



SECTION 9

Green Globes EB Healthcare Program

LEARNING OBJECTIVES

- List the difference in eligibility for EB Healthcare compared to EB.
- Explain the adaptations made within the Environmental Assessment Areas to accommodate healthcare.

Developed in 2011, Green Globes for EB Healthcare is used to assess and certify existing healthcare buildings, recognizing that sustainability is an ongoing process requiring continuous evaluation and benchmarking. Using this tool enables building owners/managers to focus on sustainability, gives them options when considering capital improvements or implementation of best practices, and allows them to track and rate the benefits of various building attributes and procedures.

The Green Globes EB Healthcare program is nearly identical to that of the standard Green Globes EB program. However, there are some important differences for EB Healthcare in regards to eligibility requirements, criteria and point allocation, verification documentation, and resources.

Program Features

All of the Green Globes features and EB program features discussed earlier apply to EB Healthcare. There is only one survey with access to the Project List, Building Dashboard, Automated Report and Verifier's Worksheet. In addition, the navigation works the same.

Eligibility Requirements

Existing buildings pursuing EB Healthcare certification may have been certified previously under Green Globes NC, EB Healthcare, or they could be pursuing their first certification. Just as with other Green Globes programs, there are no pre-requisites. A building using this program typically has the following characteristics:

- Is located in the U.S. or within a U.S. Territory.
- Is at least 400 gross square feet.
- Is occupied with at least 12 consecutive months of operational energy and water performance data.
Is a permanent enclosed structure.
- Is a 24/7 skilled nursing facility with licensed in-patient beds.
- Has a contiguous project boundary and its site.
- Is typically designed for human occupancy with HVAC and water.

More details regarding eligibility can be found in the [Green Globes Building Eligibility Guidance](#) document located in the Training & Resources\User Resources\Downloads link on GBI website.

The following chart may be helpful in determining if your building should be assessed and certified under Green Globes EB or EB Healthcare.

Individual Building Description	EB Healthcare Hospitals	EB	NC
Hospital ¹	Eligible ^{3 5 6}	Not Eligible	Eligible ⁷
Long-Term Care Facility ¹			
Outpatient Clinic ² Ambulatory Care Center ² Medical Office Building ²	Not Eligible	Eligible ^{3 4 6}	
Dormitory/Apartment			
Office Building			
Mechanical/Valve/ Controls Building		Conditional Eligibility ^{4 5 6}	
Warehouse		Eligible ^{4 5 6}	
Light Industrial Building			

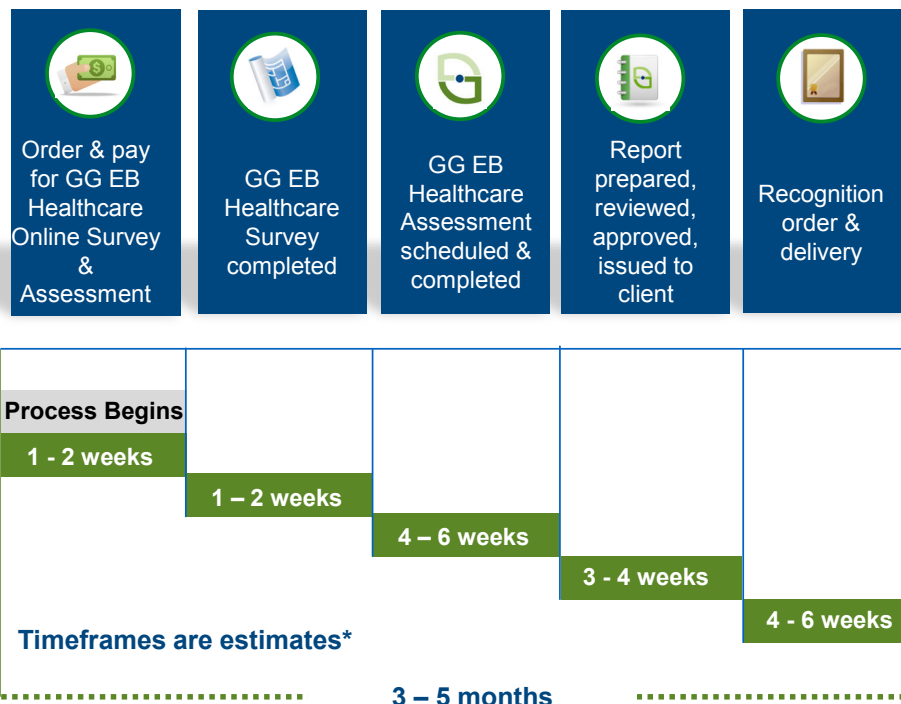
Notes:

