Tax Deduction Qualified Software for buildings placed in service on or after Dec 31 2014 and before Jan 1 2027.

Carrier Hourly Analysis Program (HAP) v6.0 Build 0888

On this page you'll find information about (name and version of your software), listed as 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: 01/27/2025

Statements and information in the right hand column of this table 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;	Carrier Software Systems Building TR-4, Room 400A P.O. Box 4808 Syracuse, NY, 13221 USA
(2) The name, email address, and telephone number of the person to contact for further information regarding the software;	Carrier Software Systems software.systems@carrier.com
(3) The name, version, or other identifier of the software as it will appear on the list;	Carrier Hourly Analysis Program (HAP) 6.0 Build 0888
(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	Carrier Hourly Analysis Program (HAP) 6.0 Build 0888 been tested in accordance with ANSI/ASHRAE Standard 140-2017. All information and results are posted at https://www.carrier.com/commercial/en/us/software/hvac-system-design/software-downloads/ - scroll down to eDesign Resource Material section. See submitted drive for the executable version of the software as well as the input files used for the testing.
(5) A declaration by the manager in charge of software development, made under penalties of perjury, that all statements and information in the right hand column of this table are true and correct.	On behalf of the Carrier Hourly Analysis Program (HAP) development team I certify the following:

(a) The software has been tested according to ANSI/ASHRAE Standard 140-2014 Standard Method of Test for the Evaluation of Building Energy Analysis Computer Programs (except for sections 5.2.4, 7, and 8);	Carrier Hourly Analysis Program (HAP) 6.0 has been tested according to the American National Standards Institute/American Society of Heating, Refrigerating and Air-Conditioning Engineers (ANSI/ASHRAE) Standard 140-2017 Standard Method of Test for Evaluation of Building Energy Analysis Computer Programs.
(b) The software can model explicitly[1]—	Carrier Hourly Analysis Program (HAP) 6.0 is fully compliant with requirements of ANSI/ASHRAE Standard 90.1-2007 Section G2, including:
(i) 8,760 hours per year;	The Carrier Hourly Analysis Program (HAP) 6.0 complies.
(ii) Calculation methodologies for the building components being modeled;	The Carrier Hourly Analysis Program (HAP) 6.0 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 Carrier Hourly Analysis Program (HAP) 6.0 complies.
(iv) Thermal mass effects;	The Carrier Hourly Analysis Program (HAP) 6.0 complies.
(v) Ten or more thermal zones;	The Carrier Hourly Analysis Program (HAP) 6.0 complies.
(vi) Part-load performance curves for mechanical equipment;	The Carrier Hourly Analysis Program (HAP) 6.0 complies.
(vii) Capacity and efficiency correction curves for mechanical heating and cooling equipment; and	The Carrier Hourly Analysis Program (HAP) 6.0 complies.
(viii) Air-side and water-side economizers with integrated control.	The Carrier Hourly Analysis Program (HAP) 6.0 complies.
(c)[2] The software can explicitly model each of the following HVAC systems listed in ANSI/ASHRAE Standard 90.1-2007[1] Table G3.1.1B:	
(i) Packaged Terminal Air Conditioner (PTAC), constant volume (CV) fan,	The Carrier Hourly Analysis Program (HAP) 6.0 models this system.

DX coil cooling, hot-water fossil fuel boiler.	
(ii) Packaged Terminal Heat Pump (PTHP), CV fan, DX coil cooling, electric heat pump heating.	The Carrier Hourly Analysis Program (HAP) 6.0 models this system.
(iii) Packaged Rooftop Air Conditioner (PSZ-AC), CV fan, DX coil cooling, fossil fuel furnace heating.	The Carrier Hourly Analysis Program (HAP) 6.0 models this system.
(iv) Packaged Rooftop Heat Pump (PSZ-HP), CV fan, DX coil cooling, electric heat pump heating.	The Carrier Hourly Analysis Program (HAP) 6.0 models this system.
(v) Packaged Rooftop Variable-Air-Volume (PVAV) with reheat, Variable-Air-Volume (VAV) fans, DX coil cooling, hot-water fossil fuel boiler.	The Carrier Hourly Analysis Program (HAP) 6.0 models this system.
(vi) Packaged VAV with parallel fan-powered boxes (PVAV with PFP boxes) with reheat, VAV fans, DX coil cooling, electric resistance heating.	The Carrier Hourly Analysis Program (HAP) 6.0 models this system.
(vii) Packaged Rooftop VAV with reheat, VAV fans, chilled water cooling, hot-water fossil fuel boiler.	The Carrier Hourly Analysis Program (HAP) 6.0 models this system.
(viii) VAV with PFP boxes with reheat, VAV fans, chilled water cooling, electric resistance heating.	The Carrier Hourly Analysis Program (HAP) 6.0 models this system.
(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 Carrier Hourly Analysis Program (HAP) 6.0 complies.

