

CAPITAL PROJECTS SUMMARY 2010

1 Hydro One Brampton's 2010 budgeted capital program totals \$28,419,115, which is derived
 2 from 17 major categories as shown in **Table 1**, below.

3 Under IAS 23, borrowing costs that are directly attributable to the acquisition, construction or
 4 production of a qualifying asset form part of the cost of that asset. Such borrowing costs are
 5 capitalized as part of the cost of the asset. Hydro One Brampton has determined that any asset
 6 that takes greater than six months to complete is considered a qualifying asset. As a result
 7 borrowing costs have been calculated on Construction Work in Progress (CWIP) where it is
 8 expected that the duration of the project will exceed six months.

Table 1: Capital Budget Summary 2010

Type	Description	Expenditures	Contributions and Grants	Construction Work in Progress	Total
1	SUBSTATIONS AND P. & C.	1,064,281			1,064,281
2	SCADA EQUIPMENT	306,000			306,000
3	SYSTEM EXPANSION AND ENHANCEMENT	4,408,585		9,789	4,418,374
4	SYSTEM REHABS AND EQUIPMENT REPLACEMENTS	4,696,366		10,428	4,706,794
5	ROAD WIDENINGS	4,961,070	(2,023,061)	6,523	2,944,532
7	NEW GENERAL SERVICE CUSTOMERS	4,451,624	(3,944,556)		507,068
8	NEW RESIDENTIAL- HIGH DENSITY	375,455	(176,130)		199,325
10	NEW RESIDENTIAL- LOW DENSITY	5,651,823	(3,703,440)	4,326	1,952,709
11	METERING	1,587,729			1,587,729
12	VEHICLES	1,904,000			1,904,000
13	DEPARTMENT TOOLS & EQUIP. > \$500.00	103,000			103,000
15	GREEN ENERGY PROGRAMS	864,349			864,349
17	ADMIN. & SERVICE CENTRE	532,643			532,643
18	ADMINISTRATIVE COMPUTER AS/400	1,265,000			1,265,000
19	G.I.S. COMPUTER EQUIP. & SOFTWARE	459,000			459,000
23	TRANSFORMER STATION	5,268,063			5,268,063
29	LAND AND LAND RIGHTS	336,248			336,248
	Total	38,235,236	(9,847,187)	31,066	28,419,115

9
 10 Each category is then divided into specific projects with defined capital expenditures. See **Table**
 11 **1** of Schedule 7.1 for a detailed project table, and Schedule 7.2 for descriptions of each project.

SUBSTATIONS **IFRS \$1,064,281**

13 In 2010, the Substations department plans to install two new power transformers at MS19
 14 replacing the end of life T1 and T2 transformers. The high voltage primary switching at M19 will

1 also be replaced. The company will also proceed with our 13.8 kV breaker retrofit / upgrade
2 program at MS10 and MS14.

3 Station batteries are to be upgraded at several municipal substations as well as upgrading the
4 end of life battery bank at JYTS.

5 Relaying at MS22 is to be upgraded due to the existing hardware becoming obsolete. New
6 SEL relays will be installed on all feeders as per company standards.

7 Several new pieces of test equipment are to be purchased for the stations staff replacing end of
8 life equipment. Stations will also work with Fleet to replace a 25-year old fork lift.

9 **SCADA** **IFRS \$306,000**

10 In 2010, the P&C Department has slated several initiatives designed to increase system
11 reliability and improve SCADA functionality.

12 The Company plans on retro-fitting obsolete equipment at several pole top SCADA installations
13 as well as continuing the expansion of our Telemetric RTU system while security cameras will
14 be installed at MS19, MS14 and JYTS continuing the initiative started in 2009.

15 HOBNI also plans on expanding our fibre WAN into MS20 as well as adding a Spread Spectrum
16 radio node to the fibre system. This will involve the expansion of our 2.4 GHz SCADA radio
17 system.

18 The P&C Department plans on replacing / upgrading several pieces of test equipment including
19 a new TDR for primary fault locating, three phase relay test kit and phase ID kit.

20 **SYSTEM EXPANSION & ENHANCEMENT** **IFRS \$4,418,374**

21 The 2010 SE&E category includes several major projects. Of note is the construction of a new 5
22 km pole line along Hwy. 50 from Clarkway Dr. north to Castlemore Rd., and along Castlemore
23 Rd. from Hwy. 50 to Clarkway Dr. This project is required to extend HOBNI's 27.6 kV
24 distribution facilities to service an area currently under development. This new pole line will tie in
25 to an existing pole line on Hwy. 50 south of Clarkway Dr., and to a new pole line on Castlemore
26 Rd., to provide a single contingency primary supply for the development lands in this area.

27 2010 residential land development has increased over 2009 as shown by the number of draft
28 plan approvals and subdivision agreements being processed by the municipality. This drives our
29 feeder cable and switchgear projects. Actual timing of these expenditure is controlled by the

1 progress of civil works undertaken in the respective developments as HOBNI infrastructure is
2 placed in a joint use fashion with the installation of shallow services.

3 HOBNI currently operates an aged 4.16 kV distribution system. This system is nearing the end
4 of its serviceable life and plans are underway to convert this system to 27.6 kV. In 2010 the 4.16
5 kV distribution system in the Corby Cres., Sheard Ave. and McMurchy Ave. areas are being
6 replaced with a modern 27.6 kV distribution system. This involves replacing a combination of
7 overhead and underground distribution facilities with a new single contingency primary
8 distribution system needed to improve service reliability to this area. This work is also a
9 prerequisite to the decommissioning of MS8, a 40-year old outdoor municipal substation. This is
10 in line with the company's objective of phasing out obsolete low voltage distribution systems and
11 modernizing those systems to 27.6 kV.

12 Six on/below grade 4.16 kV transformer vaults are planned for upgrade in 2010. The existing
13 installations do not conform to current standards and in most cases pose increased worker
14 hazards due to exposed live primary bushings and aged equipment with limited remaining life.
15 These vaults will be converted to the current standard 27.6 kV configuration. Not only does this
16 eliminate unsafe and unreliable installations it also supports the company's objective of phasing
17 out obsolete low voltage distribution systems and modernizing those systems to 27.6 kV.

18 In previous years, HOBNI entered into agreements with HONI to construct 27.6 kV Dual
19 Element Spot Network yards at Goreway TS and Pleasant TS. This was required to provide
20 additional electrical capacity for HOBNI's grid. In 2010 HOBNI will complete the last phase of
21 the installation of all civil ducting infrastructure required at both stations in order to be able to
22 utilize this new capacity. New feeder circuits, 136M2 and 136M44 will be installed and
23 connected Goreway TS in 2010. These circuits are designed to provide new capacity for load
24 growth driven by residential development in the north east quadrant of the city, and to improve
25 feeder contingency and sectionalizing capability providing overall improved reliability.

26 2010 includes projects designed to improve cable isolation and switching capabilities at two
27 municipal substations, MS19 and MS12. An alternate primary supply will be added at MS12 and
28 new cable terminations will be installed on the 44 kV source cables at MS19.

1 **ROAD WIDENING** **IFRS \$2,944,532**

2 Hydro One Brampton portion..... \$4,967,593

3 Contributed Capital(\$2,023,061)

4 HOBNI's net estimated cost to relocate facilities due to road widening projects, initiated by road
5 authorities having jurisdiction within the city of Brampton totals \$2,944,532. Hydro One
6 Brampton's portion is estimated to be \$4,967,593. This will be offset by a capital contribution of
7 \$2,023,061.

8 Relocations range from road widening, intersection improvements, bridge construction and
9 relocations to permit improvement to sidewalks. Most of these relocations result in 50% labour
10 and equipment cost split between the Road Authority as per the Public Service Works on
11 Highway Act. MTO cost sharing is unique and is governed by the MTO Corridor Control and
12 Permit Procedures Manual.

13 We are forecasting a higher percentage of contributed capital due to modified cost sharing on
14 several projects. Hurontario St & Steeles Avenue as well as Bovaird Dr & Main Street roads for
15 example, were relocated within the last five years and are planned to be relocated again in
16 2010, as such the cost sharing agreements have been revised to account for the stranded cost
17 of equipment to be removed.

18 The information presented is based on preliminary information received from the road
19 authorities.

20 **NEW GENERAL SERVICE CUSTOMERS** **IFRS \$507,068**

21 The 2010 capital budget includes funding to provide service to new commercial and industrial
22 customers. The costs to install new infrastructure and to upgrade the capacity of existing
23 facilities to service new large commercial and industrial customers are captured here.
24 Expenditures in this category are driven by customer commitments and tend to vary with the
25 level of economic activity in the Region.

26 **NEW RESIDENTIAL - HIGH DENSITY** **IFRS \$199,325**

27 This category is also driven by customer commitments and varies with the level of economic
28 activity in the Region.

1 **NEW RESIDENTIAL- LOW DENSITY** **IFRS \$1,952,709**

2 The 2010 budget includes \$1,952,709 for the installation of electrical underground distribution
3 facilities for new Developments within the City of Brampton inclusive of a contributed capital
4 component from developers. City of Brampton projections for new residential lots in 2010 total
5 4000 units.

6 **METERING** **IFRS \$1,587,729**

7 The metering expenditures associated with the 2010 projects are consisted of projects
8 supporting new commercial, industrial and residential customers along with costs associated
9 with wholesale metering upgrades. Additional funds were spent on various regulatory
10 requirements. These projects are defined as follows:

11 ***Wholesale Metering Installations and Upgrades***

12 Hydro One Brampton is responsible to ensure that all wholesale metering installations used for
13 settlements associated with the IESO-administered market are registered with the IESO as per
14 the [IESO Market Rules Chapter 6](#), section 3.2. In addition, this metering must be compliant with
15 Measurement Canada's [Electricity & Gas Inspection Act](#). This requires that all meters and
16 associated equipment such as instrument transformers to be approved by Measurement
17 Canada. If any of the Instrument Transformers are not approved by Measurement Canada, the
18 non-compliant units must be replaced or approved at the earliest seal expiry date. In addition to
19 the above projects, Hydro One Brampton initiated its smart meter program and began to install
20 smart meters on the residential customers.

21 As per the above requirement, Hydro One Brampton will have to upgrade the wholesale
22 metering and instrument transformers for some 27.6 kV and 44kv feeders. Those wholesale
23 revenue meters are currently located inside Pleasant TS. They will be relocated outside of the
24 transformer. In addition: Goreway TS will be expanded to accommodate growth. New
25 wholesale revenue meters will be installed on the bus. Total expenditures \$1,110,729.

26 ***New Industrial and Commercial Meter Installations and Upgrades***

27 Hydro One Brampton is responsible for the installation, testing, and commissioning of new and
28 existing simple and complex metering installations. Total expenditures \$405,000.

1 ***Meter Re-Verification Program.***

2 Costs associated with this project are a direct result of upgrading and replacing damaged or
3 obsolete industrial and commercial meters and instrument transformers to ensure that all
4 equipment is compliant with Measurement Canada. Total expenditures \$72,000.

5 **VEHICLES** **IFRS \$1,904,000**

6 The Company's fleet inventory recently underwent a condition assessment. This assessment
7 was completed by an independent third party. The results and recommendations from this
8 assessment were used to validate the 2010 and future fleet management requirements. A copy
9 of the condition assessments is available on request.

10 In 2010 the company plans to replace a 1996, high usage 40' single bucket truck (V73) with a
11 55' aerial single bucket material handler truck for use in the Lines department. The purchase of
12 a chassis for next year's replacement of a 14 year old single bucket (V72) is scheduled.

13 HOBNI plans to purchase a 50' radial boom derrick digger for use in the line department for
14 building, servicing and repairing pole lines. This truck is going to replace a 19 year old digger
15 (V17) truck with high usage. The purchase of a chassis for next year's replacement of a 17 year
16 old digger truck (V25) is scheduled.

17 The purchase of an 83' double bucket material handling truck required for use in the Lines
18 department is required to replace a 17 year old truck (V01) with high PTO usage and high
19 mileage.

20 The purchase of a galvanized dump trailer which will replace a 1998 trailer (V116) that is rotten
21 and tagged "out of service". This trailer will be used in the lines department to transport gravel,
22 sand, stone, screenings, fill etc. to and from various job sites.

23 The replacement of a 1985 pole trailer (V100) with a new pole trailer which is able to transport
24 poles up to 50' in length.

25 The replacement of a 1988 forklift (V104) that is very old with a new forklift for use in
26 substations is scheduled.

27 The replacement of a 1999 metering van (V60) that has high mileage with a new van will take
28 place this year.

1 The replacement of a 2002 pick-up truck (V53) with high mileage with a new pick-up truck is
2 scheduled for this year. The consideration of a hybrid vehicle is being evaluated.

3 **MAJOR TOOLS & EQUIPMENT** **IFRS \$103,000**

4 This category is used for the purchase of tools and equipment by all departments, where the
5 cost of such exceeds \$1,000.00\$500.00. Such purchases involve replacing aged or defective
6 tools no longer suitable for service as well as the purchase of new tools providing improved
7 safety, ergonomics and technology.

8 **GREEN ENERGY** **IFRS \$864,349**

9 HOBNI has identified six projects under the green energy category. These projects will
10 introduce automated switching and reclosure technology into the HOBNI distribution system.
11 Highlights of this program include the coordinated installation of 6 - motorized 44 kV load
12 interrupter switches; 1 - "Scadamate" load interrupter switch; 2 - G&W 3Ph 3-Way Solid
13 Dielectric Dead Front Submersible Vacuum Switches; and 6- "Trip Saver" reclosures. These
14 devices are being introduces at key locations in our grid to improve outage response and
15 recovery time.

16 **ADMIN. & SERVICE CENTRE** **IFRS \$532,643**

17 In 2009 the Day Care tenant moved out of the Sandalwood Administrative facilities. Therefore,
18 the Company now has approximately 4,500 sq ft that is not being used. The budget of \$304,643
19 is to cover all costs to rework this space to the Company's needs. Note: Hydro One Brampton
20 is seeking new tenants for this space and therefore this rework will hinge on when/if the new
21 tenant is found. This is due to the fact HOBNI will need to configure the space to their needs.

22 Also in 2010 HOBNI have \$60,000 to reconfigure the old day-care parking area and remove the
23 existing playground areas.

24 Lastly HOBNI has \$168,000 for various projects related to Facility and Office equipment
25 improvements/replacements.

26 **ADMINISTRATIVE COMPUTER AS/400** **IFRS \$1,265,000**

27 **Hardware/Software Network Consolidation**

28 Hydro One Brampton Networks Inc. will undertake to consolidate and standardize their
29 Information Technology Infrastructure. This hardware/software will allow HOBNI to improve
30 server utilization and data storage for all HOBNI programs and data. This will also provide the

1 necessary hardware and software architecture necessary for real time off-site archiving, backup
2 and retrieval.

3 ***Background of Project***

4 HOBNI has assessed its information technology infrastructure requirements. It currently runs a
5 number of enterprise wide systems from the time it was Brampton Hydro. All of these systems
6 have either been in-house developed or packaged software that has been substantially
7 customized.

8 It is HOBNI's intention to proceed with a go forward strategy that would provide a road map and
9 direction for it to meet its business needs. In doing so HOBNI intends to meet its corporate
10 objectives of improving customer service, employee productivity and operating efficiency by
11 employing appropriate IT applications in a manner which improves business and process
12 efficiency.

13 ***Project Requirements***

14 HOBNI has implemented enterprise applications in support of our business requirements.
15 HOBNI is looking to implement an IT Strategy and Direction for our Information Technology
16 Infrastructure.

17 HOBNI will replace our existing hardware/software and build a network that will facilitate the
18 rapid deployment of applications and house the rapidly changing data storage requirements
19 within the Information Technology Infrastructure as it relates to Distribution utilities in North
20 America. Recent changes in the application marketplace and technology requires careful
21 consideration of the near and long term strategies of our current application providers as well as
22 possible solutions from other world-wide providers, including the manner in which those
23 applications may be delivered. This consideration is necessary due to the planned
24 replacement, upgrade or significant fortification of many HOBNI core applications over the next
25 several years.

1 **Project Overview**

2 The following provides a high level overview of the hardware/software for this Project. This list
3 is not intended to be exhaustive and only provides a high-level overview.

- 4 • HOBNI currently has dark fiber running from its facilities at 175 Sandalwood Parkway
5 West to Jim Yarrow TS approximately 10 kilometers away. It is our intent to mirror all
6 servers and SANS located at HOBNI head office to the Jim Yarrow TS location in order
7 to provide substantive backup and disaster recovery. A 10GB connection will be
8 provided and the proper communication equipment to facilitate has been included.
- 9 • HOBNI has made the decision to use VMware as its virtualization software platform and
10 all hardware/software will be compliant with VMware's specifications.
- 11 • The move to virtualization necessitates additional licensing costs for Microsoft Operating
12 System products.
- 13 • It has been determined that approximately 20 windows/2003 servers are eligible for
14 virtualization. In order to facilitate room for growth and use the latest technology HOBNI
15 will be utilizing blade technology for all server requirements.
- 16 • HOBNI also plans to virtualize the existing desktop environment. This project will also
17 include the Virtual Desktop Infrastructure hardware/software. Microsoft licensing will also
18 be included for windows XP/Vista or Windows7 desktops.
- 19 • HOBNI's current business systems runs on IBM Iseries logically partitioned M25
20 hardware platform and currently uses approximately 270GB. The second partition runs
21 Lotus Notes for email and also runs our Silverblaze solution Capricorn for external
22 customer web site inquiries and currently uses approximately 240GB. HOBNI also runs
23 an IBM Iseries model 515 for development and utilizes approximately 270GB. It is
24 intended that HOBNI move to a disk-based backup solution for both IBM Iseries
25 machines.
- 26 • 10TB usable storage capacity at both HOBNI head office and the Jim Yarrow TS
27 location will be provided for in this configuration.
- 28 • Education is a key component of this project and the required training for the software is
29 included for up to 4 staff. Knowledge transfer from vendors to staff to HOBNI staff also
30 form part of this implementation service.

- 1 • The plan includes a phased implementation approach which will allow HOBNI to train
- 2 existing staff and have minimal disruption on the organization.
- 3 • Phase 1 Switch Replacement
- 4 • Phase 2 Server and SAN production deployment, backup and Virtualization
- 5 • Phase 3 DRP Server and SAN deployment and Virtualization
- 6 • Phase 4 I series backup
- 7 • Phase 5 Desktop virtualization

8 **AM/FM COMPUTER EQUIP. & SOFTWARE** **IFRS \$459,000**

9 ***Geographic Information Systems (GIS)***

10 These 2010 capital funds were allocated to support the enterprise requirements in the GIS
11 department for upgrading computer hardware, purchase new licensed software and to provide
12 application development for the implementation and integration of new applications at the Utility.
13 The following significant projects were related to work done in this area.

14 ***GIS Software - \$28,000***

15 These funds will be used to purchase new software applications for the enhancement of our
16 existing Geographic Information System (GIS). Areas of interest include GIS upgrades and add-
17 ons, SCADA, Automated Meter Reading (AMR), Customer Information Systems (CIS) and Work
18 Management Systems (WMS).

19 Investment in these new applications will allow the Utility to expand the use of our GIS across
20 the utility to provide better engineering analysis, quicker response times and restoration times
21 for outages, better crew management and improved dispatching capabilities. The results will be
22 recognized in improved operational efficiencies throughout the Utility.

23 ***G/Technology/OMS Code Development - \$84,000***

24 This project is to have HOBNI staff work with our GIS vendor Intergraph to write new
25 GTechnology code for customizing both our Geographic Information System and the Outage
26 Management System application.

27 The scope of work is to provide scheduled sustained engineering services for upgrading the
28 existing applications to the latest version of the software. Areas of interest include In
29 service/OMS upgrade from V8.0 to V8.2, customization of the software in response to

1 Operations requirements at HOBNI, examine work flows within the application and make
2 modifications as required to suit our customers business strategies. Work also includes an
3 upgrade of G/Technology to the latest version of this operating platform.

4 ***GIS Hardware - \$40,000***

5 These funds are for the purchase of new hardware related to the operation of GIS applications
6 in the Drafting & Records department, in the Control Room and other departments interfacing
7 with the Geographic Information System (GIS).

8 Investment in new hardware insures that our GIS systems continues to perform at an optimal
9 level. New equipment purchases allow the Utility to expand our GIS user base to include other
10 departments and move forward with future field applications. Upgrading older hardware with
11 newer machines with faster processors provides for improved operational efficiency from our
12 GIS/OMS applications and users.

13 ***OMS/SCADA/Load Forecasting Software - \$67,000***

14 These funds are for the purchase of additional software licences or new application software
15 packages for the enhancement of our existing Engineering and Operations systems in the area
16 of OMS, SCADA and load forecasting.

17 This year HOBNI is looking to purchase a new load forecasting software application. In the past,
18 load forecasting reports typically required a great deal of manual input, calculations and man-
19 hours to generate. Today new software is available on the market that makes better use of data
20 stored electronically in other systems such as GIS and OMS that allows for more detailed and
21 accurate reporting results These are critical to the safe operation and analysis of our
22 distribution system in a "real time" environment.

23 ***GIS Computers, Printers and Plotters - \$116,000***

24 This project is for the purchase of computers, printers, plotters, projectors and ancillary devices
25 required in the Engineering and Operations department in support of technical requirements
26 throughout the year.

27 ***CYMCAP Software Licence - \$20,000***

28 Purchase of new CYMCAP software license with the duct bank optimizer package and the
29 multiple cable in casings analysis package for use in Planning and Standards. This is a
30 dedicated design and analysis package available with a number of different add-on modules.

1 This Engineering analysis package is a single user license which will be used in Planning &
2 Standards department to perform cable in duct calculations. This design package will allow for
3 improvements in the way HOBNI calculate duct bank fill and assist our design technicians with
4 calculating the effects that temperature places on feeder and cable installations in non-metallic
5 casings.

6 HOBNI currently does not have the ability to conduct this type of analysis with our existing
7 software. The purchase of this software package will allow our engineering staff to better
8 investigate different design alternatives with respect to optimizing the installation of cables in
9 duct banks and the ability to calculate the temperatures that the company can expect for certain
10 cable types and configurations in our designs. This translates into better distribution designs
11 and increased reliability of our underground cable installations.

12 ***CYME Gateway software license \$104,000***

13 This project is for the purchase of new CYME Gateway software licence. This is a dedicated
14 design and analysis packaged solution used for the creation and the maintenance of the
15 CYMDIST distribution network data model. Utilizing the connectivity network extracted from the
16 GIS engine, the CYMDIST model can provide accurate and electrically complete, load analysis
17 functionality with graphical representation. This distribution analysis software will provide the
18 interface link between CYMDIST and the GIS data for use in Planning and Standards to perform
19 network analysis utilizing the mapping capabilities available in GIS.

20 **TRANSFORMER STATION** **IFRS \$5,268,063**

21 This project represents the final capital contribution to be paid by Hydro One Brampton to Hydro
22 One Networks for the construction of a new 27.6 kV DESN at the Goreway Transformer Station.
23 Payments will be made in accordance with a Connection and Cost Recovery Agreement
24 entered into by both parties. The new DESN will provide an additional 430 Mva of capacity for
25 Hydro One Brampton's distribution system.

26 **LAND AND LAND RIGHTS** **IFRS \$336,248**


27 HOBNI has identified three easement parcels to be acquired in 2010. These parcels are
28 required to provide land needed by HOBNI to install new infrastructure including; land for duct
29 structure egress at Goreway TS, land for a new pole line along the CN railway and for an
30 access agreement to provide vehicle access across privately held land.

Table 1: Capital Projects Table 2010


Type	Description	1,610	1806	1808	1815	1820	1830	1835	1840	1845	1850	1855	1860	1915	1920	1930	1940	1955	1980	1995	2055	Total	
			Land Rights	Buildings and Fixtures	Transformer Station Equipment	Distribution Station Equipment	Poles, Towers and Fixtures	Overhead Conductors and Devices	Underground Conduit	Underground Conductors and Devices	Line Transformers	Services	Meters	Office Furniture and Equipment	Computer Equipment - Hardware	Transportation Equipment	Tools, Shop and Garage Equipment	Communication Equipment	System Supervisory Equipment	Contributions and Grants	Construction Work in Progress		
1	SUBSTATIONS AND P. & C.					1,064,281																1,064,281	
2	SCADA EQUIPMENT																221,000		85,000			306,000	
3	SYSTEM EXPANSION & ENHANCEMENT						1,497,465	995,617	670,477	1,054,183	190,843										9,789	4,418,374	
4	SYSTEM REHAB & EQUIPMENT REPLACEMENT						1,049,134	698,750	1,033,988	1,617,626	296,868										10,428	4,706,794	
5	ROAD WIDENINGS						2,976,643		1,240,267	744,160										(2,023,061)	6,523	2,944,532	
7	NEW GENERAL SERVICE CUSTOMERS									2,782,264	1,669,359										(3,944,556)	507,068	
8	NEW RESIDENTIAL- HIGH DENSITY									75,091	300,365										(176,130)	199,325	
10	NEW RESIDENTIAL- LOW DENSITY									3,394,373	1,697,186	560,264									(3,703,440)	4,326	1,952,709
11	METERING				1,110,729								477,000									1,587,729	
12	VEHICLES															1,904,000						1,904,000	
13	DEPARTMENT TOOLS & EQUIP. > \$500.00																103,000					103,000	
15	GREEN ENERGY PROGRAMS						864,349															864,349	
17	ADMIN. & SERVICE CENTRE			480,643										52,000								532,643	
18	ADMINISTRATIVE COMPUTER AS/400	590,000													635,000			40,000				1,265,000	
19	G.I.S. COMPUTER EQUIP. & SOFTWARE	303,000													156,000							459,000	
23	TRANSFORMER STATION	5,268,063																				5,268,063	
29	LAND AND LAND RIGHTS		336,248																			336,248	
	Total	6,161,063	336,248	480,643	1,110,729	1,064,281	6,387,591	1,694,367	2,944,732	9,667,697	4,154,621	560,264	477,000	52,000	791,000	1,904,000	324,000	40,000	85,000	(9,847,187)	31,066	28,419,115	

CAPITAL PROJECTS DESCRIPTIONS 2010

- 1 The following pages contain copies of documents detailing 2010 Capital projects

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	MS19 Primary Switch Upgrade	Project Number:	2010-249
Project Manager:	Greg Mather	Project Technician:	Fred / Shane
Last Updated:	Friday, May 07, 2010	Investment Category:	Sustainment
Type	SS - Substations	Investment Driver:	Safety
Description/Justification			
Existing 44KV switches perform unreliably and are obsolete. The tie switch cannot be operated on potential.			
Investment Scope			
Investment Results			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September		\$50,000.00	\$50,000.00
October		\$33,000.00	\$33,000.00
November			\$0.00
December			\$0.00
Totals	\$0.00	\$83,000.00	\$83,000

Business Case Justification
Replacing existing switches with remotely operable Joslyn VBM 44KV switches
Alternative Considered
We will sole supply this work as there are very few options at this voltage level.

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	MS19 T1 and T2 Replacement	Project Number:	2010-301
Project Manager:	Greg Mather	Project Technician:	Shane Beirmes
Last Updated:	Friday, May 07, 2010	Investment Category:	Sustainment
Type	SS - Substations	Investment Driver:	Reliability
Description/Justification			
Existing TX is past it's projected life expectancy and is gassing. It is currently under a load restriction of 5MVA to prevent catastrophic failure. Scope of project increased to allow for the purchase of two transformers (19T1 and 19T2)			
Investment Scope			
Investment Results			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September			\$0.00
October		\$20,000.00	\$20,000.00
November		\$730,000.00	\$730,000.00
December			\$0.00
Totals	\$0.00	\$750,000.00	(\$750,000.00)


Business Case Justification

This is part of a multi year TX upgrade program that is recommended in the ACA


Alternative Considered

Went out to tender for new TX and chose the lowest bid that met all tender requirements




		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	JYTS Station Battery Replacement	Project Number:	2010-302
Project Manager:	Greg Mather	Project Technician:	Mike Albano
Last Updated:	Friday, May 07, 2010	Investment Category:	Sustainment
Type	SS - Substations	Investment Driver:	Reliability
Description/Justification			
Existing Battery Bank is at it's projected life expectancy. This bank cannot be run to failure.			
Investment Scope			
Investment Results			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May		\$20,000.00	\$20,000.00
June			\$0.00
July			\$0.00
August			\$0.00
September			\$0.00
October		\$20,000.00	\$20,000.00
November			\$0.00
December			\$0.00
Totals	\$0.00	\$40,000.00	(\$40,000.00)

Business Case Justification
If this bank were to fail, JYTS would have to be fully off loaded until a new bank could be installed. Also, if there was a battery failure during a fault, significant damage to the station could occur.
Alternative Considered
We will replace the existing batteries with identical new units due to good performance and customer service.

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	MS Battery Bank Replacement	Project Number:	2010-303
Project Manager:	Greg Mather	Project Technician:	Gladwin Hall
Last Updated:	Friday, May 07, 2010	Investment Category:	Sustainment
Type	SS - Substations	Investment Driver:	Reliability
Description/Justification			
Replace end of life battery banks at several municipal substations			
Investment Scope			
Investment Results			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February		0	\$0.00
March		\$4,500.00	\$4,500.00
April		\$4,500.00	\$4,500.00
May		\$4,500.00	\$4,500.00
June		\$4,500.00	\$4,500.00
July		\$4,500.00	\$4,500.00
August		\$4,500.00	\$4,500.00
September		\$4,500.00	\$4,500.00
October		\$4,500.00	\$4,500.00
November		\$4,000.00	\$4,000.00
December			\$0.00
Totals	\$0.00	\$40,000.00	(\$40,000.00)

Business Case Justification
End of life battery banks require replacement / upgrade to ensure proper protection functionality.
Alternative Considered
Continue with our standard batteries to maintain compatibility with existing charging systems.

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Station Breaker Upgrades	Project Number:	2010-304
Project Manager:	Greg Mather	Project Technician:	Fred Hamilton
Last Updated:	Friday, May 07, 2010	Investment Category:	Sustainment
Type	SS - Substations	Investment Driver:	Reliability
Description/Justification			
Continue replacement of obsolete magnetic air breakers at MS10 and MS14 with ABB VM1 Vacuum Modules			
Increase scope of project to \$150K funded by excess monies from 2010-301 (MS19TX)			
Investment Results			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June		\$24,000.00	\$24,000.00
July		\$25,000.00	\$25,000.00
August		\$25,000.00	\$25,000.00
September		\$25,000.00	\$25,000.00
October		\$25,000.00	\$25,000.00
November			\$0.00
December			\$0.00
Totals	\$0.00	\$124,000.00	(\$124,000.00)


Business Case Justification

Existing breakers are past their projected life expectancy and are having trouble interrupting fault current with in specification. Existing breakers require significantly more maintenance than vacuum modules.


Alternative Considered

Continuing project with ABB VM1 modules to maintain compatibility with existing equipment.




		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Stations Test Equipment	Project Number:	2010-317
Project Manager:	Greg Mather	Project Technician:	Ryan Clark
Last Updated:	Friday, May 07, 2010	Investment Category:	Operations
Type	SS - Substations	Investment Driver:	Reliability
Description/Justification			
Purchase of power factor test kit and small infrared camera for Station Maintenance Department			
Investment Scope			
Investment Results			
Cost & Timing Estimates			
	<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>
	January		\$0.00
	February		\$0.00
	March		\$0.00
	April		\$0.00
	May		\$8,500.00
	June		\$0.00
	July		\$0.00
	August	\$8,500.00	\$8,500.00
	September		\$0.00
	October		\$0.00
	November		\$0.00
	December		\$0.00
	Totals	\$0.00	\$17,000.00
			(\$17,000.00)


Business Case Justification
Purchase of power factor test kit for transformer testing and replace damaged infrared camera
Alternative Considered
We plan on looking at equipment from several manufacturers.

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Telemetric for Cellemetry	Project Number:	2010-012
Project Manager:	Greg Mather	Project Technician:	Mike Albano
Last Updated:	Friday, May 07, 2010	Investment Category:	Development
Type	SC - SCADA	Investment Driver:	Reliability
Description/Justification			
Continue expansion of Telemetric fault indicator system			
Investment Scope			
Investment Results			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July		\$4,700.00	\$4,700.00
August		\$5,300.00	\$5,300.00
September			\$0.00
October			\$0.00
November			\$0.00
December			\$0.00
Totals	\$0.00	\$10,000.00	(\$10,000.00)


Business Case Justification
Continue with installation of Telemetric RTU equipment and fault indicators to provide fault location information to Control during outages.
Alternative Considered
None: Continue with use of our standard Telemetric equipment to maintain compatibility with existing SCADA equipment.

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Pole Top RTU Retrofit	Project Number:	2010-149
Project Manager:	Greg Mather	Project Technician:	
Last Updated:	Friday, May 07, 2010	Investment Category:	Sustainment
Type	SC - SCADA	Investment Driver:	Technical Obsolescence
Description/Justification			
Upgrades to obsolete SCADA equipment at various pole top locations			
Investment Scope			
Investment Results			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September		\$4,700.00	\$4,700.00
October		\$5,300.00	\$5,300.00
November			\$0.00
December			\$0.00
Totals	\$0.00	\$10,000.00	(\$10,000.00)


Business Case Justification
Upgrade obsolete SCADA equipment at pole top locations to improve reliability and increase functionality of the SCADA system
Alternative Considered
Continue with our standard SCADA parts

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	MS Security Cameras	Project Number:	2010-305
Project Manager:	Greg Mather	Project Technician:	Chris Kimble
Last Updated:	Friday, May 07, 2010	Investment Category:	Operations
Type	SC - SCADA	Investment Driver:	Safety
Description/Justification			
Continuation of 2009 MS security camera pilot project. We will install security cameras at MS14 and MS 19 while increasing the number of cameras at MS22 and MS10.			
Investment Scope			
Investment Results			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February			\$0.00
March			\$0.00
April		\$10,000.00	\$10,000.00
May		\$1,000.00	\$1,000.00
June		\$2,000.00	\$2,000.00
July		\$3,000.00	\$3,000.00
August			\$0.00
September			\$0.00
October			\$0.00
November			\$0.00
December			\$0.00
Totals	\$0.00	\$16,000.00	(\$16,000.00)


Business Case Justification
Camera installations will increase system security and improve the safety of our workers and the public.
Alternative Considered
We will continue using the Arecont products we standardized on in 2009 to maintain compatibility with existing equipment

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010		
Project Title:	TDR for Primary Fault Locating	Project Number:	2010-306	
Project Manager:	Greg Mather	Project Technician:	Glen Holmgren	
Last Updated:	Friday, May 07, 2010	Investment Category:	Operations	
Type	SC - SCADA	Investment Driver:	Reliability	
Description/Justification				
Purchase of TDR for primary fault locating				
Investment Scope				
Investment Results				
Cost & Timing Estimates				
	<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
	January			\$0.00
	February			\$0.00
	March			\$0.00
	April		\$12,000.00	\$12,000.00
	May			\$0.00
	June			\$0.00
	July			\$0.00
	August		\$13,000.00	\$13,000.00
	September			\$0.00
	October			\$0.00
	November			\$0.00
	December			\$0.00
	Totals	\$0.00	\$25,000.00	(\$25,000.00)


Business Case Justification
<p>Our existing TDR failed and was not repairable. We will purchase a new unit to allow for more accurate primary fault locates. This equipment will shorten the time taken to locate faults and increase the accuracy of our results.</p>
Alternative Considered
<p>We will purchase equipment compatible with our High Voltage Thumper.</p>

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Fibre/Communication Improvements	Project Number:	2010-308
Project Manager:	Greg Mather	Project Technician:	Gladwin Hall
Last Updated:	Friday, May 07, 2010	Investment Category:	Development
Type	SC - SCADA	Investment Driver:	Reliability
Description/Justification			
Continue expansion of Fibre SCADA data WAN to MS20			
Investment Scope			
Investment Results			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May		\$12,000.00	\$12,000.00
June			\$0.00
July			\$0.00
August			\$0.00
September		\$31,000.00	\$31,000.00
October		\$2,000.00	\$2,000.00
November			\$0.00
December			\$0.00
Totals	\$0.00	\$45,000.00	(\$45,000.00)


Business Case Justification
Expand Fibre network into MS20 and/or relocate communication equipment from sign tower
Alternative Considered
We will continue our existing IRU with Hydro One Telecom and use our standard communication equipment.

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	SCADA Communication Hardware (DNP)	Project Number:	2010-309
Project Manager:	Greg Mather	Project Technician:	Gladwin Hall
Last Updated:	Friday, May 07, 2010	Investment Category:	Development
Type	SC - SCADA	Investment Driver:	Reliability
Description/Justification			
Continue expansion of 2.4 GHz comm / DNP protocol system. This may include expansion of our fibre WAN as well.			
Investment Scope			
Investment Results			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February			\$0.00
March			\$0.00
April		\$4,000.00	\$4,000.00
May		\$4,000.00	\$4,000.00
June		\$4,000.00	\$4,000.00
July		\$6,000.00	\$6,000.00
August		\$4,000.00	\$4,000.00
September		\$4,000.00	\$4,000.00
October		\$7,000.00	\$7,000.00
November		\$6,000.00	\$6,000.00
December		\$6,000.00	\$6,000.00
Totals	\$0.00	\$45,000.00	(\$45,000.00)


Business Case Justification
Expand 2.4GHz Radio network to provide communication coverage to DNP RTU program. These funds will also allow for the purchase of more DNP based RTU equipment.
Alternative Considered
We will continue with our standard Freewave data radios to maintain compatibility with existing equipment

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Remote SCADA Battery Improvements	Project Number:	2010-310
Project Manager:	Greg Mather	Project Technician:	
Last Updated:	Friday, May 07, 2010	Investment Category:	Sustainment
Type	SC - SCADA	Investment Driver:	Reliability
Description/Justification			
Upgrade of end of life battery banks at Pole top SCADA installations			
Investment Scope			
Investment Results			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July		\$2,000.00	\$2,000.00
August		\$2,000.00	\$2,000.00
September			\$0.00
October			\$0.00
November			\$0.00
December			\$0.00
Totals	\$0.00	\$4,000.00	(\$4,000.00)


Business Case Justification
Replace end of life battery banks to ensure that SCADA switches will operate during outages when they are needed the most. This will increase system reliability.
Alternative Considered
Continue with our standard batteries to maintain compatibility with existing charger equipment

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	P&C Test Equipment	Project Number:	2010-313
Project Manager:	Greg Mather	Project Technician:	Glen Holmgren
Last Updated:	Friday, May 07, 2010	Investment Category:	Operations
Type	SC - SCADA	Investment Driver:	Reliability
Description/Justification			
Purchase of three phase recloser test kit, phase ID test kit, 80KV portable hi-pot, primary fault locating pick up and high voltage test cables for the P&C Department			
Investment Scope			
Investment Results			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February			\$0.00
March			\$0.00
April		\$2,000.00	\$2,000.00
May		\$5,000.00	\$5,000.00
June		\$5,000.00	\$5,000.00
July		\$5,000.00	\$5,000.00
August		\$5,000.00	\$5,000.00
September		\$5,000.00	\$5,000.00
October		\$5,000.00	\$5,000.00
November		\$4,000.00	\$4,000.00
December			\$0.00
Totals	\$0.00	\$36,000.00	(\$36,000.00)


Business Case Justification
Replace various pieces of obsolete / non functional test equipment
Alternative Considered
We plan on looking at equipment from several manufacturers.


		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	MS22 Protection Hardware	Project Number:	2010-315
Project Manager:	Greg Mather	Project Technician:	Gladwin Hall
Last Updated:	Friday, May 07, 2010	Investment Category:	Sustainment
Type	SC - SCADA	Investment Driver:	Technical Obsolescence
Description/Justification			
Replace obsolete protection relays at MS22			
Investment Scope			
Investment Results			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May		\$20,000.00	\$20,000.00
June			\$0.00
July			\$0.00
August			\$0.00
September		\$20,000.00	\$20,000.00
October		\$10,000.00	\$10,000.00
November			\$0.00
December			\$0.00
Totals	\$0.00	\$50,000.00	(\$50,000.00)


Business Case Justification
Existing ABB DPU200R relays are no longer supported by the manufacturer. New SEL 351A relays to be installed and ABB relays to be used as spares at MS10 and MS14.
Alternative Considered
We will use SEL 351 relays as they are the same as units installed at JYTS. This reduces spares costs and makes it easier for the Techs as they are familiar with the product.

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Three Phase Relay Test Equipment	Project Number:	2010-316
Project Manager:	Greg Mather	Project Technician:	Mike / Chris
Last Updated:	Friday, May 07, 2010	Investment Category:	Operations
Type	SC - SCADA	Investment Driver:	Reliability
Description/Justification			
Replace obsolete, poorly functioning relay test equipment			
Investment Scope			
Investment Results			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May		\$55,000.00	\$55,000.00
June		\$9,500.00	\$9,500.00
July		\$500.00	\$500.00
August			\$0.00
September			\$0.00
October			\$0.00
November			\$0.00
December			\$0.00
Totals	\$0.00	\$65,000.00	(\$65,000.00)

Business Case Justification
Existing AVO relay test kit has become unreliable and is no longer supported by the manufacturer. New test equipment is required to accurately test our protection systems.
Alternative Considered
We plan on looking at equipment from several manufacturers.

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	2010 New Development Feeder Cable & Switchgear Costs	Project Number:	2010-089
Project Manager:	Aldo Mastrofranceso	Project Technician:	Emil Sampaga
Last Updated:	Feb 16 2010	Investment Category:	Development
Type	System Expansion & Enhancement	Investment Driver:	Growth
Description/Justification			
<p>This annual pool is allocated for the installation of new underground feeder class facilities including pad-mounted switching devices and 600 amp feeder cable systems required to support residential load growth. Timing of expenditures is driven by development progress.</p>			
Investment Scope			
<p></p>			
Investment Results			
<p>To install feeder class distribution systems required to support new loads resulting from land development.</p>			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January		\$2,000.00	\$2,000.00
February		\$2,000.00	\$2,000.00
March		\$75,000.00	\$75,000.00
April		\$70,000.00	\$70,000.00
May		\$0.00	\$0.00
June		\$0.00	\$0.00
July		\$71,000.00	\$71,000.00
August		\$79,000.00	\$79,000.00
September		\$75,000.00	\$75,000.00
October		\$75,000.00	\$75,000.00
November		\$75,000.00	\$75,000.00
December		\$75,000.00	\$75,000.00
Totals		\$599,000.00	(\$599,000.00)

<p>Business Case Justification</p> <p>This funding enables the company to capitalize on joint use trench and duct opportunities for the installation of HOB feeder class systems, in conjunction development projects at the time of construction.</p>
<p>Alternative Considered</p> <p>None</p>
 <p>The top row contains two photographs of green metal electrical cabinets. The left cabinet is in a field with a mound of earth in the background. The right cabinet is in a field with tall grass in the foreground. The bottom photograph shows a worker in an orange safety suit and white hard hat working in a trench, handling large black cables. A stack of black pipes is visible on the right side of the trench.</p>


		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	4.16/27.6 Conversion Program to Eliminate MS-8. Construct new distribution facilities and convert loads from 4.16 kV to 27.6 kV.	Project Number:	2010-204
Project Manager:	Aldo Mastrofranceso	Project Technician:	Larry Boston
Last Updated:	February 18, 2010	Investment Category:	Sustainment
Type	System Expansion & Enhancement	Investment Driver:	Reliability
Description/Justification			
This project covers Hydro One Brampton Capital expenditures to convert an existing 4.16kV pole line to 27.6kV along McMurchy Ave from the OBRAG Rail Line to McHardy Crt.			
Investment Scope			
Eight new wood poles to be installed along McMurchy Ave to replace existing aged poles. New 27.6kV circuit to be installed on these new poles. Three - three phase transformer banks and one single phase transformer will be replaced. Secondary conductors to be upgraded where required.			
Investment Results			
This work is expected to be completed within the calendar year. The new 27.6kV circuit will improve reliability to our customers and complete one phase of a program to decommission an aging Municipal Station - MS 8.			
Cost & Timing Estimates			
Month	Actual Cost	Budget	Variance
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September		\$8,500.00	\$8,500.00
October		\$12,500.00	\$12,500.00
November		\$37,000.00	\$37,000.00
December			\$0.00
Totals	\$0.00	\$58,000.00	(\$58,000.00)

Business Case Justification

This program weighed rebuilding 2 ageing 4.16 kV municipal substations and the related distribution system vs. converting loads serviced by the ageing system to 27.6 kV. It was decided to convert the loads as this is in line with the company's objective of phasing out obsolete low voltage distribution systems and modernizing those systems to 27.6 kV.

Alternative Considered




		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Construct new facilities to supply new townhouse site	Project Number:	2010-206
Project Manager:	Aldo Mastrofranceso	Project Technician:	Emil Sampaga
Last Updated:	February 17, 2010	Investment Category:	Development
Type	System Expansion & Enhancement	Investment Driver:	Customer Demand
Description/Justification			
This project covers Hydro One Brampton Capital expenditures to convert an existing 4.16kV overhead line to 27.6kV in response to Technical Services' requirement for a 27.6kV supply to the new townhouse site at Sheard Ave. and Henderson Ave.			
Investment Scope			
Installation of Mid Span Opener (without jumpers) to isolate 4.16KV system not included in the conversion, re-insulation if required on selected poles, recovery of 4.16KV transformers (one 3-phase transformer bank and 3 1-phase transformers) and replacement with new 27.6KV transformers. Existing overhead primary conductors (556kcmil Al) will be used and will be connected to existing 27.6KV circuit along Haggert Ave South.			
Investment Results			
This work is expected to be completed within the calendar year. To extend a 27.6 kV circuit into an older 4.16 kV distribution area to service new development.			
Cost & Timing Estimates			
Month	Actual Cost	Budget	Variance
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September			\$0.00
October		\$33,500.00	\$33,500.00
November		\$24,500.00	\$24,500.00
December			\$0.00
Totals	\$0.00	\$58,000.00	(\$58,000.00)

Business Case Justification

Hydro One Brampton policy dictates that no new loads be added to the obsolete lower voltage distribution systems.

Alternative Considered




		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Construct M14 feeder tie across the CN Railway at the Brampton GO Station	Project Number:	2010-230
Project Manager:	Aldo Mastrofranceso	Project Technician:	Larry Boston
Last Updated:	February 18, 2010	Investment Category:	Development
Type	System Expansion & Enhancement	Investment Driver:	Reinforcement
Description/Justification			
This project covers Hydro One Brampton Capital expenditures to construct a M14 feeder tie across the CN Railway at the Brampton GO Station. This tie is required to extend the new 42M70 feeder to Kennedy Rd. to off load existing feeders at this location.			
Investment Scope			
Investment Results			
This work is expected to be completed within the calendar year.			
To complete a 27.6 kV circuit tie to off load existing feeders and improve system reliability by utilizing new capacity at Pleasant TS.			
Cost & Timing Estimates			
Month	Actual Cost	Budget	Variance
January		\$82,500.00	\$82,500.00
February		\$82,500.00	\$82,500.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September			\$0.00
October			\$0.00
November			\$0.00
December			\$0.00
Totals	\$0.00	\$165,000.00	(\$165,000.00)

Business Case Justification

This project is part of the feeder expansion plan at Pleasant TS which was designed to utilize new capacity provided by the construction of Dual Element Spot Network constructed by Hydro One Networks and funded by Hydro One Brampton.

Alternative Considered




		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Construct 27.6 kV pole line	Project Number:	2010-231
Project Manager:	Aldo Mastrofranceso	Project Technician:	Rolando Mena
Last Updated:	February 17, 2010	Investment Category:	Development
Type	System Expansion & Enhancement	Investment Driver:	Growth
Description/Justification			
This project covers Hydro One Brampton Capital expenditures to construct a 27.6kV pole line along Castlemore Road from Clarkway Drive to Highway 50 to tie in to a new pole line along Highway 50 in anticipation of load growth in the area.			
Investment Scope			
A new 700m pole line consisting of 13 concrete poles with one 27.6kV circuit is to be constructed. The pole line will be constructed along the south side of Castlemore Road starting at two spans east of Clarkway Drive to Highway 50. This pole line will be configured to allow for three additional circuits to be installed in the future.			
Investment Results			
This work is expected to be completed within the calendar year.			
To provide capacity for development and to create additional ties and switching flexibility between Goreway TS circuits 136M47 and 136M52.			
Cost & Timing Estimates			
Month	Actual Cost	Budget	Variance
January			\$0.00
February			\$0.00
March		\$4,100.00	\$4,100.00
April		\$4,100.00	\$4,100.00
May		\$8,200.00	\$8,200.00
June		\$79,000.00	\$79,000.00
July		\$83,000.00	\$83,000.00
August		\$41,000.00	\$41,000.00
September			\$0.00
October			\$0.00
November		\$3,600.00	\$3,600.00
December			\$0.00
Totals	\$0.00	\$223,000.00	(\$223,000.00)

Business Case Justification

Required to service development along the west side of Hwy 50

Alternative Considered



		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Construct 27.6 kV pole line	Project Number:	2010-232
Project Manager:	Aldo Mastrofranceso	Project Technician:	Larry Boston
Last Updated:	February 18, 2010	Investment Category:	Development
Type	System Expansion & Enhancement	Investment Driver:	Growth
Description/Justification			
<p>This project covers Hydro One Brampton Capital expenditures to construct a new 27.6kV pole line along Highway 50 from Clarkway Drive to Old Castlemore Road in advance of load growth resulting from development currently underway in this area. This new pole line will tie in with an existing pole line on Hwy 50 south of Clarkway Dr and a new pole line on Casitemore Rd.</p>			
Investment Scope			
<p>A new 2.2 km pole line consisting of 46 concrete poles with one 27.6kV circuit is to be constructed. The pole line is to be constructed along the west side of Hwy 50 starting at the south side of Clarkway Dr to Old Castlemore Rd. This pole line will be configured to allow for only two additional circuits to be installed in the future.</p>			
Investment Results			
<p>This work is expected to be completed within the calendar year.</p> <p>To provide capacity for development and to create additional ties and switching flexibility between Goreway TS circuits 136M47 and 136M52.</p>			
Cost & Timing Estimates			
Month	Actual Cost	Budget	Variance
January			\$0.00
February		\$1,650.00	\$1,650.00
March		\$1,650.00	\$1,650.00
April		\$1,650.00	\$1,650.00
May		\$1,650.00	\$1,650.00
June		\$1,650.00	\$1,650.00
July		\$41,250.00	\$41,250.00
August		\$165,000.00	\$165,000.00
September		\$123,750.00	\$123,750.00
October		\$123,750.00	\$123,750.00
November		\$33,000.00	\$33,000.00
December			\$0.00
Totals	\$0.00	\$495,000.00	(\$495,000.00)


Business Case Justification

Required to service developemnt along the west side of Hwy 50.

Alternative Considered



insert pdf of draft plan for this area

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Install 44kV Cable Risers c/w Cluster Switches	Project Number:	2010-233
Project Manager:	Aldo Mastrofranceso	Project Technician:	Carlton DeHajjle
Last Updated:	February 17, 2010	Investment Category:	Sustainment
Type	System Expansion & Enhancement	Investment Driver:	Safety
Description/Justification			
<p>This project involves the reconfiguration of two 44kV cable risers with the inclusion of Cluster Switches. The existing direct connection of the risers to the overhead circuits without any isolation switch other than at the MS-19 station is considered unsafe and inconvenient for operations.</p>			
Investment Scope			
<p>Two (2) 70ft wood poles are to replace the existing two 65ft riser poles and the 44kV riser cables are to be reconfigured to conform with the current Standard that incorporates cluster switches.</p>			
Investment Results			
<p>The construction is scheduled for completion during the first quarter of the calendar year.</p> <p>To eliminate phase over phase cable terminations which are difficult to isolate and ground.</p>			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January		\$1,650.00	\$1,650.00
February		\$82,500.00	\$82,500.00
March		\$47,850.00	\$47,850.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September			\$0.00
October			\$0.00
November			\$0.00
December			\$0.00
Totals	\$0.00	\$132,000.00	(\$132,000.00)


Business Case Justification

1. Improved operational efficiency for work zone isolation activities
2. Improved safety owing to conformity with the most recent company Standards.


Alternative Considered

1. This project is a product of the company's safety initiatives




		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Install a 44 kV LIS on the 74M44 circuit	Project Number:	2010-236
Project Manager:	Aldo Mastrofranceso	Project Technician:	Carlton DeHajjle
Last Updated:	February 17, 2010	Investment Category:	Sustainment
Type	System Expansion & Enhancement	Investment Driver:	Reliability
Description/Justification			
<p>This project involves the replacement of solid blade switches 44-261 on the 74M44 circuit at Airport Rd, north of Queen St, with a Load Interrupter Switch. Efficient and rapid three phase switching will as a result be possible thereby enhancing operation and control of the network.</p>			
Investment Scope			
<p>One(1) 70ft concrete pole is to replace the existing 65ft pole with existing storm guying being re-used. The 44kV Load Interrupter Switch complete with manual operating assembly is to be installed on the new and re-framed concrete pole.</p>			
Investment Results			
<p>The construction is scheduled for completion during the first third of the calendar year.</p> <p>To provide three phase switching capability at this location.</p>			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January		\$1,650.00	\$1,650.00
February		\$1,650.00	\$1,650.00
March		\$32,800.00	\$32,800.00
April		\$4,900.00	\$4,900.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September			\$0.00
October			\$0.00
November			\$0.00
December			\$0.00
Totals	\$0.00	\$41,000.00	(\$41,000.00)


Business Case Justification
<p>1. Improved operational efficiency for work zone isolation activities</p> <p>2. Improved operational efficiency owing to switching being made possible expeditiously from ground level.</p> <p>3. This project will improve feeder sectionalizing, outage response time and overall reliability, by eliminating three single phase in line switches and installing a gang operated three phase load interrupting switch.</p>
Alternative Considered
<p>1. Not Applicable</p>

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Install 27.6 kV LIS on the 42M45 Circuit	Project Number:	2010-237
Project Manager:	Aldo Mastrofranceso	Project Technician:	Larry Boston
Last Updated:	February 18, 2010	Investment Category:	Sustainment
Type	System Expansion & Enhancement	Investment Driver:	Reliability
Description/Justification			
<p>This project covers Hydro One Brampton Capital expenditures to replace existing in-line switch 20-1293 located on Mayfield Rd east of Hurontario St with a Tiered Outboard Load Interrupter Switch. This will enhance the switching capabilities on the 42M45 circuit.</p>			
Investment Scope			
<p>A new 27.6kV Tiered Outboard Load Interrupter Switch complete with manual operating assembly will be installed on the existing pole. A new concrete stub pole and the associated span guying will be installed as well.</p>			
Investment Results			
<p>This work is expected to be completed within the calendar year.</p> <p>To provide 3-phase ganged switching at this location.</p>			
Cost & Timing Estimates			
Month	Actual Cost	Budget	Variance
January		\$1,650.00	\$1,650.00
February		\$1,650.00	\$1,650.00
March		\$32,800.00	\$32,800.00
April		\$4,900.00	\$4,900.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September			\$0.00
October			\$0.00
November			\$0.00
December			\$0.00
Totals	\$0.00	\$41,000.00	(\$41,000.00)

Business Case Justification
<p>This project will improve feeder sectionalizing, outage response time and overall reliability, by eliminating three single phase in line switches and installing a gang operated three phase load interrupting switch.</p>
Alternative Considered
<p>One(1) 70ft concrete pole is to replace the existing 65ft pole with existing storm guying being re-used. The 44kV Load Interrupter Switch complete with manual operating assembly is to be installed on the new and re-framed concrete pole.</p>

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Wanless Dr 42M 67 Feeder Extension - Chinguacousy Rd to McLaughlin Rd	Project Number:	2010-240
Project Manager:	Aldo Mastrofranceso	Project Technician:	
Last Updated:	June 11, 2010	Investment Category:	Development
Type	System Rehabilitation & Equipment Replacement	Investment Driver:	Growth
Description/Justification			
Wanless Dr 42M 67 Feeder Extension - Chinguacousy Rd to McLaughlin Rd. This project is required to install new facilities needed to utilize the capacity of the previously constructed 42M67 circuit, currently dead ended on Chinguacousy Rd south of Wanless Dr.			
Investment Scope			
Install new polymer insulators complete with supports and string approximately 2 km of three phase 556 kcmil ASC conductor. Complete a fly tap connection at Wanless Dr and Chinguacousy Rd. and splice through to existing conductor currently dead ended on Chinguacousy Rd and on Wanless DR west of McLaughlin Rd.			
Investment Results			
Extend the servicing range of the 42M67 circuit to facilitate off loading of the existing 42M43 and to provide improved contingency options for feeder circuits in this area.			
Work to be completed by Dec 31, 2010			
Cost & Timing Estimates			
Month	Actual Cost	Budget	Variance
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September		\$65,000.00	\$65,000.00
October		\$65,000.00	\$65,000.00
November		\$64,000.00	\$64,000.00
December			\$0.00
Totals	\$0.00	\$194,000.00	(\$194,000.00)

Business Case Justification
Loads currently serviced by the 42M43 are exceeding the rating of this circuit during peak load periods. Planning has identified this as a priority due to very limited offloading options on this circuit and the number of customers involved.
Alternative Considered
None applicable.

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Install Solid Blade In-Line Switches	Project Number:	2010-241
Project Manager:	Aldo Mastrofranceso	Project Technician:	
Last Updated:	June 11, 2010	Investment Category:	Development
Type	System Rehabilitation & Equipment Replacement	Investment Driver:	Growth
Description/Justification			
Install sectionalizing capabilities between two feeder circuits at an existing twin circuit dead end structure at Kennedy Rd and the CNR Tracks			
Investment Scope			
Reframe an existing dead end structure to increase conductor spacing to facilitate the installation of solid blade in line switches. Switches are required to connect the two feeders dead ended at this location.			
Investment Results			
To be able to transfer load from one feeder to another during times of heavy loading.			
Cost & Timing Estimates			
Month	Actual Cost	Budget	Variance
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September			\$0.00
October		\$20,000.00	\$20,000.00
November		\$21,000.00	\$21,000.00
December			\$0.00
Totals	\$0.00	\$41,000.00	(\$41,000.00)






**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2010**


Project Title:	Parallel Step-down/Phase for Loading	Project Number:	2010-242
Project Manager:	Aldo Mastrofranceso	Project Technician:	Emil Sampaga
Last Updated:	June 11, 2010	Investment Category:	Development
Type	System Rehabilitation & Equipment Replacement	Investment Driver:	Growth
Description/Justification			
This Capital project is required to alleviate loading problems on existing three 250KVA, 16000-4800V step-down transformers on Pole nos. 2044, 2058, and 2072 located Along Bovaird Dr, west of Mississauga Rd. New three 250KVA step down transformers will be installed in parallel with existing units for increased capacity.			
Investment Scope			
Installation of new three 250KVA, 16000-4800V step down transformers .			
Investment Results			
To increase capacity on an existing 8.32 k V circuit supplied via step down transformation from a 27.6 kV source. This project is expected to be completed within the calendar year.			
Cost & Timing Estimates			
Month	Actual Cost	Budget	Variance
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September			\$0.00
October		\$30,000.00	\$30,000.00
November		\$28,000.00	\$28,000.00
December			\$0.00
Totals	\$0.00	\$58,000.00	(\$58,000.00)




Example of a similar installation, note fuses are at the transformer location. This will not be the case for this project.

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Bardin Fault Indicator Beta Sites	Project Number:	2010-243
Project Manager:	Aldo Mastrofranceso	Project Technician:	
Last Updated:	June 11, 2010	Investment Category:	Development
Type	System Rehabilitation & Equipment Replacement	Investment Driver:	Growth
Description/Justification			
This project has been initiated to add intelligent fault detection and load monitoring devices at 5 - 44 kV switch locations.			
Investment Scope			
Install Bardin Fault Indicators at 5 existing motorized 44 kV Load Interrupter switch sites.			
Investment Results			
The Bardin Fault indicating devices will provide control room operators with real time current values. This information is required when preparing switching operations involving paralleling of loads between separate transformer stations. This will improve system reliability by avoiding excessive current flows during paralleling operations.			
Cost & Timing Estimates			
Month	Actual Cost	Budget	Variance
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September			\$0.00
October		\$11,000.00	\$11,000.00
November		\$14,000.00	\$14,000.00
December			\$0.00
Totals	\$0.00	\$25,000.00	(\$25,000.00)

Business Case Justification
<p>Bardin FCI was chosen because the device can monitor/record the load current every hour. The control room operators can identify the load current before & after switching operation, especially during load transfer. The operators know exactly how much load to transfer and can read the total load current after the load transfer.</p>
Alternative Considered

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Countryside Dr. Pole line Extension	Project Number:	2010-244
Project Manager:	Aldo Mastrofranceso	Project Technician:	
Last Updated:	June 11, 2010	Investment Category:	Development
Type	System Rehabilitation & Equipment Replacement	Investment Driver:	Growth
Description/Justification			
This project is designed to improve customer reliability by providing an alternate supply to a single ended feeder circuit supplying a larger residential customer base.			
Investment Scope			
Construct 27.6 kV pole line facilities along Countryside Dr from The Gore Rd to Evergreen Dr and complete a connection between two 27.6 kV circuits.			
Investment Results			
To improve customer reliability by providing a second point of supply for contingency during the loss of the normal supply.			
Cost & Timing Estimates			
Month	Actual Cost	Budget	Variance
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September		\$65,000.00	\$65,000.00
October		\$86,000.00	\$86,000.00
November		\$75,000.00	\$75,000.00
December			\$0.00
Totals	\$0.00	\$161,000.00	(\$226,000.00)


Business Case Justification
Alternative Considered

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Install a 27.6 kV Load Interrupter Switch	Project Number:	2010-245
Project Manager:	Aldo Mastrofranceso	Project Technician:	
Last Updated:	June 11, 2010	Investment Category:	Development
Type	System Rehabilitation & Equipment Replacement	Investment Driver:	Growth
Description/Justification			
Provide load break switching capabilities on the 42M14 circuit on Van Kirk Dr south of Sandalwood Pkwy			
Investment Scope			
Recover Inline switch 20-1115 and install a 27.6 kV LIS			
Investment Results			
To improve customer reliability and response time to system events by providing feeder sectionalizing capabilities via a 27.6 kV LIS.			
Cost & Timing Estimates			
Month	Actual Cost	Budget	Variance
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September		\$10,000.00	\$10,000.00
October		\$20,000.00	\$20,000.00
November		\$20,000.00	\$20,000.00
December			\$0.00
Totals	\$0.00	\$50,000.00	(\$50,000.00)


Business Case Justification

Alternative Considered




		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Install G&W 3PH 3-WAY DEAD FRONT SUBMERSIBLE VACUUM SWITCH in Vault 910	Project Number:	2010-262
Project Manager:	Aldo Mastrofranceso	Project Technician:	Larry Boston
Last Updated:	February 18, 2010	Investment Category:	Sustainment
Type	System Expansion & Enhancement	Investment Driver:	Safety
Description/Justification			
This project covers Hydro One Brampton Capital expenditures to install a G&W 3Ph 3-Way Dead Front Submersible Vacuum Switch in vault 910 located at the SE corner of Queen St and Rutherford Rd. This will enable crews to safely switch submersible 200A installations while remaining above grade - improving switching time, reliability and worker safety.			
Investment Scope			
Investment Results			
This work is expected to be completed within the calendar year.			
To provide remote above grade switching for a submersible 200A installation.			
Cost & Timing Estimates			
Month	Actual Cost	Budget	Variance
January		\$25,000.00	\$25,000.00
February		\$25,000.00	\$25,000.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September			\$0.00
October			\$0.00
November			\$0.00
December			\$0.00
Totals	\$0.00	\$50,000.00	(\$50,000.00)

Business Case Justification
<p>This project will enable crews to safely switch a submersible 200A installation while remaining above grade - improving worker safety, switching time and reliability. This will also improve our ability to respond to system events on this circuit, which services a prime downtown commercial centre.</p>
Alternative Considered

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Install G&W 3PH 3-WAY DEAD FRONT SUBMERSIBLE VACUUM SWITCH in Vault 9439	Project Number:	2010-263
Project Manager:	Aldo Mastrofranceso	Project Technician:	Larry Boston
Last Updated:	February 18, 2010	Investment Category:	Sustainment
Type	System Expansion & Enhancement	Investment Driver:	Safety
Description/Justification			
<p>This project covers Hydro One Brampton Capital expenditures to install a G&W 3Ph 3-Way Dead Front Submersible Vacuum Switch in vault 9439 located on Queen St east of Main St. This will enable crews to safely switch the submersible transformers installed in vault 9439 while standing above grade - improving switching time and reliability. This work is to be completed in conjunction with the rebuild of vault 9439.</p>			
Investment Scope			
<p>This work is expected to be completed within the calendar year.</p> <p>To provide remote above grade switching for a submersible 200A installation.</p>			
Investment Results			
Cost & Timing Estimates			
Month	Actual Cost	Budget	Variance
January		\$25,000.00	\$25,000.00
February		\$25,000.00	\$25,000.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September			\$0.00
October			\$0.00
November			\$0.00
December			\$0.00
Totals	\$0.00	\$50,000.00	(\$50,000.00)

Business Case Justification
<p>This project will enable crews to safely switch a submersible 200A installation while remaining above grade - improving worker safety, switching time and reliability. This will also improve our ability to respond to system events on this circuit, which services a prime downtown commercial centre.</p>
Alternative Considered

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010		
Project Title:	Area Rehabilitation and Voltage Conversion Project - Corby Cres.	Project Number:	2010-269	
Project Manager:	Aldo Mastrofranceso	Project Technician:	Emil Sampaga	
Last Updated:	Feb 16 2010	Investment Category:	Sustainment	
Type	System Expansion & Enhancement	Investment Driver:	Reliability	
Description/Justification				
<p>This project is required to replace aging distribution facilities including a 4.16 kV to 27.6 kV voltage conversion to facilitate the decommissioning and removal of an aged low voltage substation MS-8.</p>				
Investment Scope				
<p>This work is expected to be completed within the calendar year.</p> <p>The new 27.6kV distribution system will improve reliability to our customers in this area and will complete one phase of a program to decommission an aging Municipal Station - MS 8.</p>				
Investment Results				
<p>This work is expected to be completed within the calendar year.</p> <p>The new 27.6kV distribution system will improve reliability to our customers in this area and will complete one phase of a program to decommission an aging Municipal Station - MS 8.</p>				
Cost & Timing Estimates				
	<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
	January			\$0.00
	February			\$0.00
	March			\$0.00
	April		\$4,000.00	\$4,000.00
	May		\$4,000.00	\$4,000.00
	June		\$8,000.00	\$8,000.00
	July		\$107,000.00	\$107,000.00
	August		\$83,000.00	\$83,000.00
	September		\$83,000.00	\$83,000.00
	October		\$124,000.00	\$124,000.00
	November			\$0.00
	December			\$0.00
	Totals	\$0.00	\$413,000.00	(\$413,000.00)

Business Case Justification


This program weighed rebuilding 2 ageing 4.16 kV municipal substations and the related distribution system vs. converting loads serviced by the ageing system to 27.6 kV. It was decided to convert the loads as this is in line with the company's objective of phasing out obsolete low voltage distribution systems and modernizing those systems to 27.6 kV.

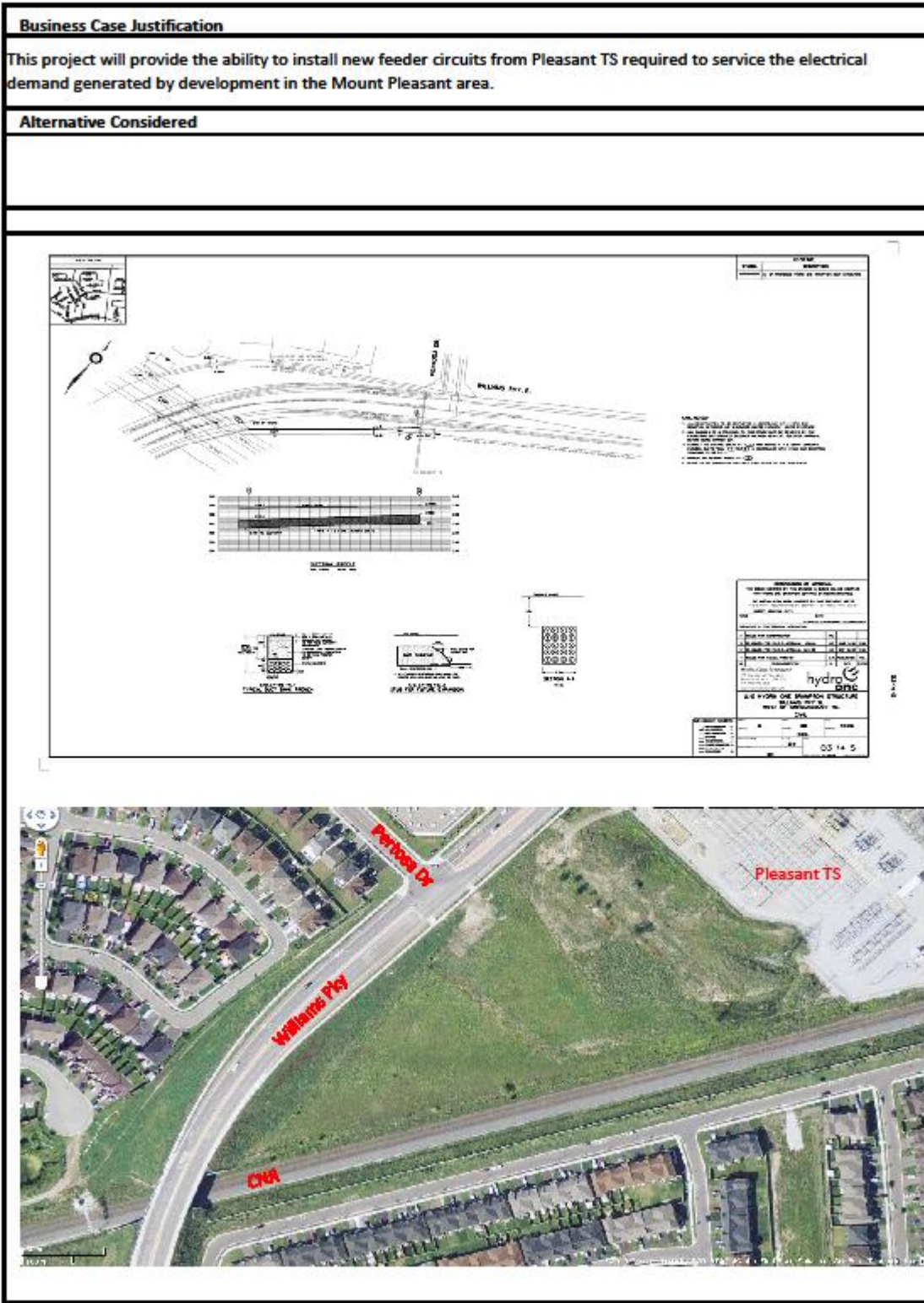
Alternative Considered


Replace 4.16 station transformers and rebuild low voltage distribution system.





		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Concrete encased duct installations for all future 27.6 kV feeder egress from new DESN - Pleasant TS	Project Number:	2010-270
Project Manager:	Aldo Mastrofranceso	Project Technician:	Rolando Mena
Last Updated:	February 17, 2010	Investment Category:	Development
Type	System Expansion & Enhancement	Investment Driver:	Growth
Description/Justification			
<p>This project is required to install new underground duct banks along Williams Parkway going west from Pleasant TS. This will provide connection to the previously installed duct banks from Pleasant TS and the existing duct banks, which terminated at the north side of CNR, south of Williams Parkway.</p> <p>This project is required to facilitate future feeder cable egress' from the new Pleasant TS DESN.</p>			
Investment Scope			
<p>A total of 170m of 20 duct - concrete encased duct bank with reinforcement bar is to be constructed to complete the duct bank egress for all future 27.6kV feeder egress from the new DESN at Pleasant TS. The duct bank infrastructure will run along the south side of Williams Pky to connect to existing ductbanks at CNR and to existing ductbanks at Pertosa Dr. and Williams Pky intersection.</p>			
Investment Results			
<p>This work is expected to be completed within the calendar year.</p> <p>To provide infrastructure needed for future underground feeder cable installation connecting to a new DESN at Pleasant TS.</p>			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August		\$4,750.00	\$4,750.00
September		\$4,125.00	\$4,125.00
October		\$4,125.00	\$4,125.00
November		\$69,500.00	\$69,500.00
December		\$82,500.00	\$82,500.00
Totals	\$0.00	\$165,000.00	(\$165,000.00)




		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Goreway TS Civil Works - Phase 2	Project Number:	2010-271
Project Manager:	Aldo Mastrofranceso	Project Technician:	Carlton DeHajile
Last Updated:	February 17, 2010	Investment Category:	Development
Type	System Expansion & Enhancement	Investment Driver:	Growth
Description/Justification			
<p>This project involves the completion (phase 2 of 2) of the construction of duct bank egress for all future 27.6kV and 44kV feeder egress from the new 2nd DESN at the Goreway TS.</p>			
Investment Scope			
<p>A total of 276m of 16 duct and 32m of 4 duct concrete encased duct bank with reinforcement bar is to be constructed to complete the duct bank egress for all future 27.6kV and 44kV feeder egress from the 2nd new DESN. The duct bank infrastructure ends at the eastern boulevard Goreway Dr to the north of the Goreway TS.</p>			
Investment Results			
<p>The phase 2 duct bank egress is scheduled to be completed by May 4, 2010. This will permit the needed installation of the 136M4 feeder egress that is required at Project No. 2010-287.</p>			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January		\$2,000.00	\$2,000.00
February		\$16,500.00	\$16,500.00
March		\$106,500.00	\$106,500.00
April		\$238,000.00	\$238,000.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September			\$0.00
October			\$0.00
November			\$0.00
December			\$0.00
Totals	\$0.00	\$363,000.00	(\$363,000.00)

Business Case Justification

1. To provide infrastructure for future feeder cable connections.
2. To utilize additional capacity at Goreway TS needed to off load existing feeder circuits.
3. To support load growth driven by development in the Toronto Gore area.

