



VE 2019.2.0.0

Release Notes

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VE 2019 Feature Pack 02 Changes

Apache

Copy space attribute disabled for multiple spaces [ID-29172]: Apache copy space attributes button is now disabled when more than a single space is selected.

Energy meters conflict resolver correction [ID-48410]: The heat recovery energy meter is now correctly picked up by the energy meter conflict resolver allowing the user to select a replacement.

ApacheSim

PV modelling simulation error corrected [ID-55485]: A correction has been made to allow a simulation to be ran with both translucent shading and free standing PV panels within a model.

Null Link error corrected [ID-56177]: Prevented internal walls being incorrectly paired with internal walls from other spaces which had resulted in Null Link error in simulation.

ApacheSolar improvements to solar gain calculation [ID-58181]: Apachesolar (simulation preference to track sun path through non-connected spaces) is improved so that solar radiation is correctly tracked in cases where blinds are present in the window (raised and lowered cases now matching Apache more closely).

Error message improvements [ID-49773]: Improvements have been made to error messages when running simulations using Apache Solar. Users will be informed in instances when they need to rerun SunCast.

Prevented a simulation error when HVAC network has low flow across a WWHX [ID-56795]: Previously an Assertion error would be displayed when ApacheHVAC detailed components were included in a simulation output when there is a low flow across a WWHX.

Cooling tower fan power reported correctly [ID-54939]: The erroneous aggregation of a cooling towers loop distribution pump on the cooling towers fan power meter results has been corrected.

RadianceIES Link: sensor calculation re-runs automatically [ID-41817]: If model location has been changed since last sensors calculation and RadianceIES link is ticked on simulation settings the n the sensors calculation is re-run as part of the apache simulation.

ApacheHVAC

Airside economizer improvements [ID-53535]: The controls and system parameters links are improved to allow effective operation of airside economizer in prototype systems.

Corrected Heating Thermostat controller setting [ID-57122]: Any controller using the Heating Thermostat link will now have the "Action with High Sensor Input:" set to off.

Corrected System Parameters links in HVAC controllers [ID-58128]: When changing the link of a controller/clicking the re-apply button the correct time switch profile is assigned.



Midband variation is now set correctly for Prototype HVAC systems [ID-31832]: Midband variations have been corrected for all cooling coil LAT per zone RH controllers on all PSZ prototype HVAC systems.

Prototype system 03 & 04 'Cooling Coil - full cooling LAT band' improved [ID-51813]: System type 03 and 04 updated so that cooling coils cooling LAT have correct on continuously timeswitch set.

ECB system 11 Corrected Midband Variation [ID-57039]: The Midband variation control now sets correctly for cooling and heating coils for ECB budget system 11.

Prevented a crash when assigning default ID's for HVAC systems [ID-29220]: A crash has been prevented when clicking the assign default IDs button within the "User action required" dialog when the network contained invalid profile IDs.

VRF reference field must contain text [ID-50639]: When adding a VRF system the reference can no longer be left blank.

Added tooltips in HVAC System Wizard [ID-50791]: Tooltips were added for the icons in analysis and reporting section of HVAC System Wizard.

Prevented system parameters dialog from incorrectly opening [ID-54528]: Prevented the system parameters dialog from being opened in place of component/controller dialog on certain occasions

Crash prevented in HVAC wizard [ID-55641]: A crash was prevented when opening the HVAC design wizard with a component or controller currently selected.

Corrected Thermal Storage condenser loop flow setting [ID-57039]: With Thermal Storage configured, the CHWL water loop no longer erroneously overrides the flow control setting to constant and remains as variable.

Corrected issue with Profile Option on VRF system [ID-57896]: When setting a VRF system Outdoor unit control to a profile option, the correct profile value is simulated in the results file.

Loads and System Sizing Reports

Model orientation added to Loads Report [ID-40709]: The model orientation is written to the Project and Climate page of the Loads Reports.

Non-loop Plant Equipment added to Loads Report [ID-30069]: Plant equipment which is not part of a loop in the ApacheHVAC scheme is reported in the Plant Loops and Equipment section of the System Sizing report. Includes details of; DX Chiller, Unitary Cooling System, Water to Water Heat Pump, VRF Heating and Cooling system, Air to Air Heat Pump, Generic Heat Source and Electric Heating Coil.

Prevented model crash when generating system loads reports [ID-58749]: A crash has been prevented when attempting to generate system loads reports.

ApLocate

Corrected saving custom design weather data in ApLocate [ID-33442]: ApLocate now correctly saves custom design weather data.

WDView removed from Standard Data and Weather Files installation [ID-]: Design Weather Data WDView older than version 5 is removed from the Standard Data and Weather Files installer. Older versions if required can be obtained by contacting IES.

Navigator for National Energy Code of Canada for Buildings (NECB) – 2011

NECB Reference 03 system correction [ID-46199]: The time switch profile for the cooling coil controller for NECB 2011 reference 03 system remains set to 'on continuously' after running room loads and system sizing calculations.

Navigator for ASHRAE 90.1 PRM

Multiple heat rejection devices on chilled water loop [ID-59556]: It is possible to model multiple heat rejection devices (Cooling Towers or Fluid Coolers) on a Chilled Water Loop.

Fans and Pumps interface updated [ID-59629]: New interface provided for specifying power of Fans and Pumps in ApacheHVAC systems.

Space Data link improved for Zone ventilation requirements [ID-40600]: Space data link is improved to better support ventilation requirements for zones which are made up of spaces with different demands which can be aggregated for the HVAC Zone assignment instead of the previous method which was taken directly from the Master Space in the Zone.

BPRM report no longer double counts zones [ID-31531]: BPRM report no longer double counts zones if they have been assigned to both space by space and building type groups.