1. A hospital or long-term care building may incorporate other occupancies/uses such as an outpatient/ambulatory care clinic, emergency room, and medical offices. If the building incorporates inpatient beds, use EB Healthcare.
2. For stand-alone buildings without inpatient beds, such as Outpatient Clinics and Ambulatory Care Centers, use standard EB (non-healthcare).
3. Additional fees for building complexity may be required for certification.
4. Building size must be at least 400 gross square feet of fully-enclosed space include lighting, and a mechanical ventilation system.
5. These buildings may have numerous non-applicable criteria. Consult with GBI staff regarding utility/special purpose buildings prior to pursuing Green Globes certification.
6. Green Globes EB and EB Healthcare require at least 12 consecutive months of normalized operational data.
7. Buildings are eligible to pursue Green Globes NC certification if they are in any stage of the design/construction process or have been occupied for fewer than 18 months.

Tasks & Estimated Time Commitments

Just as with EB, an EB Healthcare assessment can be completed in 3-5 months. The certification time line is largely dependent upon the client in regards to completion of the online evaluation and availability and organization of the supporting documentation.

Green Globes EB Healthcare focuses on real, quantifiable performance data and management practices; consequently, Just as with EB, there is only one assessment stage.



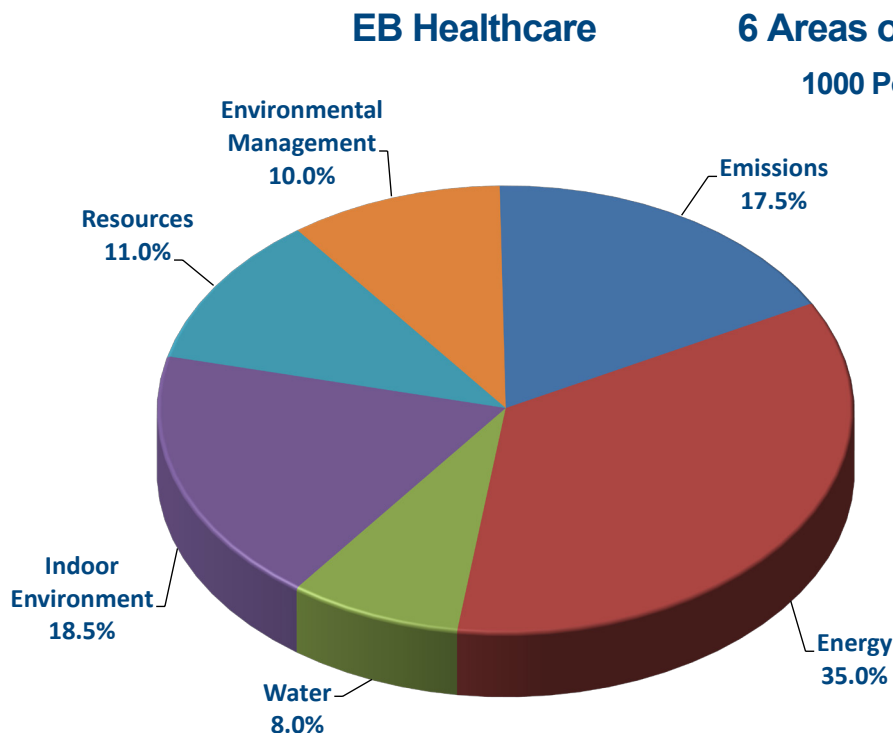
The list of specific tasks GGP's may perform when taking a building through the Green Globes EB Healthcare process, and estimated time required is identical to the EB assessment process.

Green Globes Projects Tasks for EB Healthcare	Estimated Work Hours
Project management & client meetings	4 - 8
Gather and assemble data for the online survey	12 - 20
Complete online survey	2 - 8
Prepare documentation package for the on-site assessor review	12 - 20
Plan and attend the EB on-site assessment	4 - 12
Post assessment action items (review report and share results)	4 - 8
Recognition	1
Total Hours	39 - 77

Assessment Areas Adaptations for Healthcare

A number of adaptations were made for the EB Healthcare survey to accommodate differences between healthcare facilities and other building types. The total maximum possible points is 1000, but as discussed

earlier, there are some variances in the maximum possible points for the six assessment areas. Water has two fewer points, Environmental Management has three fewer points, and Indoor Environment has five additional points.



