



Advancing Technology
for Humanity

Design and Specification of Switchgear vs. Switchboards & PV Source Connections

James Alvers, Siemens

SCV PES/IAS Joint Chapter Update

April 30, 2025

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SCV PES/IAS Joint Chapter 2025

Chair	Steve Jordan
Vice Chair	James Alvers
Treasurer	Fred Jones
Secretary	Patrick Hoban
Officers 2025	Looking for volunteers to run!

Additional ExCom members/volunteers

Webmaster	Looking for volunteers!
Program Chair	Gary Gagliano
Program/University Advisor	Prof. Maryam Khanbaghi
Meeting Site Sponsor	Looking for sponsors!
Communications	James Alvers
Volunteers	Brian Oshel Fred Rebarber

2024 ACCOMPLISHMENTS

8 technical meetings 2024 (5 in person 3 hybrid)

System session at IEEE WTS on AI: 5 speakers, member sponsored 22 attendees

240 Members in Santa Clara Valley Section

SCV PES/IAS Recent Highlights

Themes: AI data center challenges, low carbon electricity, and reducing fire and human safety risks in the electric grid

1. All day seminar on the power requirements, low carbon power challenges, and heat removal challenges for AI Data centers
2. Several technical talks on low carbon electricity, including Fission, Fusion (Lawrence Berkeley Labs director of the Fusion project
3. MicroGrids, Smart Grids and Reducing fire and ArcFlash risks
4. Ran portion of the WTS AI Summit on Power

PLANS!

1. May or June: Bloom Fuel Cell/hydrogen/UPS
2. May 20-21: PG&E/PES Grid Reliability Summit, San Jose
3. June 17: Dr. Jessica Bian, VP GridX Partners, Grid Reliability
4. **Fall Seminar on topic of interest to members**

October 2023 Seminar: Powering The AI Revolution

Time	Session
8:15	Introduction to IEEE PES/IAS Chapter & Logistics
8:30	<i>Achieving a Sustainable Future for Data Center Power</i> <i>Peter Panfil, VP Power solutions, Vertiv</i>
9:30	<i>Environmentally Friendly Supercomputing at NASA</i> <i>William Thigpen, Manager High End computer Project, NASA Ames</i>
10:30	Morning Break
10:45	<i>Advanced Data Center Cooling with Air-Liquid Hybrid Technology</i> Ali Heydari, Distinguished Engineer, NVIDIA Fred Rebarber, President, Norman S Wright
11:55	Working Lunch Buffet Served in Foyer
1:00	<i>Upgrading existing data centers to Support AI</i> Rebecca Weekly, VP, Hardware Systems Engineering, Cloudflare
2:00	<i>Digital Electricity: Fault Managed Power</i> Stephen Eaves, CEO, Volt Server
3:00	<i>Fully Sustainable Data Centers for AI workloads: Hydrogen</i> Rajesh Gopinath, Co-Founder, EdgeCloudLink

World Technology Summit on AI

System Session Keynote speakers



Dr. Jessica Bian
VP, Grid-X Partners



Peter Panfil
VP Vertiv



Dr. Paolo Faraboschi
HP Labs



Ali Heydari,
Director, NVIDIA



Matthew Davidsaver
GE Vernova

Time	Program	Keynote speaker
8:45 AM	Utility Challenges to Deliver Power to Large Data Centers	Dr. Jessica Bian
9:10 AM	Energy Independence and the BYOP Strategy	Peter Panfil
9:45 AM	Reducing Barriers to Training AI Foundation Models	Dr. Paolo Faraboschi
10:30 AM	BYOP: Gas Turbines for Data Centers	Matthew Davidsaver
11:00 AM	Data Center Cooling Roadmap to Meet Opportunities and Challenges of AI	Ali Heydari

————— → 15 min coffee break

PES/PG&E Electricity Resiliency Summit

Achieving a More Reliable and Resilient Energy Future May 20-21

8:30	Welcome & Fireside chat: VP PG&E, Mayor of San Jose
9:30	1: Reliable Energy Delivery: ComEd, Quanta, Oncor
11:00	2: Preventing Catastrophic Outages for Transmission & Substations: PG&E, ComEd, Pepco, Eversource
1:30	3: Data Centers and Their Impact on the Grid Panel: PG&E, Exelon, Georgia Power, Meta, RTE
3:00	4: Reliability Improvement – Recent Utility Experiences: Challenges, Success Stories, and Lessons Learned: Duke, PG&E, Southern, Quanta
4:00	5: Innovation In Forensics and Failure Analytics: ComEd, Quanta
9:00	6: Reliability, Resilience, and Optimization of Capital Investments: PG&E, Duke, NERC
10:30	7: Reliability, Resilience & Wildfire Mitigation: PG&E, OPUC, Sandia
11:30	8: Climate Resiliency & Major Event Response: Quanta, ComEd, PG&E
2:00	9: Technology Panel on Reliability: PG&E, Quanta, S&C, Eaton, NuGrid
3:00	10: Western US Experiences: PG&E, Microsoft, CPUC

<https://ieee-pes.org/conferences-meetings/2025-ieee-pes-summit-achieving-a-more-reliable-and-resilient-energy-future/>



SCV PES/IAS Meetings 2024

Date	Description	Speaker	Attend.
1/26/24	PGE Advanced Research Center: fault detection, fire prevent, automatic restart	Multiple	26
3/13/24	Swedish Neutral: fault isolation, fire prevention grounding technology	Viacheslav Levashov, Swedish Neutral (at CPUC)	42 hybrid
4/24/24	Power Distribution Systems with Energy Storage Systems for residential and institutional applications	Mark Baldassari, Enphase NEC Article 705	29
5/20/24	SMART Power Flow Controllers - A Necessity for Future Power Grid	Dr. Kalyan Sen, Sen Engineering	64 hybrid
9/19/24	Chasing Zero – Towards a Future of Lithium-Ion Battery Fire Prevention	Rick Reynolds, EVP at ORR Protection (Fire Preventions)	
10/02/24	Community MicroGrid technology and programs	Shreya Kodnadu, PG&E Franz Stadtmueller, PG&E	~45 reg
10/15/24	Grid Modernization: Technological Advancements Beyond Smart Grid https://events.vtools.ieee.org/m/432410	John McDonald, PE Past President, IEEE PES	hybrid
11/13/24 11/14/24	IEEE World Technology Summit on AI Infrastructure https://wts.ieee.org	20+ Speakers on AI, Power, Cooling, Applications, Silicon, Security	105
Fall 2025	Next Gen AI Data Center Challenges	TBD	