

Meeting Minutes

October 16, 2024

GWAC Members

Ron Bernstein, GWAC Chair and President, RBCG, LLC

Kay Aikin, Founder, CPO, Dynamic Grid/Introspective Systems

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

Shawn Chandler, Director, Guidehouse

Marc Costa, Dir. Policy Planning, the Energy Coalition

David Forfia, Principal Consultant, Utilicast

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

Ahlmahz Negash, Sr. Power Analyst, Tacoma Power

Aaron Snyder, Dir. of Grid Technology Consulting, EnerNex

Leonard Tillman, Partner, Balch & Bingham, LLP

GWAC Associates & Emeritus

Rahul Bahadur, Assoc. GWAC

Ron Cunningham, Emeritus 0

Mark Knight, Emeritus

Jeff Morris

Ken Wacks, Emeritus

GWAC Guest Speaker

Yashar Kenarangui, Xcel Energy

GWAC Friends

Larissa Affolabi

Bob Bass

Marguerite Behringer

Harry

David Breecker

Toby Considine

Kevin Cornish

Paul DeMartini

Larisa Dobriansky

Peter Fitzgerald

Don Hammerstrom, PNNL

Doug Houseman

Anthony James

Muhidin (Dino) Lelic

Alaa Mahjoub

Stephen MacDonald

Denis Marchand

James Orenstein

Brian Patterson

Andrew Shi

Tylor Slay, PNNL

Wade Troxell

Zach Woogen

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PNNL Support

Jaime Kolln, PNNL GWAC Administrator

Susie McGuire, GWAC Coordinator



Agenda

Call to Order and Roll Call

- Welcome

GWAC Administrative Business

- Minutes
- Upcoming events
- GWAC Accomplishments
- Action Items

Guest Speaker - Yashar Kenarangu, Principal Engineer, Xcel Energy

Future Activities

- Call for Council Members is open
- GWAC Strategic Outreach Plan
- Planning 2025 GWAC Conference

Work Product Status Reports

- Working Party Status Update
 - Next Big Thing Slide Deck
 - 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 Transportation Electrification

- Liaison Reports

New Business

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Jaime Kolln, GWAC Administrator, opened the meeting and read the proprietary notice and briefly reviewed the agenda.

He introduced Bob Bass from Portland State University. He asked other new participants to introduce themselves.

Bob Bass noted that he has worked with Shawn Chandler and Jaime Kolln in the past. He is doing DERMS and DER work at PSU and also conformance testing of flexible loads and things like that. He gave a link to something he has been working on <https://www.aceee.org/2025-hot-water-hot-air-forums>

Peter Fitzgerald, an engineer with INS Engineering, introduced himself, noting he had met several GWAC members at the recent GWAC Symposium at RE+ in Anaheim.

Jaime encouraged those on today's call to contact him or Susie if they have an interest in participating on any of the work group committees that we will talk about later on today's call. The work groups are open to all GWAC meeting attendees.

Zach Woogen the interim executive director of the Vehicle Grid Integration Council or VGIC introduced himself. He is working on grid integration for EVs into the electric power system. They are working on bi-directional, programs, rules, rates, and tariffs. He does a lot of work with utilities. For anyone interested in how EV can fit into the broader grid architecture, please contact him.

Zach also noted that he will be running a workshop day before the EV Forum next month on EV policy and regulatory issues. He is also happy to talk with people at the upcoming V2G forum in Detroit.

Jaime asked for a vote on the minutes that have been sent out. David Forfia gave a motion to approve the July minutes as amended and Ron Bernstein seconded the motion. There were no objections.

David Forfia gave a motion to approve the August minutes as amended and Ron Bernstein seconded the motion. There were no objections.

Jaime introduced the September minutes from the Face-to-Face meeting that covered the full day and a half meeting. Ron Bernstein requested more time to look over the September minutes. Jaime put that motion aside for the November meeting.

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Conferences and Events

Date	Event	Location	Attend	Speaker	Topic
Sept 9 - 12, 2024	RE+ Anaheim, CA & GWAC Symposium	Anaheim, CA	GWAC		
Oct. 1 – 2, 2024	Grid FWD 2024	Banff, Canada	Ahlmahz Negash		
Oct 15-16, 2024	Design Lights Consortium Summit	Milwaukee, WI	Ron Bernstein		
Oct. 16, 2024	Smart Energy Consumer Collaborative	Reston, VA	Ken Wacks, Jeremy Roberts		
Oct. 21 – 23, 2025	V2G Business, Policy, and Technology Forum	Detroit, MI	Jaime Kolln, James Mater		Addressing Challenges, Achieving the Potential of V2G
Jan. 21 – 23, 2025	IEEE PES Grid Edge Technologies Conf	San Diego, CA	Kay Aikin, Jaime Kolln, Farrokh Rahimi		
Feb. 10 – 12, 2025	AHR Expo and ASHRAE Winter Conf	Orlando FL	Ron Bernstein	Ron Bernstein	Grid Arch/Future States GWAC F2F proposed
Mar. 24 - 27, 2025	DistribuTECH	Dallas, TX	Forfia, Rahimi, Jaime Kolln		
April 14-17, 2025	IEEE Energy & Policy Forum	Washington?			Formerly ISGT
July 27 – 31, 2025	IEEE PES General Meeting	Austin, TX	Farrokh Rahimi, Jaime Kolln		
Sept. 8-11, 2025	RE+	Las Vegas, NV	Jaime Kolln		GWAC Tutorial?

