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of Ontario



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STANDING COMMITTEE ON PUBLIC ACCOUNTS

UNIVERSITIES – MANAGEMENT OF FACILITIES
(Section 3.14, 2007 Annual Report of the Auditor General of Ontario)

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The Honourable Steve Peters, MPP
Speaker of the Legislative Assembly

Sir,

Your Standing Committee on Public Accounts has the honour to present its Report and commends it to the House.

Norman W. Sterling, MPP
Chair

Queen's Park
November 2008

STANDING COMMITTEE ON PUBLIC ACCOUNTS

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1st Session, 39th Parliament

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PREAMBLE

The Standing Committee on Public Accounts held hearings on the Auditor General's 2007 audit of the Universities – Management of Facilities on May 28, 2008. The audit findings were reported in s. 3.14 of the Auditor General's *2007 Annual Report*. The Committee has endorsed the Auditor's findings and recommendations.

This report constitutes the Committee's findings and recommendations. Background information on sections of the original audit report is followed by an overview of the hearings' main findings and, as appropriate, new recommendations. *Hansard*, the verbatim record of the hearings, should be consulted for the complete proceedings.

Acknowledgments

The Committee extends its appreciation to officials from the Ministry of Training, Colleges and Universities, the Council of Ontario Universities, and Carleton University, McMaster University and the University of Guelph for their attendance at the hearings. The Committee also acknowledges the assistance provided during the hearings and report writing deliberations by the Office of the Auditor General, the Clerk of the Committee, and staff at the Legislative Library's Research and Information Services.

1. AUDIT OBJECTIVES AND MAIN FINDINGS

The Auditor's objective was to assess whether selected universities had adequate policies, procedures, and systems to manage and maintain their academic and administrative facilities cost-effectively.

The Auditor examined facility management policies and practices at Carleton University, McMaster University and the University of Guelph. The Auditor also asked 15 other universities and the Ontario College of Art and Design to complete a questionnaire on their policies and practices. All sent responses. The audit did not cover the construction of new facilities or additions, or retrofits of old facilities.

The following university departments are responsible for areas assessed by the Auditor:

- Physical Plant (e.g., custodial work, annual capital renewal projects, utilization of administrative space, consumption of gas, oil, electricity and water);
- Registrar (utilization of classrooms and laboratories); and
- Security (safety of students, staff and property).

The Auditor noted the following with regard to facility management policies and practices:

- **Capital Renewal Projects and Deferred Maintenance:** Ontario's 18 universities purchased a common capital-asset-management system in 2001.* The system indicated that the backlog of deferred maintenance was estimated to be \$1.6 billion in 2006. The following is data for the three audited universities:

- The combined capital renewal projects in 2005-06 totalled \$18.3 million.
- The combined deferred-maintenance amount in 2005-06 was estimated to be \$409 million.

Therefore, the value of combined capital renewal projects amounted to less than 5% of combined deferred-maintenance; the Auditor said the total for combined renewal projects was insufficient to reduce the backlog of deferred-maintenance projects.

- **Suggested Improvements for Capital-asset-management System:** to improve usefulness of the system for prioritizing capital renewal projects and the accuracy of deferred maintenance information, universities should:
 - implement procedures to update the system with information on completed renewal projects in a more timely manner;
 - check the reliability of deferred maintenance forecasts made by the system for a sample of facilities; and
 - institute programs to periodically re-inspect conditions of facilities.
- **Space Utilization and Physical-plant Operations:** obtaining better information about space utilization and physical-plant operations would be beneficial for promoting cost-effective operations at the three audited universities.
- **Efficiency of Academic and Administrative Space Utilization:** procedures to ensure efficiencies in this area need to be improved. Studies from two audited universities indicated that significant improvements in academic space utilization could be achieved; Carleton University's new scheduling system was expected to achieve a 30% improvement in academic space utilization.
- **Purchasing Practices:** a test of purchases relating to physical-plant operations indicated general compliance with open and competitive purchasing practices at the three audited universities.
- **Insufficient Analysis of Facility Costs:** a lack of analysis of how facility operating costs are affected by building structure and design prevented taking these into account in the design and approval of new educational programs and research projects.

* As of January 1, 2008, there are 19 universities in Ontario.

- **Benchmarking:** there is a need to compare facility operating costs to those of similar facilities at the university or at other universities to identify cost reduction possibilities.
- **Monitoring and Evaluating Plant Departments:** the universities lacked proper procedures for this type of monitoring and evaluation.
- **Physical-plant Department Staff and Contractors:** the universities did not have adequate procedures to ensure that staff/contractors properly completed work or to use complaints and survey results to assess performance.¹

2. COMMITTEE REQUEST FOR MINISTRY RESPONSE

The Committee requests that the Ministry of Training, Colleges and Universities (Ministry) provide the Committee Clerk with a written response within 120 calendar days of the tabling of this report with the Speaker of the Legislative Assembly, unless otherwise specified in a recommendation, as is the case with recommendation 10.

2.1 Committee Recommendations

- 1. The Ministry of Training, Colleges and Universities shall report to the Standing Committee on Public Accounts on specific initiatives undertaken by the Ministry and the Council of Ontario Universities since the Committee hearing on s. 3.14 of the Auditor General's 2007 Annual Report (Universities – Management of Facilities) to promote the sharing of best practices among Ontario universities in connection with recommendations contained in the audit report.**
- 2. The Ministry of Training, Colleges and Universities shall request that the Council of Ontario Universities provide data on how much of the money provided by the Ministry to the universities for deferred maintenance in the university fiscal years 2005-06, 2006-07, 2007-08 and, when available, 2008-09 was spent on deferred maintenance, and shall report this information to the Standing Committee on Public Accounts. Each university should specify for each of its fiscal years**
 - **the amount of money the university received from the Ministry for deferred maintenance;**
 - **total spending (including university funds) on deferred maintenance projects, (each university should also include a list of deferred maintenance projects costing \$100,000 or more and a lump sum total for deferred maintenance projects costing less than \$100,000);**
 - **whether any money provided by the Ministry for deferred maintenance was not spent and if not, why not;**

- where money provided by the Ministry for deferred maintenance that was not spent was carried on the university's books; and
- the amount of deferred maintenance outstanding after deferred maintenance projects were completed.

The Committee further recommends that the Ministry obtain the same information for each subsequent university fiscal year and make all the information that it receives (beginning with fiscal year 2005-06) publicly available.

3. Some universities such as Carleton University are already conducting periodic independent reviews to help ensure that their inventories of deferred maintenance are kept up-to-date. The Ministry of Training, Colleges and Universities shall report to the Standing Committee on Public Accounts on measures undertaken to require all Ontario universities to conduct independent reviews to verify that their procedures meet the intent of the Facilities Condition Assessment Program with respect to such matters as
 - the frequency of inspections of the condition of buildings and associated infrastructure;
 - timely updating of the capital-asset-management-system; and
 - testing the accuracy of the system's data to ensure that the reported information is reliable.
4. Following its discussion with university presidents on the zero carbon footprint increase concept, the Council of Ontario Universities shall report to the Standing Committee on Public Accounts what universities are doing to reduce their carbon emissions.
5. The Ministry of Training, Colleges and Universities shall report to the Standing Committee on Public Accounts on measures that the Ministry is undertaking to ensure that all Ontario universities adopt a formal risk assessment system to prioritize renewal projects, as has been done at the University of Guelph.
6. Given that Ontario universities are not using the same standard to track and compare space utilization across the system, the Standing Committee on Public Accounts believes that it would be useful for the Ministry of Training, Colleges and Universities to introduce a common standard for universities to track and compare space utilization. The Ministry shall report to the Committee whether it plans to introduce a common standard.
7. The Ministry of Training, Colleges and Universities shall provide the Standing Committee on Public Accounts with a report, for each

university, on the utilization rates for each category of academic space, such as classrooms, lecture theatres, and laboratories. The report should cover utilization rates for each of the fall, winter, and summer semesters, break out daytime and evening utilization, and describe the basis for the calculation.

