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November 30, 2007

Ontario Energy Board
P.O. Box 2319
27th Floor
2300 Yonge Street
Toronto, ON M4P 1E4

Attention: Kirsten Walli
Board Secretary

**Re: Interrogatory Responses – Electricity Distribution Rates
EB-2007-0713**

Attached please find Hydro Ottawa's responses to the interrogatories sent by Board Staff, Energy Probe, the Consumers Council of Canada, the School Energy Coalition and the Vulnerable Energy Consumers Coalition for the above noted proceeding. Responses to the supplementary interrogatories sent by Board Staff on November 23, 2007 (#75 through #84) will be filed in the next few days.

If further information is required, please contact the undersigned at 613-738-5499 ext 527 or lynneanderson@hydroottawa.com.

Yours truly,

A handwritten signature in black ink, appearing to read "Lynne Anderson", written in a cursive style.

Lynne Anderson
Chief Regulatory Affairs and Government Relations Officer
Hydro Ottawa



Interrogatory

Question #1

Reference: Exhibit A1, Tab 2, Schedule 1, page 2, lines 4-12

- a) Is Hydro Ottawa aware of any instance in Ontario where a rate rider has been approved by the OEB to address the fact that filings made for distribution rates are done on a calendar year basis but the rates are not effective until May 1st? If so, please identify the relevant proceeding and provide a copy of the Board's decision.
- b) Is Hydro Ottawa aware of any instance in Ontario where such a rate rider has been requested by an electricity distributor and denied by the OEB? If so, please identify the relevant proceeding and provide a copy of the Board's decision.

Response

- a) No, but please see the response to Board Staff Interrogatory #57 a).
- b) No, Hydro Ottawa is not aware of any instance in Ontario where such a rate rider has been requested by an electricity distributor and denied by the Board.



1 **Interrogatory**

2

3 Question #2

4

5 Reference: Exhibit A1, Tab 2, Schedule 1, page 3, lines 15-22

6

7 a) Please provide a copy of Sewer Use By-law No. 2003-514.

8

9 b) Please provide further explanation/derivation regarding the \$1.3 M in
10 incremental costs that could be incurred in complying with the by-law.

11

12 **Response**

13

14 a) A copy of Sewer Use By-Law No. 2003-514 has been obtained from the
15 City of Ottawa web site, www.ottawa.ca, and is attached.

16

17 b) Please see the response to Board Staff Interrogatory #59 e).

A by-law of the City of Ottawa to regulate the control of discharges to sewers and sewage works.
The Council of the City of Ottawa enacts as follows:

DEFINITIONS

¹ In this by-law:

"accredited laboratory" means any laboratory accredited by an authorized accreditation body in accordance with a standard based on "ISO/IEC/EN 17025: General Requirements for Competence of Calibration and Testing Laboratories" established by the International Organization for Standardization, as amended;

"acute hazardous waste chemical" means a material which is an acute hazardous waste chemical within the meaning of Regulation 347;

"amalgam separator" means any technology, or combination of technologies, designed to separate amalgam particles from dental operation wastewater;

"animate products of biotechnology" means a living organism created through the practice of biotechnology, and includes material which has been genetically modified using techniques that permit the direct transfer or removal of genes in that organism;

"Best Management Practices (BMP)" means an integrated plan to control and reduce the release of restricted and prohibited waste into the sewage works to a practicable extent, through methods including physical controls, pre-treatment processes, operational procedures and staff training;

"biochemical oxygen demand (BOD)" means the 5-day BOD which is the determination of the molecular oxygen utilized during a 5-day incubation period for the biochemical degradation of organic material (carbonaceous demand), and the oxygen used to oxidize inorganic material such as sulphides and ferrous iron;

"biomedical waste" means biomedical waste as defined in the Ontario Ministry of Energy and the Environment Guideline C-4 entitled "The Management of Biomedical Waste in Ontario" dated April 1994, as amended;

"biosolids" means the product of stabilized organic solid material recovered from the wastewater treatment process;

"blowdown water" means recirculating water that is discharged from a cooling or heating water system for the purpose of controlling the level of water in the system or for the purpose of discharging from the system materials contained in the system, the further build-up of which would or might impair the operation of the system;

"Building Code Act" means the Building Code Act, 1992, S.O. 1992, c. 23, as amended, or any successor legislation thereto and herein cited as the BCA;

"carpet cleaner waste" means a combination of liquid and solid wastes, generated by carpet or furniture cleaning, that are collected in a mobile holding tank or are discharged to a sewer;

"certified amalgam separator" means any amalgam separator that is certified in accordance with standard "ISO 11143:1999 for Dental equipment - Amalgam separators" established by the International Organization for Standardization, as amended;

"carrier" means a person who transports hauled liquid waste to the sewage works for disposal;

"City" means the City of Ottawa;

"combined sewer" means a sewer intended to function simultaneously as a storm sewer and a sanitary sewer;

"combustible liquid" means a liquid that has a flash point not less than 37.8 degrees Celsius and not greater than 93.3 degrees Celsius;

"Compliance Officer" means a person authorized by the City to carry out observations and inspections and take samples as prescribed by this by-law;>

"composite sample" means a volume of sewage, stormwater, uncontaminated water, or effluent made up of two or more grab samples that have been combined automatically or manually and taken at intervals during the sampling period;

"connection" or "drain" means that part or those parts of any pipe or system of pipes leading directly or indirectly to a sewage works;

"cooling water" means water that is used in a process for the purpose of removing heat and that has not come into contact with any raw material, intermediate product, waste product, or finished product, but does not include blowdown water;

"dental amalgam" means a dental filling material consisting of an amalgam of mercury, silver and other materials such as copper, tin or zinc;

"dentistry" means dental care, dental hygiene or dental laboratory activities which produce waste dental amalgam;

"domestic sewage" means sewage released from non-institutional, non-commercial, and non-industrial premises as a result of normal human living processes;

"Environmental Protection Act" means the Environmental Protection Act, R.S.O. 1990, c. E. 19, as amended and any successor legislation thereto, and herein cited as the EPA;

"fixture" means a receptacle, appliance, apparatus, piping system, floor drain or other device that releases or discharges sewage;

"food waste" means solid waste from the preparation, cooking and dispensing of food and from the handling, storage and sale of produce;

"fuel" means alcohol, gasoline, naphtha, diesel fuel, fuel oil or any other ignitable substance intended for use as a fuel;

"General Manager" means the General Manager of the Transportation, Utilities and Public Works Department of the City or authorized representative;

"grab sample" is an aliquot of the flow being sampled taken at one particular time and place;

"groundwater" means water in a saturated zone or stratum beneath the surface of land or below a surface water body;

"hailed sewage" means waste removed from a sewage system, including a cesspool, a septic tank system, a privy vault or privy pit, a chemical toilet, a portable toilet, or a sewage holding tank but does not include sludge removed from wastewater treatment plants;

"hailed liquid waste" means sewage that is suitable for treatment in a sewage works and is transported to a sewage works for disposal and includes hailed sewage;

"hazardous industrial waste" means a material which is a hazardous industrial waste within the meaning of Regulation 347;

"hazardous waste chemical" means a material which is a hazardous waste chemical within the meaning of Regulation 347;

"ignitable waste" means a material which,

is a liquid, other than an aqueous solution containing less than 24 per cent alcohol by volume and has a flash point less than 93 degrees Celsius, as determined by the Tag

- (a) Closed Cup Tester (ASTM D-56-97a), the Setaflash Closed Cup Tester (ASTM D-3828-97 or ASTM D-3278-96e1), the Pensky-martens Closed Cup Tester (ASTM D-93-97), or as determined by an equivalent test method;

- (b) is a solid and is capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a danger;
- (c) is an ignitable compressed gas (Class 2, Division D) as defined in the regulations made under the TDGA, or,
- (d) is an oxidizing substance (Class 5, Divisions 1 and 2) as defined in the regulations made under the TDGA;

"industrial" means of or pertaining to industry, manufacturing, commerce, trade, business, or institutions as distinguished from domestic or residential;

"industry" means any owner or operator of industrial premises from which there is a discharge of any matter directly or indirectly into a City sanitary sewer, combined sewer or storm sewer;

"Lower Explosive Limit (LEL)" means the minimum concentration of the compound as a gas or vapour, measured as a percentage in air, which will explode or burn;

"matter" includes any solid, liquid or gas;

"non-contact cooling water" is water which is used to reduce temperature for the purpose of cooling and which does not come into direct contact with any raw material, intermediate product other than heat, or finished product;

"nuclear substance" means:

- (a) deuterium, thorium, uranium or an element with the atomic number greater than 92;
- (b) a derivative of compound of deuterium, thorium, uranium or of an element with an atomic number greater than 92;
- (c) a radioactive nuclide;
- (d) a substance that is prescribed as being capable of releasing nuclear energy or as being required for the production or use of nuclear energy;
- (e) a radioactive substance or radioactive thing that was used for the development or product or in connection with the use, of nuclear energy;

as defined under the Nuclear Safety and Control Act 1997, c.9 as amended from time to time;

"Ontario Water Resources Act" means the Ontario Water Resources Act, R.S.O. 1990, c. O.40, as amended and any successor legislation thereto, and herein cited as the OWRA;

"pathological waste" means a material which is a pathological waste within the meaning of Regulation 347 or any material which may be designated in writing by the Chief Medical Officer of Health;

"PCBs" means any monochlorinated or poly-chlorinated biphenyl or any mixture of these or mixture that contains one or more of them;

"person" includes an individual, association, partnership, corporation, municipality, Provincial or Federal agency, or an agent or employee thereof;

"pesticides" means a pesticide regulated under the Pesticides Act, R.S.O. 1990, c. P.11, as amended or any successor legislation thereto;

"pH" means the logarithm to the base 10 of the reciprocal of the concentration of hydrogen ions in moles per litre of solution;

"pollution prevention" means the use of processes, practices, materials, products, substances or energy that avoid or minimize the creation of pollutants and wastes;

"premises" means any land or building or both or any part thereof;

"private sewer connection" means that part of any drain or system of drains, including drains or subsurface drainage pipe for surface or subsurface drainage of the land in or adjacent to a building, lying within the limits of the private lands and leading to a municipal sewer

connection;

reactive waste" means a substance that,

- (a) is normally unstable and readily undergoes violent changes without detonating;
- (b) reacts violently with water;
- (c) forms potentially explosive mixtures with water;
- (d) when mixed with water, generates toxic gases, vapours or fumes in a quantity sufficient to present danger to human health or the environment;
- (e) is a cyanide or sulphide bearing waste which, when exposed to pH conditions between 2 and 12.5, can generate toxic gases, vapours or fumes in a quantity sufficient to present danger to human health or the environment;
- (f) is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement;
- (g) is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure; or
- (h) is an explosive (Class 1) as defined in the regulations made under the TDGA;

"Regulation 347" means the general waste management regulation made under Part V of the EPA, as amended, or any successor regulation thereto;

"sanitary sewer" means a sewer for the collection and transmission of domestic, or industrial sewage or any combination thereof;

"severely toxic waste" means waste containing any contaminant listed in Schedule 3 of Regulation 347;

"sewage" means any liquid waste containing animal, vegetable, chemical or mineral matter in solution or in suspension, but does not include stormwater or uncontaminated water;

"sewage works" means any works for the collection, transmission, treatment or disposal of sewage, stormwater or uncontaminated water, including a combined sewer, sanitary sewer or storm sewer, or any part of such works, but does not include plumbing or other works to which the BCA applies;

"sewer" means a pipe, conduit, drain, open channel, ditch or watercourse for the collection and transmission of sewage, stormwater, or uncontaminated water, or any combination thereof;

"sludge" means wastewater containing more than 0.5% total solids, but does not include material which has been pumped out of a septic tank;

"spill" means a direct or indirect discharge into the sewage works, storm sewer or the natural environment which is abnormal in quantity or quality in light of all the circumstances of the discharge;

"Standard Methods" means a procedure or method set out in Standard Methods for the Examination of Water and Wastewater published jointly by the American Public Health Association, American Water Works Association and Water Environment Federation, 20th edition, as amended from time to time;

"storm sewer" means a sewer for the collection and transmission of uncontaminated water, stormwater, drainage from land or from a watercourse or any combination thereof;

"stormwater" means water from rainfall, other natural precipitation, drainage or from the melting of snow or ice;

"subsurface drainage pipe" means a pipe that is installed underground to intercept and convey subsurface water, and includes foundation drains;

"total kjedahl nitrogen (TKN)" means organically bound nitrogen plus ammonia nitrogen, as determined by using a standard procedure;

"total PAHs" means the total of all the following polycyclic aromatic hydrocarbons:

anthracene, Benzo(a)pyrene, Benzo(a)anthracene, benzo(e)pyrene, Benzo(b)fluoranthene, Benzo(j)fluoranthene, Benzo(k)fluoranthene, Benzo(g, h, i)perylene, chrysene, dibenzo(a,h)anthracene, dibenzo(a,i)pyrene, dibenzo(a,j)acridine, 7H-dibenzo(c,g)carbazole, fluoranthene, indeno(1,2,3-c,d)pyrene, perylene, phenanthrene, and pyrene;

"Transportation of Dangerous Goods Act" means the Transportation of Dangerous Goods Act 1992, S.C. 1992, c. 34, as amended or any successor legislation thereto and herein cited as the TDGA;>

"uncontaminated water" means potable water as supplied by the City or water with a level of quality which is typical of potable water normally supplied by the City, or any other water which complies with Section 6 of this by-law;

"waste disposal site leachate" means leachate, namely liquid containing dissolved or suspended contaminants which emanates from waste and is produced by water percolating through waste or by liquid in waste, from any waste disposal site;

"watercourse" means an open channel, ditch or depression either natural or artificial, in which water flows either continuously or intermittently; and

"waters" means a well, lake, river, pond, spring, stream, reservoir, artificial watercourse, intermittent watercourse, or other water or watercourse.

INTERPRETATION

- 2 (1) Headings are for reference purposes and shall not affect in any way the meaning or interpretation of the provisions of this by-law.
- If any section, clause or provision of this by-law, including anything contained in the Schedules attached hereto, is for any reason declared by a court of competent jurisdiction to be invalid, the same shall not affect the validity of this by-law as a whole or any part thereof other than the section, clause or provision so declared to be invalid and it is hereby declared to be the intention that all the remaining sections, clauses or provisions of this by-law shall remain in full force and effect until repealed, notwithstanding that one or more provisions thereof shall have been declared to be invalid.
- (2)
- (3) In this by-law, a word interpreted in the singular number has a corresponding meaning when used in the plural.

APPLICATION

- 3 (1) This by-law shall apply to all sewers, including combined, sanitary and storm sewers, sewage works, and any connections thereto which mediate or immediately enter into such sewers or sewage works, which are publicly or privately owned or operated and are located within the boundaries of the City.
- (2) This by-law does not apply to the discharge of any matter or sewage, in an emergency, as determined by and approved by the Medical Officer of Health in the exercise of their authority under the Health Protection and Promotion Act, R.S.O. 1990. c.H. 7, as amended.

SANITARY AND COMBINED SEWER REQUIREMENTS

- 4 (1) No person shall, directly or indirectly, discharge or deposit or cause or permit the discharge or deposit of sewage or matter of any type into a sanitary sewer, combined sewer, municipal or private sewer connection to any sanitary sewer or combined sewer in circumstances where,
- (a) to do so may cause or result in,

- (i) a health or safety hazard to a person authorized by the General Manager to inspect, operate, maintain, repair or otherwise work on a sewage works;
- (ii) an offence under the OWRA or the EPA or any regulation made thereunder from time to time;
- (iii) biosolids from the sewage works to which either sewage discharges, directly or indirectly, to fail to meet the objectives and criteria as listed in the Ministry of Energy and the Environment publication entitled "Guidelines for the Utilization of Biosolids and Other Wastes on Agricultural Land" dated March 1996, as amended from time to time;
- (iv) interference with the operation or maintenance of a sewage works, or the impairment or interference with any sewage treatment process;
- (v) a hazard to any person, animal, property or vegetation;
- (vi) an offensive odour to emanate from sewage works, and without limiting the generality of the foregoing, sewage containing hydrogen sulphide, carbon disulphide, or other reduced sulphur compounds, amines or ammonia in such quantity as may cause an offensive odour;
- (vii) damage to the sewage works;
- (viii) an obstruction or restriction to the flow in the sewage works.
- (ix) the presence of toxic gases, vapours or fumes within the sewage works such that:
 1. two successive readings on an explosion hazard meter, at the point of discharge into the sewage works or at any point in the sewage works, of more than five percent LEL are obtained;
 2. any single reading on an explosion hazard meter, at the point of discharge into the sewage works or at any point in the sewage works, of ten percent LEL or higher is obtained; or
 3. any single reading on an explosion hazard meter, at the point of discharge into the sewage works or at any point in the sewage works, of two parts per million atmospheric hydrogen sulphide or higher is obtained.
- (b) the sewage has one or more of the following characteristics:
 - (i) a pH less than 5.5 or greater than 11;
 - (ii) two or more separate liquid layers; or
 - (iii) a temperature greater than 60 degrees Celsius;
- (c) the sewage contains one or more of the following:
 - (i) acute hazardous waste chemicals;
 - (ii) animate products of biotechnology; except where they have been decontaminated prior to discharge.
 - (iii) biomedical waste, except where:

1. done so in accordance with the Ontario Ministry of Energy and the Environment Guideline C-4 entitled "The Management of Biomedical Waste in Ontario" dated December 1994, as amended;
 2. human blood and body fluids known to contain viruses and agents in listed in "Risk Group 4" as defined in "Laboratory Biosafety Guidelines" published by Health and Welfare Canada, dated 1996, as amended, are decontaminated prior to discharge; and
 3. the discharge of bulk fluids takes place only between the hours of midnight and 6 a.m..
- (iv) combustible liquid;
- (v) dyes or colouring materials which when passed through a sewage works discolour the sewage works effluent;
- (vi) fuel;
- (vii) hauled sewage, except where:
1. the hauled sewage is being discharged from a recreational vehicle; or
 2. the carrier of the hauled sewage operating as a waste management system has a certificate of approval or provisional certificate of approval issued under the EPA or is exempt from the requirement to have a certificate or provisional certificate of approval; and
 3. the carrier complies with the provisions of Section 7 of this by-law.
- (viii) hauled liquid waste, except where:
1. the hauled liquid waste is being discharged from a recreational vehicle; or
 2. the carrier of the hauled liquid waste operating as a waste management system has a certificate of approval or provisional certificate of approval issued under the EPA or is exempt from the requirement to have a certificate or provisional certificate of approval; and
 3. The carrier complies with the provisions of Section 7 of this by-law.
- (ix) ignitable waste;
- (x) hazardous industrial waste;
- (xi) hazardous waste chemicals;
- (xii) nuclear waste, except where :
1. the nuclear substances are being discharged under a valid and current licence issued by the Canadian Nuclear Safety Commission or its successor;
 2. a copy of the licence has been provided to the General Manager; and

3. the person has written approval from the General Manager permitting such discharge.
- (xiii) pathological waste, except where the waste has been decontaminated prior to discharge;
- (xiv) PCBs, except where:
 1. the person has a certificate of approval for a mobile site or PCB mobile waste disposal system issued under the EPA or where the person is claiming exemption under a regulation, the person has demonstrated to the satisfaction of the General Manager that the conditions of the exemption are met;
 2. a copy of the most recent certificate or provisional certificate and any amendment is provided to the General Manager;
 3. the person has written approval from the General Manager that the person has met a condition for an exemption under the regulations in relation to their discharge of PCBs to the sewage works; and
 4. The discharge contains a concentration of less than 1 microgram per litre of PCBs.
- (xv) pesticides;
- (xvi) reactive waste;
- (xvii) severely toxic waste;
- (xviii) silver bearing wastewater from photo finishing processes not treated with a silver recovery unit prior to discharge;
- (xix) sludge, except where:
 1. the discharge is expressly authorized in writing by the General Manager, in accordance with guidelines adopted by the City from time to time, prior to the discharge; and
 2. the person has entered into an agreement with the City which expressly authorizes the discharge and includes such other conditions as compensation and monitoring requirements;
- (xx) waste disposal site leachate, except where:
 1. the waste disposal site leachate is discharged pursuant to a Certificate of Approval or Order relating to the premises under the EPA or OWRA which expressly allows the discharge;
 2. the person has entered into an agreement with the City which expressly authorizes the discharge from the premises including such other conditions, including compensation, as may be agreed upon and such agreement is expressly authorized in writing by the General Manager; and

3. A copy of the Certificate of Approval or written authorization referred to in clause (a) has been provided to the General Manager.

(xxi) solid or viscous substances in quantities or of such size to be capable of causing obstruction to the flow in a sewer, including but not limited to ashes, bones, cinders, sand, mud, soil, straw, shaving, metal, glass, rags, feathers, tar plastics, wood, unground garbage, animal parts or tissues and paunch manure.

(d) The sewage contains a concentration expressed in milligrams per litre, in excess of any one or more of the limits in Table 1 of this by-law entitled "Limits for Sanitary and Combined Sewers Discharge", at Schedule "A" of this by-law unless:

- (i) otherwise authorized in a Best Management Practices Plan approved by Council; or
- (ii) the discharge is in accordance with a valid discharge agreement or Compliance Program; or
- (iii) the person has demonstrated that one or more of the parameter limits contained in Schedule "A" cannot be met as a result of water conservation measures and the General Manager has exercised discretion to impose mass loading based limits in addition to or in place of concentration-based limits.

(2) The discharge of stormwater, non-contact cooling water, water from drainage of roofs or land, water from a watercourse, or uncontaminated water to a sanitary or combined sewer is prohibited unless:

- (a) the stormwater is discharged into or in connections to any combined sewer provided such connection existed prior to October 24, 1984; or
- (b) the stormwater or water does not comply with Section 6 of this by-law; or
- (c) the non-contact cooling water originated from the City's water supply; or
- (d) the discharge is from a groundwater remediation system in accordance with a sanitary sewer agreement pursuant to section 9 of this by-law; or
- (e) the discharge is expressly authorized in writing by the General Manager in accordance with guidelines adopted by the City from time to time, prior to the discharge.

(3) The discharge of sewage, containing water originating from a source other than the City's water supply, directly or indirectly to a sanitary sewer or combined sewer is prohibited, unless:

- (a) the discharge is expressly authorized in writing by the General Manager in accordance with guidelines adopted by the City from time to time, prior to the discharge; and
- (b) the owner or operator of the premises has entered into, an agreement in accordance with section 9 of this by-law.

PROHIBITION OF DILUTION

5 No person shall discharge directly or indirectly or deposit or cause or permit
the discharge or deposit of sewage into a sanitary sewer, combined sewer,
. storm sewer, municipal or private sewer connection to any sanitary sewer,
combined sewer, or storm sewer in circumstances where matter has been added
to the discharge for the purpose of dilution to achieve compliance with
Sections 4 or 6 of the by-law.

STORM SEWER REQUIREMENTS

6 (1) No person shall directly or indirectly, discharge or deposit or cause or permit
the discharge or deposit of matter of any type in or into a storm sewer,
. watercourse, municipal or private sewer connection to any storm sewer in
circumstances where:

- (a) to do so may cause or result in,
 - (i) damage to storm sewer;
 - (ii) interference with proper operations of storm sewer;
 - (iii) obstruction or restriction of the storm sewer or the flow therein;
 - (iv) a hazard to any person, animal, property, or vegetation;
 - (v) impairment of the quality of the water in any well, lake, river, pond, spring, stream, reservoir or other water or watercourse;
 - (vi) the contravention of a certificate of approval or provisional certificate of approval issued under the OWRA or the EPA with respect to the storm sewer, its discharge or both the storm sewer and its discharge.
- (b) the matter has one or more of the following characteristics:
 - (i) visible film, sheen or discolouration;
 - (ii) two or more separate layers;
 - (iii) a temperature greater than 40 degrees Celsius;
 - (iv) a pH less than 6.0 or greater than 9.0.
- (c) the matter contains one or more of the following:
 - (i) acute hazardous waste chemicals;
 - (ii) animate products of biotechnology;
 - (iii) biomedical waste;
 - (iv) blowdown water;
 - (v) carpet cleaner waste;
 - (vi) combustible liquids;
 - (vii) concrete mixtures;
 - (viii) dyes or colouring materials, except where the dye is used by the City, or an agent working on behalf of the City, as a tracer;
 - (ix) floating debris;
 - (x) fuel;
 - (xi) hauled sewage;
 - (xii) hauled liquid waste;
 - (xiii) hazardous industrial waste;
 - (xiv) hazardous waste chemicals;

- (xv) ignitable waste;
- (xvi) material discharged from a groundwater remediation system;
- (xvii) motor oil;
- (xviii) nuclear waste;
- (xix) organic solvents;
- (xx) paint;
- (xxi) pathological waste;
- (xxii) PCB's
- (xxiii) pesticides
- (xxiv) reactive waste;
- (xxv) severely toxic waste;
- (xxvi) sewage;
- (xxvii) sludge;
- (xxviii) solvent extractable matter of animal, vegetable origin, mineral or synthetic origin;
- (xxix) waste disposal site leachate;
- (xxx) waste water from an industrial operation;
- (xxxi) a substance from raw materials, intermediate or final product, used or produced in, through or from an industrial process;
- (xxxii) a substance used in the operation or maintenance of an industrial site;
- (xxxiii) contaminants from the raw materials, intermediate or final products or wastewater from an industrial operation;
- (xxxiv) E.coli colonies in excess of 200 per 100ml;
- (xxxv) matter containing a concentration, expressed in milligrams per litre, in excess of any one or more of the limits in Table 2 entitled "Limits for Storm Sewer Discharge" of Schedule "A" of this by-law except where:
 - the discharge of matter containing concentrations of total suspended solids in excess of 15 mg/l occurs after erosion and sediment control guidelines which have been approved by the City have been implemented; or
 - The owner or operator of the premises has written approval from the General Manager for a Best Management practices plan (BMP); or
 - The discharge results solely from:
 - street cleaning which has been authorized by the City;
 - hydrant flushing which has been

authorized by the
City;

3. extinguishing fires;

(2) A person may be required, upon receipt of notice from the General Manager, to complete one or more of the following activities as stated in the notice addressing stormwater from the premises:

- (a) a study on stormwater quality and / or quantity;
- (b) modification and / or construction of stormwater facilities;
- (c) development and implementation of a best management practices plan (BMP);
- (d) adoption and implementation of pollution prevention techniques or measures; or
- (e) any other requirements as specified by the City.

(3) The provisions of subsections (1) and (2) shall only apply to the discharge of stormwater runoff from industrial premises to a storm sewer or to any discharge to a storm sewer, to which the matter prohibited by subsection (1) has been added for the purpose of disposing of the matter.

LIQUID WASTE TRANSPORTED TO SEWAGE WORKS

⁷ (1) Except as permitted by this section, the disposal of hauled liquid waste to the sewage works is prohibited.

(2) No person shall dispose of hauled liquid waste to the sewage works without having first procured an annual permit.

(3) A carrier must submit to the General Manager an application for an annual permit on the form provided by the General Manager.

(4) Upon the application for an annual permit by the carrier and payment by the carrier of the annual permit fee, the General Manager may issue an annual permit.

(5) The General Manager shall establish by annual permit the conditions for discharge and disposal of hauled liquid waste at the sewage works and the expiry of the annual permit.

(6) A carrier with a valid annual permit shall:

- (a) deliver and dispose of hauled liquid waste in accordance with the procedures for discharge that may be set from time to time by the City;
- (b) comply with all conditions of the annual permit;
- (c) pay fees for the disposal of hauled liquid waste, based on type of material, concentration or volume, as set forth in Schedule "B" to this by-law;
- (d) provide, on request of the General Manager, samples of the hauled liquid waste or analysis of such samples or both, prior to the discharge of the hauled liquid waste;
- (e) submit, prior to disposal of hauled liquid waste, manifests on the form issued by the General Manager, each part of which has been accurately completed for that load of hauled liquid waste, unless otherwise directed by the General Manager; and
- (f) equip vehicles identified in the annual permit with automated access

tags in accordance with the conditions of use established by the General Manager.

- (7) The General Manager may:
- (a) revise a valid annual permit issued to a carrier upon submission of an application and payment of a fee as set forth in Schedule "B" to this by-law;
 - (b) at any time collect samples of the hauled liquid waste for analysis;
 - (c) refuse to issue an annual permit or revise an annual permit if, among other things, the information provided on the application form is deficient or incorrect, the hauled liquid waste to be transported to the sewage works is prohibited, the annual permit fee has not been paid or the carrier has failed to comply with the conditions of an annual permit;
 - (d) establish, from time to time, application forms for annual permits, manifest forms for disposal of hauled liquid waste, and procedures relating the discharge and disposal of hauled liquid waste;
 - (e) cancel an annual permit if the carrier fails to comply with the conditions of an annual permit or fails to comply with the provisions of this Section;
 - (f) exempt a carrier from the requirement to equip vehicles with automatic access tags under conditions to be determined by the General Manager, upon receipt of a written request from the carrier;
 - (g) require the carrier or generator of the hauled liquid waste to enter into an agreement pursuant to Section 9 of this by-law for the disposal of certain types of hauled liquid waste.

- (8) Hauled sewage from a domestic source is exempt from the requirement not to exceed one or more of Table 1 "Limits for Sanitary and Combined Sewers Discharge" as set forth in Schedule "A", provided the hauled sewage does not contain:

- (a) industrial sewage;
- (b) fuel;
- (c) ignitable waste;
- (e) hazardous waste chemicals;
- (e) hazardous industrial waste;
- (f) reactive waste;
- (g) pathological waste; or
- (h) severely toxic waste.

- (9) Hauled liquid waste generated outside the City that is transported to a transfer station within the City and subsequently transported to the sewage works for disposal shall be deemed to be waste generated outside the City for the purpose of payment of fees as set out in Schedule "B" to this by-law, and shall be manifested as such.

- (10) Despite the provisions of this section, the owner or operator of a recreational vehicle may discharge hauled liquid waste at the sewage works in accordance with the policies and procedures relating to the discharge and disposal of hauled liquid waste prescribed by the General Manager.

REPORTING AND SELF-MONITORING REQUIREMENTS

- 8
(1) Upon request of a Compliance Officer, all owners or operators of industrial premises with connections to a sewage works or making use of any kind of sewage works shall provide the following information:
- (a) the name and address of the premises, the names of its owner and operator, a telephone number or other means by which the owner and operator can be contacted;
 - (b) description of process operations, including waste discharge rates and contaminant concentrations, and hours of operation;
 - (c) the names of all raw materials, products, by-products, waste and any other substance or material that is used, produced, discharged or emitted from such premises;
 - (d) the generator registration number, if any, assigned with respect to the premises under Regulation 347, along with the waste classes for which the registration was been obtained;
 - (e) the types, volumes, concentrations and frequency of discharge of all substances or materials;
 - (f) the dimensions, specifications and location of all drainage connections to the sewage works;
 - (g) the dimensions, specifications and location of all manholes constructed pursuant to this by-law;
 - (h) the specifications of all drainage lay-out plans;
 - (i) the types of industrial processes, neutralization processes and systems, ion exchange systems, heavy metal absorption systems, on-site treatment facilities and all other processes occurring prior to the discharge of any substance or material into any sewage works; and all other information, in the opinion of the Compliance Officer, is reasonable and necessary for the proper treatment and efficient operation and monitoring of sewage works.
- (2) Where a change occurs in the information submitted pursuant to subsection (1), the industry shall submit the new information to the Compliance Officer within 60 days of the change.
- (3) The industry shall complete, any monitoring or sampling of any discharge to a sewage works, as required by the Compliance Officer, and provide the results to the City in accordance with written notification from the City.
- (4) A Compliance Officer may require that samples obtained for self-monitoring be analyzed by an accredited laboratory.
- (5) The information provided to the City will be in a format acceptable to the Compliance Officer.
- (6) The obligations set out in or arising out of this section of this by-law shall be completed at the expense of the industry or the person carrying out the obligation.

AGREEMENTS

- 9
(1) Subject to subsections (2) and (3), the discharge or deposit of sewage that would otherwise be prohibited by this by-law may be permitted into or in any connection to any sanitary sewer or combined sewer to an extent fixed by

agreement with the City on such terms and conditions as set out in this by-law including conditions relating to the control of the quantity and quality of the discharge, the protection of the sewage works, payment of discharge and administrative fees or sewer rates as set out in Schedule "B" of this by-law to compensate the City for its additional costs of operation, repair, and maintenance of the sewage works, and on other terms and conditions as may be deemed appropriate by the City or General Manager.

