UNIVERSITY OF TORONTO

THE GOVERNING COUNCIL

REPORT NUMBER 153 OF THE BUSINESS BOARD

November 9, 2006

To the Governing Council,
University of Toronto.

Your Board reports that it met on Thursday, November 9, 2006 at 5:00 p.m. in the Council Chamber, Simcoe Hall, with the following members present:

Ms Jacqueline C. Orange (In the Chair)
Mr. Richard Nunn, Vice-Chair
Ms Catherine J. Riggall, Vice-President, Business Affairs
Professor Angela Hildyard, Vice-President, Human Resources and Equity
Mr. Donald A. Burwash
Mr. P. C. Choo
Dr. Alice Dong
Ms Mary Anne Elliott
Ms Susan Eng
Mr. Robin Goodfellow
Dr. Gerald Halbert
Ms Paulette L. Kennedy
Mr. Gerald A. Lokash
Mr. Geoffrey Matus
Ms Marvi H. Ricker
Professor Arthur S. Ripstein
Ms Estefania Toledo

Professor Vivek Goel, Vice-President and Provost
Ms Rivi Frankle, Interim Vice-President, and Chief Advancement Officer
Ms Judith Wolfson, Vice-President, University Relations
Ms Sheila Brown, Chief Financial Officer
Ms Christina Sass-Kortsak, Assistant Vice-President, Human Resources
Ms Elizabeth Sisam, Assistant Vice-President, Campus and Facilities Planning
Mr. Ron Swail, Assistant Vice-President, Facilities and Services
Professor Safwat Zaky, Vice-Provost, Planning and Budget
Mr. Nick Zouravlioff, Acting Chief Capital Projects Officer

Secretariat:

Mr. Neil Dobbs
Mr. Henry Mulhall

Regrets:

Ms Kate Hilton
Professor Glen A. Jones
Mr. Raj Kothari
Mr. George E. Myhal
Mr. David Oxtoby
Mr. Stephen C. Smith
Ms B. Elizabeth Vosburgh
Mr. Robert S. Weiss
Mr. W. David Wilson

In Attendance:

Professor Catharine Whiteside, Vice-Provost, Relations with Health Care Institutions and Dean, Faculty of Medicine
Professor John Coleman, Vice-Principal, Research and Graduate Studies, University of Toronto at Scarborough
Mr. Bruce Dodds, Director of Utilities, Facilities and Services Department

In Attendance (Cont'd)

Dr. Jeanne Li, Special Assistant to the Vice-President, Business Affairs
Professor George Luste, President, University of Toronto Faculty Association
Mr. Pierre G. Piché, Controller and Director of Financial Services
Mr. Allan Shapira, Hewitt Associates

ALL ITEMS ARE REPORTED TO THE GOVERNING COUNCIL FOR INFORMATION.

1. Report of the Previous Meeting

The Chair said that members were notified electronically the previous day that Report Number 152 was available on the web, and copies had been placed on the table. To give members the opportunity to read the report more carefully, she proposed to defer its approval until the next meeting. Members were asked to notify the Secretary of any errors or omissions.

2. Business Arising from the Report of the Previous Meeting

The Chair said that members would have the opportunity to raise any matters of "business arising" at the beginning of the next meeting. Those matters would include a brief report from the Interim Vice-President and Chief Development Officer in response to a request for information concerning donations from alumni who were graduate and undergraduate students.

3. Pension Plans: Annual Financial Report for the Year ended June 30, 2006

Ms Kennedy reported that the Audit Committee had, at its meeting of November 6, 2006, completed a full review of the annual financial report on the Pension Plans for the year ended June 30, 2006. The external auditors and the actuaries were present to assist the Committee.

Ms Brown recalled that the University administered three pension plans: the main registered plan, the plan for employees of the Ontario Institute for Studies in Education at the time it became amalgamated with the University's Faculty of Education, and the unregistered Supplemental Retirement Arrangement (S.R.A.) The financial position of the plans was as follows:

- **The main registered pension plan** was in a market deficit (comparing the market value of the plan assets as at July 1, 2006 to its accrued liabilities) of $50.7-million, an improvement from the previous year's deficit of $86.4-million. The actuarial valuation of the plan, which reflected the actuarial smoothing of market gains and losses over the years) showed a deficit of $93.4-million as at July 1, 2006.