Ahlmahz attended the GridFWD in Banff, Canada. There was a lot on Markets and transmission, not much yet on AI in the power system. But next year will be focused on AI and the grid. Next year's will be in Monterey, California.

In the chat Toby Considine said If one is looking to cross-silo control integration and energy effects thereof, look at the Coalition 4 Smarter Buildings (c4sb.org) and the IBB (in essence an in-building cloud for cloud-native style integration). Notable is OpenADR3 interfaces to systems and components, potentially bridging to a TE interface for the building as a whole.

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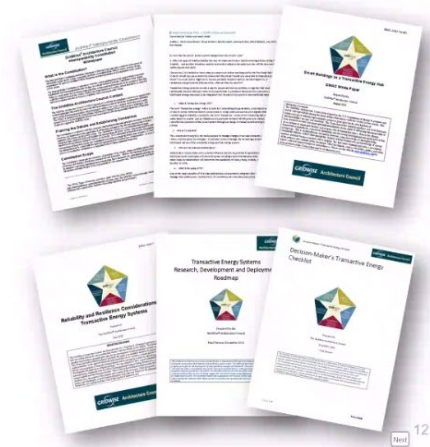


GWAC Accomplishments

- 2024 – [Future Electric Power Industry and Grids – Now What Again is Our Destination?](#) (NEW)
- 2024 – [A Practical Introduction to Common Grid Architecture Techniques](#) (NEW)
- 2023 – [Current GWAC Speaker Video Presentations](#)
- 2015-2022 – [Annual Transactive Energy Systems Conference](#) (since 2019, IEEE PES partnership event)
- 2022 – [Blog Post #5 - Decarbonization efforts of three Northern California CCA's](#) - Bahadur
- 2022 – [Blog Post #4 - Decarbonization of the Electric Grid](#) – Bernstein
- 2022 – [Blog Post #3 - Energy Equity in Decarbonization](#) - Negash
- 2022 – [Blog Post #2 - Grid Infrastructure Challenges In A Decarbonized World](#) – Aikin
- 2021 – [Blog Post #1 - Decarbonization – The Pattern that Has Emerged](#) - McCafferty, McCormick, Forfia
- 2020 – [Transactive Energy FAQ](#)
- 2020 – [Smart Buildings as a Transactive Energy Hub](#)
- 2020 – [Decision Maker's Interoperability Checklist v.1.6](#)
- 2020 – [Reliability and Resilience Considerations for TE Systems](#)
- 2019 - [GridWise® Transactive Energy Framework V1.1](#)
- 2018 - [TE Systems Research, Development and Deployment Roadmap](#)
- 2016 - [TE Decision Makers Checklist](#)



GWAC YouTube Channel



Jaime Kolln reminded the group that the Future State white paper has been published, and he added that it is pretty fantastic. He thanked Ron Cunningham for his work on the paper and for working with the PNNL editorial team to finalize the report.

Jaime mentioned the value of past GWAC work products such as the Decision Maker's Checklist, which was revised and republished in 2020. He suggested that GWAC may want to consider developing more checklists for decision makers, policy makers, and regulators as a quick reference guide.

He reminded the group that GWAC publications are located on the GWAC website, and said GWAC work goes back 20 years, some actually a bit longer than that. He said that Steve Widergren had given a good recap of GWAC history at the at the GWAC Face to Face meeting held in San Diego in September.

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Action Items

- Send speaker ideas to Jaime Kolln and Ron Bernstein and copy Susie McGuire.
 - **LinkedIn post highlighting Mission/Vision Update**
 - **Add an “About the Council” slide to template**
 - Make slide deck templates available to GWAC members.
- Website updates
 - Continue to add video presentations including speakers to GWAC database bureau post on the website.
 - Feedback requested on format, etc.
 - GWAC and Emeritus GWAC to review their bios from the website and update if needed.
- GWAC call for candidates
 - Jaime will be contacting GWAC members with expiring terms.

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Jaime asked the GWAC members and associations to update their bios and photos and photos for the GWAC website.

Action: GWAC Members and Associates to update their bios and photos by sending new content to Susie McGuire. GWAC emeritus may consider doing the same.

Kay Aikin asked about inviting Emeritus GWAC members to join GWAC calls.

Kay suggested an in memorial on the website for those that have passed.

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Guest Speaker :
Yashar Kenarangui, Principal Engineer, Xcel Energy

*Integrating Marketplace Systems with an Effective
Enterprise DERMS Architecture*

Jaime introduced Yashar Kenarangui; he will talk on FERC 2222 and asked the group to hold questions until the end.

