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Top: EEI Chief Strategy Officer and Executive Vice President, Public Policy and External Affairs Brian Wolff, welcomes attendees to The Hub. Above: Energy Impact Partners Partner and Chief Utility Officer Kevin Fitzgerald.

Showcasing Technology and Innovation in The Hub

EEI's member companies—our nation's investor-owned electric companies—are leading a clean energy transformation. We are united in our commitment to get the energy we provide as clean as we can as fast as we can, without compromising on the reliability or affordability that are essential to the customers and communities we serve.

This transformation, vision, and commitment were front and center today, as EEI 2022 kicked off with the Technology and Innovation Showcase in The Hub, exclusively sponsored by Energy Impact Partners (EIP). "We're seeing this clean energy transformation go a lot faster," said EEI Chief Strategy Officer and Executive Vice President, Public Policy and External Affairs **Brian Wolff**, as he welcomed attendees to The Hub. "When I think of what EEI 2022 means, the real topic here is innovation: innovative technologies and innovative policies."

EIP Partner and Chief Utility Officer **Kevin Fitzgerald** echoed Wolff: "About 10 years ago, many pundits were saying that the power sector was going to be disrupted.... That's the 'why' of EIP: to invest in disruptive technologies."



Above: Dr. Michael Webber, EIP Chief Technology Officer and Josey Centennial Professor in Energy Resources at the University of Texas at Austin.

What is the Clean Energy/Decarbonization Challenge—and What Are the Opportunities?

In this fascinating presentation, **Dr. Michael Webber**, EIP Chief Technology Officer and Josey Centennial Professor in Energy Resources at the University of Texas at Austin, gave a high-level look at key macro-trends in demographics and technologies that are shaping the global energy landscape. Webber identified a two-sided challenge: "How do we increase access to energy, especially the 1 billion people who do not have electricity, without reducing energy access for the 7 billion who do? We have an ethical-moral imperative to resolve this challenge," he said.

"We need to accelerate innovation because we're running the world on old ideas," Webber concluded. "How do we accelerate innovation? The energy sector is unique because we're innovating all the time."



Above, L to R: EEI Vice Chairman Warner Baxter, Ameren Corporation Executive Chairman; ClearPath and ClearPath Action CEO Rich Powell; Director of the Department of Energy's Loan Programs Office Jigar Shah; and Brian Wolff.

Policy Drivers for Clean Energy Innovation

Delivering a clean energy future will require the right public policies to be in place. **Brian Wolff** returned to The Hub stage to moderate a conversation with EEI Vice Chairman **Warner Baxter**, Ameren Corporation Executive Chairman; **Jigar Shah**, Director of the Department of Energy's Loan Programs Office; and **Rich Powell**, CEO of ClearPath and ClearPath Action.

The discussion began with a look at implementation of the bipartisan 2021 Infrastructure Investment and Jobs Act (IIJA). "We have to understand just how important this legislation is," Baxter said. "It's a once-in-a-generation thing. Now is the time to be leaning in, in a big way on clean energy technologies, because we know they take time." Shah agreed: "This law was designed to achieve liftoff in sectors that need it."

Powell emphasized how the <u>Carbon-Free Technology Initiative</u> (CFTI) helped to advance policies to ensure the commercial availability of affordable, carbon-free, 24/7 technologies. "Among a lot of partners in the innovation space, EEI laid out a powerful roadmap through CFTI, and IIJA checked a lot of the boxes we put forward," he said.

Wolff and Baxter turned to the importance of congressional passage of a clean energy tax package. "As part of the regulated business, all these tax credits flow back to our customers," Baxter emphasized. "For us to achieve our ambitious goals, we need these investments and tax incentives to marry them with the infrastructure law, so we can supercharge the innovation we want in the country—and do it affordably."

"This is really about changing our mindset to energy abundance," concluded Shah. "We still should think about efficiency, but we also need to think about what it looks like to have more electricity available to us than we can fathom. America has to be able to do big things—from commercializing what we've invented around electric vehicles, high voltage transmission, hydrogen, next-generation storage [and more], it is our technologies that are powering China, Europe, and other countries."

Pittman wrapped up the afternoon's discussions: "A key theme that jumped out at me is there is a ton of capital and green power going into emerging technologies, but they will not scale without deep collaboration with industry incumbents."



Above: EEI Chairman Gerry Anderson.

Racing to Zero: Building Tomorrow's Technologies Today

EEI Chairman **Gerry Anderson**, DTE Energy Executive Chairman, moderated a discussion of how EEI's member companies and their partners are deploying clean energy technologies to benefit their customers. The panel included **Ben Fowke**, former EEI Chairman and retired executive chairman, Xcel Energy; Electric Power Research Institute Vice President of Energy Supply and Low-Carbon Resources **Neva Espinoza**; and Energy Impact Partners Founder and Managing Partner **Hans Kobler**.