- **The OISE/UT plan** was in a market-value surplus position of $5.2-million as at July 1, 2006, after taking into account the partial wind-up of the plan. The actuarial surplus was $4-million.

3. Pension Plans: Annual Financial Report for the Year ended June 30, 2006 (Cont'd)

- **The Supplemental Retirement Arrangement** had a market reserve of $14.1-million, reflecting the amount appropriated by the University in an internally restricted fund to deal with the accrued liabilities of the S.R.A.

Ms Brown recalled that the University had adopted a pension contribution strategy, which required the University to contribute each year an amount equal to the full current service cost plus special payments of $27.2-million per year. The strategy continued to be an appropriate one, at least for the interim while the University examined a number of factors including continuing increases in life expectancy, long-term investment return expectations, and the need to manage and control unfunded post-retirement benefits other than pensions.

Invited to address the Board, Professor Luste referred members to his memorandum of November 9, 2006, copies of which had been placed on the table for the meeting. There was, in his view, a major financial problem with respect to the pension plan that was hidden in the actuarial assumptions used to calculate the plan's financial position. While that problem could remain hidden for some years, it was nonetheless a cause for very real concern. The source of the problem was that in the past, too little money had been put into the plan. According to Professor Luste's calculations, as much as $1.4-billion, in today's dollars, had not been contributed, the outcome of contribution holidays. Over the past two decades, faculty and staff had not made employee contributions for three years and the University had not made employer contributions for fourteen years. The cumulative outcome in current value was shown by the graph on page 3 of Professor Luste's memorandum.

Professor Luste said that while the University claimed that its contribution holiday was required by law, that was only a part of the explanation. The plan surplus, which forced the employer contribution holiday, was the outcome of certain actuarial assumptions, in particular the assumed real (after inflation) investment return on the pension plan's assets. Until 1991, the actuarial valuation had assumed a real return of 2.5%. For the 1990-91 valuation, the real-return assumption was increased to 3.0%. For the 1996-97 valuation, the real return assumption was increased again to 3.5%. For the 1998-99 valuation, it was increased to its current rate of 4.0%. The change in assumptions in each case resulted in an expansion of the actuarial surplus and a continuation of the excuse for not making employer contributions to the plan. Professor Luste's concern was that the outcome would eventually cause real problems. The University should not have departed from the 2.5% real-return assumption. The Ontario Teachers' Pension Plan was currently facing real problems but had recognized them by recommending a real-return assumption of 2.5%. Professor Luste referred members to an excerpt from the comments of Mr. Robert W. Korthals in the 2005 annual report of the Ontario Teachers' Pension Plan. Mr. Korthals had served as the first Chair of the Board of the University of Toronto Asset Management Corporation and as a Senior Advisor to the President of the University on financial matters.

3. Pension Plans: Annual Financial Report for the Year ended June 30, 2006 (Cont'd)

Professor Luste recognized that faculty and staff had contributed to the problem. In the years when the University was taking a contribution holiday, the Faculty Association and staff representatives had asked that members also be given a contribution holiday. However, while it was possible to delay for some years the consequences of contributing too little to the plan, the outcome would be only to shift the burden of funding the plan to future generations of plan members and to future University budgets.

Professor Luste stated his view that there was also a very serious governance problem with respect to the pension plan. The board of the Ontario Teachers' Pension Plan consisted one half of representatives of the stakeholders and one half of representatives of the employer – the Province of Ontario. At the University of Toronto, the members of the plan – active and retired – had no representation whatever.

Two matters arose in discussion.

