



# University of Toronto

OFFICE OF THE ASSISTANT VICE-PRESIDENT, SPACE AND FACILITIES PLANNING

TO: Planning and Budget Committee

SPONSOR: Elizabeth Sisam, Assistant Vice-President, Space and Facilities Planning

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DATE: September 16, 2005 for September 22, 2005

AGENDA ITEM: 5

## ITEM IDENTIFICATION:

Project Planning Committee for Electrical and Mechanical Infrastructure Upgrades Phase 4: New Mechanical Chiller at the University of Toronto at Scarborough.

## JURISDICTIONAL INFORMATION:

Under the *Policy on Capital Planning and Capital Projects*, the Planning & Budget Committee considers annual infrastructure renewal plans and, from time to time, special projects which address extraordinary and/or urgent needs to support the infrastructure of the University.

## PREVIOUS ACTION TAKEN:

The Campus Master Plan for UTSC was approved in May, 2001, identifying a plan for campus development which included the construction of several new buildings to accommodate projected increases in student enrolment. As a secondary effect of the proposed new construction, two assessments were initiated to evaluate the existing electrical and mechanical infrastructure. The consultants identified several potentially critical conditions and deficiencies, and made recommendations for replacement and upgrading of these systems to ensure dependable service for the foreseeable future. In response to these reports, the University developed a multi-phase plan to replace and upgrade the infrastructure at UTSC. This plan is detailed in the Project Planning Report.

The multi-phase plan identified a defined set of high priority projects that required immediate attention. All projects in the planned schedule to the present time that cost less than \$2million dollars have been approved by the Accommodation and Facilities Directorate [AFD]. These projects identified as Phases 1A, 1B, 2A and 2B are tabulated below and have previously been reported to Planning and Budget in the regularized annual AFD reporting as required by policy.

AFD Approval	Phase	Project Title	Cost of the Project
May 9, 2003	Phase 1A	Electrical Distribution Switch	\$451,000
January 30, 2004	Phase 1B	De-aerator for heating / Asbestos	\$1,675,000
January 30, 2004	Phase 2A	Electrical Distribution and Indoor/ Outdoor Switchgear Replacement	\$1,660,000
January 30, 2004	Phase 2B	Mechanical Infrastructure – New Boiler / Asbestos	\$1,505,000

Approval of Phase 3, Cooling Towers, costing \$2,515,000 was approved by the Planning and Budget Committee in December, 2004, since the projected cost exceeded the \$2 million limit for projects considered by AFD. All approved reports are available upon request.

### HIGHLIGHTS:

Numerous infrastructure needs related to both the electrical and mechanical systems at UTSC have required urgent attention in the past 30 months. Extensive construction has occurred on the UTSC campus, with each of the five new major buildings requiring adequate electrical and mechanical services to ensure effective operation. A considerable portion of these expenditures relate to the additional demands of the new buildings as well as the replacement of systems that partially address deferred maintenance issues. It is to be noted that this project comprises a number of phases that need to be addressed in a timely manner to avoid the disruption of services to the campus. Each of the phases has been isolated as an independent project that contributes to the overall infrastructure at UTSC. Any phase that exceeds the \$2 million limit, requires the approval by Planning & Budget and is presented in the context of the larger whole.

### FINANCIAL AND/OR PLANNING IMPLICATIONS:

UTSC has already directed a total of \$7,806,000 towards Phases 1, 2 and 3 of the initially projected \$17.351 million infrastructure upgrades plan at UTSC. The new chillers, phase 4, will require an additional \$2,919,000. The funds for phase 4 are to be derived from Deferred Maintenance Funds and from the Facilities Renewal Program to be allocated to UTSC for 2005-06 and 2006-07.

Account	2005-2006	2006-2007	-
FRP		200,000	200,000
Deferred Maintenance Funds	1,204,809	1,514,191	2,719,000
Total			\$2,919,000

The implementation of Phase 4 as proposed in the project committee report reduces the overall number of phases of infrastructure upgrades from seven to six and reduces the projected total cost of the upgrades of \$17.351 million by \$1.607 million to \$15.672 million. These changes are possible because Phase 4 now replaces a CFC unit replacement previously scheduled for Phase 7 at a slight decrease to costs projected initially. Approval of the project is required now to allow for the purchase of the chiller which requires considerable lead time. The work will be implemented in the 2006-07 fiscal year.

**IMPACT ON THE CAPITAL PLAN EXPENDITURES:**

With respect to the impact on the capital plan expenditures, no borrowing of funds have been directed to this phase of the project or the previous phases. The need for these infrastructure upgrades is absolutely necessary to support the new buildings at UTSC addressed within the Capital Plan.

**RECOMMENDATIONS:**

That the Planning and Budget Committee recommend to the Academic Board:

1. THAT the Project Planning Report for the Electrical and Mechanical Infrastructure Upgrades at the University of Toronto at Scarborough, Phase 4 Mechanical: New Chiller, be approved in principle.
2. THAT the project scope for the new chillers as described in the project committee report be approved at an estimated total project cost of \$2,919,000 to be funded from the following sources:
  - i) Deferred Maintenance Funds allocation to UTSC in 2005-06 in the amount of \$1,204,809.
  - ii) Facilities Renewal Program allocation 2006-07 in the amount of \$200,000.
  - iii) Deferred Maintenance Funds allocation to UTSC in 2006-07 in the amount of \$1,514,191.