Either the Ministry or the Council of Ontario Universities should post these rates on its web site.

8. The Ministry of Training, Colleges and Universities shall report to the Standing Committee on Public Accounts on measures that the Ministry is taking to ensure that Ontario universities institute periodic and independent reviews of their utilization of space and implement changes that are effective in improving space utilization.
9. The Ministry of Training, Colleges and Universities shall report to the Standing Committee on Public Accounts on measures introduced to ensure that, when determining new capital grants for a university, the Ministry takes space utilization rates for the university into account, and considers whether retrofits would be a more cost-effective alternative to new construction.
10. By October 30, 2009, the Ministry of Training, Colleges and Universities shall report to the Standing Committee on Public Accounts on McMaster University's evaluation of the pilot project that it introduced to charge for the use of space on its campus, specifying whether this initiative has had an impact on improving space utilization.

3. OVERVIEW

At the time of the audit, Ontario had 18 publicly funded universities. The universities own most of their facilities; they manage a portfolio of 918 buildings. As of March 2007 the average age of the buildings was over 30 years old, the estimated replacement value was \$14.4 billion and the value of associated infrastructure, such as boilers and power systems, was an estimated \$2.2 billion.

Universities are responsible for utility costs and day-to-day cleaning, repairs, and security services. The Ministry expects these costs to be funded out of the universities' operating revenues. The Ministry assists universities with maintenance through its Facilities Renewal Program grants of \$26.7 million per year.²

3.1 The Ministry and the Universities

The Ministry oversees the overall structure of the post-secondary education system. It is responsible for providing operating and capital funding to both universities and colleges and establishing the provincial objectives for the use of

those funds. The universities are different from the colleges in that they have more autonomy. They are established by independent Acts of the Legislature as independent bodies and they have responsibility for program delivery, the administration of the institution and also for prudent financial management.

The Ministry provides the universities with an annual operating grant which represents approximately 49% of their revenue, meaning that the government is a major source of funding. Other sources of revenue include fees (43%) and other funding (8%). In 2007-08, the government allocated just over \$3 billion in operating grants to the university sector, which was an increase of \$1.132 billion, or 59%, over the operating grants in 2002-03.

The government's main goals for post-secondary institutions, and universities in particular, are the following:

- access, in order to ensure that policies and programs are in place to promote access for all students but particularly those who are under-represented in the system;
- quality, to provide funding for the institutions to enhance the quality of their learning environment; and
- accountability, so that the Ministry can track and report on achievements of the Reaching Higher plan (see p. 10 for details) and report on individual institutional achievements as well.

The universities have worked with the Ministry to comply with the new tuition framework, which addresses the issue of access, and also to implement a new student access guarantee that guarantees students access to post-secondary education. The Ministry now requires the universities to participate in the National Survey of Student Engagement and the Consortium for Student Retention Data Exchange, providing the Ministry with a good sense of the student experience at the institutions.

The Ministry has introduced a multi-year accountability agreement which it has signed with each of the universities. The universities report on system-wide measures and on institution-specific measures.

The universities generally agree with the Auditor's recommendations and in many instances have taken actions to address the recommendations. In other cases they have indicated that implementation will depend on the availability of resources.³ The universities found the experience of working with the Auditor and his staff to be positive and constructive.⁴

3.2 Focusing All Universities on Auditor's Recommendations

The Council of Ontario Universities (COU) president and chief executive officer said that the three universities examined during the audit were selected as bellwethers of the system. There was also an extensive questionnaire for the

remaining 15 universities. The Auditor used the questionnaire to determine whether issues identified as relevant for the three audited universities were issues common to most Ontario universities.

The COU said that the universities know that we are in an era of deepened transparency and “following the money.” The universities want to be prepared. The COU expects the process of addressing issues raised in the audit report to be one of continuous learning. This is a shared responsibility and it is necessary to ensure there is follow-up.

The COU said that a follow-up letter from the Committee could be useful for flagging issues that the Committee considers important. The COU could then take this letter to the executive heads of the universities to indicate to them that the Committee is paying close attention to issues raised in the audit report, understands the issues, and is supportive on certain points, but expects the universities to grow, learn and improve, particularly given the expectation and hope that deeper investment will be forthcoming from the government.⁵

3.3 Sharing Best Practices

The Ministry, the COU and the universities are all committed to sharing best practices. The COU is an organization that works on behalf of the universities in Ontario to develop common policies and advocate for the advancement of higher education in the province.⁶ It has over 20 affiliates. One of its key roles is to be the convenor of such university vice-presidents as the vice-presidents of research, the vice-presidents of finance and administration and the vice-presidents of operations. The COU provides a venue where the vice-presidents can convene to jointly examine common issues.⁷

The vice-presidents of finance and administration of the universities have met and have discussed and analyzed the auditor’s report. The vice-presidents have put together an inventory of best practices based on the report. They are taking action, sharing best practices, and are looking forward to reporting back on the implementation of those best practices.⁸

As a result of the audit the University of Guelph vice-president, finance and administration (Guelph VP), the Carleton University vice-president, finance and administration (Carleton VP) and other colleagues made a presentation on the Auditor’s report at the June 2008 Canadian Association of University Business Officers conference. This facilitated the sharing of practices and recommendations with university colleagues across the country.⁹

Committee Recommendation

The Standing Committee on Public Accounts recommends that:

- 1. The Ministry of Training, Colleges and Universities shall report to the Standing Committee on Public Accounts on specific initiatives undertaken by the Ministry and the Council of Ontario Universities**

since the Committee hearing on s. 3.14 of the Auditor General's 2007 Annual Report (Universities – Management of Facilities) to promote the sharing of best practices among Ontario universities in connection with recommendations contained in the audit report.

4. AUDIT OBSERVATIONS AND RECOMMENDATIONS

Each of the audited universities used a different mix of in-house staff and contractors to provide property-management services.

4.1 Renewal of Facilities

University structures, interior finishings, electrical systems, heating and air-conditioning systems, and plumbing all require upkeep. Systems and designs of buildings may become uneconomical or obsolete over time. Older buildings sometimes require extensive renovations to meet new regulations in areas such as health, safety and access.

The Ministry provides Ontario universities with \$26.7 million annually, through a formula based primarily on enrolments, to help fund capital-renewal projects to maintain facilities. Excluding recently announced additional funding, the amount has not changed in five years although in 2005 the Ministry provided one-time funding of \$133 million for capital renewal.

Deferred Maintenance

Senior university administrative and physical-plant officers are concerned about the risk associated with the backlog of deferred-maintenance projects. For example, deferred roof replacement can result in a risk of leaks, water damage and health risks associated with mould.

In 2001 a task force composed of representatives from Ontario's universities recommended purchasing a common capital-asset-management system to assess, track and report on the condition of facilities. The task force said that a Facility Condition Assessment Program, using the system and training, would enable accurate costing of deferred maintenance and an analysis of funding effects. The system requires that each major component of a building be inspected and that data be entered in the system's database. The system forecasts the timing and costs of capital renewal projects.

Since 2001 the COU has used information from the system to provide the Ministry with annual Facilities Condition Assessment Reports. The latest report (March 2007) said that annual renewal expenditures of about \$264 million were required to maintain facilities in their current condition. This is consistent with data listed in a 2006 consulting report commissioned by one of the audited universities. The data indicates that capital renewal spending over the useful life of a building would:

- average between 1% and 1.5% of replacement cost per year; and

- range from 0.5% per year in the first 10 years to 2.5% after 25 years.