(a) Pension contribution strategy. A member asked whether Professor Luste's concerns were shared by the administration and whether they would call for a reconsideration of the pension contribution strategy. Ms Brown replied that the administration had concluded that the pension contribution strategy continued to be an appropriate one for the interim while work continued on an examination of several issues including the mortality tables to be used (people were living longer) and the long-term expectation concerning the rate of investment return. The administration would report to the Board upon completion of its review, either to confirm the continuation of the approved pension contribution strategy or to recommend a change.

(b) Actuarial assumptions. A member asked for a response to Professor Luste's concern about the assumed rate of investment return. Ms Brown recalled that she had responded to this question at the previous meeting when Professor Luste had commented on the semi-annual report on investment performance. She had said that the University assumed a higher return expected to be achieved over the longer run by assuming some volatility risk and gaining the additional long-run returns that had historically been achieved by investing a portion of the pension fund in equities. Mr. Shapira added that the assumption concerning the real rate of investment return was one of the topics being reviewed as part of the review of the pension contribution strategy. It was a major topic of discussion generally. It was important to arrive at an appropriate return assumption which would determine the level of contributions required to ensure that there would be equity between the generations of stakeholders. The real question was whether there should be a higher return assumption representing the risk premium for investing in equities. While the Ontario Teachers' Pension Plan used a 2.5% rate to discount its liabilities, it in fact used a higher rate of assumed return on assets. Some other public-sector plans used a real return assumption of 4¼% or even 4½%. The University was examining the question as part of an asset / liability study, which would help to define the meaning of various possible long-term assumptions. The current long-term strategy did recognize the presence of some risk in the management of the pension plan. That recognition was reflected in the long-term commitment to full current-service-cost contributions plus additional annual contributions to deal with volatility of investment returns.

3. Pension Plans: Annual Financial Report for the Year ended June 30, 2006 (Cont'd)

The Chair asked when the matter would return to the Business Board. Ms Brown said that she anticipated that the review of the pension contribution strategy would be completed before the plan valuation as at July 1, 2007.

The Chair said that the audited financial statements required the Business Board's approval prior to their submission to the Financial Services Commission of Ontario.

On the recommendation of the Audit Committee,

YOUR BOARD APPROVED

(a) The audited financial statements of the University of Toronto Pension Plan, June 30th, 2006; and

(b) The audited financial statements of the University of Toronto (OISE) Pension Plan, June 30th, 2006.

The Chair thanked the Audit Committee for its detailed review of the annual report on the pension plans.

4. Capital Projects Report, 1999 – 2006

Ms Riggall said that it was important that the Board have a historical overview of the University's construction program in order to avoid drawing conclusions about that program on the basis of a small number of projects where there were well-know problems. The overview covered major projects from the beginning of the current period of major capital expansion until the present.

Mr. Zouravlioff noted that he had joined the staff of the University six years ago. One of his key challenges had been to come to terms with the high level of public scrutiny of, and involvement with, the construction program. While that had been an additional challenge to the project managers involved, the high level of University-community involvement had also led to some truly marvelous buildings. The program had included a large number of buildings that had been given awards for their design:

- the Terrence Donnelly Centre for Cellular and Biomolecular Research: a 2006 Ontario Association of Architects Award of Excellence and a 2006 award from the Royal Institute of British Architects;
- the University of Toronto at Mississauga (UTM) Phase VII Residence: a 2004 Award of Excellence from the Ontario Association of Architects and the 2006 Governor General's Medal in Architecture;
- the Hart House Elevator Retrofit (designed by University's internal design group): a 2005 Heritage Toronto Award of Excellence;

