeline



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They are watching what happens in other states and organizations to see what is on the horizon and how it might affect California.

Building performance standards across the US are of particular interest.

They are shifting their focus based on changes. Looking at how buildings and grid come together and also transportation. They want to incorporate whole building practices.

What is the goal?

Improvement of Energy Policy and Codes & Standards

Incorporate whole building performance and a future decarbonized grid

- Support Decarbonization and Electrification Efforts
- Support Grid-Interactive Efficient Buildings

How do we get there?

More regulations?

- Code is more complex
- Leads to less overall compliance



Potential changes . . .

- Support **Broader Changes vs Incremental Code Language Changes**
 - Whole Building Approach
 - Monitoring to Manage
 - Load Flexibility



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CALIFORNIA ENERGY COMMISSION

CEC 2025 Energy Code Strategies

- Heat pump baselines
- Promote demand flexibility, solar PV generation and energy storage
- Covered process loads
- Equity & affordable new housing program integration
- Additional, alterations, and smaller homes. (e.g., ADUs)
- Electric vehicle readiness support
- Interagency coordination



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Looking Beyond the Energy Code

Additional Codes & Standards:

- Local Reach Codes
- Energy Efficiency in Existing Buildings
- Load Flexibility
 - Load Management
 - Flexible Demand Appliances
- Title 24, Part 11 – CALGreen
 - Carbon Reduction Collaborative
 - Electric Vehicle Workgroup
- Title 20, Appliance Efficiency Regulations

Policy Action:

- CEC Integrated Energy Policy Report
 - Building Decarbonization
 - Workforce Education & Training
 - Grid-Interactive Efficient Buildings
 - Embodied Carbon
- CPUC | CARB | CalEPA

Recent Legislation:

- **SB 48:** Water and Energy Savings Act
- **SB 253:** Climate Corporate Data Accountability Act
- **SB 795 (did not pass):** Energy: building energy efficiency: heating, ventilation, and air conditioning equipment: sale registry and compliance tracking system: compliance document data repository

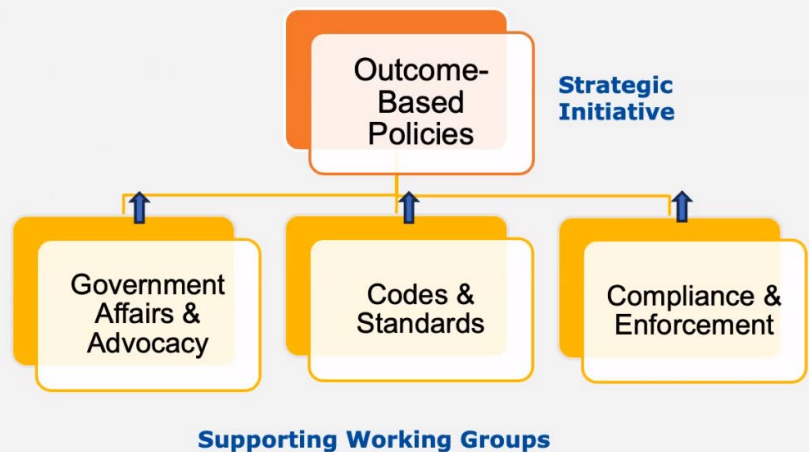


2024:

(1) Strategic Objective

+

(3) Supporting Working Groups



Josh noted that CEA hopes to see outcome-based policies and added that what CEA advocates for are advances that will help the state meet its decarbonization goals.

Once the buildings are in there currently is no mechanism to check their performance.

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CEA is open to adding people to their group to increase their perspective.

Q&A for Josh Dean -

Marc Costa said there has been some serious rollbacks of standards from the ICC.

Josh said that one member shared an published article about this.

Marc Costa suggested that they talk more offline. He has some information about local groups that are aligned with Josh's work in California.

Josh noted that we can put everything into code or policy but if it's not followed through on the ground whether by contractors, installers, or enforcement agencies then it does no good. What they are seeing is that as code becomes more complex many stakeholders don't have the time or resources to fully enforce the code. His group is doing some acceptance testing in California on the commercial side for lighting and mechanical controls

Alaa Mahjoub asked about existing opportunities for decarbonizing the supply chain in the building sector.