The average age of the audited universities' buildings ranged from 36 to 48 years. The 2005-06 budgets for facilities renewal at the universities totalled 0.9% of replacement cost. Their combined deferred maintenance backlog was an estimated \$409 million, excluding infrastructure.

The audit results combined with questionnaire responses from all Ontario universities indicated that actual capital renewal spending has been well below assessed needs.

A 2005 report, *Ontario: A Leader in Learning*, recommended:

1. Colleges and universities should receive adequate government funding to contract for up to \$200 million of critical repair work in each of the three subsequent years, beginning in 2005-06.
2. While initial work is proceeding, the Ministry should collaborate with sector partners to refine and update the assessment of the maintenance backlog.
3. A comprehensive plan should be developed to bring the system to a state of good repair.
4. Institutions should develop asset management plans to keep inventory in good repair and should plan and budget to avoid future backlogs.

The government provided one-time funding in 2005-06 of \$200 million -- \$67 million to colleges and \$133 million to universities. The Auditor found no indication of progress in developing a comprehensive plan to bring the system to a state of good repair. The audited universities had made some progress in planning in connection with the fourth recommendation in *Ontario: A Leader in Learning*.

- The Auditor said the Facilities Condition Assessment Program was useful in providing deferred maintenance information, but the quality of information could be improved.

The Auditor recommended that the universities should:

- periodically verify that the renewal models used by their capital-asset-management system are generating reliable deferred-maintenance forecasts;
- establish programs to periodically re-inspect the condition of their facilities;
- institute periodic, independent reviews to verify that their procedures meet the intent of the Facilities Condition Assessment Program; and

- maintain facility-condition information in their capital-asset-management database at a level of detail that is consistent with the way in which renewal projects are undertaken, and update the database as projects are completed.

The Auditor also said that to help ensure that university facilities provide effective work and learning environments, the Ministry should work with universities to develop a plan to reduce the extent of deferred maintenance.

In their initial responses, the universities generally agreed with the Auditor's recommendation. One indicated that it has been developing a management plan to address the issues raised in the recommendation. It was expecting that this would be fully implemented by the end of 2008. Another university agreed that its system could be enhanced through periodic re-inspection, and that it would consider a process to implement more frequent inspections within available resources. The third university said it did not believe that independent reviews of its procedures would be useful.

In its initial response the Ministry said, with respect to the report, *Ontario, A Leader in Learning*, that the government did not implement all of the recommendations in this report. Instead, it responded by implementing the Reaching Higher in Postsecondary Education plan, a multi-year investment whereby total operating grants to universities will increase by \$814 million, or 35%, between the 2004-05 and 2009-10 fiscal years.

The Ministry also said that, recognizing that ownership and stewardship of any plan to reduce the extent of deferred maintenance "resides with the individual universities, the Ministry concurs with the recommendation and will seek to work with universities to develop their plans to reduce deferred maintenance amounts."¹⁰

Committee Hearings

Long-term Capital Plan

The Ministry said that capital planning in this sector has relied on government's fiscal capacity from time-to-time. Now that the government has announced a long-term capital plan, a \$60-billion capital plan over 10 years, the Ministry is working closely with the Ministry of Public Infrastructure Renewal (PIR) to develop a comprehensive capital plan for the post-secondary sector, including universities.¹¹

The Ministry will be asking the universities to submit to the Ministry all the information that the universities have on their deferred maintenance challenges, on their existing projects and on future projects that they may be considering. This will enable the Ministry to build a comprehensive inventory of capital needs, both for deferred maintenance and also for issues such as growth and research.¹²

This will also enable the Ministry, in an engagement with PIR, to put together an integrated capital plan for the sector. The Ministry would then be able to test the

plan against the priorities that governments establish. The Minister of Training, Colleges and Universities brought the Minister of Public Infrastructure Renewal to a meeting of COU presidents to outline the general process. This is a new development in the sector.¹³ The initiative differs from the first PIR capital plan in that the universities and colleges will be participants in this long-term plan.¹⁴

Deferred Maintenance

The Ministry's long-term capital planning process is aimed at addressing the ongoing need for strategic capital investments across the system.¹⁵ The Ministry is continuing to work with universities through the Ontario Association of Physical Plant Administrators to refine the methodologies and the models used in facilities condition assessment programs. There are some very good methodologies, identified by the Auditor, used in some institutions.¹⁶

The Ministry will act as a facilitator, in conjunction with COU, to make sure that those best practices are implemented across the system.¹⁷ The Ministry believes that the Auditor's report provides useful recommendations that will improve the quality of information used in maintenance decisions at universities and will lead to improved cost efficiency with respect, in particular, to space utilization and physical plant operations.¹⁸

Backlog of Deferred-maintenance Projects

The COU noted that one of the major conclusions of the Auditor's report was the recognition that universities had an increasing backlog of delayed capital projects or deferred maintenance. As noted earlier, the universities' common-capital-asset management system valued the backlog at an estimated \$1.6 billion in 2006.¹⁹

The backlog comprises mundane but necessary aspects of physical plant operations such as worn-out roofs, outdated cooling and electrical systems and boilers that are in need of replacement or repair. The COU noted one of the audit report's main conclusions that the resources currently dedicated by universities to these capital projects are insufficient for reducing the backlog of deferred maintenance projects.²⁰

The COU believes that one important aspect of the audit is that the Auditor has "shone a spotlight" on the issue of deferred maintenance. It is difficult to fundraise for items which are not "glamorous or sexy" such as roofs, boilers and plumbing. If the universities do not receive assistance from the government, it is difficult for them to raise the necessary funds even though all such items are vital to the good functioning of the institutions and to the health and safety of faculty, students and staff. As noted by the Auditor, funding for deferred maintenance is currently \$26.7 million annually. The amount is somewhat less than 10% of the industry standard.²¹

Funding for Deferred Maintenance (Facilities Renewal)

Ministry Action to Date

The Ministry increased capital funding to the universities in 2007 to assist the universities in providing an effective work and learning environment and to allow them to reduce the extent of deferred maintenance on their campuses. The funding included \$135 million that was targeted to capital projects in three areas: energy

efficiency projects, campus safety and security initiatives, and the renewal of academic infrastructure.

In addition, there was \$264 million for 21 specific capital projects at universities, mostly involving new construction, but also the renewal of existing buildings. At the end of the 2007-08 fiscal year, there was \$200 million for capital projects focused specifically on decreasing deferred maintenance levels and on renovations to increase space utilization.²²

\$335 Million in One-time Payments for Deferred Maintenance

The COU noted that the universities have to give enormous credit to the Ministry for heeding the Auditor's analysis and taking very significant action in recent months. Between the end of January 2008 and through the 2008 budget the government has committed some \$335 million in one-time payments to help universities address the backlog in deferred maintenance. The amount is 12 times the amount in terms of what is ordinarily received in a given year.²³

The COU said that it is important to focus on the base – the foundation, the roof and the plumbing – and believes that universities will be able to address such base issues with the “kick-start of funding” that was invested under deferred maintenance.²⁴ The COU said, however, that more work remains to be done. As was noted by the Auditor and by Mr. Bob Rae in his report on higher education (*Ontario, A Leader in Learning*) funding for deferred maintenance needs to be put on a long-term, sustainable footing, reflective of industry standards.²⁵

The COU said that at the same time that the Auditor was conducting his audit, the COU was recognizing that it had not focused enough in its advocacy work on the issue of deferred maintenance. The COU said that the problem had gone on for too long and had languished.

