VE 2021.0.0.0 Release Notes

Release Notes

17/12/2020

Contents

VE 2021 Changes

ApacheHVAC

HVAC System Design Wizard [ID-]: System Design Wizard can be accessed via Apache, ApacheHVAC or compliance Navigators. Offers simple interface to generate new systems by specifying rooms/zones then select airside options, plant equipment and finally option to autosize and generate reports ready for energy simulation.

Advanced Air to Air Heat Pump model added [ID-]: An advanced air to air heat pump for heating and cooling is added.
Traditional simple heat pump type also retained for consistency on existing projects.

Free Convection model on Cooling Tower/Fluid Cooler added [ID-]: An option to specify free convection is added to cooling tower/fluid cooler on chilled water loop. Specific as an initial air flow fraction that will operate in free mode with no fans power consumption.

Fan Controls updates [ID-]: Added capability for zone-level recirculation fans to operate only when associated compressor operates (as in heat pumps, zone-level AC, etc.) via new "Cycle on with terminal unit compressor" control option in the System Parameters.

Updated defaults for humidity control and setpoints [ID-76906]: New defaults have been set for humidity control and setpoints.
Dehumidification option is set to "Per system-level dry-bulb or dew-point control only" and info pop up is added to clarify modelling options on System Parameters.

Negative room loads do not result in negative airflows from system parameters [ID-12768]: When cooling/heating design zone loads change to a negative value, the design airflow correctly limits to a 0, not a negative value.

Corrected the default HVAC link via the Room/zone sizing step using the System Prototypes & Sizing navigator [ID-15776]: The default link has now been set to proposed instead of being set to 'None'.

DHW dialog retains Pump description edits [ID-29269]: The DHW dialog now correctly updates when the description is changed within the pump curve edit dialog (explicit mode).

Corrected Zone Airflow Distribution dialog interface [ID-35388]: Zone Airflow Distribution dialog columns can now be resized.

Corrected the conversion of Setpoint values in the data table when using IP units [ID-40433]: Setpoint values are now converted correctly in the data table when using IP units.

Offsets applied on controller when negative value specified [ID-43642]: When controller variation is set to profile and setpoint offset is applied as negative value the correct adjustment is applied.

Range validation improved when exit chilled water loop dialog [ID-45846]: Chilled water loop dialog now accepts the default values when cancel edits.

Added minimum size to data table dialog [ID-63320]: Added minimum width to tabular edit data table dialog to prevent erroneous errors.

Prevented a crash when opening corrupted models [ID-65901]: Prevented a crash caused by the chilled water loop of certain models which held an invalid value. User can edit the loop and correct the highlighted issue.

Prevented a rounding error when changing to IP units [ID-66856]: Prevented an error from occurring due to an incorrect rounding in IP units of the flow rate.

Number of primary circuit pumps now correctly updated [ID-74005]: The number of primary circuit pumps is now correctly updated when a new chiller is added on chilled water loop and default setting (dedicated chiller pumps) is selected.

Prevented fan end use from being populated with duplicate entries [ID-74832]: Prevented fan end use for chilled water loops from being populated with duplicate entries when switching tabs.

Corrected secondary pump DT being incorrectly set [ID-77502]: Pump power dialog is now correctly updated for the secondary circuit of a Chilled water loop when editing the associated DT.

Apache simulation settings are correctly saved when accessed through the HVAC System Wizard [ID-77757]: Apache simulation options are now correctly saved when set via the HVAC System Wizard.

Systems generated via HVAC System Wizard sizing calculation corrected [ID-77930]: The sizing calculation of DOAS systems is improved to avoid design calculation failure related to an error on Heat Transfer Loop so that error no longer interrupts system loads calculation step.

ApacheSim

Comfort Settings added to Space Data [ID-]: To support thermal comfort calculations (TM52, ASHRAE 55) a Comfort tab is added to Space Data and Building Template Manager to allow settings Clo, Met and variables specific to ASHRAE 55 Adaptive thermal comfort and direct solar radiation calculations.

Improved error reporting when invalid weather file is used for Apache simulation [ID-50810]: Added a new error message when a simulation is run without a valid weather file selected so that multiple messages do not appear.

Error with ordinal use indexing corrected [ID-70062]: Improved error in calculation of ApacheHVAC heat transfer loop that resulted in apache simulation error.

