

# 2021 ANNUAL REPORT



Lisa Wood  
Executive  
Director

## Message from the Executive Director

Throughout 2021, the Institute for Electric Innovation (IEI) focused primarily on three key issues shaping the future of the electric power sector – rethinking energy efficiency as a carbon resource, corporate customer sustainability solutions, and engaging residential customers with technology – through its major initiatives including:

- Hosting its signature annual event, **Powering the People 2021: Achieving a Carbon-Free Energy Future.**
- Hosting a series of Thought Leader Executive Dialogues focused on **Engaging Customers with Technology.**
- Publishing a series of fact sheets on trends in clean energy, energy efficiency, and smart meter deployments.
- Holding a briefing with the NARUC Energy Resources and the Environment (ERE) and Electricity Committees on rethinking energy efficiency as a carbon resource.

IEI's executive dialogues, events, and reports help to define opportunities for the industry and identify how the industry is finding solutions for its customers. We look forward to continuing this important work in 2022!

– Lisa Wood, Executive Director

## Powering the People: Achieving a Carbon-Free Energy Future

In November 2021, IEI held its signature Powering the People event which brought together more than 100 industry leaders from electric companies, environmental organizations, technology companies, corporate customers, policymakers, regulators, and other stakeholders to explore two key issues:

### Advancing Carbon-Free Energy Solutions for Corporate and Federal Customers

- Andrew Mayock, Federal Chief Sustainability Officer, Executive Office of the President, kicked off the discussion with remarks about how the federal government is leading by example and how its carbon-free energy goals will spur a dramatic acceleration of investments in all carbon-free energy resources.
- Bob Rowe, CEO of NorthWestern Energy and Co-Chair of IEI, moderated a discussion about how leading corporate and federal customers like Microsoft and the Department of Defense are now seeking 100% carbon-free energy solutions and how partnering with electric companies to provide these solutions makes sense.

### Rethinking Energy Efficiency as a Carbon Resource

- Ralph Cavanagh, Energy Co-Director, Climate and Clean Energy, Natural Resources Defense Council, kicked off the discussion with remarks focused on how energy efficiency (EE) will play an even more critical role in the future as a low cost and flexible solution for reducing carbon emissions.
- Gene Rodrigues, Vice President, ICF, moderated a discussion on EE as a carbon resource and the importance of capturing the full range of EE benefits including reducing energy use and carbon emissions with thought leaders from the North Carolina Utilities Commission, U.S. Department of Energy, Opower/Oracle Utilities, and Southern California Edison.

Key Takeaways from Powering the People 2021 can be found here: <https://bit.ly/34xvbh9> and <https://bit.ly/3eZtv1Z>

## IEI NARUC ERE/Electricity Committee Briefing on EE as a Carbon Resource and NARUC Resolution

In January, 2021, IEI briefed members of the NARUC Committees on Energy Resources and the Environment (ERE) and Electricity on energy efficiency as a carbon resource and presented recent trends to measure both the energy savings and the carbon emissions reductions associated with electric company customer-funded energy efficiency programs. In November 2021, NARUC passed a resolution (sponsored by the ERE Committee) focused on increasing the role of energy efficiency in achieving cost-effective energy supply and decarbonization.

## IEI Thought Leaders Speak Out: Engaging Customers with Technology Dialogue Series

Throughout 2021, IEI hosted seven Thought Leaders Speak Out dialogues to bring together electric company executives with customer responsibilities and specific technology companies to share lessons learned from using technology to successfully engage with residential customers. The dialogues covered the following:

- In April, APS and Google led a discussion on advances in pre-enrolled smart thermostat programs and the APS Cool Rewards program. APS can dispatch an event across 37,000 customers (via their smart thermostats) and reliably provide about 40 megawatts of load, avoiding the dispatch of less efficient and less environmentally friendly generators. Key Takeaways: <https://bit.ly/2QUiJSd>
- In May, PG&E and Oracle led a discussion on technology and online tools to improve the customer experience as PG&E transitions 2.5 million residential customers onto time-of-use (TOU) rates as the new standard offering. Bill protection for the first 12 months on the new TOU rates and customer outreach is providing customers with motivation to engage with PG&E's tools for understanding their energy usage under the new rate plan. Key Takeaways: <https://bit.ly/3wA2okS>
- In June, Portland General Electric (PGE) and E Source led a discussion on applying data science to target and strategically engage individual customers in PGE's Peak Time Rebate program. Since launching the program at scale in 2019, PGE has enrolled nearly 100,000 customers - about 12% of PGE's residential customers. Using data science to target customers for the program, load shifting/reduction per customer increased by 50% and load predictability narrowed to +/- 10%. Key Takeaways: <https://bit.ly/3lzGUEs>
- In July, DTE and Powerley led a discussion on using the DTE Insight App to empower customers with awareness and control over their energy and carbon footprints. Today, more than 300,000 DTE households are using the Insight App as a Home Energy Management Platform, with users interacting over one million times per year. Some customers are reducing their carbon footprints by more than 10%. Key Takeaways: <https://bit.ly/3DAuKOO>
- In August, Georgia Power and Sensus led a discussion about how Georgia Power provides customers with seven rate options including multiple TOU rates, demand-based rates, and guaranteed fixed rate products like Flat Bill and Pay-By-Day to meet customer expectations. Today, 50% of Georgia Power customers are opting for these "non-standard" rates versus 5 years ago when 90% of customers were on the standard rate. Key Takeaways: <https://bit.ly/3lx25Oh>
- In September, Ameren and Anterix led a discussion on how a private LTE network that is both scalable and flexible improves the reliability and security of the electric grid, enhances visibility and integration of variable clean energy sources, and enables targeted and rapid outage detection and management for customers. Key Takeaways: <https://bit.ly/3snue52>