- (2) The agreement referred to in subsection (1) may be one or more of the following:

- (a) a special discharge agreement may only be entered into for the discharge of the following parameters in sewage: suspended solids, biochemical oxygen demand, phenolic compounds (4AAP), total phosphorous, Kjeldahl nitrogen, or any combination thereof;
- (b) a sanitary sewer agreement may be entered into for the discharge of sewage which contains water that has originated from a source other than the City's water distribution system;
- (c) a leachate agreement may be entered into for the discharge of waste disposal site leachate;
- (d) a sludge agreement may be entered into for the discharge of sludge that meets certain criteria, as established by the City, from time to time.

- (3) The agreements shall be generally in the form designated by the City from time to time. The General Manager shall be authorized to execute the agreements contemplated in subsection (2) on behalf of the City in the form designated by the City.

- (4) A person who has entered into an agreement with the City in accordance with this section shall not be prosecuted under section 4 of this by-law for the discharge or deposit of sewage containing the matters specified in the agreement during the period within which the agreement is applicable and so long as the agreement is fully complied with.

- (5) The agreements contemplated by subsection (2) may be terminated by the City by written notice at any time where there is an emergency situation of immediate threat or danger to any person, property, plant or animal life, waters or sewage works.

- (6) The agreements contemplated by subsection (2) may be terminated by the City at any time on 30 days written notice if the discharge of any matter covered by such agreement contravenes clause (a) of subsection 4(1) or without assigning any cause.

- (7) Where a common sewer service pipe connects different industrial premises to the sewage works and only one test manhole is maintained pursuant to this by-law, the results of monitoring performed on samples collected from such manholes shall be used to determine any overstrength fees or sewer rates, unless otherwise approved by the General Manager.

- (8) A permit may be issued by the General Manager to the City's departments, commissions or local boards where the provisions of this section provide that the General Manager may enter into an agreement and such permit shall set out

the conditions for any discharge or deposits as would otherwise be set out by agreement.

COMPLIANCE PROGRAM

- 1 An industry may submit to the General Manager a proposed compliance
0(1) program setting out activities to be undertaken by the industry that would
result in the prevention or reduction and control of the discharge or deposit of
matter from the industry's premises into municipal or private sewer
connections to any sanitary sewer or combined sewer.

- (2) An industry may submit to the General Manager a proposed compliance
program setting out activities to be undertaken by the industry that would
result in the prevention or reduction and control of the discharge or deposit of
uncontaminated water, or stormwater from the industry's premises to eliminate
the discharge of matter into municipal or private sewer connections to any
storm sewer.

- (3) Upon receipt of an application pursuant to subsections (1) or (2) above, the
General Manager may issue an approval for a compliance program to the
industry to discharge an effluent that does not comply with a limit set out in
Schedule "A" of the by-law. Such approval is to be in accordance with
guidelines therefore adopted by the City from time to time. The industry shall
be entitled to make non-complying discharges in the amount and only to the
extent set out in the General Manager's approval during the planning, design,
and construction or installation of facilities or works needed to implement the
approved compliance program.

- (4) A person who has entered into an agreement with the City in accordance with
this section shall not be prosecuted under section 4 of this by-law for the
discharge or deposit of sewage containing the matters specified in the
agreement during the period within which the agreement is applicable and so
long as the agreement is fully complied with.

- (5) Every proposed compliance program shall be for a specified length of time
during which treatment facilities are to be installed, and shall be specific as to
the remedial actions to be implemented by the industry, the dates of
commencement and completion of the activity, and the materials or other
characteristics of the matter to which it relates and shall provide for the
payment of fees as set out in Schedule "B" to this by-law. The final activity
completion date shall not be later than the final compliance date in the
compliance program.

- (6) The industry to which a compliance program approval has been issued shall
submit a compliance program progress report to the General Manager within
14 days after the scheduled completion date of each activity listed in the
approved compliance program.

- (7) The General Manager is authorized to execute agreements with industries with
respect to approved compliance programs which agreements may, in
accordance with guidelines adopted by the City from time to time, include a
provision for a reduction in the payment of fees otherwise required from the
industry to the City pursuant to a special discharge agreement. The reduction in
payment to the City may be in such an amount and for such duration as the

agreement may specify.

The General Manager may terminate any approved compliance program agreement entered into pursuant to subsection (6) at any time on 30 days written notice to the industry in the event that the industry fails or neglects to carry out or diligently pursue the activities required of it under its approved compliance program, and in the event of such termination, the industry shall pay to the City the full difference in amount between what it was required to pay to the City pursuant to a special discharge agreement, and the amount actually paid to the City as a result of having entered into an agreement with respect to the approved compliance program.

- (8)
- (9) A compliance program contemplated by this section may be terminated by the General Manager by written notice at any time where there is an emergency situation or immediate threat or danger to any person, property, plant or animal life, or waters

- (10) A permit may be issued by the General Manager to the City's departments, commissions or local boards where the provisions of this section provide that the General Manager may enter into a compliance program and such permit shall set out the conditions for any discharge or deposits as would otherwise be set out by an approved compliance program.

SAMPLING AND ANALYTICAL REQUIREMENTS

- 1 The sampling and analysis required by this by-law shall be carried out in accordance with the procedures, modified or unmodified, as described in
1 (1) Standard Methods, the Ministry of Energy and the Environment and Energy
1 (1) publication entitled "Protocol for the Sampling and Analysis of
1 (1) Industrial/Municipal Wastewater" dated August, 1994, the United States
1 (1) Environmental Protection Agency methods or analytical methods adopted by the City.

- (2) Compliance or non-compliance with this by-law may be determined by the analysis of a grab sample or a composite sample done in accordance with subsection (1) above. A sample may contain additives for its preservation and may be collected manually or by using an automatic sampling device.

SPIILLS

- 1 In the event of a spill to a sewage works, the person responsible or the person
1 (1) having the charge, management and control of the spill shall immediately
1 (1) notify the City and provide any information with regard to the spill that is
1 (1) requested.

- (2) The person shall provide a detailed report on the spill to the City within five days after the spill, containing the following information to the best of their knowledge:

- (a) location where the spill occurred;
- (b) name and telephone number of person who reported the spill and the location and time where they can be contacted;
- (c) name of the person who discharged or deposited, or who is believed to have discharged or deposited, the material to the sewage works;
- (d) date and time of spill;
- (e) material spilled;

- (f) characteristics of material spilled;
- (g) volume of material spilled;
- (h) duration of spill event;
- (i) work completed or still in progress in the mitigation of the spill; and
- (j) preventative actions being taken to ensure a similar spill does not occur again.

- The person responsible for the spill or the person having the charge, management and control of the spill shall do everything reasonably possible to
- (3) contain the spill, protect the health and safety of citizens, minimize damage to property, protect the environment, clean up the spill and associated residue and restore the affected area to its condition prior to the spill

- Where the person responsible for the spill or the person having the charge, management and control of the spill fails or neglects to carry out or diligently pursue the activities required of it in subsection (3) of this by-law, the City may take such measures as they deem appropriate to contain the spill, protect the health and safety of citizens, minimize damage to property, protect the environment, clean up the spill and associated residue and restore the affected area to its condition prior to the spill and recover any associated costs from the person responsible for the spill and/or the person having the charge, management and control of the spill.
- (4) the health and safety of citizens, minimize damage to property, protect the environment, clean up the spill and associated residue and restore the affected area to its condition prior to the spill and recover any associated costs from the person responsible for the spill and/or the person having the charge, management and control of the spill.

MANHOLES

- The owner or operator of industrial premises, or multi-storey residential buildings with one or more connections to a sewage works shall install and maintain in good repair in each connection a suitable manhole to allow
- 1 observation and sampling, and flow measurement of the sewage,
 - 3(1) uncontaminated water or stormwater therein, provided that where installation of a manhole is not possible, an alternative device or facility may be substituted with the prior written approval of the General Manager.
 - .

- The manhole or alternative devices shall be located on the property of the owner or operator of the premises, as close to the property line as possible, unless the General Manager has given prior written approval for a different location.
- (2)

- Each manhole, device or facility installed as required by this section shall be designed and constructed in accordance with good engineering practice and the requirements of the municipal standard, as established by the City from time to time, and shall be constructed and maintained by the owner or operator of the premises at their expense.
- (3)

- The owner or operator of the industrial premises or multi-storey buildings shall at all time ensure that every manhole, alternative device or facility installed as required by this subsection is accessible at all times for the purposes of maintaining, observing, sampling, and flow measurement of the sewage, uncontaminated water or stormwater therein.
- (4)

- If the owner or operator of the industrial premises or multi-story building fails to install a manhole or alternate device, the General Manager, by notice in writing, may require the owner or operator of the premises to pay to the City that amount of money which the General Manager deems necessary to cover
- (5)

the cost of constructing and installing a manhole or alternate device an upon receipt of such notice, the owner or operator of the premises shall forthwith pay such amount to the City.

MONITORING DEVICES

- 1 The City may require the owner or operator of industrial premises or multi-
4(1) storey residential buildings to install and maintain devices to monitor the
discharge of matter, sewage, uncontaminated water or stormwater and to
submit to the City regular reports regarding the discharges.
- A discharge of matter or sewage to a single private sewer connection from a
premises with two or more separate businesses serviced by a single water
service will be considered as being released by the person responsible for the
payment of the City of Ottawa Water Services Utility bill for that water meter.
- (2) A discharge of matter or sewage to a single private sewer connection from a
premises with two or more separate businesses, each serviced by separately
metered water services will be considered as being released from each of the
(3) separate businesses, in proportion to the separate business' water consumption,
unless it is shown to the satisfaction of the General Manager, by the owner or
operator of the premises, that:
- (a) the portion of the material or sewage that is overstrength, or in
violation of this by-law, is being released from only one of the
businesses serviced by a separate metered water service on the
premises; and
 - (b) the material or sewage released from that business can be monitored
separately from the other businesses.

INTERCEPTORS

- 1 The owner or operator of any premises in which there is commercial or
5(1) institutional food preparation shall install a grease and oil interceptor on all
fixtures to prevent the release of oil and grease directly or indirectly to a sewer.
- The owner or operator of any premises in which vehicles or equipment are
serviced, repaired or washed shall install grease, oil, or sand interceptors on all
fixtures to prevent the release of grease, oil or sand directly or indirectly to a
sewer.
- (2)
- (3) All interceptors shall:
- (a) be of sufficient capacity and appropriate design to intercept natural oil
and grease, synthetic or petroleum oil and grease, gasoline, sand or
other sediment likely to flow into it under peak flow conditions;
 - (b) be located to be readily and easily accessible for cleaning and
inspection;
 - (c) be constructed of impervious materials capable of withstanding abrupt
or extreme changes in temperature;
 - (d) be of substantial construction, watertight, and equipped with easily
removable covers which, when bolted in place, shall be gastight and
watertight, except when the intercepting trap is for sand only the
cover need not be gastight and watertight; and
 - (e) be maintained by the owner, at the owner's expense, in continuously
efficient operation at all times.

- (4) Where an interceptor has been installed:
the owner or operator is required to produce maintenance records for
(a) the preceding eighteen (18) month period on request by a Compliance Officer; and
(b) a Compliance Officer shall have the right to enter upon the premises at any time to inspect its operation and maintenance.

DENTAL WASTE AMALGAM SEPARATOR

1 The owner or operator of any premises in which dentistry is practiced, shall
6(1) install, operate and properly maintain a certified amalgam separator on all
fixtures to prevent the release of dental amalgam directly or indirectly to a
sewer by no later than January 1, 2005, except where:

(a) The dental practice consists only of one of the following dental specialties, as defined in the Canada-wide Standard on Mercury for Dental Amalgam Waste:

- (i) Orthodontics and Dentofacial Orthopedics;
- (ii) Oral and Maxillofacial Surgery;
- (iii) Oral Medicine and Pathology;
- (iv) Oral and Maxillofacial Radiology;
- (v) Periodontics; or

(b) The dental practice consists solely of visits by a mobile dental practitioner who prevents any dental amalgam from being released directly or indirectly to the sewage works.

Despite subsection (1), any person operating a business from which dental amalgam is or will be discharged directly or indirectly to a sewer, at premises which are constructed or substantially renovated on or after the date that this
(2) by-law comes into force, shall install, operate and properly maintain dental amalgam separator(s) in any piping system which is connected directly or indirectly to a sewer.

GARBAGE GRINDERS

1 No person shall install or operate within the City any garbage grinding devices,
7 the effluent from which will discharge directly or indirectly into the sewage
works.

SWIMMING POOLS

1
8(1) No person shall discharge wastewater from a swimming pool or wading pool:

- (a) such that it flows directly or indirectly to a storm sewer or storm drainage system;
- (b) such that it flows onto an adjoining property;
- (c) such that it flows over a valley or ravine wall; or
- (d) such that it may cause erosion or instability of the valley or ravine slope.

(2) Wastewater from a swimming or wading pool shall either be transported away by an appropriately licensed waste hauler or be discharged either by way of a temporary connection to the sanitary sewer or by way of controlled discharge to the owner's property such that the discharge is at all times contained within

the property until it evaporates or infiltrates into the ground.

RIGHT OF ENTRY

- 1 No person shall prevent, hinder, obstruct or interfere in any way with the
9(1) General Manager or a Compliance Officer and persons deemed, by the General
Manager, to be essential to an inspection and sampling, bearing proper
credentials and identification from,
· entering in or upon, at any reasonable time without notice or a
(a) warrant, any land or premises, except land or premises being used as a
dwelling house;
(b) making such tests or taking such samples as the General Manager or a
Compliance Officer deems necessary;
(c) inspecting or observing any plant, machinery, equipment, work,
activity, or documents;
(d) making inquiries and taking photographs;
for the purposes of administering or enforcing this by-
law
(2) Any person who hinders or obstructs a Compliance Officer with carrying out
tests under and enforcing the provisions of this by-law, is guilty of an offence.
(3) Any person who knowingly provides false information in any report or return
required under this by-law or who willfully withholds information required
under this by-law, is guilty of an offence.
Notwithstanding subsection (1), a Compliance Officer may obtain an Order or
(4) a Warrant to obtain any information deemed necessary to assess compliance
with this by-law.

PROTECTION FROM DAMAGE

- 2 No person shall uncover, open into, break, alter, damage, destroy, deface or
0 tamper or cause or permit the breaking, damaging, destroying, defacing or
· tampering with any permanent or temporary device installed in a sewage works
for the purposes of flow measuring, sampling and testing of matter, sewage,
uncontaminated water or stormwater.

DAMAGE TO THE SEWAGE WORKS

- 2 Any person discharging matter, sewage, uncontaminated water, or stormwater
to the municipal sewage works shall be responsible for ensuring that such
2 matter, sewage, uncontaminated water, or stormwater conforms at all times to
1 the provisions of this by-law, and shall be liable for any damage or expense
· arising out of any failure to properly check and control such discharge,
including the cost of investigation, repairing, cleaning or replacing any part of
any municipal sewage works damaged thereby.

OFFENCES

- 2 Every person, other than a corporation, who contravenes any provision of
2(1) sections 4, 5, or 6, is guilty of an offence and on conviction is liable to a fine of
· not more than Ten Thousand (\$10,000) Dollars for a first offence and not more
than Twenty-Five Thousand (\$25,000) Dollars for any subsequent conviction.
(2) Every corporation which contravenes any provision of sections 4, 5, or 6 is
guilty of an offence and on conviction is liable to a fine of not more than Fifty
Thousand (\$50,000) Dollars for a first offence and not more than One Hundred

Thousand (\$100,000) Dollars for any subsequent conviction.

- Notwithstanding subsections (1) and (2), every person who contravenes any provision of any other section of this by-law, is guilty of an offence and on conviction is liable for every day or part thereof upon which such offence occurs or continues to a fine of not more than \$5,000 as provided for in the Provincial Offences Act, R.S.O. 1990, Chap. P.33, as amended.
- (3) In this by-law, a subsequent conviction means a conviction for an offence which offence occurs after the date of conviction for an earlier offence under this by-law or any of its predecessors.
- (4) When a person has been convicted of an offence under this by-law,
- (a) the Ontario Superior Court of Justice (Provincial Division) of the City of Ottawa, or
- (b) any court of competent jurisdiction thereafter,
- may, in addition to any penalty imposed on the person convicted, issue an Order prohibiting the continuation or repetition of the offence or the doing of any act or thing by the person convicted directed toward the continuation or repetition of the offence.

REPEAL

- 2 The following by-laws or portions of by-laws of the old municipalities are
- 3 repealed:
- .
- (a) Part 5.2 "Sewers, Sewage Works and Control of Discharges" of By-law 252 of 1998 of the old Regional Municipality of Ottawa-Carleton;
- (b) Part 5.4.7 "Provision of Grease, Oil and Sand Interceptors in Connections to Regional Sewers" of By-law 252 of 1998 of the old Regional Municipality of Ottawa-Carleton;
- (c) Sections 3, 27, 28, 29, 29A, 30, 31, 32, 33, and 34 of By-law 163-73 of 1999 of the old Corporation of the City of Ottawa,
- (d) By-law 60-67 of 1967 of the old Corporation of the Township of Nepean,
- (e) Section 15 of By-law 53-16 of 1953 of the old Village of Rockcliffe Park,
- (f) Sections 3(5), 9, and 11 of By-law 50 of 1997 of the old Corporation of the Township of West Carleton,
- (g) Sections 3, 20, 22, 23, 24, 25, 26, 27, 28 and 29 of By-law 3354 of the old Corporation of the City of Vanier,
- (h) Sections 4(b) and 4(c) of By-law 82-86 of 1989 of the old Corporation of the City of Kanata,
- (i) Sections 9, 21, 23, 24, 25, 26, 27, 28, 29, 30, and 31 of By-law 21 of 1984 of the old Corporation of the City of Gloucester, and
- (j) Sections 3, 27, 28, 29, 30, 31, 32, 33, 34, and 35 of By-law 59-87 of 1988 of the old Corporation of the Township of Goulbourn.

TRANSITION

- 2 Despite Section 23, special discharge agreements, sanitary sewer agreements,
- 4 leachate agreements, compliance programs, liquid material permits, and
- .
- permits entered into by the former Regional Municipality of Ottawa-Carleton,

and in effect immediately prior to the passage of this by-law, remain in force in accordance with their terms and conditions.

EFFECTIVE DATE

2

5 This by-law comes into force on January 1, 2004.

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SHORT TITLE

2

6 This by-law may be referred to as the "Sewer-Use By-law".

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ENACTED AND PASSED this day of , 2003.

CITY CLERK MAYOR

SCHEDULE "A" - TABLES

Table 1 . Limits for Sanitary and Combined Sewers Discharge

Parameter	Limit (mg/l)	Parameter	Limit (mg/l)
Biochemical Oxygen Demand	300	1,3-Dichlorobenzene / m	0.036
Cyanide (total)	2	1,4-Dichlorobenzene / p	0.017
Fluoride	10	1,1-Dichloroethane	0.2
Total Kjeldahl Nitrogen	100	1,2-Dichloroethane	0.21
Oil & Grease . Animal & Vegetable	150	1,1-Dichloroethylene	0.04
Oil & Grease . Mineral & Synthetic	15	cis-1,2-dichloroethylene	0.2
Phenolics (4AAP)	1	trans-1,2-dichloroethylene	0.2
Phosphorous (total)	10	1, 2-Dichloropropane	0.85
Sulphates	1500	cis-1,3-Dichloropropylene	0.07
Sulphides	2	trans-1,3-Dichloropropylene	0.07
Suspended Solids (total)	350	Ethylbenzene	0.057
Aluminium (total)	50	Methylene Chloride	0.211
Antimony (total)	5	Styrene	0.04
Arsenic (total)	1	1,1,2,2-Tetrachloroethane	0.04
Bismuth (total)	5	Tetrachlorethylene	0.05
Boron (total)	25	Toluene	0.08
Cadmium (total)	0.02	1,1,1-Trichloroethane	0.054
Chromium (total)	5	1,1,2-Trichloroethane	0.8
Cobalt (total)	5	Trichloroethylene	0.054
Copper (total)	3	Trichlorofluoromethane	0.02
Lead (total)	5	1,3,5-Trimethylbenzene	0.003
Manganese (total)	5	Vinyl Chloride	0.4
Mercury (total)	0.001	Xylene (total)	0.32
Molybdenum (total)	5	Bis(2-chloroethoxy)methane	0.036
Nickel (total)	3	Bis(2-ethylehexyl)phthalate	0.28
Selenium (total)	5	Benzylbutylphthalate	0.017
Silver (total)	5	Diethylphthalate	0.2
Tin (total)	5	Di-n-butylphthalate	0.057

Titanium (total)	5	Di-n-octylphthalate	0.03
Vanadium	5	Fluorene	0.059
Zinc (total)	3	Indole	0.05
Benzene	0.01	1-Methylnaphthalene	0.032
Bromodichloromethane	0.35	2-Methylnaphthalene	0.022
Bromoform	0.63	Naphthalene	0.059
Bromomethane	0.11	Total PAHs	0.015
Carbon Tetrachloride	0.057	2,4-Dichlorophenol	0.044
Chlorobenzene	0.057	Dioxins and Furans (total)	0.00072
Chloroethane	0.27	Formaldehyde	0.3
Chloroform	0.08	Hexachlorobenzene	0.0001
Chloromethane	0.19	N-Nitrosodimethylamine	0.4
Dibromochloromethane	0.057	Nonylphenols	0.002525
1,2 Dibromoethane	0.028	Nonylphenol ethoxylates	0.0025
1,2.Dichlorobenzene / o	0.088		

Table 2 . Limits for Storm Sewer Discharge

Parameter	Limit (mg/l)	Parameter	Limit (mg/l)
Biochemical Oxygen Demand	25	1,2-dichlorobenzene	0.0056
Cyanide (total)	0.02	1,4-dichlorobenzene	0.0068
Phenolics (4AAP)	0.008	Cis-1,2-dichloroethylene	0.0056
Phosphorous (total)	0.4	Trans-1,3-dichloropropylene	0.0056
Suspended Solids (total)	15	Ethylbenzene	0.002
Arsenic (total)	0.02	Methylene chloride	0.0052
Cadmium (total)	0.008	1,1,2,2-tetrachloroethane	0.017
Chromium (total)	0.08	Tetrachloroethylene	0.0044
Copper (total)	0.04	Toluene	0.002
Lead (total)	0.12	Trichloroethylene	0.0076
Manganese (total)	0.05	Xylene (total)	0.0044
Mercury (total)	0.0004	Naphthalene	0.0064
Nickel (total)	0.08	Hexachlorobenzene	4e-005
Selenium (total)	0.02	Nonylphenols	0.001
Silver (total)	0.12	Nonylphenol ethoxylates	0.01
Zinc (total)	0.04	PCBs	0.0004
Benzene	0.002	Total PAHs	0.006
Chloroform	0.002		

SCHEDULE "B" - FEES

DESCRIPTION	FEE
Hauled Liquid Waste	
Annual Permit Fee	\$190.00 per year
Annual Permit Revision Fee	\$106.00 per revision
Disposal fees	
Liquid Material	\$0.53 per cubic metre
Liquid Material generated outside the City of Ottawa	\$9.21 per cubic metre

Discharge Fees

Fees for parameters in sewage listed below shall be based on the following:

Parameters in sewage	
Biochemical Oxygen Demand	\$1.13 per kg
Suspended Solids	\$0.60 per kg
Phenolic compounds	\$1.13 per kg
Kjeldahl Nitrogen	\$4.50 per kg
Phosphorous	\$1.81 per kg
Water from a source other than the municipal Distribution system	\$0.52 per cubic metre

Administration Fees

Special Discharge Agreement Fee	\$739.00
Sanitary Sewer Agreement Fee	\$528.00
Compliance Program Fee	\$739.00
Sanitary Sewer Agreement Revision Fee	\$79.00 per revision
Compliance Program Revision Fee	\$159.00 per revision
(paid at time of entering agreement or program)	

[[top](#)]



1 **Interrogatory**

2

3 Question #3

4

5 Reference: Exhibit A1, Tab 2, Schedule 1, page 4, lines 4-13

6

7 a) Please provide a copy of the June 13, 2006 direction from the OEB.

8

9 **Response**

10

11 a) A copy of the June 13, 2006 direction from the Board, referred to in
12 Exhibit A1-2-1 (paragraph. 11.0), is attached.

**Ontario Energy
Board**
P.O. Box 2319
27th. Floor
2300 Yonge Street
Toronto ON M4P 1E4
Telephone: 416- 481-1967
Facsimile: 416- 440-7656
Toll free: 1-888-632-6273

**Commission de l'Énergie
de l'Ontario**
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2300, rue Yonge
Toronto ON M4P 1E4
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BY E-MAIL ONLY

June 13, 2006

To All Electricity Local Distribution Companies

**Re: Smart Meters and Low Voltage Accounting Matters arising from the
Board's 2006 EDR Decision on Common or Generic Issues
Board File No. EB-2006-0136**

On March 21, 2006, the Board issued its decision on certain generic 2006 EDR issues (RP-2005-0020/EB-2005-0529). This decision referred to two areas where accounting guidance would be provided. One matter concerns smart meters and the other concerns low voltage or wheeling charges billed by a host distributor to an embedded distributor. This letter identifies the accounts, under the Uniform System of Accounts (USoA), which are approved for these two subjects. Appendices A and B contain the specific account information and related guidance.

Background concerning smart meters

In its decision on the generic 2006 EDR issues, the Board adopted the recommendation in the Board's earlier report to the government on smart meters with regard to cost recovery during the phase-in period. The Board stated its view that given the increased need for electricity and the importance of conservation, specific funding for smart meters should be included in 2006 rates by all Ontario electric LDCs.

A few LDCs applied for specific smart meter programs, and rates were approved based on the evidence and forecasts submitted. For the majority of LDCs, the Board decided that year-one expenditures equivalent to \$0.30 per residential customer per month would be appropriate to be included in rates for the rate year beginning May 1, 2006. The Board also approved that two separate variance accounts should be established (one for capital and one for operating expenses) to track differences between the amount funded in rates and actual costs.

Accounts and procedures for smart meters

The Board will implement accounting procedures for smart meters in two stages. First is the issuance of the approved variance accounts and general accounting guidance provided through this letter. The second stage will be guidance to address specific accounting issues which will be informed through a staff-led consultation.

The \$0.30 per month equivalent is considered to be seed money to help to fund the start-up phase. For the majority of LDCs, the recoveries from customers will likely exceed their investments in smart meters in the beginning. While the Board views the funding approved in rates for smart meters to be for the purposes of this specific initiative, there will be no need to segregate the funds in a separate bank account. The variance accounts will track the amounts.

For now, revenue will be reduced by the amount for smart meters funded in rates on a monthly basis, and the capital variance account 1555 will be used to record this seed funding. Investments in smart meters will be recorded in the capital variance account, and LDCs should use sub-accounts to segregate costs by type for future fixed asset accounting required under GAAP. The LDC's normal capitalization policies should be followed in identifying fixed asset expenditures. The LDC should isolate the approved rate recovery in a separate capital variance sub-account to facilitate calculation.

Incremental operating, maintenance, amortization and administrative expenses directly related to smart meters will be recorded in the operating expense variance account 1556. At present, avoid allocating general expenses that are not specifically related to smart meters. After consultation with the utilities and interested parties, the Board may establish criteria to follow for allocating indirect costs and expenses.

Please see **Appendix A** for guidance on the accounting entries for the two variance accounts. The overall effect of this accounting is to remove the monthly amounts collected from customers from revenue and the direct costs otherwise included as current period charges from the income statement of the LDC.

Accounts 1555 and 1556 will be added to the list of accounts to be reported under 2.1.1 of the Electricity Reporting and Record Keeping Requirements (RRR) effective for the quarter-ended September 30, 2006 (which will be due by October 31, 2006).

Within the next few months the Board intends to consult with LDCs about more detailed accounting matters that are necessary to clarify the contents of the variance accounts. Therefore, note that the accounts' definitions have not been fully developed at this time.

As part of stage two of this process, the Board will issue a staff paper on accounting for smart meters. It will address such matters as return on the investment in smart meters, taxes on income associated with smart meters and the process for clearing the variance accounts.

Accounts and procedures for low voltage charges

The Board's decision of March 21, 2006 on the generic 2006 EDR proceeding also determined that it was appropriate for an embedded LDC to establish and maintain a variance account for transmission system or low voltage (LV) charges from a host distributor. These charges are related to transactions which are not part of the electricity wholesale market.

For embedded LDCs, USoA account number 1550, LV Variance Account, is approved to record transmission system or LV charges effective May 1, 2006. The amounts recorded in this account are comprised of the difference between the monthly recordings in approved Account 4750, Charges – LV, and Account 4075, Billed – LV. The details of these accounts and guidance are outlined in **Appendix B**. This approach is similar to the accounting procedures for the RSVAs which are used to capture the difference between revenue (billed) and expense (charge) at month end.

Account 1550 will be added to the list of accounts to be reported under 2.1.1 of the Electricity RRR effective for quarter-ended June 30, 2006 (which will be due by July 31, 2006).

It should be noted that the Board's decision of December 9, 2004, on Regulatory Assets – Phase II, directed embedded distributors to use account 1586, RSVAcn for LV charges from Hydro One Network Inc., on an interim basis. The Regulatory Audit Office provided accounting guidance to embedded distributors in the December 2005 FAQs (see the Board's website under the Accounting Procedures Handbook) on the use of this account in relation to these LV charges which applies to all such charges incurred up to April 30, 2006.

Questions regarding the smart meter variance accounts should be directed to Duncan Skinner at 416-440-8127 and the low voltage variance account to Ben Baksh at 416-440-8128. The Board's toll free number is 1-888-632-6273.

Yours truly,

Original Signed by

Peter O'Dell
Assistant Board Secretary

APPENDIX A**Accounting Guidance for the Smart Meter Variance Accounts****Account 1555, Smart Meter Capital and Recovery Offset Variance Account**

Debit: Revenue 4080

Credit: Variance Account 1555

To record the recoveries of smart meter funding included in the fixed charge rate for each class of customer.

Debit: Variance Account 1555

Credit: Bank/Accounts Payable XXXX

To record capitalized direct costs related to the smart meter program.

Appropriate sub-accounts shall be used in account 1555 to segregate costs into various categories of cost.

Carrying charges will apply to the monthly opening principal balance in the variance account at a rate of interest prescribed by the Board. A sub-account shall be used to separately record these carrying charges.

Records shall be maintained at an appropriate level to permit Board review and verification of amounts recorded therein.

Disposition of the variance account balance will not be considered in the Board's annual reviews of electricity non-commodity accounts under Bill 23.

Account 1556, Smart Meter OM&A Variance Account

Debit: Variance Account 1556

Credit: OM&A contra account 5695

To record incremental OM&A expenses and amortization related to the smart meter program.

Separate sub-accounts within the OM&A contra account shall be created for the following categories of expenses: operating, maintenance, administration and depreciation or amortization.

Carrying charges will apply to the monthly opening principal balance in the variance account at a rate of interest prescribed by the Board. A sub-account shall be used to separately record these carrying charges.

Records shall be maintained at an appropriate level to permit Board review and verification of amounts recorded therein.

Disposition of the variance account balance will not be considered in the Board's annual reviews of electricity non-commodity accounts under Bill 23.

APPENDIX B

Accounting Guidance for Low Voltage Variance Account

Effective May 1, 2006, the following accounts will be used to record the variances arising from low voltage transactions which are not part of the electricity wholesale market:

Account 1550, LV Variance Account

On a monthly basis, this account shall be used to record the net of:

- i) the amount charged by a host distributor to an embedded distributor for transmission or low voltage services, Account 4750

AND

- ii) the amount billed to the embedded distributor's customers based on the embedded distributor's latest approved rate(s), Account 4075

Carrying charges will apply to the monthly opening principal balance in the variance account at a rate of interest prescribed by the Board. A sub-account shall be used to separately record these carrying charges.

Disposition of the variance account balance will be considered in the Board's annual reviews of electricity non-commodity accounts under Bill 23.

Account 4750, Charges – LV

This account shall be used by an embedded distributor to record the amount charged by a host distributor for transmission or low voltage services. Depending on an embedded distributor's normal monthly accounting practices, this account may include accruals for amounts not yet invoiced by the host distributor.

Account 4075, Billed – LV

This account shall be used by an embedded distributor to record amounts billed to its customers for transmission or low voltage charges. Depending on an embedded distributor's normal monthly accounting practices this account may include accruals for monthly unbilled estimates. Regardless of the method used, the embedded distributor must ensure a proper matching of the billed amounts recorded in Account 4075 to those charges recorded in Account 4750.



1 **Interrogatory**

2

3 Question #4

4

5 Reference: Exhibit A1, Tab 4, Schedule 1, page 1, lines 16-17

6

7 a) Has Hydro Ottawa received an order from the Board declaring its current
8 2007 rates to be interim for the period from January 1, 2008 to April 30,
9 2008. If so, please provide a copy.

10

11 **Response**

12

13 a) No, Hydro Ottawa has not received an order from the Board declaring
14 current 2007 rates to be interim for the period from January 1, 2008 to
15 April 30, 2008. Hydro Ottawa has requested this order as per updated
16 Exhibit A1-2-1 in paragraph 13.0 (b) at page 4 and updated Exhibit A1-4-1
17 in paragraphs 2 and 3 at pages 1-2.



