

OP 3: Building Operations and Maintenance

5 points available

A. Credit Rationale

This credit recognizes institutions that operate and maintain their buildings in ways that protect the health of building occupants and the environment. An institution's existing building stock is typically the largest source of campus energy consumption and greenhouse gas emissions. By adopting and following a sustainable operations and maintenance framework, institutions can conserve energy and water, minimize impacts on the surrounding site, reduce waste and water consumption, promote indoor environmental quality, and support markets for environmentally preferable materials while providing healthy and productive work, learning, and living spaces. While other credits also capture many of the impacts of green buildings (e.g., on campus energy consumption and water use), this credit specifically recognizes institutions that have comprehensive sustainable operations and maintenance programs and that pursue third party certification for those programs.

B. Criteria

Institution owns and operates buildings that are:

- 1) Certified under a green building rating system focused on the operations and maintenance of existing buildings, e.g. [LEED®](#): Building Operations + Maintenance (O+M)
And/or
- 2) Operated and maintained in accordance with published sustainable operations and maintenance guidelines and policies that include one or more of the following:
 - [Indoor air quality \(IAQ\) management](#) policy or protocol
 - [Green cleaning](#) policy, program or contract
 - Energy management or benchmarking program
 - Water management or benchmarking program

Energy and water management and benchmarking programs include dashboards, analytics tools, and other mechanisms to assess performance, set goals, create and implement action plans, and evaluate progress. See, for example [ENERGY STAR Guidelines for Energy Management](#) and [U.S. EPA Portfolio Manager](#).

Building space that meets multiple criteria listed above should not be double-counted.

Building space that is certified under a green building rating system for new construction and major renovation must also be certified under a rating system focusing on operations and maintenance to count as certified space for this credit. For example, a building that is certified under LEED: Building Design + Construction (BD+C) but not LEED: Building Operations + Maintenance (O+M) should not be counted as certified space. Sustainability in new construction and major renovation projects is covered in the *Building Design and Construction* credit.

C. Applicability

This credit applies to all institutions that have occupied building space that is eligible for certification under a green building rating system for existing buildings. See “[Eligible building space \(operations and maintenance\)](#)” in G. Standards and Terms.

D. Scoring

Institutions earn the maximum of 5 points available for this credit by having all eligible building space certified at the highest achievable level under a rating system for existing buildings used by an [Established Green Building Council](#) (GBC) in the institution’s locality, e.g. LEED O+M, certification level Platinum. Incremental points are awarded based on the percentage of building space that is certified at each level and/or maintained in accordance with sustainable operations and maintenance policies (see table below). For example, an institution that had 100 percent of its eligible building space certified at the minimum level would earn 2.5 points for this credit, while an institution that had 50 percent of its eligible building space certified at the minimum level would earn 1.25 points.

*Points for **certified space** are calculated automatically in the STARS Reporting Tool as follows:*

Operations and maintenance level	Factor		Floor area of building space certified at each level		Total floor area of building space		Points earned
Certified LEED O+M Platinum or at the highest achievable level under another GBC rating system	5	x	_____	÷	_____	=	
Certified LEED O+M Gold or at the 2nd highest level under another 4- or 5-tier GBC rating system	4		_____				
Certified at mid-level under a 3- or 5-tier GBC rating system (e.g., BREEAM-In Use, CASBEE for Existing Buildings, DGNB, Green Star Performance)	3.5		_____				
Certified LEED O+M Silver or at a step above minimum level under another 4 -or	3		_____				

5-tier GBC rating system						
LEED O+M Certified or certified at minimum level under another GBC rating system	2.5		_____			
Certified at any level under a non-GBC rating system (e.g., BOMA BEST, Green Globes CIEB)	2.5		_____			
Total points earned for certified space →						Up to 5

Points for **uncertified space** are calculated automatically in the STARS Reporting Tool as follows:

Floor area of uncertified space = (Total floor area of building space) - (Floor area of certified space)

Maintained under a(n):	Factor		Percentage of uncertified space maintained under each policy or program (0-100)		Floor area of uncertified space		Total floor area of building space		Points earned
Indoor air quality (IAQ) management policy or protocol	0.005		_____						
Green cleaning policy, program or contract	0.005		_____						
Energy management or benchmarking program	0.005	×	_____	×	_____	÷	_____	=	
Water management or benchmarking program	0.005		_____						
Total points earned for uncertified space →									Up to 2