BPRM table title corrections [ID-53819]: Titles for reports being displayed in the wrong orientation has been corrected

Corrected Florida compliance report not generating [ID-63143]: Florida compliance report now generates after running 90.1-2013 energy simulation for a complete year with 60 min reporting intervals.

Prevented error when generating Baseline system sizing report [ID-57188]: Prevented a KeyError: spaceID when running a system sizing calculation for a 0 degree baseline network and generating a baseline system sizing report (PRM 2010 Navigator).

Improved baseline HVAC systems [ID-54864]: ASHRAE 90.1-2010 Baseline Systems 9 & 10 have been updated so the nomenclature is more in line with the other baseline systems. The heating source for system 9 now references the correct furnace and efficiency.

'Import and Edit Baseline System' step opens library at correct section [ID-48336]: The 'Import and Edit Baseline System' step in the ASHRAE 90.1-2004 and 2007 - App. G PRM navigator opens the HVAC library with the 90.1 PRM 2007 Baseline systems section expanded.

PRM navigator steps clarified [ID-51844]: Manually extrude objects step in the PRM navigator has been renamed to be clearer.

Improved Lighting Power Density reduction tool [ID-56362]: The LPD values for Proposed are applied as entered by user and baseline will apply template value for the relevant space/building type. LPD dialog reads back in the correct value as applied to proposed in even where gain is split per lighting controls.

Corrected people gain occupancy assignment [ID-59452]: When generating a baseline model, people gains are no longer being overwritten with template values. People gain occupancy is now correctly copied over to the baseline model.

Baseline generation internal gains behaviour modified [ID-65127]: The Baseline model generation is changed regards internal gains so that user edits to proposed are copied over to Baseline when it is generated else appropriate values are taken from the Navigator interfaces according to ASHRAE 90.1 where set for lighting, receptacle, people.

ASHRAE Loads

Improved empty file name error reporting in HVAC [ID-15077]: A more informative error message is now displayed when the results file name in ASHRAE loads calculation settings dialog is left blank.

Construction Database

IGSDB Link implemented [ID-57272]: Option is added to CDB to allow user to connect to International Glazing Database and import glass materials for use in VE Constructions. Option is found on CDB sidebar or via View menu which opens a dialog to search and filter then choose what to import to the Project Materials.

Improved target thermal mass edit box for IP units [ID-36458]: The target thermal mass edit box has now been made unit aware and will correctly set it itself when switching between IP and Metric units.

Licence keys

Updated licence expiration logic [ID-52779]: VE now launches successfully into Viewer mode when launched with expired keys, allowing the user to refresh or input a new activation code as needed.

Activate Software button removed from IES User Info [ID-]: The IES User Info dialog which appears on startup now has the Activate Software button removed so that legacy licence system doesn't inadvertently overwrite licence on user machine.

General

Display improved for 4k screens [ID-50477]: The main VE interfaces are improved so they can display on 4k resolution screens. Further interfaces found to have display problems at high resolution can be submitted to feedback@iesve.com

A further option to use System scaling (Windows) can be found under Tools >> Preferences >> General Preferences if required.

Prevented VE launch error when a PC name contains special characters [ID-56954]: The VE software will launch without any issues if the users' PC name contains any special characters.

Prevented a crash on launch [ID-53965]: A correction has been made that was preventing the VE from launching on certain user systems.



RadianceIES and ApacheHVAC toolbar positioning retained [ID-29161]: The toolbars in RadianceIES and ApacheHVAC are now retained when VE is closed and reopened.

Start Page Starter Geometry improved [ID-57641]: The Starter Geometry that can be used for new projects is improved to have some spaces marked as Plenum/Void where more realistic.

Start Page User presets in weather and location manager correctly deleted [ID-29221]: Users presets are now deleted correctly when apply is clicked between clicking delete and ok.

Start Page Crash prevented when changing footprint shape [ID-46829]: In the Geometry Wizard, a crash has been prevented when changing the footprint shape.

Start Page Invalid perimeter no longer set when changing footprint shape [ID-46830]: In the Geometry Wizard, invalid perimeters are no longer created when changing the footprint shape.

Project Notepad now supports multiple selections [ID-50620]: You are now able to select multiple items at a time in the Project Notepad.

Tasks in the Project Notepad can be ticked by a single click [ID-50622]: Project Notepad tasks now only require a single click to tick the checkbox.

Report translation widget has been removed [ID-53786]: All HTML based reports have had the retired language translation widget removed

Task manager relocation has been improved [ID-53838]: Simulation Task manager dialog now repositions itself more consistently when changing number of screens

Improved Task Manager dialog behaviour [ID-62786]: Issues that prevented accessing the simulation task manager are improved so that it can take focus from VE to check simulation progress or download results.

Improved Content Manager behaviour [ID-63571]: The content manager dialog correctly repositions itself after initially being placed on the second screen of a dual monitor setup then switching to single screen

Improved UI display in HVAC wizard (4K) [ID-64855]: When using IES native 4K scaling and after resetting the column width in the HVAC wizard, all columns will still be visible.

Lisi

Lisi help failing to launch correction [ID-27808]: Lisi help is now able to be launched correctly from both the F1 button as well as the help button.

MacroFlo

Custom Exposure Coefficients option added [ID-53022]: Interface is provided to allow user to add and edit custom wind pressure coefficients in project exposures for use with opening types.

MacroFlo opening type dialog improvements [ID-42708]: Only a single MacroFlo opening type dialog can be opened at a time.

ModelIT

Precision changes [ID-16710]: The precision to which model endpoints are stored is reduced to 3 decimal places in metric (or equivalent when working in feet-inches). This is intended to improve model stability and performance while allowing enough detail in modelling for any building designs.

Config and Heal Scars tool added [ID-16710]: Toolbar options added for Config (create matching endpoints on a surface when an adjacent space endpoint meets that surface) and Heal Scars (remove additional split surfaces/endpoints when adjacent space is moved away from a space).

