



**STAFF REPORT
ACTION REQUIRED**

Implementation of the Sustainable Energy Funds

Date:	November 12, 2007
To:	Executive Committee
From:	Deputy City Manager and Chief Financial Officer Deputy City Manager, Richard Butts
Wards:	All
Reference Number:	P:\2007\Internal Services\F&re\Ec07118F&re-AFS5514

SUMMARY

This report recommends the goals and objectives, as well as the financial, eligibility and administrative guidelines, for the Toronto Energy Conservation Fund (TECF) and the Toronto Green Energy Fund (TGEF), known together as the Sustainable Energy Funds (“the Funds”). The Sustainable Energy Funds will assist the City in achieving the greenhouse gas reduction and air quality targets outlined in the Climate Change, Clean Air and Sustainable Energy Action Plan.

The Funds should be established as revolving loan funds that provide low-interest financing to projects that improve energy efficiency in buildings, and/or generate renewable energy in Toronto. The City’s Divisions, Agencies, Boards, Commissions and Corporations (ABCCs), as well as universities, colleges, schools, hospitals and other not-for-profit bodies, should be eligible for financial support from the Funds. These are referred to as the “MASH” sector (Municipalities, Academic, Social Service and Health entities).

Funding for City energy efficiency projects will continue to be provided through the Energy Retrofit Program and other sources, including the 90 Megawatt electricity savings program that the City is delivering on behalf of the Ontario Power Authority.

Further project eligibility criteria are spelled out in this report, and in the attached background report, as are issues involving the administration and operation of the Funds. The implementation of the Sustainable Energy Funds will be coordinated with other City programs, as well as programs offered by the federal and provincial governments, the utility companies, and other funding bodies.

RECOMMENDATIONS

The Deputy City Manager/Chief Financial Officer and Deputy City Manager recommend that:

1. City Council approve the goals and objectives, incentive levels, eligibility criteria and administrative guidelines for the Toronto Energy Conservation Fund and the Toronto Green Energy Fund, as outlined in this report and Attachment 1.
2. The Chief Corporate Officer be authorized to approve project loans from the Toronto Energy Conservation Fund and the Toronto Green Energy Fund up to a value of \$2 million.
3. The Chief Corporate Office be requested to report to Council before the end of 2008 on expanding the scope of the Sustainable Energy Funds to include the private sector (commercial/residential/industrial), and on the resources required to do so.

Financial Impact

Funding for the TECF, the TGEF, the Energy Retrofit Program and the Better Buildings Partnership have been included in the City's Recommended 2008 Capital Budget and 2009-2012 Capital Plan:

Sustainable Energy Programs – (\$ MILLIONS)

<i>Existing Programs</i>	
Energy Retrofit Program	9.3
Better Buildings Partnership Loan Program	6.345
Sub-total	15.645
<i>New Programs</i>	
Toronto Energy Conservation Fund	42.0
Toronto Green Energy Fund	20.0
Sub-total	62.0
TOTAL	77.645

The Toronto Energy Conservation Fund and the Toronto Green Energy Fund

The TECF and the TGEF will be revolving loan funds provided from the Strategic Infrastructure Partnership Reserve Fund. The TECF in the amount of \$42 million and the TGEF in the amount of \$20 million represents the City's share of funding provided for energy efficiency for the MASH and not for profit sectors. In addition, the Ontario Power Authority will provide an energy efficiency incentive of up to 40% of the project value for all eligible energy retrofits in these sectors. These two combined sources of

funding will provide approximately \$100 million for energy efficiency projects. It is anticipated that the funding received from OPA for the City’s projects will be returned to the Strategic Infrastructure Partnership Reserve Fund; while repayments from the other sectors will be used as revolving funds for other future projects within all sectors.

Cash Flow (as per 5 Year Capital Budget submission - \$,000)

Year	Conservation Fund	Green Energy Fund	Total
2008	6,000	3,000	9,000
2009	12,000	5,000	17,000
2010	24,000	5,000	29,000
2011	0	4,000	4,000
2012	0	3,000	3,000
Total	42,000	20,000	62,000

The Better Buildings Partnership Program

The Better Building Partnership Loan Repayment Reserve Fund is also a revolving fund of \$8 million through which funds are lent to not for profit organizations for energy retrofit projects at 0% interest.

The Energy Retrofit Program

The Energy Retrofit Program will continue to be funded from recoverable debt. The Program will continue to attract contributions from the Federation of Canadian Municipalities. This program will end at the end of 2009.