Alternative Considered

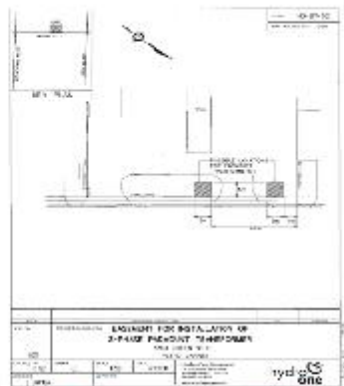


		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Install 3 phase padmount TX	Project Number:	2010-272
Project Manager:	Aldo Mastrofranceso	Project Technician:	Emil Sampaga
Last Updated:	Feb 16 2010	Investment Category:	Development
Type	System Expansion & Enhancement	Investment Driver:	Growth
Description/Justification			
<p>This is a 2010 Capital Project identified as being required to provide 347/600V supply to Petro Canada 354 Queen St East which is currently fed from a distant (approx. 180 meters) submersible transformer vault T910.</p>			
Investment Scope			
<p>This project covers installation of a new 3 phase padmount transformer that requires easement, construction of 3-100mm ductbank, and installation of underground primary cables.</p>			
Investment Results			
<p>This work is expected to be completed within the calendar year.</p> <p>To improve worker safety by eliminating dual three phase transformer banks located in one below grade utility chamber.</p>			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September		\$4,000.00	\$4,000.00
October		\$4,000.00	\$4,000.00
November		\$25,000.00	\$25,000.00
December		\$21,000.00	\$21,000.00
Totals	\$0.00	\$54,000.00	(\$54,000.00)


Business Case Justification

This project is designed to improve worker safety and customer reliability.

Alternative Considered






		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Convert T9250 to 27.6 kV	Project Number:	2010-276
Project Manager:	Aldo Mastrofranceso	Project Technician:	Emil Sampaga
Last Updated:	Feb 16 2010	Investment Category:	Sustainment
Type	System Expansion & Enhancement	Investment Driver:	Reliability
Description/Justification			
<p>This project is required for conversion of an aged 4.16KV system to 27.6KV system to facilitate decommissioning of low voltage municipal substations. Install a three phase 27.6 kV padmount transformer to replace T9250 on George St north of Wellington.</p>			
Investment Scope			
<p>Existing 3-100KVA, 2400-120/240V transformer bank will be replaced with three phase 27.6KV padmount transformer that requires easement. A total of 130m new 28KV underground primary cables will be installed on existing 6-100mm duct bank about 32m in length and will be spliced on existing 28KV cables in MH #60 located along George St.</p>			
Investment Results			
<p>This work is expected to be completed within the calendar year.</p> <p>Convert transformer vault T9250 to a 27.6 pad-mount transformer.</p>			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September			\$0.00
October			\$0.00
November		\$29,000.00	\$29,000.00
December		\$29,000.00	\$29,000.00
Totals	\$0.00	\$58,000.00	(\$58,000.00)

Business Case Justification

This is in line with the company's objective of phasing out obsolete low voltage distribution systems and modernizing those systems to 27.6 kV.

Alternative Considered




		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Convert Transformer Vaults from 4KV to 27.6KV	Project Number:	2010-278
Project Manager:	Aldo Mastrofranceso	Project Technician:	Emil Sampaga
Last Updated:	Feb 16 2010	Investment Category:	Sustainment
Type	System Expansion & Enhancement	Investment Driver:	Reliability
Description/Justification			
<p>This project is required to convert 4.16 kV distribution systems to 27.6 kV system to facilitate decommissioning low voltage municipal substations. Convert transformer vault T10340 at 80 Scott St and eliminate antiquated primary metering unit.</p>			
Investment Scope			
<p>This project covers replacement of existing 4.16KV transformer bank with 27.6KV transformer bank. This job requires 4.16KV to 27.6KV conversion of existing overhead lines along Scott St (replacement of five old 35' poles and one 1-phase transformer) to connect to the existing 27.6KV circuit along Church St East. New 32m duct bank and a total of 220m underground primary cables will also be installed from riser pole to the new 27.6KV transformer vault.</p>			
Investment Results			
<p>This work is expected to be completed within the calendar year.</p> <p>Improve customer reliability and worker safety.</p>			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September			\$0.00
October			\$0.00
November			\$0.00
December		\$58,000.00	\$58,000.00
Totals	\$0.00	\$58,000.00	(\$58,000.00)

Business Case Justification

This project will improve customer reliability and worker safety by eliminating antiquated sub standard transformer vault installations.

Alternative Considered



		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Convert Transformer Vaults from 4.16 kV to 27.6 kV	Project Number:	2010-279
Project Manager:	Aldo Mastrofranceso	Project Technician:	Emil Sampaga
Last Updated:	Feb 16 2010	Investment Category:	Sustainment
Type	System Expansion & Enhancement	Investment Driver:	Reliability
Description/Justification			
<p>This project is required to convert 4.16 kV distribution systems to 27.6 kV system to facilitate decommissioning low voltage municipal substations. Convert transformer vault T10249 at 49 McMurchy Ave N from 4.16KV to 27.6KV.</p>			
Investment Scope			
<p>Investment Results</p> <p>This work is expected to be completed within the calendar year.</p> <p>Improve customer reliability and worker safety.</p>			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September			\$0.00
October			\$0.00
November			\$0.00
December		\$58,000.00	\$58,000.00
Totals	\$0.00	\$58,000.00	(\$58,000.00)


Business Case Justification

This is in line with the company's objective of phasing out obsolete low voltage distribution systems and modernizing those systems to 27.6 kV.

This project will improve customer reliability and worker safety by eliminating antiquated sub standard transformer vault installations.

Alternative Considered



		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Convert Transformer Vaults from 4.16 kV to 27.6 kV	Project Number:	2010-281
Project Manager:	Aldo Mastrofranceso	Project Technician:	Emil Sampaga
Last Updated:	Feb 16 2010	Investment Category:	Sustainment
Type	System Expansion & Enhancement	Investment Driver:	Reliability
Description/Justification			
<p>This project is required to convert 4.16 kV distribution systems to 27.6 kV system to facilitate decommissioning low voltage municipal substations. Convert transformer vault T10317 at 99 Kennedy Rd from 4.16KV to 27.6KV.</p>			
Investment Scope			
<p>This project covers recovery of existing 4.16KV transformer bank and underground cables, installation of new 27.6KV transformer bank, construction of new 17m duct bank to be spliced to existing duct bank along Kennedy Rd, installation of a total of 280m new underground primary cables, and installation of new 27.6KV cluster switch. New transformer bank installation will be connected to existing 27.6KV circuit along Kennedy Ave.</p>			
Investment Results			
<p>This work is expected to be completed within the calendar year.</p> <p>Improve customer reliability and worker safety.</p>			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September			\$0.00
October			\$0.00
November			\$0.00
December		\$41,000.00	\$41,000.00
Totals	\$0.00	\$41,000.00	(\$41,000.00)


Business Case Justification

This is in line with the company's objective of phasing out obsolete low voltage distribution systems and modernizing those systems to 27.6 kV.

This project will improve customer reliability and worker safety by eliminating antiquated sub standard transformer vault installations.

Alternative Considered



		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Convert Transformer Vaults from 4.16 kV to 27.6 kV	Project Number:	2010-282
Project Manager:	Aldo Mastrofranceso	Project Technician:	Emil Sampaga
Last Updated:	Feb 16 2010	Investment Category:	Sustainment
Type	System Expansion & Enhancement	Investment Driver:	Reliability
Description/Justification			
<p>This project is required to convert 4.16 kV distribution systems to 27.6 kV system to facilitate decommissioning low voltage municipal substations. Convert transformer vault T10293 at 47 McMurchy Ave N from 4.16 kV to 27.6 kV.</p>			
Investment Scope			
<p>This project covers recovery of existing 4.16KV transformer bank, installation of new 27.6KV transformer bank, construction of new 45m duct bank, installation of new 210m underground primary cables, and installation of new 27.6 KV cluster switch. New transformer bank installation will be connected to existing 27.6KV circuit along McMurchy Ave.</p>			
Investment Results			
<p>This work is expected to be completed within the calendar year.</p> <p>Improve customer reliability and worker safety.</p>			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September			\$0.00
October			\$0.00
November			\$0.00
December		\$54,000.00	\$54,000.00
Totals	\$0.00	\$54,000.00	(\$54,000.00)


Business Case Justification

This is in line with the company's objective of phasing out obsolete low voltage distribution systems and modernizing those systems to 27.6 kV.

This project will improve customer reliability and worker safety by eliminating antiquated sub standard transformer vault installations.

Alternative Considered



		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Convert Transformer Vaults from 4.16 kV to 27.6 kV	Project Number:	2010-283
Project Manager:	Aldo Mastrofranceso	Project Technician:	Emil Sampaga
Last Updated:	Feb 16 2010	Investment Category:	Sustainment
Type	System Expansion & Enhancement	Investment Driver:	Reliability
Description/Justification			
<p>This project is required to convert 4.16 kV distribution systems to 27.6 kV system to facilitate decommissioning low voltage municipal substations. Convert transformer vault T10291 at 53 McMurchy Ave from 4.16 kV to 27.6 kV.</p>			
Investment Scope			
<p>This project covers recovery of existing 4.16KV transformer bank, installation of new 27.6KV transformer bank, construction of new 75m duct bank, installation of new 300m underground primary cables, and installation of new 27.6 KV cluster switch. New transformer bank installation will be connected to existing 27.6KV circuit along McMurchy Ave.</p>			
Investment Results			
<p>This work is expected to be completed within the calendar year.</p> <p>Improve customer reliability and worker safety.</p>			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September			\$0.00
October		\$27,000.00	\$27,000.00
November		\$27,000.00	\$27,000.00
December			\$0.00
Totals	\$0.00	\$54,000.00	(\$54,000.00)


Business Case Justification

This is in line with the company's objective of phasing out obsolete low voltage distribution systems and modernizing those systems to 27.6 kV.

This project will improve customer reliability and worker safety by eliminating antiquated sub standard transformer vault installations.

Alternative Considered




		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Rebuild vault roof structure	Project Number:	2010-284
Project Manager:	Aldo Mastrofranceso	Project Technician:	Larry Boston
Last Updated:	February 18, 2010	Investment Category:	Sustainment
Type	System Expansion & Enhancement	Investment Driver:	Safety
Description/Justification			
<p>This project covers Hydro One Brampton Capital expenditures to replace the roof structure of vault 9439 located on Queen St east of Main St. The existing roof structure is deteriorating and must be rebuilt to protect our equipment and workers and for public safety.</p>			
Investment Scope			
<p>The existing roof structure will be dismantled and rebuilt incorporating concrete and rebar to engineered standards. Consultant to supply stamped approved drawings for the new roof structure.</p>			
Investment Results			
<p>This work is expected to be completed within the calendar year. This below grade vault supports transformation and primary devices. Vault structure integrity is to be confirmed for worker and public safety.</p>			
Cost & Timing Estimates			
Month	Actual Cost	Budget	Variance
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September			\$0.00
October			\$0.00
November			\$0.00
December		\$66,000.00	\$66,000.00
Totals	\$0.00	\$66,000.00	(\$66,000.00)

Business Case Justification

To mitigate the risk associated with the failure of a below grade structure.

Alternative Considered




		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Install 136M4 Feeder Cable egress Goreway TS	Project Number:	2010-287
Project Manager:	Aldo Mastrofranceso	Project Technician:	Carlton DeHajile
Last Updated:	February 17, 2010	Investment Category:	Development
Type	System Expansion & Enhancement	Investment Driver:	Growth
Description/Justification			
<p>This project involves the installation of a 27.6kV feeder (136M4) egress from the new (2nd DESN) at the Goreway Transformer Station. Feeder load statistics monitored by the Planning and Standards group established the necessity for the additional distribution plant capacity to accommodate increasing demand in the Toronto Gore area.</p>			
Investment Scope			
<p>2,703m of 28kV, 1000 kcmil and 897m of 250 kcmil Cu underground cable is to be installed in existing and new ducts. The cable is to be routed from the 136M4 bay at the Goreway TS in existing ducts to a riser pole on Goreway Dr that is 489m north of the latter. A fourth 626m O/H circuit is to be added to the existing pole-line between the said riser pole on Goreway Dr and the riser pole at Cottrelle Blvd to the north. The riser pole at the latter location is to be reconfigured to facilitate the new electrical connections to effect the off-loading.</p>			
Investment Results			
<p>The 136M4 feeder is scheduled to be commissioned by May 31, 2010</p>			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February			\$0.00
March			\$0.00
April		\$1,500.00	\$1,500.00
May		\$121,000.00	\$121,000.00
June		\$1,500.00	\$1,500.00
July			\$0.00
August			\$0.00
September			\$0.00
October			\$0.00
November			\$0.00
December			\$0.00
Totals	\$0.00	\$124,000.00	(\$124,000.00)

Business Case Justification

1. To utilize additional capacity at Goreway TS needed to off load existing feeder circuits.
2. To support load growth driven by development in the Toronto Gore area.

Alternative Considered



		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Install 136M2 feeder Cable egress Goreway TS	Project Number:	2010-288
Project Manager:	Aldo Mastrofranceso	Project Technician:	Carlton DeHajjle
Last Updated:	February 17, 2010	Investment Category:	Development
Type	System Expansion & Enhancement	Investment Driver:	Growth
Description/Justification			
<p>This project involves the installation of a 27.6kV feeder (136M2) egress from the new (2nd DESN) at the Goreway Transformer Station. Feeder load statistics monitored by the Planning and Standards group established the necessity for additional distribution plant capacity to accommodate demand.</p>			
Investment Scope			
<p>2,684 metres of 28kV, 1000 kcmil and 889metres of 250 kcmil Cu underground cable is to be installed in existing as well as new ducts. The cable is to be routed from the 136M2 bay at the Goreway TS in existing ducts to a riser pole on Sun Pac Blvd that is approximately 78m south of Williams Pkwy. The existing overhead circuits at Sun Pac Blvd are to be reconfigured to facilitate the new electrical connections to effect the off-loading.</p>			
Investment Results			
<p>The 136M2 feeder is scheduled to be commissioned by July 01, 2010</p>			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February			\$0.00
March			\$0.00
April		\$8,250.00	\$8,250.00
May		\$8,250.00	\$8,250.00
June		\$124,000.00	\$124,000.00
July		\$148,500.00	\$148,500.00
August			\$0.00
September			\$0.00
October			\$0.00
November			\$0.00
December			\$0.00
Totals	\$0.00	\$289,000.00	(\$289,000.00)


Business Case Justification

1. To utilize additional capacity at Goreway TS needed to off load existing feeder circuits.
2. To support load growth driven by development in the Toronto Gore area.

Alternative Considered





		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Install Composite Pole Top Extensions	Project Number:	2010-293
Project Manager:	Aldo Mastrofranceso	Project Technician:	Emil Sampaga
Last Updated:	Feb 16 2010	Investment Category:	Sustainment
Type	System Expansion & Enhancement	Investment Driver:	Reliability
Description/Justification			
<p>This is a 2010 Capital Project identified as being required to increase fly tap spacing of O/H conductors. Install composite pole top extensions at Bovaird and Chinguacousy Rd.</p>			
Investment Scope			
<p>Installation of composite pole extensions is still under evaluation by the reliability committee, materials, and standards. Once evaluation is completed, a pilot program will be implemented and details will be forwarded to engineering.</p>			
Investment Results			
<p>This work is expected to be completed within the calendar year.</p> <p>Increase phase to phase separation in accordance with current standards.</p>			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September			\$0.00
October			\$0.00
November		\$20,500.00	\$20,500.00
December		\$20,500.00	\$20,500.00
Totals	\$0.00	\$41,000.00	(\$41,000.00)


Business Case Justification

To mitigate the risk of an outage caused by phase to phase contact.

Alternative Considered

Replace existing concrete poles with taller poles.



		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Convert Single Phase Transformers from 4.8 kV to 16 kV	Project Number:	2010-296
Project Manager:	Aldo Mastrofranceso	Project Technician:	Carlton DeHajjle
Last Updated:	February 17, 2010	Investment Category:	Sustainment
Type	System Expansion & Enhancement	Investment Driver:	Technical Obsolescence
Description/Justification			
This project involves the replacement of single phase 4.8 kV Distribution Transformers with 16 kV Units supplied from the 27.6kV overhead distribution in the area. This will facilitate the decommissioning of MS-17, a low voltage substation.			
Investment Scope			
Nine (9) Single Phase 4.8kV Distribution Transformers of total capacity 437kVA are to be replaced with 16kV Distribution Transformers along Bramalea Rd between Clark Blvd and Orenda Rd.			
Investment Results			
The conversion is scheduled for completion during the last third of the calendar year			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September		\$8,000.00	\$8,000.00
October		\$8,000.00	\$8,000.00
November		\$34,000.00	\$34,000.00
December			\$0.00
Totals	\$0.00	\$50,000.00	(\$50,000.00)


Business Case Justification

1. This is in line with the company's objective of phasing out obsolete low voltage distribution systems and modernizing those systems to 27.6 kV.
- 2 . Improved reliability due to the elimination of plant that are at the end of their useful lives.
3. Security of supply is improved with enhanced backup from the 27.6kV network.

Alternative Considered

1. This project is encompassed in the company's decision to eliminate the 8.32kV distribution plant.




		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Install new poles to reduce span lengths	Project Number:	2010-297
Project Manager:	Aldo Mastrofranceso	Project Technician:	Rolando Mena
Last Updated:	February 17, 2010	Investment Category:	Sustainment
Type	System Expansion & Enhancement	Investment Driver:	Safety
Description/Justification			
This project covers Hydro One Brampton Capital expenditures to reduce four 85m spans along McLaughlin Road, north of Williams Parkway by installing four new poles at mid-span. This will also cover costs to install additional storm guys.			
Investment Scope			
Four 55 ft wood poles to be installed midspan between poles #9652, #9680, #9708, #9736 and #9764 along McLaughlin Rd, north of Williams Pky W. Three storm guying will be installed at three pole locations.			
Investment Results			
This work is expected to be completed within the calendar year. This will provide more reliability because of shorter spans and added storm guying.			
Cost & Timing Estimates			
Month	Actual Cost	Budget	Variance
January		\$1,650.00	\$1,650.00
February		\$1,650.00	\$1,650.00
March		\$1,650.00	\$1,650.00
April		\$10,500.00	\$10,500.00
May			\$0.00
June		\$21,550.00	\$21,550.00
July			\$0.00
August			\$0.00
September			\$0.00
October			\$0.00
November			\$0.00
December			\$0.00
Totals	\$0.00	\$37,000.00	(\$37,000.00)

Business Case Justification


Improve system reliability by eliminating the impact of in span conductor contact during high wind conditions.

Alternative Considered




		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010		
Project Title:	2010 Unplanned Wood Pole Replacement	Project Number:	2010-029	
Project Manager:	Aldo Mastrofranceso	Project Technician:	Emil Sampaga	
Last Updated:	Feb 16 2010	Investment Category:	Sustainment	
Type	System Rehabilitation & Equipment Replacement	Investment Driver:	Reactive Demand	
Description/Justification				
This project is for the replacement of wood poles identified as being defective, during the course of completing planned construction projects during the year.				
Investment Scope				
Investment Results				
This work is expected to be completed within the calendar year.				
Cost & Timing Estimates				
	<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
	January		\$2,300.00	\$2,300.00
	February		\$2,300.00	\$2,300.00
	March		\$3,000.00	\$3,000.00
	April		\$2,900.00	\$2,900.00
	May		\$3,300.00	\$3,300.00
	June		\$2,900.00	\$2,900.00
	July		\$2,300.00	\$2,300.00
	August		\$2,050.00	\$2,050.00
	September		\$2,050.00	\$2,050.00
	October		\$3,300.00	\$3,300.00
	November		\$3,300.00	\$3,300.00
	December		\$3,300.00	\$3,300.00
	Totals	50.00	\$33,000.00	(\$33,000.00)


Business Case Justification
<p>This project has been established to mitigate the risks associated with aging poles no longer suitable for service.</p>
Alternative Considered

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010		
Project Title:	2010 Unplanned Underground Cable Replacement	Project Number:	2010-037	
Project Manager:	Aldo Mastrofranceso	Project Technician:	Emil Sampaga	
Last Updated:	Feb 16 2010	Investment Category:	Sustainment	
Type	System Rehabilitation & Equipment Replacement	Investment Driver:	Reactive Demand	
Description/Justification				
This Project is to respond to primary cable faults occurring during the budget year, resulting in unplanned cable replacements.				
Investment Scope				
Investment Results				
> To re-establish primary cable supply and/or to maintain contingency following primary cable faults.				
Cost & Timing Estimates				
	<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
	January		\$4,950.00	\$4,950.00
	February		\$11,550.00	\$11,550.00
	March		\$1,650.00	\$1,650.00
	April		\$6,600.00	\$6,600.00
	May		\$9,900.00	\$9,900.00
	June		\$11,550.00	\$11,550.00
	July		\$13,200.00	\$13,200.00
	August		\$9,900.00	\$9,900.00
	September		\$14,850.00	\$14,850.00
	October		\$26,400.00	\$26,400.00
	November		\$18,150.00	\$18,150.00
	December		\$36,300.00	\$36,300.00
	Totals	\$0.00	\$165,000.00	(\$165,000.00)

Business Case Justification
<p>This project is required to ensure a continued reliable supply by providing funding enabling the company to respond to primary cable faults.</p>
Alternative Considered

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	2010 Reactive Demand Projects – Underground	Project Number:	2010-039
Project Manager:	Aldo Mastrofranceso	Project Technician:	Emil Sampaga
Last Updated:	Feb 16 2010	Investment Category:	Sustainment
Type	System Rehabilitation & Equipment Replacement	Investment Driver:	Reactive Demand
Description/Justification			
<p>This is an annual pool allocated to respond to various system events, equipment failures (other than cable faults) and customer demand projects generating underground capital expenditures occurring within the budget year. This program is intended to respond to unplanned system events and conditions found during the year, that impact or have the potential to impact, customer reliability and /or distribution system performance.</p>			
Investment Scope			
<p> </p>			
Investment Results			
<p>> To re-establish service and/or to maintain contingency following system events.</p>			
Cost & Timing Estimates			
	<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u> <u>Variance</u>
	January		\$12,800.00 \$12,800.00
	February		\$29,800.00 \$29,800.00
	March		\$4,300.00 \$4,300.00
	April		\$17,100.00 \$17,100.00
	May		\$25,600.00 \$25,600.00
	June		\$30,000.00 \$30,000.00
	July		\$34,000.00 \$34,000.00
	August		\$25,600.00 \$25,600.00
	September		\$38,400.00 \$38,400.00
	October		\$68,300.00 \$68,300.00
	November		\$46,900.00 \$46,900.00
	December		\$307,200.00 \$307,200.00
	Totals		\$640,000.00 (\$640,000.00)

Business Case Justification
<p>This project is required to ensure a continued reliable supply by providing funding enabling the company to respond to system events impacting service reliability, public safety and environmental scenarios.</p>
Alternative Considered

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010		
Project Title:	2010 Unplanned O/H Transformer Replacements	Project Number:	2010-054	
Project Manager:	Aldo Mastrofranceso	Project Technician:	Emil Sampaga	
Last Updated:	Feb 16 2010	Investment Category:	Sustainment	
Type	System Rehabilitation & Equipment Replacement	Investment Driver:	Reactive Demand	
Description/Justification				
This Project is for unplanned O/H transformer replacements for transformer failures occurring in the budget year.				
Investment Scope				
Investment Results				
> To re-establish customer service following unplanned transformer failures. > To proactively replace overloaded transformers before failure.				
Cost & Timing Estimates				
	<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
	January		\$3,500.00	\$3,500.00
	February		\$3,500.00	\$3,500.00
	March		\$4,500.00	\$4,500.00
	April		\$4,500.00	\$4,500.00
	May		\$5,000.00	\$5,000.00
	June		\$4,500.00	\$4,500.00
	July		\$3,500.00	\$3,500.00
	August		\$3,000.00	\$3,000.00
	September		\$3,000.00	\$3,000.00
	October		\$5,000.00	\$5,000.00
	November		\$5,000.00	\$5,000.00
	December		\$5,000.00	\$5,000.00
	Totals	\$0.00	\$50,000.00	(\$50,000.00)

Business Case Justification
<p>This project is required to ensure a continued reliable supply of electricity by providing funding enabling the company to respond to transformer failures impacting service reliability, public safety and environmental scenarios.</p>
Alternative Considered



**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2010**

Project Title:	2010 Reactive O/H System Improvements	Project Number:	2010-059
Project Manager:	Aldo Mastrofranceso	Project Technician:	Emil Sampaga
Last Updated:	Feb 16 2010	Investment Category:	Sustainment
Type	System Rehabilitation & Equipment Replacement	Investment Driver:	Reactive Demand
Description/Justification			
This is an annual pool allocated to respond to various system events, equipment failures and customer demand projects generating overhead capital expenditures occurring within the budget year. This program is intended to respond to unplanned system events and conditions found during the year, that impact or have the potential to impact, customer reliability and /or distribution system performance.			
Investment Scope			
Investment Results			
> To re-establish service and/or to maintain contingency following system events.			
Cost & Timing Estimates			
Month	Actual Cost	Budget	Variance
January		\$23,100.00	\$23,100.00
February		\$23,100.00	\$23,100.00
March		\$29,700.00	\$29,700.00
April		\$29,700.00	\$29,700.00
May		\$29,700.00	\$29,700.00
June		\$23,100.00	\$23,100.00
July		\$19,800.00	\$19,800.00
August		\$19,800.00	\$19,800.00
September		\$33,000.00	\$33,000.00
October		\$33,000.00	\$33,000.00
November		\$33,000.00	\$33,000.00
December		\$198,000.00	\$198,000.00
Totals	\$0.00	\$495,000.00	(\$495,000.00)

Business Case Justification

This project is required to ensure a continued reliable supply by providing funding enabling the company to respond to system events impacting service reliability, public safety and environmental scenarios.

Alternative Considered




- 44KV 'JOSLYN' LIS to be replaced due to operation failure



**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2010**

Project Title:	Installation of New Poles and Aerial Secondary Distribution System	Project Number:	2010-234
Project Manager:	Aldo Mastrofranceso	Project Technician:	Carlton DeHajjle
Last Updated:	February 18, 2010	Investment Category:	Sustainment
Type	System Rehabilitation & Equipment Replacement	Investment Driver:	Reliability
Description/Justification			
This project involves the erection of poles and an overhead secondary distribution system on Kennedy Road, as a follow up to associated pole line rebuild project that was recently completed on the opposite side of the street.			
Investment Scope			
This project involves the erection of 20 poles and construction of 824m of overhead secondary distribution on the west side of Kennedy Rd between Clarence St. and Tullamore Rd to the south.			
Investment Results			
The construction is scheduled for completion during the first quarter of the calendar year.			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January		\$16,400.00	\$16,400.00
February		\$24,600.00	\$24,600.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September			\$0.00
October			\$0.00
November			\$0.00
December			\$0.00
Totals	\$0.00	\$41,000.00	(\$41,000.00)

Business Case Justification
<ol style="list-style-type: none">1. Optimisation of secondary distribution plant.2. Upgrading of old installation to current standards.3. Enhanced reliability of secondary distribution in the locale.
Alternative Considered
<ol style="list-style-type: none">1. Underground alternative is of a higher cost.

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	2009 Projects carried forward into 2010	Project Number:	2010-246
Project Manager:	Aldo Mastrofranceso	Project Technician:	
Last Updated:	June 11, 2010	Investment Category:	Development
Type	System Rehabilitation & Equipment Replacement	Investment Driver:	Growth
Description/Justification			
Finalize projects started in 2009 but not completed U/G			
Duct Structure - Humberwest @ Williams Parkway O/H			
27.6Kv Pole line - Hwy 50 Cottrell to Castlemore			
O/H 27.6 Kv Pole line - Catlemore Rd - Clarkway to Hwy 50			
O/H Install 27.6 twin cct - Railway St to East of Main St			
Investment Scope			
Complete the construction of new assets for projects which were initiated in 2009.			
Investment Results			
Expenditures will allow the completion projects with construction in progress. Project costs will be moved to fixed assets upon completion in 2010.			
Cost & Timing Estimates			
Month	Actual Cost	Budget	Variance
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August		206,500.00	\$206,500.00
September		206,500.00	\$206,500.00
October		206,500.00	\$206,500.00
November		206,500.00	\$206,500.00
December			\$0.00
Totals	\$0.00	\$826,000.00	(\$826,000.00)

Business Case Justification
Alternative Considered



**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2010**

Project Title:	Feeder cable replacement	Project Number:	2010-264
Project Manager:	Aldo Mastrofranceso	Project Technician:	Emil Sampaga
Last Updated:	Feb 16 2010	Investment Category:	Sustainment
Type	System Rehabilitation & Equipment Replacement	Investment Driver:	Reactive Demand
Description/Justification			
This is a 2010 Capital Project identified as being required to replace faulted feeder cables. Install new 1000 kcmil 28 kV AI feeder cables on Beech St from Church St to Queen St.			
Investment Scope			
This project covers the recovery and replacement of existing 500kcmil AI, 28KV feeder cable. A total of 1230m 1000kcmil AI, 28KV new feeder cables will be installed on existing 12-100mm duct bank.			
Investment Results			
Re-establish a feeder connection between Church St and Queen St.			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September			\$0.00
October		\$82,500.00	\$82,500.00
November		\$41,250.00	\$41,250.00
December		\$41,250.00	\$41,250.00
Totals	\$0.00	\$165,000.00	(\$165,000.00)


Business Case Justification
<p>The existing feeder cable located on Beech St faulted which eliminated a single contingency option to service loads along Queen St reducing service reliability for this area. A single contingency must be established to provide a back up supply to this area to improve reliability.</p>
Alternative Considered



**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2010**

Project Title:	27.6kV Feeder Cable Replacement I3 Grid	Project Number:	2010-265
Project Manager:	Aldo Mastrofranceso	Project Technician:	Rolando Mena
Last Updated:	February 17, 2010	Investment Category:	Sustainment
Type	System Rehabilitation & Equipment Replacement	Investment Driver:	Reliability
Description/Justification			
This project covers Hydro One Brampton Capital expenditures to install new ducts and 1000kcmil 28kV Al cables to replace aging and faulted 350kcmil 15kV Cu cables along Williams Parkway from Dixie Road to North Park Drive. This project also covers the costs to upgrade the existing 15kV Model 11 switchgear located at northeast corner of Williams Parkway and North Park Drive to a 28kV unit.			
Investment Scope			
A 750m, 4 x 100mm HDPE ductbank with 3 x 1000 kcmil 28kV Al cables will be constructed along Williams Pky E from riser pole #9569 located on Dixie Road to switchgear #113 located at northeast corner of North Park Drive and Williams Pky E. The riser pole termination and the model 11 switchgear will be replaced to conform with new standards. The old cables will be abandoned and grounded.			
Investment Results			
This work is expected to be completed within the calendar year. To re-establish cable reliability and contingency for the loads in this area.			
Cost & Timing Estimates			
Month	Actual Cost	Budget	Variance
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September		\$41,000.00	\$41,000.00
October		\$124,000.00	\$124,000.00
November		\$83,000.00	\$83,000.00
December			\$0.00
Totals	\$0.00	\$248,000.00	(\$248,000.00)

Business Case Justification
<p>This section of feeder cable is a source connection from MS-19 servicing subdivisions in the area . Multiple faults on these cables have lowered their health index to replacement status.</p>
Alternative Considered

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	15 kV Feeder Cable Replacement	Project Number:	2010-266
Project Manager:	Aldo Mastrofranceso	Project Technician:	Rolando Mena
Last Updated:	February 17, 2010	Investment Category:	Sustainment
Type	System Rehabilitation & Equipment Replacement	Investment Driver:	Reliability
Description/Justification			
<p>This project covers Hydro One Brampton Capital expenditures to install new ducts and 1000kcmil 28kV Al cables to replace aging and faulted 500kcmil 15kV Al cables along Charolais Boulevard from Main Street to McLaughlin Road. This project will also cover the costs to upgrade the existing 15kV Model 11 and two Model 9 switchgears located along Charolais Boulevard to 28kV.</p>			
Investment Scope			
<p>A total of 700m of 8 x 100mm ductbank, 420m of 4 x 100mm ductbank and 5,500m of 1000kcmil 28kV Al cables will be installed along Charolais Blvd from switchgear #27 west of Main St to switchgear #28 east of McLaughlin Rd. The old cables will be abandoned and grounded. Two model 9 and one model 11 switchgears including their foundations will be replaced to conform with new standards.</p>			
Investment Results			
<p>This work is expected to be completed within the calendar year. To re-establish cable reliability and contingency for the loads in this area.</p>			
Cost & Timing Estimates			
Month	Actual Cost	Budget	Variance
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July		\$4,000.00	\$4,000.00
August		\$38,100.00	\$38,100.00
September		\$135,500.00	\$135,500.00
October		\$165,200.00	\$165,200.00
November		\$70,200.00	\$70,200.00
December			\$0.00
Totals	\$0.00	\$413,000.00	(\$413,000.00)

Business Case Justification

Multiple faults on these cable segments have lowered their health index to replacement status.

Alternative Considered

1. Cable rejuvenation treatment was considered however due to the number of cable faults in the area, cable replacement was selected.



**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2010**

Project Title:	13.8kV Re-Cabling at Bramalea G Section-	Project Number:	2010-267
Project Manager:	Aldo Mastrofrancesco	Project Technician:	Carlton DeHajjle
Last Updated:	February 17, 2010	Investment Category:	Sustainment
Type	System Rehabilitation & Equipment Replacement	Investment Driver:	Reactive Demand
Description/Justification			
This project involves the replacement of the 15kV, 350 kcmil Cu underground cable run between Switch site 325 at Central Park Dr and Torbram Rd and Switch site 155 at Central Park Dr and Greenbriar Rd. This particular cable segment recently suffered repeated faults.			
Investment Scope			
This project involves the replacement of 281m (route length) of 3 x 1c 15kV, 350 kcmil Cu underground cable with 3 x 1c 1000kcmil Al 28kV cable. A total of 259m of trenching, 324m of replacement cable and a total 65m of road crossing directional bores at three locations is required.			
Investment Results			
The construction is scheduled for completion during the calendar year. To re-establish cable reliability and contingency for the loads in this area.			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June		\$8,350.00	\$8,350.00
July		\$16,500.00	\$16,500.00
August			\$0.00
September			\$0.00
October		\$124,000.00	\$124,000.00
November		\$124,000.00	\$124,000.00
December		\$66,150.00	\$66,150.00
Totals	\$0.00	\$339,000.00	(\$339,000.00)

Business Case Justification

Multiple faults on these cables have lowered their health index to replacement status.

Alternative Considered

1. Cable rejuvenation treatment was considered however due to the number of cable faults in the area, cable replacement was selected.



**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2010**

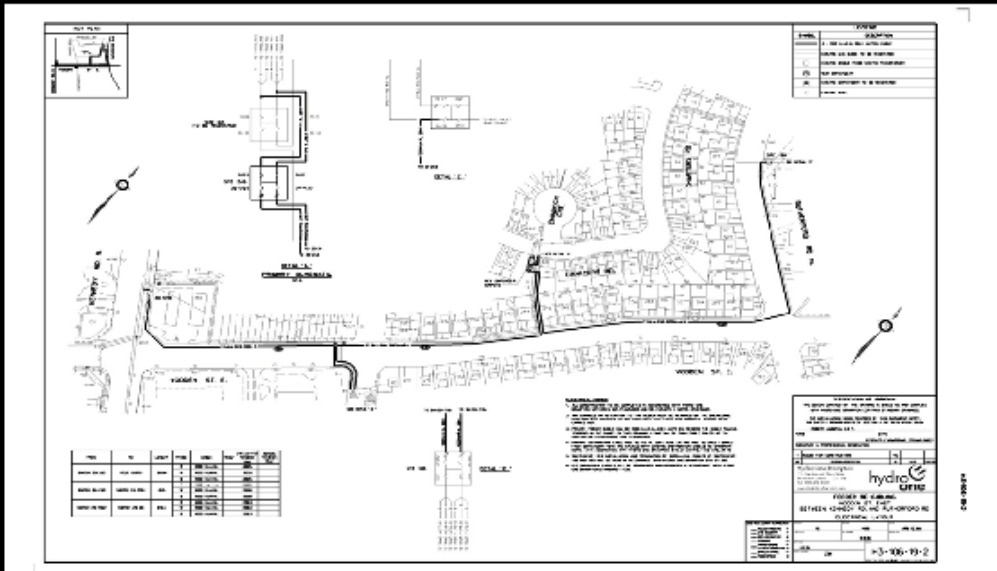
Project Title:	27.6kV Feeder Cable replacement	Project Number:	2010-268
Project Manager:	Aldo Mastrofranceso	Project Technician:	Rolando Mena
Last Updated:	February 17, 2010	Investment Category:	Sustainment
Type	System Rehabilitation & Equipment Replacement	Investment Driver:	Reliability
Description/Justification			
This project covers Hydro One Brampton Capital expenditures to install new ducts and 1000kcmil 28kV AI cables to replace aging and faulted 500kcmil 28kV AI cables from Switch 20-59 at Kennedy Road to Switch 20-36 at Rutherford Road N. This project will also cover the costs to replace a old 28kV Model 9 switchgear site # 83 located at Charters Road.			
Investment Scope			
A total of 810m of 4 x 100mm ductbank, 130m of 8 x 100mm ductbank and 3,600m of 1000kcmil 28kV AI cables will be installed along Vodden St E from riser pole #9375 at Kennedy Rd to switchgear #86 on Hansen Rd to switchgear #83 at Charters Rd Park and to switchgear #90 on Rutherford Rd N. The old cables will be abandoned and grounded. One model 9 switchgear including its foundation will be replaced to conform with new standards.			
Investment Results			
This work is expected to be completed within the calendar year. To re-establish cable reliability and contingency for the loads in this area.			
Cost & Timing Estimates			
Month	Actual Cost	Budget	Variance
January		\$4,100.00	\$4,100.00
February		\$4,100.00	\$4,100.00
March		\$16,300.00	\$16,300.00
April		\$64,500.00	\$64,500.00
May		\$207,000.00	\$207,000.00
June		\$124,000.00	\$124,000.00
July		\$18,000.00	\$18,000.00
August			\$0.00
September			\$0.00
October			\$0.00
November			\$0.00
December			\$0.00
Totals	\$0.00	\$438,000.00	(\$438,000.00)

Business Case Justification

Multiple faults on these cable segments have lowered their reliability to replacement status

Alternative Considered

1. Cable rejuvenation treatment was considered however due to the number of cable faults in the area, cable replacement was selected.





**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2010**

Project Title:	Replace aged 4/0 cables from MS 13 which supply the downtown core and replace the 1000 kcmil feeder cable supplying MS 13.	Project Number:	2010-275
Project Manager:	Aldo Mastrofranceso	Project Technician:	Larry Boston
Last Updated:	February 18, 2010	Investment Category:	Sustainment
Type	System Rehabilitation & Equipment Replacement	Investment Driver:	Reliability
Description/Justification			
This project covers Hydro One Brampton Capital expenditures to replace the aging 4/0 cable in the downtown core area in three steps. This cable replacement will complete the upgrade/conversion of the Network System and provide better reliability to the downtown customers. The replacement of the feeder cables to MS 13 will enhance the reliability of this station.			
Investment Scope			
A total of 3,030 m of new 1/0 28kV primary cable and 1,160m of new 1000kcmil 28kV feeder cable will be installed in existing ducts. New terminations will be completed at MS-13. As well, new 1/0 to 1/0 and 1000kcmil to 1000kcmil splices will be established.			
Investment Results			
This work is expected to be completed within the calendar year. To establish a new single contingency 1/0 28kV primary distribution system and to eliminate a series of 4/0 to 1/0 hand made splices at MS-13. MS 13 will be supplied with new 1000 kcmil cable which eliminates a set of 750 kcmil to 1000 kcmil splices.			
Cost & Timing Estimates			
Month	Actual Cost	Budget	Variance
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May		\$98,724	\$98,724.45
June		\$20,625	\$20,625.00
July			\$0.00
August			\$0.00
September		\$99,000	\$99,000.00
October		\$61,875	\$61,875.00
November		\$49,776	\$49,775.55
December			\$0.00
Totals	\$0.00	\$330,000.00	(\$330,000.00)

Business Case Justification
<p>The aging downtown network system is being modernized to a standard single contingency primary distribution system. This is the last phase of this program which is designed to improve reliability and worker safety.</p>
Alternative Considered



**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2010**

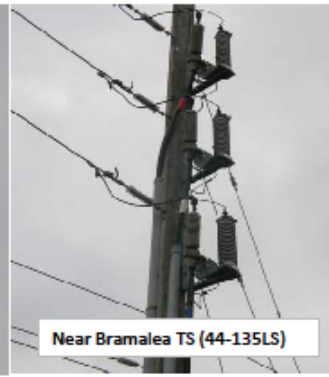
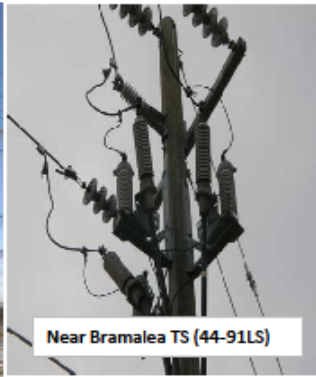
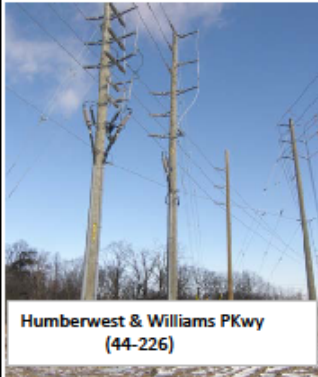
Project Title:	Replacement of 44kV 'Joslyn' Porcelain Termination with 3M Cold Shrink Term	Project Number:	2010-277
Project Manager:	Aldo Mastrofranceso	Project Technician:	Carlton DeHajjle
Last Updated:	February 17, 2010	Investment Category:	Sustainment
Type	System Rehabilitation & Equipment Replacement	Investment Driver:	Reliability
Description/Justification			
This project involves the replacement of 44kV 'Joslyn' Porcelain terminations with 3M Cold Shrink terminations. 'Joslyn' porcelain terminations are on record as fragmenting on failure and scattering debris.			
Investment Scope			
Installations near five (5) critical roadside locations that have the 'Joslyn' porcelain terminations are to be targeted.			
Investment Results			
The construction is scheduled for completion during the first quarter of the calendar year.			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January		\$25,000.00	\$25,000.00
February		\$25,000.00	\$25,000.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September			\$0.00
October			\$0.00
November			\$0.00
December			\$0.00
Totals	\$0.00	\$50,000.00	(\$50,000.00)


Business Case Justification

1. Reduced customer outages and accompanying loss of revenue.
2. Elimination of the possibility of damage to nearby property and injury to people.
3. Enhanced security of supply to customers.

Alternative Considered

1. Not Applicable




		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Rebuild vault roof structure	Project Number:	2010-285
Project Manager:	Aldo Mastrofranceso	Project Technician:	Larry Boston
Last Updated:	February 18, 2010	Investment Category:	Sustainment
Type	System Rehabilitation & Equipment Replacement	Investment Driver:	Safety
Description/Justification			
This project covers Hydro One Brampton Capital expenditures to rebuild the roof structure of vault 10210 located on Theatre Lane behind #24 Queen St East. The existing roof structure is deteriorating and must be rebuilt to protect our equipment and workers and for public safety.			
Investment Scope			
The existing roof structure will be dismantled and rebuilt incorporating concrete and rebar to engineered standards. Consultant to supply stamped approved drawings for the new roof structure.			
Investment Results			
This work is expected to be completed within the calendar year.			
This below grade vault supports transformation and primary devices. Vault structure integrity is to be confirmed for worker and public safety.			
Cost & Timing Estimates			
Month	Actual Cost	Budget	Variance
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September			\$0.00
October			\$0.00
November			\$0.00
December		\$66,000.00	\$66,000.00
Totals	\$0.00	\$66,000.00	(\$66,000.00)

Business Case Justification

To mitigate the risk associated with the failure of a below grade structure.

Alternative Considered



		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Rebuild vault roof structure	Project Number:	2010-286
Project Manager:	Aldo Mastrofranceso	Project Technician:	Larry Boston
Last Updated:	February 18, 2010	Investment Category:	Sustainment
Type	System Rehabilitation & Equipment Replacement	Investment Driver:	Safety
Description/Justification			
This project covers Hydro One Brampton Capital expenditures to rebuild the roof structure of vault 9920 located on Centre Street north of Queen St East. The existing roof structure is deteriorating and must be rebuilt to protect our equipment and workers and for public safety.			
Investment Scope			
The existing roof structure will be dismantled and rebuilt incorporating concrete and rebar to engineered standards. Consultant to supply stamped approved drawings for the new roof structure.			
Investment Results			
This work is expected to be completed within the calendar year. This below grade vault supports transformation and primary devices. Vault structure integrity is to be confirmed for worker and public safety.			
Cost & Timing Estimates			
Month	Actual Cost	Budget	Variance
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September			\$0.00
October			\$0.00
November			\$0.00
December		\$66,000.00	\$66,000.00
Totals	\$0.00	\$66,000.00	(\$66,000.00)

Business Case Justification

To mitigate the risk associated with the failure of a below grade structure.

Alternative Considered





**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2010**

Project Title:	Replacement Porcelain Insulators with Polymer Insulators	Project Number:	2010-294
Project Manager:	Aldo Mastrofranceso	Project Technician:	Carlton DeHajjle
Last Updated:	February 17, 2010	Investment Category:	Sustainment
Type	System Rehabilitation & Equipment Replacement	Investment Driver:	Reliability
Description/Justification			
This project involves the replacement of Porcelain insulators with Polymer insulators due to the poor performance of the Porcelain insulators as evidenced by the failure statistics on record. The failure of these insulators result in high repair costs and extensive outages, especially on heavily loaded feeders.			
Investment Scope			
854 Line Post and Suspension Porcelain insulators at 95 poles are to be replaced at two location zones. One zone stretches from the Hwy 410 to Torbram Rd along the Utility Corridor south of the Hwy 407 for 85 poles and the other zone stretches from Chinguacousy Rd east along the Utility Corridor adjacent to the CNR route for 10 poles.			
Investment Results			
The construction is scheduled for completion during the first quarter of the calendar year.			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January		\$99,100.00	\$99,100.00
February		\$41,300.00	\$41,300.00
March		\$16,600.00	\$16,600.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September			\$0.00
October			\$0.00
November			\$0.00
December			\$0.00
Totals	\$0.00	\$157,000.00	(\$157,000.00)


Business Case Justification

1. Reduced customer outages and accompanying loss of revenue.
2. Elimination of the possibility of damage to distribution plant.
3. Enhanced security of supply to customers.

Alternative Considered

1. Not Applicable



		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Install 21 new rear lot poles	Project Number:	2010-295
Project Manager:	Aldo Mastrofranceso	Project Technician:	Rolando Mena
Last Updated:	February 17, 2010	Investment Category:	Sustainment
Type	System Rehabilitation & Equipment Replacement	Investment Driver:	Reliability
Description/Justification			
This project covers Hydro One Brampton Capital expenditures to replace existing wood poles with limited remaining life, with new light weight composite poles.			
Investment Scope			
A total of 21 new 35 ft composite poles are to replace deteriorated wood poles located at rear lots.			
Investment Results			
This work is expected to be completed within the calendar year. The new composite poles will provide increased reliability and will require less maintenance than wood poles.			
Cost & Timing Estimates			
Month	Actual Cost	Budget	Variance
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September		\$4,000.00	\$4,000.00
October		\$4,000.00	\$4,000.00
November		\$20,500.00	\$20,500.00
December		\$33,500.00	\$33,500.00
Totals	\$0.00	\$62,000.00	(\$62,000.00)

Business Case Justification

To mitigate the risk associated with a falling pole and to increase service reliability.

Alternative Considered

Wood poles were considered as an alternative. The reduced weight of the composite pole was the determining factor.





**Hydro One Brampton Networks Inc.
 Capital Expenditures - 2010**

Project Title:	<i>Replace Porcelain Insulators on Poles</i>	Project Number:	<i>2010-298</i>
Project Manager:	<i>Aldo Mastrofranceso</i>	Project Technician:	<i>Larry Boston</i>
Last Updated:	March 24, 2010	Investment Category:	<i>Sustainment</i>
Type	<i>System Rehabilitation & Equipment Replacement</i>	Investment Driver:	<i>Safety</i>
Description/Justification			
<p>This project covers Hydro One Brampton Capital expenditures to replace porcelain insulators on the 27.6kV circuit on three poles located on Kennedy Rd N between Williams Pkwy E and Centennial Mall. This will complete the re-insulating of the 27.6kV circuit along Kennedy Rd N from Church St to Bovaird Dr.</p>			
Investment Scope			
<p>A total of twelve silicone insulators to be installed to replace the existing porcelain insulators. New standoff brackets and a steel crossarm to be installed to replace the aging existing wood crossarms. The existing riser terminations to be upgraded to today's standards.</p>			
Investment Results			
<p>Only two of the three locations will be completed in 2010 due to budget restraints.</p>			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June		\$17,000.00	\$17,000.00
July			\$0.00
August			\$0.00
September			\$0.00
October			\$0.00
November			\$0.00
December			\$0.00
Totals	\$0.00	\$17,000.00	(\$17,000.00)

Business Case Justification

Alternative Considered





**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2010**

Project Title:	Rebuild Aging Pole Line	Project Number:	2010-299
Project Manager:	Aldo Mastrofranceso	Project Technician:	Rolando Mena
Last Updated:	February 17, 2010	Investment Category:	Sustainment
Type	System Rehabilitation & Equipment Replacement	Investment Driver:	Safety
Description/Justification			
This project covers Hydro One Brampton Capital expenditures to replace aging and leaning poles along Lesbury Ave.			
Investment Scope			
A total of seven 40 ft wood poles to be installed along Lesbury Ave to replace old poles. Two single phase transformers will be replaced with new 50kVA, 2400-120/240V transformers. Open wire secondary conductors will be replaced with 3/0 AACSR with 2 x 3/0 Al F.L to conform with new standards.			
Investment Results			
This work is expected to be completed within the calendar year. Old open wire secondary installations will be upgraded to new standards.			
Cost & Timing Estimates			
Month	Actual Cost	Budget	Variance
January		\$4,100.00	\$4,100.00
February		\$33,400.00	\$33,400.00
March		\$12,500.00	\$12,500.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September			\$0.00
October			\$0.00
November			\$0.00
December			\$0.00
Totals	\$0.00	\$50,000.00	(\$50,000.00)

Business Case Justification

Mitigate risks associated with falling poles and improve system reliability.

Alternative Considered





**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2010**

Project Title:	Poleline relocation - Road Widening	Project Number:	Appro 2010-069
Project Manager:	Aldo Mastrofranceso	Project Technician:	Various
Last Updated:	May 7,2010	Investment Category:	Development
Type	O/H - Overhead	Investment Driver:	Customer Demand
Description/Justification			
This project covers Hydro One Brampton Capital expenditures to complete relocation works at the request of the Region of Peel, City of Brampton . Typically relocations result in 50% labour and equipment cost spilt between the road authority as per the Public Service Work on Highway Act. Hydro One Brampton is responsible for 100% of the material costs.			
Investment Scope			
The recovery of existing main line poles, installation of new main line poles, installation of guy poles and associated guys. Stringing new 556 kcmil, Al conductor, Stringing 3/0 AACSR neutral conductor, installaing new O/H secondary field lashed conductor, transferring existing conductors (were feasible) to new pole line. The required switching and circuit isolation as required.			
Investment Results			
Complete relocations to accommodate future road widening conflicts in a timley manner. It is antcipated that project listed will be completed within the Calendar year, however Region and City budgeting may require that some projects be accelerated or dealyed, which in turn will effect Hydro One Brampton's commitments.			
Cost & Timing Estimates			
Month	Actual Cost	Budget	Variance
January		\$153,174.61	\$153,174.61
February		\$176,295.31	\$176,295.31
March		\$352,560.61	\$352,560.61
April		\$367,041.05	\$367,041.05
May		\$277,488.35	\$277,488.35
June		\$358,370.79	\$358,370.79
July		\$216,756.53	\$216,756.53
August		\$254,327.66	\$254,327.66
September		\$196,525.92	\$196,525.92
October		\$170,515.13	\$170,515.13
November		\$213,866.44	\$213,866.44
December		\$153,174.60	\$153,174.60
Totals		\$2,890,097.00	(\$2,890,097.00)

Business Case Justification

This project covers the relocation of Hydro One Brampton facilities at the request of the Region of Peel, and the City of Brampton due road widening along various roads within the City of Brampton. See 2010 Road widening sheet included.

Alternative Considered

Occasionally, the road authority may request Hydro One Brampton to place existing overhead facilities underground. In these instances, the road authority will be requested to pay for 100% of the total costs minus Hydro One Brampton's share of the Overhead relocation cost at the standard 50% labour and Equipment cost.



**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2010**

Project Title:	NEW CUSTOMERS-GENERAL SERVICE INDUSTRIAL	Project Number:	2010-010
Project Manager:	Aldo Mastrofranceso	Project Technician:	
Last Updated:		Investment Category:	Development
Type	Other	Investment Driver:	Customer Demand
Description/Justification			
These investments are required to meet the ongoing demand to connect new customers to Hydro One Brampton's distribution network, to complete service upgrades and for service cancellation. Failure to respond to these requests would result in non compliance with the distribution license requirements and with obligations set forth in the Distribution System Code.			
Investment Scope			
This program involves the installation of new infrastructure necessary to extend service for new customer connections. Individual investments within this program are managed on a project basis and can include design , labour, material and other costs associated with the actual physical connection or removal.			
Investment Results			
To remain in compliance with the distribution license and to meet or exceed the OEB service quality requirements for customer requests.			
Cost & Timing Estimates			
Month	Actual Cost	Budget	Variance
January		\$12,100.00	\$12,100.00
February		\$12,400.00	\$12,400.00
March		\$11,900.00	\$11,900.00
April		\$11,900.00	\$11,900.00
May		\$11,900.00	\$11,900.00
June		\$12,900.00	\$12,900.00
July		\$14,000.00	\$14,000.00
August		\$14,900.00	\$14,900.00
September		\$14,900.00	\$14,900.00
October		\$14,900.00	\$14,900.00
November		\$14,900.00	\$14,900.00
December		\$15,300.00	\$15,300.00
Totals	\$0.00	\$162,000.00	(\$162,000.00)

Business Case Justification
Timing of expenditures are customer driven. Expenditures are required to meet regulatory requirements.
Alternative Considered



**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2010**

Project Title:	NEW CUSTOMERS-GENERAL SERVICE COMMERCIAL	Project Number:	2010-011
Project Manager:	Aldo Mastrofranceso	Project Technician:	
Last Updated:		Investment Category:	Development
Type	Other	Investment Driver:	Customer Demand
Description/Justification			
<p>These investments are required to meet the ongoing demand to connect new customers to Hydro One Brampton's distribution network, to complete service upgrades and for service cancellation. Failure to respond to these requests would result in non compliance with the distribution license requirements and with obligations set forth in the Distribution System Code.</p>			
Investment Scope			
<p>This program involves the installation of new infrastructure necessary to extend service for new customer connections. Individual investments within this program are managed on a project basis and can include design , labour, material and other costs associated with the actual physical connection or removal.</p>			
Investment Results			
<p>To remain in compliance with the distribution license and to meet or exceed the OEB service quality requirements for customer requests.</p>			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January		\$30,000.00	\$30,000.00
February		\$21,450.00	\$21,450.00
March		\$21,450.00	\$21,450.00
April		\$21,450.00	\$21,450.00
May		\$21,450.00	\$21,450.00
June		\$21,450.00	\$21,450.00
July		\$24,700.00	\$24,700.00
August		\$24,700.00	\$24,700.00
September		\$24,700.00	\$24,700.00
October		\$24,715.00	\$24,715.00
November		\$33,000.00	\$33,000.00
December		\$33,000.00	\$33,000.00
Totals	\$0.00	\$302,065.00	(\$302,065.00)

Business Case Justification
Timing of expenditures are customer driven. Expenditures are required to meet regulatory requirements.
Alternative Considered



**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2010**

Project Title:	RESIDENTIAL-HIGH DENSITY (APT. BUILDGS)	Project Number:	2010-070
Project Manager:	Aldo Mastrofranceso	Project Technician:	
Last Updated:		Investment Category:	Development
Type	U/G - Underground	Investment Driver:	Customer Demand
Description/Justification			
<p>These investments are required to meet the on-going demand to connect new customers to Hydro One Brampton's distribution network, upgrade services of existing customers, and the cancellation of services. Not proceeding with these investments would result in non-compliance with Distribution license requirements and with obligations under the Distribution System Code. This work is a regulatory requirement</p>			
Investment Scope			
<p>This program involves the installation of new infrastructure necessary to extend service for new customer connections. Individual investments within this program are managed on a project basis and can include design , labour, material and other costs associated with the actual physical connection or removal.</p>			
Investment Results			
<p>To remain in compliance with the distribution license and to meet or exceed the OEB service quality requirements for customer requests.</p>			
Cost & Timing Estimates			
Month	Actual Cost	Budget	Variance
January		\$2,800.00	\$2,800.00
February		\$3,600.00	\$3,600.00
March		\$4,400.00	\$4,400.00
April		\$79,000.00	\$79,000.00
May		\$6,100.00	\$6,100.00
June		\$5,400.00	\$5,400.00
July		\$23,000.00	\$23,000.00
August		\$5,300.00	\$5,300.00
September		\$27,000.00	\$27,000.00
October		\$6,100.00	\$6,100.00
November		\$28,000.00	\$28,000.00
December		\$5,000.00	\$5,000.00
Totals	\$0.00	\$195,700.00	(\$195,700.00)


Business Case Justification
Alternative Considered




**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2010**

Project Title:	RESIDENTIAL - LOW DENSITY (SINGLES & SEMIS)	Project Number:	2010-072
Project Manager:	Aldo Mastrofranceso	Project Technician:	Various
Last Updated:	May 7,2010	Investment Category:	Development
Type	U/G - Underground	Investment Driver:	Growth
Description/Justification			
This project requires the installation of Underground Hydro Facilities in order to provide electrical supply to new subdivisions being developed in the City of Brampton			
Investment Scope			
Installation of new infrastructure , Padmounted Transformers,underground distribution cable, feeder cable, switchgears and energy meters to meet Development demand. Market conditons and the Development size will dictate the costs of these projects.			
Investment Results			
Provide Electrical supply to new Developments within the City of Brampton. Ensure adequate supply to new and existing customers.			
Cost & Timing Estimates			
Month	Actual Cost	Budget	Variance
January		\$158,266.67	\$158,266.67
February		\$158,266.67	\$158,266.67
March		\$158,266.67	\$158,266.67
April		\$158,266.67	\$158,266.67
May		\$158,266.67	\$158,266.67
June		\$158,266.67	\$158,266.67
July		\$158,266.67	\$158,266.67
August		\$158,266.67	\$158,266.67
September		\$158,266.67	\$158,266.67
October		\$158,266.67	\$158,266.67
November		\$158,266.67	\$158,266.67
December		\$158,266.67	\$158,266.67
Totals	\$0.00	\$1,899,200.00	(\$1,899,200.00)


Business Case Justification
This project requires the installation of Hydro infrastructure at the request of various Developers within the City of Brampton.
Alternative Considered

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Metering	Project Number:	2010-028
Project Manager:	Scott Miller	Project Technician:	J. McGill
Last Updated:	Feb. 2010	Investment Category:	Other or Shared Services
Type	M - Metering	Investment Driver:	Regulatory
Description/Justification Wholesale (TS Station) metering Alterations and Upgrades due to Market Rules.			
IESO Market Rules stipulate full metering point upgrades at first meter seal expiry. 1)Upgrades need to be done at Bramalea TS M26, M27 and M28 due to early seal expiry. Meters need to be moved from control building to pole mounted enclosures. 2) T1 and T2 metering at Pleasant TS expire in 2010. ITs are non compliant. 2 existing bus metered points will be moved to 3 riser poles outside the station. 3) B/Y and E/Z metering at Pleasant TS need to be relocated from control building to Cabinets at seal expiry this year. 4) Goreway B and Y bus upgrade has been in queue since 2008. It			
Investment Scope			
Investment Results			
Cost & Timing Estimates			
Month	Actual Cost	Budget	Variance
January		\$0.00	\$0.00
February		\$0.00	\$0.00
March		\$0.00	\$0.00
April		\$0.00	\$0.00
May		\$0.00	\$0.00
June		\$0.00	\$0.00
July		\$0.00	\$0.00
August		\$0.00	\$0.00
September		\$0.00	\$0.00
October		\$325,000.00	\$325,000.00
November		\$325,000.00	\$325,000.00
December		\$450,000.00	\$450,000.00
Totals	\$0.00	\$1,100,000.00	(\$1,100,000.00)


Business Case Justification
<p>1) T1 and T2 Metering at Pleasant TS expire this year. Instrument Transformers are non compliant therefore meter points will be moved outside station to 3 poles along Ching. Rd. Triggered by IESO Market Rules. 2) B/Y and E/Z bus metering needs to be moved from control bldg. to meter cabinets. In this case the ITs are compliant so metering will remain inside the station. Triggered by seal expiry and IESO Market Rules. 3) Goreway B and Y bus metering has been awaiting the availability of HONI to do the work since 2008. Since we are the only customer out of Goreway TS, and the expansion metering will be inside the station, these points will remain inside. ITs are non compliant so IESO market rules have triggered a full upgrade at seal expiry. 4) Goreway DESN-2 will come on line in May of 2010. Costing for this job is via Capital contributions through HOBNI Engineering, but MSP fees will be added to register metering points. Year to year variations on budgeting are solely due to when the seals expire on the legacy metering. A given year might see no or one seal expiry while the following year may see the expiry of 12 seals etc. As such, a flat line of year to year variances is impossible.</p>
Alternative Considered
<p>Alternative to item 1 above was to leave metering inside TS. Since these are the last 3 metering points we would have inside TS, we will move them outside to eliminate future access problems. HOBNI can do this job for roughly the same amount as HONI would charge us for simply moving the meters. Since this job was unexpected and forced upon us by Measurement Canada, we would be in non-compliance with IESO for at least 2 years if we were to wait for HONI scheduling. Alternative to item 2 above would be to completely rebuild the metering and leave it inside the station. No firm scheduling has of yet been received for the work so it appears HONI may not get to this in 2010. Moving the metering outside eliminates any future access problems and ensures that the work will get done this year. Alternative to item 3 above would be to relocate metering outside the station. Rejected as ITs are measurement Canada compliant and spares are available. Costing would also be a factor. Alternative to item 4 above would require removing the 4 points inside the station and relocating to 10 (ten) feeder poles outside the station. Not economical. There is no alternative to item 5.</p>

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010		
Project Title:	Metering	Project Number:	2010-036	
Project Manager:	Scott Miller	Project Technician:	John Gordon	
Last Updated:		Investment Category:	Development	
Type	M - Metering	Investment Driver:	Customer Demand	
Description/Justification Metering Equipment Commissioning				
This expenditure is for the costs to install new three phase meters and associated equipment for new commercial and industrial buildings. This also covers the cost of initial crosswatt testing and and ratioing of new instrument transformers				
Investment Scope				
Investment Results				
Cost & Timing Estimates				
	Month	Actual Cost	Budget	Variance
	January		33,750	\$33,750.00
	February		33,750	\$33,750.00
	March		33,750	\$33,750.00
	April		33,750	\$33,750.00
	May		33,750	\$33,750.00
	June		33,750	\$33,750.00
	July		33,750	\$33,750.00
	August		33,750	\$33,750.00
	September		33,750	\$33,750.00
	October		33,750	\$33,750.00
	November		33,750	\$33,750.00
	December		33,750	\$33,750.00
	Totals	\$0.00	\$405,000.00	(\$405,000.00)

Business Case Justification
Alternative Considered

				Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010			
Project Title:		Metering		Project Number:		2010-038	
Project Manager:		Scott Miller		Project Technician:		John Gordon	
Last Updated:				Investment Category:		Other or Shared Services	
Type		M - Metering		Investment Driver: Regulatory			
Description/Justification INDUST/COMM. INSTALLATIONS							
This expenditure is for the costs of replacement three phase meters for reverification and seal extension regulated by Measurement Canada and replacement meters and associated equipment for damaged and obsolete meters							
Investment Scope							
Investment Results							
Cost & Timing Estimates							
Month		Actual Cost		Budget		Variance	
January		6,000.00		6,000.00		\$6,000.00	
February		6,000.00		6,000.00		\$6,000.00	
March		6,000.00		6,000.00		\$6,000.00	
April		6,000.00		6,000.00		\$6,000.00	
May		6,000.00		6,000.00		\$6,000.00	
June		6,000.00		6,000.00		\$6,000.00	
July		6,000.00		6,000.00		\$6,000.00	
August		6,000.00		6,000.00		\$6,000.00	
September		6,000.00		6,000.00		\$6,000.00	
October		6,000.00		6,000.00		\$6,000.00	
November		6,000.00		6,000.00		\$6,000.00	
December		6,000.00		6,000.00		\$6,000.00	
Totals		50.00		572,000.00		(\$72,000.00)	


Business Case Justification
Alternative Considered

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Vehicles & Major Equipment Replacements	Project Number:	2010-360
Project Manager:	Brian Oakley	Project Technician:	Paul Morin
Last Updated:	4/27/2010	Investment Category:	Operations
Type	FL - Fleet	Investment Driver:	Safety
Description/Justification			
55 ft Aerial Single Bucket Material Handler used in Line Dept. Replacing 1996 40 ft Single Bucket with many hours.			
Investment Scope			
This vehicle is required to build, service and repair lines and respond to all types of emergencies and to keep outage times low.			
Investment Results			
Improved outage times. Many calls and emergencies are paid by the customer or insurance companies.			
Cost & Timing Estimates			
	<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u> <u>Variance</u>
	January		\$0.00
	February		\$130,000.00
	March		\$0.00
	April		\$0.00
	May		\$0.00
	June		\$0.00
	July		\$0.00
	August		\$0.00
	September		\$0.00
	October		\$0.00
	November	\$137,000.00	\$137,000.00
	December	\$297,000.00	\$297,000.00
	Totals	\$0.00	\$564,000.00 \$565,000.00

Business Case Justification

New vehicle is 15 ft higher and has material handling capabilities (reach is needed). Old vehicle is 14 years old.

Alternative Considered

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Vehicles & Major Equipment Replacements	Project Number:	2010-362
Project Manager:	Brian Oakley	Project Technician:	Paul Morin
Last Updated:	3/2/2010	Investment Category:	Operations
Type	FL - Fleet	Investment Driver:	Safety
Description/Justification			
50 ft Radial Boom Derrick (Digger) for use in Lines Department for building, servicing and repairing pole lines.			
Investment Scope			
This vehicle is required to build, service and repair pole lines			
Investment Results			
Less downtime. Emergencies are paid by customer or insurance companies			
Cost & Timing Estimates			
Month	Actual Cost	Budget	Variance
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June		\$130,000.00	\$130,000.00
July			\$0.00
August			\$0.00
September			\$0.00
October		\$108,000.00	\$108,000.00
November			\$0.00
December		\$271,000.00	\$271,000.00
Totals	\$0.00	\$509,000.00	(\$509,000.00)

Business Case Justification
New 50 ft truck will replace 1990 42 ft truck.
Alternative Considered
More reach




Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2010


Project Title:	Vehicle & Major Equipment Replacement	Project Number:	2010-361
Project Manager:	Brian Oakley	Project Technician:	Paul Morin
Last Updated:	4/27/2010	Investment Category:	Operations
Type	FL - Fleet	Investment Driver:	Safety
Description/Justification			
83 ft Material Handling Double Bucket truck used in the Lines Department.			
Investment Scope			
Veh required to build,service,repair hydro lines. Specialized equip. needed to reach new pole heights & bare hand/High Volt			
Investment Results			
Higher rate for 83 ft Truck and less down time			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February		\$150,000.00	\$150,000.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September			\$0.00
October			\$0.00
November			\$0.00
December		\$469,000.00	\$469,000.00
Totals	\$0.00	\$619,000.00	(\$619,000.00)

12C 2010 - 83 ft Double Bucket


Business Case Justification
Vehicle is needed for extra reach; replacing 1993 70 ft truck
Alternative Considered
Considered the same height but higher reach is needed

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Vehicles & Major Equipment Replacements	Project Number:	2010-363
Project Manager:	Calvin Struthers	Project Technician:	Paul Morin
Last Updated:	4/27/2010	Investment Category:	Operations
Type	FL - Fleet	Investment Driver:	Safety
Description/Justification			
Dump trailer used in Line Department			
Investment Scope			
This trailer will be used to transport gravel, sand, stone, screenings, fill etc. to and from job sites			
Investment Results			
Less downtime; saves buying a dump truck			
Cost & Timing Estimates			
	Month	Actual Cost	Budget
	January		\$0.00
	February		\$0.00
	March	\$19,000.00	\$19,000.00
	April		\$0.00
	May		\$0.00
	June		\$0.00
	July		\$0.00
	August		\$0.00
	September		\$0.00
	October		\$0.00
	November		\$0.00
	December		\$0.00
	Totals	\$0.00	\$19,000.00 (\$19,000.00)


Business Case Justification
New trailer will be galvanized. The frame on the old 1998 trailer is rotted and is tagged "out of service".
Alternative Considered
galvanized

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Station Maintenance Fork Lift Truck	Project Number:	2010-365
Project Manager:	Brian Oakley	Project Technician:	Paul Morin
Last Updated:	4/27/2010	Investment Category:	Operations
Type	FL - Fleet	Investment Driver:	Technical Obsolescence
Description/Justification			
<p>Replace vehicle 104 (1987 fork lift) with new unit as existing unit has become problematic. It was unavailable for use for several weeks in 2009. This item has been moved from the 2012 budget to take advantage of excess funds from 2010-301. Money will be moved from the Substations budget to the Fleet budget.</p>			
Investment Scope			
Investment Results			
Cost & Timing Estimates			
	Month	Actual Cost	Budget
	January		\$0.00
	February		\$0.00
	March		\$0.00
	April		\$0.00
	May		\$0.00
	June		\$0.00
	July		\$0.00
	August		\$0.00
	September		\$0.00
	October		\$0.00
	November		\$39,000.00
	December		\$0.00
	Totals	\$0.00	\$39,000.00
			(\$39,000.00)


Business Case Justification
<p>Existing forklift is 23 years old and no longer supported by any manufacturer. We were going to borrow the Stores indoor fork lift but modifications to the Metering shop doors would be required. Also, there would be issues scheduling use of Stores forklift.</p>
Alternative Considered
<p>We will go out to tender on this item.</p>

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Van for Metering	Project Number:	2010-377
Project Manager:	Brian Oakley	Project Technician:	Paul Morin
Last Updated:	4/27/2010	Investment Category:	Operations
Type	FL - Fleet	Investment Driver:	Technical Obsolescence
Description/Justification			
One van to be used in metering.			
Investment Scope			
Needed in metering to repair and replace meters in the field.			
Investment Results			
More reliable and less downtime.			
Cost & Timing Estimates			
	Month	Actual Cost	Budget
	January		\$0.00
	February		\$0.00
	March		\$0.00
	April		\$0.00
	May		\$0.00
	June		\$0.00
	July		\$0.00
	August		\$0.00
	September		\$0.00
	October		\$34,000.00
	November		\$50,000.00
	December		\$0.00
	Totals	\$0.00	\$84,000.00
			(\$84,000.00)

Business Case Justification
Replace van #60, a 1999 unit that has high miles.
Alternative Considered
To purchase an SUV.

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Vehicles & Major Equipment Replacements	Project Number:	2010-364
Project Manager:	Brian Oakley	Project Technician:	Paul Morin
Last Updated:	4/27/2010	Investment Category:	Operations
Type	FL - Fleet	Investment Driver:	Safety
Description/Justification			
Pole Trailer (Line Department)			
Investment Scope			
Pole trailer is required to transport poles up to 50 ft in length			
Investment Results			
Less money spent on old trailer frames to get them to pass annual inspections			
Cost & Timing Estimates			
	Month	Actual Cost	Budget
	January		\$0.00
	February		\$0.00
	March		\$0.00
	April		\$0.00
	May		\$0.00
	June		\$26,000.00
	July		\$0.00
	August		\$0.00
	September		\$0.00
	October		\$0.00
	November		\$0.00
	December		\$8,000.00
	Totals	\$0.00	\$34,000.00
			(\$34,000.00)

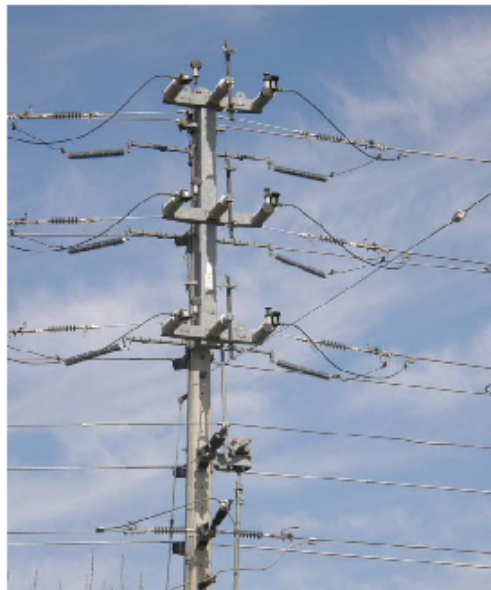
Business Case Justification
New trailer will be galvanized. Old trailer 1985
Alternative Considered
Optional flat bed attachment


		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Multiple 44kV SCADA Controlled Switch installations	Project Number:	2010-235
Project Manager:	Aldo Mastrofranceso	Project Technician:	Rolando Mena
Last Updated:	February 17, 2010	Investment Category:	Sustainment
Type	Green Energy/Smart Grid	Investment Driver:	Reliability
Description/Justification			
This project covers Hydro One Brampton Capital expenditures to install six new 44kV LIS with SCADA control at key locations to alleviate 44kV loading problems and to avoid installing a new 44kV 74M49 circuit form Bramalea TS.			
Investment Scope			
Investment Results			
This work is expected to be completed within the calendar year.			
To improve reliability and provide additional switching capabilities.			
Cost & Timing Estimates			
Month	Actual Cost	Budget	Variance
January		4,000.00	\$4,000.00
February		24,000.00	\$24,000.00
March			\$0.00
April			\$0.00
May		125,000.00	\$125,000.00
June		123,000.00	\$123,000.00
July		103,000.00	\$103,000.00
August			\$0.00
September			\$0.00
October		53,000.00	\$53,000.00
November			\$0.00
December			\$0.00
Totals	\$0.00	\$432,000.00	(\$432,000.00)

Business Case Justification

To eliminate the need for a new 44 kV feeder connection at Bramalea TS.