The COU subsequently identified the issue of deferred maintenance as a priority. The COU president and CEO said that part of his job is to make the rounds at Queen's Park and speak to the decision makers. They have responded. The fact that there was public attention and scrutiny by the Auditor helped the case.²⁶

The Ministry said that when it allocates funding for deferred maintenance to universities that it takes differences in the age of facilities into account.²⁷ The Ministry looks at the facility's condition index. This is an important variable when the Ministry makes its calculations because there are different challenges at different institutions, given the different ages of institutions.²⁸ Guelph, for example, has the challenge of all its buildings reaching the end of their life cycle at more or less the same time. The Ministry makes its allocations with this type of information in mind.²⁹

Deferred Maintenance Amount Continues to Grow

The Carleton VP explained why the deferred maintenance problem continues to grow despite rather large sums that have been invested. In the Ontario university system, there are about \$15-billion worth of assets. If these assets had a life

expectancy of 50 years, they would deteriorate at a rate of 2% a year. Total deterioration would amount to approximately \$300 million a year. This amount would presumably be added to the deferred maintenance bill each year. In other words it is possible to invest \$200 million for deferred maintenance and still have an increase in the total amount of deferred maintenance from year-to-year.³⁰

The COU said that there was a time lag between issuance of the audit report and subsequent government deferred maintenance investments. The Auditor's deferred maintenance backlog number does not reflect the new investments. The COU's expectation is that the government's \$335 million deferred maintenance investment will result in a significant dent in the \$1.6 billion deferred maintenance backlog identified by the Auditor.³¹

Reconciling Funds Allocated For Deferred Maintenance with Expenditures

The Ministry said that it did not have the figure at hand for how much of the \$133 million given to universities in 2005 for renewal projects was actually spent on facility renewal. However, the Ministry said that it does require report-backs from each of the institutions on how the money is spent so this is a figure that could be calculated.³²

The COU said that it is the COU's commitment to the Committee that the funds earmarked for deferred maintenance will be spent on deferred maintenance.³³ There is a commitment across the system to address the issue of the backlog of deferred maintenance and to make sure that funds provided are properly allocated for this work. The COU committed to reporting back to the Committee on this issue.³⁴ The Deputy Minister said that every time he visits Carleton University he is shown the university's 40-year old boiler. The next time he goes to the university he said that he wants to see a new boiler and will personally verify that the money has been spent.³⁵

The Auditor was asked whether he was satisfied that the Ministry does track where the money goes by way of capital or facility renewal. The Auditor said that he would expect the Ministry to be tracking the funds and to have report-backs but as the funding is recent, the Auditor would need to return to the Ministry for another audit to verify this. In a year the Auditor would need to go into the Ministry to see if the information is available, whether the funds are being tracked and if it is known whether the money was spent on deferred maintenance and not on something else.³⁶

The COU said that if the Auditor went back to the same three audited universities next year and was not able to reconcile money received with deferred maintenance and projects completed, and if the Auditor could not see an appropriate fluctuation in the deferred maintenance cost, he should point this out and suggest that a better job be done on inventories. However, the COU said that when the Ministry earmarks funds for a certain purpose, it is the expectation of both the COU and the Ministry that the COU provide a full accounting of how the funds were used. The COU intends to do this for the allocated \$335 million.³⁷

How Universities Responded Before Injection of \$335 Million

The Committee noted that before the recent additional funding that the overall budget of the Ministry for universities' facility maintenance and renewal appeared to be around \$26 million or \$27 million. The Committee wanted to know whether the universities combined, were spending more than this on deferred maintenance.³⁸

The COU said that expenditures varied from university-to-university. Some executive heads insisted on investing more each year and found funds for this from operating budgets, etc. Others did less well. In virtually every case, universities have not been able to keep up with the backlog. The industry standard is that 1% to 1.5% of a building's current replacement value (CRV) per year should be spent on maintaining the building in proper order. As the Auditor noted, about one tenth of this amount is available.³⁹

How Universities Will Spend Their Shares of \$335 Million

The McMaster University vice-president, administration (McMaster VP) said that McMaster will receive approximately \$22 million of the \$335 million. The university's total current amount of deferred maintenance is approximately \$160 million. The new funds will be used for expenditures on such items as emergency power upgrades, boilers, the university's energy programs (everything from rainwater harvesting to energy retrofits) and enhanced security items on campus such as emergency communications. The list of items covered is wide and varied and does deal with roofs as well.⁴⁰

The Guelph VP said that Guelph will receive \$20 million of the \$335 million. The university's total current amount of deferred maintenance is approximately \$200 million. The deferred maintenance problem was so great that the university's board had approved borrowing to address deferred maintenance projects.⁴¹

The new funds will be used on a significant major renovation and restoration of the exterior of the Macdonald Institute – one of the founding buildings on the Guelph campus. This work will address serious structural issues including a crumbling portico that was about to fall. Guelph is also retrofitting the McLaughlin Library to control lighting so that there is not, as is currently the case, just one switch to turn the lights on and off. The university is undertaking a number of retrofits which include conserving water in washrooms (water conservation is a major concern for the City of Guelph). The university has been able to partner with the City and has received some funding from Guelph Hydro.⁴²

The Carleton VP said that Carleton will receive \$23 million of the \$335 million. The university's total current amount of deferred maintenance is just over \$60 million. The bulk of the money will be spent on deferred maintenance items. At the end of this cycle, Carleton's deferred maintenance will probably be reduced to approximately \$45 million.⁴³

The Carleton VP said the most interesting project that the university is undertaking is retrofitting labs in the Stacey buildings that are 50 years old. The

labs have the same technology as 50 years ago. The labs will be made modern and state-of-the-art, which will improve space utilization, the student experience and energy consumption as well.⁴⁴

Idea of Moratorium on New Capital to Put Money in Maintenance

The COU responded to this idea as “one of those situations where we need to walk and chew gum at the same time.” There are enormous efficiencies in installing a new boiler to replace one that is forty years old. However, universities are on the leading edge in areas such as sustainability construction. Platinum standard buildings, for example, use renewable energy, are sealed properly and are thermally heated. These represent opportunities for new business because every part of the globe has to wrestle with such issues. The COU does not believe universities would be prepared to put all their eggs in the basket of simply fixing up what they have. It is necessary to prepare for growth and new students.⁴⁵

Facility Condition Assessment

The COU has recognized that the inventory of deferred maintenance must be kept up-to-date. It agrees with the Auditor’s recommendation that it is necessary to conduct periodic reviews. It is a COU priority to maintain the deferred maintenance inventories, in terms of sharing best practices throughout the system.⁴⁶

The Carleton VP believed that Carleton was the university that was cited in the the Auditor’s report as not agreeing with the part of the Auditor’s recommendation that addressed the need for periodic independent reviews to verify that procedures met the intent of the Facility Condition Assessment Program.⁴⁷ The Carleton VP thinks that the Facility Condition Assessment Program that Ontario universities instituted in 2001 to undertake consistent, uniform facility audits is an industry best practice.

At Carleton the practice is to re-inspect 20% of the facilities each year. The university uses a third party contractor (consultants) to do the facility audits. This costs the university about 10 cents a square foot. The University does not believe that it would be a good use of money to hire another auditor or consultant to re-audit the work of the first consultant. The university believes that it already has an independent review process in place through the third party contractor’s work.⁴⁸

The Carleton VP said that when the universities acquired the software for the facilities condition assessment program that facilities staff members from the universities were required to take training on how to use the program. A committee oversees the work and reviews the reports generated by each university. Every year training is upgraded as the software product changes, or institutions raise questions regarding how to do or record something. The Carleton VP does not believe that the data is perfect but believes that it is quite good in terms of reflecting that the universities are using the same standards and recording information the same way.⁴⁹

Committee Recommendations

The Standing Committee on Public Accounts recommends that:

2. **The Ministry of Training, Colleges and Universities shall request that the Council of Ontario Universities provide data on how much of the money provided by the Ministry to the universities for deferred maintenance in the university fiscal years 2005-06, 2006-07, 2007-08 and, when available, 2008-09 was spent on deferred maintenance, and shall report this information to the Standing Committee on Public Accounts. Each university should specify for each of its fiscal years**
 - **the amount of money the university received from the Ministry for deferred maintenance;**
 - **total spending (including university funds) on deferred maintenance projects, (each university should also include a list of deferred maintenance projects costing \$100,000 or more and a lump sum total for deferred maintenance projects costing less than \$100,000);**
 - **whether any money provided by the Ministry for deferred maintenance was not spent and if not, why not;**
 - **where money provided by the Ministry for deferred maintenance that was not spent was carried on the university's books; and**
 - **the amount of deferred maintenance outstanding after deferred maintenance projects were completed.**

The Committee further recommends that the Ministry obtain the same information for each subsequent university fiscal year and make all the information that it receives (beginning with fiscal year 2005-06) publicly available.