Operating Impacts

Currently, \$0.393 million, beginning in 2010, has been identified as operating budget savings as a result of the projects identified in the 5-Year Capital Plan for the Energy Retrofit Program. Further savings will be identified as the specific projects are approved. No operating savings to the City will be identified as a result of the Better Buildings Partnership Program.

Operating savings as a result of the City’s projects under the TECF and TEGF will be reported on an annual basis as projects and payback/savings are identified.

DECISION HISTORY

At its meeting on July 16, 17, 18 and 19, 2007, Council adopted the “Climate Change, Clean Air and Sustainable Energy Action Plan: Moving from Framework to Action” <http://www.toronto.ca/legdocs/mmis/2007/cc/decisions/2007-07-16-cc11-dd.pdf>

ISSUE BACKGROUND

This report responds to recommendations 2 a) and b) of the Climate Change, Clean Air and Sustainable Energy Action Plan: Moving from Framework to Action (the Climate Change Plan) which endorsed the establishment of the Toronto Energy Conservation Fund and the Toronto Green Energy Fund. It also supports Recommendation 5 (Environmentally Friendly Public Institutions, Industries and Commercial Operations); Recommendation 6 (Planning for a Sustainable Energy Future); Recommendation 7 (Toronto, Becoming the Renewable Energy Capital of Canada); Recommendation 11 (Partnerships for Change), and Recommendation 14 (Regular Monitoring and Reporting).

Toronto was one of the first cities in the world to realize the potential impacts of climate change, and of the role that cities can play in addressing it. Council has demonstrated leadership through programs that support energy efficiency and renewable energy in order to reduce greenhouse gas emissions. For example, the Toronto Atmospheric Fund and the Energy Efficiency Office were created in the early 1990's. Programs such as the Better Buildings Partnership and the Energy Retrofit Program have helped the City reduce emissions from its own operations by approximately 30% from 1990 levels.

The above-noted programs, with the exception of the Toronto Atmospheric Fund, are housed in the Business and Strategic Innovation unit of Facilities and Real Estate. This arrangement helps to align the objectives and delivery of the City's sustainable energy programs.

COMMENTS

Existing City Funding Programs for Conservation and Renewable Energy

Currently, there are several internal funding programs used to finance the City's own energy conservation projects:

- The Energy Retrofit Program (ERP) has provided \$35 million in loans since 2004 to Agencies, Boards, Commissions and Divisions (ABCDs) that are financed from the property tax base. Loans must be paid back within ten years from the energy cost savings that the funded projects generate. The ERP is scheduled to end December 31, 2009
- The Better Buildings Partnership Loan Repayment Reserve Fund (BBP-LRRF) is a City program operated by the Energy Efficiency Office. It was created by the former City of Toronto in 1997. The fund is capitalized at \$8 million, and lends money at 0% interest to City ABC's and other MASH sector organizations for projects that increase energy efficiency in their buildings. City divisions' energy efficiency projects are not currently eligible for BBP-LRRF funding
- The City has signed an agreement with the Ontario Power Authority (OPA) to reduce electricity demand by 90 megawatts in new and existing buildings in a

- number of sectors in Toronto before the end of 2010. City ABCCDs are eligible for an incentive payment from this program, based on electricity savings
- The Toronto Atmospheric Fund (TAF) was created by the former City of Toronto with an endowment of \$23 million. TAF provides grants to projects that reduce greenhouse gas emissions using the interest it earns from the endowment. Roughly one-third (approximately \$300,000) of TAF's annual grants are made available to the City's ABCDs

The City is also eligible for funding for sustainable energy projects from the Federation of Canadian Municipalities' Green Municipal Funds. The provincial government recently announced the creation of the Municipal Eco Challenge Fund, a \$220 million grant and loan program designed to assist municipalities in reducing greenhouse gas emissions. More sustainable energy funding programs for which municipalities are eligible will likely be developed in the coming months and years.

Goals and Objectives of the Sustainable Energy Funds

The proposed goals of the Sustainable Energy Funds are to:

- Help the City meet its climate change and air quality targets as established in the Climate Change Plan
- Support other City initiatives and priorities, including other initiatives contained in the Climate Change Plan

In consultation sessions undertaken during the preparation of this report, stakeholders indicated that a straightforward and timely application process is a high priority for those wishing to undertake sustainable energy projects. They also expressed a desire to see more coordination among program funders from all three orders of government, the utility companies, and others. Those objectives will help guide the development of the Sustainable Energy Funds.