In addition to the point variances, there are some differences within the criteria.

ENERGY

- Most hospitals utilize campus-wide energy metering rather than individual building metering. ENERGY STAR Portfolio Manager has a module for healthcare campuses that users can enter in the Green Globes EB Healthcare survey.
- If the healthcare building does happen to be individually metered and has 12 consecutive months of performance data, then you should enter the individual building energy data and ENERGY STAR rating into the Green Globes survey.
- If a healthcare facility has neither a building nor a campus ENERGY STAR rating, you will need to manually enter the performance data into ENERGY STAR to obtain a rating, which you will then enter into the Green Globes survey. Ensure that the data you input into the ENERGY STAR tool is the same data for the same date range that you enter into the Green Globes survey.
- Thresholds have been added to EB Healthcare for energy-efficient lighting and controls to allow partial credit for upgrades done in only certain parts of the facility.
- Energy audit specifically addresses plug load of personal-use appliances such as hot plates, mini-fridges, and microwaves and encourages better appointed and located staff lounges.
- EB Healthcare also addresses the energy load of Radiology and MRI equipment to audit energy use and savings.

- There are four achievements levels for energy use targets and monitoring.

WATER

- EB Healthcare uses a new methodology to evaluate water performance based on the number of in-patient beds.
- Water efficiency standards have percentage credit thresholds.
- There are percentage credit thresholds for water saving features to allow partial credit for updates done in only certain parts of the facility.

RESOURCES

- Storage and collection criteria are expanded to 10 categories of recyclable materials.
- There are four thresholds to allocate points for the diversion rate.

EMISSIONS

- EB Healthcare evaluates lead and mercury management (in addition to asbestos and radon).
- Credit is allocated for four boiler operations & management best practices.
- There are updated criteria for refrigerant and hazard communication programs.

INDOOR ENVIRONMENT

- The CO₂ monitoring definition is expanded.
- Personal temperature controls for patients are evaluated.
- The criteria address health care-specific filtration requirements and smoking standards.
- Potentially hazardous areas for local exhaust have expanded credit allocation.
- EB Healthcare provides guidance on lighting best practices and noise management for healthcare facilities.

