QUICK START GUIDE
FOR *CBECC-RES 2016*

Quick Start Guide Topics Menu

What's New

If you are an experienced user of CBECC-Res 2013, you need to understand these changes to use CBECC-Res 2016 effectively:

1. CBECC-Res 2016 will only produce analyses and compliance documents for the 2016 Standards update. You will continue to use of CBECC-Res 2013 to work on projects covered by the 2013 Standards update.

2. CBECC-Res 2016 input files are named <filename>.ribd16. You can convert a CBECC-Res 2013 input file with an .ribd suffix (see File below), but once you have saved it you can no longer open it with the 2013 program.

3. CBECC-Res 2016 incorporates the new requirements of the 2016 Standards update. Projects that complied under the 2013 Standards will generally need to have additional efficiency measures to comply for the 2016 Standards. See the of CBECC-Res 2016 User's Manual for more information.

Overview

The California Building Energy Code Compliance 2016 Residential Standards compliance software (*CBECC-Res 2016)* is a software program developed by the California Energy Commission for use in complying with the 2016 update to the *Residential Building Energy Efficiency Standards.*

This Quick Start Guide provides brief descriptions of the software program's major features. It's a good idea to review the Quick Start Guide before using the program for the first time or if you have questions while using the program. Additional Help features will be added to future versions of the program.

There is also a *CBECC-Res User's Manual* available through the software's Help menu, and an FAQ document that can be downloaded from the project website at www.bwilcox.com/BEES/BEES.html.

How to Get Support or Report a Problem

If you have questions about the software or run into a problem, there a number of resources where you can find help:

- This Quick Start Guide
- The CBECC-Res FAQ document, which can be downloaded from www.bwilcox.com/BEES/BEES.html
- The User's Manual available through the software's Help menu and the Program Files directory.

If you have a question that is not covered by one of these documents or if you think CBECC-Res is not operating correctly, send an email to CBECC-Res Support <cbecc.res@gmail.com> and we'll answer your question as soon as possible.

If you are reporting a CBECC-Res crash or error, please include as much of the following as possible (copy and paste this template into your email):

> CBECC-Res version (Help: About): CBECC-Res 2016.?.? (???)
>
> Describe the error, using as much detail as possible.
>
> List the steps taken to produce the error, using as much detail as possible.
>
> 1.
> 2. etc.
>
> If there is an error message, what is the message? If possible, take a screenshot of the error message and attach it to the email as a file.
>
> Please attach your <ProjectName>.ribd16 file. This is the file you open and save from inside CBECC-Res. By default, this file is located in the C:\Users\<your username>\My Documents\CBECC-Res- 2016.?.? Projects directory.

We appreciate your willingness to help us improve CBECC-Res by taking the extra time to document and report issues in a way that will help us fix them quickly. If you include your name and phone number, we may call you to clarify the problem or ask for more details. We will not share your name, phone number, files or email address with anyone outside the CBECC-Res development team or use it for any purpose other than responding to your report.

Updates and Project Website

Updates to CBECC-Res will be posted to the project website: www.bwilcox.com/BEES/BEES.html.

Analysis Types

Proposed Only: Simulates the building input by the user with the 2016 compliance rules.

Proposed and Standard: In addition to simulating the Proposed Design, simulates the Standard Design building which complies with the 2016 Prescriptive Standards and establishes the energy budget for compliance.

Menu Bar

This section explains the program features you access by clicking on the options on the menu bar at the top of the screen.

File – The *File* menu contains the standard functions for file management, loading recently used files, and exiting the program. CBECC-Res- 2016 input files have an .ribd16 suffix. A set of example input files are loaded into the Projects directory. Files previously saved in CBECC-Res 2013 have a .ribd suffix.

Opening 2013 project files
Existing CBECC-Res 2013 files can be converted to 2016 files using the following process:
1. Select File, open.
2. Change the default search from ***Res Project Files (*.ribd16)*** to ***2013 Res Project Files (*.ribd)***
3. Find the file (in the 2013 projects folder).
4. Perform a file-save action (as prompted), selecting a 2016 projects folder.

Warning: Once a file has been saved in CBECC-Res 2016 it cannot be opened CBECC-Res 2013.

Edit – In addition to the standard Windows™ *Cut, Copy,* and *Paste* commands, the *Edit* menu contains several commands for editing building descriptions. They are:

- *Edit Component*
- *Create Component*
- *Delete Component*

These menus allow you to edit all building components, including components that are not displayed on the tree control. Use this method to edit components like schedules and performance curves.

