

Weatherization Assistant Update History

Updated: November 12, 2009

Version 8.6.0.4 (Issued November 9, 2009)

General

- The following parameters associated with the NEAT window film retrofit measure were modified in the Setup Library Key Parameters form and Library Measures form: Retrofit Window Film Surface Emittance from 0.90 to 0.84, Retrofit Window Film Solar Heat Gain Coefficient from 0.50 to 0.49, Lifetime from 5 to 15 years, Material cost from \$3.00/ft² to \$1.00/ft², and Labor cost from \$1.00/ft² to \$3.00/ft².
- The Weatherization Assistant installer routine was modified so that an update from Version 8.6.0.3 to Version 8.6.0.4 would enter the new window film retrofit measure parameters into the existing Setup Library.
- A Supply Library Summary report was added to the Supply Library that prints out all the items entered in the Supply Library that have an inventory indicated.
- The ability to cancel an import when importing a record that already exists in the database was added to the Data Link feature.
- A problem with user-defined NEAT Insulation Types being lost when a Setup Library was imported from a previous versions was corrected.
- A problem with material and labor details associated with measures in a work order being lost when the work order was imported from Version 8.4 into Version 8.6 was corrected.
- A problem with a date range being requested when a Work Order Report was selected was corrected.
- A problem with an unhandled error occurring when the References button was selected in the Setup Library and Supply Library for an undefined record was corrected.

NEAT and MHEA

- A problem occurring when a new lighting record was created on the Lighting form (possibly only after an audit had already been run) was corrected.

NEAT

- The "Perimeter to Insulate" field found in the Sill block of data on the Foundations form was allowed to accept a value of 0.
- A problem with a mandatory measure being included in the whole house (or cumulative) SIR calculation even though the Include in SIR checkbox associated with the measure was not checked was corrected.
- A problem with the Cumulative SIR field included in the Economic Summary data block on the Audit Information form including a mandatory measure that was not suppose to be included in the whole house (or cumulative) SIR calculation was corrected.
- A problem with the cooling savings being inaccurately calculated for the air conditioner replacement measure and other measures with an SIR less than the air conditioner replacement measure when the existing air conditioning equipment did not cool the entire house was corrected.

- A problem with the energy savings calculated for a mandatory replacement of a double-pane window with a double-pane, low-e window being zero was corrected.

MHEA

- A problem occurring when a new window record was created on the Window form (possibly only after an audit had already been run) was corrected.
- A problem with an efficiency needing to be entered in the Replacement Heating form even if a replacement unit was not desired was corrected.

Version 8.6.0.3 (Issued September 18, 2009)

General

- The Help feature was modified to be compatible with Vista and to include an index and table of contents.
- An optional password protection feature was provided when the database file (mdb, wdz) method of importing and exporting clients is used.
- A button was added to all the status editor forms that allows the current status to be cleared.
- The ability to reassign references to records when references are deleted was provided (e.g., when a setup library is deleted, audits that referenced that setup library can now be reassigned to another setup library).
- The Manufacturer and Model fields on the Refrigerator and Water Heater forms found in the Supply Library were made to be mandatory fields so that appropriate information would be displayed when drop-down boxes for replacement units are selected in NEAT and MHEA.
- A problem with the material quantities entered for a user defined measure not being brought forward when a setup library from an earlier version was imported into a newer version was corrected.

NEAT and MHEA

- Fields were added to the water heater and refrigerator forms that allow replacements to be designated as mandatory.
- A Delete button that clears all the entries on a form was added to those forms that previously required highlighting a large vertical bar to the left of the form to clear all the form's entries.
- A problem in the ordering of measures on the Recommended Measures report when only two measures were recommended was corrected.
- A problem with the "In Stock" value listed for a material under the "Copy Supply" drop down box in the Materials/Labor Details subform of a work order being the number purchased rather than the number available was corrected.

NEAT

- Fields were added to the cooling equipment form that allow a tune up or a replacement to be designated as mandatory.
- Fields were added to the Key Parameters/Windows form in the Setup Library that allow the characteristics of window films added to windows as a retrofit measure to be specified.