**Connecting the Dots
Between Grid Modernization
and Virtual Power Plants**

**Yashar Kenarangui, PE (IL)
Principal Engineer**

Xcel Energy – Emerging Technologies

**This presentation is not a commentary on Xcel Energy's
Strategy or Plans**

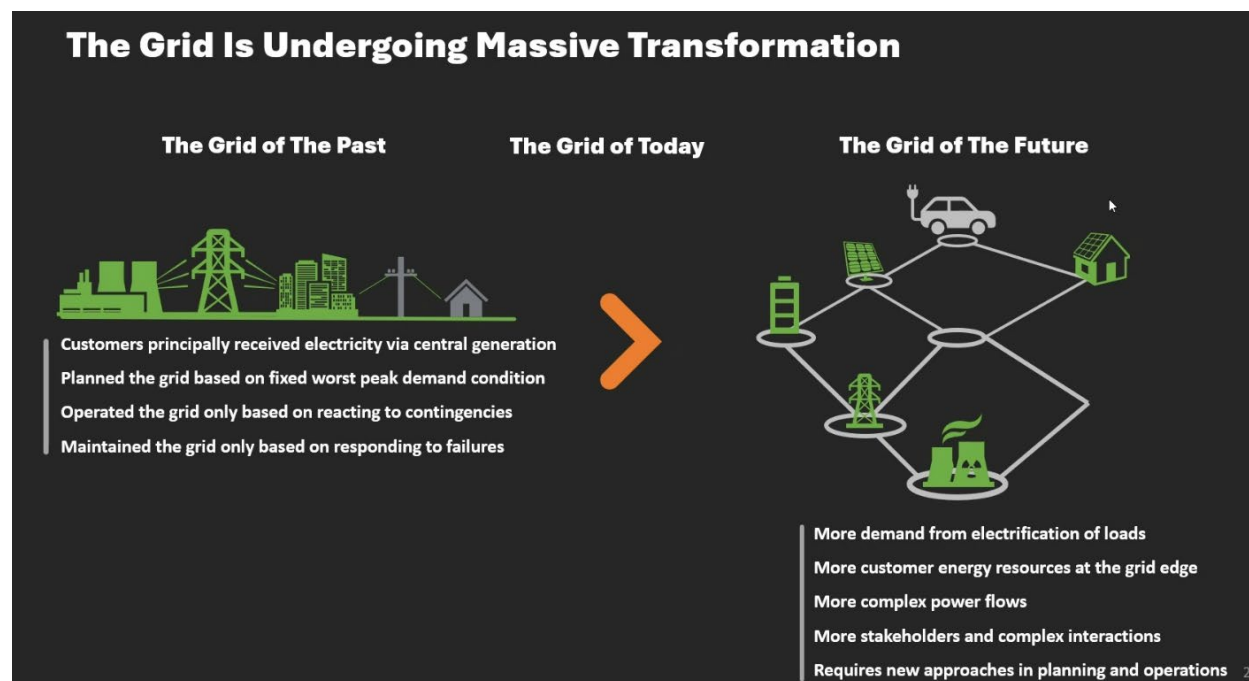
Yashar is a principal engineer at Xcel Energy in the emerging technology group. They do economic studies and assess the technology readiness of various aspects of technology, and they look at people and processes as well, at utility scale.

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He will focus today on Grid Modernization and virtual power plants.

He noted this is not a comment on Xcel Energy.



The grid is responding to fatigue and failures, not much with analytics or proactive measures until now. We expect more demand from electrification of loads with EVs and heat pumps. We gain some resiliency against outages. There are some new issues with new participants on the grid.

We need advanced, new approaches to the power system.

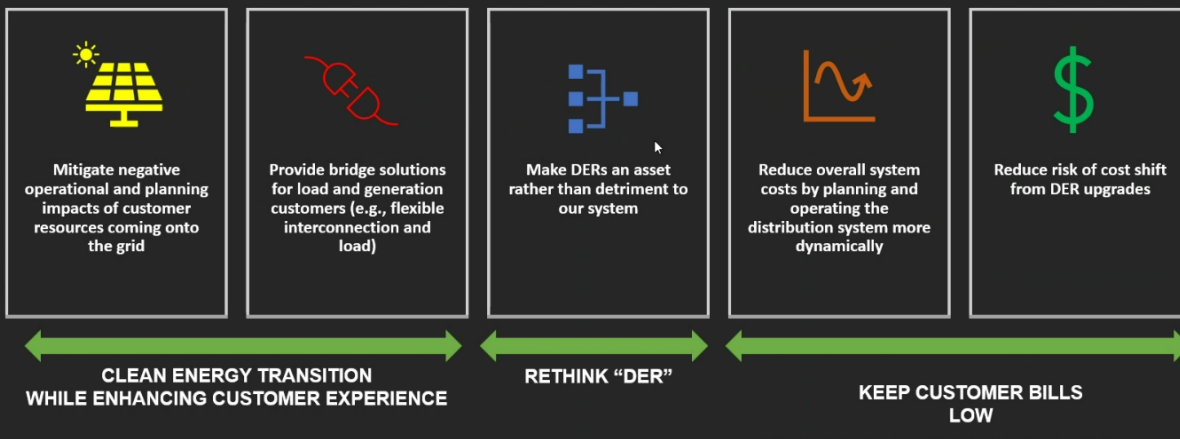
Each utility and region is different.

Each is starting to accommodate changes at the grid edge.

