Toronto 2015 BUDGET

CAPITAL ANALYST NOTES

Sustainable Energy Plan

2015 – 2024 CAPITAL BUDGET AND PLAN OVERVIEW

The Sustainable Energy Plan (SEP) provides funding to invest in local energy initiatives that maintain the City of Toronto as a world leader in the sustainable use of energy from local, clean and renewable sources.

The 2015–2024 Recommended Capital Budget and Plan of $159.251 million invests in the City's energy infrastructure to continually reduce the energy requirements of City operations, meet the energy reduction targets set by City Council, pursue directives issued by City Council to ensure the future energy security of the City, and reduce the Green House Gas (GHG) footprint.

The 10-Year Recommended Capital Plan also allocates funding for community based green energy projects and various energy retrofit and conservation and demand management projects at facilities across the City.

Highlights

Overview & Recommendations

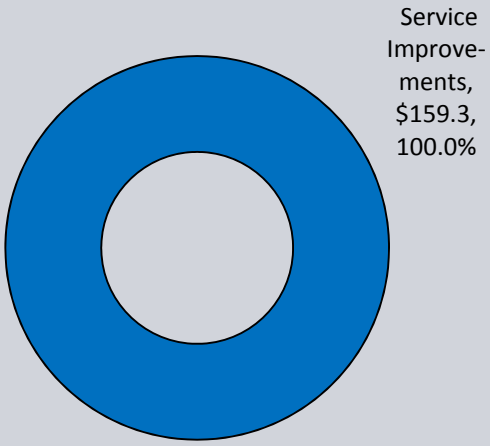
Appendices:

Contacts

Kenneth Quan
Manager, Financial Planning
Tel: (416) 392-8393
E-Mail: kquan2@toronto.ca

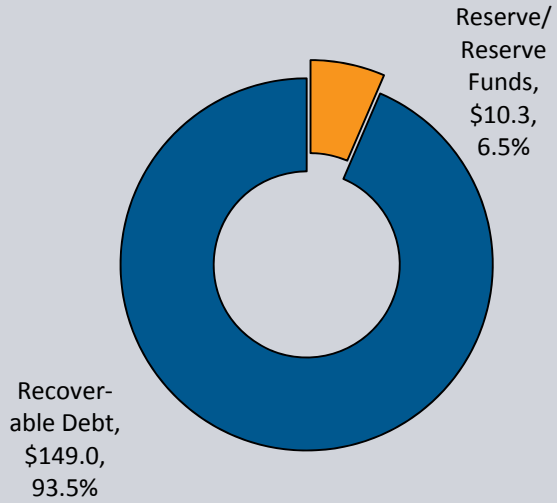
Capital Spending and Financing

2015-2024 Capital Budget and Plan by Expenditures Category



$159.251 Million

2015-2024 Capital Budget and Plan by Funding Source



$159.251 Million

Where does the money go?

The 2015–2024 Recommended Capital Budget and Plan totals $159.251 million for the following service improvement initiatives:

- Energy Retrofit Projects for comprehensive energy efficiency upgrades and improvements to City facilities.
- District Energy Systems which integrates City energy assets together to realize significant financial and operational savings.

  Demand Response Program and Conservation and Demand Management (CDM) initiatives that provide electricity capacity to balance province-wide demand and supply capability during periods of electricity constraint, resulting in relief to the grid and revenues as compensation for participating in the program.

- Renewable Energy Projects which generate electricity from natural resources (i.e. solar) producing significant reductions in GHG emissions and generating revenues through the Provincial Feed-In-Tariff program.

- Community Based Green Energy Projects that finance community-based organizations, which promote upgrading facility utilities to reduce energy consumption and the carbon footprint.

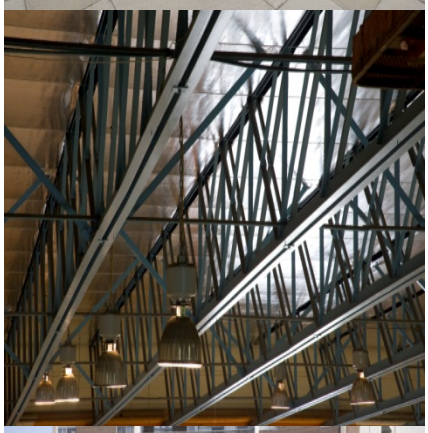
Where does the money come from?

The 10-year Recommended Capital Plan is funded by 2 major sources:

- Recoverable debt funding of $148.950 million comprises of 93.5% of SEP's 10-Year capital funding.
- Additional capital financing of $8.600 million will be provided from the Local Improvements Charge Energy Works Reserve Fund for the Residential Energy Retrofit Program and $2.301 million from the Toronto energy Conservation Fund for Solar PV FIT Program and Community Energy Planning projects.

Our Key Challenges & Priority Actions

- Working with internal and external stakeholders to ensure the City of Toronto Agencies, Corporations and Divisions, as well as community organizations **improve energy efficiency and reduce environmental footprint**.
  - ✓ Implement the *Energy & Conservation Demand Management Plan (ECDM)* to reduce energy consumption at City facilities and green house gas emissions. The 2015 – 2024 Recommended Capital Plan includes funding of $36.500 million to perform energy audits and implement energy retrofit projects at City facilities, including Agencies.
  - ✓ Continue to develop and promote the Residential Energy Retrofit Program. The 2015-2024 Recommended Capital Plan provided funding of $8.000 million to provide loans to homeowners, allowing them to pay for energy efficiency and water conservation projects over time through their property tax bills.



2015 Capital Budget Highlights

The 2015 Recommended Capital Budget for the Sustainable Energy Plan of $21.910 million, including carry forward funding will:

- Continue the following projects:
  - ➢ Demand Response Program and Conservation Demand Management which funds energy retrofit projects that contribute to the reduction of electricity demand to balance province wide demand and supply capability during periods of electricity constraint, and improves the City's energy security ($1.855 million).
  - ➢ Renewable Energy Program which encompasses projects that harness energy that comes from natural, sustainable sources such as the sun, the earth and biomass, and provides a cleaner alternative to generating energy from fossil fuels ($7.079 million in 2015)
  - ➢ Residential Energy Retrofit Program to initiate energy conservation projects in single family homes and multi-residential locations ($5.600 million in 2015).
- Begin 8 new energy conservation projects for City Programs and Agencies, including, but not limited to:
  - ➢ An investment of $1.437 million for upgrades to major energy consuming equipment at various locations.
  - ➢ *The microFIT, FIT and Mid-Size Solar Photovoltaic* programs, an investment in solar generated energy at various locations throughout the City, totalling $3.000 million in 2015.

Recommendations

The City Manager and Chief Financial Officer recommend that:

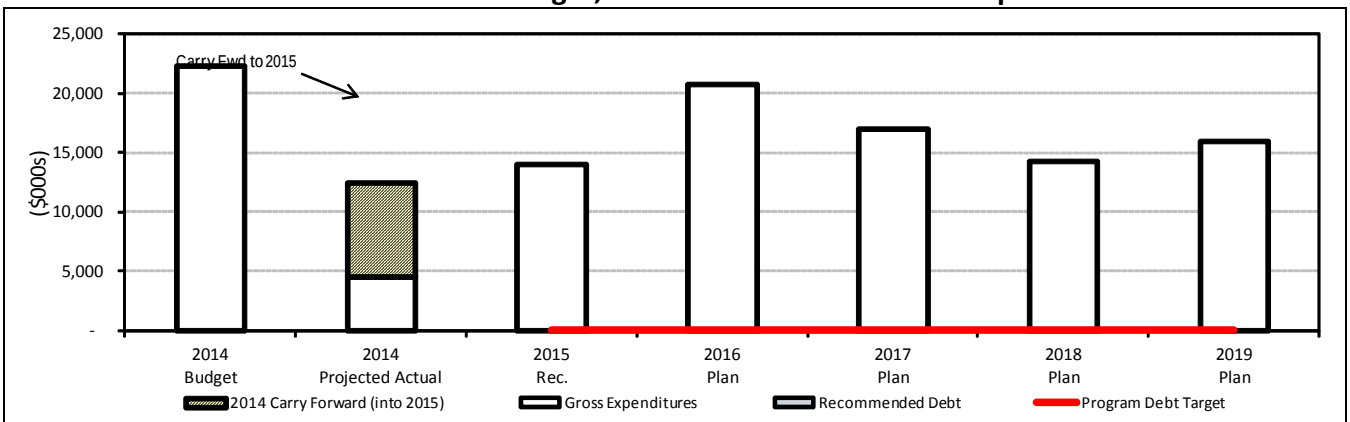
1. City Council approve the 2015 Recommended Capital Budget for the Sustainable Energy Plan with a total project cost of $15.473 million, and 2015 cash flow of $14.037 million and future year commitments of $6.314 million comprised of the following:
   a) New Cash Flow Funds for:
      i. 10 new / change in scope sub-projects with a 2015 total project cost of $15.473 million that requires cash flow of $10.595 million in 2015 and decreases in future year cash flow commitments of $5.128 million in 2016.
      ii. 8 previously approved sub-projects with a 2015 cash flow of $3.442 million; and future year cash flow commitments of $0.452 million in 2016; $0.367 million for 2017; and $0.367 million for 2018.
   b) 2014 approved cash flow for 12 previously approved sub-projects with carry forward funding from 2014 into 2015 totalling $7.873 million.
2. City Council approve the 2016-2024 Recommended Capital Plan for the Sustainable Energy Plan totalling $139.150 million in project estimates, comprised of $15.500 million in 2016; $16.650 million for 2017; $14.000 million for 2018; $16.000 million for 2019; $16.000 million for 2020; $16.000 million for 2021; $15.000 million for 2022; $15.000 million for 2023; and $15.000 million in 2024.
3. City Council approve the operating impacts of capital for 2015-2024, including incremental savings of $0.082 million in 2019, $0.015 million in 2020, and $0.161 million in 2024 pertaining to Energy Retrofit Projects.
4. City Council approve that any project utilizing the recoverable debt model completely repay all associated costs necessary to bring the project into use, including operating costs, prior to any operational savings being realized by the Program or Agency.
5. City Council direct the Environment and Energy Division and Financial Planning to monitor and report energy consumption and any associated operating savings through the City's annual budget process.

Part I:

