

< Virtual Environment >

*Cost effective,
sustainable building
design from concept to
completion and beyond*

SUSTAINABILITY TOOLKIT FEATURES:

The <VE> Sustainability Toolkit enables designers to perform common sustainable design analysis with a single button click. Perform quick 'what-if' scenarios to establish the most appropriate sustainable and energy efficient approach. The <Virtual Environment> Toolkits are exclusive to Autodesk Revit, uniquely leveraging sustainability into your BIM project.

SUSTAINABILITY TOOLKIT

HEATING AND COOLING LOADS

Enables architects to establish the effect of building on peak energy usage and allow mechanical engineers to size HVAC equipment. Calculations can be performed using either ASHRAE or CIBSE methods.

DYNAMIC THERMAL SIMULATION

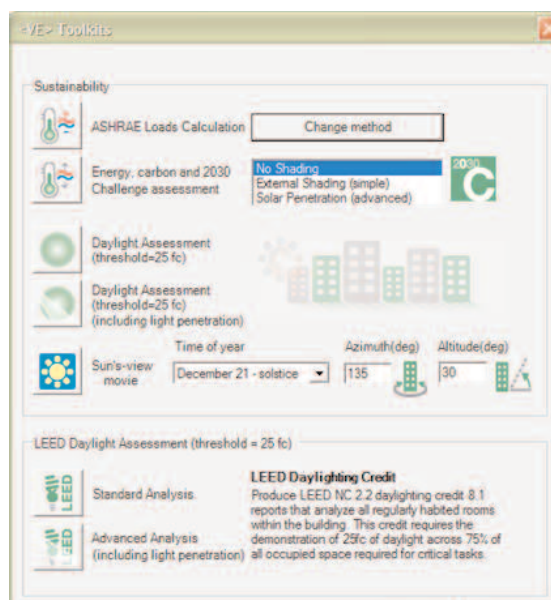
Identify key sustainable parameters for the building project using dynamic simulation including the carbon footprint, annual energy usage, peak internal conditions and occupant thermal comfort.

DAYLIGHTING ASSESSMENT

Identify whether the internal daylight illuminance levels throughout the building meet common daylighting criteria. Establish whether daylight compensation control is feasible for your building.

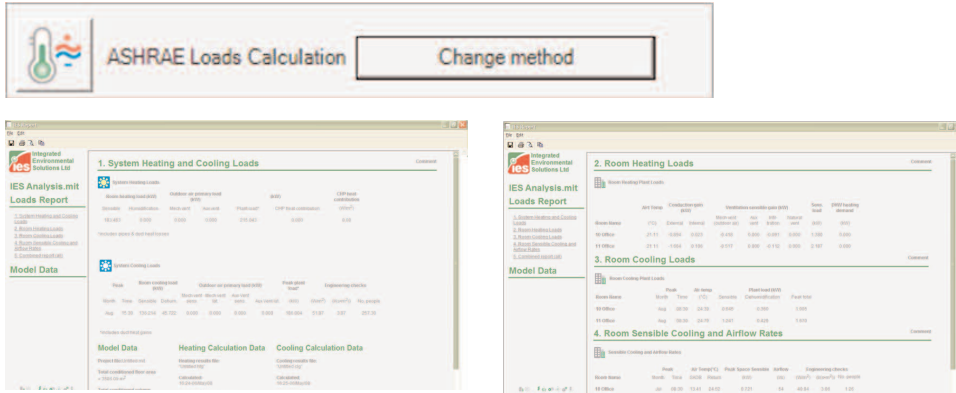
SOLAR ASSESSMENT

Assess the impact of the sun by automatically creating sun-view animations for Winter, Summer and Transitional periods.



SUSTAINABILITY TOOLKIT OUTPUT:

HEATING AND COOLING LOADS

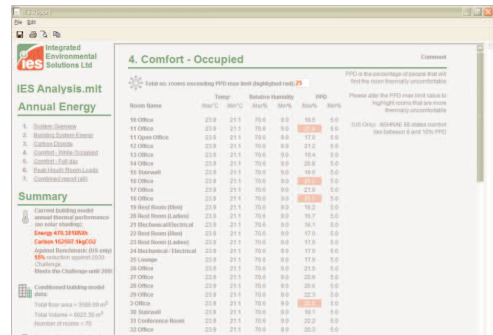


The screenshot shows the ASHRAE Loads Calculation software interface. At the top, there is a 'Change method' button. Below it, the software displays four reports: 1. System Heating and Cooling Loads, 2. Room Heating Loads, 3. Room Cooling Loads, and 4. Room Sensible Cooling and Airflow Rates. Each report contains detailed data tables for various rooms and systems.

ROOM COMFORT ASSESSMENT



The screenshot shows the Room Comfort Assessment software interface. It features a 'Challenge assessment' section with options for 'No Shading External Shading (simple)' and 'Solar Penetration (advanced)'. The interface also includes a 'Energy, carbon and 2030' section.

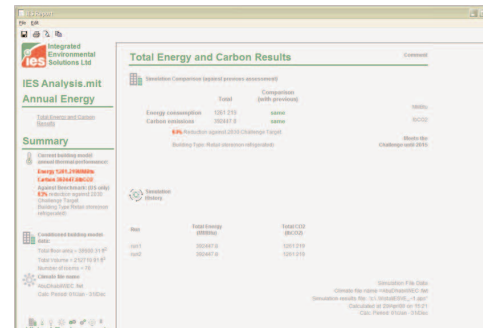


The screenshot shows a detailed table of comfort metrics for various rooms. The table includes columns for Room Name, Temp, Humidity, and other metrics. The data is organized into a grid format, with a summary section at the bottom.

CARBON & ENERGY FOOTPRINT

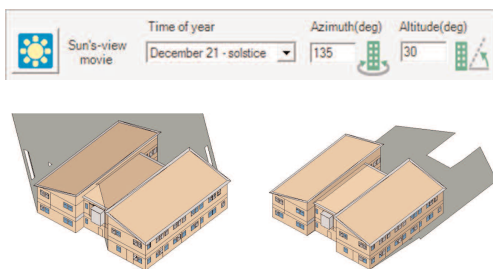


The screenshot shows the Carbon & Energy Footprint software interface. It features a 'Challenge assessment' section with options for 'No Shading External Shading (simple)' and 'Solar Penetration (advanced)'. The interface also includes a 'Energy, carbon and 2030' section.



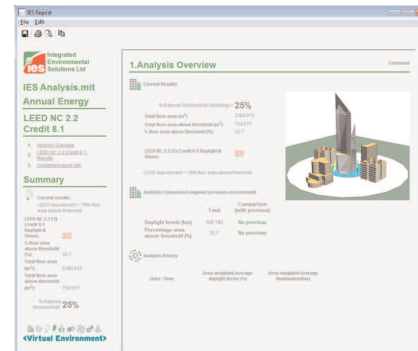
The screenshot shows the 'Total Energy and Carbon Results' section of the software. It includes a summary table with columns for Energy, Carbon, and other metrics. The data is presented in a clear, structured format.

SUN-VIEW IMAGES



The screenshot shows the Sun-view movie software interface. It features a 'Sun's-view movie' section with controls for 'Time of year' (December 21 - solstice), 'Azimuth(deg)' (135), and 'Altitude(deg)' (30). Below the controls, there are 3D renderings of buildings from different perspectives.

DAYLIGHTING ASSESSMENT



The screenshot shows the Daylighting Assessment software interface. It features a '1. Analysis Overview' section with a 3D rendering of a building. The interface also includes a summary table with columns for Daylighting, Energy, and other metrics.

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