



**KINECTRICS**

# High Voltage Testing Services

Meeting Industry Needs With Specialized Expertise And Experience



## PROVEN CAPABILITIES

Kinectrics can address all your High Voltage testing needs for switchgear, transformer, power cables, insulators and other transmission and distribution equipment rated up to 500 kV under lightning and switching impulse and power frequency voltages. We offer comprehensive indoor, outdoor, mobile, and specialized environmental test facilities and expertise.

For over 30 years, Kinectrics' capabilities in high voltage apparatus and insulation systems have successfully supported one of the largest power systems in the world. Our facilities and services have been used extensively in both electrical industry transmission and distribution research programs and, by manufacturers for product development and testing standards. We welcome customer involvement.

Kinectrics' high voltage laboratory, coupled with our qualified technical experts in advanced testing and diagnostics, provide clients with the assurance they are receiving accurate, reliable test results to facilitate informed decision-making.



## SETTING INDUSTRY STANDARDS

Kinectrics' scientists, engineers and technologists are actively involved with standards committees, the evaluation of new materials and their environmental impacts, and the development of advanced test methods. Our ongoing involvement in research means Kinectrics remains up-to-date with new products and technologies.

## COMPREHENSIVE SERVICES

Kinectrics performs tests to ANSI, IEEE, AEIC, NEMA, CEA, IEC and other national and international standards including:

- Wet and Dry Power Frequency Withstand and Flashover
- Partial Discharge
- Radio Interference Voltage (RIV)
- Visual Corona
- Dry Lightning Impulse Critical Flashover and Withstand
- Power Arc
- Step Front Impulse
- Contamination (solid layer, clean fog method)
- Custom Test Programs for Research and New Product Development





## COMPLETE TEST CAPABILITIES

Kinectrics maintains indoor and mobile outdoor High Voltage testing capabilities.

- Lightning impulse voltage tests up to 1850 kV
- Switching surge tests up to 1300 kV
- Power frequency tests up to 800 kV

Examples of typical tests conducted:

- Lightning and switching impulse tests on power apparatus
- Impulse tests on transformers
- Partial discharge tests on internal insulation
- Visual corona and RIV tests on transmission and substation hardware
- Load cycling and qualification tests on high voltage power cables
- Contamination testing of external insulation
- Design and Type Tests on polymeric, porcelain and glass insulators

## SPECIALIZED FACILITIES

### Environmental Testing Chamber

Our unique environmental testing chamber is capable of simulating fog, freezing rain and icing conditions continuously, while monitoring the performance of insulation up to test voltages of 350 kV. The facility accommodates contamination testing of external insulation under standard and non-standard conditions.

These tests are of particular interest to utilities looking at the performance characteristics of various insulators. For example, test results can be used to determine the best insulator for a specific utility application. Icing tests on outdoor grounding and disconnect switches to evaluate mechanical performance are also conducted in this facility.

### Tracking Wheel Test Facility

These facilities are designed primarily for the tracking and erosion tests on polymeric insulators required by various national and international standards. The facilities can also be used for accelerated aging tests on insulation materials.

### Test objects handled:

- Insulators
- Distribution, power and regulation transformers
- Voltage and current transformers
- Power cables and cable system accessories
- Metal clad switchgears
- Transmission and distribution class switches
- Transmission line and station hardware
- Arresters
- Electrical insulating components

### Direct client benefits

- Accurate, reliable test results to support informed decision-making
- Confirm performance specifications before installation
- Quality testing by utility industry experts in a world-class facility
- “One-stop” shop – can be combined with High Current laboratory and other Kinectrics testing services





**KINECTRICS**

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