10-Year Capital Plan

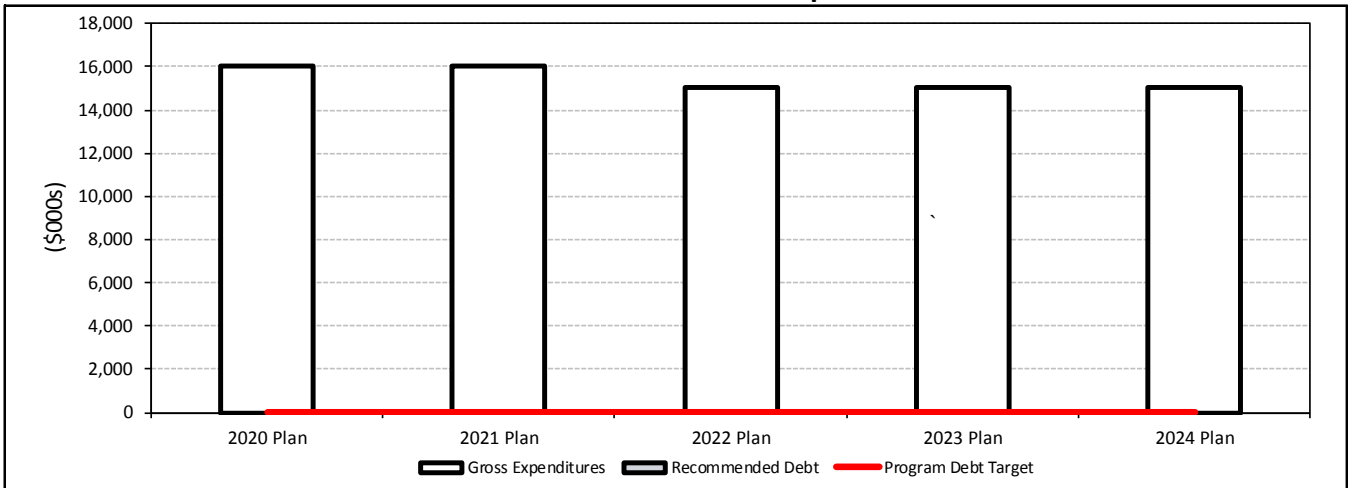
10 Year Capital Plan

Table 1a
2015 Recommended Budget, 2016-2019 Recommended Capital Plan



	2014		2015 Rec'd Capital Budget and 2016 - 2019 Rec'd Capital Plan						
	Budget	Projected Actual	2015	2016	2017	2018	2019	2015 - 2019	5-Year Total Percent
Gross Expenditures:									
2014 Capital Budget & Approved FY Commitments	22,340	4,617	3,442	452	367	367		4,628	5.6%
Recommended Changes to Approved FY Commitments									
2015 New/Change in Scope and Future Year Commitments			10,595	4,878				15,473	18.8%
2016- 2019 Capital Plan Estimates				15,500	16,650	14,000	16,000	62,150	75.6%
2-Year Carry Forward for Reapproval									
1-Year Carry Forward to 2015		7,873	→						
Total Gross Annual Expenditures & Plan	**22,340**	**12,490**	**14,037**	**20,830**	**17,017**	**14,367**	**16,000**	**82,251**	**100.0%**
Financing:									
Recommended Debt									
Reserves/Reserve Funds	9,011	3,605	6,200	3,367	367	367		10,301	12.5%
Development Charges									
Provincial/Federal									
Debt Recoverable	13,329	1,012	7,837	17,463	16,650	14,000	16,000	71,950	87.5%
Other Revenue									
Total Financing	**22,340**	**4,617**	**14,037**	**20,830**	**17,017**	**14,367**	**16,000**	**82,251**	**100.0%**
By Project Category:									
Health & Safety									
Legislated									
SOGR									
Service Improvement	22,340	4,617	14,037	20,830	17,017	14,367	16,000	82,251	100.0%
Growth Related									
Total by Project Category	**22,340**	**4,617**	**14,037**	**20,830**	**17,017**	**14,367**	**16,000**	**82,251**	**100.0%**
Asset Value ($) at year-end									
Yearly SOGR Backlog Estimate (not addressed by current plan)									
Accumulated Backlog Estimate (end of year)									
Backlog: Percentage of Asset Value (%)									
Operating Impact on Program Costs							(82)	(82)	

Table 1b
2020 - 2024 Recommended Capital Plan



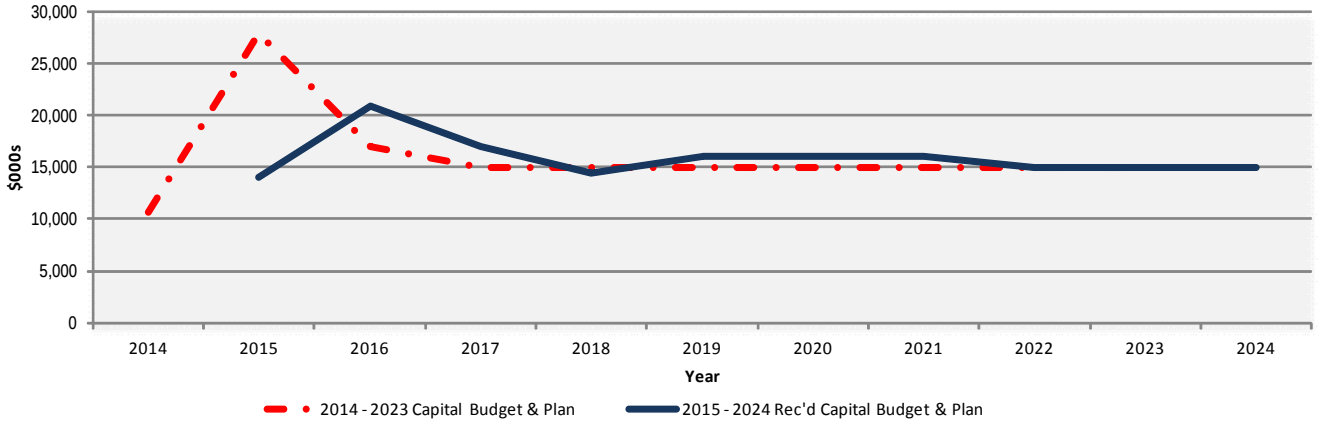
	2020 - 2024 Rec'd Capital Plan						
	2020	2021	2022	2023	2024	2015 - 2024	10-Year Total Percent
Gross Expenditures:							
2014 Capital Budget & Approved FY Commitments						4,628	2.9%
Recommended Changes to Approved FY Commitments							
2015 New/Change in Scope and Future Year Commitments						15,473	9.7%
2020 - 2024 Capital Plan Estimates	16,000	16,000	15,000	15,000	15,000	139,150	87.4%
Total Gross Annual Expenditures & Plan	**16,000**	**16,000**	**15,000**	**15,000**	**15,000**	**159,251**	**100.0%**
Financing:							
Recommended Debt							
Reserves/Reserve Funds						10,301	6.5%
Development Charges							
Provincial/Federal							
Debt Recoverable	16,000	16,000	15,000	15,000	15,000	148,950	93.5%
Other Revenue							
Total Financing	**16,000**	**16,000**	**15,000**	**15,000**	**15,000**	**159,251**	**100.0%**
By Project Category:							
Health & Safety							
Legislated							
SOGR							
Service Improvement	16,000	16,000	15,000	15,000	15,000	159,251	100.0%
Growth Related							
Total by Project Category	**16,000**	**16,000**	**15,000**	**15,000**	**15,000**	**159,251**	**100.0%**
Asset Value($) at year-end							
Yearly SOGR Backlog Estimate (not addressed by current plan)							
Accumulated Backlog Estimate (end of year)							
Backlog: Percentage of Asset Value (%)							
Operating Impact on Program Costs	(15)				(161)	(258)	

Key Changes to the 2014 - 2023 Approved Capital Plan

The 2015 Recommended Capital Budget and the 2016 - 2024 Recommended Capital Plan reflects a decrease of $1.380 million in capital funding from the 2014 to 2023 Approved Capital Plan.

The table and chart below provide a breakdown of the $1.380 million or 0.9% decrease in the Capital Program on an annual basis from 2014 to 2024.

Chart 1
Changes to the 2014 -2023 Approved Capital Plan (In $000s)



($000s)	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	10-Year Total
2014 - 2023 Capital Budget & Plan	10,719	27,912	17,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000		160,631
2015 - 2024 Rec'd Capital Budget & Plan		14,037	20,830	17,017	14,367	16,000	16,000	16,000	15,000	15,000	15,000	159,251
Change %		(49.7%)	22.5%	13.4%	(4.2%)	6.7%	6.7%	6.7%	0.0%	0.0%		(0.9%)
Change $		(13,875)	3,830	2,017	(633)	1,000	1,000	1,000	0	0		(1,380)

As made evident in the chart above, the $1.380 million decrease in the Capital Program reflects adjustments to reflect historical spending.

- The 2014 Approved Capital Budget included funding for Energy and Retrofit Program that will no longer be required in 2015 due to low participation in the program.

As reflected in Table 2 on the following page, changes to the 2014 – 2023 Approved Capital Plan include an overall net decrease of $5.661 million in capital funding in the nine common years of the Capital Plans (2015 – 2023) arise from the re-prioritization of Sustainable Energy Plan's capital projects, based on the following factors:

- Reduction in funding for the Demand Response Program due to delays in finalizing agreements with proponents, low participation and the Province of Ontario halting new enrolments into the existing program.
- Realigning Sustainable Energy Plan's 2015-2024 Capital Budget and Plan with historical spending rates.

A summary of project changes for the years 2015 to 2023 totalling $5.661 million are provided in Table 2 on the next page.

Table 2
Summary of Project Changes (In $000s)

$000s	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2015 - 2023 Total
2014 - 2023 Capital Budget & Plan	10,719	27,912	17,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000		**149,912**
2015 - 2024 Rec'd Capital Budget & Plan		14,037	20,830	17,017	14,367	16,000	16,000	16,000	15,000	15,000	15,000	**144,251**
Capital Budget & Plan Changes (2015 - 2023)		(13,875)	3,830	2,017	(633)	1,000	1,000	1,000				**(5,661)**

	Total Project Cost	2015	2016	2017	2018	2019	2020	2021	2022	2023	2015 - 2023	2024	Revised Total Project Cost
Previously Approved													
Energy Retrofit Program & Conservation & Demand Management	27,297	(1,360)	1,335	1,000	1,000	1,000	1,000	1,000	1,000	1,000	6,975	4,000	38,272
Conservation and Demand Response Program	29,970	(8,615)	50	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(15,565)	2,000	16,405
Community Energy Planning			367	367	367						1,101		1,101
Solar PV Installations - MicroFIT Program and Future Years	4,300	500									500	500	5,300
Solar PV Installations - FIT Program, Toronto Hydro JV, & Future Years	17,000	(5,000)	2,000	1,000		2,000	2,000	2,000	1,000	1,000	6,000	2,000	25,000
GeoExchange (McGregor, 2015, and Future Years)	4,145	1,250									1,250	500	5,895
Residential Energy Retrofit Program (HELP)	8,000	(400)	400										8,000
Total Previously Approved		(13,625)	4,152	1,367	367	2,000	2,000	2,000	1,000	1,000	261	9,000	
New													
District Energy Systems	26,000	(2,600)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(10,600)	2,000	17,400
Solar PV Installations - Mid-Size PV Program		1,000									1,000		1,000
Biomass			100	1,650							1,750		1,750
Community Based Green Energy Projects - 2015 and Future Years	9,000											1,000	10,000
Combined Heat & Power (4 Locations and Future Years)	21,000	1,350	578								1,928	3,000	25,928
Total New		(250)	(322)	650	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(5,922)	6,000	
Total Changes		**(13,875)**	**3,830**	**2,017**	**(633)**	**1,000**	**1,000**	**1,000**			**(5,661)**	**15,000**	

Significant Capital Project Changes in the Sustainable Energy Plan:

Significant reductions in capital expenditures have been made to the following projects:

- Funding for the Demand Response Program (*Energy Retrofit Program & Conservation & Demand Management*, and *Conservation and Demand Response Program*) which provides approaches reduce the demand of electricity in order to balance province wide demand and supply capability during periods of electricity constraint, has been adjusted to reflect the following:
  - The 2014 Approved Capital Budget for the Demand Response Program ($7.459 million) was not spent due to delays in finalizing agreements with Toronto Community Housing Corporation and Toronto Water opting to fund their participation in the program internally.
  - The Province of Ontario has halted new enrolments into the existing Demand Response Program for 2014 and will reinstate this program in a different form in 2015.
- The recommended District Energy Systems Project involves the creation of a thermal energy distribution system for multiple buildings at a neighbourhood scale, which will produce significant financial and energy savings. Cash flow funding has decreased as further study and agreements with the associated divisions are required prior to the initiation of the project.

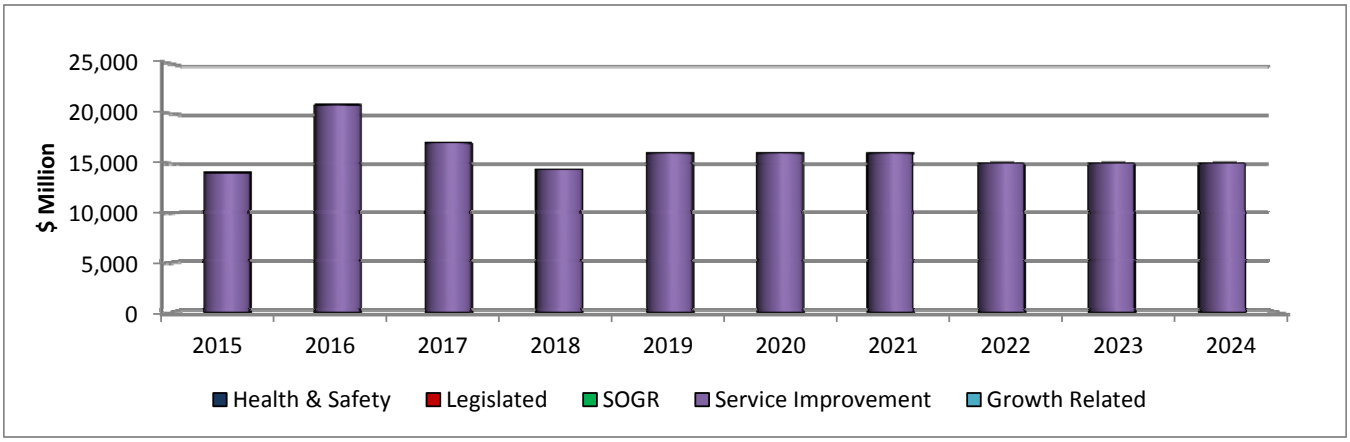
The following previously approved Sustainable Energy Plan capital projects have been allocated increased funding to address the City's key priorities as outlined below:

- The MicroFIT Program will permit the City of Toronto to meet Council's target for renewable energy technologies by 2020. City staff have identified 12 potential locations within Corporate, Fire, EMS, and Parks, Forestry & Recreation facilities. Further studies and agreements with the associated divisions are required prior to the initiation of the project. The project with an increase in funding of $0.500 million is expected to be completed by the end of 2015 and will contribute $0.051 million annually over an approximate payback schedule of 16 years.
- Cash flows for the Toronto Hydro joint venture project were deferred from 2015 to future years to reflect actual expected spending, but will require an increase of $6.000 million for the development of future year solar photovoltaic installations with the assistance of the Toronto Hydro Corporation.