1 **Interrogatory**

2
3 Question #5

4
5 Reference: Exhibit A1, Tab 5, Schedule 1, page 1, lines 5-13

6
7 Preamble: Hydro Ottawa states that “the rate year is now from May 1st of one
8 year to April 30th of the next”.

- 9
10 a) Is it Hydro Ottawa’s contention that this is change from past practice?
11
12 b) How does this practice differ from that for 2006 when Hydro Ottawa also
13 filed for rate approval based on a forward test year application?
14
15 c) Did Hydro Ottawa apply for a rate rider and deferral account for 2006
16 revenue deficiency during the rate year? If not, what is different for 2008?
17

18 **Response**

- 19
20 a) No, but the practice of setting the rate year has changed three times since
21 distribution rates were first unbundled for 2001. In the 1st Generation
22 Distribution Rate Handbook, the rate year was set for March 1st of each
23 year. For 2004, a change was made so that the rate year was from April
24 1, 2004 to March 31, 2005. The rate year in 2005 again commenced on
25 April 1st. However, in 2006, the Board implemented another change so
26 that the rate year was from May 1, 2006 to April 30, 2007. It is not clear
27 what impacts on distributors the Board considered in making these
28 changes.
29
30 b) The rate year for 2008 is May 1, 2008 to April 30, 2009. The rate year for
31 2006 was May 1, 2006 to April 30, 2007. Therefore, Hydro Ottawa agrees



1 that the same practice for setting the rate year has been used in both
2 2006 and 2008.

- 3
4 c) Hydro Ottawa did not apply for a rate rider or a deferral account for the
5 revenue deficiency that occurred for the first four months of the calendar
6 year 2006. However, a revenue deficiency did occur in 2006. Hydro
7 Ottawa's audited distribution revenue for 2006 was only \$113.9M. The
8 Board-approved revenue requirement was \$122.4M. It was this
9 deficiency, and expectation of revenue deficiencies in each year that rates
10 are rebased, that prompted Hydro Ottawa to address this situation for
11 2008.

12
13 As discussed in the response to Board Staff Interrogatory #57 h), Hydro
14 Ottawa has assessed that there has been a material hardship resulting
15 from the difference between the rate year and the calendar/fiscal year.



Interrogatory

Question #6

Reference: Exhibit A1, Tab 5, Schedule 1, page 2, lines 1-7

Report of the Board on Cost of Capital and 2nd Generation Incentive Regulation
for Ontario's Electricity Distributors, December 20, 2006 – pages 36-37

a) Does Hydro Ottawa acknowledge that the annual rate adjustment process
under the 2GIRM provides for some allowance for increase in rate base
for the years 2008 and 2009? If not, why not?

b) If the 3GIRM similarly provides some allowance for increased rate base,
does Hydro Ottawa agree that the deferral account requested is more
appropriately viewed as a variance account which should also capture the
additional capital related revenue requirement provided for under the
3GIRM in 2009 and 2010? If not, why not?

Response

a) Hydro Ottawa's is re-basing in 2008 and therefore the 2GIRM mechanism
was only applicable to 2007. The rate adjustment process for 2GIRM
provided for an increase to rates of an allowed inflation increase based on
the GDP-PI, less a productivity factor of 1%. For 2007, GDP-PI was 1.9%
and therefore there was a net increase in rates, and as a result in revenue
as well, for 2007. If the GDP-PI had been less than 1%, there would have
been a net decrease in rates and revenue.



1 Hydro Ottawa would disagree that its rate base in 2007 was increased as
2 a result of 2GIRM. The premise of incentive regulation mechanisms, such
3 as 2GIRM, is that the rates have been delinked from costs and therefore
4 there was no cost-based revenue requirement for 2007. The rate base
5 and revenue requirement remained at the 2006 level, even though the
6 rates increased.

- 7
8 b) If the 3GIRM does have a similar inflation less productivity mechanism as
9 the 2GIRM, rates will again be delinked from costs for 2009 and 2010.
10 Hydro Ottawa's rate base and revenue requirement would remain at the
11 2008 level, but the rates would be adjusted by the 3GIRM mechanism.

12
13 Hydro Ottawa's proposal for a capital adjustment factor would have the
14 3GIRM mechanism applied only to the OM&A portion of the rates (the
15 portion as determined from the 2008 revenue requirement). The capital
16 adjustment factor would apply to the capital portion of the rates. On this
17 basis, there would be no 3GIRM adjustment to the capital portion of the
18 rates. In this case, Hydro Ottawa's rate base would increase in 2009 and
19 2010 by the amount of the Board-approved capital additions.

20
21 If, instead of the capital adjustment factor, the Board approves a deferral
22 account for the impact of the capital additions on Hydro Ottawa's revenue
23 requirement, it is assumed that the 3GIRM adjustment would apply to the
24 total rates. Hydro Ottawa agrees that the incremental amount of revenue
25 resulting from any 3GIRM adjustment applied to the capital portion of
26 rates (the portion as determined by the 2008 revenue requirement) would
27 be an offsetting entry to the deferral account.
28



1 **Interrogatory**

2

3 Question #7

4

5 Reference: Exhibit A1, Tab 5, Schedule 2, page 1, lines 24-31

6 Exhibit A1, Tab 7, Schedule 3, page 1, Table 1

7

8 a) Does the pricing of services provided by Hydro Ottawa to each of its three
9 affiliates include an allowance for Administration and/or Corporate
10 Overhead. If yes, how is this determined? If no, why not?

11

12 **Response**

13

14 a) The pricing of services provided by Hydro Ottawa to each of its three
15 affiliates is either based on market price or cost. Market prices are
16 assumed to be all-inclusive. Cost-based prices, which include all
17 incremental and direct costs, do not include an allowance for
18 administration and/or corporate overhead. The amounts are typically
19 small and the administration not significant.



1 **Interrogatory**

2
3 Question #8

4
5 Reference: Exhibit A1, Tab 7, Schedule 3, Appendices C, E, F, G, H, I, J

6
7 a) What is included in the Straight Time Billing Rate for the Fitter Mechanic
8 (Appendix C) – e.g. is it just wages, is it fully burdened salaries, does it
9 include overheads?

10
11 b) What is included in the Unit Cost rate for Technical Support and
12 Applications Services Support (Appendices E & G)?

13
14 c) How are the costs per square foot determined for facilities management
15 and what costs are included (Appendices F & J)?

16
17 d) How were the charges established for the Human Resource Service
18 Agreements (Appendix H & I) and what costs of Hydro Ottawa are they
19 based on?

20
21 e) How were the charges established for the General IT Service (Appendix
22 K) and what costs of Hydro Ottawa are they based on?

23
24 **Response**

25
26 a) For the Fitter Mechanic the Straight Time Billing Rate includes wages and
27 benefits but no overheads.

28
29 b) Technical Support includes technical on-site solutions, advisory services,
30 requested research and IT asset repairs due to damage caused by the
31 customer. An average labour rate of \$70.00 is charged out per hour of



work, which represents a market price. Business Applications Support includes the charges for licenses, maintenance, external technical support, coordination of training on new corporate software and internal technical support for JD Edwards and is allocated on an estimated use basis.

- c) The per square foot price is based on 2007 market pricing obtained through a real estate consultant. The cost may include provision for heating, ventilation, air conditioning, snow shoveling, grass cutting, building maintenance services, building and office security, and property administration services charged on a square foot basis, depending on the type of premise: warehouse, office, station, and location and terms of the specific SLA.
- d) The charges for the Human Resource Service are cost-based. They are based on level of services and hours of support provided to the affiliates.
- e) General IT Service Fee includes charges for telephone, wireless and IT infrastructure (including new PC and peripheral equipment acquisition, installation and set-up and new telephone installation and set-up). It does not include capital acquisition of PC equipment and peripherals, asset management, network management, Level 1 and Level 2 Help Desk Support, email, internet access, data security and back- up, and enterprise wide software. The Connection Fee includes cost for OM&A services, depreciation, the charges for licenses, maintenance, external technical support, coordination of training on new corporate software and internal technical support for JD Edwards. The fee is allocated on a per employee connection basis. The fee does not include costs for items that are leased by or on behalf of the Holding Company nor does it include consumables. These items are charged back separately, on an individual



- 1 basis. The charges were based on prior year actual costs plus an
- 2 inflationary factor.



1 **Interrogatory**

2

3 Question #9

4

5 Reference: Exhibit A1, Tab 7, Schedule 4, page 1

6

7 a) Please provide a copy of Hydro Ottawa's current organizational structure
8 down to the departmental level.

9

10 **Response**

11

12 a) Please refer to the response to Energy Probe Interrogatory #1 a).



1 **Interrogatory**

2
3 Question #10

4
5 Reference: Exhibit A1, Tab 7, Schedule 4, page 1

- 6
7 a) Are there any charges from the Holding Company to Hydro Ottawa for
8 strategic planning services? If so, what are they projected to be for 2007
9 and 2008 and where are the services documented in the Service Level
10 Agreements?

11
12 **Response**

- 13
14 a) The charges from the Holding Company to Hydro Ottawa (see Exhibit D1-
15 2-1) are for corporate services that are mainly strategic in nature;
16 unfortunately it is impractical to try to separate the strategic components
17 from other contemporaneous work. The total costs are allocated to Hydro
18 Ottawa based on activity levels that are assessed each year. For both
19 2007 and 2008, the allocated costs are estimated at \$2.1M, or 39% of the
20 Holding Company's total costs.

21
22 The costs allocated to Hydro Ottawa are based on a sharing of corporate
23 services under verbal terms of agreement in prior years. A draft written
24 agreement was prepared this year, but has not been executed, pending
25 the Board's final decision on amendments to the *Affiliate Relationships*
26 *Code for Electricity Distributors and Transmitters* ("ARC"). A discussion
27 paper on amendments to the ARC was issued by Board Staff on June 15,
28 2007. The Board issued proposed amendments for comments on
29 September 19, 2007. It is expected that the Board will issue an amended
30 ARC before the end of 2007 and that this will have new provisions related
31 to Shared Corporate Services. Rather than execute an agreement and



1 then have to amend it due to an amended ARC, Hydro Ottawa has
2 deferred signing the agreement. The draft agreement nevertheless sets
3 out all terms and conditions under which costs have been allocated to
4 Hydro Ottawa; a copy it is attached for informational purposes.

THIS CORPORATE MANAGEMENT AND FINANCING AGREEMENT
(the "Agreement") effective the 1st day of January 2008

BETWEEN:

HYDRO OTTAWA HOLDING INC., a corporation incorporated under the laws of the Province of Ontario, with an address at 3025 Albion Road North Ottawa, Ontario.

(hereinafter called "**HOHI**")

AND

HYDRO OTTAWA LIMITED, a corporation incorporated under the laws of the Province of Ontario, with an address at 3025 Albion Road North Ottawa, Ontario

(hereinafter called "**HOL**")

(collectively referred to as the "Parties" and individually as a "Party")

WHEREAS the Parties desire to enter into this Agreement by which HOHI shall provide Services to HOL pursuant to the terms and conditions contained therein; and

NOW THEREFORE, in consideration of the mutual covenants and agreements herein and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, HOHI and HOL agree as follows:

1. Purpose

The purpose of this Agreement is to describe the Services to be provided by HOHI to HOL, the cost recovery mechanism for such Services, the responsibilities of and the working relationship between HOHI and HOL relating to such Services. This Agreement also sets out the interest and financing costs to be charged or recovered by HOHI from HOL.

2. Definitions

In this Agreement, unless otherwise specified, the following terms shall have the following meanings:

"**Affiliate**" means, with respect to any party, (i) any legal entity of which the securities or other ownership interests representing fifty per cent (50%) or more of the equity or fifty percent (50%) or more of the ordinary voting power or fifty percent (50%) or more of the

general partnership interest are, at the time such determination is being made, owned, Controlled or held, directly or indirectly, by such legal entity, or (ii) any legal entity which, at the time such determination is being made, is Controlling or under common Control with, such legal entity. As used herein, the term "Control", whether used as a noun or verb, refers to the possession, directly or indirectly, of the power to direct, or cause the direction of, the management or policies of a legal entity, whether through the ownership of voting securities, by contract or otherwise.

"Affiliate Relationships Code" means the *Affiliate Relationships Code for Electricity Distributors and Transmitters* issued by the Ontario Energy Board on April 1, 1999, including any and all amendments or revisions thereto.

"Agreement" or "Corporate Management and Financing Agreement" means this Agreement between the Parties, which includes this document, any attached Schedules and Appendices, and amendments or supplements issued pursuant to this Agreement.

"Business Hours" means the hours from 8:00 a.m. to 4:00 p.m., Eastern Time, on the weekdays from Monday to Friday, inclusive, with the exception of statutory holidays observed by HOL.

"Confidential Information" means all information, whether disclosed orally, in writing, or otherwise, designated as being confidential, which is disclosed by one Party (the "Disclosing Party") to the other Party (the "Recipient") relating to the business of the Disclosing Party or in connection with the subject matter of this Agreement and includes, but is not limited to, business, financial, and marketing information, plans and strategies, contractual, customer and supplier information, technical information related to hardware, software and firmware, and know-how, trade secrets and any other intellectual property rights, and the terms of this Agreement. Notwithstanding the foregoing, Confidential Information shall not include information which (i) now is, or hereafter properly becomes, generally available to the public other than as a result of disclosure in breach of this Agreement; (ii) is required to be disclosed in compliance with any applicable law, under order of a court of competent jurisdiction or other similar requirement of a governmental agency, so long as the Recipient provides the Disclosing Party with prior written notice of any required disclosure pursuant to such law, order or requirement and cooperates, to the extent permitted by law with the Disclosing Party in seeking an order eliminating or restricting the disclosure or a protective order or otherwise ensuring the confidential treatment of the Confidential Information; (iii) is disclosed with the prior written approval of an authorized officer of the Disclosing Party; (iv) is previously known to the Recipient at the time of disclosure; (v) is discovered by the Recipient without reference to the Confidential Information of the Disclosing Party; or (vi) is lawfully obtained from a third party which was not bound by a confidentiality agreement respecting the disclosure.

"Government Authority" means any government, parliament, legislature or any regulatory authority, agency, commission or a board of any government, parliament or legislature, or any political subdivision thereof, or any court or, without limitation to the foregoing, any other law, regulation or rule making entity or any person acting under the

authority of any of the foregoing or any other authority charged with the administration or enforcement of laws, including the Privacy Commissioner of Canada and the Information and Privacy Commissioner of Ontario and the Ontario Energy Board (OEB), the Ontario Power Authority and the Ontario Ministry of Energy.

"Laws" shall have the meaning prescribed to it in Section 11.

"Personal Information" means information about an identifiable individual, including without limitation any information defined or deemed as such pursuant to any applicable laws or regulations related to privacy or data protection, that is transferred to, collected or compiled by, or otherwise under the control or custody of HOHI and that (i) is about customers or employees of or consultants to HOL or its Affiliates or (ii) is otherwise held by HOHI for or on behalf of HOL or its Affiliates.

"Representatives" in reference to party, means the party's directors, officers, employees, agents and contractors, the party's Affiliates, and all such Affiliates' respective directors, officers, employees, agents and contractors.

"Services" shall have the meaning prescribed to it in Section 8 and shall include corporate management services (including but not limited to, corporate human resources, financing, accounting, President and Chief Financial Officer management, corporate secretary, internal audit, risk management, and legal services) and other special projects, as required.

3. Priority of Documents

The documents specified below form part of and are incorporated into this Agreement. If there is a discrepancy between the wording of any documents which appear on the list, the wording of the document which first appears on the list shall prevail over the wording of any document which subsequently appears on the list:

- (a) Schedule A
- (b) Schedule B

4. Performance

- (1) All Services shall be performed, and the deliverables conveyed, in a timely and business-like manner in accordance with the terms and conditions of this Agreement.
- (2) The Services shall be performed in accordance with industrial and professional practices, codes and standards carried out by professionals, technicians or workers skilled and qualified in the type of work required.
- (3) HOHI covenants and agrees with and represents and warrants to HOL that HOHI has the experience, ability and financial capacity to perform and fulfill its obligations hereunder, and covenants to maintain during the Term and any Renewal Term, the

financial and other ability and authority to perform and fulfill its obligations hereunder.

5. Term

- (1) This Agreement shall commence on January 1, 2008 and shall remain in effect until December 31, 2008.
- (2) Provided HOL is not then in default under the terms of this Agreement, the Term of this Agreement will automatically renew for additional terms of one (1) year each on the same terms and conditions as herein provided save and except in respect of Price. ("Renewal Term"). The Price during each Renewal Term shall be determined at the time of renewal by HOHI in accordance with the principles set out in Section 4 of Schedule A, attached hereto..

6. Termination

- (1) Either Party has the absolute right in its sole discretion to terminate this Agreement by written notice to the other Party, specifying a termination date not sooner than sixty (60) days following delivery of such notice. In the event of any such termination, HOL shall only be obligated to pay HOHI for work effort reasonably expended and expenses incurred prior to the date of termination. HOHI shall not undertake any further commitments after receipt of notice of termination and HOL shall not, under any circumstances, be responsible for any loss of revenue or anticipated profit.
- (2) Upon a termination notice being given by HOL, HOHI shall cease work (including the procurement of materials for the fulfilment of this Agreement) in accordance with and to the extent specified in the notice, but shall proceed to complete such part or parts of the Services as are not affected by the termination notice. HOL may, at any time or from time to time, give one or more additional termination notices with respect to any or all parts of the Services not terminated by any previous termination notice.
- (3) Any partial termination of the Agreement shall be evidenced by a written agreement as between the Parties specifying the specific Services to be terminated, and the adjustment in Transfer Price pursuant to such partial termination; provided that the Parties shall make any adjustments required to insure that the Transfer Prices remain consistent with the Affiliate Relationships Code.
- (4) In the event of termination pursuant to this Section 6, HOHI shall diligently perform the Services up to the termination date so specified and the sole measure of HOL's liability to HOHI, if any, shall be to pay for Services performed by HOHI in accordance with the terms of this Agreement up to the termination date.

7. Terms of Payment

(1) Corporate Management Services

- (a) All Services provided by HOHI, or its Representatives, shall be charged to HOL in accordance with the cost recovery principles set out in Sections 4, and 5 of Schedule A, attached hereto, and in accordance with the Affiliate Relationships Code (the "Price" or, collectively, the "Prices").
- (b) The Parties hereby agree and acknowledge that they shall renegotiate the Services and Prices described in Schedule A, attached hereto, at such times as necessary in order to ensure that the Prices remain consistent with the requirements of the Affiliate Relationships Code.

(2) Financing

- (a) HOHI will charge HOL interest and finance costs calculated monthly in accordance with Section 8 of Schedule A, attached hereto, and in accordance with the Affiliate Relationships Code.

(3) Advances

- (a) HOL may record an advance on an "as and when required" basis for its operational needs.
- (b) Any advances shall be made in accordance with Section 6 of Schedule A, attached hereto, and the Affiliate Relationships Code.
- (c) HOL shall repay any advances in accordance with Section 7 of Schedule A, attached hereto, and the Affiliate Relationships Code.

8. Corporate Management Services

- (1) HOHI shall provide HOL with the services listed in Schedule A hereto and any additional services required by HOL from time to time (collectively, the "Services"). Any additional Services required by HOL shall be provided by HOHI at mutually agreed upon terms, conditions and Prices, provided however that such terms, conditions and Prices shall be consistent with the requirements of the Affiliate Relationships Code.
- (2) HOHI shall provide the Services at the quality levels set out in Schedule A. These levels shall be reviewed from time to time.
- (3) Subject to subsection 8(4), HOHI shall have the right, in its sole discretion, to contract with a third party to deliver all or part of the Services, provided however that such

third party shall be capable of providing such Services to the same or better quality levels than those set forth in subsection 8(2). The Parties agree that HOHI shall be acting as the agent of HOL in procuring the delivery of such Services to HOL.

- (4) Where HOHI has contracted with a third party to provide part or all of the Services pursuant to subsection 8(3), HOL shall pay the amount charged by such third party for the portion of the Services delivered.
- (5) An employee may be transferred or seconded from HOHI to HOL or from HOL to HOHI with the prior written approval of the Manager of the relevant departments of HOHI and HOL. Such approval shall set forth the terms and conditions of such transfer including all appropriate measures required to preserve the confidentiality of customer information. When on a secondment or transfer, the employee will not provide any services whatsoever to the original company during the period of secondment or transfer.
- (6) HOHI shall bear all costs incurred, and all risk involved, in delivering the Services to HOL.

9. Invoicing

Charges for Services rendered and reimbursable expenses incurred will be submitted monthly, unless otherwise specified. Payment will be made via inter-company transfer on a monthly basis. In the case of a disagreement regarding the actual amount invoiced, Parties will adhere to the mediation procedure set out in Section 25 for resolution.

10. Goods & Services Tax (GST)

No GST will be charged as per intercompany election GST25 *Closely Related Corporations and Canadian Partnerships – Election or Revocation of the Election to Treat Certain Taxable Supplies as having been made for Nil Consideration.*

11. Compliance with Laws

HOHI will at all times comply with all applicable laws, statutes, rules, regulations, by-laws, orders, notices, ordinances and other requirements of any Government Authority (collectively, the "Laws"). Without limiting the foregoing, HOHI covenants that it will comply with the provisions of health and safety Laws. HOHI acknowledges that it is solely responsible as employer for the health and safety of all its employees and workers. HOHI shall comply with and shall require all of its employees and workers to comply with the provisions of all Laws.

12. Progress Reports

- (1) As and when requested by HOL, HOHI shall prepare progress reports, which shall be forwarded to the appropriate HOL Contact named in Schedule B. The context and detail of these reports shall be complete and appropriate for the scope and nature of

the work as established between the Parties' Contacts.

- (2) Regular progress review meetings between the Parties may also be convened on an as and when required basis upon agreement between the Parties' Contacts. Such meetings shall be in addition to the required progress reports.

13. Completion of the Work

HOHI shall diligently endeavor to complete the Services in accordance with Schedule A and, if necessary, will increase the level of effort/resources necessary to ensure the schedule is maintained. Any increase in cost greater than five percent (5%) of the Total Corporate Management Costs, as set out in Appendix 1 to Schedule A, attached hereto, shall be approved by HOL's Contact's prior written authorization, notwithstanding any extra efforts required to maintain schedule.

14. Proprietary Rights, Confidentiality

- (1) Both Parties retain all rights to methodology, knowledge, and data brought to the work and used therein. No rights to proprietary interests existing prior to the start of the work are passed hereunder other than rights to use same as provided for below. HOHI shall not incorporate into the work any data, software or hardware the use of which by HOL violates the proprietary rights of third parties.
- (2) All title and beneficial ownership interests to all intellectual property, including copyright, of any form, including, without limitation, discoveries (patented or otherwise), software, data (hard copies and machine readable) or processes, conceived, designed, written, produced, developed or reduced to practice in the course of the work shall vest in and remain with HOL. HOHI shall not do any act, which may compromise or diminish HOL's interests as aforesaid.
- (3) Subject to any third party rights or licence agreements, HOHI grants to HOL a non-exclusive paid up license to use any data and other proprietary items incorporated into the work by HOHI hereunder. HOHI may, by prior written notice and written acknowledgment by HOL's Contact, reserve the right to incorporate into the work data or other proprietary property for the use of which HOHI wishes to charge a fee. If said notice and acknowledgment are not executed prior to the incorporation, HOHI shall be deemed to have waived any such fee. HOL shall have the right to exploit such data and property and to license same to third parties provided that such licenses contain reasonable reservations of proprietary rights in favor of HOHI (which may be included in a general reservation, but shall contain the same order of legal protection as HOHI uses when distributing such data or property to third parties) or provided the use of same does not reveal information proprietary to HOHI.
- (4) Each Party agrees not to disclose any Confidential Information to any person except those of its Representatives who have a need to know such Confidential Information in connection with this Agreement and who are informed of the confidential nature of

the Confidential Information and who agree to be bound by the terms of this Section 14. The Recipient will not use any Confidential Information relating to the Disclosing Party for any purpose other than in connection with the performance of its obligations, or exercise of its rights, under this Agreement, and will exercise the same security measures normally exercised with respect to its own Confidential Information, and at a minimum a reasonable degree of care, to safeguard the Confidential Information from disclosure to anyone other than as permitted hereby.

- (5) If this Agreement is terminated at any time, the Parties agree that such Confidential Information provided and all copies thereof (excluding Confidential Information in oral form that has not been put into tangible form) will be immediately returned to the Disclosing Party or, at the Disclosing Party's option, destroyed. Notwithstanding the foregoing, the Recipient shall be entitled to keep, subject always to all the provisions of this Agreement, one copy of any notes, analyses, reports or other written material prepared by, or on behalf of, the receiving party that contain Confidential Information for its records.
- (6) Each Party shall be responsible for any breach of this Agreement by the Party, its Representatives and any person to whom it discloses any Confidential Information. Full and faithful performance by each of the Parties hereto of all obligations under this Agreement is the essence of this Agreement. Each of the Parties hereto acknowledges that monetary damages are not an adequate remedy for violations of the obligations of confidentiality under this Agreement and that any non-compliance or breach thereof shall result in irreparable harm to the Disclosing Party, and that in such event the Disclosing Party shall be entitled to equitable relief, including injunctive relief, without prejudice to any other remedies available to the said Disclosing Party.
- (7) HOHI shall (i) collect, use, disclose, and retain Personal Information only as required to fulfill its obligations pursuant to this Agreement, (ii) take appropriate measures to ensure the privacy and security of all Personal Information, including taking measures to prevent unauthorized access, collection, use, disclosure, copying, modification or disposal; and (iii) comply with all applicable laws or regulations related to privacy or data protection.
- (8) The provisions of this Section 14 shall survive termination of this Agreement.

15. Accounts and Right to Audit

- (1) HOHI shall keep proper accounts and records of the cost to HOHI of the Services provided and of all expenditures or commitments made by HOHI in connection therewith, and shall keep all books and records including invoices, receipts, vouchers, cheques, and bank statements relating thereto. HOHI shall not, without the prior written consent of HOL, dispose of any such accounts, records, invoices, receipts or vouchers until the expiration of seven (7) years after final payment under this

Agreement, or until the settlement of all outstanding claims and disputes, whichever is later.

- (2) All such accounts and records as well as any invoices, receipts, vouchers, cheques, and bank statements shall at all times during the retention period referred to in subsection 15(1) be open to audit, inspection and examination by the authorized representatives of HOL, who may make copies and take extracts thereof. HOHI shall furnish all such information as the representatives of HOL may from time to time require with respect to such accounts, records, invoices, receipts and vouchers.

16. Limitation of Liability

HOL intends that HOHI not be liable to HOL for professional errors and omissions committed in the course of the work beyond the limits of insurance coverages which HOHI is required to maintain, or which HOHI obtains during the course of the work and toward the cost of which HOL directly or indirectly (i.e., through payment of overhead markups) contributes. As between HOHI and HOL, this intention may be considered legally binding so long as it is not used by virtue of a provision in the policy to defeat or lessen coverage and, therefore, liability. For the purposes of this provision, self-insurance shall be the equivalent of no insurance unless a reserve that is recognized in HOHI's financial reports, or that is recognized by Canada Revenue Agency or the by the income tax authority in the jurisdiction of HOHI's home office, is established.

17. Additional HOHI Responsibilities

HOHI shall also be responsible for:

- (a) ensuring the billing rate is commensurate with the Services to be performed; and
- (b) ensuring that all expenses are appropriate, accurate, properly supported by receipts. HOHI shall exercise integrity, prudence, and sound business judgment in the incurring and invoicing of reimbursable business expenses.

18. HOL's Duties

- (1) HOL shall gratuitously and timely furnish all pertinent information and data available to it and shall give such assistance as shall reasonably be required by HOHI for the performance of the Services. HOL shall communicate its decisions on reports, recommendations and other matters properly referred to it by HOHI for decision within such reasonable time as shall not delay or disrupt performance of the Services. HOL will use reasonable efforts to facilitate the granting of access to all sites and locations, as reasonably required by HOHI for performance of the Services.
- (2) HOL shall gratuitously make available its personnel, equipment and facilities reasonably required for performance of Services.

19. Insurance

- (1) HOHI shall at its own expense maintain in force the following insurance coverages, to the extent applicable:
 - (a) Commercial General Liability Insurance with coverage of not less than Two Million Canadian Dollars (\$ 2,000,000) per occurrence involving bodily injury or property damage;
 - (b) Professional Liability (Errors and Omissions) with coverage limits of not less than Two Million Canadian Dollars (\$ 2,000,000); and
 - (c) Automobile Liability including owned, non-owned and hired automobiles with coverage limits of Two Million Canadian Dollars (\$ 2,000,000) anyone occurrence Combined Single Limit Bodily Injury and Property Damage;
- (2) HOHI shall provide to HOL certificates of its insurance, specifying insurers, types of risks insured and coverage limits, from time to time, as HOL shall reasonably require. Such certificates shall provide that the insurer shall not cancel or amend the subject insurance coverage unless and until HOL shall have had at least thirty (30) days notice from the insurer of its intention to cancel or amend.

20. Limited Warranty, Liability and Indemnification

- (1) HOHI warrants that its Services will be performed within the limits set out in Schedule A, attached hereto, with professional thoroughness and competence in all respects. HOHI at its own expense will correct and perform, if necessary, any Service which does not meet such standards of performance if notified within one (1) year after completion of the Services.
- (2) HOHI shall indemnify and hold harmless HOL and its Representatives from all liability to any person including HOHI and its Representatives for any and all damages, expenses and costs, for injury to or death of any person or damage to or destruction or loss of use of property of HOHI or any other person including HOL, arising directly from or indirectly caused by any negligent act or omission of HOHI or of any person for whose acts or omissions HOHI may be liable, except to the extent where such damage, expense, cost, destruction or loss of use is caused by the negligence or misconduct of HOL or HOL's failure to comply with any health and safety requirements of any Government Authority. Such indemnity shall survive any termination of this Agreement.
- (3) HOL shall indemnify and hold harmless HOHI and its Representatives from all liability to any person including HOL and its Representatives for any and all damages, expenses and costs, for injury to or death of any person or damage to or destruction or loss of use of property of HOHI or any other person including HOL, arising directly from or indirectly caused by: (i) any negligent act or omission of HOL or of any person for whose acts or omissions HOL may be liable or (ii) HOL's failure to comply

with any health and safety requirements of any Government Authority.

- (4) Notwithstanding any other provision to the contrary, HOHI's total aggregate liability for damages arising from any cause of action whatsoever, shall not exceed an amount (the "Liability Amount") equal to the higher of: (a) the total consideration payable to HOHI pursuant to this Agreement, or (b) the limits of the insurance coverage's described above.
- (5) In no event, whether as a result or breach of contract, warranty, tort (including negligence), strict liability or otherwise shall either Party be liable to the other for any indirect, incidental, or consequential damages of any nature.

21. Assignment

- (1) Neither Party shall assign this Agreement nor any interest therein without the prior written consent of the other Party, such consent not to be unreasonably withheld.
- (2) No consent to any assignment granted by either Party shall relieve the other Party from any liability or obligation under this Agreement.
- (3) Notwithstanding the foregoing, it is agreed that:
 - (a) HOL may voluntarily, by statute, or by legislative directive or authority, transfer its interest hereunder without the consent of HOHI to an Affiliate.
 - (b) In the event that HOL is restructured or reorganized into new entities whether by legislative mandate or otherwise, any such new entity, as determined by HOL or the government of the Province of Ontario, may assume all rights and obligations of HOL under this Agreement, with the agreement of HOHI.

22. Notice

Every notice or other communication required or permitted in this Agreement shall be in writing directed to the Party to whom delivered at such Party's address either personally or by facsimile, as follows:

(a) Hydro Ottawa Holding Inc.:

3025 Albion Road
Ottawa, Ontario
K1G 3S4

Attention: Corporate Secretary and General Counsel
Fax: (613) 738-5486

(b) Hydro Ottawa Limited:

3025 Albion Road
Ottawa, Ontario
K1G 3S4

Attention: Director, Finance
Fax: (613) 738-5498

Or at such other address as may be notified by either Party pursuant to subsection 22(2).

- (2) Either Party may change its address from time to time by giving written notice of such change to the other Party. Any notice delivered hereunder by hand or by facsimile to an officer or designated person of the addressee shall be deemed to have been received by the addressee upon such delivery or transmission.

23. No Agency

Nothing in this Agreement shall be construed to constitute either Party as the agent, employee, licensee, partner, joint venturer or other representative of the other.