Locks Improved [ID-23346]: Snapping to endpoints and model locks is improved to be easier to use and more intuitive.

Number of sphere segment correction [ID-47214]: When an invalid number of segments is detected it will reset the value to be within the 6 - 360 range. This prevents the "Enter an integer between 6 and 360" error.

Improved glazing addition methods [ID-53697]: Objects that do not require glazing can no longer have it added through the right click menu.

Corrected split spaces vertically tool [ID-54657]: Prevented the loss of thermal templates, constructions and room groupings when using the split spaces vertically tool.

Adjacent building and local shades can be moved/rotated [ID-56135] Correction made to ensure all object types can be moved or rotated.

BIM Workflow

BIM Import Workflow improved [ID-40477]: BIM Import workflow is moved to new project area on Start Page to give easier access and streamlined options supported by more tidying options on new ModelIT toolbar buttons to Heal Geometry, Identify Missing Spaces, Cap Volumes etc.

BIM Import Template Mapping [ID-20795]: Template Mapping option is provided for BIM file imports allowing to quickly assign VE thermal templates as part of file import.

Monodraught Cool-Phase Navigator

Monodraught support improved [ID-19866]: Monodraught COOL-PHASE components are now correctly imported into VE. As well as system loads calculations can now be done in the Monodraught navigator.

Monodraught HTM Navigator

HVAC network imported correctly [ID-50569]: Corrections have been made to ensure that the HVAC network is imported correctly.

RadianceIES

15k Lux Sky [ID-57012]: New sky option is provided to model 15k Lux Sky as required for Hong Kong building authority assessments.

Perez sky option added [ID-56984]: LM83 Compliant Perez Sky option is added to simulation options for advanced dynamic simulations. In Simulation options dialog the default for a new project is to use Perez sky and a resolution of 577 patches.

Dynamic Calculation Settings modified [ID-56988]: When calculation quality is set to Dynamic the hard coded present parameters are revised to give accurate results with a faster simulation time. See IES Technical Support for details of previous and new quality settings if required.

Daylight Coefficient reuse option added [ID-57636]: When running multiple advanced dynamic daylight calculations an option is given to reuse daylight coefficients from previous calculation, if appropriate this can reduce calculation times.

Vertical Sky Component results display improved [ID-57093]: When viewing VSC results on VSC tab a checkbox is provided to toggle between the results being shown by each window or the window index number as shown on the results table. On results grid the Zone, Surface and Opening columns can be clicked to quickly show only results for that selection on the workspace.

Prevented a crash within RadianceIES [ID-30295]: A crash has been prevented when using the copy button in the WP grid tab within RadianceIES.

RadianceIES surface properties dialog positioning has been improved [ID-30443]: The radiance surface properties dialog now repositions itself correctly if its position has been saved on a secondary screen that has been disconnected.

Improved WP Grid view statistics [ID-36096]: Increased the size of the text in the statistics legend. New buttons are also implemented to increase and decrease the size of the text.

sDA analysis improved so that South West and South East windows are grouped correctly [ID-37996]: RadianceIES window groups now ignore erroneous outlier points on certain geometry configurations that were causing incorrect window groups in sDA simulations.

Sensor calculation corrected for models including inactive spaces [ID-40063]: For certain models RadianceIES was recording low illuminance values when model includes inactive zones, this has been corrected so that each active space writes out the appropriate sensor position and results for Apache.

WPGrid tab Corrected displayed results when changing level [ID-44283]: The correct results are now initially displayed when changing level. Previously results that should have been hidden were displayed.

Invisible space warning improved [ID-46554] Only a single Invisible space warning dialog is now shown when running simulation rather than a warning for each space.

Pattern scale value retained [ID-47419]: In the Surface properties tab, the Pattern scale value will be retained when switching between applications.

Advanced simulation default quality settings updated [ID-49646]: The VSC simulation quality is now set to 'VSC' by default. All other advanced simulations will be set to 'Dynamic' by default. A warning will be shown when changing the quality for advanced simulations.

Corrected Radiance dynamic results contour/colour bands display [ID-57248]: After running any advanced dynamic simulation, the contour results display and cover the whole WP floor area when rooms are connected.

BIM Import Navigator

Corrected an issue in the BIM navigator if OS language is German [ID-39535]: Corrects an issue in which the text in the BIM navigator was incorrect if the windows OS language was set to German.

SunCast

Set surfaces visibility correction [ID-29347]: Set surfaces now only changes the selected object/object group's visibility.

Prevented error in [Rooms] data when loading solvis results [ID-55578]: Error no longer occurs when loading solar vis tab results after simulation.

VE Compliance

Corrected provisions tab in VE Compliance from not being re-enabled [ID-31152]: Provisions tab is now correctly re-enabled when the system type is changed from generic to a valid type for meter provisioning.

Improved section 6 SBEM file writing [ID-32619]: Address fields from building and system data now correctly write to file and thus propagate over to the xml

Improved tab system in NCM Wizard [ID-41246]: Corrected an issue in which ventilation and system controls tabs were unintentionally re-enabled within the NCM Wizard when changing from different tabs.

Improved VE compliance aux energy simulation [ID-64008]: When running VE Compliance simulation with parallel simulation on, a warning message is now displayed to the user to inform them that parallel simulations should be used for final compliance submissions.

VEScripts/API

VEScripts editor go to line correction [ID-47676]: The go to line feature of the VEScripts editor output pane now works correctly when the file path contains the word 'line'.

Conductivity added to get_ and set_ properties for glazed materials [ID-49835]: Conductivity is now included in the get_ and set_ properties methods for glazed materials.

get and set_ncm_lighting methods have been improved [ID-51073]: get and set_ncm_lighting methods now return and set different_sensor_control_back correctly in accordance with the UI.