Apache results description is now correctly saved when closing [ID-73550]: Apache results description is now correctly saved after user edit when selecting "Save and close" in the simulation settings dialog.

Prevented a stall in simulation for certain models [ID-74723]: An improvement is made to apache simulation when encountering an edge case in calculation of ApacheHVAC Hot Water Loop DHW Heat Exchanger so that simulation does not stall on first timestep.

APLocate (Weather)

Updated ASHRAE design day temperature variation profile to fit 2009 curve [ID-66653]: The ASHRAE design day temperature variation profile has been updated.

ASHRAE Loads

Loads calculation can be run for heating or cooling only [ID-15764]: An issue has been resolved which prevented running a calculation when only one option (heating or cooling) has been selected when analysis type: ApacheHVAC Room and HVAC Zone loads has been selected.

Heating/Cooling Loads calculation settings only displayed when relevant [ID-16402]: When the heating/cooling loads checkbox is unticked, the settings for either the heating/cooling loads are disabled.

Loads Report

Improved CIBSE load calculations to deal with large room area [ID-55693]: The CIBSE load calculations have been improved to better handle exceptionally large floor areas.

Prevented layout error causing system loads report generation to fail [ID-71526]: The system loads reports can now be successfully generated when ApacheHVAC plant equipment exceeds the page size.

ApPro (Profiles)

Cancel option improved when creating new profile [ID-9272]: When a profile is newly created, clicking cancel no longer retains the new profile and now correctly deletes the profile.

Corrected compact profiles default holiday times [ID-29219]: Default holiday hours have the correct default times assigned to them. These are now inactive as standard and set as below;

> System occupied - 08:00 > 18:00
>
> System extended - 06:30 > 18:30

Day group labels are now displayed correctly for Compact profiles [ID-76806]: Day group labels are now correctly shown in the compact profile editing dialog.

Constructions

Prevented commas from being written incorrectly in the internal shading device dialog [ID-74021]: Commas are now written in correctly for formulas for the raising and lowering of shading devices.

FlucsPro/FlucsDL

Improved zoom functionality for drawing a task area [ID-14670]: Improvements have been made to the zoom in and out tool to ease functionality when drawing a task area.

Reports show correct reflectance values [ID-42369]: User edited reflectance values in FlucsPro are now correctly shown in reports.

Translucent shades not supported in FlucsDL calculations [ID-50643]: Prevented translucent shades from being displayed in FlucsDL as they are not supported.

MacroFlo

Wind pressure coefficients limits increased [ID-73397]: Wind pressure coefficient range has now been increased for the range -10 to 10.

VE Scripts/api

Improved VEScripts editor [ID-34346]: VEScripts editor now saves scroll position on all open tabs when switching between scripts.

VEScripts dialog loads correctly [ID-49164]: Prevented the VEScripts dialog from flashing when first opened with open tabs.

Corrected typo in VEScripts API [ID-51247]: Corrected a typo in the VEScripts API (the previous spelling is still supported).

Prevented a crash in the model summary sample script [ID-53429]: Prevented a crash in the model summary script when run with an unsaved project.

Improved VEScripts go to line functionality [ID-58577]: VEScripts go to line functionality now correctly goes to the error line when double clicking the error message.

Corrected macroflo.py sample script [ID-73010]: macroflo.py sample script has now been updated to run without error.

Improved error reporting for FFD csv [ID-75258]: Improved error checking and reporting for incorrect headers in the FFD csv file.

General

Full meter paths are now shown when being assigned [ID-29509]: Full meter paths are now shown in the meter dialog and in meter dropdowns rather than each path element.

Collapse all now does not collapse to model node [ID-32851]: The collapse all option in the model browser has been modified to only collapse displayed groups and not up to model level.

Removed obsolete menu items for Compliance modules [ID-34089]: Removed obsolete menus for NECB, PRM and IECC Compliance modules.

HVAC zone view added to all Compliance modules [ID-34258]: HVAC zone view has been enabled for all compliance modules except for UK & Ireland.

Improved project overwriting [ID-38655]: When a project is overwritten by a new one all files relating to the previous project are removed.

Project notepad wraps text [ID-50705]: Text now wraps to the size of the textbox making it easier to read.

Keys/Licence System

Improved error checking in request licence dialog [ID-65368]: Improved error checking and reporting in request licence dialog for unsupported characters.