4. Capital Projects Report, 1999 – 2006 (Cont'd)

- the Bahen Centre for Information Technology: a 2003 Ontario Concrete Award for Outstanding Work, a City of Toronto Architecture and Urban Design Award and an Award of Excellence from the Ontario Association of Architects; a 2005 Honourable Mention in the Building Magazine Outside the Box Award for Urban Design;
- the University of Toronto at Scarborough (UTSC) Student Centre: a 2005 Ontario Association of Architects Honourable Mention and an Ontario Steel Design Award Honourable Mention;
- the School of Continuing Studies building addition and renovation: a 2005 Honourable Mention from the Ontario Association of Architects;
- the King's College Road Open Space Plan. The master plan for the open space plan had in 2001 been awarded a Canadian Society of Landscape Architects National Merit Award and a City of Toronto Architecture and Urban Design Award of Excellence for Visions and Master Plans. The King's College Road project had in 2005 been awarded a City of Toronto Architecture and Urban Design Award and a Canadian Society of Landscape Architects Regional Merit Award;
- the most recent New College Residence building had been awarded a 2001 Canadian Architect Award of Excellence;
- the Leslie L. Dan Pharmacy Building: a 2006 Ontario Steel Design Award;
- the Morrison Pavilion addition to the Sigmund Samuel Library: a 2004 Award of Excellence of the Ontario Association of Architects and the 2004 award of the Ontario Library Association for the best new academic library building;
- the John and Edna Davenport wing of the Lash Miller Chemical Laboratories: a 2002 Honourable Mention from the Ontario Association of Architects.

Other exciting major projects had been completed: the Arts and Administration Building at UTSC; the University College Morrison Hall Residence; the UTSC Academic Resource Centre; the Woodsworth College Residence; the UTM Wellness Centre; and the UTM Hazel McCallion Academic Learning Centre.

Mr. Zouravlioff said that between 1999 and August 31, 2006, $935.4-million of spending had been approved for capital projects costing more than $2-million. Of that amount, $835-million had been approved for the original cost of projects and a further $100.4-million had been provided through supplementary approvals. Of the $100.4-million in supplementary approvals, 60% had been approved for four projects: $20.7-million for the Bahen Centre for Information Technology, $11.5-million for the Terrence Donnelly Centre for Cellular and Biomolecular Research, $10.1-million for the Davenport Wing of the Lash Miller Chemical Laboratories, and $9.3-million for the Economics Building project. Of the $100.4-million of supplementary approvals, $86.71 had been approved by the Governing Council and $13.69-million by the Vice-President, Business Affairs, who had authority to approve additional spending of up to $2-million or 10% of the project cost, whichever was less, provided that there was no substantial change to the scope of the project. The additional $100.4-million of additional spending was

4. Capital Projects Report, 1999 – 2006 (Cont'd)

approved by governance for 11 projects, by the Vice-President, Business Affairs for 11 projects and by both for 4 projects. There were various reasons for the additional spending for the 26 projects. In thirteen cases, there were increases to the scope of the project. Often additional donations or other opportunities arose to enhance the project. In one case, in spite of appropriate due diligence, unexpected problems had arisen with respect to site conditions and coordination. In three cases, tenders had been more costly than the original estimates. In nine cases, there was a combination of those factors. Of the 42 projects completed between 1999 and August 31, 2006, 14 were fully completed by the target date. A further 18 were functionally completed. That meant that the occupants had moved and settled into the building by the date that they were required to begin their functions, for instance teaching in a new term, but some additional construction work had continued during the early period of occupancy. In ten cases, the occupants had been unable to occupy the project by the target date. Of the ten cases where the completion targets had been missed, the reason in six cases had been an enhancement to the scope of the project: the Dan Pharmacy Building, the Downsview Library Storage Facility, The Lash Miller / McClennan Courtyard, the Munk Centre, the Sidney Smith Hall patio enclosure, and the Centre for Applied Biology and Biotechnology at UTM. In one other case, the Flavelle House renovation, the tender had come in higher than expected, and it had been necessary to analyze the problem, negotiate changes and seek additional funding. In the case of the Bahen Centre parking garage, both factors had been involved. Finally, in two cases, the Woodsworth College Residence and the shelled space in that residence, the work had simply not been completed to the satisfaction of the city's building inspectors. The detail for each project was provided in the table contained in the written report.

A member observed that while $100-million of additional spending was not a large proportion of over $935-million of spending, it did represent a large dollar amount. She asked what changes in the governance and management processes would avoid the problem of increased project costs in the future? Should the University be comparing its costs to benchmarks to prevent overspending?