WeatherFileReader has been updated in VEScripts [ID-52981]: A new weather_variable enum has been added to make choosing variables clearer, the documentation has been updated to reflect this.

Corrected assign_construction() method functionality [ID-60211]: Running the assign_construction() method correctly assigns constructions for partitions/internal walls.

Prevented error when running example overheating script [ID-61614]: This script has been updated to be more robust when annual simulations have been run to ensure no error occurs if there is not a full year of data.



Updated VE Scripts api_examples [ID-61806]: The HVAC folder has been included in the installer so users have access to the HVAC script examples via VE Scripts.

Corrected network issue with HVAC_loads_to_xls script [ID-63524]: When running the HVAC_loads_to_xls script the network file path /name is correctly loaded.

VistaPro

Results order is now retained in VistaPro [ID-29175]: The order of results files is retained when clicking the refresh button.

Refresh results retains weather file [ID-29185]: The correct weather file is now always re-loaded when the refresh files button is clicked.

Prevented crash in VistaPro from bad characters in file name [ID-30616]: Bad file name characters can no longer be used when saving in the range tests dialog.

Energy report dialog has been improved [ID-51143]: The conditioned floor area for the energy report is now automatically calculated.

Corrected TM52 report filename issue [ID-54583]: Prevented TM52 report filenames being truncated when a full stop is included in the name.

Crash prevented when using XY plot tool [ID-56906]: A crash has been prevented when the plot was trying to read a value for the 1st of January of the next year.

Corrected UI behaviour in the XY Plot dialog [ID-56907]: The Next and Previous buttons no longer require multiple clicks to perform the desired action. Next and Previous buttons also become greyed out when at the limits of the highlighted areas.

Corrected XY plot tool Test behaviour [ID-64956]: When running an XY plot test the results reset to annual view each time a new test is run.

Corrected XY plot tool highlighted area order [ID-64960]: When running an XY plot test, clicking next shows the next highlighted area in the correct order.

Prevented crash opening start menu in VistaPro [ID-62736]: A crash has been prevented when a graph is opened in VistaPro with room level data and the start page is opened.

VE 2019 Feature Pack 01 Changes

ApacheHVAC

CIBSE Room Loads can be used for Room Sizing [ID-]: CIBSE Method can be selected for room loads as part of system sizing process in HVAC System Wizard.

NCM Equivalent Systems included in Library [ID-]: Equivalents of the Standard UK NCM System types are included in ApacheHVAC Prototype system library and HVAC System Wizard.

Note: these are intended for design calculations only and UK Building Regulations Compliance are still required to set up apache systems through NCM System Wizard as normal.

Fixed controller preview chart x-axis inversion [ID-220357]: Entering error-specific values for deadband and set point no longer inverts the x-axis of the on/off controller's preview chart.

Fixed pump performance curve parameter label [ID-21448]: A typo in the pump performance curve parameter label for Hot Water Loops has been corrected.

Corrected minimum outside airflow for DCV systems [ID-24612]: The calculation for minimum outside airflow in DCV single-zone recirculated air systems has been corrected.

Prevented crash when editing customised prototype system [ID-27796]: A crash has been prevented when editing a custom-made multi-layer multiplex inside an imported prototype system.

Prevented crash when adding controller to a blank canvas [ID-28713]: A crash has been prevented when adding a controller to an empty canvas and clicking Ok on the sensor dialog.

Removed error on cancelling System schedule & setpoint prefix [ID-29162]: An error has been prevented when attempting to cancel the edit of an SSS schedule prefix.

Updated VRF system import type [ID-34546]: VRF systems imported from the prototype library have been updated to import with the correct type (air source or water source as labelled).

Updated AAHP default backup heat source [ID-36244]: The default backup heat source for air-to-air heat pumps in the prototype system library has been updated to electric resistance.

Corrected ASHRAE 170 typo [ID-42516]: A typo in the ASHRAE 170 categories has been corrected.

Warning dialog corrected for System schedules and setpoints upgrade [ID-47906]: The warning dialog for HVAC SSS upgrade now references the correct version of VE.

ApacheSim

Error improved [ID-]: Error messages when Apache simulation encounters an error are improved for common cases to be more helpful.

Instances where 'apache terminated unexpectedly' or 'encountered an error' are being displayed should be reported to IES Technical Support for further improvements.

Removed incorrect characters in error message [ID-49097]: Error message reporting invalid characters has been fixed.

Improved error message helpfulness for incorrect date selection [ID-50630]: Improved the information provided by the error message reported when an invalid date is used for a simulation in Apache.

Removed ground contact profile linkage setting from navigators' apache settings [ID-33871]: The setting for linking Notional and Actual buildings' Ground Contact Profile has been removed from Apache settings when launched via a navigator (is available for UK Regulations VE Compliance only).

Apache View

Removed erroneous profile preview sub-hourly spikes [ID-25562]: Incorrect sub-hourly spikes shown on preview charts for profiles have been removed.

Updated tabular edit two-value set points labels [ID-32907]: The labels for the two-value set points in the Apache tabular edit view have been changed to more clearly show main and setback set points, matching the Building Template Manager.

APLocate (Weather)

Improved error messages for incomplete weather data sets [ID-35498]: Error message is shown when design location has an incomplete weather data set.

Constructions Database

Improved Ground-Contact Floorplans UI [ID-29240]: The groups dropdown in the Ground-Contact Floorplans dialog has been expanded to accommodate larger group spaces names.

General

Improved auto-save settings [ID-29264]: The auto-save preferences selected are now saved globally across VE sessions and projects.

Improved SHP/GML Import UI [ID-13709]: Some UI improvements have been made to the SHP/GML Import window.

Resized notepad created alerts [ID-29249]: Notepad created alerts have been resized to accommodate the warning icon regardless of alert content.