Master Templates

Improved Master Template Wizard to prevent unresponsive dialog [ID-79924]: Improved the Master Template Wizard to prevent the dialog become unresponsive after repeated clicks.

Navigator for ASHRAE 901. PRM

Navigator for ASHRAE 90.1 2016 [ID-]: Navigator for ASHRAE 90.1 2016 App G PRM and Prescriptive methods added. Approved for Florida Building Code 2020 (when location/state is set to Florida)
Note: requires a new licence key, you can refresh your licence to check if this is already available on your account, else contact sales@iesve.com.

Updated descriptions for PRM 2013 Baseline Systems [ID-19353]: Descriptions have been added to 2013 baseline systems via the Import Systems dialog.

Whole building method Infiltration calculation corrected [ID-77077]: When choosing to set Infiltration via whole building method from Navigator action the correct values are applied to rooms based on user selection.

Space/room group assignment only lists rooms [ID-29215]: An improvement has been made which filters out Shades and Adjacent Buildings by default, stopping them from being listed for space/room group assignment via the PRM navigator.

Removed duplicate WWR rows in BPRM report [ID-32840]: Removed duplicate data rows in the proposed vs baseline design table.

BPRM report to refers to LEED 2012 [ID-43345]: BPRM reports for 2010 and 2013 now correctly reference LEED 2012.

Corrected prototype template "Space: Religious building" [ID-47950]: The Space: Religious building template now correctly has the correct proposed power density.

Data centre energy now correctly reported in PRM compliance report [ID-69348]: The data centre end use energy is now correctly reported within the PRM compliance report

Improved error reporting for PRM exterior lighting dialog [ID-69516]: Improved error reporting for categories that do not have an end use.

Prevented script error (hanging) when generating Florida compliance report [ID-75224]: An error preventing generation of the Florida compliance report has been prevented for certain models.

Baseline reheat energy adjustment now available for Florida report [ID-79928]: The baseline reheat energy adjustment option is now available for the Florida compliance report.

Prototype data can now be correctly imported with composite layers [ID-75778]: Corrected an issue that was preventing constructions from being imported when they contained composite layers.

VE Navigator for LEED v4

Prevented erroneous error message in LZCT dialog [ID-54014]: Prevented an incorrect error message being displayed when opening the LZCT dialog from the Navigator for LEED.

VE Navigator for One Click LCA

Register link in OCL navigator now opens browser in the foreground [ID-45012]: Corrected the OCL navigator to open the browser for the register link in the foreground.

One Click LCA report now more accurately outputs PV generated electricity [ID-80029]: PV generated electricity is now correctly reported in the One Click LCA report.

NECB Navigator

Reference fan sizing step removed from NECB navigator [ID-33444]: Reference fan sizing step has been removed from the NECB navigator as it is redundant.

Removed 0 degree only option from the HVAC wizard when accessed from NECB navigators [ID-51072]: Removed the redundant 0 degree only option from the HVAC wizard when accessed via the NECB navigators.

ModelIT

Improvements to the preview navigation on SHP/GML import [ID-14705]: Improvements have been made to make the preview navigation more intuitive, with enhancements to the zoom and pan controls.

Enhanced the instruction shown in the preview window on SHP/GML import [ID-14706]: The import instruction has been refined to make it clearer on actions that can be performed.

Colour thumbnail updates when a new colour is assigned for a space [ID-18266]: When selecting a new colour for a space, the thumbnail of the newly assigned colour correctly changes.

Improved gbXML import [ID-44735]: Prevented VE from freezing when importing problem XML files.

Prevented translucent shades from being turned off with local shades [ID-50626]: Prevented the local shades toggle from turning translucent shades on and off.

Prevented a mismatch of freestanding PV panel count between ModelIT and Apache [ID-56996]: Added the capability to remove freestanding PV panels that had become corrupted and were visible in Apache but had no geometry associated.

Prevented a crash from occurring with freestanding PV panels [ID-60765]: A crash has been prevented when manipulating freestanding PV panels.

Copied PV panels are now correctly recognised by Apache [ID-77965]: Copied PV panels are now correctly identified by Apache in the electricity generators dialog.

Prevented glazed partitions being added to adjacent buildings [ID-58885]: Prevented glazed partitions from being added to attached adjacent buildings.

Prevented openings from being added to adjacent building/local shade [ID-59442]: Prevented openings from being added to adjacent buildings and local shades.