3. **Some universities such as Carleton University are already conducting periodic independent reviews to help ensure that their inventories of deferred maintenance are kept up-to-date. The Ministry of Training, Colleges and Universities shall report to the Standing Committee on Public Accounts on measures undertaken to require all Ontario universities to conduct independent reviews to verify that their procedures meet the intent of the Facilities Condition Assessment Program with respect to such matters as**
 - **the frequency of inspections of the condition of buildings and associated infrastructure;**
 - **timely updating of the capital-asset-management-system; and**
 - **testing the accuracy of the system's data to ensure that the reported information is reliable.**

Prioritization of Facility Renewal Projects

Senior physical-plant personnel identified and selected facility renewal projects at the audited universities. Those related to health or safety received priority. Only one of the three universities had a formal project ranking system. Documentation related to project selection at the other two universities needed improvement.

The Auditor said prioritization processes could be improved by ensuring that the schedules of potential renewal projects used by plant personnel at their project selection meetings were complete. The capital-asset-management system can generate the required schedules if, as discussed earlier, it is updated on a timely basis. System data on the condition of major building systems and components would need to be complete and accurate.

The Auditor recommended that the universities should take steps to ensure that they have accurate and complete schedules of renewal projects due in each year and, where there are insufficient funds to complete all projects that are due, implement formal project-ranking procedures.

The universities generally agreed with the recommendation. One university indicated that it has implemented the items in the recommendation based on sound risk-assessment principles, and that the assessment process has been used to develop a 10-year plan to address critical deferred maintenance and will continue to be used to update this plan. Another university agreed that a formal project-ranking procedure could enhance the process, and said that it would explore the most effective and efficient approach and best practices. The third university believed that its current process was sound, but indicated that it will continue to expand its use of the Facility Condition Assessment software to support improved project scheduling and ranking.⁵⁰

Committee Hearings

Prioritization of Renewal Projects

The COU drew attention to the Auditor's comment that appropriate systems are in place for prioritizing projects, but that these could be improved to some extent.⁵¹ Based on the Auditor's findings, the Guelph VP believes that Guelph's system could be a best practice for all the other universities (not just the three assessed).⁵²

Guelph has a risk assessment system that it uses internally to prioritize projects. The university has assessed the extent of deferred maintenance for all buildings on the campus. It has also developed a 10-year plan, prioritizing projects based firstly on health and safety, and Municipal Code issues. The university also has responsibilities for accessibility. All of these factors are taken into account as is the age of the building and the urgency of the situation.⁵³

Each year the university revisits its list of projects. It is possible that some other maintenance-related surprise may have occurred on campus. Guelph has the oldest facilities in the university system and so from time-to-time faces surprises such as old steam lines that are not working properly.⁵⁴

Energy Efficiency and Zero Footprint

The COU said that recent deferred maintenance investments have made energy use and the impact on the environment a priority, along with health and safety issues.⁵⁵ Energy use is at the top of the list for most universities as they examine challenges associated with new building construction as well as retrofits. Energy use is a cost issue as well as a moral and social responsibility issue.⁵⁶

Lakehead University is realizing a 30% energy use saving as a result of a retrofit.⁵⁷ The COU is aware that many universities and colleges in the United States have signed onto the Clinton Challenge, based on the zero footprint concept. (This entails measuring and managing greenhouse gas emissions -- particularly CO₂ emissions -- through such initiatives as energy efficiency projects. Costs can be lowered for projects when purchasers' buying power is pooled.) The COU intends to put this idea before the university presidents as a "stretch goal" to think through and to work on an appropriate Ontario response.⁵⁸

The Deputy Minister of the Ministry said that he has taken advantage of experience from his time as Deputy Minister of Education. He said the Ministry of Education has made huge strides in examining such issues as sustainability and Leadership in Energy and Environmental Design (LEED) certification in connection with new school builds. The Deputy Minister has imported some of these ideas into the Ministry.⁵⁹

He has been working with the Deputy Minister of PIR and the Deputy Minister of the Environment to begin developing a consistent approach in builds both in areas where these deputy ministers have direct control and also in the broader sector. While the universities have considerable autonomy, the Ministry plays an important role in helping broker discussions and in facilitating the sharing of best practices.⁶⁰

The Ministry said that \$334 million of the \$600 million in additional capital funding that the government provided in 2007 was for deferred maintenance. The Ministry asked for projects in specific areas for "the first chunk" -- \$135 million -- of this \$334 million. One of these areas was energy efficiency. The Ministry did not require that one-third of the projects be in energy efficiency because the Ministry wanted to allow the institutions flexibility, given their own needs. The Ministry does, however, have a sense of how much money was spent in areas such as energy efficiency.⁶¹

The Ministry believes that it should undertake further work on broader environmental issues. The universities, which are in some ways centres of innovation, are perhaps far ahead of some other parts of the public sector with regards to environmental issues in connection with facilities. The Ministry, in conjunction with COU, needs to consider how it can play a role in terms of facilitating best practice and sharing best practice.⁶²

Universities have the autonomy to make decisions around capital and design. The Ministry is not in the business of capital and design for universities as it is in the

Kindergarten-to-grade 12 (K-to-12) sector, where the Ministry has more control. The Ministry does review university business cases and could choose, in a review of those business cases, to require a consideration of sustainability.⁶³

Committee Recommendations

The Standing Committee on Public Accounts recommends that:

- 4. Following its discussion with university presidents on the zero carbon footprint increase concept, the Council of Ontario Universities shall report to the Standing Committee on Public Accounts what universities are doing to reduce their carbon emissions.**
- 5. The Ministry of Training, Colleges and Universities shall report to the Standing Committee on Public Accounts on measures that the Ministry is undertaking to ensure that all Ontario universities adopt a formal risk assessment system to prioritize renewal projects, as has been done at the University of Guelph.**

4.2 Utilization of Facilities

University facilities are expensive to build and operate, so it is critical that space be well utilized.

Assessing Existing Utilization

Universities need procedures to measure, analyze, and report on the use of academic space (classrooms and laboratories) and administrative space to identify opportunities for improvement. The universities need to measure and analyze hours of use versus available hours, and space needed versus space used on an ongoing basis.

None of the audited universities used such procedures regularly. One had staff examine classroom utilization every three years; another took the initiative to hire consultants in 2006 to provide utilization information to help develop a campus space plan. The consultants found that:

- Average daytime utilization was 58% for classrooms controlled by the registrar's office, short of the 80% target recommended by the consultants.
- Laboratories were only used for 22% of available daytime hours, short of the 60% target recommended by the consultants.
- The classroom pool was generally composed of rooms that were too large for the size of groups using them.

The consultants recommended:

- increasing average weekly utilization of classrooms from 27.5 to 36 hours;
- scheduling more classes during less favoured times;

- improving the overall match between the seating capacity of allocated classrooms and the number of students enrolled in a class;
- achieving 80% utilization of classrooms within three years; and
- setting scheduling timelines and milestones to enable the university to estimate demand for classroom space before room timetables are produced.