- A problem with installation of water heater tank insulation being recommended when a water heater wrap is already installed was corrected.

MHEA

- A separate cooling equipment replacement form was developed that allows the characteristics and costs of the replacement unit to be specified and the replacement unit to be designated as a mandatory measure.
- A field was added to the primary cooling system form that allows a mandatory tune up to be specified.
- A problem which had allowed windows entered on the Shell/Windows form and the Addition/Windows form to appear in the data sheet view of either form was corrected.

Version 8.5.0.0 (Issued May 13, 2009)

NEAT

- Fields were added to the Key Parameters/Windows form in the Setup Library that allow the thermal characteristics of replacement windows, replacement low-e windows, and retrofit storm windows to be described, including the ability to describe the retrofit storm window as being low-e.
- The window retrofit options field was expanded to include a low-e replacement window as a mandatory measure option.

Version 8.4.1.4 (Issued January 30, 2009)

NEAT and MHEA

- A problem introduced in Version 8.4.1.0 with double clicking on a setup or supply library selected on the Audit Information form bringing you to the wrong library was corrected.
- An error introduced in Version 8.4.1.0 that occurred when you tried to rerun an audit immediately after changing the weather file or the setup or supply libraries on the Audit Information form was corrected.
- A problem with having to enter the heating fuel twice on the Water Heating Baseloads tab before the entry would be saved was corrected.

MHEA

- MHEA was modified so that it is fully operational under Vista.
- A problem introduced in Version 8.4.1.0 with the calculation of the SIR for lighting measures was corrected.


Version 8.4.1.1 (Issued December 9, 2008)

MHEA

- A problem introduced in Version 8.4.1.0 with incorrect values appearing in the three cumulative columns (Cost, Savings, and SIR) in the Energy Saving Measure Economics table of the Recommended Measure report was corrected.

Version 8.4.1.0 (Issued November 14, 2008)

General

- A “New” button was included along with the existing “” button in the record navigation boxes of all the forms to open new blank records.
- Two “Account #” fields were added to the Client Information form.
- The following entries in the Setup Library were updated: fuel costs, fuel price indices, selected NEAT key parameters (night setback, film coefficient, internal loads, and the input cooling SEER), and selected MHEA key parameters (thermostat setback, building component R-values, home leakiness values, free heat values, door U-values, window R-values, and water heater wrap R-value).
- Checks were initiated so that, while in Preferences, the program cannot be restarted if any records are open.
- The reasonable and allowable ranges for all input fields were updated as needed.
- When importing or exporting a client and the audit(s) associated with that client, the transfer of the Agency information and the Setup and Supply Libraries associated with the client and audits was made optional.

NEAT

- Several major modeling changes were made: gable ends were added to the modeling of unfinished attics, the slab-on-grade heat conduction model was changed, and the distribution of solar gains over time was altered.
- Improvements and updates were made to the algorithms and default values used to calculate the UA for the wall, floor, and ceiling.
- An “Include in SIR” check box was added to the Windows and Heating forms to make the inclusion of mandatory window and heating system retrofit measures in the cumulative SIR calculation for the house optional.
- A “Window Type” field and an “Interior Shading” field were added to the Window form, (neither are currently used by the program and, thus, do not impact the recommendations).
- A problem on the Finished Attic form with two “Added Insulation Type” fields being displayed for kneewalls was corrected.
- An “Uninsulated Supply Ducts” button was added to the Heating form in replacement of the three duct-related fields that allows three different rectangular and/or round uninsulated supply duct sections to be described.
- An “Evaluate None” option was added to the Replacement System options on the Heating form that prevents all heating system replacement and tune-up retrofit measures from being evaluated or recommended for the specific house being audited.

- A calculation error associated with the “Year Manufactured” fields (formerly called the “Year Purchased” fields) on the Heating and Cooling form when a heat pump is being described was corrected.
- A problem with the HSPF field on the Heating form (when a heat pump is being described) not being treated like a mandatory field was corrected.

