



The Development and Application of Policy-Based Tools for Institutional Green Buildings

By Anthony F. Cupido, P. Eng.

In May 2008, APPA forwarded a Web-based survey on behalf of the author, an APPA member and current President of OAPPA (in Ontario), to all designated representatives of member institutions. The purpose of the survey was to determine

if institutional policies are an important criterion for an institution's sustainable building practices and the use of Leadership in Energy and Environmental Design (LEED®). The survey specifically focused on water conservation and rainwater harvesting.

This research consisted of a Web-based survey to gather information about an institution's sustainable building practices and the use of specific

tools or instruments such as policies, guidelines, standards, laws, or goals for "green" buildings.

Initiating this survey through APPA's Center for Facilities Research (CFaR) has provided an opportunity to expand and strengthen the facilities body of knowledge, as well as engage members in groundbreaking research regarding green building policies in the United States and Canada.

The survey was completed by 218 members and represented a good participation rate of approximately 20 percent.

Follow-up interviews were conducted during the summer, with 24 individuals who volunteered to participate with additional detailed questions. The number of individuals was selected to ensure that four members in each of APPA's six regions were chosen to give a geographical balance across the United States and Canada. These interviews provided



more in-depth insight into the approach senior facility officials use while working with sustainable policies, guidelines, standards, laws, or goals. Barriers and challenges adhering to existing policies or adopting new policies were explored. Understanding the use of consultants for the LEED registration and subsequent documentation, as well as related costs, was examined.

Related research has concluded that university sustainability policies are important because they seem to determine the degree to which a university will attempt environmental change and engage in sustainable initiatives. While there is a growing movement toward a sustainable future in higher education, there is clear evidence that an opportunity exists to enhance policy development and application in higher education as it relates to the promotion of sustainable building practices and the application of LEED.

PRECIOUS WATER

With respect to water conservation and rainwater harvesting, the critical importance of water as a precious natural resource cannot be overstated. As ongoing pressure from economic growth continues, concerns will be introduced regarding reduced reliability of water supply and water management. The results of these concerns may include policies relating to the development and adaptation of innovative technologies and processes. Many APPA members are experiencing water restrictions in their state or local municipality due to weather and climate changes that are impacting their respective campuses.

Rainwater harvesting provides the opportunity for institutional buildings to limit their demand for conventional potable water supplies. As part of the design and construction of a new Faculty of Engineering building at McMaster University, the objective is to collect rainfall from the roof of the five-story building and to reuse it for

both potable and non-potable uses in the majority of the building.

Preliminary results and conclusions of the recent survey and interviews are indicating the following:

RELATED RESEARCH HAS CONCLUDED THAT UNIVERSITY SUSTAINABILITY POLICIES ARE IMPORTANT BECAUSE THEY SEEM TO DETERMINE THE DEGREE TO WHICH A UNIVERSITY WILL ATTEMPT ENVIRONMENTAL CHANGE AND ENGAGE IN SUSTAINABLE INITIATIVES.

- APPA members are playing an important leadership role in the development of institutional policies, guidelines, standards, or goals for “green” buildings. They are providing the vision for sustainable buildings at their respective campuses or helping to lead sustainable teams of stakeholders for that purpose.
- That LEED is the dominant tool used by institutions as a policy, guideline, standard, or goal to establish a “green building” on their campus.
- In their capacity/role on a new “green building” design team, over half of the respondents wished that they had a green building policy to ensure that they could obtain a particular “green” building standard such as LEED and/or a particular level of LEED that others may be arguing against for various reasons.
- When asked to rank the importance of water conservation with the conservation of electricity and natural gas, approximately 70 percent acknowledged that it was equally or more important.
- Waterless urinals are problematic to maintain and are becoming less favor-


able by APPA respondents to specify for new construction and renovations.

The results of this survey and the follow-up interviews will provide us with an opportunity to enhance policy development and application in higher education as it relates to the promotion of sustainable building practices and the application of LEED.

A comprehensive review and analysis of the survey data and interviews is still taking place and will be completed in the spring of 2009. The results of the survey and the analysis of follow-up interviews will be published on the CFaR website when the review and analysis is completed. ☺

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