

# Solar Testing Facility

Exova operates the National Solar Testing Facility (NSTF), one of North America's leading centres for testing and rating green energy technologies under controlled sunlight, temperature, humidity and wind conditions.



Solar testing Services include evaluation of solar space and water heating systems, windows and advanced fenestration designs. The Solar testing facility also tests automotive and aerospace materials and components, as well as electronic enclosures and building envelope components.

The National Solar Testing Facility, founded in 1980, is the only lab in Canada to provide test data that is used by CSA to certify solar domestic hot water systems and by ULC/UL to certify photovoltaic equipment. The National Solar Testing Facility (NSTF) is also accredited for SRCC and FSEC solar thermal certification programs in the USA. We provide testing services according to standards from ASHRAE, CSA, FSEC, IEC, ISO, SRCC and ULC/UL.

## Serving the Solar Energy, Building Products, Automotive, Telecommunications Industries:

- Safety testing and performance evaluation of solar energy systems
- Field measurement of solar energy system thermal performance
- Evaluation of the thermal response of materials, components and systems to MIL-STD 810E solar radiation test conditions
- Solar testing using our large area, full-spectrum, steady-state, indoor Solar Simulator with drive-in environmental chamber
  - 4 m by 2.8 m area irradiated with controlled solar radiation, 100 - 1367 W/m<sup>2</sup>
  - Combined humidity, temperature (-20 to 50°C), wind, and sunshine exposure
- Measurement and computer analysis of fenestration system heat transfer to CSA A440.2 standard
  - Fenestration U-Factor and Solar Heat Gain Coefficient measurements
  - Guarded colorimeter for fenestration heat-transfer measurements
- Indoor and Outdoor solar exposure testing of materials and components, such as electronic instruments and enclosures, telecommunication devices, building materials, solar energy equipment and full-size automobiles

**Testing  
Advising  
Assuring**

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