- The Plan includes modifications to the GeoExchange initiative which is an increased investment of $1.250 million in 2015 for the installation of geothermal heating and cooling systems at new City facilities, or facilities where HVAC work has been scheduled. This project supports the strategic initiative #6 (supporting Environmental Sustainability) and will have an annual payback of $0.086 million.
- The Mid-Size PV Program is for projects that are too large for the OPA microFIT program and too small for the Toronto Hydro PV Program. This program will permit the City of Toronto to meet Council's target for renewable energy technologies by 2020. Funding of $1.000 million will be required with a payback of $0.090 million annually (approximately 18 year schedule).
- The Biomass project includes a $1.750 million investment for the installation of a biomass boiler that will operate on wood from Urban Forestry, primarily through the tree maintenance program. This substitute will result in an annual estimate savings of $0.204 million (beginning in 2017).

2015 – 2024 Recommended Capital Plan

Chart 2
2015 – 2024 Capital Plan by Project Category (In $000s)



As illustrated in the chart above, the Sustainable Energy Plan is comprised entirely of Service Improvement related projects. Table 3 (on the next page) highlights the capital projects over the 10-Year Recommended Capital Plan.

Table 3
Summary of Capital Projects by Category (In $000s)

	Total App'd Cash Flows to Date*	2015 Budget	2016 Plan	2017 Plan	2018 Plan	2019 Plan	2020 Plan	2021 Plan	2022 Plan	2023 Plan	2024 Plan	2015 - 2024 Total	Rec'd Total Project Cost
Total Expenditures by Category													
Service Improvements													
Energy Retrofit Projects:													
Animal Services Efficiency Measures	45	147										**147**	192
Cummer Lodge	65	205										**205**	270
Kipling Acres			85									**85**	85
Water Retrofits in Civic Centres	210	630										**630**	840
Americas Pavillion Toronto Zoo	60	205										**205**	265
Exhibiton Place LED Building Lighting		250	250									**500**	500
Sub-Total - Energy Retrofit Projects	380	1,437	335									**1,772**	2,152
Energy Conservation & Demand Management		500	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	**36,500**	36,500
Community Energy Planning			367	367	367							**1,101**	1,101
District Energy Systems - Future Years			1,400	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	**17,400**	17,400
Demand Response, NG Generators at Corporate Facilities		355	1,050									**1,405**	1,405
Demand Response / CDM - Future Years			1,000	1,000	1,000	2,000	2,000	2,000	2,000	2,000	2,000	**15,000**	15,000
Solar PV Installations - MicroFIT Program and Future Years	730	800	500	500	500	500	500	500	500	500	500	**5,300**	6,030
Solar PV Installations - Mid-Size PV Program - 2015		1,000										**1,000**	1,000
Solar PV - FIT Program	3,200	1,200	2,000	2,000	2,000	2,000	2,000	2,000	1,000	1,000	1,000	**16,200**	19,400
Solar PV Installations - FIT - Toronto Hydro JV			3,000	2,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	**12,000**	12,000
GeoExchange (McGregor)		265										**265**	265
GeoExchange	235	1,130	500	500	500	500	500	500	500	500	500	**5,630**	5,865
Biomass			100	1,650								**1,750**	1,750
Community Based Green Energy Projects		1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	**10,000**	10,000
Residential Energy Retrofit Program (HELP)	2,000	5,000	3,000									**8,000**	10,000
Combined Heat & Power		1,350	2,578	2,000	2,000	3,000	3,000	3,000	3,000	3,000	3,000	**25,928**	25,928
Total Expenditures by Category	**6,545**	**14,037**	**20,830**	**17,017**	**14,367**	**16,000**	**16,000**	**16,000**	**15,000**	**15,000**	**15,000**	**159,251**	**165,796**

2015 – 2024 Recommended Capital Projects

The Sustainable Energy 10-Year Recommended Capital Plan supports the City of Toronto's Strategic theme to Support Environmental Sustainability through numerous service improvement initiatives.

Service Improvements

- The *Energy Retrofit Program* involves replacing and/or upgrading major energy consuming equipment within City facilities where substantial energy savings can be achieved. Energy Retrofit projects represent an attractive asset renewal and energy saving opportunity which includes a rate of return on capital, as well as improving energy security to achieve environmental benefits.
  - The 10-Year Recommended Capital Plan includes funding of $1.687 million for these service improvement initiatives.
  - All Energy related projects are managed through Facilities Management Services, with the continuation of the following projects:
    - The Energy Retrofit Project for Animal Services Efficiency Measures includes second year funding of $0.147 million in 2015 to upgrade and replace equipment and generate energy savings of $0.021 million annually, resulting in full cost recovery over a 14 year period.
    - The Energy Retrofit Project at Cummer Lodge includes funding of $0.205 million in 2015 and projects an annual operating impact of $0.097 million annually achieved through reduced energy costs with an approximated cost recovery over a 5 year period. In addition, it is estimated that a reduction of 305 tonnes of Green House Gas (GHG) CO_2 emissions per year will be realized.

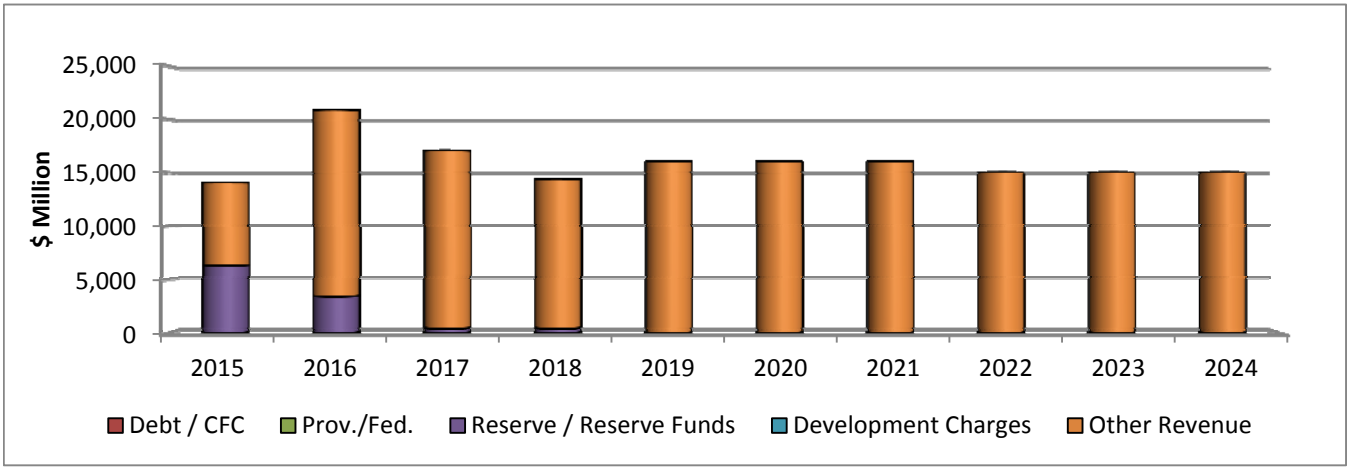
  - The Energy Retrofit Project for facility efficiency upgrades at the Toronto Zoo (Americas Pavilion) includes funding of $0.205 million in 2015 and projects an annual operating impact of $0.023 million annually achieved through reduced energy costs, with an expected cost recovery over an 18 year period.
  - The Energy Retrofit Project for Water Retrofits in Civic Centres ($0.630 million in 2015) projects an annual operating impact of $0.130 million annually achieved through reduced energy costs and water consumption, with an expected cost recovery over a 10 year period.

- Community Based Energy Projects are aimed at community groups located within Toronto to help build green energy installations in their local area. The model, based on the principle that the benefits of energy should be localized and provides strong links between communities, is forged to increase awareness and encourage community benefit through the way agreements are structured. The Sustainable Energy Plan offers funding to community based organizations to replace and upgrade equipment within Community facilities where significant energy savings can be achieved. This will create an incentive for shared investment in and ownership of renewable energy technologies. The 10-Year Recommended Capital Plan includes funding of $10.000 million for this service improvement initiative.
- The Renewable Energy Program encompasses projects that harness energy that comes from natural, sustainable sources, such as the sun, earth and biomass. Generating energy from these renewable sources is a cleaner alternative to generating energy from more traditional sources (e.g. significantly less pollution than coal-fired power generation), which improves the health of residents and the general public and produces greater economic activity. The 10-Year Recommended Capital Plan includes funding of $42.145 million for this service improvement program.
- The District Energy Systems Program is a thermal energy distribution system for multiple buildings at a neighbourhood scale and integrates City energy assets together to produce significant financial and energy savings. Modern district energy systems provide an opportunity to increase utilization efficiency, meet the demand and minimize energy waste, reduce energy costs, provide increased security of energy supply, and reduce the need for large scale central generation and reliance exclusively on grid transmission infrastructure. The 10-Year Recommended Capital Plan includes funding of $17.400 million for this service improvement initiative.
- The Residential Energy Retrofit program (HELP) is a $10.000 million program that assists property owners in reducing energy use and saving money on energy bills by improving the energy efficiency of their homes and buildings. The 10-Year Recommended Capital Plan includes funding of $8.000 million for this service improvement initiative. The Local Improvement Charges Energy Works Reserve Fund is a revolving fund that supports the newly established Residential Energy Retrofit Program designed to advance funding to consenting property owners interested in undertaking qualifying energy and water improvements and are willing to allow the City to impose a Local Improvement Charge (LIC) on their property to secure repayment.
- The Conservation and Demand Management/Demand Response Program provides electricity to balance province wide demand and supply capability during periods of electricity constraint/high prices as identified by the Independent Electricity System Operator. Curtailment of loads may incorporate Building Automation Systems, interior and/or exterior lighting and control of in HVAC

(heating, ventilation, and air conditioning) systems, and demand response enrollment. Additionally, emergency generators are enabled to operate which is called upon by the Independent Electricity System Operator. This program also incorporates projects from the Corporate Energy Conservation & Demand Management Plan, which has identified opportunities to cut facility energy consumption at 478 buildings from fifteen City Divisions, Agencies, Boards and Commissions. The 10-Year Recommended Capital Plan includes funding of $36.500 million for the service improvement project.

- The Combined Heat & Power Projects involve the use of a heat engine or power station to simultaneously generate electricity and useful heat. Combined Heat and Power (CHP) captures some or all of the by-product for heating very close to the plant. The 10-Year recommended capital plan includes funding of $25.928 million, beginning in 2016, for staff to commence CHP projects for various City locations, funded solely through recoverable debt.

Chart 3
2015 – 2024 Capital Plan by Funding Source (In $000s)



The 10-Year Recommended Capital Plan of $159.251 million will be financed by the following sources:

- Recoverable debt accounts for $148.950 million or 93.5% of the financing for projects in the 10-Year Capital Plan.
  - Projects funded through recoverable debt must meet the eligible criteria approved by City Council outlined in the report entitled, "Repurposing of the Sustainable Energy Funds and New Funding Model for City Energy Projects": Specifically:
    - Projects must generate energy savings or revenue sufficient to offset their respective debt service schedule over the performance life of the asset.
    - Each project that is funded through recoverable debt requires an extensive business case which clearly details the operating impact for City Programs and Agencies affected.
    - All debt must be repaid within 20 years.
- Reserve and Reserve Funds constitute $10.301 million or 12.5% of the required funding, which will be utilized in the first 5 years.
  - The Local Improvement Charges Energy Works Reserve Fund is a revolving fund that supports the newly established Residential Energy Retrofit Program designed to advance funding to

consenting property owners interested in undertaking qualifying energy and water improvements and are willing to allow the City to impose a Local Improvement Charge (LIC) on their property to secure repayment. Funding in the amount of $8.000 million is provided for the Residential Energy Retrofit Program.