24. Force Majeure

- (1) Any delay in the performance of any Service which is caused by *force majeure* or event beyond the reasonable control of either Party (but not including an inability to pay) shall be excused by the other Party. As used herein, "*force majeure*" includes acts of God, acts of local, state, provincial or federal government, fire, floods, epidemics, strikes or labour unrest.
- (2) In the event of *force majeure* affecting either Party, such Party shall notify the other within seven (7) consecutive days (including holidays and weekends) of the event allegedly causing the delay, and the time for completing the portion of any Service which has been or is likely to be delayed shall be extended by a period equal to the length of the delay so caused and the total performance period for the Service shall be deemed extended.

25. Dispute Resolution

- (1) If a dispute arises out of or relates to this Agreement, or the breach, termination, validity or subject matter thereof, or as to any claim in tort, in equity or pursuant to any domestic or international statute or law, the Parties expressly agree to endeavor in good faith to settle the dispute by mediation in accordance with subsection 25(2).
- (2) Where there is a dispute, as contemplated by subsection 25(1), the Parties shall abide by the following process:
 - (a) The Party claiming that a dispute has arisen must give written notice (Notice of

Dispute) to the other Party to the dispute in accordance with Section 22. The Notice of Dispute shall specify the nature of the dispute.

- (b) On receipt of the Notice of Dispute specified in paragraph 26(2)(a), the Parties to the dispute must within five (5) business days of receipt of said Notice of Dispute seek to resolve the dispute.
- (c) If the dispute is not resolved within five (5) business days or within such further period as the Parties agree, then the Notice of Dispute shall be referred to the Chief Financial Officer of each Party.
- (d) On receipt of the Notice of Dispute, the Chief Financial Officer of each Party shall seek to resolve the dispute.
- (e) If the dispute is not resolved within five (5) business days from the receipt of Notice of Dispute by the Chief Financial Officer, or within such further period as the Parties agree, then the Notice of Dispute shall be referred to the President and Chief Executive Officer of each Party.
- (f) The decision of the President and Chief Executive Officer shall be final and binding on the Parties.

26. Governing Law

The laws of the Province of Ontario shall govern this Agreement. Any suit, action or proceeding arising out of or related to this Agreement shall be brought in the appropriate court of the Province of Ontario and each Party irrevocably attorns and submits to the jurisdiction of such court.

27. Amendments and Waivers

No amendment or waiver of any provision of this Agreement shall be binding on either party unless consented to in writing by such party. No waiver of any provision of this Contract shall constitute a waiver of any other provision, nor shall any waiver constitute a continuing waiver, unless otherwise provided.

28. Severability

If any provision of this Agreement is determined to be invalid or unenforceable in whole or in part, such invalidity or unenforceability shall attach only to such provision and everything else in this Agreement shall continue in full force and effect.

29. Entire Agreement

There are no understandings, agreements, warranties or representations, express or implied, except as set forth in this Agreement. This Agreement may not be amended or supplemented except in writing and executed by both Parties. HOHI acknowledges that communications (whether verbal or written) from other HOL departments or workers or persons alleging to act on behalf of HOL will not be effective to change this Agreement or its implementation.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed as of the date first set forth above.

For Hydro Ottawa Holding Inc.:

For Hydro Ottawa Limited:

Signature: _____

Signature: _____

Name: Rosemarie T. Leclair

Name: Norm Fraser

Title: President and Chief Executive Officer

Title: Chief Operating Officer

Date: _____

Date: _____

Signature: _____

Signature: _____

Name: Wojo Zielonka

Name: Doug Shannon

Title: Chief Financial Officer and Chief Information Officer

Title: Director, Finance

Date: _____

Date: _____

SCHEDULE A

SERVICES

1.0 PURPOSE

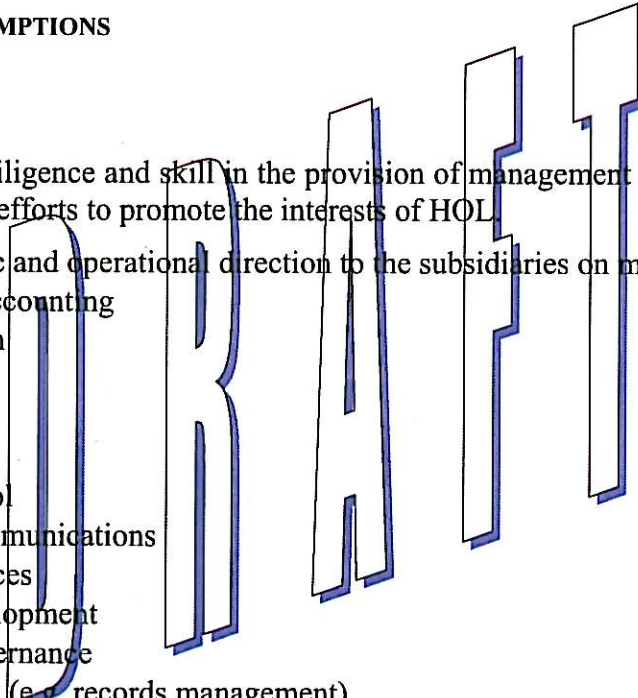
Services covered under this Agreement include strategic and operational direction provided for President and Chief Financial Officer management services, Human Resources, Taxation, Corporate Secretary, Internal Audit, Risk Management, Legal services, Corporate Communications, Regulatory Affairs, and other services as required.

This Schedule also outlines interest and financing costs to be charged/recovered by Hydro Ottawa Holding Inc. (HOHI) from Hydro Ottawa Limited (HOL).

Appendix 1 to this Schedule A includes the estimated cost of services.

2.0 BUSINESS ASSUMPTIONS

2.1 HOHI will:

- 
- (a) Exercise care, diligence and skill in the provision of management services to HOL and will use its best efforts to promote the interests of HOL.
 - (b) Provide strategic and operational direction to the subsidiaries on matters of:
 - finance and accounting
 - risk mitigation
 - taxation
 - legal services
 - Laws
 - internal control
 - corporate communications
 - human resources
 - business development
 - corporate governance
 - administration (e.g. records management)
 - corporate financial systems
 - (b) Provide timely, cost-effective management services to HOL
 - (c) Procure consultants, including external legal counsel, where specialist advice is required.
 - (d) Liaise with financial institutions and report consolidated compliance with credit agreements and trust indenture.
 - (e) Charge fair and equitable financing costs reflective of HOL's borrowing needs.

- (f) Maintain adequate financing facilities for HOL based on approved 3-Year business plan and revised quarterly forecasts.
- (g) Provide HOL with a monthly account of interest and finance charges.

2.2 All work performed by HOHI shall be governed by all applicable Laws, agreements with third parties and internal processes including but not limited to the following:

- Affiliate Relationships Code
- Audit, Governance and Compensation, and Nominating Committees' Terms of Reference
- Internal Audit Charter
- Approved audit plans
- Any credit facility agreement arranged by a Party with a financial institution
- BNY Trust Company of Canada Trust Indenture dated February 4, 2005 and any supplemental indentures.
- BNS Cash Management Agreement
- CIBC Cash Management Agreement
- Hydro Ottawa Code of Conduct
- All relevant directives, guidelines, orders and codes of the Ontario Energy Board (OEB).
- Shareholder Declarations for HOHI and HOL
- Quarterly financial reporting process
- Budgeting and strategic planning process
- *Ontario Business Corporations Act (OBCA)*
- *Income Tax Act*
- *Corporations Tax Act (Ontario)*

2.3 HOL will:

- (a) Submit and comply with all representations made during the quarterly compliance review.
- (b) Request those services it requires and be able to define needs to ensure appropriate service provision.
- (c) Provide resources where necessary to conduct data gathering and audit testing assistance for internal audit and other services.
- (d) Develop a management action plan to address internal audit recommendations.

- (e) Provide accurate information on a timely basis to facilitate completion of requested/required tasks.
- (f) Participate fully and willingly in all focus groups, surveys, meetings and committees initiated by HOHI.
- (g) Undertake not to take any action, nor operate its business in a manner that would result in HOHI's default under existing credit facilities identified in section 2.2.
- (h) Provide accurate information on a timely basis by requested dates to facilitate completion of requested/required tasks.
- (i) Submit request for short-term borrowing requirements 24 hours in advance of requirement, not to exceed existing borrowing capacity.
- (j) Provide long-term borrowing requirements via 3-Year business plan and revised quarterly forecasts, and submit request for long-term borrowing advance as agreed to via 3-Year business plan and revised quarterly forecast 5 days in advance of requirement.
- (k) Report compliance in accordance with all existing credit facilities on a quarterly basis through the quarterly bank compliance reporting process.

2.4 Definitions

- **Inter-corporate debt** – includes short-term and long-term borrowings from HOHI excluding any trade accounts receivable, payable or accrued amounts.
- **Short-term borrowing requirements** – amounts borrowed for less than 180 days required to support temporary working capital deficiencies or other temporary cash requirements. A continuous series of loans and repayments that continue for 180 consecutive days will be converted into long-term borrowing.
- **Long-term borrowing requirements** – amounts borrowed for greater than 180 days to support continued working capital deficiencies and capital asset acquisitions.

3.0 SERVICES PROVIDED

President Management Services includes:

- Overall advice, guidance and approval of:
 - HOL divisional business plans to ensure alignment to enterprise strategic direction;
 - HOL operational budget plans and strategy;
 - HOL operational and financial results - performance against plan;
 - HOL business growth and development;
 - Shareholder, HOHI and HOL Board, Stakeholder and Reputation Management;
 - Regulatory compliance including legislation and other statutory, legal, contractual, etc. requirements;
 - Leadership and organizational development programs;

- Enterprise Risk Management framework for divisional implementation; and
- Enterprise policies, programs, practices, standards and performance measures.

CFO Management Services includes:

- Advice and guidance on financial strategic & operational direction
- Advice and recommendations of matters addressed at Board of Directors, and Audit Committees.
- Financial services, including:
 - Interim and long-term financing for operations and capital expenditures.
 - Reporting compliance with credit agreements and trust indentures.
 - Evaluating business strategies in support of maintaining an investment grade credit rating for the consolidated entity.
 - Liaising with credit rating agencies.
 - Arranging for Banker's Acceptances, letters of credits or other bank instruments as required. (Does not include insurance bonds required on performance contracts.)
 - Management of banking services and leverage of corporate facilities to minimize fees.
 - Management of signatories on banking certificates.
- Accounting services, including:
 - Completion of Management Discussion and Analysis (MD&A) for Annual Report.
 - Evaluation of accounting policies, as required, before presentation to Audit Committee.
 - Completion of consolidated actual, forecast and budgeted results and preparation of related presentations for the Audit Committee and Board of Directors.
 - Completion of consolidated 5 year financial plan and preparation of related presentations for the Board of Directors.
 - Documentation of Corporate Finance Policies and Procedures.
 - Evaluation of strategic projects, including assessment against specified company risk and reward relationships.
 - Monitoring tax planning and compliance activities.
 - Development and communication of Financial Calendar.
 - Accumulation of information and preparation of presentation material for Board of Directors and Corporate Committees.
 - Support of company financial tools for consistent monthly financial reporting.
 - Facilitation of the consolidated audit.

Human Resources includes:

- Provide leadership and direction to employees in Human Resources and Safety, Environment and Training;
- Prepare materials for information or approval by Governance and Compensation Committee and HOL and HOHI Boards of Director, such as OHSE annual and quarterly reports, metrics, performance review, collective bargaining mandate, etc. Attend and present at same as required. Liaise and coordinate with HOL Chief Operating Officer and Senior Management Team as required;
- Provide advice and recommendations of a strategic and operational nature to HOL Chief Operating Officer and Senior Management Team;

- Provide executive services including review of executive compensation, drafting of executive contracts and addendums, design and implementation of executive performance assessment, etc.;
- Develop mandate and strategy for collective bargaining;
- Oversee negotiations and administration of collective agreement, including labour-management relations, grievance management, etc.;
- Monitor legislative changes, identify and communicate impacts to organization, and report on compliance;
- Oversee the development and implementation of employee engagement strategies, including recognition, wellness, recruitment, etc.;
- Design and implement programs, such as performance management, management and leadership development, succession planning, workforce planning, etc.;
- Review and redesign compensation system for management group employees;
- Renew Code of Conduct, including validation of organizational values;
- Oversee the improvement of processes in Human Resources and Safety, Environment and Training;
- Oversee the development of metrics for organizational effectiveness, including people and OHSE metrics. Report on metrics quarterly and annually; and
- Oversee the development and implementation of a policy framework for Human Resources and Safety, Environment and Training.

Corporate Secretary Services includes:

- Board and Committee meeting agendas, attendance, preparation, and minutes.
- Custodian of corporate records, such as incorporation documents, bylaws, share certificates, board resolutions.
- Dissemination of Board decisions.
- Reproduction and dissemination of reports for Hydro Ottawa Limited and Hydro Ottawa Holding Inc.
- Preparation of minutes of meetings for all Board and Committee meetings for Hydro Ottawa Limited and Hydro Ottawa Holding Inc.
- Submission of all requisite corporate filings under the *OBCA* and the *Corporations Information Act*.
- Corporate records management advice (records classification, record archiving)
- Co-ordination and response to access to information requests and advice on protection of personal information.

Internal Audit Services includes:

- Development and conduct of a rolling three-year internal audit plan approved by the Audit Committee.
- Evaluation of the effectiveness of risk management, control and governance processes.
- Reporting to management and the Audit Committee on observations and recommendations resulting from internal audit activity.
- Follow-up on management's action plans resulting from internal audit activity.
- Liaise with external financial, regulatory and other auditors as required.

Enterprise Risk Management (ERM) includes:

- Development and maintenance of ERM conceptual framework.
- Design of ERM implementation processes and procedures.
- Provide assistance and oversight of the quarterly risk reporting process.
- Provide training and assist with the implementation of ERM.
- Conduct special risk-assessment assignments as directed by the ERM steering committee or the Board.
- Oversee the documentation of the business continuity planning
- Prepare and update an annual risk profile for HOL.

Legal Services includes:

- Legal advice and opinions.
- Litigation management and support.
- Contract drafting and review.
- Policy development, review and support.

Corporate Communications includes:

- Oversees the establishment of the company's communications agenda and objectives
- Advice and guidance on stakeholder and shareholder relations, public relations and customer communications
- Advice and recommendations to the Chief Operating Officer and Senior Management Team on communications issues
- Oversees the development of Corporate Social Responsibility programs
- Oversees the development of communications protocols
- Acts as chief media spokesperson
- Review and approval of communications materials
- Oversees implementation of the Enterprise Risk Management program in the Corporate Reputation area

Regulatory Affairs includes:

- Managing the relationship with regulatory agencies specific to the local distribution company including:
 - influencing future regulatory rules,
 - completing required regulatory filings,
 - ensuring appropriate licenses are obtained, and
 - overseeing compliance with rules and regulations.
- Liaising with external bodies including OEB, IESO, OPA, MOE, EDA and OPA.
- Identifying, reviewing, and monitoring HOL policies, practices and performances measures to ensure compliance with regulatory requirements.
- Reviewing HOL's Conditions of Service for compliance with regulatory requirements.
- Coordinating rate applications
- Providing regulatory advice, leadership and guidance to the senior management team and operational staff within HOL.
- Reviewing corporate benchmarking.

Services not subject to management cost recovery:

- Review of HOHI corporate governance practices.
- Shareholder requirements specifically of HOHI.
- Interest charges on inter-corporate debt charged as per promissory note.
- Direct Costs of HOL are to be budgeted by HOL, but may be managed by HOHI in consultation with HOL.

4.0 MANAGEMENT SERVICES COST RECOVERY PRINCIPLES

Unless otherwise stated, costs will be estimated, based on the budget for services to be rendering in the following year. The following costing methodology applies when determining the amount to be charged:

All costs related to shareholder specific costs are borne directly by HOHI, such as shareholder specific costs.

Costs specifically attributable to HOL are allocated.

Project costs are allocated on an established basis. (e.g. compensation programs allocated by headcount).

After deducting the costs borne by HOHI, specific allocations, special projects, and meetings, HOL will assume its proportionate share of the remaining costs on the basis of level of effort rendered.

5.0 PAYMENT OF MANAGEMENT SERVICES COST RECOVERY

Unless otherwise stated, HOHI will charge HOL for services rendered based on the Total corporate Management Costs as per Appendix 1. A monthly charge equal to 1/12th of this amount will be invoiced each month as per the intercompany transaction approval process.

Should a significant change in operations indicate that this charge may not be appropriate, the amount will be recalculated and the amount adjusted as required. A final true up of actual to budgeted costs will be performed at year-end. No adjustment will be made where amount is within 5% of budget.

6.0 ADVANCES

Advances exceeding 180 days will be converted into promissory notes.

Promissory notes will be advanced when necessary to maintain HOL's target 60/40-debt/equity ratio.

Requests for short-term borrowing may be initiated by e-mail and confirmed by approved bank transfer.

Confidential

Requests for long- term borrowing will be evidenced by e-mail and confirmed by signed promissory notes.

7.0 REPAYMENT OF ADVANCES

Repayment of advances will be made in the following priority:

- Short term borrowings
- Existing non-interest bearing promissory notes (as long as the minimum debt to equity ratio is not affected), as per the terms of the promissory notes.
- Other interest bearing promissory notes, as per the terms of the promissory notes.

8.0 FINANCE COST RECOVERY/CHARGE PRINCIPLES

Unless otherwise stated, finance cost recovery/charges will be calculated each month, based on the following:

Letter of Credit fees – at terms arranged with the Canadian Imperial Bank of Commerce (“CIBC”)

Long Term Grid Promissory Notes – at the rate stipulated in the signed promissory notes.

Bankers Acceptance (BA) draws – at the related bankers acceptance plus 10bps for the number of days the BA is outstanding during the month.

Daily Cash Overdraft/Prime Loans – at terms arranged with the Bank of Nova Scotia (“BNS”) plus 10 bps

Daily Cash Balance – as earned per terms arranged with BNS

9.0 RESPONSIBILITIES OF SERVICE PROVIDER

PRIORITIZATION

Work will be prioritized according to established criteria negotiated between the parties.

APPENDIX 1

CORPORATE MANAGEMENT SERVICES AGREEMENT COST RECOVERY FOR FISCAL YEAR 2008

<u>SERVICE</u>	<u>ESTIMATED BASIS (for special projects)*</u>	<u>TOTAL ESTIMATED COST</u>
1. Corporate Human Resources	Based on headcount	357,000
2. President Management Services	~ 40%	320,000
3. CFO Management Services	~ 40%	395,000
4. Corporate Secretary Services		
Board and Other Governance Meetings	~ 45%	82,000
5. Internal Audit Services	~ 55%	257,000
6. Risk Management	~ 40%	112,000
7. Legal Counsel	~ 45%	337,000
8. Corporate Communications	~ 60%	101,000
9. Regulatory Affairs	~ 85%	179,000
TOTAL CORPORATE MANAGEMENT COSTS		2,100,000

Appendix 1 Notes

* See 4.0 Management Services Cost Recovery Principles

SCHEDULE B

CORPORATE MANAGEMENT SERVICES AGREEMENT

CONTACTS

<u>NAME / TITLE</u>	<u>EXTENSION</u>	<u>CELL NUMBER</u>	<u>E-MAIL ADDRESS</u> <i>(all addresses @hydroottawa.com)</i>
Hydro Ottawa Limited – phone 738-5499, fax 738-5498			
Norm Fraser Chief Operating Officer	Ext. 526	282-3514	normfraser@
Doug Shannon Director, Finance	Ext. 234	282-4057	dougshannon@
Hydro Ottawa Holding Inc. – phone 738-5499, fax 738-6402			
Rosemarie T. Leclair President and Chief Executive Officer	Ext. 203	720-0353	rosemarieleclair@
Wojciech Zielonka Chief Financial Officer	Ext. 205	277-7988	wojozielonka@



Interrogatory

Question #11

Reference: Exhibit A1, Tab 10, Schedule 1, page 1

a) Please provide the minimum service standard for SAIDI, SAIFI and CAIDI for 2005 and 2006.

b) Please provide the minimum service standard for SAIDI, SAIFI and CAIDI for 2007.

Response

The *2006 Electricity Distribution Rate Handbook*, published by the Board, states with regard to SAIDI, SAIFI and CAIDI: "A distributor that has at least 3 years of data on this index should, at a minimum, remain within the range of its historical performance".

The minimum service standard for SAIDI, SAIFI and CAIDI for Hydro Ottawa is to be in the range of its historical performance. Tables 1 and 2 provide the 3-year average for each reliability metric. The impact of the 2003 blackout has been excluded from the 2003 metrics.



a)

Table 1: 3 Year Averages for 2005 and 2006

Reliability Metric	2005 Year (Average of 2002 – 2004)	2006 Year (Average of 2003 – 2005)
SAIDI	1.174	1.097
SAIFI	1.171	1.037
CAIDI	1.027	1.077

b)

Table 2: 3 Year Averages for 2007

Reliability Metric	2007 Year (Average of 2004 – 2006)
SAIDI	1.121
SAIFI	0.947
CAIDI	1.153



1 **Interrogatory**

2

3 **Question #12**

4

5 Reference: Exhibit A2, Tab 1, Schedule 2, page 1

6

7 a) Please provide a schedule that shows the following line items for 2006
8 (approved), 2006 (actual), 2007 forecast and 2008 forecast:

9

- 10 • Rate Base
- 11 • Return on Rate Base (\$ and %)
- 12 • Return on Equity (\$ and %)
- 13 • Distribution Expenses (excluding LV)
- 14 • Amortization
- 15 • PILS
- 16 • Service Revenue Requirement
- 17 • Revenue Offsets
- 18 • Transformer Ownership Credit
- 19 • LV Costs

20

21 **Response**

22

23 Please see the table on the next page:

24



	2006 Approved	2006 Actual	2006 Normalized	2007 Estimate	2008 Forecast¹
Rate Base \$000	\$504,316	\$500,460	\$500,460	\$546,691	\$581,765
Return on Rate Base \$000	18,155	39,997	16,755	15,236	20,501
Return on Rate Base %	3.6%	8.0%	3.3%	2.8%	3.5%
Return on Equity \$000	18,155	39,997	16,755	15,236	20,501
Return on Equity %	9.00%	19.98%	8.37%	6.98%	8.81%
Distribution Expenses (excluding LV) \$000	\$43,987	\$43,825	\$43,825	\$46,105	\$59,328
Amortization \$000	\$33,970	\$33,060	\$33,060	\$37,743	\$43,754
PILS \$000	\$12,436	\$12,721	\$11,001	\$15,285	\$13,676
Service Revenue Requirement \$000	124,420	\$141,588	\$118,426	\$128,031	\$155,537
Revenue Offsets \$000	(4,078)	(\$8,335)	(\$8,335)	(\$7,816)	(\$7,586)
Transformer Ownership Credit \$000	1,129	\$1,171	\$1,171	\$1,142	\$1,159
LV Costs \$000	554	\$1,010	\$1,010	\$1,423	\$1,394

1

¹ The 2008 Forecast is based on the proposed 2008 revenue requirement. Actual results will be different because new rates are not implemented until May 1, 2008.



Interrogatory

Question #13

Reference: Exhibit A2, Tab 2, Schedule 1, page 1
Exhibit B1, Tab 2, Schedule 1, page 10

- a) How many years forward did the OM&A and Capital budgets prepared by Hydro Ottawa in 2005 (for 2006 Rate Application) and 2006 (i.e., the budget for 2007) cover?
- b) Please provide a schedule setting out by Division/Department, 2007 budget OM&A, 2007 actual OM&A and 2008 projected OM&A on both a gross (before capitalization) and net basis.

Response

- a) In the past few years, Hydro Ottawa has prepared a one-year budget for approval purposes with a forward forecast of four years for discussion purposes only. Therefore the forward forecasts are prepared with less rigour in terms of detailed data inputs than the budget year.
- b) Attached is a schedule setting out the 2007 budgeted OM&A, 2007 actual OM&A and 2008 forecast OM&A on a departmental basis excluding CDM. As discussed in the response to CCC Interrogatory #5, the Budget Guidelines provided in Exhibit A2-2-1 were the guidelines provided to Hydro Ottawa's staff in preparing the 2008 budget based on Hydro Ottawa's System of Accounts ("SOA"). There are differences in the presentation of OM&A between the SOA and the Board's USoA. These differences were fully reconciled in Exhibit A3-3-2 for the net OM&A. However, there are also differences in how allocations are shown that



1 impact on how the gross OM&A is reported. In addition, Hydro Ottawa's
2 department structure does not align to the USoA grouping of accounts.
3 The departments shown in the schedule are as follows:
4

5 CAM – Construction and Maintenance

6 DAM – Distribution Asset Management

7 CCC – Customer Care and Conservation

8 CMM – Communications

9 COO – Chief Operating Officer

10 CRP – Corporate Costs

11 FIN – Finance

12 HR – Human Resources

13 IT – Information Technology

14 MER – Metering and Electricity Revenue

15 REG – Regulatory Affairs
16

Attachment to VECC Interrogatory 13b)

Operations, Maintenance and Administration by Department by Hydro Ottawa System of Accounts

	LDC less CDM			CAM			DAM			CCC less CDM			CMM			COO		
	June Forecast	07 Budget	08 Budget	June Forecast	07 Budget	08 Budget	June Forecast	07 Budget	08 Budget	June Forecast	07 Budget	08 Budget	June Forecast	07 Budget	08 Budget	June Forecast	07 Budget	08 Budget
Expenses																		
Compensation Expenses	47,921,555	48,130,598	51,776,913	13,677,332	13,679,466	14,818,589	14,781,066	14,790,494	16,031,558	2,362,822	2,488,117	2,565,732	475,886	490,480	514,183	528,648	489,520	602,931
Maintenance Expenses	23,974,248	25,126,489	22,270,483	17,201,102	17,448,210	16,113,261	1,408,127	1,444,936	1,335,390				0	0	0	0	0	0
Operating Expenses	6,912,089	7,233,777	7,517,702	843,401	822,500	916,500	1,573,590	1,575,756	1,650,909	2,122,046	2,119,200	2,248,000	0	0	0	0	0	0
General and Admin. Expenses	17,461,921	18,328,211	18,292,284	418,870	423,267	475,388	1,033,089	1,033,384	1,125,710	572,648	595,274	374,880	863,227	844,829	958,175	128,330	133,950	404,671
Gross OM&A	96,269,813	98,819,076	99,857,381	32,140,705	32,373,442	32,323,738	18,795,871	18,844,570	20,143,567	5,057,516	5,202,591	5,188,612	1,339,113	1,335,309	1,472,358	656,978	623,470	1,007,602
Other Expenses																		
Work for Others	1,600,726	1,446,612	1,145,777	932,937	843,451	691,794	653,086	603,161	453,983	0	0	0	0	0	0	0	0	0
Property Taxes	1,731,383	1,650,000	1,758,250	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Gross Expenses	99,601,922	101,915,688	102,761,408	33,073,642	33,216,893	33,015,531	19,448,957	19,447,731	20,597,551	5,057,516	5,202,591	5,188,612	1,339,113	1,335,309	1,472,358	656,978	623,470	1,007,602
Allocations																		
Allocations	-50,101,413	-49,963,305	-40,542,798	-16,454,474	-17,250,308	-16,072,058	-17,944,344	-16,884,788	-8,608,214	2,415,367	2,347,764	0	-916	0	0	0	0	0
	-50,101,413	-49,963,305	-40,542,798	-16,454,474	-17,250,308	-16,072,058	-17,944,344	-16,884,788	-8,608,214	2,415,367	2,347,764	0	-916	0	0	0	0	0
Net OM&A	49,500,509	51,952,383	62,218,610	16,619,167	15,966,586	16,943,474	1,504,613	2,562,943	11,989,337	7,472,883	7,550,355	5,188,612	1,338,197	1,335,309	1,472,358	656,978	623,470	1,007,602

	CRP			FIN			HR			IT			MER incl. SMR			REG		
	June Forecast	07 Budget	08 Budget	June Forecast	07 Budget	08 Budget	June Forecast	07 Budget	08 Budget	June Forecast	07 Budget	08 Budget	June Forecast	07 Budget	08 Budget	June Forecast	07 Budget	08 Budget
Expenses																		
Compensation Expenses	819,545	834,222	600,000	5,062,708	5,241,310	5,597,835	1,670,556	1,672,752	1,837,297	2,043,817	2,053,040	2,352,363	6,060,065	5,962,694	6,404,419	439,109	428,503	452,005
Maintenance Expenses	0	0	0	3,141,453	3,171,357	2,987,114	1,539,916	2,291,536	1,046,400	0	0	0	683,651	770,450	788,317	0	0	0
Operating Expenses	472	0	0	232,682	249,904	237,600	400	700	1,000	7,848	4,100	4,100	2,131,651	2,461,618	2,459,593	0	0	0
General and Admin. Expenses	1,589,824	1,800,987	1,763,875	1,745,608	1,732,877	1,799,972	1,720,003	1,831,707	1,818,797	1,475,118	1,496,020	1,267,980	6,811,579	7,155,938	7,002,086	1,103,625	1,279,979	1,300,750
Gross OM&A	2,409,841	2,635,209	2,363,875	10,182,451	10,395,448	10,622,522	4,930,875	5,796,695	4,703,494	3,526,784	3,553,160	3,624,443	15,686,946	16,350,700	16,654,415	1,542,734	1,708,482	1,752,755
Other Expenses																		
Work for Others	0	0	0	0	0	0	0	0	0	0	0	0	14,703	0	0	0	0	0
Property Taxes	0	0	0	1,731,383	1,650,000	1,758,250	0	0	0	0	0	0	0	0	0	0	0	0
Total Gross Expenses	2,409,841	2,635,209	2,363,875	11,913,834	12,045,448	12,380,772	4,930,875	5,796,695	4,703,494	3,526,784	3,553,160	3,624,443	15,701,649	16,350,700	16,654,415	1,542,734	1,708,482	1,752,755
Allocations																		
Allocations	-2,336,609	-2,492,361	-12,720,196	-10,454,502	-10,328,405	-559,714	-3,334,277	-3,479,545	-62,400	-3,016,158	-2,886,890	0	1,024,659	1,011,227	-2,520,216	-159	0	0
	-2,336,609	-2,492,361	-12,720,196	-10,454,502	-10,328,405	-559,714	-3,334,277	-3,479,545	-62,400	-3,016,158	-2,886,890	0	1,024,659	1,011,227	-2,520,216	-159	0	0
Net OM&A	73,232	142,849	-10,356,321	1,459,332	1,717,043	11,821,058	1,596,599	2,317,151	4,641,094	510,625	666,269	3,624,443	16,726,308	17,361,927	14,134,199	1,542,575	1,708,482	1,752,755



Interrogatory

Question #14

Reference: Exhibit A2, Tab 2, Schedule 1, pages 2-3

Exhibit B1, Tab 2, Schedule 1, page 10

- a) Please provide a copy of the Capital Plan prepared in 2005 (i.e., consistent with the 2006 Rate Application) at the same level of detail as shown in Table 1. Please include the values for all forward years addressed by the Plan. (Note: Hydro Ottawa is requesting approval of a 3-year capital expenditures forecast. The purpose of these requests is to help assess the accuracy of Hydro Ottawa's past forecasts)
- b) Please provide the Capital Plan developed as part of budgeting process for the 2007 Budget at the same level of detail as shown in Table 1.
- c) The Application states that Table 1 represents a "preliminary draft capital plan". Please explain more fully what Table 1 represents (i.e., was it prepared as part of the process to set the budget for 2007 or was it prepared afterwards, how does it relate to the current capital expenditure plan included in the Applications?)
- d) The Sustainment values in Table 1 escalating much faster than the 2% / annum set out in the guideline.
 - Please explain why.
 - What is the effect of the reduced allocations in 2008, 2009 and 2010 (page 3, lines 5-6)?



Response

- a) The following table provides the 3-year Capital Plan forecast, consistent with the 2006 EDR Application, in the same format as Table 1 of Exhibit A2-2-1:

Capital Program	2005 Plan for 2006 (\$000)	2005 Plan for 2007 (\$000)	2005 Plan for 2008 (\$000)
Sustainment	\$32,696	\$37,013	\$37,031
Demand	27,850	27,324	29,999
General Plant	22,550	18,730	16,445
CDM ¹	1,420		
TOTAL	\$84,516	\$83,067	\$83,475

- b) The Capital Plan as developed in the 2007 budgeting process is presented in Table 1 as shown in Exhibit A2-2-1 at page 3.
- c) Table 1 in Exhibit A2-2-1 was prepared as part of the process to set the 2007 capital budget and contained preliminary planning information for 2008 to 2010.

- d) The Sustainment values in Table 1 are from the 2007 budget planning process. The guidelines presented are for the 2008 planning process, hence the difference in percentage change.

The reference to reduced allocations was to ensure that staff understood that the pending change in the capitalization process would have to be factored into the 2% budget guideline calculation when comparing 2008 budgeted capital spending to the 2007 capital budget. The 2007 budget

¹ CDM expenditures included in the other categories for 2007 and 2008 plans.



