



CAN-QUEST Building Energy Modelling Software

CAN-QUEST is Natural Resources Canada's (NRCan) software for modelling building energy use. It is a Canadian adaptation of eQUEST® 3.62, a popular energy simulation and compliance-checking tool developed in the United States. CAN-QUEST demonstrates performance path compliance with the *National Energy Code of Canada for Buildings 2011* (NECB 2011) and supports the design of high-performance commercial and institutional buildings.

CAN-QUEST includes such features as:

- Canadian weather data
- support for metric and imperial measurements
- English and French user interfaces
- NECB 2011 compliance reports

Unlike eQUEST, CAN-QUEST can automatically generate an NECB 2011-compliant reference building and produce a compliance report. CAN-QUEST also includes the following features:

- uses a DOE2.2 energy simulation engine
- uses advanced 2- and 3-D graphical representation of building geometry
- supports parametric runs for a quick assessment of energy-efficient design options
- supports technologies such as photovoltaics, ground loop heat exchangers, and several types of heating, ventilating and air-conditioning systems
- offers "wizard" functionality to allow for quick preliminary assessments of energy use (allows users to quickly develop a preliminary model and import a CAD footprint and zoning information)
- provides detailed help resources within the user interface

National Energy Code of Canada for Buildings

The requirements of the *National Energy Code of Canada for Buildings 2011* (NECB 2011) are, on average, 25 percent more stringent than the previous code. To date, five provinces (Nova Scotia, Ontario, Manitoba, Alberta and British Columbia) and two cities (Vancouver, B.C., and Whitehorse, Y.T.) have adopted the NECB 2011. Several other provinces and territories are expected to adopt the Code in the near future.

CAN-QUEST is one of the tools that has been recognized to demonstrate compliance with the NECB 2011 and can confirm whether new buildings and additions comply with or exceed the code.

One advantage of this software is its capacity to reduce modelling time. When the data for a proposed building design is entered, the software automatically generates a reference building based on NECB 2011. By building both the proposed and reference models simultaneously, the software cuts modelling time in half.

CAN-QUEST can help with provincial, territorial and municipal code compliance or with utility-sponsored programs for building energy efficiency or demand reduction.

Download the software

CAN-QUEST is available free from NRCan at nrcan.gc.ca/energy/efficiency/buildings/eenb/16600.

To obtain a manual for modelling building energy in CAN-QUEST, contact info.services@nrcan-rncan.gc.ca.

Software training

NRCan has developed two training courses that provinces and territories can modify for their local requirements and use to train professionals in their jurisdictions about working with CAN-QUEST:

- a one-day introduction to the NECB 2011 and CAN-QUEST for the building owners and managers, building inspectors, city planners, architects, and engineers who will manage NECB 2011-compliant projects
- a two-day, hands-on computer course that focuses on the software and the modelling process for those who will prepare building energy models to show compliance with the NECB 2011, such as architects, engineers and technicians

CAN-QUEST training is available in a number of cities across Canada.

For information about training scheduled in your area or about CAN-QUEST, contact NRCan at info.services@nrcan-rncan.gc.ca or 1-877-360-5500 (toll-free) (613-992-3245 in the National Capital Region).

Natural Resources Canada's Office of Energy Efficiency
Leading Canadians to Energy Efficiency at Home, at Work and on the Road

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Aussi disponible en français sous le titre :
CAN-QUEST, le logiciel de modélisation de l'énergie des bâtiments

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