Enhanced notepad saving [ID-29250]: Notepads have been enhanced to save on a per-project basis, rather than per-session.

Corrected notepad settings [ID-50586]: Empty alerts can no longer be created.

Corrected BIM import Help links [ID-50804]: Corrected incorrect documentation from being shown when attempting to view the gbXML import documentation.

Keys/Licensing

Corrected dropdown initialisation in keys request dialog [ID-49728]: The keys request dialog has its dropdown initialised correctly so that correct licence requests types are sent to server.

Corrected PIN update on releasing keys [ID-49828]: User PIN update is now triggered correctly when keys are released without needing to restart the VE.

Updated automated keys system to include VE 6.1.1.3 [ID-52243]: Users whose licences are served via the new automated keys system will now be able to access VE 6.1.1.3 after refreshing their keys.

Licence Control corrected [ID-52243]: Help >> Licence Control and System Report will now show licence usage again.

Updated licence expiration logic [ID-52779]: VE now launches successfully into Viewer mode when launched with expired keys, allowing the user to refresh or input a new activation code as needed.

Enhanced logging for error reporting when launching VE [ID-52129]: VE logging capability has been enhanced to better enable developers to track down reported issues when parameter is incorrect error shown on startup. Technical Support team will instruct when this is required to be submitted.

Corrected MAC Address error when launching VE [ID-53511]: An error has been prevented when launching the VE with network licence keys hosted on a machine with Netbios TCP/IP disabled.

Macroflo

Improved error reporting for MacroFlo linked simulation [ID-45690]: The error message for a simulation being run with a MacroFlo link with no (or closed) openings has been improved to better guide the user to problems identified with unbalanced airflows.

ModelIT

OSM Import error resolved [ID-53536]: The error and crash when loading data from OSM has been resolved. Windows update had broken link to OSM server, this is now reinstated.

Model upgrading has been improved [ID-48150]: Prevented model geometry being lost in upgrade from 2018.1.1 as had been encountered on certain user upgrade scenarios in VE 2018.2 and VE 2019.

Display Space ID setting retained [ID-11366]: The "Display Space ID" setting is now retained across settings and projects.

Prevented error on initial assignment of glazing constructions [ID-12183]: Constructions are successfully assigned to glazing added via the "Add Window in Plan" tool, preventing an error on querying the opening.

Included zero-volume rooms in Model Report [ID-24860]: Zero-volume rooms are now included in the Model Report without the need to enable all space types.

Enhanced space subtraction logic [ID-29245]: Subtraction now works automatically when two spaces are selected, with the smaller volume subtracted from the larger of the selected spaces.



Corrected reported floor area calculation [ID-32905]: The floor area reported in the Model Report has been corrected to exclude holes.

Turned off automatic closing of DXF errors [ID-43177]: When a DXF error popup occurs, it will now stay on the users screen until dismissed.

Corrected void naming tool to include space name [ID-51589]: Voids created through the void creation tool are now named with the space name appended with the void name.

Navigator for ASHRAE 90.1 PRM

Option to copy Proposed HVAC Zones to Baseline added [ID-54569]: Right click menu option added to HVAC Zones browser to give option to copy Proposed HVAC Zones and Zones Groups scheme to Baseline building model.

Fixed loads calculations cancel operation [ID-19035]: Cancelling the Room and System Loads dialog while in Legacy Sim Mode no longer continues to run the simulation.

Corrected calculation of heating energy in BPRM report [ID-59334]: Space heating energy is now calculated correctly in BPRM report where previously had displayed a negative value.

ASHRAE baseline constructions are now imported correctly [ID-53865]: ASHRAE baseline constructions are now imported without error regardless of the presence of rooflights within PRM 2010/2013 projects.

Navigator for International Energy Conservation Code (IECC) – 2012

Enhanced accessibility of IECC dialogs [ID-34087]: Pressing enter on dialogs now correctly triggers the highlighted action as expected.

Updated help links [ID-34091]: The help links in Site Obstruction and Shading section now launch the browser to the correct location on the VE Help site.

Navigator for National Energy Code of Canada for Buildings (NECB) – 2011

Corrected population of NECB report [ID-49200]: NECB project details fields are now populated correctly from the data provided in previous steps.

NECB report layout improved [ID-49312]: NECB report headings are now laid out correctly to match tables.

Corrected logo hyperlink [ID-29224]: The NECB logo hyperlink now opens in the user's default browser.

Navigator for OneClick Life Cycle Analysis

Updated logo hyperlink [ID-45014]: When clicked, the OneClick LCA logo now opens the OneClick LCA website in the user's default browser.

Parallel Simulation Manager

Removed Running Merge status from Completed simulations [ID-28733]: The Running Merge status is now removed from simulations once the merge has been completed.

Removed idle simulations from task manager [ID-29227]: Idle simulations (created when cancelling simulations) are now removed from the task manager to reduce clutter.

RadianceIES

Fixed threshold values when viewing illuminance images [ID-50947]: Illuminance calculations threshold medium band now accepts values smaller than 2.

Corrected assignment of surface properties to internal ceilings and floors [ID-53093]: Fixed an issue where internal ceiling and floor properties were being assigned incorrectly to each other.

Corrected simulation of surface properties for floor and ceiling constructions [ID-53095]: Radiance simulations have been corrected to correctly utilise the user-set surface properties of floor and ceiling in an internal ceiling construction. This also corrects surface properties of internal ceilings on upgraded models.

Fixed threshold shading not appearing when using an AOI [ID-53791]: Threshold shading now appears correctly when viewing an illuminance image with an AOI active.

Corrected average lux display for low results [ID-29197]: Rooms with low lux levels (<0.01) now correctly display their average lux.

Re-ordered WP Grid bands [ID-30302]: The bands in the WP-Grid tab have been re-ordered to be more consistent.