- The continuation of the Solar Photovoltaic Program and Community Planning Program will draw $1.200 million and $1.101 million, respectively from the Toronto Energy Conservation Fund.

10-Year Capital Plan: Net Operating Budget Impact

Table 5
Net Operating Impact Summary (In $000s)

	2015 Rec'd Budget		2016 Plan		2017 Plan		2018 Plan		2019 Plan		2015 - 2019		2015 - 2024	
Projects	$000s	Positions	$000s	Positions	$000s	Positions	$000s	Positions	$000s	Positions	$000s	Positions	$000s	Positions
Previously Approved														
Water Retrofits at Civic Centres													(129.0)	
Energy Retrofit (Cummer Lodge)									(82.0)		(82.0)		(97.0)	
GeoExchange (2013)													(32.0)	
Total Recommended (Net)									**(82.0)**				**(258.0)**	

The 10-Year Recommended Capital Plan will decrease future year Operating Budgets by a total of $0.258 million net over the 2015 – 2024 period, as shown in the table above.

- Once a project is completed, realized savings will be used to recover debt servicing costs in the City's Capital and Corporate Financing Account.
- Once the debt has been fully repaid, cost savings will be permanently realized through reductions in the Program's Operating Budget.

Savings after debt servicing costs are fully repaid will be realized from the following projects:

- *Water Retrofit* projects at Civic Centres with an expected payback period of 8 years will generate savings of $0.129 million in 2024.
- *The Energy Retrofit Project* will generate total net energy savings of $0.258 million over the 10-year period 2015 -2024, including net energy savings of $0.082 million in 2019, an additional $0.015 million for a total of $0.97 million annualized savings in 2020 at Cummer Lodge.
- The GeoExchange program will generate savings of $0.032 million in 2024.

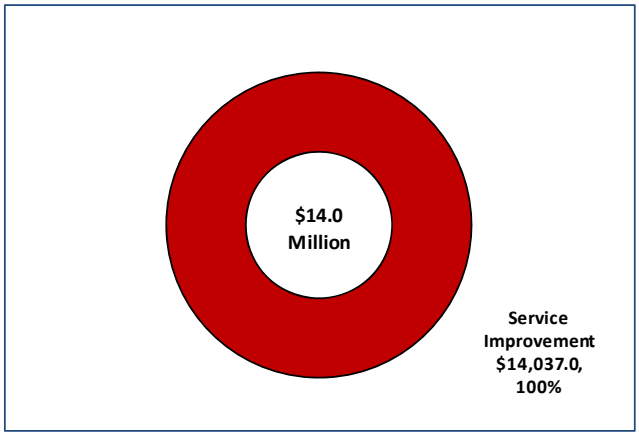
Part II:

2015 Capital Budget

2015 Recommended Capital Budget

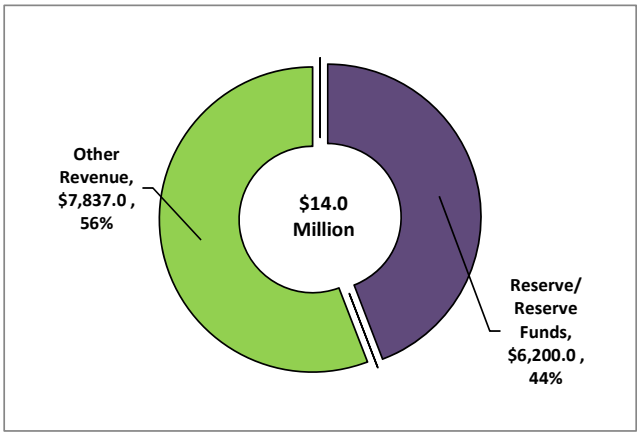
2015 Capital Budget by Project Category and Funding Source

2015 Capital Budget by Project Category (in $000s)



$14.0 million

2015 Capital Budget by Funding Source (in $000s)



$14.0 million

The 2015 Recommended Capital Budget, excluding funding carried forward from 2014 to 2015, requires cash flow funding of $14.037 million.

The Program is entirely comprised of Service Improvement projects dedicated to increasing energy efficiency and reducing greenhouse gas emissions, including:

- The Energy Retrofit and Conservation Energy Demand Projects ($1.937 million);
- The Demand Response Program ($0.355 million);
- Community-Based Green Energy Projects ($1.000 million);
- The Renewable Energy Program ($4.395 million);
- The Combined Heat and Power Project ($1.350 million); and
- The Residential Energy Retrofit Program is allocated $5.000 million in 2015.

The 2015 Recommended Capital Budget is financed primarily by:

- *Recoverable Debt ($7.837 million, 56%)*
  - Recoverable debt finances all projects with the exception of 2 projects financed by Reserve and Reserve Funds listed below.
- *Reserve and Reserve Funds ($6.200 million, 44%)*
  - The Residential Energy Retrofit Program of $5.000 million is funded from a Local Improvements Charge, Energy Works Reserve Fund, a forward revolving fund that is replenished as loans are repaid by homeowners participating in the program.
  - The Solar PV Installations – FIT projects as part of the Renewable Energy Program ($1.200 million) and Community Energy Planning ($0.367 million) are funded by the Toronto Energy Conservation Reserve Fund.

Table 7
2015 Recommended Cash Flow & Future Year Commitments (In $000s)

	2013 & Prior Year Carry Forward Funding	2014 Carry Forward Funding	2015 Rec'd Cash Flow	Total 2015 Cash Flow (Incl 2014 C/Fwd)	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total 2015 Rec'd Cash Flow & FY Commits
Expenditures														
Previously Approved		7,873	3,442	11,315	452	367	367							12,501
Change in Scope			(490)	(490)										(490)
New			6,085	6,085	1,878									7,963
New w/Future Year			5,000	5,000	3,250	-	-	-	-	-	-	-	-	8,250
Total Expenditure		7,873	14,037	21,910	5,580	367	367	-	-	-	-	-	-	28,224
Financing														
Debt														
Other		4,301	7,837	12,138	2,213									14,351
Reserves/Res Funds		3,572	6,200	9,772	3,367	367	367							13,873
Development Charges														
Provincial/Federal														
Total Financing (including carry forward funding)		7,873	14,037	21,910	5,580	367	367	-	-	-	-	-	-	28,224

Approval of the 2015 Recommended Capital Budget of $21.910 million will result in the following:

- $7.873 million in 2014 funding that will be carried over to 2015 for the continuation of Energy Retrofit Program, Conservation & Demand Management Program, Renewable Energy Program, Residential Energy Retrofit Program and Community Energy Planning.
- New project funding of $7.082 million to support the 2015 cash flow requirements for ongoing capital projects such as Energy Retrofits at Booth Yard, Civic Centres, Arenas, Cummer Lodge, Toronto Zoo American Pavilion and Animal Services facilities; generators at Corporate Facilities as part of Conservation and Demand Management; and Solar PV Installations and GeoExchange as part of the Renewable Energy Program.
- Funding of $2.000 million to support 2 new projects for 2015, the Mid-size Solar PV Program and Community-Based Green Energy Projects.
- Recommended multi-year funding of $6.955 million in 2015, which will require future year commitments of $6.314 million ($5.580 million in 2016, $0.367 million in 2017 and $0.367 million in 2018) for the following:
  - The continuation of the Energy Retrofit LED Building Lighting Project from 2015, which aims to replace lighting systems with new LED lights within various City facilities ($0.250 million in 2016).
  - The continuation of the Demand Response Program and CDM initiatives for City of Toronto facilities, with a commitment of $1.135 million in 2016.
  - The continuation of the installation of a combined heat & power system, with a commitment of $0.578 in 2016.
  - The continuation of the Community Energy Planning Project, with a commitment of $0.367 in each year from 2016 to 2018.
  - The final stage of the pilot project for the Residential Energy Retrofit Program ($3.000 million in 2016).

2015 Recommended Capital Project Highlights

Table 8
2015 Recommended Capital Project Highlights (in $000s)

Project	Total Project Cost	2015	2016	2017	2018	2019	2015 - 2019	2020	2021	2022	2023	2024	2015 - 2024 Total
Energy Retrofit Program & Conservation & Demand Management	N/A	4,404	250				**4,654**						**4,654**
Conservation and Demand Response Program	N/A	1,855	85				**1,940**						**1,940**
Community Energy Planning	N/A	622	367	367	367		**1,723**						**1,723**
Solar PV Installations	N/A	5,600					**5,600**						**5,600**
GeoExchange (McGregor, 2015, and Future Years)	N/A	1,479					**1,479**						**1,479**
Residential Energy Retrofit Program (HELP)	N/A	5,600	3,000				**8,600**						**8,600**
District Energy Systems	N/A						-						-
Biomass	N/A						-						-
Community Based Green Energy Projects - 2015 and Future Years	N/A	1,000					**1,000**						**1,000**
Combined Heat & Power (4 Locations and Future Years)	N/A	1,350	1,878				**3,228**						**3,228**
Total (including carry forward funding)		**21,910**	**5,580**	**367**	**367**	-	**28,224**	-	-	-	-	-	**28,224**

The 2015 Recommended Capital Budget provides funding of $21.910 million, including carry forward funding from 2014 to 2015 to:

Continue:

- Energy Retrofit projects at various locations including Booth Yard ($1.000 million), City of Toronto Civic Centres ($0.735 million), Arena facilities ($1.317 million), Cummer Lodge ($0.205 million), Toronto Zoo American Pavilion ($0.205 million) and Animal Services facilities ($0.192 million).
- Community Energy Planning Project ($0.622 million).
- The Renewable Energy Program, including the commencement of the Solar Photovoltaic microFIT installations ($0.800 million), Solar Photovoltaic FIT installations ($1.200 million), and the GeoExchange project ($1.395 million).
- The Residential Energy Retrofit Program ($5.600 million) to initiate resource and energy conservation measures through upgrades / replacements of energy consuming equipment in single family homes and multi-residential locations.

Begin:

- The Energy Retrofit Program to install LED lighting in various City facilities ($0.250 million).
- Various Demand Response and CDM Projects with an investment of $1.855 million in 2015.
- Begin Community-based Green Energy Project initiatives ($1.000 million) by installing green energy equipment in community facilities including Not-For-Profit and Non-Government Organizations.
- Initiate the Combined Heat & Power projects that will generate electricity simultaneously by combining the use of a heat engine and power station at various City facilities ($1.350 million).

Part III:

Issues for Discussion

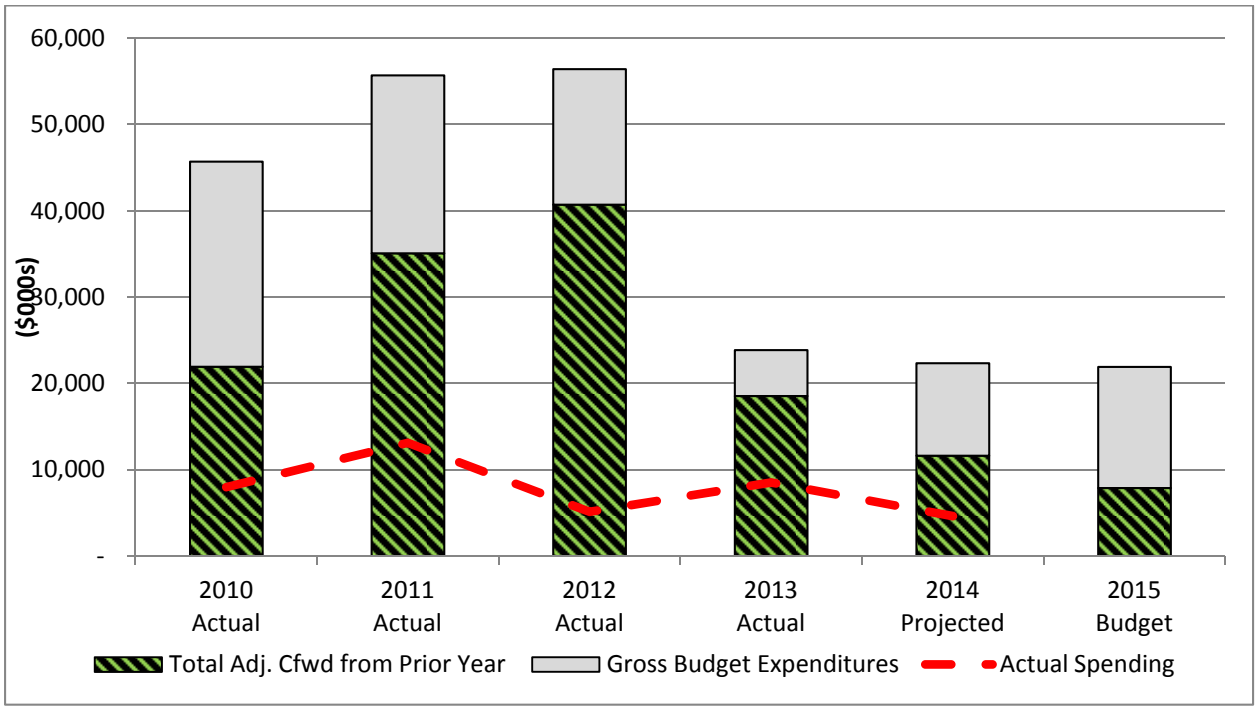
Issues for Discussion

Issues Impacting the 2015 Capital Budget

Capacity to Spend

Historical spending trends for the Sustainable Energy Plan indicate an average spending rate of 20.7% over the past 5 years. With the dissolution of the Sustainable Energy Reserve Funds, spending was suspended up to the close of 2012. Despite the introduction of the recoverable debt funding mechanism at the end of 2012, the capacity to spend in 2013 was 35.6%.