E. Reporting Fields

Required

- Total floor area of existing building space (square feet/square metres)
- Floor area of building space that is certified at each level under a green building rating system for the operations and maintenance of existing buildings used by an Established Green Building Council (square feet/square metres):
 - Certified LEED O+M Platinum or at the highest achievable level under another GBC rating system for the operations and maintenance of existing buildings
 - Certified LEED O+M Gold or at the 2nd highest level under another 4- or 5-tier GBC rating system for the operations and maintenance of existing buildings
 - Certified at mid-level under a 3- or 5-tier GBC rating system for the operations and maintenance of existing buildings (e.g., DGNB, Green Star Performance, BREEAM-In Use, CASBEE for Existing Buildings)
 - Certified LEED O+M Silver or at a step above minimum level under another 4 -or 5–tier GBC rating system for the operations and maintenance of existing buildings
 - LEED O+M Certified or certified at minimum level under another GBC rating system for the operations and maintenance of existing buildings

- Floor area of building space that is certified under a non-GBC rating system for the operations and maintenance existing buildings, e.g. BOMA BEST, Green Globes CIEB (square feet/square metres)

If reporting certified space, provide:

- A brief description of the green building rating system(s) used and/or a list or sample of certified buildings and ratings
- Floor area of building space that is NOT certified, but that is maintained in accordance with formally adopted sustainable building operations and maintenance guidelines or policies (square feet/square metres)

If reporting uncertified space, provide:

- Of the institution's uncertified building space, what percentage of floor area is maintained in accordance with the following?
 - A published indoor air quality (IAQ) management policy or protocol (0-100)
 - A published green cleaning policy, program or contract (0-100)
 - An energy management or benchmarking program (0-100)
 - A water management or benchmarking program (0-100)

If reporting an IAQ management policy or protocol, provide:

- A copy of the IAQ management policy or protocol or the website where the policy/protocol may be found (upload or URL)

If reporting a green cleaning policy, program or contract, provide:

- A copy of the green cleaning policy or a brief description of how green cleaning is incorporated into cleaning contracts (upload or text)

If reporting an energy management or benchmarking program, provide:

- A brief description of the energy management or benchmarking program

If reporting a water management or benchmarking program, provide:

- A brief description of the water management or benchmarking program

Optional

- The website URL where information about the programs or initiatives is available
- Additional documentation to support the submission (upload)
- Data source(s) and notes about the submission
- Contact information for a responsible party (a staff member, faculty member, or administrator who can respond to questions regarding the data once it is submitted and available to the public)

F. Measurement

Timeframe

Report on the current certification status of buildings at the time of submission.

Buildings for which certification has lapsed should not be counted as certified space. Likewise, buildings for which certification is pending should not be counted as certified space; these buildings may be excluded from the calculations for this credit for up to 2 years following registration with LEED or another rating system. Finally, buildings that have been certified under a rating system that focuses on design and construction (e.g., LEED BD+C) may be excluded from the calculations for this credit for up to 5 years following the date of certification.

Sampling and Data Standards

Include all eligible building space (operations and maintenance) as defined in *G. Standards and Terms* that is part of the institution's overall STARS institutional boundary. Reporting on a sample or subset of eligible building space is not allowed for this credit.

An institution may use any standard definition of floor area (e.g., ASHRAE, ANSI/BOMA, IECC), as long as it uses the same definition for both the total floor area of eligible building space and the floor area of building space that is certified and/or sustainably operated and maintained.

Buildings that are not owned by the institution and in which the institution is one of multiple tenants may be excluded. If the institution chooses to include such buildings, it must include all multi-tenant buildings that are included in the institution's overall STARS boundary (see *Institutional Characteristics*) and in which the institution is a tenant; institutions cannot choose to include some leased spaces and omit others. If an institution chooses to include leased spaces, the institution should count only the square footage of building space it occupies and not the entire building.

Buildings that the institution leases entirely (i.e., the institution is the only tenant) should be included.