"We're the only sector that has carbon emissions reduction in process," Anderson observed. "We know there is a lot more to do—we all have targets of zero or net-zero. We need new technologies, new policies, and thinking to achieve these targets."

Fowke outlined how his former company's emphasis on deploying wind energy, together with using natural gas and its existing nuclear fleet, helped reduce customer

bills while maintaining reliability and reducing emissions. "Now, across the industry, most everyone has the same goal," he said.

Espinoza explored the challenges and opportunities of scaling up technologies and systems to achieve resilient clean energy goals: "We all live and breathe a global supply chain," she said. "Are we planning the chain to be as large and robust as we need it to be?... A lot of exciting programs are moving forward, with technologies already in the ground."

"There is so much innovation going on to decarbonize steel, cement, agriculture, heating—there is innovation happening that will bring us to a level that we have never thought about," Kobler said. "The future may look very different 10 years from now than we think it will today."



Above, L to R: Anterix President and CEO Robert Schwartz; Ameren Services Senior Vice President and Chief Digital Information Officer Bhavani Amirthalingam.

Using Private LTE to Bolster Resilience

Grid resilience remains paramount for EEI's member companies, and the nexus of energy and telecommunications offers important lessons. Ameren Services Senior Vice President and Chief Digital Information Officer **Bhavani Amirthalingam** spoke with Anterix President and CEO **Robert Schwartz** about how electric companies are strengthening their networks.

"Leading the way to a sustainable future is part of our vision at Ameren," Amirthalingham said. "Advanced telecommunications are anchored in this—from restoring power after storms, or enhancing distribution automation on the grid—the need for robust communication infrastructure has shifted significantly."

"We can harness the cost curve, R&D curve, and cybersecurity curve in a single technology," Schwartz said. "Alongside the clean energy transformation, there needs to be a similarly reliable and secure communications network."



Above: Portland General Electric President and CEO Maria Pope.

Mitigating Wildfire Risk

Portland General Electric President and CEO **Maria Pope** offered insights on how electric companies are coordinating their wildfire mitigation and response strategies with a broad array of partners. "Unity of mission and unity of message are so important," Pope said. "Sticking together with government at every level and across the sector through the Electricity Subsector Coordinating Council differentiates our sector."

She also outlined how EEI and other partners across the industry and in government are focused on studying wildfire prevention, mitigation, and response, and the role of electric company investments in protecting the energy grid.



Above, L to R: Tennessee Valley Authority's Vice President of the Clinch River New Nuclear Project Greg Boerschig; Zap Energy Vice President of Product Development Ryan Umstattd; and PSEG Chairman, President, and CEO Ralph Izzo.

The Power of Advanced Nuclear

PSEG Chairman, President, and CEO **Ralph Izzo** moderated this conversation about the potential for advanced nuclear in the energy mix. He was joined by the Tennessee Valley Authority's Vice President of the Clinch River New Nuclear Project **Greg Boerschig** and Zap Energy Vice President of Product Development **Ryan Umstattd**.

"It feels like nuclear is enjoying a bit of a renaissance," Izzo observed, outlining the broad array of support for the role of both existing nuclear reactors and advanced nuclear energy in achieving a carbon-free future.

The conversation turned to the technology, regulatory, and financial challenges of developing fleets of advanced nuclear reactors. "Fusion is close to its Kitty Hawk moment," Umstattd said. "We're targeting having fusion energy commercially available by 2030. We need to take that big swing—it's required by the market and by the planet."

"The first-of-a-kind [of any technology] is difficult to make cost-effective," Boerschig noted. "The learning curve, through scaling learnings into a fleet, is how you achieve cost-effectiveness.... If we're not going to build a fleet of small modular reactors, we're probably not going to be the first, either."



Above, L to R: National Grid Vice President of Government Relations Emily Duncan; EEI Associate General Counsel, Energy and Technology Regulation Sandra Safro.

Unlocking Hydrogen's Potential

Hydrogen is well-positioned to be a crucial clean energy resource for a carbon-free future. To look at today's challenges and opportunities, EEI Associate General Counsel, Energy and Technology Regulation **Sandra Safro** spoke with National Grid Vice President of Government Relations **Emily Duncan**.

Saffro outlined how electric companies and their partners in both the public and private sectors are embracing the potential of hydrogen. Duncan agreed: "Everybody's talking about hydrogen today, yet people have been toiling away at it for a long time. The policy is starting to meet the moment.... At National Grid, we are trying to create a hydrogen ecosystem—something that can serve communities in a variety of ways."





Top, L to R: Southern Company Services Senior Vice President of Research and Development Dr. Mark Berry; Energy Impact Partners Senior Vice President of Innovation and Commercialization Evan Pittman. Above: Rondo CEO John O'Donnell; Pittman.

