



Australian Government
National Measurement Institute

The National Measurement Institute, Australia

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measurement.gov.au

The National Measurement Institute



NMI is responsible under the *National Measurement Act (1960)* for Australia's top-level infrastructure for physical, chemical, biological and legal measurement.

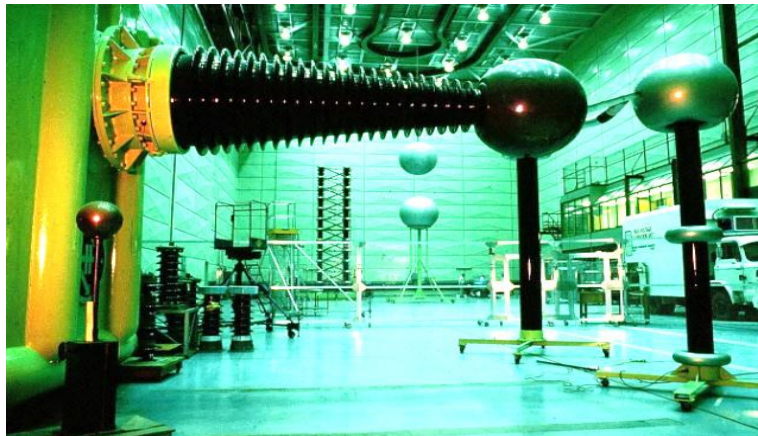
NMI delivers measurement infrastructure and services to Australia, to

- Ensure that measurements in Australia can be reliable and fit-for-purpose
- Ensure that measurements made in Australia can be accepted internationally
- Contribute measurement expertise to national policy development
- Manage the national trade measurement system (value ~ B\$ 400 p.a.)
- Support the adoption of measurement technologies in real-world situations

In support of Australian productivity and innovation

NMI working with Electrical Energy Sector

- Maintaining and disseminating Australian primary standards of voltage, current, electrical power, time, temperature, gas and liquid hydrocarbon flow, humidity (dew point), etc. to industry
- Coordination of trade measurement in Australia, including the approval of patterns (types) of electricity meters
- World first reference measurement facility for power quality and electrical power up to 200 kHz
- Unique high voltage laboratory and mobile laboratory testing precision instrumentation and major infrastructure used in power generation and distribution at voltages up to 3 MV



The NMI high voltage laboratory at Lindfield, Sydney incorporates Australia's largest high voltage hall.



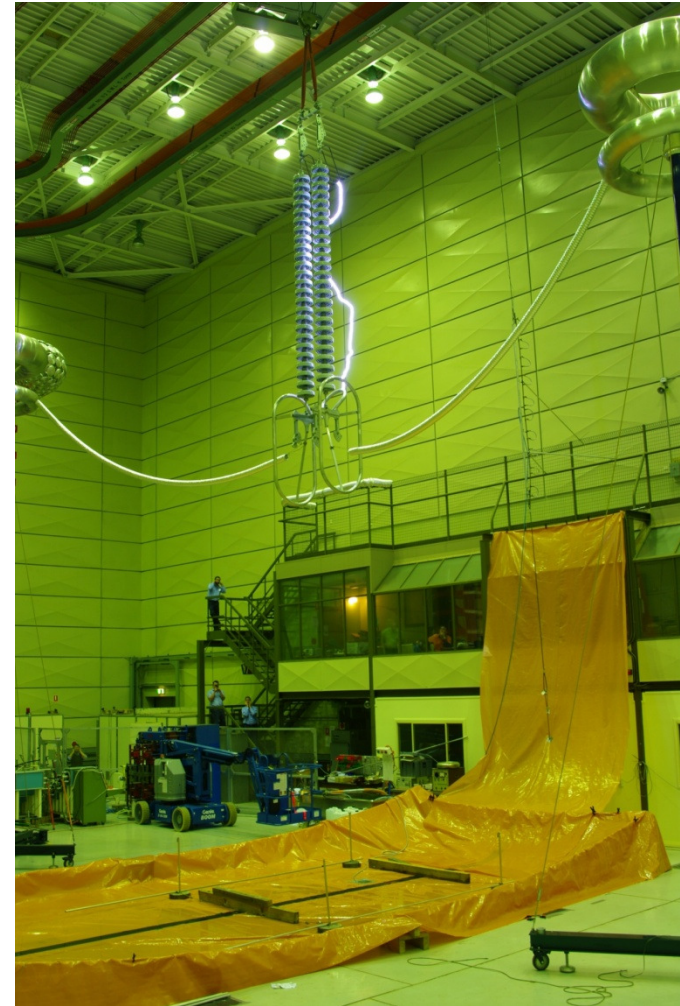
Calibration of a wideband wattmeter for use in LED power measurements with distorted current waveforms.

NMI Supporting Electricity Transmission and Distribution

- Underpinning reliable operation of power transmission infrastructure within specifications set by documentary standards
- National metrology institutes are often the only providers of precise HV testing



1000 kV DC divider with measurement uncertainty of $100 \mu\text{V/V}$

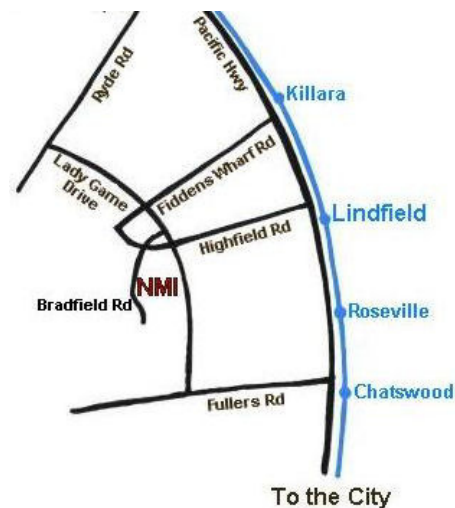


Testing of a 500 kV transmission line insulator tension assembly with a +2420 kV lightning impulse



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See you on Saturday



- 9 am departure
- no hills

National Measurement Institute

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