Tax Deduction Qualified Software

EnergyPlus version 8.3.0

On this page you'll find information about the EnergyPlus version 8.3.0 **Qualified Software for Calculating Commercial Building Tax Deductions | Department of Energy** http://energy.gov/eere/buildings/qualified-software-calculating-commercial-building-tax-deductions, which calculates energy and power cost savings that meet federal tax incentive requirements for commercial buildings.

Date Documentation Received by DOE: 26 May 2015

Statements in quotes are from the software developer.

Internal Revenue Code §179D (c)(1) and (d) Regulations Notice 2006-52, Section 6 requirements as amplified by Notice 2008-40, Section 4 requirements.	
(1) The name, address, and (if applicable) web site of the software developer;	U.S. Department of Energy EE-2J 1000 Independence Avenue, SW Washington, DC 20585-0121 http://www.energyplus.gov
(2) The name, email address, and telephone number of the person to contact for further information regarding the software;	Amir Roth Amir.roth@ee.doe.gov (202)287-1694
(3) The name, version, or other identifier of the software as it will appear on the list;	EnergyPlus Version 8.3.0
(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	Provided to DOE on a CD
(5) A declaration by the developer of the software, made under penalties of perjury, that—	"On behalf of the EnergyPlus development team I certify the following:"
(a) The software has been tested according to ANSI/ASHRAE Standard 140-2007 Standard Method of Test for the Evaluation of Building Energy Analysis Computer Programs;	"The software has been tested according to ANSI/ASHRAE Standard 140-2007 Standard Method of Test for the Evaluation of Building Energy Analysis Computer Programs."
(b) The software can model explicitly—	"The EnergyPlus Software is fully compliant with ASHRAE 90.1-2001 and meets all of the below requirements."
(i) 8,760 hours per year;	"The EnergyPlus Software complies."
(ii) Calculation methodologies for the building components being modeled;	"The EnergyPlus Software complies."
(iii) Hourly variations in occupancy, lighting power, miscellaneous equipment power,	"The EnergyPlus Software complies."

thermostat setpoints, and HVAC system operation, defined separately for each day of the week and holidays;	
(iv) Thermal mass effects;	"The EnergyPlus Software complies."
(v) Ten or more thermal zones;	"The EnergyPlus Software complies."
(vi) Part-load performance curves for mechanical equipment;	"The EnergyPlus Software complies."
(vii) Capacity and efficiency correction curves for mechanical heating and cooling equipment; and	"The EnergyPlus Software complies."
(viii) Air-side and water-side economizers with integrated control.	"The EnergyPlus Software complies."
(c) 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.	"The EnergyPlus Software models this system."
(ii) Packaged Terminal Heat Pump (PTHP) (air source), single-zone package (through the wall), air-to-air DX coil heat/cool.	"The EnergyPlus Software models this system."
(iii) Packaged Single Zone Air Conditioner (PSZ-AC), single-zone air, air-to-air DX coil cool, gas coil, constant-speed fan.	"The EnergyPlus Software models this system."
(iv) Packaged Single Zone Heat Pump (PSZ-HP), single-zone air, air-to-air DX coil cool/heat, constant-speed fan.	"The EnergyPlus Software models this system."
(v) Packaged Variable-Air-Volume (PVAV) with reheat, multi-zone hydronic loop, air-to-air DX coil, VAV fan, boiler, hot water VAV terminal boxes.	"The EnergyPlus Software models this system."
(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.	"The EnergyPlus Software models this system."
(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.	"The EnergyPlus Software models this system."
(viii) Variable-Air-Volume with parallel fan powered boxes (VAV with PFP boxes), multi-zone	"The EnergyPlus Software models this system."

air, air-handling unit, chilled water coil, hot water coil, VAV fan, chiller, fan-powered induction boxes, electric reheat.	
(d) 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	"The EnergyPlus Software complies."
(ii) Design load calculations to determine required HVAC equipment capacities and air and water flow rates.	"The EnergyPlus Software complies."
(e) The software can explicitly model:	
(i) Natural ventilation.	"The software can explicitly model natural ventilation."
(ii) Mixed mode (natural and mechanical) ventilation.	"The software can explicitly model mixed mode (natural and mechanical) ventilation."
(iii) Earth tempering of outdoor air.	"The software can explicitly model earth tempering of outdoor air."
(iv) Displacement ventilation.	"The software can explicitly model displacement ventilation."
(v) Evaporative cooling.	"The software can explicitly model evaporative cooling."
(vi) Water use by occupants for cooking, cleaning or other domestic uses.	"The software can explicitly model 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.	"The software can explicitly model water use by heating, cooling, and other equipment or for on-site landscaping."
(viii) Automatic interior or exterior lighting controls (such as occupancy, photocells, or time-clocks).	"The software can explicitly model automatic interior or exterior lighting controls (such as occupancy, photocells, or time-clocks)."
(ix) Daylighting (sidelighting, skylights, or tubular daylight devices).	"The software can explicitly model daylighting (sidelighting, skylights, and tubular daylighting devices)."
(x) Improved fan system efficiency through static pressure reset.	"The software can explicitly model improved fan system efficiency through static pressure reset."
(xi) Radiant heating or cooling (low or high	"The software can explicitly model

temperature).	radiant heating or cooling (low or high temperature).”
(xii) Multiple or variable-speed control for fans, cooling equipment, or cooling towers.	“The software can explicitly model multiple or variable speed control for fans, cooling equipment, or cooling towers.”
(xiii) On-site energy systems (such as combined heat and power systems, fuel cells, solar photovoltaic, solar thermal, or wind).	“The software can explicitly model on-site energy systems (such as combined heat and power systems, fuel cells, solar photovoltaic, solar thermal, or wind).”

Date Posted: 26 May 2015

Tax Deduction Qualified Software — http://energy.gov/eere/buildings/qualified-software-calculating-commercial-building-tax-deductions