Josh said we do have a lot of manufacturers as members. SP53 in California is the Climate Corporate Accountability Act. Vendors doing business in California must report on

here was legislation – SB253 – passed in CA last year – asks those doing business in CA to report on scope 1, 2 and 3 emissions beginning in 2026 on 2025 data.

They haven't really tapped into that yet for supply chains, but they did raise that as an issue to the members and many of them are large enough to meet the threshold of that legislation.

He said the supply chain will be next predominately for those doing work in California and supplying materials.

Jaime Kolln thanked Josh for presenting to GWAC today on the CEA and asked about posting a video of the talk on the GWAC website.

Josh Dean liked the idea and agreed to send his permission as an email to Susie after the meeting. He thanked the group for allowing him to present today on the California Energy Alliance.

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“Next Big Thing” / “Back from the Future”

- Originally presented at AHR Expo
- Ron Ambrosio and Rahul Bahadur are leading a committee to develop a webinar on "The Next Big Thing"
 - Rahul Bahadur and Ron Ambrosio Updates
- Next Steps
 - Development of a concise slide deck
 - Web Page with details including GWAC activities



Ron Ambrosio gave an update on the development of the Back to the Future Webinar. The committee is meeting every two weeks. The group consists of himself, Rahul Bahadur, Jaime Kolln, Stephen MacDonald, and Ron Bernstein. They started with AHR material and have added some content. To comply with the time allowed they have the presentation down to about 50 minutes now with recent edits. They have compressed the introduction and supporting material. They are focused next on what the Grid Architecture tools, and process are. Jaime sent some material that David Forfia had done which will help.

Jaime sent them some materials from David Forfia, and they will review that. They will send the draft deck out to the GWAC for feedback.

Hopefully in the next couple weeks they will have a draft slide deck that they will send them to the Council for feedback.

Jaime Kolln noted that he had seen an early version of the presentation and said that it is coming together nicely.

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Planning the GWAC Conference

- Co-Located at RE+ in Anaheim, CA September 9-12, 2024
 - Specific Format TBD, but planning on plenaries and two tracks
 - RE+ Technical Session is Monday and Tuesday.
 - GWAC Technical Session will be Wednesday and Thursday
- Schedule Organizing Committee (OC) Meeting
 - Coordinating with Lesley Fondren and Lori Smith (RE+)
 - Collaborate with IEEE.
- Council Members Participating in the Organizing Committee
 - At Least 4 Council Members
 - No papers this year
 - Sponsorship TBD
 - Need to understand associated fees. Will be tiered based on SEPA/SEIA membership.
 - Call for participation is the kickoff; it will include a timeline of due dates for presenters.

Some GWAC tutorials are planned, they would be part of the RE+ technical session on Monday and Tuesday. We will discuss these at the Conference organizing meetings.

The Conference will call for papers this year which means there won't be a need for a technical review committee. The committee will have to look at the registration fees for the attending the conference.

Sponsorship coordination also will not be needed.

Ron B. said picking a name for the conference is a key next step.

The GWAC Conference will be on Wednesday and Thursday.

Stephan MacDonald and Shawn Chandler would like to be on the conference organizing committee.

Action: add Stephan MacDonald and Shawn Chandler to the conference organizing committee.

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GWAC Face-to-Face Meetings

- Discuss F2F meetings for 2024
 - Spring meeting planned for April 16 -18 2024
OATI, Bloomington MN
Microgrid Technology Center
 - September 13 (after GWAC conference)
 - Casa Bernstein
 - 20th GWAC Anniversary



Several attendees will get in early on Monday, Jaime suggested a no host dinner.

A group no host dinner was suggested for Tuesday night as well.

Jaime noted that the GWAC 20th anniversary celebration will be held the Friday after RE+ at Ron Bernstein's home in San Diego and there will be an evening dinner for the anniversary.

Ron B added that he will plan a fun event for Saturday Sept. 14 for those that can stay on.