Ruleset – Identifies the compliance ruleset currently in use.

View – Enables you to toggle the display of the Tool Bar and the Status Bar on and off.

Tools – The *Tools* menu contains the following options of interest to end-users:

- *Check Building Database* – Reviews the building descriptions to make sure a performance analysis can be completed.
- *Perform Analysis* – Performs a compliance check based on the current building description.
- *Building Summary Reports* – Produces diagnostic reports summarizing the Proposed and Standard Design.
- *Review Analysis Results* – Recalls the last analysis results for this file.
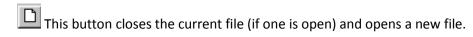- *Generate Title-24 Compliance Report* – Produces a CF1R report.

Help – Various Help tools are available under the *Help* menu. [Note: Help Topics feature is not available.]

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Tool Bar

This section explains the program features you access by clicking on the icons on the tool bar at the top of the screen.

New File

This button closes the current file (if one is open) and opens a new file.

Open Existing File

This button closes the current file (if one is open) and launches the *Open* dialog to enable you to select an existing file to open.

Save File

This button saves the file under its current name or, if you have not named the file, launches the *Save As* dialog to enable you to provide a new file name.

Copy Selected Item

This button enables you to copy the selected item on the tree control (along with any child components) to the Windows clipboard. The *Copy* button is not available from within program dialogs, but you can use the keyboard equivalent, Ctrl+C, to copy selected text.

Paste Contents of Clipboard

This button enables you to paste components copied from the tree control to the selected location in the tree control (provided that location is compatible with the stored component). The *Paste* button is not available from within program dialogs, but you can use the keyboard equivalent, Ctrl+V, to paste text from the Windows clipboard to the selected input field.

Perform Analysis

This button enables you to launch a compliance analysis using the currently loaded building description. You must save the current building description before performing the analysis.

About CBECC-Res 2016

This button enables you to view program license and version information.

Main Screen

The main screen of the *CBECC-Res 2016* program is used primarily for editing building descriptions. There are two folder tabs at the top of the main screen—Envelope and Mechanical. These tabs provide different views of the building description and provide access to two different subsets of the building description data.

Right Mouse Button Menu Options

The *CBECC-Res 2016* program makes extensive use of menus accessible by clicking the right mouse button. The functions available through these menus depend on whether you are on the main screen or in an input dialog window.

Main Screen Right Mouse Menu. When clicked over a building component, the following choices are available:

- *Edit* – Opens the input dialog window for the selected component
- *Rename* – Enables you to rename the selected component
- *Delete* – Deletes the selected component
- *Copy* – Copies the selected component with all of its child components
- *Paste* – Adds copied components and their children to the selected component
- *Expand/contract* – Expands or contracts the list of children components attached to a selected component
- *Create* – Enables you to create new child components for the selected component

Input Dialog Right Mouse Menu. When clicked over an input value in the window, the following choices are available:

- *Item Help* – Accesses Help information applicable to the selected input field [Feature currently not available.]
- *Topic Help* – Accesses Help information applicable to the selected component [Feature currently not available.]
- *Restore Default* – Returns the value of the field to its default value (if applicable)
- *Critical Default Comment* – Opens a dialog enabling you to enter a justification for overriding values designated by the Code as critical defaults, i.e., a value that should only be overridden with special justification. [This feature is not yet implemented.]

Building Tree Controls (Parent/Child Relationships)

In order to analyze a building's energy use, it is necessary to track relationships among building components. *CBECC-Res 2016* displays these relationships using the familiar tree control, found in Windows™ Explorer and many other applications. For example, under the Envelope tab, exterior walls are shown as parents to windows (windows are connected to exterior walls and appear underneath walls) and children to spaces. The tree controls vary in the components they display depending on which folder tab is currently selected.

Use the Tree Control for Rapid Editing

The tree control can be used to move and copy components or groups of components. To move a component, just drag and drop. If an association isn't allowed, the program will prevent the move from being carried out. To copy a component, select the component, copy, and paste. It is advisable to rename copied components to maintain readability. Whenever parents are moved, copied, or deleted, child components are included.

Components shown on the tree can be moved using a drag-and-drop technique to other components provided it results in a compatible parent-child relationship. For example, you can drag a window onto a different wall, but not vice versa.

