

## Notice 2008-40

### Amplification of Notice 2006-52; Deduction for Energy Efficient Commercial Buildings

#### SECTION 4. LIST OF APPROVED SOFTWARE PROGRAMS

##### **.01 In General.**

The Department of Energy creates and maintains a public list of software that may be used to calculate energy and power consumption and costs for purposes of providing a certification under section 4 of Notice 2006-52. This public list appears at [http://www.eere.energy.gov/buildings/info/tax\\_incentives.html](http://www.eere.energy.gov/buildings/info/tax_incentives.html).

Software will be included on the list if the software developer submits the following information to the Department of Energy:

- (1) The name, address, and (if applicable) web site of the software developer;
- (2) The name, email address, and telephone number of the person to contact for further information regarding the software;
- (3) The name, version, or other identifier of the software as it will appear on the list;
- (4) All test results, input files, output files, weather data, modeler reports, and the executable version of the software with which the tests were conducted; and
- (5) A declaration by the developer of the software made under penalties of perjury and containing all of the following information:
  - (a) A statement that the software has been tested according to the American National Standards Institute/American Society of Heating, Refrigerating and Air-Conditioning Engineers (ANSI/ASHRAE) Standard 140-2007 Standard Method of Test for the Evaluation of Building Energy Analysis Computer Programs.
  - (b) A statement that the software can model explicitly—
    - (i) 8,760 hours per year;
    - (ii) Calculation methodologies for the building components being modeled;
    - (iii) Hourly variations in occupancy, lighting power, miscellaneous equipment power, thermostat setpoints, and HVAC system operation, defined separately for each day of the week and holidays;

- (iv) Thermal mass effects;
- (v) Ten or more thermal zones;
- (vi) Part-load performance curves for mechanical equipment;
- (vii) Capacity and efficiency correction curves for mechanical heating and cooling equipment; and
- (viii) Air-side and water-side economizers with integrated control.

(c) A statement that the software can explicitly model each of the following HVAC systems listed in Appendix G of Standard 90.1-2004:

(i) Packaged Terminal Air Conditioner (PTAC) (air source), single-zone package (through the wall), multi-zone hydronic loop, air-to-air DX coil cooling, central boiler, hot water coil.

(ii) Packaged Terminal Heat Pump (PTHP) (air source) single-zone package (through the wall), air-to-air DX coil heat/cool.

(iii) Packaged Single Zone Air Conditioner (PSZ-AC), single-zone air, air-to-air DX coil cool, gas coil, constant-speed fan.

(iv) Packaged Single Zone Heat Pump (PSZ-HP), single-zone air, air-to-air DX coil cool/heat, constant-speed fan.

(v) Packaged Variable-Air-Volume (PVAV) with reheat, multi-zone air; multi-zone hydronic loop, air-to-air DX coil, VAV fan, boiler, hot water VAV terminal boxes.

(vi) Packaged Variable-Air-Volume with parallel fan powered boxes (PVAV with PFP boxes), multi-zone air, DX coil, VAV fan, fan-powered induction boxes, electric reheat.

(vii) Variable-Air-Volume (VAV) with reheat, multi-zone air, multi-zone hydronic loop, air-handling unit, chilled water coil, hot water coil, VAV fan, chiller, boiler, hot water VAV boxes.

(viii) Variable-Air-Volume with parallel fan powered boxes (VAV with PFP boxes), multi-zone air, air-handling unit, chilled water coil, hot water coil, VAV fan, chiller, fan-powered induction boxes, electric reheat.

(d) A statement that the software can—

(i) Either directly determine energy and power costs or produce hourly reports of energy use by energy source suitable for determining energy and power costs separately; and

(ii) Design load calculations to determine required HVAC equipment capacities and air and water flow rates.

(e) A statement describing which, if any, of the following the software can explicitly model:

(i) Natural ventilation.

(ii) Mixed mode (natural and mechanical) ventilation.

(iii) Earth tempering of outdoor air.

(iv) Displacement ventilation.

(v) Evaporative cooling.

(vi) Water use by occupants for cooking, cleaning or other domestic uses.

(vii) Water use by heating, cooling, or other equipment, or for on-site landscaping.

(viii) Automatic interior or exterior lighting controls (such as occupancy, photocells, or time clocks).

(viii) Daylighting (sidelighting, skylights, or tubular daylight devices).

(ix) Improved fan system efficiency through static pressure reset.

(x) Radiant heating or cooling (low or high temperature).

(xi) Multiple or variable speed control for fans, cooling equipment, or cooling towers.

(xii) On-site energy systems (such as combined heat and power systems, fuel cells, solar photovoltaic, solar thermal, or wind).

## **.02 Addresses.**

Submissions under this section must be addressed as follows:

Commercial Software List  
Department of Energy  
Office of Building Technologies,  
EE-2J  
1000 Independence Ave., SW  
Washington, DC 20585-0121

**.03 Updated Lists.**

The software list at [http://www.eere.energy.gov/buildings/info/tax\\_incentives.html](http://www.eere.energy.gov/buildings/info/tax_incentives.html) will be updated as necessary to reflect submissions received under this section.

**.04 Removal from Published List.**

The Department of Energy may, upon examination, determine that software is not sufficiently accurate to justify its use in calculating energy and power consumption and costs for purposes of providing a certification under section 4 of Notice 2006-52 and remove the software from the published list. The Department of Energy may undertake such an examination on its own initiative or in response to a public request supported by appropriate analysis of the software's deficiencies.

**.05 Effect of Removal from Published List.**

Software may not be used to calculate energy and power consumption and costs for purposes of providing a certification with respect to property placed in service after the date on which the software is removed from the published list.

The removal will not affect the validity of any certification with respect to property placed in service on or before the date on which the software is removed from the published list.

**.06 Public Availability of Information.**

The Department of Energy may make all information provided under paragraph .01 of this section available for public review

**.07 Applicability.**

The procedures in this section supersede the procedures set forth in section 6 of Notice 2006-52 for periods after March 31, 2008. Any software that is included on the public list on March 31, 2008, will remain on the public list unless and until removed under the procedures set forth in this section.