MHEA

- MHEA’s energy saving predictions were reduced so that they better agree with field monitored results. This was accomplished by increasing the internal loads assumed by the program (as entered in the setup library) and by making the following changes within the program: reduced the infiltration load by 25%, added an extra R-value of 1.0 to the primary envelope components (walls, ceiling, and floor), and reduced the energy saving estimates by 40% (i.e., multiplied the energy savings by a 0.6 correction factor).
- Modeling of the Addition Floor and Addition Roof were improved.
- Improvements and updates were made to the algorithms and default values used to calculate the UA for the wall, floor, and ceiling.
- An “Include in SIR” check box was added to the Windows, Addition Windows, Doors, Addition Doors, and Heating Primary forms to make the inclusion of mandatory window, door, and tune-up retrofit measures in the cumulative SIR calculation for the house optional. The “Include in SIR” checkbox on the Heating Replacement form (formerly called the “Include Replacement Costs in Home Retrofit”) was programmed to work in the same manner as the other “Include in SIR” checkboxes.
- A “Frame Type” field was added to the Window and Addition Window forms, although neither are currently used by the program and, thus, have no impact on the recommendations.
- An “Additional Cost” field was added to the Door and Addition Door forms.
- “Programmable Thermostat” and “Tune-up Mandatory” checkboxes were added to the Heating Primary form.

NEAT and MHEA

- Forms were modified and fields were edited to improve readability and ease of data input, and to make them more consistent between NEAT and MHEA.
- All “Additional Cost” fields were reviewed and programmed as needed to allow both positive and negative values (a cost to be added to or subtracted from the cost determined from the setup library, respectively).
- A calculation was added so that the HSPF entered for heat pumps and the SEER entered for heat pumps and central air conditioners is modified by a climate correction factor within the program.
- Un-editable “Recovery Efficiency” fields were added to the Water Heating form for both the existing equipment and the replacement. These fields are automatically populated once a water heater is selected from the Weatherization Assistant’s library of manufacturers and models.

Version 8.3.3.11 (Issued May 19, 2008)

NEAT

- A problem with the costs for the Fill Ceiling Cavity measure, as printed on the Recommended Measures report, not being correctly listed under the Measures tab was corrected.
- The Finished Attics form was modified so that the block of Added Insulation information is no longer removed from the form when “None” is chosen as the Added Insulation Type.
- A problem with being able to enter a zero in the Foundation Wall Height field on the Foundations tab, which caused the program to crash, was corrected.

Version 8.3.3.8 (Issued March 19, 2008)

General

- An intermittent problem that was introduced in Version 8.3.3.6 in the Setup Library with the Library Measures form not being displayed properly was corrected.
- A problem that was introduced in Version 8.3.3.6 in Data Link with the Import/Export via Database Files data transfer method was corrected.

MHEA

- A problem with the Addition Floor Type field not being filled in when an existing audit is copied was corrected.

Version 8.3.3.6 (Issued December 19, 2007)

General

- The Weatherization Assistant and NEAT can operate under Vista (and MHEA with conditions).
- The Weatherization Assistant opens with a window sized for 1024x768 resolution.
- Data sheet views are no longer persistent.
- There are an additional number of reports available in the data sheet view to facilitate exporting results to spreadsheets.

NEAT

- The wall stud depth is specified by the user.
- The installation of wall cavity insulation is evaluated even if the wall is already partially insulated with a batt, blanket, or rigid board insulation.
- R-49 is evaluated as a 5th insulation option for attics.
- R-38 is evaluated as a 4th insulation option for floors.
- The data input form for foundations is reformatted to clarify and simplify inputs.
- The floor joist size is specified by the user in evaluating sill insulation.
- The user can define up to six insulation types each for the attic, knee wall, exterior wall, floor, sill, and foundation wall.

- Fuel switching for fossil-fueled heating systems is allowed.
- Replacing an electric heating system with resistance heaters or a heat pump is evaluated.
- The installation of a heat pump is evaluated when only existing window air conditioners exist or when no air conditioning system is presently installed.
- Kerosene heating systems are treated the same as oil heating systems.
- Space heaters can be replaced to eliminate secondary heating systems.
- The algorithm associated with replacing space heaters is fixed.

