LEONARDO ACADEMY
THE SUSTAINABILITY EXPERTS®

The Use of LEED® Building Standards In the College and University Marketplace

A Survey Report by Leonardo Academy

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Preface

Welcome to this Leonardo Academy survey on the use of LEED® by colleges and universities.

The goal of this survey is to explore how colleges and universities use LEED certification, how LEED certification fits into their overall sustainability programs and goals, and what factors motivate the use of the LEED rating system.

This survey was developed acknowledging the unique and powerful role that institutions of higher education occupy in advancing sustainability in practice and developing the vital body of knowledge surrounding sustainability action.

Suggestions for questions to include in future surveys are welcome. If you have any comment or suggestions please email them to info@leonardoacademy.org or call the Leonardo Academy office at (608) 280-0255.

Leonardo Academy is a nonprofit founded in 1997 with the mission to advance environmental improvement and sustainability by leveraging the competitive market. Our organization develops innovative sustainability approaches and standards, and provides consultancy services to support sustainability implementation across all sectors with a focus on green building rating systems.

This is Leonardo Academy's 20th Anniversary Year!

Regards,

Michael Arny, PE, LEED AP BD+C and O+M, WELL AP
President
Leonardo Academy, Inc. The Sustainability Experts®

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Section 1: Introduction

Colleges and universities pose a unique opportunity to the green building and facilities management industries because of their campus setting, ability to pool resources across multiple buildings, and the ability to integrate sustainability initiatives across academic and non-academic staff resources.

Purpose

This survey was conducted to gather information on the use of Leadership in Energy and Environmental Design (LEED®) green building certification by college and university facilities in the United States in order to gain insight into current market engagement for green building initiatives among higher education institutions and identify driving factors for implementing infrastructure-based sustainability practices.

Background

LEED was developed by the United States Green Building Council (USGBC), launched in 2000, and is today recognized as the foremost certification program for environmental responsibility and resource efficiency for building owners and operators. In the context of colleges and universities, the applicable LEED rating systems include New Construction (LEED NC), LEED for Existing Buildings: Operations and Maintenance (LEED EBOM), and LEED Campus. LEED EBOM is an ongoing process with the goal of improving operations of already existing buildings, many of which use energy, water, and other resources inefficiently. The USGBC requires that buildings certified under LEED EBOM recertify at least once every five years in order to maintain or improve certification status. LEED Campus provides preapproval for a number of campus-wide credits to streamline LEED implementation across several buildings owned and operated under the same leadership.

This survey recognizes that in addition to LEED, myriad programs, incentives, scorecards, metrics, and standards designed to increase the sustainability of campus operations and level of responsibility for the environmental impacts caused by colleges and universities are available.