G. Standards and Terms

Eligible building space (operations and maintenance)

"Eligible building space (operations and maintenance)" includes the total floor area of all building space that is eligible for certification under a rating system for existing buildings. To be included, building space must meet the minimum program requirements of a rating system for existing buildings. See, for example, [LEED](#)

[O+M Minimum Program Requirements](#). Buildings that do not meet minimum program requirements and are therefore ineligible for certification under a green building rating system for existing buildings (e.g., unoccupied buildings such as parking garages, and buildings that serve less than 1 Full Time Equivalent occupant) should be excluded.

Established Green Building Council

An [Established Green Building Council](#) (GBC) has been granted 'Established' membership status by the World Green Building Council (WGBC). Rating systems for existing buildings used by Established GBCs include LEED, BREEAM, CASBEE, DGNB, Green Star, and IGBC. Further information about GBCs and rating systems/tools is available on the [WGBC website](#).

Green cleaning

Green cleaning refers to the use of cleaning products and methods that are safer for human health and the environment than conventional, chemical-based cleaning products and methods. A green cleaning program includes established policies and procedures and staff training in safe, effective and ecologically preferable cleaning practices.

Indoor air quality management

An indoor air quality (IAQ) management policy or protocol should be consistent with the U.S. Environmental Protection Agency's [Indoor Air Quality Building Education and Assessment Model \(I-BEAM\)](#) and/or ASHRAE's *Large Building Guidance on Indoor Air Quality* and include, at minimum:

- Regular auditing or monitoring,
- A mechanism for occupants to register complaints, and
- Action plans to implement any corrective measures required in response to audits, monitoring or complaints.

LEED

[LEED](#) (Leadership in Energy and Environmental Design) is described by the U.S. Green Building Council as "a voluntary, consensus-based, market-driven program that provides third-party verification of green buildings". LEED rating systems include Building Design + Construction (BD+C), Interior Design + Construction (ID+C), Building Operations + Maintenance (O+M), and Neighborhood Development (ND).

Scoring Example: Building Operations and Maintenance

Calculating points earned for certified space

- Example University owns and operates 100,000 ft² of existing, occupied building space. Of that, the following buildings that are certified under LEED O+M::
- 20,000 ft² building that is certified under LEED for Existing Buildings: O+M, certification level Silver.
- 20,000 ft² building that is certified under LEED for Existing Buildings: O+M, certification level Gold.
- 10,000 ft² building that is certified under LEED for Existing Buildings: O+M, certification level Platinum.

Total eligible building space = 5,000 ft² + 10,000 ft² + 5,000 ft² + 20,000 ft² + 10,000 ft² = 50,000 ft²

Operations and maintenance level	Factor		Floor area of building space certified at each level		Total floor area of eligible building space		Points earned
LEED O+M Platinum Certified	5	x	<u>10,000</u>	÷	<u>100,000</u>	=	0.5
LEED O+M Gold Certified	4		<u>20,000</u>				0.8
LEED O+M Silver Certified	3		<u>20,000</u>				0.6
LEED O+M Certified	2.5		<u>0</u>				0
Certified at any level under a non-GBC rating system (e.g., BOMA BEST, Green Globes CIEB)	2.5		<u>0</u>				0
Total points earned for certified space →							1.9

Calculating points earned for uncertified space

In addition to the certified space reported above, Example University owns and operates the following buildings:

- 5,000 ft² building managed under an IAQ policy and a green cleaning contract
- 10,000 ft² building managed under an IAQ policy and a green cleaning contract
- 10,000 ft² building managed under an IAQ policy and a green cleaning contract
- 20,000 ft² building managed under an IAQ policy, a green cleaning contract, and an energy and water benchmarking program
- 5,000 ft² building managed under an IAQ policy, a green cleaning contract, and an energy and water benchmarking program

Floor area of uncertified space = (Total floor area of building space) - (Floor area of certified space)
 = 100,000 - 50,000
 = 50,000 ft²

Maintained under a(n):	Factor		Percentage of uncertified space maintained under each policy or program (0-100)		Floor area of uncertified space		Total floor area of building space		Points earned
Indoor air quality (IAQ) management policy or protocol	0.005	×	<u>100</u>	×	<u>50,000</u>	÷	<u>100,000</u>	=	0.25
Green cleaning policy, program or contract	0.005		<u>100</u>						0.25
Energy management or benchmarking program	0.005		<u>50</u>						0.125
Water management or benchmarking program	0.005		<u>50</u>						0.125
Total points earned for uncertified space →									0.75

Total points earned for the credit = 1.9 + 0.75
 = 2.65