The following table illustrates the rate of spending from 2010 to 2014 for the Sustainable Energy Plan:



The main reasons for the historical low spend rate are:

- Greater need for collaboration across programs, Divisions, agencies, and corporations,
- Administration requirements needed to be refined and streamlined to make program requirements more transparent and aligned with program goals

During the 2015 Budget process, the Environment & Energy Division worked with Financial Planning Division to implement the following strategies in order to increase the participation and spending rates of the programs:

Alignment of Cash Flow Funding

A review of historical spending rates resulted in an adjustment of cash flow funding estimates to more accurately reflect the number of contracts in place and the realistic completion of projects, particularly for the Conservation and Demand Response Program and District Energy Systems and Solar PV Installations. The total reduction in the 2015-2024 Capital Plan from the 2014-2023 Capital Plan for the comparative 9 years (2015 – 2023) is $5.661 million.

Reduce the Cost of Capital to Participating Divisions / Agencies

Since the City shifted to a Recoverable Debt Model for SEP Programs, a rate of interest charged for repayment was set at the Bank of Canada's bond yield plus 2%, which is factored into the repayment schedule. The premium placed on the cost of borrowing has discouraged participating as some claim they could borrow at a lower rate elsewhere in the market. As a result, the rate charged to participants has been reduced to the City's cost of borrowing for projects beginning in 2015.

Operating Impacts of Capital

In order to provide incentives for participants, any operating impacts of capital such as additional staff required to operate new systems will be factored into the payback schedule. Future annualized savings must exceed the ongoing costs to sustain the projects

Incorporate Projects Identified in the Corporate Energy Conservation & Demand Management Plan into the 2015-2024 Capital Budget and Plan

The Corporate Energy Conservation & Demand Management Plan addresses 478 buildings from fifteen City Divisions, Agencies, Boards and Commissions which together spent over $53 Million on electricity and natural gas in 2012. The Plan identifies opportunities to reduce facility energy consumption by approximately 30 per cent that could generate annual cost savings of over $17 million with an average payback period of less than 8 years, at a total capital cost of $142 million.

This new plan was adopted by Council in July 2014, including a request for the City's Agencies, Corporations and Divisions to actively participate in further identification and implementation of energy conservation and demand management projects.

As a result, the 2015-2024 Recommended Capital Budget and Plan for Sustainable Energy Plan includes $36.500 million for Corporate Energy Conservation & Demand Management Plan projects to increase participation to the program.

Implement a Portfolio-Based Approach

In order to provide flexibility to allocate funding between similar projects and enable SEP to take advantage of opportunities, the Environment and Energy Division will review and determine the feasibility of amending the current project-based approach to a portfolio-based approach for current and future year energy initiatives. When projects are not identified until after the budget is approved, individual projects within the program/portfolio can be approved as per the terms in the current financial control by-law, i.e. projects up to $250,000 can be approved under the Division Head and CFO's authority, with proper support and business case outlining the expected returns. Projects above $250,000 will continue to seek approval through a report to Budget Committee / Council.

The strategies implemented are intended to increase the spending rate and enable more projects to begin and complete. Both the Environment & Energy Division and Financial Planning will continue to monitor program uptake, progress of projects and spending. Further adjustments to cash flow funding in future budget submissions may be required to more accurately reflect spending and expected completion of projects.

Issues Referred to the 2015 Capital Budget Process

Resilient City

In June, 2014, City Council adopted the report entitled "*Resilient City – Preparing for a Changing Climate.*" The report outlined an approach that will see climate change resilience integrated into decision-making and co-ordination of City operations and services. The report proposed a Climate Change Risk Management Policy that defines roles and responsibilities for identifying and mitigating climate risks and proposes mechanisms for co-ordinating, resourcing and prioritizing actions. In addition, this report responded to the climate resilience directives made by City Council when it discussed how the City responded to the December 2013 ice storm.

The report contains several recommendations with the intention to increase the City's ability to respond to and prepare for climate change and extreme weather events, including:

- Direct the Deputy City Manager and Chief Financial Officer and the Chief Corporate Officer to identify proposals for consideration during the 2015 Budget process and beyond for financing required increases in the electrical standby capacity in critical City-owned buildings operated by Facilities Management.

The above recommendation is not expected to require new funding as the Energy and Environment Division is already implementing initiatives to increase electrical standby capacity. The 2015-2024 Recommended Capital Plan provides funding of $24 million for the Demand Response Program, which provides electricity to balance province wide demand and supply capability during periods of electricity constraint/high prices as identified by the Independent Electricity System Operator. Curtailment of loads may incorporate Building Automation Systems, interior and/or exterior lighting and control of in HVAC (heating, ventilation, and air conditioning) systems, and demand response enrollment. Additionally, emergency generators are enabled to operate which is called upon by the Independent Electricity System Operator.

Any new initiatives will be incorporated into current funding mechanisms, including financial incentives available from the Ontario Power Authority, the City's recoverable debt financing model, and existing state of good repair capital budgets.

Corporate Energy Conservation & Demand Management Plan (2014-2019) - Green Energy Act - Regulation 397/11

The City has been successfully investing in energy conservation and demand management for more than a decade with a succession of projects across a number of different building types. The Energy & Waste Management Office (EWMO) within the Environment and Energy Division has the mandate to implement energy saving projects at City facilities. The most recent projects completed by EWMO have been implemented through the Energy Retrofit Program which was in place from 2007 to 2013. This program has resulted in energy savings of approximately $5 Million annually.

To encourage ongoing Public Sector energy efficiency improvements, the Ontario Ministry of Energy enacted Regulation 397/11 in January 2012 as part of the Green Energy Act. This regulation requires all public sector entities to submit to the Province their annual energy consumption and greenhouse gas emissions by July 1, 2013. As a second deliverable, under this regulation, all public sector entities are

required to prepare and publish their five year Energy Conservation and Demand Management Plans by July 1, 2014.

The City's five year Energy Conservation and Demand Plan (2014-2019) addresses this requirement and provides a framework for the City to plan its next phase of energy efficiency improvements. The ECDM Plan report can be electronically accessed at: http://insideto.toronto.ca/fred/ewm/ecdm.pdf

Scope of Plan

This new plan addresses 528 buildings from fifteen City Agencies, Boards, Divisions and Commissions which together spent over $53 Million on electricity and natural gas in 2012. The buildings addressed in this plan together cover over 19 million square feet. The analysis completed to date projects opportunities to reduce facility energy consumption by approximately 30 per cent resulting in annual cost savings of over $17 Million with an average payback period of less than 8 years. The resulting energy conservation will enable City of Toronto to reduce its greenhouse gas emissions by nearly 32,000 tons. In cases where replacement of old equipment is required, the return on investment is higher based on the combination of energy conservation and State of Good Repair (SOGR) projects.

Of the 528 facilities covered by this report, 37 are larger than 100,000 square feet in area and account for about 45 per cent of the total area covered by this project. As well, 47 facilities with the highest energy savings potential account for approximately 57 per cent of the total projected savings. The table below illustrates further details based on individual Agencies, Divisions or building type covered by the report:

Facility Type	No. of Facilities	Total Indoor Area (Square feet)	Cost Savings	GHG Emissions (Tonnes)
Administrative offices and related facilities	51	4,846,672	$ 4,549,000	6,868
Ambulance stations and associated offices and facilities	24	216,311	$ 347,000	421
Children's Services	9	64,186	$ 48,000	146
Community centres	70	2,033,543	$ 2,348,000	4,365
Cultural facilities	20	596,553	$ 448,000	926
Fire stations and associated offices and facilities	88	836,816	$ 581,000	1,250
Indoor recreational facilities	46	1,477,712	$ 2,585,000	5,022
Indoor sports arenas	27	862,996	$ 1,210,000	1,672
Indoor swimming pools	7	214,077	$ 267,000	854
Long-Term Care Homes and Services	10	1,622,285	$ 335,000	1,877
Performing arts facilities	3	430,370	$ 155,000	323
Police services facilities	39	2,589,421	$ 1,200,000	1,467
Public libraries	73	1,548,904	$ 1,879,000	2,887
Service Yards & Storage Facilities	0	1,740,016	$ 1,059,000	2,904
Shelter, Support and Housing Administration	11	280,617	$ 228,000	911
TOTAL	478	19,360,480	$ 17,239,000	31,893

Methodology

Target setting methodology used for the Energy Conservation and Demand Management report was based on building energy consumption from top-quartile energy performers under individual building types. The corresponding result was used to set energy performance targets for the remaining 75 percent of the buildings within the group. The target-setting methodology breaks down potential

savings into year-round and seasonal (winter or summer) electricity and gas use, which help narrow down measures most likely to be appropriate for each scenario.

An initial set of possible energy conservation measures has been included in individual reports, customized to each building type. These measures have been organized by type (mechanical, lighting, electrical, envelope and process) and categorized as behavioural, operational or retrofit/capital. Other factors such as ease of implementation, savings potential and suggested timeline have been also accounted for.

Implementation and Budgeting

Past project costs combined with implementation information were used to establish preliminary timelines and financial analysis. The following savings measures were reviewed:

- Lighting retrofits and associated controls;
- Mechanical system modifications and efficiency improvements;
- Appliance replacement and controls; and
- Localized efficiency measures for the building envelope.

Estimated project costs also include energy audits, staff training, measurement and verification of actual savings as well as additional maintenance costs associated with incorporation of new technology and operating practices. Projected borrowing costs and inflation have also been accounted for in cash flow analyses presented throughout the report. Accordingly, the overall Energy Conservation and Demand Management project cost is estimated at just over $142 million.

The Plan will initially focus on facilities with highest conservation potential. The following steps will enable identification and implementation of specific projects at these facilities in the next five years:

- Detailed energy audits to determine more specific opportunities along with the required analysis and engineering to assess technical and financial benefits;
- Divisional review of the proposed opportunities including low cost operational improvements to ensure maximized energy savings as well as commitment to undertake energy retrofit and conservation projects;
- Inclusion of projects in the Capital Budget process;
- Implementation and project management of the agreed upon projects;
- Staff training and implementation of improved operational and maintenance practices; and
- Measurement, verification and reporting on the energy savings achieved from completed projects and operational improvements.

At its meeting of July 8, 9, 10 and 11, 2014, City Council considered the report "*Corporate Energy Conservation & Demand Management Plan (2014-2019) - Green Energy Act - Regulation 397/11*" and adopted as amended the following:

1. City Council agree that the Energy Conservation and Demand Management (ECDM) Plan outlined in Appendix A of the report (June 9, 2014) from the Director, Environment and Energy, will be used as

the foundation for developing energy conservation and demand management projects in City facilities for the next five years.

2. City Council direct the Director, Environment and Energy to continue leading the projects associated with the City's Energy Conservation and Demand Management Plan and assist the City's Agencies, Corporations and Divisions in the achievement of proposed targets.
3. City Council request the City's Agencies, Corporations and Divisions to actively participate in further identification and implementation of energy conservation and demand management projects.

The report can be viewed at:
http://www.toronto.ca/legdocs/mmis/2014/pe/bgrd/backgroundfile-70326.pdf

Financial Impact

In the 2015-2024 Capital Budget and Plan, cash flow funding of $36.500 million is recommended as a placeholder for Corporate Energy Conservation & Demand Management Plan projects. These projects are financed by recoverable debt, to be repaid by energy savings generated from the projects. The program will have the flexibility to proceed with projects once they have been identified and approved by the Chief Corporate Officer and Financial Planning Division.

