

Advancing safe, reliable, affordable, and environmentally responsible electricity for society through global collaboration, thought leadership, and science and technology innovation.



## Strategic Initiatives

### Integrated Energy Network (IEN)

The IEN envisions a future in which customers have flexibility to use, produce, and manage energy as they choose, while improving access to reliable, safe, affordable, and cleaner energy. Three important areas of focus are using cleaner energy through efficiency and electrification, producing cleaner energy, and integrating energy resources.

### Efficient Electrification

Launched by EPRI's Board of Directors in 2017, this three-year initiative focuses on broad benefits to consumers, utilities, and society by exploring development and deployment of higher-performance electric end uses to enhance other commercial technologies and deliver new energy services.

### Artificial Intelligence

EPRI's research on artificial intelligence (AI) supports the acceleration of AI applications across the electric sector, connecting leading AI providers, startups, universities, and research groups with utilities to develop training data sets and support performance testing.

### Resilience

EPRI's Resilience Initiative is broadening energy system resilience to consider customer and community perspectives, and to support education, customer tools, and pilot projects. R&D includes resilience initiatives and technologies for communities—building on research in threat assessment, mitigation, customer preferences and resource valuation.

## Key Aspects

### Thought Leadership

Think ahead and identify issues, technology gaps, and broader needs that affect the electricity sector.

### Industry Expertise

Provide expertise across all major technical disciplines and from every stage of electricity generation, transmission, distribution, and end use.

### Collaborative Value

Bring together our members and diverse scientific and technical communities to shape and drive research and development in the electricity sector.

### Independent

Objective, scientifically based results address reliability, efficiency, affordability, health, safety, and the environment.

### Nonprofit

Chartered to serve the public benefit, with guidance from an independent Advisory Council.

## About Us

The Electric Power Research Institute, Inc. (EPRI) conducts research and development relating to the generation, delivery, and use of electricity for the benefit of the public. An independent, nonprofit organization, EPRI brings together its scientists and engineers as well as experts from academia and industry to help address challenges in electricity, including reliability, efficiency, affordability, health, safety, and the environment. EPRI also provides technology, policy, and economic analyses to drive long-range research and development planning, supports research in emerging technologies, and uses objective technology-based research and resulting insights, to inform policy makers and regulators in areas related to an integrated energy network.

EPRI members represent 90% of the electricity generated and delivered in the United States with international participation extending to 40 countries. EPRI's principal offices and laboratories are located in Palo Alto, Calif.; Charlotte, N.C.; Knoxville, Tenn.; Dallas, Texas; Lenox, Mass.; and Washington, D.C.

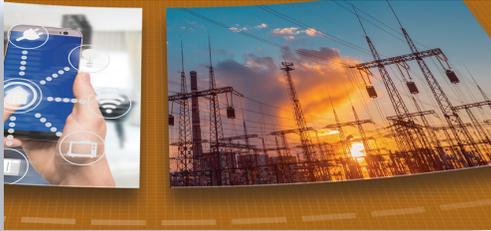
# RESEARCH PORTFOLIO



## Technology Innovation

Driving thought leadership and advanced R&D, along with technology scouting and incubation, to sustain a full pipeline of solutions leading to the Integrated Energy Network (IEN)

- Efficient Electrification
- Energy Storage
- Grid Modernization
- Low-CO<sub>2</sub> Fossil Generation
- Next-Gen Nuclear
- Next-Gen Renewables
- Water-Energy Nexus



## Power Delivery and Utilization—Transmission, Distribution, and Substations

Enhancing the safety, reliability, and resiliency of bulk power and distribution system infrastructure with new tools, technologies, and approaches

- Transmission
- Distribution
- Substations
- Integrated Grid



## Power Delivery and Utilization—Distributed Energy Resources and the Customer

Providing the insights, tools, R&D, and analysis to assist utilities and stakeholders with the journey to reliable, affordable, efficient, and environmentally responsible power system transformation

- Energy Utilization and the Customer
- Information, Communication, and Cyber Security



## Nuclear

Developing technologies that enable the safe, reliable, economical operation of existing nuclear plants and the deployment of advanced nuclear power plants

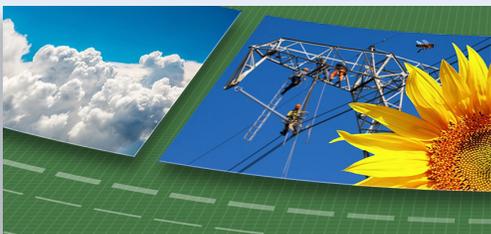
- Fuels and Chemistry
- Materials Management
- Plant Performance
- Deploy New Nuclear Power Plants
- Flexible Operations
- Plant Decommissioning



## Generation

Providing the fossil and renewable generating fleets with safe, reliable, economical, and environmentally responsible electricity production technologies

- Advanced Fossil, CO<sub>2</sub> Capture, Utilization, and Storage
- Environmental Controls and Combustion Performance
- Major Component Reliability
- Cross Sector Technologies
- Operations and Maintenance
- Renewables



## Energy and Environment

Shaping a sustainable energy future through collaborative analysis, environmental science, and technology research

- Power Generation
- Energy and Environmental Analysis
- Energy Sustainability
- Renewable and Distributed Energy Resources
- Transmission and Distribution
- Workforce Health and Safety

### Electric Power Research Institute

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