The consultants also found examples of poor utilization of administrative space. The university is addressing issues raised by the consultants.

A space audit at another university revealed that many faculty members had a faculty office and additional office space for research projects/other assignments. Also, research space appeared to be underutilized. The university now requires the Vice-President of Research to approve space requests. Another university was in the process of hiring a Director of Space and Capital Planning.

Incentives for Minimizing Space Demands

The audited universities had no incentives to encourage academic and administrative staff to find ways to improve space utilization. Cost recovery initiatives could expedite this. A 2005 report commissioned by the Higher Education Funding Council for England said that higher-education institutions that charged for space used 12% less space than those not charging.

The Auditor recommended that the universities should:

- ensure that they have adequate systems and procedures to measure, analyze, and report on hours of use versus available hours, and space needed versus space used; and
- set space utilization objectives to be achieved over a three to five-year time frame.

In their initial responses the universities generally agreed with the recommendation. One university indicated that it recognized in 2006 the importance of more effective management of space utilization and that it was in the process of setting up a management system, including additional staff, to implement the recommendation. It anticipated that the system would be in place by the end of 2008. Another university indicated that it uses a central booking system for the majority of its classroom space, and that it was considering various approaches to encourage more efficient use of space.⁶⁴

Committee Hearings

Utilization of Space

The COU noted the Auditor's comment that approaches to the utilization of academic space could be improved.⁶⁵ The Ministry will be creating an inventory of current and future institutional capacity expansion priorities which will be assessed against strategic principles and criteria. The Ministry will be writing to institutions to request this information in the summer of 2008.⁶⁶

The COU emphasized the importance of optimal use of space and said this is an issue of good administration. It is necessary to have a disciplined focus on pooling resources. These resources should not be locked away in a private purview of one part of the university. It is necessary to be on the cutting edge of administrative practices related to space utilization.⁶⁷

The COU said that the universities are constantly working on ways in which they can improve the administration of space utilization but benefited from the audit, which was a second set of eyes, professionally well trained, that have looked at many different sectors. The universities continue to learn and improve. The COU will ensure that insights from the audit are disseminated across the system. The COU appreciates the Auditor's efforts to ensure that the use of public funds provides the best value possible.⁶⁸

The McMaster VP said that vice-presidents of administration do not have control over the utilization of space. The provost manages this. At McMaster there are some areas of the university that are managed and controlled centrally by the registrar's office. McMaster has good utilization data about those classrooms and those laboratories. The McMaster VP does not have utilization data for classrooms and laboratories that are managed directly within a faculty and by the dean's office.

As a result of the audit report, McMaster is changing its model. This summer the provost is leading an initiative to track all space on campus so that "we will centrally manage and we will know the utilization of all space on campus."⁶⁹ In a conflict or difference of opinion over utilization, authority rests with the provost when it comes to academics and research at the university. However, the McMaster VP said that these conflicts do not arise because in a student-centred environment, the focus is on managing the student's needs.⁷⁰

The Guelph VP said that she accepted the Auditor's recommendation regarding space utilization and was not really surprised by it. Assigning utilization of space on a university campus is very complex. Guelph is satisfied that it is doing a good job, in terms of utilization of space, in its larger teaching facilities, particularly those which are in good condition.⁷¹

One of the real challenges for any university is that some of the teaching facilities no longer suit the style of teaching. The heating and ventilation may be such that the environment for learning is not perfect. Guelph had already identified a need – and it was reinforced by the Auditor's report – to pay more attention to assuring the best use of space available. Guelph has just created and filled a position for Manager of Space and Capital Planning. This individual's responsibility will be to work with the registrar and the planning office in order to ensure appropriate allocation, utilization and auditing of the use of space.⁷²

Space Utilization Complexity (Labs, Common Standard for Utilization)

The Carleton VP said that he believed that most of the information in the Auditor's report about space is about Carleton University. The university

recognized six or seven years ago that it was not making as good use of its space as it should and started to focus on this as a priority. The audit report said that at the time of the audit Carleton had 58% utilization of its classrooms. The university received a report last week indicating the rate is now 69% and that the university will reach a rate of 80%. Carleton has excellent data today on all of its classroom utilization.⁷³

The only space that Carleton would allow its deans to control today would be laboratory spaces that are dedicated to a particular faculty. The university also tracks the utilization of that space. Laboratories built 20, 30 or 40 years ago were mainly purpose-built spaces. Carleton's chemistry lab retrofit is resulting in improved utilization because the design facilitates multi-purpose chemistry activity within one space. The retrofit is expensive but the Carleton VP thinks that all universities know that it is necessary to be aware of such factors in designing new spaces.⁷⁴

The Guelph VP said that her university recognizes from the Auditor's work that Carleton's space utilization is a best practice. This is what Guelph will try to emulate. Guelph has a good handle on the usage of large teaching classrooms on the campus. There is less control and less certainty with regard to usage of labs and computer labs. These tend to be controlled more at the local level. Guelph is trying to make sure that it applies the same procedures and policies to varying types of space.⁷⁵

The COU said that space utilization assessment for labs may require a more sophisticated assessment process. For example, when a lab is not occupied with a class, it may be in the process of being set up for a certain type of activity or experiment. It is necessary to take into account these types of factors.⁷⁶

The Guelph VP said the answer to the question, "Are we using the same system in terms of space utilization tracking?" is "Absolutely not." She asked the Committee to consider recommending a common standard. The Guelph VP said suggesting that every university use the same system would not necessarily be the best use of fairly scarce resources now. It was quite costly to bring in the standard system for tracking the facilities' condition index. The universities have different systems that probably work quite well, but setting a common standard would be very helpful.⁷⁷

The Ministry said that there is a commitment to work with COU on the sharing of best practices. The Ministry accepts the suggestion to see whether it is possible to use a common standard for the universities in order to be able to compare data. This will help the Ministry.⁷⁸

Incentives for Minimizing Space Demands

McMaster is currently exploring a model that would charge for the use of space. For example, when the faculty of engineering wants to build new space or wants to dedicate space for a laboratory, it will be charged an occupancy cost on a square-footage basis for that space. Currently, the space is free so there is no disincentive for using the space. McMaster wants to make sure that it uses space

appropriately. The McMaster VP said she would know in a year from now whether this model has had any impact on utilization.⁷⁹

Space Utilization by the 15 Universities That Were Not Audited

The Ministry said that there is no regular reporting on space utilization by the 15 universities that were not audited. The Ministry will be seeking reports through COU on utilization. Every time the Ministry is in front of Treasury Board for a new capital build, the question of utilization comes up. As part of the long-term capital planning process, the Ministry will ensure that it has regular reports on utilization. The Ministry believes this will become an increasingly important consideration and variable when it is making the case for capital monies.⁸⁰

The Ministry does have a methodology for tracking space standards across all institutions. This is regularly updated and helps form the Ministry's capital planning. The Ministry concludes from the audit report that the best practices identified in the audit on space utilization should be shared with all universities. The assistant deputy minister of the post-secondary education division sent a "very high-level" memo to the sector on May 15, 2008 alerting people to the existence of the report.⁸¹ The Ministry has made a commitment to work on sharing best practices across the system.⁸²

Distance Learning

The COU said that distance learning is particularly important and mentioned the north in the context of distance learning resulting in travel cost savings and lowering (environmental) impact.⁸³ The Ministry said that all of the institutions are examining possibilities for enhancing offerings to students through less traditional means, including distance learning. The north does pose a particular challenge. The Ministry has a well-developed network called Contact North, which provides access to post-secondary education and training throughout the north.⁸⁴