The City of Toronto has a strong history in raising energy efficiency and lowering the carbon footprint of its own buildings. Over the past 10 years, the Energy & Waste Management Office has cumulatively avoided costs of approximately $43 million attributed to the implementation of energy retrofit projects.

Appendices

Appendix 1
2014 Performance

2014 Key Accomplishments

In 2014, the Sustainable Energy Plan accomplished the following:

- ✓ Successfully implemented the Home Energy Loan Program - using local improvement charges to fund deep energy retrofits in residential buildings.
- ✓ Prepared an Energy Conservation & Demand Management Plan identifying projects in over 500 City buildings that have the potential to generate utility savings in excess of $17 million - unanimously approved by Council in July.
- ✓ Completed Phase I of the City/Toronto Hydro Solar PV program (10 installations), and Phase I of the City microFIT program (6 installations)
- ✓ Received 10 Feed-in Tariff contracts from the Ontario Power Authority for Phase 2 of the City/Toronto Hydro Solar PV program
- ✓ Substantially completed energy retrofits at Parks, Forestry and Recreation facilities, utilizing $1 M in Sustainable Energy Reserves funds, were substantially completed in 2014
- ✓ Received Council approval to proceed with the Exhibition Place LED Lighting project and enroled the Kipling Acres Long-Term Care Home in the Demand Response Program

2014 Financial Performance

Table 9
2014 Budget Variance Analysis (In $000's)

2014 Approved	As of Sept. 30, 2014		Projected Actuals at Year End		Unspent Balance	
$	$	% Spent	$	% Spent	$ Unspent	% Unspent
22,340	946	4.2%	4,617	**20.7%**	17,723	**79.3%**

*Based on the Third Quarter Variance Report

2014 Experience

The Sustainable Energy Plan (SEP) incurred expenditures of $0.946 million or 4.2% of the 2014 Approved Capital Budget of $22.340 million for the period ended September 30, 2014; and projects spending of $4.617 million or 20.7% by year-end.

The projected year-end under-spending of $17.724 million is mainly attributable to the following major capital projects:

- The Demand Response Program incurred no capital expenditures during the nine month period ended September 30, 2014. This is primarily due to Toronto Water directly funding their enrolment in the Demand Response Program, late approval by Council in Q3 for Long-Term Care Homes and Services' enrolment, and to the Province of Ontario halting new enrolments into the existing program in 2014, to be reinstated in a different form in 2015. This has resulted in expected

spending of $0.1 million or 1.3% of the 2014 approved cash flow of $7.459 million at year-end for the Kipling Acres Long-Term Care facility.

- The Solar Photovoltaic Program's capital expenditures totalled $0.308 million or 7.1% of the 2014 approved cash flow of $4.348 million. The installation of the solar PV for the initial group of building locations in partnership with Toronto Hydro has been completed. These locations will be generating revenues annually over the next 20 years. However, projects for the installation of solar panels have been delayed as a result of longer wait times for application reviews and approvals by the Ontario Power Authority (OPA). It is estimated that $1.248 million or 28.7% of the 2014 approved cash flow will be disbursed at year-end.

- The Renewable Energy Program's capital expenditures totalled $0.078 million or 3.4% of the 2014 approved cash flow of $2.326 million. The project is currently experiencing a delay due to coordination with various stakeholders and partners and the higher than budgeted RFP for the GeoExchange project resulting in the reissuance of the tender. It is estimated that $0.800 million or 34.4% of the 2014 approved cash flow will be disbursed at year-end for the installation of the microFIT solar photovoltaic for 14 sites and the study for the potential geo-exchange locations. In addition the installation of solar photovoltaic for the cost of $1.250 million at the Pan Am Aquatic Centre will not proceed under the Sustainment Energy Plan as the project will be completed by the Pan Am Group.

- The Residential Energy Retrofit Program (HELP) incurred capital expenditures of $0.119 million or 5.9% of its 2014 approved cash flow of $2.0 million. It is estimated that 70% of the 2014 approved cash flow funding or $1.400 million will be disbursed by year-end for residential and multi-residential energy retrofit projects within the City of Toronto. The project initially experienced lower than expected applications from home owners in some areas but the eligible neighbourhoods have been expanded to include over 60,000 new dwellings in order to boost program uptake. A spike in lending is anticipated by year-end as a large number of homeowners are finalizing their applications.

- The Energy Retrofit Program incurred capital expenditures of $0.326 million or 5.4% of its 2014 approved cash flow of $6.057 million during the nine month period ended September 30, 2014. The Program is currently experiencing a delay as a result of finalizing project scopes and obtaining agreements with clients in various City Divisions. It is estimated that $0.918 million or 15.2% of the 2014 approved cash flow will be disbursed for the energy (water and lighting) retrofit work at City Hall, Arenas, Civic Centres and Exhibition Place.

Impact of the 2014 Capital Variance on the 2015 Recommended Budget

- Funding of $7.873 million is being carried forward and included in the 2015 Recommended Capital Budget for the continuation of projects in the Energy Retrofit, Conservation & Demand Management, Renewable Energy, Residential Energy Retrofit and Community Energy Planning programs.

Appendix 2

Table 10
2015 Rec'd Capital Budget; 2016 to 2024 Rec'd Capital Plan ($000s)

Project	Total Project Cost	2015	2016	2017	2018	2019	2015 - 2019	2020	2021	2022	2023	2024	2015 - 2024 Total
Energy Retrofit & Conservation Demand Management		4,404	4,250	4,000	4,000	4,000	**20,654**	4,000	4,000	4,000	4,000	4,000	**40,654**
Community Based (Green) Projects		1,622	1,367	1,367	1,367	1,000	**6,723**	1,000	1,000	1,000	1,000	1,000	**11,723**
Solar PV Installations		5,600	5,500	4,500	3,500	3,500	**22,600**	3,500	3,500	2,500	2,500	2,500	**37,100**
GeoExchange Projects		1,479	500	500	500	500	**3,479**	500	500	500	500	500	**5,979**
Biomass Project			100	1,650			**1,750**						**1,750**
District Energy Systems			1,400	2,000	2,000	2,000	**7,400**	2,000	2,000	2,000	2,000	2,000	**17,400**
Demand Response Program		1,855	2,135	1,000	1,000	2,000	**7,990**	2,000	2,000	2,000	2,000	2,000	**17,990**
Combined Heat & Power Projects		1,350	2,578	2,000	2,000	3,000	**10,928**	3,000	3,000	3,000	3,000	3,000	**25,928**
Residential Energy Retrofit Program (HELP)		5,600	3,000				**8,600**						**8,600**
Total (including carry forward funding)		**21,910**	**20,830**	**17,017**	**14,367**	**16,000**	**90,124**	**16,000**	**16,000**	**15,000**	**15,000**	**15,000**	**167,124**

Note: Table 10 includes expected carry-forwards from 2014.

Appendix 3

2015 Rec'd Capital Budget; 2016 to 2024 Rec'd Capital Plan

Report Phase 2 - Program 48 Sustainable Energy Plan Program Phase 2 Sub-Project Category 01,02,03,04,05,06,07 Part B Sub-Project Status S2,S5,S6 Part C Sub-Project Status S2,S3,S4

CITY OF TORONTO

Gross Expenditures ($000's)

Appendix 3

Sustainable Energy Plan

Sub-Project Priority	Project No. Sub-project No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By									
						2015	2016	2017	2018	2019	Total 2015-2019	Total 2020-2024	Total 2015-2024	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt - Recoverable Debt	Total Financing
ERP906993	Energy Retrofit Projects																						
0	17	Energy Retrofit Projects - Booth Yard	30	S2	04	1,000	0	0	0	0	1,000	0	1,000	0	0	0	0	0	0	0	0	1,000	1,000
0	19	ERP - 1652 Keele & Ellesmere Yard	CW	S2	04	610	0	0	0	0	610	0	610	0	0	0	0	0	0	0	0	610	610
0	20	ERP - Water Retrofits in Civic Centres	CW	S2	04	735	0	0	0	0	735	0	735	0	0	0	0	0	0	0	0	735	735
0	21	ERP - Arena Facilities - Lighting Retrofits	CW	S2	04	1,317	0	0	0	0	1,317	0	1,317	0	0	0	0	0	0	0	0	1,317	1,317
0	23	ERP - Cummer Lodge	24	S2	04	205	0	0	0	0	205	0	205	0	0	0	0	0	0	0	0	205	205
0	24	ERP - Animal Services Efficiency Measures	CW	S2	04	192	0	0	0	0	192	0	192	0	0	0	0	0	0	0	0	192	192
0	25	ERP - Efficiencies-Americas Pavillion Toronto Zoo	42	S2	04	205	0	0	0	0	205	0	205	0	0	0	0	0	0	0	0	205	205
0	26	ERP - 1652 Keele & Ellesmere Yard - Cancelled	CW	S3	04	-610	0	0	0	0	-610	0	-610	0	0	0	0	0	0	0	0	-610	-610
0	27	ERP - LED Building Lighting	CW	S4	04	250	250	0	0	0	500	0	500	0	0	0	0	0	0	0	0	500	500
		Sub-total				3,904	250	0	0	0	4,154	0	4,154	0	0	0	0	0	0	0	0	4,154	4,154
ERP907354	Sustainable Energy Plan - Various																						
0	1	Community Energy Planning	CW	S2	04	622	367	367	367	0	1,723	0	1,723	0	0	0	0	1,723	0	0	0	0	1,723
0	4	Future Year Community Based Green Energy Projects	CW	S6	04	0	1,000	1,000	1,000	1,000	4,000	5,000	9,000	0	0	0	0	0	0	0	0	9,000	9,000
0	5	Community Based Green Energy Projects - 2015	CW	S4	04	1,000	0	0	0	0	1,000	0	1,000	0	0	0	0	0	0	0	0	1,000	1,000
		Sub-total				1,622	1,367	1,367	1,367	1,000	6,723	5,000	11,723	0	0	0	0	1,723	0	0	0	10,000	11,723
ERP907661	Renewable Energy Program																						
1	5	Solar PV Installations - MicroFIT Program	CW	S2	04	550	0	0	0	0	550	0	550	0	0	0	0	0	0	0	0	550	550
0	9	Solar PV Installations - FIT Program	CW	S6	04	0	2,000	2,000	2,000	2,000	8,000	7,000	15,000	0	0	0	0	0	0	0	0	15,000	15,000
0	10	GeoExchange - 2013	CW	S2	04	229	0	0	0	0	229	0	229	0	0	0	0	0	0	0	0	229	229
0	11	Solar PV - MicroFIT - Future Years	CW	S6	04	0	500	500	500	500	2,000	2,500	4,500	0	0	0	0	0	0	0	0	4,500	4,500
0	12	GeoExchange - Future Years	CW	S6	04	0	500	500	500	500	2,000	2,500	4,500	0	0	0	0	0	0	0	0	4,500	4,500
0	13	Solar PV - MircoFIT (Reserves)	CW	S2	04	150	0	0	0	0	150	0	150	0	0	0	0	150	0	0	0	0	150
0	14	Solar PV - FIT Program (Revised) (Reserves)	CW	S2	04	3,400	0	0	0	0	3,400	0	3,400	0	0	0	0	3,400	0	0	0	0	3,400
0	15	Solar PV Installations - MicroFIT Program - 2015	CW	S4	04	500	0	0	0	0	500	0	500	0	0	0	0	0	0	0	0	500	500

CITY OF TORONTO

Gross Expenditures ($000's)