Corrected ALE threshold display in MVII [ID-34331]: ALE results in Model Viewer 2 now correctly display the thresholds describing the visualisation.

Prevented crash with open images [ID-10272]: A crash has been prevented when switching to ModelIT view with an image open in RadianceIES.

Corrected legend units when viewing sDA results in MVII [ID-28868]: Legend units now correctly show as % when this option has been selected when viewing sDA results in ModelViewer 2.

Corrected sDA threshold display [ID-28869]: When viewing sDA window groups, the percentage area meeting defined criteria is displayed correctly.

Improved radiance toolbar tab switching [ID-29159]: The selected tab switches to Luminaire Settings when the Switch Daylight Off toolbar button is pressed, to be consistent with other toolbar button actions.

Improved checkbox disabling logic [ID-29160]: The Daylight Off checkbox now corresponds with the toolbar button's active state.

Improved accessibility of RadianceIES simulation time selection [ID-29195]: Settings are saved correctly when navigating with the keyboard in the RadianceIES simulation time range selection.

Improved invisible spaces warning [ID-46553]: When the "Invisible Spaces" warning is shown to users, clicking No no longer gives a Failed to Initialise error and the simulation is cancelled as expected.

User settings for image modifier retained [ID-47421]: User settings for the image modifier are now retained upon application switch.

SunCast

Enhanced solar shading design day checks [ID-20388]: More checks have been put in place for validating dates when running the solar shading calculation.

Fixed incorrect assignment of translucent shading [ID-50596]: Assignment of translucent shading when running a solar energy analysis has been corrected.

Improved simulation capabilities [ID-50875]: SunCast calculations have been improved to better handle models with complex surface geometry.

Fixed a mismatch in geometry when reading the solar shading file [ID-53785]: An issue with model geometry not matching the solar shading file for certain models file has been fixed.

Troubleshooting

Corrected Licence in Use troubleshooting report section [ID-53770]: The Licence in Use section of the Troubleshooting Report has been corrected to show the licences currently in use by users connected to the keys.

VE Compliance

Corrected reported S-TER-2002 value [ID-53187]: When running a Section 6 2015 ApacheSim EPC or Section 63 simulation, the S-TER-2002 value has been corrected using the model's equivalent Section 6 2010 Notional building. This will appear as an extra simulation running under the EPC Task in the Tasks Manager.

Standardised IES Criterion 3 Report with BRUKL [ID-13686]: The IES Criterion 3 report now reports the same criteria as the actual BRUKL report.

Corrected typo in tooltip [ID-31173]: A typo has been corrected in a toolbar action's tooltip.

Fixed an issue with exporting as VE 6.1.1.3 model [ID-52831]: An error stopping VE 2019 models that were exported to VE 6.1.1.3 from being opened has been fixed.

Prevented invalid licence error [ID-54844]: Running a Section 6 EPC while using the new automated keys system no longer triggers an Invalid Licence error.

VEScripts

Prevented a crash when running import gbXML script [ID-50805]: A crash has been prevented when running a gbXML import script.



Updated browser refresh on gbXML import [ID-34333]: The model browser is now refreshed automatically on importing a gbXML file.

Updated python script file picker icon [ID-34551]: The IESFilePicker VEScript utility has been updated to use the IES logo as its dialog icon.

VistaPro

Fixed loss of tariffs on Save As [ID-20178]: Tariffs are now saved with projects when they are saved, rather than requiring an export.

Corrected date range viewing within VistaPro [ID-50389]: The date range no longer resets to entire year when selecting additional files to view in VistaPro.

Energy report supports sub-60 min reporting interval [ID-54010]: Energy report annual values can now be displayed correctly if simulation reporting interval is below 60 mins.

Comfort parameters are now in line with CIBSE standards [ID-54577]: Comfort parameter defaults are now set at CIBSE TM59 standards

VE 2019 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.

VRF Performance Curves LG option added [ID-]: LG option added in VRF Performance Curves selection allows modelling of LG MULTI V Air and Water VRF systems.

Corrected warning message improved [ID-21538]: A correction is applied in the Hot Water Loop deletion warning dialog.

Removed system schedules upgrade prompt for imported systems [ID-34068]: The System Schedules upgrade prompt has been removed for navigator-imported HVAC systems.

Removed Daikin VRF curve sets [ID-38417]: Daikin VRF performance curve sets have been temporarily removed pending internal checks with Daikin.

Prototype systems DX Cooling performance curve parameter corrected [ID-41696]: The DX Cooling performance curve parameters have been corrected when used with 90.1 2013 PRM and ECB system libraries.

Prevented crash while editing system with dialog open [ID-43656]: Multiplex layers can't be edited when an airside component edit dialog is open.

Correction heating coil design loop delta T source [ID-44752]: Heating coil and room unit (radiator) Design Water delta T is now sourced from the selected hot water loop (primary or secondary). Further improvement made to prevent Radiator edit dialog from showing different Delta T when dialog is first opened.

Crash prevented when opening corrupt DHW System [ID-44779]: A crash has been prevented when attempting to open a DHW System referencing a non-existent heat source.

Note: found this state can arise if DHW system is exported without heat sources and then imported to a new blank system.

Modified CWL pump calculations [ID-48805]: Condenser water loop pump power/heat gain calculations have been modified to give more accurate representations of results.

ASHRAE Loads Reports

Corrected Engineering Checks reported values in loads report [ID-40204]: The btu/h/sf and sf/ton values have been corrected in the LARI report; total coil peak cooling and total coil peak heating values are taken as shown on report then presented in engineering checks as Btu/h/ft² and ft²/ton values which are consistent with other values shown on the page.