The Ministry has just started introducing pilots in the south in a Contact South concept. The Ministry has discovered that access can be as much of a challenge in some parts of southern Ontario as it is in northern Ontario. Instead of assuming that every time there is demand, that it is necessary to respond with bricks and mortar, the Ministry said it is possible to consider distance education and other options for providing students with access. The Ministry said that it needs to do more and should be looking at common and integrated approaches, and learning from others as it proceeds.⁸⁵

Growth and Space

The Ministry again referred to the \$600 million that it provided in additional funding in 2007 over and above capital monies targeted for post-secondary institutions, noting that \$264 million of that funding was dedicated to 21 specific capital projects. One of the criteria for those was classroom spaces and expansion. In each instance (when universities applied for this type of funding) the Ministry did ask institutions to identify how much additional space would be generated and how many students could be accommodated. The Ministry does not have tabulated figures.⁸⁶

The COU works closely with the Ministry on estimates regarding expected student growth. Some estimates anticipate as much as a one-third increase over the next 10 to twelve years. That would be an additional 120,000 students. (The Ministry said that it faces the prospect of somewhere between 60,000 to 120,000 – based on the most dramatic assumption – additional students.) There will need to be more space. The COU's commitment is to ensure that new space is done according to the best standards.⁸⁷

The COU explained why the growth in the higher education sector is outpacing that in the K-to-12 sector. The COU said that there has been much discussion about the shrinking labour force and the baby boom generation having fewer children. However, there is a high participation rate in higher education from immigrants coming into Ontario. In addition there are, in general, higher participation rates in higher education.⁸⁸

Parents, students and people who want to upgrade their education are recognizing that jobs materializing in the knowledge economy require higher levels of training.⁸⁹ The Ministry said that higher education participation rates are increasing not only for students coming out of high school, but for people actually going back into post-secondary education, too. Notwithstanding declining enrolment in K-to-12, higher participation rates mean that there will be a significant growth in post-secondary participation probably until about 2014 or 2015. There will then be a plateau, followed by an increase again.⁹⁰

The COU described this trend as a challenge, but also a good problem for Ontario. As the Ontario economy evolves and challenges are visible in some areas of the manufacturing sector, it appears that the key to sustainable prosperity is investing in people and having one of the most highly educated populations in the world.⁹¹

The Ministry said that it needs to be prudent that it does not overbuild. The Ministry works closely with the Ministry of Finance on different kinds of modelling. The same people who do the modelling on K-to-12 do the modelling on post-secondary education.⁹² The Ministry said that it needs to continue to interrogate the models all the time so that the Ministry does not become complacent and come up with policy responses which may result in building too much infrastructure or building the wrong kind of infrastructure. The Ministry is very alert to this issue.⁹³ The COU said that it is “on our shoulders” to ensure that the best possible conditions exist in terms of maximal use of current facilities before deciding to augment space.⁹⁴

Of the 86,000 additional students in recent years, 80,000 entered the university system. It is possible to discuss whether this was the right proportion. The Ministry believes that it needs to get more people into applied learning, into colleges and into the trades. The Ministry is working on this and the universities even recognize that challenge moving ahead.⁹⁵

Student-Faculty Ratios

As part of its multi-year accountability agreements with institutions, the Ministry is tracking student-faculty ratios.⁹⁶ Ontario had many more students enter the

system than the COU or the Ministry anticipated. Over the four-year period the Ministry anticipated an increase of 50,000 students. The increase, as noted earlier, was actually 86,000 students. Ontario's participation rates still remain very high. Ontario's post-secondary attainment rates are the highest in the country and one of the highest in the OECD.⁹⁷

While the Ministry has made significant new investments, it has not made certain quality-related improvements because of increasing student numbers. The Ministry's current challenge is to see whether it can continue to make quality improvements and address issues related to growth in student numbers. The University of Western Ontario has produced figures on an improvement in student-faculty ratios, in terms of class size.⁹⁸

The Ministry is pleased that it has been able to respond each year to the additional demand with additional operating funding, including last year, when the Ministry was able to fully fund every student who entered the system. However, the Ministry, as noted earlier, faces the prospect of additional students. That will pose a challenge but one which the Ministry should embrace and look forward to.⁹⁹

Committee Recommendations

The Standing Committee on Public Accounts recommends that:

- 6. Given that Ontario universities are not using the same standard to track and compare space utilization across the system, the Standing Committee on Public Accounts believes that it would be useful for the Ministry of Training, Colleges and Universities to introduce a common standard for universities to track and compare space utilization. The Ministry shall report to the Committee whether it plans to introduce a common standard.**
- 7. The Ministry of Training, Colleges and Universities shall provide the Standing Committee on Public Accounts with a report, for each university, on the utilization rates for each category of academic space, such as classrooms, lecture theatres, and laboratories. The report should cover utilization rates for each of the fall, winter, and summer semesters, break out daytime and evening utilization, and describe the basis for the calculation.**

Either the Ministry or the Council of Ontario Universities should post these rates on its web site.

- 8. The Ministry of Training, Colleges and Universities shall report to the Standing Committee on Public Accounts on measures that the Ministry is taking to ensure that Ontario universities institute periodic and independent reviews of their utilization of space and implement changes that are effective in improving space utilization.**

9. **The Ministry of Training, Colleges and Universities shall report to the Standing Committee on Public Accounts on measures introduced to ensure that, when determining new capital grants for a university, the Ministry takes space utilization rates for the university into account, and considers whether retrofits would be a more cost-effective alternative to new construction.**

10. **By October 30, 2009, the Ministry of Training, Colleges and Universities shall report to the Standing Committee on Public Accounts on McMaster University's evaluation of the pilot project that it introduced to charge for the use of space on its campus, specifying whether this initiative has had an impact on improving space utilization.**

4.3 Information for Controlling Costs

Facility operating costs at Ontario universities average approximately \$50 per square meter per year for day-to-day operations, plus \$20 per square meter for capital renewal projects. The audited universities did not analyze how facility operating costs are affected by various factors, such as the type of finishings or hours of operation. Such information would make comparisons in cost per square meter of similar facilities possible. Universities would then be able to identify potential savings, for example, by using finishings for new facilities that have proven to be more durable and cheaper to maintain.

The three universities would need to allocate both operating costs and capital costs to facilities in order to obtain information needed to analyse facility costs. The Auditor also noted that while some physical-plant departments at Ontario universities tried to compare facility costs, department representatives at the audited universities said comparisons were not very informative as the costs did not reflect adjustments for differences in program offerings, research activities or the age of facilities.

The Auditor recommended that the universities should implement systems and procedures to provide management with the information required to:

- enable them to take facility costs into account when making decisions, including those regarding the design and approval of new educational programs and research projects; and
- perform both the internal and external-cost comparisons required to identify poor and good practices, and take action to correct or promote them respectively.

In their initial responses the universities generally agreed with the recommendation. One university indicated that it currently benchmarks costs with local and U.S.-based facilities. However, because costs are often reported and coded differently across institutions, it is a challenge to achieve consistency between universities. To enhance its internal analysis, this university, after the

audit, installed meter systems on each building to track utility use. This university also noted that, as this information comes on-line, more analysis could be completed and the university's effectiveness in managing these costs improved.

Another university stated that its physical-plant department is part of the formal review and sign-off for new research, educational proposals, and new facilities in areas related to operational costs. This university also indicated that its energy-metering system and detailed allocation of contracted custodial and maintenance-services costs enable it to provide good estimates of operating costs.¹⁰⁰

4.4 Monitoring Performance and Quality Control

Establishing Performance Objectives

The audited universities had significant annual costs for custodial, groundskeeping and maintenance services and for security services. None of the universities had established measurable service-level objectives for its plant and security departments to help determine whether value was received for expenditures.

