

EnergyGauge USA Version 7.0.01

RELEASE NOTES

GENERAL NEW FEATURES:

Version 7.0.01 is a minor release with changes on HVAC grading and tax credit. Version 7.0.00 was a major release and if you are upgrading from version 6 you may want to read the release notes for Version 7.0.00 also. Version 7.0.01 will overwrite 7.0.00 (your building files will be saved). Version 7 will not overwrite Version 6. Look for the EGUSA7 icon to run Version 7.



GENERAL BUG FIXES

- Change worst case warning from 9 simulations to 4 orientations (Version 7 reduced worst case from eight orientations to 4).
- The multiple system heating input screen correctly displays efficiency for strip heating systems.
- Flat roof entry with gable height of 0 will now run.
- Newly added California cities better matched to TMY city.
- UEF or EF as selected by user now displayed for water heater on reports

Manual J and S

- Short form report available

FLORIDA ENERGY CODE

- Blank Form R402 has blank check boxes for Pass or Fail now and should save correctly when made into PDF
- Removed 2017 ERI calculation –current software will only do 2020

IECC

- Removed 2015 ERI calculation – current software will only do 2018

TAX CREDIT

DOE approved a new RESNET methodology for tax credit for new energy-efficient homes, RESNET Pub 001-20. The new methodology largely follows the newly passed (ANSI/RESNET 301-2019) standard but has a number of its own features. DOE approved EnergyGauge 7.0.01 and this version can now register tax credit reports. Per DOE requirements, EnergyGauge USA RESNET Pub 001-20 requires HVAC Grading.

- Reference home mechanical ventilation system power corrected
- HVAC grading will default to grade III for ductwork of grade III or for airflow of Grade III.
- AHU calculated values and HVAC grading results will show on AHU screen for both proposed and confirmed projects.
- Rating organization seal to show on tax credit report.

HERS RATERS CHANGES AND OTHER FEATURES

- HERS Providers now presorted alphabetically in preferences
 - NOTE: Open preferences in 7.0.01 and reselect your HERS Provider
- HERS Summary report – rated home lighting and miscellaneous values were reversed – now fixed
- System size used for rated and reference homes increased for HVAC grading calculations to assure no unmet hours.
- Registration for Version 7 files now enabled.

PREVIOUS VERSION IMPORTANT INFORMATION ON HVAC GRADING - Repeated in these release notes

In Version 7.0 all HERS calculations are conducted with ANSI/RESNET 301-2019 including Addendums A and B. For those wishing to finish projects with ANSI/RESNET 301-2014 with amendments, version 6.1.09 is recommended. EnergyGauge Version 7.0 is for detached and attached buildings with individual cooling, heating and hot water systems. EnergyGauge USA does not currently handle cooling, heating and hot water systems serving multiple units.

The software includes ANSI/RESNET/ACCA Standard 310 for HVAC Grading. Standard 310 adds in the ability to obtain credit for a verified HVAC system. A new equipment tab, *AHU*, allows software users to enter the central fan design and measured CFMs, the measure fan wattage and the measured refrigerant charge. HVAC grading ranges from a default of Grade III to a best of Grade I. Grade I has a range of possible values so a *no fault* scenario will reduce energy use more than our default Grade I. Details about the standard should be obtained from RESNET and your Training Provider.

Standard 310 calls for a default 0.58 Watts/CFM for unmeasured fan systems for both the rated and reference home. This is higher than the historical EnergyGauge USA default of 0.375 Watts/CFM for SEER 14 and higher equipment that was compared against the historical EnergyGauge USA default of 0.5 Watts/CFM for the HERS reference home SEER 13 system. As such, using HVAC grading without measurement may result in higher HERS indexes than previously.

EnergyGauge USA currently allows the calculation of HERS Indexes with or without HVAC grading. RESNET will eventually **only allow registration of ratings with HVAC grading**. HERS ratings that incorporate measurements and verifications of quality installations should achieve significant improvement in the HERS index for homes with large annual cooling loads and those homes with high annual heating loads met mainly by a heat pump.

ENERGY STAR

- No changes

ANNUAL SIMULATION:

- User can select to compute annual simulation with or without HVAC grading. User must enter AHU entries for HVAC grading.
- Historically when selecting Annual Simulation there was a second choice to use the older appliance schedules located on the Equipment|Appliances tab. This simulation choice is now moved to its own **Custom Appliance Simulation** menu selection under the **Calculation** selection.