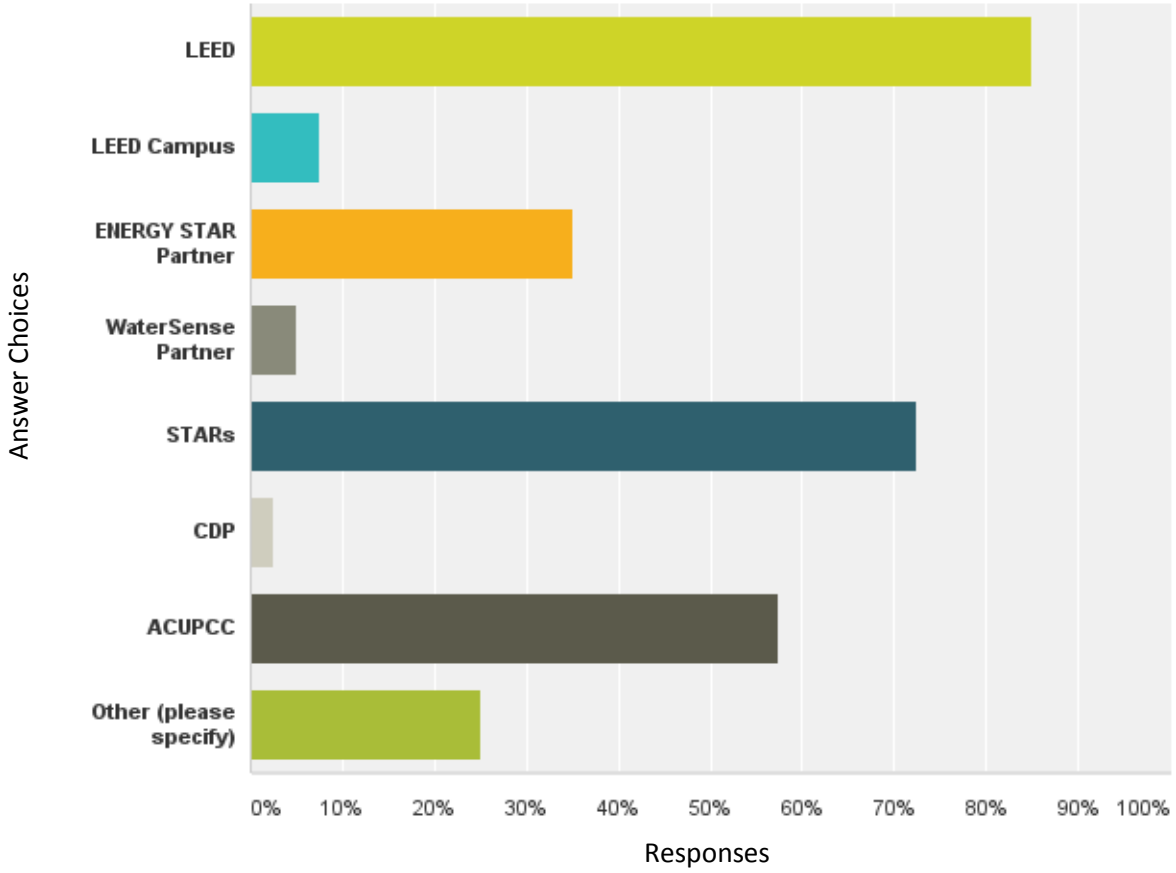
Methodology

Leonardo Academy, Inc. The Sustainability Experts® collected survey responses over a 12-week period from May through August 2016. Survey responses were gathered via online SurveyMonkey® software and via manual SurveyMonkey data entry for responses collected by phone. Responses were collected from 40 colleges and universities throughout the United States. The results contain survey responses representing institutions in 24 U.S. states and each primary geographic U.S. region (Northeast, Southeast, South, Midwest, West, Southwest, and Northwest). For most questions, respondents had the opportunity to provide additional comments. All comments provided by respondents are included in the response summary for each question.

Section 2: Overview of Findings

The results of survey Question 1 provide a snapshot of the use of LEED® by college and universities compared to other available sustainability programs and metrics, including LEED Campus, the EPA's ENERGY STAR Partner® program, the EPA's WaterSense® Partner program, the Sustainability Tracking, Assessment, and Rating System™ (STARS), the Carbon Disclosure Project (CDP), the American College & University Presidents' Climate Commitment (ACUPCC) supported by Second Nature, and others.

Question 1: What sustainability initiatives does your campus participate in?



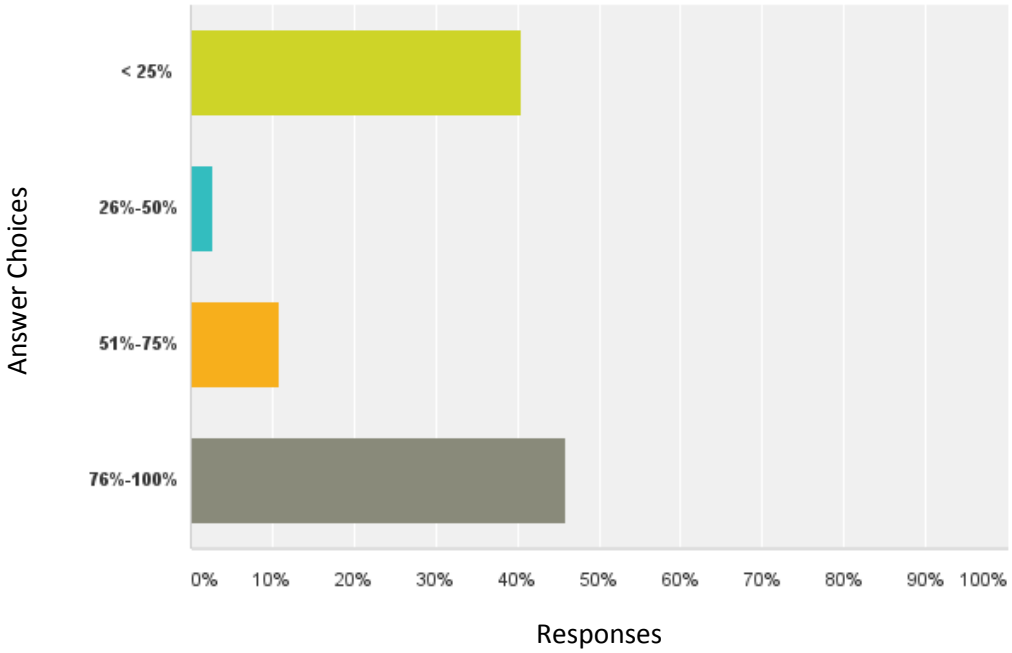
Summary of Responses to Survey Question 1:

The following sustainability initiatives are used by college and university campuses (in order from most popular to least popular): LEED (84%), STARS (73%), American College and University President's Climate Commitment (59%), ENERGY STAR Partner (35%), LEED Campus (8%), WaterSense Partner (5%), and the Carbon Disclosure Project. "Other" responses (24% of respondents provided additional

comments) include LABS21, the Sustainability Grand Challenge, Green Office, Green Events, Zero Waste, the Climate Action Plan, Sustainable Endowment Institute (SEI), International Green Construction Code, UC President's Carbon Initiative 2020, Green Globes, and the EPA Green Power Partnership. Of these programs, LEED is the most broadly used sustainability initiative on college and university campuses.