Most Ontario universities belong to the U.S.-based Association of Higher Education Facilities Officers (Association). The Association has defined levels of service for physical-plant department activities. The Association also publishes information on costs and numbers of employees needed by institutions of varying sizes to achieve each level of service. The plant personnel at audited universities believed they were not resourced at a level enabling them to meet what they believed to be the appropriate service level.

Ontario universities could use the Association's defined service levels and related cost information as a starting point for determining their own service level objectives. Physical-plant departments could then report on whether these were achieved. Accountability could be enhanced through periodic, independent reviews. Although two universities had evaluated plant operations (one through a consultant and the other through an internal review), their lack of resources limited their ability to implement all of the recommendations contained in the evaluations.

Maintaining Service Quality

The Auditor noted the following with regard to the audited universities' departmental supervisory inspections of work completed by staff and contractors:

- Custodial Services: the level of inspections varied, ranging from infrequent, formal inspections at one university to no formal inspections at another.
- Groundskeeping: none had a formal inspection process.
- Maintenance: none had a formal inspection process.
- Security: none had processes to assess the quality of work of individual security personnel other than assessing the quality of incident reports for issues such as accuracy and steps taken to address incidents.

Two of the audited universities used surveys to obtain opinions on the adequacy of custodial, groundskeeping and maintenance services, but not on security services. None organized complaints or survey results in a manner that facilitated analysis and evaluation of performance.

The Auditor recommended that the universities should:

- consider establishing service-level objectives and require that their physical-plant and security departments report on the achievement of these objectives;
- implement supervisory inspections of the work of staff and contractors for quality and completeness, and document the results of these inspections; and
- use survey results and complaint information to help evaluate departmental and staff performance.

In their initial responses the universities generally agreed with the recommendation. One university agreed that its maintenance function could benefit from a more rigorous follow-up, which will be implemented in 2008. Another university noted that formal surveys are a good idea and, if resources were available in the future, it would consider implementing this approach. The third university noted that it currently uses the results from surveys to evaluate and adjust service levels and procedures, that it was reviewing its service levels across campus, and has set objectives in some areas, with others to be considered in the future.¹⁰¹

4.5 Purchasing Policies and Procedures

The Auditor noted that policies and procedures at each of the audited universities ensured that goods and services purchased were acquired economically and that there was a fair and open competitive acquisition process. Policies were generally being followed for purchases made in connection with custodial services, groundskeeping, and maintenance activities.¹⁰²

Committee Hearings

The COU commented that the Auditor noted with approval the open and competitive purchasing policies of the universities in the contracting of work for deferred maintenance projects.¹⁰³

NOTES

¹ Ontario, Office of the Auditor General, *2007 Annual Report* (Toronto: The Office, 2007), pp. 317-319.

² *Ibid.*, p. 317.

³ Ontario, Legislative Assembly, Standing Committee on Public Accounts, *Hansard: Official Report of Debates*, 39th Parliament, 1st Session (May 28, 2008): P-169-170.

⁴ *Ibid.*, p. P-171.

⁵ *Ibid.*, pp. P-179-180.

⁶ *Ibid.*, p. P-170.

⁷ *Ibid.*, p. P-183.

⁸ *Ibid.*, p. P-171.

⁹ *Ibid.*, p. P-183.

¹⁰ Office of the Auditor General, *2007 Annual Report*, pp. 320-323.

¹¹ Standing Committee on Public Accounts, *Official Report of Debates*, p. P-173.

¹² *Ibid.*

¹³ *Ibid.*

¹⁴ *Ibid.*

¹⁵ *Ibid.*, p. P-170.

¹⁶ *Ibid.*

¹⁷ *Ibid.*

¹⁸ *Ibid.*

¹⁹ *Ibid.*, p. P-171.

²⁰ *Ibid.*

²¹ *Ibid.*

²² *Ibid.*, p. P-170.

²³ *Ibid.*, p. P-171.

²⁴ *Ibid.*

²⁵ *Ibid.*

²⁶ *Ibid.*, p. P-175.

²⁷ *Ibid.*, p. P-173.

²⁸ *Ibid.*

²⁹ *Ibid.*

³⁰ *Ibid.*, p. P-175.

³¹ *Ibid.*, p. P-178.

³² *Ibid.*, p. P-175.

³³ *Ibid.*, p. P-180.

³⁴ *Ibid.*

³⁵ *Ibid.*, p. P-179.

³⁶ *Ibid.*, p. P-176.

³⁷ *Ibid.*, p. P-179.

³⁸ *Ibid.*, p. P-180.

³⁹ *Ibid.*

⁴⁰ *Ibid.*

⁴¹ *Ibid.*, pp. P-180-181.

⁴² *Ibid.*

⁴³ *Ibid.*, p. P-181.

⁴⁴ *Ibid.*

⁴⁵ *Ibid.*

⁴⁶ *Ibid.*, p. P-176.

⁴⁷ *Ibid.*, p. P-172.

⁴⁸ *Ibid.*

⁴⁹ *Ibid.*, pp. P-172-173.

⁵⁰ Office of the Auditor General, *2007 Annual Report*, pp. 323-324.

⁵¹ Standing Committee on Public Accounts, *Official Report of Debates*, p. P-171.

⁵² *Ibid.*, p. P-173.

- ⁵³ Ibid.
- ⁵⁴ Ibid.
- ⁵⁵ Ibid., p. P-174.
- ⁵⁶ Ibid.
- ⁵⁷ Ibid.
- ⁵⁸ Ibid.
- ⁵⁹ Ibid.
- ⁶⁰ Ibid.
- ⁶¹ Ibid., p. P-176.
- ⁶² Ibid.
- ⁶³ Ibid.
- ⁶⁴ Office of the Auditor General, *2007 Annual Report*, pp. 324-326.
- ⁶⁵ Standing Committee on Public Accounts, *Official Report of Debates*, p. P-171.
- ⁶⁶ Ibid., p. P-170.
- ⁶⁷ Ibid., p. P-174.
- ⁶⁸ Ibid., p. P-178.
- ⁶⁹ Ibid., p. P-172.
- ⁷⁰ Ibid.
- ⁷¹ Ibid., p. P-176.
- ⁷² Ibid.
- ⁷³ Ibid., p. P-181.
- ⁷⁴ Ibid., p. P-182.
- ⁷⁵ Ibid.
- ⁷⁶ Ibid., p. P-183.
- ⁷⁷ Ibid.
- ⁷⁸ Ibid.
- ⁷⁹ Ibid., p. P-182.
- ⁸⁰ Ibid.
- ⁸¹ Ibid., pp. P-182-183.
- ⁸² Ibid., p. P-182.
- ⁸³ Ibid., p. P-174.
- ⁸⁴ Ibid.
- ⁸⁵ Ibid.
- ⁸⁶ Ibid., p. P-177.
- ⁸⁷ Ibid., pp. P-174 and P-177.
- ⁸⁸ Ibid., p. P-177.
- ⁸⁹ Ibid.
- ⁹⁰ Ibid., p. P-178.
- ⁹¹ Ibid., p. P-177.
- ⁹² Ibid., p. P-178.
- ⁹³ Ibid.
- ⁹⁴ Ibid., p. P-179.
- ⁹⁵ Ibid., p. P-178.
- ⁹⁶ Ibid., p. P-177.
- ⁹⁷ Ibid.
- ⁹⁸ Ibid.
- ⁹⁹ Ibid.
- ¹⁰⁰ Office of the Auditor General, *2007 Annual Report*, pp. 326-328.
- ¹⁰¹ Ibid., pp. 328-330.
- ¹⁰² Ibid., p. 330.
- ¹⁰³ Standing Committee on Public Accounts, *Official Report of Debates*, p. P-171.