Ms Riggall replied that the $100-million of additional spending did not in fact represent costs above budget but often represented increases in budgets for good and valid reasons. In some cases, additional donations had allowed the expansion of projects. In other cases, it had become apparent that the expansion of projects would add efficiency, for example the addition of heating, ventilation and air conditioning capacity in the area at the same time as the completion of a project. The approval of additional spending by governance demonstrated the quality of the process; as additional spending was required, recommendations were submitted to governance for consideration and approval of budget increases; costs were not allowed to exceed their budgets. It was difficult to find benchmarks for the cost of university buildings because each was unique. Unlike such standard construction as office buildings, the range of costs was a broad one for university teaching and research buildings. In addition, the cost of all buildings varied greatly over time depending on highly cyclical market conditions.

4. Capital Projects Report, 1999 – 2006 (Cont'd)

Professor Goel added that the University had learned a great deal from its experience and had made changes in the way projects were brought forward for approval. In many cases, the administration was bringing forward preliminary Project Planning Reports for approval, obtaining authorization for initial work on a project that would enable detailed planning and much more accurate forecasting of costs. With staged approval, it would also be possible to go into older buildings that were being retrofitted and to learn about the condition of those buildings. In addition, more projects were being completed in stages. In some cases, the availability of additional donations had allowed the enhancement of projects, and the University had frequently planned for the expansion of projects upon the availability of further funding. For example, in the case of the Donnelly Centre for Cellular and Biomolecular Research, the University had shelled in two floors to allow for further space, which was completed when funding became available. In addition, the provision of a further donation by Dr. Donnelly had enabled the connection of the Donnelly Centre to the Medical Sciences Building by an atrium, which had proven to be a highly beneficial addition for the students who used the two buildings. It was, therefore, not appropriate to characterize further spending as necessarily cost over-runs to be prevented in the future. The amount that could properly be regarded as the outcome of cost overruns was a very small proportion of the total construction program.

In the course of discussion, a member with expertise in property matters said that the outcome of the University's construction program had been superlative, particularly in the exceptionally difficult construction market in Toronto over the past few years.

5. Capital Program Report

Ms Sisam said that the report was forwarded pursuant to the usual practice of providing the Board, at any meeting at which it would consider a capital project, with an overview of the progress on executing the capital plan and on the University's borrowing capacity for capital purposes. There had been no change since the report presented at the previous meeting on October 10.

6. Borrowing Update

Ms Riggall said that she would, at the January meeting, bring to the Board the outcome of the administration's review of the University's Borrowing Strategy, as approved by the Governing Council in June 2004. That meeting would also receive a report on the new capital plan and a proposal for a revised Real Estate Strategy. The current report was intended to remind the Board of the current Borrowing Strategy, the amount borrowed, the amount allocated and the amount available for other capital purposes. The Borrowing Strategy was driven by the needs articulated in the University's academic plan. The plan for enrolment growth would require growth in the size of the faculty and staff, which would in turn require new space. In addition, new programs and technological change would require the renovation and adaptation of existing space for new purposes. It could turn out that the needs for new space could not be accommodated within the current properties of the campuses. Therefore there was also need to re-examine the University's current real-estate strategy.

6. Borrowing Update (Cont'd)

Ms Riggall said that each project was required to have a funding and, if necessary, a financing plan. Each project would normally require an equity contribution that might be provided by government grants, donations, or carry-forward funds accumulated by the academic division. If the equity was insufficient, then the University would (as would individuals buying or renovating a house) turn to borrowing to finance the project.

Ms Riggall recalled that the approved Borrowing Strategy had set a limit to borrowing of 40% of the University's net assets averaged over the most recent five years. The Strategy spoke of a range of between one third and 40% of net assets, but the University had more recently tended to think in terms of the 40% limit, and it was inclined to continue to do so. In fact, while approved borrowing had moved towards that limit, actual borrowing to date was closer to 25% of net assets.