Section 3: Survey Results

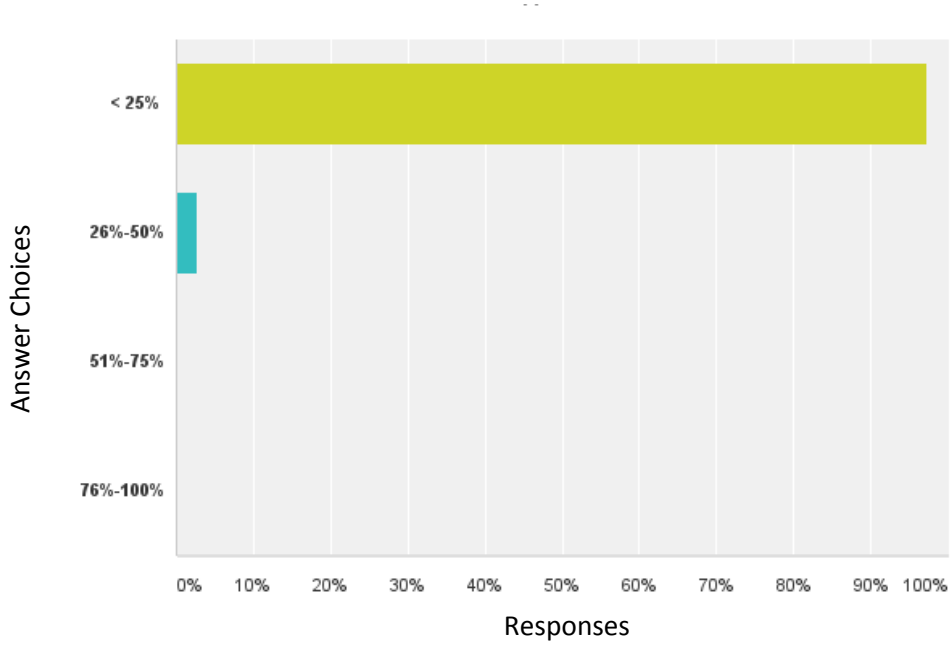
Question 2: What percentage of new buildings are LEED NC certified?



Summary of Question 2 Responses:

40% of respondents certify less than 25% of New Construction projects, 2.7% certify 26-50% of New Construction Projects, 10% certify 51-75% of New Construction projects and 45% certify 76-100% of New Construction projects.

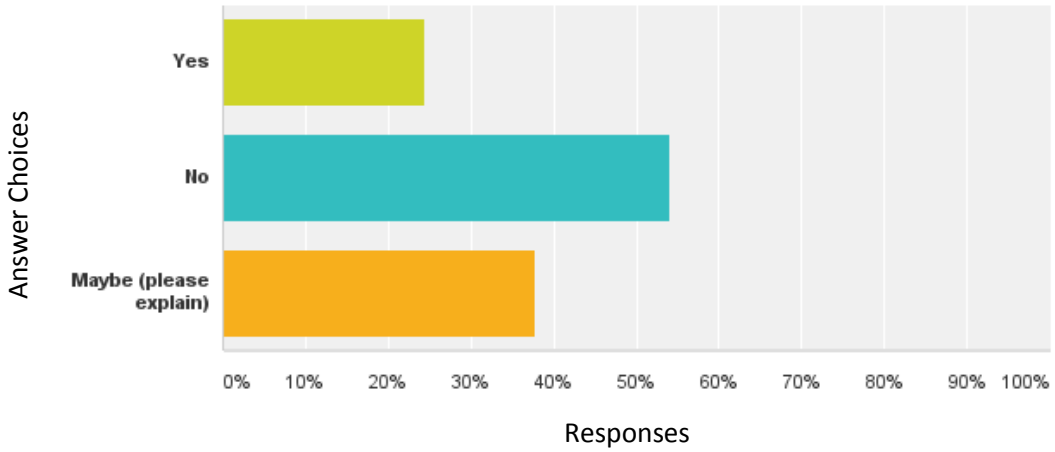
Question 3: What percentage of existing buildings are LEED EB certified?



Summary of Reponses to Question 3:

97% of survey respondents reported that less than 25% of their existing buildings are LEED EB certified. 3% of respondents reported that 26-50% of their campus buildings are LEED EB certified.

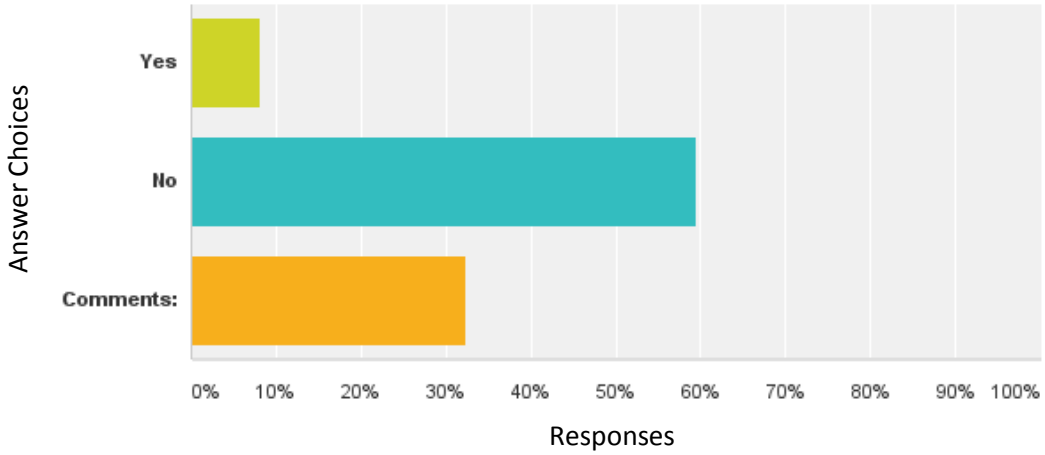
Question 4: For buildings that are not LEED certified, do you have plans to certify in the future?



Summary of Reponses to Question 4:

For existing buildings that are not LEED certified, 24% of respondents have plans to certify in the future, 54% do not have plans to certify in the future, and 38% might certify in the future. Those who responded in the "maybe" category provided narrative commentary. Reasons for questioning the pursuit of certification include limited resources such as staff, time, and funding, mixed levels of executive commitment, lack of university approval, opting for internal certification programs, lack of tenant demand, and waiting for an opportunity to arise with major renovations.