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Challenges and Opportunities in Planning and Operating the Grid Today

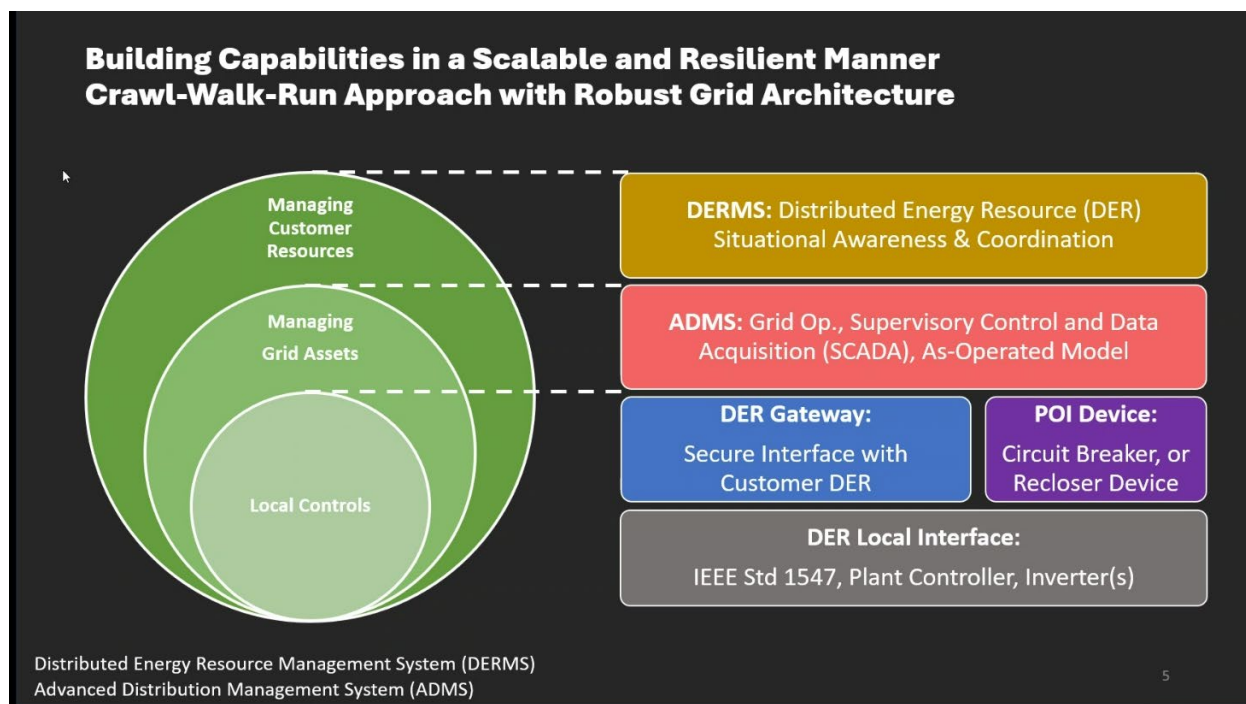


Need New Capabilities and Functions to Plan and Operate Tomorrow's Grid



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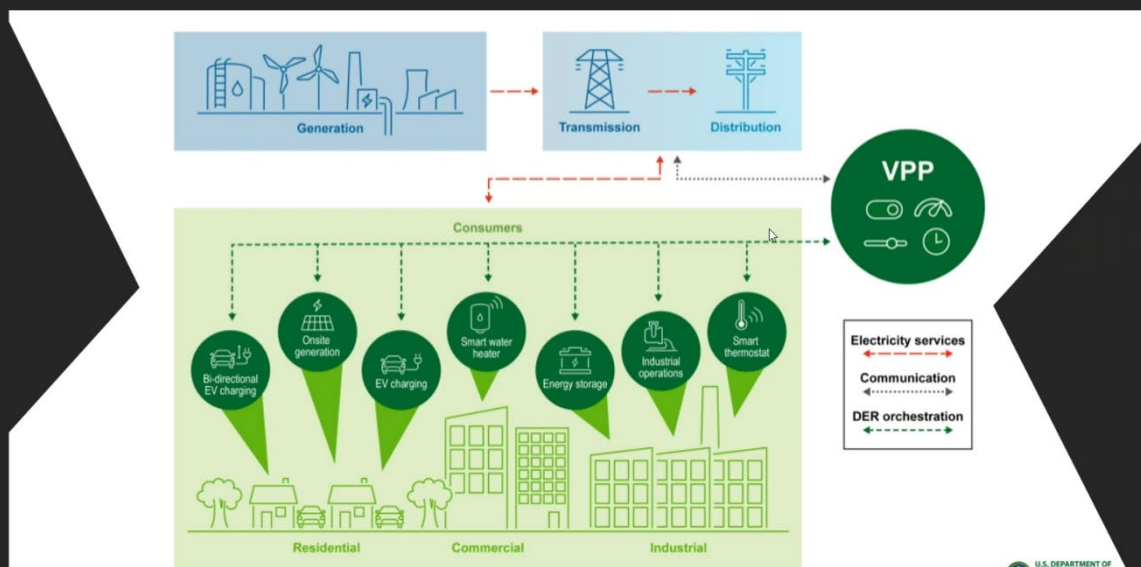
Each step must serve as a platform for capabilities. We are starting with the interface between the grid and the customer and 1547 IEEE guides

Power controllers and power plants are aggregating customer resources as one controllable unit for the grid. We need a DER Gateway device which serves multiple devices, with failsafe controls and cyber security.

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A **Virtual Power Plant (VPP)** is an aggregation of decentralized energy resources managed collectively through smart technology to mimic a **Traditional Power Plant**, enhancing grid stability and flexibility



He showed a slide that gave a good general definition of a VPP, in the slide above. There is no definite definition.

Like with other power plants it is aggregating large numbers of customer owned devices. With thermostats, water heaters, EVs and energy storage and PVs - it's all about aggregating small scale DERs.

