



Deferred Maintenance of University Infrastructure

Addressing the growing backlog of accumulated deferred maintenance of university infrastructure will enhance the ability of Canadian universities to educate and innovate.

What is the accumulated deferred maintenance of university infrastructure?

A major portion of the existing Canadian university campus infrastructure was constructed in the 1960s and 1970s or earlier. Not only are many of these facilities at or near the end of their projected lifecycles, they often do not adequately meet the needs of today's research and teaching activities. Compounding this, universities were forced during the period of fiscal retrenchment in the 1990s to devote scarce financial resources to their core functions of ensuring access to the growing number of people seeking a higher education and supporting vital research activities. Maintenance and rehabilitation of physical infrastructure often had to be deferred resulting in a large and growing university infrastructure deficit.

A January 2008 consultant's report prepared for the Council of Atlantic Ministers of Education & Training (CAMET) found that the average university building in Canada is 32 years old. For some of Canada's oldest universities, this average is significantly higher. The CAMET report noted that a building's electrical, plumbing and ventilation systems need renewal after 15 to 20 years, while the roof and exterior skin of a building need major work after 25 to 30 years of service. In addition, the report indicated that teaching and research demands are now changing so rapidly that the cycle of building renewal has accelerated dramatically. Changing building codes and occupational health and safety standards also impose updates to building systems.

At the same time, energy conservation requirements and a new focus on environmental sustainability are drawing attention to heating and cooling systems that need modernization as well as windows, walls and roofs.

What is the scale and urgency of accumulated deferred maintenance at Canadian universities?

Based on studies carried out in the various regions, the Canadian Association of University Business Officers estimates the value of the university infrastructure backlog across Canada is \$6.84 billion, of which \$5.1 billion is deferred maintenance. Of the \$5.1 billion of deferred maintenance, close to half, or \$2.4 billion, is considered to be urgent.

University facilities managers always have a range of high priority projects in the planning process so that they can respond quickly if a maintenance issue becomes acute and/or if funding becomes available. They include projects as basic as fixing leaking roofs and replacing old windows. They also include projects that are necessary to upgrade or renew mission-critical laboratories and other facilities, and other projects that would be transformative such as the modernization of heating and water systems that have long-term beneficial environmental and financial impacts. The need to renew campus infrastructure becomes even more urgent in light of projected growth in national full-time enrolment at Canadian universities of between 9 percent and 16 percent over the period from 2006 to 2016.

How can the problem be addressed?

AUCC recommends that the federal government, as part of an economic stimulus package in the upcoming federal budget, invest in university infrastructure. The federal government could design its financial contribution to avoid the possibility of a structural deficit by making either a one-time allocation of funds to be used over a set period or by making a sun-setting, multi-year commitment with annual funding allocations.

A federal investment in university infrastructure would complement other forms of provincial or local funding for accumulated deferred maintenance infrastructure projects. Provincial governments would be consulted on the design of this federal university infrastructure initiative to



ensure that federal and provincial actions on this issue are complementary. A national committee of university facilities managers exists within CAUBO and could be instrumental in developing appropriate criteria at the technical level to best meet federal objectives and those of universities.

A streamlined assessment process could be put in place to assess and approve eligible projects quickly. AUCC member institutions are ready to immediately launch many campus infrastructure projects. In other cases, engineering and architectural work could commence immediately followed by construction within six to 12 months if funding were available. While the focus would be on deferred maintenance, some new construction projects can also be launched very quickly.

How would Canada benefit from federal funding for university infrastructure?

Given the onset of an economic recession in Canada, federal funding for university infrastructure would provide substantial, timely, short-term economic stimulus and create jobs in communities across Canada. The CAMET study found that “the total economic impact of a \$500 million investment in university infrastructure projects within Atlantic Canada is estimated to be \$1.7 billion in Canada as a whole and \$987 million in Atlantic Canada...and would create 6,400 person years of direct and spin-off employment.”

Investing in renovating, retrofitting, and constructing university infrastructure to meet the latest environmental standards would also contribute to the development and advancement of smart and green technologies. By stimulating development of these cutting-edge industries in Canada, this would contribute to Canada’s longer-term environmental and innovation goals.

Universities are the primary training ground for the highly-qualified people who will be key to Canada’s success in the knowledge economy. The quality of university infrastructure and its ability to meet modern research, teaching and learning needs provide very important incentives to retain top

Canadian students, professors and researchers in Canada and to attract highly-qualified talent from other countries. Keeping highly-qualified people in Canada and attracting others is crucial to Canada’s future competitiveness, capacity to innovate, and quality of life.

Finally, the public would also benefit directly from the improvements to university infrastructure since such facilities often serve the general public as well as the university community.

Moving ahead

Investing in university infrastructure, especially to address accumulated deferred maintenance, will create economic stimulus and jobs in communities across the country. AUCC member institutions have a physical presence in more than 80 communities. Such investment will also assist universities in educating more Canadians and in maintaining an internationally competitive research and innovation system that will enhance Canada’s economic capacity and productivity.

To create jobs now and to sustain economic growth into the future, AUCC recommends that the federal government make an investment in the 2009 federal budget of at least \$2.4 billion for university infrastructure, particularly those projects that directly address accumulated deferred maintenance.