Alternative Considered




		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Install 27.6 kV Scada Mate Switch	Project Number:	2010-239
Project Manager:	Aldo Mastrofranceso	Project Technician:	Larry Boston
Last Updated:	February 18, 2010	Investment Category:	Sustainment
Type	Green Energy/Smart Grid	Investment Driver:	Reliability
Description/Justification			
This project covers Hydro One Brampton Capital expenditures to replace existing LIS 20-22 located on Steeles Ave west of Rutherford Rd with a Tiered Outboard Scada Mate Switch. This will enhance the switching capabilities on the 25M3 circuit.			
Investment Scope			
Investment Results			
This work is expected to be completed within the calendar year.			
To provide automated remote switching at this location.			
Cost & Timing Estimates			
Month	Actual Cost	Budget	Variance
January		\$1,300.00	\$1,300.00
February		\$1,300.00	\$1,300.00
March		\$1,300.00	\$1,300.00
April		\$56,000.00	\$56,000.00
May		\$10,100.00	\$10,100.00
June			\$0.00
July			\$0.00
August			\$0.00
September			\$0.00
October			\$0.00
November			\$0.00
December			\$0.00
Totals	\$0.00	\$70,000.00	(\$70,000.00)

Business Case Justification

This project will improve feeder sectionalizing, outage response time and overall reliability, by eliminating three single phase in line switches and installing an automated remote controlled gang operated three phase load interrupting switch.

Alternative Considered

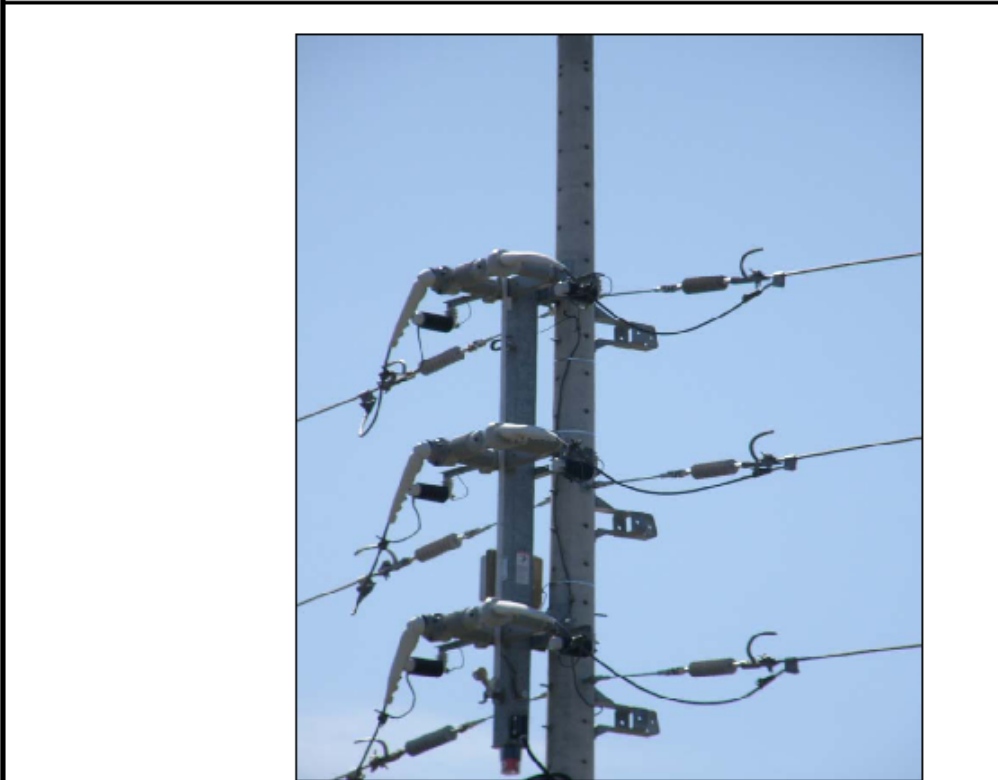



		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	Install 27.6 kV Scada Mate Switch	Project Number:	2010-247
Project Manager:	Aldo Mastrofranceso	Project Technician:	Carlton DeHajjle
Last Updated:	May 14, 2010	Investment Category:	Sustainment
Type	Green Energy/Smart Grid	Investment Driver:	Reliability
Description/Justification			
This project covers Hydro One Brampton Capital expenditures to replace existing LIS 20-206 located on Sandalwood Pkwy west of Hurontario St with an automated Tiered Outboard Scada Mate Switch.			
Investment Scope			
Erect a 27.6 kV Scada mate switch and associated hardware.			
Investment Results			
To provide automated remote switching at this location. This work is expected to be completed within the calendar year.			
Cost & Timing Estimates			
	<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u> <u>Variance</u>
	January		
	February		
	March		
	April		
	May		
	June		\$2,000.00
	July		\$2,000.00
	August		\$2,000.00
	September		\$78,500.00
	October		\$2,500.00
	November		
	December		
	Totals	\$0.00	\$87,000.00 \$0.00

Business Case Justification

This project will improve feeder sectionalizing, outage response time and overall reliability, by eliminating three single phase in line switches and installing an automated remote controlled gang operated three phase load interrupting switch. This switch will allow for the complete SCADA operation on the 42M14 circuit in front of the HOB operating centre.

Alternative Considered



		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010		
Project Title:	Improvements for Distributed Generation	Project Number:	2010-248	
Project Manager:	Aldo Mastrofranceso	Project Technician:		
Last Updated:	May 14, 2010	Investment Category:	Sustainment	
Type	Green Energy/Smart Grid	Investment Driver:	Reliability	
Description/Justification				
This project is intended to respond to requests for distributed generation projects.				
Investment Scope				
Construct new facilities and or modify existing infrastructure to accommodate new generator connections.				
Investment Results				
To remain compliant with the Distribution System Code and Provincial initiatives for green energy projects.				
Cost & Timing Estimates				
	Month	Actual Cost	Budget	Variance
	January			\$0.00
	February			\$0.00
	March			\$0.00
	April			\$0.00
	May			\$0.00
	June		\$5,020.00	\$5,020.00
	July		\$5,020.00	\$5,020.00
	August		\$5,020.00	\$5,020.00
	September		\$200,800.00	\$200,800.00
	October		\$35,140.00	\$35,140.00
	November			\$0.00
	December			\$0.00
	Totals	\$0.00	\$251,000.00	(\$251,000.00)

Business Case Justification
<p>The Distribution System Code stipulates certain costs that Hydro One Brampton must bear in relation to constructing facilities enabling connection for "Renewable Generator" sites.</p>
Alternative Considered



**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2010**

Project Title:	Install 3 trip saver reclosure units	Project Number:	2010-291
Project Manager:	Aldo Mastrofranceso	Project Technician:	Emil Sampaga
Last Updated:	Mar 4, 2010	Investment Category:	Sustainment
Type	Green Energy/Smart Grid	Investment Driver:	Reliability
Description/Justification			
This is a 2010 Capital Project identified as being required to eliminate permanent outage due to temporary faults through installation of trip saver recloser units on T14303, T14304 & T14305 at Mississauga Rd at Bovaird Dr - Apple Factory.			
Investment Scope			
A total of three trip saver recloser units will be installed on transformers T14303, T14304 & T14305 located along Bovaird Dr.			
Investment Results			
This work is expected to be completed within the calendar year.			
Cost & Timing Estimates			
	<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u> <u>Variance</u>
	January		\$4,000.00 \$4,000.00
	February		\$4,000.00 \$4,000.00
	March		\$0.00
	April		\$0.00
	May		\$0.00
	June		\$0.00
	July		\$0.00
	August		\$0.00
	September		\$0.00
	October		\$0.00
	November		\$0.00
	December		\$0.00
	Totals	50.00	\$8,000.00 (\$8,000.00)

Business Case Justification
Alternative Considered



**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2010**


Project Title:	Install 3 trip saver reclosure units	Project Number:	2010-292
Project Manager:	Aldo Mastrofranceso	Project Technician:	Emil Sampaga
Last Updated:	Mar 4, 2010	Investment Category:	Sustainment
Type	Green Energy/Smart Grid	Investment Driver:	Reliability
Description/Justification			
This is a 2010 Capital Project identified as being required to eliminate permanent outage due to temporary faults through installation of trip saver recloser units on T12260, T12261 & T12262 at Creditview Rd south of Queen St.			
Investment Scope			
A total of three trip saver recloser units will be installed on transformers T12260, T12261 & T12262 located along Creditview Rd.			
Investment Results			
This work is expected to be completed within the calendar year.			
Cost & Timing Estimates			
Month	Actual Cost	Budget	Variance
January		\$4,000.00	\$4,000.00
February		\$4,000.00	\$4,000.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September			\$0.00
October			\$0.00
November			\$0.00
December			\$0.00
Totals	\$0.00	\$8,000.00	(\$8,000.00)

Business Case Justification


Alternative Considered



Installed Trip Saver Reclosers at Creditview Rd South of Queen St

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010 IN IFRS		
Project Title:	Old Day-Care Area Rework	Project Number:		
Project Manager:	Calvin Struthers	Project Technician:		
Last Updated:		Investment Category:		
Type	BD - Building	Investment Driver:	Reliability	
Description/Justification				
Rework of this space will allow Hydro One Brampton to use this ourselves or alternately rent this space.				
Investment Scope				
The investment will require the complete gutting and rework of the space including furniture and equipment.				
Investment Results				
Allow relocation of HOB staff to facilitate efficient work flow or alternately HOB will rent this space to generate revenue.				
Cost & Timing Estimates				
	<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
	January		\$50,000	\$50,000.00
	February		\$100,000	\$100,000.00
	March		\$100,000	\$100,000.00
	April		\$50,000	\$50,000.00
	May			\$0.00
	June			\$0.00
	July			\$0.00
	August			\$0.00
	September			\$0.00
	October			\$0.00
	November			\$0.00
	December			\$0.00
	Totals	\$0.00	\$300,000.00	(\$300,000.00)

Business Case Justification
<p>This space is currently nonproductive until we reconfigure the area. It was specifically set-up as a Day-Care.</p>
Alternative Considered
<p>Delay renovations until 2011 or 2012, if we have no need for this space at present. Senior Management is evaluating this at</p>

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	IT Infrastructure Renewal	Project Numbers:	2010-024,025,026, 027, 126, 143
Project Manager:		Project Technician:	
Last Updated:		Investment Category:	Operations
Type	Other	Investment Driver:	Technical Obsolescence
Description/Justification			
<p>HOBNI has assessed its information technology infrastructure requirements. It currently runs a number of enterprise wide systems from the time it was Brampton Hydro. All of these systems have either been in-house developed or packaged software that has been substantially customized.</p> <p>It is HOBNI's intention to proceed with a go forward strategy that would provide a road map and direction for it to meet its business needs. In doing so HOBNI intends to meet its corporate objectives of improving customer service, employee productivity and operating efficiency by employing appropriate IT applications in a manner which improves business and process efficiency. The following provides a high level overview of the hardware/software for this Project. This list is not intended to be exhaustive and only provides a high-level overview.</p> <ul style="list-style-type: none"> • HOBNI currently has dark fibre running from its facilities at 175 Sandalwood Parkway West to Jim Yarrow TS approximately 10 kilometers away. It is our intent to mirror all servers and SANS located at HOBNI head office to the Jim Yarrow TS location in order to provide substantive backup and disaster recovery. • HOBNI has made the decision to use VMware as its virtualization software platform. • It has been determined that approximately 20 windows/2003 servers are eligible for virtualization. <p>HOBNI's current business systems runs on IBM Iseries logically partitioned M25 hardware platform and currently uses approximately 270GB. The second partition runs Lotus Notes for email and also runs our Silverblaze solution Capricorn for external customer web site inquiries and currently uses approximately 240GB. HOBNI also runs an IBM Iseries model 515 for development and utilizes approximately 270GB. It is intended that HOBNI move to a disk-based backup solution for both IBM Iseries machines. Based on studies carried out over the last year we will be implementing 10TB usable storage capacity at both HOBNI head office and the Jim Yarrow TS location.</p>			
Investment Scope			
<p>The total budgeted investment is \$1,265,000.00</p>			


Investment Results			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February		\$120,000.00	\$120,000.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September			\$0.00
October		\$1,145,000.00	\$1,145,000.00
November			\$0.00
December			\$0.00
Totals	\$0.00	\$1,265,000.00	(\$1,265,000.00)
Business Case Justification			
<p>Enterprise Content Management requires a vast amount of disk storage and memory for retrieval indexes and for the data being retrieved. In order to maintain our current high standards for customer service it is necessary to combine both physical resources, i.e. switches, servers, personal computers and storage, but also the software infrastructure to allow for easier access to all data within the organization. The further requirement for enhanced disaster recovery and business continuity has also been addressed in this project.</p>			
Alternative Considered			
<p>We are currently reviewing several proposals for the entire infrastructure renewal.</p>			



**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2010**

Project Title:	GIS SOFTWARE	Project Number:	2010-003
Project Manager:	Greg Mather	Project Technician:	N/A
Last Updated:	2/1/2010	Investment Category:	Other or Shared Services
Type	Other	Investment Driver:	Reliability
Description/Justification			
Purchase of new licence/software applications for use in the Drafting & Records department and other departments interfacing with the Geographic Information System (GIS).			
Investment Scope			
The scope of this project is to purchase new software applications for the enhancement of our existing Geographic Information System (GIS). Areas of interest include GIS upgrades and add-ons, SCADA, Automated Meter Reading (AMR), Customer Information Systems (CIS) and Work Management Systems (WMS).			
Investment Results			
Investment in these new applications will allow the utility to expand the use of our GIS to provide better engineering analysis, quicker response times and restoration times for outages, better crew management and improved dispatching capabilities. The results will be recognized in improved operational efficiencies throughout the utility.			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June		\$14,500.00	\$14,500.00
July			\$0.00
August			\$0.00
September			\$0.00
October			\$0.00
November			\$0.00
December		\$14,500.00	\$14,500.00
Totals	\$0.00	\$29,000.00	(\$29,000.00)

Business Case Justification
<p>Our goal is to continue to integrate customer and distribution information into one common platform. This system integration will allow us to provide better service to both in-house and external customers through improved efficiencies in GIS data management.</p>
Alternative Considered
<p>Alternative applications are considered and "request for proposals" are issued where applicable.</p>

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010		
Project Title:	GTECHNOLOGY/OMS CODE DEVELOPMENT	Project Number:	2010-004	
Project Manager:	Greg Mather	Project Technician:	N/A	
Last Updated:	2/1/2010	Investment Category:	Other or Shared Services	
Type	Other	Investment Driver:	Reliability	
Description/Justification				
<p>This project is to have HOBNI staff work with our GIS vendor Intergraph to write new Gtechnology code for customizing both our Geographic Information System and the Outage Management System application.</p>				
Investment Scope				
<p>The scope of services is to provide scheduled sustained engineering services for upgrading the existing applications to the latest version of the software. Areas of interest include Inservice/OMS upgrade from V8.0 to V8.2, customization of the software in response to Operations requirements at HOBNI, examine work flows within the application and make modifications as required to suit our customers business strategies . Work also includes an upgrade of G/Technology to the latest version of this operating platform.</p>				
Investment Results				
<p>Investment in these enhancements will allow the utility to expand the use of our GIS to provide better engineering analysis, quicker response times and restoration times for outages, better crew management, improved dispatching designed to improve operational efficiency throughout the utility.</p>				
Cost & Timing Estimates				
	<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
	January			\$0.00
	February			\$0.00
	March		\$8,300.00	\$8,300.00
	April		\$8,300.00	\$8,300.00
	May		\$8,300.00	\$8,300.00
	June		\$8,300.00	\$8,300.00
	July		\$8,300.00	\$8,300.00
	August		\$8,300.00	\$8,300.00
	September		\$8,300.00	\$8,300.00
	October		\$8,300.00	\$8,300.00
	November		\$8,300.00	\$8,300.00
	December		\$8,300.00	\$8,300.00
	Totals	\$0.00	\$83,000.00	(\$83,000.00)


Business Case Justification
<p>This work is required as part of continuing plan to integrate customer and distribution information into one common platform. This system integration will allow us to provide better service to both in-house and external customers through improved efficiencies in GIS data management.</p>
Alternative Considered
<p>Sole Supplier - No alternative considered</p>



**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2010**

Project Title:	GIS HARDWARE	Project Number:	2010-088
Project Manager:	Greg Mather	Project Technician:	N/A
Last Updated:	2/1/2010	Investment Category:	Other or Shared Services
Type	Other	Investment Driver:	Reliability
Description/Justification			
Purchase of new hardware related to the operation of GIS applications in the Drafting & Records department, in the Control Room and other departments interfacing with the Geographic Information System (GIS).			
Investment Scope			
The scope of this project is to purchase new hardware as required to improve the performance of running various GIS and OMS applications. It is also used to replace equipment due to unexpected malfunction or obsolescence.			
Investment Results			
Investment in new hardware insures that our GIS systems perform at there optimal level at all times. New equipment purchases allow the utility to expand our GIS user base to include other departments and move forward with future field applications. Upgrading older hardware with newer machines with faster processors provides for improved operational efficiency from our GIS/OMS applications and users.			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June		\$20,000.00	\$20,000.00
July			\$0.00
August			\$0.00
September			\$0.00
October		\$20,000.00	\$20,000.00
November			\$0.00
December			\$0.00
Totals	50.00	\$40,000.00	(\$40,000.00)

Business Case Justification
Hardware upgrades allow us to store more historical information in the GIS database providing better service to both in-house and external customers through improved efficiencies in GIS data management.
Alternative Considered
Competitive quotes obtained for all purchases.

		Hydro One Brampton Networks Inc. Progress Report - Capital Expenditures For Year 2010	
Project Title:	OMS/SCADA/LOAD FORECASTING SOFTWARE	Project Number:	2010-128
Project Manager:	Greg Mather	Project Technician:	N/A
Last Updated:	2/1/2010	Investment Category:	Other or Shared Services
Type	Other	Investment Driver:	Reliability
Description/Justification			
Purchase of additional software licences or new application software packages for the enhancement of our existing Engineering and Operations systems in the area of OMS, SCADA and load forecasting.			
Investment Scope			
The scope of this project is investigate and evaluate new application software as it becomes available. Where it is determined that these will provide added value to our business then they are recommended for purchase.			
Investment Results			
The results will be improvements in the way we do business through new automation. These improvements translate into savings in both Capital and OM & A costs.			
Cost & Timing Estimates			
	<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u> <u>Variance</u>
	January		\$0.00
	February		\$0.00
	March		\$67,000.00
	April		\$67,000.00
	May		\$0.00
	June		\$0.00
	July		\$0.00
	August		\$0.00
	September		\$0.00
	October		\$0.00
	November		\$0.00
	December		\$0.00
	Totals	\$0.00	\$67,000.00 (\$67,000.00)

Business Case Justification

In the past, load forecasting reports typically required a great deal of manual input, calculations and manhours to generate. Today new software is available on the market that makes better use of data stored electronically in other systems such as GIS and OMS that allows for more detailed and accurate reporting results These are critical to the safe operation and analysis of our distribution system in a "real time" environment.

Alternative Considered

All alternatives are considered and competitive quotes obtained for all purchases.



**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2010**

Project Title:	GIS COMPUTERS, PRINTERS, PLOTTERS	Project Number:	2010-130
Project Manager:	Greg Mather	Project Technician:	N/A
Last Updated:	2/1/2010	Investment Category:	Other or Shared Services
Type	Other	Investment Driver:	Reliability
Description/Justification			
This budget is for the purchase of computers, printers, plotters, projectors and ancillary devices required in the Engineering and Operations department in support of technical requirements throughout the year.			
Investment Scope			
Purchases are evaluated and made on an "as required" basis throughout the year to improve the performance of various in-house applications supported by the GIS department.			
Investment Results			
These tools are a very important part of providing our customers with the timely information they need to conduct their day to day business. They allow staff to better maintain our GIS database.			
Cost & Timing Estimates			
	<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u> <u>Variance</u>
	January		\$23,200.00 \$23,200.00
	February		\$0.00
	March		\$23,200.00 \$23,200.00
	April		\$0.00
	May		\$23,200.00 \$23,200.00
	June		\$0.00
	July		\$0.00
	August		\$0.00
	September		\$23,200.00 \$23,200.00
	October		\$0.00
	November		\$0.00
	December		\$23,200.00 \$23,200.00
	Totals	\$0.00	\$116,000.00 (\$116,000.00)

Business Case Justification
Good reliable computer equipment is essential for producing professional reports and presentations for use in GIS and other departments across the utility.
Alternative Considered
All alternatives are considered and competitive quotes obtained for all purchases.



**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2010**

Project Title:	CYMCAP SOFTWARE LICENCE	Project Number:	2010-312
Project Manager:	Greg Mather	Project Technician:	N/A
Last Updated:	2/1/2010	Investment Category:	Operations
Type	Other	Investment Driver:	Reliability
Description/Justification			
Purchase of new CYMCAP software licence with the ductbank optimizer package and the multiple cable in casings analysis package for use in Planning and Standards.			
Investment Scope			
This is a dedicated design and analysis package available with a number of different add-on modules. This Engineering analysis package is a single user licence which will be used in Planning & Standards department to perform cable in duct calculations.			
Investment Results			
This design package will allow for improvements in the way HOBNI calculate ductbank fill and assist our design technicians with calculating the effects that temperature places on feeder and cable installations in non-metallic casings.			
Cost & Timing Estimates			
	<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u> <u>Variance</u>
	January		\$0.00
	February		\$20,000.00 \$20,000.00
	March		\$0.00
	April		\$0.00
	May		\$0.00
	June		\$0.00
	July		\$0.00
	August		\$0.00
	September		\$0.00
	October		\$0.00
	November		\$0.00
	December		\$0.00
	Totals	\$0.00	\$20,000.00 (\$20,000.00)

Business Case Justification
<p>We currently do not have the ability to conduct this type of analysis with our existing software. The purchase of this software package will allow our engineering staff to better investigate different design alternatives with respect to optimizing the installation of cables in ductbanks and the ability to calculate the temperatures that we can expect for certain cable types and configurations in our designs. This translates into better distribution designs and increased reliability of our underground cable installations.</p>
Alternative Considered
<p>All alternatives are considered and competitive quotes obtained for all purchases.</p>



**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2010**

Project Title:	CYME CYMEDIST GATEWAY SOFTWARE LICENCE	Project Number:	2010-314
Project Manager:	Greg Mather	Project Technician:	N/A
Last Updated:	3/3/2010	Investment Category:	Operations
Type	Other	Investment Driver:	Reliability
Description/Justification			
Purchase of new CYME Gateway software licence. This distribution analysis software provides the interface link between CYMDIST and GIS data for use in Planning and Standards to perform network analysis utilizing the mapping capabilities available in GIS.			
Investment Scope			
This is a dedicated design and analysis package solution used for the creation and the maintenance of the CYMDIST distribution network data model. Utilizing the connectivity network extracted from the GIS engine, the CYMDIST model can provide accurate and electrically complete load analysis functionality with graphical representation. CYMDIST Gateway provides a generic interfacing method with the libraries of your enterprise GIS in a stand-alone solution that features a data manipulation engine reading the GIS data format.			
Investment Results			
This design package will allow our Engineers and planning technicians to perform up-to-date network analysis on our entire distribution system.			
Cost & Timing Estimates			
	<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u> <u>Variance</u>
	January		\$0.00
	February		\$0.00
	March		\$0.00
	April		\$0.00
	May		\$0.00
	June		\$0.00
	July		\$0.00
	August		\$0.00
	September		\$0.00
	October		\$0.00
	November		\$104,000.00
	December		\$0.00
	Totals	\$0.00	\$104,000.00 (\$104,000.00)

Business Case Justification
<p>We currently do not have the ability to conduct this type of analysis with our existing applications software. The purchase of this software package will allow our engineering staff to better investigate different design alternatives with respect to optimizing the performance of our distribution system. This translates into better distribution designs and increased reliability.</p>
Alternative Considered
<p>Sole Supplier - No alternative considered</p>



**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2010**

Project Title:	Goreway TS	Project Number:	2010-139
Project Manager:	Aldo Mastrofranceso	Project Technician:	
Last Updated:	3/4/2010	Investment Category:	Development
Type	Other	Investment Driver:	Growth
Description/Justification			
<p>This project represents the capital contributions paid by Hydro One Brampton to Hydro One Networks for the construction of a new 27.6 kV DESN at the Goreway Transformer Station. Payments were made in accordance with a Connection and Cost Recovery Agreement entered into by both parties. The new DESN will provide an additional 430 Mva of capacity for Hydro One Brampton's distribution system.</p>			
Investment Scope			
<p>To ensure adequate System Capacity for projected load growth and to provide system operating contingency. This involves forward planning exercises and negotiating contracts with the provincial transmission entity responsible for bulk power delivery.</p>			
Investment Results			
<p>To secure additional capacity to provide new feeder connections for HOB's distribution system.</p>			
Cost & Timing Estimates			
	<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u> <u>Variance</u>
	January		\$2,634,031.50 \$2,634,031.50
	February		\$0.00
	March		\$0.00
	April		\$0.00
	May		\$2,634,031.50 \$2,634,031.50
	June		\$0.00
	July		\$0.00
	August		\$0.00
	September		\$0.00
	October		\$0.00
	November		\$0.00
	December		\$0.00
	Totals	\$0.00	\$5,268,063.00 (\$5,268,063.00)

Business Case Justification
<p>Over the last ten years development in The City of Brampton has increased the electrical demand at HONI's Bramalea and Goreway Transformer stations to a point with the short term transformer LTR values (Limited Time Rating) are being exceeded. Due to distance restrictions Goreway TS can only be supported by the nearest station, Bramalea TS, but the fact that Bramalea TS operates at LTR during peak demand makes offloading of Goreway TS not possible. This prompted HOB and HON to enter into an agreement for HON to construct a second Dual Element Spot Network (DESN) at Goreway TS, to provide additional system capacity. The Connection and Cost Recovery agreement was executed in 2008 for a May 1st 2010 in service date and requires HOB to provide defined progress payments to HON.</p>
Alternative Considered



**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2010**

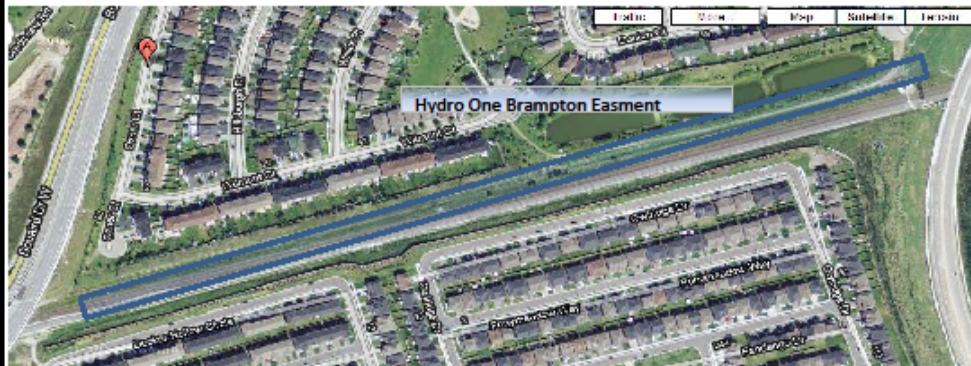
Project Title:	Land Rights for City Property	Project Number:	2010-211
Project Manager:	Aldo Mastrofranceso	Project Technician:	Rolando Mena
Last Updated:	2/17/2010	Investment Category:	Development
Type	O/H - Overhead	Investment Driver:	Growth
Description/Justification			
This covers Hydro One Brampton Capital expenditures to purchase an easement for a new 27.6kV, 2-circuit pole line, north of the CNR from Dunlop Ct to Ozner Ct.			
Investment Scope			
Investment Results			
This will allow HOB to have provision for the swing easement for maintenance and clearance from proposed dwellings and to have vehicle access via Ozner Ct.			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February			\$0.00
March			\$0.00
April		\$61,000.00	\$61,000.00
May			\$0.00
June			\$0.00
July			\$0.00
August			\$0.00
September			\$0.00
October			\$0.00
November			\$0.00
December			\$0.00
Totals	\$0.00	\$61,000.00	(\$61,000.00)

Business Case Justification

Required for new circuit connections at Pleasant TS needed to support load growth driven by development in the area.

Alternative Considered

The easement route selected is by far shorter than any route available along a public road allowance making the purchase of the easement a more cost effective option.





**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2010**

Project Title:	Land Rights from the TRCA	Project Number:	2010-318
Project Manager:	Aldo Mastrofranceso	Project Technician:	Carlton DeHajje
Last Updated:	2/17/2010	Investment Category:	Development
Type	U/G - Underground	Investment Driver:	Growth
Description/Justification			
Obtain easement for a new feeder egress out of the Goreway Transformer Station.			
Investment Scope			
Easement for two ductbanks each of width 0.7m separated by 2.2m and located 2m north of the southern easement limit and a splicing area at the western extreme of the duct run of dimensions 30m x 15m x 25m x 40m			
Investment Results			
This will allow HOB to install underground cables from our Goreway Transformer Station to facilitate load growth within the limits the City of Brampton.			
Cost & Timing Estimates			
	<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u> <u>Variance</u>
	January		\$0.00
	February		\$0.00
	March		\$0.00
	April		\$0.00
	May		\$0.00
	June		\$0.00
	July		\$0.00
	August		\$0.00
	September		\$0.00
	October		\$0.00
	November		\$0.00
	December		\$0.00
	Totals	\$0.00	\$135,010.00 (\$135,010.00)

Business Case Justification
Required to secure land needed to construct infrastructure to support future feeder cable installations.
Alternative Considered
None




**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2010**

Project Title:	Land Rights from the Gap	Project Number:	2010-319
Project Manager:	Aldo Mastrofranceso	Project Technician:	Robert Agostini
Last Updated:	2/17/2010	Investment Category:	Sustainment
Type	O/H - Overhead	Investment Driver:	Reliability
Description/Justification			
Obtain easement for access hydro pole line along the CNR.			
Investment Scope			
Investment Results			
This will allow HOB to access our existing pole line for maintenance and construction.			
Cost & Timing Estimates			
Month	Actual Cost	Budget	Variance
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June			\$0.00
July			\$0.00
August		\$80,000.00	\$80,000.00
September			\$0.00
October			\$0.00
November			\$0.00
December			\$0.00
Totals	\$0.00	\$80,000.00	(\$80,000.00)

Business Case Justification
<p>We presently have entry access at CNR and Chinguacousy Road but do not have the ability to exit. A vehicle entering must be backed out. The easement will provide an exit point for our vehicles through this narrow corridor.</p>
Alternative Considered



Hardware/Software Network Consolidation

Project: Hardware/Software Network Consolidation		HYDRO ONE BRAMPTON NETWORKS INC.	
Document Name: 2010 Network Consolidation Plan			
Department: Information Technology	Version: 1.0	Date: February 2010	Page: 2 of 5

1. Hardware Requirements

1.1 Switches

HOBNI currently has installed 3 (three) HP Procurve Switches model 5308xl with 354 connected ports. HOBNI also has installed 1 (one) HP Procurve Switch 5406zl with 16 ports connected; this switch is used for users that also have IP phones. Switches will be replaced to address current and future needs regarding connectivity of servers and desktops at 1GB and also allow for the use of IP Phones throughout the organization.


1.2 Communications

HOBNI has a pair of single mode glass fibres running between 175 Sandalwood Parkway and Jim Yarrow Transformer Station (JYTS).

One end of the fibre is terminated in the Hydro One Telecom (H.O.T.) fibre room at 175 Sandalwood Parkway and the termination at JYTS to be installed in a patch panel. H.O.T. can bring the fibre into the fibre patch panel at JYTS; as well as bring it into the patch panel in the Bell room here at 175 Sandalwood Parkway.

This fibre has never been used so H.O.T. will need to test it before it is accessible and useful.

HOBNI plans on using JYTS facility to provide mirroring of production servers and sans as well as providing copies of backup and making this HOBNI's Disaster Recovery Site. The plan calls for **10GB** site to site connectivity.

Project: Hardware/Software Network Consolidation		HYDRO ONE BRAMPTON NETWORKS INC.	
Document Name: 2010 Network Consolidation Plan			
Department: Information Technology	Version: 1.0	Date: February 2010	Page: 3 of 5

1.3 Servers

HOBNI has determined through a server review (see Appendix B) the number of existing servers that qualify for virtualization and the balance of the servers requiring new blade servers. It has been determined that our preferred solution should utilize blade server technology.

1.4 Storage Area Networks


HOBNI has determined through a server review (see Appendix B) that we project our Storage requirements to be 10TB useable locally and 10TB useable at our JYTS location. This requirement is based on current and future disk storage requirements for all server and desktop virtualized devices, data requirements and backup.

1.5 Tape Sub-system

It is HOBNI's desire to move to a disk backup environment. Inasmuch as disk backup is the preferred mechanism for all backups a tape sub-system should be provided to allow for archival of data and programs beyond a specified threshold. Our current tape technology for our SAN/Server backups are an IBM TotalStorage 3582 Model L23 (3582-L23) Ultrium Tape Drive using LTO2 tapes. Our existing Iseries production machine uses an IBM 3581 Model L38 tape autoloader with 8 cartridge slots and utilizes the Ultrium 3 tape drive with 400GB of native data capacity and 800GB data capacity with compression. Our development Iseries uses IBM TotalStorage 3580 model L33 Ultrium 3 Tape Drive. Please refer to (Appendix B) for current backup for all servers.

1.6 Rack Enclosure

All servers and storage should be in an enclosure that will have the necessary allowance for the growth projected in servers and storage. Please ensure rack enclosures for both the Sandalwood Parkway and JYTS locations are provided.

Project: Hardware/Software Network Consolidation		HYDRO ONE BRAMPTON NETWORKS INC.	
Document Name: 2010 Network Consolidation Plan			
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1.7 Virtual Desktop Infrastructure

HOBNI currently has approximately 205 DELL personal computers in its network. These devices are all presently 5 years or older. HOBNI intends to virtualize up to 90% of these desktops in the second phase of this project. Approximately 10% of our desktops are used in Engineering applications which require higher end graphics and may not be suitable (at this time) for virtualization. Any VDI recommendations will allow for dual-monitors at all workstations.

2. Software Requirements

2.1 VMware – Server Virtualization


HOBNI's stated direction has been to use VMware for its virtualization of as many existing servers as possible. HOBNI will require licensing to virtualize approximately 20 Microsoft Server/2003 devices that are currently eligible for virtualization.

2.2 VMware – Desktop Virtualization

HOBNI currently has approximately 205 DELL personal computers in its network. These devices are all presently 5 years or older. HOBNI intends to virtualize up to 90% of these desktops in the second phase of this project. Approximately 10% of our desktops are used in Engineering applications which require higher end graphics and may not be suitable (at this time) for virtualization. HOBNI will require licensing to virtualize approximately 200 windows devices.

2.3 Microsoft Server/Desktop Virtualization

Under virtualization Microsoft requires licensing for its desktop and server products. All Microsoft software requirements for the proposed desktop and server solutions will be included in the plan.

Project: Hardware/Software Network Consolidation		HYDRO ONE BRAMPTON NETWORKS INC.	
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2.4 Switch/Server/Desktop Management

Network administration is the backbone of the enterprise. HOBNI will enter into a licensing agreement with the selected vendor to acquire network administration software and provide the necessary training for staff.

Operating Environment – iSeries Servers

Company Name: Hydro One Brampton
 Contact:
 Address:
 City, ST, Zip:
 Phone:
 email:

Item #	Server Name / Model	OS Version / Language	IBM i Serial Number	Software Tier	Process or Feature	Total / Used GB of Disk	Bandwidth (slowest link to Director)	Save while active used?	Journaling used?	Triggers / Constraints used?	IFS DLO (QDLS) used?	Main Purpose
1	515	V5R4	100C0BA	P05	6010	423 / 250	Fibre	Yes	No	Triggers	Yes	Development
2	M25 (LPAR 1)	V5R4	102243M	P10	5634	351 / 270	Fibre	Yes	No	Triggers	Yes	Production
3	M25 (LPAR 2)	V5R4	102243M	P10	5634	423 / 170	Fibre	?	No	No	Yes	Notes / Web

Current Backup: BRMS to Tape

Retention Policy	Backup	When run	Retained for
Daily	Mon - Thur		35 days
Weekly	Friday		6 weeks
Monthly		last day of the	7 years
Applicatio	Various times		7 years

Operating Environment - Non-iSeries servers

Item #	Server Location (physical)	Server Name	Server Plan for new environment	OS (specify server vs. workstation)	Service Pack Level	Amount of Data (GB) to be backed up	External Bandwidth	Backup Window	Applications	Databases	AntiVirus	Number of SQL DB's on Server?
1	Computer Room	HOB1	Tivoli, file server	Virtualize	Windows Srv 2003	Service Pack 2	22G	1000M		SQL 8.00.760	Etrust	
2	Computer Room	HOB2	Domain Controller, file server	Virtualize	Windows Srv 2003	Service Pack 2	174G	1000M	Active Directory		Etrust	
3	Computer Room	HOB3	MV90	Standalone	Windows Srv 2003	Service Pack 2	26G	1000M			Etrust	
4	Computer Room	HOB4	Domain Controller, file server	Virtualize	Windows Srv 2003	Service Pack 2	85G	1000M	Active Directory	Pervasive SQL 9.1	Etrust	
5	Computer Room	HOB5	Compleo	Virtualize	Windows Srv 2003	Service Pack 2		1000M		SQL 8.00.760	Etrust	
6	Computer Room	HOB6	Websense - standalone	Standalone	Windows Srv 2003	Service Pack 2		1000M		SQL 8.00.2039	Etrust	
7	Computer Room	HOBABELL	Phone System - Standalone	Standalone	Windows 2000	Service Pack 4		1000M			Etrust	
8	Computer Room	HOBVES	Blackberry Enterprise Server	Virtualize	Windows Srv 2003Service pack 2	Service Pack 2		1000M		SQL 8.00.760	Etrust	
9	Computer Room	GIS4	Phase out	Phase out	Windows NT4	Service Pack 5		100M	Domain Server			
10	Computer Room	EOSSVR1	Merge into FS1, Phase out	Virtualize	Windows 2000 Server	Service Pack 4	10G	100M	2AM-4AM	File Server		
11	Control Room	HostA	As is	Standalone	Windows Srv 2003	Service Pack 1	1G	1000M	2AM-4AM	SCADA Server		
12	Control Room	HostB	As is	Standalone	Windows Srv 2003	Service Pack 1	30G	1000M	2AM-4AM	SCADA Server		
13	Computer Room	OMS71	Virtualize to OMS1	Virtualize	Windows Srv 2003	Service Pack 2	2G	1000M	2AM-4AM	OMS Primary Server	Oracle 10G	
14	Computer Room	OMS72	Virtualize to OMS2	Virtualize	Windows Srv 2003	Service Pack 2	2G	1000M	2AM-4AM	OMS Secondary Server	Oracle 10G	
15	Computer Room	OMS73	Virtualize to OMS3	Virtualize	Windows Srv 2003	Service Pack 2	2G	1000M	2AM-4AM	OMS Web Server		
16	Computer Room	OMS81	Split and merge into OMSDEV, OMS	Virtualize	Windows Srv 2003	Service Pack 2	2G	1000M	2AM-4AM	OMS Migration Server, Backup Server	Oracle 10G	
17	Computer Room	GIS71	Merge into FS1	Virtualize	Windows Srv 2003	Service Pack 2	40G	1000M	2AM-4AM	Backup Server		
18	Computer Room	GIS51	Merge into FS1	Virtualize	Windows Srv 2003	Service Pack 2	100G	1000M	2AM-4AM	File Server		
19	Computer Room	GIS88	Virtualize to PS1	Virtualize	Windows Srv 2003	Service Pack 2	1G	1000M	2AM-4AM	Printer Server		
20	JY Station	GIS86	Phase out	Phase out	Windows Srv 2003	Service Pack 2	200G	1000M	2AM-4AM	Backup Server located JY Station		
21	Computer Room	GIS54	Merge into GISPROD	Virtualize	Windows Srv 2003	Service Pack 2	1G	1000M	2AM-4AM	G/Tech Web Server and Plot Server		
22	Computer Room	GIS55	Merge into GISPROD	Virtualize	Windows Srv 2003	Service Pack 2	1G	1000M	2AM-4AM	G/Tech Export Server and Mobile Server		
23	Computer Room	GIS72	Split and merge into FS1 and DB1	Virtualize	Windows Srv 2003	Service Pack 2	1G	1000M	2AM-4AM	G/Tech Database Server	Oracle 10G	
24	Computer Room	GIS52	As is	Standalone	Windows Srv 2003	Service Pack 2	200G	1000M	2AM-4AM	Onsite Backup Server		
25	Computer Room	NICELOG	As is	Standalone	Windows Srv 2003	Service Pack 2	50G	1000M	2AM-4AM	Phone Record Server	SQL Server 2000	
26	Control Room	EOS81	As is	Standalone	Windows Srv 2003	Service Pack 2	100G	1000M	2AM-4AM	Phone Record Media Server	SQL Server 2000	

I.T. Servers
 GIS Servers

Current Backup Solution: Tivoli

Operating Environment - Virtual Machines

Item #	Server Location (physical)	Virtual Machine Server Name	Server Plan for new environment	OS	Service Pack Level	Amount of Data (GB) to be backed up	Allocated RAM/ Processor	Shared NIC Speed	Backup Window
1	Computer Room	GIS2	Phase out	Windows NT	Service Pack 5	1GB	512M	100M	2AM-4AM
2	Computer Room	GIS58	Split and merge into OMSDEV, GISDEV	Windows 2000	Service Pack 4	1GB	512M	1000M	2AM-4AM

I.T. Servers
GIS Servers

Brampton	Server Make	Model	Chip Type	# of Processors	# of Cores
HOB1	IBM	xseries	Intel	1	2
HOB2	IBM	xseries	Intel	1	2
HOB3	IBM	xseries	Intel	1	2
HOB4	IBM	xseries	Intel	1	2
HOB5	IBM	xseries	Intel	1	2
HOB8	IBM	xseries	Intel	1	2
BES	IBM	xseries	Intel	1	2
BELL	IBM	xseries	Intel	1	2
EOSSVR1	Dell	PowerEdge 4400	Intel Pentium III	1	2
HostA	Dell	PowerEdge 830	Intel Pentium 4	1	2
HostB	Dell	PowerEdge 830	Intel Pentium 4	1	2
OMS71	Dell	PowerEdge 1550	Intel Xeon	2	4
OMS72	Dell	PowerEdge 1550	Intel Xeon	2	4
OMS73	Dell	PowerEdge 1850	Intel Xeon	2	4
OMS81	Dell	PowerEdge 1550	Intel Xeon	2	4
GIS71	Dell	PowerEdge 1550	Intel Xeon	2	4
GIS51	Dell	PowerEdge 2850	Intel Xeon	2	4
GIS88	Dell	PowerEdge 1550	Intel Xeon	2	4
GIS86	Dell	PowerEdge 2900	Intel Xeon	2	4
GIS54	Dell	PowerEdge 2850	Intel Xeon	2	4
GIS55	Dell	PowerEdge 2850	Intel Xeon	2	4
GIS72	Dell	PowerEdge 1550	Intel Xeon	2	4
GIS52	Dell	PowerEdge 4800	Intel Xeon	2	4
NICELOG	NICE	NiceLog	Intel	1	2
EOS81	Dell	PowerEdge 2900	Intel Xeon	2	4

**Backup Plans for Iseries Systems
Production System**

We have 4 sets of backups on this system Daily, Weekly, Monthly and Yearly

Daily Backup's run on Monday through Thursday and consists of all DATA libraries, Programmer libraries, and System Libraries. The retention for these tapes is 29 days.

Weekly Backup's run on Fridays and consists of all DATA libraries, Programmer libraries, and System Libraries. The retention for these tapes is 45 days.

Monthly Backup's run on the last day of the month and consists of all DATA libraries, Programmer libraries, and System Libraries. The retention for these tapes is 13 months or 395 days.

Yearly Backup's run on the last day of the month and consists of all DATA libraries with retention for 7 years.

Lotus Notes Mail System

We have 2 sets of backups on this system daily and Monthly.

Daily Backup's run on Monday through Friday and consists of all the Lotus Notes Libraries. The retention for these tapes is 42 days.

Monthly Backup's run on the last day of the month and consists of all the Lotus Notes Libraries. The retention for these tapes is 740 days.

Development System

We have 1 set of backups for the development system.

We backup the system libraries, object libraries and all programmer libraries . The retention for these tapes is 42 days.

Tivoli backup settings:

Daily - Keep 7 versions
Monthly - Keep 12 months
Yearly - Keep 7 years

Department	PC	Server	AS/400 terminal	Printer	
MIS	8			2	
HR	4			2	
					Include 4 PCs on the counter and 1 PC in the meeting room
CREDIT AND COLLECTION	13			1	
CUSTOMER SERVICES	21			2	
REGULATORY AFFAIRS	7			2	
ADMINISTRATION	9			5	
ACCOUNTING	12			3	
PURCHASING	6			1	
ENGINEERING	16			2	
TECHNICAL SERVICES	4			1	
GIS	4			0	
DRAFTING	9			6	
PLANNING AND STANDARD	6			1	
MEETING ROOM	4			0	
TRAINING ROOM	8			0	
SURVEY	4			3	
					maintenance, 1 pc in Forest room, 1 PC for air conditioning
HSE	10			3	
					Include 1 pc for meter reading.
SMART METER	4			0	
METERING	5			1	
LINES	19			1	
PROTECTION AND CONTROL	4			1	
COMPUTER ROOM	8		11	2	
COMPUTER ROOM(GIS)			14		
FLEET	4			2	
STORE	3			7	
CONTROL ROOM	12			1	
TOTAL	204		25	8	43

Enterprise Content Management Solution

Hydro One Brampton consists of many separate departments, such as Accounting and Finance, Engineering, Administration, Customer Service, Regulatory, IT, Construction and so on.

Each department has specific requirements for content management. ECM business solutions have been designed to meet many of these requirements and solve problems specific to a particular department. Typically, these solutions are driven by the need to improve efficiency or save money.

Examples include: purchase order processing, invoicing, engineering project management, bill processing, regulatory compliance, and financial reporting, to mention a few.

Once an application has been deployed at the departmental or group level, the IT Department involved in implementing the first application can use the lessons learned to solve content issues in other departments. While the first deployment may take place in the Accounting Department, the next deployment may occur in the Customer Service Department, and so on. Some of the most advanced ECM-enabled organizations in the world today have more than 20 distinct department-level applications supported by a common underlying suite of technologies and a common data model.

Some of the solutions that have been developed for ECM and that Hydro One Brampton will be reviewing include some of the following:

- Accounts payable administration.
- Human resources
- Customer care
- Policies and procedures
- Digital asset management.
- Project collaboration
- Engineering change management.
- Records management

As Hydro One Brampton moves to leverage the same infrastructure for process improvements company-wide, finding the best solution often leads to a long-term strategic Enterprise Content Management solution. This involves deploying a complete series of applications across an entire organization. In order to make these applications simple to deploy and cost effective to replicate, a common set of technologies with the same content model is required as an underlying infrastructure. This means that the suite of technologies must be sufficient to deliver all applications across the enterprise.

In many applications that are critical to the operation and success of an organization, collaboration requires cross-departmental cooperation. In many companies, achieving this cooperation is the very basis for long-term competitive advantage.

This implies strong cross-functional cooperation and collaboration, plus the sharing of critical documents among all departments.

ECM suites are made up of a number of technology pieces working harmoniously to manage the complete lifecycle of electronic documents, from creation to archive and eventual deletion. You can compare ECM suites with other suite-based software products, such as Microsoft® Office. Microsoft Office includes different tools that work together to provide personal productivity for office workers. Likewise, ECM suites offer a set of tightly integrated facilities for searching, managing, distributing, publishing and archiving electronic documents to achieve organizational productivity.

Unlike Microsoft Office, ECM suites require little to no software to be installed on a personal computer. ECM software leverages Internet technology to deliver services to people, meaning that accessing the software requires only a Web browser, a username and a password.

ECM suites provide secure access, storage, publication and archiving of large volumes of business content. ECM allows organizations to manage the processes for working with different types of content, while tracking and controlling content changes. Content management is not confined to organizing computer directories; it involves exploiting your business know-how to avoid critical failures, to operate more efficiently and to become more productive and profitable.

Structured vs. Unstructured Information

To introduce the technologies that underpin ECM, it is necessary to understand the difference between structured and unstructured information and why managing unstructured content is such a challenge.

Structured data is based on numbers organized into tables. These database tables can be quickly manipulated to find data that refers to the numbers in the table. Unstructured data is not as easy to organize and retrieve.

Words, an example of unstructured data, are organized into tables similar to an index found at the back of a book. Because the data model for words (unstructured data) is fundamentally different from the data model for numbers (structured data), the technologies that support each must differ.

Computers have fundamentally changed the way we work; most office workers today require a computer to do their jobs. Managing payroll, processing orders and invoices, inventory control and financial accounting all rely heavily on the numeric processing capabilities of computers. Computers are exceptional at crunching numbers, but the

challenge for ECM applications is to use information technology to manage documents and pictures, or what is termed unstructured data.

Individual productivity tools such as word-processing systems, spreadsheets, presentation tools, Web editors and e-mail have created an explosion of unstructured data that must be managed. Organizations need to store this information, make it accessible and ensure that it is up to date and secure, as well as appropriately distributed, published and consumed.

The reason why unstructured data matters is the sheer size of this information and its recent growth rate. While this is important, what makes unstructured data the focus of IT for the future is the astounding growth rates of digital content that are being reported with main stream adoption of the Internet. It is estimated by various industry observers that large corporations are doubling their unstructured data every two months! Even if this rate slowed to every 3 months or every 6 months, it represents an enormous change in the type of information that is available for use within an organization.

Think about this rate for a minute. Consider all of the digital information created by corporations since the start of computing and then consider that all that information will be created all over again in the next few months!

Our every-day experience suggests that this is happening when we consider the incredible growth in the size of our e-mail inboxes and the scope and scale of the public Internet.

As a comparison, consider that unstructured information probably tracks transactions and that tracks the economy. A very strong global economy grows by an average of 4 percent per year and ERP growth is commensurate with that and probably in the 10 percent range or linear.

Now consider the two growth rates together. Today unstructured data is probably about 10 times the amount of structured data but consider the impact of even a few years of hyper growth by ECM (unstructured) and steady growth by ERP (structured), the gap will be 1,000 times the size of what it is today. With this rate of growth, whatever problems that IT currently faces with unstructured data it is clear that these problems will only get worse with time. It is better to start early on solving issues with web sites and email management since they will only be larger problems if they are left for another year to grow bigger. Clearly, the ECM repository of web sites and email will dominate the IT agenda for the foreseeable future.

It is for these reasons that Hydro One Brampton will issue an RFP in late 2010 for the installation and implementation of a strategic Enterprise Wide Content Management solution once our infrastructure renewal project has been completed.

CAPITAL PROJECTS SUMMARY 2011

1 This forecast budget has been prepared based on the framework provided by recently
 2 completed Asset Condition Assessment, Fleet Condition Assessment and a Facilities Asset
 3 Management Study. The results of these assessments were used in the analysis and
 4 development of the 2011 test year and forward looking business plans. The results of the
 5 studies and assessments provided information and direction on establishing the framework of
 6 future spending requirements however they were not used exclusively. Through collaborative
 7 interaction, staff at HOBNI analyzed the results of the studies to explore opportunities to reduce
 8 spending levels from those suggested while considering risk aversion and risk acceptance. The
 9 conclusion of this review resulted in forecast expenditures well below those prescribed in the
 10 studies.

11 The Company's 2011 budgeted capital program totals \$20,984,484, which is derived from 16
 12 major categories as shown in the table below.

Table 1: Capital Budget Summary 2011

Type	Description	Expenditures	Contributions and Grants	Construction Work in Progress	Total
1	SUBSTATIONS AND P. & C.	875,648			875,648
2	SCADA EQUIPMENT	107,000			107,000
3	SYSTEM EXPANSION AND ENHANCEMENT	1,987,857		(1,899)	1,985,958
4	SYSTEM REHABS AND EQUIPMENT REPLACEMENTS	4,610,051		(4,403)	4,605,648
5	ROAD WIDENINGS	5,538,115	(2,257,620)	(3,133)	3,277,362
7	NEW GENERAL SERVICE CUSTOMERS	6,418,175	(5,685,214)		732,961
8	NEW RESIDENTIAL- HIGH DENSITY	499,191	(234,097)		265,094
10	NEW RESIDENTIAL- LOW DENSITY	6,390,933	(4,186,497)	(2,106)	2,202,330
11	METERING	1,719,604			1,719,604
12	VEHICLES	2,168,000			2,168,000
13	DEPARTMENT TOOLS & EQUIP. > \$500.00	75,000			75,000
15	GREEN ENERGY PROGRAMS	869,502			869,502
17	ADMIN. & SERVICE CENTRE	1,066,692			1,066,692
18	ADMINISTRATIVE COMPUTER AS/400	660,000			660,000
19	G.I.S. COMPUTER EQUIP. & SOFTWARE	205,000			205,000
29	LAND AND LAND RIGHTS	168,685			168,685
	Total	33,359,453	(12,363,428)	(11,541)	20,984,484

1 Under IAS 23, borrowing costs are directly attributable to the acquisition, construction or
2 production of a qualifying asset form part of the cost of that asset. Such borrowing costs are
3 capitalized as part of the cost of the asset. Hydro One Brampton has determined that any asset
4 that takes greater than six months to complete is considered a qualifying asset. As a result
5 borrowing costs have been calculated on Construction Work in Progress (CWIP) where it is
6 expected that the duration of the project will exceed six months.

7 Each category is then divided into specific projects with defined capital expenditures. Detailed
8 descriptions of each project are provided in Tab 5, Schedule 8.1 of this Exhibit, following this
9 section.

10 **SUBSTATIONS** **IFRS \$875,648**

11 In 2011, the Substations department plans to install a new power transformer at MS20 replacing
12 the end of life T2 transformer as part of a multi-year transformer replacement plan started in
13 2010. The company will also continue with the 13.8 kV breaker retrofit/upgrade program at
14 MS10 and MS14 that began in 2009.

15 Air conditioning units will be installed at MS14 and MS10 to control humidity in these stations
16 preventing corona damage to the station bus.

17 Relaying at MS10 is to be upgraded due to the existing hardware becoming obsolete. New SEL
18 relays will be installed on all feeders as per the Utility's standards.

19 A new high voltage thumper unit will be purchased for truck 81 to allow staff to locate primary
20 faults if truck 75 is not available.

21 In 2011, HOBNI will begin funding the upgrade of the VCOM radio system. This is a multi-year
22 project that should end in 2014.

23 **SCADA** **IFRS \$107,000**

24 In 2010, the Protection & Control (P&C) department moved ahead with several initiatives
25 designed to increase system reliability and improve SCADA functionality.

26 In 2011, P&C plans on retro-fitting obsolete equipment at several fibre-based SCADA
27 installations as well as continuing the expansion of the 2.4 GHz communication network.

1 HOBNI plans on replacing the obsolete HMI equipment at Jim Yarrow TS as well as upgrading
2 reclose block systems at MS 1, 2, 3, and 19.

3 **SYSTEM EXPANSION & ENHANCEMENT** **IFRS \$1,985,958**

4 **4.16 kV to 27.6kV Conversion Program\$317,000**

5 HOBNI currently operates an aged 4.16 kV distribution system. This system is nearing the end
6 of its serviceable life. In 2011, the 4.16 kV conversion program will replace the 4.16 kV
7 distribution system on Hansen Rd., Orenda Rd., and Clarence St. areas with a modern 27.6 kV
8 distribution system. This involves replacing a combination of overhead and underground
9 distribution facilities with a new single contingency primary distribution system needed to
10 improve service reliability to this area. This work is also a prerequisite to the decommissioning
11 of MS8, a 40 year old outdoor municipal substation. This is in line with the Company's objective
12 of phasing out obsolete low voltage distribution systems and modernizing those systems to 27.6
13 kV.

14 **Jim Yarrow TS Expansion 27.6 kV Egress Program.....\$62,000**

15 HOBNI will extend the existing Jim Yarrow TS 25M12 circuit along Steeles Ave. from Creditview
16 Rd. to Mississauga Rd. in 2011 as part of a program to provide feeder contingency and
17 sectionalizing capability for an existing circuit servicing an industrial zoned area in the south-
18 west section of the city.

19 **Goreway TS Expansion - 27.6 kV Egress Program.....\$1,111,958**

20 In 2011 HOBNI will install a new feeder circuit egress at Goreway TS. The 136M18 will be
21 installed to Cottrelle Blvd. to provide a single contingency connection to the existing 136M46

22 2011 will also include the extension of an existing Goreway TS feeder extension on Countryside
23 Dr. from Everglade to the Gore Rd.

24 These projects are required to provide new capacity for load growth driven by residential
25 development in the north-east section of the city, and to improve feeder contingency and
26 sectionalizing capability providing overall improved reliability for the area serviced by these
27 circuits.

28

1 **Expansions and Extensions for New Residential Subdivisions \$495,000**

2 HOBNI allocates annual funding for the installation of 600 AMP feeder class distribution facilities
3 within residential development projects. This funding is used to capitalize on the opportunity to
4 install HOBNI feeder class facilities in a joint trench with new residential subdivisions. This work
5 is required to extend feeder class systems for bulk power delivery systems to service the new
6 developments lands. Actual timing of this expenditure is controlled by the progress of civil
7 works, undertaken in the respective developments as HOBNI infrastructure is placed in a joint
8 use fashion with the installation of shallow services.

9 **SYSTEM REHABILITATION AND EQUIPMENT**

10 **REPLACEMENT (SR&ER) IFRS \$4,605,648**

11 The 2011, SR&ER category will include replacement of capital assets identified in HOBNI's
12 Asset Condition Assessment Plan. While this plan identifies proposed capital replacements, the
13 Company may not always follow the recommendations exactly if other mitigating opportunities
14 are available. For example, rather than implement a system-wide pole replacement program,
15 the company embarked on a wood pole testing program to identify pole condition and remaining
16 life. The information collected from this program will be used to implement a more selective
17 approach in pole replacement, thus reducing the financial impact of a broad based pole
18 replacement program. It is expected that this approach will maximize the life of the pole assets
19 while minimizing the financial impact on this and subsequent rate applications.

20 The **Capital Replacement Programs** are broken down by asset category as on the following
21 pages.

1 **Primary Feeder Rehabilitation/Replacement Program\$1,527,648**

2 The 2011 replacement program focuses on cables which have experienced faults exceeding the
 3 maximum allowable threshold, elevating their status to replacement. HOBNI focuses on
 4 “Feeder” or “Bulk Load” cable system performance as these cable systems have a much higher
 5 impact on customer outages and respective reliability indices. **Figure 16** shows the
 6 recommended year over year three phase circuit replacement quantity.

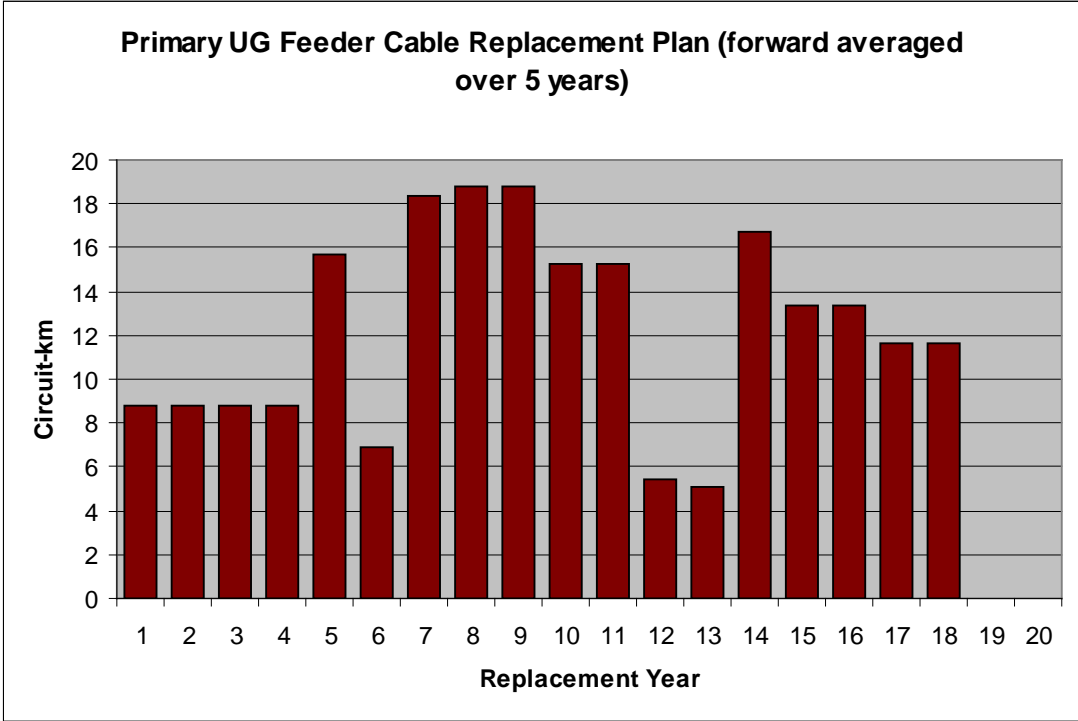


Figure 1: Primary Underground Feeder Cable Replacement Plan

Year 1 = 2010

1 **Primary Distribution Cable Rehabilitation/Replacement Program \$557,000**

2 Distribution cable faults have a much lower impact on system performance and reliability,
 3 however there is approximately three and half times as much distribution class cable vs. feeder
 4 class cable in HOBNI's system; with 2,246 km distribution class cable vs. 665 km feeder class
 5 cable in operation, there is a need for a levelized and systematic approach to distribution cable
 6 rejuvenation or replacement. Failure to implement and maintain a program to address this
 7 category would result in increasing reactive cable fault related costs and lower reliability
 8 performance. HOBNI has taken a conservative approach in funding allocations for distribution
 9 class cables replacement. This decision was based on evolving cable rejuvenation technologies
 10 emerging in the market that are being touted as being a more cost effective measure for aging
 11 cable systems. **Figure 17** below shows the recommended year over year cable conductor
 12 rejuvenation or replacement quantity.

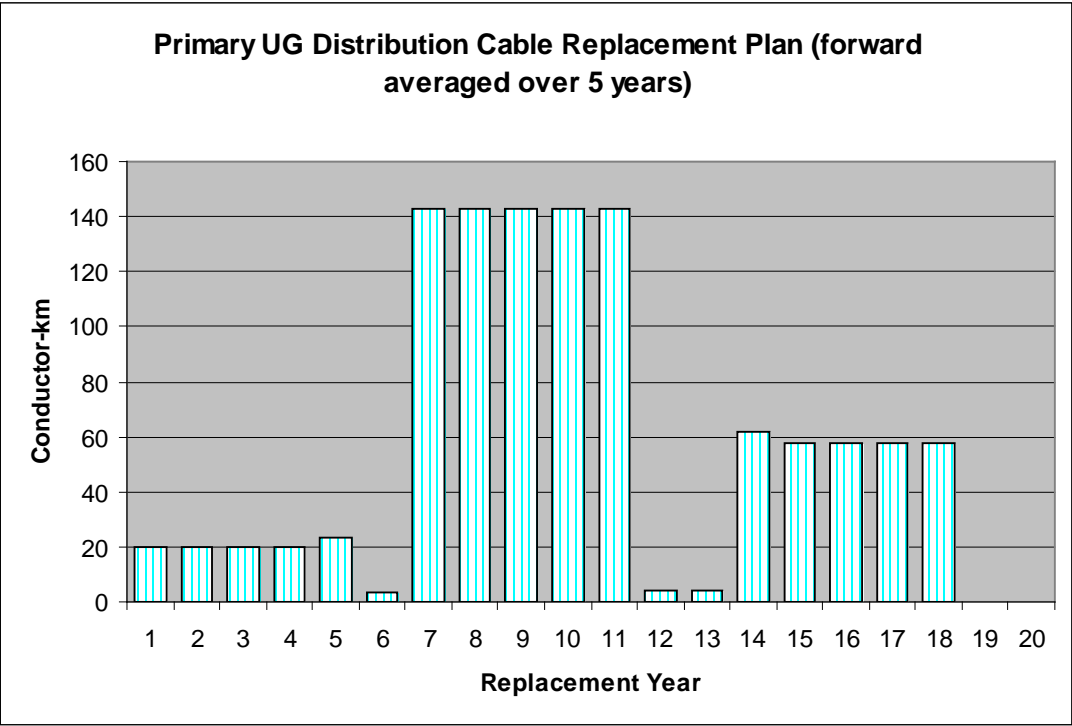


Figure 2: Primary Underground Distribution Cable Replacement Plan

Year 1 = 2010

1 **Insulator Replacement Program\$264,000**

2 HOBNI's overhead distribution system ranges in age and incorporates a diverse range of line
3 post insulators. Certain types of porcelain line post insulators have failed unexpectedly during
4 line construction activities increasing worker risk during overhead line projects. This matter was
5 raised in priority and awareness among staff and employees and the Company has
6 implemented an insulator replacement program to eliminate these units from service. In 2011,
7 \$264,236 has been allocated towards this program and it is expected that it will require several
8 years to eliminate these units from service.

1 **Three Phase Pole top Transformer Replacement Program\$159,000**

2 The Company currently owns and operates 404 three phase configured pole mounted
 3 transformers of varying ages and ratings. The three phase transformer configuration is typically
 4 required to service commercial or industrial load centers where loss of supply may have a
 5 higher impact on customer service and reliability compared to single phase applications. For this
 6 reason, HOBNI has implemented a proactive three phase pole mounted transformer
 7 replacement program to replace transformers before failure. The Company uses transformer
 8 loading history and information collected via visual inspections to identify and rank units for
 9 replacement. Funding is based on probability of failure.

10 **Figure 18** below presents estimated annual three phase replacement quantities based on
 11 probability of failure.

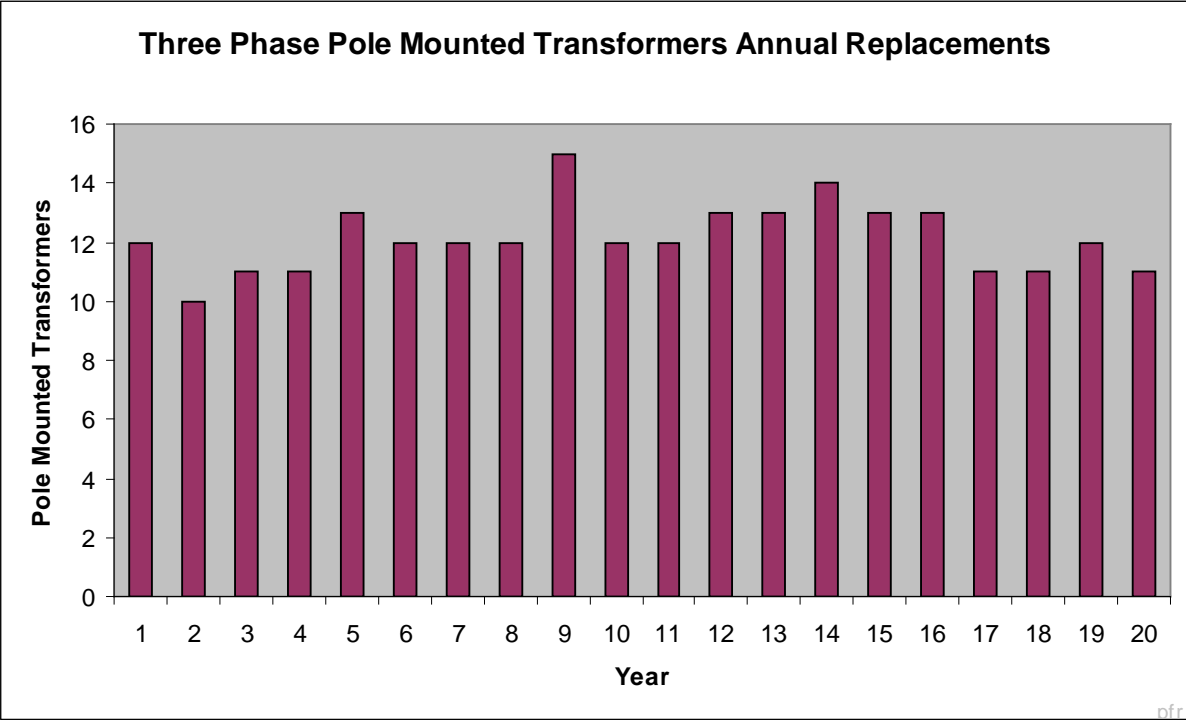


Figure 3: Three Phase Pole Mounted Transformers Yearly "Probable Failure" Replacements

Year 1 = 2010

1 **Three Phase Pad Mounted Transformer Replacement Program\$159,000**

2 HOBNI owns and operates 723 three phase pad mounted transformers of varying ages and
3 ratings. The three phase transformer configuration is typically required to service commercial or
4 industrial load centers where loss of supply may have a higher impact on customer service and
5 reliability compared to single phase applications. For this reason, HOBNI has implemented a
6 proactive three phase pad mounted transformer replacement program to replace transformers
7 before failure. The Company uses transformer loading history and information collected via
8 visual inspections to identify and rank units for replacement. Funding is based on probability of
9 failure.

10 **Figure 19** below presents estimated annual replacement quantities based on probability of
11 failure.

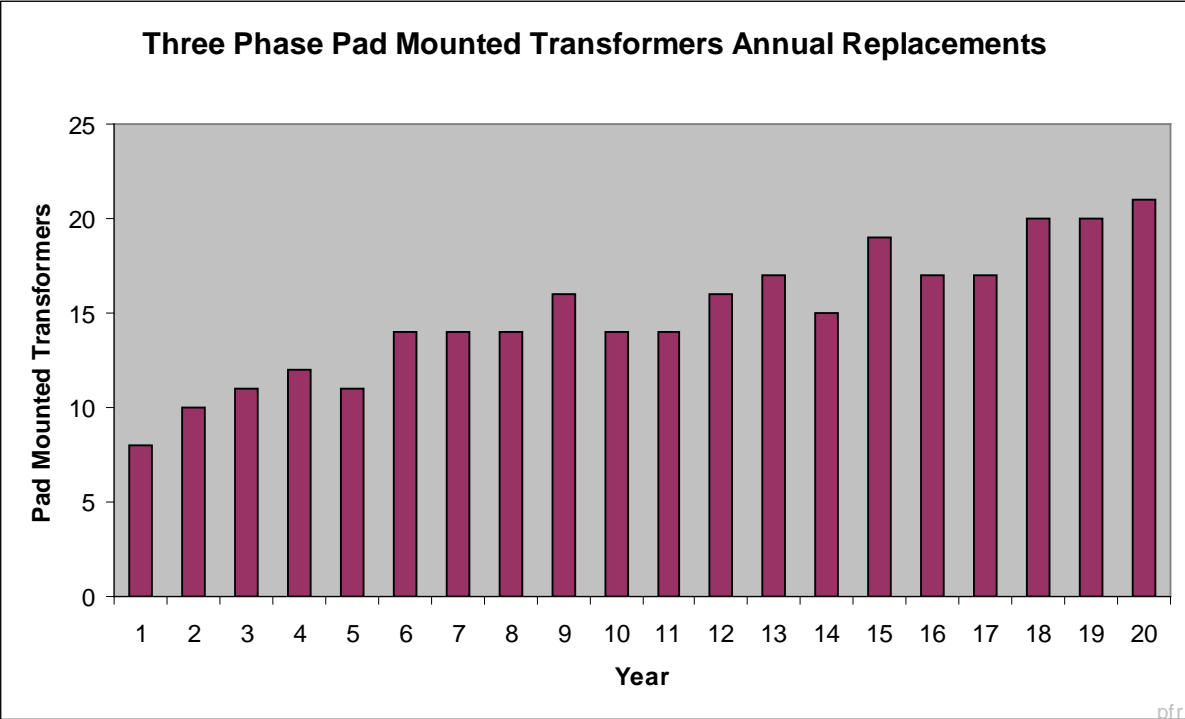


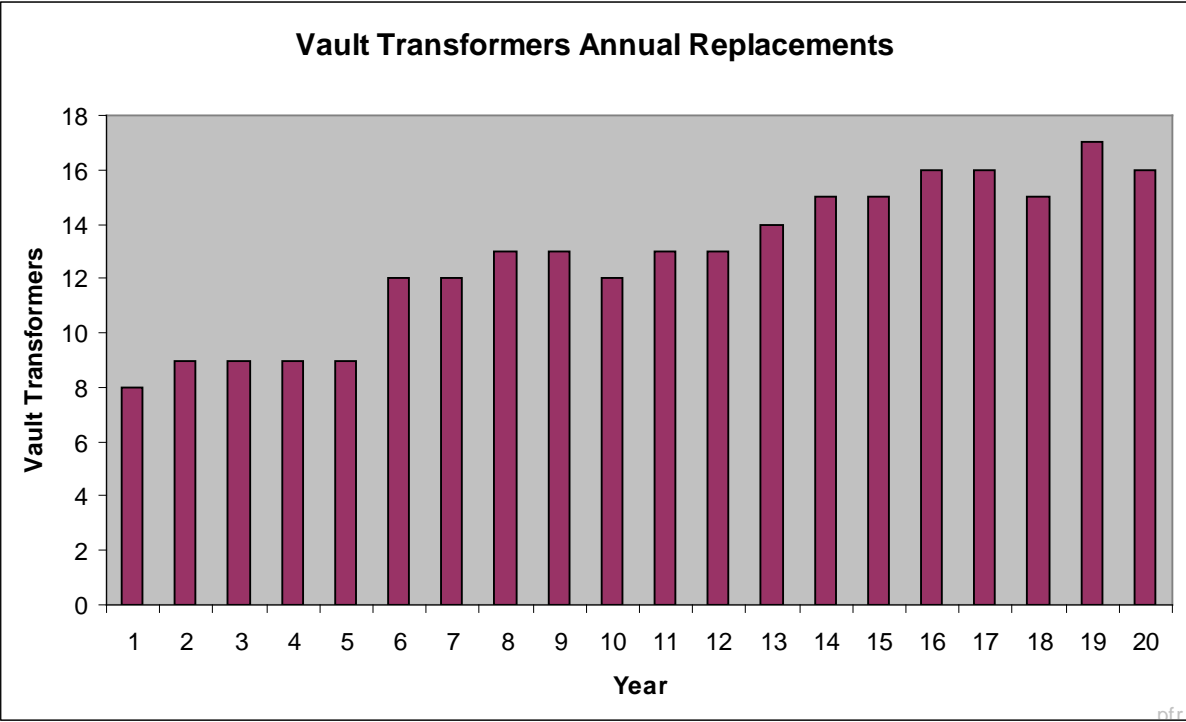
Figure 4: Three Phase Pad-Mounted Transformers Yearly "Probable Failure" Replacements

Year 1 = 2010

1 **Three Phase Vault Transformer Replacement Program.....\$370,000**

2 The company currently owns and operates 1447 three phase configured vault type transformers
 3 of varying ages and ratings. Three phase vault type transformer configurations service a variety
 4 of load centers including high rise residential, commercial and industrial load centers where loss
 5 of supply may have a higher impact on customer service and reliability compared to single
 6 phase applications. HOBNI has implemented a proactive vault-type transformer replacement
 7 program to replace transformers before failure. The Company uses transformer loading history
 8 and information collected via visual inspections to identify and rank units for replacement.
 9 Funding is based on probability of failure. The Company has adopted a philosophy to replace
 10 vault type transformers with outdoor pad mounted transformers wherever possible. This
 11 provides improved worker safety and enhanced primary elbow switching capabilities due to the
 12 presence of under oil switching devices provided in the three phase pad mounted transformers.