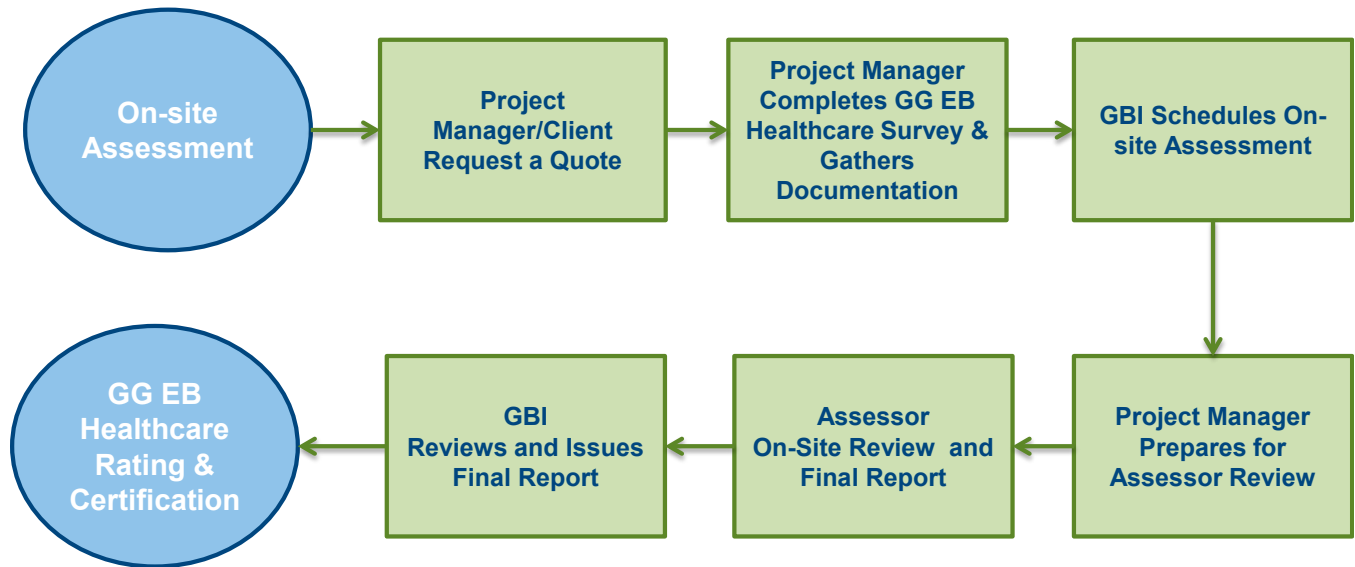
ENVIRONMENTAL MANAGEMENT

- EB Healthcare evaluates patient & staff satisfaction survey results and implementation.

Assessment Process

ON-SITE ASSESSMENT & CERTIFICATION MAP

The Green Globes for Healthcare Buildings assessment process is identical to the Green Globes for Existing Buildings assessment process.



REQUEST & VIEW A QUOTE

The process to request and view a quote is nearly identical to the process for EB.

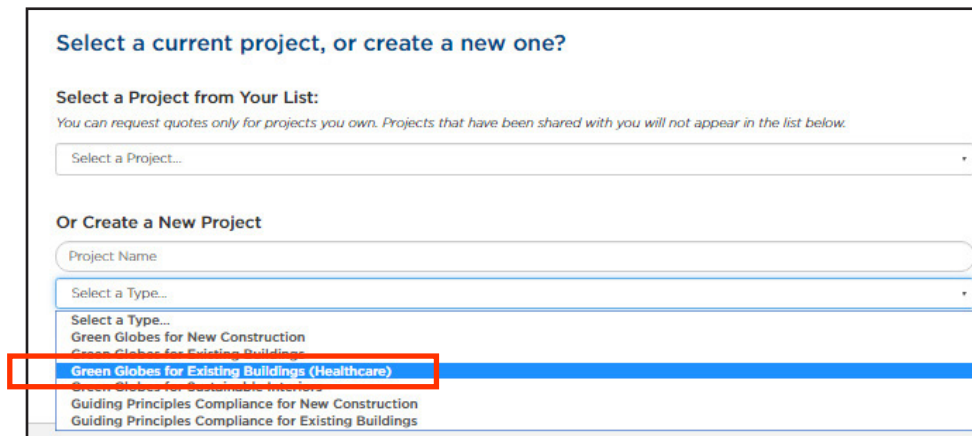
Create a GBI Account

To request a quote the project manager will need to create a GBI Account. To create an account, follow these steps:

- From the GBI website, www.thegbi.org select "Create Account".
- Complete the account information.
- Read and accept the terms of service.
- Enter the CAPTCHA and select "Create Account".

Request a Quote

- To request a quote, login to your GBI Account.
- From the green toolbar, hover over Green Globes Projects and select “Request a Quote”.
- You can select a previously created project from the drop down list, or create a new one. If you create a new project, add your project name and select the Green Globes for Existing Buildings (Healthcare) program type from the drop down list.



Select a current project, or create a new one?

Select a Project from Your List:
You can request quotes only for projects you own. Projects that have been shared with you will not appear in the list below.

Select a Project...

Or Create a New Project

Project Name

Select a Type...

- Select a Type...
- Green Globes for New Construction
- Green Globes for Existing Buildings
- Green Globes for Existing Buildings (Healthcare)**
- Green Globes for Sustainable Interiors
- Guiding Principles Compliance for New Construction
- Guiding Principles Compliance for Existing Buildings

- Select “Create New Project”.
- Complete the Quote Form. Please be sure to enter integers only in the square footage field (no commas or periods). Note that Google Chrome seems to work better than Firefox for completing the form.
- When the form is complete, select “Submit Quote Request”.

GBI will prepare a formal quote within two business days of receiving the quote request. The quote will be visible from within GBI Account of the person who requested the quote. In addition, GBI will send the quote in PDF format via email.

