

Questions and Answers

Autodesk® Green Building Studio® web service helps architects and designers to conduct whole building energy analysis, optimize performance and efficiency, and achieve carbon neutrality earlier in the design process.

An open analysis tool based on the robust data exchange of the Green Building XML (gbXML) schema, Autodesk Green Building Studio technology is interoperable with Revit® Architecture and other compatible energy analysis software. Architects and designers can use the Autodesk Green Building Studio web service to evaluate building components for effects on energy consumption and better maximize economic and environmental performance. With more tools for energy analysis of building design proposals, architects and designers can think sustainably, plan proactively, and build better.

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1. General

1.1 What is Autodesk Green Building Studio?

Autodesk Green Building Studio is a web-based service that includes industry leading building energy and carbon analysis tools. Green Building Studio tools enable architects and designers to evaluate the energy profiles and carbon footprints of various building designs. Files are shared between engineering software programs and among engineers and architects early in the design cycle, making sustainable design more efficient and cost effective.

1.2 What is Green Building XML (gbXML)?

The Green Building XML schema (gbXML) was developed to facilitate intelligent information exchange, enabling integrated interoperability between building design models and a wide variety of engineering analysis tools available today. Autodesk Green Building Studio relies on the gbXML file format to securely transfer building information between design tools such as Revit Architecture and its web-based whole building energy analysis engine DOE-2.

2. How to Buy

2.1 How do I access the Green Building Studio web service?

Purchase an annual subscription for access to the service including unlimited projects, unlimited runs. Subscriptions can be purchased for single-users or in a ten-user pack only.

- Single user-Annual Subscription \$745
- Ten user-Annual Subscription\$4995

New users of the web service can access a limited 30-day free trial before purchasing a subscription. The free trial includes up to two building projects.

2.2 How do I access the free trial?

Link to the Green Building Studio web service and select new user registration.

<https://www.greenbuildingstudio.com/register.aspx>

Complete the form and make note of your user name and password, as you will need these later to log in. Once you have agreed to the Autodesk Terms of Use agreement, you'll receive an email from gbs@greenbuildingstudio.com to validate your email address. From here, follow the link to log-in to Green Building Studio using the user name and password you created. You are now a member of the Green Building Studio web service and ready to start realizing carbon neutral designs. Your Projects page will monitor your trial account and let you know when it is ready to expire.

2.3 How do I purchase a subscription to Green Building Studio web service?

If you have never registered for Green Building Studio, follow the steps above to access the free trial and register for a Green Building Studio account.

Once you have a user name and password you can purchase a subscription at any time. From Your Projects page, select: "Upgrade your account now by purchasing a License." Select single user or ten user option to best suit your business needs. When you "add to cart" you will be forwarded to the Autodesk Store Shopping cart. You will need a valid credit card to complete your purchase.

2.4 How do I add users to a 10-User Subscription?

After purchasing a 10-User subscription, new users may be added at anytime (up to 10 in total) by the site administrator from the Projects page. The site administrator is the person who completed the initial registration and purchase process. To be added, users must have an existing Green Building Studio user name and password and proper email domain.

Please note: during the registration process for 10-User subscriptions, you have the option to enter additional corporate email domains to your corporate account, should your company have more than one. These must be valid domains of your company. These email domain names will go through a validation process and, when accepted, an email will be sent to the email address used when you registered in Green Building Studio.

2.5 Who can I contact for more information about purchasing Green Building Studio subscriptions?

If you have questions about a new or existing account, please contact our support staff directly by sending email to Sales.GBS@autodesk.com

3. Technical Capabilities

3.1 Can I use the Autodesk Green Building Studio web service to import material properties from my BIM tool?

You can use Green Building Studio to import material properties, but currently BIM tools are not enabled to export that information to the web service through the gbXML file, so regional code-compliant default material assemblies are used instead for the baseline energy simulation. These defaults can then be modified on the web service either through Design Alternatives or by using the Project Defaults from Your Project List page.

3.2 How does the Autodesk Green Building Studio web service choose the material assemblies, schedules, etc. required for whole building energy analysis?

Green Building Studio determines the appropriate defaults based on where your building is located, the building type, and the size of your building. The majority of construction, schedule and equipment defaults are ASHRAE 90.1-2004 compliant. However, some locations have energy codes that supersede ASHRAE 90.1, and in these cases the baseline energy simulation will be compliant with those regional codes.

3.3 Can my building information modeling tool import the changes I make in the Autodesk Green Building Studio web service?

Today's building information modeling tools are not yet designed to accept gbXML input files, so presently changes made in Green Building Studio cannot be automatically incorporated back into the building information model.

3.4 Can I use the Autodesk Green Building Studio web service to study daylighting or create rendered views of my project?

The Autodesk Green Building Studio web service currently does not perform daylighting or rendered studies, but those capabilities are already available in leading building information modeling tools such as Revit Architecture.

3.5 Does the Autodesk Green Building Studio web service only analyze commercial buildings?

Green Building Studio can be used to analyze residential, commercial and institutional project types.

3.6 Is the Autodesk Green Building Studio web service only suited for new construction projects?

Existing buildings can also be analyzed using Green Building Studio, provided that there is a building information model to submit that approximates the building's geometry.

3.7 Have the results of the Autodesk Green Building Studio web service been validated?

The Autodesk Green Building Studio web service simulation results were evaluated under ANSI/ASHRAE Standard 140-2004, Standard Method of Test for the Evaluation of Building Energy Analysis Computer Programs, and certified by the U.S. Department of Energy.

4. Design Process

4.1 How much detail is needed in the building information model to perform accurate whole building energy analysis?

In general the main exterior walls, windows, roofs, floors and interior partitions separating the building's thermal zones are ideal for energy analysis. More detail tends to add time and complexity to the model without improving simulation accuracy.

4.2 How do I model engineering details such as framing factors and infiltration rates using the Autodesk Green Building Studio web service?

Green Building Studio is a schematic design tool for architects to evaluate the energy profiles and carbon footprints of different building forms. It is not designed to capture highly detailed engineering effects.

4.3 Does the Autodesk Green Building Studio web service perform LEED reporting?

Green Building Studio provides guidance on the LEED Daylighting 8.1 Credit and LEED Water Efficiency Credits 1, 2 and 3. It also uses the DOE-2 hourly energy simulation engine as required by LEED Energy and Atmosphere Credits 1 and 2. The web service is useful for assessing goal viability for the first LEED charrette; however, it is not a compliance tool and does not produce the required LEED submittal documentation. It is intended for use early in the process when design changes are conceptually easy to make.

4.4 What does it mean for a building to be "Carbon Neutral"?

A carbon neutral building as defined by the Autodesk Green Building Studio web service is one which reduces its power consumption and substitutes renewable energy by a quantity equal to the percentage of electricity and onsite fuel usage for which fossil fuels are the feedstock.

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