13 **Figure 20** below presents estimated annual replacement quantities based on probability of
 14 failure.



15 **Figure 5: Vault Transformers Yearly "Probable Failure" Replacements**

Year 1 = 2010

1 **Three Phase Pad mount Switchgear Replacement Program\$132,000**

2 HOBNI currently owns and operates 298 pad mounted switchgears. These devices represent a
 3 significant asset, providing 200 distribution connections for load centers and load break
 4 switching capabilities from the bulk power feeder class infrastructure. The majority of these units
 5 incorporate air as the insulating medium with a small number of older units utilizing mineral
 6 insulating oil. Failures of pad mounted switchgear impact feeder class systems directly and as
 7 such have a high impact on customer outage minutes and respective reliability indices. The
 8 Company uses information collected via visual inspections to identify and rank units for
 9 replacement. Funding is based on probability of failure. Replacement quantities are relatively
 10 low due to proactive measures taken by the Company to maintain these devices in a reliable
 11 condition.

12 **Figure 21** below presents estimated annual replacement quantities based on probability of
 13 failure.

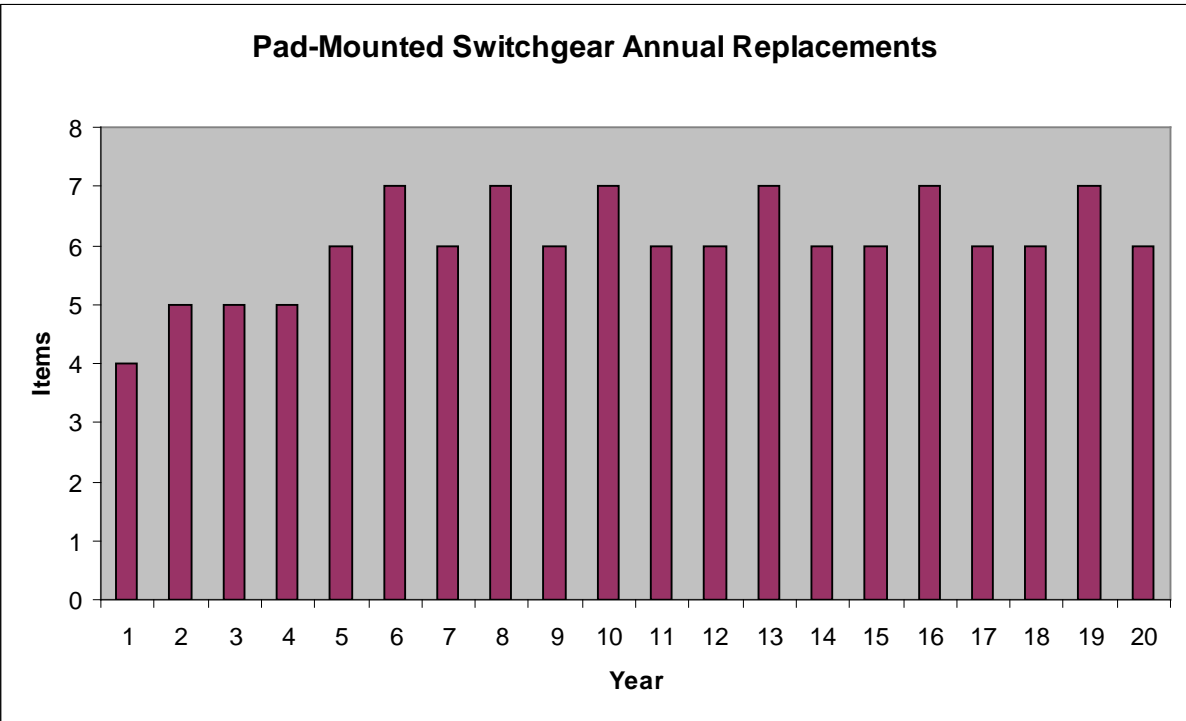


Figure 6: Pad Mounted Switchgear Yearly "Probable Failure" Replacements

Year 1 = 2010

1 **Three Phase Load Interrupter Switch Replacement Program.....\$159,000**

2 The company currently owns and operates 695 overhead three phase load interrupting
 3 switches. These devices represent a significant asset, providing load break/make switching
 4 capabilities in the overhead bulk power feeder class infrastructure. Failures of these switches
 5 impact feeder class systems directly and as such have a high impact on customer outage
 6 minutes and reliability indices. The Company completes an annual visual inspection and
 7 infrared scanning program of overhead load interrupting switches. Defects and heating
 8 anomalies on these switches are promptly analyzed and corrected, which contribute to
 9 improved long term performance. As a result replacement requirements are minimized.

10 **Figure 22** below presents estimated annual replacement quantities based on probability of
 11 failure.

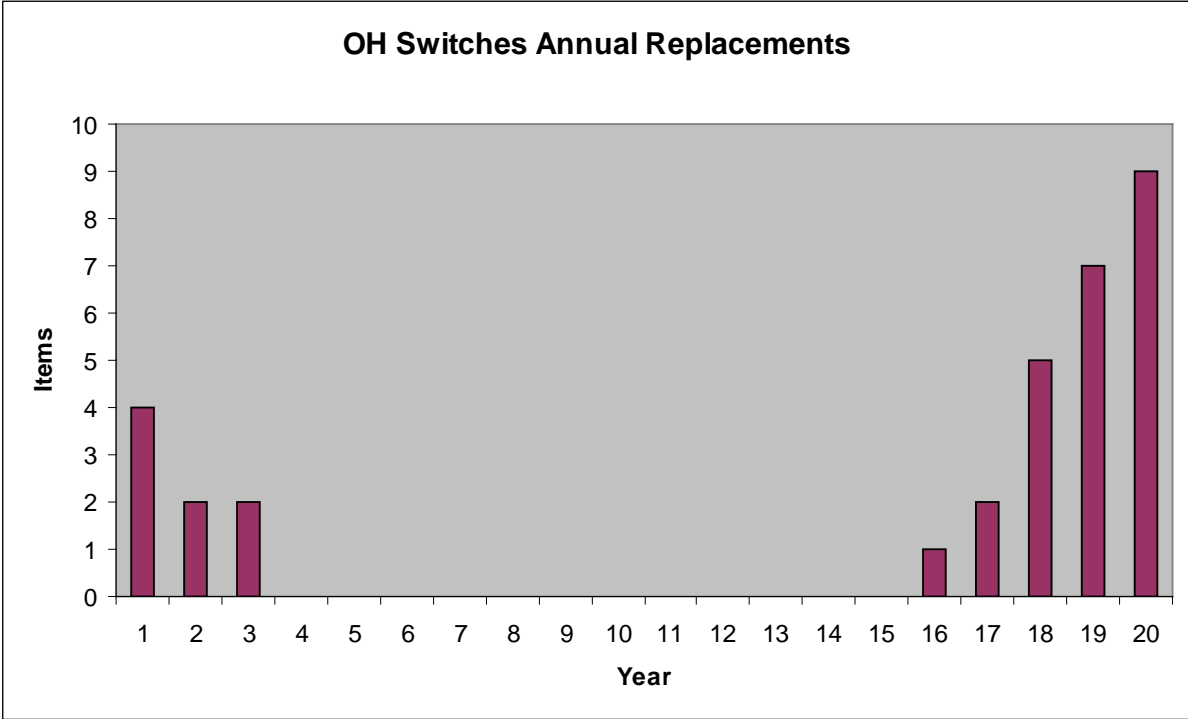


Figure 7: Overhead Switches Yearly "Probable Failure" Replacements

Year 1 = 2010

1 **Wood Pole Replacement Program.....\$66,000**

2 HOBNI currently maintains approximately 12,000 standing wood poles in the distribution
 3 system. These poles range in age, size and species and represent a significant asset in
 4 delivering power to the customers of Brampton. HOBNI last completed a five-year wood pole
 5 testing program in 2000. The results of this program, coupled with other known data was used
 6 in the Asset Condition Assessment (ACA) and Capital Replacement Plan for wood poles. The
 7 forecast dollar amount allocated for wood pole replacement in 2011 is lower than that
 8 recommended in the ACA. This is due to the fact that a significant number of aged poles are
 9 removed from service under the annual roadway improvement projects initiated by local road
 10 authorities.

11 **Figure 23** below presents estimated annual replacement quantities based on probability of
 12 failure.

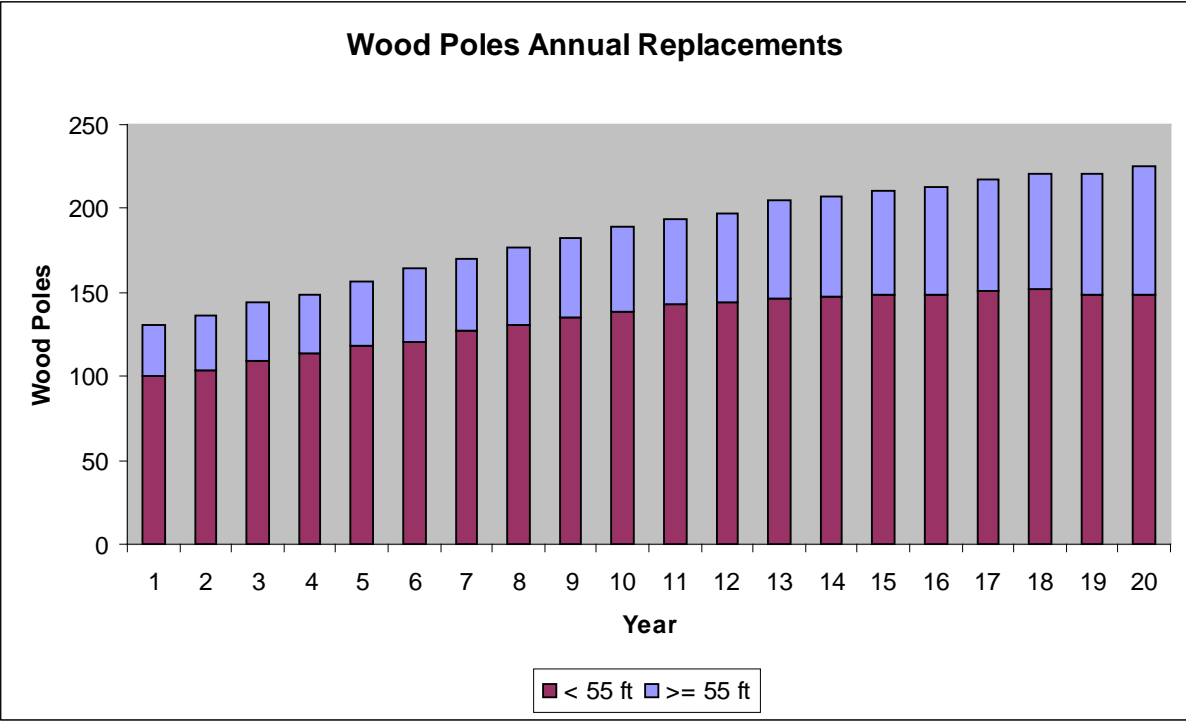


Figure 8: Wood Poles Yearly "Probable Failure" Replacements

Year 1 = 2010

1 **Single Phase Transformer Replacement Program\$684,000**

2 This program involves replacement of single phase transformers in various installation
 3 scenarios. The total number of units in service is 13,026 broken down as follows;

4	Pole top	1,544	\$152,000
5	Pad mounted	11,331	\$519,000
6	Submersible	151	\$ 13,000

7 Single phase transformers typically service smaller residential and light commercial loads,
 8 where loss of supply has a minimal impact on customer service and reliability. As a result these
 9 units are "run to failure". Funding is required for replacement costs based on estimated failure
 10 rates..

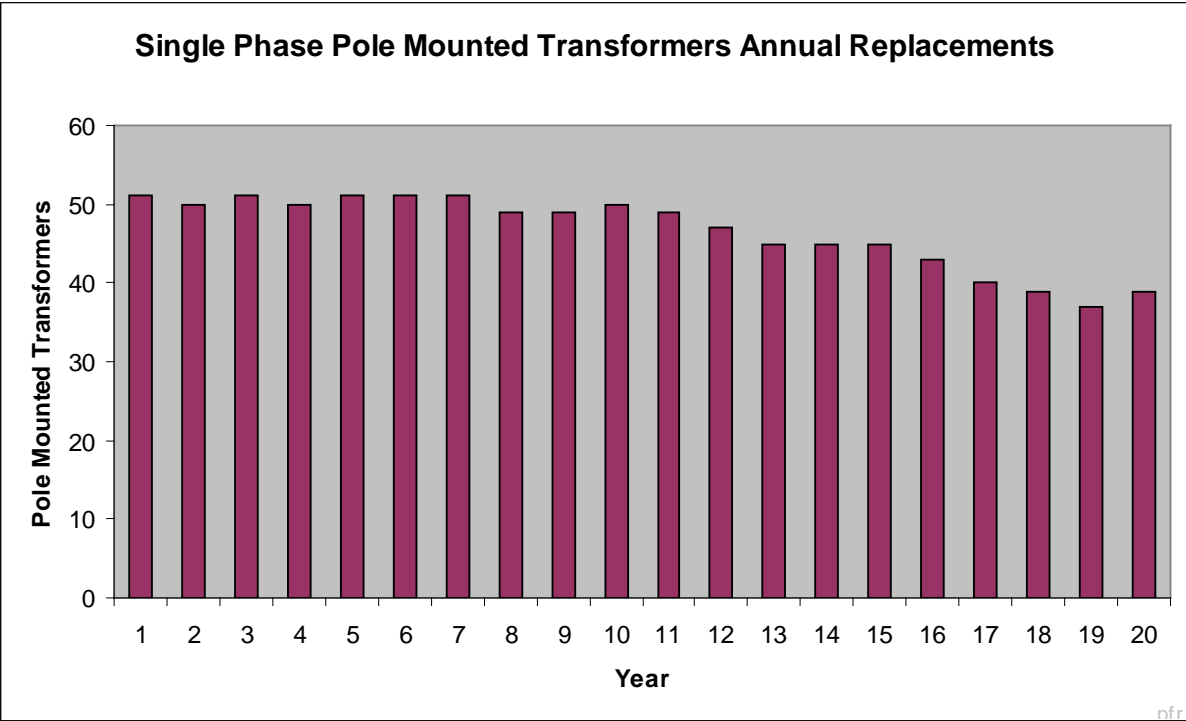


Figure 9: Single Phase Pole Mounted Transformers Yearly "Probable Failure" Replacements

Year 1 = 2010

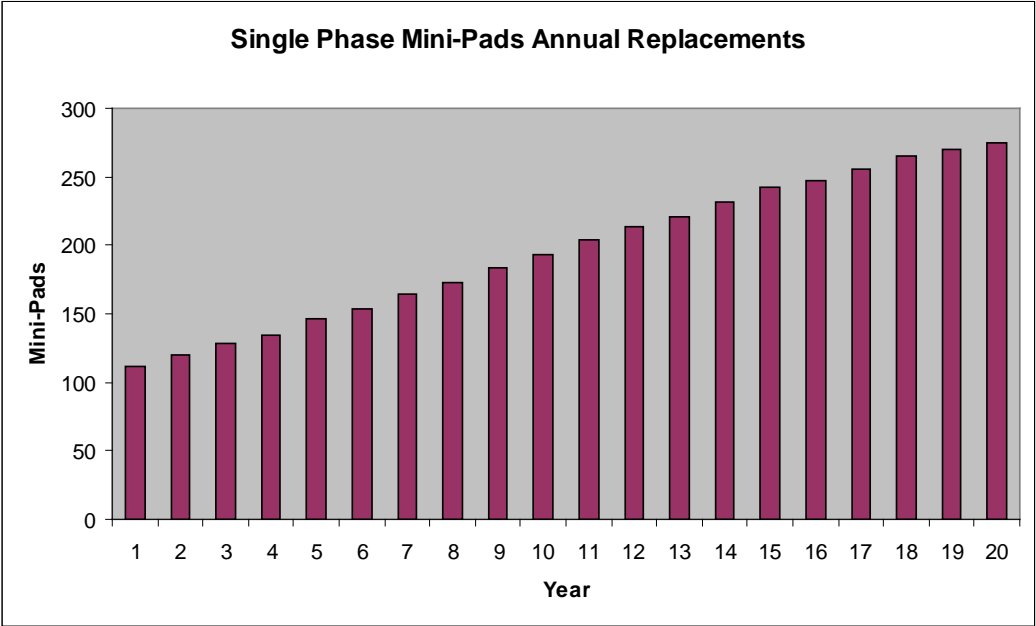


Figure 10: Mini-Pad Transformers Yearly "Probable Failure" Replacements

Year 1 = 2010

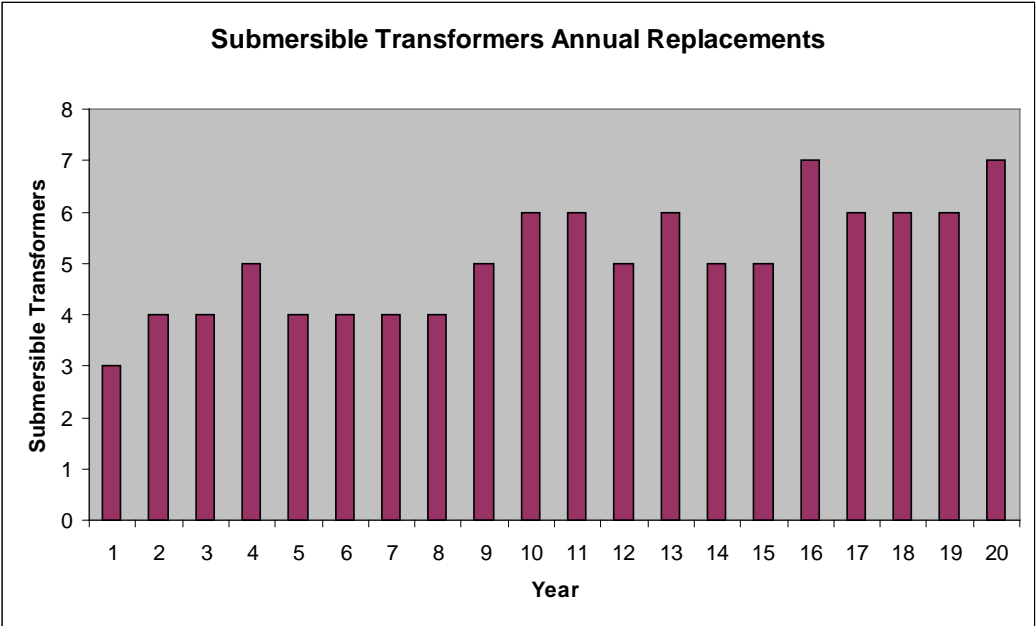


Figure 11: Submersible Transformers Yearly "Probable Failure" Replacements

Year 1 = 2010

1 **Unplanned Overhead System Improvements\$264,000**

2 This is an annual pool allocated to respond to various equipment failures and customer demand
3 projects generating overhead capital expenditures occurring within the budget year. This
4 category is also used for smaller, unallocated projects costing less than \$25,000.

5 **Unplanned Underground System Improvements\$264,000**

6 This is an annual pool allocated to respond to various equipment failures and customer demand
7 projects generating underground capital expenditures occurring within the budget year. This
8 category is also used for smaller, unallocated projects costing less than \$25,000.

9 **ROAD WIDENING IFRS \$3,277,362**

10 **Hydro One Brampton portion.....\$5,534,982**

11 **Contributed Capital.....(\$2,257,620)**

12 The estimated gross capital expenditure to relocate Hydro One Brampton facilities due to road
13 widening obligations in 2011 totals \$5,534,982. Hydro One Brampton will recover \$2,257,620 as
14 contributed capital from the road authorities based on normal cost sharing arrangements.

15 Relocations range from road widening, intersection improvements, bridge construction and
16 relocations to permit improvements to sidewalks and streetscapes. Costs sharing for these
17 projects are dictated by the Public Service Works on Highway Act for municipal projects, and by
18 the MTO Corridor Control and Permit Procedures Manual for provincial highways.

19 Scheduling and implementation of these projects are beyond HOBNI's control. The company is
20 obligated to respond to requests for the relocation of existing infrastructure in accordance with
21 various municipal and provincial legislation as describe above.

22 **NEW GENERAL SERVICE CUSTOMERS IFRS \$732,961**

23 The 2011 capital budget includes \$732,961 to provide service to new commercial and industrial
24 customers. The costs to install new infrastructure and to upgrade the capacity of existing
25 facilities to service new large commercial and industrial customers are captured here.
26 Expenditures in this category are driven by customer commitments and tend to vary with the
27 level of economic activity in the Region.

1 **NEW RESIDENTIAL - HIGH DENSITY** **IFRS \$265,094**

2 This category is driven by customer commitments and varies with the level of economic activity
3 in the Region.

4 **NEW RESIDENTIAL - LOW DENSITY** **IFRS \$2,202,330**

5 The 2011 budget is based on City of Brampton projections for the connection of 4,500
6 residential services in 2011. This work includes the installation of underground electrical
7 distribution facilities for new developments within the city, inclusive of a contributed capital
8 component from Developers.

9 **METERING** **IFRS \$1,719,604**

10 The metering expenditures associated with the 2011 projects consist of projects supporting new
11 commercial, industrial and residential customers along with costs associated with wholesale
12 metering upgrades. Additional funds will be spent on various regulatory requirements. These
13 projects are to be defined as:

14 **Wholesale Metering Installations and Upgrades**

15 Hydro One Brampton is responsible to ensure that all wholesale metering installations used for
16 settlements associated with the IESO-administered market are registered with the IESO as per
17 the IESO Market Rules Chapter 6, section 3.2. In addition, this metering must be compliant with
18 Measurement Canada's Electricity & Gas Inspection Act. This requires that all meters and
19 associated equipment such as instrument transformers be approved by Measurement Canada.
20 If any of the Instrument Transformers are not approved by Measurement Canada, the non-
21 compliant units must be replaced or approved at the earliest seal expiry date. In addition to the
22 above projects, Hydro One Brampton will continue with its Smart Meter program.

23 As per the above requirement, Hydro One Brampton will have to upgrade the wholesale
24 metering and instrument transformers at the 27.6 kV bus located inside Goreway TS. In
25 addition, wholesale metering points from three feeders located inside Bramalea TS will be
26 relocated outside of the station Total expenditures \$1,150,000.

1 **New Industrial and Commercial Meter Installations and Upgrades**

2 Hydro One Brampton is responsible for the installation, testing, and commissioning of new and
3 existing simple and complex metering installations. Total expenditures \$326,604.

4 **Meter Reverification Program**

5 Costs associated with this project are a direct result of upgrading and replacing damaged or
6 obsolete industrial and commercial meters and instrument transformers to ensure that all
7 equipment is compliant with Measurement Canada. Total expenditures \$54,000.

8 **New Residential Metering**

9 Hydro One Brampton is expecting approximately 1,450 new customers in 2011. In order to
10 service these customers, Hydro One Brampton will have to install new meters for all of these
11 customers. Total expenditures \$189,000

12 **FLEET MAINTENANCE** **IFRS \$2,168,000**

13 The company's fleet inventory underwent a Condition Assessment in March of 2010. This
14 assessment was completed by an independent third party. The results and recommendations
15 from this assessment were used as a guide to form the 2010 and future fleet management
16 requirements. A copy of the condition assessments is available on request. The following items
17 are forecast for 2011:

18 Replacement one V72, a 1996 single bucket truck with high mileage and age, by a new 55 ft
19 single bucket truck - the chassis will have been paid for in 2010 so the bin body and aerial
20 device will be outstanding for this year; The replacement of one V76, a 1992, 19-year old single
21 bucket truck with high mileage and age, by a new 55 ft single bucket truck; The purchase of a
22 chassis for replacement of V49, a 2000, 11-year old double bucket truck - the remainder of the
23 project will be completed in 2012; The replacement of a V79, a 1993, 18-year old double bucket
24 truck with high mileage and age, by an 83ft double bucket truck; The replacement V25, a 1993,
25 17-year old radial boom derrick digger with high mileage and PTO hours - the chassis will be
26 paid for in 2010 and the remainder (the digger and the bin body) will be paid for this year along
27 with placing the unit into service; The replacement of V112, a 1992, 18-year old cargo trailer
28 with a rotten frame - this new cargo trailer will be safer for the road and the Lines department
29 will be able to utilize it; The replacement of one V179, a 1992, 19-year old fork lift with many
30 hours on it - the new unit will have better safety features and be used in Stores; The

1 replacement of V09, a 1999, 12-year old compact car, by a vehicle with better safety features
2 and more reliability; The replacement of V174, a 1982, 29-year old pole trailer with metal
3 corrosion - the new pole trailer will be safer and more reliable; The replacement of two 1981
4 Havelock cable reel trailers, V163 and V171, which are 30-years old; The replacement of V45, a
5 1999, 12-year old stake truck which has high mileage - the new stake truck will have better
6 safety features and be more reliable; The addition of one new dump trailer for use in the Lines
7 department.

8 **MAJOR TOOLS & EQUIPMENT** **IFRS \$75,000**

9 This category is used for the purchase of tools and equipment by all departments, where the
10 cost of such exceeds \$1,000.00. Such purchases involve replacing aged or defective tools no
11 longer suitable for service as well as the purchase of new tools providing improved safety,
12 ergonomics and technology.

13 **GREEN ENERGY** **IFRS \$869,502**

14 HOBNI has included funding in the amount of \$165,620 for expansion projects required to
15 support "Renewable Generator Connections", and an additional \$82,800 to enable "Renewable
16 Generator Improvement" type projects.

17 \$289,840 has been allocated for Smart Meter technology and \$331,242 has been retained for a
18 SCADAMate automated switch program. The SCADAMate switching devices will be introduced
19 at key locations in the grid to improve outage response and recovery time.

20 **ADMIN. & SERVICE CENTRE** **IFRS \$1,066,692**

21 Phase 1: Parking Lot Repaving cost in 2011 is anticipated at \$706,000. To allow the continued
22 deterioration of the parking lot is not advisable as the deterioration will only accelerate. This will
23 result in higher spot repair costs and not address the ongoing safety concerns due to ponding.
24 In addition, during heavy rainstorms, the drainage is further impacted. The parking lot has many
25 areas with substantial cracking that allows water to enter and creates damages due to the
26 freeze/thaw cycles. The extra cost to rework the sub-base will allow the new asphalt to last
27 longer.

1 In 2011, \$93,000 will be allocated to replace approximately 20 old workstations to current
2 ergonomic standards.

3 In 2011, the Company will replace the PDU for the Computer System , requiring \$30,500.

4 In 2011, selected areas of flooring in the administrative building will require \$30,500.

5 In 2011 outside railings will be replaced costing \$20,000.

6 In 2011, \$26,000 has been budgeted for new office equipment.

7 \$160,692 for various projects related to facility and office equipment improvements and/or
8 replacements has been allocated.

9 **ADMINISTRATIVE COMPUTER AS/400** **IFRS \$660,000**

10 Major Capital projects for 2011 will be comprised of several items. Part of the Company's
11 "greening" process will be virtualizing many of the desktop computers. This will enable easier
12 management of the desktop computers and will also provide enhanced capabilities in the case
13 of a disaster.

14 HOBNI will be upgrading the existing IBM I-series machine in order to facilitate the amount of
15 data growth due to the Smart Meter program.

16 The upgrading of the Nortel phone system will be completed in 2011 to enhance customer
17 service ability to have the caller information displayed to the Customer Service Representative
18 prior to picking up the call.

19 The largest project will be the installation and setup of a new Enterprise Content Management
20 solution. This solution will involve all areas of the organization and provide a much needed
21 facility for Hydro One Brampton staff to file, store and retrieve any type or style of document.

22 **AM/FM COMPUTER EQUIP. & SOFTWARE** **IFRS \$205,000**

23 **Geographic Information Systems (GIS)**

24 These 2011 capital funds are allocated to support the enterprise requirements in the GIS
25 department for upgrading computer hardware, purchasing new licensed software, and providing
26 application development for the implementation and integration of new applications at the Utility.

27 The following significant projects were related to work done in this area.

1 **GIS Software \$20,000**

2 These funds will be used to purchase new software applications for the enhancement of our
3 existing Geographic Information System (GIS). Areas of interest include GIS upgrades and add-
4 ons, SCADA, Automated Meter Reading (AMR), Customer Information Systems (CIS) and Work
5 Management Systems (WMS).

6 Investment in these new applications will allow the Company to expand the use of its GIS
7 across the Utility to provide better engineering analysis, quicker response times and restoration
8 times for outages, better crew management, and improved dispatching capabilities. The results
9 will be recognized in improved operational efficiencies throughout the Utility.

10 **G/Technology/OMS Code Development \$66,000**

11 This project is will have HOBNI staff work with its GIS vendor, Intergraph, to write new
12 Gtechnology code for customizing both the Geographic Information System and the Outage
13 Management System application.

14 The scope of work is to provide scheduled sustained engineering services for upgrading the
15 existing applications to the latest version of the software. Areas of interest will include an In
16 service/OMS upgrade from V8.0 to V8.2, customization of the software in response to
17 Operations requirements at HOBNI, examining work flows within the application, and making
18 modifications as required to suit customers' business strategies. Work will also include an
19 upgrade of G/Technology to the latest version of this operating platform.

20 **GIS Hardware \$40,000**

21 These funds will be allocated for the purchase of new hardware related to the operation of GIS
22 applications in the Drafting & Records department, in the Control Room and other departments
23 interfacing with the Geographic Information System (GIS).

24 Investment in new hardware insures that the GIS systems continue to perform at an optimal
25 level. New equipment purchases will allow the Utility to expand its GIS user base to include
26 other departments and to move forward with future field applications. Upgrading older hardware
27 with newer machines with faster processors will provide improved operational efficiency from
28 the GIS/OMS applications and users.

1 **OMS/SCADA/Load Forecasting Software \$25,000**

2 These funds will be for the purchase of additional software licences or new application software
3 packages for the enhancement of the Company's existing Engineering and Operations systems
4 in the area of OMS, SCADA and load forecasting.

5 These new licences will be installed at the back-up control centre at JYTS? as part of THE
6 Company's emergency preparedness initiative, which will be critical to the safe operation and
7 analysis of HOBNI's distribution system if there ever was a need to abandon the HOBNI control
8 centre and conduct operations from the back-up site.

9 **GIS Computers, Printers and Plotters \$54,000**

10 This project will be for the purchase of computers, printers, plotters, projectors and ancillary
11 devices required in the Engineering and Operations department in support of technical
12 requirements throughout the year.

13 **LAND AND LAND RIGHTS** **IFRS \$168,685**

14 HOBNI has identified three easement parcels to be acquired in 2011. These parcels are
15 required to provide land needed by the Utility to install new infrastructure including land for duct
16 structure egress at Goreway TS, land for a new pole line along the CN railway, and for an
17 access agreement to provide vehicle access across privately held lands.

CAPITAL PROJECTS 2011

Table 1: Capital Project Table 2011

Type	Description	1610	1806	1808	1815	1820	1830	1835	1840	1845	1850	1855	1860	1915	1920	1925	1930	1935	1940	1955	1960	1980	1995	2055	Total
			Land Rights	Buildings and Fixtures	Transformer Station Equipment	Distribution Station Equipment	Poles, Towers and Fixtures	Overhead Conductors and Devices	Underground Conduit	Underground Conductors and Devices	Line Transformers	Services	Meters	Office Furniture and Equipment	Computer Equipment - Hardware	Computer Software	Transportation Equipment	Stores Equipment	Tools, Shop and Garage Equipment	Communication Equipment	Miscellaneous Equipment	System Supervisory Equipment	Contributions and Grants	Construction Work in Progress	
1	SUBSTATIONS AND P. & C.				765,648												39,000			71,000					875,648
2	SCADA EQUIPMENT																					107,000			107,000
3	UNDERGROUND DISTRIBUTION SYSTEM						699,992	467,672	286,865	450,500	82,828													(1,899)	1,985,958
4	OVERHEAD DISTRIBUTION SYSTEM						483,833	324,239	1,331,299	2,090,886	379,794													(4,403)	4,605,648
5	ROAD WIDENINGS						3,322,869		1,384,529	830,717														(2,257,620)	3,277,362
7	NEW GENERAL SERVICE CUSTOMERS									4,011,360	2,406,815													(5,685,214)	732,961
8	NEW RESIDENTIAL- HIGH DENSITY									99,838	399,353													(234,097)	265,094
10	NEW RESIDENTIAL- LOW DENSITY									3,838,394	1,919,197	633,342												(4,186,497)	2,202,330
11	METERING				1,161,604								558,000												1,719,604
12	VEHICLES																								2,168,000
13	DEPARTMENT TOOLS & EQUIP. > \$500.00												289,000						75,000						75,000
15	CONSERVATION AND DEMAND MANAGEMENT				250,502																	330,000			869,502
17	ADMIN. & SERVICE CENTRE			920,192										146,500											1,066,692
18	ADMINISTRATIVE COMPUTER AS/400	410,000													190,000										660,000
19	G.I.S. COMPUTER EQUIP. & SOFTWARE	111,534													93,466										205,000
29	LAND AND LAND RIGHTS		168,685																						168,685
	Total per GL	521,534	168,685	920,192	1,412,106	765,648	4,506,694	791,911	3,002,693	11,321,695	5,187,987	633,342	847,000	146,500	283,466	-	2,207,000	-	75,000	131,000	-	437,000	(12,363,428)	(11,541)	20,984,484

CAPITAL PROJECTS DESCRIPTIONS 2011

- 1 The following pages include copies of project description documents for 2011 Capital Project



**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2011**

Project Title:	MS20 T2 Station Transformer Replacement	Project Number:	2011-xxx	
Project Manager:	Greg Mather	Project Technician:		
Last Updated:	Friday, May 07, 2010	Investment Category:	Sustainment	
Type	SS - Substations	Investment Driver:	Reliability	
Description/Justification				
Continuation of 13.8KV TX replacement program.				
Investment Scope				
Investment Results				
Cost & Timing Estimates				
	<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
	January			\$0.00
	February			\$0.00
	March			\$0.00
	April			\$0.00
	May			\$0.00
	June			\$0.00
	July			\$0.00
	August			\$0.00
	September			\$0.00
	October			\$0.00
	November		\$610,000.00	\$610,000.00
	December			\$0.00
	Totals	\$0.00	\$610,000.00	\$610,000.00

Business Case Justification

This is part of a multi year TX upgrade program that is recommended in the ACA

Alternative Considered

We will go out to tender to buy a 15/20/25 MVA TX



**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2011**

Project Title:	Station Breaker Replacements at MS10 and MS14	Project Number:	2011-xxx
Project Manager:	Greg Mather	Project Technician:	
Last Updated:	Friday, May 07, 2010	Investment Category:	Sustainment
Type	SS - Substations	Investment Driver:	Reliability
Description/Justification			
Continue replacement of obsolete magnetic air breakers at MS10 and MS14 with ABB VM1 Vacuum Modules			
Investment Results			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February			\$0.00
March			\$0.00
April			\$0.00
May			\$0.00
June		\$30,000.00	\$30,000.00
July		\$30,000.00	\$30,000.00
August		\$30,000.00	\$30,000.00
September		\$30,000.00	\$30,000.00
October		\$4,000.00	\$4,000.00
November			\$0.00
December			\$0.00
Totals	\$0.00	\$124,500.00	(\$124,000.00)

Business Case Justification

Existing breakers are past their projected life expectancy and are having trouble interrupting fault current with in specification. Existing breakers require significantly more maintenance than vacuum modules.

Alternative Considered

Continuing project with ABB VM1 modules to maintain compatibility with existing equipment.



**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2011**

Project Title:	MS10 and MS14 Air Conditioning Units	Project Number:	2011-xxx	
Project Manager:	Greg Mather	Project Technician:		
Last Updated:	Friday, May 07, 2010	Investment Category:	Development	
Type	SS - Substations	Investment Driver:	Reliability	
Description/Justification				
Install A/C units at MS10 and MS14 to reduce humidity on station bus.				
Investment Scope				
Investment Results				
Cost & Timing Estimates				
	<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
	January			\$0.00
	February			\$0.00
	March			\$0.00
	April			\$0.00
	May		\$10,000.00	\$10,000.00
	June			\$0.00
	July			\$0.00
	August		\$6,000.00	\$6,000.00
	September			\$0.00
	October			\$0.00
	November			\$0.00
	December			\$0.00
	Totals	\$0.00	\$16,600.00	\$16,600.00

Business Case Justification

Install A/C units in station to reduce humidity on station bus in the summer. The 13.8KV bus had issues due to corona / moisture in the past.

Alternative Considered

We will get quotes from several suppliers



**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2011**

Project Title:	MS10 Protection Relay Hardware Replacements	Project Number:	2011-xxx	
Project Manager:	Greg Mather	Project Technician:		
Last Updated:	Friday, May 07, 2010	Investment Category:	Sustainment	
Type	SS - Substations	Investment Driver:	Technical Obsolescence	
Description/Justification				
Replace obsolete protection relays at MS10				
Investment Scope				
Investment Results				
Cost & Timing Estimates				
	<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
	January			\$0.00
	February			\$0.00
	March			\$0.00
	April			\$0.00
	May			\$0.00
	June		\$12,000.00	\$12,000.00
	July			\$0.00
	August		\$12,000.00	\$12,000.00
	September			\$0.00
	October			\$0.00
	November			\$0.00
	December			\$0.00
	Totals	\$0.00	\$24,000.00	\$24,900.00

Business Case Justification

Existing ABB DPU2000R relays are no longer supported by the manufacturer. New SEL 351A relays to be installed and ABB relays to be used as spares at MS14.

Alternative Considered

We will use SEL 351 relays as they are the same as units installed at JYTS and MS22. This reduces spares costs and makes it easier for the Techs as they are familiar with the product.



**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2011**

Project Title:	Thumper for Truck 81	Project Number:	2011-xxx
Project Manager:	Greg Mather	Project Technician:	
Last Updated:		Investment Category:	Development
Type	SS - Substations	Investment Driver:	Reliability
Description/Justification			
Purchase of a high voltage thumper for truck 81			
Investment Scope			
Investment Results			
Cost & Timing Estimates			
	<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u> <u>Variance</u>
	January		\$0.00
	February		\$0.00
	March		\$0.00
	April		\$0.00
	May		\$0.00
	June		\$33,200.00
	July		\$0.00
	August		\$0.00
	September		\$0.00
	October		\$0.00
	November		\$0.00
	December		\$0.00
	Totals	\$0.00	\$33,200.00 \$33,200.00

Business Case Justification

Truck 81 does not currently have a thumper. If truck 75 is unavailable primary faults cannot be located at this time.

Alternative Considered

We will purchase a unit similar to the truck 75 thumper to maintain compatibility with our existing equipment



**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2011**

Project Title:	VCOM Radio System Infrastructure Replacements	Project Number:	2011-xxx	
Project Manager:	Greg Mather	Project Technician:		
Last Updated:	Friday, May 07, 2010	Investment Category:	Sustainment	
Type	SS - Substations	Investment Driver:	Safety	
Description/Justification				
2011 installment of our required VCOM infrastructure payment				
Investment Scope				
Investment Results				
Cost & Timing Estimates				
	<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
	January			\$0.00
	February			\$0.00
	March			\$0.00
	April			\$0.00
	May			\$0.00
	June		\$60,400.00	\$60,400.00
	July			\$0.00
	August			\$0.00
	September			\$0.00
	October			\$0.00
	November			\$0.00
	December			\$0.00
	Totals	\$0.00	\$60,400.00	\$60,590.00

Business Case Justification

The VCOM system is being upgraded to the new P-25 standard. This is our 2011 capital contribution for the infrastructure upgrades

Alternative Considered

There is no other comparable radio network available.



**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2011**

Project Title:	SCADA Fibre Hardware Replacements / Upgrades	Project Number:	2011-xxx
Project Manager:	Greg Mather	Project Technician:	
Last Updated:	Friday, May 07, 2010	Investment Category:	Sustainment
Type	SC - SCADA	Investment Driver:	Reliability
Description/Justification			
Replace / Upgrade obsolete fibre equipment on SCADA fibre LAN			
Investment Scope			
Investment Results			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February			\$0.00
March			\$0.00
April		\$5,000.00	\$5,000.00
May		\$5,000.00	\$5,000.00
June		\$0.00	\$0.00
July		\$0.00	\$0.00
August		\$0.00	\$0.00
September		\$5,000.00	\$5,000.00
October		\$0.00	\$0.00
November		\$1,300.00	\$1,300.00
December		\$0.00	\$0.00
Totals	\$0.00	\$16,300.00	(\$16,300.00)

Business Case Justification

Replace obsolete fibre line drivers, switches and ancillary equipment with modern higher performance units

Alternative Considered

We will look at equipment from several sources



**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2011**

Project Title:	SCADA Hardware Retrofit & S&C Motor Mechanisms	Project Number:	2011-xxx
Project Manager:	Greg Mather	Project Technician:	
Last Updated:	Friday, May 07, 2010	Investment Category:	Sustainment
Type	SC - SCADA	Investment Driver:	Reliability
Description/Justification			
Replace obsolete motor operators and ancillary SCADA equipment with new S&C motor operators			
Investment Scope			
Investment Results			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February			\$0.00
March			\$0.00
April		\$12,000.00	\$12,000.00
May		\$0.00	\$0.00
June		\$0.00	\$0.00
July		\$0.00	\$0.00
August		\$0.00	\$0.00
September		\$7,700.00	\$7,700.00
October		\$0.00	\$0.00
November		\$0.00	\$0.00
December		\$0.00	\$0.00
Totals	\$0.00	\$19,700.00	(\$19,700.00)

Business Case Justification
Replace end of life SCADA equipment and motor operators at two pole top locations
Alternative Considered
We will use standard equipment from Stores



**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2011**

Project Title:	SCADA Communication System Improvements DNP/2.4GHZ	Project Number:	2011-xxx
Project Manager:	Greg Mather	Project Technician:	
Last Updated:	Friday, May 07, 2010	Investment Category:	Sustainment
Type	SC - SCADA	Investment Driver:	Reliability
Description/Justification			
Replace obsolete communication equipment and increase use of 2.4 GHz SCADA comm lines / DNP equipment			
Investment Scope			
Investment Results			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February			\$0.00
March			\$0.00
April		\$4,000.00	\$4,000.00
May		\$4,000.00	\$4,000.00
June		\$0.00	\$0.00
July		\$0.00	\$0.00
August		\$0.00	\$0.00
September		\$4,000.00	\$4,000.00
October		\$4,300.00	\$4,300.00
November		\$0.00	\$0.00
December		\$0.00	\$0.00
Totals	\$0.00	\$16,300.00	(\$16,300.00)

Business Case Justification

Replace obsolete SCADA comm equipment and increase 2.4 GHZ comm system

Alternative Considered

We will use standard equipment for this work



**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2011**

Project Title:	Improvements to Recloser Block Systems at MS19, MS1, MS2 & MS3	Project Number:	2011-xxx
Project Manager:	Greg Mather	Project Technician:	
Last Updated:	07/05/2010	Investment Category:	Operations
Type	SC - SCADA	Investment Driver:	Safety
Description/Justification			
Upgrade recloser block equipment / systems at MS 1, 2 ,3 and 19			
Investment Scope			
Investment Results			
Cost & Timing Estimates			
<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
January			\$0.00
February			\$0.00
March			\$0.00
April		\$2,000.00	\$2,000.00
May		\$2,000.00	\$2,000.00
June		\$2,000.00	\$2,000.00
July		\$0.00	\$0.00
August		\$2,000.00	\$2,000.00
September		\$2,000.00	\$2,000.00
October		\$2,000.00	\$2,000.00
November		\$1,200.00	\$1,200.00
December		\$0.00	\$0.00
Totals	\$0.00	\$13,200.00	(\$13,200.00)

Business Case Justification
Upgrade obsolete equipment and re-work local recloser block schemes to be more straight forward for staff
Alternative Considered
We will use standard equipment from Stores



**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2011**

Project Title:	JYTS SCADA / HMI Replacement / Improvements	Project Number:	2011-xxx	
Project Manager:	Greg Mather	Project Technician:		
Last Updated:	Friday, May 07, 2010	Investment Category:	Sustainment	
Type	SC - SCADA	Investment Driver:	Reliability	
Description/Justification				
Upgrade HMI / SCADA equipment at JYTS due to obsolete equipment issues and poor performance of existing equipment				
Investment Scope				
Investment Results				
Cost & Timing Estimates				
	<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u>	<u>Variance</u>
	January			\$0.00
	February			\$0.00
	March			\$0.00
	April		\$0.00	\$0.00
	May		\$0.00	\$0.00
	June		\$0.00	\$0.00
	July		\$0.00	\$0.00
	August		\$0.00	\$0.00
	September		\$41,500.00	\$41,500.00
	October		\$0.00	\$0.00
	November		\$0.00	\$0.00
	December		\$0.00	\$0.00
	Totals	\$0.00	\$41,500.00	(\$41,500.00)

Business Case Justification

Existing equipment is problematic and obsolete. This equipment is critical to the operation of JYTS.

Alternative Considered

This work will be single sourced to ESAC to maintain compatibility with the existing systems at JYTS.



**Hydro One Brampton Networks Inc.
 Capital Expenditure - 2011**

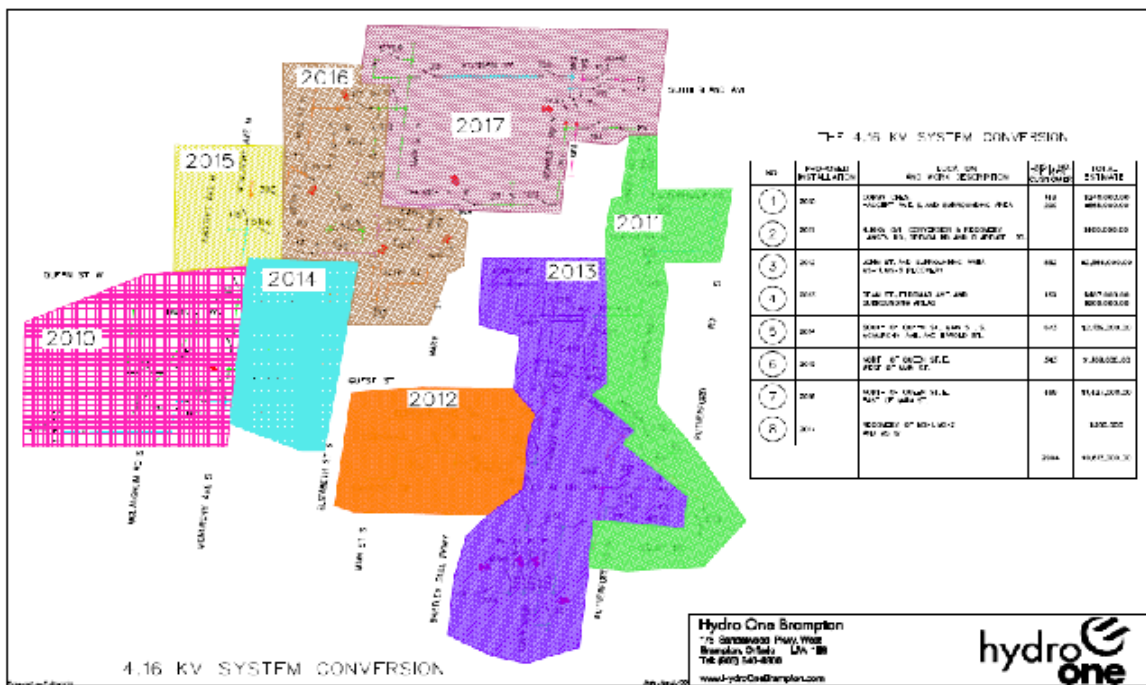
Project Title: 4.16 to 27.6KV Conversion Program	Project Number: 2011-234				
Project Manager: Aldo Mastrofranceso	Project Technician:				
Last Updated: Monday, June 14, 2010	Investment Category: Development				
Type System Expansion & Enhancement	Investment Driver: Growth				
Description					
<p>This program is designed to replace aging and obsolete 4.16 kV distribution facilities with modern 27.6 kV distribution plant.</p>					
Investment Scope					
<p>Rebuild and convert existing 4.16 kV distribution facilities in accordance with a planned implementation program. The 2011 program involves rebuilding and converting overhead 4.16 kV systems on the following streets;</p> <ul style="list-style-type: none"> - Hansen Rd from Queen St to Orenda - Orenda Rd from Hansen Rd to Kennedy Rd - Eastern Ave From MS3 to Hansen Rd - Clarence Rd from Selby Rd to Kennedy Rd - Rutherford Rd S from MS11 to pole #235 - ROW from MS-11 to Stanford Rd 					
Investment Results					
<p>This program is intended to provide a systematic approach to the elimination of the 4.16 kV distribution system with implementation timed to avoid the need to replace major 4.16 kV assets such as transformers, cables, terminations and protective devices.</p>					
Cost & Timing					
	2011	2012	2013	2014	2015
Capital Costs	\$317,000.00	\$1,694,000.00	\$453,000.00	\$1,414,000.00	\$733,000.00
OM&A	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Gross Investment	\$317,000.00	\$1,694,000.00	\$453,000.00	\$1,414,000.00	\$733,000.00
Recoverable	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Net Investment	\$317,000.00	\$1,694,000.00	\$453,000.00	\$1,414,000.00	\$733,000.00
Project Start Date					
Project In-Service Date					

Business Case Justification

Hydro One Brampton's 4.16 kV distribution system dates back to 1954 and is serviced from seven municipal substations. These systems have been maintained and repaired to date however these systems are experiencing increasing servicing requirements with certain municipal station transformers gassing at such a rate that replacement is required. In 2009 the company examined the option of maintaining /rebuilding the system for continued operation at 4.16 kV vs. a complete conversion to 27.6 kV. The company concluded that the option to convert to 27.6 kV would provide a greater long term solution with multiple benefits including; reduced transformer losses, reduced inventory requirements, reduced number of voltage levels on the overhead infrastructure, and potential revenue from the sale of municipal substations lands, to name a few.

Alternatives Considered

The company considered rebuilding and replacing 4.16 kV municipal stations and related infrastructure.





**Hydro One Brampton Networks Inc.
 Capital Expenditure - 2011**

Project Title: <i>Expansion & Extension for new Residential Subdivision</i>	Project Number: <i>2011-235</i>				
Project Manager: <i>Aldo Mastrofranceso</i>	Project Technician:				
Last Updated: <i>Monday, June 14, 2010</i>	Investment Category: <i>Development</i>				
Type <i>System Expansion & Enhancement</i>	Investment Driver: <i>Growth</i>				
Description					
<p>This project has been created for the construction of new infrastructure required to support residential development in the City of Brampton. Timing of expenditures are driven by development activity and are beyond the control of the company.</p>					
Investment Scope					
<p>The work completed under this project pertains to the installation of underground feeder class (bulk power) infrastructure, such as cables, duct structures and switchgear, which are required to support load growth generated from residential development activity. This funding enables the company to capitalize on joint use trench and duct opportunities for the installation of HOB feeder class systems. The company's infrastructure is placed or constructed in conjunction with the installation of shallow services, which are completed by contractors working on behalf of the various developers operating in the City of Brampton.</p>					
Investment Results					
<p>The expected result of this investment is to provide bulk power delivery systems to support load growth generated by residential development, and to capitalize on the opportunity to install facilities in a joint use fashion with other servicing entities.</p>					
Cost & Timing					
	2011	2012	2013	2014	2015
Capital Costs	\$495,000.00	\$495,000.00	\$495,000.00	\$495,000.00	\$495,000.00
OM&A	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Gross Investment	\$495,000.00	\$495,000.00	\$495,000.00	\$495,000.00	\$495,000.00
Recoverable	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Net Investment	\$495,000.00	\$495,000.00	\$495,000.00	\$495,000.00	\$495,000.00
Project Start Date					
Project In-Service Date					

Business Case Justification

This expenditure is required to ensure availability of supply for new service connections in accordance with the obligations of othe company's Elictricity Distributor's Licence and the Distribution System Code.

Alternatives Considered

None.





**Hydro One Brampton Networks Inc.
 Capital Expenditure - 2011**

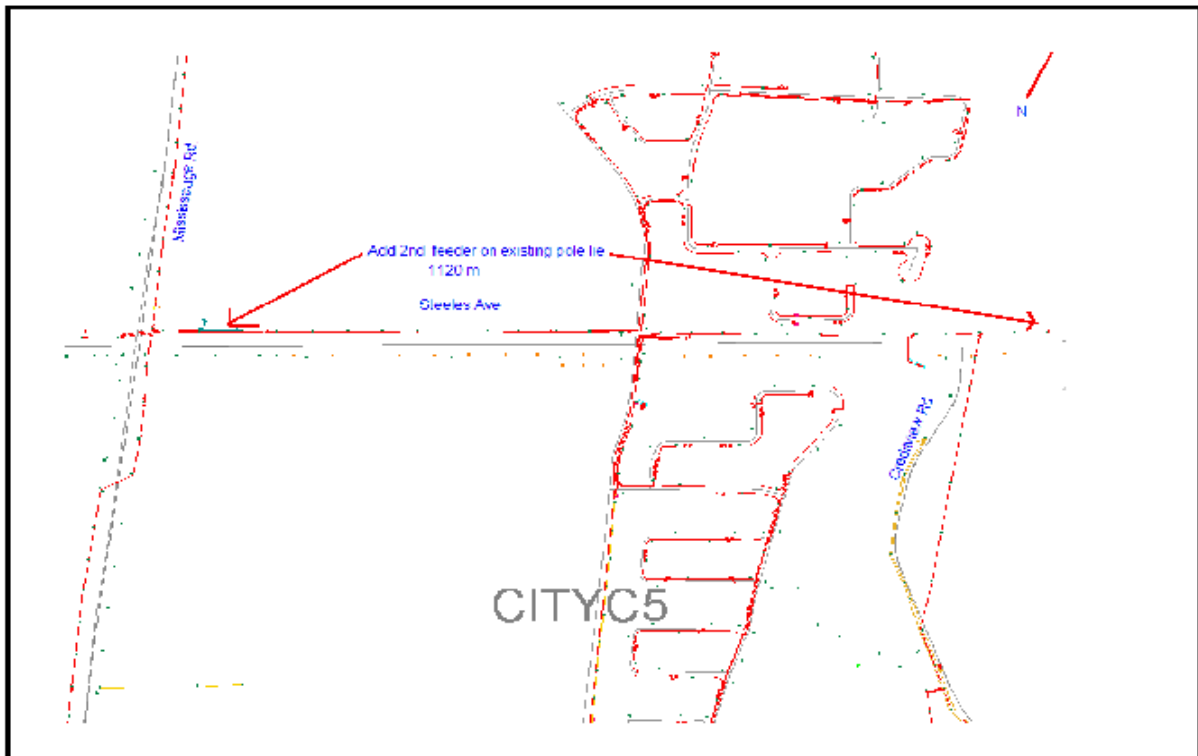
Project Title: <i>Jim Yarrow TS Expansion 27.6KV Egress Program</i>	Project Number: <i>2011-269</i>				
Project Manager: <i>Aldo Mastrofranceso</i>	Project Technician:				
Last Updated: <i>Monday, June 14, 2010</i>	Investment Category: <i>Development</i>				
Type <i>System Expansion & Enhancement</i>	Investment Driver: <i>Growth</i>				
Description					
<p>This project has been created to extend the 25M12 feeder circuit to Mississauga Rd to provide an alternate supply to an existing feeder circuit.</p>					
Investment Scope					
<p>Frame and string 1.12 km of 3 X 556 ASC conductor on an existing pole line from Creditview to Mississauga Rd along Steeles Ave. (Pole 1542 to 1962)</p>					
Investment Results					
<p>Improve system reliability and feeder sectionalizing capabilities by providing a 27.6 kV connection to an existing circuit located at Mississauga Rd and Steeles Ave.</p>					
Cost & Timing					
	2011	2012	2013	2014	2015
Capital Costs	\$62,000.00	\$413,000.00	\$0.00	\$0.00	\$537,000.00
OM&A	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Gross Investment	\$62,000.00	\$413,000.00	\$0.00	\$0.00	\$537,000.00
Recoverable	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Net Investment	\$62,000.00	\$413,000.00	\$0.00	\$0.00	\$537,000.00
Project Start Date					
Project In-Service Date					

Business Case Justification

This work is the second stage of a two stage program designed to extend the 25M12 feeder circuit from Jim Tarrow TS to Mississauga Rd. to provide an alternate connection for the existing 25M10 circuit. The 25M10 circuit supplies a large user. This circuit has very limited contingency options making it difficult to respond to system events in the area. The new 215M12 feeder connection is intended to improve customer reliability and operating flexibility by providing an alternate supply to an existing feeder circuit.

Alternatives Considered







**Hydro One Brampton Networks Inc.
 Capital Expenditure - 2011**

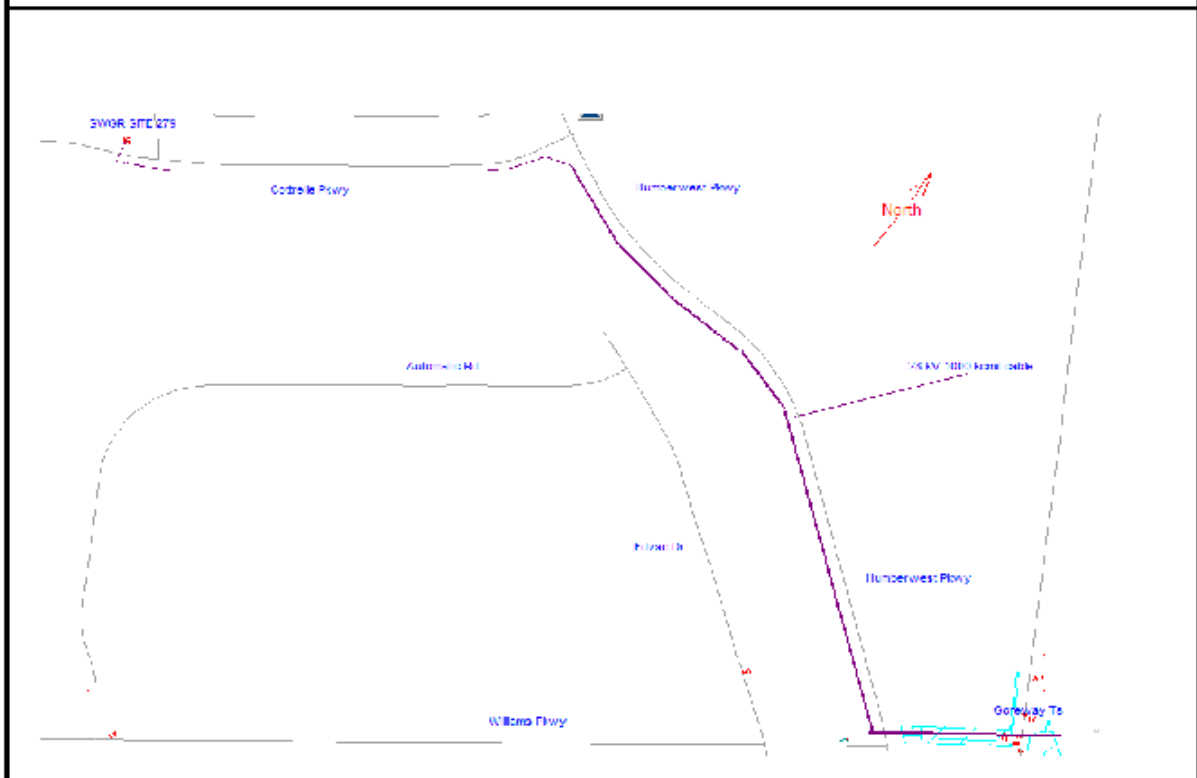
Project Title: <i>Goreway TS Expansion 27.6 KV Egress Program</i>	Project Number: <i>2011-271</i>				
Project Manager: <i>Aldo Mastrofranceso</i>	Project Technician:				
Last Updated: <i>Monday, June 14, 2010</i>	Investment Category: <i>Development</i>				
Type <i>System Expansion & Enhancement</i>	Investment Driver: <i>Growth</i>				
Description					
<p>This project has been created for the connection of the 136M18 feeder breaker at Goreway TS.</p>					
Investment Scope					
<p>This project requires the installation of approximately 6 km of 28 kV 1000 kcmil Cu cables from the M18 breaker position at Goreway TS to existing switchgear position 20-1275 located on Cottrelle Blvd. The majority of this project will use existing vacant duct facilities.</p>					
Investment Results					
<p>To provide an alternate feeder supply to switchgear site 279.</p>					
Cost & Timing					
	2011	2012	2013	2014	2015
Capital Costs	\$1,094,000.00	\$929,000.00	\$929,000.00	\$929,000.00	\$413,000.00
OM&A	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Gross Investment	\$1,094,000.00	\$929,000.00	\$929,000.00	\$929,000.00	\$413,000.00
Recoverable	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Net Investment	\$1,094,000.00	\$929,000.00	\$929,000.00	\$929,000.00	\$413,000.00
Project Start Date					
Project In-Service Date					

Business Case Justification

Switchgear site 279 provides 2 - 200 amp distribution circuit connections for local loads north of Cottrelle Pkwy and east of Humberwest Pkwy. This switchgear is currently connected to a single feeder source and the number of customers connected are increasing to a point where loss of the feeder would impact the company's reliability indices.

This project will provide an alternate feeder connection to switchgear site 279, via switch 20-1275. This will provide a contingency supply for the area serviced by switchgear 279.

Alternatives Considered





**Hydro One Brampton Networks Inc.
 Capital Expenditure - 2011**

Project Title: <i>Primary Feeder Rehab or Replacement Program</i>	Project Number: <i>2011-215</i>				
Project Manager: <i>Aldo Mastrofranceso</i>	Project Technician:				
Last Updated: <i>Monday, June 14, 2010</i>	Investment Category: <i>Sustainment</i>				
Type <i>System Rehabilitation & Equipment Replacement</i>	Investment Driver: <i>Reliability</i>				
Description					
<p>This program has been established to replace aging feeder cable systems approaching the end of their useful in service life.</p>					
Investment Scope					
<p>This program focuses on feeder cables nearing or reaching the end of their useful life. Cables are evaluated based on age, loading and fault history. Cable segments with faults exceeding the maximum allowable threshold are selected for replacement and identified in the annual capital budget. The company incorporates cable fault data identified from trouble reports into the GIS records data base. The data base is queried to select cable fault information.</p>					
Investment Results					
<p>This program is designed to maintain underground feeder grid integrity by replacing aging feeder class cable systems in a proactive organized manner. HOB focuses on "Feeder" or "Bulk Load" cable system performance as these cable systems have a much higher impact on customer outages and the respective reliability indices.</p>					
Cost & Timing					
	2011	2012	2013	2014	2015
Capital Costs	\$1,486,000.00	\$1,561,000.00	\$1,672,000.00	\$1,858,000.00	\$2,601,000.00
OM&A	\$40,900.00	\$43,000.00	\$46,000.00	\$51,000.00	\$71,000.00
Gross Investment	\$1,526,900.00	\$1,604,000.00	\$1,718,000.00	\$1,909,000.00	\$2,672,000.00
Recoverable	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Net Investment	\$1,526,900.00	\$1,604,000.00	\$1,718,000.00	\$1,909,000.00	\$2,672,000.00
Project Start Date					
Project In-Service Date					

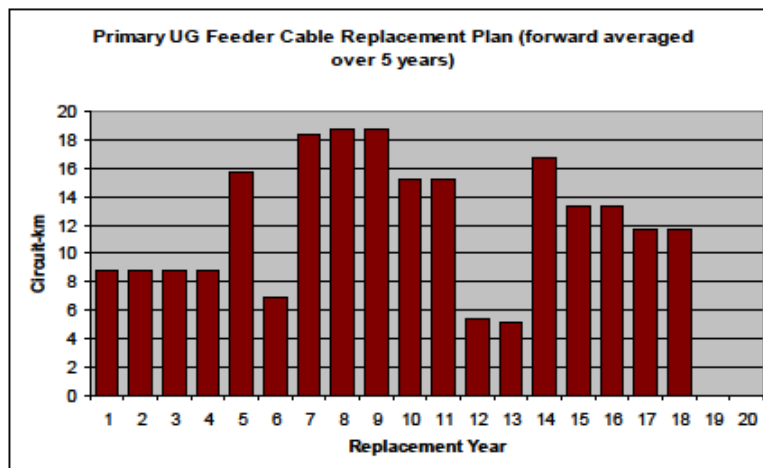
Business Case Justification

Hydro One Brampton Networks Inc. owns and operates approximately 665 conductor kilometres of feeder class cables, of various age, ratings and voltage categories. These cable systems provide bulk power delivery to the customers of the City of Brampton. Residents and industry alike depend on a reliable and secure supply of electricity provided by the underground feeder cable systems. It is of paramount importance that these systems perform reliably and with minimal interruption.

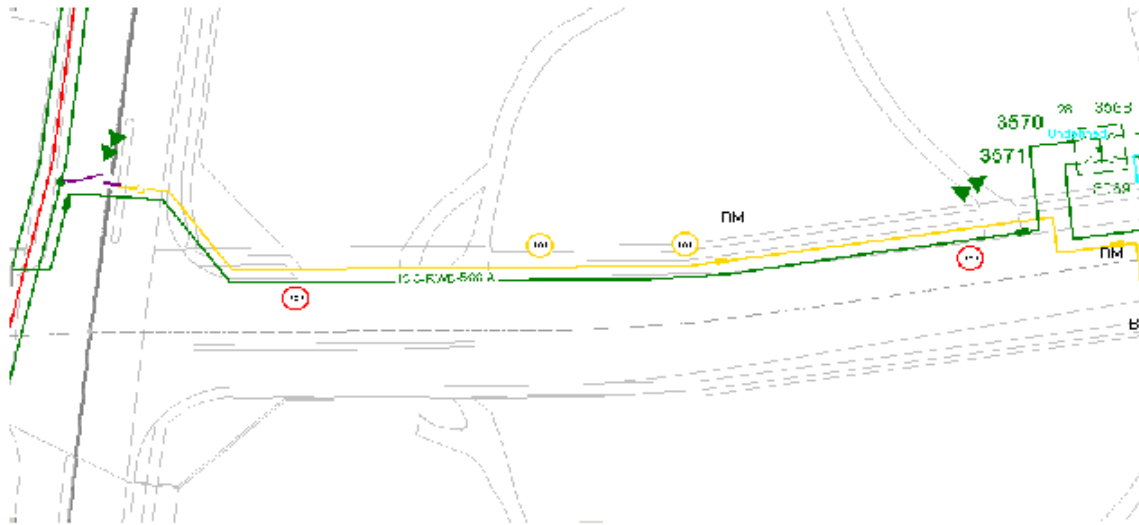
As with most electrical systems, cables have a limited life cycle which varies with age, loading and stress resulting from fault current. HOBNI monitors cable duty and fault history in order to identify cable segments that are no longer deemed suitable for service. These segments are scheduled for replacement and included in the annual capital budget.

Alternatives Considered

The company has examined cable injection technologies designed to re-establish cable BIL as an alternative to replacement. HOBNI has worked with two vendors providing injection services however only on a very selective basis. Considering cables for injection vs. replacement requires careful evaluation of many variables to ensure the best long term result and cost benefit. The company will continue to explore injection technology for future projects.



Asset Condition Assessment Recommended cable replacement quantity
 Year 1 is 2010



GIS Cable Element with Feeder cable fault (FCF) shown



**Hydro One Brampton Networks Inc.
 Capital Expenditure - 2011**

Project Title: <i>Distribution Cable Rehab or Replacement Program</i>	Project Number: <i>2011-216</i>				
Project Manager: <i>Aldo Mastrofranceso</i>	Project Technician:				
Last Updated: <i>Monday, June 14, 2010</i>	Investment Category: <i>Sustainment</i>				
Type <i>System Rehabilitation & Equipment Replacement</i>	Investment Driver: <i>Reliability</i>				
Description					
<p>This program has been established to replace aging distribution cable systems approaching the end of their useful in service life.</p>					
Investment Scope					
<p>This program focuses on distribution cables nearing or reaching the end of their useful life. Cables are evaluated based on age, loading and fault history. Cable segments with faults exceeding the maximum allowable threshold are selected for replacement and identified in the annual capital budget. The company incorporates cable fault data identified from trouble reports into the GIS records data base. The data base is queried to select cable fault information.</p>					
Investment Results					
<p>This program is designed to maintain underground distribution cable system performance by replacing aging cable systems in a proactive organized manner.</p>					
Cost & Timing					
	2011	2012	2013	2014	2015
Capital Costs	\$557,000.00	\$576,000.00	\$595,000.00	\$632,000.00	\$743,000.00
OM&A	\$15,000.00	\$16,000.00	\$16,500.00	\$17,000.00	\$20,000.00
Gross Investment	\$572,000.00	\$592,000.00	\$611,500.00	\$649,000.00	\$763,000.00
Recoverable	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Net Investment	\$572,000.00	\$592,000.00	\$611,500.00	\$649,000.00	\$763,000.00
Project Start Date					
Project In-Service Date					

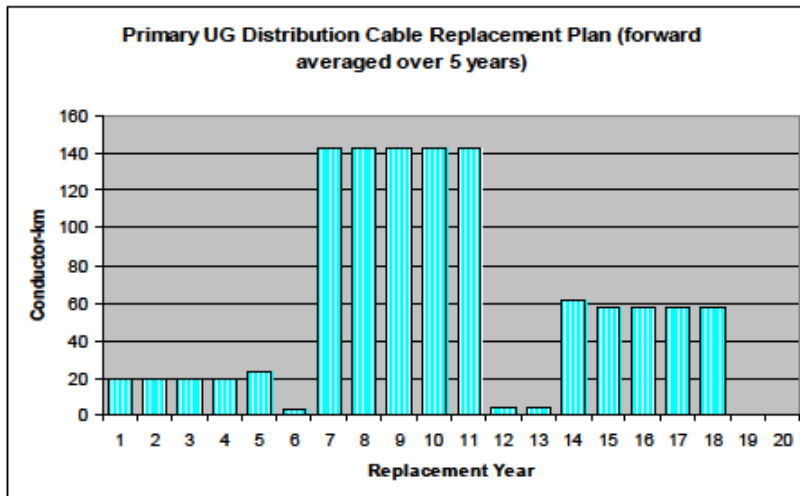
Business Case Justification

Hydro One Brampton Networks Inc. owns and operates approximately 2250 conductor kilometres of distribution cables, of various ages, ratings and voltage categories. These cable systems provide local power delivery to the customers of the City of Brampton. The majority of these cable systems have an alternate supply which reduces the impact of a cable fault.

Faults on underground distribution cables are usually caused by insulation failure within a localized area and when failures do occur they can be repaired at much lower cost than replacement of the entire cable. The company balances repair vs. replacement costs and cables that are no longer suitable for repair will be identified and replaced under this program.

Alternatives Considered

The company has examined cable injection technologies designed to re-establish cable BIL as an alternative to replacement. HOBNI has worked with two vendors providing injection services however only on a very selective basis. Considering cables for injection vs. replacement requires careful evaluation of many variables to ensure the best long term result and cost benefit. The company will continue to explore injection technology for future projects.