View a Quote

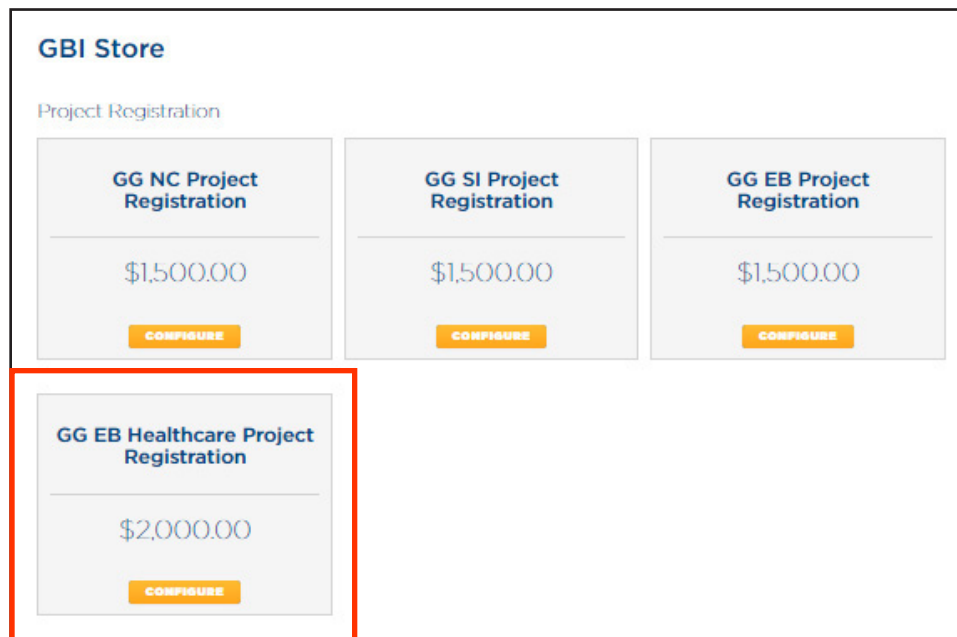
- To view your quotes, access your GBI Account and select “Green Globes Projects” in the green toolbar. From the left navigation select “My Quotes”.
- Or you may hover over the Green Globes Projects and from the fly out menu select “My Quotes”.
- Select the project from the list for which you wish to view the quote. The quote will display.

REGISTER A PROJECT

The process to register a project is very similar to the process for EB.

Some clients elect to register their project and submit payment to gain access to the online survey in advance of purchasing an assessment.

- If you wish to register a project prior to purchasing an assessment, hover over the Green Globes Projects link in the green toolbar and select “Register a Project”.
- From the GBI Store, select “Configure” under the header GG EB Healthcare Project Registration.



- Under the Add New Project section, enter the project name and select “Create Project”.
- If you have already added your project name but did not complete your project registration, your project name will be in your project list. From the Associate your Project screen under “Select from your projects section, choose the project from your drop down list and click “Select Project”.
- An alternative method to select your project is to go to your list of Green Globes projects by hovering over Green Globes Projects in the green toolbar and select “Existing Building Projects”.
- From your project list, click on the project you wish to register.
- Select “Register Project”.
- Select “Continue to Checkout”.
- Complete your billing and shipping information and select “Continue”.
- Read and Accept the End User License Agreement and select “Place Order”.

ORDER AN ASSESSMENT

When ready, you may order the third-party assessment online through the GBI website using the following steps. (Note: for large orders of multiple buildings, GBI can place the orders on your behalf for a nominal administrative fee.) The project should be ordered against the same account connected to the quote and if applicable, the previously ordered project registration.

If your quote included a project registration in addition to an assessment, you can register your project and order the assessment at the same time.

ON-SITE ASSESSMENT

During the visit the assessor will verify the level of compliance to the Green Globes criteria which results in the final assessment rating and certification level (certification is based upon a minimum score of 35%).

Complete the EB Healthcare Survey

Every assessment begins with the completion of the online survey. You will have access to the survey once the project registration is paid. Completing the EB Healthcare survey may require input from the Facility Manager, Energy Engineer, Building Owner, Human Resources Staff, and on-site Environmental Coordinators. There are also questions that ask if the owner has conducted annual occupant surveys to gather data on their general health, comfort, and well-being as well as how informed staff are about energy policies and opportunities to conserve resources.

Add Project and Complete Basic Project Information

The first task is to connect your project to the survey. To add your project, login to the GBI Account from which the assessment and/or project registration were ordered.

- Select “Green Globes Projects” from the green toolbar.
- Select “Existing Building Projects”.
- Select “Launch Project” next to the project you wish to open.
- Select “Add a New Project”.
- At the top of the screen select the button to indicate you intend to complete a full assessment on this project. Complete the remainder of the Basic Building Information and select “Save and Continue”. After you click Save and Continue you will be on the first page of the survey.

