Building Technologies Program

Tax Deduction Qualified Software
VisualDOE version 4.1 build 0002

On this page you'll find information about the VisualDOE version 4.1 build 0002 qualified computer software (www.buildings.energy.gov/qualified_software.html), which calculates energy and power cost savings that meet federal tax incentive requirements for commercial buildings (www.buildings.energy.gov/commercial/).

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Statements in quotes are from the software developer.

Internal Revenue Code §179D (c)(1) and (d) Regulations Notice 2006-52, Section 6 requirements	
(1) The name, address, and (if applicable) web site of the software developer;	Architectural Energy Corporation 2540 Frontier Avenue, Suite 201 Boulder, Colorado 80301
(2) The name, email address, and telephone number of the person to contact for further information regarding the software;	Tianzhen Hong THong@archenergy.com +1 (415) 957-1977 ext 111
(3) The name, version, or other identifier of the software as it will appear on the list;	VisualDOE version 4.1 build 0002
(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.
(5) A declaration by the developer of the software, made under penalties of perjury, that—	"VisualDOE 4 uses DOE-2.1E version 119 developed by LBNL as the calculation engine which meets the following requirements:"
(a) The software has been tested according to ANSI/ASHRAE Standard 140-2004 Standard Method of Test for the Evaluation of Building Energy Analysis Computer Programs;	"The software has been tested according to ANSI/ASHRAE Standard 140-2004 Standard Method of Test for the Evaluation of Building Energy Analysis Computer Programs."
(b) The software can model explicitly—	"VisualDOE is fully compliant with ASHRAE 90.1-2001 and meets all of the below requirements."
(i) 8,760 hours per year;	"The VisualDOE software complies."
(ii) Calculation methodologies for the building components being modeled;	"The VisualDOE software complies."
(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;	"The VisualDOE software complies."
(iv) Thermal mass effects;	"The VisualDOE software complies."
(v) Ten or more thermal zones;	"The VisualDOE software complies."

(vi) Part-load performance curves for mechanical equipment;	"The VisualDOE software complies."
(vii) Capacity and efficiency correction curves for mechanical heating and cooling equipment; and	"The VisualDOE software complies."
(viii) Air-side and water-side economizers with integrated control; and	"The VisualDOE software complies with the air-side economizer requirements. The VisualDOE software cannot model water-side economizers with integrated control and cannot be used for projects with that technology."
(c) 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 VisualDOE software complies."
(ii) Design load calculations to determine required HVAC equipment capacities and air and water flow rates.	"The VisualDOE software complies."

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