Powering the People

KEY TRENDS DRIVING CHANGE

March 17, 2016 | 12:00 pm - 4:30 pm | Reception Follows Mandarin Oriental Hotel | Washington, DC



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Welcome



Welcome to **Powering the People** - our annual celebration of innovation and change in the electric power industry. This year's theme is **Key Trends Driving Change**, and we look forward to hearing from electric power industry thought leaders as they present their unique perspectives on emerging trends shaping the future of energy - trends that are being driven by technology, by public policy, and by changing customer needs and expectations.

During this year's Powering the People, industry thought leaders will deliver "TED-style" talks focused on three key trends driving change.

- Digital and distributed power grid. This session focuses on how and why electric power companies are investing billions to build the smarter energy infrastructure that customers want - a more dynamic and more secure power grid.
- Individualizing customer services. This session focuses on why electric power companies are increasingly providing individualized services to all types of customers - ranging from major corporations to households - and the regulatory challenges associated with customization.
- Smart cities. This session focuses on how cities and towns around the world are establishing initiatives to drive sustainability and economic development and the key role of electric power companies and the digital power grid as partners in this effort.

At the end of today's program, the "Wrap-up" discussion will connect the dots among these trends. As tomorrow's electric power companies provide even cleaner energy, provide more individualized customer services, integrate and connect more distributed energy resources, and provide greater reliability and resilience – collaboration, progressive public policy, and appropriate regulatory policies will be critical for the successful transformation of the industry. Ultimately, as the transformation unfolds, how do we strike the right balance? Today's talks are an important addition to that conversation. I hope you enjoy this year's **Powering the People**.

Dun Wood

Lisa Wood

Vice President, The Edison Foundation
Executive Director, Institute for Electric Innovation

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Agenda

12:00 pm Lunch Welcome 12:30 pm Lisa Wood, Vice President, The Edison Foundation and Executive Director, Institute for Electric Innovation 12:40 pm **Driving Our Energy Future** CEO View: Ralph Izzo, Chairman, President and CEO, PSEG Regulator View: Bob Stump, Commissioner, Arizona Corporation Commission 1:00 - 4:00 pm Mini TED-Style Talks Facilitated by Bob Rowe, President and CEO, NorthWestern Energy 1:00 pm **Digital and Distributed Power Grid** Representative Mimi Walters (R-CA) Pedro Pizarro, President, Southern California Edison Susan Kennedy, Founder and CEO, Advanced Microgrid Solutions 1:45 pm **Individualizing Customer Services** Jonathan Weisgall, Vice President, Government Relations, Berkshire Hathaway Energy Chris Black, COO and Chief Technology Officer, Tendril 2:30 - 3:00 pm Break sponsored by ORACLE 3:00 pm **Smart Cities** Russell Vanos, VP, Sales and Marketing, Global Software, Services and Smart Cities, Itron Roger Woodworth, Vice President, Avista Corp. and President, Avista Development 3:50 pm Wrap-Up Bill Loveless, Energy Columnist, USA Today, connects the dots & leads Q&A with Susan Kennedy and Bob Rowe. 4:20 pm Closing Remarks Tom Kuhn, President, Edison Electric Institute Reception sponsored by TENDRIL 4:30 pm

Welcome



Lisa WoodVice President, The Edison Foundation
Executive Director, Institute for Electric Innovation

Lisa Wood is Vice President of The Edison Foundation and Executive Director of the Institute for Electric Innovation (IEI). As Executive Director of IEI she collaborates with a Management Committee of over 20 electric utility CEOs and provides thought leadership on current issues and innovation in the elec-

tric power industry. Under Ms. Wood's leadership, IEI released its 4th book in December 2015: Key Trends Driving Change in The Electric Power Industry.

Wood is a Nonresident Senior Fellow in the Energy Security and Climate Initiative at The Brookings Institution and an Adjunct Professor at Johns Hopkins University SAIS.

Ms. Wood serves on several boards including the Advisory Board of Current, GE's new energy business.

