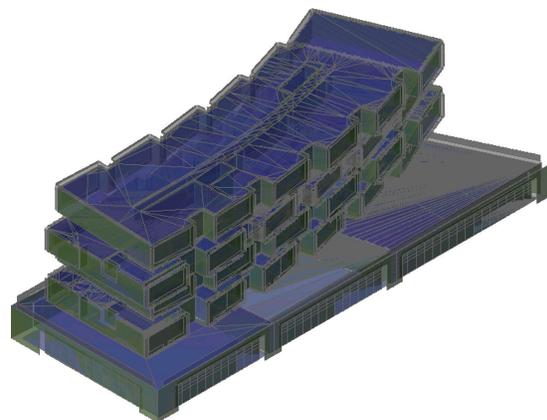


High performance design – empowered by simulation

New analysis tools for the Revit ecosystem advance the democratization of sustainable building design



Revit quickly generates accurate analytical models directly from the building elements model.¹

Highlights

- Executes energy analysis directly within the design models
- Performs automated daylighting for LEED
- Automates sensitivity studies of common building features
- Integrates with tools for advanced studies like LCA and CFD

Benefits

- Incorporate energy use feedback throughout the design process
- Meet daylighting goals on every project, without outsourcing
- Easily compare design options without extensive training
- Calculate embodied impacts, validate HVAC design

Sustainability as a business driver

The global construction marketplace has changed dramatically since 2008 when a McGraw Hill Construction industry study identified the top driver for sustainable building as “doing the right thing”. By 2012, new business drivers such as “client, market, and regulatory demand” topped the list reflecting how the industry has transformed to view sustainability as a business imperative.² Paradoxically, though expectations across the industry have reached new heights, they are not typically accompanied by larger budgets and extended timelines. In the past, energy modeling, for example, could take from 2 days to 3 weeks, making it unfeasible for most projects. In today’s market, teams must be able to deliver their projects efficiently and cost-effectively to maintain healthy margins.

New tools advance simulation-led design

High performing design is achieved by applying an integrated design and team approach during the planning and programming phases. The greatest impact can be realized when layout and material selection alternatives are evaluated early in the process for their effect on energy efficiency, occupant satisfaction, and the embodied impact of building materials. The following new features and tools support this approach by making it possible to simulate performance in these high-impact areas within the Revit design and production environment.³

Fast, integrated energy analysis

Users can now perform energy analysis directly from within the Revit design model in a much shorter time frame (10 minutes to 2 hours), and often with greater accuracy. And design work doesn’t slow down because analysis is running in the cloud. As a result, energy analysis can more keep pace with design changes and inform the process early and often.

Get in touch.

Contact your Autodesk Sustainability Solutions team today.

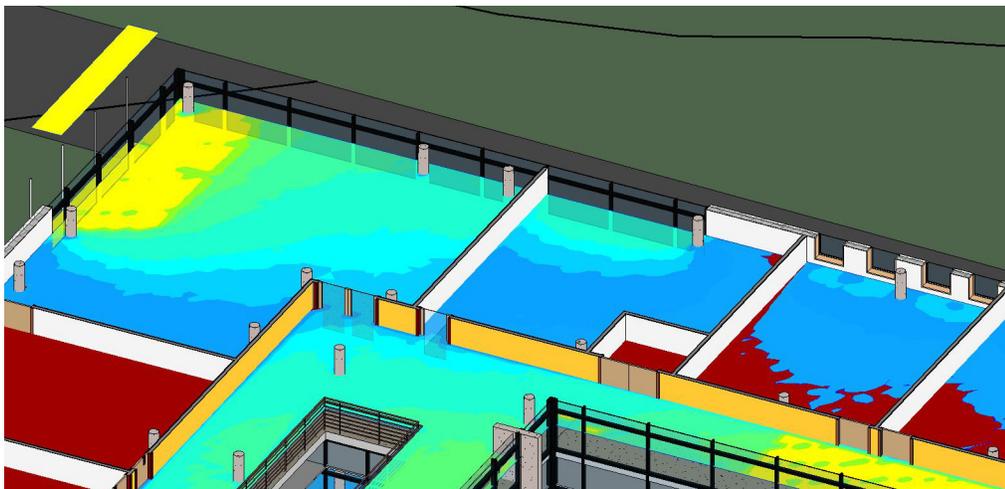
sustainability.solutions@autodesk.com
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DOE 2.2, the industry-standard engine that powers eQUEST and all Autodesk energy analysis tools, just got a major update. It’s now 64-bit compatible and delivers much faster simulation times (typically 30%) and better handling of larger, more complex models.

Potential Energy Savings (PES)

Prescriptive approaches do not always work because the best strategies to improve energy performance will vary for each project. This new feature in Energy Analysis for Revit automatically runs sensitivity studies of 12 common building upgrades across 40 parallel simulations so architects get valid and useful results even without extensive training in building science. Teams can quickly compare design alternatives, determine which will have a

New automated Daylighting for LEED displays results directly in the design canvas. Designers can now experiment with daylight spaces on any Revit project.



Green building product selection with Tally¹

Built on PE International's GaBi database, the largest environmental dataset for LCA, Tally is a powerful tool for gathering quick insight into the ecological trade-offs of different design scenarios. Life Cycle Assessment (LCA) can now be performed on demand throughout the BIM process, from design through construction.



Optimize your HVAC design with Computational Fluid Dynamics (CFD) to compete and win. Simulation CFD using the Revit model is faster, simpler and more powerful than traditional CFD tools.

greater impact on energy consumption, and confidently present the best energy conservation measures to clients in planning stages.

Automated Daylighting for LEED

This automated feature enables a broad range of designers who are not daylighting specialists to perform daylighting analysis and see the results displayed directly in the Revit model. More accessible daylighting analysis makes it affordable to investigate daylighting strategies on every Revit project and collaborate more effectively with lighting experts. The information needed to submit for LEED compliance is generated automatically.

Advanced lighting analysis

More experienced users can analyze how form and material affect electric and solar lighting performance. Analyses run from any Revit 3D view for almost any location, date, and sky condition.

CFD for temperature and airflow analysis

Computational fluid dynamics (CFD) is used by design teams to study airflow in the plenum and occupied spaces to optimize supply temperatures and diffuser selection and placement. It is also a valuable tool for

exploring natural ventilation and complex convection schemes. Autodesk Simulation CFD⁴ users can choose between local and cloud-based solving options. With CFD, teams can create compelling presentations to convey high-performing HVAC designs that reduce energy costs for clients while improving occupant satisfaction.

Complimentary courses from Autodesk

Professional firms can now grow the number of staff who bring valuable up-to-date knowledge and insight on energy efficient building to their teams without incurring the high cost of traditional training. The Autodesk Building Performance Analysis Certificate (BPAC) program offers a free series of AIA, USGBC and ASHRAE-accredited courses that are self-paced and offered online. The BPAC course series is just part of Autodesk's commitment to make sustainability easy, insightful and cost-effective for professionals who are creating a better built environment.

For more information about Autodesk Sustainability Solutions, contact: sustainability.solutions@autodesk.com

¹As seen in Design Review

²"World Green Building Trends," McGraw Hill Construction SmartMarket Report 2013

³Available in Building Design Suite 2015 Premium and Ultimate with Subscription

⁴Tally is a registered trademark of KT Innovations, an affiliate of KieranTimberlake and PE International, and is sold separately from BDS.

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