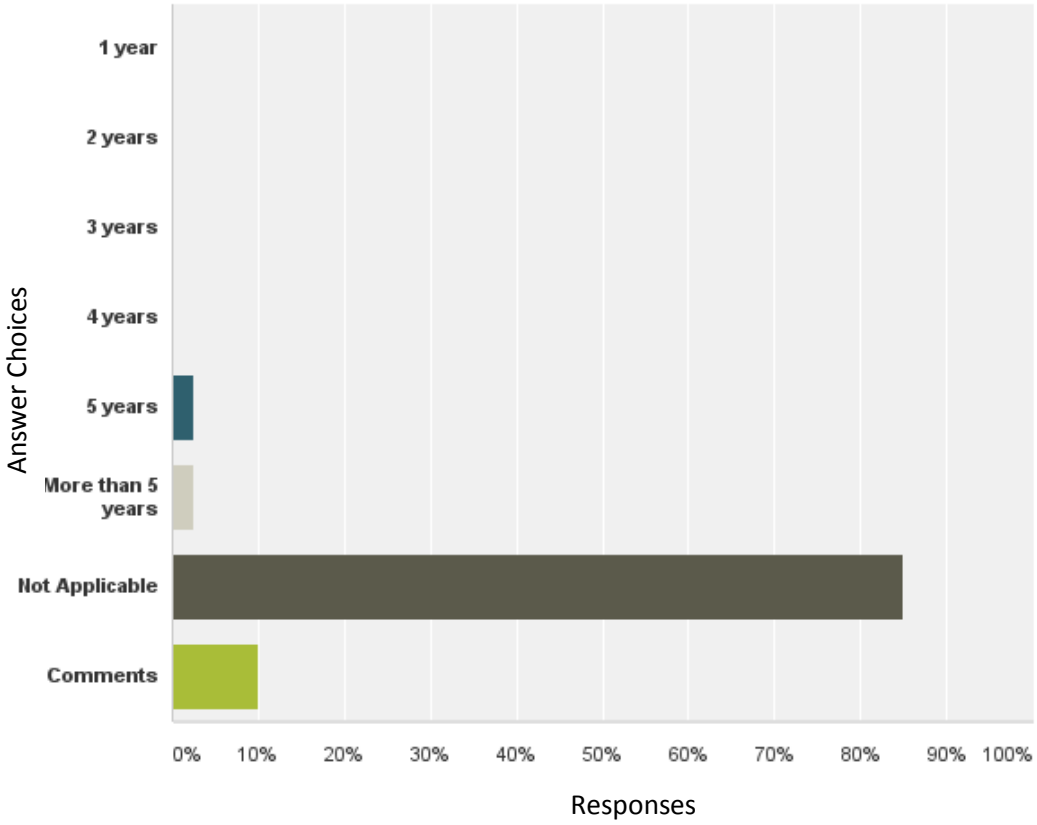
Question 5: After initial LEED NC or EBOM certification, do you maintain ongoing LEED EBOM certification?



Summary of Reponses to Question 5:

8% of respondents maintain ongoing LEED EBOM recertification while 59% do not. 32% provided additional comments. Additional commenters identified that recertification has not been a policy requirement, making it difficult to fund, and that certified buildings have not yet reached the end of the maximum 5 year recertification window.

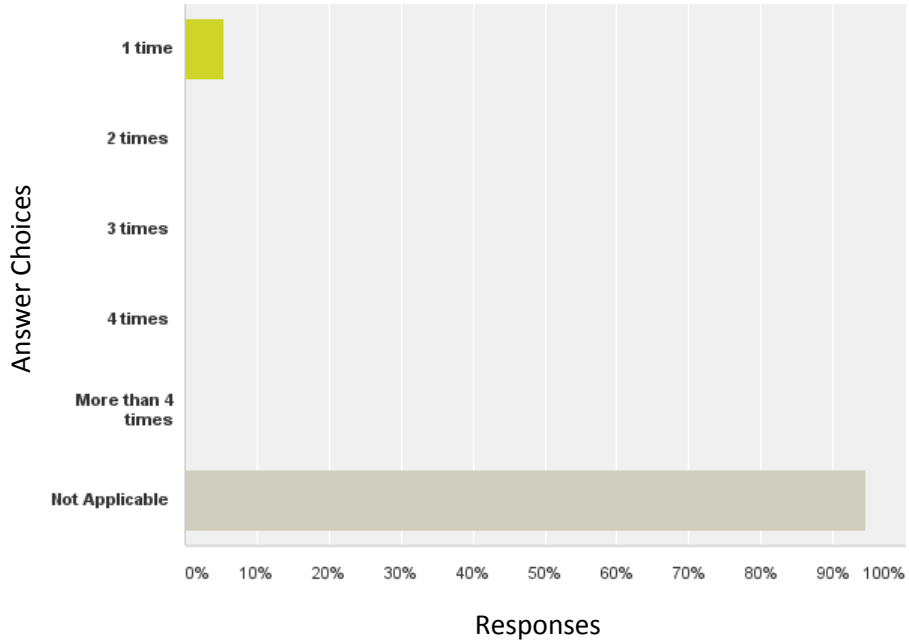
Question 6: How long is your typical LEED recertification cycle?



Summary of Reponses to Question 6:

Although this question is only applicable to 15% of respondents, 3% answered that their LEED recertification cycle is 5 years long and 3% responded that their recertification cycle is longer than 5 years. 10% of repondends provided comments, siting that they do not know because recertification falls under the responsibility of a different department, or that they have no buildings to recertify.