The Chair recalled that the January meeting would consider the University's plan for capital development (driven by the academic plan), the Real Estate Strategy, and the Borrowing Strategy. That would represent the first integrated, strategic examination of those key matters by governance. She urged all members to make every effort to attend that very important meeting.

7. Capital Project: University of Toronto at Mississauga: Medical Academy

The Chair said that a slightly revised version of this proposal had been posted to the web and placed on the table for the meeting. The corrections had been described in an e-mail message from the Secretary. The recommendation for the Board's consideration had not been changed.

Professor Goel said that the University proposed to establish a fourth Medical Academy at the University of Toronto at Mississauga. The Province of Ontario had, in its *Reaching Higher* plan, developed a program to fund an increase in medical school enrolment in the Province. The focus of the proposed new Academy would be community-based medical practice. The program would be offered in partnership with the hospitals in the Mississauga, Peel and Brampton regions. It would adopt the model of distributed education, with students receiving some of their training at the St. George Campus and some at the new UTM Academy, and with the use of video-conferencing to provide some lectures to students on both campuses simultaneously. Some of the training at the UTM Academy would take place at the UTM Campus and some at the hospitals in the region. The facilities for the Academy would be constructed in space vacated by the UTM Library, which had moved to the new Hazel McCallion Academic Learning Centre. The project would be coupled with a plan for a new Student Services Plaza in the remainder of the space vacated by the Library. The projects would involve the construction of some space built out from the UTM South Building. The recommendation before the Board dealt solely with the development of space for the Medical Academy. A separate proposal would follow for the remainder of the project to accommodate the Student Services Plaza. The current proposal also included the renovation and addition of space to the

7. Capital Project: University of Toronto at Mississauga: Medical Academy (Cont'd)

Medical Sciences Building on the St. George Campus, especially to accommodate additional space for media services and for instruction in gross anatomy.

Professor Whiteside added that the Province had asked the University to expand its medical-school enrolment to ensure the availability of medical services to Ontario's growing and aging population, and the Province had provided funding for the expansion. The University was able to manage the enrolment growth through the new Medical Academy, and it would in fact gladly manage further growth if the Province wished to fund such growth and additional capital expansion.

On the recommendation of the Vice-President, Business Affairs,

Subject to Governing Council approval of the project,

YOUR BOARD APPROVED

THAT the Vice-President, Business Affairs be authorized:

To execute the University of Toronto at Mississauga Medical Academy project, at a total project cost not to exceed $20.107-million, using the following sources of funding:

(i) borrowing of $14.7-million to be repaid, with interest, from provincial funding in the form of annualized payments having a present value of $14.7 million, and

(ii) borrowing of $5.407-million to be repaid, with interest, by the Faculty of Medicine and the University of Toronto at Mississauga;

and

THAT the senior financial officer responsible for financial matters be authorized to arrange such interim and long term borrowing as required, from either internal or external resources.

8. Capital Project: University of Toronto at Scarborough: New Science Building – Increased Appropriation

Mr. Zouravlioff reported that the planned new Science Building at UTSC was one of the projects where the tendered prices from all bidders, in the current construction market, had proven to be higher than the originally estimated cost. All of the tendered prices were very close, with the two lowest bidders within $75,000 of each other – a remarkably low spread on so large a

8. Capital Project: University of Toronto at Scarborough: New Science Building – Increased Appropriation (Cont'd)

project. The University had engaged in negotiations and had removed some features from the project to reduce its cost, but it wished to ensure that there was no loss of functionality. The outcome was a final project cost of $37.089-million, an increase of $4-million over the previously approved cost. Completing the project involved dealing with a substantial number of secondary effects, in particular the expansion of mechanical and electrical services on the UTSC Campus. It was precisely those areas, especially mechanical services, that were under greatest cost pressure.