Asset Condition Assessment Recommended
cable replacement quantity



**Hydro One Brampton Networks Inc.
 Capital Expenditure - 2011**

Project Title: <i>Insulator Replacement Program</i>	Project Number: <i>2011-217</i>				
Project Manager: <i>Aldo Mastrofranceso</i>	Project Technician:				
Last Updated: <i>Monday, June 14, 2010</i>	Investment Category: <i>Sustainment</i>				
Type <i>System Rehabilitation & Equipment Replacement</i>	Investment Driver: <i>Reliability</i>				
Description					
<p>This program has been created to address flashover and mechanical failures experienced on older style porcelain insulators.</p>					
Investment Scope					
<p>Existing pole lines will be re-insulated using the newer polymer products until all porcelain and glass products have been removed.</p>					
Investment Results					
<p>Eliminate flashover and safety issues associated with mechanical failures experienced on older style insulators used on 27.6 kV systems.</p>					
Cost & Timing					
	2011	2012	2013	2014	2015
Capital Costs	\$264,000.00	\$264,000.00	\$264,000.00	\$264,000.00	\$264,000.00
OM&A	\$22,000.00	\$22,000.00	\$22,000.00	\$22,000.00	\$22,000.00
Gross Investment	\$286,000.00	\$286,000.00	\$286,000.00	\$286,000.00	\$286,000.00
Recoverable	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Net Investment	\$286,000.00	\$286,000.00	\$286,000.00	\$286,000.00	\$286,000.00
Project Start Date					
Project In-Service Date					

Business Case Justification

The company's overhead distribution system incorporates a diverse range of line post insulators. Certain types of porcelain line post insulators have failed unexpectedly during line construction activities increasing worker risk during overhead line projects. This matter was raised in priority and awareness among staff and employees and the company has implemented an insulator replacement program to eliminate these units from service.

Outages resulting from poles fires and broken insulators have negatively impacted the reliability of certain overhead feeder circuits in the company's distribution system. These events cannot be controlled so the best approach is to eliminate the root cause. It is expected that it will require several years to eliminate these units from service.

Alternatives Considered

status quo.



Older style pin type porcelain insulator



Washing older style porcelain line post insulator to reduce tracking and flashover



**Hydro One Brampton Networks Inc.
 Capital Expenditure - 2011**

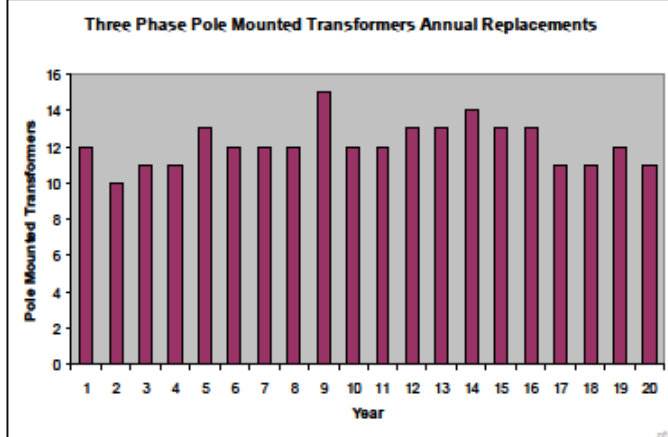
Project Title:	<i>Three Phase Pole-top Transformer Replacement Program</i>		Project Number:	<i>2011-218</i>	
Project Manager:	<i>Aldo Mastrofranceso</i>		Project Technician:		
Last Updated:	<i>Monday, June 14, 2010</i>		Investment Category:	<i>Sustainment</i>	
Type	<i>System Rehabilitation & Equipment Replacement</i>		Investment Driver:	<i>Reliability</i>	
Description					
<p>This program will replace three phase pole mounted transformers that have reached the end of their useful life.</p>					
Investment Scope					
<p>Hydro One Brampton owns and operates 1830 pole mounted three phase transformers, servicing an array of customers. Outages resulting from failure of these transformers impacts customer service and company reliability. This program will replace units that have been subjected to sustained overloads or where visual inspection has identified excessive heating or deterioration.</p>					
Investment Results					
<p>This program has been created to provide reliable Three Phase Pole-top Transformation to ensure continued reliable customer service and to meet the company's reliability objectives.</p>					
Cost & Timing					
	2011	2012	2013	2014	2015
Capital Costs	\$159,000.00	\$139,000.00	\$152,000.00	\$159,000.00	\$178,000.00
OM&A	\$13,000.00	\$11,500.00	\$12,500.00	\$13,000.00	\$14,700.00
Gross Investment	\$172,000.00	\$150,500.00	\$164,500.00	\$172,000.00	\$192,700.00
Recoverable	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Net Investment	\$172,000.00	\$150,500.00	\$164,500.00	\$172,000.00	\$192,700.00
Project Start Date					
Project In-Service Date					

Business Case Justification

The three phase transformer configuration is typically required to service commercial or industrial load centers where loss of supply may have a higher impact on customer service and reliability compared to single phase applications. For this reason HOB has implemented a proactive three phase pole mounted transformer replacement program to replace transformers before failure. The company uses transformer loading history and information collected via visual inspections to identify and rank units for replacement. Funding is based on probability of failure.

Alternatives Considered

Run to failure.



Year 1 = 2010



**Hydro One Brampton Networks Inc.
 Capital Expenditure - 2011**

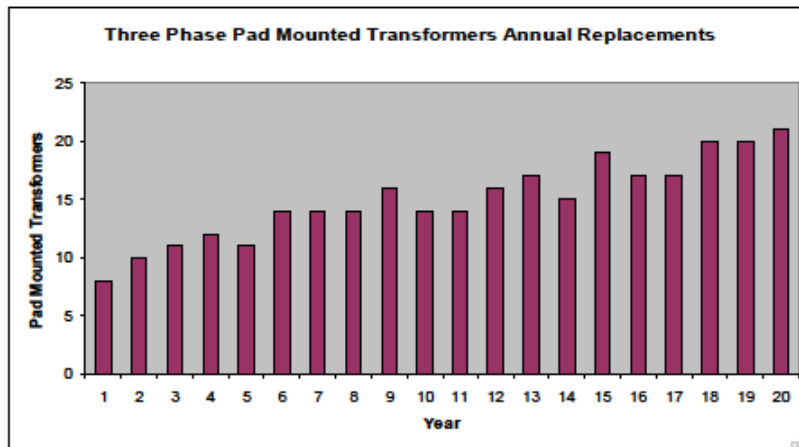
Project Title:	<i>Three Phase Pad Mount Transformer Replacement Program</i>				Project Number:	<i>2011-219</i>
Project Manager:	<i>Aldo Mastrofranceso</i>				Project Technician:	
Last Updated:	<i>Monday, June 14, 2010</i>				Investment Category:	<i>Sustainment</i>
Type	<i>System Rehabilitation & Equipment Replacement</i>				Investment Driver:	<i>Reliability</i>
Description						
<p>This program will replace three phase pad mounted transformers that have reached the end of their useful life.</p>						
Investment Scope						
<p>Hydro One Brampton owns and operates 723 pad mounted three phase transformers, servicing an array of customers. Outages resulting from failure of these transformers impacts customer service and company reliability. This program will replace units that have been subjected to sustained overloads or where visual inspection has identified excessive heating or deterioration.</p>						
Investment Results						
<p>This program has been created to provide reliable three phase pad mounted transformation to ensure continued reliable customer service and to meet the company's reliability objectives.</p>						
Cost & Timing						
	2011	2012	2013	2014	2015	
Capital Costs	\$159,000.00	\$198,000.00	\$231,000.00	\$264,000.00	\$248,000.00	
OM&A	\$13,000.00	\$16,000.00	\$19,000.00	\$22,000.00	\$20,000.00	
Gross Investment	\$172,000.00	\$214,000.00	\$250,000.00	\$286,000.00	\$268,000.00	
Recoverable	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Net Investment	\$172,000.00	\$214,000.00	\$250,000.00	\$286,000.00	\$268,000.00	
Project Start Date						
Project In-Service Date						

Business Case Justification

The three phase transformer configuration is typically required to service commercial or industrial load centers where loss of supply may have a higher impact on customer service and reliability compared to single phase applications. For this reason HOB has implemented a proactive three phase pole mounted transformer replacement program to replace transformers before failure. The company uses transformer loading history and information collected via visual inspections to identify and rank units for replacement. Funding is based on probability of failure.

Alternatives Considered

Run to failure.



Year 1 = 2010



**Hydro One Brampton Networks Inc.
 Capital Expenditure - 2011**

Project Title: <i>Three Phase Vault Transformer Replacement Program</i>	Project Number: <i>2011-220</i>				
Project Manager: <i>Aldo Mastrofranceso</i>	Project Technician:				
Last Updated: <i>Monday, June 14, 2010</i>	Investment Category: <i>Sustainment</i>				
Type <i>System Rehabilitation & Equipment Replacement</i>	Investment Driver: <i>Reliability</i>				
Description					
<p>This program will replace three phase vault type transformers that have reached the end of their useful life.</p>					
Investment Scope					
<p>Hydro One Brampton owns and operates 1447 vault type transformers, servicing an array of customers. Outages resulting from failure of these transformers impacts customer service and company reliability. This program will replace units that have been subjected to sustained overloads or where visual inspection has identified excessive heating or deterioration.</p>					
Investment Results					
<p>This program has been created to provide reliable three phase vault type transformation to ensure continued reliable customer service and to meet the company's reliability objectives.</p>					
Cost & Timing					
	2011	2012	2013	2014	2015
Capital Costs	\$370,000.00	\$416,000.00	\$429,000.00	\$462,000.00	\$462,000.00
OM&A	\$30,000.00	\$35,000.00	\$36,000.00	\$38,000.00	\$38,000.00
Gross Investment	\$400,000.00	\$451,000.00	\$465,000.00	\$500,000.00	\$500,000.00
Recoverable	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Net Investment	\$400,000.00	\$451,000.00	\$465,000.00	\$500,000.00	\$500,000.00
Project Start Date					
Project In-Service Date					

Business Case Justification

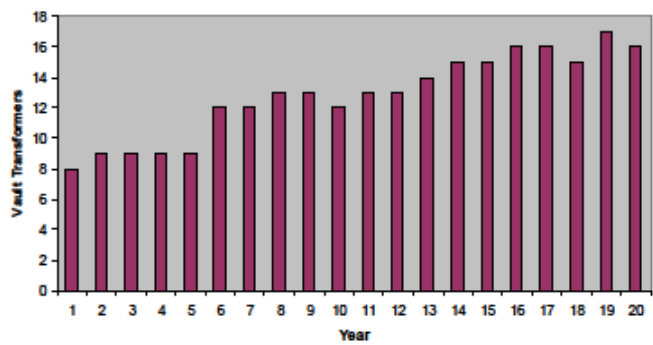
The company currently owns and operates 1447 three phase configured vault type transformers of varying ages and ratings. Three phase vault type transformer configurations service a variety of load centers including high rise residential, commercial and industrial load centers where loss of supply may have a higher impact on customer service and reliability compared to single phase applications. HOB has implemented a proactive vault type transformer replacement program to replace transformers before failure. The company uses transformer loading history and information collected via visual inspections to identify and rank units for replacement. Funding is based on probability of failure.

Alternatives Considered

Run to failure.



Vault Transformers Annual Replacements



Year 1 = 2010



**Hydro One Brampton Networks Inc.
 Capital Expenditure - 2011**

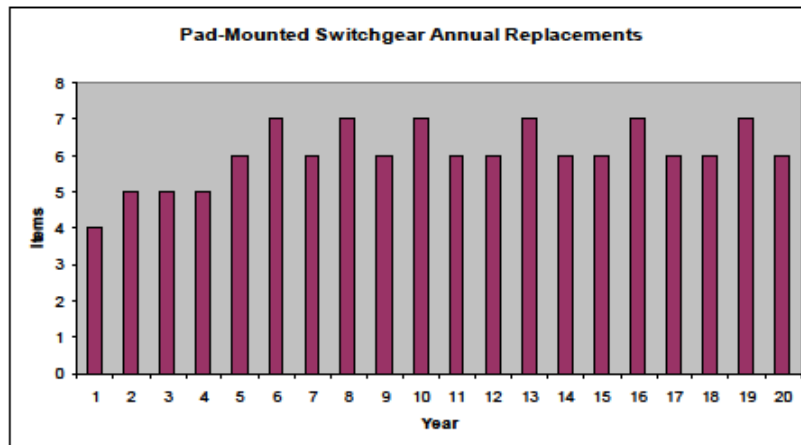
Project Title:	<i>Three Phase Pad mount Switchgear Replacement Program</i>		Project Number:	<i>2011-221</i>	
Project Manager:	<i>Aldo Mastrofranceso</i>		Project Technician:		
Last Updated:	<i>Monday, June 14, 2010</i>		Investment Category:	<i>Sustainment</i>	
Type	<i>System Rehabilitation & Equipment Replacement</i>		Investment Driver:	<i>Reliability</i>	
Description					
<p>This program will replace three phase pad mounted switchgear units that are nearing the end of their useful life.</p>					
Investment Scope					
<p>Hydro One Brampton owns and operates 298 pad mounted switchgear. Failures of pad mounted switchgear impact feeder class systems directly and as such have a high impact on customer outage minutes and respective reliability indices. This program will replace units that have been subjected to flash over events, non repairable bus insulator tracking and barrier degradation. The company uses information collected via visual inspections and trouble report data to identify and rank units for replacement. Funding is based on probability of failure.</p>					
Investment Results					
<p>This program has been created to provide reliable pad mounted switchgear equipment to ensure continued reliable customer service and to meet the company's reliability objectives.</p>					
Cost & Timing					
	2011	2012	2013	2014	2015
Capital Costs	\$132,000.00	\$165,000.00	\$172,000.00	\$178,000.00	\$211,000.00
OM&A	\$11,000.00	\$14,000.00	\$14,200.00	\$14,700.00	\$17,500.00
Gross Investment	\$143,000.00	\$179,000.00	\$186,200.00	\$192,700.00	\$228,500.00
Recoverable	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Net Investment	\$143,000.00	\$179,000.00	\$186,200.00	\$192,700.00	\$228,500.00
Project Start Date					
Project In-Service Date					

Business Case Justification

HOB currently owns and operates 298 pad mounted switchgear. These devices represent a significant asset, providing 200 distribution connections for load centers and load break switching capabilities from the bulk power feeder class infrastructure. The majority of these units incorporate air as the insulating medium with a small number of older units utilizing mineral insulating oil. Failures of pad mounted switchgear impact feeder class systems directly and as such have a high impact on customer outage minutes and respective reliability indices. It is imperative that these devices are in good operating condition.

Alternatives Considered

None, running to failure is not an option.



Year 1 = 2010





**Hydro One Brampton Networks Inc.
 Capital Expenditure - 2011**

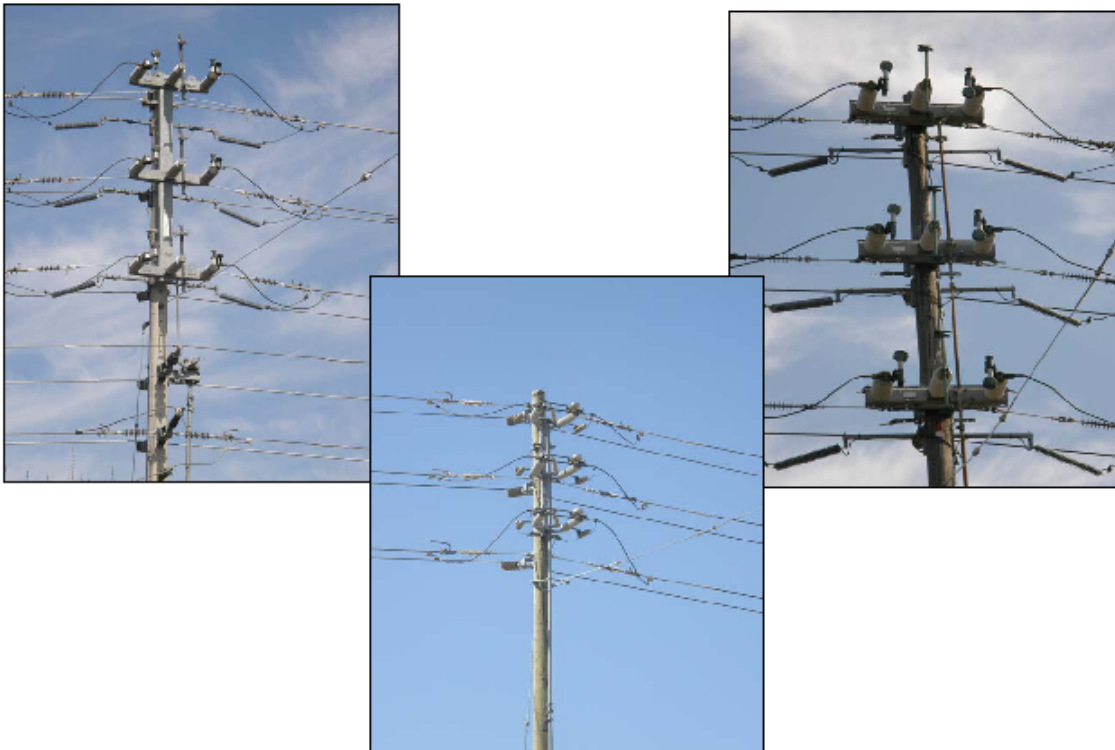
Project Title:	<i>Three Phase Load Interrupter Switch Replacement Program</i>		Project Number:	<i>2011-222</i>	
Project Manager:	<i>Aldo Mastrofranceso</i>		Project Technician:		
Last Updated:	<i>Monday, June 14, 2010</i>		Investment Category:	<i>Sustainment</i>	
Type	<i>System Rehabilitation & Equipment Replacement</i>		Investment Driver:	<i>Reliability</i>	
Description					
<p>This program will replace three phase load interrupter switches that are nearing the end of their useful life.</p>					
Investment Scope					
<p>The company currently owns and operates 695 overhead three phase load interrupting switches. Failures of these switches impact feeder class systems directly and as such have a high impact on customer outage minutes and respective reliability indices. The company completes an annual visual inspection and infrared scanning program of overhead load interrupting switches. The results are used to identify switches that are no longer reliable for service.</p>					
Investment Results					
<p>This program has been created to ensure that load interrupter switches continue to provide reliable switching capabilities. This is crucial in sectionalizing fault zones, transferring load, creating work zones and responding to system events. These qualities are fundamental drivers of the company's reliability performance objectives.</p>					
Cost & Timing					
	2011	2012	2013	2014	2015
Capital Costs	\$159,000.00	\$79,000.00	\$79,000.00		
OM&A	\$13,000.00	\$7,000.00	\$7,000.00		
Gross Investment	\$172,000.00	\$86,000.00	\$86,000.00	\$0.00	\$0.00
Recoverable	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Net Investment	\$172,000.00	\$86,000.00	\$86,000.00	\$0.00	\$0.00
Project Start Date					
Project In-Service Date					

Business Case Justification

Load interrupter switches represent a significant asset, providing load break/make switching capabilities in the overhead bulk power feeder class infrastructure. Failures of these switches impact feeder class systems directly and as such have a high impact on customer outage minutes and respective reliability indices. It is imperative that these devices are in good operating condition.

Alternatives Considered

None, running to failure is not an option.





**Hydro One Brampton Networks Inc.
 Capital Expenditure - 2011**

Project Title:	<i>Single Phase Poletop Transformer Replacement Program</i>		Project Number:	<i>2011-223</i>	
Project Manager:	<i>Aldo Mastrofranceso</i>		Project Technician:		
Last Updated:	<i>Monday, June 14, 2010</i>		Investment Category:	<i>Sustainment</i>	
Type	<i>System Rehabilitation & Equipment Replacement</i>		Investment Driver:	<i>Reactive Demand</i>	
Description					
<p>This program will replace single phase pole top transformer on a reactive basis.</p>					
Investment Scope					
<p>Hydro One Brampton owns and operates 1447 single phase pole mounted transformers. Single phase transformers typically service smaller residential and light commercial loads, where loss of supply has a minimal impact on customer service and reliability. As a result these units are "run to failure". Funding is required for replacement costs based on estimated failure rates.</p>					
Investment Results					
<p>To ensure adequate funding for replacement of failed transformers.</p>					
Cost & Timing					
	2011	2012	2013	2014	2015
Capital Costs	\$152,000.00	\$152,000.00	\$159,000.00	\$159,000.00	\$165,000.00
OM&A	\$12,500.00	\$12,500.00	\$13,000.00	\$13,000.00	\$13,500.00
Gross Investment	\$164,500.00	\$164,500.00	\$172,000.00	\$172,000.00	\$178,500.00
Recoverable	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Net Investment	\$164,500.00	\$164,500.00	\$172,000.00	\$172,000.00	\$178,500.00
Project Start Date					
Project In-Service Date					

Business Case Justification

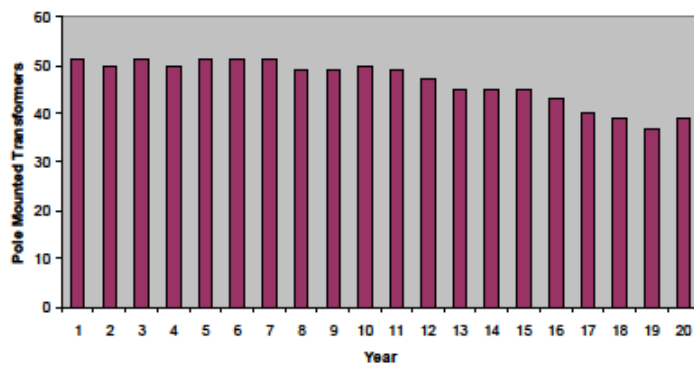
Expenditures allocated to this program are required to replace failed equipment in order to re-establish supply.

Alternatives Considered

None, run to failure



Single Phase Pole Mounted Transformers Annual Replacements



Year 1 = 2010



**Hydro One Brampton Networks Inc.
 Capital Expenditure - 2011**

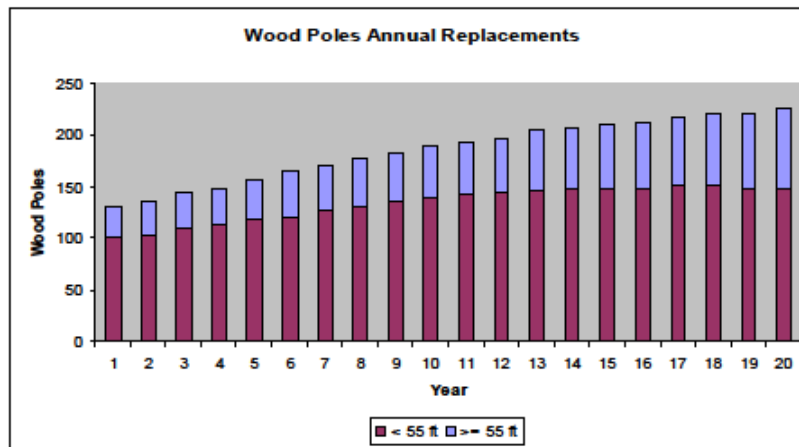
Project Title: <i>Wood Pole Replacement Program</i>	Project Number: <i>2011-224</i>				
Project Manager: <i>Aldo Mastrofranceso</i>	Project Technician:				
Last Updated: <i>Monday, June 14, 2010</i>	Investment Category: <i>Sustainment</i>				
Type <i>System Rehabilitation & Equipment Replacement</i>	Investment Driver: <i>Reliability</i>				
Description					
<p>This program is designed to replace standing wood poles no longer deemed suitable for service.</p>					
Investment Scope					
<p>Hydro One Brampton currently maintains approximately 12,000 standing wood poles in the distribution system. These poles range in age, size and species and represent a significant asset in delivering power to the customers of Brampton. This program will replace poles and related attachments identified during company's normal day to day activities and from the results obtained from a pole testing contract launched in the summer of 2010.</p>					
Investment Results					
<p>The main purpose of this investment is to provide funding necessary to replace defective poles no longer suitable for service as they are found during the course of performing day to day activities and as identified from the pole testing contract.</p>					
Cost & Timing					
	2011	2012	2013	2014	2015
Capital Costs	\$66,000.00	\$73,000.00	\$79,000.00	\$86,000.00	\$92,000.00
OM&A	\$5,500.00	\$6,000.00	\$6,500.00	\$7,000.00	\$7,600.00
Gross Investment	\$71,500.00	\$79,000.00	\$85,500.00	\$93,000.00	\$99,600.00
Recoverable	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Net Investment	\$71,500.00	\$79,000.00	\$85,500.00	\$93,000.00	\$99,600.00
Project Start Date					
Project In-Service Date					

Business Case Justification

Poles form an integral part of the company's power delivery infrastructure. The company must be capable of responding to situations where poles must be replaced to ensure public safety and to maintain service to our customers.

Alternatives Considered

Devices exist in the industry which can be used to stabilize a suspect pole. These devices/braces have limitations governed by the maximum forces being supported by the pole. The company will assess pole locations found to be defective for the application of these devices. Poles will be replaced where loading exceeds the capacity of the brace.



Year 1 = 2010





**Hydro One Brampton Networks Inc.
 Capital Expenditure - 2011**

Project Title: <i>Unplanned Overhead System Improvements</i>	Project Number: <i>2011-225</i>				
Project Manager: <i>Aldo Mastrofranceso</i>	Project Technician:				
Last Updated: <i>Monday, June 14, 2010</i>	Investment Category: <i>Sustainment</i>				
Type <i>System Rehabilitation & Equipment Replacement</i>	Investment Driver: <i>Reliability</i>				
Description					
<p>This is an annual pool allocated to respond to various system events, equipment failures and customer demand projects generating overhead capital expenditures occurring within the budget year. This program is intended to respond to unplanned system events and conditions found during the year, that impact or have the potential to impact, customer reliability and /or distribution system performance.</p>					
Investment Scope					
<p></p>					
Investment Results					
<p>To re-establish service and/or to maintain contingency following system events.</p>					
Cost & Timing					
	2011	2012	2013	2014	2015
Capital Costs	\$264,000.00	\$270,000.00	\$275,000.00	\$280,000.00	\$286,000.00
OM&A	\$21,800.00	\$22,300.00	\$22,700.00	\$23,000.00	\$23,600.00
Gross Investment	\$285,800.00	\$292,300.00	\$297,700.00	\$303,000.00	\$309,600.00
Recoverable	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Net Investment	\$285,800.00	\$292,300.00	\$297,700.00	\$303,000.00	\$309,600.00
Project Start Date					
Project In-Service Date					

Business Case Justification

This project is required to ensure a continued reliable supply by providing funding enabling the company to respond to system events impacting service reliability, public safety and environmental scenarios.

Alternatives Considered

Alternatives will be assessed when the unplanned requirements are being reviewed.



**Hydro One Brampton Networks Inc.
 Capital Expenditure - 2011**

Project Title: <i>Unplanned Underground System Improvements</i>	Project Number: <i>2011-226</i>				
Project Manager: <i>Aldo Mastrofranceso</i>	Project Technician:				
Last Updated: <i>Monday, June 14, 2010</i>	Investment Category: <i>Sustainment</i>				
Type <i>System Rehabilitation & Equipment Replacement</i>	Investment Driver: <i>Reliability</i>				
Description					
<p>This is an annual pool allocated to respond to various system events, equipment failures and customer demand projects generating underground capital expenditures occurring within the budget year. This program is intended to respond to unplanned system events and conditions found during the year, that impact or have the potential to impact, customer reliability and /or distribution system performance.</p>					
Investment Scope					
<p>To re-establish service and/or to maintain contingency following system events.</p>					
Investment Results					
Cost & Timing					
	2011	2012	2013	2014	2015
Capital Costs	\$264,000.00	\$270,000.00	\$275,000.00	\$280,000.00	\$286,000.00
OM&A	\$21,800.00	\$22,300.00	\$22,700.00	\$23,000.00	\$23,600.00
Gross Investment	\$285,800.00	\$292,300.00	\$297,700.00	\$303,000.00	\$309,600.00
Recoverable	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Net Investment	\$285,800.00	\$292,300.00	\$297,700.00	\$303,000.00	\$309,600.00
Project Start Date					
Project In-Service Date					

Business Case Justification

This project is required to ensure a continued reliable supply by providing funding enabling the company to respond to system events impacting service reliability, public safety and environmental scenarios.

Alternatives Considered

Alternatives will be assessed when the unplanned requirements are being reviewed.



**Hydro One Brampton Networks Inc.
 Capital Expenditure - 2011**

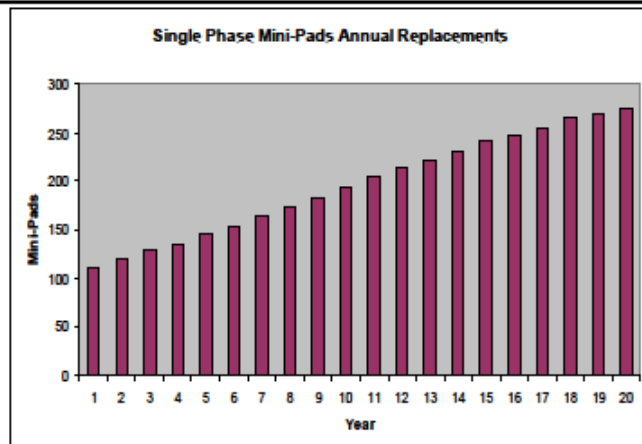
Project Title:	<i>Single Phase Padmount Transformer Replacement Program</i>		Project Number:	2011-227	
Project Manager:	<i>Aldo Mastrofranceso</i>		Project Technician:		
Last Updated:	<i>Monday, June 14, 2010</i>		Investment Category:	<i>Sustainment</i>	
Type	<i>System Rehabilitation & Equipment Replacement</i>		Investment Driver:	<i>Reliability</i>	
Description					
<p>This program will replace single phase pad mounted transformer on a reactive basis.</p>					
Investment Scope					
<p>Hydro One Brampton owns and operates 11331 single phase pad mounted transformers. Single phase transformers typically service smaller residential and light commercial loads, where loss of supply has a minimal impact on customer service and reliability. As a result these units are "run to failure". Funding is required for replacement costs based on estimated failure rates.</p>					
Investment Results					
<p>To ensure adequate funding for replacement of failed transformers.</p>					
Cost & Timing					
	2011	2012	2013	2014	2015
Capital Costs	\$519,000.00	\$562,000.00	\$595,000.00	\$661,000.00	\$727,000.00
OM&A	\$43,000.00	\$46,000.00	\$49,000.00	\$55,000.00	\$60,000.00
Gross Investment	\$562,000.00	\$608,000.00	\$644,000.00	\$716,000.00	\$787,000.00
Recoverable	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Net Investment	\$562,000.00	\$608,000.00	\$644,000.00	\$716,000.00	\$787,000.00
Project Start Date					
Project In-Service Date					

Business Case Justification

Expenditures allocated to this program are required to replace failed equipment in order to re-establish customer supply.

Alternatives Considered

None, run to failure.



Year 1 = 2010



**Hydro One Brampton Networks Inc.
 Capital Expenditure - 2011**

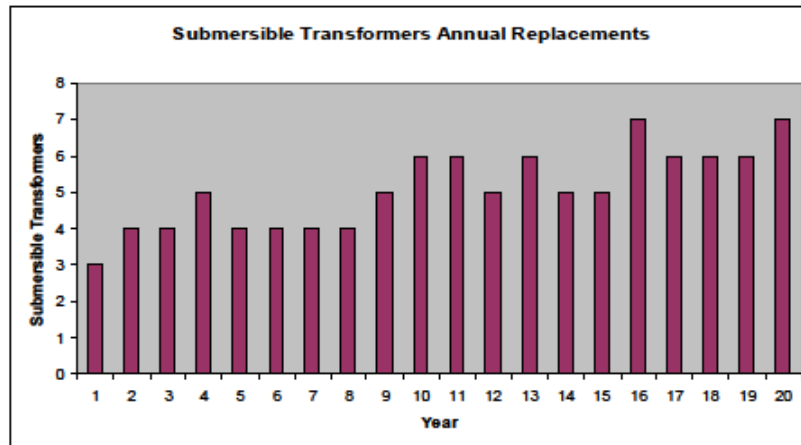
Project Title:	<i>Single Phase Submersible Transformer Replacement Program</i>		Project Number:	2011-228	
Project Manager:	<i>Aldo Mastrofranceso</i>		Project Technician:		
Last Updated:	<i>Monday, June 14, 2010</i>		Investment Category:	<i>Sustainment</i>	
Type	<i>System Rehabilitation & Equipment Replacement</i>		Investment Driver:	<i>Reliability</i>	
Description					
<p>This program will replace failed single phase submersible transformers on a reactive basis.</p>					
Investment Scope					
<p>Hydro One Brampton owns and operates 151 single phase submersible transformers. Single phase transformers typically service smaller residential and light commercial loads, where loss of supply has a minimal impact on customer service and reliability. As a result these units are "run to failure". Funding is required for replacement costs based on estimated failure rates.</p>					
Investment Results					
<p>To ensure adequate funding for replacement of failed transformers.</p>					
Cost & Timing					
	2011	2012	2013	2014	2015
Capital Costs	\$13,000.00	\$20,000.00	\$20,000.00	\$26,000.00	\$20,000.00
OM&A	\$1,100.00	\$1,600.00	\$1,600.00	\$2,200.00	\$1,600.00
Gross Investment	\$14,100.00	\$21,600.00	\$21,600.00	\$28,200.00	\$21,600.00
Recoverable	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Net Investment	\$14,100.00	\$21,600.00	\$21,600.00	\$28,200.00	\$21,600.00
Project Start Date					
Project In-Service Date					

Business Case Justification


Expenditures allocated to this program are required to replace failed equipment in order to re-establish customer supply.

Alternatives Considered

None, run to failure.



Year 1 = 2010

		Hydro One Brampton Networks Inc. Proposed Business Case - Capital Expenditure For Year 2011			
Project Title:	Poleline relocations - Road Widening	Project Number:	2011-069		
Project Manager:	Aldo Mastrofranceso	Project Technician:	Various		
Last Updated:	Feb 11,2010	Investment Category:	Development		
Type	O/H - Overhead	Investment Driver:	Customer Demand		
Description					
<p>This project covers Hydro One Brampton Capital expenditures to complete relocation works at the request of the Region of Peel, City of Brampton . Typically relocations result in 50% labour and equipment cost split between the road authority as per the Public Service Work on Highway Act. Hydro One Brampton is responsible for 100% of the material costs.</p>					
Investment Scope					
<p>The recovery of existing main line poles, installation of new main line poles, installation of guy poles and associated guys. Stringing new 556 kcmil, Al conductor, Stringing 3/0 AACSR neutral conductor, installaing new O/H secondary field lashed conductor, transferring existing conductors (were feasible) to new pole line. The required switching and circuit isolation as required.</p>					
Investment Results					
<p>Complete relocations to accommodate future road widening conflicts in a timley manner. It is antcipated that project listed will be completed within the Calendar year, however Region and City budgeting may require that some projects be accelerated or dealyed, which in turn will effect Hydro Obe Brampton commitments.</p>					
Cost & Timing					
	2011	2012	2013	2014	2015
Capital Costs	\$4,438,423.60				
OM&A	\$1,096,558.40				
Gross Investment	\$5,534,982.00				
Recoverable	\$2,257,620.00				
Net Investment	\$3,277,362.00				
Project Start Date					Jan-11
Project In-Service Date					


Business Case Justification
Alternatives Considered



**Hydro One Brampton Networks Inc.
 Proposed Business Case - Capital Expenditure
 For Year 2011**

Project Title: GS - Residential HiRise Buildings		Project Number: 2011-070			
Project Manager: Aldo Mastrofranceso		Project Technician:			
Last Updated:		Investment Category: Development			
Type U/G - Underground		Investment Driver: Customer Demand			
Description					
Future hirise development in the core of the downtown is projected. Acceleride transportation will support this growth.					
Investment Scope					
Investment Results					
Cost & Timing					
	2010	2011	2012	2013	2014
Capital Costs		\$260,108.00			
OM&A					
Gross Investment					
Recoverable					
Net Investment					
Project Start Date					
Project In-Service Date					

Business Case Justification
Alternatives Considered

		Hydro One Brampton Networks Inc. Proposed Business Case - Capital Expenditure For Year 2011			
Project Title: GS New Commercial Customers		Project Number: 2011-11			
Project Manager: Aldo Mastrofranceso		Project Technician:			
Last Updated:		Investment Category: Development			
Type U/G - Underground		Investment Driver: Customer Demand			
Description					
<p>Projected growth based on known proposals and healthy economy.</p>					
Investment Scope					
<p> </p>					
Investment Results					
<p> </p>					
Cost & Timing					
	2010	2011	2012	2013	2014
Capital Costs		\$526,500.00			
OM&A					
Gross Investment					
Recoverable					
Net Investment					
Project Start Date					
Project In-Service Date					

Business Case Justification
Alternatives Considered



**Hydro One Brampton Networks Inc.
 Proposed Business Case - Capital Expenditure
 For Year 2011**

Project Title: GS New Industrial Customers		Project Number: 2011-10			
Project Manager: Aldo Mastrofranceso		Project Technician:			
Last Updated:		Investment Category: Development			
Type U/G - Underground		Investment Driver: Customer Demand			
Description					
Projected growth based on known proposals and healthy economy.					
Investment Scope					
Investment Results					
Cost & Timing					
	2010	2011	2012	2013	2014
Capital Costs		\$283,500.00			
OM&A					
Gross Investment					
Recoverable					
Net Investment					
Project Start Date					
Project In-Service Date					


Business Case Justification
Alternatives Considered




**Hydro One Brampton Networks Inc.
 Proposed Business Case - Capital Expenditure
 For Year 2011**

Project Title:	RESIDENTIAL - LOW DENSITY (SINGLES & SEMIS)				Project Number:	
Project Manager:	Aldo Mastrofranceso				Project Technician:	Various
Last Updated:	May 7,2010				Investment Category:	Development
Type	U/G - Underground				Investment Driver:	Growth
Description						
This project requires the installation of Underground Hydro Facilities in order to provide electrical supply to new subdivisions being developed in the City of Brampton						
Investment Scope						
Installation of new infrastructure , Padmounted Transformers,underground distribution cable, feeder cable, switchgears and energy meters to meet Development demand. Market conditons and the Development size will dictate the costs of these projects.						
Investment Results						
Provide Electrical supply to new Developments within the City of Brampton. Ensure adequate supply to new and existing customers.						
Cost & Timing						
	2011	2012	2013	2014	2015	
Capital Costs	\$5,700,077.00					
OM&A	\$633,342.00					
Gross Investment	\$6,333,419.00					
Recoverable	\$4,186,497.00					
Net Investment	\$2,146,922.00					
Project Start Date						
Project In-Service Date						


<p>Business Case Justification This project requires the installation of Hydro infrastructure at the request of various Developers within the City of Brampton.</p>
<p>Alternatives Considered</p>

		Hydro One Brampton Networks Inc. Proposed Business Case - Capital Expenditure For Year 2011			
Project Title: Metering		Project Number: 2011-028			
Project Manager: Scott Miller		Project Technician: Jim McGill			
Last Updated:		Investment Category: Development			
Type M - Metering		Investment Driver: Customer Demand			
Description Metering Equipment Commissioning IESO Market Rules stipulate full metering point upgrades at first meter seal expiry. 1)Upgrades need to be done at Goreway TS. Expected to be completed in May. IESO stipulates full upgrade at seal expiry. Seals at Bramalea TS M27, M28 and M26 were good until 2014, but firmware problems with the ION meters, which we use, forced Measurement Canada to back the seal life down to 6 years, making them due at end of 2010. We need to move meters from rack in control bldg. to cabinets. We will take advantage of the opportunity to move the points outside the TS enclosure.					
Investment Scope					
Investment Results					
Cost & Timing Estimates					
	2010	2011	2012	2013	2014
Capital Costs	\$1,100,000.00	\$1,150,000.00	\$0.00	\$0.00	\$0.00
OM&A Expenditures					
Gross Investment Costs					
Recoverable Costs					
Net Investment Costs					
Project Start Date					
Project In-Service Date					


Business Case Justification
Alternatives Considered

		<p align="center">Hydro One Brampton Networks Inc. Proposed Business Case - Capital Expenditure For Year 2011</p>			
Project Title: Metering		Project Number: 2011-036			
Project Manager: Scott Miller		Project Technician: John Gordon			
Last Updated:		Investment Category: Development			
Type M - Metering		Investment Driver: Customer Demand			
Description Metering Equipment Commissioning					
This expenditure is for the costs to install new three phase metering and associated equipment. This also includes the initial crosswatt testing and ratioing of new instrument transformers					
Investment Scope					
Investment Results					
Cost & Timing Estimates					
	2010	2011	2012	2013	2014
Capital Costs	\$405,000.00	\$315,000.00	\$324,000.00	\$333,000.00	\$342,000.00
OM&A Expenditures					
Gross Investment Costs					
Recoverable Costs					
Net Investment Costs					
Project Start Date					
Project In-Service Date					

Business Case Justification
Alternatives Considered

		<p align="center">Hydro One Brampton Networks Inc. Proposed Business Case - Capital Expenditure For Year 2011</p>			
Project Title: Metering		Project Number: 2011-038			
Project Manager: Scott Miller		Project Technician: John Gordon			
Last Updated:		Investment Category: Other or Shared Services			
Type: M - Metering		Investment Driver: Regulatory			
<p>Description INDUST/COMM. INSTALLATIONS</p> <p>This expenditure is for the cost of replacement three phase meters for reverification and seal extension regulated by Measurement Canada and replacement meters and associated equipmen for damaged or obsolete single phase meters</p>					
Investment Scope					
Investment Results					
Cost & Timing Estimates					
	2010	2011	2012	2013	2014
Capital Costs	\$72,000.00	\$54,000.00	\$55,800.00	\$57,600.00	\$59,400.00
OM&A Expenditures					
Gross Investment Costs					
Recoverable Costs					
Net Investment Costs					
Project Start Date					
Project In-Service Date					

Business Case Justification
Alternatives Considered

		Hydro One Brampton Networks Inc. Proposed Business Case - Capital Expenditure For Year 2011			
Project Title: Metering		Project Number: 2011-050			
Project Manager: Scott Miller		Project Technician: John Gordon			
Last Updated:		Investment Category: Development			
Type M - Metering		Investment Driver: Growth			
Description <u>New Residential Metering</u>					
This expenditure is for the cost of single phase meters for new residential services up to 200 Amp, replacement single phase meters for reverification and seal extension regulated by Measurement Canada and replacement meters for damaged or obsolete single phase meters.					
Investment Scope					
Investment Results					
Cost & Timing Estimates					
	2010	2011	2012	2013	2014
Capital Costs	\$60,750.00	\$189,000.00	\$193,500.00	\$200,700.00	\$207,000.00
OM&A Expenditures					
Gross Investment Costs					
Recoverable Costs					
Net Investment Costs					
Project Start Date					
Project In-Service Date					

Business Case Justification
Alternatives Considered



**Hydro One Brampton Networks Inc.
 Proposed Business Case - Capital Expenditure
 For Year 2011**

Project Title: Cargo Trailer		Project Number:			
Project Manager:		Project Technician:			
Last Updated:		Investment Category:			
Type		Investment Driver:			
Description					
Cargo Trailer for Lines Department					
Investment Scope					
Investment Results					
New trailer safer for the road					
Cost & Timing					
	2010	2011	2012	2013	2014
Capital Costs		\$21,000.00			
OM&A					
Gross Investment		\$21,000.00			
Recoverable					
Net Investment		\$21,000.00			
Project Start Date		January			
Project In-Service Date		May			

Business Case Justification
<p data-bbox="289 533 855 560">New trailer will replace a 1992 trailer with rotted frame</p>
Alternatives Considered



**Hydro One Brampton Networks Inc.
 Proposed Business Case - Capital Expenditure
 For Year 2011**

Project Title: Digger Truck (RBD)		Project Number:			
Project Manager:		Project Technician:			
Last Updated:		Investment Category:			
Type		Investment Driver:			
Description					
Digger Truck (Radial Boom Derrick)					
Investment Scope					
Investment Results					
New reliable vehicle with better safety features					
Cost & Timing					
	2010	2011	2012	2013	2014
Capital Costs		\$296,000.00			
OM&A					
Gross Investment		\$296,000.00			
Recoverable					
Net Investment		\$296,000.00			
Project Start Date		January			
Project In-Service Date		December			

<p>Business Case Justification</p> <p>New vehicle will have 50 ft reach and will replace 1993 vehicle with a 40 ft reach</p>
<p>Alternatives Considered</p> <p>Higher reach required for new pole heights</p>



**Hydro One Brampton Networks Inc.
 Proposed Business Case - Capital Expenditure
 For Year 2011**

Project Title: One Double Bucket Truck	Project Number: 2011-012
Project Manager: Brian Oakley	Project Technician: Paul Morin
Last Updated: 4/23/2010	Investment Category: Operations
Type: FL - Fleet	Investment Driver: Safety

Description

One Double Bucket Truck for lines Department

Investment Scope

Investment Results

New reliable vehicle with better safety features

Cost & Timing					
	2010	2011	2012	2013	2014
Capital Costs		\$773,000.00			
OM&A					
Gross Investment		\$773,000.00			
Recoverable					
Net Investment		\$773,000.00			

Project Start Date	January
Project In-Service Date	November

Business Case Justification
<p data-bbox="289 533 893 560">New Double bucket truck scheduled to replace a 1993 unit.</p>
Alternatives Considered
<p data-bbox="277 919 613 947">longer reach for higher pole lines</p>



**Hydro One Brampton Networks Inc.
 Proposed Business Case - Capital Expenditure
 For Year 2011**

Project Title: Dump Trailer	Project Number: 2011-012				
Project Manager: Brian Oakley	Project Technician: Paul Morin				
Last Updated: 4/23/2010	Investment Category: Operations				
Type FL - Fleet	Investment Driver: Safety				
Description					
Dump Trailer					
Investment Scope					
Investment Results					
New reliable trailer that will be safer for the road					
Cost & Timing					
	2010	2011	2012	2013	2014
Capital Costs		\$12,000.00			
OM&A					
Gross Investment		\$12,000.00			
Recoverable					
Net Investment		\$12,000.00			
Project Start Date	January				
Project In-Service Date	September				

<p>Business Case Justification</p> <p>New trailer will be an addition to the fleet.</p>
<p>Alternatives Considered</p>



**Hydro One Brampton Networks Inc.
 Proposed Business Case - Capital Expenditure
 For Year 2011**

Project Title: Fork Lift		Project Number:			
Project Manager:		Project Technician:			
Last Updated:		Investment Category:			
Type		Investment Driver:			
Description					
Fork Lift used in Stores Yard					
Investment Scope					
Investment Results					
New reliable fork lift with better safety features					
Cost & Timing					
	2010	2011	2012	2013	2014
Capital Costs		\$78,000.00			
OM&A					
Gross Investment		\$78,000.00			
Recoverable					
Net Investment		\$78,000.00			
Project Start Date		January			
Project In-Service Date		October			


Business Case Justification
<p data-bbox="289 533 862 560">New vehicle will replace a 1992 vehicle with many hours</p>
Alternatives Considered



**Hydro One Brampton Networks Inc.
 Proposed Business Case - Capital Expenditure
 For Year 2011**

Project Title: One passenger car	Project Number: 2011-12				
Project Manager: Brian Oakley	Project Technician: Paul Morin				
Last Updated: 5/6/2010	Investment Category: Development				
Type FL - Fleet	Investment Driver: Safety				
Description					
One passenger car for Engineering Department					
Investment Scope					
Investment Results					
Reliable vehicle with better safety features					
Cost & Timing					
	2010	2011	2012	2013	2014
Capital Costs		\$33,500.00			
OM&A					
Gross Investment		\$33,500.00			
Recoverable					
Net Investment		\$33,500.00			
Project Start Date	January				
Project In-Service Date	June				

Business Case Justification
The new vehicle will replace a 1999 compact car.
Alternatives Considered
Electric car

		Hydro One Brampton Networks Inc. Proposed Business Case - Capital Expenditure For Year 2011			
Project Title: Pole Trailer		Project Number:			
Project Manager:		Project Technician:			
Last Updated:		Investment Category:			
Type		Investment Driver:			
Description					
Pole Trailer					
Investment Scope					
Investment Results					
New reliable trailer that will be safer for the road					
Cost & Timing					
	2010	2011	2012	2013	2014
Capital Costs		\$54,000.00			
OM&A					
Gross Investment		\$54,000.00			
Recoverable					
Net Investment		\$54,000.00			
Project Start Date		January			
Project In-Service Date		September			

Business Case Justification
<p data-bbox="289 533 867 558">New trailer will replace 1982 trailer with metal corrosion</p>
Alternatives Considered



**Hydro One Brampton Networks Inc.
 Proposed Business Case - Capital Expenditure
 For Year 2011**

Project Title: Reel Cable Trailers	Project Number: 2011-012				
Project Manager: Brian Oakley	Project Technician: Paul Morin				
Last Updated: 4/23/2010	Investment Category: Operations				
Type FL - Fleet	Investment Driver: Reliability				
Description					
Two Reel Cable Trailers					
Investment Scope					
Investment Results					
New trailers with better safety features for working on the road					
Cost & Timing					
	2010	2011	2012	2013	2014
Capital Costs		\$21,000.00			
OM&A					
Gross Investment		\$21,000.00			
Recoverable					
Net Investment		\$21,000.00			
Project Start Date	January				
Project In-Service Date	September				

Business Case Justification
<p data-bbox="289 533 716 558">New trailers will replace two 1981 trailers</p>
Alternatives Considered



**Hydro One Brampton Networks Inc.
 Proposed Business Case - Capital Expenditure
 For Year 2011**

Project Title: Single Bucket Truck	Project Number: 2011-012				
Project Manager: Brian Oakley	Project Technician: Paul Morin				
Last Updated: 4/23/2010	Investment Category: Operations				
Type FL - Fleet	Investment Driver: Safety				
Description					
Single Bucket Truck Material Handler for lines Department					
Investment Scope					
Investment Results					
New reliable vehicle with better safety features					
Cost & Timing					
	2010	2011	2012	2013	2014
Capital Costs		\$724,000.00			
OM&A					
Gross Investment		\$724,000.00			
Recoverable					
Net Investment		\$724,000.00			
Project Start Date	January				
Project In-Service Date	November				


Business Case Justification
<p data-bbox="289 533 1036 558">New vehicle has 55 ft reach and will replace 1992 vehicle with 40 ft reach</p>
Alternatives Considered
<p data-bbox="277 919 613 945">longer reach for higher pole lines</p>




**Hydro One Brampton Networks Inc.
 Proposed Business Case - Capital Expenditure
 For Year 2011**

Project Title: Stake Truck and Bin Body		Project Number:			
Project Manager:		Project Technician:			
Last Updated:		Investment Category:			
Type		Investment Driver:			
Description					
Stake Truck used in Lines Department					
Investment Scope					
Investment Results					
New reliable vehicle with better safety features					
Cost & Timing					
	2010	2011	2012	2013	2014
Capital Costs		\$120,000.00			
OM&A					
Gross Investment		\$120,000.00			
Recoverable					
Net Investment		\$120,000.00			
Project Start Date		January			
Project In-Service Date		September			

Business Case Justification
<p data-bbox="289 533 735 558">New vehicle will replace a 1999 Stake Truck</p>
Alternatives Considered

		Hydro One Brampton Networks Inc. Capital Expenditure - 2011			
Project Title: <i>Expansion for Renewable Generator Connections</i>		Project Number: <i>2011-240</i>			
Project Manager: <i>Aldo Mastrofranceso</i>		Project Technician:			
Last Updated: <i>Monday, June 14, 2010</i>		Investment Category: <i>Other or Shared Services</i>			
Type <i>Green Energy Programs</i>		Investment Driver: <i>Regulatory</i>			
Description					
<p>This project is for the expansion of Hydro One Brampton's distribution system to facilitate the connection of "Renewable Generators"</p>					
Investment Scope					
<p>Construct new facilities to provide service connection capabilities between new "Renewable Generator" sites and Hydro One Brampton's existing distribution system.</p>					
Investment Results					
<p>To meet the obligations stipulated in the Distribution System Code to accommodate new Renewable Generators.</p>					
Cost & Timing					
	2011	2012	2013	2014	2015
Capital Costs	\$165,000.00	\$168,000.00	\$172,000.00	\$175,000.00	\$179,000.00
OM&A					
Gross Investment	\$165,000.00	\$168,000.00	\$172,000.00	\$175,000.00	\$179,000.00
Recoverable	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Net Investment	\$165,000.00	\$168,000.00	\$172,000.00	\$175,000.00	\$179,000.00
Project Start Date					
Project In-Service Date					


<p>Business Case Justification</p> <p>The Distribution System Code stipulates certain costs that Hydro One Brampton must bear in relation to constructing an expansion required to provide a point of connection for "Renewable Generator" sites.</p>
<p>Alternatives Considered</p>

		Hydro One Brampton Networks Inc. Capital Expenditure - 2011			
Project Title:	<i>Renewable Generator Enabling Improvements</i>	Project Number:	<i>2011-241</i>		
Project Manager:	<i>Aldo Mastrofranceso</i>	Project Technician:			
Last Updated:	<i>Monday, June 14, 2010</i>	Investment Category:	<i>Other or Shared Services</i>		
Type	<i>Green Energy Programs</i>	Investment Driver:	<i>Regulatory</i>		
Description					
<p>This project is for the "non expansion" type works required to facilitate the connection of "Renewable Generators"</p> <p>The Distribution System Code requires that specific changes to Hydro One Brampton's distribution system to allow it to accommodate renewable generation be classified as Renewable Enabling Improvements (REI).</p>					
Investment Scope					
<p>To install or modify;</p> <ul style="list-style-type: none"> > electrical protection equipment; > voltage regulating transformer controls or station controls; > protection against islanding (transfer trip or equivalent); > bidirectional reclosers; > tap-changer controls or relays; > breaker protection relays; > supervisory Control and Data Acquisition system design, construction and connection; > equipment to allow for and accommodate 2-way electrical flows or reverse flows; and > communication systems <p>to facilitate the connection of renewable energy generation facilities.</p>					
Investment Results					
<p>To remain compliant with the Distribution System Code.</p>					
Cost & Timing					
	2011	2012	2013	2014	2015
Capital Costs	\$83,000.00	\$84,000.00	\$86,000.00	\$88,000.00	\$89,000.00
OM&A					
Gross Investment	\$83,000.00	\$84,000.00	\$86,000.00	\$88,000.00	\$89,000.00
Recoverable	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Net Investment	\$83,000.00	\$84,000.00	\$86,000.00	\$88,000.00	\$89,000.00
Project Start Date					
Project In-Service Date					

Business Case Justification

The Distribution System Code stipulates certain costs that Hydro One Brampton must bear in relation to constructing facilities enabling connection for "Renewable Generator" sites.

Alternatives Considered

		Hydro One Brampton Networks Inc. Capital Expenditure - 2011			
Project Title: <i>Smart Meter Technology</i>		Project Number: <i>2011-242</i>			
Project Manager: <i>Aldo Mastrofranceso</i>		Project Technician:			
Last Updated: <i>Monday, June 14, 2010</i>		Investment Category: <i>Other or Shared Services</i>			
Type <i>Green Energy Programs</i>		Investment Driver: <i>Regulatory</i>			
Description					
<p>This project is for the purchase of software required to utilize smart meter technology and to leverage the functionality of the existing outage management system currently in operation at Hydro One Brampton.</p>					
Investment Scope					
<p>To implement Smart Meter Technology initiatives to integrate the Smart Meter system with the Outage Management System (OMS). Smart meter data will be transmitted from the Smart Meter system to the OMS system in real time, allowing the prediction engine in OMS to accurately pinpoint failed equipment on the distribution system. It will also identify when the meter is removed and will help identify theft of power or meter tampering issues.)</p>					
Investment Results					
<p>To have a fully functional smart meter interrogation program with data collection and data transfer capabilities integrated with the Outage Management System.</p>					
Cost & Timing					
	2011	2012	2013	2014	2015
Capital Costs	\$289,000.00	\$295,000.00	\$301,000.00	\$307,000.00	\$313,000.00
OM&A					
Gross Investment	\$289,000.00	\$295,000.00	\$301,000.00	\$307,000.00	\$313,000.00
Recoverable	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Net Investment	\$289,000.00	\$295,000.00	\$301,000.00	\$307,000.00	\$313,000.00
Project Start Date					
Project In-Service Date					

Business Case Justification

Subsequent to a requirement imposed by the Province in 2006 the company has since installed over 125,000 smart meters. The company is now planning to capitalize on this investment and utilize the capabilities of this system.

Alternatives Considered



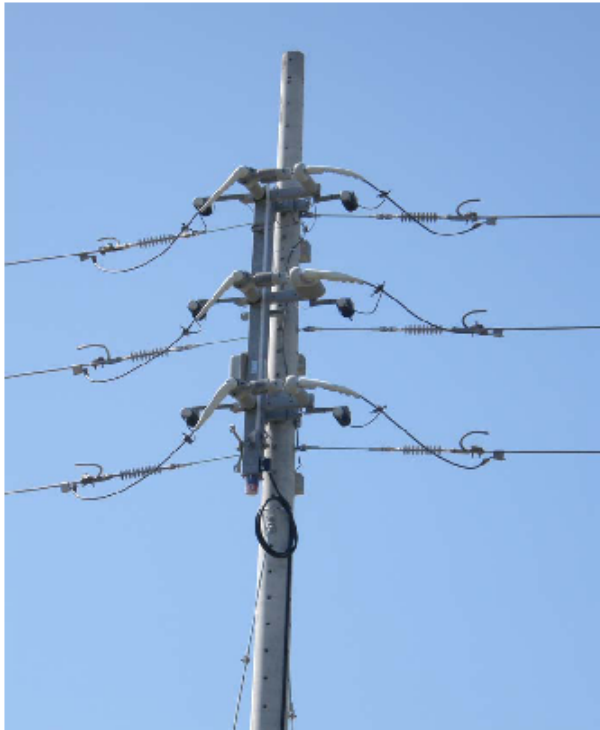
**Hydro One Brampton Networks Inc.
 Capital Expenditure - 2011**

Project Title: SCADA Mate Automation Switch Program	Project Number: 2011-243				
Project Manager: Aldo Mastrofranceso	Project Technician:				
Last Updated: Monday, June 14, 2010	Investment Category: Other or Shared Services				
Type: Green Energy Programs	Investment Driver: Regulatory				
Description					
<p>This project is designed to improve distribution system outage recovery times by introducing automated switching devices.</p>					
Investment Scope					
<p>Install automated Scada mate switching devices at key locations in the distribution system.</p>					
Investment Results					
<p>Increase feeder sectionalizing capabilities to improve fault restoration response time and to improve overall system reliability.</p>					
Cost & Timing					
	2011	2012	2013	2014	2015
Capital Costs	\$330,000.00	\$337,000.00	\$344,000.00	\$351,000.00	\$358,000.00
OM&A					
Gross Investment	\$330,000.00	\$337,000.00	\$344,000.00	\$351,000.00	\$358,000.00
Recoverable	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Net Investment	\$330,000.00	\$337,000.00	\$344,000.00	\$351,000.00	\$358,000.00
Project Start Date					
Project In-Service Date					

Business Case Justification

Response to system events occurring on Hydro One Brampton's distribution system are impeded by traffic volumes, construction activity and other events which hamper the company's ability to dispatch vehicles to the site of such events. The solution is to reduce the need for on site response to switch out the zone affected, by introducing automated remote switching capabilities.

Alternatives Considered





**Hydro One Brampton Networks Inc.
 Proposed Business Case - Capital Expenditure
 For Year 2011 - IFRS**

Project Title: Repaving Of Sandalwood Parking Lot Phase 1	Project Number:				
Project Manager: Calvin Struthers	Project Technician:				
Last Updated:	Investment Category: Sustainment				
Type BD - Building	Investment Driver: Reliability				
Description					
Phase 1 of Repaving all Sandalwood Parking Lot. Phase ii would be completed in 2012.					
Investment Scope					
The investment covers subgrade rework and grading corrections as well as Paving to proper standards for our application..					
Investment Results					
This investment will stop the current deterioration of the lot thus reducing spot maintenance costs as well as improving safety. Currently the many depressions and incorrect grading have resulted in areas where standing water (ponding) freezes thus causing random slippery locations. In addition improper grades have allowed water to collect against the building walls in some locations.					
Cost & Timing					
	2010	2011	2012	2013	2014
Capital Costs		\$700,000.00	\$700,000.00		
OM&A					
Gross Investment					
Recoverable					
Net Investment					
Project Start Date					
Project In-Service Date					

Business Case Justification

To allow the continued deterioration of the parking lot is not advisable as the deterioration will only accelerate. This will result in higher and higher spot repair costs and not address the ongoing safety concerns due to ponding. In addition during heavy rainstorms the drainage is further impacted. We now have many areas with substantial cracking that allows water to enter and creates damages due to the freeze/thaw cycles. The extra cost to rework the sub-base will allow the new asphalt to last longer. Please see Kinectrics report on this item.

Alternatives Considered



**Hydro One Brampton Networks Inc.
 Proposed Business Case - Capital Expenditure
 For Year 2011**

Project Title: Information Technology	Project Number: 2011-024				
Project Manager: Doug Bond	Project Technician:				
Last Updated:	Investment Category: Other or Shared Services				
Type: Other	Investment Driver: Customer Service				
Description Phone System Upgrade					
<p>This project will involve the upgrading of our existing Nortel Phone System to allow us to use "soft phone" technology. This will enhance our customer service department's ability to enable customer information to be displayed ahead of the customer's pick up on the phone line. This will also enhance our ability to maintain phone contact with our customers in the event of a disaster.</p>					
Investment Scope					
<p>The investment would be approximately \$60,000.00</p>					
Investment Results					
Cost & Timing					
	2010	2011	2012	2013	2014
Capital Costs		\$60,000.00			
OM&A					
Gross Investment					
Recoverable					
Net Investment					
Project Start Date					
Project In-Service Date					

Business Case Justification

With costs for staffing rising it is our intention to maintain our current customer satisfaction level. In order to maintain this level it is important to provide the tools necessary for the customer service representative to complete the calls in a timely fashion. This new feature will allow us to serve customers in a more expeditious manner thereby maintaining existing personnel costs yet enhancing the customer service experience. With the use of "soft phone" technology it will enable us to establish remote connectivity and still service our external customers.

Alternatives Considered



**Hydro One Brampton Networks Inc.
 Proposed Business Case - Capital Expenditure
 For Year 2011**

Project Title: Information Technology	Project Number: 2011-025																																				
Project Manager: Doug Bond	Project Technician:																																				
Last Updated:	Investment Category: Other or Shared Services																																				
Type: Other	Investment Driver: Technical Obsolescence																																				
Description Desktop Virtualization																																					
<p>This project will entail the removal of almost all personal computer desktops and be replaced with Virtual Devices. The power consumption on many of the personal computers is approximately 200 watts and the new devices are 10 watts. With over 200 personal computers in the organization there will be a significant savings in electricity and also provide Hydro One Brampton with a more secure environment.</p>																																					
Investment Scope																																					
<p>The investment would be approximately \$80,000.00</p>																																					
Investment Results																																					
<table border="1"> <thead> <tr> <th>Cost & Timing</th> <th>2010</th> <th>2011</th> <th>2012</th> <th>2013</th> <th>2014</th> </tr> </thead> <tbody> <tr> <td>Capital Costs</td> <td></td> <td>\$80,000.00</td> <td></td> <td></td> <td></td> </tr> <tr> <td>OM&A</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Gross Investment</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Recoverable</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Net Investment</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Cost & Timing	2010	2011	2012	2013	2014	Capital Costs		\$80,000.00				OM&A						Gross Investment						Recoverable						Net Investment					
Cost & Timing	2010	2011	2012	2013	2014																																
Capital Costs		\$80,000.00																																			
OM&A																																					
Gross Investment																																					
Recoverable																																					
Net Investment																																					
Project Start Date																																					
Project In-Service Date																																					

Business Case Justification

Many of our desktops are now over 5 years old and with the advent of desktop virtualization it was Hydro One Brampton's decision to adopt virtualization of these desktops in order to take advantage of increased flexibility of desktop management, power consumption and disaster recovery and business continuity alternatives.

Alternatives Considered



**Hydro One Brampton Networks Inc.
 Proposed Business Case - Capital Expenditure
 For Year 2011**

Project Title: Information Technology	Project Number: 2011-027				
Project Manager: Doug Bond	Project Technician:				
Last Updated:	Investment Category: Other or Shared Services				
Type: Other	Investment Driver: Business Efficiency				
Description Enterprise Content Management					
<p>Enterprise Content Management is a set of tools that will enable the organization to store, index and retrieve any computer object within a single domain, whether it be a word, excel, powerpoint document, email, voice recording or engineering drawing. It will also have the ability to have collaborative tools whereby users can share information and have results and ideas tracked.</p>					
Investment Scope					
<p>The investment would be approximately \$400,000.00</p>					
Investment Results					
Cost & Timing					
	2010	2011	2012	2013	2014
Capital Costs		\$400,000.00			
OM&A					
Gross Investment					
Recoverable					
Net Investment					
Project Start Date					
Project In-Service Date					

Business Case Justification

We currently have several environments for storage of data. We have our email (Lotus Notes), our storage area network for all file types, Word, Excel, PowerPoint, PDF files, etc., our GIS system for drawings, and our IBM Iseries for customer static information. None of these systems can bring everything together in one easy to use application. Enterprise Content Management has sufficiently matured whereby Hydro One Brampton feels the investment at this time would start to garner the benefits of a fast growing utility.

Alternatives Considered

An RFP will be issued to review several alternatives prior to implementation.



**Hydro One Brampton Networks Inc.
 Proposed Business Case - Capital Expenditure
 For Year 2011**

Project Title: Information Technology	Project Number: 2011-126				
Project Manager: Doug Bond	Project Technician:				
Last Updated:	Investment Category: Other or Shared Services				
Type Other	Investment Driver: Business Efficiency				
Description Iseries Upgrade					
<p>This project will involve the upgrading of our existing IBM Iseries equipment to allow us to house the additional data from our smart meter implementation.</p>					
Investment Scope					
<p>The investment would be approximately \$100,000.00</p>					
Investment Results					
Cost & Timing					
	2010	2011	2012	2013	2014
Capital Costs		<u>\$100,000.00</u>			
OM&A					
Gross Investment					
Recoverable					
Net Investment					
Project Start Date					
Project In-Service Date					

Business Case Justification

This data will be required by both the Meter Data Management Repository and our Customer Service personnel. This data will also be used by our Engineering and Regulatory departments to enable us to create management reporting from the hourly intervals.

Alternatives Considered



**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2011**

Project Title:	GIS SOFTWARE	Project Number:	2011-003
Project Manager:	Greg Mather	Project Technician:	N/A
Last Updated:	4/1/2011	Investment Category:	Other or Shared Services
Type	Other	Investment Driver:	Reliability
Description/Justification			
Purchase of new licence/software applications for use in the Drafting & Records department and other departments interfacing with the Geographic Information System (GIS).			
Investment Scope			
The scope of this project is to purchase new software applications for the enhancement of our existing Geographic Information System (GIS). Areas of interest include GIS upgrades and add-ons, SCADA, Automated Meter Reading (AMR), Customer Information Systems (CIS) and Work Management Systems (WMS).			
Investment Results			
Investment in these new applications will allow the utility to expand the use of our GIS to provide better engineering analysis, quicker response times and restoration times for outages, better crew management and improved dispatching capabilities. The results will be recognized in improved operational efficiencies throughout the utility.			
Cost & Timing Estimates			
	<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u> <u>Variance</u>
	January		0 \$0.00
	February		0 \$0.00
	March		0 \$0.00
	April		0 \$0.00
	May		0 \$0.00
	June		10,000 \$10,000.00
	July		0 \$0.00
	August		0 \$0.00
	September		0 \$0.00
	October		0 \$0.00
	November		0 \$0.00
	December		10,000 \$10,000.00
	Totals	\$0.00	\$20,000.00 (\$20,000.00)

<p>Business Case Justification</p> <p>Our goal is to continue to integrate customer and distribution information into one common platform. This system integration will allow us to provide better service to both in-house and external customers through improved efficiencies in GIS data management.</p>
<p>Alternative Considered</p> <p>Alternative applications are considered and "request for proposals" are issued where applicable.</p>



**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2011**

Project Title:	GTECHNOLOGY/OMS CODE DEVELOPMENT	Project Number:	2011-004
Project Manager:	Greg Mather	Project Technician:	N/A
Last Updated:	4/1/2011	Investment Category:	Other or Shared Services
Type	Other	Investment Driver:	Reliability
Description/Justification			
This project is to have HOBNI staff work with our GIS vendor Intergraph to write new Gtechnology code for customizing both our Geographic Information System and the Outage Management System application.			
Investment Scope			
The scope of services is to provide scheduled sustained engineering services for upgrading the existing applications to the latest version of the software. Areas of interest include Inservice/OMS upgrade from, customization of the software in response to Operations requirements at HOBNI, examine work flows within all our GIS applications and make modifications as required to suit our customers business strategies . Work also includes an upgrade of G/Technology to the latest version of this operating platform.			
Investment Results			
Investment in these enhancements will allow the utility to expand the use of our GIS to provide better engineering analysis, quicker response times and restoration times for outages, better crew management, improved dispatching designed to improve operational efficiency throughout the utility.			
Cost & Timing Estimates			
	<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u> <u>Variance</u>
	January		0 \$0.00
	February		0 \$0.00
	March		0 \$0.00
	April		22,333 \$22,333.00
	May		0 \$0.00
	June		0 \$0.00
	July		0 \$0.00
	August		22,333 \$22,333.00
	September		0 \$0.00
	October		0 \$0.00
	November		0 \$0.00
	December		22,334 \$22,334.00
	Totals	\$0.00	\$67,000.00 (\$67,000.00)

Business Case Justification
<p>This work is required as part of continuing plan to integrate customer and distribution information into one common platform. This system integration will allow us to provide better service to both in-house and external customers through improved efficiencies in GIS data management.</p>
Alternative Considered
<p>Sole Supplier - No alternative considered</p>



**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2011**

Project Title:	GIS HARDWARE	Project Number:	2011-088
Project Manager:	Greg Mather	Project Technician:	N/A
Last Updated:	4/1/2011	Investment Category:	Other or Shared Services
Type	Other	Investment Driver:	Reliability
Description/Justification			
Purchase of new hardware related to the operation of GIS applications in the Drafting & Records department, in the Control Room and other departments interfacing with the Geographic Information System (GIS).			
Investment Scope			
The scope of this project is to purchase new hardware as required to improve the performance of running various GIS and OMS applications. It is also used to replace equipment due to unexpected malfunction or obsolescence.			
Investment Results			
Investment in new hardware insures that our GIS systems perform at there optimal level at all times. New equipment purchases allow the utility to expand our GIS user base to include other departments and move forward with future field applications. Upgrading older hardware with newer machines with faster processors provides for improved operational efficiency from our GIS/OMS applications and users.			
Cost & Timing Estimates			
	<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u> <u>Variance</u>
	January		0 \$0.00
	February		0 \$0.00
	March		0 \$0.00
	April		0 \$0.00
	May		0 \$0.00
	June		20,000 \$20,000.00
	July		0 \$0.00
	August		0 \$0.00
	September		0 \$0.00
	October		20,000 \$20,000.00
	November		0 \$0.00
	December		0 \$0.00
	Totals	\$0.00	\$40,000.00 (\$40,000.00)

Business Case Justification
Hardware upgrades allow us to store more historical information in the GIS database providing better service to both in-house and external customers through improved efficiencies in GIS data management.
Alternative Considered
Competitive quotes obtained for all purchases.



**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2011**

Project Title:	OMS/SCADA/LOAD FORECASTING SOFTWARE	Project Number:	2011-128
Project Manager:	Greg Mather	Project Technician:	N/A
Last Updated:	4/1/2011	Investment Category:	Other or Shared Services
Type	Other	Investment Driver:	Reliability
Description/Justification			
Purchase of additional software licences or new application software packages for the enhancement of our existing Engineering and Operations systems in the area of OMS, SCADA and load forecasting.			
Investment Scope			
The scope of this project is investigate and evaluate new application software as it becomes available. Where it is determined that these will provide added value to our business then they are recommended for purchase.			
Investment Results			
The results will be improvements in the way we do business through new automation. These improvements translate into savings in both Capital and OM & A costs.			
Cost & Timing Estimates			
	<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u> <u>Variance</u>
	January		0 \$0.00
	February		0 \$0.00
	March		0 \$0.00
	April		0 \$0.00
	May		0 \$0.00
	June		0 \$0.00
	July		0 \$0.00
	August		0 \$0.00
	September		0 \$0.00
	October		0 \$0.00
	November		12,500 \$12,500.00
	December		12,500 \$12,500.00
Totals		\$0.00	\$25,000.00 (\$25,000.00)


<p>Business Case Justification</p> <p>In the past, load forecasting reports typically required a great deal of manual input, calculations and manhours to generate. Today new software is available on the market that makes better use of data stored electronically in other systems such as GIS and OMS that allows for more detailed and accurate reporting results These are critical to the safe operation and analysis of our distribution system in a "real time" environment.</p>
<p>Alternative Considered</p> <p>All alternatives are considered and competitive quotes obtained for all purchases.</p>




**Hydro One Brampton Networks Inc.
 Progress Report - Capital Expenditures
 For Year 2011**

Project Title:	GIS COMPUTERS, PRINTERS, PLOTTERS	Project Number:	2011-130
Project Manager:	Greg Mather	Project Technician:	N/A
Last Updated:	4/1/2011	Investment Category:	Other or Shared Services
Type	Other	Investment Driver:	Reliability
Description/Justification			
This budget is for the purchase of computers, printers, plotters, projectors and ancillary devices required in the Engineering and Operations department in support of technical requirements throughout the year.			
Investment Scope			
Purchases are evaluated and made on an "as required" basis throughout the year to improve the performance of various in-house applications supported by the GIS department.			
Investment Results			
These tools are a very important part of providing our customers with the timely information they need to conduct their day to day business. They allow staff to better maintain our GIS database.			
Cost & Timing Estimates			
	<u>Month</u>	<u>Actual Cost</u>	<u>Budget</u> <u>Variance</u>
	January		10,600 \$10,600.00
	February		0 \$0.00
	March		10,600 \$10,600.00
	April		0 \$0.00
	May		10,600 \$10,600.00
	June		0 \$0.00
	July		0 \$0.00
	August		0 \$0.00
	September		10,600 \$10,600.00
	October		0 \$0.00
	November		0 \$0.00
	December		10,600 \$10,600.00
	Totals	\$0.00	\$53,000.00 (\$53,000.00)

Business Case Justification
Good reliable computer equipment is essential for producing professional reports and presentations for use in GIS and other departments across the utility.
Alternative Considered
All alternatives are considered and competitive quotes obtained for all purchases.

