California Building Energy Code Compliance Residential (CBECC-Res) is free, public domain, compliance software developed by the California Energy Commission for use in showing performance compliance with the 2025 Energy Code for single-family residential buildings.

2025.1.0 RV Release Notes

- 2025.1.0 RV was released 4/24/25.
- The 2025.1.0 Research Version (RV) provides a preview of the final 2025.1.0 compliance software, is for review and testing only, and is not usable for compliance.
- The 2025.1.0 RV is a draft and does not include all measures and functionality that will be present in the final 2025.1.0 compliance software. See below for details on what's included in this version.
- 2025.1.0 RV can be downloaded from:
    - 2025 Energy Code Compliance Software website [https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2025-energy-code-compliance-software]
    - CBECC-Res project website [https://www.bwilcox.com/BEES/cbecc2025.html].

Capabilities and enhancements implemented in CBECC-Res 2025.1.0 RV

- Replace prior heat pump and air conditioner simulation method/algorithms w/ the new Performance Map model based on in depth statistical analysis of the NEEP database. This impacts how all split heat pumps and air conditioners are simulated and allows specification of single vs. variable speed for each equipment. This also allows for specification of heat pump backup as none, electric resistance or gas.
- New method of describing and simulating generic tier 3 & 4 heat pump water heaters through specification of tier and UEF.
- Enable output to project log summary of compliance result (success/failure & margin) and generation of a draft 2025 compliance report.
- Apply 25% reduction to prescribed PV system capacity based on exception #5 in 2025 energy code, when project includes a JA12-compliant battery energy storage system (requiring user confirmation via checkbox on Battery dialog tab).
- Adjust calculation of maximum PV that can be installed on solar access roof area (SARA) based on percent SARA steep-sloped (new input) and PV power densities specified in the 2025 energy code.
- Changes to window U-factor and SHGC requirements as stated in the 2025 energy code.
- Changes to prescriptive refrigerant charge requirements by equipment type, climate zone and home size.

- Changes to cooling equipment crankcase heater power by equipment type and size.
- Enable Time-of-Use (TOU) battery control option in 2025 analysis and revising the battery discharge to only meet home loads (not discharge to grid)
- Changed battery capacity inputs from total capacity & reserve percent to simply compliance cycling capacity (w/ same 15% reduction in simulated capacity, as with prior code vintages).
- Apply self-utilization compliance credit to all 2025 models for which the credit is available (removing the checkbox to toggle this credit on/off).

Bugs Fixed in CBECC 2025.1.0 RV

- Fixed analysis abort issue in models including multiple zones served by combined HVAC/DHW heat pumps (HeatPumpDHWCombo).