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GWAC Strategic Outreach Plan

- GWAC Mission and Vision Statements
 - Set up recurring “strawman” Task Force – More Discussion Coming up!
 - Recordings to be Developed and Published to YouTube
 - Outreach through conference presentations
 - Other organizations to "cross-pollinate" ideas with.
 - Identify liaison volunteers

Jaime is hoping to get the mission and vision refresh wrapped in time for a vote at the Spring F2F at OATI.

Ron Bernstein gave a reminder to all GWAC, GWAC Associates, and Emeritus that they may speak on behalf of the GWAC at meetings and conferences. The GWAC Slide template is available on the GWAC Teams site or just ask Susie to send them to you. He added that the cross-pollination from these outreach events will help to grow GWAC participation.

IF anyone wanting to be a liaison for new groups, please let Jaime know. Also, liaisons may have some ideas where GWAC members may fit into other organizations.

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Grid Architecture White Paper

- Working Group: Seemita Pal, Ron Cunningham, David Wollman, Ron Bernstein, Ahlmahz Negash, Larisa Dobriansky, David Forfia, Kay Aikin, Aaron Snyder, Ron Ambrosio, Lorenzo Kristov, Farrokh Rahimi, Rahul Bahadur, Gerald Gray, Mark Paterson, Timothy Schoechele, Jeff Morris, Leonard Tillman, Andrew Bordine, Chris Villarreal, Ron Melton
- White paper contents reviewed, revised and finalized. **Contents ready!**
- Next steps
 - The white paper formatting and look are being further enhanced – pretty straightforward and would be complete soon.
 - “About the Council” section is being made consistent with the Future States paper.
 - Blog post will be created to advertise the publication

Jaime let people know that Seemita Pal is now at PGE. He is working on finishing this paper up. The about the council will be in line with the Future States paper. Likewise, the new cover art will be finalized and applied to both papers.



Grid Vision & Future States White paper

- A near final edit of the ‘report’ was submitted to PNNL editors, and GWAC administrator and few of the core authors mid-November 2023, resolving most of the received review comments/feedback. There are a few key items that needed to be resolved concerning: Title Page, About This Document, About GridWise and the GridWise Architecture Council, and a couple of requested citations for Grid 3.0 Future States and early NIST Conceptual Model artifacts and applying those to the near final draft.
- Awaiting, final resolution of those items, by GWAC Administrator, GWAC leadership.

Jaime said he has gone through the Future states paper and has some edits that he will send to Ron Cunningham

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Action: Jaime will send Ron Cunningham some edits on the Future States paper.

Ron C added that there will be an appendix to the paper so there is no longer a need for a publicly accessible website to reference that information.

Ron C and Jaime will be finalizing this paper. The title may change, there is discussion about that.



Grid Architecture for Regulators

- **Team members: Lorenzo Kristov, Kay Aikin, Larisa Dobriansky, Jeff Morris, Mark Paterson, Farrokh Rahimi, Chris Villarreal, Ron Bernstein**
- White paper will be aimed primarily to GWAC community:
 - Document experiences, observations & lessons learned from the use/non-use/value of Grid Architecture in policy & regulation venues
 - Provide a basis for strategies to promote Grid Architecture among policy makers
 - Paper will be a living document, starting with a few initial case studies and adding new case studies as available
- Initial case studies
 - U.S. — FERC Order 2222
 - State — Xcel Minnesota rate case; CPUC High-DER docket
 - Municipal — Portland Maine
 - International — Ontario, Canada
- Tentative target date: Draft for GWAC review by mid-November; ready for posting early 2024.



GWAC Future Work Products Discussion

Applying Grid Architecture Concepts to Bridge Back from the Future Grid

in concert with current work and building on the previous GridWise Architecture Council work products, this document attempts to provide a roadmap for operators, planners, developers, integrators, and policy makers as guidance to develop interoperable systems that will architect the grid of the future as described in the future states. This paper will include discussions of motivating participation of customer owned assets and opportunities for avoided costs by working toward a long-term vision rather than only short-term needs. This document will be completed in FY24.