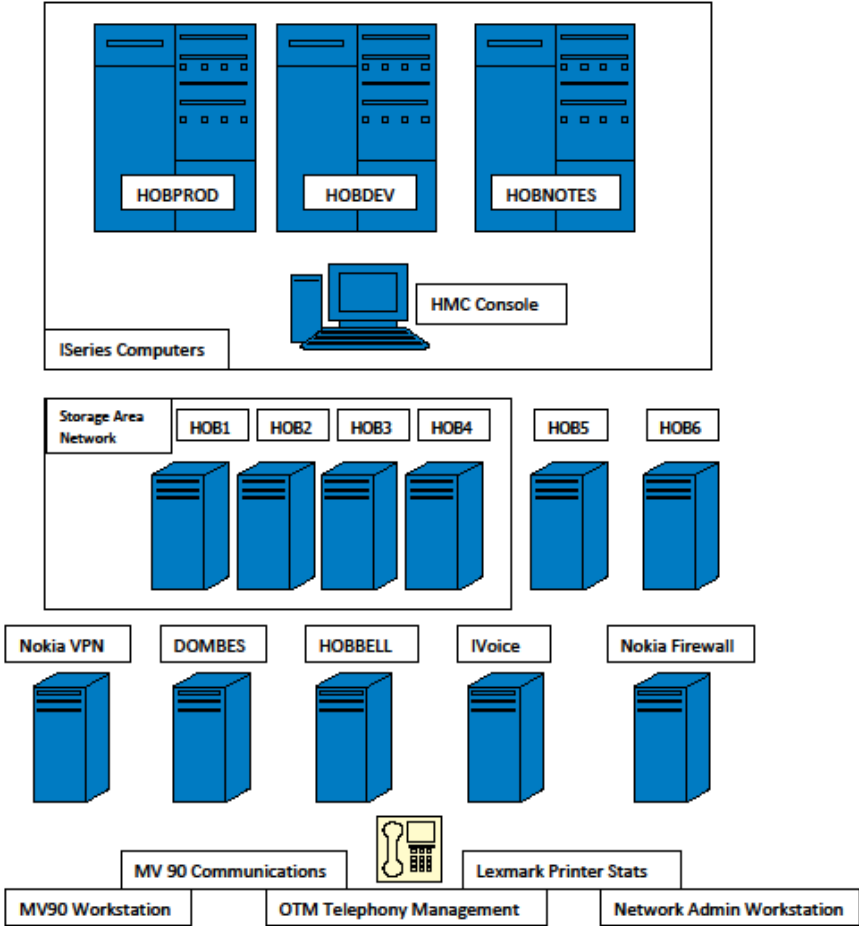
		Hydro One Brampton Networks Inc. Capital Expenditure - 2011			
Project Title: <i>Land Rights - Various</i>		Project Number: <i>2011-243</i>			
Project Manager: <i>Aldo Mastrofranceso</i>		Project Technician:			
Last Updated: <i>Monday, June 14, 2010</i>		Investment Category: <i>Development</i>			
Type <i>System Expansion & Enhancement</i>		Investment Driver: <i>Growth</i>			
Description					
Investment Scope					
Investment Results					
Cost & Timing					
	2011	2012	2013	2014	2015
Capital Costs	\$167,000.00	\$167,000.00	\$167,000.00	\$167,000.00	\$167,000.00
OM&A					
Gross Investment	\$167,000.00	\$167,000.00	\$167,000.00	\$167,000.00	\$167,000.00
Recoverable	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Net Investment	\$167,000.00	\$167,000.00	\$167,000.00	\$167,000.00	\$167,000.00
Project Start Date					
Project In-Service Date					

Business Case Justification
Alternatives Considered


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Hydro One Brampton Domain Schematic

The main administration systems for Hydro One Brampton Networks Inc. utilize an IBM Iseries mid-range system. The applications have been developed and maintained in house by our staff of software developers. The software is written in RPGIII, RPGIV, and RPGLE or generated in those languages by an upper case tool called Cool/2E from Computer Associates.



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Application System Overview

HOBPROD: (Hydro One Brampton Production)

Customer Information System

- Customer Account maintenance
- Meter change maintenance
- Customer payment plan maintenance (Pre-authorized, Equal Payment Plan)
- Customer contact tracking
- Bill Messaging/Insert management
- Customer Deposit Maintenance
- Customer Application management

Billing


- Meter reading and reading verification and editing
- Cycle billing
- Final billing
- Cancel/Rebill exception handling
- Billing Rate maintenance

Collections

- (Collections) Activity tracking by customer
- Connect/Disconnect Management
- Customer Deposit Maintenance
- Customer payment processing
- Follow up maintenance

Purchasing

- Supplier Management
- Purchase requisition management
- Request for Quote tracking
- Purchase Order/Blanket Order System
- Receipt management
- Expediting and order tracking system

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Inventory

- Material Requisition/Return System
- Physical Inventory System
- Wire reel management
- Transformer management

Payroll/Human Resources


- Employee Timesheet maintenance
- Emergency call-out tracking and maintenance
- Shift and Standby tracking and maintenance
- Generation and maintenance of crew rotation schedule
- Driver license and driver training system
- Candidate screening system
- Payroll creation and transmission to the Bank, reporting on employee vacation, sick/appointment time, benefits.
- On line access by employee to pay stubs
- ID card system for all employees and contractors

Trouble Reporting System

- Warranty tracking for developer installed secondaries and transformer installations
- Completely integrated with access to CIS data, meter info, transformer data and previous trouble call info by customer
- Trouble calls can be split up and forwarded to multiple departments for action
- Managed outages (customer requested)
- Fault locating, restoration and maintenance tracking and scheduling
- Stakeouts and locates scheduling
- Historical inquiry and reporting with multi-level trouble codes

Work Order System

- Provides tracking of project costs/budgeting
- Enterprise wide integration within systems

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Financials

- General ledger systems are fed from all other subsystems
- Accounts payable
- Miscellaneous accounts receivable
- Budgeting and budget vs. actual tracking and reporting via Prophix
- Financial Statements

Electronic Business Transactions (EBT)

- Retailer and retailer/customer contract maintenance
- Retailer invoicing management
- Integrated into CIS and billing, will automatically create required transactions.
- Converts raw data into or from required XML

Fleet System

- Vehicle creation and management
- Internal material management, inventory management, purchasing and receiving
- Vehicle maintenance management
- Warranty, licensing and defect management


Engineering Standards & Reservation System

- Standards management (approved and standardized bills of material)
- Bill of Material creation for project planning and estimating
- Creation of Work order from estimated plans for material acquisition/allocation

(HOBDEV) Hydro One Brampton Development

Application Development

- Change management and tracking
- User testing and 'play' data
- Programmer tools – Probe, Abstract, etc
- Cool2E upper case tool

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(HOBNOTES) Hydro One Brampton Lotus Notes

- Domino Server for Enterprise wide e-mail
- Corporate Intranet
- Customer Self-Serve Web site

Wintel Platform

User Workstations

- Office Professional 2007
- Client Access (Iseries access)
- Lotus Notes (e-mail/calendar access)
- Computer Associates E-Trust anti-virus protection
- Windows XP (and Vista on trial basis)
- Microsoft Internet Explorer (internet access)

Some users have additional user specific software such as (but not limited to):


- Adobe Professional
- Maximizer
- Adobe Photoshop
- Adobe Illustrator
- Microsoft Project
- XML Spy

Wintel Servers (HOB1 through HOB6 and others)

- Tivoli Storage management and backup
- RSA Securid VPN management
- APLINK – Royal Bank AP service software
- MV90 – large customer interval metering
- Launcher – mail merge Iseries data with Word Documents
- Compleo – Transfer Iseries output to PDF/Excel and e-mail
- XML EBT converter – converts to/from raw data to XML
- Secure Shell SSH FTP server
- Vermillion FTP server
- Blackberry Enterprise Server

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- Checkpoint Firewall
- Ivoice – managed customer call placement and handling
- Call pilot/OTM – phone system management and voicemail

External Data Transfers

1. iVoice
 - a. IVR server used to contact customers via automated telephone message for collections calls. Allows customers to provide payment info or transfer to an agent.
2. HOB2 (APLink)
 - a. Royal Bank proprietary software. Allows us to contact Royal Bank and provide a data file for creation, mailing and reconciliation of cheques to suppliers or customers.
3. HOB4 (EBT Server)
 - a. Using SSH SecureShell FTP program, allow access to 2 specific directories to our parent company for pickup and delivery of EBT 'PIPES'.
 - b. Using SSH SecureShell FTP program, allow access to specific directories for Smart meter pickup and drop off of mass deployment installation files (F1 files) and installation result files (F2 files).
4. iSeries Machines
 - a. HOBPROD – Delivery of Payroll information to Royal Bank weekly
 - b. HOBPROD – Receipt of cash deposits (customer payments) from Royal Bank daily
 - c. HOBPROD – Delivery of Pre-authorized payment particulars to Royal Bank daily
 - d. HOBPROD – Delivery of Billing information to Moore Business Forms daily
 - e. HOBPROD – Access to Smart meter Reads from SerViewCom via FTP
 - f. HOBPROD – Delivery/Receipt of data files for bill pricing to Enemajica
 - g. HOBNOTES – Delivery of PDF'd bills to customers via Web interface
 - h. HOBNOTES – Receive e-mail into the (Lotus Notes) Domino e-mail server
5. MV90 Communications
 - a. Modem-to-meter communications for data collection used in billing large customers

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Internal Data Transfers

1. HOB4


- a. Upload Electronic Business Transactions to Iseries for processing via Client Access 'Transfer to Iseries'
- b. Data from the Iseries is downloaded via FTP and converted to XML by the EBT to XML converter program
- c. Upload Smartmeter F2 transaction file to Iseries via copy to the IFS
- d. Data from the Iseries is merged with Word documents to create customer letters via Launcher
- e. Spool file output is changed to PDF or converted to Excel and e-mailed and archived using Compleo.

2. HOBPROD

- a. Transfer Electronic Business Transaction 'flat file' to HOB4 via FTP for conversion to XML in preparation for pickup by Inergi
- b. Transfer customer transaction and billing files to HOBNOTES via SAVERST for web presentment
- c. Transfer data files to HOBDEV via SAVERST to repopulate test environment
- d. Transfer data file to HOB2 via FTP for APLINK
- e. Receive data from Outage Management System to populate trouble system (in development)
- f. Receive data from GIS via FTP for streetlight on and off times (used in creation of data for Enermajica)
- g. Exchange data with GIS via FTP to synchronize transformer location information (in development)
- h. Transfer active account information to GIS via FTP
- i. Transfer meter readings from ITRON handhelds to HOBPROD for customer billing
- j. Transfer meter readings from SerViewCom to HOBPROD for customer billing (under development)
- k. Transfer usage information from MV90 to HOBPROD for customer billing (large customers)

3. HOB2

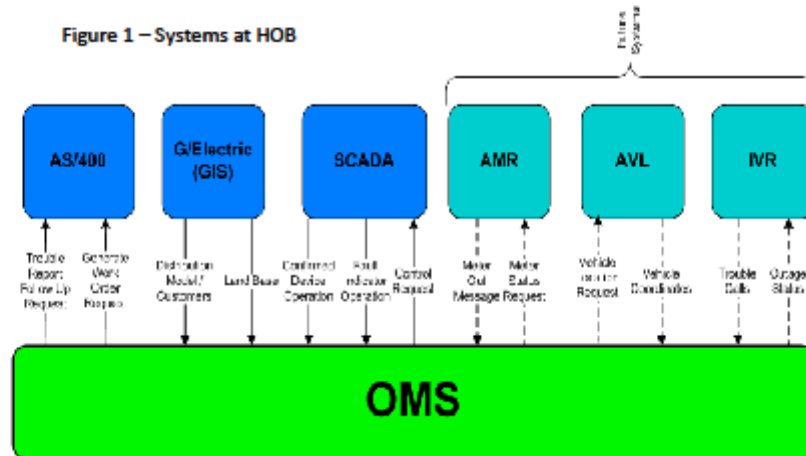
- a. Data is transferred from the Iseries AP system to APLINK database.

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GIS/OMS at Hydro One Brampton:

The key scope of the OMS project is to create a system to consolidate existing and future multiple operational systems into a single applicable environment. The following diagram – Figure 1 –


Systems at HOB¹ illustrates the system integration for the HOB OMS. The AMR, AVL and IVR applications will be deployed when the first three have been developed.



AS400 (IBM):

The AS/400 is IBM's proprietary hardware and software environment. The AS/400 hosts the majority of corporate applications for HOB including the Customer Information System, Work Management System, Financials, H.R. and Outage Management. The OMS to AS/400 interface have been designed as follows:

1. The OMS adds an option to initiate an "Outage Follow up Request". This function displays a pick list of recipients to whom the request will be sent. The system will then generate a CSV file record (The comma-separated values or CSV; also known as a comma-separated variable. This is a file format type that stores tabular data) which includes outage information (location, device, outage #) and send this file to the AS400. This file will be sent to selected recipients.
2. Certain outage events will require the initiation of a new work order in the AS/400. Work Order generation is required when certain restoration costs are recoverable. The OMS must provide the ability to indicate an Outage has recoverable costs and to create a "Create Work Order". CSV file record with outage specific information.

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G/Technology (GIS):


G/Technology is Intergraph Corporations Geographic Information System (GIS) environment. The G/Technology application at HOB is used to maintain a graphic distribution network model on the HOB land base. The distribution network model consists of facilities and their respective electrical connectivity and spans from the source feeder breaker to the customer meter point. Customer related data including name address and phone number is passed to the GIS from the AS/400 on a nightly basis. The G/Technology to OMS interface requirements are as follows:

The extraction of distribution facilities and associated electrical connectivity must be done from the G/Technology application for import into the OMS database environment. This extraction would also include customer data and the association between a service point and a transformer.

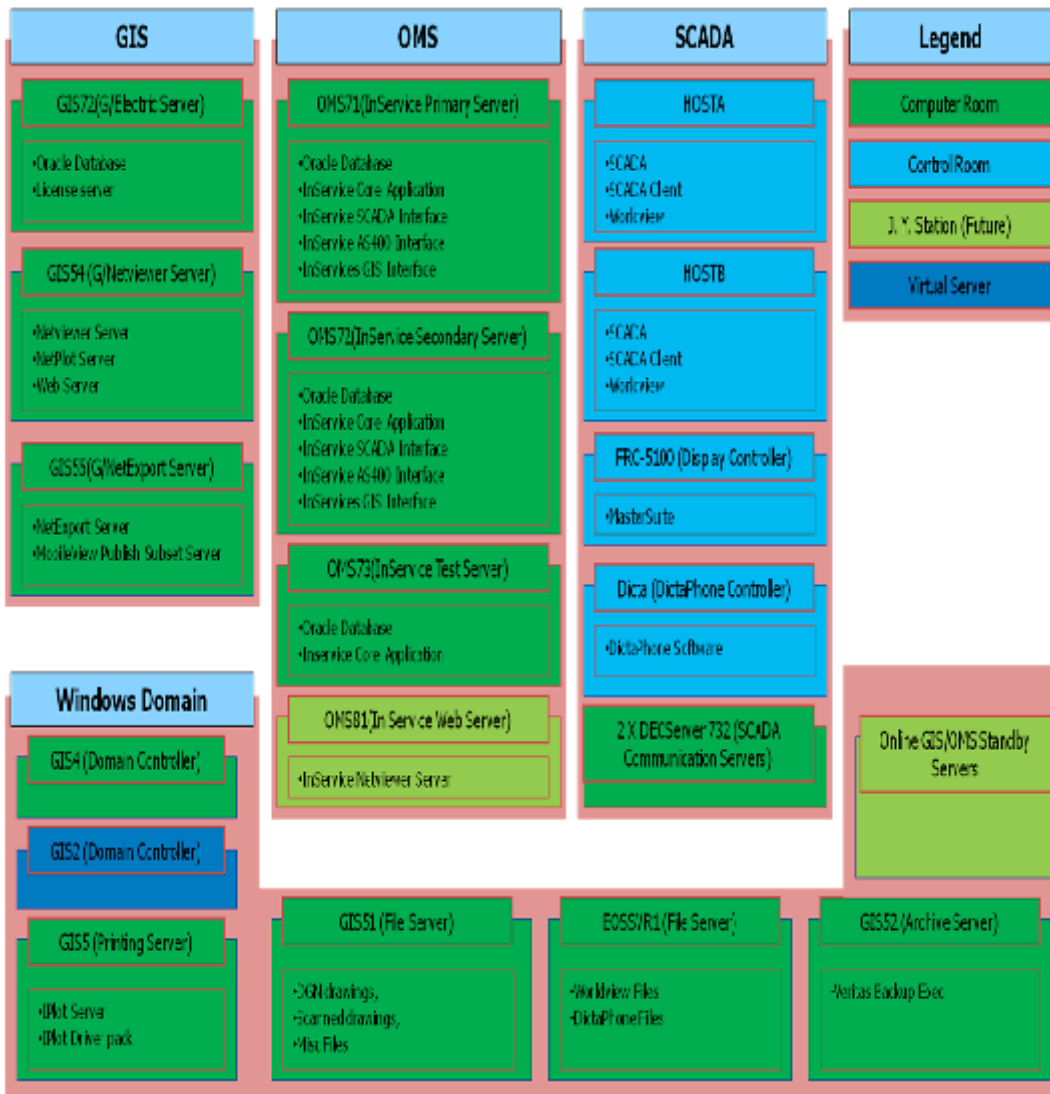
Supervisory Control and Data Acquisition Systems (SCADA):


HOB utilizes Survalent Technologies Window's SCADA and Worldview products. HOB's SCADA system capabilities include the geographic display of the HOB distribution network and the monitoring and control of telemetered devices both within and outside distribution substations. HOB is in the process to remove the geographic display capabilities from the Survalent system and utilize the new OMS as the "front end" for certain SCADA operations. The OMS/SCADA integration requirements are as follows: Upon confirmed lock out of a SCADA monitored device the SCADA system shall generate an Inter Control Centre Communication (ICCP) message to the OMS indicating the device has locked out. The OMS receives the message and creates a confirmed outage event associated with the device. Any predicted outages downstream of the confirmed device will be incorporated into the newly created confirmed outage. The OMS shall receive fault indicator operation alarms from the SCADA system and graphically highlight the location of the fault indicator. The OMS shall initiate device operation commands, using the ICCP protocol.

The system has not been fully optimized, at the present time, as the Automated Meter Reading (AMR), Automatic Vehicle Tracking (AVL) and Interactive Voice Recognitions (IVR) systems are future applications.

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Engineering and Operation - Computer Systems



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Hydro One Brampton is embarking on a strategic plan that will include the following:

1. The review of our entire network infrastructure was concluded in 2009 regarding the feasibility of server and desktop consolidation and/or virtualization. Recommendations from this plan are to be implemented over the next two years. Refer to Appendix A.
2. This review created recommendations for hardware/software requirements for an offsite fiber linked disaster recovery and backup site at our Jim Yarrow TS.
3. Our plan for 2011 is to have a third party security organization conduct a penetration test of our network and based on their findings make recommendations for improvement should they be required.
4. Our focus in 2010 will include major projects such as Smart Metering and the move to Time of Use billing. This will entail major changes to our billing as well as communications with the MDMR and our head end system at Hydro One Networks for interfacing with our Smart Meter database.
5. Our infrastructure review is also taking into consideration the requirement of a document management solution for the entire organization. This will require analyzing all documents throughout the organization and identifying the number of documents, their access requirements and their retention periods. Our infrastructure must be flexible enough to handle the potential growth of this application.
6. Our customer service web site will be enhanced to show all smart meter data for customers.

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APPENDIX's

- **Appendix A - Virtualization**
- **Appendix B - Current Hardware age**
- **Appendix C – Enterprise Content Management**

CAPITAL EXPENDITURES VARIANCE ANALYSIS FOR 2006 - 2011

1 Hydro One Brampton's materiality threshold used for the 2011 Test Year was determined to be
 2 \$300,000 per Exhibit 1 Tab 3 Schedule 8.0.

3 To clarify; the following variance analysis looks at the difference in capital additions in each year where
 4 such differences are plus or minus \$300,000 from the comparative year. Comparisons begin with the
 5 2006 Board Approved data vs. 2006 actual. Comparisons relating to the years 2010 and 2011 are
 6 forecast amounts reported under IFRS.

7 Variance reporting by GL requires an understanding of the various "Project Types" that will be
 8 referenced in this report. **Table 1** identifies project type and descriptions.

Table 1: Capital Expenditures Type Descriptions

Type	Description
1	SUBSTATIONS AND P. & C.
2	SCADA EQUIPMENT
3	SYSTEM EXPANSION AND ENHANCEMENT
4	SYSTEM REHABS AND EQUIPMENT REPLACEMENTS
5	ROAD WIDENINGS
7	NEW GENERAL SERVICE CUSTOMERS
8	NEW RESIDENTIAL- HIGH DENSITY
10	NEW RESIDENTIAL- LOW DENSITY
11	METERING
12	VEHICLES
13	DEPARTMENT TOOLS & EQUIP. > \$500.00
15	GREEN ENERGY PROGRAMS
17	ADMIN. & SERVICE CENTRE
18	ADMINISTRATIVE COMPUTER AS/400
19	G.I.S. COMPUTER EQUIP. & SOFTWARE
23	TRANSFORMER STATION
29	LAND AND LAND RIGHTS

9 The tables on the following pages display in detail expenditure variances throughout the prescribed
 10 term. Summaries per account follow the tables.

Tables 2 and 3: Capital Expenditures

Capital Expenditures Board Approved to 2011

G/L Description	OEB Approved	2006	2007	2008	2009	2010	2011
1610 Miscellaneous Intangible Plant					5,134,057	6,161,063	521,534
1806 Land Rights	542,406	58,458	19,170	7,069	23,226	336,248	168,685
1808 Buildings and Fixtures	314,451	1,123,351	1,630,659	1,283,556	602,472	480,643	920,192
1815 Transformer Station Equipment	227	3,474	12,600	3,803,296	257,953	1,110,729	1,412,106
1820 Distribution Station Equipment	379,738	639,781	192,033	169,870	279,295	1,064,281	765,648
1830 Poles, Towers and Fixtures	2,916,775	5,802,455	5,777,486	4,388,180	7,129,091	6,387,591	4,506,694
1835 Overhead Conductors and Devices	1,915,934	2,191,510	1,983,311	2,073,555	2,214,142	1,694,367	791,911
1840 Underground Conduit	1,343,496	2,284,568	2,102,665	1,926,785	4,665,139	2,944,732	3,002,693
1845 Underground Conductors and Devices	6,540,501	6,352,682	23,445,365	16,144,870	7,731,744	9,667,697	11,321,695
1850 Line Transformers	1,320,934	3,160,025	2,278,674	5,378,129	6,208,233	4,154,621	5,187,987
1855 Services	1,161,044	714,723	793,538	544,543	613,536	560,264	633,342
1860 Meters	1,041,974	1,170,387	6,157,185	6,392,693	9,445,080	477,000	847,000
1915 Office Furniture and Equipment	120,030	47,337	86,526	84,367	2,570	52,000	146,500
1920 Computer Equipment - Hardware	1,114,635	453,294	476,458	155,453	70,653	791,000	283,466
1925 Computer Software		226,383	508,907	184,032			
1930 Transportation Equipment	427,673	714,607	1,355,127	90,483	215,003	1,904,000	2,207,000
1935 Stores Equipment		19,150					
1940 Tools, Shop and Garage Equipment	41,090	152,979	287,536	156,761	159,036	324,000	75,000
1955 Communication Equipment	113,747	50,146	102,028	78,757	117,318	40,000	131,000
1960 Miscellaneous Equipment	2,577	16,025	15,620	12,711	8,554		
1980 System Supervisory Equipment	113,701	195,795	208,555	144,806	64,979	85,000	437,000
1995 Contributions and Grants	(3,777,458)	(4,471,257)	(18,528,211)	(16,082,800)	(12,704,438)	(9,847,187)	(12,363,428)
2040 Electric Plant Held for Future Use				3,554,454	258,332		
2055 Construction Work in Progress		682,425	1,964,208	(1,397,746)	798,274	31,066	(11,541)
Total	15,633,474	21,588,299	30,869,441	29,093,824	33,294,250	28,419,115	20,984,484
Variance		5,954,825	9,281,141	(1,775,617)	4,200,426	(4,875,135)	(7,434,631)

Capital Expenditure Variance Board Approved to 2011

G/L Description	OEB Board Approved	2006	2007	2008	2009	2010	2011
1610 Miscellaneous Intangible Plant					5,134,057	\$1,027,006	(\$5,639,529)
1806 Land Rights		(483,948)	(39,288)	(12,101)	16,157	\$313,022	(\$167,563)
1808 Buildings and Fixtures		808,900	507,308	(347,103)	(681,084)	(\$121,829)	\$439,549
1815 Transformer Station Equipment		3,247	9,126	3,790,696	(3,545,343)	\$852,776	\$301,377
1820 Distribution Station Equipment		260,043	(447,748)	(22,163)	109,425	\$784,986	(\$298,633)
1830 Poles, Towers and Fixtures		2,885,680	(24,969)	(1,389,306)	2,740,911	(\$741,500)	(\$1,880,897)
1835 Overhead Conductors and Devices		275,576	(208,199)	90,244	140,587	(\$519,775)	(\$902,456)
1840 Underground Conduit		941,072	(181,903)	(175,880)	2,738,354	(\$1,720,407)	\$57,961
1845 Underground Conductors and Devices		(187,819)	17,092,683	(7,300,495)	(8,413,126)	\$1,935,953	\$1,653,998
1850 Line Transformers		1,839,091	(881,351)	3,099,455	830,104	(\$2,053,612)	\$1,033,366
1855 Services		(446,321)	78,815	(248,995)	68,993	(\$53,272)	\$73,078
1860 Meters		128,413	4,986,798	235,508	3,052,387	(\$8,968,080)	\$370,000
1915 Office Furniture and Equipment		(72,692)	39,188	(2,159)	(81,797)	\$49,430	\$94,500
1920 Computer Equipment - Hardware		(661,341)	23,164	(321,005)	(84,800)	\$720,347	(\$507,534)
1925 Computer Software		226,383	282,524	(324,875)	(184,032)		
1930 Transportation Equipment		286,934	640,520	(1,264,644)	124,520	\$1,688,997	\$303,000
1935 Stores Equipment		19,150	(19,150)				
1940 Tools, Shop and Garage Equipment		111,889	134,557	(130,775)	2,275	\$164,964	(\$249,000)
1950 Power Operated Equipment							
1955 Communication Equipment		(63,601)	51,882	(23,271)	38,560	(\$77,318)	\$91,000
1960 Miscellaneous Equipment		13,448	(405)	(2,909)	(4,157)	(\$8,554)	
1980 System Supervisory Equipment		82,094	12,760	(63,749)	(79,827)	\$20,021	\$352,000
1995 Contributions and Grants		(693,799)	(14,056,954)	2,445,411	3,378,362	\$2,857,251	(\$2,516,241)
2040 Electric Plant Held for Future Use				3,554,454	(3,296,122)	(\$258,332)	
2055 Construction Work in Progress		682,425	1,281,783	(3,361,954)	2,196,020	(\$767,208)	(\$42,607)
Total		5,954,825	9,281,141	(1,775,617)	4,200,426	(\$4,875,135)	(\$7,434,631)

1 ACCOUNT 1610 – MISCELLANEOUS INTANGIBLE PLANT

OEB Account 1610	2006 OEB Approved	2006	2007	2008	2009	2010	2011
Actual	-	-	-	-	\$5,134,057	\$6,161,063	\$521,534
Variance	-	-	-	-	\$5,134,057	\$1,027,006	(\$5,639,529)

2 This account incurred a variance over the threshold in three of the reporting periods.

3 **2009 vs. 2010**.....**\$5,134,057**

4 The majority of the variance in this period was driven by expenditures in Type 23
 5 Transformer Station, for progress payments to Hydro One Networks Inc. in accordance with
 6 the Connection and Cost Recovery Agreements (CCRA) for the construction of new
 7 transformer projects. Hydro One Brampton negotiated two separate CCRAs with Hydro
 8 One Networks Inc. for the construction of Dual Element Spot Networks (DESNs) with one at
 9 Pleasant TS and a second at Goreway TS.

10 These DESNs are essentially a standalone transformer and breaker arrangement that is
 11 added to existing transformer station yards and connected to the high voltage bus. The
 12 DESN provides additional capacity to Hydro One Brampton by stepping down transmission
 13 voltages, i.e. 230kV to a utilization voltage which in HOBNI's case is 27.6 kV. These
 14 CCRAs include scheduled funding contributions payable by HOBNI, as defined in the
 15 agreement.

16 Effective January 1, 2009, HOBNI adopted CICA Handbook Section 3064, Goodwill and
 17 Intangible Assets. The new section establishes standards for the recognition,
 18 measurement, presentation and disclosure of goodwill and other intangible assets.
 19 Intangible assets include computer applications software as well as capital contributions to
 20 Hydro One Networks Inc. for the construction of transmission connection facilities.

21 As a result of the above, the DESN projects which were originally capitalized in 1815 were
 22 transferred to this account and accounted for the majority of this variance.

1 **2010 vs. 2009**.....**\$1,027,006**

2 The variance in this period relates to expenditures that would have, in previous years, been
 3 capitalized under general ledger account 1925, however due to the new CICA Handbook
 4 Guidelines mentioned above these expenditures will be capitalized in 1610.

- 5 Type 18 - VMware virtualization software \$590,000
- 6 Type 19 - \$303,000
- 7 GIS Software including CYME software, G/Technologies/OMS Code Development, Load Forecasting
- 8 Software, CYMCAP Software and CYME Gateway Software

9 The balance of the variance is associated with CCRA payments discussed above.

10 **2011 vs. 2010**.....**(\$5,639,529)**

11 The variance in this period is a direct result of no further scheduled funding contributions
 12 being made to Hydro One Networks Inc. in accordance with the CCRA for the construction
 13 of new transformer projects as these were completed in 2010.

14 **ACCOUNT 1806 – LAND RIGHTS**

OEB Account 1806	2006 OEB Approved	2006	2007	2008	2009	2010	2011
Actual	\$542,406	\$58,458	\$19,170	\$7,069	\$23,226	\$336,248	\$168,685
Variance	-	(\$483,948)	(\$39,288)	(\$12,101)	\$16,157	\$313,022	(\$167,563)

15 This account incurred a variance over the threshold in two of the reporting periods.

16 **2006 Actual vs. 2006 Board Approved**..... **(\$483,948)**

17 This variance was the result of the purchase of an easement in 2004 across lands known
 18 as the “Utility Corridor” located along the southern boundary of the City of Brampton. This
 19 easement was required to facilitate the construction of a pole line required for a feeder tie
 20 between two transformer stations.

21 **2010 vs. 2009**.....**\$313,022**

22 This variance is the result of the requirement to purchase nine easements in 2010. Several
 23 of these are large parcels of land were required by Hydro One Brampton to install new

1 infrastructure. The largest of these includes easement purchases for duct egress at
 2 Goreway TS. and for a new pole line installation along the CN railway. Other costs will
 3 include agreements to procure vehicle access permission across various privately owned
 4 lands.

5 **ACCOUNT 1808 – BUILDING AND FIXTURES**

OEB Account 1808	2006 OEB Approved	2006	2007	2008	2009	2010	2011
Actual	\$314,451	\$1,123,351	\$1,630,659	\$1,283,556	\$602,472	\$480,643	\$920,192
Variance	-	\$808,900	\$507,308	(\$347,103)	(\$681,084)	(\$121,829)	\$439,549

6 This account incurred a variance over the threshold in five of the reporting periods.

7 **2006 Actual vs. 2006 Board Approved.....\$808,900**

8 This period was impacted by a significant expenditure for roof replacement in 2006 at
 9 HOBNI's administrative facility located at 175 Sandalwood Parkway West, Brampton.

10 **2007 vs. 2006.....\$507,308**

11 This variance was due in most part to the Conservation and Demand Management initiative
 12 and the first phase of the HVAC system rebuild at HOBNI's administrative facility.

13 The Conservation and Demand Management initiative included a complete lighting retrofit
 14 for the entire facility which resulted in a 40% demand reduction and saw the introduction of
 15 high bay fluorescent lights to replace the existing HID high bay lights in Stores, the garage
 16 and indoor parking areas along with the canopy parking area. The existing T8 lights were
 17 replaced with higher efficiency T8s with electronic ballasts.

18 Also contributing to the variance was the installation of the Company's two solar generation
 19 projects. These were two demonstration projects that were undertaken in 2007 which saw a
 20 20 kW unit installed on the roof and a 1.5kW unit installed in the visitor parking area of the
 21 administrative facility. These two projects were to demonstrate typical residential and
 22 commercial applications for solar technology.

1 **2008 vs. 2007** **(\$347,103)**

2 This variance was mainly due to the fact there were no Conservation and Demand
 3 Management costs in 2008. This was partially offset by the second year of HVAC rebuild
 4 costs.

5 **2009 vs. 2008** **(\$681,084)**

6 This figure further reflects declining facility construction activities and no further
 7 Conservation and Demand Management costs.

8 **2011 vs. 2010** **\$439,549**

9 This variance is as a result of forecasted construction costs in 2011 to complete the first
 10 phase the parking lot upgrade at the Sandalwood facility. The second phase will be
 11 completed in 2012

12 **ACCOUNT 1815 – TRANSFORMER STATION EQUIPMENT**

OEB Account 1815	2006 OEB Approved	2006	2007	2008	2009	2010	2011
Actual	\$227	\$3,474	\$12,600	\$3,803,296	\$257,953	\$1,110,729	\$1,412,106
Variance	-	\$3,247	\$9,126	\$3,790,696	(\$3,545,343)	\$852,776	\$301,377

13 This account incurred a variance over the threshold in three of the reporting periods.

14 **2008 vs. 2007** **\$3,790,696**

15 This variance was a result of Type 11 Metering and Type 23 Transformer Station projects. The
 16 majority of this variance was a result of scheduled payments made by HOBNI to HONI in
 17 accordance with a Connection & Cost Recovery Agreement with HONI for the construction of
 18 Dual Element Spot Network at Pleasant TS. The CCRA includes scheduled funding
 19 contributions payable by HOBNI as defined in the agreement. \$3,200,000 of this amount was
 20 capitalized to this account in 2008 and subsequently transferred out in 2009 to account 1610.

21 The DESN is essentially a standalone transformer and breaker arrangement that is added to the
 22 existing transformer station yard and connected to the high voltage bus. The DESN provides

1 additional capacity to the LDC by stepping down transmission voltages, i.e. 230kV to a
2 utilization voltage which in HOBNI's case is 27.6kV.

3 The balance of the variance was a result of the installation of four wholesale revenue metering
4 points. Full wholesale revenue metering upgrades were done to the B and Y bus at Bramalea
5 TS due to meter seal expiry and two legacy metering points being relocated to outside of the
6 station.

7 **2009 vs. 2008**.....(**\$3,545,343**)

8 This variance was a result of no further spending in Type 23 Transformer Station projects and
9 significantly reduced spending in Type 11 Metering projects.

10 Metering projects included a wholesale revenue metering point upgrade at Goreway TS, due to
11 non-compliant current transformers in use in this station. Another metering point was relocated
12 outside of the transformer station yard. In addition, a second wholesale revenue metering point
13 upgrade was completed for the M16 44kV feeder out of Woodbridge TS. The metering point
14 was relocated closer to Hydro One Brampton's service territory boundary.

15 **2010 vs. 2009**.....**\$852,776**

16 This variance is due to additional wholesale revenue metering upgrades at Pleasant TS.
17 Wholesale metering upgrades and relocations are scheduled to be completed on 2 – 27.6 kV
18 buses and 3 – 44kV feeders. These metering points will be relocated out of the station
19 boundaries.

20 **2011 vs. 2010**.....**\$301,377**

21 This variance is driven by two issues. Wholesale revenue metering costs in 2011 are forecasted
22 to be approximately \$51,000 higher than 2010 costs due to additional metering work required in
23 order to remain compliant with the IESO. The balance of the variance is as a result of new
24 Green Energy initiatives being planned by the Company.

1 **ACCOUNT 1820 – DISTRIBUTION STATION EQUIPMENT**

OEB Account 1820	2006 OEB Approved	2006	2007	2008	2009	2010	2011
Actual	\$379,738	\$639,781	\$192,033	\$169,870	\$279,295	\$1,064,281	\$765,648
Variance	-	\$260,043	(\$447,748)	(\$22,163)	\$109,425	\$784,986	(\$298,633)

2 This account incurred a variance over the threshold in two of the reporting periods.

3 **2007 vs. 2006 (\$447,748)**

4 This variance was a result of significant expenditures in 2006, which in most part were driven by
 5 a one-time cost for a new substation transformer at MS14, including replacement of the
 6 MS14T2 transformer at Municipal Station No. 14, and replacement of existing obsolete solid
 7 state controllers at MS21 as spare parts manufacturer support was unavailable for the existing
 8 equipment.

9 **2010 vs. 2009\$784,986**

10 This variance is the result of significant upgrade expenditures required at HOBNI's existing
 11 MS19 substation. This work involves the replacement of two station transformers and the
 12 primary high voltage switching. This equipment is past its projected life expectancy and is
 13 gassing. Replacement is being conducted in accordance with recommendations made in the
 14 2009 Asset Condition Assessment Report (ACA) and the 13.8 kV System Load Study
 15 conducted by HOBNI.

16 **ACCOUNT 1830 – POLES, TOWERS AND FIXTURES**

OEB Account 1830	2006 OEB Approved	2006	2007	2008	2009	2010	2011
Actual	\$2,916,775	\$5,802,455	\$5,777,486	\$4,388,180	\$7,129,091	\$6,387,591	\$4,506,694
Variance	-	\$2,885,680	(\$24,969)	(\$1,389,306)	\$2,740,911	(\$741,500)	(\$1,880,897)

1 This account incurred a variance over the threshold in five of the reporting periods
 2 The majority of costs mapped to account 1830 are generated from Type 4 Overhead
 3 Distribution and Type 5 Road Widening Projects.

4 **2006 Actual vs. 2006 Board Approved.....\$2,885,680**

5 **Type 4 Overhead Distribution Projects**

6 2006 Actual Capital expenditures for Overhead Distribution projects exceeded the 2006 Board
 7 Approved amount by \$1,428,784. Two projects were significant in driving the increased spend in
 8 2006:

9 **27.6 kV Pole Line Rebuild – Kennedy Rd. S., Tullamore Dr. to Clarence St.**

10 This was the first phase of a project designed to replace an aging multi-circuit wood
 11 pole line with a new concrete pole line located on the opposite side of the road. Loads
 12 serviced from the existing 4.16 kV circuit on the aged wood line were converted to 27.6
 13 kV. All three wire services were upgraded to 4-wire wye grounded connections totalling
 14 \$847,692.

15 **27.6kV Pole Line - Castlemore Rd, Goreway Dr. to McVean Dr.**

16 This project was issued to replace an aged wooden pole line with a new concrete pole
 17 line on the opposite side of Castlemore Rd. from Goreway Dr. to McVean Dr. Concrete
 18 poles selected for this project provided extra pole height required to support an
 19 additional 27.6 kV circuit totalling \$537,967.

20 **Type 5 Road Widening Projects**

21 2006 Actual Capital expenditures for Road Widening projects exceeded the 2006 Board
 22 Approved amount by \$1,259,458. Some of the more significant projects contributing to this
 23 variance include;

24	Goreway Dr. from Hwy. 407 to Queen St. E	\$588,191
25	Chinguacousy Rd. from Sandalwood Pkwy. W. to Wanless Dr.....	\$351,744
26	Steeles Ave. W. from Chinguacousy Rd to east of McMurchy Ave. S.....	<u>\$348,771</u>
27	Projects Total	\$1,288,706

28 The balance of this variance consists of smaller, reductions in spending in Department Tools &
 29 Equipment.

1 **2008 vs. 2007****(\$1,389,306)**

2 The variance from 2008 vs. 2007 is negative due to reduced spending in 2008. Once again,
3 significant drivers for this variance come from Type 4 Overhead Distribution Projects and Type 5
4 Road Widening Projects.

5 **Type 4 Overhead Distribution Projects**

6 2008 capital expenditures for Overhead Distribution projects were less than the 2007 amount by
7 (\$1,012,631).

8 **Type 5 Road Widening Projects**

9 2008 capital expenditures for Road Widening projects were less than the 2007 amount by
10 (\$539,481). This is reflective of reduced road improvement projects initiated by the local road
11 authorities during this period.

12 The decrease in spending for Type 4 and Type 5 projects combined from 2008 over 2007 totals
13 (\$1,552,113.63). This amount is slightly greater than the variance reported which is offset by
14 cumulative smaller, one-time expenses.

15 **2009 vs. 2008****\$2,740,911**

16 The variance in this period was driven almost entirely by local roadway improvement projects.

17 While there was a decrease of (\$1,098,452) in the Type 4 Overhead Distribution Project
18 category, Type 5 Road Widening Projects increased by \$3,952,330.

19 The net result of these two categories is a \$2,853,877 increase in overall spending from 2009
20 over 2008.

21 **2010 vs. 2009** **(\$741,500)**

22 This variance is the result of a forecasted reduction (\$2,850,000) in road widening expenditures
23 in 2010 coupled with an increase in forecasted spending of \$1,250,000 in overhead line rebuilds
24 and expansion projects. This variance also includes a forecast of \$860,000 for Green Energy,
25 for system switch automation.

26 **2011 vs. 2010****(\$1,880,897)**

27 This variance reflects a reduction (\$1,363,000) in the overall forecasted capital expenditures
28 allocated against overhead line rebuilds and additions offset by a moderate increase \$346,000
29 in forecasted spending for road widening projects. The balance is a result of no planned
30 spending on Green Energy projects in 2011.

1 **ACCOUNT 1835 – OVERHEAD CONDUCTORS AND DEVICES**

OEB Account 1835	2006 OEB Approved	2006	2007	2008	2009	2010	2011
Actual	\$1,915,934	\$2,191,510	\$1,983,311	\$2,073,555	\$2,214,142	\$1,694,367	\$791,911
Variance	-	\$275,576	(\$208,199)	\$90,244	\$140,587	(\$519,775)	(\$902,456)

2 This account incurred a variance over the threshold in two of the reporting periods.

3 **2010 vs. 2009**..... **(\$519,775)**

4 This variance is the result of a forecasted reduction (\$272,000) in estimated road widening
 5 expenditures in 2010 coupled with a forecasted reduction (\$105,000) in overhead line rebuilds
 6 and additions. The balance of the variance is the combination of multiple smaller reductions in
 7 forecast expenditures.

8 **2011 vs. 2010**..... **(\$902,456)**

9 This variance reflects a reduction in the forecasted capital expenditures for system expansion
 10 and rebuilds projects.

11 **ACCOUNT 1840 – UNDERGROUND CONDUIT**

OEB Account 1840	2006 OEB Approved	2006	2007	2008	2009	2010	2011
Actual	\$1,343,496	\$2,284,568	\$2,102,665	\$1,926,785	\$4,665,139	\$2,944,732	\$3,002,693
Variance	-	\$941,072	(\$181,903)	(\$175,880)	\$2,738,354	(\$1,720,407)	\$57,961

12 This account incurred a variance over the threshold in four of the reporting periods.

13 The majority of costs mapped to account 1840 are generated from Type 3 Underground
 14 Distribution System and Type 5 Road Widening Projects.

1 **2006 Board Approved vs. 2006 Actual\$941,072**

2 The variance in this reporting period was the result of a \$666,000 increase in Type 3
3 Underground Distribution System spending driven by: (a) a subdivision cable replacement
4 project and the 136M52 duct; and (b) feeder cable egress at Goreway TS.

5 A \$348,639 increase was recorded in Type 5 Road Widening projects driven by a road widening
6 at Steeles Ave. W. and McLaughlin Rd. S., as well as a joint duct structure build with HONI at
7 Williams Pkwy. W. and Pertosa Ave. Timing of the Road Widening expenditures is driven
8 externally.

9 **2009 vs. 2008\$2,738,354**

10 The variance in this reporting period was a result of a \$669,195 increase in Type 3 Underground
11 Distribution System and a \$2,045,385 increase in Type 5 Road Widening Project spending.

12 The Type 3 variance resulted from the construction of new civil infrastructure at Goreway TS to
13 facilitate future feeder egresses. The balance of the variance was generated by Type 5 Road
14 Widening which saw a dramatic increase over 2008. This was driven by a City of Brampton
15 initiated road re-construction project along Queen Street referred to as the Acceleride Transit
16 (Züm) project.

17 **2010 vs. 2009(\$1,720,407)**

18 This variance is the result of a forecasted reduction (\$1,078,500) in estimated road widening
19 expenditures in 2010 coupled with a decrease (\$539,500) in the forecasted capital expenditures
20 for system expansion and rebuilds projects. The balance of the variance is driven by smaller
21 forecast reductions in General Service and Low Density Residential projects.

1 **ACCOUNT 1845 – UNDERGROUND CONDUCTORS AND DEVICES**

OEB Account 1845	2006 OEB Approved	2006	2007	2008	2009	2010	2011
Actual	\$6,540,501	\$6,352,682	\$23,445,365	\$16,144,870	\$7,731,744	\$9,667,697	\$11,321,695
Variance	-	(\$187,819)	\$17,092,683	(\$7,300,495)	(\$8,413,126)	\$1,935,953	\$1,653,998

2 This account incurred a variance over the threshold in five of the reporting periods.

3 Costs mapped to this UsaA account are generated from several project types with major
 4 influences from the housing market conditions and road authority projects.

5 **2007 vs. 2006 Actual\$17,092,683**

6 This period experienced a major increase in costs applied to account 1845. This increase in
 7 costs was driven in most part by:

- 8 Type 7 New General Service Customers \$6,904,611
- 9 Type 10 New Residential - Low Density \$10,101,894
- 10 Type 5 Road Widening \$1,188,770
- 11 Type 4 Underground Distribution (\$1,286,259)

12 The Type 10 variance amount of \$10,101,894 is a combination of three separate items. The first
 13 was the result of Hydro One Brampton's practice of accruing assets and liabilities once the
 14 expansion project had been energized or connected to Hydro One Brampton's distribution
 15 system. This accrual reflects the difference in cost between costs incurred to date vs. Hydro
 16 One Brampton's outstanding obligations to complete the project.

17 The second contributor to this account variance involves the recording of assets based on
 18 Capitalization costs provided by the Developer upon completion of the project.

1 **2008 vs. 2007****(\$7,300,495)**

2 This period experienced an overall decline in costs which were driven by the following projects;

3	Type 3 Underground Distribution.....	\$680,003
4	Type 4 Overhead Distribution.....	\$780,623
5	Type 5 Road Widening.....	\$571,564
6	Type 7 New General Service Customers.....	(\$4,199,438)
7	Type 10 New Residential - Low Density	(\$4,880,028)

8 The majority of the decline was as a result of the development sector project categories. Both
 9 general service and low density residential numbers were down which was expected as the
 10 economy was in recession.

11 **2009 vs. 2008****(\$8,413,126)**

12 This variance was driven by a decline in new service connections resulting in an \$8,235,100
 13 reduction in development expenditures. This was coupled with a \$650,000 decrease related to
 14 underground cable system replacements completed in 2008. These costs were offset by a
 15 \$540,000 increase in road widening expenditures in 2009.

16 **2010 vs. 2009****\$1,935,953**

17 This variance is driven by a) a forecasted reduction in system expansions and additions
 18 (\$340,000), a forecasted reduction in road widening (\$753,000) offset by a forecasted increase
 19 spend in new development projects (General Service, High Density and Low Density
 20 Residential) at \$3,026,500.

21 **2011 vs. 2010****\$1,653,998**

22 This variance is a result of a forecasted increase in development (General Service, High Density
 23 and Low Density Residential) related expenditures totalling \$1,698,000 and \$85,500 in road
 24 widening costs. This is offset by a forecasted reduction (\$130,000) in system expansions and
 25 additions.

1 **ACCOUNT 1850 – LINE TRANSFORMERS**

OEB Account 1850	2006 OEB Approved	2006	2007	2008	2009	2010	2011
Actual	1,320,934	3,160,025	2,278,674	5,378,129	6,208,233	4,154,621	5,187,987
Variance	-	1,839,091	(881,351)	3,099,455	830,104	(2,053,612)	1,033,366

2 This account had a variance over the threshold in all of the reporting periods.

3 **2006 Actual vs. 2006 Board Approved.....\$1,839,091**

4 The variance in this period was a result of costs generated in several project types as follows:

5	Type 3 Underground Distribution	\$537,682
6	Type 4 Overhead Distribution	\$104,646
7	Type 7 New General Service Customers	\$509,906
8	Type 10 New Residential - Low Density	\$658,082

9 The most significant variance was generated by Type 10 projects which saw an increase of
 10 \$658,082. This variance was driven by customer growth and the manner by which the fixed
 11 asset costs from capitalization letters were classified following completion of the expansion
 12 project.

13 **2007 vs. 2006 Actual (\$881,351)**

14 This variance was driven mainly by a reduction of (\$909,726) in new General Service
 15 Customers coupled with a reduction of (\$382,348) in new Low Density Residential customers.
 16 This was offset by an increase of \$455,852 across road widening, and underground distribution
 17 categories with other minor variances making up the difference.

18 **2008 vs. 2007\$3,099,455**

19 2008 saw a \$2,527,114 increase in New General Service Customers and a \$1,031,347 increase
 20 in Residential Development. This was offset by a reduction of (\$459,006) across Overhead &
 21 Underground Distribution and Road Widening categories.

1 **2009 vs. 2008** **\$830,104**

2 2009 saw a decrease of (\$547,431) in Low Density Residential customers. The was offset by an
 3 increase of \$787,631 In Overhead Distribution and an increase of \$479,024 in New General
 4 Service customers, and other minor variances.

5 **2010 vs. 2009** **(\$2,053,612)**

6 This variance is driven by a forecasted reduction in System Expansions and Additions
 7 (\$1,133,000) and a forecast reduction in development, (General Service, High Density and Low
 8 Density Residential) of (\$896,000). The balance of the variance is a small reduction in forecast
 9 Road Widening costs.

10 **2011 vs. 2010** **\$1,033,366**

11 This variance is driven by a forecast increase in development (General Service, High Density
 12 and Low Density Residential) of \$1,058,500. The balance of the variance is a small reduction in
 13 forecasted System Expansions and Additions.

14 **ACCOUNT 1855 – SERVICES**

OEB Account 1855	2006 OEB Approved	2006	2007	2008	2009	2010	2011
Actual	\$1,161,044	\$714,723	\$793,538	\$544,543	\$613,536	\$560,264	\$633,342
Variance	-	(\$446,321)	\$78,815	(\$248,995)	\$68,993	(\$53,272)	\$73,078

15 This account incurred a variance over the threshold in one of the reporting periods.

16 **2006 Actual vs. 2006 Board Approved** **(\$446,321)**

17 The variance in this period is driven mainly by Type 10 New Residential - Low Density projects.
 18 The 2006 Board Approved amount was \$990,919 while the actual was \$594,702, a (\$396,216)
 19 variance. This is reflective of a drop in the number of residential services connected in 2006
 20 versus what was projected. Type 7 New General Service Customers was also down by \$55,444
 21 in this period.

1 **ACCOUNT 1860 – METERING**

OEB Account 1860	2006 OEB Approved	2006	2007	2008	2009	2010	2011
Actual	\$1,041,974	\$1,170,387	\$6,157,185	\$6,392,693	\$9,445,080	\$477,000	\$847,000
Variance	-	\$128,413	\$4,986,798	\$235,508	\$3,052,387	(\$8,968,080)	\$370,000

2 This account incurred a variance over the threshold in four of the reporting periods.

3 **2007 vs. 2006\$4,986,798**

4 Hydro One Brampton’s Smart Metering Program is largely responsible for this variance.
 5 Although some smart metering activity took place in 2006, the main roll out was initiated in
 6 2007. During this year, Hydro One Brampton installed over 37,000 smart meters and the
 7 associated infrastructure.

8 **2009 vs. 2008 \$3,052,387**

9 This variance was the result of expenditures in account 1860 exceeding the 2008 expenditures
 10 by \$3,052,387. Once again, this is largely due to Hydro One Brampton’s Smart Metering
 11 Program. Hydro One Brampton installed under 48,000 smart meters in 2009. Some of these
 12 meter installs included smart meters associated with small general service customers <50 kW.
 13 These meters are more costly and require additional installation expense as special
 14 consideration has to be given to arranging outages with business in order to reduce disruption
 15 to business.

16 **2010 vs. 2009.....(\$8,968,080)**

17 In 2010, Hydro One Brampton’s smart metering program will begin to ramp down. It is expected
 18 that all smart meters required under the Ministry of Energy and Infrastructure directive will have
 19 been installed by year end. Hydro One Brampton is currently ahead of its planned smart
 20 metering deployment schedule largely due to the efforts of the 2009 installation program. As
 21 most of the smart meters were previously installed, only a relatively few remain.

1 **2011 vs. 2010.....\$370,000**

2 This variance is the largely the result of forecast projects totalling \$289,000 for the Green
 3 Energy Act. The company plans to implement Smart Meter Technology initiatives to integrate
 4 the Smart Meter system with the Outage Management System (OMS). Smart meter data will be
 5 transmitted from the Smart Meter system to the OMS system in real time, allowing the prediction
 6 engine in OMS to accurately pinpoint failed equipment on the distribution system. It will also
 7 identify when the meter is removed and will help identify theft of power or meter tampering
 8 issues.

9 This variance is also driven by increased Metering expenditures of \$81,000.

10 **ACCOUNT 1920 – COMPUTER EQUIPMENT – HARDWARE**

OEB Account 1920	2006 OEB Approved	2006	2007	2008	2009	2010	2011
Actual	\$1,114,635	\$453,294	\$476,458	\$155,453	\$70,653	\$791,000	\$283,466
Variance	-	(\$661,341)	\$23,164	(\$321,005)	(\$84,800)	\$720,347	(\$507,534)

11 This account incurred a variance over the threshold in four of the reporting periods.

12 **2006 Actual vs. 2006 Board Approved..... (\$661,341)**

13 This variance was the result of the significant one-time expenditures in 2004. Significant
 14 Operations projects in 2004 contributing to this variance were:

- 15 Purchase of a new Control Room graphics projection screen system..... \$254,639
- 16 Replacement of computers in the GIS and Drafting & Records departments..... \$234,699
- 17 Replacement of an existing printer with a new wide format printer in the GIS dept..... \$120,218

18 **2008 vs. 2007..... (\$321,005)**

19 This variance was the result of a significant one time expenditure in 2007 to purchase an
 20 Outage Management System

21 **2010 vs. 2009.....\$720,347**

22 This variance is the result of a significant one-time expenditure in 2010 to replace all existing
 23 servers, storage area networks and the creation of a disaster recovery site.

1 **2011 IFRS vs. 2010 IFRS..... (\$507,534)**

2 This negative variance is the result of a one-time expenditure occurring in 2010, to replace all
 3 existing servers, storage area networks and the creation of a disaster recovery site.

4 **ACCOUNT 1925 – COMPUTER SOFTWARE**

OEB Account 1925	2006 OEB Approved	2006	2007	2008	2009	2010	2011
Actual	-	\$226,383	\$508,907	\$184,032	-	-	-
Variance	-	\$226,383	\$282,524	(\$324,875)	(\$184,032)	-	-

5 This account incurred a variance over the threshold in one of the reporting periods.

6 **2008 vs. 2007 (\$324,875)**

7 This variance was the result of reduced spending in 2008 for GIS and OMS interface software
 8 \$175,777 compared to \$434,944 in 2007.

9 **ACCOUNT 1930 – TRANSPORTATION EQUIPMENT**

OEB Account 1930	2006 OEB Approved	2006	2007	2008	2009	2010	2011
Actual	\$427,673	\$714,607	\$1,355,127	\$90,483	\$215,003	\$1,904,000	\$2,207,000
Variance	-	\$286,934	\$640,520	(\$1,264,644)	\$124,520	\$1,688,997	\$303,000

10 This account incurred a variance over the threshold in five of the reporting periods.

11 **2007 vs. 2006 \$640,520**

12 Significant projects contributing to this variance included the completion of the re-chassis of a
 13 50' double bucket truck, and the purchases of an 83' double bucket truck, one step van, two
 14 overhead cable pullers, and a tractor and pole trailer.

1 **2008 vs. 2007(\$1,264,644)**

2 This variance was the result of a delay in receiving vehicle delivery orders from 2008 until 2009,
 3 coupled with the major expenditures in 2007. In 2008 these costs were treated as CWIP in the
 4 amount of \$760,969 and included the purchases of a 51' single bucket, one vacuum truck, one
 5 light-duty SUV, and a tractor and pole trailer.

6 **2010 vs. 2009.....\$1,688,997**

7 This variance is the result of the Fleet Assessment conducted by R. Irwin Fleet Services which
 8 calls for an aggressive fleet replacement schedule for heavy equipment to catch up with industry
 9 standards. These recommendations are very costly for the first three years and it has been
 10 decided to spread these costs over five years. Certification, repairs and maintenance will remain
 11 up to date on old equipment until the replacement date.

12 **2011 vs. 2010.....\$303,000**

13 This variance is also the result of the Fleet Assessment conducted by R. Irwin Fleet Services
 14 which calls for an aggressive fleet replacement schedule for heavy equipment to catch up with
 15 industry standards. These recommendations are very costly for the first three years and it has
 16 been decided to spread these costs over five years. Certification, repairs and maintenance will
 17 remain up to date on old equipment until the replacement date.

18 **ACCOUNT 1980 – SYSTEM SUPERVISORY EQUIPMENT**

OEB Account 1980	2006 OEB Approved	2006	2007	2008	2009	2010	2011
Actual	\$113,701	\$195,795	\$208,555	\$144,806	\$64,979	\$85,000	\$437,000
Variance	-	\$82,094	\$12,760	(\$63,749)	(\$79,827)	\$20,021	\$352,000

19 This account incurred a variance over the threshold in one of the reporting periods.

20 **2011 vs. 2010.....\$352,000**

21 This variance is driven by the forecasted expenditure of \$330,000 in response to requirements
 22 under the Green Energy Act. The company plans to install additional automated SCADA

- 1 switches to improve response time to system events. The remaining variance is from smaller
- 2 SCADA projects.

3 **ACCOUNT 1995 – CONTRIBUTIONS AND GRANTS**

OEB Account 1995	2006 OEB Approved	2006	2007	2008	2009	2010	2011
Actual	(\$3,777,458)	(\$4,471,257)	(\$18,528,211)	(\$16,082,800)	(\$12,704,438)	(\$9,847,187)	(\$12,363,428)
Variance	-	(\$693,799)	(\$14,056,954)	\$2,445,411	\$3,378,362	\$2,857,251	(\$2,516,241)

- 4 This account account incurred a variance over the threshold in all of the reporting periods.
- 5 This account captures capital contributions made by Developers, Road Authorities, and other
- 6 agencies or individuals who require HOBNI's services complete their own projects. Such
- 7 financial contributions are established in accordance with the terms and conditions of HOBNI
- 8 Servicing Agreements, legislation and municipal bylaws.
- 9 Since these requests are externally driven, HOBNI has no control over their timing and as such,
- 10 the year over year variances are beyond the company's control.

11 **ACCOUNT 2040 – ELECTRIC PLANT HELD FOR FUTURE USE**

OEB Account 2040	2006 OEB Approved	2006	2007	2008	2009	2010	2011
Actual	-			\$3,554,454	\$258,332		
Variance	-			\$3,554,454	(\$3,296,122)	(\$258,332)	

- 12
- 13 This account account incurred a variance over the threshold in two of the reporting periods
- 14 **2008 vs. 2007****\$3,554,454**
- 15 Effective January 1, 2008, the Company retrospectively adopted Canadian Institute of
- 16 Chartered Accountants' (CICA) Handbook Section 3031, *Inventories*, with reclassification of

1 comparative prior period amounts. This new section requires that certain major spare parts and
 2 standby equipment be reclassified from inventory to fixed assets. In this reporting period the
 3 company reclassified \$3,554,454 in inventory to fixed assets.

4 **2009 vs. 2008**(**\$3,296,122**)

5 The variance in this period is a result of this being the second reporting period since adoption of
 6 CICA Handbook Section 3031, thus, the balance to be reclassified to fixed assets only reflected
 7 changes in inventory from the prior year and did not include the one time impact of
 8 reclassification.

9 **ACCOUNT 2055 – CONSTRUCTION WORK IN PROGRESS**

OEB Account 2055	2006 OEB Approved	2006	2007	2008	2009	2010	2011
Actual	-	\$682,425	\$1,964,208	(\$1,397,746)	\$798,274	\$31,066	(\$11,541)
Variance	-	\$682,425	\$1,281,783	(\$3,361,954)	\$2,196,020	(\$767,208)	(\$42,607)

10 This account incurred a variance over the threshold in four of the reporting periods.

11 **2006 Actual vs. 2006 Board Approved****\$682,425**

12 HOBNI negotiated a Connection & Cost Recovery Agreement (CCRA) with HONI for the
 13 construction of Dual Element Spot Network (DESN) at Pleasant TS to provide additional
 14 capacity for load growth. The CCRA includes scheduled funding contributions payable by
 15 HOBNI as defined in the agreement. The variance represents a progress payment made in
 16 2006 for which there was no balance in the 2006 OEB approved year.

17 **2007 vs. 2006****\$1,281,783**

18 The increase in Construction Work in Progress (CWIP) during this period was driven by
 19 \$307,000 for Smart Metering software for work completed by an external party but not placed in
 20 service.

21 This period also included progress payments of \$1,657,208 as per the terms of a Connection
 22 and Cost Recovery Agreement (CCRA) with HONI for the construction of DESN at Pleasant TS.

1 These payments were in CWIP until such time that the new DESN was commissioned and in
2 service.

3 **2008 vs. 2007(\$3,361,954)**

4 This period saw a negative variance resulting from the transfer of \$2,339,633 out of CWIP to
5 fixed assets, following the final commissioning of the new DESN at Pleasant TS. The transfer
6 out of CWIP was offset by \$180,918 to CWIP for metering software and \$706,000 for vehicle
7 purchases where the vehicles were not ready to be placed in service.

8 **2009 vs. 2008\$2,196,020**

9 This variance was driven by Vehicle and metering software projects that were in CWIP in 2008
10 and completed and placed in service in 2009. Offset by \$798,274 of new vehicles placed into
11 CWIP.

12 **2010 vs. 2009 (\$767,208)**

13 This variance was driven by Vehicle projects that were completed and placed in service in 2009,
14 no new assets were put into CWIP.

CAPITAL CONTRIBUTION VARIANCE ANALYSIS

1 Residential Development and Industrial /Commercial customers are provided with an “Offer to
2 Connect” for new connections. Under Chapter 3, Section 3.2.1 of the Ontario Energy Board’s
3 Distribution System Code (DSC), the Utility must “perform an economic evaluation to determine
4 if the future revenue from the customer(s) will pay for the capital cost and on-going maintenance
5 costs of the expansion project”.

6 The DSC’s section 3.2.6 states that “if a shortfall between the present value of the project costs
7 and revenues is calculated, the distributor may propose to collect all or a portion of that amount
8 from the customer, in accordance with the distributor’s documented policy on capital
9 contribution by customer class.” The economic evaluation period will commence based on the
10 date when the first primary cable internal to the expansion project is connected to HOBNI’s point
11 of supply.

12 Using the methodology in Appendix “B” of the DSC, HOBNI completes a final analysis at the
13 end of the “Five Year Customer Connection Horizon” or, after ninety percent (90%) of all
14 services have been connected. This determines any refund to or amounts owing by the
15 Developer/Customer.

16 Another consideration is road widening projects. These are done at the request of road
17 authorities from the City of Brampton, Region of Peel, and The Ministry of Transportation, and
18 also require capital contributions. Capital expenditures from HOBNI are required to complete
19 relocation works. Relocations range from road widenings, intersection improvements, bridge
20 constructions and relocations to permit improvement to sidewalks. Typically, the road authority
21 is responsible for contributed capital in the amount of 50% of the labour and equipment costs,
22 with HOBNI being responsible for the remaining costs including 100% of material.

23 Since capital contributions are customer driven, HOBNI has no control over their timing, and the
24 year over year variances are beyond the Company’s control. Market conditions and regulatory
25 guideline influence the timing and the amount of the contributions. Hydro One Brampton reflects
26 all customer contributions in USoA account 1995.

Table 1: OEB Account 1995 Variance Data

OEB Account 1995	2006 OEB Approved	2006	2007	2008	2009	2010	2011
Actual	(3,777,856)	(4,471,257)	(18,528,211)	(16,082,800)	(12,704,438)	(9,847,187)	(12,363,428)
Variance	-	(693,401)	(14,056,954)	2,445,411	3,378,362	2,857,251	(2,516,241)

ACCOUNTING TREATMENT FOR PROJECTS EXCEEDING ONE YEAR

1 **CURRENT PRACTICE UNDER CGAAP**

2 To comply with the Canadian Generally Accepted Accounting Principles and regulatory
3 requirements, the cost of a major fixed asset that is acquired, constructed or developed over
4 time shall include carrying costs attributable to the acquisition, construction or development
5 activity. The carrying cost to be capitalized is the amount resulting from the application of the
6 OEB's approved "Allowance for Funds Used during Construction" (AFUDC) rate to major fixed
7 asset expenditures included as construction in progress. This rate may include a deemed cost
8 of equity financing. The AFUDC rate will either be a specific rate provided by the OEB or will be
9 a rate calculated by the LDC based on OEB guidance or parameters and approved by the OEB.
10 Capitalization of AFUDC will cease once the asset is declared in-service.

11 Hydro One Brampton capitalizes borrowing costs on all self-constructed property, plant and
12 equipment (PP&E) using a borrowing cost rate prescribed by the Ontario Energy Board (OEB).
13 The OEB-prescribed capitalization rate is equal to the Canadian Derivatives Exchange Mid-
14 Term Corporate Bond Index Yield. The index is comprised of a diverse group of investment
15 grade, fixed coupon Canadian corporate bonds with a term to maturity of five to ten years. The
16 rate is reviewed and updated quarterly; changes are only made when the change from the
17 previous quarter is equal to or greater than 25 basis points.

18 **CAPITALIZATION OF BORROWING COSTS UNDER IFRS**

19 IFRS only permits the capitalization of incremental borrowing costs (e.g. those that would have
20 been avoided if the expenditure on the underlying asset had not been made) on assets that take
21 a substantial period of time to construct at a rate determined by the weighted average cost of
22 borrowing the debt, whether it be for specific or general purposes. Further, IFRS allows the
23 continued capitalization of borrowing costs during periods of suspension, depending on the
24 nature and length of time of the suspension. There is no guidance in IFRS on how long a
25 "substantial period of time" is. Hydro One Brampton has determined that capital work of a
26 recurring nature takes less than six months to complete and therefore any capital work that
27 exceeds six months would constitute "a substantial period of time".

1 IFRS permits the capitalization of incremental borrowing costs only, (i.e. those that would have
2 been avoided if the expenditure on the underlying asset had not been made), at a rate
3 determined by the weighted average cost of borrowing the debt, whether it be for specific or
4 general purposes. IAS 23R Borrowing Costs (IAS 23) contains explicit guidance on what
5 borrowing costs qualify for capitalization.

6 IAS 23.5 defines borrowing costs as interest and other costs that an entity incurs in connection
7 with the borrowing of funds. Further, IAS 23.6 states that borrowing costs may include the
8 following elements:

- 9 a) Interest on bank overdrafts and short-term and long-term borrowings;
- 10 b) amortization of discounts or premiums relating to borrowings;
- 11 c) amortization of ancillary costs incurred in connection with the arrangement of
12 borrowings;
- 13 d) finance charges in respect of finance leases recognized in accordance with IAS 17
14 Leases; and
- 15 e) exchange differences arising from foreign currency borrowings to the extent that they are
16 regarded as an adjustment to interest costs.

CAPITALIZATION POLICY

1 Hydro One Brampton adheres to the capitalization of assets based on a general policy set out
2 below:

3 **GENERAL POLICY**

4 Hydro One Brampton classifies its expenditures between capital and OM&A expense so as to
5 allocate costs to specific accounting periods in a manner that appropriately matches those costs
6 with related future economic benefits. Accordingly, expenditures that are material in amount
7 and which meet the definition of an asset are capitalized. Hydro One Brampton will capitalize all
8 costs of an item or project which meet the definition of an asset under IFRS (2009 and prior
9 Generally Accepted Accounting Principles in Canada) and where the following additional criteria
10 are met:

- 11 • The individual cost of the item is in excess of \$1,000.00.
- 12 • The useful life of the item purchased or constructed is in excess of one year.

13 **GENERAL REQUIREMENTS**

14 Expenditures incurred for the following general purposes are capitalized, where above
15 established materiality limits:

- 16 a) Purchase, construction and commissioning of specific assets that will provide future
17 economic benefits;
- 18 b) Design and development of specific assets that will provide future economic benefits;
- 19 c) Additions to specific assets; and
- 20 d) Betterments that result in improvement of capacity, efficiency, useful lifespan, or
21 economy of specific assets.

22 Direct expenditures qualifying for capitalization include direct labour, direct materials and
23 supplies, transportation costs, directly attributable external costs and fees, permits, and injuries
24 and damages incurred in construction work (net of insurance recoveries).

25 Indirect expenditures qualifying for capitalization include (1) interest costs at the regulator's
26 allowance for funds used during construction), (2) attributable shared service costs (e.g. general

1 engineering, administrative salaries and expenses, insurance and taxes), and (3) attributable
2 depreciation of capital tools and transport and work equipment used in the capital project.

3 Direct and indirect decommissioning, fixed asset removal and site restoration costs are charged
4 to current operations (i.e. depreciation expense) as incurred unless specific accounting
5 provisions have already been made. If a specific accounting provision has been made, such
6 expenditures are charged to that accumulated balance sheet provision.

7 Materials, supplies and capital spares purchased for future usage are not immediately
8 capitalized as in-service assets, nor are they immediately charged to operations. Materials,
9 supplies and spare capital components are treated as inventories of stock for future
10 consumption in Hydro One Brampton's operations, maintenance and construction programs.
11 Materiality limits and business facts will determine the final accounting classification of these
12 items as capital or OM&A.

13 **SPECIFIC REQUIREMENTS**

14 ***Assets Not Owned By Hydro One Brampton***

15 Expenditures on assets not owned by Hydro One Brampton that provide future economic
16 benefits are capitalized, provided there is assurance that Hydro One Brampton has the right to
17 use the asset or that the asset's future economic benefits will continue to accrue to Hydro One
18 Brampton.

19 ***Carrying Charges***

20 Carrying charges are capitalized as asset acquisition costs as long as a project is undergoing
21 design and construction activities and there is a reasonable expectation of completion and
22 recovery. Carrying charges are charged to current operations once a project is either declared
23 in-service or is declared as ready for service.

24 ***Computer Software Costs***

25 System software expenditures are capitalized. Major applications software projects with total
26 acquisition and enhancement expenditures in excess of established materiality limits, and with
27 an expected future useful life exceeding two years, are capitalized. All other software
28 expenditures are charged to current operations as incurred.

1 Software acquisition and enhancement costs include:

- 2 • software purchase costs (including internal and external customization charges);
- 3 • initial and ongoing payments for licensing agreements to use external software
- 4 packages where the license period exceeds two years;
- 5 • attributable development costs where software is internally developed; and
- 6 • Testing, data purchase and loading costs, commissioning, and documentation.

7 Software-related expenditures for existing data clean up prior to loading are not capitalized as
8 they represent a repair of existing data. Business process reengineering costs that are directly
9 related to certain computer systems are charged to current operations as incurred, as these
10 reengineering costs are not an integral component of the software.

11 Major software projects that consist of several related but independent modules are placed in
12 service as each module meets in-service criteria.

13 ***Contributions in Aid of Construction***

14 Fixed assets funded in whole or in part by external parties are capitalized at cost. Contributions
15 in Aid of Construction received from external parties are recorded in capital accounts as a
16 specific asset contra account (i.e. credit account) offsetting the asset cost in whole or in part.
17 For external reporting purposes under IFRS these contributions are classified as deferred
18 revenue.

19 ***Land and Land Rights***

20 Capitalized land costs include direct purchase costs including appraisals, fees, commission's
21 surveys, title search and registration, and net clearance costs of unwanted buildings. Costs for
22 first clearing, grading and damage costs related to construction and installation of plant are
23 ultimately capitalized as part of the cost of fixed assets constructed on the land, rather than as
24 an integral cost of the land.

25 Capitalized land rights include Hydro One Brampton's cost of acquiring rights, interests and
26 privileges in land owned by others.

27 ***Leases***

28 Capital and operating leases are accounted for in conformance with the requirements of section
29 3065 of the Handbook of the Canadian Institute of Chartered Accountants.

1 **Major Infrequent Repairs**

2 The accounting treatment of unbudgeted infrequent repairs which are material in amount are
3 referred to the Controller's department to determine whether a special regulatory accounting
4 treatment should be sought. All other expenditures for repairs are expensed as incurred.

5 **Major Transformation Equipment**

6 The cost of major transformation equipment to be installed at a current construction project is
7 transferred to the project capital work order at the time the equipment is delivered to site.

8 The cost of major transformation equipment for installation at a future construction project is
9 transferred to the "Assets Held for Future Use Account" at the time the equipment is delivered to
10 a storage site. While in this account, interest on the equipment is charged to current operations
11 until the equipment is delivered to a current construction project.