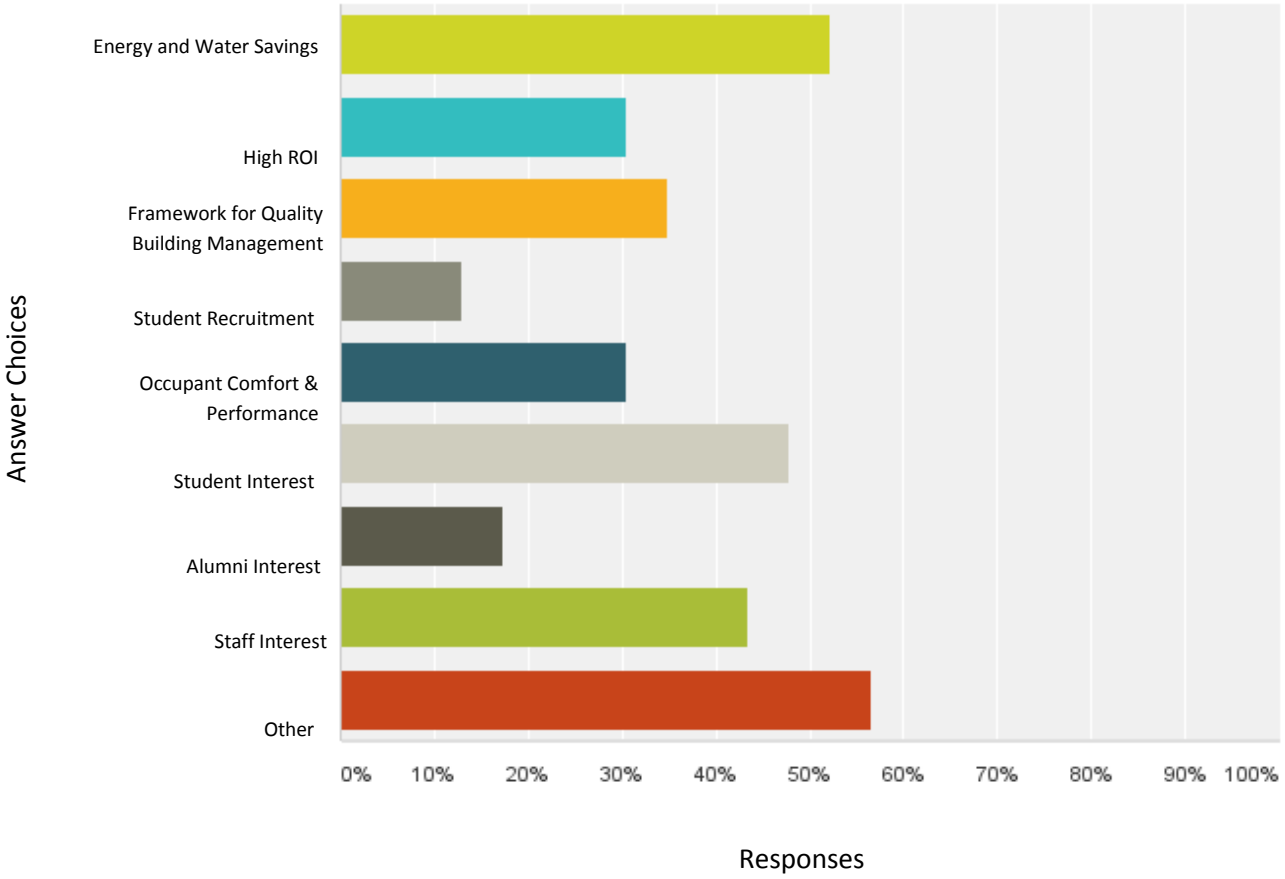
Question 7: For the building on your campus that has the longest LEED recertification history, how many times has this building been recertified?



Summary of Question 7 Responses:

5% of respondents reported earning recertification 1 time for the campus building with the longest recertification history. This question was not applicable to 95% of respondents.

Question 8: What have been the main benefits of earning ongoing LEED EBOM recertification for buildings on your campus?