Access the Survey in Subsequent Sessions

If you have previously added your project and entered your basic building information, you will not be automatically directed to the Basic Building Information page. Once you select “Launch Project” you will be directed to the Project List. Click on the project name link.

This will direct you to the project dashboard where you can click in the colored section beneath the area you wish to access, select “Complete Questionnaire”, select “go to section”.

Add Collaborators

In addition, if you have other team members who require access to the surveys, you may add them as collaborators just as you would for a traditional EB project. Please refer to page 142 for further details regarding how to add other users as collaborators.

Save Responses

Criteria are allocated specific point values according to the response provided (Yes, No, N/A, or a threshold value).

You must select “Save and Continue” at the bottom of each page to save your responses and advance to the next page.

The Green Globes online system is interactive and automatically calculates the projected Green Globes score based upon your responses to the survey questions. Each time you save a page of responses within the survey, the projected score updates accordingly. The system also indicates what percentage of the survey has been completed depending on the total number of pages saved (not based upon the number of responses answered and saved).

Pre-Assessment Checklist

The project manager and team should complete the survey and utilize the [GG EB Healthcare Pre-Assessment Checklist](#) (available for download online) to record the specific documentation and location within that document that supports their responses.

This checklist can then be used to assist the team when gathering documentation to submit to the assessor. It is recommended the team include this file with the documentation packet submission to assist in locating the specific documentation used to support the survey response. It is NOT intended to be used as scoring tool, as it does not contain threshold values for individual responses.

The GG EB Healthcare Pre-Assessment Checklist is an Excel-based document. The file includes expandable sections to be able to view each criterion, associated ToolTips and maximum possible points.

Gather Documentation

The project manager will ensure all documentation that verifies the survey responses is available and ready to provide to the assigned assessor.

Schedule On-Site Assessment

When your project registration and assessment are paid, the online evaluation is complete, and your documentation is ready for review, contact GBI to schedule your On-Site Assessment.

Provide your preferred date range for the site visit. Keep in mind that a minimum of one month advance notice is required for scheduling.

Your GBI Project Manager will reach out to the pool of certified third-party Green Globes Assessors (GGA's) to determine who is available and best suited for your project. Once secured he/she will assign an assessor to your project and email a scheduling letter that provides the assessor's contact information and the official site visit date.

The assessor will contact you to discuss specific details of the assessment, including the itinerary, recommended participants, etc..

Prepare for Site Visit

When preparing for the On-Site Assessment, you should organize the assessment documentation in the order of the criteria within the survey.

To help with the organization process, you can print a copy of the survey (Verifier Worksheet) that contains your responses by selecting “View Report” from the top navigation. From the report, select the link “Click here to see a verifier worksheet for this building”.

You should also secure a meeting room and arrange for all key personnel to be available during the assessment. Schedule a guided site tour. It should be organized so that the building walk-through occurs in an efficient and orderly sequence (e.g. from roof deck through main floors, to basement, to external site) and the items to be inspected are seen throughout a single path. The assessor should not have to retrace his/her steps unless certain building features need to be revisited.

Healthcare buildings are typically larger, and may require multiple days to assess.

The assessor will contact the project manager to discuss the site visit and provide an agenda in advance.

Assessor On-Site Assessment

During the site visit the assessor will verify conformance to the assessment criteria and determine point awards based upon additional documentation and the physical inspection of the building and site. The visit consists of three phases: the Introductory Meeting, the Building/Site Tour and the Closure Meeting.

Introductory Meeting

On the day of the site visit, you should meet the assessor at a pre-determined time and place. The assessor will begin with a brief meeting with key project personnel, which should include an introduction of team members. He/she will review the survey and the supporting documentation and note all documentation still lacking. Be sure to discuss any criteria you believe should be considered as non-applicable and address any other questions.

The assessor will look for the following documentation during the visit organized by assessment area.