12 The cost of major transformation equipment purchased as power system operating spares is
13 treated as if the equipment is placed in service at the time it is delivered to a storage site.

14 **Mobile Distribution Station Equipment**

15 The costs, including depreciation, rental, connection and disconnection, and moving such
16 mobile distribution equipment, are charged to the related capital project in cases where the
17 equipment is used to maintain service to customers during extensive re-arrangements of Hydro
18 One Brampton distribution stations. The cost of mobile equipment used for other purposes is
19 charged to current operations.

20 **Penalty Payments**

21 Contract penalty payments related to the design and construction of Hydro One Brampton fixed
22 assets should be charged to current operations.

23 **Plant Retirement Units (PRU's)**

24 Expenditures for the creation or replacement of a PRU are capitalized.

25 Expenditures to replace a component of a PRU or for the physical removal or relocation of a
26 PRU, are charged to current operations or, where previously provided for, to the appropriate
27 provision account (e.g. asset removal), as incurred.

1 ***Project Development Costs***

2 Project development and pre-engineering costs are capitalized once a preferred alternative has
3 been selected and approved. All general planning and specific project planning costs incurred
4 prior to the approval of a preferred alternative are charged to current operations as incurred.

5 ***Research and Development Costs***

6 Research and development expenditures are accounted for in accordance with the
7 recommendations of the CICA Handbook Section 3450, "Research and Development Costs."
8 Specific capital project development expenditures are accounted for under the "project
9 development costs" noted above.

10 ***Temporary Facilities Built to Assist Construction***

11 The cost of building and removing such facilities, including material cost less salvage, are
12 capitalized as part of the cost of the related capital construction project.

13 ***Temporary Operating Plant***

14 The cost of constructing such temporary operating assets is capitalized as operating plant if
15 total cost exceeds established materiality levels and if the estimated service life exceeds two
16 years.

17 ***Training Costs***

18 Training costs related to assets that are new to Hydro One Brampton's operations or which are
19 otherwise unconventional in nature, and which can be directly associated with those specific
20 tangible assets, are capitalized as an integral cost of those assets. All other training costs,
21 including those associated with capitalized computer software projects are charged to current
22 operations as incurred.

1 **PAYROLL BURDEN AND OVERHEAD COSTS**

2 Under IFRS, an item of property, plant and equipment (PP&E) is recognized only if it is probable
3 that a future economic benefit associated with the item will flow to the entity and its cost can be
4 measured reliably. A similar principle applies under Canadian Generally Accepted Accounting
5 Principles (CGAAP).

6 However, one of the main differences between IFRS and CGAAP relates to the determination of
7 the carrying amount of PP&E. Under both IFRS and CGAAP, PP&E is recognized initially at
8 cost. What varies between the two sets of standards is the definition of what should be included
9 in that "cost", especially where assets have been constructed by the entity internally.

10 Expenditures incurred for the following general purposes are capitalized:

- 11 • purchase, construction and commissioning of specific assets that provide future
12 economic benefits;
- 13 • design and development of specific assets that provide future economic benefits;
- 14 • additions to existing assets; and
- 15 • betterments that result in improvement of capacity, efficiency, useful life span, or
16 economy of specific existing assets.

17 Expenditures qualifying for capitalization include direct labour, direct materials and supplies,
18 transportation costs, directly attributable external costs, professional fees and permits. Indirect
19 expenditures qualifying for capitalization include: borrowing costs, attributable indirect
20 depreciation of equipment, tools and transport and work equipment used in the capital project.
21 Decommissioning, fixed asset removal and site restoration costs are charged to current
22 operations (i.e. depreciation expense) as incurred unless a related asset retirement obligation
23 (ARO) has previously been recorded in the financial statements.

24 Given that IFRS only allows the inclusion of directly attributable costs to be capitalized as part of
25 the cost of an item of PP&E, and further, explicitly disallows administration and other general
26 overheads, the Company performed an analysis of its method of accounting for PP&E to identify
27 costs that are considered to be non-directly attributable and therefore do not meet the criteria for
28 capitalization under IFRS.

1 **Indirect Labour**

2 Trade labour hours are distributed directly to benefiting programs and projects by the use of
3 timesheets, consistent with common industry practice. Labour rates are “fully loaded” to ensure
4 that all associated support costs required to deploy resources are accurately and cost effectively
5 distributed to the benefiting work.

6 At a high level, the cost elements embedded in the overhead rates include:

- 7 • Payroll Obligations – base pay, contractually negotiated payroll allowances, government
8 obligations paid by Hydro One Brampton (e.g. CPP and EI benefits) and Company
9 benefits.
- 10 • Contractual Time Away from Work – employee vacation, statutory holidays, banked time
11 and time taken due to sickness.
- 12 • Time not Directly Benefiting a Specific Program or Project – time for attendance at safety
13 meetings, time used to complete the required health and safety training, and
14 housekeeping and downtime, the latter most often created due to inclement weather.
- 15 • Field Supervision and Technical Support – costs associated with field trades supervision
16 and other management and technical staff providing support to manage and monitor the
17 status of the assigned programs and projects.
- 18 • Support Activities – administrative expenses, costs for centralized support activities and
19 work management systems and costs to design, develop and deliver work method
20 training and health and environmental practices.

21 Hydro One Brampton uses three different overhead labour rates depending on the nature of the
22 project. An overhead rate of 71% is assigned to labour allocated to all capital and OM&A
23 accounts to cover the payroll obligations, contractual time away from work, training, and health
24 and safety costs. Of the 71%, the Company has determined that 8% is disallowable for
25 capitalization as this amount relates to training and health and safety costs which are
26 disallowable under IFRS. The 8% is charged to OM&A.

27 An overhead rate of 95% is used for unplanned capital projects. This rate is made up of the
28 original 71% explained above and also includes an additional 24% overhead to recover labour
29 and expenses incurred by field and operations supervisors and managers, and any labour and
30 expense for GIS, substantiations, drafting, survey and inspection, and Control Room not directly

1 applied against the work order line. The entire 24% overhead amount has been deemed to be
2 non-directly attributable and is disallowed under IFRS. Thus for unplanned projects with a 95%
3 overhead rate the Company capitalizes 63% and 32% is charged to OM&A (8% for cost
4 associated with safety and training and 24% for costs associated with indirect labour as
5 explained above).

6 An overhead rate of 126% is added to labour for planned capital projects. This rate is made up
7 of the 71% and 24% explained above and also includes an additional 31% to recover labour and
8 expenses incurred by Engineering Supervisors and Managers, Technical Services Supervisor,
9 Planning and Standards Supervisor, and Metering Supervisor. The entire 31% overhead has
10 been deemed to be non-directly attributable and is disallowed under IFRS. Thus capital
11 projects with a 126% overhead rate, the Company capitalizes 63% with the remaining 63%
12 charged to OM&A (8% and 24% as explained above plus an additional 31% for Engineering,
13 Technical Services, Metering, and Planning and Standards supervision).

14 ***Inventory (Materials Surcharge)***

15 Hydro One Brampton maintains a Purchasing and Stores Department. The cost of maintaining
16 this department is collated and allocated as a fixed standard material surcharge rate of 15%,
17 which is applied on top of the cost of materials requested from the Company's stores and those
18 directly shipped to the job.

19 At a high level, the cost elements embedded in the material surcharge rate include:

- 20 • The labour and support expenses to sustain the internal procurement department.
- 21 • Warehouse costs, specifically the cost of labour and expenses for the store-keepers that
22 manage the warehouse, as well as overheads of the physical warehouse location.
- 23 • The labour costs for employees that perform required inspections/testing of materials
24 during and after their purchase.
- 25 • Depreciation of equipment used in the warehouse

26 IAS 16 paragraph 16b states that the cost of an item of PP&E includes only those costs directly
27 attributable to bringing the asset to the location and condition necessary for it to be capable of
28 operating in the manner intended by management. Furthermore, IAS 16 paragraph 19 prohibits
29 the inclusion of administration and general overheads as an element of cost in PP&E.

1 In light of the above IFRS requirements, the Company determined that of the 15%, 7% was
2 allowable as it relates to direct labour and expenses of the stores department. The remaining
3 8% is to recover administrative labour and expenses of the procurement department and is
4 deemed as disallowable and will be charged to OM&A.

5 **Fleet**

6 Hydro One Brampton owns and operates in excess of 100 vehicles and other fleet equipment to
7 support its capital work programs. The Fleet department provides centralized and turnkey
8 services that include maintenance, administration, vehicle replacement and disposal.

9 Like labour rates, equipment rates are “fully loaded” rates to ensure that all costs required to
10 deploy equipment are accurately and cost effectively distributed to the benefiting capital (and
11 OM&A) project.

12 At a high level, the costs elements embedded in the standard vehicle rates include:

- 13 • Operations and Repair Costs - This cost category primarily consists of repair costs
14 (labour and parts) related to the maintenance of fleet equipment. Operations cost
15 includes wages, materials and contractor costs.
- 16 • Depreciation - The depreciation expense for each vehicle is calculated based on the
17 current Hydro One Brampton depreciation rates.
- 18 • Fuel Cost - Fuel costs are charged directly to the particular piece of equipment
19 consuming the fuel. These then form part of the costs of the fleet department, which are
20 allocated to the individuals capital (and OM&A) projects and programs via the method
21 described above.

22 IAS 16 paragraph 16b states that the cost of an item of PP&E includes only those costs directly
23 attributable to bringing the asset to the location and condition necessary for it to be capable of
24 operating in the manner intended by management. Further, IAS 16 paragraph 19 prohibits the
25 inclusion of administration and general overheads as an element of cost in PP&E.

26 In light of the above IFRS requirement it was determined that only the depreciation and fuel
27 costs would be considered allowable under IFRS. Hydro One Brampton therefore determined
28 that in general only 33% relate to fuel and depreciation. The remaining 67% of the vehicle
29 charge out rate is deemed disallowable and is charged to OM&A.

1 **Accounts Payable Surcharge**

2 Capital project costs may also include additional costs including non-inventory material and
3 external contractor charges required to perform the capital work.

4 Like inventory costs, accounts payable costs are viewed as an allowable cost presuming that
5 the material or contractor is necessary for bringing the asset to the condition necessary for it to
6 be capable of operating in a manner intended by management. Similar to what is done for
7 material in inventory; the Company includes a 15% surcharge on Accounts Payable invoices to
8 recover Purchasing and Stores administration and labour.

9 IAS 16 paragraph 16b states that the cost of an item of PP&E includes only those costs directly
10 attributable to bringing the asset to the location and condition necessary for it to be capable of
11 operating in the manner intended by management. Further, IAS 16 paragraph 19 prohibits the
12 inclusion of administration and general overheads as an element of cost in PP&E.

13 In light of the above IFRS requirement although the actual material and contractor charges
14 booked outside of the inventory system are allowed to be capitalized, it was determined that the
15 15% surcharge was administrative in nature is deemed disallowable.

16 Burden rates are reviewed periodically for reasonableness. The last comprehensive review of
17 all burden rates, except vehicle rates, was conducted in 2009 and new rates made effective
18 January 1, 2010. The last vehicle rate study was conducted in 2008 and made effective January
19 1, 2009.

20 Once a capital project is approved and planned, Hydro One Brampton evaluates how the project
21 will proceed. The typical components involved in capital projects are:

- 22 • Labour
- 23 • Vehicles
- 24 • Materials
- 25 • Contractors (if required)
- 26 • Direct Purchases

1 **Labour**

2 Each hourly employee tracks and records each hour to the project they are working on which is
3 then multiplied by their base rate of pay. A labour burden of 71% (2010 rate) on their rate of
4 pay is applied to recover the costs of benefits. An additional Lines and Operations
5 Administration burden is calculated at 24% of the employee's base rate of pay. This burden is
6 intended to recover the lines supervision and operations management related to the capital
7 project. Where there is engineering work directly attributable to the project, an engineering
8 administration burden is calculated at 31% of the employee's base rate of pay. This burden is
9 intended to recover the drafting and engineering staff time.

10 **Vehicles**

11 Each of Hydro One Brampton's vehicles has an hourly rate attached to it. Each vehicle rate is
12 charged to the capital project for the total hours that the vehicle is used for each capital project.
13 Vehicle cost recovery rates are reviewed annually for reasonableness.

14 **Materials Issues**

15 The materials that are used for capital projects are charged to the project with an additional
16 burden attached. This is a purchasing and stores burden related to ordering the product, the
17 receipt and handling of the material in the warehouse and the issuing of the material. This
18 burden rate is 15% of the material cost.

19 **Contractors**

20 Depending on Hydro One Brampton's existing workforce and their priorities, Hydro One
21 Brampton may hire through a tendering process contractors to perform capital work. The
22 contractors' work must be supervised by the operations and engineering managers and
23 therefore a 15% or 50% burden is calculated to recover these costs.

24 **Direct Materials**

25 When direct materials are procured for a capital project and there is no handling required by
26 warehouse staff a 15% burden is applied to the cost of the material.

EXHIBIT 2 TAB 6

ASSET MANAGEMENT

ASSET MANAGEMENT SUMMARY

1 The Hydro One Brampton Asset Management Plan summarizes investments for the next five
2 years. For the first year (2011) estimated expenditures are based on detailed knowledge of
3 major programs and projects. For the next four years (2012-2015) the projected expenditures
4 are based on the first year's plan and known future challenges and initiatives.

5 HOBNI's distribution system has experienced significant growth over the last two decades. The
6 Utility's highest recorded system peak of 785 MW was established in the summer of 2006.
7 HOBNI's highest recorded annual energy consumption, to date, occurred in 2007 and was
8 recorded at 3,962.8 GWh..

9 HOBNI's system reliability is such that on average, customers are not without service for more
10 than 54 minutes in a year. In addition, HOBNI's customers, on average, do not experience more
11 than 1.3 interruptions in service in a year and when an interruption occurs, HOBNI's average
12 restoration time is 42 minutes. The reliability indicators assist in developing the Sustainment
13 Driven programs within the Asset Management Plan. Sustainment Driven Investment projects
14 deal with replacement of assets at end of life, i.e. transformer replacements, subdivision
15 rebuilds and pole replacements. The purpose of maintaining the long term and short term
16 functionality of assets is to ensure public and employee safety, comply with regulations and
17 contractual requirements, and to provide a level of reliability that is aligned with corporate
18 objectives.

19 In organizing and planning projects, HOBNI has four main asset investment categories for
20 projects; Sustainment Driven Investments; Development Driven Investments; Maintenance &
21 Operations Driven Investments; and Other Services Driven Investments. Each of these
22 categories can have a Capital and/or OM&A components. The five year Asset Management
23 Plan is summarized by category and shown in the table on the following pages.

24 The Asset Management Plan is included as part of this Exhibit, as **Tab 6, Schedule 1.1,**
25 **Appendix E.**

Summary of Total Investment Costs (\$000's)					
Investment Categories	Forecast				
	2011	2012	2013	2014	2015
Total Net Investments (X+Y-Z)	\$25,656	\$26,838	\$26,884	\$25,830	\$24,848
<i>Total Capital (X)</i>	<i>\$33,143</i>	<i>\$34,711</i>	<i>\$35,814</i>	<i>\$33,654</i>	<i>\$32,061</i>
Sustainment	\$5,591	\$5,652	\$5,965	\$6,419	\$7,146
Station Equipment Replacement	\$976	\$856	\$914	\$1,054	\$804
Distribution Equipment Replacement	\$1,997	\$2,074	\$2,186	\$2,266	\$2,376
Cable Rehabs and Replacements	\$2,044	\$2,137	\$2,267	\$2,490	\$3,344
Emergency O/H Replacements	\$267	\$272	\$277	\$283	\$289
Emergency U/G Replacements	\$308	\$314	\$320	\$327	\$333
Development	\$23,208	\$25,085	\$25,803	\$23,742	\$21,664
Egress Expansions & Extensions	\$1,651	\$2,973	\$3,076	\$1,796	\$1,651
New General Services	\$6,354	\$6,480	\$6,613	\$6,746	\$6,880
New Residential Subdivisions	\$6,333	\$7,064	\$8,039	\$6,821	\$6,090
New Residential High Density	\$494	\$504	\$515	\$524	\$535
Road Widening	\$5,483	\$4,913	\$5,615	\$4,913	\$4,211
Metering	\$1,708	\$573	\$591	\$608	\$625
New Generator Connections & Expansions	\$165	\$168	\$172	\$175	\$179
Voltage Conversions	\$317	\$1,694	\$453	\$1,414	\$733
Generator Enabling Improvements	\$83	\$84	\$86	\$88	\$89
Smart Grid	\$619	\$632	\$644	\$657	\$670
Other Services	\$4,343	\$3,973	\$4,046	\$3,493	\$3,251
Fleet Replacement Program	\$2,168	\$1,930	\$1,927	\$1,928	\$1,925
Major Tools	\$75	\$92	\$93	\$95	\$96
Administration & Service Centre	\$1,067	\$887	\$723	\$454	\$220
Administrative Computer AS/400	\$660	\$595	\$810	\$560	\$560
AM/FM Computer Equipment	\$205	\$302	\$326	\$289	\$283
Land & Land Rights	\$169	\$167	\$167	\$167	\$167
Total OM&A & Removals (Y)	\$4,778	\$4,956	\$4,959	\$5,095	\$5,060
Sustainment	\$275	\$281	\$296	\$313	\$340
Development	\$506	\$611	\$533	\$581	\$448
Maintenance & Operations	\$3,997	\$4,064	\$4,130	\$4,201	\$4,272
Preventative Maintenance & Operations	\$892	\$907	\$920	\$938	\$953
Reactive Maintenance & Operations	\$3,105	\$3,157	\$3,210	\$3,264	\$3,319
Total Recoverables (Z)	\$12,462	\$12,829	\$13,888	\$12,919	\$12,274
Capital Contribution & Recoverable	\$6,714	\$6,875	\$7,685	\$6,802	\$6,167
Road Widening	\$2,258	\$2,023	\$2,312	\$2,023	\$1,734
New General Services	\$1,137	\$1,160	\$1,183	\$1,207	\$1,231
New Residential Subdivisions	\$3,220	\$3,592	\$4,087	\$3,468	\$3,097
Maintenance & Operations - Padmount Painting	\$99	\$100	\$102	\$104	\$105
Upstream Costs	\$5,748	\$5,954	\$6,203	\$6,118	\$6,107
New General Services	\$4,548	\$4,638	\$4,733	\$4,829	\$4,924
New Residential Subdivisions	\$966	\$1,078	\$1,226	\$1,040	\$929
New Residential Low Density	\$234	\$239	\$244	\$248	\$253

APPENDIX E



Asset Management Plan

2011 - 2015

Version 7.0

June 14, 2010

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Executive Summary

1. Executive Summary

The Hydro One Brampton Networks Inc. (HOBNI) Asset Management Plan summarizes investments for the next five years: for the first year (2011) estimated expenditures are based on detailed knowledge of major programs and projects; for the next four years (2012-2015) the projected expenditures are based on the first year's plan and known future challenges and initiatives.

HOBNI's distribution system has experienced significant growth over the last two decades. The utility's highest recorded system peak of 785 MW was established in the summer of 2006. HOBNI's highest recorded annual energy consumption, to date, occurred in 2007 and was recorded at 3,942.5 GWh. HOBNI's load is forecast to grow on average by about 2.3% per year over the forecast period to 2025.

HOBNI's system reliability is such that on average, customers are not without service for more than 54 minutes in a year. In addition, HOBNI's customers, on average, do not experience more than 1.3 interruptions in service in a year and when an interruption occurs, HOBNI's average restoration time is 42 minutes. The reliability indicators assist in developing the Sustainment Driven programs within the Asset Management Plan. Sustainment Driven Investment projects deal with replacement of assets at end of life, i.e. transformer replacements, subdivision rebuilds and pole replacements. The purpose of maintaining the long term and short term functionality of assets is to ensure public and employee safety, to comply with regulations and contractual requirements, and to provide a level of reliability that is aligned with corporate objectives.

In organizing and planning projects, HOBNI has four main asset investment categories for projects; Sustainment Driven Investments; Development Driven Investments; Maintenance & Operations Driven Investments; and Other Services Driven Investments. Each of these categories can have a Capital and/or OM&A component. The 5 year Asset Management Plan is summarized by category and shown in the table below.

Executive Summary

Summary of Total Investment Costs (\$000's)					
Investment Categories	Forecast				
	2011	2012	2013	2014	2015
Total Net Investments (X+Y-Z)	\$25,656	\$26,838	\$26,884	\$25,830	\$24,848
<i>Total Capital (X)</i>	<i>\$33,143</i>	<i>\$34,711</i>	<i>\$35,814</i>	<i>\$33,654</i>	<i>\$32,061</i>
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Other Services	\$4,343	\$3,973	\$4,046	\$3,493	\$3,251
Fleet Replacement Program	\$2,168	\$1,930	\$1,927	\$1,928	\$1,925
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New Residential Subdivisions	\$966	\$1,078	\$1,226	\$1,040	\$929
New Residential Low Density	\$234	\$239	\$244	\$248	\$253

Purpose

2. Purpose

Hydro One Brampton Networks Inc.'s (HOBNI) Asset Management Plan documents policies, strategies, objectives and targets as well as asset specific information used for establishing levels of future capital and maintenance expenditures that ultimately comprise an Investment Plan. The Asset Management Plan will provide the direction for all work being undertaken at the utility in order to meet the required obligations as prescribed by acts, regulations, codes and guides including health and safety considerations all within the guidelines of good utility practices as recognized across the industry.

The Asset Management Plan summarizes investments for the next five years: for the first year (2011) estimated expenditures are based on detailed knowledge of major programs and projects; for the next four years (2012-2015) the projected expenditures are based on the first year's plan and known future challenges and initiatives.

The Asset Management Plan also provides a means of disseminating information to customers, shareholders and regulators regarding the rationale behind the work to be carried out by HOBNI going forward. Since the needs driven by internal and external conditions and demands will change with time, the Asset Management Plan is a dynamic document that is expected to be updated annually.

3. Introduction

3.1. Company Profile

Hydro One Brampton Networks Inc. (HOBNI) is a subsidiary of Hydro One Inc. (HOI) and is one of the Hydro One families of companies. It is a premier electricity delivery company in Ontario and is the eighth largest Local Distribution Company (LDC) in Ontario. The utility's Head Office is located at 175 Sandalwood Parkway West in the City of Brampton. HOBNI has approximately 131,000 customers, the majority of which are residential, and estimated fixed assets of \$255 million. The utility also owns and maintains a mixed fleet of trucks, cars and trailers.

3.2. Mission Statement

HOBNI's mission is to provide shareholder value while supplying safe and reliable distribution of electricity to our customers and continuing to accommodate new development within our franchise area.

3.3. Strategic Directions & Objectives

Our strategy is to continue to improve system operability while maintaining a high level of reliability and keeping community and employee safety in mind. The corporation continues to focus on productivity improvements and cost containment by further leveraging current resources, infrastructure and other technologies such as Outage Management System (OMS), Automated Meter Reading (AMR) and Smart Metering (SM). As it has been in the past, it is expected that as HOBNI continues to grow, efficiencies will be realized in order to keep the average cost of servicing customers fairly constant over the planning period. Capital investments will be made to accommodate future growth and to ensure that the current levels of system reliability are maintained.

Introduction

This Asset Management Plan is consistent with HOBNI's strategic objectives. While Hydro One Brampton has one of the industry's best safety records, the focus will remain on reducing the number of incidents that require medical aid while searching for new innovative approaches to keep safety in the forefront and celebrate the success achieved in the safety program.

To improve customer relations there is a plan to increase the number of customer contacts initiated by the company's senior management staff. A customer survey was completed in 2009 and confirmed positive customer opinions of all service levels at Hydro One Brampton.

HOBNI will benchmark its reliability performance against other LDCs in the industry. Focus on staff development and training will continue throughout the planning period. HOBNI's main asset is its employees and there is a plan in place to actively facilitate employees' development and training. A number of apprentices will be hired in trades to support the work program and they will require a significant amount of training and development. HOBNI is also committed to continual Health & Safety Training and skills upgrade for all of its employees. Furthermore, HOBNI supports employees in their involvement in community activities and encourages them to be corporate ambassadors through participation in the School Electrical Safety Education Program, United Way, various other charities and the Brampton Board of Trade.

3.4. Geographic Map

HOBNI has a service territory of 269 sq. km. Neighbouring utilities include Hydro One Networks Inc. to the north, Enersource Hydro Mississauga to the south, Powerstream to the east and Halton Hills Hydro to the west.

System Description

4. System Description

4.1. System Information

HOBNI owns 2231 km of overhead primary feeder/distribution lines and 2,468 km of underground primary feeder/distribution lines covering its service territory. About 75% of its distribution network is underground. It has a Control Center operating on a “24/7” basis utilizing an Outage Management System (OMS) and a SCADA system for “real time” distribution system monitoring.

The supply is sourced from four (4) Hydro One Networks Inc. owned 230 kV Transformers Stations (Goreway, Bramalea, Pleasant & Woodbridge) stepped down at 44 kV and 27.6 kV and one HOBNI owned 230 kV Transformer Station (Jim Yarrow TS) built in 2001. The utility transforms the 44 kV and 27.6 kV sub-transmission voltages through its Municipal Stations (MS) to primary distribution voltages of 13.8 kV, 8.32 kV and 4.16 kV. All new facilities are supplied directly from 27.6 kV and there is an on-going program to convert 4.16 kV and 8.32 kV to 27.6 kV. There are fifteen (15) Municipal Station transformers and approximately 15,600 distribution transformers on the system.

4.2. Asset Categories

The following Table 1 summarizes the total number of HOBNI owned distribution assets. In 2009, HOBNI retained the consultant Kinectrics Inc. to conduct a detailed Asset Condition Assessment (ACA) for each of these asset groups as detailed in Part 5.3 of this plan.

System Description

Asset Description	Number of Assets
MS Transformers	15
Circuit Breakers	36
Single Phase Pole Mounted Transformers	1,544
Three Phase Pole Mounted Transformers	404
Mini-Pad Transformers	11,331
Three Phase Pad-Mounted Transformers	723
Single Phase Submersible Transformers	151
Three Phase Vault Transformer Banks	1,447/3
Three Phase Load Interrupting O/H Switches	695
Pad-Mounted Switchgear	286
Wood Poles	12,314
U/G Primary Feeder Cable (3 PH Circuit km)	222
U/G Primary Distribution Cable (km)	2,246
Station and SCADA Batteries	151
Utility Chambers	327
Station Buildings	14
Overhead conductor (Circuit km)	2231

Table 1

System Outlook & Performance

5. System Outlook & Performance

5.1. Demand & Energy Load Forecast

Hydro One Brampton's distribution system has experienced significant growth over the last two decades. The utilities highest recorded system peak of 785 MW was established in the summer of 2006. Hydro One Brampton's highest recorded annual energy consumption, to date, occurred in 2007 and was recorded at 3,942.5GWh (Power Purchased).

Hydro One Brampton Networks Inc.'s load is forecast to grow on average by about 2.3% per year over the forecast period to 2025 based on the September 2009 annual forecast. Hydro One Brampton's customer energy consumption for 2010 is expected to increase by 4.8% over the 2009 level and is forecast to grow at a rate of 2.3% annually beyond 2010. All forecasts are weather-normal, i.e., weather effects are not included.

HYDRO ONE BRAMPTON DEMAND FORECAST 2010-2019																					
M. H.	ACTUAL MEGAWATT PEAK										PROJECTED MEGAWATT PEAK										
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019			
JAN	507.7	515.3	561.6	574.5	655.4	616.1	681.3	696.1	635.0	613.1	629.9	677.0	651.1	652.2	686.7	611.2	615.7	616.3			
FEB	561.8	577.7	591.0	569.8	651.1	612.1	681.0	684.4	632.0	613.5	629.9	677.0	651.1	652.2	686.7	611.2	615.7	616.3			
MAR	575.0	617.2	620.0	574.5	651.1	679.2	650.5	677.0	682.0	679.2	610.0	627.7	611.3	655.0	671.7	667.1	702.9	719.1			
APR	485.2	481.4	496.1	484.6	667.0	612.1	626.7	611.4	625.0	617.1	618.1	667.1	625.1	610.2	611.7	615.8	659.7	615.2			
MAY	502.0	451.0	545.5	487.1	723.0	633.2	718.2	504.4	692.0	673.0	617.0	681.7	646.2	651.0	670.2	661.8	707.7	725.0			
JUN	677.1	671.3	688.1	671.2	672.6	772.1	728.2	681.6	742.0	772.1	777.1	792.2	671.3	620.1	670.2	667.7	671.2	671.1			
JUL	655.7	637.7	615.9	724.0	651.0	749.5	691.0	667.1	732.0	767.1	719.9	667.9	671.4	610.2	686.5	662.4	685.9	670.0			
AUG	642.1	622.2	610.7	707.7	784.0	755.3	674.1	731.8	782.0	777.5	796.4	613.7	632.4	651.6	671.1	661.1	671.9	652.6			
SEP	611.0	611.7	617.1	611.0	611.0	611.0	611.0	611.0	611.0	611.0	611.0	611.0	611.0	611.0	611.0	611.0	611.0	611.0			
OCT	597.7	577.4	510.9	581.0	621.5	611.0	611.0	611.0	611.0	611.0	611.0	611.0	611.0	611.0	611.0	611.0	611.0	611.0			
NOV	467.0	507.7	535.7	566.4	651.7	653.2	673.2	683.0	692.0	673.0	617.0	631.7	646.2	651.0	670.2	661.8	707.7	725.0			
DEC	637.7	611.3	510.9	681.2	681.8	686.2	611.0	611.0	611.0	611.0	611.0	611.0	611.0	611.0	611.0	611.0	611.0	611.0			
AVG	617.7	616.9	610.8	686.3	671.4	677.7	670.6	681.6	677.9	641.0	661.3	675.4	646.4	629.7	718.8	675.3	725.1	718.1			
% CHANGE	-0.0	3.9	8.2	2.5	4.3	-0.3	-9.3	4.2	2.0	2.3	2.3	2.3	2.3	2.1	2.3	2.3	2.3				
MINIMUM	655.7	621.3	615.1	720.2	681.9	772.1	729.2	754.0	782.0	777.5	796.4	613.7	632.4	651.6	671.1	661.1	671.9	652.6			
% CHANGE	0.0	-2.4	13.2	7.3	-1.3	-6.6	1.0	3.1	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3				
WINDING	639.7	646.3	678.0	693.4	685.0	618.2	606.6	603.0	615.0	618.2	638.2	647.7	652.5	677.6	693.4	703.4	726.7	742.4			
% CHANGE	1.3	1.0	2.8	1.1	8.3	5.8	0.8	1.8	1.8	2.3	2.3	2.3	2.3	2.1	2.3	2.3	2.3				

Table 2

Information used to prepare the forecast is based on HOBNI's historical load growth trending as well as information collected from the City of Brampton Economic

System Outlook & Performance

Development Office on population growth and employment projections. HOBNI uses the “CYME” statistical modeling software to perform all of its load flow calculations. Feeder loads are updated to reflect the latest load forecast projections. System load flows are then performed to ensure stability of the system during peak loading conditions as well as during system simulated outage conditions.

HYDRO ONE BRAMPTON ENERGY FORECAST 2010- 2019																		
MTH.	ACTUAL GIGAWATT HOURS								PROJECTED GIGAWATT HOURS									
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
JAN	211.4	202.9	211.3	208.8	217.5	211.9	211.3	211.4	225.0	221.0	221	221.4	222.9	222.2	222.2	222.4	222.4	222.4
FEB	211.1	208.9	207.1	206.7	218.0	217.8	221.8	224.7	217.0	221.8	211.7	224.4	222.2	221.2	221.1	221.7	221.2	221.4
MAR	200.2	207.2	203.9	212.7	223.0	220.0	222.4	219.2	230.0	227.6	242.4	233.0	231.4	230.7	225.2	225.8	225.0	224.9
APR	226.1	226.0	221.7	231.7	247.1	240.9	241.0	237.5	260.0	241.0	271.1	249.1	246.0	247.0	241.4	241.2	241.0	241.1
MAY	233.7	233.1	229.2	241.0	251.7	244.1	241.0	242.9	280.0	241.0	274.1	251.2	248.0	251.1	246.0	247.0	247.0	247.1
JUN	266.1	260.0	257.0	272.0	271.0	271.0	272.2	272.2	340.0	271.0	272.0	272.0	272.0	269.0	266.7	266.7	267.0	267.2
JUL	317.3	314.6	317.8	328.1	330.0	332.9	341.3	342.4	355.0	341.2	341.5	341.1	341.0	341.7	342.4	342.4	342.4	342.4
AUG	300.0	292.9	312.0	325.0	328.5	331.0	341.4	348.1	358.0	342.2	341.2	340.1	338.8	337.7	337.0	337.0	337.0	337.0
SEP	311.1	312.0	311.9	315.0	317.1	318.9	317.0	318.0	330.0	327.7	314.4	312.0	310.5	311.1	311.1	311.0	311.0	311.0
OCT	312.1	317.5	318.8	321.7	317.7	318.7	317.7	318.0	317.0	324.0	311.7	314.1	312.2	312.9	312.1	311.7	311.7	311.0
NOV	276.1	270.4	272.3	277.4	283.4	281.8	284.8	286.0	318.0	312.4	318.0	315.5	313.8	313.0	312.2	312.7	312.4	312.4
DEC	311.1	311.1	311.9	317.4	318.4	311.5	319.0	319.0	333.0	317.7	318.5	318.5	317.7	317.1	317.2	317.2	317.2	317.2
AVG	266.8	264.7	264.8	271.3	276.0	278.6	279.0	279.7	327.7	314.7	317.4	316.8	316.8	316.7	316.5	316.2	316.0	316.1
± AN. 1.2015.H	1.8	1.8	1.4	1.6	1.7	1.7	1.5	1.1	1.8	1.8	1.8	1.1	1.2	1.8	1.8	1.1	1.2	1.8

Legend:
 Green: Load forecast confirmed by meter data for the period
 Yellow: Load forecast follows preliminary values not confirmed by the IEC

Table 3

Forecasted Load Factor 2010					Historical Load Factor				
MTH.	Days	Demand	Energy	LF.	23YR.	0 YR.	5 YR.	1 YR.	
JAN	31	600.0	245.0	40.3	76.1	75.4	76.5	75.2	JANUARY
FEB	28	600.0	217.0	36.2	77.9	78.3	78.4	77.2	FEBRUARY
MAR	31	585.0	300.0	51.3	77.2	75.0	77.0	75.4	MARCH
APR	30	525.0	207.0	39.4	77.4	78.5	75.6	73.1	APRIL
MAY	31	590.0	300.0	50.8	71.3	71.0	71.1	73.0	MAY
JUN	30	740.0	340.0	45.9	66.6	64.0	64.7	62.5	JUNE
JUL	31	750.0	355.0	47.2	67.1	65.0	65.6	65.4	JULY
AUG	31	760.0	355.0	46.7	67.2	65.7	65.7	64.3	AUGUST
SEP	30	630.0	320.0	50.8	68.6	69.2	66.6	67.3	SEPTEMBER
OCT	31	550.0	317.0	57.6	76.2	75.0	76.7	78.0	OCTOBER
NOV	30	590.0	323.0	54.7	75.7	75.0	76.8	77.3	NOVEMBER
DEC	31	605.0	333.0	55.0	75.0	75.0	73.8	71.0	DECEMBER
				72.2	72.9	72.7	72.9	72.6	

Table 4 – HOBNI Load Factor – Historical & Forecasted

System Outlook & Performance

5.2. Reliability Performance

Reliability performance is presented in accordance with the Ontario Energy Board's Electricity Reporting & Record Keeping Requirements.

The reliability of regulated electric utilities cannot be assessed without generally understanding how their dependability is measured. The Ontario Energy Board primarily relies upon four basic gauges of reliability:

1. SAIDI (System Average Interruption Duration Index)
2. SAIFI (System Average Interruption Frequency Index)
3. CAIDI (Customer Average Interruption Duration Index)
4. MAIFI (Momentary Average Interruption Frequency Index)

Efforts will be focused on reducing the length of outages (thereby improving SAIDI) by introducing procedures, monitoring equipment and the implementation of the Outage Management System (OMS).

5.2.1. SAIDI

SAIDI is an indicator of system reliability that expresses the length of interruptions that customers experience in a year on average. All planned and unplanned sustained interruptions are used to calculate this index.

SAIDI is defined as the total customer-hours of sustained interruptions normalized per customer served and is expressed as follows:

$$\text{SAIDI} = \frac{\text{(Total Customer-Hours of Sustained Interruptions)}}{\text{(Total Number of Customers Served)}}$$

System Outlook & Performance

As seen in Figure 2, the average interruption time that customers experienced in the last five (5) years has been 54 minutes (0.904 hours). The longest and shortest average interruption times were 68 minutes (1.13 hours) in 2007 and 43 minutes (0.72 hours) in 2009 respectively. (All numbers exclude Loss of Supply).

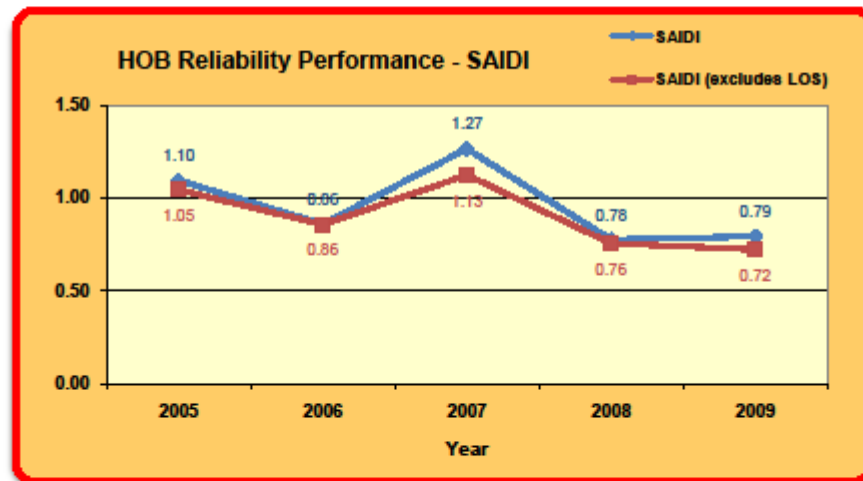


Figure 2

5.2.2. SAIFI

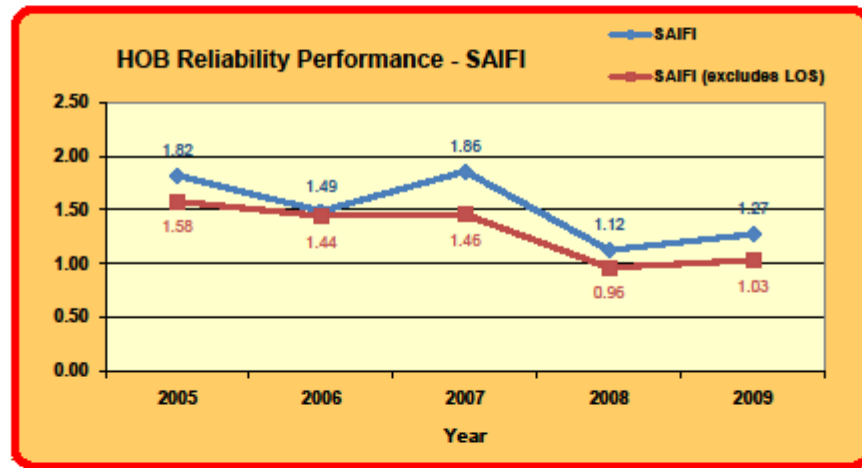
SAIFI is an indicator of the average numbers of sustained interruptions each customer experiences. All planned and unplanned sustained interruptions are used to calculate this index.

SAIFI is defined as the number of sustained interruptions normalized per customer served, and is expressed as follows:

$$\text{SAIFI} = \frac{\text{(Number of Sustained Interruptions for all Customers)}}{\text{(Total Number of Customers Served)}}$$

System Outlook & Performance

As seen in Figure 3, the average frequency of interruptions in the last five (5) years has been 1.29 interruptions per customer per year. The longest and shortest average number of interruptions per customer per year was 1.58 in 2005 and 0.96 in 2008 respectively. (All numbers exclude Loss of Supply).



i

Figure 3

5.2.3. CAIDI

CAIDI is an indicator of the speed at which power is restored. All planned and unplanned sustained interruptions are used to calculate this index.

CAIDI is defined as the number of sustained interruptions normalized per customer served, and is expressed as follows:

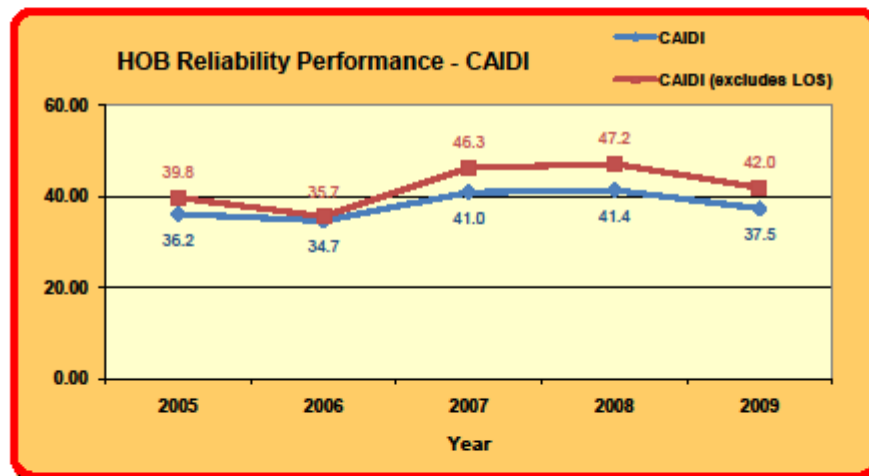
$$CAIDI = \frac{\text{Customer-hours of Sustained Interruptions}}{\text{Number of Sustained Interruptions}}$$

Or

$$CAIDI = \frac{(SAIDI)}{(SAIFI)}$$

System Outlook & Performance

As seen in Figure 4, the average time to restore power in the last five (5) has been 42 minutes (0.703 hours). The longest and shortest average times to restore power were 47.3 minutes (0.788 hours) in 2008 and 35.7 minutes (0.595 hours) in 2006 respectively. (All numbers exclude Loss of Supply).



g

Figure 4

5.2.4. MAIFI

MAIFI is an indicator of the average numbers of momentary interruptions each customer experiences. All planned and unplanned momentary interruptions are used to calculate this index.

MAIFI is defined as the number of momentary interruptions normalized per customer served, and is expressed as follows:

$$\text{MAIFI} = \frac{\text{(Number of Momentary Interruptions for all Customers)}}{\text{(Total Number of Customers Served)}}$$

System Outlook & Performance

As seen in Figure 5, the average number of momentary interruptions each customer has experienced in the last five (5) years has been 3.8. The longest and shortest average number of interruptions each customer has experienced was 4.56 in 2005 and 3.17 in 2007 respectively. (All numbers exclude Loss of Supply).

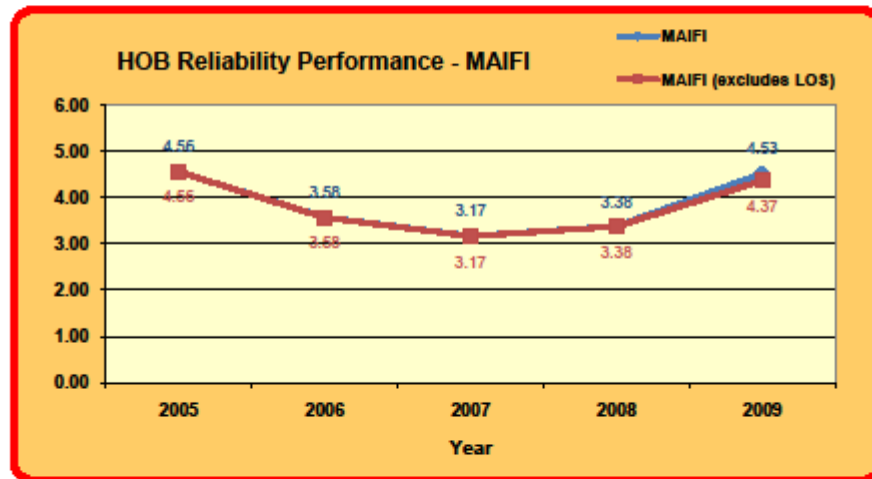


Figure 5

5.2.5. Cause of Outages

Customer interruptions resulting from equipment failures due to deterioration, aging or improper maintenance are classified as Defective Equipment and are the main cause of customer outages. Defective Equipment accounted for an average of 46.3% of customer outages in the last three (3) years (please refer to Table 5).

As seen in Figure 6, Transformers represented 51% of all equipment failures followed by Cables at 34% (main feeder & distribution).

Hydro One Brampton's system continues to age and it is clear that Equipment replacement programs must be continued.

System Outlook & Performance

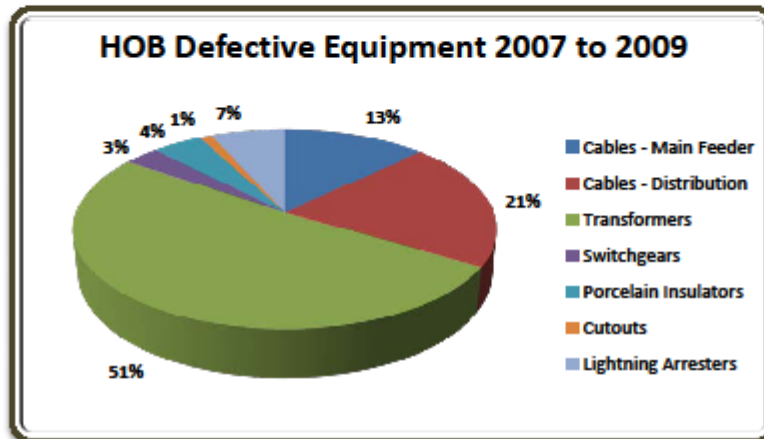


Figure 6

Rounding out the top five (5) causes of outages for the last 3 years (averaged) includes; Loss of Supply where 18.4% of customer interruptions were a result of problems with the bulk electricity supply system; Foreign Interference at 10.2% were a result of outages caused by such events as animals, vehicles, dig-ins, vandalism, sabotage, and other foreign objects; Lightning events resulting in an insulation breakdown and/or flashovers contributed to 9.1% of customer interruptions; and Human Element where HOBNI line staff interfaced with the HOBNI system caused 5.2% of the customer interruptions.

Description	2007	2008	2009
Unknown/Other	2.9%	1.9%	6.7%
Scheduled Outage	0.7%	1.2%	1.1%
Loss of Supply	21.4%	15.0%	18.9%
Tree Contacts	0.7%	4.1%	4.2%
Lightning	13.3%	5.3%	8.7%
Defective Equipment (Failures)	49.9%	50.3%	38.7%
Adverse Weather	1.6%	3.4%	1.5%
Adverse Environment	0.1%	2.1%	0.2%
Human Element	2.2%	10.6%	2.9%
Foreign Interference	7.3%	6.1%	17.1%

Table 5

System Outlook & Performance

5.3. Asset Condition Assessment

5.3.1. Introduction

HOBNI retained Kinectrics Inc. (Kinectrics) to carry out an Asset Condition Assessment (ACA) of HOBNI's distribution assets. The assets were divided into 16 Asset Groups and, for each of these Asset Groups; an ACA included the following tasks:

- Derive Health Indexes.
- Carry out Risk Assessments.
- Conduct Field Surveys.
- Develop optimal capital replacement plan.
- Develop levelized capital replacement plan.
- Provide recommendations for prioritized data gap closure.

In addition, Kinectrics was asked to comment on HOBNI's maintenance practices.

The report summarized the methodology, demonstrated specific approaches used and presented the resultant findings and recommendations.

5.3.2. Data & Health Index

The information for each Asset Group included Health Index, Data Availability Indicator (DAI), Capital Replacement Plans and recommendations for closing data gaps in a prioritized manner.

Where appropriate, the results were modified based on the expert opinion of HOBNI staff. Field observations generally supported the Health Index distribution derived using Kinectrics' methodology. Some differences could be attributed to the fact that the field survey observations weighted all the condition parameters equally while the Health Index formulation used a weighted sum of condition parameters scores.

System Outlook & Performance

5.3.3. Summary of Results

Table 6 shows, for each Asset Group, the total number of assets and the percentage of assets in the poor or very poor categories.

Description	Number of Assets	% of Poor and Very Poor
MS Transformers	18	50 %
Circuit Breakers	36	8.33%
Single Phase Pole Mounted Transformers	1544	< 1%
Three Phase Pole Mounted Transformers	404	< 1%
Mimi-Pad Transformers	11331	< 1%
Three Phase Pad-Mounted Transformers	723	0%
Single Phase Submersible Transformers	151	0%
3 Phase Vault Transformer Banks	1447/3	0%
3 Phase Load Interrupting Overhead Switches	695	1.15%
Pad-Mounted Switchgear	286	16.78%
Wood Poles < 55 ft and Wood Poles ≥ 55 ft	12314	6.64%
Primary (Feeder) XLPE Cable	222 three phase circuit-km	19.93%
Primary (Distribution) XLPE Cable	2,246 conductor-km	5.05%
Batteries	151	9.27%
Utility Chambers	327	15.90%
Buildings	14	0%

Table 6

5.3.4. Conclusions & Recommendations

The availability of condition data collected by HOBNI is compatible with that of comparable size utilities. Prioritized gap closure is recommended, particularly for the following Asset Categories:

System Outlook & Performance

- Power Transformers
- SF6 and Vacuum breakers
- XLPE Primary Feeder and Distribution cables
- Wood poles
- Utility Chambers
- Overhead switches

There is a need to put in place an overhead conductor testing program that will allow us to determine its condition in various parts of HOBNT's system.

There is a need to significantly increase underground feeder and distribution primary cable replacement program and double the transformer replacement program.

HOBNT's maintenance practices are in compliance with the Distribution System Code (DSC) requirements.

Annual data gap closure progress analysis and periodic asset condition assessment are needed to ensure that appropriate investments are being made in replacing aging assets and that adequate condition information is being collected. Collection of measurements for transformer and breaker measurements should start at Jim Yarrow MTS to accumulate the required information for the future condition assessments.

Methods of Analyzing Asset Investment

6. Methods of Analyzing Asset Investment

The following are methods, processes and practices used to help analyze HOBNI asset investments:

6.1. Business Case Analysis

The main items used to assess asset performance and condition assessment in a business case are:

- The age of asset,
- The frequency of failures,
- The asset condition,
- Reviewing impact of changes in environmental and regulatory requirements,
- The current and future maintenance costs,
- The replacement costs for new solutions,
- The spare parts availability,
- The skills available internally or externally to repair or completely refurbish the affected units,
- Safety of employees, customers and public is part of a constant review to ensure that equipment operates under fault conditions with paramount security,
- Integrity of equipment adjacent to faulted one and risk of releasing contaminated substances and particles into the ground or atmosphere,
- Obsolete design standards are reviewed for older units in service,
- Impact on quality of supply,
- Impact on Customer and Impact on Utility,
- Business ability for a proper and timely management of its asset replacement program.
- Cost Benefit Analysis
 - Additional MW Capacity

Methods of Analyzing Asset Investment

- Savings in Line Losses
- Savings to the community due to savings in Customer-minutes and Effective MW minutes of outages
- Projected revenue due to the ability to serve new and existing customers by expanding the distribution system.

6.2. System Performance

A detailed review of the performance of individual system components was undertaken. This included analysis of loading, line loss and reliability of the sub-transmission feeders, substation transformers and primary feeders.

In addition, a district planning load forecast, based on site plan approvals, building permits, subdivision construction and commercial/industrial service applications, was developed.

For each of the feeders, the following items were used or computed:

- Operator monitoring and experience (operator reports)
- Cost of line losses based on kW and kWh of heat losses.
- Reliability performance based on indices which measure the average duration and frequency of outages.

Analysis of these feeders was performed and methods to overcome the exposure were identified. These methods included measuring the extent of feeder loading, reviewing and expanding maintenance programs and finally the need for new system capital projects.

6.3. Reliability Measures

The cost of outages to the community is calculated based on the results developed from customer surveys, analytic methods, and actual interruption or case study methods. The results are shown in the following table:

Methods of Analyzing Asset Investment

Interruption Cost Models*		
	Duration of Outage	Average Cost \$/kW
Residential Model 1	60 minutes	1.77
Residential Model 2	4 hours	7.08
Commercial Model 1	1 minute	0.47
Commercial Model 2	20 minutes	2.80
Commercial Model 3	8 hours	113.10
Industrial Model 1	1 minute	1.30
Industrial Model 2	20 minutes	4.18
Industrial Model 3	8 hours	42.0

**Based on Surveys and studies as reported to EDA, EPRI and US Department of Energy.*

Table 7

Based on the above values, the savings to the community is conservatively estimated at \$5 per customer-minute of reduction in the power outage.

Asset Management Planning & Development

7. Asset Management Planning & Development

Asset Management planning is performed annually and focuses on the development of a five-year plan which comprises a detailed plan for the first year in the planning cycle and a less detailed outlook for the remaining years. The planning cycle in 2010 pertained to the 2011-2015 period.

The annual Asset Management planning and development process consists of four stages:

1. Development of supporting information & documents;
2. Asset investment development;
3. Prioritization of asset investments; and
4. Asset investment selection & approvals.

7.1. Development of Supporting Information & Documents

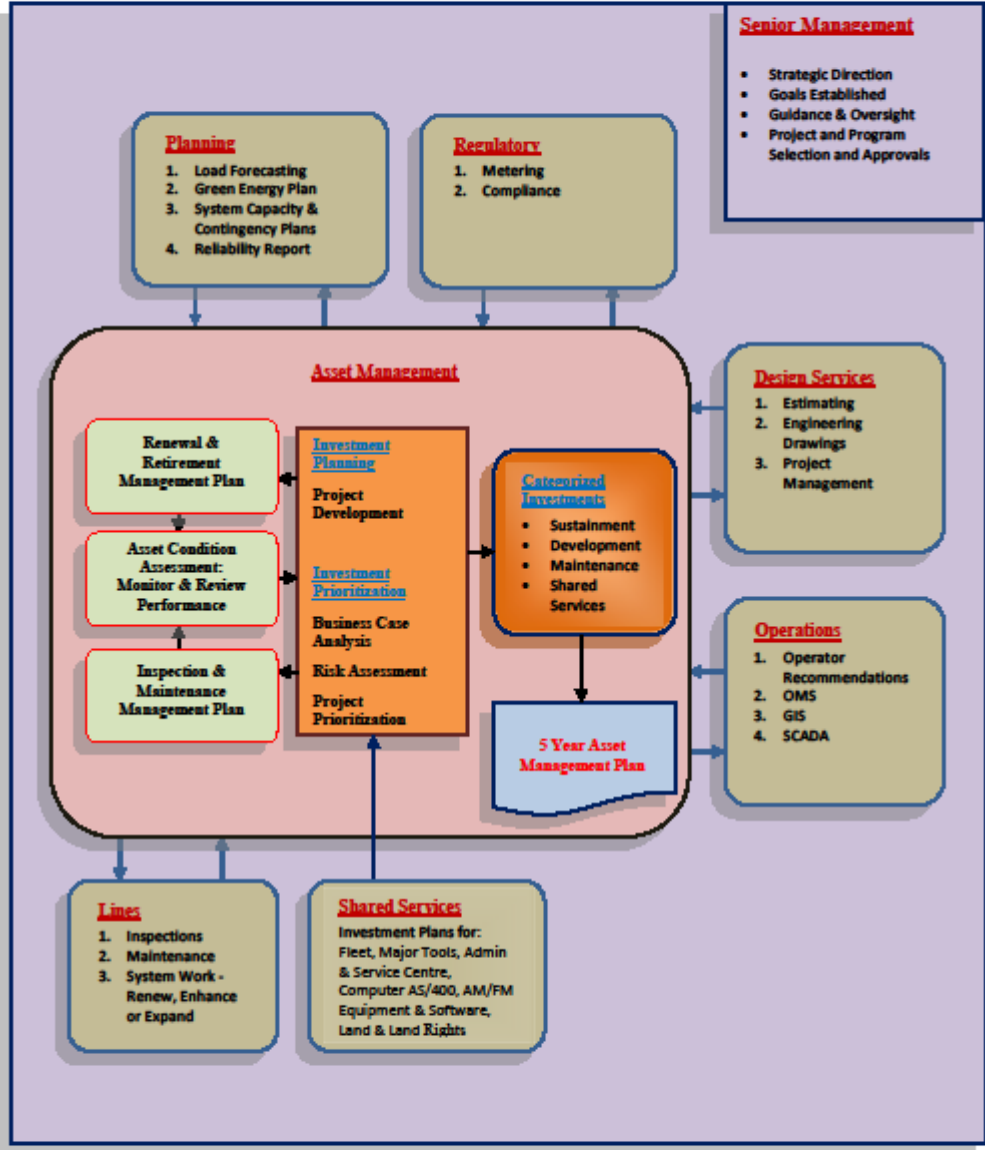
To facilitate the preparation of the Asset Management plan, supporting information and documents are developed by HOBNI departments and groups; this information is used to help identify potential investments.

7.1.1. Senior Management

HOBNI's Distribution strategic direction and goals are reviewed and established by the senior management team. The strategic goals are included in the business planning instructions for reference by planners as the business plan is being developed. HOBNI's corporate vision and strategic objectives are shown in section 3.0 of this report.

Asset Management Planning & Development

Figure 7 – HOBNI Asset Management Planning



Asset Management Planning & Development

7.1.2. Planning Function

Planning is responsible for setting planning criteria and plant performance standards to meet the system needs, and for preparing development plans to cater for future load growth and new connections. The need for System Expansion and Reinforcement is identified through system planning studies and load flow analysis. This may include the construction of new feeder or sections of feeders, equipment or conductor upgrade on existing feeders, and increase in capacity at a station upstream of the new feeders and upgrades.

7.1.3. Regulatory Function

Regulatory is responsible for metering and regulatory/legislative compliance. The metering responsibilities include projects supporting new commercial, industrial and residential customers along with wholesale metering upgrades. The regulatory/legislative compliance responsibilities include dealings with the OEB, ESA, IESO, OPA and MOE to name a few.

7.1.4. Design Services Function

Design Services are part of Engineering and are responsible for providing services in the area of design, cost estimating and project management for new asset installations and planned asset replacement projects arising from approved capital project recommendations to replace assets according to asset renewal programs.

7.1.5. Operations Function

System operations are responsible for the day-to-day operation of the distribution system and use of power system assets to deliver the product to the customer, which includes responsibility for operational reliability, security and quality, and for the SCADA operations to support this activity.

Asset Management Planning & Development

7.1.6. Lines Function

Lines have the responsibility for construction, commissioning and inspection and maintenance of distribution assets, including short-term planning and scheduling services for the required work and local maintenance work analysis and correction.

7.1.7. Asset Management Function

Asset management is responsible for the management of processes and documentation relevant to asset management. The group maintains an asset management database for recording assets and asset management activities. The recorded information will contain details of location and plant fitted to that location, asset standard type nominations, standard maintenance levels, required maintenance and testing activities, frequencies (trigger dates), standard job templates and their cost, maintenance history and repair activities, outstanding maintenance work with its cost and planned future schedules. The asset management group provides detailed analysis and review of asset performance, the required time frame for action, and recommendations on required action. To help justify projects, the asset management group prepares a detailed technical and financial business case for a particular asset project.

Asset Management Planning & Development

Group Responsible	Information/Document Description
Senior Management	Strategic Direction & Goals
	Corporate Business Values
	Mission & Vision
Planning	Substation Plans
	Load Forecast
	System Load Capacity Plan
	Voltage Conversion Plan
	Green Energy Plan (System Generator Capacity)
	System Contingency Plans
	System Reliability Report
Regulatory	Metering Requirements
	Green Energy Plan (CDM Plan)
	Compliance Requirements
Design Services	Estimates & Designs
Operations	Operator Recommendations
	Green Energy Plan (Smart Grid Plan)
	Outage Management Reports
Lines	Inspection Reports
	Maintenance Reports
	Trouble Truck Reports
Shared Services	Investment Plans: Fleet, Major Tools, Computer AS/400, Administration & Service Centre, AM/FM Equipment & Software, Land & Land Rights
Asset Management	Renewal & Retirement Management Plan
	Inspection & Maintenance Management Plan
	Asset Condition Assessment

Table 8 – HOBNI Supporting Information & Documents

Asset Management Planning & Development

7.2. Asset Investment Development

As part of the investment development phase, the supporting information and documents identified in section 6.1 of this report are used to identify potential investments. Information such as customers' needs (including anticipated load growth and generator connections), criticality of asset, operational performance, asset age and asset condition are examined in the context of risk to identify areas requiring investments resulting in risk mitigation.

Individual investments are developed and sorted into four major investment categories: Sustainment Driven investments, Development Driven investments, Maintenance & Operations Driven investments, and Other Services. Sustaining work is performed to maintain the existing capability of the distribution system so that it continues to function as originally designed. Development activities extend the capability of the distribution system, primarily to meet the demands of load and generator customers. The Maintenance & Operations activities ensure that the life of assets are optimized and will help protect against major equipment failures and associated reliability problems. HOBNI's Other Services are comprised of other corporate activities (e.g. Fleet, Major Tools, Administration & Service Centre, Administrative Computer AS/400, AM/FM Computer Equipment & Software and Land & Land Rights).

The individual investments that make up the Investment Plan are generally developed using the common process illustrated in Figure 8 below. This common process is then tailored at the lower level to suit each category of work.

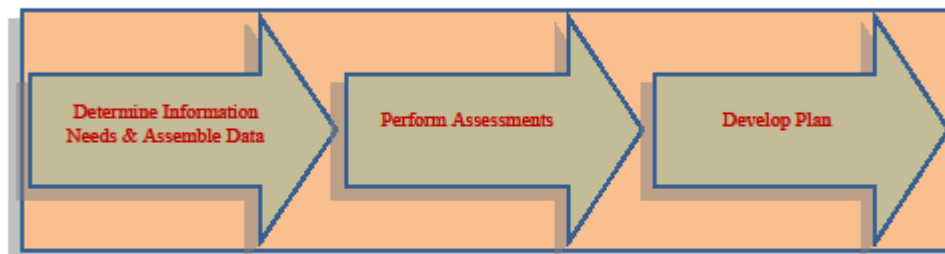


Figure 8 – Common Development Steps for Investments

Asset Management Planning & Development

The following sections, detail the processes for developing particular investments for each of the Sustainment, Development and Maintenance categories of work. Other Services investments are developed independently and incorporated into the proposed Asset Management Plan for review by Senior Management in finalizing the Asset Management Plan.

7.2.1. *Sustainment Driven Investments*

Sustaining asset investments are grouped into two (2) major categories:

1. Proactive Driven Investments

- a. *Station Equipment Replacement Program* - funds planned work required to maintain, refurbish or replace assets located within municipal stations.
- b. *Distribution Equipment Replacement Program* - funds planned work required to maintain, refurbish or replace overhead and underground distribution assets.
- c. *Cable Rehab/Replacement Program* – funds planned work required to rejuvenate or replace underground feeder and distribution cables.

2. Reactive Driven Investments

- a. *Emergency Overhead Equipment Replacement Program* - funds emergency work required to replace like-for-like overhead distribution assets.
- b. *Emergency Underground Equipment Replacement Program* - funds emergency work required to replace like-for-like underground distribution assets.

For each subset of sustainment work, the common process shown in Figure 8 is applied as described below:

1. Determine Information Needs and Assemble Data

A variety of information and data sets are required to develop sustaining investments. Asset condition data is a key input to the assessment of possible investments since assets deteriorate over the course of their active duty. The scope of data collected depends on the priority (i.e. value and risk) of the asset category. Data

Asset Management Planning & Development

is collected in various ways, such as visual inspection by field maintenance crews, results from various testing procedures on assets (e.g. pole tests, submarine cable tests), and monitored reliability performance. Other information related to regulatory (e.g. Distribution System Code requirements) and legislative (e.g. new PCB regulations) requirements is also required for assessing the investment needs. In some cases (e.g. demand investments) historical information is used as a basis for future forecasts. The data is compiled for each specific asset and may be grouped with the data of other assets of the same asset family for the purpose of developing investments. Data is verified and validated for accuracy.

2. Perform Assessment(s)

The assessment process focuses on risk mitigation and the two components that make up risk: Probability of Failure/Event Occurrence; and, Consequence of Failure/Event Occurrence.

a. Probability of Failure

The probability of failure, or of a particular unacceptable event occurring, is determined through:

Asset Condition Assessments (ACA): These are proactive condition assessments specific to the various asset classes and result in condition ratings for each asset class. The condition ratings are leading indicators of the likelihood that a failure or an unacceptable event will occur and are used to assess the need for mitigating action in the form of revised maintenance procedures or asset replacement.

Assessing Asset Demographics: Assets which draw closer to end-of-life are expected to require increased attention to maintain satisfactory level of performance and minimize the probability of failure. Maintenance costs of an asset in these periods can increase significantly.

Asset Management Planning & Development

Evaluating Component Performance and Reliability: Equipment failure rates are lagging measures which HOBNI monitors as critical signals of asset deterioration. These measures are used to validate the condition ratings and identify the need for immediate corrective action. Poor performance of a particular component will also be assessed to determine if there is a need to be concerned about the health of other like units in the system.

Equipment Utilization: The usage of a component can also affect its performance and probability of failure. Assets wear out more quickly if operated repeatedly, near or above their normal ratings, or in a manner that places excessive stress on their components. Thus utilization assessment(s) are done on specific assets where there is a risk that usage will have affected the life of the equipment.

Historical Demand: For demand investments, the probability of events occurring is based on history and trending information.

b. *Consequence of Failure*

The second aspect that is assessed is the consequence of a failure or particular unacceptable event. Consequences that are considered include:

- public and employee safety hazards
- reliability of the distribution system
- security concerns
- environmental impacts
- regulatory or legislative compliance penalties

Events that may lead to significant adverse consequences are identified and considered in conjunction with the probability or likelihood of occurrence. High Risk events, defined as those with high probability, high consequence or both, are mitigated before lower risk events.

Asset Management Planning & Development

3. Develop Plan

Developing the plan for individual projects or programs involves the initial step of developing a recommended action, either a maintenance or capital investment, for each asset based on the assessment discussed above. Initial individual investments are developed and prioritized based on criteria aligned with corporate objectives and business values. Various levels of sustainment effort are defined for each asset, and the cost and risk is determined for each level of investment.

The planning process also involves reviewing the potential investments and “bundling” work where there are synergies to be realized and it is practical to do so. For example, there may be a situation where transformers need to be replaced at a particular municipal station and there is also work to be done on the reclosers at the same station. This work would be bundled together if there are efficiencies to be realized with respect to mobilization of crews to do the work and timing of outages that need to be taken. In some cases, it may also be efficient to advance other sustainment work (e.g. PCB testing) at the same station, in order to make better use of resources and outage windows already planned for the station.

7.2.2. Development Driven Investments

Development asset investments are grouped into three (3) major categories:

1. Growth Driven Investments

a. *Feeder Expansion & Reinforcement Program* - funds upgrades to the distribution system in response to load growth and performance issues;

2. Customer Driven Investments

a. *New General Service Connections* – funds projects required to meet the on-going demand to connect new industrial/commercial customers to HOBNI’s Distribution System and upgrade services of existing customers.

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- b. *New Residential Subdivisions* – funds projects required to meet the on-going demand to connect new subdivisions to HOBNI’s distribution system.
 - c. *New Residential High Density* – funds projects required to meet the on-going demand to connect new high density residential subdivisions to HOBNI’s distribution system.
 - d. *Road Widening*s – funds projects for joint-use work that HOBNI is obligated to provide in order to meet its contractual obligations to joint use partners such as the City of Brampton, Ministry of Transportation and the Region of Peel.
 - e. *Metering* – funds projects supporting new commercial, industrial and residential customers along with wholesale metering upgrades.
 - f. *New Generator Connections & Expansions* – funds the work required to connect generators onto the distribution system and to implement the necessary expansion to accommodate these connections;
3. Enhancement Driven Investments
- a. *Voltage Conversion Program* - funds projects required to address end-of-life 4.16kV assets and upgrade them to 27.6kV to mitigate reliability and safety risks associated with the 4.16kV system and reduce system losses.
 - b. *Generator Enabling Improvements* - funds the work required to connect generators onto the distribution system and to implement the necessary enabling infrastructure (e.g. protection and control) to accommodate these connections;
 - c. *Smart Grid Program* - which is an initiative to innovate, test, assess, and implement emerging technologies and new solutions on HOBNI.

Although the nature of the above work is in some cases very different, the investments for each are developed using the common process shown in Figure 8. Details on the application of the process for Development investments are provided below.

1. Determine Information Needs and Assemble Data

Depending on the nature of the investment, information inputs into the development process vary. For New Residential Subdivisions Work, the primary inputs are

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historical accomplishment data and economic factors (e.g. GDP, housing starts) that can be assessed and used to forecast future demand. For System Expansions and Reinforcement, the primary inputs are feeder loading, protection, and configuration information along with future load growth forecasts. For Generation Connections and Expansions, the primary inputs are the number and location of connection proponents and the results of engineering and technical studies on the impact of anticipated generation connections. For Smart Grid, the primary inputs are information about new technologies that have potential applications on HOBNI's system.

2. Perform Assessments

Assessments are performed for each subset of Development work using a risk based approach that recognizes HOBNI's strategic objectives and business values (e.g. safety, reliability, regulatory and legal compliance). In the case of assessments related to Distributed Generation and Smart Grid investments, consideration is also given to the direction provided in the *Green Energy and Green Economy Act, 2009*. These assessments are applied in a manner that is consistent with the work's nature. These assessments then lead to the identification of a prioritized list of prudent projects based on relative benefits (i.e. risks mitigated) to the corporation.

For New General Service Connections, the assessments are based on econometric analyses and forecasting models. The data assembled (e.g. economic factors, historical accomplishments, load growth forecasts) in the first step of the investment development process is used in the assessments to help predict the numbers of New General Service Connections that can be expected in future years. The assessment results in a forecast that is then considered in relation to pertinent risks (e.g. Customer, Reputational, and Regulatory).

For Feeder Expansions, Extensions & Reinforcements and Generation Connection & Expansions, assessments involve engineering and technical studies that model feeder loading and growth. These studies identify unacceptable conditions (e.g. high short-

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circuit levels, phase imbalances, low voltages) that increase risks in areas such as safety, system reliability, or HOBNI's ability to connect load customers or generators. After unacceptable conditions and generation connection needs are identified, the assessments then move on to developing alternatives for addressing the conditions in a cost-effective manner.

3. Develop Plans

Developing the plan is the final step in the process and is guided by the results from assessments that were conducted. For example, Feeder Expansions, Extensions & Reinforcements cost-effective alternatives to address unacceptable loading and system conditions are included the plan. For Generation Connection & Expansions work, investments required to facilitate the timely connection of increasing amounts of renewable distributed generation are identified. Similar to the process followed for Sustainment investments, the planning process for Development investments involves reviewing potential investments in a holistic manner and "bundling" complimentary work where synergies exist. For example, a large number of generation connection applications in a particular area will drive proactive Generation Enhancement work.

7.2.3. *Maintenance & Operation Driven Investments*

Maintenance & Operation asset investments are grouped into two (2) major categories:

1. Preventative Maintenance & Operation Driven Investments

This program funds planned work for the testing, inspection and maintenance of the HOBNI distribution system.

2. Reactive Maintenance Operation Driven Investments

This program funds unplanned work for the testing, inspection and maintenance of the HOBNI distribution system.

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Although the nature of the above work is in some cases very different, the investments for each are developed using the common process shown in Figure 8. Details on the application of the process for Maintenance & Operation investments are provided below.

1. Determine Information Needs and Assemble Data

The Development Process begins by gathering information related to specific operating needs. The information about operating needs is typically related to corporate and operating strategies, asset condition information, business objectives, or process, market, and regulatory requirements. Given the nature of the Operations function, most needs are related to information system software and hardware components. Examples of specific needs that have been identified are:

- Improve restoration efforts and customer service by building and maintaining systems that leverage smart meter data to provide real-time outage data.
- Improve operating processes and tools to prepare for greater quantities of distributed generation and to enhance monitoring and control of the distribution system.
- Develop real-time system analysis tools to provide reliability assessments for real-time dispatch of the distribution.

2. Perform Assessments

Once information about operating needs is gathered, assessments of each need are conducted to:

- a. Determine the value (e.g. mitigation of risks, improvement in service) associated with addressing the need.
- b. Identify and examine potential alternatives for addressing the need, which depending on the specific need, may include:
 - Extending existing applications and systems to take advantage of enhanced capabilities that are already inherent in the existing tool set.

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- Purchasing commercial “off-the-shelf” software or more elaborate tools that may be considered either “best-in-breed” or specifically designed for electric utilities.
- Making better use of existing data or adjusting existing processes to achieve a desired goal.
- Replacing or upgrading hardware or software in anticipation of its end-of-life (e.g. withdrawal of vendor support). The results of the assessment in terms of both value and potential alternatives to addressing a need are then used to develop the plan.

3. *Develop Plans*

Once assessments are complete, detailed plans are developed in order to determine the scope, timing, and investments required to address needs. The investments are prioritized based on their value along with other factors such as the ability to strike a balance between sustaining existing operating facilities and developing new facilities. Once developed, the investments are included in the Investment Plan.

7.3. Asset Investment Prioritization

The individual investments resulting from the asset investment development process go through a risk-based prioritization process. The outcome of the risk-based prioritization process is a list of investments that is consistent with HOBNI’s strategic goals and takes into account levels of investment and associated risk mitigation against such goals as financial, operational, environmental, safety, regulatory and legal considerations.

The prioritization process converts HOBNI business values and key performance indicators in Table 9 into investment criteria and guidelines that are used for managing risk and facilitating trade-offs between investments. At the core of the process is a multi-criteria analysis, which is used to help decision-makers understand and quantify business risks and uncertainties, so that objective decisions can be made respecting priorities.