ApacheSim

Solar Algorithm Enhancement [ID-]: Solar tracking in Apache simulation enhanced to allow beam to exit building and re-enter through another opening (i.e. across a courtyard). Allows more accurate solar calculation as well as support for Translucent shades feature.

Note: if model contains translucent shade the calculation automatically runs in this mode, otherwise user has option to switch between this and traditional apache solar algorithm via Tools >> Preferences >> Simulation options.

Prevented crash when running ColorCoat Renew Solar Collectors [ID-36860]: A simulation crash has been prevented when running a calculation involving ColorCoat Renew Solar Collectors.

Added heat rejection to end uses and meters [ID-45404]: Heat rejection is recorded correctly to end uses and meters so that energy end uses and meter total energy variables match.

Improved Apache error reporting [ID-39979]: Significant improvements have been made to the Apache system's error reporting. Meaningful errors have been added to give more information about the source of an error.

Simulation can run when ApacheHVAC system contains cooling coil with contact factor = 1.00 [ID-39979]: Cases where advanced cooling coil present in ApacheHVAC network had Contact Factor of 1.00 can now run without causing apache terminated unexpectedly errors .

Chilled Water Loop simulations improved [ID-45686]: In cases where simulation is linked to an ApacheHVAC network with a severely undersized chilled water loop serving coils on airside network, simulation is improved so that Supply Water Temperature reset does not result in the coil and subsequently chilled water loop shutting off, instead the loop will continue to run at loop/chiller capacity.

APLocate (Weather)

Corrected save functionality of ApLocate [ID-18348]: When closing the ApLocate window, the confirmation dialog now behaves correctly when asked to Cancel.

ApPro (Profiles)

Scripted Profiles dialog box improved [ID-29169]: Create button now highlighted when dialog box is opened and pressing enter will now create rather than exit.

Apache View

Improvement made to Space Data Air Exchange tab UI [ID-22857]: Improvements were made to the Air Exchange tab to stop the units from being cut off for air flow per facade.

CIBSE Loads (ApacheCalc)

Improved UI behaviour [ID-21725]: Pressing Enter key while renaming a results file name now saves the change made before running the simulation.

Constructions

Library Constructions updated [ID-]: Library Constructions (CDB View menu >> Library Constructions) is updated with more pre-defined options; 1,426 glazing variants (u-value and SHGC), common Manufacturer glazing and common types representing common rating systems (ASHRAE 90.1, IECC, Title24)

Corrected water surface property display [ID-49278]: When draw Water landscaping object and then switch to RadianceIES the auto generated surface property and Construction are correctly defined.

IECC Navigator

Prevented error when opening HVAC Systems [ID-46879]: An error has been prevented when generating the Standard Reference system from the navigator action.

Prevented crash when running room loads [ID-46881]: A crash has been prevented when running room loads on the standard reference model with autosize option switched on.

VE Start Page

Geometry Wizard [ID-]: Schematic Geometry Wizard provided when choose New Project, select from range of pre-defined shapes. Options for edits to characteristics such as orientation, dimensions, glazed areas, zoning and roof generation.

Create from BIM File [ID-]: Create from BIM File option provided when choose New Project. Choose BIM file to start project and work through importing including checks, Quarantine and healing prior to import.

ModelIT

Translucent Shades added [ID-]: New toolbar button added to draw translucent shades. Planar shade surfaces that can have a glazed construction assigned with specified solar transmittance for inclusion in SunCast solar shading calculation, apache dynamic simulation and RadianceIES analysis. Note: not currently supported in SunCast solar visualisation analysis or NCM VE Compliance.

Improved space split algorithm [ID-11825]: The algorithm used to split spaces has been improved to prevent crashes when splitting spaces with non-vertical walls.

Corrected context menu partition holes [ID-29242]: Behaviour for creating partition holes from the context menu has been corrected for rooms adjacent to a room with 100% partition holes.

Export to gbXML improved for Adjacent Buildings [ID-38908]: A crash has been prevented when attempting to export a model to gbXML format with adjacent building spaces present.

Corrected model report units [ID-28030]: The unit labels for reported values in the model report now match the user's Unit Preference.

VE Navigator for LEED v4

Corrected LEED v4 daylight calculations [ID-42733]: The LEED v4 daylight credit report has been corrected to ensure lux values are calculated and reported correctly for larger open plan spaces.

Residential shower calculation now more accurate within LEED 2009 navigator [ID-46104]: Residential shower is now calculated more accurately within the LEED 2009 navigator.

VE Navigator for OTTV

Prevented shading file error in OTTV Navigator [ID-45124]: A shading file error has been prevented when generating reports from the OTTV Navigator.

VE Navigator for One Click LCA

Corrected OCL Navigator total energy accumulation [ID-45020]: The OCL Navigator script now reports the same total energy values as VistaPro.

VE Navigator for Architecture 2030 Challenge

AIA DDX Connection [ID-]: VE Navigators >> Compliance has new Architecture 2030 Challenge added with connection to online AIA DDX site. Extracts model data and results from ASHRAE 901 (Proposed and Baseline) simulation and automatically uploads to Design Data Exchange site.

VE Licence Keys

Automated Licence Keys [ID-]: Automated licence keys functionality is added allowing users to enter an Activation Code supplied from IES to access licence keys.

Note: Users who have licence keys running in older version of VE can install VE 2019 and continue working using existing licence keys. A new code will be issued on next renewal.

Tools >> Preferences >> General tab has option to switch back to Legacy licence activation if that is required, IES Technical Support would advise as required.

NECB Navigator

Corrected DX Cooler performance curve [ID-38899]: The NECB DX Cooler performance curve parameters have been corrected.

Prevented error when opening HVAC Systems [ID-46879]: An error has been prevented when generating the Standard Reference system from the navigator action.

Crash prevented when running through navigator [ID-47679]: An HVAC naming convention has been updated to prevent crashes when running simulations through navigators.

