

OpenStudio Version 1.10.0

Release Notes – 12/18/2015

These release notes describe version 1.10.0 of the OpenStudio software suite developed by the National Renewable Energy Laboratory (NREL), Buildings and Thermal Systems, Commercial Buildings Research Group, Tools Development Section, and associated collaborators. The notes are organized into the following sections:

- Where to Find OpenStudio Documentation
- Installation Notes
- Overview

Where to Find OpenStudio Documentation

- OpenStudio release documentation, including these release notes, tutorials, and other user documentation, is available at <https://www.openstudio.net/>.
- C++ API documentation is available at <https://openstudio-sdk-documentation.s3.amazonaws.com/index.html>.
- Measure development documentation is available at http://nrel.github.io/OpenStudio-user-documentation/reference/measure_writing_guide/.

Installation Notes

OpenStudio is supported on Windows 7 – Windows 10, OS X 10.9 – 10.10, and 64-bit Ubuntu 14.04.

OpenStudio 1.10.0 supports EnergyPlus Release 8.4.0, which is bundled with the OpenStudio installer. It is no longer necessary to download and install EnergyPlus separately. However, an installer is available at <https://github.com/NREL/EnergyPlus/releases/tag/v8.4.0>. Other builds of EnergyPlus 8.4 are not supported by OpenStudio 1.10.0.

OpenStudio 1.10.0 supports Radiance 5.0.a.5, which is bundled with the OpenStudio installer. It is no longer necessary to download and install Radiance separately. However, an installer is available at <https://github.com/NREL/Radiance/releases/tag/5.0.a.5>. Other builds of Radiance are not supported by OpenStudio 1.10.0.

Installation Steps

- The OpenStudio SketchUp Plug-in requires [SketchUp 2016](#) (not available for Linux). The OpenStudio SketchUp Plug-in does not support older versions of SketchUp. SketchUp 2016 is available in 32 and 64-bit versions; the 32-bit version of OpenStudio on Windows will only work with the 32-bit version of SketchUp 2016, and the 64-bit version of OpenStudio will only work with the 64-bit version of SketchUp 2016.
- Download and install [OpenStudio](#).
- Setup a Building Component Library (BCL) account to access online building components and measures. [View instructions on how to setup your account and configure the key in OpenStudio](#).

Overview

OpenStudio 1.10.0 has a number of new features and bug fixes. Some of the more noteworthy are as follows:

- Updated plug-in to work with SketchUp 2016. SketchUp autosave will no longer save the osm. Surfaces referencing constructions with no layers are no longer shown as air walls in the plug-in.
- Fixed code in Date and Time classes that resulted in memory access violation crashes in Ruby bindings.
- Changed operation of ConstructionBase.getNetArea, see documentation for details.
- Deprecated field 'Source Zone Infiltration Treatment' from object ZoneAirMassFlowConservation, adding E+ 8.4 fields 'Infiltration Balancing Method' and 'Infiltration Balancing Zones'.
- The Radiance Daylighting Measure has the following additions:
 - Added support for electrochromic glazing (two-state)
 - Renderings are generated for each primary daylighting control point and glare sensor found in the model
 - Added ability to optionally generate "debug" images showing each window group octree
- Made minor enhancements to standard OpenStudio simulation results.
- Added water to water heat pump component models, including HeatPumpWaterToWaterEquationFitCooling and HeatPumpWaterToWaterEquationFitHeating.
- Added capability to assign DesignSpecificationOutdoorAir object directly on VAV air terminals, including AirTerminalSingleDuctVAVReheat and AirTerminalSingleDuctVAVNoReheat. This is an EnergyPlus feature that allows for more precise outdoor air control, but was previously not available in OpenStudio.
- Refined GridView elements in the OpenStudio Application to increase their performance.
- Extended OSGridController and SpacesLoadsGridView to show loads inherited from SpaceTypes, and more generally, inherited subrows.

OpenStudio 1.10.0 includes several other minor features as well as many bug fixes. For a full list of changes included in OpenStudio 1.10.0, please see the [complete changelog](#).

Issue Statistics Since Previous Release

- 67 new issues were filed since the 1.9.0 release of OpenStudio (not including opened pull requests).
- 53 issues were closed since the 1.9.0 release of OpenStudio (not including closed pull requests).