Prior to launching IEI, Wood was a Principal with The Brattle Group; a Principal with PHB Hagler Bailly; and a Program Director at RTI International. Wood holds a Ph.D. in Public Policy and Management from the Wharton School of the University of Pennsylvania and an M.A. from the University of Pennsylvania.

Driving Our Energy Future

CEO View



Ralph IzzoChairman, President and CEO, PSEG

Ralph Izzo was elected chairman and chief executive officer of Public Service Enterprise Group Incorporated (PSEG) in April 2007. Previously, Mr. Izzo was president and chief operating officer of Public Service Electric and Gas Company (PSE&G).

Mr. Izzo is a well-known leader within the utility industry, as well as the public policy arena. He is frequently asked to testify before Congress and speak to organizations on matters pertaining to national energy policy.

Mr. Izzo's career began as a research scientist at the Princeton Plasma Physics Laboratory, performing numerical simulations of fusion energy experiments. Mr. Izzo received his Bachelor of Science and Master of Science degrees in mechanical engineering and his Doctor of Philosophy degree in applied physics from Columbia University. He also received a Master of Business Administration degree, with a concentration in finance from the Rutgers Graduate School of Management. Mr. Izzo has received Honorary Degrees from the New Jersey Institute of Technology (Doctor of Science), Thomas Edison State University (Doctor of Humane Letters), Bloomfield College (Doctor of Humane Letters), Rutgers University (Doctor of Humane Letters), and Raritan Valley Community College (Associate of Science).

Mr. Izzo serves as nominating committee chairman of the New Jersey Chamber of Commerce, and is on the board of directors for The Williams Companies, the New Jersey Utilities Association, the Edison Electric Institute (EEI), and the Nuclear Energy Institute (NEI).

Regulator View



Bob StumpCommissioner, Arizona Corporation Commisson

Corporation Commissioner Bob Stump was re-elected to the Arizona Corporation Commission in 2012. He is the youngest statewide elected official in Arizona.

Commissioner Stump represented District 9 in the Arizona House of Representatives from 2002-2008. He serves on the Board of Directors of the National Association of Regulatory Commissioners (NARUC), is a member

of the Harvard Electricity Policy Group and the Aspen Institute's Society of Fellows, and is an Advisory Council member of the Center for Public Utilities.

Commissioner Stump has a wide range of policy experience, having served as Chairman of the House Health Committee; Co-Chair of the Joint Select Committee to Investigate Operations and Conditions at the Arizona Veterans Home; Vice Chair of the Health and Rules committees; and as a member of Ways & Means, Commerce & Military Affairs, Water and Agriculture, Financial Institutions & Insurance, Education, the Interagency Council on Long-Term Care, the Interim Committee on Welfare Reform, and the House Ethics Committee.

Commissioner Stump holds degrees from Harvard University, where he studied American religious history and political philosophy, and the University of California at Berkeley, where he studied philosophy and social thought, and from which he graduated with High Honors. Commissioner Stump is Chairman of the Board of Phoenix Opera, and served on the board of the Symphony of the West Valley. He also serves as a Trustee of the Grammy Award-winning Phoenix Boys Choir.

Mini TED-Style Talks

Facilitator



Bob RowePresident and CEO, NorthWestern Energy

Mr. Rowe is President and Chief Executive Officer of NorthWestern Corporation. He is Co-Chair of the Institute for Electric Innovation, part of the Edison Electric Institute (EEI); a member of the EEI Board of Directors Executive Committee; a member of the American Gas Association Board of Directors; Western Energy Institute past chair and current executive committee member.

Previously, he was co-founder and senior partner at Balhoff, Rowe & Williams, LLC, a specialized national professional services firm providing financial and policy advice to clients in the telecommunications and energy industries. Mr. Rowe served as commissioner and chairman of the Montana Public Service Commission from 1993-2004, and also served as president of the National Association of Regulatory Utility Commissioners (NARUC).

Mr. Rowe resides in Helena, Montana. He holds a BA from Lewis and Clark College in Portland, Oregon, a JD from the University of Oregon, completed the Kennedy School Senior Executives' Program, and is active in various legal and professional organizations. He has been active with a variety of university-based organizations, and is currently a senior fellow at the University of Florida Public Utility Research Center.