On the recommendation of the Vice-President, Business Affairs,

YOUR BOARD APPROVED

THAT the Vice-President, Business Affairs be authorized to execute the University of Toronto at Scarborough (UTSC) New Science Building Project, for an increased cost not to exceed $37.089-million, using the following sources of funds:

i.	2004-05 cash allocation from the UTSC operating budget	$ 3.000-million
ii.	Further cash allocation from the UTSC operating budget	10.089- million
iii.	Debt financing to be repaid by the UTSC operating budget	24.000- million

and

THAT the senior financial officer responsible for financial matters be authorized to arrange such interim and long term borrowing as required, from either internal or external resources.

9. Central Utilities Review

Ms Riggall recalled that the Board had, two years ago, received a presentation of a planned review of the University's utilities infrastructure, entitled "Some Like it Hot." That review had now been completed with the aid of consultants, Sebesta Blomberg, well-reputed consulting engineers operating from Minneapolis, Minnesota. The firm had extensive experience in consulting on university infrastructure operations. The consultants had considered various options for the management of the University's utilities infrastructure including continuing internal management, outsourcing that management, or working in partnership with a private-sector partner.

9. Central Utilities Review (Cont'd)

Mr. Swail recalled that the administration had undertaken a detailed review of deferred maintenance in 2005 and had committed to undertake a similar review of the utilities infrastructure. The highlights of that review were as follows.

- **Objectives**. There had been four objectives of the review. The first was to assess the University's central utilities systems: steam heating, electricity and chilled water cooling. The second was to benchmark those systems and to provide a competitive assessment of them against internal and external systems. The third was to provide a response to a number of unsolicited offers that had been received to purchase the University's systems or to act as partner with the University in their operation. The final objective was to provide a strategy, including a business model, for the sustainable operation of the systems. That model took into account future operating and capital costs. The objective was to enable consistent funding for those needs. While the model would provide for funding at a consistent rate, the cost would be substantial.

- **Consultants**. The University had engaged the well-respected consulting engineers, Sebesta Blomberg, who specialized in utility-infrastructure assessments and who had provided business advice to universities across North America. The consultants had worked with University staff for well over a year to provide their assessment. The University was also currently working with the Association of Physical Plant Administrators, a North-America-wide group, to develop an energy-efficiency benchmarking database.

- **Consultants' assessment**. The consultants had concluded that the University's systems and infrastructure on all three campuses were well maintained and effectively managed. They were reliable and cost-competitive, in some cases saving the University substantial amounts of money over other options.

- **Steam-heating costs**. The cost of steam heating was lowest on the St. George campus, demonstrating the savings provided by providing heating to 85% of the campus through a large central steam plant. That generated savings on labour and equipment as well as on natural gas purchases. The cost of producing steam heat on the St. George campus was also substantially less than purchasing steam from a potential external supplier. (That alternative supplier was not able to offer services to UTM and UTSC.) For 2007, the estimated cost was $14.91-million for the internal steam system compared to $21.04-million for direct purchase of steam. The amount of saving over an extended period of time such as twenty-five years was substantial.

- **Chilled water cooling costs**. The University's cost for supplying internally chilled water for cooling purposes on the St. George Campus was again far less than the cost of purchasing chilled water from an external supplier, which would use deep lake chilled water. For 2007, the cost of water chilled on campus was estimated to be $1.65-million compared to a cost of $2.69 million for purchase.

9. Central Utilities Review (Cont'd)

- **Electricity costs**. Internal distribution of electricity was less expensive than connecting the older buildings on the St. George Campus to the Toronto Hydro grid. The cost of the internal distribution was estimated to be $17.38-million for 2007 compared to $18.04-million for external connection. The difference did not include the substantial connection costs.

- **Benchmarking energy-use intensity**. The consultants had compared the University's energy use to peer institutions on the basis of the square feet of buildings serviced. All peers were large research-intensive universities with co-generation plants. The University of Toronto was the most efficient in its energy use. Mr. Swail stressed that the conclusion did not mean that the University could not and should not seek to be more efficient.

- **Response to unsolicited utility-service and business proposals**. The University had received proposals from different suppliers concerning particular operations on each of the three campuses. The consultants were asked to assess those offers in terms of the best long-term interest of the University, determining what strategic benefits would be gained or lost in affirmative or negative responses to the offers. In all cases, the consultants had concluded that the proposals "offer no advantage in terms of service or cost" to the University.