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Capital and OM&A investments are prioritized annually within the context of a five-year planning period. The output of the prioritization process is an Asset Management Plan proposal. The Asset Management Plan proposal is composed of a list of prioritized program/project investments, both capital and OM&A, developed in response to asset, customer and business needs. The process incorporates risk tolerances consistent with corporate direction and also considers resource, material, outage availability and other constraints. Once approved, the Investment Plan sets the company's direction with respect to the work programs going forward.

The Asset Management Plan is approved and in effect at a specific time of the year. The implementation of the Asset Management Plan is subjected to adjustments as new risks and/or opportunities emerge, or changes in conditions or shift in priorities throughout the year. A redirection process described in Section 6.3.5 of this report enables the incorporation of such modifications.

The investment prioritization process responds to factors such as aging infrastructure, customer demand for higher reliability, changing regulations, funding pressures, etc. Also, work execution considerations such as resources, materials and outage availability, effective work bundling, etc. are accounted for in the development of the proposed expenditures, which result in investment proposals that balance our asset needs with the various implementation constraints and are more accurate from an implementation perspective.

The prioritization process considers risk mitigation against the dimensions of the set of business values to select the proposed levels of investment leading to the preparation of an Asset Management Plan Proposal. This annual process consists of the following steps:

- Refine/validate business values;
- Develop multiple levels of investments to incrementally mitigated risks;
- Determine and evaluate the cost, benefits and risks for each level;
- Prioritize the levels across all areas; and

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- Assess the results and build the Asset Management Plan Proposal

These steps are described in the below section of this report.

7.3.1. Business Values

Business Values (BVs) are designed by HOBNI to enable the achievement of the Company's strategic goals, by forming the criteria against which investments are developed, risks are managed and trade-offs are facilitated between investments. The Business Values are measured by a set of key performance indicators (KPIs). The BVs represent the objectives that are to be factored into the decision-making process, while the KPIs represent how the impact on the BVs is to be measured.

Table 9 below shows the BVs and KPIs used in 2010 in the establishment of the 2011 - 2015 Asset Management Plan proposal.

The KPIs form the basis of the multi-criteria analysis used to prioritize investments by providing the dimensions for consideration when assessing the degrees of risk and the risk mitigation that each proposed investment level provides against each of the BVs. The process incorporates a probability-severity-of-outcome risk matrix to determine the impact ratings for each BV. The Probability scale ranges from Remote to Very Likely and Severity of Outcome scale ranges from Minor to Catastrophic.

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Business Value	Measure/Key Performance Indicator
Safety & Environment	<ul style="list-style-type: none"> • Employee: workforce safety • Environmental performance • Public safety
Financial	<ul style="list-style-type: none"> • Net Income • Credit Worthiness • Value of Enterprise
Regulatory Relationship	<ul style="list-style-type: none"> • Credibility with regulators & authorities • Obtaining the required approvals and or permits
Customer/Reliability	<ul style="list-style-type: none"> • Distribution reliability • Distribution system security • OEB SQI index • Customer satisfaction: large and mid customers (industrials and generators) • Customer satisfaction: residential and small business customers
Business Efficiency	<ul style="list-style-type: none"> • Productivity • Employee skills: attracting, developing and retaining key competencies • Work Program accomplishment, including Distribution plan short-term initiatives

Table 9 – HOBNI Business Values & Performance Indicators

7.3.2. Multiple Investment Levels

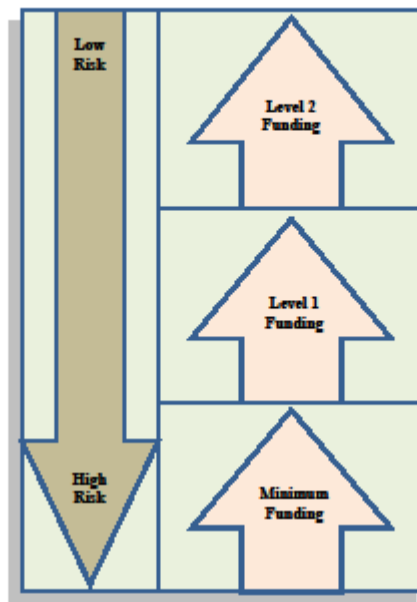
Customers, asset and business needs, risks and objectives guide the ongoing planning activities. Investment proposals are developed to address these needs, risks and objectives, and are then incorporated into the prioritization process. The scope and levels of the investment - and the accomplishments those levels of investment deliver - vary depending on the level of risk mitigated.

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HOBNI's work prioritization process is based on a risk mitigation approach and is consistent with widely accepted Asset Management Standards such as PAS 55 issued in 2008 by the Institute of Asset Management in collaboration with the British Standards Institute. The approved business plan, which incorporates the Asset Management Plan, represents an aggregate set of investments which balance needs with constraints with the target of achieving the Corporation's business values and objectives.

The approach is illustrated in Figure 9 below.

Figure 9 – Accomplishment Levels versus Risk



The accomplishment levels are established and evaluated for a period of five years to allow for, among other things, the long-term management of resources. However, short-term constraints such as scheduling of skilled staff, availability of materials, or availability of outages, are also considered when establishing the levels of work that are undertaken.

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Minimum Levels of investment, as illustrated in Figure 9, are those required to avoid unacceptable risk. The Minimum Level of investment is neither a sustainable level of investment nor a desirable target level of investment. The Minimum Level is an extreme lower level boundary condition used for investment planning purposes. This level is used as a foundation upon which additional investments at higher levels are layered with the objective of mitigating risk to a prudent residual level.

As noted earlier, risk is assessed over a 5-year planning horizon. That is, the Minimum Level of investment is intended to maintain the Company on the horizon of unacceptable risk over and just beyond the 5-year planning horizon. Considerations of risk and risk mitigation are probabilistic in nature. If an area of HOBNI's business were limited to only Minimum Level of investment over the planning period, it is very probable that an unacceptable risk would be realized.

Further, in the absence of any specific risk tied to a shorter timeframe within the 5 year planning horizon, specific investments may be rescheduled from one time period to another within the 5-year planning horizon. HOBNI would do so in response to drivers such as execution constraints comprising critical resource limitations or availability of outages and with due care that such a rescheduling would limit any material deterioration of associated risk.

In the short term, the investment required to mitigate risk to a prudent residual level may not be achievable because of factors such as shortages of critical work execution resources. As a result, a lower investment plan may need to be undertaken over the short term while additional resources are secured and brought to bear on the overall investment requirement.

Increasing levels of accomplishment (which in turn represent decreasing levels of risk to the BVs) are established for each area of the company. For example, increasing the levels of investment funding, so that 1,000 or 2,500 or 5,000 substandard wood poles are replaced per year over a 5 year period, would result in a progressive lowering of risks

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related to reliability and safety. In this example, replacing fewer substandard wood-poles per year would represent unacceptable financial and regulatory risks after the 5 year period, a deterioration of customer reliability and an unacceptable safety risk to the organization.

7.3.3. Investment Costs, Benefits and Risks

Total funding requirements to carry out the accomplishments established for each level of investment are determined using current year costs as the basis for comparison. Where appropriate, linkages between particular investment areas are taken into consideration. For example, additional vegetation management accomplishments should over time reduce the number and extent of trouble calls and damage during storms, thus reducing the future funding required for trouble calls and storm damage. These linkages are factored into the plans for those investment areas to determine the total net cost used in the resulting Asset Management Plan.

The benefits of each investment are determined by its ability to mitigate risk to the BVs. The KPIs provide a common set of criteria to measure the impact, or consequence, of the investment for the BV. However, risk is the product of the consequence and the probability of occurrence, so this probability of occurrence also has to be established. BV risk is identified in a two-dimensional table as shown in Table 10. Using this approach, the change in risk for each BV as a result of the investment is established.

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Table 10 – Business Value Evaluation Matrix

	Minor	Moderate	Major	Severe	Worst Case
Very Likely (>=95%)				Unacceptable Risk Zone	
Likely (65% to <95%)					
Medium (25% to <65%)			Decreasing Risk		
Unlikely (>=5% to <25%)					
Remote (<5%)					

7.3.4. Investment Prioritization

The needs, objectives, accomplishments, costs, and risk assessment for each level of accomplishment are documented. This information is then reviewed by HOBNI senior managers and other stakeholders within HOBNI. The quality control review ensures the full integration of the numerous investments and uniformity in the use of the risk assessment model. Particular attention and challenge is given to the proposed Minimum level of investment, given its significance.

The information provides the necessary cost and risk mitigation data required to conduct the risk-based prioritization process. The prioritization process selects one of several levels of investment for each investment area based on that level’s ability to mitigate risk to the BVs. The aggregation of work programs and projects that define the various selected level yields the preliminary Asset Management Plan Proposal.

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The preliminary Asset Management Plan Proposal is reviewed by senior management before the final Asset Management Plan and associated funding requirements are established. Senior management's review takes into consideration the associated impacts on customer rates, the ability to accomplish the proposed work in light of known constraints (e.g. labour, material, engineering resources), the financial health of the company, as well as the residual risk to the business (i.e. the risk to the BVs that remains after the investments are made).

7.3.5. Asset Management Plan and Redirection

While the Asset Management Plan is the product of extensive planning and analysis, implementation of the plan must be done in a manner that is dynamic and flexible. Redirection of approved investments may be required for a number of reasons, including changing customer needs, changing asset priorities based on new information, changing external requirements and major events (e.g. extensive storms and equipment failures). This is why implementation of the Asset management Plan throughout the year may vary from the plan as new risks or opportunities emerge, and due to changes in conditions and shifts in priorities. This redirection of work allows appropriate adjustments to be made to the work originally identified in the Asset Management Plan. As an example, distribution line emergency restoration work required to repair damage caused by storms or equipment failures can be significant in a given year and may necessitate the redirection of funds and field resources from other investment areas to correct the unexpected and significant damage.

7.4. Asset Investment Approval & Control

Once the preliminary plans have been accepted at the proof-of-concept stage and have gone through the investment prioritization process described in section 6.3 of this report, detailed analysis of the preferred alternatives and costs is completed for individual

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projects and programs and business cases based on the detailed analysis and cost estimates are prepared for review and approval by the HOBNI senior management team.

7.4.1. Project and Program Approval

Once the overall Asset Management Plan has been prioritized and reviewed, individual project and program proposals are developed and assessed. Such factors as the need for the investment including the implications of not doing the work, the anticipated results and the recommended solution and its cost are all considered. In determining the recommended solution, alternative approaches and project risks are considered. The proposals are then reviewed in a series of steps at the senior management levels, depending on the dollar limit and the significance of the investment. Strategic investments are reviewed and approved by the HOBNI Board of Directors.

7.4.2. Monitoring and Control

Each month, management monitors year-to-date expenditures and accomplishments as well as projected year-end expenditures. Deviations from plans are identified and corrective action taken. In the event that spending on a project is expected to be materially different from the amount originally approved, a variance review is prepared. Projects which cannot be re-justified are either scaled back, cancelled or otherwise adjusted to conform to the new situation. Variances on programs are reviewed on a monthly basis by the senior management team. Any resulting re-direction of resources is approved at the HOBNI senior management level.

Asset Investment Categories & Budgets

8. Asset Investment Categories & Budgets

In organizing and planning projects, HOBNI has four main asset investment categories for projects; Sustainment Driven Investments; Development Driven Investments; Maintenance & Operations Driven Investments; and Other Services Driven Investments. Each of these categories can have a Capital and/or OM&A component.

8.1. Sustainment Driven Investments

Sustainment Driven Investments are defined as projects required for maintaining the existing capability of the distribution system so that it continues to function as originally designed.

Sustainment Driven Investment projects deal with replacement of assets at end of life, i.e. transformer replacements, subdivision rebuilds and pole replacements. The purpose of maintaining the long-term and short-term functionality of assets is to ensure public and employee safety, to comply with regulations and contractual requirements, and to provide a level of reliability that is aligned with corporate objectives.

Electrical Distribution assets are subject to deterioration that will eventually impede their ability to function as originally designed. Asset deterioration depends on factors such as geographic environment and location, utilization, age, weather, and maintenance practices. As assets deteriorate, equipment performance and reliability usually suffer, resulting in increased environmental risks, an increase in potential safety hazards to the public and employees, and decreased system reliability. Ultimately, assets deteriorate to the point that they are no longer able to perform their function(s) in a cost-effective manner, at which point replacement becomes necessary.

Sustainment Investment programs fund both Proactive (planned) work and Reactive (unplanned) work. Proactive work is required to preserve functionality of the existing distribution system by replacing deteriorated components with new components that are designed to perform an equivalent function. The identification of specific assets for

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possible replacement is based on data collected during the Asset Condition Assessment (ACA) process described in Section 5.3 of this report. The condition of assets is one consideration in determining replacement. Other factors include historic performance, asset criticality, availability of spare equipment, load growth, and local customer impacts as well as the business drivers that form part of the project prioritization process described in Section 7.4. The prioritization process allows all distribution programs to be ranked and compared to one another so that investments can be directed to where they provide the maximum business value.

Reactive capital work involves asset replacement that is required during emergency service interruptions. The varying nature of this work requires HOBNI to forecast costs based on historical averages with adjustments made to reflect recent changes in expenditure patterns or work requirements.

HOBNI maintains infrastructure, equipment and resources to respond to emergency interruptions within the timelines specified by the OEB Distribution System Code. Planned work on the other hand, does not generally pose the same degree of urgency and is scheduled over time, based on knowledge of the condition of the assets.

8.1.1. Proactive Driven Investments

8.1.1.1 Station & SCADA Equipment Replacement Program

This investment is required to maintain customer reliability and performance of stations, as well as ensuring employee safety by addressing end-of-life station assets. Station assets which include transformers, circuit breakers and structures require replacement because equipment and structures lose their capability to perform as intended based on deteriorating conditions as a result of ageing and utilization. Station equipment replacement investments are prioritized based on asset condition assessment (ACA) results, historical performance, availability of spares and other criteria that includes safety and improvements in design standards.

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2011 SUBSTATION PROJECTS - \$868,678

In 2011 the Substations Department plans to install a new power transformer at MS20 replacing the end of life T2 transformer as part of a multi-year Transformer replacement plan started in 2010. The company will also continue with its 13.8KV breaker retrofit / upgrade program at MS10 and MS14 that began in 2009.

Other significant projects include:

- A/C units will be installed at MS14 and MS10 to control humidity in these stations preventing corona damage to the station bus.
- Relaying at MS10 is to be upgraded due to the existing hardware becoming obsolete. New SEL relays will be installed on all feeders as per HOBNI standards.
- A new high voltage thumper unit will be purchased for truck 81; this gives the ability to locate primary faults if truck 75 is not available.
- In 2011 HOBNI will begin funding the upgrade of the VCOM radio system. This is a multi-year project that should end in 2014.

2011 SCADA PROJECTS - \$107,346

In 2010, the P&C Department moved ahead with several initiatives designed to increase system reliability and improve SCADA functionality. In 2011, the plan is to retro-fit obsolete equipment at several fibre based SCADA installations as well as continuing the expansion of our 2.4 GHz communication network. HOBNI also plans on replacing the obsolete HMI equipment at JYTS as well as upgrading reclose block systems at MS 1, 2, 3, and 19.

8.1.1.2 Distribution Equipment Replacement Program

Distribution equipment deteriorates over time and must be replaced when reliability and safety risks reach unacceptable levels. Distribution equipment is exposed to various

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adverse conditions and failure can also occur as a result of a number of causes, some of which are described in the following:

- Mechanical stress on operating linkages, operating rods, springs and contacts due to wear-and-tear during fault interrupting conditions;
- Exposure to contaminants such as salt and pollutants, and extreme environmental weather conditions;
- Chemical contamination such as dust and powder produced by arc erosion during switching and fault interruptions; and
- Thermal stress because of localized heating and varying load currents.

2011 Insulator Replacement Program - \$264,237

HOBNI's overhead distribution system ranges in age and incorporates a diverse range of line post insulators. Certain types of porcelain line post insulators have failed unexpectedly during line construction activities increasing worker risk during overhead line projects. This matter was raised in priority and awareness among staff and employees and the company has implemented an insulator replacement program to eliminate these units from service. It is expected that it will require several years to eliminate these units from service.

2011 Three-Phase Pole-top Transformer Replacement Program - \$158,542

The company currently owns and operates 404 three-phase configured pole mounted transformers of varying ages and ratings. The three-phase transformer configuration is typically required to service commercial or industrial load centers where loss of supply may have a higher impact on customer service and reliability compared to single-phase applications. For this reason HOBNI has implemented a proactive three-phase pole-top transformer replacement program to replace transformers before failure. The company uses transformer loading history and information collected via visual inspections to identify and rank units for replacement. Funding is based on probability of failure.

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2011 Three-Phase Pad-mounted Transformer Replacement Program - \$158,542

HOBNI owns and operates 723 three-phase configured pad-mounted transformers of varying ages and ratings. The three-phase transformer configuration is typically required to service commercial or industrial load centers where loss of supply may have a higher impact on customer service and reliability compared to single-phase applications. For this reason HOBNI has implemented a proactive three-phase pad-mounted transformer replacement program to replace transformers before failure. The company uses transformer loading history and information collected via visual inspections to identify and rank units for replacement. Funding is based on probability of failure.

2011 Three-Phase Vault Transformer Replacement Program - \$369,931

The company currently owns and operates 1447 three-phase configured vault type transformers of varying ages and ratings. The three-phase vault type transformer configurations service a variety of load centers including high rise residential, commercial and industrial load centers where loss of supply may have a higher impact on customer service and reliability compared to single-phase applications. HOBNI has implemented a proactive vault type transformer replacement program to replace transformers before failure. The company uses transformer loading history and information collected via visual inspections to identify and rank units for replacement. Funding is based on probability of failure. The company has adopted a philosophy to replace vault type transformers with outdoor pad-mounted transformers wherever possible. This provides improved worker safety and enhanced primary elbow switching capabilities due to the presence of under oil switching devices provided in the three-phase pad-mounted transformers.

2011 Three-Phase Pad-mount Switchgear Replacement Program - \$132,118

HOBNI currently owns and operates 298 pad-mounted switchgears. These devices represent a significant asset, providing 200 distribution connections for load centers and load break switching capabilities from the bulk power feeder class infrastructure. The majority of these units incorporate "air" as the insulating medium with a small number of older units utilizing "mineral oil" as the insulating medium. Failures of pad-mounted switchgear impact feeder class systems directly and as such have a high impact on

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customer outage minutes and respective reliability indices. The company uses information collected via visual inspections to identify and rank units for replacement. Funding is based on probability of failure. Replacement quantities are relatively low due to proactive measures taken by the company to maintain these devices in a reliable condition.

2011 Three-Phase Load Interrupter Switch Replacement Program - \$158,542

The company currently owns and operates 695 overhead three-phase load interrupting switches. These devices represent a significant asset, providing load break/make switching capabilities in the overhead bulk power feeder class infrastructure. Failures of these switches impact feeder class systems directly and as such have a high impact on customer outage minutes and respective reliability indices. The company completes an annual visual inspection and infrared scanning program of overhead load interrupting switches. Defects and heating anomalies on these switches are promptly analyzed and corrected, which contribute to improved long term performance. As a result replacement requirements are minimized.

2011 Wood Pole Replacement Program - \$66,667

HOBNI currently maintains approximately 12,000 standing wood poles in the distribution system. These poles range in age, size and species and represent a significant asset in delivering power to the customers of Brampton. HOBNI last completed a 5 year wood pole testing program in 2000. The results of this program coupled with other known data, was used in the Asset Condition Assessment (ACA) and capital replacement plan for wood poles. The forecast dollar amount allocated for wood pole replacement in 2011 is lower than that recommended in the ACA. This is due to the fact that a significant number of aged poles are removed from service under the annual roadway improvement projects initiated by local road authorities.

2011 Single-Phase Transformer Replacement Program - \$688,636

This program involves replacement of single-phase transformers in various installation scenarios. The total number of units in service is 13,026 broken down as follows:

- Pole top 1,544

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- Pad mounted 11,331
- Submersible 151

Single-phase transformers typically service smaller residential and light commercial loads, where loss of supply has a minimal impact on customer service and reliability. As a result these units are “run to failure”. Funding is required for replacement costs based on estimated failure rates.

8.1.1.3 Cable Rehab/Replacement Program

HOBNI has obligations as a public utility to deliver and maintain reliable electrical energy with minimal service interruptions to its customers. Therefore the system must be kept reliable, robust and well maintained to perform as designed under all normal conditions. The artery used to deliver power to the system is the underground cable. Underground cable failures are one of the leading causes of equipment failures in the distribution system. Typically life expectancy for underground cable is approximately 35 years. Cables installed prior to 35 years were not jacketed and are more susceptible to failures.

Many of the failures in cables can occur for one or more of the following reasons:

- Age of the cable,
- Insulation deterioration resulting from long term exposure to high temperatures due to sustained loading,
- Moisture and other deleterious factors,
- Physical damage from diggings or poor installation methods used by contractors,
- Exposure to high currents during cable faults.

Each year after the summer peak, HOBNI reviews the cable failure rates in the City of Brampton and determines the areas to rebuild. As a part of the program, HOBNI also replaces transformers and switchgears to ensure the area is fully rehabilitated.

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Primary Feeder Rehabilitation/Replacement Program - \$1,486,330

The 2011 replacement program focuses on cables which have experienced faults exceeding the maximum allowable threshold, elevating their status to replacement. HOBNI focuses on “Feeder” or “Bulk Load” cable system performance as these cable systems have a much higher impact on customer outages and respective reliability indices.

Primary Distribution Cable Rehabilitation/Replacement Program - \$557,374

Distribution cable faults have a much lower impact on system performance and reliability. However, there are approximately three and half times as much distribution class cables vs. feeder class cables in HOBNI’s system. With 2246 km (distribution class) vs. 665 km (feeder class) cables in operation there is a need for a levelized and systematic approach to distribution cable rejuvenation or replacement. Failure to implement and maintain a program to address this category would result in increasing reactive cable fault related costs and lower reliability performance. HOBNI has taken a conservative approach in funding allocations for distribution class cable replacement. This decision was based on evolving cable rejuvenation technologies emerging in the market place that are being touted as being a more cost effective measure for aging cable systems.

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8.1.2. Reactive Driven Investments

Reactive capital investment includes funds for repair/replacements of failed distribution components, and generally does not involve engineering design. Based on past practice and trending, funds are allocated to capture all expenditures associated with this work. The main goal for allocating these funds is to maintain system reliability to an acceptable standard. Reactive capital funds allocation is divided into two parts; overhead and underground. Both categories of work demand asset replacement due to unforeseen failure and therefore are not planned as specific projects. These investments are usually of an urgent nature and are driven by a need to maintain system reliability to an acceptable standard.

8.1.2.1 Reactive Overhead Equipment Replacement Program

The overhead work includes replacement of poles, wires, transformers and overhead line hardware. The forecast for these investments is based upon historical performance and trending data.

2011 Emergency Overhead Equipment Replacement Program - \$266,667

This is an annual pool allocated to respond to various equipment failures and customer demand projects generating overhead capital expenditures occurring within the budget year. This category is also used for smaller un-allocated projects costing less than 25,000.

8.1.2.2 Reactive Underground Equipment Replacement Program

The underground work includes replacement of cables, splices, joints, transformers, switches and civil infrastructure. The forecast for these investments is also based upon historical performance and trending data.

2011 Emergency Underground Equipment Replacement Program - \$307,692

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This is an annual pool allocated to respond to various equipment failures and customer demand projects generating underground capital expenditures occurring within the budget year. This category is also used for smaller unallocated projects costing less than 25,000.

8.1.3. Summary of Sustainment Investment Costs

Sustainment Investment Costs (\$000's)					
P – Proactive Driven R – Reactive Driven	Forecast				
	2011	2012	2013	2014	2015
Capital					
Station & SCADA Equipment Replacement (P)	\$976	\$856	\$914	\$1,054	\$804
Distribution Replacement (P)	\$1,997	\$2,074	\$2,186	\$2,266	\$2,376
Cable Rehabs and Replacements (P)	\$2,044	\$2,137	\$2,267	\$2,490	\$3,344
Emergency O/H Replacements (R)	\$267	\$272	\$277	\$283	\$289
Emergency U/G Replacements (R)	\$308	\$314	\$320	\$327	\$333
Total Capital (X)	\$5,591	\$5,652	\$5,965	\$6,419	\$7,146
OM&A and Removals:					
Station Equipment Replacement (P)	\$10	\$7	\$8	\$12	\$5
Distribution Replacement (P)	\$165	\$171	\$180	\$187	\$196
Cable Rehabs and Replacements (P)	\$56	\$59	\$62	\$69	\$92
Emergency O/H Replacements (R)	\$22	\$22	\$23	\$23	\$24
Emergency U/G Replacements (R)	\$22	\$22	\$23	\$23	\$24
Total OM&A and Removals (Y)	\$275	\$281	\$296	\$313	\$340
Gross Investments (X+Y)	\$5,866	\$5,934	\$6,261	\$6,733	\$7,486
Recoverables					
Total Recoverables (Z)	\$0	\$0	\$0	\$0	\$0
Net Investments (X+Y-Z)	\$5,866	\$5,934	\$6,261	\$6,733	\$7,486

Table 11

Asset Investment Categories & Budgets

8.2. Development Driven Investments

Development Driven Investments are required to connect new load and generation customers and to enhance existing, or construct new, distribution assets. These investments ensure the system's capability to provide a secure and reliable supply of electricity in response to new large load customer connections, cumulative system-wide load growth and system demands associated with new generators. Growth is predicted through the combined use of load-forecast models, historical growth patterns, and specific load measurements taken at times of heavy loading during the year.

Development Driven Investments fund three (3) types of programs; Growth Driven, Customer Driven and Regulatory Driven investments.

Growth Driven work includes projects designed to increase the capability of existing lines and stations, or to construct new lines and stations in response to system load growth forecasts.

Customer Driven projects involve work required to connect new load or generator customers, or to modify customers' present service, as required. Customer Driven projects also include work to meet commitments with the City of Brampton, Region of Peel and Ministry of Transportation in response to infrastructure projects or road widening projects. The varying nature of this work requires HOBNI to forecast costs based on historical averages with adjustments made to reflect recent changes in expenditure patterns or work requirements.

Regulatory Driven Investments are defined as projects which are mandated by electricity regulations. Projects of this nature include wholesale metering upgrades per IESO market rules and OEB sponsored initiatives such as Smart Metering and Smart Grid programs.

Asset Investment Categories & Budgets

8.2.1. Growth Driven Investments

8.2.1.1 Feeder Expansions, Extensions & Reinforcements

Investments in Feeder Expansions, Extensions & Reinforcements provide for new and modified distribution system facilities to accommodate increases in customer load, system modifications and additions to improve system reliability, as well as additions to the system that will improve operations and asset life cycle planning. Not proceeding with these types of investments would lead to overloaded assets and the inability to serve new load presenting reliability, customer, regulatory and safety risks.

2011 Jim Yarrow TS Expansion 27.6kV Egress Program - \$61,930

HOBNI will extend the existing Jim Yarrow TS 25M12 circuit along Steeles Ave from Creditview Rd. to Mississauga Rd in 2011 as part of a program to provide feeder contingency and sectionalizing capability for an existing circuit servicing an industrial zoned area in the south west quadrant of the City.

2011 Goreway TS Expansion - 27.6kV Egress Program - \$1,094,104

In 2011, HOBNI will install a new feeder circuit egress at Goreway TS. The 136M18 will be installed to Cottrelle Blvd. to provide a single contingency connection to the existing 136M46. Also in 2011, an existing Goreway TS feeder will be extended on Countryside Dr. from Everglade to the Gore Rd. These projects are required to provide new capacity for load growth driven by residential development in the north east quadrant of the City, and to improve feeder contingency and sectionalizing capability providing overall improved reliability for the area serviced by these circuits.

2011 Expansions & Extensions for New Residential Subdivisions - \$495,443

HOBNI allocates annual funding for the installation of 600 amp feeder class distribution facilities within residential development projects. This funding is used to capitalize on the opportunity to install HOBNI feeder class facilities in a joint trench with new residential subdivisions. This work is required to extend feeder class systems for bulk power delivery systems to service the new developments lands. Actual timing of this

Asset Investment Categories & Budgets

expenditure is controlled by the progress of civil works undertaken in the respective developments as HOBNI infrastructure is placed in a joint-use fashion with the installation of shallow services.

8.2.2. Customer Driven Investments

Customer Driven Investment programs fund programs such as New General Service, Developer Works & New Connections, High Density Residential & Upgrades, Road Widening, Wholesale Metering and New Generator Connections.

8.2.2.1 New General Services

These projects are required to meet the on-going demand to connect new industrial/commercial customers to HOBNI's Distribution System and upgrade services of existing customers. Each year, HOBNI connects new customers to the distribution system and upgrades existing customers. As a part of the obligation in HOBNI's electricity distribution license and the distributor's responsibility in the Distribution System Code, HOBNI is required to connect all customers on a non-discriminatory basis, upon written request for connection. A service upgrade occurs when an existing customer requires a larger service entrance. A service upgrade requires the preparation of a service layout and replacement of secondary service cables. Transformers may also have to be upgraded and meters replaced.

2011 NEW GENERAL SERVICES - \$6,354,063 (Net = \$668,849)

The 2011 capital budget provides service to new commercial and industrial customers. The costs to install new infrastructure and to upgrade the capacity of existing facilities to service new large commercial and industrial customers are captured here. Expenditures in this category are driven by customer commitments and tend to vary with the level of economic activity in the Region. HOBNI will recover \$1,137,043 as capital contribution and \$4,545,171 as upstream costs from the developer based on normal cost sharing arrangements.

Asset Investment Categories & Budgets

8.2.2.2 Developer Works & New Connections

These projects are required to meet the on-going demand to connect new subdivisions to HOBNI's distribution system and capital contribution refunds to the developer. Each year, HOBNI connects new subdivisions to the distribution system. As a part of the obligation in HOBNI's electricity distribution license and the distributor's responsibility in the Distribution System Code, HOBNI is required to make an "Offer to Connect" to all customers on a non-discriminatory basis, upon written request for connection. For customers that require expansion of the distribution system in order to connect a subdivision, a discounted cash-flow model is used to determine developer contributions. The capital contribution is based on any shortfall between future revenues and the cost of connection, expansion and reinforcement.

2011 NEW RESIDENTIAL SUBDIVISIONS – \$6,333,419 (Net = \$2,146,922)

The 2011 budget is based on City of Brampton projections for the addition of 4500 homes. This work includes the installation of underground electrical distribution facilities for new Developments within the City of Brampton. HOBNI will recover \$3,220,383 as capital contribution and \$966,115 as upstream costs from the developer based on normal cost sharing arrangements.

8.2.2.3 High Density New Residential & Upgrades

These projects are required to meet the on-going demand to connect new high density residential subdivisions to HOBNI's distribution system and capital contribution refunds to the developer. As a part of the obligation in HOBNI's electricity distribution license and the distributor's responsibility in the Distribution System Code, HOBNI is required to make an "Offer to Connect" to all customers on a non-discriminatory basis, upon written request for connection. For customers that require expansion of the distribution system in order to connect a subdivision, a discounted cash-flow model is used to determine developer contributions. The capital contribution is based on any shortfall

Asset Investment Categories & Budgets

between future revenues and the cost of connection, expansion and reinforcement. A service upgrade occurs when an existing customer requires a larger service entrance. A service upgrade requires the preparation of a service layout and replacement of secondary service cables. Transformers may also have to be upgraded and meters replaced.

2011 NEW RESIDENTIAL - HIGH DENSITY – \$494,205 (Net = \$260,108)

This category is also driven by customer commitments and varies with the level of economic activity in the Region. HOBNI will recover \$234,097 as upstream costs from the developer based on normal cost sharing arrangements.

8.2.2.4 Road Widening

This is a demand program that covers joint-use work that HOBNI is obligated to provide in order to meet its contractual obligations to joint-use partners such as the City of Brampton, Ministry of Transportation and the Region of Peel.

This program also covers line relocation work that must be carried out at the request of Municipal and Provincial road authorities under applicable legislation and Ministry of Transportation guidelines. This work covers changes or upgrades to HOBNI distribution assets to accommodate the needs of joint-use partners. The requests result in pole class and height changes to accommodate increases in the pole loading and to obtain appropriate ground clearances for public safety.

Also HOBNI distribution occupies road allowances at no cost and in return is required to install, relocate or reconstruct its facilities in order to accommodate the specific requirements of the road authorities. The typical requests are to relocate lines to accommodate changes to roads, highways and bridges. The recoverable portions of the relocation costs are dependent on the specific circumstances of each project.

These projects are typically driven by other authorities' schedules for road works and vary in location. They are often difficult for HOBNI to predict since these projects are

Asset Investment Categories & Budgets

dependent on other authorities getting necessary approvals or property in order to construct in the Right-of-Way.

2011 ROAD WIDENINGS - \$5,482,792 (Net = \$3,225,172)

These projects include capital expenditures to relocate HOBNI facilities due to road widening obligations. HOBNI will recover \$2,257,620 as contributed capital from the road authorities based on normal cost sharing arrangements. Relocations range from road widening, intersection improvements, bridge construction and relocations to permit improvement to sidewalks and streetscapes. Costs sharing for these projects are dictated by the Public Service Works on Highway Act for municipal projects, and by the MTO Corridor Control and Permit Procedures Manual for provincial highways. Scheduling and implementation of these projects are beyond HOBNI's control. The company is obligated to respond to requests for the relocation of existing infrastructure in accordance with various municipal and provincial legislation as describe above.

8.2.2.5 Metering

2011 METERING PROGRAM - \$1,708,000

The metering expenditures associated with the 2011 projects are consisted of projects supporting new commercial, industrial and residential customers along with costs associated with wholesale metering upgrades. Additional funds were spent on various regulatory requirements.

These projects are defined as follows:

- Wholesale Metering Installations and Upgrades \$1,150,000 - HOBNI is responsible to ensure that all wholesale metering installations used for settlements associated with the IESO-administered market are registered with the IESO as per the IESO Market Rules Chapter 6, section 3.2. In addition, this metering must be compliant with Measurement Canada's Electricity & Gas Inspection Act. This requires that all meters and associated equipment such as instrument transformers be approved by Measurement Canada. If any of the Instrument Transformers are

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not approved by Measurement Canada, the non-compliant units must be replaced or approved at the earliest seal expiry date. As per the above requirement, HOBNI will have to upgrade the wholesale metering and instrument transformers at the 27.6 kV bus located inside Goreway TS. In addition, wholesale metering points from three feeders located inside Bramalea TS will be relocated outside of the station.

- **New Industrial and Commercial Meter Installations and Upgrades \$315,000** - HOBNI is responsible for the installation, testing, and commissioning of new and existing simple and complex metering installations.
- **Meter Re-verification Program \$54,000** - Costs associated with this project are a direct result of upgrading and replacing damaged or obsolete industrial and commercial meters and instrument transformers to ensure that all equipment is compliant with Measurement Canada.
- **New Residential Metering \$189,000** - HOBNI is expecting approximately 1,450 new customers in 2011. In order to service these customers, HOBNI will have to install new meters on all of these customers.

8.2.2.6 New Generator Connections & Expansions

In accordance with its Distribution license, HOBNI is required to connect new generators that comply with the requirements of the Market Rules, the Distribution System Code, and all applicable codes, standards, and rules. The number of new generators applying for connection, and the potential number that will actually connect have grown immensely due to the provincial government's initiatives to promote renewable distributed generation, and the resulting FIT program implemented by the Ontario Power Authority (OPA).

2011 Generator Connection & Expansions Program - \$165,148

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These projects are additions or modifications to the distribution system in response to a request to connect one or more generation facilities. This includes increasing the length of the main distribution system and rebuilding existing lines (i.e. single-phase to three-phase upgrades, re-conductoring, overbuilding or underbuilding) or voltage conversions. HOBNI will either cover the full cost of an expansion, if it is part of an OEB approved plan, or will cover expansion costs up to a predefined cap (i.e. \$90,000 per MW) in the case of a specific generator connection not covered by the Board approved plan.

8.2.3. Enhancement & Improvement Driven Investments

8.2.3.1 Voltage Conversion Program

Voltage Conversion investments are required to address end-of-life 4.16kV assets and upgrade them to 27.6kV to mitigate reliability and safety risks associated with the 4.16kV system and to reduce system losses. Not proceeding with these types of investments will result in reliability and customer dissatisfaction risks associated with potential lengthy outages.

4.16kv to 27.6kV Conversion Program - \$317.084

HOB currently operates an aged 4.16 kV distribution system. This system is nearing the end of its serviceable life. In 2011 the 4.16 kV conversion program will replace the 4.16 kV distribution system on Hansen Rd, Orenda Rd, and Clarence St areas with a modern 27.6 kV distribution system. This involves replacing a combination of overhead and underground distribution facilities with a new single contingency primary distribution system needed to improve service reliability to this area. This work is also a prerequisite to the decommissioning of MS-8, a 40 year old outdoor municipal substation. This is in line with the company's objective of phasing out obsolete low voltage distribution systems and modernizing those systems to 27.6 kV.

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8.2.3.2 Generator Enabling Improvements Program

In accordance with its Distribution license, HOBNI is required to connect new generators that comply with the requirements of the Market Rules, the Distribution System Code, and all applicable codes, standards, and rules. The number of new generators applying for connection, and the potential number that will actually connect have grown immensely due to the provincial government's initiatives to promote renewable distributed generation, and the resulting FIT program implemented by the Ontario Power Authority (OPA).

2011 Generator Enabling Improvements Program - \$82,574

Renewable Enabling Improvements (REI) are investments made to enhance the system and accommodate increased levels of generation. This includes modifications to manage two-way electrical flow, additions of protection equipment and voltage regulating equipment. REI investment costs will be the responsibility of HOBNI.

8.2.3.3 Smart Grid Program

HOBNI will be exploring the concepts and technology associated with Smart Grid. This will help HOBNI facilitate the Government of Ontario's green initiatives and at the same time, remain consistent with its corporate goals. This investment is required to innovate, test and prove new emerging technologies that will allow implementation of Smart Grid solutions in a safe and proactive manner across the distribution system.

Asset Investment Categories & Budgets

2011 Smart Grid Program \$619,304

HOBNI proposes projects that would involve research and pilots into such technologies as real time monitoring, control devices, remediate faults and outage management & restoration systems. Several projects that will commence in 2011 include:

- *Smart Meter Integration with OMS* - In 2011, HOBNI plans on integrating the Smart Meter system with the Outage Management System (OMS). Smart meter data will be transmitted from the Smart Meter system to the OMS system in real time, allowing the prediction engine in OMS to accurately pinpoint failed equipment on the distribution system. It will also identify when the meter is removed and will help identify theft of power or meter tampering issues.
- *Feeder Automation Equipment* - HOBNI continues to investigate and install automation equipment on our distribution feeders. These remotely operable switches will replace existing air insulated manual equipment. In 2011 new solid dielectric, remotely operable, sectionalizing switches will be installed; these units will allow for dynamic system load control. Also, in 2011 solid dielectric recloser equipment will be installed to allow for automatic feeder sectionalizing during faults.
- *Distributed Generation* - HOBNI is required to monitor distributed generation installations with capacities that are greater than 250 kW. Exploratory work has been initiated on how best to collect all required metering and Supervisory Control and Data Acquisition (SCADA) data, with hopes that a single metering / SCADA solution can be utilized. In 2010 equipment from PML will be investigated for suitability. This equipment is to communicate to the SCADA master via Bell I/P modems in real time. This data will then be utilized by our Control Centre as well as sent to Hydro One Networks via our fibre-based ICCP master to master link.

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- *Safety / Security* - In 2009 a Municipal Substation (MS) security initiative was implemented. I/P based cameras were installed at three MSs and have proven to work well. These installations bring back real time video to the HOBNI Control Room. In 2010 this initiative is being expanded to increase the number of locations being monitored.
- *Communications Expansion* - As distribution automation increases on the system, HOBNI's communication network will require expansion. This work will involve expanding our fibre optic network, increasing the number of spread spectrum radio nodes (both 900 MHZ and 2.4 GHZ) as well as investigating new communication technologies. These new technologies may include secure I/P over the cellular network or Wi-Max solutions.

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8.2.4. Summary of Development Investment Costs

Development Investment Costs (\$000's)					
G – Growth Driven C – Customer Driven E – Enhancements & Improvement	Forecast				
	2011	2012	2013	2014	2015
Capital					
Egrets Expansions & Extensions (G)	\$1,651	\$2,973	\$3,076	\$1,796	\$1,651
New General Services (C)	\$6,354	\$6,480	\$6,613	\$6,746	\$6,880
New Residential Subdivisions (C)	\$6,333	\$7,064	\$8,039	\$6,821	\$6,090
New Residential High Density (C)	\$494	\$504	\$515	\$524	\$535
Road Widening (C)	\$5,483	\$4,913	\$5,615	\$4,913	\$4,211
Metering (C)	\$1,708	\$573	\$591	\$608	\$625
New Generator Connections & Expansions (C)	\$165	\$168	\$172	\$175	\$179
Voltage Conversions (E)	\$317	\$1,694	\$453	\$1,414	\$733
Generator Enabling Improvements (E)	\$83	\$84	\$86	\$88	\$89
Smart Grid (E)	\$619	\$632	\$644	\$657	\$670
Total Capital (X)	\$23,208	\$25,085	\$25,803	\$23,742	\$21,664
OM&A and Removals					
Customer Driven (E)	\$453	\$406	\$464	\$406	\$348
Enhancements & Improvements (E)	\$53	\$205	\$69	\$175	\$100
Total OM&A and Removals (Y)	\$506	\$611	\$533	\$581	\$448
Gross Investments (X+Y)	\$23,714	\$25,696	\$26,335	\$24,323	\$22,112
Recoverables					
Road Widening (Capital Contributions)	\$2,258	\$2,023	\$2,312	\$2,023	\$1,734
New Residential Subdivisions (Capital Contributions)	\$3,220	\$3,592	\$4,087	\$3,468	\$3,097
New General Service (Capital Contributions)	\$1,137	\$1,160	\$1,183	\$1,207	\$1,231
New Residential High Density (Upstream)	\$234	\$239	\$244	\$248	\$253
New Residential Subdivisions (Upstream)	\$966	\$1,078	\$1,226	\$1,040	\$929
New General Services (Upstream)	\$4,548	\$4,638	\$4,733	\$4,829	\$4,924
Total Recoverables (Z)	\$12,363	\$12,729	\$13,786	\$12,816	\$12,168
Net Investments (X+Y-Z)	\$11,351	\$12,968	\$12,549	\$11,507	\$9,944

Table 12

Asset Investment Categories & Budgets

8.3. Maintenance & Operations Driven Investment

The Maintenance & Operation Driven Investment funds two (2) types of work, the Preventative Maintenance & Operations (planned) and Reactive Maintenance & Operations (unplanned) programs. HOBNI's Maintenance & Operations strategy is to minimize reactive and emergency-type work through an effective planned maintenance program (including predictive and preventative actions). HOBNI's customer responsiveness and system reliability are monitored continually to ensure that its Maintenance & Operations strategy is effective. This effort is coordinated with HOBNI's capital project work, so that where maintenance programs have identified matters the correction of which require capital investments, HOBNI may adjust its capital spending priorities to address those matters.

8.3.1. Preventative Maintenance & Operations Program

This program funds planned work for the testing, inspection and maintenance of the HOBNI distribution system.

2011 PREVENTATIVE MAINTENANCE & OPERATIONS PROJECTS - \$892,150

In order to ensure the continued performance and reliability of the distribution system, HOBNI funds preventative type maintenance programs. Preventative maintenance is conducted under two types of maintenance programs, predictive and pro-active maintenance. Predictive maintenance involves the testing and inspection of equipment for a predetermined condition that anticipates failures and then undertaking maintenance tasks to pre-empt those failures. This type of maintenance typically relies on a scientific approach based on actual data. Pro-active maintenance typically involves cyclical inspection and maintenance tasks, which emphasize the preservation of asset performance over the life of the asset.

The following planned programs are scheduled for 2011:

- Dry icing of switchgears
- Inspection of underground and overhead plant.
- Cable Hi-pots.

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- Padmount Painting.
- Infrared scanning.
- Vault inspection and maintenance.
- Wood pole testing.
- Insulator washing.
- Tree trimming and removals.

8.3.2. Reactive Maintenance & Operations Program

This program funds unplanned work or expenses incurred in the operation, inspection and maintenance of the HOBNI distribution system.

2011 REACTIVE MAINTENANCE & OPERATIONS PROJECTS - \$3,104,794

The HOBNI Lines department is responsible for the field assets at the 4kV / 13.8kV / 27.6kV levels, required for maintaining power to its 131,000 residential and business customers in the City of Brampton. The field assets include approximately 16,600 poles, 2,231 km of overhead lines, 2468 km of underground cable and 15,600 transformers. This investment funds trouble calls and emergency repair/replacement of failed distribution components, and generally does not involve engineering design. The main goal for allocating this fund is to maintain system reliability to an acceptable standard.

The following unplanned programs are budgeted for 2011:

- Residential meter and meter base repairs.
- Isolations and Switching
- Residential service changes or upgrades
- Switch repairs
- Termination repairs
- Fuse replacements
- Primary overhead/underground repairs
- Secondary overhead/underground repairs
- Tree trimming and removals

Asset Investment Categories & Budgets

- Street light repairs
- Trouble calls
- Disconnects & reconnects
-

8.3.3. Summary of Maintenance & Operations Investment Costs

Maintenance & Operations Investment Costs (\$000's)					
P – Preventative Driven Maintenance & Operations R – Reactive Driven Maintenance & Operations	Forecast				
	2011	2012	2013	2014	2015
Capital					
Total Capital (X)	\$0	\$0	\$0	\$0	\$0
OM&A					
Preventative Driven Maintenance & Operations (P)	\$892	\$907	\$920	\$938	\$953
Reactive Driven Maintenance & Operations (R)	\$3,105	\$3,157	\$3,210	\$3,264	\$3,319
Total OM&A (Y)	\$3,997	\$4,064	\$4,130	\$4,201	\$4,272
Gross Investments (X+Y)	\$3,997	\$4,064	\$4,130	\$4,201	\$4,272
Recoverables					
Contributed Capital Padmount Painting (P)	\$99	\$100	\$102	\$104	\$105
Total Recoverables (Z)	\$99	\$100	\$102	\$104	\$105
Net Investments (X+Y-Z)	\$3,898	\$3,964	\$4,028	\$4,098	\$4,167

Table 13

Asset Investment Categories & Budgets

8.4. Other Services Driven Investment

Other Services consists of the sustainment and enhancement of existing equipment and infrastructure, including computer-related hardware and software and transport and work equipment as well as projects initiated to improve business support functions.

Other Services Driven Investments are defined as programs such as Fleet, Major Tools, Administration & Service Centre, Administrative Computer AS/400, AM/FM Computer Equipment & Software and Land & Land Rights.

8.4.1. Fleet

This program is required to meet vehicle and equipment fleet capital requirements based on replacement requirements and increased work program size and staff growth. Not proceeding or delaying this project spending would lead to lower-than-required fleet level, increased maintenance costs and a shift to more expensive rental units if available. Fleet vehicles must be maintained at an optimum level to comply with various regulations (Highway Traffic Act, CVOR regulations, etc.) and to maintain productivity by minimizing downtime & travel time and taking advantage of technology improvement opportunities. Present replacement criteria are based on manufacturers' recommendations and repair history. Light vehicles are replaced after 3 -5 years or 170,000 km; service trucks are replaced after 5 - 7 years or 200,000 km; heavy equipment trucks are replaced after 10 – 12 years or after 230,000 km and work equipment is replaced on a condition assessment basis.

2011 FLEET PROJECTS - \$2,168,000

The company's fleet inventory underwent a condition assessment in 2010. This assessment was completed by an independent third party. The results and recommendations from this assessment were used as a guide to form the 2010 and future fleet management requirements.

Asset Investment Categories & Budgets

The following items are forecast for 2011:

- Replace one 1996 single bucket truck (V72) with high mileage and age, with a new 55ft single bucket truck. The chassis will have been paid for in 2010 so the bin body and aerial device will be outstanding for this year.
- The replacement of one 1992 single bucket truck (V76) with high mileage and age with a new 55ft single bucket truck.
- The purchase of a chassis for replacement of a year 2000 double bucket truck (V49). The remainder of the project will be completed in 2012.
- The replacement of a 1993 double bucket truck (V79) with high mileage and age with an 83ft double bucket truck.
- The replacement of one 1993 radial boom derrick digger (V25) with high mileage and PTO hours. The chassis will be paid for in 2010 and the remainder (the digger and the bin body) will be paid for this year along with placing the unit into service.
- The replacement of one 1992 cargo trailer (V112) with a rotted frame. This new cargo trailer will be safer for the road and the Lines dept. will be able to utilize it.
- The replacement of one 1992 fork lift (V179) with many hours on it. The new unit will have better safety features and be used in Stores.
- The replacement of one 1999 compact car (V09) with better safety features and more reliable.
- The replacement of one 1982 pole trailer (V174) with metal corrosion. The new pole trailer will be much safer and more reliable.
- The replacement of two 1981 Havelock cable reel trailers (V163 & V171).
- The replacement of one 1999 stake truck (V45) which has high mileage. The new stake truck will have better safety features and be more reliable.
- The addition of one new dump trailer for use in the lines department.

Asset Investment Categories & Budgets

8.4.2. Major Tools

Major tools covers tools that are required to be replaced at end of life, replace obsolete equipment as new standards and safer work practices come into effect and provide for sufficient levels of new equipment consistent with work program expansion and increased staffing levels. Major tools are used by field staff to carry out day-to-day work activities. The equipment must be maintained at appropriate levels such that work can be executed in a safe and cost effective manner. Major tool requirements will vary year to year depending on a number of factors including the overall asset condition service equipment, the number of larger cost "one-time" items that occur from year to year, the size of the work program and associated staffing levels projected in the business plan, random equipment failures and weather severity and trends which affect the intensity and use of certain types of service equipment particularly related to storm and trouble call programs.

2011 MAJOR TOOLS & EQUIPMENT PROGRAM - \$75,000

This category is used for the purchase of tools and equipment by all departments, where the cost of such exceeds \$500.00. Such purchases involve replacing aged or defective tools no longer suitable for service as well as the purchase of new tools providing improved safety, ergonomics and technology.

8.4.3. Administration & Service Centre

ADMINISTRATION & SERVICE CENTRE - \$1,066,692

- Phase 1 of Parking Lot Repaving - \$706,000. Allowing the continued deterioration of the parking lot is not advisable as the deterioration will only accelerate. This will result in increased spot repair costs and not address the ongoing safety concerns due to water ponding. In addition during heavy rainstorms the drainage is further impacted. We now have many areas with substantial cracking that allows water to enter and creates damages due to the

Asset Investment Categories & Budgets

freeze/thaw cycles. The extra cost to rework the sub-base will allow the new asphalt to last longer.

- Replace 20 old workstations to current ergonomic standards - \$93,000.
- Replace the PDU for our Computer System - \$30,500.
- Replace flooring in selected areas - \$30,500.
- Replace outside railings - \$20,000
- New office equipment - \$26,000.
- Various facility and office equipment improvements/replacements - \$160,692.

8.4.4. Administrative Computer AS/400

ADMINISTRATIVE COMPUTER AS/400 - \$660,000

Major Capital projects for 2011 will be comprised of several items:

- Part of our “greening” process will be virtualizing many of our desktop computers. This will enable easier management of the desktops and also gives us enhanced capabilities in the case of an emergency or disaster.
- We will also be upgrading our existing IBM I-series machine in order to facilitate the amount of data growth due to the smart meter program.
- The upgrading of our Nortel phone system will be completed in 2011 to enhance our customer service ability to have the caller information displayed to the Customer Service Representative prior to picking up the call.
- The largest project will be the installation and setup of a new Enterprise Content Management solution. This solution will involve all areas of the organization and provide a much needed facility for HOBNI staff to file, store and retrieve any type or style of document.

Asset Investment Categories & Budgets

8.4.5. AM/FM Computer Equipment & Software

AM/FM COMPUTER EQUIPMENT & SOFTWARE - \$205,000

These 2011 capital funds were allocated to support the enterprise requirements in the Geographic Information System (GIS) department for upgrading computer hardware, purchasing new licensed software and to provide application development for the implementation and integration of new applications at the utility. The following significant projects are proposed for 2011:

- GIS Software \$20,000 - These funds will be used to purchase new software applications for the enhancement of our existing GIS. Areas of interest include GIS upgrades and add-ons, SCADA, Automated Meter Reading (AMR), Customer Information Systems (CIS) and Work Management System (WMS). Investment in these new applications will allow the utility to expand the use of our GIS across the utility to provide better engineering analysis, quicker response times and restoration times for outages, better crew management and improved dispatching capabilities. The results will be recognized in improved operational efficiencies throughout the utility.
- G/Technology/OMS Code Development \$66,000 - This project is to have HOBNI staff work with our GIS vendor Intergraph to write new G/Technology code for customizing both our GIS and the Outage Management System (OMS) application. The scope of work is to provide scheduled sustained engineering services for upgrading the existing applications to the latest version of the software. Areas of interest include in service/OMS upgrade from V8.0 to V8.2, customization of the software in response to Operation requirements at HOBNI, examine work flows within the application and make modifications as required to suit our customers' business strategies. Work also includes an upgrade of G/Technology to the latest version of this operating platform.
- GIS Hardware \$40,000 - These funds are for the purchase of new hardware related to the operation of GIS applications in the Drafting & Records department,

Asset Investment Categories & Budgets

in the Control Room and other departments interfacing with the GIS. Investment in new hardware insures that our GIS system continues to perform at an optimal level. New equipment purchases allow the utility to expand our GIS user base to include other departments and move forward with future field applications. Upgrading older hardware with newer machines with faster processors provides for improved operational efficiency from our GIS/OMS applications and users.

- OMS/SCADA/Load Forecasting Software \$25,000 - These funds are for the purchase of additional software licenses or new application software packages for the enhancement of our existing Engineering and Operations systems in the area of OMS, SCADA and Load Forecasting. These new licenses will be installed at our back-up control centre as part of our emergency preparedness initiative. These are critical to the safe operation and analysis of our distribution system if there ever was a need to abandon the HOBNI control centre and conduct operations from the back-up site.
- GIS Computers, Printers and Plotters \$54,000 - This project is for the purchase of computers, printers, plotters, projectors and ancillary devices required in the Engineering and Operations department in support of technical requirements throughout the year.

8.4.6. Land & Land Rights

LAND AND LAND RIGHTS - \$168,685

HOB has identified three easement parcels to be acquired in 2011. These parcels are required to provide land needed by HOBNI to install new infrastructure including; land for duct structure egress at Goreway TS, land for a new pole line along the CN railway and for an access agreement to provide vehicle access across privately held lands.

Asset Investment Categories & Budgets

8.4.7. Summary of Other Services Investment Costs

Other Services Investment Costs (\$000's)					
	Forecast				
	2011	2012	2013	2014	2015
Capital					
Fleet Replacement Program	\$2,168	\$1,930	\$1,927	\$1,928	\$1,925
Major Tools	\$75	\$92	\$93	\$95	\$96
Administration & Service Centre	\$1,067	\$887	\$723	\$454	\$220
Administrative Computer AS/400	\$660	\$595	\$810	\$560	\$560
AM/FM Computer Equipment	\$205	\$302	\$326	\$289	\$283
Land & Land Rights	\$169	\$167	\$167	\$167	\$167
Total Capital (X)	\$4,343	\$3,973	\$4,046	\$3,493	\$3,251
OM&A					
Total OM&A (Y)	\$0	\$0	\$0	\$0	\$0
Gross Investments (X+Y)	\$4,343	\$3,973	\$4,046	\$3,493	\$3,251
Recoverables:					
Total Recoverables (Z)	\$0	\$0	\$0	\$0	\$0
Net Investments (X+Y-Z)	\$4,343	\$3,973	\$4,046	\$3,493	\$3,251

Table 14

Asset Investment Categories & Budgets

8.5. Summary of Investment Costs by Category

Summary of Total Investment Costs (\$000's)					
	Forecast				
	2011	2012	2013	2014	2015
Capital					
Sustainment	\$5,591	\$5,652	\$5,965	\$6,419	\$7,146
Development	\$23,208	\$25,085	\$25,803	\$23,742	\$21,664
Maintenance & Operations	\$0	\$0	\$0	\$0	\$0
Other Services	\$4,343	\$3,973	\$4,046	\$3,493	\$3,251
Total Capital (X)	\$33,143	\$34,711	\$35,814	\$33,654	\$32,061
OM&A					
Sustainment	\$275	\$281	\$296	\$313	\$340
Development	\$506	\$611	\$533	\$581	\$448
Maintenance & Operations	\$3,997	\$4,064	\$4,130	\$4,201	\$4,272
Other Services	\$0	\$0	\$0	\$0	\$0
Total OM&A (Y)	\$4,778	\$4,956	\$4,959	\$5,095	\$5,060
Gross Investments (X+Y)	\$37,920	\$39,667	\$40,772	\$38,750	\$37,121
Contributions & Recoverable					
Development	\$12,363	\$12,729	\$13,786	\$12,816	\$12,168
Maintenance & Operations	\$99	\$0	\$100	\$0	\$102
Total Contribution & Recoverable (Z)	\$12,462	\$12,729	\$13,887	\$12,816	\$12,270
Net Investments (X+Y-Z)	\$25,458	\$26,938	\$26,886	\$25,934	\$24,851

Table 15

Supporting Documents

9. Supporting Documents

Supporting Documents

9.1. Distribution Asset Condition Assessment

Supporting Documents

Supporting Documents

9.2. Facility Asset Management Study

Supporting Documents

9.3. Fleet Assessment

R. IRWIN FLEET SERVICES

FLEET ASSESSMENT

Hydro One Brampton Networks Inc.

Bob Irwin
3/16/2010

FLEET ASSESSMENT: HYDRO ONE BRAMPTON

The following outlines the condition of the Hydro One Brampton Fleet which I have most recently viewed during February and March. Discussions with the fleet supervisor and shop technicians with regards to vehicle repairs and maintenance programs applied to this fleet have been of assistance. I have reviewed each vehicle file, all heavy, light, and other equipment for 2009, completely to assist in accurate assessment of this fleet, the files indicate individual repair costs and associated downtime, the accumulated mileage, engine hours and P.T.O. hours over the previous year. The information gathered is used to complete the attached fleet replacement schedules and market values for the fleet.

The general vehicle change out schedule in most of the G.T.A is 10-11 years for medium to heavy trucks. The re-chassis of aerial devices and digger derricks is not a recommended practice as in the past. Re-chassis of devices creates additional costs, such as vehicle rentals and lost production time and is not cost effective.

The guidelines for utility fleets incorporate engine hours, mileage, vehicle condition and repair history to determine when replacement is financially efficient to avoid heavy rebuild costs and keep up to current technology in the heavy fleet. During aerial device and digger derrick operation, engines idle to operate the hydraulic systems, when the engine hours accumulate to 10,000 past experience has shown that major engine overhaul for example, is imminent. Throughout assessment, 10,000 engine hours or 400,000km is used as a guideline for heavy fleet replacement. Industry standards use a 44 kilometre factor per engine hour I.E. 10,000 engine hours converted to kilometres would be 440,000 kilometres.

The change out schedule recommended to utility fleets for medium and light equipment is 7 to 8 years or 170,000 kilometres. I recommend that this range be extended to 220,000 kilometres and allow the fleet department to assess should replacement be required sooner due to mechanical failure patterns, and I have reflected this on the replacement schedule. This allows financial concentration on the heavy fleet at present.

Trailers of various types should be reviewed for replacement every 10 years. Most of the trailer fleet is in fair to good condition, varying by levels of use. The pole trailers #100 and #174 should be replaced promptly with the new style low profile "V" bunk trailers. The present trailers old style extension systems are prone to rust and difficult to adjust.

Many of the cars in the pool fleet have low kilometres for their age. I have included these in the replacement schedule but would suggest decreasing the size of this car fleet and renting as needed for students etc. These vehicles are parked for considerable time during the year, which creates rust in exhaust and brakes, and require unnecessary maintenance due to outside storage.

My review of the fleet shows that there are outdated vehicles of various types in use, trucks #72 and #73 required repairs due to rust and age when a counterweight dropped from one of the vehicles necessitating fabrication repairs and stability re-certification, both these vehicles have worn high emission diesel engines, with exhaust systems exiting below the service body cabinets to the sidewalk and work areas. Other heavy fleet vehicles with engines over 10,000 hours, such as truck #33, have had costly engine failures and excessive downtime.

The concentration of vehicle replacement in this fleet should be toward the heavy fleet, many with Amador aerial devices at the present time. The double bucket Amador aerial device used in this fleet were previously manufactured and sold by Amador in Brampton. The Amador product has served many utilities with safe and economical operation for many years due to their durable heavy design, however this product is no longer manufactured, when service and overhaul is required the shops quoting on this work are general aerial device repair outlets and not the manufacturer, questions arise about genuine approved parts being used, also the supply of replacement components come into question in the future. It is not recommended to use these aerial devices beyond 20 years of service and utilities follow this practice throughout Ontario.

New vehicle replacements in the heavy fleet will increase field production and efficiency, decrease emissions with new diesel technology, and free up shop technicians for regular routine maintenance duties rather than repair or repetitive break down. New vehicles in the fleet will allow for less spare vehicles overall.

The Hydro One Brampton Fleet as I view it has fallen behind, there appears to be repetitive unscheduled repairs, rebuild costs and increased downtime. This situation has possibly been caused by rapid growth, necessitating increases in hydro structure, stations and installations. The fleet appears to have been somewhat disregarded but managed to keep up with spare and aging vehicles. Presently shop technicians spend 80% of their time on 20% of the fleet.

My findings verify to me that an immediate, aggressive fleet replacement program should be put in place. The acquisition of new vehicles, particularly in the heavy fleet, aerial device, digger derricks, and support vehicles used by the line crews, should be a priority. A system of vehicle ordering - purchasing should be set up to allow for vehicle ordering 6 months prior to the scheduled replacement year.

I have included a list of market values for the existing fleet based on information collected from the marketplace and recent sales of heavy and light equipment, lesser amounts would be realized at auction.

R.IRWIN FLEET SERVICES
MARCH 16, 2010

Hydro One Brampton Fleet Market Values

UNIT #	DESCRIPTION	MARKET VALUE
#1	1993 INT, 70FT AMADOR	\$30,000.00
#2	2006 INT, 70FT AMADOR (1990)	\$48,000.00
#27	2006 INT, 70FT AMADOR (1994)	\$50,000.00
#49	2000 INT, 67FT POSI	\$65,000.00
#50	2000 INT, 67FT POSI	\$65,000.00
#79	1993 INT, 70FT AMADOR	\$30,000.00
#78	2008 FREIGHT, 85FT POSI	\$360,000.00
#32	2000 INT, 51FT POSI	\$58,000.00
#33	2000 INT, 51FT POSI	\$58,000.00
#70	2004 INT, 51FT POSI	\$85,000.00
#74	2004 INT, 51FT POSI	\$85,000.00
#72	1996 FREIGHT, 40FT TECO	\$9,000.00
#73	1996 FREIGHT, 40FT TECO	\$9,500.00
#88	1997 INT, 55FT TELELECT	\$45,000.00
#90	2002 FORD, 37FT ALTEC	\$35,000.00
#19	1990 INT, ALTEC DIGGER	\$15,000.00
#25	1993 FORD, TELELECT DIGGER	\$14,000.00
#57	2004 INT, TELELECT DIGGER	\$110,000.00
#12	1999 INT, TELELECT DIGGER	\$78,000.00
#77	2008 KENWORTH TRACTOR	\$45,000.00
#80	2009 INT, 2009 VACTOR	\$345,000.00
#41	1993 INT, HIAB CRANE	\$23,000.00
#18	2000 F-450	\$11,000.00
#19	2000 F-450	\$11,000.00
#23	2006 F-450	\$18,000.00
#28	2006 F-450	\$18,000.00
#44	2006 F-450	\$45,000.00
#38	2006 F-450	\$18,000.00
#45	1999 F-450	\$9,000.00
#43	1999 F-450	\$9,000.00
#46	1999 F-450	\$9,000.00
#47	1999 F-450	\$9,000.00
#52	2006 F-350	\$18,000.00
#82	2004 F-450	\$14,000.00
#3	1999 ESCORT	\$1,100.00
#5	1999 ESCORT	\$1,100.00
#6	1999 ESCORT	\$1,100.00

#7	2002 FOCUS	\$1,400.00
#8	2002 FOCUS	\$1,400.00
#9	1999 ESCORT	\$1,100.00
#10	1999 ESCORT	\$1,100.00
#11	2002 FOCUS	\$1,400.00
#15	2002 FOCUS	\$1,400.00
#22	2002 FOCUS	\$1,400.00
#35	2002 F-150	\$5,000.00
#36	2002 F-150	\$6,000.00
#37	2002 F-150	\$5,000.00
#53	2002 F-150	\$5,000.00
#83	2004 F-150	\$6,500.00
#84	2004 F-150	\$6,500.00
#91	2004 F-150	\$6,500.00
#92	2006 F-150	\$9,000.00
#4	2006 E-250 VAN	\$10,500.00
#29	2002 E-250 VAN	\$5,500.00
#34	2006 E-250 VAN	\$10,500.00
#48	2006 E-250 VAN	\$10,500.00
#51	2002 E-150 VAN	\$4,000.00
#60	1999 E-150 VAN	\$3,000.00
#61	2003 E-150 VAN	\$4,500.00
#64	2003 E-150 VAN	\$4,500.00
#69	2001 E-150 VAN	\$3,800.00
#75	2002 E-450 CUBE VAN	\$13,000.00
#81	2008 E-450 CUBE VAN	\$79,600.00
#104	1987 FENWICK FORKLIFT	\$1,000.00
#175	2004 JOHN DEERE LOADER	\$17,500.00
#178	2004 TOYOTA FORKLIFT	\$17,000.00
#179	1992 NISSAN FORKLIFT	\$6,000.00
#180	2005 CAT FORKLIFT	\$16,000.00
#13	2009 ESCAPE HYBRID	\$24,000.00
#14	2009 ESCAPE HYBRID	\$24,000.00
#40	2006 ESCAPE HYBRID	\$15,000.00
#42	2006 ESCAPE HYBRID	\$15,000.00
#19207	TIMBERLAND TENSIONER	\$46,500.00
#19307	TIMBERLAND TENSIONER	\$46,500.00
#109	BOX TRAILER	\$900.00
#110	BOX TRAILER	\$900.00
#119	BOX TRAILER	\$1,500.00
#165	BOX TRAILER	\$900.00

#163	REEL TRAILER	\$900.00
#167	REEL TRAILER	\$1,600.00
#171	REEL TRAILER	\$900.00
#113	COMPRESSOR	\$1,500.00
#101	CARGO TRAILER	\$2,600.00
#107	CARGO TRAILER	\$2,600.00
#108	CARGO TRAILER	\$2,600.00
#117	SPILL TRAILER	\$900.00
#156	CARGO TRAILER	\$2,600.00
#157	CARGO TRAILER	\$2,200.00
	TOTAL:	\$2,314,000.00

Hydro One Brampton Fleet Market Values

UNIT #	MODEL	TYPE	STATUS	2010	2011	2012	2013	2014	2015	2016	2017	2018
DOUBLE BUCKETS												
#1	1993 INT	70' AMADOR		566,000								
#26	2006 INT	70' AMADOR	1990 AERIAL		588,640							
#27	2006 INT	70' AMADOR	1992 AERIAL			612,000						
#49	2000 INT	67' POSI					636,600					
#50	2000 INT						636,600					
#78	2008 FREIGHT	85' POSI										774,610
#79	1993 INT	70' AMADOR			588,640							
SINGLE BUCKET MATERIAL HANDLERS												
#32	2000 INT	51' POSI			423,200							
#33	2000 INT	51' POSI			423,200							
#70	2004 INT	51' POSI					475,800					
#74	2004 INT	51' POSI				457,500						
SINGLE BUCKET												
#72	1996 FREIGHT	40 TECO		407,000								
#73	1996 FREIGHT	40 TECO			423,000							
#88	1997 INT				423,000							
#90	2002 FORD								325,000			
DIGGER DERRICK												
#12	1999 INT	5048 TELELECT				538,400						
#17	1990 INT	D8428 ALTEC		497,800								
#25	1993 FORD	92-45 TELELECT			517,700							

#57	2004 INT	5048 TELELECT							605,600			
TRACTOR												
#77	2008 KEN	T300	KEEP 15 YRS									
VACUUM TRI												
#80	2009 INT	VACTOR	KEEP 14 YRS									
HIAB CRANE												
#47	1993 INT	220 HIAB								590,000		
				1,470,800	3,387,380	1,607,900	1,749,000		930,600	590,000		774,610

Hydro One Brampton Fleet Replacement Schedule

UNIT #	MODEL	KILOMETRES	2010	2011	2012	2013	2014	2015	2016	2017	2018
CARS											
#3	1999 ESCORT	85,800	26,000								
#5	1999 ESCORT	85,874		27,000							
#6	1999 ESCORT	96,965			28,122						
#7	2002 FOCUS	69,622			28,122						
#8	2002 FOCUS	79,230					30,416				
#9	1999 ESCORT	83,522			28,122						
#10	1999 ESCORT	76,761			28,122						
#11	2002 FOCUS	78,248					30,146				
#15	2002 FOCUS	82,963					30,416				
#22	2002 FORD	77,049					30,416				
PICKUPS											
#35	2002 F-150	116,949			60,743						
#36	2002 F-150	115,997			60,743						
#37	2002 F-150	220,443		58,406							
#53	2002 F-150	153,301		58,406							
#83	2004 F-150	152,436				63,172					
#84	2004 F-150	129,240					65,699				
#91	2004 F-150	169,825			60,743						
#92	2006 F-150								71,060		
			26,000	143,812	294,717	63,172	187,363		71,060		

Hydro One Brampton Fleet Replacement Schedule

UNIT #	MODEL	TYPE	2010	2011	2012	2013	2014	2015	2016	2017	2018
STAKE TRUCKS											
#18	2000 FORD F-450	SERVICE BODY			140,608						
#19	2000 FORD F-450	SERVICE BODY			140,608						
#23	2006 FORD F-450	SERVICE BODY									177,900
#28	2006 FORD F-450	SERVICE BODY									177,900
#44	2006 FORD F-450	FLEET SERVICE									
#38	2006 FORD F-450	SERVICE BODY									177,900
#45	1999 FORD F-450	SERVICE BODY		135,200							
#43	1999 FORD F-450	SERVICE BODY			140,608						
#46	1999 FORD F-450	DUMP			140,608						
#47	1999 FORD F-450	SERVICE BODY			140,608						
#52	2006 FORD F-350	SMART METER									177,900
#82	2004 FORD F-450	DUMP							163,780		
VANS											
#4	2006 E-250	VAN									71,166
#29	2002 E-150	VAN				58,493					
#34	2006 E-250	VAN									71,166
#48	2006 E-250	VAN									71,166
#51	2002 E-150	VAN				58,493					
#60	1999 E-150	VAN		54,080				63,266			
#61	2003 E-150	VAN						63,266			
#64	2003 E-150	VAN				58,493					
#69	2001 E-150	VAN									
CUBE VANS											
#81	2008 E-150	VAN									227,730
#75	2002 E-450	VAN									227,730
				189,280	703,040	175,479		126,532	163,780		1,380,558

Hydro One Brampton Fleet Replacement Schedule

UNIT #	MODEL	KM/TYPE	2010	2011	2012	2013	2014	2015	2016	2017	2018
<i>SUV</i>											
#13	2009 ESCAPE HY	16,323							52,637		
#14	2007 ESCAPE HY	22,995					48,666				
#40	2006 ESCAPE HY	40,663				46,794					
#42	2006 ESCAPE HY	41,730				46,794					
<i>FORKLIFTS/TRACTORS</i>											
#104	1987 FENNER	ES15P			40,000						
#175	2004 J.DEERE	4320									
#178	2004 TOYOTA	7FBH									
#179	1992 NISSAN	MODEL 90		82,000							
#180	2005 CAT	MODEL 100									
				82,000	40,000	93,588	48,666		52,637		

Hydro One Brampton Fleet Replacement Schedule

UNIT #	MODEL	STATUS	2010	2011	2012	2013	2014	2015	2016	2017	2018
BOX TRAILERS											
#109	1992 BEELINE				18,000						
#110	1992 BEELINE				18,000						
#119	2000 CARGO					28,000					
#165	1970 HAVELOCK				35,000						
REEL TRAILERS											
#163	1981 HAVELOCK			11,000							
#167	1974 KING					31,000					
#171	1981 HAVELOCK				12,000						
COMPRESSOR											
#113	1984 INGERSOLL					28,000					
FLOAT											
#102	1987 MARTIN	REBUILT									
CARGO											
#101	1986 TJW										
#107	1991 TJW					23,000					
#108	1991 TJW					23,000					
#117	1999 PETERBOROUGH	SPILL									
#156	1993 TJW					23,000					
#157	1993 TJW						24,300				
				11,000	83,000	156,000	24,300				

Hydro One Brampton Fleet Replacement Schedule

UNIT #	MODEL	STATUS	2010	2011	2012	2013	2014	2015	2016	2017	2018
CARGO TRAILER											
#112	1992 BEELINE			22,000							
DUMP TRAILER											
#114	1999 MARKHAM					29,000					
#11510	1995 JDJ							24,041			
#116	1998 MARKHAM		12,000								
POLE TRAILER											
#100	1985 TJ WELD		26,000								
#174	1982 TJ WELD			56,000							
#187	2008 THRU-WAY										
UNDERGROUND PULLER											
#194	2000 TIMBERLAND										
TENSIONERS											
#19207	2007 TIMBERLAND										
#19307	2007 TIMBERLAND										
			38,000	78,000		29,000		24,041			

Hvdro One Brampton Fleet Replacement Schedule Yearly Forecast

2010	2011	2012	2013	2014	2015	2016	2017	2018
<i>1,534,800</i>	<i>3,891,472</i>	<i>2,728,657</i>	<i>2,090,760</i>	<i>260,329</i>	<i>1,081,173</i>	<i>877,477</i>		<i>2,155,168</i>