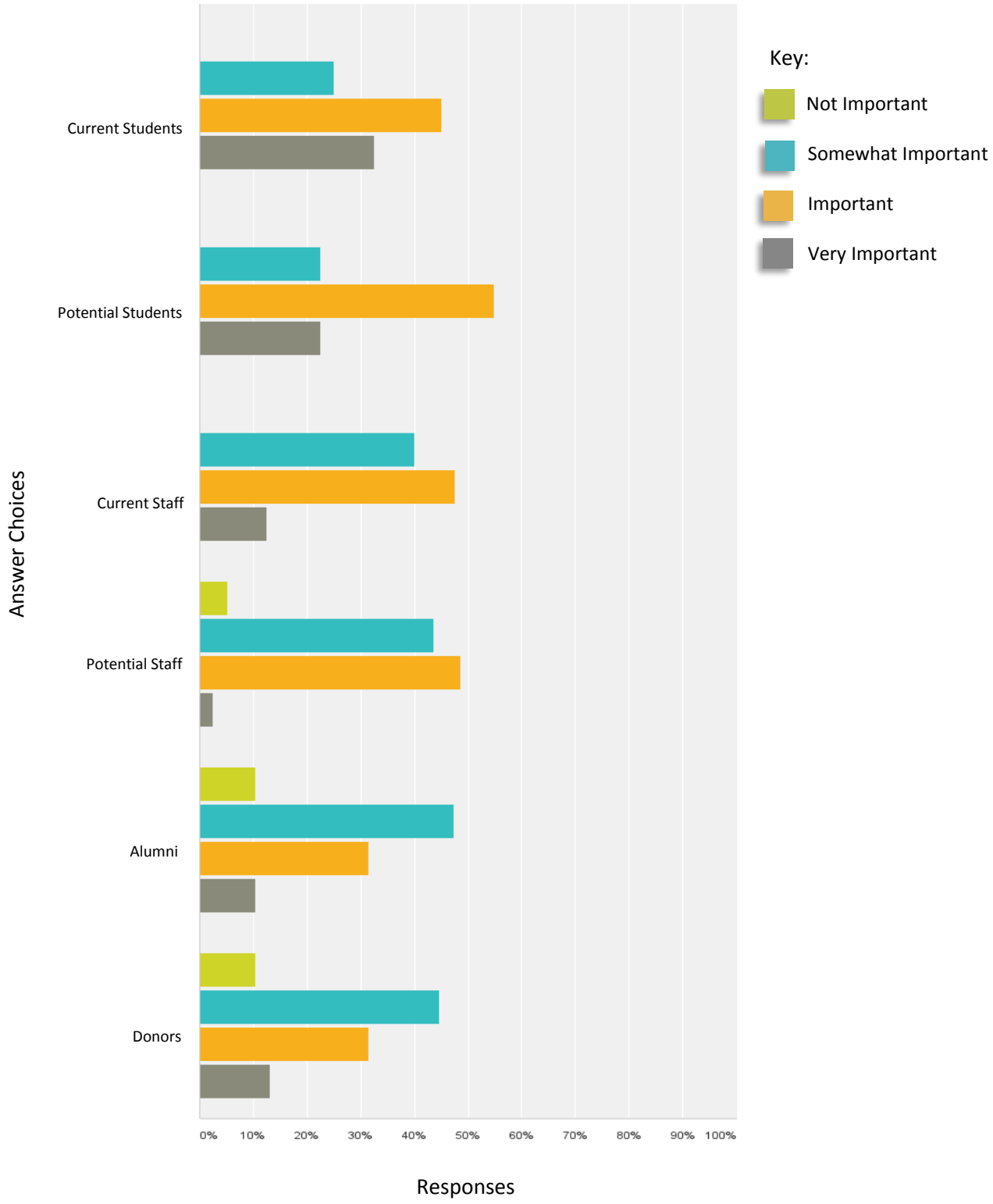


Summary of Reponses to Question 8:

Of the main benefits of earning ongoing LEED EBOM recertification for campus buildings, 52% agree that energy and water savings is a main benefit, 48% agree that it caters to the interests of students on campus, 43% believe it caters to the interests of staff on campus, 35% agree that it provides a quality framework for building management, 30% believe its associated high return on operations improvements to be a main benefit, 30% agree that the provided occupant comfort and performance are main benefits, 17% believe that it caters to the interest of alumni, and 13% agree that it is helpful in recruiting students.

Comments in the “other” category reveal additional benefits including property tax incentive and the opportunity to create and use a LEED Lab to conduct feasibility studies and gap analyses for campus buildings.

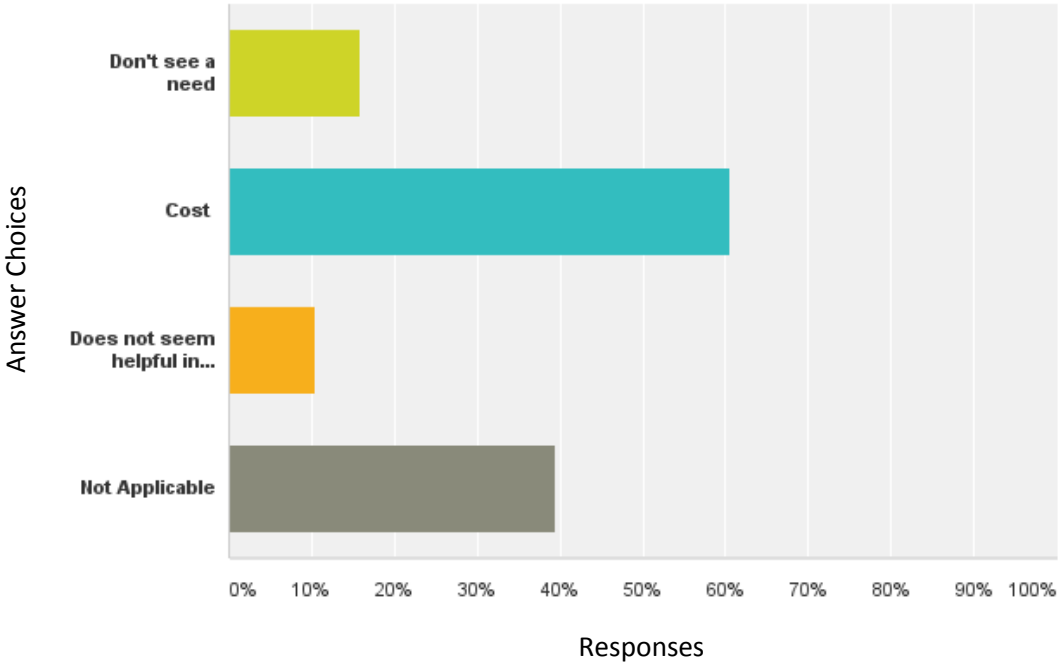
Question 9: How important is sustainability to the following audiences of your college or university?