Appendix 3

Sustainable Energy Plan

Sub-Priority	Project No. SubProj No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By									
						2015	2016	2017	2018	2019	Total 2015-2019	Total 2020-2024	Total 2015-2024	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
ERP907661	Renewable Energy Program																						
0	16	Solar PV Installations - Mid-Size PV Program-2015	CW	S4	04	1,000	0	0	0	0	1,000	0	1,000	0	0	0	0	0	0	0	0	0	1,000	1,000
0	17	Solar PV Installations - FIT - Toronto Hydro JV	CW	S6	04	0	3,000	2,000	1,000	1,000	7,000	5,000	12,000	0	0	0	0	0	0	0	0	0	12,000	12,000
0	18	GeoExchange - 2015	CW	S4	04	1,130	0	0	0	0	1,130	0	1,130	0	0	0	0	0	0	0	0	0	1,130	1,130
0	19	Biomass - 2015-16	CW	S6	04	0	100	1,650	0	0	1,750	0	1,750	0	0	0	0	0	0	0	0	0	1,750	1,750
0	20	GeoExchange (McGregor CC) - 2014 - Additional	CW	S3	04	120	0	0	0	0	120	0	120	0	0	0	0	0	0	0	0	0	120	120
		Sub-total				7,079	6,100	6,650	4,000	4,000	27,829	17,000	44,829	0	0	0	0	3,550	0	0	0	0	41,279	44,829
ERP907832	District Energy Systems																						
0	2	District Energy Systems - Future Projects	CW	S6	04	0	1,400	2,000	2,000	2,000	7,400	10,000	17,400	0	0	0	0	0	0	0	0	0	17,400	17,400
		Sub-total				0	1,400	2,000	2,000	2,000	7,400	10,000	17,400	0	0	0	0	0	0	0	0	0	17,400	17,400
ERP907833	Demand Response Program																						
0	1	Demand Response - 2013	CW	S2	04	1,000	0	0	0	0	1,000	0	1,000	0	0	0	0	0	0	0	0	0	1,000	1,000
0	2	Demand Response / CDM - Future Years	CW	S6	04	0	1,000	1,000	1,000	2,000	5,000	10,000	15,000	0	0	0	0	0	0	0	0	0	15,000	15,000
0	4	Demand Response-NG Generators at Corp Facililities	CW	S4	04	355	1,050	0	0	0	1,405	0	1,405	0	0	0	0	0	0	0	0	0	1,405	1,405
0	5	DR - LTC Homes-Kipling Acres	02	S2	04	500	85	0	0	0	585	0	585	0	0	0	0	0	0	0	0	0	585	585
		Sub-total				1,855	2,135	1,000	1,000	2,000	7,990	10,000	17,990	0	0	0	0	0	0	0	0	0	17,990	17,990
ERP908006	Combined Heat & Power																						
0	1	Combined Heat & Power CHP-Future Years	CW	S6	04	0	2,000	2,000	2,000	3,000	9,000	15,000	24,000	0	0	0	0	0	0	0	0	0	24,000	24,000
0	2	Combined Heat & Power-Resiliency at 4 Locations	CW	S4	04	1,350	578	0	0	0	1,928	0	1,928	0	0	0	0	0	0	0	0	0	1,928	1,928
		Sub-total				1,350	2,578	2,000	2,000	3,000	10,928	15,000	25,928	0	0	0	0	0	0	0	0	0	25,928	25,928
ERP908007	Residential Energy Retrofit Program																						
0	1	Residential Energy Retrofit Program - Pilot	CW	S2	04	600	0	0	0	0	600	0	600	0	0	0	600	0	0	0	0	0	0	600
0	2	HELP (RERP) - Pilot	CW	S5	04	5,000	3,000	0	0	0	8,000	0	8,000	0	0	0	8,000	0	0	0	0	0	0	8,000
		Sub-total				5,600	3,000	0	0	0	8,600	0	8,600	0	0	0	8,600	0	0	0	0	0	0	8,600
ERP908130	Energy Conservation & Demand Management																						
0	1	Energy Conservation Demand Management Plan - 2015	CW	S4	04	500	0	0	0	0	500	0	500	0	0	0	0	0	0	0	0	0	500	500

Report Phase 2 - Program 48 Sustainable Energy Plan Program Phase 2 Sub-Project Category 01,02,03,04,05,06,07 Part B Sub-Project Status S2,S5,S6 Part C Sub-Project Status S2,S3,S4

CITY OF TORONTO

Gross Expenditures ($000's)

Appendix 3

Sustainable Energy Plan

Sub-Priority	Project No. SubProj No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments 2015	2016	2017	2018	2019	Total 2015-2019	Total 2020-2024	Total 2015-2024	Current and Future Year Cash Flow Commitments Financed By: Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
ERP908130		Energy Conservation & Demand Management																						
0	2	Energy Conservation & Demand Mngmt Plan-Future Yrs	CW	S6	04	0	4,000	4,000	4,000	4,000	16,000	20,000	36,000	0	0	0	0	0	0	0	0	0	36,000	36,000
		Sub-total				500	4,000	4,000	4,000	4,000	16,500	20,000	36,500	0	0	0	0	0	0	0	0	0	36,500	36,500
Total Program Expenditure						21,910	20,830	17,017	14,367	16,000	90,124	77,000	167,124	0	0	0	8,600	5,273	0	0	0	0	153,251	167,124

Report Phase 2 - Program 48 Sustainable Energy Plan Program Phase 2 Sub-Project Category 01,02,03,04,05,06,07 Part B Sub-Project Status S2,S5,S6 Part C Sub-Project Status S2,S3,S4

CITY OF TORONTO

Gross Expenditures ($000's)

Appendix 3

Sustainable Energy Plan

Sub-Priority	Project No. SubProj No.	Project Name Sub-project name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments and Estimates								Current and Future Year Cash Flow Commitments and Estimates Financed By									
						2015	2016	2017	2018	2019	Total 2015-2019	Total 2020-2024	Total 2015-2024	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
Financed By:																							
		Reserves (Ind. "XQ" Ref.)				5,600	3,000	0	0	0	8,600	0	8,600	0	0	0	8,600	0	0	0	0	0	0	8,600
		Reserve Funds (Ind."XR" Ref.)				4,172	367	367	367	0	5,273	0	5,273	0	0	0	0	5,273	0	0	0	0	0	5,273
		Debt - Recoverable				12,138	17,463	16,650	14,000	16,000	76,251	77,000	153,251	0	0	0	0	0	0	0	0	0	153,251	153,251
Total Program Financing						21,910	20,830	17,017	14,367	16,000	90,124	77,000	167,124	0	0	0	8,600	5,273	0	0	0	0	153,251	167,124

Status Code	Description
S2	S2 Prior Year (With 2015 and\or Future Year Cashflow)
S3	S3 Prior Year - Change of Scope 2015 and\or Future Year Cost\Cashflow)
S4	S4 New - Stand-Alone Project (Current Year Only)
S5	S5 New (On-going or Phased Projects)
S6	S6 New - Future Year (Commencing in 2016 & Beyond)

Category Code	Description
01	Health and Safety C01
02	Legislated C02
03	State of Good Repair C03
04	Service Improvement and Enhancement C04
05	Growth Related C05
06	Reserved Category 1 C06
07	Reserved Category 2 C07

Appendix 4

2015 Recommended Cash Flow and Future Year Commitments

Report Phase 2 - Program 48 Sustainable Energy Plan Program Phase 2 Part B Sub-Project Status S2 Part C Sub-Project Status S2,S3,S4,S5 Sub-Project Category 01,02,03,04,05,06,07 User Fields ALL

CITY OF TORONTO

Gross Expenditures ($000's)

Appendix 4

Sustainable Energy Plan

Sub-Priority	Project No. Sub-Proj No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments 2015	2016	2017	2018	2019	Total 2015-2019	Total 2020-2024	Total 2015-2024	Current and Future Year Cash Flow Commitments Financed By: Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt - Recoverable Debt	Total Financing
ERP906993		Energy Retrofit Projects																					
0	17	Energy Retrofit Projects - Booth Yard	30	S2	04	1,000	0	0	0	0	1,000	0	1,000	0	0	0	0	0	0	0	0	1,000	1,000
0	19	ERP - 1652 Keele & Ellesmere Yard	CW	S2	04	610	0	0	0	0	610	0	610	0	0	0	0	0	0	0	0	610	610
0	20	ERP - Water Retrofits in Civic Centres	CW	S2	04	735	0	0	0	0	735	0	735	0	0	0	0	0	0	0	0	735	735
0	21	ERP - Arena Facilities - Lighting Retrofits	CW	S2	04	1,317	0	0	0	0	1,317	0	1,317	0	0	0	0	0	0	0	0	1,317	1,317
0	23	ERP - Cummer Lodge	24	S2	04	205	0	0	0	0	205	0	205	0	0	0	0	0	0	0	0	205	205
0	24	ERP - Animal Services Efficiency Measures	CW	S2	04	192	0	0	0	0	192	0	192	0	0	0	0	0	0	0	0	192	192
0	25	ERP - Efficiencies-Americas Pavillion Toronto Zoo	42	S2	04	205	0	0	0	0	205	0	205	0	0	0	0	0	0	0	0	205	205
0	26	ERP - 1652 Keele & Ellesmere Yard - Cancelled	CW	S3	04	-610	0	0	0	0	-610	0	-610	0	0	0	0	0	0	0	0	-610	-610
0	27	ERP - LED Building Lighting	CW	S4	04	250	250	0	0	0	500	0	500	0	0	0	0	0	0	0	0	500	500
		Sub-total				3,904	250	0	0	0	4,154	0	4,154	0	0	0	0	0	0	0	0	4,154	4,154
ERP907354		Sustainable Energy Plan - Various																					
0	1	Community Energy Planning	CW	S2	04	622	367	367	367	0	1,723	0	1,723	0	0	0	0	1,723	0	0	0	0	1,723
0	5	Community Based Green Energy Projects - 2015	CW	S4	04	1,000	0	0	0	0	1,000	0	1,000	0	0	0	0	0	0	0	0	1,000	1,000
		Sub-total				1,622	367	367	367	0	2,723	0	2,723	0	0	0	0	1,723	0	0	0	1,000	2,723
ERP907661		Renewable Energy Program																					
0	10	GeoExchange - 2013	CW	S2	04	229	0	0	0	0	229	0	229	0	0	0	0	0	0	0	0	229	229
0	13	Solar PV - MircoFIT (Reserves)	CW	S2	04	150	0	0	0	0	150	0	150	0	0	0	0	150	0	0	0	0	150
0	14	Solar PV - FIT Program (Revised) (Reserves)	CW	S2	04	3,400	0	0	0	0	3,400	0	3,400	0	0	0	0	3,400	0	0	0	0	3,400
0	15	Solar PV Installations - MicroFIT Program - 2015	CW	S4	04	500	0	0	0	0	500	0	500	0	0	0	0	0	0	0	0	500	500
0	16	Solar PV Installations - Mid-Size PV Program-2015	CW	S4	04	1,000	0	0	0	0	1,000	0	1,000	0	0	0	0	0	0	0	0	1,000	1,000
0	18	GeoExchange - 2015	CW	S4	04	1,130	0	0	0	0	1,130	0	1,130	0	0	0	0	0	0	0	0	1,130	1,130
0	20	GeoExchange (McGregor CC) - 2014 - Additional	CW	S3	04	120	0	0	0	0	120	0	120	0	0	0	0	0	0	0	0	120	120
1	5	Solar PV Installations - MicroFIT Program	CW	S2	04	550	0	0	0	0	550	0	550	0	0	0	0	0	0	0	0	550	550
		Sub-total				7,079	0	0	0	0	7,079	0	7,079	0	0	0	0	3,550	0	0	0	3,529	7,079
ERP907833		Demand Response Program																					

Report Phase 2 - Program 48 Sustainable Energy Plan Program Phase 2 Part B Sub-Project Status S2 Part C Sub-Project Status S2,S3,S4,S5 Sub-Project Category 01,02,03,04,05,06,07 User Fields ALL

CITY OF TORONTO

Gross Expenditures ($000's)

Appendix 4

Sustainable Energy Plan

Sub-Priority	Project No. Sub-Proj No.	Project Name Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments								Current and Future Year Cash Flow Commitments Financed By									
						2015	2016	2017	2018	2019	Total 2015-2019	Total 2020-2024	Total 2015-2024	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
ERP907833	Demand Response Program																						
0	1	Demand Response - 2013	CW	S2	04	1,000	0	0	0	0	1,000	0	1,000	0	0	0	0	0	0	0	0	0	1,000	1,000
0	4	Demand Response-NG Generators at Corp Facililities	CW	S4	04	355	1,050	0	0	0	1,405	0	1,405	0	0	0	0	0	0	0	0	0	1,405	1,405
0	5	DR - LTC Homes-Kipling Acres	02	S2	04	500	85	0	0	0	585	0	585	0	0	0	0	0	0	0	0	0	585	585
		Sub-total				1,855	1,135	0	0	0	2,990	0	2,990	0	0	0	0	0	0	0	0	0	2,990	2,990
ERP908006	Combined Heat & Power																						
0	2	Combined Heat & Power-Resiliency at 4 Locations	CW	S4	04	1,350	578	0	0	0	1,928	0	1,928	0	0	0	0	0	0	0	0	0	1,928	1,928
		Sub-total				1,350	578	0	0	0	1,928	0	1,928	0	0	0	0	0	0	0	0	0	1,928	1,928
ERP908007	Residential Energy Retrofit Program																						
0	1	Residential Energy Retrofit Program - Pilot	CW	S2	04	600	0	0	0	0	600	0	600	0	0	0	600	0	0	0	0	0	0	600
0	2	HELP (RERP) - Pilot	CW	S5	04	5,000	0	0	0	0	5,000	0	5,000	0	0	0	5,000	0	0	0	0	0	0	5,000
		Sub-total				5,600	0	0	0	0	5,600	0	5,600	0	0	0	5,600	0	0	0	0	0	0	5,600
ERP908130	Energy Conservation & Demand Management																						
0	1	Energy Conservation Demand Management Plan - 2015	CW	S4	04	500	0	0	0	0	500	0	500	0	0	0	0	0	0	0	0	0	500	500
		Sub-total				500	0	0	0	0	500	0	500	0	0	0	0	0	0	0	0	0	500	500
Total Program Expenditure						21,910	2,330	367	367	0	24,974	0	24,974	0	0	0	5,600	5,273	0	0	0	0	14,101	24,974

