

# Western's Energy Services Equipment Loan Program

**W**estern's Equipment Loan Program provides technical equipment and training to firm power customers at little or no cost. The equipment is available to help customers with energy efficiency in their own systems and in their customers' homes and businesses.

The program lets customers "test drive" new technologies before investing in expensive equipment. It also offers these technologies to small utilities that might not otherwise be able to afford expensive equipment for analyzing energy efficiency.



## Infrared Cameras

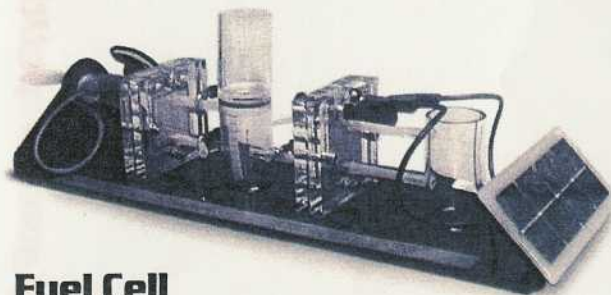
convert invisible infrared radiation from heat to visible images, showing overheated electrical

components and the locations of heat leaks that could be corrected by weatherization measures. They also help utilities with preventive maintenance by showing potential malfunctions in transmission and electrical substation equipment, such as overheating transformers, capacitors and switches, and loose connections that increase system losses.



**Electric Power Analyzers** are used to analyze electric energy use, monitor electric system performance and check electric systems for specific problems and inefficiencies.

The equipment measures, records and analyzes power quality, harmonics and energy, and can identify performance problems of electrical equipment. Data gathered can be downloaded to a computer for analysis.



## Fuel Cell Demonstration Kits

demonstrate the simple operation of hydrogen fuel cells and hydrogen energy supply systems. Hydrogen fuel cell technology is receiving more attention since it provides solutions to energy-related environmental impacts and problems caused by an increasing demand for energy and decreasing supply of resources.



**Educational Kits** are used to share information about the economic and environmental advantages and the practicality of renewable resources. Available kits include workshops-in-a-box on Wind Energy and Solar Energy for Communities and Schools.



**Energy Efficient Lighting Displays** demonstrate new lighting technologies and lighting efficiency. The kits contain

eight compact fluorescent and traditional incandescent light bulbs, which can be switched on individually. An ammeter lets users compare the efficiency of various lighting technologies.

## Available Equipment

### Infrared Cameras

- Black and white or color
- Digital or video image storage
- Training materials for infrared scanning

### Power Analyzers

- Power and demand analyzers
- Power quality, energy and harmonics analyzers
- Training kits for power quality analysis

### Wind Analyzers

- Anemometer kits with 20 m. towers for measuring and recording wind generation potential

### Energy Audit Equipment

- Blower door kits
- Infrared temperature sensor guns
- Luminance meters

### Educational Kits

- Fuel cell demonstration kits
- Energy efficient lighting displays
- Wind energy workshop kits
- Solar energy workshop kits
- Schools Going Solar workshop kits

### For more information and to request equipment

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For on-line information and requests, go to Western's Energy Services Web site:

[www.es.wapa.gov](http://www.es.wapa.gov)



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Energy Services **Sharpening your competitive edge**

# Equipment Loan Program



## Sharpening Your Competitive Edge