Summary of Reponses to Question 9:

To current students, 24% of respondents believe that campus sustainability is somewhat important, 43% believe it is important, and 34% believe it is very important. To potential students 21% respondents believe campus sustainability is somewhat important, 54% believe it is important, and 24% believe it is very important. To current staff, 38% of respondents believe that campus sustainability is somewhat important, 48.65% believe it is important, and 14% believe it is very important. To potential staff, 6% of respondents believe campus sustainability is unimportant, 42% believe it is somewhat important, 50% believe it is important, and 3% believe it is very important. To alumni, 9% of respondents believe campus sustainability is unimportant, 49% believe it is somewhat important, 31% believe it is important, and 11% believe it is very important. To donors, 9% of respondents believe campus sustainability is unimportant, 43% believe it is somewhat important, 34% believe it is important, and 14% believe it is very important.

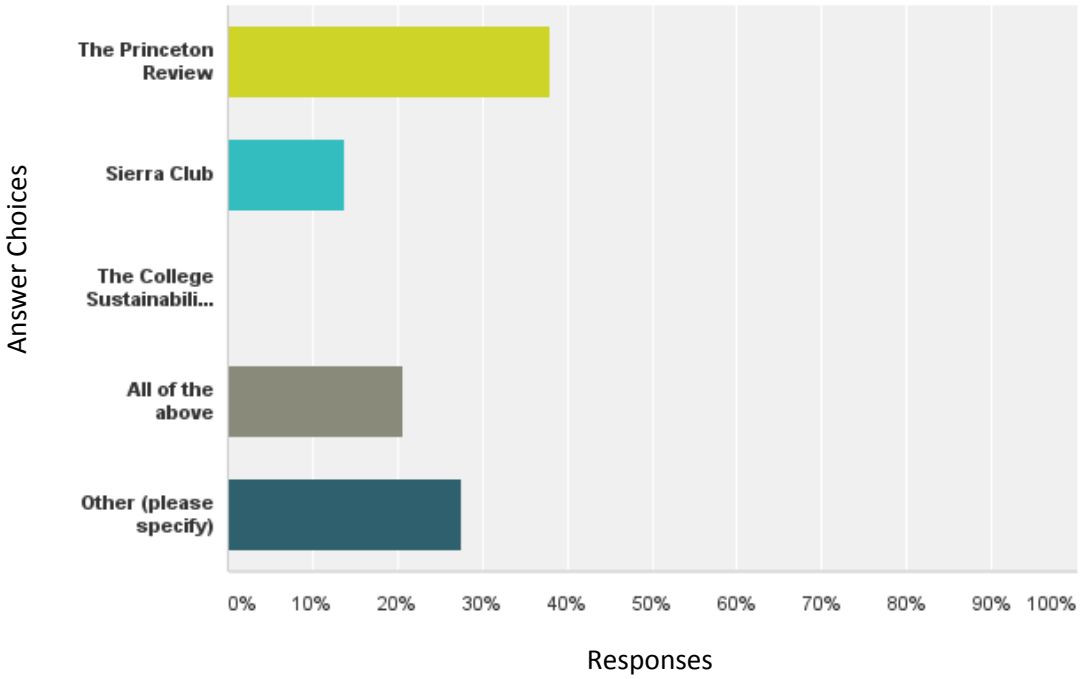
Question 10: If you are not pursuing ongoing LEED EBOM recertification for buildings on your campus, what is/are main reason(s)?



Summary of Reponses to Question 10:

For respondents who are not pursuing ongoing LEED EBOM recertification for campus buildings, 16% do not see a need, 60% see cost as a barrier, and 11% do not see it as a helpful tool in recruiting students. This question was not applicable to 39% of respondents.

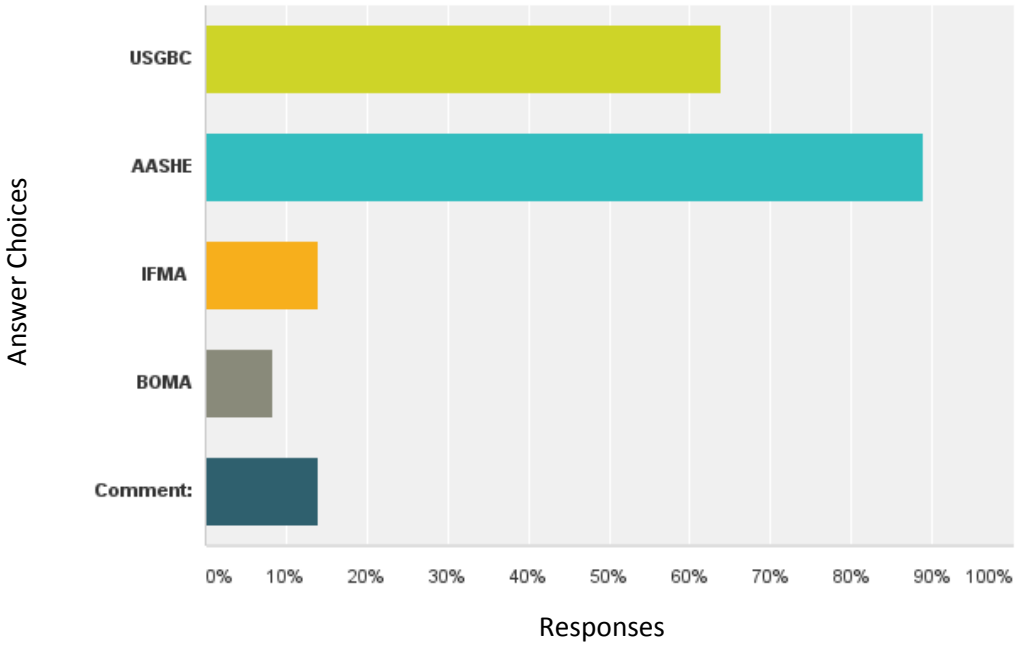
Question 11: What college and university sustainability ratings for prospective students do you participate in?



