

HanitaFirst ENERGY MODELING Program

In addition to helping make energy efficiency investment decisions, computer simulations of a building's energy use have long been accepted as required work in many tax or utility incentive programs.

The answer to the question of whether simulations can really be accurate is "yes" and "no". The accuracy of the simulation depends on two primary factors:

1. The quality of the input data along with the skill of the person doing the energy systems survey/audit and subsequent modeling, and
2. The competency of the energy and building modeling software, and

With a high-quality Building Survey performed by Hanita, our Energy Modeling staff (including Electrical Engineers and Certified Energy Managers) have the skills to perform right-sized audits and interpret the modeling results.

Regarding the competency of the software, Hanita uses primarily the *Efilm* program which is powered by EnergyPlus, the simulation engine developed under the continuous funding of United States Department of Energy (U.S. DOE). *"EnergyPlus models heating, cooling, lighting, ventilation, other energy flows, and water use. EnergyPlus includes many innovative simulation capabilities: time-steps less than an hour, modular systems and plant integrated with heat balance-based zone simulation, multizone air flow, thermal comfort, water use, natural ventilation, and photovoltaic systems."* – U.S. DOE Office of Energy Efficiency and Renewable Energy (EERE).