Energy

- Energy Consumption
 - ENERGY STAR documentation
 - Work order for energy meter installation
 - Energy consumption figures
 - Utility Bills for the 12 month period
- Lighting
 - Equipment cut sheets and reflected ceiling plan to verify percentage and/or calculations
- Boilers
 - Boiler manuals
 - Mechanical drawing with layout

- Controls
 - Operating procedures that establish temperature set points
- Hot Water
 - Water heater operating manuals
 - Standard operating procedures that establish temperature set points or faucet temperatures
- Other Energy Efficiency Features
 - Equipment cut sheets
 - Operating manuals
 - Schematic drawings of CHP
- Green Energy
 - Copies of contracts with green energy provider or RECs
- Envelope
 - Building condensation report
 - Industrial Hygienist report
 - Cut sheets for windows/doors
 - Data on insulation or building section drawings that show sealant and insulation details
- Energy Policy
 - Documented energy policy signed by senior management
- Energy Audit
 - Energy Audit report within the last 3 years
- Energy Management, Monitoring and Targeting
 - Energy plan, energy historical data
 - Documented energy goal with preferably graphical representations to show movement toward goals
- Energy Training
 - Individual training plans
- Financial Resources
 - Budget that includes energy upgrades and explains funding source
- Sub-metering
 - Tenant energy readings

- Tenant agreement
- Drawing of sub-metering layout
- Operating Manual
 - Operating Manual
- Maintenance Schedules
 - Maintenance schedule or reports from applicable computer program
 - Life Cycle calculations or data that demonstrate how they are used as part of maintenance decisions
- Public Transportation
 - Bus/Train route maps and schedule
- Cycling Facilities
 - Visit bike racks and changing facilities
- Other Measures
 - Advertising or notices concerning car-pooling etc.
 - Policy for transit passes
 - Policy and evidence of hospital vans for patient transit

Water

- Water Consumption
 - Water consumption figures and water bills for the 12 consecutive month period
- Water Conserving Features
 - Cut sheets or operating manuals for water saving features, or plan showing how landscape minimizes irrigation
 - Documents for alternate irrigation sources
- Water Management
 - Water management plan
 - Water monitoring data
 - Water goals
 - Maintenance procedures/records

Resources

- Facilities for Storing and Handling Recyclable Materials
 - Waste management contracts

- Waste Reduction Workplan
 - Waste Audit report within 3 years
 - Waste handling reports
 - Waste diversion goal
 - Construction waste management plan/policy
- Site Enhancement
 - Environmental assessment data

Emissions, Effluents and Pollution Controls

- Boiler Emissions
 - Emission data or report
 - Maintenance report
- Refrigerants
 - Chiller system operating manuals
- Management of Ozone Depleting Refrigerants
 - ODS inventory or report
 - Maintenance records
 - Training records
 - Leak testing results
 - ODS phase out plan
 - Maintenance contract
- Halons
 - Validate that none of the sprinkler systems contain halon
- Waste Water Effluents
 - Demonstrate floor and roof drain operations, in addition to storm water routes and protection
 - Indicate glycol flushing locations and procedures
- Asbestos
 - Asbestos inventory and report
 - Asbestos management plan
- Lead

- Lead management
- Mercury
 - Mercury reduction plan
- Radon
 - Radon survey or location maps to indicate radon risk area
- PCBs
 - PCB survey or report
 - PCB management Plan
 - PCB inspection results
- Storage Tanks
 - Storage tank management plan
 - Reporting results
 - Upgrading schedule
 - Testing results
 - Emergency response procedures
 - Records
 - Closure/removal plans
- Drinking Water (lead and bacteria)
 - Report from local authority to indicate water quality
- HCS Program
 - Provide copies of MSDS's
- Health & Safety and Management of Hazardous Products
 - Procedures for handling haz mat, records of haz mat & haz waste disposal, and training records for staff handling of haz mat
 - Procedures or scope of work from landscape contractors, pest control contracts

Indoor Environment

- Ventilation System
 - Maintenance records for ventilation system
 - Results of acoustic measurements
 - Results of carbon dioxide monitoring

- Mechanical drawings showing equipment
- Filtration System
 - Filter cut sheets
 - Demonstrate manometer set points
- Humidification System
 - Humidification system cut sheets or manufacturing information
 - Maintenance records
- Cooling Towers
 - Maintenance records for cooling towers
- Parking and Receiving
 - Visit parking areas to validate ventilation systems and ensure no exhaust fumes are permitted to reenter the building
 - Demonstrate the carbon monoxide monitoring in the garage and near boilers
- Control of Pollutants at Source
 - Record of complaints from building occupants
 - Procedures to minimize indoor air pollutants at source
 - Cleaning contract and scope of work
- IAQ Management
 - Sample forms or contract with tenants concerning IAQ
 - Record of previous complaints
 - Indoor Air Quality audit, HVAC operating procedures
- Lighting Features
 - Lighting survey or lighting audit data
 - Calculations or site plans that indicate day lighting levels
- Noise
 - Demonstrate the noise levels throughout the building