Parallel Simulation Manager

Improved error reporting [ID-33982]: RadianceIES error reporting has been improved to be more robust and inform user when a calculation error occurs.

Navigator for ASHRAE 90.1. PRM

Florida Building Code support added [ID-]: Navigator for ASHRAE 90.1 2013 ECB extended to support Florida Building Code when project location is set to Florida.

Import prototype data inc. budget constructions, budget building and systems automatically generated with additional edits prevented in accordance with Florida Building Code requirement. Additional reporting available in Navigator Results >> Florida Reports section.

ECB system library updates [ID-49781]: ASHRAE 90.1 ECB 2010 and 2013 library systems updated with AND controller to link coil temperature and airflow controllers for system schedule operation.

Systems 1, 2, 3, 4 have MC1 and MC2 controllers linked to MC3

Systems 9 & 11 have MC1 and MC9 Controllers linked to MC3

Note: Other ASHRAE 90.1 baseline systems will require future update but can be manually modified after loading to a project if system schedule configuration is not found to be adequate.

Improved DPI awareness of Setpoint Sync [ID-33083]: The Sync Proposed Setpoint Data to Standard Reference dialog has been made DPI aware to correct window sizing.

Corrected lighting control profile assignment [ID-41702]: The variation and dimming profiles assigned to lighting gains have been corrected when applying lighting controls.

Corrected LPD assignment after applying lighting controls [ID-42266]: Lighting power densities assigned after applying lighting controls have been modified to correctly distribute among existing lighting gains.

Correction to costs calculation [ID-46593]: PRM report energy and cost summary now displays correct costs.

RadianceIES

Accelerad integrated [ID-]: Accelerad plug-in has been integrated to RadianceIES to allow faster daylighting calculations making use of CUDA-enabled GPU. Contact support@iesve.com for details and Feature Enabler.

Sky Resolution options added [ID-]: RadianceIES options (RadianceIES menu >> Simulation options) has Sky Resolution tab added offering 3 sky resolution choices; 145 patches, 577 patches or 2305 patches. Allows control of simulation accuracy and speed depending on stage of analysis.

Updated ApLocate icon [ID-29158]: The ApLocate icon has been updated to be consistent with instances in other VE applications.

Height and grid size retained when exit application [ID-29163]: Simulate tab will retain the height and grid size set values after exiting and re-entering RadianceIES.

Dynamic daylighting calculations Quality can be edited [ID-41970]: Dynamic daylighting sDA analysis calculation quality can be edited. User has option to set Custom calculation parameters or choose 'Dynamic' option to run with previously used hard coded settings.

Improved surface property upgrade route [ID-48109]: Assigned surface properties upgraded from previous versions migrate correctly to assigned constructions on upgrade.

Improved high resolution grid warning [ID-14507]: The warning given when attempting to run RadianceIES for a model using a grid of higher resolution than recommended has been improved to give more information and allow the grid resolution to be decreased.

SunCast

Improved topographical shade rendering [ID-32465]: The rendering process for topographical shades has been corrected to ensure surfaces are not hidden in shading images.

Support added for free standing PV Panels [ID-47866]: When model contains free standing PV panel the shading file can be loaded without error following solar shading calculation.

VE Compliance

SBEM 5.6.a patch 3 integrated [ID-]: VE Compliance updated with SBEM 5.6.a patch 3.

BRE note: Release of patch 3 for iSBEM_v5.6.a in order to rectify a problem with recording and reporting the potential CO2 emissions saving associated with the "replace boiler" measure for Scotland's Section 63 assessments.

SBEMie 5.5.h patch 1 integrated [ID-]: VE Compliance Part L 2017 Ireland updated with SBEM 5.5.h patch 1.

SEAI note: The following patch should be installed to ensure multiple renewables of the same type are considered when calculating the RER.

Part L 2017 Ireland model archive included in BER XML [ID-]: Part L 2017 Ireland BER has two buttons to run calculation; Generate BER: Final will create a model archive and embed this in BER XML while Generate BER: Test Run does not and so will not produce a valid BER XML for lodgement.

Corrected SFP reporting with Heat Recovery enabled using certain systems [ID-18409]: The SFP is now reported in the correct columns when Heat Recovery is enabled while using the "Split or multi-split" and "Single room cooling" NCM systems.

BRUKL HVAC System Performance Table corrected [ID-20729]: Apache Sim method BRUKL HVAC System Performance table corrected so that Actual and Notional systems reported in same order.

Adjusted Space Data dialog [ID-31150]: The Space Data dialog has been adjusted to ensure no text is cut off.

Improved NCM Wizard UI [ID-31154]: Keyboard navigation in the NCM Wizard has been improved.

Corrected L2 Navigator building type action [ID-31187]: Navigator actions have been corrected to ignore unavailable UI elements.

Corrected air permeability for Part L2 2013 [ID-46774]: Calculation of envelope area corrected so that Notional Building air permeability for top-lit spaces is applied as per Table 3 in L2 2013 NCM Modelling Guide.

Corrected SBEM locations list [ID-47218]: The SBEM Locate dropdown list has been corrected to include all relevant SBEM locations depending on selected regulation.

EPC shows Assessor Name [ID-47485]: Corrected an issue where assessor name was not input correctly into the Energy Performance Certificate.

VistaPro

Energy Model Report added [ID-]: New toolbar button in VistaPro generates one page summary of building energy performance from simulation results (*.aps) file. Report lists Energy End Uses, Costs, Primary Energy demands.

Corrected variable selection [ID-30398]: Equivalent end uses are no longer selected when selecting variables.

Corrected summing of weather variables [ID-47314]: Weather radiation variables now sum more accurately within VistaPro.

Removed erroneous confirmation dialog [ID-29173]: The logic for displaying the confirmation dialog when deleting a session has been improved.