Summary of Reponses to Question 11:

38% of respondents participate in the Princeton Review, 14% participate in the Sierra Club rating system, 0% participates in the College Sustainability Report Card, and 21% participate in all three. Those who responded in the "Other" category commented that they also participate in STARS, all three, or they do not know.

Question 12: What are the most helpful resources for campus sustainability?



Summary of Reponses to Question 12:

AASHE is the most important campus sustainability resource (89% of respondents have identified it as most helpful), followed by the United States Green Building Council (64%), IFMA (14%), and BOMA (8%). 15% of respondents provided comments, identifying additional campus resources that are most helpful include the International Living Future Institute, Salmon Safe Certification, peer projects/initiatives, APPA, ASCE, APWA, SAME, IDEA and DOE ENERGY STAR.

Section 4: Result Highlights

- **Top initiatives used by colleges and universities:**
  - LEED is used by 84% of respondents
  - STARS is the next most-used by 73% of respondents
- **Certification of New Construction projects:**
  - 46% of respondents certify 76-100% of New Construction projects.
  - 41% of respondents certify less than 25% of New Construction projects
- **Existing Building Certification:**
  - 97% of respondents reported that less than 25% of their existing buildings are LEED EB certified
- **Plans for existing buildings that are not LEED certified:**
  - 24% of respondents have plans to certify in the future
- **Maintaining ongoing LEED EBOM recertification:**
  - 8.11% of respondents maintain ongoing LEED EBOM recertification
- **Main benefits of earning ongoing LEED EBOM recertification for campus buildings:**
  - 52% of respondents say energy and water savings
  - 48% of respondents say it caters to the interests of students
  - 43% of respondents say it caters to the interests of staff on campus
  - 35% of respondents say it provides a quality framework for building management
  - 30% of respondents say its associated high return on operations improvements
  - 30% of respondents say the provided occupant comfort and performance
  - 17% of respondents say it caters to the interest of alumni
  - 13% of respondents say it is helpful in recruiting students
- **Purpose for campuses not pursuing ongoing LEED EBOM recertification:**
  - 60% of respondents day cost is prohibitive (Note: compare with main benefits above)
- **College and university perception of importance of campus sustainability to potential students:**
  - 21% respondents believe campus sustainability is somewhat important
  - 54% believe it is important
  - 24% believe it is very important
- **Campus sustainability rating participation:**
  - Princeton Review: 37%
  - Sierra Club rating system: 13%
  - College Sustainability Report Card: 0%
  - Participate in all three above: 20%
- **Most helpful resources for campus sustainability:**
  - AASHE: 88%
  - US Green Building Council: 63%
  - IFMA 13%
  - BOMA: 8%

Section 5: Conclusion

The data gathered from survey responses offers insight into the level of LEED participation compared to other available programs, driving factors for pursuing LEED and its specific applications (for New Construction, Existing Buildings, and ongoing recertification), level of importance to key stakeholders, benefits and challenges to pursuing campus sustainability through LEED, and more.

Among survey respondents, LEED is the sustainability initiative with the highest campus participation rate, followed by the STARS program. The top benefits of earning ongoing LEED EB O+M recertification for buildings on campus were identified as energy and water savings, catering to the interest of current students, and catering to the interest of current staff. While respondents confirm that there are numerous benefits to pursuing LEED EB O+M certification, there exists a missed opportunity in existing buildings on college and university campuses. While 45% of respondents certify 76% to 100% of New Construction projects, 97% of respondents reported that less than 25% of their existing buildings are LEED EB O+M certified.

There is an opportunity for campuses to put the LEED EB O+M rating system to work on maintaining the performance of LEED NC certified buildings and improving and maintaining the performance of existing buildings. Ongoing LEED EB O+M certification for LEED NC certified buildings ensures ongoing performance as intended and designed. The LEED EB O+M rating system can also be used to upgrade and maintain the ongoing performance of existing buildings on campus.

In order of highest to lowest level of importance to stakeholders, the survey results demonstrate that campus sustainability is believed to be most important to current students, followed by potential students, current staff, potential staff, donors, and alumni. As such, engaging all the campus audiences including current and prospective students, current and potential staff, alumni and donors in supporting campus sustainability offers an opportunity for driving increased implementation of campus sustainability and LEED for campus buildings.

Appendix A: Key Terms & Acronyms

AASHE: Association for the Advancement of Sustainability in Higher Education

APPA: APPA: Leadership in Educational Facilities. Previously called the Association of Physical Plant Administrators.

APWA: American Public Works Association

ASCE: The American Society of Civil Engineers.

BOMA: Building Owners and Managers Association. An international network for professionals involved in building ownership, management, development, and leasing.

CDP: Carbon Disclosure Project

IDEA: Interactive Distance Education Alliance

IFMA: International Facility Management Association. An international association for building management professionals.

International Living Future Institute: A global network dedicated to creating a healthy future for all by addressing sustainable building design through The Living Building Challenge.

LABS21: A resource to support the design, construction, and operation of high-performance laboratories

LEED: Leadership in Energy and Environmental Design

LEED EB O+M: The LEED for Existing Buildings: Operations and Maintenance rating system

LEED NC: The LEED for New Construction rating system

SAME: Society of American Military Engineers

STARS: Sustainability Tracking, Assessment, and Rating System

USGBC: United States Green Building Council. Managing body for the LEED rating system.