- Committee : **Mark Paterson**, Marc Costa, Ron Ambrosio, David Forfia, Kay Aikin, Lorenzo Kristov, Farrokh Rahimi, Farrokh Rahimi, Aaron Snyder,
- 2:00 PM PT/ 5:00 PM ET Thursday 2 times 1st and 3rd Thursday of the month

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This is on the importance of building back from the future – 3 D’s – distributed, democratized, and decarbonized.

When Mark Paterson is back from travel, we can go over this one.



GWAC Future Work Products Discussion

Grid Architecture Concept Model for Transportation Electrification

Analyze various visions of the electrification of fossil fuel-based systems and identify areas where GWAC concepts could provide architectural value to bridge and coordinate between customer and grid objectives. Electrification will introduce dependencies such as those seen in the transportation sector due to electrification. Grid Architecture will be used to describe the touchpoints (for example through sector coupling) that will require collaboration. GMLC reference cases will be included. This activity will take place in FY24 and be completed FY25.

- 15-20 page whitepaper
- Committee: Ron Cunningham, Farrokh Rahimi, Mark Ortiz, David Forfia, Aaron Snyder, Lorenzo Kristov, Bhaskar Mitra, Paul DeMartini
- 1:00 PM PT/ 4:00 PM ET, 4th Tuesday of the month

Jaime said the Grid Architecture Concept Model group has met once.

Ron Cunningham and Paul DeMartini are participating on this one

The committee meets on the 4th Tues of the month.

Let Jaime Kolln know if you want to be added to this work group.

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Liaison Reports

- NIST – David Wollman
- Green Button – Jeremy Roberts (*New*)
- EPRI – Sean Crimmins, Ben Ealey
- IEEE PES – Farrokh Rahimi
- ASHRAE, CTA, ASHB (formerly CABA) – Ron Bernstein
- ISO/IEC, IREC – Ken Wacks
- SEPA – Aaron Smallwood
- NARUC – Jeff Morris

- *Are there other organizations we should be hearing from?*

Dave Wollman, NIST was not able to attend today.

Aaron Smallwood SEPA was not able to attend today.

Jeremy Green Button – since the last meeting they have demoed their directory services which is a three-part search engine for finding utilities platform vendors to those utilities and third-party app providers of green button solutions. It went live this morning to members only. Feedback is coming in. It will go live to the public in a couple weeks. The resource will be available to both members and non-members. He will be at DistribuTECH.

Sean Crimmins EPRI –Matt Wakefield will be at DistribuTECH. They are kicking off a new project with vendors in the grid model, ADMS, dist planning and operations space. There are 8 or 9 vendors in that space. The objective is to improve the standardization of grid model exchange. There are many different use cases. PNNL is a vendor that is involved. If you have use cases that you feel are important

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for distribution and grid model exchange between applications, between entities, please let him know. Green Button wants to hear from as many people as possible and they will incorporate it into their work with vendors.

The work will become open through the UCA so the profiles, conformance rules for data exchange will be hosted by UCA and the community.

Ron M for IEEE – Some PES leadership changes have taken place, new president, and some new board leaders.

Ron M. encouraged people to attend the IEEE PES General meeting in Seattle this July. He also noted that there are several technical committees in IEEE that overlap with GWAC interests. One would be the Smart Buildings, Loads and Customer Systems technical committee that Shawn he was the first technical chair of, and Ron was the second chair after him.

Ron Bernstein mentioned that DOE has a project for developing training programs for workforce enhancement and workforce development. It is online and provides training for smart buildings and smart building advancements in controls and network automation. He created one of the modules on building automation and cyber security, network segmentation and building automation systems.

Ron B. also noted that the DLC, Design Lights Consortium, is another nonprofit focused on the lighting industry has a new advisory group forming for integration and interoperability of the NLCS which is network lighting controls to HVAC and mechanical systems as an effort to bring greater interactions, interoperability, and integration between those different segments in the built environment.

Ron B. - ASHRAE – In the April edition of the ASHRAE journal there will be an article that Ron wrote on what they call the single pane of glass for user and operator interfaces and how that interface will bring things other than just building automation but also grid interfaces and utility interfaces and things of that nature.