MHEA

- Window retrofit recommendations are based on individual window descriptions.
- Sealing (weatherizing) windows is evaluated as a 4th window retrofit option.
- The selection of window retrofit options is consistent with NEAT's approach.
- The space-heating system efficiency improvement from a tune-up is consistent with NEAT's (i.e., the efficiency improvement becomes less as the existing efficiency increases).
- Separate installation costs are entered for measures applied to the mobile home itself and to the additions on mobile homes.

NEAT and MHEA

- Assigning an auditor to an audit is no longer required.
- Drop-down fields having only one available selection are automatically filled in.
- The "Client ID" field is left blank when a new audit is created to reduce data entry errors.
- "Additional Cost" fields are available for each window retrofit option.
- The estimated energy consumption of the refrigerator can be viewed without having to evaluate a replacement unit.

Version 8.2.7.8 (Issued September 9, 2006)

General

- A report is provided which lists all the measure costs entered in the Setup Library.
- Different sections of the Input Report can be selected for printing.
- Problems associated with the following items have been corrected: client name missing from the Recommended Measure Report, changing the user-supplied logo used in output reports, the status history as seen on the Client Completion Report, designating user-defined measures as being applicable to NEAT and/or MHEA, and activating the password feature before any users with passwords have been entered.

NEAT

- The Rs/inch for user-defined wall and attic insulation types are displayed in the associated combo boxes.
- The algorithm relating the year an air conditioner was purchased to a default efficiency is updated.
- Problems associated with the following items have been corrected: loss of envelope measure recommendations when a space heater replacement is recommended, not evaluating user-defined wall insulation types for frame walls with existing insulation, incorrect window

retrofit costs displayed on the Measures tab, the annual pre-weatherization energy consumption displayed on the Recommended Measure Report being too low when duct sealing is evaluated (representing consumption after duct sealing but before the installation of other recommended measures), and an incorrect annual post-weatherization energy consumption displayed on the Recommended Measure Report when a space heater replacement is recommended.

MHEA

- The algorithm relating the sum of the pressure pan readings to the duct leakage rate is modified.
- Window and door codes are listed on the Recommended Measures Report.
- The order that recommended measures are listed on the Recommended Measures Report are modified to be consistent with NEAT.
- Problems associated with the following items have been corrected: a door replacement not being evaluated unless a mandatory replacement is specified, and the post-weatherization annual consumption reported in the Recommended Measures Report when baseload measures are recommended.

Version 8.2.7.6 (Issued August 26, 2005)

General

- The Weatherization Assistant's optional administration features are introduced, including agency-related contact information, client data intake, recording of health and safety issues, recording of diagnostic measurements, work orders, status tracking, simplified cost accounting, inventory control, report generation, site mapping, and digital photo storage.
- Client information is entered separately from NEAT or MHEA.
- NEAT and MHEA share a common Setup Library.
- A Supply Library is introduced.
- Up to 65,000 characters can be entered in each comment field.
- Comments can be directly imported into work orders.

NEAT

- The user can enter a specific R-value of additional insulation to evaluate for the attic.
- A multiple number of finished attic components can be described.
- An "Additional Cost" field is available separately for foundation floor insulation and foundation wall insulation.
- A multiple number of space-heating systems can be described.
- Standard and high-efficiency replacement space-heating equipment can be described separately.
- Secondary space-heating systems can be replaced along with the primary space-heating system by a replacement unit.

MHEA

- The leakiness of individual windows is specified and used in estimating the energy savings from window retrofits (equivalent to NEAT).
- A distinction is made between existing floor insulation that is installed between the joists and under the joists.
- The data input form for the floors of additions is reformatted to allow a more accurate description.
- The length of the thermostat setback is based on the setback during the night rather than the day.

NEAT and MHEA

- Energy-efficiency and repair measures can be predefined and selected under the Itemized Cost tab.
- The data input form for refrigerators is reformatted to add data fields for the style and defrost mechanism for the existing and replacement units and to show the estimated energy consumption of the existing and replacement units.
- The algorithm for estimating the energy consumption of the existing refrigerator includes the location of the unit and the condition of the door seals.
- The database of refrigerators is expanded.
- The heat content of fuels and the uniform present worth factors are included in the Setup Library.