At NorthWestern Energy, his focus is on working with other employees to build a strong company, focused on providing essential infrastructure and service that will be a long-term partner to the customers and communities they serve.

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Digital and Distributed Power Grid

Today, U.S. electric power companies are building the smarter energy infrastructure that customers want - a more dynamic and more secure power grid that provides customers greater control and efficiency and more connection and interaction with thousands of distributed energy resources and devices. As electric power companies integrate and enable the technologies that link customers and resources, and manage the growing number of distributed resources, what are some of the challenges and opportunities?



Representative Mimi Walters R-CA

Congresswoman Mimi Walters represents the 45th Congressional District of California and currently serves on the House Judiciary Committee and the House Committee on Transportation and Infrastructure. She previously served in the California State Senate from 2008 - 2014, representing California's 37th District of the California State Senate.

Congresswoman Walters possesses a background in both business and local government. Her professional career has included time with the firm of Drexel, Burnham & Lambert as an Investment Executive; subsequently she joined Kidder Peabody & Company.

Congresswoman Walters began her career in public service as a member of the Laguna Niguel City Council in 1996. She served as the City's mayor in 2000, and as a Councilwoman, she was a leading voice for fiscally responsible government and local control.

She is a founder of the California Women's Leadership Association (CWLA) and has served on the Boards of the National Association of Women Business Owners (NAWBO), the Laguna Niguel Republican Women Federated, the American Cancer Society, and the South Coast Medical Center Foundation.

A champion for job creation, lower taxes, less intrusive government, and fiscal responsibility, Congresswoman Walters has been active in conservative causes for many years. In 2006, she led the fight against eminent domain abuse by serving as the Honorary Statewide Chair for the Protect Our Homes Coalition. She has won all three awards that are issued by the Orange County Republican Party, being named Local Elected Official of the Year in 1997, Volunteer of the Year in 1998 and Legislator of the Year in 2005.

Congresswoman Walters graduated from the University of California at Los Angeles in 1984 with a Bachelor of Arts degree in Political Science. She and her husband, David, have 4 children.

Pedro PizarroPresident, Southern California Edison

Pedro J. Pizarro is president of Southern California Edison (SCE). SCE is one of the nation's largest investor-owned electric utilities, delivering power to more than 14 million people in a 50,000-square-mile service area spanning Central, Coastal and Southern California.

Before returning to SCE last October, Pedro served as president of Edison Mission Energy (EME), an independent power producer, from 2011 until the sale of substantially all of its assets to NRG Energy in April 2014. At the time, EME was a subsidiary of Edison International. Prior to leading EME, Pedro progressed through several roles of increasing responsibility at Edison International and SCE, including director of Strategic Planning, vice president of Technology Business Development, vice president of Strategy and Business Development, senior vice president of Power Procurement and executive vice president of Power Operations. Pedro was a senior engagement manager with McKinsey & Company in Los Angeles before joining Edison in 1999.

Pedro has a Ph.D. in chemistry from Caltech and a bachelor's degree in chemistry from Harvard University. He currently serves on the boards of Argonne National Laboratory, the Southern California Leadership Council, and Western Energy Institute. He also has served on the boards of Caltech, the Electric Power Supply Association, the California Power Exchange, the Colburn School and House Research Institute.



Susan Kennedy Founder and CEO, Advanced Microgrid Solutions

Susan served for two decades at the highest levels of state and federal government, most recently as chief of staff to Governor Arnold Schwarzenegger, cabinet secretary and deputy chief of staff to Governor Gray Davis and communications director for U.S. Senator Dianne Feinstein. She served from 2003-2006 on California's Public Utilities Commission, regulating the state's

investor-owned electric utilities, telecommunications providers and private water companies.

Susan was at the center of many of California's groundbreaking environmental policies, including the carbon reduction mandate and cap-and-trade program under AB 32, the Low-Carbon Fuel Standard, auto emission standards and Renewable Portfolio Standard. She coordinated the State's emergency demand response efforts during the energy crisis of 2000-2001 and as a member of the PUC she authored what was then the largest energy efficiency program in utility history. She holds a B.A. in Management from Saint Mary's College of California.