1 was created using a more full cost allocation of overheads than the
2 preliminary forward years' spending plan forecasted at that time. The
3 effect of reduced overhead allocations will be to lower future capital
4 spending and increase annual operating and maintenance costs.



Interrogatory

Question #15

Reference: Exhibit B1, Tab 1, Schedule 1, page 2

- a) In Table 2, please explain how footnote #2 relates to the “Contributed Capital” row.
- b) With respect to Table #2, in what line item(s) is Smart Meters captured for the “2006 Approved with SM” and what was the “approved value” for 2006? Please provide a breakdown of Smart Meter spending by line item.
- c) With respect to Table #2, in which line item(s) is Smart Meters included for 2006 Actual, 2007 Estimate and 2008 Forecast? Please provide a breakdown of Smart Meter spending by line item.

Response

- a) Footnote #2 on Table 2 in Exhibit B1-1-1 only refers to “CDM Expenditures and Recoveries” and does not relate to “Contributed Capital”. There should not have been a footnote marked on Contributed Capital.
- b) In Table 2, Smart Meter capital expenditures are included under Services and Meters for 2006 Approved with SM. The 2006 Board-approved capital expenditures are shown in Exhibit D3-1-1, page 2, Table 2.
- c) In Table 2 Smart Meter capital expenditures are included under Services and Meters for 2006 Actual, 2007 Estimate and 2008 Forecast. The capital expenditures for each of those years are shown in Exhibit D3-1-1,



- 1 page 2, Table 2. A breakdown of the capital spending is further shown in
- 2 the Attachment to updated Exhibit E1-1-1, page 3.



Interrogatory

Question #16

Reference: Exhibit B1, Tab 1, Schedule 1, page 2
Exhibit B1, Tab 2, Schedule 1, pages 1-4 and Table 4

Preamble: Information on total capital spending is presented in a different format than the details on the proposed capital programs. Furthermore, there is no totaling of the spending by “program type” that reconciles with the total capital spending for either the historical or forecast years.

a) For each of 2006 Approved, 2006 Actual, 2007 Projected and 2008 Forecast, please provide a set of schedules that shows the breakdown of spending in each of the following areas:

- Sustainment – by Capital Program and Budget Program
- Demand – for each of the 8 categories listed
- General Plant – for each of the 8 categories listed

Please report contributed capital for each area.

Response

a) The following series of tables present the capital expenditures for 2006 Approved, 2006 Actual, 2007 Estimate and 2008 Forecast.



The information has been presented with some changes from the referenced exhibits;

- Smart Meter expenses have been included in the Demand section,
- Major Line Extensions and Minor Line Extensions have been combined into one category, and
- General Plant expenses have been displayed with more detailed categories, to match the reporting from the financial system.

The 2006 Approved columns include all information available from the 2006 EDR Application, and subsequent evidence. In some cases, details on the forecasted proposed spending for specific programs were not tracked, and therefore no number has been provided.

As described in this Application, Hydro Ottawa has set reporting materiality limits for distribution capital of \$500k and general plant capital of \$100k (lower than the material limit set by the Board). These materiality limits have been used in the creation of the following tables as well.

Contributed Capital applies to the Demand area only, and is listed separately.



1

Table 1 – Distribution Capital Expenditures, Sustainment

		2006 Approved \$000	2006 Actual \$000	2007 Estimate \$000	2008 Forecast \$000
Stations Asset	Stations Transformer Replacement	\$1,990	\$562	\$398	\$701
	Stations Switchgear Replacement		1,196	4,603	5,610
	Stations Relay Replacement		123	1,581	
Stations Capacity		4,061	1,637	4,190	9,277
Stations Enhancement		1,696	2,232	1,515	1,851
Stations Automation			616	20	
Distribution Asset	Cable Replacement	2,129	2,766	3,652	3,507
	Pole Replacement	4,580	5,828	3,980	3,409
	Insulator Replacement Program	475	1,230	633	257
	Distribution Transformer Replacement	6,601	2,750	2,505	1,708
	Switchgear New and Rehab		518	371	116
	Plant Failure Capital	699	3,757	2,094	1,171
Distribution Enhancement	System Voltage Conversion		405	2,659	122
	System Reliability		1,021	680	365
	Distribution Enhancements		4,264	2,698	609
	Major & Minor Line Extensions		1,528	721	3,444
System Ops. Automation		3,019	1,336	925	840
Facility Programs –Stations			1,984	2,679	3,504
TOTAL		\$25,250	\$33,753	\$35,904	\$36,491

2



1
2

Table 2 – Distribution Capital Expenditures, Demand

	2006 Approved \$000	2006 Actual \$000	2007 Estimate \$000	2008 Forecast \$000
Plant Relocation	\$2,874	\$5,237	\$4882	\$4,182
Residential		7,439	7,418	8,350
Commercial	4,331	7,504	5,401	5,811
System Expansion	2,789	1,445	2,102	2,069
Infill	1,859	4,288	3,021	2,598
Damage To Plant	559	1,120	749	468
Wholesale Meter Upgrade		1,258	585	506
Smart Meters		16,376	16,920	9,684
TOTAL	\$12,412	\$44,667	\$41,078	\$33,668

3
4

Table 3 - General Plant Capital Expenditures

	2006 Approved \$000	2006 Actual \$000	2007 Estimate \$000	2008 Forecast \$000
GIS Budget Program	\$4,902	\$6,186	\$6,513 ¹	
Fleet Replacement	2,590	3,222	2,996	1,693
CIS Enhancements	1,427	830	1,020	2,722
Buildings - Facilities	3,131	2,662	2,451	2,103
Furniture and Equipment	691	494	182	272
Tools Replacement		917	1,024	1,037
Information Services and Technology		558	827	719
New PC and Peripherals	419	297	759	370
PC and Peripheral Replacement		210	225	218
Website Enhancements	132	23	36	392
Geographic Resource Management System Enhancements				547 ²
TOTAL	\$13,292	\$15,399	\$16,033	\$10,073

¹ GIS project will be completed in 2007

² The Geographic Resource management System Enhancements program will begin in 2008.



1

2

Table 4 – Total Expenditures

	2006 Approved \$000	2006 Actual \$000	2007 Estimate \$000	2008 Forecast \$000
Sustainment	\$25,250	\$33,753	\$35,904	\$36,491
Demand	12,412	44,667	41,078	33,668
General Plant	13,292	15,399	16,033	10,073
Programs/Projects less than Materiality	40,344 ¹	1,518	1,553	1,564
TOTAL	\$91,298	\$95,337	\$94,568	\$81,796
Contributed Capital	(\$6,782)	(\$20,029)	(\$15,022)	(\$15,345)
Net Capital Expenses	\$84,516	\$75,308	\$79,546	\$66,451

3

¹ The Programs/Projects less than materiality for 2006 Approved is shown as \$40,344k as many of the expenditures were not detailed in the 2006 EDR Application.



1 **Interrogatory**

2
3 Question #17

4
5 Reference: Exhibit B1, Tab 2, Schedule 2, page 1, lines 21-26; page 2, lines 4-9
6 and page 5, lines 4-9

7
8 a) Please provide a measure of where 2006 actual replacement levels and
9 spending were relative to 2005 levels and the level indicated by the AMP
10 recommendations

11
12 b) Please provide a measure/indication as to where projected 2007 and
13 forecast 2008 replacement levels and spending are relative to the level
14 indicated by the AMP recommendations

15
16 c) Please explain how Hydro Ottawa has specifically addressed the
17 “conservative nature” of its AMP models in developing its current forecast
18 of capital spending for Sustainment (see page 1).

19
20 d) By what measure, has Hydro Ottawa deemed its approach for 2008 to be
21 “conservative” (see page 5)?

22
23 e) Please indicate where in the Application a breakdown of the \$14 M in
24 2008 sustainment capital spending discussed on page 5 can be found.
25 Otherwise, please provide details on the \$14 M.

26
27 **Response**

28
29 a) The Asset Management Plan (“AMP”) documentation was issued in 2005;
30 consequently, the recommendations of the AMP were not considered in
31 the planning or execution of the 2005 capital budgets.



The expenses shown in Table 1 are those directly attributed to the AMP intermediary programs. The impact of superseding programs (programs which would achieve the same result but are done for other purposes) is not included in the expense reporting.

Table 1: 2005 and 2006 Actual Expenses

Program	2005 Actual \$000	2006 Actual \$000	AMP \$000	Notes
Pole Replacement	\$3,411	\$5,828	\$6,500	- AMP - \$500k/yr based on \$13,000/pole = \$6.5M - HOL planned levels at 350 poles/year
Insulator Replacement	555	1,230	500	AMP - Replacement is less beneficial and should not be actively pursued. Plan \$500k a year to replace defective models.
Distribution Transformer Replacement	624	2,750	3,000	AMP projected costs based on replacing based on AM principles and due to the pending PCB regulation. More accurate data is required to be sure of models. \$3M in 2006 and 2007, \$2.8M in 2008, \$2.4M in 2009, \$500k in 2010 and \$1M per year afterwards.
Civil Rehabilitation	199	433	300	AMP - \$300k per year for 2006-2011
Cable Replacement Total	2,681	3,155	11,000	AMP – Replacement levels at \$2M on plastic trunk and \$9M on distribution.
<i>Cable Replacement</i>	<i>1,991</i>	<i>2,766</i>	<i>see total</i>	
<i>Elbow and Insert Replacement</i>	<i>210</i>	<i>110</i>	<i>see total</i>	
<i>Splice Replacement</i>	<i>221</i>	<i>85</i>	<i>see total</i>	
<i>PILC Riser and Pothead</i>	<i>259</i>	<i>194</i>	<i>see total</i>	
Switchgear New and Rehab	268	518	1,500	AMP – expenses for pad-mounted switchgear
Vault Rehab or Removal	103	12	500	AMP – expenses on switchgear in the vaults
Overhead Equipment New and Rehab	114	27	144	AMP - run some to failure, replace some annually (reclosers)



Program	2005 Actual \$000	2006 Actual \$000	AMP \$000	Notes
Station Battery Replacement	109	98	90	
Station Switchgear replacement	130	1,196	6,500	AMP - risk and functional based replacement
Stations Relay Replacement	16	123	850	- AMP - \$850k/yr - HOL – coordinate with stations switchgear replacement projects
Stations Transformer Replacement		562	-NA-	Condition assessment of asset has been recollected so the AMP is outdated. See Exhibit B1-2-2.
Stations Conductor				AMP – run to failure. No intermediary program.
Overhead Conductors			100	AMP – Replacement of this asset does improve the condition of what is installed. Allocate \$100k/yr for miscellaneous work. HOL – do not actively replace overhead conductors, impacted by superseding programs.
SCADA				As AMP discusses, HOL is in process of converting to one SCADA platform. This is a significant construction and is not in regular use mode for intermediary program development.

1

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b) The expenses shown in Table 2 are those directly attributed to the AMP intermediary programs. The impact of superseding programs (programs which would achieve the same result but are done for other purposes) is not included in the expense reporting.

Table 2: 2007 Estimated and 2008 Forecasted Expenses

Program	2007 Estimate \$000	2008 Forecast \$000	AMP \$000	Notes
Pole Replacement	\$3,980	\$3,409	\$6,500	- AMP – 500k/yr based on \$13,000/pole = \$6.5M - HOL planned levels at 350 poles/year. 2006 costs were \$15k/pole. (SEC Interrogatory #13)
Insulator Replacement	633	257	500	AMP - Replacement is less beneficial and should not be actively pursued. Plan \$500k a year to replace defective models.
Distribution Transformer Replacement	2,505	1,708	3,000	AMP projected costs based on replacing based on AM principles and due to the pending PCB regulation. More accurate data is required to be sure of models. \$3M in 2006 and 2007, \$2.8M in 2008, \$2.4M in 2009, \$500k in 2010 and \$1M per year afterwards.
Civil Rehabilitation	179	102	300	AMP - \$300k per year for 2006-2011
Cable Replacement Total	4,076	3,878	11,000	AMP – Replacement levels at \$2M on plastic trunk and \$9M on distribution.
<i>Cable Replacement</i>	3,652	3,507	<i>see total</i>	
<i>Elbow and Insert Replacement</i>	176	157	<i>see total</i>	
<i>Splice Replacement</i>	29	94	<i>see total</i>	
<i>PILC Riser and Pothead</i>	219	120	<i>see total</i>	
Switchgear New and Rehab	371	116	1,500	AMP – expenses for pad-mounted switchgear
Vault Rehab or Removal	139	153	500	AMP – expenses on switchgear in the vaults



Program	2007 Estimate \$000	2008 Forecast \$000	AMP \$000	Notes
Overhead Equipment New and Rehab	106	60	144	AMP - run some to failure, replace some annually (reclosers)
Station Battery Replacement	62		90	
Station Switchgear replacement	4,603	5,610	6,500	- AMP - risk and functional based replacement - HOL combined Station Switchgear and Relay replacement projects in 2008
Stations Relay Replacement	1,581		850	- AMP - \$850k/yr - HOL – coordinate with stations switchgear replacement projects
Stations Transformer Replacement	398	701	-NA-	Condition assessment of asset has been recollected so the AMP is outdated. See Exhibit B1, Tab 2, Schedule 2.
Stations Conductor				AMP – run to failure. No intermediary program.
Overhead Conductors			100	AMP – Replacement of this asset does improve the condition of what is installed. Allocate \$100k/yr for miscellaneous work. HOL – do not actively replace overhead conductors, impacted by superseding programs.
SCADA				As AMP discusses, HOL is in process of converting to one SCADA platform. This is a significant construction and is not in regular use mode for intermediary program development.

1

2

3 c) The “conservative nature” of the AMP models refers to the bias of risk
4 aversion. The AMP is a tool to assist with planning, based on risk and
5 consequence. The model is considered conservative when, in inputting
6 assumed or estimated data, the mean failure data chosen provides the
7 lower risk scenario for Hydro Ottawa, which is also the higher cost.

8

9 d) Hydro Ottawa considers its approach for 2008 to be conservative in
10 relation to capital expenditures. As discussed in part c), the levels of
11 failure predicted in poles and cables, for example, have not yet
12 materialized. Recognizing this, and that investments must be made with



financial prudence, replacement investment has been set at a lower level than AMP recommended in these categories for the three-year budgeting period.

- e) The Sustainment Capital program for 2008 contains the AMP-related expenses of \$14M. Table 3 below contains the Distribution Asset and Station Asset expenditures, that combined are the AMP spending for 2008.

Table 3: 2008 AMP Related Capital Expenditures

	2008 Expenses (\$)
Pole Replacement	3.4M
Cable Replacement	3.5M
Distribution Transformer Replacement	1.7M
Station Switchgear Replacement	5.6M
Station Transformer Replacement	0.7M
TOTAL	14.9M



1 **Interrogatory**

2
3 Question #18

4
5 Reference: Exhibit B1, Tab 2, Schedule 2, page 11, lines 12-16

- 6
7 a) Please provide the estimates used in modeling regarding the costs to
8 Hydro Ottawa's customers of outage, safety and reliability impacts and
9 explain how they were derived

10
11 **Response**

- 12
13 a) The costs to Hydro Ottawa's customers in terms of outage and safety are
14 rated on a point system, which was developed as part of the Asset
15 Management Strategy.

16
17 **Reliability**

18 The reliability score is based on the number of customers interrupted by a
19 failure, and the number of customer-hours of interruption caused by a
20 failure.

21
22 Outage event score = Customers Affected / (1,300 customers)

23 Duration Score = Customer-Hours / (1,300 customer-hours)

24
25 The total reliability score is the sum of these two scores.

26
27 **Safety and Environment**

28 The estimates and process used for modeling safety and environmental
29 impacts is included in the attached Asset Management Plan, Safety and
30 Environment Scoring.



Asset Management Plan Safety and Environment Scoring

Rev. 0, 2005-12-14

GENERAL

This document provides guidelines for estimating consequence scores for people safety, damage to public property and the environment in the event of asset failures.

Safety (public or employee) or Damage to Public Property

Philosophy:

- Safety score is determined by multiplying the Probability of the event happening times the Consequences when the event does take place.
- Evaluate only one specific asset at a time (i.e. one insulator on a pole).
- Deal with the probability or consequences related to the specific asset and not a combination of events (i.e. include “insulator breaks and phase conductor hits Line Maintainer”, but do not include the additional possibility that “the aerial device shorts to ground and the Line Maintainer is electrocuted”).
- Rate the most significant event when an asset fails for each of public safety and property damage and use the greater of the two scores.

1.0 PROBABILITY of the event happening (i.e. how likely is a particular event to occur when an asset fails?). In every case we assume that a failure occurs, - we simply must determine the probability of a particular event occurring because of that failure.

Example: If a WART insulator fails and breaks, what is the probability that the conductor it supports falls down and hits a lower phase. This event has the potential to cause an over-voltage that damages customers' equipment?

A. Probability is rated as a decimal fraction. If a particular event is likely to occur often (say 80% of the time) when a failure takes place, the probability rating would be 0.80.

2.0 CONSEQUENCE (i.e. when the event takes place, how severe is it and what is the likelihood of someone or some thing being close enough to be affected?). Therefore, Consequence is determined by considering the Severity of the event and the possible Proximity of a person or property to the event.

Rank **Severity of the Event** from 1 to 100 in accordance with the following criteria of what would normally happen. Use “B1” for public safety severity and “B2” for public damage severity (damage to public property).

B1 Severity of Public Safety. Consider that a person is as close as they could possibly be under “normal” circumstances (i.e. do not consider someone tampering with equipment of breaking into a substation, etc.). This “rating” is based on one point being equal to \$50,000.

Score	Description
0	No impact
0.01	Very small impact (e.g. no more than a scare) [\$500]
0.02	Minor injury (e.g. scratch or bruise, etc.) [\$1000]
0.05	Injuries requiring medical treatment (e.g. stitches) [\$2500]
0.1	
0.5	
1	Somewhat severe injuries involving significant loss of blood, broken bones, etc. [\$50,000]
5	
10	Very severe injuries requiring long-term hospitalization. [\$500,000]
50	Permanent disability (e.g. loss of limb, loss of eyesight, etc. [\$2.5M]
100	Loss of Life [\$5M]

B2 Severity for Public Damage. Consider that public property is as close as it could possibly be under “normal” circumstances. This “rating” is based on one point being equal to \$50,000.

Score	Description
0	Negligible impact - \$0
0.02	\$1000
0.2	\$10k
1	\$50k
2	\$100k
4	\$200k
6	\$300k
10	\$500k
20	\$1M
40	\$2M
100	\$5M

Severity

Rank **Exposure to the Event** in accordance with the following criteria. This rating is an estimate of the proportion (C1) of the time that a person or thing is within range of the effects of the event and the proportion (C2) of the full effect likely to be felt.

C1 Presence. Proportion of time that someone (or something) is within range of experiencing the full effect of the event.

Score	Description
0.0	Never (i.e. 0%)
0.1	10%
0.2	20%
0.3	30%
0.4	40%
0.5	50%
0.6	60%
0.7	70%
0.8	80%
0.9	90%
1.0	100%

C2 Degree. The likelihood of experiencing the full effect of the event, even if someone (or something) is within range. [For example, if a pole falls, how likely is it that a person will be in line with direction of the falling pole and will not be able to jump out of the way in time? In this example, if anyone is within a 20 degree arc of where the pole falls, they might be hit. Therefore, $C2 = 20/360 = 0.06$.]

Score	Description
0.0	Never (i.e. 0%)
0.1	10%
0.2	20%
0.3	30%
0.4	40%
0.5	50%
0.6	60%
0.7	70%
0.8	80%
0.9	90%
1.0	100%

3.0 SCORE FOR AN EVENT

(Probability Rating)*(Consequence Rating)
 =(Probability Rating)*[(Severity Rating)*(Exposure Rating)]
 =A * (either B1 or B2) * C1 * C2

4.0 EXAMPLES

1. WART Insulators:

- **Event 1:** Insulator fails, breaks, conductor drops into lower phase with the potential for voltage surge on underbuilt and damage to customer equipment.

A: Probability. We might estimate that 50% of the time the conductor would contact the underbuilt. Therefore $A = 0.5$.

B2: Severity. We are dealing with the potential for property damage so we rate the B2 factor. We might estimate that the effect of the event could be quite widespread (e.g. in a subdivision) and the total damage to public property could be as much as \$100,000. Therefore, $B2 = 2$.

C1: Presence. This factor is a measure of the proportion of the time customer equipment may be within range of the full effect. For this example, we might estimate that the event would take place near enough to customer equipment to cause the severity as rated in B2 to happen perhaps 10% of the time. Therefore, $C1 = 0.1$.

C2: Degree. This factor is a measure of the likelihood of the full force being experienced, even if the event is within range. In this case, the protection devices would normally limit the amount of the surge so there would be very little effect. In addition, even if a surge is created, impedance between the event and the customer equipment will reduce the effect. Therefore, we might rate this factor at 5% of the full effect, so $C2 = 0.05$.

Total Consequence Score for Public Damage in this case is computed as;

$$\begin{aligned} &A * B2 * C1 * C2 \\ &= 0.5 * 2 * 0.1 * 0.05 \\ &= 0.005 \end{aligned}$$

This is not a large concern in the overall scheme of things.

- **Event 2:** Insulator fails, breaks, a few small pieces of porcelain drop to the ground under the pole with the potential of hitting a member of the public.
A: Probability. In the case of insulator fracture, we might estimate that only 10% of the time would pieces of porcelain actually break off and fall to the ground. Therefore $A = 0.1$.

B1: Severity. Since we are dealing with public safety we rate the B1 factor. We might estimate that the full effect of the event if a small piece of porcelain were to hit a person would be a small scratch or bruise and might cost up to \$1000 in damages. Therefore, $B1 = 0.02$.

C1: Presence. The proportion of time that a person would actually be within range in this example is very small. Firstly, people are not likely to be underneath many poles ever. Think of all the poles along rural roadsides or urban boulevards where there are never any pedestrians. Let's say only 50% of poles are accessible. Even where poles are in the sidewalks, the chances of a person being in the vicinity is extremely remote unless the pole happens to be at a bus stop. Even then there are many times during the day when there is no one at the bus stop. Let's say for those poles that are accessible, there are people present only 1% of the time. Therefore we might estimate this factor at 50% of 1% or 0.5%. Therefore $C1 = 0.005$.

C2: Degree. In this event, what is the likelihood that a person when present will experience the full force of the effect. Consider that in winter people are well bundled up and any small pieces of porcelain would not even scratch or bruise them. At any time of the year, the likelihood is remote that a piece of porcelain hits a person where it could cause a cut or bruise. We might estimate this factor at 1%. Therefore $C2 = 0.01$.

Total Consequence Score for Public Safety in this case is computed as;

$$\begin{aligned} &A * B1 * C1 * C2 \\ &= 0.1 * 0.02 * 0.005 * 0.01 \\ &= 0.0000001. \end{aligned}$$

As expected, this is not a significant consequence of a WART failure.

- **Event 3:** Insulator fails, breaks, conductor drops and potentially causes a flash that could injure (by hitting or burning) a Line Maintainer who happens to be working at the pole.

A: Probability. As in Event 1 above, we might estimate that 50% of the time a falling conductor drop significantly and either hit a Line Maintainer or the underbuilt. Therefore $A = 0.5$.

B1: Severity. Since we are dealing with employee safety we rate the B1 factor. We might estimate that the full effect of the event would be broken bones or burns. They would be off work for awhile, but it is not likely that they would be killed or permanently disabled. If we speculate that the maximum cost might be \$50,000, therefore, $B1 = 1$.

C1: Presence. The proportion of time that a Line Maintainer would actually be within range in this example is very small. Firstly, the chances of a Line Maintainer being within range of the falling conductor or the resulting flash are quite remote. Even if we assume that WART insulators are more prone to failing when work is being done on the pole, we might estimate the Line Maintainer would be within range perhaps 1% of the times that a conductor could drop. Now we have to consider the use of protective equipment. Safety practices require the use of phase catchers, so the only exposure would be the relatively short period of time before the phase catchers are in place or after they have been removed and the Line Maintainer is within range. We might consider this to be only 10% of the total time the Line Maintainer is at the pole location. Therefore we might estimate this factor at 10% of 1% or 0.1%. Therefore $C1 = 0.001$.

C2: Degree. In this event, what is the likelihood that a Line Maintainer, when present, will experience the full force of the effect. In many cases the Line Maintainer's PPE will mitigate the effect of burns, they will receive a glancing blow from the conductor, etc. We might estimate this factor at 10%. Therefore $C2 = 0.1$.

Total Consequence Score for Employee Safety in this case is computed as;

$$\begin{aligned} &A * B1 * C1 * C2 \\ &= 0.5 * 1 * 0.001 * 0.1 \\ &= 0.00005. \end{aligned}$$

Even though we are concerned about the potential for any injury to employees, the Consequence Score for this event is quite low.

Environment

Philosophy:

- As with Safety, the Environment score is determined by multiplying the Probability of the event happening times the Consequences when the event does take place.
- Evaluate only one specific asset at a time (i.e. one transformer on a pole).
- Deal with the probability or consequences related to the failure of a specific asset and not a combination of events (i.e. include “transformer leaks, mineral oil drips on the ground, possibly getting into ground water or storm sewer”, but do not include the additional possibility that “the mineral oil is ignited by a child playing with matches”).
- Rate the most significant Environmental event when an asset fails.

1.0 PROBABILITY of the event happening (i.e. how likely is a particular event to occur when an asset fails?). In every case we assume that a failure occurs, - we simply must determine the probability of a particular event occurring because of that failure.

Example: If a pole-mounted transformer leaks, what is the probability that the oil drips on the ground with the potential to damage the environment?

A. Probability is rated as a decimal fraction. If a particular event is likely to occur often (say 80% of the time) when a failure takes place, the probability rating would be 0.80. In the example of a pole-mounted transformer leaking, the oil will drip on the ground every time so $A = 1$.

2.0 CONSEQUENCE (i.e. when the event takes place, how severe is it and what is the likelihood that the environment will be affected?).

B. Rank **Severity of the Event** from 1 to 100 in accordance with the following potential for impact on the environment. This “rating” is based on one point being equal to \$50,000.

Score	Description
0	Negligible impact - \$0
0.02	\$1000
0.2	\$10k
1	\$50k
2	\$100k
4	\$200k
6	\$300k
10	\$500k
20	\$1M
40	\$2M
100	\$5M

For the example of a leaking transformer, cleanup costs might be in the order of \$50,000 if the event went on undetected for a very long time. Therefore, we might estimate $B = 1$.

C. Rank **Exposure to the Event** in accordance with the following criteria. This rating combines an estimate of the proportion (C1) of the events that would result in the full effect being felt by the environment (e.g. oil spill directly into a storm sewer or ground water) and the proportion (C2) of the events that are never detected.

C1 Presence. Proportion of the events that take place near environmentally sensitive areas combined with the likelihood that the event will affect the environment. [For example, if a pole-mounted transformer leaks onto the ground, what is the likelihood of the oil getting into a catch basin (or ground water) rather than being absorbed and trapped by the soil?]

Score	Description
0.0	Never (i.e. 0%)
0.1	10%
0.2	20%
0.3	30%
0.4	40%
0.5	50%
0.6	60%
0.7	70%
0.8	80%
0.9	90%
1.0	100%

For the example of a leaking transformer, we might estimate that oil getting into a catch basin or ground water, even in the long term is rather remote and we could rate $C1 = 0.2$.

C2 Degree. This is a measure of the duration of the event, - how long it is likely to be before the event is rectified. [For example, if a pole-mounted transformer leaks onto the ground, it is more likely to be noticed by passers-by than if a padmounted transformer leaks into the hole under its base.] When considering environmental consequences, it is usually worse to experience the effect over a long period before it is detected and removed. However, in many cases, there will be a limit to the duration because even minor events may escalate into catastrophic occurrences, such as the case where a slow transformer leak goes undetected until the oil level drops and an internal arc causes an explosion.

Score	Description
0.0	0 % No duration (e.g. potential spill or other effect discovered before it happens)
0.1	10% Very short duration. (e.g. event happens while crew is on site)
0.2	20% of the potential damage to the environment is experienced.
0.3	30% of the potential damage to the environment is experienced.
0.4	40% of the potential damage to the environment is experienced.
0.5	50% of the potential damage to the environment is experienced.
0.6	60% of the potential damage to the environment is experienced.
0.7	70% of the potential damage to the environment is experienced.
0.8	80% of the potential damage to the environment is experienced.
0.9	90% of the potential damage to the environment is experienced.
1.0	100% Very long duration. Full potential damage to the environment is experienced.

3. SCORE FOR AN EVENT

(Probability Rating) *(Consequence Factor)
 =(Probability Rating)*[(Severity Rating)*Exposure Rating])
 =A * B * C1 * C2

4. EXAMPLES

1. Pole Mounted Transformers

- **Event 1:** Transformer leaks, mineral oil drips on the ground.

A: Probability. When a transformer leaks, the oil will drip on the ground 100% of the time. Therefore A = 1.0.

B: Severity. Cleanup costs might be in the order of \$50,000 if the event went on undetected for a very long time. Therefore, B = 1.0.

C1: Presence. It is possible that leaking oil may get into ground water or into a catch basin, but we might estimate that proximity to sensitive areas will happen only 30% of the time. Therefore, C1 = 0.3.

C2: Degree. We might estimate that a leaking transformer would cause 50% of the maximum possible environmental damage before the leak is identified and corrected. Therefore, C2 = 0.5.

Total Consequence Score for Environment in the case is computed as;

$$\begin{aligned}
 &A * B * C1 * C2 \\
 &= 1 * 1 * 0.3 * 0.5 \\
 &= 0.15
 \end{aligned}$$

- **Event 2:** Transformer ruptures violently and hot oil is ejected over the surrounding area.

A: Probability. When the transformer explodes, hot oil will be ejected 100% of the time. Therefore A = 1.0.

B: Severity. Cleanup costs might be in the order of \$100,000 if we did not respond to the problem right away. Therefore, B = 2.0.

C1: Presence. Proximity to sensitive areas might be estimated as 30% of the time. Therefore C1 = 0.3.

C2: Degree. Relatively low environmental damage will occur because the spill will be detected very quickly and cleanup will take place immediately, - perhaps estimate 5% of the maximum possible environmental damage.

Therefore $C2 = 0.05$.

Total Consequence Score for Environment in the case is computed as;

$$A * B * C1 * C2$$

$$= 1 * 2 * 0.3 * 0.05$$

$$= 0.03$$



1 **Interrogatory**

2
3 Question #19

4
5 Reference: Exhibit B1, Tab 2, Schedule 2, page 14, lines 20-24 and Figure 5

- 6
7 a) On page 14, the Application states that the useful life of station switchgear
8 devices is considered to be 40 years. However, Figure 5 indicates that
9 more than 40% of Hydro Ottawa's devices exceed this age. Please
10 reconcile.

11
12 **Response**

- 13
14 a) The industry average useful life for switchgear is approximately 40 years.
15 Throughout the period from 1990-2001, Hydro Ottawa's predecessors and
16 then Hydro Ottawa embarked on an extensive substation life extension
17 program on the 4 kV substations, with the intent of extending the life of the
18 station equipment, most notably switchgear. The stations that were
19 refurbished are listed in Table 1.
20



1

Table 1: Previous Switchgear Refurbishment Program

Substation	Year	Cells of Switchgear
Beechwood	2001	12
Church	1996	9
Dagmar	1998	14
Eastview	1997	18
Florence	2000	8
Henderson	1998	14
Kilborn	1996	9
Overbrook	2001	10
Walkley	1997	12
Woodroffe	1999	15

2

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These refurbishments were intended to extend the life of the switchgear beyond the 40 years and delay replacement. Unfortunately parts became increasingly unattainable, so that in the final few years, work continued primarily to provide separation between switchgear cells to reduce potential smoke damage from possible switchgear failure events. With the present age and condition of the equipment, and lack of replacement parts, 4 kV switchgear is now included in the replacement plan.



Interrogatory

Question #20

Reference: Exhibit B1, Tab 2, Schedule 2, page 24, lines 5-14

- a) As of year-end 2006 had Hydro Ottawa made any such contributions to Hydro One Networks? If yes, please indicate where/how they are recorded in Hydro Ottawa's financial statements and what the value is.
- b) Does the forecast for 2007 and 2008 contain any such contributions? If so, how much and where are they discussed in the Application?

Response

- a) As of year-end 2006 Hydro Ottawa had made the following payments to Hydro One Networks:

Kanata MTS Phase 1	\$223,900
Kanata MTS Phase 2	\$249,049
Hawthorne Lines	\$550,300
Uplands MS	\$306,620

These expenses were recorded as Outside Services within the individual projects. They would be recorded as Construction in Progress until the asset was energized and the costs would be transferred to the asset.

