

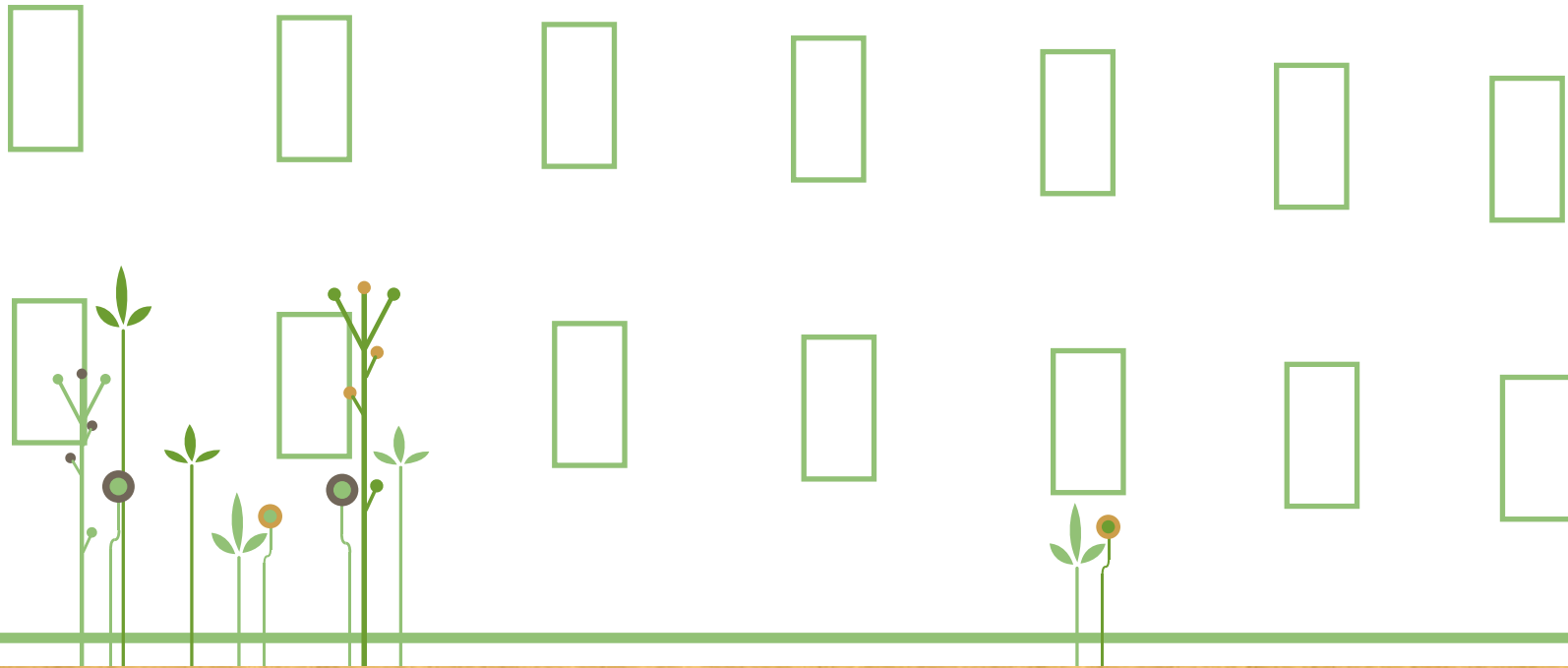


the development and application of policy-based tools for institutional

GREEN BUILDINGS



By Anthony F. Cupido, P.Eng.



IN 2008, APPA forwarded a Web-based survey on my behalf to all designated representatives of APPA 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®). Initiating this survey through APPA's Center for Facilities Research (CFaR) 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 research consisted of the comprehensive quantitative survey and qualitative follow-up interviews with 24 individuals who volunteered to participate with additional detailed questions. The number of interviewees 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.

The survey evaluated the institution's use of a policy, guideline, standard, law, or goal related to sustainable build-

ing practices and the interviews provided an opportunity for the researcher to qualitatively explore and supplement components of the survey and to gain greater insight as to the strategic application of sustainable facility initiatives at their respective institutions.

It is recognized that senior facility professionals, by the very nature of their position and its corresponding autonomy and authority, provide leadership and play a key role during the planning, design, and construction of new buildings and major renovations at their respective campuses. They perhaps have the most strategic impact and influence on the achievement of sustainable outcomes for these new facilities and are charged with the ongoing operation and maintenance of the building after the construction process.

While there has been excellent research on policy options in the broader public sector in the United States, to date no overview has been conducted within higher education applications amongst senior facility professionals in the context of green building policies and their development and application along with the corresponding use of LEED.

PRINCIPLE FINDINGS AND OUTCOMES

Facility Leadership

In a recent case study on green buildings at an Ontario university, it was concluded that strong university leadership is necessary to champion green buildings and this leadership needs to come from those on campus who have decision-making authority for new building construction. As well, this leadership is tied to the successful implementation of green building policies and it was acknowledged that if the administration at this particular campus looked at green buildings as an opportunity to showcase its innovation to incoming students, this may attract and retain additional students and faculty to the campus.

