

EPRI LABS:

R&D IN ACTION

Scientifically sound, independent research and development (R&D) is at the center of EPRI's engagement with 450 energy organizations in 45 countries, with a mission to ensure the public has clean, safe, reliable, affordable, and equitable access to electricity across the globe.

In support of this mission, EPRI delivers an annual research portfolio covering the generation, transmission, distribution, and end-use of energy. This broad spectrum of R&D is further backed by our world-class laboratory facilities, providing expertise in materials testing, cyber security, electric vehicle charging, welding, high-voltage testing, and so much more.



Charlotte, North Carolina, USA

**Capabilities:**

Non-Destructive Evaluation • Welding Technologies • Materials Testing & Characterization • T&D Component Aging & Testing • T&D Sensor Development • Electromagnetic Pulse (EMP)

**Size:**

107,600 sq. feet

Knoxville, Tennessee, USA

**Capabilities:**

Manhole Events • Energy Efficiency • Distributed Energy Resource Evaluation • Information & Communications Technology Integration • Lighting, Appliance, HVAC & Device Testing & Evaluation • Environmental Chamber Testing • Electric Vehicle Charging

**Size:**

57,000 sq. feet

Lenox, Massachusetts, USA

**Capabilities:**

High Voltage Testing • T&D Component Aging • Full Scale Distribution Testing • Stray Voltage Detection and Mitigation • Manhole Events

**Size:**

35 acres

EPRI's three lab locations in the U.S. offer unparalleled facilities to conduct research across the energy spectrum. Focusing on technology innovation across sectors, all research is independent, and findings are frequently available to the public at no cost in keeping with the organization's public benefit mission.

EPRI laboratories routinely conduct research and testing for existing and future generation technologies, from nuclear power plants and thermal systems to turbines and renewable energy. EPRI's newly expanded and renovated lab and outdoor testing facilities in Charlotte, N.C., totals over 107,600 square feet. Capabilities for evaluating components and materials include unique world-class facilities for non-destructive evaluation (NDE), welding & fabrication, metallurgical characterization, chemistry & corrosion, digitization, mechanical testing, and dozens of others. Our transmission and distribution capabilities include advanced transmission conductor testing, power transformer diagnostics, distribution automation equipment, forensic analysis, high-voltage insulator population assessments, and underground transmission cable testing.

We can research the performance and applicability of future energy solutions with robotics and augmented and virtual reality, as well as maximize the value of EVs, new lighting technology, indoor and outdoor agriculture approaches, and commercial energy storage at our Knoxville, Tenn., lab totaling 57,000 square feet.

EPRI can evaluate the performance of and risks to more traditional utility components that are currently serving billions of energy customers around the world including poles, lines, meters, substations, and switches at a 35-acre outdoor facility and a 24,000 square foot indoor lab in Lenox, Mass.. This laboratory complex is also testing emerging technologies such as the application of robotics and drones for advanced inspection and repair.

EXPERT STAFFING

EPRI labs are staffed by accomplished researchers, many with advanced degrees in energy and engineering fields. More importantly, EPRI ensures that laboratory staff earn and maintain critical certifications for work performed. For example, staff working on nuclear-related projects are certified for all major Nondestructive Evaluation (NDE) techniques including Radiography Testing (RT), Ultrasonic Testing (UT), Magnetic Particle Testing (MT), Visual Testing (VT), Eddy Current Testing, Registered Professional Engineer and Nuclear Quality Assurance (ASME Codes & Standards).

KNOXVILLE

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LENOX

High Voltage Testing • T&D Component Aging • Full Scale Distribution Testing • Stray Voltage Detection and Mitigation • Manhole Events

CHARLOTTE

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