The primary use case for the devices is the customer. It's energy storage for resiliency and EV for transportation.

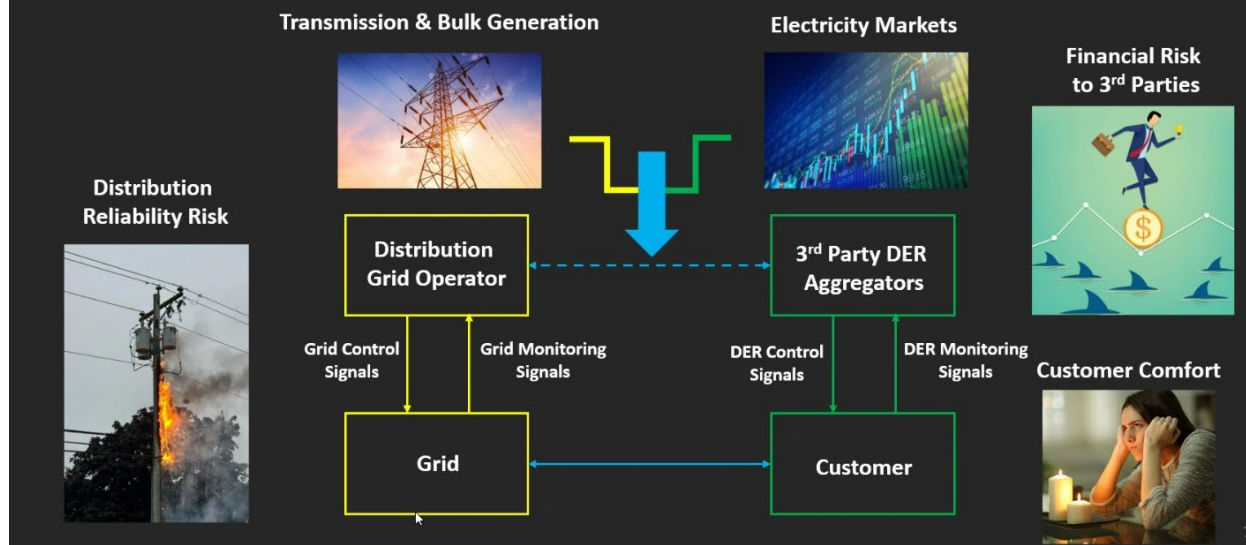
The customer comfort level and use case cannot be compromised.

VPP should serve both bulk power system and DERs.

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Meeting the Needs of The Grid, Customer, and Markets



If an aggregator is grouping a lot of behind the meter systems, it can overload the transformer.

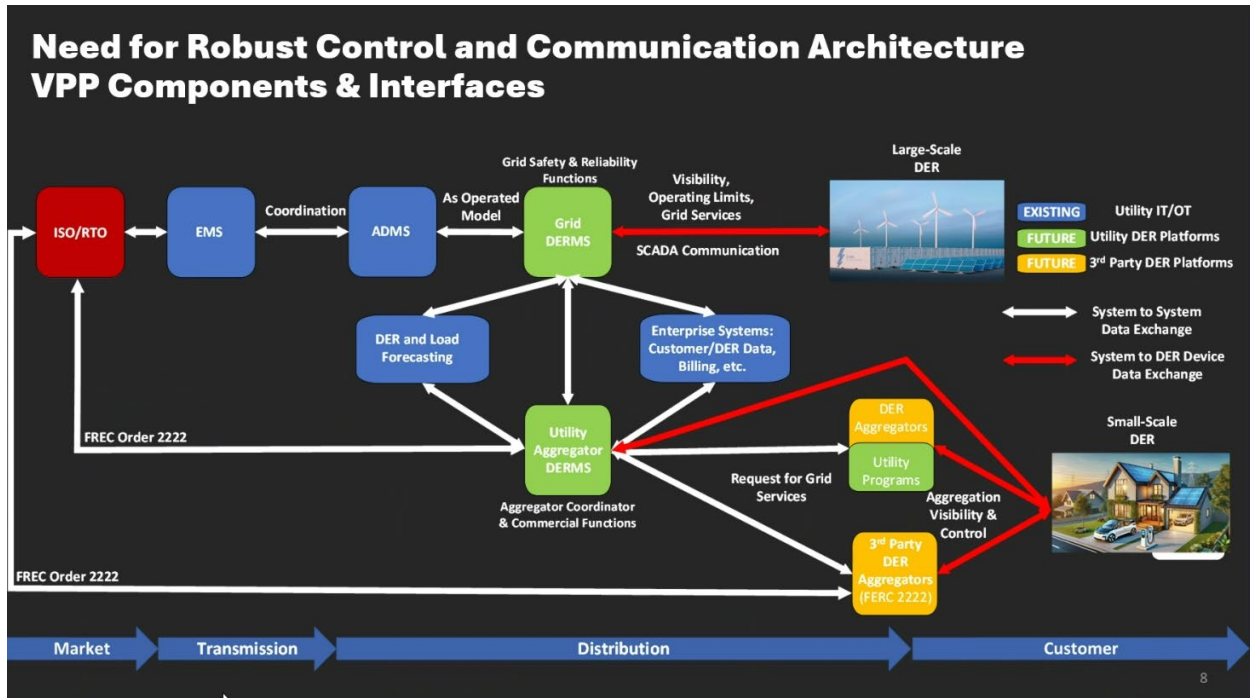
Aggregators are participating in the market they must be reliable to be successful. They may overestimate the number of services that they can provide to the bulk power system.