The following principle research findings and outcomes are noted:

- Follow-up interviews confirmed that senior facility professionals are playing a key role in policy and non-policy development at their respective institutions. As well, they are becoming more informed about the benefits related to sustainable initiatives and building operating costs.
- Respondents also recognized the important role that students are playing by influencing administration to move toward more sustainable initiatives.
- An outcome of the qualitative follow-up interviews was the acknowledgment by the participants that when asked about the development of their institution's tool or instruments for green buildings, 19 of the 24 participants indicated that they were either the driving force or major influence behind the document.
- This fact speaks to the leadership provided by these senior facilities officers. As well, many indicated that they were active members and participants in administrative committees for sustainability, environmental and/or a green building team.

POLICY AND NON-POLICY COMPLIANCE

A specific focus of the follow-up interviews was to ask participants whether or not their institution was complying with their sustainable policy or their guideline, standard, law, or goal. Nine of the participants work with institutions that are guided by state or provincial legislation, while 15 are not. In each case, an institution that is guided by policy or legislation has complied with the policy or legislation (and reached their LEED target) for their new buildings or have acknowledged that they are utilizing the policy or legislation for the first time on their first building and intend to comply.

Ten institutions reference or are impacted by state or provincial legislation. With the exception of one state, all legislation originates from "western" states or provinces.

As well, the fact that ten institutions are seeking their first LEED certification is testimony to the newness of the process for many.


BARRIERS TO ADOPTING A POLICY

A key research initiative for this paper was to identify bar-

riers to adopting a sustainable building policy. While most of the respondents are taking some initiative to promote sustainable buildings and practices, they are doing so with non-policy tools or instruments that are not mandatory at their institution. When asked in their opinion what the barriers to adopting a policy were and to what extent did they agree or disagree with a list of possible barriers, the following principal responses were received in the rank order:

- Consulting and other costs to apply for LEED registration and designation
- Green buildings are more expensive than traditional buildings
- A guideline or standard is sufficient to meet the intent
- A policy would limit their flexibility on a given project
- No one has taken the time or made the effort to draft a policy
- State or provincial law supersedes a need for a policy.
- Follow-up interviews reinforced these results amongst those institutions that did not have a policy.

WHILE MOST OF THE RESPONDENTS ARE TAKING SOME INITIATIVE TO PROMOTE SUSTAINABLE BUILDINGS AND PRACTICES, THEY ARE DOING SO WITH NON-POLICY TOOLS OR INSTRUMENTS THAT ARE NOT MANDATORY AT THEIR INSTITUTION.



GREEN BUILDING COSTS

The cost of incorporating sustainable design features in building projects has been a subject of discussion and argument amongst institutional facility professionals on both sides of the U.S.-Canadian border for many years. Several survey respondents, who participated in the follow-up interviews and have been in their roles as facility professionals for more than a decade, and acknowledged that the cost of providing sustainable design features into their new buildings has been offset by improved operating costs since the late 1980s. These costs not only included energy costs but maintenance costs as well.

POLICY TEMPLATE

A second research objective for this paper was to develop a sustainable building policy template for other institutions to utilize for their policy development process. A review was performed of eight sustainable policies gathered from interview participants who indicated that their institution had such a policy. As well, a review was completed of 33 known sustainable/green building policies, guidelines, and/or standards of institutions that have these documents identified through the listings of the U.S. Green Building Council and the Association for the Advancement of Sustainability

in Higher Education. Almost 90 percent of the survey respondents acknowledged that a green building/sustainable building policy template would be considered a valuable tool for implementing a policy at their institution. Interview participants without a policy also acknowledged their desire for such a template.

CONCLUSION

Using a mixed-methods approach has provided clear evidence that higher education institutions are contributing to the growth in sustainable practices in higher education and that the facility professionals are contributing to the much needed leadership in this field. Campus sustainability should not be an isolated initiative divorced from such areas as facility operations, maintenance, and capital renewal. The integration and balancing of these areas are often overlooked pieces to sustainability. Facility professionals should be major contributors to developing any large-scale sustainability program on campus.

Previous research, along with the findings in this paper, indicates that policy development and application is an important component of sustainability in higher education. Institutions that have implemented sustainable/green building policies for their new buildings or major renovations are exhibiting policy compli-

ance and meeting their LEED targets, while some institutions that utilize non-policy practices are not complying.

Provincial and state legislation appears to support higher education sustainable initiatives and is the catalyst to compliance for some as exhibited in the western regions of APPA. The findings also confirm that the motivator for many institutions with a policy is assured lower building operating costs. It is hoped that the developed policy template will provide some institutions with the incentive and framework to move forward with the creation of their own sustainable building policy and the use of the LEED building assessment rating system. The high percentage of participants requesting a policy template is testimony to the need for such a template. ☺

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