Emphasis will also be placed on:

- Setting SMART (Specific, Measurable, Achievable, Realistic, Time-Based) objectives for the Funds that link the programs to City objectives; specifically, setting the Funds' strategic objectives and operational objectives, and setting targets for:
 - Performance
 - Projects
 - Administration
- Measuring and reporting on whether objectives and targets are met
- Regular reporting on the greenhouse gas and air quality impacts of individual projects and the program as a whole
- Ensuring accountability and transparency

Program Description (Attachment 1)

The Sustainable Energy Funds should provide low-interest revolving loans to project owners in eligible sectors through both the Toronto Energy Conservation Fund and the

Toronto Green Energy Fund. Access to low-cost capital has been identified as a barrier to energy efficiency and renewable energy by building owners and others. Most energy incentive programs, such as the federal government’s EcoEnergy Efficiency program, provide a grant after projects have been completed. That still leaves many proponents with the problem of finding the up-front capital required to initiate their projects.

A further reason for Council to approve a loan program is that, as the loans are repaid back into the Funds, money will be available for future sustainable energy projects. This is unlike grant programs, where funding is available on a “one time only” basis.

Energy conservation and energy efficiency refer to measures that reduce energy consumption. Renewable energy involves the production of energy from sources that are relatively non-polluting and are naturally replenished. Examples of energy conservation/efficiency measures include lighting retrofits, improvements to building envelope, and high-efficiency boilers. Examples of renewable energy include solar photovoltaic, wind, and geothermal energy.

In creating the Sustainable Energy Funds, Council should recognize that there is less funding available, both internally and externally, for the City’s renewable energy projects than for energy efficiency projects. Renewable energy technologies are still relatively expensive compared to more conventional energy sources. The City’s ABCDs are the leading developers of renewable energy projects in Toronto. For example, Exhibition Place is home to North America’s first wind turbine, a hydrogen fuel cell, Canada’s largest solar photovoltaic installation, and will soon house a geothermal facility. Solar swimming pool heating equipment is being installed on a number of City recreation facilities. If the City is to continue its leadership role in this area, it should provide funding for its renewable energy projects.

The Sustainable Energy Funds will also assist the City in achieving other policy objectives. Initiatives such as the Tower Renewal Project, aimed at revitalizing high-rise residential apartment buildings, and policies such as the Green Development Standard, which encourages a high level of energy efficiency in new buildings, stand to benefit from the work of the new Funds.

Eligibility for City Energy Funding Programs by Sector

	Energy Retrofit Program	Better Buildings Partnership	90 MW OPA Program	Conservation Fund	Green Energy Fund
<i>Internal:</i>					
Divisions	X		X	X	X
ABCCs	X	X	X	X	X
<i>External:</i>					
MASH sector		X	X	X	X
Other sectors			X	TBD	TBD

Eligibility Criteria

Based on a review of funding criteria for the City’s Better Buildings Partnership and Energy Retrofit Program, as well as other sustainable energy funding programs, it is recommended that the Funds should adopt the following eligibility requirements:

Sector	Projects must be owned by a MASH sector or not-for-profit entity (excluding buildings owned or leased by the federal or provincial governments). Consideration will be given to expanding eligibility to other sectors in 2009.
Location	Projects must be located within the City of Toronto
Financial criteria	Applicants must demonstrate a need for City financing. The City should not be the major project financier. Applicants must submit complete financial details for the project, and show that they have sought funding from other programs for which their project is eligible (including other City of Toronto programs as applicable). Applicants must demonstrate a good credit history and ability to repay the loan.
Project team	Project teams must have a successful record of working on similar projects. Applications must outline the qualifications of team members.
Timing	Applicants must submit estimated project timelines. Projects must commence within one year of loan approval.
Comprehensiveness	Projects must consider all opportunities for energy savings/generation, and must attempt to maximize energy savings by using shorter-payback measures to subsidize longer-payback measures.
Quantification of results	Estimates of greenhouse gas and smog-causing pollutant reductions, and energy savings or generation resulting from the project must be provided. Project owners must commit to providing ongoing energy data to the City.
Other criteria	Projects must be consistent with City policies; all City permits and approvals must be obtained. Applicants must demonstrate that all relevant federal and provincial legislation/regulations are adhered to.