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Individualizing Customer Services

Increasingly, customers want customized services. Some large customers (like data centers and major corporations) want 100 percent renewable energy to meet corporate sustainability goals. Some residential customers want tools to manage, control, and choose their energy use. How will technology, innovative solutions, policy, and regulation play a role in providing the customized energy solutions that customers want?



Jonathan Weisgall

Vice President, Government Relations, Berkshire Hathaway Energy

Jonathan Weisgall is Vice President for Government Relations for Berkshire Hathaway Energy Company, a subsidiary of Berkshire Hathaway. He joined CalEnergy (Berkshire Hathaway Energy's predecessor company) in 1993 as Vice President for Legislative and Regulatory Affairs. Weisgall also serves as Chairman of the Board of Directors of the Center for Energy Efficiency and

Renewable Technologies and vice president of the Geothermal Energy Association. He is an Adjunct Professor of Law at Georgetown University Law Center, where he has taught a seminar on energy issues since 1990. Weisgall graduated from Columbia College and from Stanford Law School and previously practiced law in Washington, D.C. at Covington & Burling.



Chris Black

COO and Chief Technology Officer, Tendril

Chris Black has spent the past 19 years creating and growing numerous early to mid-stage software companies. He has an abiding passion for technology, operational improvement, and building smart, productive teams within a collaborative culture. Chris joined Tendril in 2011 as Chief Technology Officer with the goal of delivering world-class software solutions for the evolving

energy market.

At Tendril, Chris applies his deep technology knowledge, performance management and leadership to his role as CTO. Chris is responsible for executing on Tendril's vision to deliver solutions that make a tangible difference in the way customers use energy.



Smart Cities

Cities and towns around the world are establishing smart city initiatives - clean energy infrastructure; improved transportation; networked street lighting; and more. How are electric power companies partnering with cities and technology providers to bring the benefits of a digital and distributed power grid to urban centers?



Russell Vanos

Vice President, Sales and Marketing, Global Software, Services and Smart Cities, Itron

Russ Vanos, vice president sales and marketing, global software and services for Itron, is a utility industry and connected city visionary who played a major role in driving early smart grid technology adoption in North America. Named to this position in November 2015, Vanos is leading Itron's global software and services

teams to enable true solution selling in collaboration with Itron's Electricity, Gas and Water business lines. He is also integral to the Internet of Things and smart cities initiatives for the company.

Vanos joined Itron in 1980 and has held various leadership positions across sales, marketing and operations, both nationally and internationally. Most recently, Vanos served as Itron's senior vice president of corporate strategy and business development.

Vanos is on the boards of the Washington State University Energy Innovation Center and Envision Charlotte, is a member of Edison Electric Institute (EEI), sits on the Cisco Internet of Things Steering Committee, and is a founding member of the Smart Cities Council.



Roger Woodworth

Vice President, Avista Corp.
President, Avista Development

Since the start of his career at Avista in 1979, Woodworth has served in various leadership roles including strategic counsel, corporate development officer, vice president of Operations, vice president for sustainable energy, vice president of customer solutions, and most recently as vice president and chief strategy officer.

He is active in various business and civic organizations including gubernatorial appointed trustee to the Washington State Life Sciences Discovery Fund, member and past-chair of the President's Advisory Council for Washington State University-Spokane, board member of Plum Energy, LLC as well as Dragon Jacket, LLC, and vice-chair of the Ignite Northwest foundation board.

He has previously served as gubernatorial appointed chair of the Washington Economic Development Commission, chair of the Northwest Energy Efficiency Alliance, chair of Edison Electric Institute's retail services executive advisory committee, inaugural member of Rocky Mountain Institute's "Electricity Lab" initiative, participant in the American Academy of Arts and Sciences forum on behavioral sciences in energy policy, gubernatorial appointee to the Washington State Clean Energy Leadership Council, founding vice chair of the Spokane Health Services and Science Advisory Board, chair of the Northwest Gas Association board, president of the National Hydropower Association board, and chair of the Inland Northwest Community Foundation.

Woodworth earned his Bachelor of Science degree in wildlife ecology from Washington State University and is a graduate of Columbia University's Senior Executive Program.