(ii) Design load calculations to determine required HVAC equipment capacities and air and water flow rates.	The Carrier Hourly Analysis Program (HAP) 6.0 complies.

(e)[2] The software can explicitly model:

(i) Natural ventilation.	The Carrier Hourly Analysis Program (HAP) 6.0 does not explicitly model this feature and shall not be used for projects with this technology.
(ii) Mixed mode (natural and mechanical) ventilation.	The Carrier Hourly Analysis Program (HAP) 6.0 does not explicitly model this feature and shall not be used for projects with this technology.
(iii) Earth tempering of outdoor air.	The Carrier Hourly Analysis Program (HAP) 6.0 does not explicitly model this feature and shall not be used for projects with this technology.
(iv) Displacement ventilation.	The Carrier Hourly Analysis Program (HAP) 6.0 does not explicitly model this feature and shall not be used for projects with this technology.
(v) Evaporative cooling.	The Carrier Hourly Analysis Program (HAP) 6.0 does not explicitly model this feature and shall not be used for projects with this technology.
(vi) Water use by occupants for cooking, cleaning or other domestic uses.	The Carrier Hourly Analysis Program (HAP) 6.0 does not explicitly model this feature and shall not be used for projects with this technology.
(vii) Water use by heating, cooling, or other equipment, or for on-site landscaping.	The Carrier Hourly Analysis Program (HAP) 6.0 does not explicitly model this feature and shall not be used for projects with this technology.
(viii) Automatic interior or exterior lighting controls (such as occupancy, photocells, or time-clocks).	The Carrier Hourly Analysis Program (HAP) 6.0 does not explicitly model this feature and shall not be used for projects with this technology.
(ix) Daylighting (sidelighting, skylights, or tubular daylight devices).	The Carrier Hourly Analysis Program (HAP) 6.0 explicitly models automatic daylighting controls for sidelighting and skylights. It does not explicitly model tubular devices.
(x) Improved fan system efficiency through static pressure reset.	The Carrier Hourly Analysis Program (HAP) 6.0 does not explicitly model this feature and shall not be used for projects with this technology.
(xi) Radiant heating or cooling (low or high temperature).	The Carrier Hourly Analysis Program (HAP) 6.0 does not explicitly model this feature and shall not be used for projects with this technology.
(xii) Multiple or variable-speed control for fans,	The Carrier Hourly Analysis Program (HAP) 6.0 explicitly models this feature.

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 Carrier Hourly Analysis Program (HAP) 6.0 does not explicitly model this feature and shall not be used for projects with this technology.

Date Posted: 01/27/2025

1) 90.1-2007 is defined by the PATH Act of 2015 as "Standard 90.1–2007 of ASHRAE and IESNA (as in effect on the day before the date of the adoption of Standard 90.1–2010 of such Societies)." This definition includes 90.1-2007 and the addenda supplement package (Addenda a, b, c, g, h, i, j, k, l, m, n, p, q, s, t, u, w, y, ad, and aw) and addendum r, plus all published errata.

2) Software that cannot explicitly model one or more of the HVAC systems or features in sections 5.c and 5.e of the table can still be listed as qualified software. It cannot, however, be used for 179D analyses of projects that need to model such systems or features. When this is the case, the statement used for the particular requirements shall be as follows: The *AAA EnergySoftware* cannot model *system or feature X* and shall not be used for projects with this technology.

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

Sincerely,

James Pegues

Manager, eDesign Software Development

Carrier

315-432-6526

james.f.pegues@carrier.com

https://www.carrier.com/commercial/en/us/