- **Strategy for sustainable operation of the central utilities**. Based on the consultants' conclusion, Mr. Swail and his colleagues set about developing a "cost of service" model as a basis for the sustainable operation of the central utilities. That model had to take into account operating costs to serve not only existing loads but also projections for future loads that would arrive with capital expansion. In addition, that model would have to take into account the major capital expenses that would be required to replace aging existing machinery and to procure machinery to provide future needs. The inherent challenge was that capital renewal would be very expensive. Adding to the challenge, it was difficult to predict the useful life of the current facilities. The consultants had been asked to provide a model showing likely costs over the next twenty-five years. Those costs would be very uneven, with exceptionally high costs for the capital costs incurred in years when it became necessary to replace boilers and utilities tunnels. To deal with this problem, Mr. Swail proposed a model that would spread costs in a consistent manner over the twenty-five years in a way that could be handled by the budget process without major variances. That model would involve the development of a reserve fund. That would require an annual contribution of $4.5-million for the St. George Campus, $1-million for the UTM Campus and $0.6-million for the UTSC Campus – amounts that would have to be added to the usual utilities budget.

9. Central Utilities Review (Cont'd)

- **Concluding summary**. Reliable operation of the campus utilities was critical to the achievement of the University's mission. Those systems were in good condition: well managed and well maintained. The University's utilities operations compared well to external benchmarks and to other external solutions. There was, however, need for a sustainable way to provide for future capital needs. The best way was to set aside regular capital allocations to sustain a reliable and efficient operation. The proposed cost-of-service model represented a way to provide the needed capital funds in a smooth, predictable way to ensure that the systems continued to provide value.

In the course of discussion a member commended the administration for the review, which had been very well done. Among the matters that arose in discussion were the following.

(a) The reserve fund. In response to a question, Ms Riggall and Mr. Swail said that the reserve fund, like all of the University's financial assets, would be invested by the University of Toronto Asset Management Corporation. For the first five years, it was likely that all of the amounts going into the fund would be required immediately for equipment replacement.

(b) Risks to the proposed model. A member asked which of the assumptions used in the model were the most risky and the most likely, if they did not come to pass, to have given rise to choice of a different strategy. Mr. Swail and Mr. Dodds replied that the price of fuel could not be predicted for twenty-five years. Nor could equipment failure. However, the University purchased natural gas in the same market as the potential external suppliers and, given its scale, enjoyed comparable pricing. For the next few years, the University had locked in a very advantageous price.

(c) Response of companies making proposals for external operation. In response to a question, Ms Riggall said that the University had not completed discussions with the companies that had made offers. One supplier in particular might well make further offers in view of its interest in using University tunnels to send its services north of Bloor Street. The University would, as the result of the consultants' study, be in a much better position to respond in any further discussions.

(d) Recent infrastructure renewal. A member recalled that the Board had recently approved considerable spending for infrastructure renewal. Mr. Swail and Mr. Dodds replied that the approved projects on the St. George Campus were measures to reduce energy consumption and to replace certain chillers. The next replacement of those chillers was projected at the far end of the twenty-five year projection. There had been no spending for boiler replacement on the St. George Campus; that work had been approved for UTM and UTSC only. The major heating need on the St. George Campus would be replacement of equipment in the central steam plant and the replacement of utilities tunnels.

9. Central Utilities Review (Cont'd)

(e) Staff expertise. A member asked whether staff expertise would continue to be available for the efficient internal operation of the University's infrastructure. Mr. Dodds replied that the University had very low staff turnover, strong training programs and active succession planning.

10. Date of Next Meeting

The Chair reminded members that the next regular meeting was scheduled for **Monday, January 15, 2007** at 5:00 p.m. She recalled that the meeting would deal with all of the key factors in the University's capital program, and she again urged members to make every effort to attend.

The meeting adjourned at 6:25 p.m.

Secretary

Chair

December 6, 2006

37872