

KEMA Labs

CESI Group



High Power and High Voltage Testing in Americas

Largest High Power and High Voltage Facilities in US

Who We Are

KEMA Labs is a globally recognized organization specializing in Testing, Inspections & Certification. With locations worldwide, we merge traditional methods with cutting-edge technology to test a wide range of grid equipment. This ensures compliance with the latest rigorous standards for performance and safety. We also provide quality assurance and advisory services, leveraging our horizontally integrated global expertise to support clients throughout the entire energy value chain.



+4000

Global
customers per year

50+

Accredited Labs

200+

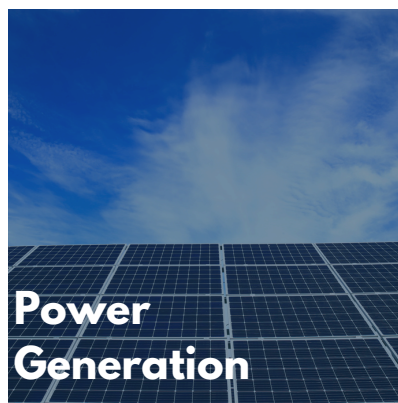
Talented People

6+

Labs & Offices
Worldwide

Industries Served

KEMA Labs is a globally recognized organization specializing in Testing, Inspections & Certification. With locations worldwide, we serve multiple industries by merging traditional methods with cutting-edge technology, supported by cross expertise and state-of-the-art facilities, to test a wide range of grid equipment.



Your #1 Resource for Electrical Testing

Our Lab offers many testing services including high-power short-circuit testing both AC and DC, high-voltage testing, synthetic testing, thermal testing, impulse testing, and more.

The High Power Lab can generate short circuit values up to 245kV/63kA. The High Voltage Lab complements the High Power Lab with dielectric testing services up to 245kV. Combined, these facilities test virtually any device at the distribution and sub-transmission level in the US power grid.



Type Test Certificate
GOLD



Report of Performance
SILVER



Test Report
GREY

Accreditations

- A2LA - Certificate Number 0553.01
- ISO 17025
- UL Third Party Test Data Program (TPTDP)

Test Standards

- ANSI, IEEE, IEC, ASTM, MIL SPEC, CSA & UL

Lab capabilities

Short-Circuit Testing

- High Voltage: $\leq 245\text{kV}$, $\leq 63\text{kA}$ (Synthetic)
- Medium Voltage: $\leq 72\text{kV}$, $\leq 63\text{kA}$
- Low Voltage AC: $\leq 2.4\text{kV}$, $\leq 275\text{kA}$
- Low Voltage DC: $\leq 1.6\text{kV}$, $\leq 230\text{kA}$

Load Switching Testing

Medium Voltage: $\leq 38\text{kV}$, $\leq 5\text{kA}$

Capacitor Switching Testing

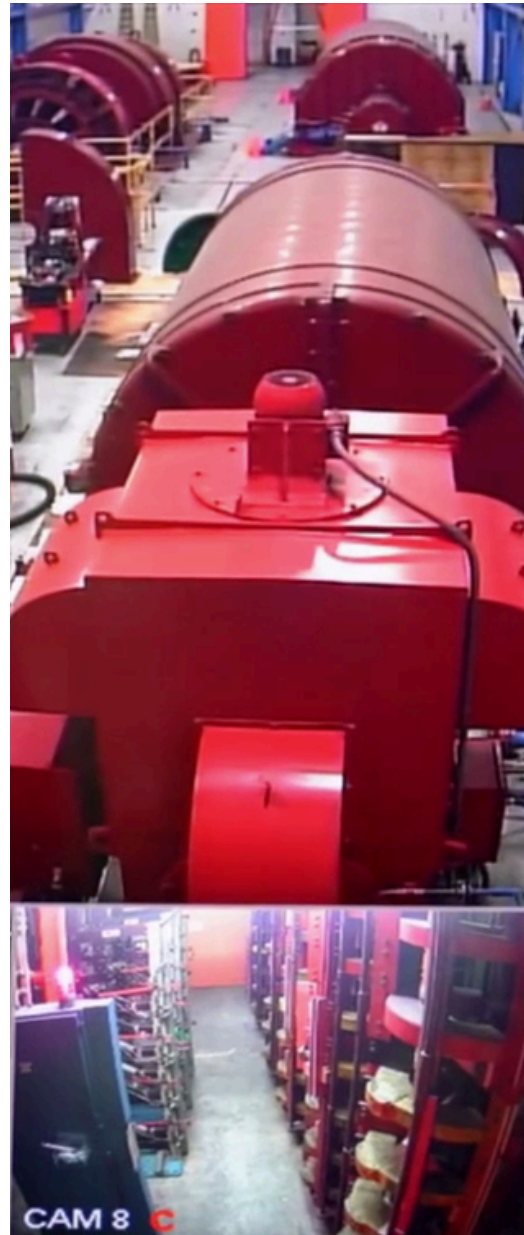
- High Voltage: 72.5kV , 550A (Single Phase)
- Medium Voltage: 38kV , $1,260\text{A}$ (Three Phase)
- Medium Voltage: 15kV , $2,000\text{A}$ (Three Phase)