Environmental Management System

- Environmental Management System (EMS) Documentation
 - Environmental Management Plan with applicable goals
 - The action plan that indicates the schedule for corrections

- Environmental Purchasing
 - The purchasing plan or documents that indicate the preferred environmentally friendly products permitted
 - Copies of documents that demonstrate the review of MSDS are part of purchasing decision making
- Emergency Response
 - A copy of the emergency response plan
 - Applicable training records
 - The operating procedures relative to power failures
- Tenant Awareness
 - Lease agreements or communications with tenants regarding environmental initiatives
 - Emails, website information, contract agreements, flyers, news letters, etc.

Building/Site Tour

After the meeting, you or a designated representative will take the assessor on a guided tour of the building and site. During the tour, the assessor will need full access to the mechanical rooms, rooftop, basement, parking garages/lots, and work areas. He/she will document findings, and take pictures of verified building features. The assessor will strive to be minimally intrusive but may need to inspect conference rooms and secure areas of the facility.

The assessor will inspect all accessible relevant building components and operations. The will inspect items, such as these:

Distance between air intakes and pollution source

- Air intake and exhausts
- HVAC Systems - installation
- Air filters
- Drains
- Toilet flow
- Urinal flow
- Sink flow
- Drains
- Motion sensors
- Water heater
- Cooling equipment and refrigerant

- Air handling equipment and access
- Leak detection
- Filters
- Meters
- Lighting controls
- Shading devices
- ENERGY STAR appliances
- Motion sensors
- Temperature controls
- Landscaping
- Irrigation system
- Exterior lights
- Smoking sign and designated smoking area
- Storage tanks
- Bicycle racks
- Car-pool spaces and hospital vans
- Recycling and waste handling

Closure Meeting

When the tour is finished, the assessor will conduct a closure meeting to review the findings, provide feedback regarding points the client is seeking, and identify items still requiring verification documentation. He/she will set expectations for the next steps, including the time line for submission of missing items and report delivery.

POST ON-SITE ASSESSMENT

Missing Documentation

Any additional documentation requested by the assessor should be sent as soon as possible after the assessment (usually within one week, unless otherwise agreed upon with the assessor). It is important to communicate any delays in the delivery of this documentation. The assessor cannot give credit for any items that cannot be validated. Delays in document submission will result in delays to the On-Site Assessment Report and Green Globes certification. Please note that failure to deliver supporting documentation within a reasonable time frame will result in the report being issued without the associated points.

Third-Party Report

Upon receiving all additional documentation, the assessor will make any last updates to the EB Healthcare

survey. The assessor will use his/her professional judgment as necessary to account for any non-applicable criteria that cannot be accommodated by the online survey and will identify the resulting Green Globes score and rating. Within four weeks of the site visit (or four weeks after the receipt of any missing documentation, whichever is later), the assessor will create a detailed EB Healthcare On-Site Assessment Report and submit it to GBI for review. The report contains the official Green Globes score, rating, and logo. It identifies any discrepancies between the client's version of the survey and the assessor's version and contains recommendations for future sustainability improvements.

GBI Report Review & Issuance

In the last step of the On-Site Assessment, GBI will review the report for consistency, for technical incongruence, grammar and aesthetics. We will notify the assessor regarding any clarification requests or needed updates. If required, the assessor will update the report and submit to GBI. We will review the report to ensure the updates are complete. Once approved, we will issue a PDF of the final assessment report to the project manager by email.

Upon receipt, the project manager is responsible for reviewing the report and identifying any areas in which they have questions or would like clarification. If there are any noted discrepancies, they must contact both the assessor and GBI within two weeks and provide documentation that supports additional credit. The assessor and GBI will promptly address any discrepancies. For additional details, please refer to the [GBI Assessment Discrepancy Resolution & Appeal Guidelines](#).

BENCHMARKING & RECERTIFICATION

GBI strongly encourages annual benchmarking of building performance using the Green Globes EB Healthcare survey as well as formal EB Healthcare recertification every three years. Tracking the building's actual performance and operations helps owners/facility managers track their return on investment in sustainable measures and develop action plans to further improve sustainability. This three-year cycle of benchmarking and Green Globes assessment is intended to continue over the entire building service life.