- b) The estimate for 2007 capital expenditures does not include any contributions to Hydro One. The forecast for 2008 capital expenditures includes \$650k for Cyrville Substation and \$250k for Marchwood



1 Substation. See response to VECC Interrogatory # 30 b) & c) for further
2 details on these two projects.

3
4 Hydro Ottawa is aware of the recent Board decision related to Hydro
5 One's Connection Procedures pursuant to the Transmission System Code
6 (EB-2006-0189) and recognizes that, as a result of this decision, there
7 may now be further contributions to Hydro One related to 2008 capital
8 projects. If material contributions are required to be paid to Hydro One in
9 2008, 2009 or 2010, Hydro Ottawa would consider filing an application
10 with the Board for an accounting order to record the amounts in a deferral
11 account.



1 **Interrogatory**

2

3 **Question #21**

4

5 Reference: Exhibit B1, Tab 2, Schedule 2, page 32, lines 1-2

6

7 a) Has Hydro Ottawa incurred (or forecast to incur) any Stations Embedded
8 Generation capital spending that will not be recovered through capital
9 contributions? If yes, please explain why.

10

11 **Response**

12

13 a) Hydro Ottawa has not incurred, and does not forecast to incur, any
14 Stations Embedded Generation capital expenditures that will not be
15 recovered through capital contributions.



Interrogatory

Question #22

Reference: Exhibit B1, Tab 2, Schedule 3, page 1, lines 3-6

- a) Please provide a copy of the 5-year IT Plan that underlies the capital spending in the current Application.

Response

The following table outlines capital spending for the period 2006 to 2010.

	2006 Actual \$000	2007 Estimate \$000	2008 Forecast \$000	2009 Forecast \$000	2010 Forecast \$000
Information Services and Technology	\$558	\$827	\$719	\$837	\$1680
PC/Peripheral Replacement Program	210	225	218	217	217
New PC and Peripherals	297	759	370	198	198

The 5-year IT Plan is predominately focused on maintaining on-going operations. IT equipment (desktop, data communication, voice communication and data infrastructure) and related applications are replaced according to vendor agreements or corporate policy. Activities of significance that will occur between 2008 and 2010 are:

- The financial reporting tool project will be completed in 2008. Expenditures for New PCs and Peripherals are forecast to return to historical based levels of spending.



- 1 • The Software Asset Management project will transition to
- 2 operation/program mode in 2008
- 3
- 4 • In 2009, an upgrade to Microsoft Office Suite is planned.
- 5
- 6 • In 2010, an upgrade to the JDE software commences which will be
- 7 completed in 2011.



1 **Interrogatory**

2

3 Question #23

4

5 Reference: Exhibit B1, Tab 3, Schedule 1, page 1, lines 8-14

6

7 a) What is the current status of the CICA's exposure draft?

8

9 **Response**

10

11 a) The CICA's Accounting Standards Board ("ASB") released a Decision
12 Summary dated August 22, 2007 removing the temporary exemption from
13 Section 1100 for rate regulated entities. This Section 1100 pertained to
14 the recognition and measurement of assets and liabilities arising from rate
15 regulation. Changes arising from the ASB decision are applicable to fiscal
16 years beginning on or after January 1, 2009. Early adoption of ASB
17 decisions, however, is usually encouraged.



Interrogatory

Question #24

Reference: Exhibit B1, Tab 3, Schedule 1, page 3, lines 4-7

a) Has this change in Cost Allocation procedure also been reflected in other areas that involve the allocation of overheads (e.g., costing of services done for affiliates, determination of activity rates for fleet services, etc.)? If yes, please discuss where and what the impact has been.

b) Has this narrower approach to cost responsibility been applied in the determination of the total Holdco costs that are allocated to Hydro Ottawa? If yes, what is the effect for 2008? If not, why not?

c) Has Hydro Ottawa adjusted its system expansion test at all for the October 2007 to May 2008 period to reflect the fact that there is a disconnect between the way capital work is costed and the costs incorporated into rates?

Response

a) No, the new Cost Allocation Procedure¹ does not affect the costing of services done for affiliates.

b) The cost allocation methodology used to allocate the Holding Company's charges to its subsidiaries has not been changed; however, the amount of these overheads that Hydro Ottawa capitalizes is determined by the new

¹ In the Responses to Interrogatories, Hydro Ottawa has used the terms "accounting change" and "change in capitalization process" interchangeably to mean the implementation of both the new cost allocation procedure and capitalization policy. The cost allocation procedure is therefore a subset of the accounting change or change in capitalization process.



1 capitalization process. The amount of the Holding Company's allocations
2 that Hydro Ottawa capitalized in 2007 was approximately \$1M. Using the
3 revised methodology, approximately \$0.2M of the Holding Company's
4 total allocations are capitalized. All of the Holding Company's allocations
5 that Hydro Ottawa does not capitalize become part of its OM&A
6 expenses.

- 7
- 8 c) Hydro Ottawa assumes that the term "system expansion test" refers to the
9 "Economic Valuation Model" for distribution system expansion. Hydro
10 Ottawa uses approved distribution rates in its model in determining the
11 amount of future revenue that will be received from a new development.
12 The model will not be updated until the new rates for 2008 are approved.
13 Costing of new projects will be based on the new burden rates that were
14 developed as a result of the new capitalization process.



1 **Interrogatory**

2
3 Question #25

4
5 Reference: Exhibit B1, Tab 3, Schedule 1, page 4, lines 9-14

- 6
7 a) Please confirm that Hydro Ottawa is a member of the Coalition of Large
8 Distributors (CLD).
9
10 b) Does Hydro Ottawa agree with the comments of the CLD submitted
11 during the recent Board consultation regarding Comparison of
12 Distributors' Costs (EB-2006-0268)? If not, in what areas does Hydro
13 Ottawa disagree?
14
15 c) If Hydro Ottawa generally agrees with the CLD's comments, what weight
16 does Hydro Ottawa believe should be attached to a comparison of its
17 OM&A costs/customer for 2006 with those of other distributors in
18 assessing the reasonableness of Hydro Ottawa's 2008 OM&A costs?
19

20 **Response**

- 21
22 a) Hydro Ottawa is a member of the Coalition Large Distributors ("CLD");
23 however, it should be noted that the CLD is an informal association of
24 distributors with no legal status. The CLD participates in Board-related
25 activities, such as consultatives, and Board proceedings on an issue-by-
26 issue basis in accordance with agreements among its members.
27
28 b) Hydro Ottawa participated in the drafting of the comments submitted by
29 the CLD regarding the comparison of distributors' costs and therefore
30 agrees with these comments.
31



1 c) OM&A costs/customer is an appropriate measure to be used in comparing
2 distributors' costs. The point of the CLD's comments was that OM&A
3 costs/customer should not be the only basis of comparison, as proposed
4 by Pacific Energy Group ("PEG"). As stated in the CLD comments paper,
5 "capital costs, capital vintage, and substitution between capital and other
6 inputs are very important factors in explaining and comparing LDC costs."

7
8 The PEG report had assessed Hydro Ottawa as among the most
9 productive LDCs (20th out of 85). Hydro Ottawa agrees with the CLD's
10 comments that capital costs should be included in the measure of
11 productivity, despite the expectation that Hydro Ottawa's favourable
12 productivity comparison, based on its old capitalization policy, would be
13 affected. It is Hydro Ottawa's view that because it was generally
14 capitalizing more overhead costs than other LDCs, the resultant
15 productivity measure was misleading. This ability to compare costs with
16 other LDCs was another reason why it was important for Hydro Ottawa to
17 modify its capitalization process. Differences in capitalization processes
18 between LDCs should not result in different assessments of productivity.

19
20 As noted in Attachment U, at page 7, to Exhibit B1-3-1, Hydro Ottawa had
21 considered the productivity results from the PEG report. The PEG report
22 had assessed negative "excess costs" for Hydro Ottawa of \$6.3M based
23 on the analysis of OM&A. Hydro Ottawa's change in capitalization
24 process¹ is estimated to increase Hydro Ottawa's OM&A costs by \$6.5M
25 in 2008. There is a correlation between these two results.

¹ In the Responses to Interrogatories, Hydro Ottawa has used the terms "accounting change" and "change in capitalization process" interchangeably to mean the implementation of both the new cost allocation procedure and capitalization policy.



1 **Interrogatory**

2

3 Question #26

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5 Reference: Exhibit B1, Tab 3, Schedule 1, Appendix T, page 15

6

7 a) Please indicate the previous “basis of allocation” for each of the areas set
8 out in Table IV-3.

9

10 **Response**

11

12 a) Table IV-3 lists 11 types of costs that relate to overheads and a brief
13 description on their basis of allocation effective October 1, 2007. The table
14 on the next page recreates Table IV-3 to show the previous method of
15 allocation for each item:



1
2

Table IV-3
Basis of Overhead Allocations

	% Related to Capital	Previous Basis of Allocation
Holdco	Variable	Costs were part of the total overhead pool and allocated to capital through a cascading calculation with the amount being capitalized based on the proportionate capital activity compared to maintenance and work for others.
Corporate Costs	Variable	As per Holdco allocation basis above
COO's Office	Variable	As per Holdco allocation basis above
Finance	Variable	As per Holdco allocation basis above
Regulatory	N/A	Regulatory costs were not included in the previous overhead pool.
Supply Chain	Variable	Allocated based on dollar value of materials and outside services associated with capital projects, maintenance and work for others.
Facilities	Variable	As per Holdco allocation basis above
Human Resources & Safety	Variable	As per Holdco allocation basis above
IT	Variable	As per Holdco allocation basis above
Operations (Engineering)	Fixed	Identified specific staff in engineering design, record keeping and asset management and their related expenses and allocated to distribution capital based on project costs.
Supervision	Variable	Ratio based on estimated proportion of dollars associated with capital projects versus maintenance and work for others. Based on management salaries and one-half of general administrative costs in Operations and Meter Installation areas.

3



Interrogatory

Question #27

Reference: Exhibit B2, Tab 2, Schedule 1

a) Were any of the 2006 reductions in the sustainment capital program spending for 2006 (actual vs. approved) due to delays arising from the increase in Demand Capital Programs? If yes, which budget programs were affected and what was the dollar impact?

b) Please indicate the approved vs. actual spending on Smart Meters in 2006 (page 11).

Response

a) In 2006, only one sustainment capital program was reduced due to delays arising from the increase in demand capital programs. The SCADA program was delayed, in part, due to the SCADA staff's involvement in embedded generation work. The delay was not the result of a financial constraint but, rather, the high workload for new staff as they were being trained and oriented on very technical and application specific work.

b) Smart Meters

- 2006 Approved = \$16,317k



- 1 The 2006 Approved amount shown is from Table 4.1 of the Board's
2 Decision with Reasons for Hydro Ottawa in the RP-2005-0020, EB-2005-
3 0381 proceeding.
4
5 • 2006 Actual = \$16,376k¹

¹ This is the capital spending recorded by Hydro Ottawa for 2006. As part of the Board's proceeding for EB-2007-0063, the Board decided that the cost of Smart Meters should be averaged over the life of the contract. This resulted in a lower capital amount for 2006 and a higher amount for 2007.



Interrogatory

Question #28

Reference: Exhibit B3, Tab 2, Schedule 1

- a) Do the capital expenditure forecasts set out in Table 1 reflect the change in Capitalization Policy implemented October 1, 2007. If yes, what is the impact on each of the line items in Table 1 for 2007?
- b) Page 12 suggests that the reduction in capital contributions for 2007 (versus 2006 actual) is due to the reduction in Demand Capital Programs. However, based on the variances set out in Tables 3 and 8, the reduction in Capital Contributions appears to be significantly larger than the reduction in Demand Capital spending. Please reconcile.

Response

- a) The capital expenditure forecasts set out in Table 1 do not reflect the change in capitalization process¹ implemented on October 1, 2007.
- b) Table 1 below provides a comparison of demand capital expenditure and capital contributions for 2006 and 2007. It is true that there is a larger reduction in capital contributions than the reduction in demand work.

¹ In the Responses to Interrogatories, Hydro Ottawa has used the terms “accounting change” and “change in capitalization process” interchangeably to mean the implementation of both the new cost allocation procedure and capitalization policy.



1

Table 1: Demand Capital Expenses and Contributions

	2006 Actual (\$000)	2007 Estimate (\$000)	Variance (\$000)
Demand Capital Expenses	43,668	41,007	(2,661)
Capital Contributions	20,029	15,022	(5,007)

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Different types of demand work fall under different funding formulas; for example, relocations done for road widening are subject to funding under the *Public Service Works on Highways Act*, whereas plant extensions performed for customer connections are subject to the economic evaluation model. The mix of Hydro Ottawa expenses to capital contributions for a given year is dependent on the particulars of the work being done.

10

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Another reason that the reduction in Capital Contributions appears to be significantly larger than the reduction in Demand Capital spending is that contributions have been assigned at the completion of the projects. Projects that occur over two years have not been assigned contributions until the end of the project, (i.e., in the second year). Therefore, there is not a direct relationship between the amount of Demand Capital in a year and the amount of Capital Contributions in a year.



Interrogatory

Question #29

Reference: Exhibit B3, Tab 2, Schedule 2, page 1, lines 9-19 and Table 1

- a) Does the \$6.5 M difference take into account the fact that the Capitalization Policy was changed October 1, 2007 and, therefore, also impacts on 2007 spending levels? If yes, how?
- b) Does the change in Capitalization Policy have roughly the same proportional impact on all 2008 capital spending? If not, why not?
- c) Which of the program areas discussed in this schedule account for the \$3.7 M increase for TS Primary Above 50 and the \$1.5 M increase in DS capital spending?

Response

- a) The \$6.5M difference is for the full fiscal year 2008. The \$6.5M is based on the estimated amount of overheads that would have been charged to capital using the former capitalization process¹ versus the new one. It is independent of the change taking effect October 1, 2007; therefore, it does not take this implementation date into account.
- b) The changes that are reflected in the new Cost Allocation Procedure mostly concern the administrative overheads and would impact all types

¹ In the Responses to Interrogatories, Hydro Ottawa has used the terms “accounting change” and “change in capitalization process” interchangeably to mean the implementation of both the new cost allocation procedure and capitalization policy.



1 of capital proportionately as these costs are charged to all capital
2 programs.

- 3
- 4 c) The \$3.7M increase for TS Primary Above 50 is due to the increased
5 spending on Stations New Capacity, as shown in Table 2, page 2 of
6 Exhibit B3-2-2. Hydro Ottawa has identified areas at or near their
7 planning criteria capacity. Three Stations Capacity projects are planned
8 to occur in 2008 to address areas of capacity concern; construction of the
9 new Cyrville Station, installation of an additional transformer at the
10 Uplands Station and a new station at Albion Station; please see Exhibits
11 B2-3-1 and B3-4-1 for project descriptions.

12

13 The \$1.5M increase in DS capital spending is due to the combination of
14 the impact of:

- 15
- 16 i) increases in the Stations Capacity program as explained above,
17 ii) increases in the Stations Switchgear replacement program to
18 address the aged switchgear,
19 iii) decreases in the Stations Relay Replacement program which has
20 been coordinated with the Stations Switchgear replacement
21 program to realize efficiencies, and
22 iv) changes not discussed for other stations programs below the
23 materiality limit; that is, where the capital budget is less than \$500k.



Interrogatory

Question #30

Reference: Exhibit B3, Tab 4, Schedule 1, pages 2 & 3

- a) Do either of the two “Stations New Capacity” projects discussed on pages 2 and 3 impact on rate base in 2008 or is all of the spending still in CIP as of year end 2008. If either project impacts on the 2008 rate base, please explain why.
- b) Please provide a schedule that sets out the annual spending for the two Stations New Capacity projects discussed on page 2 and 3.
- c) Please confirm that the balance of the Stations New Capacity spending shown in Tabled 1 is all for individual projects with spending of less than \$500 k.
- d) Does the spending on any of the three stations identified for switchgear and relay replacement (page 4) exceed the materiality limit? If so, please provide?
- e) Please discuss the implications of delaying the switchgear and relay replacement at each of the three stations: Beechwood, Eastview and Kilborn.
- f) Please provide schedule that sets out the 2008 spending for each of the cable replacement projects discussed in section 2.3.
- g) The discussion on page 5 suggests that one or more of the cable replacement projects could be deferred if evidence arises that higher priority locations exist. In the case of each of these projects, what is the



implications of delay? Why would it not be appropriate to expand the overall scope of the program if other high priority locations were also identified?

h) With respect to the capital spending discussed in sections 2.4, 2.5 and 2.6 – please provide schedules that set out the 2008 planned spending by project and show the residual capital spending in each area.

i) What is the planned 2008 capital spending on the Bronson Substation (page 9)?

Response

a) Both “Stations New Capacity” projects discussed will be in CIP at the end of 2008 and thus have no impact on the 2008 rate base.

b) The table below contains a schedule of the annual capital expenses for the two projects, comprising the *Stations New Capacity* program, excluding AFUDC.

Annual Capital Expenditures

	Uplands Additional Transformer (\$000)	Albion Station (\$000)
2008	\$1,841	\$5,156
2009	1,188	2,993
2010	204	504

c) The balance of the Stations New Capacity spending shown in Table 1 in Exhibit B3-4-1 is the following:

- i) \$1.7 M for the Cyrville Station construction, and
- ii) individual projects with spending of less than \$500k.



- d) Switchgear and Relay Replacement at the stations does exceed the materiality limit of \$500k. The table below provides the forecast yearly expenses.

Switchgear Replacement Expenditures

Project	2007 Forecast \$000	2008 Forecast \$000
Bayswater	\$1,800	\$ 500
Marchwood	2,400	500
Beechwood	200	1,900
Eastview	200	2,200
Kilborn	0	500
TOTAL	\$4,600	\$5,600

- e) The implication of delaying the switchgear replacement at the stations is increased risk of extended outages.

The switchgear at these stations have surpassed their life (manufactured in 1956, 1957, 1958) and are no longer serviceable. Life extensions were carried out in the period between 1995-2000 and all available spare materials and components that were on hand were used during those refurbishments.

- f) Cable expenditures for the projects listed in section 2.3 are provided in the table below.

Cable Replacement Expenditures

Project	2008 Forecast \$000
City Park	\$750
BeaconHill	814
Hawthorne 48M3 - 417	579
Campeau Drive	992



g) Many factors can cause a project schedule to be adjusted during a budget year, such as emergency work, outside influences (municipal consent, public review) and changes in equipment condition. The decision to delay or proceed with an additional project is based on the risk associated with the delay and the cost of proceeding (hence, cost consequence analysis in the AMP). The implication of delaying a cable replacement project is an increased risk of customer interruptions in that area. Expansion of the scope of the entire cable replacement program must be justified versus other program decreases, which may have equal or more levels of risk if delayed.

h) A schedule for each section requested is provided below.

Section 2.4: Facilities Programs - Stations

	2008 Forecast (\$000)
Stations Building Rehabilitation	\$861
Albion Station Upgrade	1,654
Uplands Station Upgrade	989
Total	\$3,504
Residual	\$0

Section 2.5: Major and Minor Line Extensions

	2008 Forecast (\$000)
Limebank F3 Feeder	\$800
Supply to Rockcliffe Airbase Redevelopment	900
Greenbank Road Rebuild	560
New Overhead along Abbott	660
Total	\$2,920
Residual	\$524



1

Section 2.6: Pole Replacement

	2008 Forecast (\$000)
Lanigan Street and Ember Glow Drive	\$555
Total	\$555
Residual	\$2,854

2

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- i) The planned spending on Bronson transformer replacement is \$400k.



Interrogatory

Question #31

Reference: Exhibit B3, Tab 6, Schedule 1, Table 1

- a) Please provide a schedule setting out the OM&A accounts that contribute to the \$59,328 k (Table 1) used to determine the 2008 Allowance for Working Capital.
- b) Please provide a copy of the Navigant report referenced on page 1.
- c) Please provide a schedule setting out the derivation of the \$4M figure on page 2 (line 19).
- d) What is the basis for the 50% figure used to calculate the Global Adjustment (page 2, line 12)?
- e) What are the forecast two-tiered prices used for 2008 and how were they determined (page 2, lines 7-10)?
- f) With respect to the 2008 Cost of Power Spreadsheet:
 - Please indicate how the IESO refunds line was calculated
 - Please indicate how the Global Adjustment line was calculated.

Response

- a) The attached table sets out the OM&A accounts that contribute to the \$59,328k in Table1 of Exhibit B3-6-1.



- b) Attached is a slide presentation made by Navigant, which shows the average monthly forecasted commodity price for 2007. The attachment is responsive to the request such that a copy of the entire Navigant report is not necessary, and in any event, the report is confidential.
- c) Attached is a calculation of the cost of power revenue of \$554.6M. This amount is \$4.3M lower than the cost of power expense calculated and provided in Exhibit B3-6-1 (\$558.9M). Therefore, based on this forecast, \$4.3M would be recorded in the Retail Settlement Variance Accounts.
- d) The 50% figure is an estimate of the portion of Hydro Ottawa's purchases that are from regulated generation assets owned by Ontario Power Generation ("OPG"). The regulated assets owned by OPG provide approximately 60% of OPG's total output, and OPG is estimated to supply roughly 80% of the province's generation. Therefore, the regulated assets would provide approximately 50% of overall generation supply in the province.
- e) A weighted average, based on historical information, was used for the forecast of the two-tier price in 2008 as follows:

Class	Commodity Price
Residential	\$0.0540
General Service < 50 kW	\$0.0600
Street Lighting	\$0.0620
Sentinel Lights	\$0.0530
Unmetered Scattered Load	\$0.0530

- f) The IESO refunds are the difference between the cost of power revenue collected from regulated customers at the average two-tier commodity price and what the cost of power revenue would have been if the regulated customers were billed on the spot market price. The calculation attached to part c) shows the total commodity revenue calculated at



1 \$468.4M, including both customers billed at the spot market price and
2 customers billed at two-tier price. Exhibit B3-6-1 shows the cost of the
3 commodity at the spot market price at \$488.7. The refunds claimed
4 through the IESO would therefore be \$20.3M (\$488.7-\$468.4).

5
6 For the Global Adjustment amount, Hydro Ottawa uses 50% (see the
7 response to part d) above) of the difference between the forecasted spot
8 market price (using the Navigant Consulting estimate) and an estimated
9 average price for OPG's regulated generation assets of 5.3 cents, applied
10 to the forecasted kWh purchases.

Accounts for Working Capital

Hydro Ottawa Limited

EB-2007-0713

Filed: 2007-11-30

Tab B – VECC Interrogatory Responses

Interrogatory #31 - Attachment 1

Page 1 of 1

USoA Account	Account Description	Amount
5010	Load Dispatching	\$3,511,117
5012	Station Buildings and Fixtures Expense	732,357
5014	Transformer Station Equipment - Operation Labour	116,603
5015	Transformer Station Equipment - Operation Supplies and Expenses	27,448
5016	Distribution Station Equipment - Operation Labour	243,378
5017	Distribution Station Equipment - Operation Supplies and Expenses	69,984
5020	Overhead Distribution Lines and Feeders - Operation Labour	776,621
5025	Overhead Distribution Lines & Feeders - Operation Supplies and Expenses	2,621,470
5035	Overhead Distribution Transformers- Operation	1,072,084
5040	Underground Distribution Lines and Feeders - Operation Labour	356,363
5045	Underground Distribution Lines & Feeders - Operation Supplies & Expenses	1,281,495
5055	Underground Distribution Transformers - Operation	47,871
5065	Meter Expense	2,575,862
5085	Miscellaneous Distribution Expense	1,604,193
5112	Maintenance of Transformer Station Equipment	116,205
5114	Maintenance of Distribution Station Equipment	761,773
5120	Maintenance of Poles, Towers and Fixtures	75,824
5125	Maintenance of Overhead Conductors and Devices	861,632
5130	Maintenance of Overhead Services	301,708
5145	Maintenance of Underground Conduit	114,200
5150	Maintenance of Underground Conductors and Devices	1,263,011
5155	Maintenance of Underground Services	361,073
5160	Maintenance of Line Transformers	467,410
5175	Maintenance of Meters	788,317
5310	Meter Reading Expense	1,000,000
5315	Customer Billing	6,805,651
5320	Collecting	1,911,160
5335	Bad Debt Expense	2,000,008
5410	Community Relations - Sundry	4,515,270
5510	Demonstrating and Selling Expense	244,582
5605	Executive Salaries and Expenses	2,537,200
5610	Management Salaries and Expenses	4,968,391
5615	General Administrative Salaries and Expenses	2,822,535
5620	Office Supplies and Expenses	3,749,097
5625	Administrative Expense Transferred Credit	(3,783,390)
5630	Outside Services Employed	724,598
5635	Property Insurance	325,692
5640	Injuries and Damages	672,575
5645	Employee Pensions and Benefits	600,000
5655	Regulatory Expenses	1,223,250
5665	Miscellaneous General Expenses	2,718,637
5675	Maintenance of General Plant	4,346,556
6105	Taxes Other Than Income Taxes	1,758,250
6205	Donations	<u>40,000</u>
	TOTAL	\$59,328,061

Forecast Wholesale Electricity Prices » Forecast Results

Forecast results project annual average 2007 prices slightly higher than 2006.

Month	Year	Dawn Gas Price	HOEP (\$/MWh)		
		(\$/MMBtu)	On-peak	Off-peak	Average
May	2006	\$8.41	\$65.44	\$30.27	\$47.02
Jun	2006	\$8.59	\$76.52	\$33.28	\$53.87
Jul	2006	\$8.75	\$101.68	\$42.24	\$70.55
Aug	2006	\$8.87	\$91.36	\$38.34	\$63.59
Sep	2006	\$8.96	\$83.87	\$33.49	\$57.48
Oct	2006	\$9.08	\$78.75	\$34.60	\$55.63
Nov	2006	\$10.19	\$86.16	\$35.09	\$59.41
Dec	2006	\$11.24	\$92.66	\$34.03	\$61.95
Jan	2007	\$11.94	\$112.11	\$40.41	\$74.55
Feb	2007	\$11.95	\$99.36	\$40.41	\$68.48
Mar	2007	\$11.74	\$74.31	\$35.55	\$54.00
Apr	2007	\$9.83	\$62.54	\$31.45	\$46.26
May	2007	\$9.62	\$63.20	\$29.15	\$45.37
Jun	2007	\$9.69	\$80.38	\$35.52	\$56.88
Jul	2007	\$9.77	\$100.98	\$45.46	\$71.90
Aug	2007	\$9.85	\$99.66	\$41.63	\$69.27
Sep	2007	\$9.87	\$83.54	\$35.49	\$58.37
Oct	2007	\$9.95	\$85.84	\$37.12	\$60.32
Nov	2007	\$10.63	\$81.94	\$42.16	\$61.10
Dec	2007	\$11.27	\$100.02	\$33.57	\$65.21
2006 Average		\$9.26	\$84.58	\$35.18	\$58.71
2007 Average		\$10.50	\$87.00	\$37.31	\$60.97

2008 Cost of Power Revenue

REVENUE

Cost of Power Revenue (IN DOLLARS)