Ron B. - CTA and IEEE the Process for transferring the 709 Control Networking Protocol standards is complete as of last week. IEEE will be the home for those standards. The committee will meet again soon to work on some enhancements of it. The standard is in the IEEE networking and communications group.

Jaime asked Ron B to let him know when the ASHRAE journal article is published, and Jaime will post it on his Linked In. Ron B. agreed and noted that there is a paragraph in the article on the GWAC.

Ken Wacks - ISO/IEC – ISO (International Organization for Standardization) and the IEC (International Electrotechnical Commission) formed a joint technical committee called JTC 1 to develop information technology (IT) standards intended to promote commerce. JTC 1 created many subcommittees that develop these standards. Subcommittee 25 (SC 25) deals with the interconnection of IT equipment. Ken is the chair of the working group in SC 25 called "Home Electronic System." ("System" is singular because the goal is a single integrated system for networked home electronics.)

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They are currently developing a comprehensive lexicon of home system applications to support interoperability. They are starting a new standard on device and system safety. The objective is to ensure that syntactically valid messages don't create unsafe operation of appliances. We don't want to start a heating or cooking appliance remotely if there is a possibility of flammable materials nearby. They just completed another round of comments from the member nations on our cybersecurity standards. Ken noted that standards don't just receive an up or down vote, they require multiple ballots and are eventually approved only with a supermajority of support, meaning that at least two thirds of the voting member nations agree, and that fewer than one quarter of the voting member nations disagree.

Ken Wacks – IREC Ken chairs the Grid Edge committee. They have been holding a number of meetings monthly and sometimes twice a month focusing on round table discussions with featured speakers. Meetings are 90 minutes each time with excellent speakers. They speak for 20 minutes followed by in-depth questions. They committee wants to make the life of solar panel installers easier. They also work with state regulators to come up with reasonable rules and regulations.

The next meeting will have a meeting on the practical sides of residential solar. This week's speaker is popular on You Tube; Reese John has a video where he installed solar on his suburban home in Pennsylvania. He worked with local code authorities and inspectors. The building inspector didn't have a precedent to follow so Reese hand developed his own application and diagrams and was able to get state approval for his solar addition to his home.

Ken confirmed that Reese found his own panels on a close out deal and they fit his roof very well. There is video of him actually doing the installation.

Marc Costa sent Ken a link related to the IREC upcoming talk: <https://solarapp.nrel.gov/>

Ron M – SEPA: The SEPA Grid Architecture working group is developing another white paper. They will ensure that it is not in conflict with any of the current white papers being developed by GWAC. The hope to have the paper done by November.

Ron Cunningham added that Aaron Smallwood with SEPA is heading up an effort to stand up something they call the SEPA Grid Technology Collaborative. It's similar to SGIP technical committee for guiding research in working groups with a focus on grid technology. It is an add on service.

Jaime Kolln added that SEPA is not expensive to join, one membership will cover a whole company and then staff can attend under their organizational address. They do a lot of interesting things in the grid community including electrification and transportation.

Jaime noted SAE or Underwriters Lab might be good organizations to add to our Liaison reports.

Meeting Minutes

February 14, 2024



Upcoming GWAC Meetings

Date	Topic or Speaker	Format	Other
February 14, 2024	Moved date up to not conflict with ISGT and DTech		
March 20, 2024	GWAC Guest Speaker – Sydney Applegate, DOE ORISE Sci, Tech & Policy Fellow		
April 16 – 18, 2024	Face to Face meeting @ OATI		Bloomington MN
September 9-12, 2024	GWAC 2024 Conference, name TBD		Anaheim, CA

Future speakers ideas:

Ron Bernstein asked the GWAC to send ideas for future speakers to him, Jaime Kolln, and Susie McGuire.

He added that GWAC members, Associates and Emeritus are welcome to present on their activities. If you are interested, please talk to Ron Bernstein or Jaime Kolln about it. These presentations could be more in the 10-to-15-minute time frame.

Jaime noted that Kay Aikin, GWAC will be giving an update on her work at a future GWAC meeting.

Ron B thanked everyone for participating today and asked for a motion to adjourn.

David Forfia gave the motion and Leonard Tillman seconded the motion.