Report Phase 2 - Program 48 Sustainable Energy Plan Program Phase 2 Part B Sub-Project Status S2 Part C Sub-Project Status S2,S3,S4,S5 Sub-Project Category 01,02,03,04,05,06,07 User Fields ALL

CITY OF TORONTO

Gross Expenditures ($000's)

Appendix 4

Sustainable Energy Plan

Sub-Priority	Project No. / SubProj No.	Project Name / Sub-project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments and Estimates								Current and Future Year Cash Flow Commitments and Estimates Financed By									
						2015	2016	2017	2018	2019	Total 2015-2019	Total 2020-2024	Total 2015-2024	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt	Debt - Recoverable	Total Financing
Financed By:																							
		Reserves (Ind. "XQ" Ref.)				5,600	0	0	0	0	5,600	0	5,600	0	0	0	5,600	0	0	0	0	0	0	5,600
		Reserve Funds (Ind."XR" Ref.)				4,172	367	367	367	0	5,273	0	5,273	0	0	0	0	5,273	0	0	0	0	0	5,273
		Debt - Recoverable				12,138	1,963	0	0	0	14,101	0	14,101	0	0	0	0	0	0	0	0	0	14,101	14,101
Total Program Financing						21,910	2,330	367	367	0	24,974	0	24,974	0	0	0	5,600	5,273	0	0	0	0	14,101	24,974

Status Code	Description
S2	S2 Prior Year (With 2015 and\or Future Year Cashflow)
S3	S3 Prior Year - Change of Scope 2015 and\or Future Year Cost\Cashflow)
S4	S4 New - Stand-Alone Project (Current Year Only)
S5	S5 New (On-going or Phased Projects)

Category Code	Description
01	Health and Safety C01
02	Legislated C02
03	State of Good Repair C03
04	Service Improvement and Enhancement C04
05	Growth Related C05
06	Reserved Category 1 C06
07	Reserved Category 2 C07

Appendix 5

2015 Recommended Capital Budget with Financing Detail

(Phase 2) 48-Sustainable Energy Plan Sub-Project Category: 01,02,03,04,05,06,07 Type: B Sub-Project Status: S2 Type: C Sub-Project Status: S2,S3,S4,S5

TORONTO

CITY OF TORONTO

Appendix 5

Sustainable Energy Plan

Sub-Project Summary

Project/Financing Priority	Project	Project Name	Start Date	Completion Date	2015 Cash Flow	Financing: Provincial Grants Subsidies	Federal Subsidy	Developmt Charges	Reserves	Reserve Funds	Capital From Current	Other 1	Other 2	Debt	Debt - Recoverable
0	**ERP906993**	**Energy Retrofit Projects**													
0	17	Energy Retrofit Projects - Booth Yard	01/01/2013	31/12/2014	1,000	0	0	0	0	0	0	0	0	0	1,000
0	19	ERP - 1652 Keele & Ellesmere Yard	01/01/2014	13/02/2015	610	0	0	0	0	0	0	0	0	0	610
0	20	ERP - Water Retrofits in Civic Centres	01/01/2014	31/12/2015	735	0	0	0	0	0	0	0	0	0	735
0	21	ERP - Arena Facilities - Lighting Retrofits	01/01/2014	31/12/2014	1,317	0	0	0	0	0	0	0	0	0	1,317
0	23	ERP - Cummer Lodge	01/01/2014	31/12/2015	205	0	0	0	0	0	0	0	0	0	205
0	24	ERP - Animal Services Efficiency Measures	01/01/2014	31/12/2015	192	0	0	0	0	0	0	0	0	0	192
0	25	ERP - Efficiencies-Americas Pavillion Toronto Zoo	01/01/2014	31/12/2015	205	0	0	0	0	0	0	0	0	0	205
0	26	ERP - 1652 Keele & Ellesmere Yard - Cancelled	01/01/2015	31/12/2015	-610	0	0	0	0	0	0	0	0	0	-610
0	27	ERP - LED Building Lighting	01/01/2015	31/12/2016	250	0	0	0	0	0	0	0	0	0	250
		Project Sub-total:			3,904	0	0	0	0	0	0	0	0	0	3,904
0	**ERP907354**	**Sustainable Energy Plan - Various**													
0	1	Community Energy Planning	01/01/2009	31/12/2018	622	0	0	0	0	622	0	0	0	0	0
0	5	Community Based Green Energy Projects - 2015	01/01/2015	31/12/2015	1,000	0	0	0	0	0	0	0	0	0	1,000
		Project Sub-total:			1,622	0	0	0	0	622	0	0	0	0	1,000
0	**ERP907661**	**Renewable Energy Program**													
0	10	GeoExchange - 2013	01/01/2014	31/12/2015	229	0	0	0	0	0	0	0	0	0	229
0	13	Solar PV - MircoFIT (Reserves)	08/10/2013	31/12/2014	150	0	0	0	0	150	0	0	0	0	0
0	14	Solar PV - FIT Program (Revised) (Reserves)	01/01/2013	31/12/2015	3,400	0	0	0	0	3,400	0	0	0	0	0
0	15	Solar PV Installations - MicroFIT Program - 2015	01/01/2015	31/12/2015	500	0	0	0	0	0	0	0	0	0	500
0	16	Solar PV Installations - Mid-Size PV Program-2015	01/01/2015	31/12/2015	1,000	0	0	0	0	0	0	0	0	0	1,000
0	18	GeoExchange - 2015	01/01/2015	31/12/2015	1,130	0	0	0	0	0	0	0	0	0	1,130
0	20	GeoExchange (McGregor CC) - 2014 - Additional	01/01/2015	31/12/2015	120	0	0	0	0	0	0	0	0	0	120
1	5	Solar PV Installations - MicroFIT Program	01/01/2014	31/12/2015	550	0	0	0	0	0	0	0	0	0	550
		Project Sub-total:			7,079	0	0	0	0	3,550	0	0	0	0	3,529
0	**ERP907833**	**Demand Response Program**													
0	1	Demand Response - 2013	01/01/2013	31/12/2016	1,000	0	0	0	0	0	0	0	0	0	1,000
0	4	Demand Response-NG Generators at Corp Facililities	01/01/2015	31/12/2016	355	0	0	0	0	0	0	0	0	0	355
0	5	DR - LTC Homes-Kipling Acres	01/08/2014	31/12/2015	500	0	0	0	0	0	0	0	0	0	500
		Project Sub-total:			1,855	0	0	0	0	0	0	0	0	0	1,855
0	**ERP908006**	**Combined Heat & Power**													
0	2	Combined Heat & Power-Resiliency at 4 Locations	01/01/2015	31/12/2016	1,350	0	0	0	0	0	0	0	0	0	1,350
		Project Sub-total:			1,350	0	0	0	0	0	0	0	0	0	1,350

(Phase 2) 48-Sustainable Energy Plan Sub-Project Category: 01,02,03,04,05,06,07 Type: B Sub-Project Status: S2 Type: C Sub-Project Status: S2,S3,S4,S5

TORONTO

CITY OF TORONTO

Appendix 5

Sustainable Energy Plan

Sub-Project Summary

Project/Financing Priority	Project	Project Name	Start Date	Completion Date	2015 Cash Flow	Financing: Provincial Grants Subsidies	Federal Subsidy	Developmt Charges	Reserves	Reserve Funds	Capital From Current	Other 1	Other 2	Debt	Debt - Recoverable
0	**ERP908007**	**Residential Energy Retrofit Program**													
0	1	Residential Energy Retrofit Program - Pilot	01/01/2014	31/12/2016	600	0	0	0	600	0	0	0	0	0	0
0	2	HELP (RERP) - Pilot	01/01/2014	31/12/2016	5,000	0	0	0	5,000	0	0	0	0	0	0
		Project Sub-total:			5,600	0	0	0	5,600	0	0	0	0	0	0
0	**ERP908130**	**Energy Conservation & Demand Management**													
0	1	Energy Conservation Demand Management Plan - 2015	01/01/2015	31/12/2015	500	0	0	0	0	0	0	0	0	0	500
		Project Sub-total:			500	0	0	0	0	0	0	0	0	0	500
Program Total:					21,910	0	0	0	5,600	4,172	0	0	0	0	12,138

Status Code	Description
S2	S2 Prior Year (With 2015 and\or Future Year Cashflow)
S3	S3 Prior Year - Change of Scope 2015 and\or Future Year Cost\Cashflow)
S4	S4 New - Stand-Alone Project (Current Year Only)
S5	S5 New (On-going or Phased Projects)

Category Code	Description
01	Health and Safety C01
02	Legislated C02
03	State of Good Repair C03
04	Service Improvement and Enhancement C04
05	Growth Related C05
06	Reserved Category 1 C06
07	Reserved Category 2 C07

Appendix 6
Reserve / Reserve Fund Review

Table 11: Reserve / Reserve Fund – Specific
($000s)

Reserve / Reserve Fund Name	Project / SubProject Name and Number	Projected Balance as at Dec 31, 2014 *	Contributions / (Withdrawls)										
			2015 Budget	2016 Plan	2017 Plan	2018 Plan	2019 Plan	2020 Plan	2021 Plan	2022 Plan	2023 Plan	2024 Plan	2015 - 2024 Total Contributions / (Withdrawls)
Local Improvement Charge Energy Works Reserve Fund (XR1724)	Beginning Balance	16,165	16,165	10,565	7,565	7,565	7,565	7,565	7,565	7,565	7,565	7,565	
	(Withdrawls)												
	Residential Energy Retrofit		(5,600)	(3,000)									(8,600)
	Total Withdrawls		**(5,600)**	**(3,000)**									**(8,600)**
	Contributions												
	Interst Income												
	Total Contributions												
Total Reserve Fund Balance at Year-End		**16,165**	**10,565**	**7,565**	**7,565**	**7,565**	**7,565**	**7,565**	**7,565**	**7,565**	**7,565**	**7,565**	**(8,600)**

* Based on the 9 Month Variance Report

Reserve / Reserve Fund Name	Project / SubProject Name and Number	Projected Balance as at Dec 31, 2014 *	Contributions / (Withdrawls)										
			2015 Budget	2016 Plan	2017 Plan	2018 Plan	2019 Plan	2020 Plan	2021 Plan	2022 Plan	2023 Plan	2024 Plan	2015 - 2024 Total Contributions / (Withdrawls)
Toronto Energy Conservation Fund	Beginning Balance	2,417	2,417	1,217	850	483	116	116	116	116	116	116	
	(Withdrawls)												
	Solar PV - FIT Program		(1,200)										
	Community Energy Planning			(367)	(367)	(367)							(1,101)
	Total Withdrawls		(1,200)	(367)	(367)	(367)							(1,101)
	Contributions												
	Interst Income												
	Total Contributions												
Other Program / Agency Net (Withdrawls) and Contributions													
Total Reserve Fund Balance at Year-End		**2,417**	**1,217**	**850**	**483**	**116**	**116**	**116**	**116**	**116**	**116**	**116**	**(1,101)**

* Based on the 9 Month Variance Report

- The Local Improvement Charge Energy Works Reserve Fund is a forward revolving reserve fund with contributions replenished as loans are repaid by homeowners participating in the Residential Energy Retrofit Program.
- Once agreements with financial institutions are finalized and participants are confirmed, estimates of contributions to the Reserve Fund will be identified.