	JAN	FEB	MAR	APR	MAY	JUN	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL
RESIDENTIAL	\$17,208,579	\$15,489,280	\$14,515,078	\$11,658,024	\$10,993,895	\$12,345,248	\$14,971,531	\$13,538,562	\$10,907,317	\$11,632,595	\$13,305,570	\$16,157,395	\$162,733,068
-Commodity Charge	\$13,332,325	\$12,000,303	\$11,245,539	\$9,032,042	\$8,482,214	\$9,524,835	\$11,551,113	\$10,445,522	\$8,415,416	\$8,974,995	\$10,265,760	\$12,466,053	\$125,736,116
-Transmission Network	\$1,407,301	\$1,266,699	\$1,187,029	\$953,382	\$895,345	\$1,005,399	\$1,219,284	\$1,102,583	\$868,294	\$947,361	\$1,083,608	\$1,315,861	\$13,272,146
-Transmission Connection	\$938,201	\$844,466	\$791,353	\$635,588	\$596,897	\$670,266	\$812,856	\$735,055	\$592,196	\$631,574	\$722,405	\$877,241	\$8,848,097
-LV Charge					\$45,556	\$51,156	\$62,039	\$56,101	\$45,198	\$48,203	\$55,135	\$66,953	\$430,340
-Wholesale Market	\$1,530,748	\$1,377,813	\$1,291,155	\$1,037,012	\$973,884	\$1,093,592	\$1,326,239	\$1,199,301	\$966,214	\$1,030,462	\$1,178,661	\$1,431,288	\$14,436,369
GENERAL SERVICE <50KW	\$4,526,219	\$4,744,551	\$5,884,740	\$5,785,812	\$5,873,362	\$5,196,795	\$4,248,575	\$4,366,674	\$4,880,106	\$4,776,399	\$5,025,802	\$5,265,628	\$60,574,625
-Commodity Charge	\$3,381,300	\$3,685,004	\$4,854,566	\$4,878,878	\$4,951,323	\$4,232,856	\$3,207,169	\$3,355,066	\$3,952,213	\$3,838,549	\$4,025,803	\$4,140,421	\$48,503,147
-Transmission Network	\$399,569	\$369,775	\$359,524	\$316,514	\$315,642	\$329,985	\$356,504	\$346,304	\$317,646	\$321,054	\$342,330	\$385,192	\$4,160,039
-Transmission Connection	\$268,941	\$248,887	\$241,987	\$213,038	\$212,451	\$222,106	\$239,955	\$233,089	\$213,800	\$216,094	\$230,414	\$259,264	\$2,800,026
-LV Charge					\$17,604	\$18,405	\$19,884	\$19,315	\$17,716	\$17,906	\$19,093	\$21,484	\$151,406
-Wholesale Market	\$476,410	\$440,885	\$428,663	\$377,382	\$376,342	\$393,444	\$425,063	\$412,901	\$378,731	\$382,795	\$408,162	\$459,268	\$4,960,046
GENERAL SERVICE 50-1000KW NOI	\$16,335,043	\$14,233,623	\$11,459,198	\$9,271,015	\$8,982,757	\$10,877,168	\$13,702,550	\$13,209,428	\$10,937,980	\$11,408,471	\$12,163,621	\$14,148,821	\$146,729,672
-Commodity Charge	\$13,727,447	\$11,710,305	\$9,015,608	\$6,865,289	\$6,710,292	\$8,590,267	\$11,416,763	\$10,848,051	\$8,681,198	\$9,096,628	\$9,754,397	\$11,611,834	\$118,028,078
-Transmission Network	\$881,461	\$879,750	\$846,900	\$893,283	\$805,364	\$802,436	\$773,181	\$826,129	\$793,005	\$818,060	\$843,355	\$851,404	\$10,014,327
-Transmission Connection	\$584,483	\$583,348	\$561,565	\$592,322	\$534,024	\$532,082	\$512,683	\$547,792	\$525,829	\$542,442	\$559,215	\$564,552	\$6,640,336
-LV Charge					\$16,088	\$16,029	\$15,445	\$16,503	\$15,841	\$16,342	\$16,847	\$17,006	\$130,102
-Wholesale Market	\$1,141,652	\$1,060,220	\$1,035,125	\$920,121	\$916,989	\$936,351	\$984,477	\$970,953	\$922,108	\$934,988	\$989,808	\$1,104,023	\$11,916,827
GENERAL SERVICE 50-1000KW INT	\$6,979,902	\$6,012,004	\$5,106,989	\$4,201,506	\$4,364,411	\$5,305,199	\$6,793,648	\$6,551,418	\$5,358,221	\$5,432,189	\$5,508,323	\$6,223,973	\$67,837,713
-Commodity Charge	\$5,924,351	\$4,991,990	\$4,064,802	\$3,209,057	\$3,332,011	\$4,249,689	\$5,703,949	\$5,460,928	\$4,292,265	\$4,396,843	\$4,466,276	\$5,163,445	\$55,255,605
-Transmission Network	\$338,437	\$341,566	\$346,036	\$338,140	\$342,868	\$351,911	\$355,212	\$357,510	\$362,463	\$346,593	\$349,862	\$338,432	\$4,169,030
-Transmission Connection	\$224,412	\$226,487	\$229,451	\$224,215	\$227,350	\$233,346	\$235,535	\$237,059	\$240,343	\$229,820	\$231,988	\$224,409	\$2,764,415
-LV Charge					\$6,849	\$7,030	\$7,096	\$7,142	\$7,241	\$6,924	\$6,989	\$6,761	\$56,030
-Wholesale Market	\$492,703	\$451,962	\$466,700	\$430,094	\$455,333	\$473,222	\$491,857	\$488,779	\$455,920	\$451,930	\$453,206	\$490,927	\$5,592,633
GENERAL SERVICE 1000-1500KW	\$2,967,703	\$2,525,713	\$2,200,540	\$1,829,386	\$1,952,344	\$2,387,494	\$3,099,921	\$2,999,351	\$2,392,596	\$2,404,128	\$2,394,684	\$2,684,625	\$29,838,485
-Commodity Charge	\$2,519,436	\$2,098,252	\$1,758,691	\$1,402,346	\$1,496,925	\$1,919,084	\$2,617,312	\$2,499,447	\$1,922,522	\$1,953,885	\$1,940,631	\$2,227,673	\$24,356,204
-Transmission Network	\$143,551	\$142,802	\$144,266	\$143,763	\$149,049	\$154,022	\$152,648	\$164,101	\$157,966	\$148,189	\$152,776	\$145,657	\$1,798,789
-Transmission Connection	\$95,186	\$94,689	\$95,660	\$95,327	\$98,832	\$102,129	\$101,218	\$108,812	\$104,744	\$98,262	\$101,303	\$96,583	\$1,192,747
-LV Charge					\$2,977	\$3,077	\$3,049	\$3,278	\$3,156	\$2,960	\$3,052	\$2,910	\$24,459
-Wholesale Market	\$209,531	\$189,970	\$201,924	\$187,950	\$204,561	\$209,183	\$225,693	\$223,713	\$204,208	\$200,830	\$196,922	\$211,801	\$2,466,285
GENERAL SERVICE 1500-5000 KW	\$6,328,041	\$5,489,869	\$4,743,528	\$4,016,831	\$4,288,641	\$5,279,861	\$6,782,309	\$6,560,340	\$5,324,807	\$5,254,335	\$5,205,332	\$5,686,763	\$64,960,659
-Commodity Charge	\$5,357,415	\$4,567,311	\$3,779,440	\$3,083,032	\$3,284,283	\$4,242,705	\$5,694,470	\$5,453,444	\$4,254,131	\$4,242,986	\$4,211,471	\$4,724,408	\$52,895,096
-Transmission Network	\$312,094	\$302,566	\$315,112	\$309,432	\$326,772	\$338,035	\$351,037	\$363,969	\$363,961	\$338,351	\$333,220	\$301,846	\$3,956,417
-Transmission Connection	\$212,980	\$206,479	\$215,040	\$211,164	\$222,997	\$230,683	\$239,552	\$248,382	\$248,389	\$230,899	\$227,398	\$205,987	\$2,699,954
-LV Charge					\$5,778	\$5,977	\$6,207	\$6,436	\$6,436	\$5,983	\$5,892	\$5,337	\$48,047
-Wholesale Market	\$445,553	\$413,512	\$433,936	\$413,204	\$448,811	\$462,461	\$491,039	\$488,110	\$451,869	\$436,116	\$427,351	\$449,185	\$5,361,146
LARGE USER	\$4,616,570	\$4,018,529	\$3,403,628	\$3,010,509	\$3,216,669	\$4,155,053	\$5,307,419	\$5,096,879	\$4,128,081	\$3,963,462	\$3,905,415	\$4,143,117	\$48,965,330
-Commodity Charge	\$3,909,783	\$3,343,568	\$2,712,870	\$2,325,650	\$2,483,474	\$3,348,797	\$4,458,664	\$4,251,089	\$3,316,128	\$3,196,354	\$3,169,616	\$3,432,422	\$39,948,415
-Transmission Network	\$225,386	\$219,844	\$224,001	\$220,388	\$230,184	\$237,897	\$271,369	\$271,963	\$268,702	\$256,342	\$242,078	\$224,649	\$2,912,803
-Transmission Connection	\$156,240	\$152,399	\$155,280	\$152,775	\$159,566	\$178,777	\$188,116	\$188,527	\$186,267	\$177,699	\$167,811	\$155,729	\$2,019,187
-LV Charge					\$4,068	\$4,558	\$4,796	\$4,807	\$4,749	\$4,531	\$4,278	\$3,970	\$35,758
-Wholesale Market	\$325,160	\$302,718	\$311,478	\$311,695	\$339,377	\$365,024	\$384,474	\$380,493	\$352,236	\$328,538	\$321,630	\$326,346	\$4,049,169
STREET LIGHTING	\$348,271	\$298,329	\$265,970	\$251,387	\$235,367	\$216,993	\$200,027	\$216,706	\$237,908	\$252,899	\$268,939	\$306,180	\$3,118,975
-Commodity Charge	\$294,950	\$249,546	\$220,127	\$206,867	\$191,961	\$175,256	\$159,830	\$174,991	\$194,263	\$207,890	\$240,651	\$256,323	\$2,572,655
-Transmission Network	\$14,291	\$14,292	\$14,293	\$14,295	\$14,296	\$14,297	\$14,298	\$14,300	\$14,301	\$14,302	\$14,303	\$14,305	\$171,573
-Transmission Connection	\$9,535	\$9,536	\$9,537	\$9,538	\$9,539	\$9,539	\$9,540	\$9,541	\$9,542	\$9,543	\$9,544	\$9,545	\$114,479
-LV Charge					\$375	\$375	\$375	\$375	\$375	\$375	\$375	\$375	\$3,003
-Wholesale Market	\$29,495	\$24,955	\$22,013	\$20,687	\$19,196	\$17,526	\$15,983	\$17,499	\$19,426	\$20,789	\$24,065	\$25,632	\$257,266
SENTINEL - BU 200410	\$151	\$910	\$183	\$874	\$190	\$888	\$167	\$891	\$154	\$885	\$154	\$895	\$6,362
-Commodity Charge	\$85	\$764	\$113	\$732	\$119	\$743	\$97	\$763	\$85	\$739	\$85	\$749	\$5,072
-Transmission Network	\$34	\$34	\$34	\$34	\$34	\$34	\$34	\$34	\$34	\$34	\$34	\$34	\$404
-Transmission Connection	\$23	\$23	\$23	\$23	\$23	\$23	\$23	\$23	\$23	\$23	\$23	\$23	\$275
-LV Charge					\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$18
-Wholesale Market	\$10	\$89	\$13	\$86	\$14	\$87	\$11	\$89	\$10	\$86	\$10	\$88	\$593
UNMETERED - BU 200420	\$117,405	\$113,427	\$116,164	\$114,496	\$122,183	\$121,737	\$119,768	\$122,978	\$124,212	\$118,779	\$116,694	\$118,121	\$1,425,965
-Commodity Charge	\$91,642	\$88,536	\$90,673	\$89,371	\$94,966	\$94,619	\$93,088	\$95,584	\$96,543	\$92,320	\$90,700	\$91,809	\$1,109,849
-Transmission Network	\$8,991	\$8,687	\$8,896	\$8,768	\$9,317	\$9,283	\$9,133	\$9,378	\$9,472	\$9,058	\$8,899	\$9,008	\$108,891
-Transmission Connection	\$6,052	\$5,847	\$5,988	\$5,902	\$6,271	\$6,248	\$6,147	\$6,312	\$6,375	\$6,097	\$5,990	\$6,063	\$73,292
-LV Charge					\$520	\$518	\$509	\$523	\$528	\$505	\$496	\$502	\$4,102
-Wholesale Market	\$10,720	\$10,357	\$10,607	\$10,455	\$11,109	\$11,069	\$10,890	\$11,181	\$11,294	\$10,800	\$10,610	\$10,740	\$129,831
Adjustment for Designated Customers	-\$1,229,115	-\$581,630	\$706,214	\$1,226,795	\$1,309,304	\$425,332	-\$906,344	-\$640,749	\$287,070	\$134,081	\$75,846	-\$304,105	\$502,700
TOTAL Cost of Power Revenue	\$59,427,881	\$52,926,234	\$47,696,018	\$40,139,840	\$40,029,819	\$45,886,434	\$55,225,915	\$52,663,247	\$44,291,392	\$45,244,062	\$47,914,533	\$54,735,519	\$586,180,895
ALL CLASSES													
-Commodity Charge	\$48,538,732	\$42,735,579	\$37,742,430	\$31,093,264	\$31,027,565	\$36,378,849	\$44,902,456	\$42,584,884	\$35,124,762	\$36,001,190	\$38,165,391	\$44,115,136	\$468,410,238
-Transmission Network	\$3,731,115	\$3,546,014	\$3,446,091	\$3,197,999	\$3,088,870	\$3,263,299	\$3,502,699	\$3,456,270	\$3,175,863	\$3,199,344	\$3,370,465	\$3,586,388	\$40,564,418
-Transmission Connection	\$2,496,053	\$2,372,160	\$2,305,884	\$2,139,892	\$2,067,949	\$2,185,201	\$2,345,630	\$2,314,594	\$2,127,509	\$2,142,452	\$2,256,091	\$2,399,395	\$27,152,808
-LV Switchgear	\$188,787	\$188,787	\$188,787	\$188,787	\$188,787	\$188,787	\$188,787	\$188,787	\$188,787	\$188,787	\$188,787	\$188,787	\$2,265,446
-LV Charge	\$0	\$0	\$0	\$0	\$0	\$99,819	\$107,127	\$119,403	\$114,481	\$101,242	\$103,731	\$112,161	\$125,302
-Wholesale Market	\$4,661,981	\$4,2727											



Interrogatory

Question #32

Reference: Exhibit B4, Tab 1, Schedule 1, last page

- a) The notes to the Table suggest the “inputs can be updated as required”. For each of the inputs listed, please indicate whether the value would be subject to future update and, if so, how such updating would be done. For example, would it include annual updating of the ROE value, updating of the short-term cost of debt value, updating of tax rates and, if so, how?
- b) For each of the 2008, 2009 and 2010 values shown in the Table, please provide a reference as to where in the Application the value can be found. If there is not a specific reference for the number, please show how it was determined and provided a reference for each of the inputs used.

Response

- a) The following table outlines the inputs to the Capital Adjustment Factor and whether they would be subject of future updates and, if so, how such updating would be done:

Input	Subject to Update	When/how updated
Equity %	Yes	Only if changed by the Board
Short term Debt %	Yes	Only if changed by the Board
Long term Debt %	Yes	Only if changed by the Board
Return on Equity	Yes	Annually, as per update by the Board for rebasing LDCs in that year.
Short term Debt Rate	Yes	Annually, as per updated Hydro Ottawa short term debt rate
Long term Debt Rate	Yes	Annually as per updated Hydro Ottawa long term debt rate
Tax Rate	Yes	Only if changed by the government



1 Hydro Ottawa envisions that before the Capital Adjustment Factor is
2 calculated and applied to rates for each year, the most current status of the
3 above inputs would be determined from the sources as indicated.

4

5 b) The attached table provides references as to where the values can be
6 found or responses to other interrogatories that show how the values were
7 determined.

Methodology for Capital Adjustment Factor

Tab B – VECC Interrogatory Responses

Interrogatory #32 - Attachment 1

Page 1 of 1

INPUTS:	REFERENCE	2008	2009 Additions	2010 Additions	NOTES
Equity	Exhibit F1-1-1 Table 1	40%	40%	40%	Inputs can be updated as required
Debt - long term	as above	56%	56%	56%	
Debt - short term	as above	4%	4%	4%	
Return on Equity	Exhibit F1-1-3	8.81%	8.81%	8.81%	
Long term Debt Rate	Exhibit F1-1-2 Table 1	5.26%	5.26%	5.26%	
Short term Debt Rate	Exhibit F1-1-2 Section 3.0	4.93%	4.93%	4.93%	
Cost of Capital	Exhibit F1-1-4 Table 1	6.67%	6.67%	6.67%	
Tax Rate	Exhibit D2-1-1	34.50%	34.50%	34.50%	
	For all above inputs, 2009 and 2010 have been assumed to be the same as 2008 until updated				
BASE REVENUE REQUIREMENT FOR CAPITAL ADJUSTMENT FACTOR					
Incremental Net Fixed Assets	Please see response to Board Staff Interrogatory # 54 for details of how each of these numbers were determined.	\$13,866,711	\$23,940,349	\$17,553,002	Smart Meters ("SM") and Stranded Meters have been removed
Incremental Average Net Fixed Assets			\$18,903,530	\$20,746,676	
Return on incremental increase in Rate Base			\$1,260,049	\$1,382,907	
Incremental Amortization on new Assets			\$1,766,375	\$1,775,696	
Net Income			\$666,160	\$731,113	
PILS			\$350,878	\$385,090	
TOTAL increase in revenue requirement			\$3,377,303	\$3,543,693	
Non OM&A Revenue Requirement Percentage Increase		\$88,622,681	\$91,999,984 3.81%	\$95,543,677 3.85%	
Minus growth in load (net of CDM)	Please see Board Staff Interrogatory # 51		0.32%	0.57%	Remove increase in Revenue due to increase in load
Net			3.49%	3.28%	
Capital Adjustment Factor (CAF)			0.0349	0.0328	

OM&A	A2-1-2 Table 1	\$59,328,061
Base Revenue Requirement	A2-1-2 Table 1	\$147,951,054
OM&A Revenue Requirement %		40.10%
Capital Revenue Requirement %		59.90%

Factor to apply to rates = $1 + (\text{Capital Revenue Requirement \%} * \text{CAF} + \text{OM\&A Revenue Requirement \%} * 3\text{GIRM})$

if 3GIRM = 0

Factor to apply to 2008 rates 1.021

Factor to apply to 2009 rates 1.020



Interrogatory

Question #33

Reference: Exhibit B4, Tab 1, Schedule 1

- a) Does Hydro Ottawa agree that one of the objectives of 3GIRM should be to incent distributors to achieve efficiency improvements that will lower their cost structure? If not, why not?
- b) Has Hydro Ottawa included an allowance for efficiency improvement in its capital forecasts for 2009 and 2010? If yes, specifically what allowance was made and how was it factored into the forecast costs? Overall, by how much as this efficiency allowance reduced capital spending in these two years in percentage terms?
- c) Is it Hydro Ottawa's standard practice, during budgeting process, to forecast capital costs for at least 3 years forward? If yes, for how long has this practice been in effect?
- d) If the response to the preceding question is yes, please provide a schedule setting out for the previous 5 years (or fewer if the practice started at a later date), the forecasts Hydro Ottawa prepared each year for its capital spending requirements in the following 3 years. Please also include in the schedule the actual capital spending for 2002 through 2006.
- e) Is it Hydro Ottawa's standard practice, during budgeting process, to forecast retail sales (i.e. kWh) for at least 3 years forward? If yes, for how long has this practice been in effect?
- f) If the response to the preceding question is yes, please provide a



1 schedule setting out for the previous 5 years (or fewer if the practice
2 started at a later date), the forecasts Hydro Ottawa prepared each year for
3 its future retail sales in the following 3 years. Please also include in the
4 schedule the actual sales and weather normalized sales volume for 2002
5 through 2006.

6
7 g) With respect to the load forecast, please indicate:

- 8
- 9 • The load growth (prior to CDM adjustment) for 2009 and 2010 and
10 indicate where in the Application the value can be found.
 - 11
 - 12 • Precisely how the CDM adjustment was determined for 2009 and
13 2010. Include schedules showing the calculations and sources of
14 inputs used.
 - 15

16 **Response**

17

18 a) Hydro Ottawa agrees that one of the many objectives of 3GIRM is to
19 incent distributors to achieve efficiencies; however, Hydro Ottawa cannot
20 agree that achieving efficiencies always leads to a “lower cost structure”.
21 A distributor may achieve efficiencies with its existing programs but have
22 new programs or changes mandated by regulators or government. There
23 are numerous examples of these types of changes, such as new
24 legislation, new regulatory fees to the Electrical Safety Authority, new city
25 bylaws, new or changed government regulations, changes to regulatory
26 codes, changes to electronic business transaction standards (“EBT”)
27 mandated by the Board, etc. This is in addition to other external factors
28 such as material costs that have experienced double-digit increases
29 recently, and more unpredictable weather, and internal issues such as an
30 aging workforce and infrastructure. Hydro Ottawa has experienced all of
31 these events in the last few years.



1 With a properly constructed 3GIRM adjustment, efficiency incentives
2 could lead to costs that are lower than they otherwise would have been.
3

4 b) Hydro Ottawa did not build specific efficiency allowances into its
5 forecasted capital expenditures in 2008 – 2010. Sustainment and General
6 Capital expenditures were targeted to increase by 2%, an amount less
7 than actual and predicted short-term increases in labour and material
8 costs. Achieving the 2% target requires efficiency or productivity gains
9 through improvements of many aspects of capital work including planning,
10 work methods, procurement of goods and services, etc. Particularly with
11 the double-digit increases in material costs experienced recently; please
12 see Exhibit D1-3-1, Section 2. Hydro Ottawa is committed to achieving the
13 2% target while still maintaining safe, reliable and customer-focused
14 distribution services. It is not possible, based on existing budgeting tools
15 and processes, to separate the dollar amount of efficiency gains
16 incorporated into forecasted or actual capital expenditures from those
17 influenced by other factors, such as the continued refinement of the Asset
18 Management Plan.
19

20 c) It has been Hydro Ottawa's practice to do a high level forecast of its
21 capital expenditures for at least 3 years as part of its internal budgeting
22 process since 2004. However, in the past, the capital forecast for years
23 beyond the budget year have not included the same level of detailed
24 advanced planning for capital projects as has been done for the current
25 2009 and 2010 forecasts. The forecasting process has been an evolving
26 one that has incorporated an Asset Management Plan that is still
27 maturing. This Asset Management Plan was developed in 2005; it
28 indicated that investment was needed to address an aging infrastructure.
29 As a result of this planned investment, Hydro Ottawa's capital forecasts
30 completed in 2005 (for 2006, 2007 and 2008) showed an incremental
31 increased capital spending. Variations in planned and actual capital



spend from year to year are in part due to the evolution of the forecasting process and related tools, and demand or growth spending which is less predictable than on going reliability projects.

d) The table below sets out Hydro Ottawa's forecasts of capital expenditures and actuals since 2004.

	2004 Forecast \$000	2005 Forecast \$000	2006 Forecast \$000	2007 Forecast \$000	Actual Spend \$000
2005	67,599				52,302
2006	60,908	84,516			75,309
2007	52,868	83,067	78,096		79,546
2008		83,475	79,909	66,451	TBD
2009			63,015	65,282	TBD
2010				59,916	TBD

e) It has been Hydro Ottawa's standard practice since 2004 to forecast retail sales (i.e. kWhs for 3 years forward, during the budgeting process).

f) The attached table shows the sales forecasts for 2005/2006/2007 made in 2004, 2006/2007/2008 made in 2005, 2007/2008/2009 made in 2006 and 2008/2009/2010 made in 2007. Also included are the actual sales for 2002 through 2006 and weather normalized sales for 2003 through 2006. In 2007 Hydro Ottawa moved from a simple extrapolation model to a linear regression model. As a result, only the forecast for 2008/2009/2010 has included weather and economic variables as inputs.

g) The forecasted load growth (prior to CDM adjustment) for 2009 and 2010 is 1.12% and 1.37%, respectively; see Table 2 in Exhibit C1-2-1. The CDM adjustment was determined for 2009 and 2010 in the same manner as the CDM adjustment for 2008. Details of this calculation and sources of the inputs can be found in the answer to VECC Interrogatory #36 a).



Interrogatory

Question #34

Reference: Exhibit B4, Tab 2, Schedule 1

Exhibit B1, Tab 2, Schedule 1

a) With respect to Table 1, where in the following pages of the Schedule are the explanations for the following variances:

- Poles and Wires (2009 versus 2008)
- IT Assets (2009 versus 2008)
- TS > 50 kW (2010 versus 2009)

b) For each of 2008, 2009 and 2010, please provide a schedule that shows the breakdown of capital spending into the following areas (taken from the second reference):

- Sustainment – by Capital Program and Budget Program
- Demand – for each of the 8 categories listed (report contributed capital separately)
- General Plant – for each of the 8 categories listed

c) Please describe how the amount of Capitalized Overhead to be included in the capital expenditures for 2009 and 2010 was determined.



Response

a)

i) Poles and Wires (2009 versus 2008)

Expenses on poles and wires are higher in 2009 than in 2008. As illustrated in Exhibit B1-2-1, Table 4, many projects/programs contribute to the individual 2006 EDR Groupings. Increased spending on Distribution Assets (Section 2.3) and Distribution Enhancements (Section 2.4) contribute to the increased expenses, as well as the cumulative effect of other distribution programs below the materiality limit.

ii) IT Assets (2009 versus 2008)

Expenses on IT assets are approximately \$1.5M higher in 2009 than in 2008. The explanation for this variance can be found in Exhibit B4-2-1 see the explanations for the following programs, which combined, contribute to the IT Asset Grouping;

- Section 4.3- CIS Enhancements,
- Section 4.4- New PC and Peripherals,
- Section 4.5- Website Enhancements, and
- Section 4.6- Information Services and Technology

iii) TS > 50 kV (2010 versus 2009)

Expenses on TS>50 kV are larger in 2010 than in 2009. The explanation for this increase is found in Exhibit B4-2-1, Section 2.1- Stations Capacity. Hydro Ottawa has identified areas that require capacity upgrades within the planning horizon. Figure 1 in Section 2.1 illustrates the expenses that occur on individual projects each year. The justification of the individual projects can be found in the years the projects begin.



- b) The following tables provide Sustainment, Demand and General Plant yearly expenses. Smart Meters are included in the Demand table.

Table 1: Distribution Capital Expenditures, Sustainment

	2008 (\$000)	2009 (\$000)	2010 (\$000)
Stations Asset	\$6,663	\$6,478	\$6,606
Stations Capacity	9,277	4,624	6,090
Stations Enhancement	1,851	1,773	1,261
Stations Automation	0	0	0
Distribution Asset	10,856	15,385	14,193
Distribution Enhancement	4,592	5,426	5,494
Distribution Automation	130	130	130
System Ops. Automation	840	780	710
Facilities Programs - Stations	3,503	2,389	3,204
TOTAL	\$37,712	\$34,596	\$37,688

Table 2: Distribution Capital Expenditures, Demand

	2008 (\$000)	2009 (\$000)	2010 (\$000)
Plant Relocation	\$4,182	\$4,316	\$4,564
Residential Subdivision	8,350	8,171	8,583
New Commercial Development	5,811	4,684	4,592
System Expansion	2,069	2,031	2,036
Stations Embedded Generation	163	159	156
Infill Service	2,598	2,586	2,897
Damage to Plant	468	555	545
Wholesale Metering	506	1,135	1,112
Smart Meters Residential	9,684	7,043	1,460
TOTAL	\$33,831	\$30,680	\$24,485



1

Table 3: General Plant Capital Expenditures

	2008 (\$000)	2009 (\$000)	2010 (\$000)
Fleet Replacement	1,693	1,463	2,068
CIS Enhancements	\$2,722	\$4,662	\$1,002
Buildings - Facilities	2,103	1,603	1,604
Furniture and Equipment	272	190	190
Tools Replacement	1,037	996	996
IST	719	837	1,680
New PC & Peripherals	370	198	198
PC/Peripheral Replacement Program	218	217	217
Website Enhancements	392	98	98
GRM System Enhancements	547	481	492
TOTAL	\$10,073	\$10,745	\$8,545

2

3

4

Table 4: Total Expenditures

	2008 (\$000)	2009 (\$000)	2010 (\$000)
Sustainment	\$37,712	\$34,596	\$37,688
Demand	33,831	30,680	24,485
General Plant	10,073	10,745	8,545
Programs/Projects Less than Materiality	180	4,056	4,483
TOTAL	\$81,796	\$80,077	\$75,201
Capital Contribution	(15,345)	(14,795)	(15,285)
Net Capital Expenses	\$66,451	\$65,282	\$59,916

5

6

7

- c) The capitalization process¹ that was implemented by Hydro Ottawa on October 1, 2007, allocates overhead costs as per Table IV-3 of the KMPG report that is

¹ In the Responses to Interrogatories, Hydro Ottawa has used the terms “accounting change” and “change in capitalization process” interchangeably to mean the implementation of both the new cost allocation procedure and capitalization policy.



1 Attachment T to Exhibit B1-3-1. The overhead costs are a fixed percentage of
2 the department providing the indirect services. The assumption for 2009 and
3 2010 was a 2% inflation factor for general expenses and 3.25% for labour as
4 per the collective agreement. These increases, based on the fixed
5 departmental percentage allocated, are included in the capital expenditures
6 shown for 2009 and 2010.



Interrogatory

Question #35

Reference: Exhibit B4, Tab 3, Schedule 1

- a) Please provide a schedule that sets out the all of the individual projects captured under the planned Stations Asset spending in 2009 and 2010 (Table 1) with a spending level of \$500 k or more. Please provide the rationale for each individual project.
- b) Please provide a schedule that sets out the 2009 and 2010 spending on (i) the Albion Substation; (ii) the Uplands Substation; (iii) the Nepean 8 kV project; and (iv) the Ottawa Core 13 kV project.
- c) Are there any other individual Stations Capacity projects with spending in excess of \$500 k. If so, please indicate what they are and provide both their rationale and annual spending.
- d) Please provide a schedule that sets out the all of the individual projects captured under the planned Distribution Asset spending in 2009 and 2010 (Table 1) with a spending level of \$500 k or more. Please provide the rationale for each individual project.
- e) Are there any individual Distribution Enhancement projects in 2009 or 2010 that exceed \$500 k? If so, please indicate what they are and provide the rationale and annual spending for each.
- f) Please provide the annual 2009 and 2010 spending forecast for the two Facilities Programs-Stations projects discussed on page 5 (lines 24-29).



- 1 g) Are there any other individual Facilities Programs-Stations projects in
2 2009 or 2010 that exceeds \$500 k? If so, please indicate what they are
3 and provide the rationale and annual spending for each.
4
5 h) Please identify any individual Demand projects in 2009 or 2010 with
6 spending that exceeds \$500 k and provide the rationale and annual
7 spending. If there are no such projects identified please explain whether
8 this is because (i) all the projects are known by small or (ii) the spending
9 level provided is a “place holder” for future expected spending.
10

11 **Response**
12

- 13 a) The total Stations Asset spending in 2009 and 2010 is provided in Exhibit B4-3-1.
14 The allocation of funding amongst the individual Capital Projects in the Stations
15 Assets Capital Program may be adjusted over time, if requirements change. The
16 Stations Assets Capital Program’s individual capital projects may vary based on
17 updated information over the next 1 and 2 years based on;
18 a. individual circuit and station loading,
19 b. condition assessment of the asset, and
20 c. performance history of the asset.
21

22 The current plan is to continue with station transformer replacement and
23 switchgear replacement (including protective relay replacements) in excess of
24 \$500k. Station transformer replacement levels will continue at, on average, three
25 per year. Station switchgear replacement will continue as outlined in Table 1
26 below.
27
28
29



Station Switchgear Replacement

	2009 Forecast \$000	2010 Forecast \$000
Beechwood	\$227	\$0
Woodroffe	1,189	3,770
Eastview	231	0
Kilborn	1,889	125
Edwin	0	1,447
Church	0	2,017

Please see Exhibit B1-2-2 for the rationale for the Stations Assets programs.

- b) A schedule for the spending on the Albion Substation, the Uplands Substation, the Nepean 8kV project and the Ottawa Core 13 kV project is provided below. Spending for 2008 for Albion and Uplands is also provided, because the projects are scheduled to begin in 2008.

Station Capacity 2009 and 2010

	2008 ¹ Forecast \$000	2009 Forecast \$000	2010 Forecast \$000
Albion TX Station	\$ 5,321	\$ 3,393	\$504
Uplands	1,841	1,188	204
Nepean 8kV Capacity Upgrade	0	34	1,732
Ottawa Core			
Hinchey Cable Work	0	0	2,359
King Edward Transformer Upgrade	0	0	1,298

- c) There are no other individual Stations Capacity projects with spending in excess of \$500k in 2009 or 2010.

¹ Forecast of 2008 expenses is only included for the projects that were requested for 2009 and 2010.



1
2 d) The total Distribution Asset spending in 2009 and 2010 is provided in Exhibit B4-
3 3-1. The allocation of funding amongst the individual Capital Projects may be
4 adjusted over time, if requirements change.

5
6 The current plan is to continue with pole replacement and cable replacement
7 projects in excess of \$500k. Pole replacement levels will continue at 350 poles
8 per year and cable replacement will continue based on identified areas.
9 Historically, plant failure capital has been in excess of \$500k per year, and it is
10 expected to continue at above this level.

11
12 The Distribution Asset Capital Program's individual capital projects may vary
13 based on updated information over the next 1 and 2 years based on:

- 14 a. performance history of the assets,
15 b. reliability and safety impact of failed assets, and
16 c. impact of demand projects; for example, a road widening may require the
17 replacement of poles that were identified to be addressed under the pole
18 replacement program.

19
20 Please see Exhibit B1-2-2 for rationale of the Distribution Assets programs.

21
22 e) The total Distribution Enhancement spending in 2009 and 2010 is provided in
23 Exhibit B4-3-1. The allocation of funding amongst the individual capital projects
24 may be adjusted over time, as requirements change.

25
26 As described in the response to CCC Interrogatory #14, there are some
27 Distribution Enhancement projects which have been deferred from previous
28 years, that will be in excess of \$500k:

- 29 • *South Urban Nepean Trunk Supply* has been deferred until 2009.
30 • *44kV tie line between Greenbank and Woodroffe* has been deferred
31 until 2009.



- *44 kV Overhead Line Didsbury to Beaverbrook* has been deferred until third parties finalize development design details, and therefore it may proceed in 2009 or 2010.

The Distribution Enhancement Capital Program's individual capital projects may vary based on updated information over the next one and two years based on:

- a. load growth reduction on individual circuits,
- b. construction of new commercial and residential development, and
- c. demand work that may impact the plant in the considered area, such as road widening.

Please see Exhibit B1-2-2 for rationale of the Distribution Assets programs. The following information for the three projects mentioned above was provided in the response to VECC Interrogatory #10 in the 2006 EDR Application.

44 kV Tie Line Greenbank to Woodroffe

Description of Business Issue:

1. The east end of Nepean (east of Woodroffe Avenue) currently has two 44 kV circuits feeding the area.
2. Should one of these circuits be isolated, it is very difficult to pick up load and provide a firm supply to the area.
3. Residential and commercial load growth has been steady with further commercial developments planned in the coming years.

Suggested Solution:

1. In order to increase reliability and security of supply an interconnection of the 44 kV circuit between Woodroffe Avenue and Greenbank Road is proposed.
2. The construction of the line would be along the CN rail line and involve the rebuild of an existing 8 kV overhead line.
3. This line would allow for load transfer and a firmer supply to the east side of Nepean in the event of an outage.
4. Approximate distance of the line is 2.2 km

Estimated Cost: \$ 620,000



South Urban Nepean Trunk Supply

Description of Business Issue:

1. South Nepean in the Barrhaven area is rapidly growing with new residential subdivisions and schools being planned and built.
2. Further expansion is expected with the City of Ottawa Light Rail Project expanding to the area.
3. The underground infrastructure requires significant expansion in order to meet these demands for new subdivisions.

Suggested Solution:

1. New duct and manhole civil structure be built along Chapman Mills Drive and installation of 27 kV trunk cable (approximate length of 1,100 m)
2. This would also allow further interconnection on the existing 27 kV circuit and match up with future plans in the area.

Estimated Cost: \$ 570,000

44 kV Overhead Line Didsbury to Beaver Brook

Description of Business Issue:

1. West Kanata has been steadily growing with future commercial developments planned.
2. Construction of an existing 44 kV circuit along Terry Fox has been completed and further interconnection would greatly assist in delivering more capacity and securing supply to areas of Kanata south of the 417.

Suggested Solution:

1. By upgrading the existing 27 circuit on the north side of the 417 at the Terry Fox interchange and jointly attaching a 44 kv circuit from the existing dead end at Didsbury Drive would allow for interconnection of the 44 kV circuit in Campeau Drive in Beaverbrook.
2. This in turn would allow for the existing 44 KV circuit which crosses the 417 between Didsbury Drive and Silver Seven Road to be utilized at 27 kV.
3. This would allow for a greater delivery of load from Kanata MTS as well as increasing the reliability and security of supply in the Kanata west.

Estimated Cost: \$ 600,000

- f) A schedule for the Facilities Programs-Stations projects in 2009 and 2010 is provided below.



Schedule 2: Facilities Programs-Stations 2009 and 2010

	2009 Forecast \$000	2010 Forecast \$000
Woodroffe	\$1,630	\$0
Nepean South Land	0	1,323
Kanata South Land	0	1,134

The rationale for these spending forecasts is to support of the future Stations Capacity programs as described in Exhibit B4-3-1 Section 2.7.

- g) There are no other individual Facilities Programs-Stations projects with spending in excess of \$500k in 2009 or 2010.
- h) There are no identified individual Demand projects in 2009 or 2010 with spending that exceeds \$500k. The spending level provided is a “place holder” for future expected spending.

In many cases Demand projects are not defined until the year in which they occur; however, Hydro Ottawa is obliged to proceed with these projects; therefore it must ensure it has included reasonable forecast expenses in its budget planning process.

Please see Exhibit B1-1-2 for information on Hydro Ottawa’s Demand planning activities.

Please see the response to SEC Interrogatory #23 for additional information on Hydro Ottawa’s forecast of Commercial Development work.