The Green Energy Fund should be open to applications from the MASH sector for appropriate and proven renewable energy technology installations. Such technologies could include solar thermal, solar photovoltaic, geothermal and wind, among others. Inappropriate technologies would include, for example, those that derive energy from tidal power, which have no practical application in Toronto. In keeping with Council’s “energy efficiency first” policy, applicants for renewable energy installations on buildings will be strongly encouraged to ensure that the building is as energy efficient as possible.

While City staff have considerable experience in dealing with project proposals from public sector and not-for-profit organizations, it has less experience working with the private sector (residential, commercial and industrial). Although there are significant opportunities for emissions reductions in that sector, further research needs to be carried out before the City can begin to provide financing to private businesses. As a result, the Chief Corporate Officer should report back in 2008 on whether access to the Sustainable Energy Funds should be extended to include private sector entities.

The City Solicitor has advised that the City could potentially provide below-market interest rate loans to for-profit businesses without violating the statutory prohibition against assistance to businesses, if it could be shown that in so doing the City obtains a public benefit. As the Sustainable Energy Funds will help reduce greenhouse gas emissions and improve air quality in Toronto, the program would likely meet the public benefit criteria.

Financial Incentives

The following incentive levels are recommended for public sector and not-for-profit organizations:

- Zero percent interest rate
- Maximum of 49% of project financing to come from the Funds
- Maximum project loan amount of \$1,000,000 in 2008
- Loan repayment (term of loan) to be negotiated – typically based on expected energy cost savings from, or value of energy generated by, the project

The Chief Corporate Officer should be authorized to approve loans for projects that meet the eligibility criteria, as is the current practice for the Better Buildings Partnership Loan Replacement Reserve Fund. If the maximum loan amount increases in future years, then loan recommendations above \$2 million should require Council approval. This threshold is the same as is applied to loans from the Toronto Atmospheric Fund.

Administrative Issues

Details of the administration of the Funds are outlined in the attached background report, “City of Toronto: Development of the Toronto Energy Conservation and Green Energy Program”. Operational procedures will be developed by staff from Facilities and Real Estate, Finance and Legal Services. These will include such matters as developing process maps and forms for loan applications, as well as the finer details of project monitoring and reporting requirements.

In 2008, the costs of operating the Sustainable Energy Funds will be absorbed by the Energy Efficiency Office. The Chief Corporate Officer will report later next year on the operating budget implications of the Funds’ operations beyond 2008.

Reporting on Program and Project Results

The Climate Change Plan recommends that there be ongoing monitoring and evaluation of, and regular reporting on, the City’s climate change initiatives. Pursuant to this, the Sustainable Energy Funds will feature clear reporting guidelines. As noted, the Chief

Corporate Officer will report with recommendations for changes to the Funds scope and operation, by the end of 2008. Annual program reports will be made in 2009 and beyond. These reports will include information such as the greenhouse gas reductions generated by the program, and on success or failure in meeting targets regarding the number of loans, and their dollar value.

Loan agreements will place a strong emphasis on reporting the greenhouse gas emission reductions generated by projects. Energy data will be required to be supplied by projects, and will be used to calculate greenhouse gas and other emission reductions. Individual project results will be included in the annual program report.

Consultation Process

Input on the development of the Funds was sought and obtained from other energy program funders (federal and provincial governments, utility companies, etc.), industry representatives, building owners/operators in the public sector, environmental organizations and City staff through meetings, conference calls and surveys.

Staff have also met with other energy program funders to review the possibility of improving the coordination of the development and delivery of energy programs in Toronto. This initiative was taken in support of recommendation 4 d) of the Climate Change Action Plan, which calls for discussions on the development of a “one-window” program for access to energy and other environmental programs. Discussions with relevant parties will continue, and will be coordinated by the Toronto Environment Office and the Energy Efficiency Office.

CONTACT

Rob Maxwell, Manager, Sustainable Energy Funds Phone: 395-6927 Fax: 392-1456;
rmaxwel@toronto.ca

Jodie Parmar, Director, Business and Strategic Innovation Phone: 338-1295 Fax: 392-4828;
jparmar1@toronto.ca

SIGNATURE

Joseph P. Pennachetti
Deputy City Manager and
Chief Financial Officer

Richard Butts
Deputy City Manager

ATTACHMENTS

Attachment 1 - “Sustainable Energy Funds – Program Background” – November 14, 2007