A set of right mouse menu edit commands can be used with the tree control. These are described in the Right Mouse Button Menu Options section. Double-clicking on any component on the tree opens its input dialog window.

Input Dialog Windows

The attributes of each building component can be edited by opening the input dialog window for the component. The dialog can be opened by double-clicking on the component on the tree control, using the *Edit* option on the right mouse menu, or using the *Edit Component* option on the *Edit* menu. (The tree control does not appear until you have created a project description using the wizard or loaded an existing project file [Ctrl+O]).

In keeping with good practice for use of any software, we recommend that you save your building description often and revise the file name once you have substantial effort invested in editing the description under the current file name.

Background Colors

The following background color convention has been used in displaying data on the dialogs:

- White background = available for user input
- Gray background = not user editable

For information on editing features available from the input dialog windows, see the Right Mouse Button Menu Options section.

To understand what information you are required to enter, see the Status Bar section.

Tip: Input Units
The input screens show the units for numerical inputs. For example, furnace AFUE is input as a % like 80, not as a fraction like 0.8. The latter will give heating energy 100 times too big.

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Status Bar

The status bar at the bottom of the screen provides useful information about each input field you select. There are three panes on the status bar that provide context-sensitive information. This same information is displayed in the ToolTips if you allow your mouse pointer to linger over an input field.

1. Input Description Pane – Concise descriptions of the selected input field are displayed at the far left of the status bar.
2. Input Classification Pane – The next pane to the right on the status bar displays a set of labels that indicates which inputs you are required to provide, which are optional, and

which are unavailable for input. The input classification labels are explained in the table below.

3.   Data Source Pane – The pane at the far right of the status bar displays a set of labels that identify the source of the information (if any) contained in the field. This can help you distinguish between information that is dictated by the compliance checking process and the information you have entered and for which you are responsible. The data source labels are explained below.

Input Classification Explanations

No field selected	No building data field is currently selected.
Input is compulsory	You are required to enter data in the selected field; the program cannot perform a compliance analysis unless you do.
Input is required	You are required to enter data in the selected field if the field is applicable to your project.
Input is optional	You may enter data in the selected field if the field is applicable to your project, but you are not required to do so. If the field contains a default value, you are permitted to simply use that value without considering its suitability for your project.
Input is crit. default	You may overwrite the data in the selected field with an entry more appropriate for your project than the default. However, if you do overwrite this "critical default" value, you must be prepared to provide documentation substantiating the value you have chosen.
Field is not editable	You cannot enter data in the selected field. The data in this field are defined by the compliance rule set or a supporting process. In some cases, the field may also be an intermediate calculated parameter or one that is not applicable to the currently selected compliance rule set.
Navigation input	The purpose of the selected field is to enable you to select a component for editing without having to exit the current component and choose the next component from the tree

Data Source Explanations

No field selected	No building data field is currently selected.
Value from user	The data shown have been defined by the user either directly through a user input or indirectly through wizard selections.
Value from simulation	The data shown have been defined by an energy simulation.

Value undefined	No data have yet been defined for the field.
Value from program	The data in this field have been defined by the program either to implement requirements and procedures specified in the energy code or to conform with building energy modeling conventions.

Defining New Components

There are two main ways to define new components (e.g., walls or equipment) in the main program interface.

Define a New Physical Component

To define a new physical component, follow these steps from the Main Program Screen:

- Right-click on the component on the tree control to which you want to add the new component.
- Select *Create*, then the type of object you want to add. (Only applicable component types will appear on the list.)
- Accept the default name, parent, and existing component to copy from or edit these fields and click OK.
- Edit the input fields with white backgrounds to describe the new component, then click OK.

Deleting Project Files

If you have created multiple projects under different project names, you may want to delete project files to free up hard disk space on your computer. By default, project files are stored in the C:\Users\<your username>\My Documents\CBECC-Res-2016 Projects folder, although where the files are stored may differ on your computer depending upon where you installed the program and if you selected a different location for storing files.

In the Projects folder, you will find several files with the same project name you used but with differing file extensions. If you have no further use for information on a project, delete all files using the primary file name. If you would like to retain a project but store it as efficiently as possible, delete all files using the primary file name EXCEPT for two files: the one named *.ribd16 (residential input building design) file extension, and * - AnalysisResults-BEES.xml (file for uploading to HERS provider). These files should be retained for projects that were completed. The other project files are recreated when an analysis is performed. There are also folders containing very large files that can be deleted.

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