The customer is a stakeholder in the system. The comfort level of the customer must be kept in mind.

For VPPs to be operational we have to meet the needs of dist system reliability, and customer comfort.

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The ADMS are existing. We need to implement new technologies and utility aggregator DERMS

There are a lot of interfaces. How do we slice and dice these for the VPP to preserve robust control and resiliency?

The federated control where upstream and downstream – complexity is hidden in each layer.

He mentioned cloud-based and sharing data, security, protocols, cyber provisions to interact with customer devices with cloud-based OEM aggregators.

Jaime Kolln asked if when you request grid services and there are price/market – the request goes to the aggregator but not necessarily the customer. Can the aggregator manage this?

Yashar replied that today most services are through utility programs. Incentives are defined w/out robust connection to grid benefits. Pay for performance is a solution that enables VPPs. Various utility programs are built in silos.

Jaime asked if as the system is proven the services will be more directly tied to traditional grid services?

Yashar replied yes, with VPPs we are trying to serve the bulk power system and distribution system. When we come to distribution systems they are not tied to specific benefits. We need to work to see that distribution and transmission are balanced.

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Jaime asked if with DERMS, VPPS and ISO – what are the drivers? Flexible interconnections? For example, if we have 100 megawatts of capacity and the distribution says no you don't have that much and then there is a bidding war.

Yashar said that 3rd party aggregators can participate but if the utility is not checking the offers, so to speak, it can be a problem. With ISOs and 3rd party aggregators the offer is checked and goes to the utility for them to run their own check. If there is a grid impact, they may adjust the offer or stop the offer because of impact to the distribution system. The interaction between Grid DERMS and aggregatory DERMS is essential.

Several people put questions and comments for Yashar in the chat:

Marc Costa (External) 10:54 AM

MC How are you bridging the technical approach to the policy and system planning activities that happen in the regulatory space?

Have any (large) customers expressed sensitivity in sharing BTM data and has that been limited to VPP participation, or is there a larger need for device/BTM system data independent of VPP participation?

AM **Does the ADMS/DERMS include Network Model Manager capabilities? Can it automatically discover DERs and update the grid's topology in real time?**

Can it integrate with Network Model Managers from other industry leaders?

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Kay Aikin_Dynamic Grid (Unverified) 10:54 ↵

KG Glad to see this perspective presented which I have been trying to point out but not with such eloquence. How do you see the interplay between edge DERMS and VPPs. Some are suggesting a VPP driven method (and requiring excess communication and rebidding in the ISO market) vs. a Edge DERMS-driven method where flexible operating envelopes would be sent to VPP's to respond too.

Yashar's reply to Alaa Mahjoub's chat question: No, at this point we don't have the implementation of DERMS. It can be difficult.

Jaime Kolln thanked Yashar for his presentation.

Jaime said GWAC is looking for more interactions with utilities and markets such as Yashar's. He noted the other questions in the chat and asked if Yashar could reply to them individually.

Jaime resumed the meeting.

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Call for Candidates Open!

Potential candidates should have demonstrated visionary capacity, team effectiveness, and an acknowledged level of recognition and credibility in their professional fields, along with specific skills and experience.



<https://gridwiseac.org/index.php/call-for-candidates/>

- Nominations are open now
- Call will close on December 15th
- At least one candidate will be chosen
- Council members serve a two-year term



https://gridwiseac.org/pdfs/gridwise_architecture_council_bylaw.pdf

The Call for Candidates is open on the GWAC website. Jaime said there are some skill sets that would be good to add to the GWAC, if not this term, then at a future term. The Call will close Dec. 15. Interested candidates should go to the site and complete an application.

Jaime reminded the group that all on the call can participate in work product groups as a GWAC non-member or emeritus.

Jaime asked everyone to reach out to Jaime or Susie for more information about applying. He reviewed the submission guidelines.

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Candidacy Submission Guidelines

The GridWise® Architecture Council (GWAC) conducts membership renewal each year. As a guideline, roughly one-quarter of the membership is refreshed each year with new members. Member terms last two years. The Architecture Council seeks candidates to represent interests in several areas.

While existing members willing to renew their membership have the advantage of being familiar with the Council, the Nominations Committee's job is to develop a slate of candidates that best meets the desired attributes specified for a Council with balanced representation.

Desired Attributes

We are looking for qualified candidates with experience in one or more of the following areas:

- Complex, system of systems theory, architecture, requirements, and design methodology.
- Electric utility strategic planning, management, operations, and market interactions.
- Electric power system automation and energy management systems.
- Distributed energy resource aggregation and integration (e.g., generation, storage, and load for demand-side participation).
- Building technologies and grid integration including, residential and commercial building automation and system integration, including consumer appliances, building controls, building energy management systems, electronics, and electric vehicles.
- Legislative, regulatory, and economic electricity policy.
- Incorporation of environmental externalities into system operations, including energy efficiency and sustainability aspects.
- Telecommunication wide-area networking (e.g., metering, SCADA, remote management systems).
- Consumer and consumer advocacy (includes industrial/commercial energy acquisition and management).

Jaime said that other Categories are not restricted to this list and will be considered.