Dielectric Testing

- Lightning Impulse: 1.4MV
- Switching Impulse: 900kV
- AC Dry Power Frequency: 600kV , 4000mA
- AC Wet Power Frequency: 250kV , 600mA
- DC Withstand: 130kV , 10mA

Thermal Testing

Up to 12kAAC , 3ϕ
 60Hz at less than 32V
Up to 8kADC at less than 48V



Types of Tests Offered

A comprehensive portfolio of advanced electrical testing services is available to validate performance, safety, and reliability across a wide range of components and operating conditions. These tests are designed to simulate real-world stresses, verify compliance with international standards, and support product development from qualification to routine verification. The range of testing capabilities includes:

- Short-Circuit
- Interruptions
- Fault-making Current
- Cable & Line Current
- Switching
- Capacitor Current Switching
- Synthetic Testing
- Internal Arcing Fault
- Resistance
- Momentary & Short-Time Withstand
- Audible Sound
- Transformer Short-Circuit
- Transformer Routine Testing
- Transformer Rectifier Unit Testing
- Electrical Endurance
- Lightning & Switching Impulse
- Power Frequency (Wet & Dry)
- Partial Discharge, Corona, RIV
- Thermal Current



Types of Equipment Tested

A broad spectrum of electrical equipment can be evaluated to ensure operational integrity, safety, and compliance with industry standards. Our testing capabilities cover critical power system components used in generation, transmission, and distribution applications, supporting manufacturers and utilities throughout the product lifecycle. The equipment categories tested include:

- Switchgear, Panel Boards & Switchboards
- Circuit Breakers
- Load Break Switches
- Fault Interrupters
- Reclosers
- Capacitor Switchers
- Surge Arrestors
- Current Limiting & Cut-Out Fuses
- Reactors
- Motor Controllers
- Cables & Grounding Assemblies
- Pantographs
- Generator Terminal Enclosers
- BusDuct / Busways / Cable Ways
- Distribution Transformers
- Transformer Rectifier Units



KEY CONTACT

MATTHEW MUTHARD

AREA MANAGER NORTH AMERICA

Email: matthew.muthard@kema.com

Mobile: (610) 390-9939

Technology, Expertise and long-standing legacy for the Energy Sector

KEMA Labs

CESI Group

CESI S.p.a.

Via Rubattino 54
20134
Milan, Italy

IPH Institut "Prüffeld für elektrische Hochleistungstechnik" GmbH

Landsberger Allee 378
12681 Berlin
Germany

KEMA B.V.

Klingelbeekseweg 195
6812 Arnhem
The Netherlands

KEMA Powertest LLC

4379 County Line Road
Chalfont, PA, 18914
United States

FGH Engineering and Test GmbH

Hallenweg 40
68219 Mannheim
Germany

Zkušebnictví, a. s.,

Podnikatelská 547
190 11
Prague 9 – Běchovice
Czech Republic