External wall area now correctly reported after space has been scaled [ID-65498]: External wall area is now correctly calculated after an object has been scaled.

Surfaces can be placed at surface level [ID-77541]: Openings can now be correctly placed at surface level view in ModelIT.

RadianceIES

Dynamic results multi-view option added [ID-]: Option to quickly select any dynamic results output on WP Grid tab and show all similar outputs for other rooms on Model Viewer 2.

Window labels drawn on workspace [ID-]: Option to draw window labels on model workspace for;
 - sDA allows to view window groups which correspond to the different simulations and results outputs
 - VSC allows to view the window index numbers matching to results grid.

Sensor table updates per selection [ID-22434]: The sensor table correctly updates/clears the sensor data for a selected room, depending on if the room has sensor data or not.

Corrected IP unit conversion for WP height and grids fields [ID-46090]: IP units are now correctly converted for use in the WP height and grid fields.

Working Plane interface improved [ID-66997]: Working plane height can be set from menu and RadianceIES view interfaces. When workspace is refreshed then view will reflect user settings.

Glare can now be analysed regardless of file location [ID-71791]: Glare can now be analysed regardless of where the luminance image has been saved.

SunCast

Solar altitude results are automatically displayed [ID-47362]: Solar altitude results are now automatically loaded when solar shading calculations complete.

Prevented a crash from occurring when running Solar exposure [ID-57002]: Prevented a crash when attempting to run a solar exposure analysis without a valid Apache licence.
Note: licence is required to be purchased for this analysis.

Improved missing surfaces reporting in SunCast [ID-57987]: SunCast will report problematic surfaces which may not be drawn correctly when images are generated.

Prevented a shading file error running solar visualisation calculation [ID-69401]: Prevented a shading file error for certain models and improved user feedback on fixing the error.

VE Compliance

Scottish accreditation scheme list is now displayed correctly [ID-76844]: Scottish accreditation scheme names are now displayed correctly within the dropdown list.

Connected spaces now have correct height written out after SBEM compliance simulation [ID-79603]: Prevented an incorrect height being used for connected spaces when running an SBEM compliance simulation.
Note: as of VE 2019.3 64-bit SBEM is included for all VE-SBEM routes and so user should avoid connecting spaces when using this version as it has a higher rooms limit which can run all level 3 buildings.

VistaPro

Comfort outputs enhanced to include ASHRAE 55: 2013 & 2017 [ID-]: The Comfort option on VistaPro is extended to offer csv summary outputs for TM52, ASHRAE 55 Analytical method, Adaptive method and direct solar radiation method.
Select spaces to analyse then click Thermal Comfort option on toolbar to choose standards you wish to assess.
Note Comfort settings are now applied per room on the Comfort Tab of space data.
When applied additional outputs such as PMV for the chosen method are added to room variables.

Blind state added as an output variable [ID-]: State of a blind (up or down) is output for windows that have local external and/or internal shading devices specified as part of their construction. This is an opening level variable.

Improved functionality using VistaPro Table [ID-15816]: An improvement has been made to allow scrolling via the wheel mouse in the Table window.

End use energy reporting corrected for electric air-cooled chiller [ID-18548]: When network is served by electric air-cooled chiller the end use reporting is corrected so that space cooling and heat rejection are in the correct categories.

Description on a results file retained when Save As project to a new name [ID-29178]: Resolved an issue with the description on a results file not being retained when a new copy of the project is saved via Save Project As.

Default weather file retained when refresh results [ID-29184]: Issued resolved stopping the default weather file disappearing when refreshing the Files section in VistaPro.

Default variable selection changed [ID-34020]: A default variable is no longer automatically selected when a category is selected by the user.

Apache simulation results file description is now correctly updating when altered [ID-67531]: Results file description is now correctly updated when altered by the user.

XY Plots update from Selected Dates preference [ID-34565]: Settings >> Chart Preferences option is read by XY Plot. When unticked the vista view will be locked to yearly view and when ticked will show only selected date range.

Improved variable selection when viewing baseline model [ID-61062]: Room variables are now correctly selected when selecting a room with the baseline model.

Updated unit labels in OpenEI Tariff tool [ID-77674]: Unit labels have been corrected in the OpenEI Tariff Tool.
Power Adjustment is $/kWh/%
Daily rate input is $/day
Correction to G-PPPS label