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GWAC Strategic Outreach Plan

- GWAC Mission and Vision Statements

Vision

The GridWise® Architecture Council supports a vision of a decarbonized, decentralized, and democratized electricity system to ensure the energy needs of today and that of future generations.

Mission

The GridWise® Architecture Council (GWAC) was formed in 2004 by the U.S. Department of Energy to propose principles for and accelerate the development and adoption of interoperability concepts and standards across all applications operating and interfacing with electric systems.

The Council's mission is to engage with stakeholders to accelerate the development and application of grid architecture concepts and principles. This leads to:

- Identification of critical paths to facilitate the effective evolution of the systems, devices, and entities that encompass the electric systems and achieve societal objectives.
 - Advancement of standards, applications, and systems interfacing with the current and future electric systems to ensure they are sustainable, reliable, resilient, efficient, extensible, and equitable.
- Guest speaker recordings continue to be developed and published to YouTube
 - Outreach through conference presentations
 - Slide deck to be developed with template and GWAC outreach slides.
 - NARUC meeting colocation?
 - Other organizations to "cross-pollinate" ideas with.
 - Identify liaison volunteers, e.g. INCOSE

Jaime reminded the group to please GWAC template if applicable when speaking to outside groups.

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GRIDWISE Architecture Council

GWAC "Our People" Video – 2nd in a series of 3

GRIDWISE Architecture Council

[Home](#) [Call for Candidates](#) [About the Council](#)



To be posted to LinkedIn with the Call for Council Members.

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Review the GWAC Symposium

- Co-Located at RE+ in Anaheim, CA September 9-12, 2024
 - Ron Bernstein – Thanks you for so much hard work!
 - Council Members – Congrats on fantastic panels!



- Next event is in Las Vegas, September 8-11
 - Reach out to Aaron Smallwood to coordinate a Monday afternoon tutorial.

Jaime commended Chair Ron Bernstein for his extensive work before, during and after the Symposium to organize the slides for the panels to facilitate smooth presentations, as well as his work to record the presentations and after the meeting to compile the videos for each panel, as well as to organize and host the 20th anniversary celebration for the GWAC and the GWAC F2F meeting at his home in San Diego.

Jaime also recognized the GWAC members excellent work to identify and invite key industry stakeholders as speakers for the GWAC Symposium and coordinate their scheduling and logistics. The talks were very well received. There were good discussions after the presentations.

The GWAC Tutorial on Monday afternoon was very well attended with over 88 non-GWAC attendees.

Jaime noted that on the first day the RE+ trade show floor was not yet open and there were no free snacks competing with our tutorial.

Kay Aikin suggested that next time GWAC have the agenda well in advance and recruit in advance to get better attendance at the Symposium.

It was our first time at RE+. We may want to do this at a smaller SEPA or RE+ event in 18 months and then do one similar to this in the 18 months after that.

The next RE+ will be in Las Vegas Sept. 8 – 11, 2025.

Jaime said we will have some future recap meetings. Feedback was received from meeting participants about future direction. If you are willing to participate in a short-term work group to review the

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symposium feedback on the future state – specifically how to get there and what the barriers are, please drop your name in the chat or let Jaime and Susie know.

To get started we will condense the symposium feedback down in a concise list or spreadsheet.

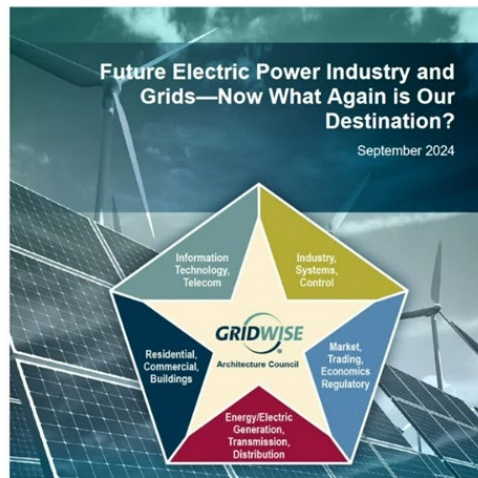
David Forfia, Aaron Synder and Leonard Tillman are interested in participating.

Jaime will invite them to a work group on Symposium Feedback. (David Forfia, Aaron Snyder, Leonard Tillman).



Grid Vision & Future States White paper

Congratulations to the team and special thanks to Ron Cunningham!



<https://gridwiseac.org/wp-content/uploads/PNNL-35526.pdf>

Link to the paper: <https://gridwiseac.org/wp-content/uploads/PNNL-35526.pdf>

Jaime recognized Ron Cunningham for leading this paper and finalizing it with the PNNL editors.

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Applying Grid Architecture Concepts to Bridge Back from the Future Grid

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, Aaron Snyder,
- 2:00 PM PT/ 5:00 PM ET Thursday 2 times 1st and 3rd Thursday of the month

Jaime reviewed the Bridge Back paper's progress.

Kay has taken this on and completed some of the work.

Jaime may have some graphics; Kay has some also.

Kay suggested creating an infographic to go along with it.

Jaime suggested they talk to a PNNL graphics specialist.

Action: Jaime Kolln and Kay Aikin to work on graphics for this paper

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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: Jaime Kolln, 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 noted these meetings are scheduled for the 4th Tues of the month

Ron Cunningham mentioned some models that the group could use for the Transportation Electrification paper.