Wrap-Up



Bill LovelessEnergy Columnist, USA Today

Bill Loveless is a veteran energy journalist with a strong reputation for compelling interviews with leading newsmakers in print, on the air and in public forums.

Now a columnist with USA Today, Bill previously was an editorial director for Platts, the energy news and information division of McGraw Hill Financial, where he coordinated coverage of U.S. energy policy. While at Platts, he also

anchored the weekly TV program "Platts Energy Week," which aired on WUSA/CBS in Washington and on PBS stations throughout the U.S.

Among his other professional activities, Bill is the host of a podcast series at Columbia University's Global Center on Global Energy Policy called the "Columbia Energy Exchange."

He is a recipient of the McGraw Hill Corporate Achievement Award, and a member of the Executive Advisory Board of the University of Rhode Island Harrington School of Communications and the National Press Club.

Closing Remarks



Tom KuhnPresident, Edison Electric Institute

Mr. Kuhn is president of the Edison Electric Institute, the association of investor-owned electric companies whose members generate and distribute approximately three-quarters of the Nation's electricity.

Prior to joining the Institute, Mr. Kuhn was president of the American Nuclear Energy Council. The Council represented virtually all of the companies in the

commercial nuclear power industry.

From 1972 to 1975, he headed the energy section of the investment banking firm, Alex Brown and Sons. From 1970 to 1972, Mr. Kuhn was White House Liaison Officer to the Secretary of the Navy.

Mr. Kuhn received a BA in Economics in 1968 from Yale University, served as a Naval Officer following his graduation, and completed a Masters in Business Administration in 1972 from George Washington University.

He currently serves on the Boards of the U.S. Energy Association, Electric Drive Transportation Association and the American Council for Capital Formation. He is Chairman-Emeritus of the U.S. Chamber's Committee of 100 and the American Society of Association Executives. He is past-chairman of the Alliance to Save Energy, ASAE's Key Industry Association Committee and of the Trade Association Liaison Council.



THOUGHT LEADERS SPEAK OUT:

Key Trends Driving Change in the Electric Power Industry

IEI will release Volume II of Thought Leaders Speak Out in June at the EEI Annual Convention in Chicago!

Volume I of **Thought Leaders Speak Out** is available for download on IEI's website: www.edisonfoundation.net





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IEI Technology Partner Roundtable

IEI's Technology Partner Roundtable is a select group of technology companies dedicated to advancing innovation in the electric power sector. The Roundtable is a platform to share information, ideas, innovations, and results as utilities and technology companies work together. Each year the Roundtable brings together executives from electric utilities and technology companies to discuss how innovations are transforming the electric grid and enabling an affordable, reliable, secure, and clean energy future.

Chair Kevin C. Fitzgerald, Executive Vice President and General Counsel, Pepco Holdings, Inc.

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About the Institute for Electric Innovation

The Edison Foundation Institute for Electric Innovation focuses on advancing the adoption and application of new technologies that will strengthen and transform the power grid. IEI's members are the investor-owned electric utilities that represent about 70 percent of the US electric power industry. The membership is committed to an affordable, reliable, secure, and clean energy future.

IEI promotes the sharing of information, ideas, and experiences among regulators, policy makers, technology companies, thought leaders, and the electric power industry. IEI also identifies policies that support the business case for the adoption of cost-effective technologies.

IEI is governed by a Management Committee of electric industry Chief Executive Officers. In addition, IEI has a Strategy Committee made up of senior electric industry executives and a select group of technology companies on its Technology Partner Roundtable.

Visit us at: www.edisonfoundation.net.

About The Edison Foundation

The Edison Foundation is a 501(c)(3) charitable organization dedicated to bringing the benefits of electricity to families, businesses, and industries worldwide. Furthering Thomas Alva Edison's spirit of invention, the Foundation works to encourage a greater understanding of the production, delivery, and use of electric power to foster economic progress; to ensure a safe and clean environment; and to improve the quality of life for all people. The Edison Foundation provides knowledge, insight, and leadership to achieve its goals through research, conferences, grants, and other outreach activities.