Long-Duration Storage and Electrifying Heavy Industry

In the concluding sessions of today's Technology and Innovation Experience in The Hub, EIP Senior Vice President of Innovation and Commercialization **Evan Pittman** highlighted how electric companies and technology partners are developing and implementing long-duration energy storage and also are using advanced technologies to help electrify industrial sectors.

Pittman was joined by Southern Company Services Senior Vice President of Research and Development **Dr. Mark Berry**. "Southern Company has had an R&D process for 50

years," Dr. Berry said. "One of our principles is learning by doing, and bringing new technologies to the marketplace."

Pittman next spoke with Rondo CEO **John O'Donnell**, whose company is developing technologies to power industrial customers through renewable energy stored as heat. O'Donnell emphasized how his company is working to "create value for electric companies by working with customers to change how competitive they are in the world market.... and taking what would otherwise be excess generation and providing voltage support, price stabilization, and serving more load without growing peak demand."

Pittman wrapped up the afternoon's discussions: "A key theme that jumped out at me is there is a ton of capital and green power going into emerging technologies, but they will not scale without deep collaboration with industry incumbents."

Tech Talks

Throughout the afternoon, "tech talks" briefed attendees on some of the cutting-edge technologies EEI's member companies are implementing to deliver a cleaner, smarter, stronger energy future for their customers:

- Duke Energy Managing Director of Public Policy Jennifer Loraine discussed her company's use of virtual reality.
- Florida Power & Light Senior Drone Pilot Michael Dorr gave an overview of how his company and others across the industry are using drones to benefit reliability.
- AES Corporation Director of Renewables Technology & Innovation Deise Yumi
 Asami talked about how her company's innovative robot is helping do the heavy
 lifting to install solar panels.

Previewing Our Tuesday Agenda

Download the EEI 2022 Agenda

Read All Speaker Info

Opening Keynote Session

Coquina Ballroom | 9:00 a.m. – 11:00 a.m.

Workforce Development Experience in The Hub

Mediterranean Ballroom, Salon 4-5 | 11:15 a.m. – 12:00 p.m.

Concurrent Breakout Sessions

- Evolving Threats: What Doesn't Keep You Awake at Night? Mediterranean Ballroom, Salon 1-3 | 11:15 a.m. – 12:15 p.m.
- Mitigating Climate Risk: AHR and More
 Mediterranean Ballroom, Salon 6-8 | 11:15 a.m. 12:15 p.m.

Conference Lunch

Mediterranean Ballroom, Salon 4-5 | 12:15 PM-1:30 PM ET

Concurrent Breakout Sessions

 Cryptocurrency: Partnering With 'Miners' to Meet Energy & Environmental Demands

Mediterranean Ballroom, Salon 1-3 | 1:35 p.m. – 2:25 p.m.

Residential Customers Want a New Relationship
 Mediterranean Ballroom, Salon 6-8 | 1:35 p.m. – 2:25 p.m.

Concurrent Breakout Sessions

- Delivering on the Promise of Fleet Electrification
 Mediterranean Ballroom, Salon 1-3 | 2:30 p.m. 3:15 p.m.
- The Future of ESG Reporting

 Mediterranean Ballroom, Salon 6-8 | 2:30 p.m. 3:15 p.m.

Electric Transportation Experience in The Hub

Mediterranean Ballroom, Salon 4-5 | 3:20 p.m. – 5:00 p.m.

Conference Reception

Mediterranean Foyer | 6:00 p.m. - 7:00 p.m.

2022 Edison Awards & Conference Dinner

Coquina Ballroom | Tuesday, June 21 | 7:00 p.m. – 9:00 p.m.

Nightcaps & Networking: The Hub

Mediterranean Ballroom, Salon 4-5 | 9:00 p.m. – 11:00 p.m.

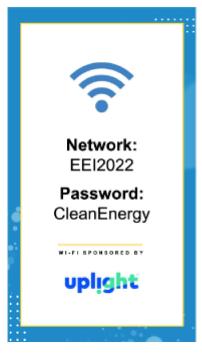
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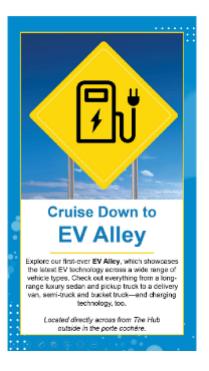
Tweet of the Day



Follow all of the action on Twitter by using #EEI2022 in your messages. Help us to amplify the digital conversation by retweeting and sharing with your friends and followers.







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- EEI 2022 Home
- EEI 2022 Agenda
- EEI 2022 Sponsors
- **Electric Perspectives** May/June 2022
- Electric Perspectives Podcast
- Energy Talk May 2022
- <u>VisitOrlando.com</u> Courtesy of the Orlando/Orange County Convention and Visitors Bureau

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