Jaime would like to start holding these meetings twice a month now to get more done. We can finalize the draft material into a structure.

Jaime suggested adding some people to the work group who have transportation expertise - it will help move the paper along.

Marc Costa asked if the concept model could use some additional people who are not involved with GWAC. Jaime said we can do that once we have a solid draft in place.

Action: Marc Costa, Muhidin (Dino) Lelic would like to help with this paper. Jaime will add them.



Marc Costa (External) 11:50 AM

MC Darcie Houck from the CPUC and Will Vicent from the CEC

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Liaison Reports

- NIST – David Wollman
 - Green Button – Jeremy Roberts
 - EPRI – Sean Crimmins
 - IEEE PES – Farrokh Rahimi, Shawn Chandler
 - 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?*

Jaime mentioned Jeremy Roberts is not on the call today and added that PNNL is working with Green Button on aggregation of data / use cases.

David Forfia noted that Sean Crimmins recently got promoted at EPRI. David will follow up with him next week about his GWAC liaison role. Ben Ealey has been on some calls.

IEEE PES – Farrokh is not available. Sean is out.

IEEE PES GM – Aaron Snyder said he submitted a tutorial to the IEEE PES. It's not yet accepted. David is on the panel. Jaime expects to attend. Mark Paterson is on the panel with David. It will cover Grid Architecture and bridge building.

IEEE PES Grid Edge will be January 2025 in San Diego, CA.

The IEEE PES GM is in July in Austin, TX.

Ken Wacks ISO/IEC: ISO and IEC are the two international standards bodies that develop industrial standards to promote world trade.

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Ken leads the committee responsible for home and building networks and application standards including energy management. This committee met last month in Japan. The Japanese hosts demonstrated EV charging managed via a home network.

A highlight of this committee was the recent publication of the 2nd edition framework standard for energy management. It specifies an Energy Management Agent (EMA) that helps the occupant integrate power from local sources (solar and wind) and storage with grid and transactive energy sources. The occupants can use the EMA to set their priorities for comfort, convenience, budget control, and climate impact mitigation.

A standard has been proposed for gathering and processing energy consumption data in an apartment complex using the residential gateway standards.

Ken Wacks, IREC – this week’s presenter is Gary Oppedahl, Vice President, Emerging Technology, BlockEnergy. He will talk on integrating DER with the power grid.

Ken Wacks chairs the IREC Customer Grid Edge Committee. The meeting is open to anyone in the industry with no charge. Contact [Ken Wacks](#) for more information.

SEPA - Ron Cunningham noted the SEPA Grid Architecture working group and plans in 2025 to continue the work with the TE taxonomy foundational model. They are looking at a consolidated list for GWAC artifacts and some material from SEPA. This is a deliverable for next year.

Ron Cunningham and Ron Melton are pitching a collaborative framework to help share with utility members and develop product deliverables. We need to discuss how to use some of those deliverables. We want get a workshop planned with discussion about topics that are worthy of research by both SEPA and GWAC. We are not trying to rebrand each other’s materials.

Jaime added that Ron C. leads the Grid Architecture and Grid Ontology work at SEPA. He noted the close relationship for GWAC with SEPA and several GWAC council members who work regularly with SEPA including David Forfia, Ron Cunningham, Aaron Snyder, and Ron Ambrosio.

Jeff Morris is not on the call today. Jaime said we would talk with him about a GWAC meeting co-located with a NARUC meeting in the future.

Kay Aikin asked about a co-locating with the winter meeting in DC. She is interested if so.

Jaime confirmed that GWAC would like to foster some collaborations with NARUC.

Jaime is hoping to find someone with INCOSE who would be interested in becoming GWAC Liaison for INCOSE.

Marc Costa mentioned the Building Action Coalition with the UN. Kay Aikin is an advisory board member. There are members from California, Scotland, Ireland, England, Belgium, Denmark, Germany.

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Kay said that Danielle Blacet-Hyden with the CA PUC presented, and they got questions answered about buildings interacting with the grid. There was a good discussion of thermal and buildings and also on equity, and better buildings on the grid.

Kay educated the group about the future of the grid. The meeting was held in Santa Monica. Here is a link to a detailed summary of the meeting by The Energy Coalition: [here](#)

New Business

Aaron is close to wrapping up NEMA work on the V2G export standard. The group had reviewed a “slew” of related materials. A white paper may come out of it. It started out simple but is blooming into something larger along the lines of energy export.

He clarified to Jaime that it is about more than the export of signals. It does relate to V2G standards.

Action: Jaime noted that this is a good concept for a potential future GWAC presentation by Aaron.

Lorenzo said a lot of the people that he works with are interested in V2G. California just passed has SB59 which requires bi-directional capability for EVs. He sees the value of exporting to the grid. It seems like a simple starting point.

CA SB59:



The Climate Center

<https://theclimatecenter.org> › Bills

[SB 59 \(Skinner\) Bidirectional Electric Vehicle Charging](#)

The bill would authorize the **California** Energy Commission (CEC) to require that electric vehicles (EVs) sold in **California** have bidirectional capability.

Aaron said the scope of the document that he is working on is vehicle to building.

David Forfia, GWAC, gave the motion to adjourn the meeting at 12:02pm Pacific time. Lorenzo Kristov, GWAC, seconded the motion. There were no objections.

The meeting was adjourned.