- In December, AES and Uplight led a discussion on AES' PLUS, a mobile app that offers personalized energy bundles to customers that include green energy, energy use optimization, a flat bill, and a preferred payment method. The personalized subscription approach provides easy-to-understand options to customers. Key Takeaways: <https://bit.ly/3y8SwAp>

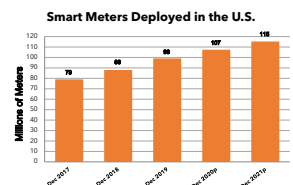
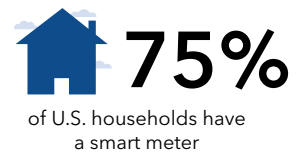
## IEI Reports, Initiatives, and Issue Briefs

### Carbon-Free Energy Initiative with World Resources Institute

In 2021, IEI led the development of a carbon-free energy initiative to address the next generation of 100% carbon-free energy (CFE) solutions for corporate customers/energy buyers. The IEI/WRI workshop series - which begins in January 2022 - will explore barriers, challenges, and pathways to success for providing 100% CFE solutions for corporate energy buyers. Participants include EEI member companies, corporate customers, WRI, EEI, and IEI. The workshop series will conclude with examples of CFE solutions that electric companies in vertically integrated and RTO markets could provide for different corporate customer profiles.

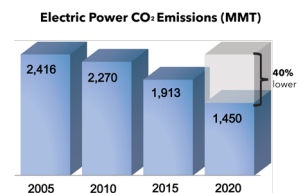
### Electric Company Smart Meter Deployments: Foundation for a Smart Grid (2021 Update)

In April, IEI released its 2021 smart meter report summarizing smart meter deployments to-date by state and by electric company and describing how electric companies are using smart meters to benefit customers. Electric company smart meter deployments are estimated to be 107 million by the end of 2020, covering nearly 75 percent of U.S. households. And 115 million smart meters are expected to be deployed by the end of 2021. Throughout 2020, many electric companies used smart meter data to deliver personalized energy management insights and tips to assist customers during the COVID-19 pandemic. <https://bit.ly/3chFw1F>

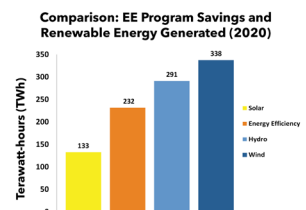


## Facts "At a Glance"

In April, IEI released its updated **Electric Companies are Committed to a Clean Energy Future**, a fact sheet showing that electric power sector carbon dioxide emissions were 40 percent below 2005 levels at the end of 2020; that electric power sector carbon dioxide emissions are now 11 percent below transportation sector emissions; and that nearly 40 percent of all electricity generated in the U.S. in 2020 came from carbon-free energy sources like nuclear, hydropower, wind, and solar. <https://bit.ly/3EXPvp8>



In October, IEI updated its **Energy Efficiency Trends in the Electric Power Industry: Top 10**, a fact sheet that shows the value of energy efficiency as a resource. In 2020, electric company customer-funded energy efficiency programs saved 232 TWh of electricity and avoided 164 million metric tons of carbon dioxide emissions. The 232 TWh of energy saved from EE programs far exceeds the 133 TWh of electricity generated by solar energy in 2020. <https://bit.ly/3dTboKk>



## Members of the Institute for Electric Innovation and The Edison Foundation

IEI's members are the investor-owned electric companies that represent about 70 percent of the U.S. electric power industry. Membership is open to all electric utilities, including investor-owned utilities, public power utilities, electric cooperatives, and international utilities. The Institute for Electric Innovation is a program of the Edison Foundation. Contributions to The Edison Foundation and its programs are tax deductible in the same manner as contributions to any 501(c)(3) organization.

- AES Corporation
- Alliant Energy
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- Black Hills Corporation
- CenterPoint Energy
- Central Hudson Gas & Electric Corp.
- Cleco Corporate Holdings
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## IEI Management Committee

**Executive Director** – Lisa Wood

**Co-Chair** – Mary Kipp, President and CEO, Puget Sound Energy

**Co-Chair** – Robert Rowe, CEO, NorthWestern Energy

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**Warner Baxter**

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Ameren Corporation

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**Lynn Good**

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Idaho Power Co.

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**Kenny Mercado**

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**Sean Trauschke**

Chairman, President, and CEO  
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**David Velazquez**

Executive Vice President  
Utility Operations  
Exelon Corporation

**Dennis Vermillion**

President and CEO  
Avista Corporation

## IEI Technology Partner Roundtable

**Anterix**



**Google**

**IBM**

**ORACLE**  
UTILITIES

**powerley**

**RECURVE**

**SENSUS**  
a xylem brand

**uplight**

## About the Institute for Electric Innovation

The Institute for Electric Innovation focuses on advancing the adoption and application of new technologies that will strengthen and transform the energy grid. IEI's members are the investor-owned electric companies that represent about 70 percent of the U.S. 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, policymakers, 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 select group of technology companies on its Technology Partner Roundtable.

## 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.



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