Interrogatory

Question #36

Reference: Exhibit C1, Tab 2, Schedule 1

- a) Please provide a schedule showing how the CDM savings projected by the OPA for the Ottawa and East regions were prorated to Hydro Ottawa's service area for 2008 (per page 21). Please provide references for all values used in the proration exercise.
- b) Page 33 of referenced OPA document indicates that "The methodology used to disaggregate the proposed CDM portfolio follows that used for disaggregating the load forecast (please see Load Forecast Supplemental Information document)". On page 21 of this Schedule, Hydro Ottawa states that its load forecast is "generally consistent with the load forecast produced for the Ottawa Region by the OPA".
- Please employ the methodology used to prorate the OPA estimate of Regional CDM savings and apply it to the OPA's regional load forecast for the Ottawa and East Region for the year 2010.
 - Please provide a table comparing the results with Hydro Ottawa's load forecast for 2010 prior to CDM adjustments.
- c) In its decision regarding Hydro One Networks' Application for 2008 and 2009 Transmission Rates, the Board agreed (EB-2006-0501, pages 91-92) that the OPA forecast of conservation included natural conservation already captured in Hydro One Networks' load forecast and adjusted Hydro One Networks' load forecast (net of CDM) upwards.



- Please indicate why a similar overlap would not exist between Hydro Ottawa's basic load forecast and the OPA's CDM forecast.
- What adjustments does Hydro Ottawa believe can be made to eliminate this overlap?

d) Are the historical values set out in Table 4 weather normalized? If not, please provide a similar table where historical sales values have been weather normalized by customer class.

e) Are the historical values set out in Table 14 weather normalized? If not, please provide a similar table where historical sales values have been weather normalized by customer class.

f) Please provide a schedule similar to Table 14 with average use projected through to 2010.

g) Please confirm whether the system energy forecast set out in Table 2 is retail sales or wholesale energy (i.e., does it include losses)?

h) Please explain how the forecast customer numbers in Tables 7 and 8 were created. Are these values forecast independently of the forecast of energy sales by customer class?

Response

a) In order to determine the impact of the OPA's projected Conservation and Demand Management ("CDM") savings on Hydro Ottawa's load forecast, Hydro Ottawa used the OPA's Regional Estimate of CDM Savings for the Ottawa and East regions in 2010. This estimate was obtained from the Integrated Power System Planning ("IPSP") Discussion Paper #3: Conservation and Management – Revised, December 21, 2006, Tables



3.7 and 3.8 and are shown in Table 1 below in Row A. In order to prorate these savings for just the Ottawa area (which is predominately the service area of Hydro Ottawa), the 2010 load forecast for each of the Regions was used. This forecast was obtained from Tables 4.8 and 4.9 of the IPSP Supplemental Load Forecast Information, prepared by the OPA in December 2006. These values are shown in Rows B and C. The resulting projected Ottawa CDM Savings are shown in Row E.

Table 1-Hydro Ottawa CDM Savings, 2010

		MW	GWh
A	Ottawa-East CDM Savings 2010	162	961
B	Regional Load Forecast-Ottawa 2010	1,829	9,867
C	Regional Load Forecast-East 2010	1,363	8,627
D	B+C	3,192	18,494
E	Ottawa CDM Savings 2010 = B/(D)*A	93	513

In order to determine the effect of these savings on the 2008 forecast, the total 2010 savings were allocated across 2006 to 2010, bearing in mind that the impact would be cumulative. The results are shown in Table 2 below.

Table 2-Hydro Ottawa CDM Savings, 2006-2010

	2006	2007	2008	2009	2010
GWh	32	64	128	256	513
MW	6	12	23	46	93

As a result of the above, the impact on Hydro Ottawa's 2008 load forecast was determined to be $128-64=64$ GWh or 64,000 MWh and $23-12=11$ MW as reported on page 21 of Exhibit C1-2-1.

- b) In the OPA's Load Forecast Supplemental Information document the Regional Load Forecast for Ottawa in 2010 is 9,867 GWh and 1,728 MW. If the methodology described in part a) above is applied, the following results are achieved for the OPA's forecast for the Hydro Ottawa service territory for 2009 and 2010:



Table 3-OPA Load Forecast for Hydro Ottawa

	2009	2010
Ottawa Region		
GWh	9,786	9,867
MW	1,809	1,829
Prorated for Hydro Ottawa		
GWh	8,184	8,252
MW	1,551	1,569
Compare to Hydro Ottawa Load Forecast prior to CDM adjustment		
GWh	8,102	8,212
MW	1,427	1,443

From the above it would appear that this methodology works fairly well for energy but does over estimate demand.

- a. Hydro Ottawa did not reduce the OPA's CDM savings target for Ottawa specifically to account for natural conservation before adjusting the 2008 forecast. The Board, in its decision on EB-2006-0501, indicated to Hydro One that because the OPA is counting natural conservation in determining if CDM targets have been met, the target should be reduced by natural conservation before it is used to adjust Hydro One's load forecast.

Hydro One uses a number of methods, such as econometric models, end-use models, customer forecast surveys and hourly load shape analysis, to produce the forecasts required for its transmission business¹. The end-use models are capable of forecasting by sector and by end-use and incorporating efficiency improvement standards. As a result, there is an opportunity to incorporate natural conservation in the forecast.

¹ EB-2006-0501, Exhibit A-14-3, page 1, lines 12-14.



Hydro Ottawa on the other hand does not use an end-use model, relying instead solely on historical data. The forecast will capture natural conservation if it is reflected in the previous years' consumption; however, it will not reflect 'new' natural conservation that occurs as a result of new efficiency improvement standards.

It should be noted that the final IPSP, which was submitted by the OPA on August 29, 2007 to the Board, included a revised Conservation Estimate for 2010 Energy Savings and Peak Demand for the Ottawa Region, which contains values higher than the values Hydro Ottawa used. The following table shows the comparison:

Table 4-OPA CDM Forecast

	IPSP ²		CDM Discussion Paper ³	
	Peak Demand MW	Energy Savings TWh	Peak Demand MW	Energy Savings TWh
Ottawa	97	0.6		
East	83	0.4		
Total	180	1.0	162	0.961

- d) The historical values for sales by class set out in Table 4 are not weather normalized. They are the model output of actuals based on the historical weather.
- e) The historical values set out in Table 14 of Exhibit C1-2-1 are not weather normalized. The table on the next page shows Average Use per Customer using weather normalized historical sales. The 2002 weather normalized sales are not available.

² EB-2007-0707, D-4-1, Table 12 and 13

³ IPSP Discussion Paper Conservation and Demand Management - Revised



Table 5-Average Use per Customer based on Weather Normalized Sales

	2003	2004	2005	2006	2007	2008	2009	2010
Average kWh/Month								
RESIDENTIAL	792	758	767	742	724	711	727	720
GENERAL SERVICE <50KW	2,920	2,718	2,864	2,698	2,722	2,796	2,726	2,765
GENERAL SERVICE 50-1000KW NONI	51,345	63,244	58,550	54,467	56,525	56,753	54,919	55,338
GENERAL SERVICE 50-1000KW INT	208,814	202,721	178,816	162,885	149,659	149,868	152,028	152,008
GENERAL SERVICE 1000-1500KW	584,235	545,778	470,453	403,523	382,686	390,240	383,342	386,525
GENERAL SERVICE 1500-5000 KW	1,188,452	1,102,481	1,066,850	926,306	860,282	858,782	851,580	848,143
LARGE USER	5,105,930	5,282,123	5,211,969	5,222,840	4,891,756	4,913,759	4,994,892	5,063,100
STREETLIGHTING	71	70	70	71	71	71	73	73
UNMETERED SCATTERED LOADS	N/A	N/A	N/A	431	552	542	542	542
Average kW/Month								
GENERAL SERVICE 50-1000KW NONI	118	127	150	137	137	141	133	134
GENERAL SERVICE 50-1000KW INT	501	465	397	352	332	331	330	330
GENERAL SERVICE 1000-1500KW	1,261	1,366	1,020	871	829	842	825	832
GENERAL SERVICE 1500-5000 KW	2,459	2,490	2,268	1,950	1,831	1,806	1,775	1,768
LARGE USER	8,599	8,602	9,412	9,292	8,878	8,844	8,599	8,717
STREETLIGHTING	0.18	0.20	0.19	0.19	0.19	0.19	0.19	0.19



- 1
- 2 f) The table provided in part e) includes average use projected for 2009 and
- 3 2010.
- 4
- 5 g) The system energy forecast set out in Table 2 of Exhibit C1-2-1 is
- 6 wholesale energy, (i.e., it does include losses).
- 7
- 8 h) The forecast of customer numbers in Tables 7 and 8 of Exhibit C1-2-1
- 9 were created separately from the forecast of energy sales by customer
- 10 class. The drivers for the customer class models include employment and
- 11 non-manufacturing employment. These models perform very well with
- 12 adjusted R^2 values ranging from 0.93 to 0.99 and low model MAPEs.



1 **Interrogatory**

2
3 Question #37

4
5 Reference: Exhibit C2, Tab 1, Schedule 1

- 6
7 a) Does Hydro Ottawa continue to receive a “switchgear credit” from Hydro
8 One Networks? If not, why not? If yes, how are these revenues
9 accounted for?
10
11 b) With respect to Non-Utility Income (page 11), does Hydro Ottawa
12 currently own any land that is surplus to current needs? If so, what is the
13 value and is it included in the 2008 rate base?
14

15 **Response**

- 16
17 a) Yes, as a result of the recent transmission rates decision for Hydro One
18 (EB-2006-0501), Hydro Ottawa will continue to receive the low voltage
19 switchgear credits (“LV credits”). These LV credits are recorded to reduce
20 the balance in the Retail Settlement Variance Account Transmission
21 Connection Account (RSVA_{CN}). The credit was also used to lower the
22 proposed retail transmission connection rates to customers. Page 4 of the
23 updated Exhibit I1-5-1 shows the transmission connection costs reduced
24 by the monthly LV credit of \$226k. This lowers the wholesale transmission
25 costs that were used in the determination of the new retail transmission
26 rates proposed by Hydro Ottawa.
27
28 b) Hydro Ottawa purchased land, some with dwellings, next to distribution
29 stations many years ago to facilitate future station expansion. These
30 assets are not included in the rate base and the associated costs and
31 revenues are not reflected in the distribution revenue requirement.



1 Following is the value estimated by Municipal Property Assessment
2 Corporation for the 2007 Property Tax Assessment:

3		
4	118 Florence St	\$250,000
5	120 Florence St	\$286,000
6	493 Gladstone Ave	\$225,000
7	326 Clemow Ave	\$501,600
8	243 Glebe Ave	\$474,000

9

10 This is the market value, not the book value, of these assets and therefore it is
11 different from the amount excluded from rate base.



Interrogatory

Question #38

Reference: Exhibit C2, Tab 1, Schedule 5, page 6

- a) Did the 2007 change in Capitalization policy impact at all on the costing of services to affiliates (i.e., less overhead cost capitalized leads to more overheads to be allocated to “operating activities”)? If not, why not? If yes, what SLAs were affected?

Response

- a) The 2007 change in capitalization process¹ does not impact the costing of services because they are two separate processes. The capitalization process is used to determine the overhead costs that are directly attributable to capital programs and, therefore, that are capitalized. The process of costing services to affiliates is based on either market prices or cost-based pricing; neither are capitalized.

¹ In the Responses to Interrogatories, Hydro Ottawa has used the terms “accounting change” and “change in capitalization process” interchangeably to mean the implementation of both the new cost allocation procedure and capitalization policy.



Interrogatory

Question #39

Reference: Exhibit D1, Tab 1, Schedule 1, page 1, lines 30-32

a) The Application suggests that with the completion of the GIS and OMS, the salaries of the related staff will now be expensed instead of capitalized.

- What “operational work” will these employees do that was not being done while these new systems were being developed?
- Was the operational work was being “backfilled” while the projects were being undertaken?

Response

a)
i) Project staff consisted of both permanent and temporary staff. Temporary staff will be released by the end of 2007. Permanent staff will be assigned to their previous or new duties. Staff will be performing both capital and operational work in 2008 with the completion of the GIS and OMS.

Operational work will include data cleanup, data verification and data backlogs. Although an external contractor will complete the data conversion, data verification will be an ongoing task for the foreseeable future. Record map updates were suspended during the project to avoid conflicts, duplication and deleted data.



1 Therefore there is significant operational work required on these
2 record maps.

3
4 Capital work will be part of construction projects. Staff will return
5 to doing construction designs for new installations to help reduce
6 wait times for developers and help reduce the backlog of as-built
7 drawings. This work will be capitalized as part of the construction
8 projects cost.

9
10 ii) Most of the operational record updates were suspended to avoid
11 conflicts, duplication and deleted data, and therefore were not
12 backfilled.



1 **Interrogatory**

2
3 Question #40

4
5 Reference: Exhibit D1, Tab 1, Schedule 1, page 2, lines 7-16

- 6
7 a) If apprenticeship programs are undertaken to meet future staffing needs,
8 is there any basis for deferring and amortizing the related costs? If not,
9 why not?

10
11 **Response**

- 12
13 a) Apprentices are full-time employees. Hydro Ottawa incurs all of the costs
14 of salaries and benefits as is does for all other employees. While some of
15 their work time is spent in a classroom, this part is an employee training
16 cost in the period and is appropriately recovered by revenue in the same
17 period. Furthermore, Hydro Ottawa's approach to apprenticeship training
18 is to have the apprentices learn "on the job" as much as possible.
19 Therefore, apprentices are involved in value-added work on the
20 distribution system within their first year, with the work progressing to
21 more complex jobs as skills are developed.

22
23 Hydro Ottawa would not support deferring costs of the apprenticeship
24 program for the following reasons:

- 25
26 • Recovery of employee training costs should be permitted in the
27 period in which they are incurred.
28
29 • The apprenticeship program is an appropriate approach in
30 addressing the demographics of Hydro Ottawa's workforce.



- 1 • Apprentices not only spend time in the classroom, but also do both
2 capital and operating work on the distribution system, under the
3 supervision of journeypersons, particularly after the first year.
4
- 5 • The administration involved in segregating learning time from work
6 on the distribution system, and then further segregating the work on
7 the distribution system into capitalized work and operating work,
8 plus the further administration for managing the regulatory
9 processes for tracking and recovery of an apprenticeship deferral
10 account, would be extensive.
11
- 12 • Hydro Ottawa's approach for the costs of the apprenticeship
13 program in 2008 is consistent with the approach taken for the
14 apprenticeship program in the 2006 EDR case; that is, this is the
15 continuation of the existing apprenticeship program, not the
16 implementation of a new program.



Interrogatory

Question #41

Reference: Exhibit D1, Tab 1, Schedule 1, page 4, Table 1

- a) Does the 2007 “allocation to capital” reflect the fact that the Overhead Capitalization policy was implemented in October 2007?
- b) Please indicate the dollars allocated to capital by cost category (i.e., line item) for 2006 Approved, 2006 Actual, 2007 Estimate and 2008 Forecast.

Response

- a) The 2007 allocation to capital does not reflect the fact that a new capitalization process¹ was implemented on October 1, 2007.
- b) The chart below provides the capital allocation by USoA line item. Please note that a different value for the 2006 Actual capital allocation amount was inadvertently used in Exhibit D1-1-1. The amount in the chart below balances to the correct value from Exhibit D1-1-2.

¹ In the Responses to Interrogatories, Hydro Ottawa has used the terms “accounting change” and “change in capitalization process” interchangeably to mean the implementation of both the new cost allocation procedure and capitalization policy.



1

USoA	2006 Approved Rate Application	2006 Actual	2007 Estimate	2008 Forecast
5415 - Energy Conservation	Not available	(3,775)	NA	NA
5085 - Miscellaneous Distribution Expense	Not available	(26,338,114)	(28,356,817)	(22,942,861)
5625 - Administrative Expense Transfer	Not available	(7,180,719)	(8,324,516)	(5,923,392)
Total Capital Allocation	Not available	(33,522,608)	(36,681,333)	(28,866,253)

2



Interrogatory

Question #42

Reference: Exhibit D1, Tab 1, Schedule 1, page 4, Table 1 and page 5, lines 17-19

- a) Please provide a schedule that sets out the 2006 Actual, 2007 Estimate and 2008 Forecast for each of the O&M programs discussed on pages 5 through 9.

Response

- a) The USoA is not structured in such a way as to provide total costs for each O&M program described. Hydro Ottawa has tried to structure its own System of Accounts (“SOA”) in a similar way for O&M programs to allow for the required mapping to the USoA. Therefore, the total costs for a specific O&M program are found in more than one USoA Account (and SOA account), because labour and operating expenses are reported in different accounts.

To provide year over year comparisons for O&M, the table on the next page provides the total costs for the USoA Accounts in which the O&M programs are recorded. As can be seen, there can be different O&M programs in a particular USoA account. Furthermore, Hydro Ottawa has provided a second column for each year showing the amounts paid for the outside services (contracts) portion of the O&M programs, if applicable.



1 **O&M Programs by USofA Account (\$000)**

USofA Account	US of A Description	Listed Programs included in USofA	2006 Actual	Outside Services 2006	2007 Estimate	Outside Services 2007	2008 Forecast	Outside Services 2008
5010	Load Dispatching	Control Room;General Switching	3,482	0	3,262	0	3,511	0
5014	Trans. Station Equip. - Operating Labour	Station Transformer Oil Analysis	69	0	60	0	117	0
5015	Trans. Station Equip. - Operating Expenses	Station Transformer Oil Analysis	30	17	50	5	27	20
5016	Dist. Station Equip. - Operating Labour	Station Transformer Oil Analysis	329	0	304	0	243	0
5017	Dist. Station Equip. - Operating Expenses	Station Transformer Oil Analysis	111	48	165	25	70	48
5020	Overhead Dist. Lines & Feeders - Operating Labour	Thermographic Scan; Tree Trimming	805	0	929	0	777	0
5025	Overhead Dist. Lines & Feeders - Operating Expenses	Thermographic Scan; Tree Trimming	2,101	26 1,934	2,524	13 2,308	2,621	13 2,461
5035	Overhead Dist. Transformers - Operation	Distribution Transformer Oil Testing	1,265	312	1,587	22	1,072	0
5040	Underground Dist. Lines & Feeders - Operation Labour	Thermographic Scan; Manhole inspection; Underground locates	762	0	742	0	356	0
5045	Underground Dist. Lines & Feeders - Operation Expenses	Thermographic Scan; Manhole Inspection; Underground Locates	1,094	140 110 701	1,435	110 100 900	1,281	110 100 900
5055	Underground Dist. Transformers - Operation	Distribution Transformer Oil Testing	36	0	341	240	48	19
5125	Maintenance of Overhead Conductors & Devices	Insulator Washing	1,023	125	912	83	862	75
5145	Maintenance of Underground Conduit	Manhole Cleaning	34	18	78	2	114	25
5150	Maintenance of Underground Conductors & Devices	Asbestos Removal & Arc-proofing of cables; CO2 Wash	1,098	90 32	1,446	226 100	1,263	250 100
5160	Maintenance of Line Transformers	Graffiti Abatement	534	100	508	150	467	120



1 **Interrogatory**

2
3 Question #43

4
5 Reference: Exhibit D1, Tab 1, Schedule 3, pages 2 & 3

6
7 a) Please indicate the status of the litigation cases referenced on page 2
8 (lines 26-27).

9
10 b) There are a number of references to increased activities/cost related to
11 collections in 2007 (page 2, lines 26-32). Does Hydro Ottawa have any
12 explanation for this higher level of activity? Did this result in higher
13 collection recoveries in 2007?

14
15 **Response**

16
17 a) Hydro Ottawa assumes that the reference is related to page 4 (lines 26-
18 27) of Exhibit D1-1-3. Both cases were related to under-billing disputes
19 and were settled through the mediation process. There are also three
20 under-billing cases that have the potential to become disputes and could
21 lead to litigation if an acceptable settlement is not reached with the
22 customers. The under-billing cases are the result of metering equipment
23 failures and crossed meters.

24
25 b) Collection activity levels have increased starting in Q2 of 2007. Examples
26 include 69,000 additional notices and reminders (29% more), 3300
27 additional field collection notices (12% more) and 460 additional
28 disconnects for non-payment (17% more). Reconnection activities have
29 also increased.
30



1 Until the end of May, aged Account Receivables (AR) were tracking much
2 higher than 2006. The increased activities were initiated in Q2 2007 and
3 starting in June, aged AR has tracked much more favorably in relation to
4 2006. Monthly Bad Debt expense is also down in 2007 from 2006, as had
5 been budgeted based on the planned collections activities; so positive
6 outcomes from the increased activity are being realized.



Interrogatory

Question #44

Reference: Exhibit D1, Tab 1, Schedule 3, page 6

a) The discussion on pages 6 & 7 suggests General Administration increased by \$2.1 M (before capital allocation). However, the table on page 1 shows an increase of less than \$700 k – please reconcile.

b) Please explain how the strategic re-organization resulted in increased Administration costs in 2007 – as the function was previously part of Hydro Ottawa and the associated costs incurred directly.

Response

a) As discussed at page 5 of Exhibit D1, 1-3, lines 19 to 21, the \$700k increase is attributable to three factors; the \$300k decrease in compensation described at page 5, lines 25 to 29; the \$2.1M increase in general administrative costs described at page 6, lines 9 to 31, and page 7, line 1; and the decrease in administration costs of \$1.1M, as more costs were allocated to capital programs, as described at page 7, lines 5 and 6.

b) The total Administration costs did not increase as a result of the reorganization. As described at page 5 of Exhibit D1-1-3, lines 25 to 29, the 3% increase in salaries that would normally be observed was reduced by the shift of costs from Hydro Ottawa to the Holding Company as a result of the reorganization, and as such the Holding Company allocations increased. This increase in allocations was offset by the reduction in salaries.



Interrogatory

Question #45

Reference: Exhibit D1, Tab 1, Schedule 4

- a) The reduction in reported 2008 O&M costs due to not allocating Administration costs to this program area for reporting purposes is \$3.7 M (page 4, lines 15-18). After allowing for this change in allocation the actual costs of O&M programs increased by almost \$3 M. Please indicate how much each of the program items discussed in Section 2.2 contributes to this increase.

Response

- a) The programs discussed in Section 2.2 of Exhibit D1-1-4 did not contribute to this increase. The programs that had increasing costs were offset by decreases in the other programs. The following table provides the specific changes for each category of O&M program discussed in Exhibit D1-1-4, Section 2.2.

O&M Program Category	Change from 2007 to 2008 (\$ millions)
Vegetation Management	0.25
Stations Facilities	0.10
General Maintenance Programs	0.10
Communications (Mobile workforce)	0.02
Oil testing of transformers	-0.24
Maintenance of Fleet	-0.10
Asbestos removal and cable locates	-0.10
Environment work (spills and water pumping)	-0.60
TOTAL	-0.57



1
2 The increase in the O&M grouping of accounts is predominately related to the
3 addition of the new apprentices and less labour being capitalized, as discussed in
4 Section 2.3. The end of the GIS program in 2007 will mean that labour capitalized in
5 2007 will be expensed in 2008. This is discussed in further detail in the response to
6 VECC Interrogatory #39. Furthermore, labour allocated to capital was higher in 2007
7 as a result of a number of stations projects.



1 **Interrogatory**

2
3 Question #46

4
5 Reference: Exhibit D1, Tab 4, Schedule 2, page 3

- 6
7 a) Please describe more fully how the cost of failure was determined (per
8 lines 7-9) and what types of costs were included.
9

10 **Response**

- 11
12 a) The costs of failure were calculated during the development of the Asset
13 Management Plan. The following variables were defined based on Hydro
14 Ottawa's outage history.

- 15
16 • The number of outages caused by trees each year, sorted by years
17 since last trim.
18 • The average number of tree related customer interruptions each
19 year sorted by years since last trim.
20 • The average number of tree related hours of interruption each year
21 sorted by years since last trim
22

23 A "consequence cost", in points, for trim cycles is then calculated. The
24 consequence cost of the failure is related to the SAIFI and SAIDI impact
25 of tree trimming related outages. The cost is calculated in a point system,
26 so that the impact of outages, regardless of the cause, can be compared
27 to the monetary cost of a program.
28

29 Reliability metrics (i.e., SAIDI and SAIFI) are used in determining
30 consequence cost as they are an indication of the performance of the
31 distribution system and the quality of service provided by Hydro Ottawa.



1
2
3
4

For further information, please see the response to VECC Interrogatory
#18.



Interrogatory

Question #47

Reference: Exhibit D1, Tab 7, Schedule 1, page 2

- a) Please provide a schedule setting out the calculation of the \$4,535 k of amortization associated with stranded meters. Please reconcile the values used with those presented in D3-1-1.
- b) Has Hydro Ottawa ever commissioned an external review of its depreciation rates. If yes, please provide the results.

Response

- a) Table 1 of Exhibit D1-7-1 shows the 2008 Forecast Amortization Expense for Stranded Meters to be \$4,535k. This is the amortization of the capital costs of all the original meters that are being stranded due to replacement by a Smart Meter and is based on a four-year straight line methodology on the remaining cost (Net Book Value) for all of these meters as of January 1, 2008. The following table shows how this amount was calculated.

	TOTAL	Per Year 2008-2011
Asset Value as of January 1, 2008	\$19,520	\$4,880
Contributed Capital	(1,288)	(322)
Amount to be Amortized	\$18,232	\$4,558
Revenue from Disposal	92	23
Net Asset Value to be recovered	\$18,140	\$4,535



- 1 Table 4 of Exhibit D3-1-1 shows the Net Value of the Stranded Meters as
2 \$18,761k. The difference between this value and the \$18,140k shown
3 above, or \$621k, is the amortization that Hydro Ottawa has already
4 received in rates for 2006 and 2007 for these stranded meters.
5
6 b) No, Hydro Ottawa has never commissioned an external review of its
7 depreciation rates.



Interrogatory

Question #48

Reference: Exhibit D3, Tab 1, Schedule 1, page 3, lines 61-72 and Table 3

- a) Are there any operating expenses in 2007 associated with smart metering. If yes, please indicate what they are captured in the Application.
- b) Please reconcile the \$983,000 value reported on line 62 with the \$953,000 value reported at line 69.
- c) Is any of the \$1,723,018 (see Table 3) included in the proposed 2008 Revenue Requirement? If so, please indicate how much and where in the Application's earlier discussion of Expenses this amount is documented.
- d) If the response to (c) is yes, why aren't all 2008 expenses associated with smart meters tracked in the Smart Meter variance account?

Response

- a) Yes, Hydro Ottawa has operating expenses in 2007 related to Smart Meters. The 2007 Estimate is shown in Exhibit D1-1-1, at the bottom of Table 1 on page 4, as \$1,034,835. Furthermore, in the updated Exhibit E1-1-1, Section 5.0 at pages 6-7, Hydro Ottawa discusses the forecast for the Smart Meter variance accounts (Accounts 1555 and 1556). The Attachment to Exhibit E1-1-1 includes an estimate of the Smart Meter variances for 2007, including the estimated operating expenses for 2007. Hydro Ottawa has proposed an approach for recovery of the stranded meter portion of Account 1555 in this Application. The estimated closing



1 balance for the remaining total for the two variance accounts (excluding
2 stranded meters) is estimated at only \$26k for 2007. Therefore, Hydro
3 Ottawa has not sought approval to clear these balances.

4
5 b) The value on line 69 was a typographical error. The correct value is
6 \$983,000.

7
8 c) Yes, \$740,018 was included in the proposed 2008 revenue requirement,
9 as discussed in Exhibit D1-1-1 at page 17. Not included, however, were
10 the amounts in Exhibit D3-1-1, Table 3, at page 3, for call center and
11 training costs, totaling \$983,000. The remaining costs from Table 3 were
12 included.

13
14 d) Hydro Ottawa took the approach of determining its 2008 revenue
15 requirement inclusive of Smart Meter costs, instead of proposing a 2008
16 rate adder. Therefore the forecasted Smart Meter capital assets were
17 included in the 2008 rate base and the forecasted 2008 Smart Meter
18 operating costs were included in the 2008 revenue requirement. The
19 proposed 2008 distribution rates accordingly include the recovery for the
20 2008 forecasted Smart Meter costs.

21
22 Hydro Ottawa could still track the differences between the amounts
23 collected from customers through the Smart Meter portion of the
24 forecasted revenue requirement and the revenue requirement based on
25 actual 2008 Smart Meter costs, if so directed by the Board.



1 **Interrogatory**

2
3 Question #49

4
5 Reference: Exhibit E1, Tab 1, Schedule 1

- 6
7 a) Please provide a continuity schedule that for each Account listed in Table
8 1 shows the annual additions, refunds/recoveries and interest leading up
9 to the balances shown.
10
11 b) Given the significant negative and positive balances in some of the RSVA
12 and RCVA accounts, why isn't Hydro Ottawa applying for a change in the
13 "rates" used for any of these items?
14

15 **Response**

- 16
17 a) Please refer to the response to Board Staff Interrogatory #60 a) that
18 includes an attachment providing a full continuity schedule for all accounts
19 in Table 1, except Accounts 1562 and 1592, in addition to other accounts
20 requested by Board Staff. The response to Board Staff Interrogatory #63
21 a) includes the continuity schedule for Accounts 1562 and 1592.
22
23 b) Hydro Ottawa has always considered the rates charged to electricity
24 retailers for service transaction requests ("strs"), distributor consolidated
25 billing and establishing service agreements with retailers to be standard
26 rates across the province between all distributors and all retailers. The
27 rates were established by the Board as part of the 1st Generation EDR
28 Handbook, and the 2006 EDR Handbook, Chapter 12, determined the
29 following: *"For 2006, the levels of these charges will be maintained at their*
30 *existing levels"*. While there is no such guidance for 2008, it is Hydro
31 Ottawa's view that a change to these rates should only be undertaken



1 within the context of a broader consultation between the Board, retailers
2 and distributors, including a review of services. Since the market has now
3 been open for more than five years, it is likely appropriate for such a
4 review to take place; however, in the meantime, Hydro Ottawa does not
5 propose a change to these rates.

6
7 In the updated Exhibit I1-5-1, Hydro Ottawa has applied to revise its Retail
8 Transmission Rates for both Network and Connection Services.



1 **Interrogatory**

2

3 Question #50

4

5 Reference: Exhibit E1, Tab 1, Schedule 1, page 9, lines 19-24

6

7 a) Why didn't Hydro Ottawa use the forecast 2008 kWhs and kW by rate
8 class to establish the rate riders? Wouldn't these values be more
9 representative of the billing parameters over the proposed recovery
10 period?

11

12 **Response**

13

14 a) Hydro Ottawa did use the 2008 kWhs and kW in the calculation of the
15 rate riders used in the Attachment to Exhibit E1-1-1 but had mistakenly
16 stated in the exhibit that these were 2006 amounts. This was corrected in
17 the updated Exhibit E1-1-1 filed on November 16, 2007.



1 **Interrogatory**

2
3 Question #51

4
5 Reference: Exhibit F1, Tab 1, Schedule 2

- 6
7 a) Please explain why 10 basis points (page 1, line 20) is a reasonable
8 (cost-based) charge for administration.
9

10 **Response**

- 11
12 a) The Holding Company incurs costs to maintain two credit ratings, trust,
13 agency and credit facility agreements, and standby fees to ensure
14 adequate credit facilities exist, of approximately \$300,000 per year. In
15 addition, compensation, legal and other costs related to treasury and
16 financing management are incurred by the Holding Company and not
17 included in cost allocation charges to Hydro Ottawa. The total of these
18 costs, exceed the amount pertaining to the ten basis points charged and
19 therefore is a reasonable charge for administration.
20

21 In addition, the Holding Company, as the parent company, issued its first
22 debentures in the capital debt markets, in 2005. In order for the interest
23 on this debt to be deductible to the Holding Company, subsection
24 20(1)(c)(i) of the *Income Tax Act* requires the money be borrowed for the
25 purposes of earning income from a business or property. Our legal
26 counsel recommended that in order to ensure the deductibility of this
27 interest, it would be advisable for the Holding Company to charge a
28 minimal amount over the rate it was paying.



Interrogatory

Question #52

Reference: Exhibit G1, Tab 1, Schedule 1, page 2

- a) Please provide a cross-reference as to where in the Application each of the cost components contributing to the \$149.11 M Total in Table 1 can be found.

Response

- a) The following table provides a cross-reference to the exhibits for each of the cost components contributing to the \$149.11M total in Table 1 of Exhibit G1-1-1.

	\$000	Reference Exhibit
Return on Rate Base	\$38,779	Attachment to I1-3-1; page 9
Distribution Expenses (including amortization)	103,082	Attachment to I1-3-1; page 3 D1-1-4, D1-7-1, D3-1-1
PILS	13,675	D2-1-1 and Attachment Attachment to I1-3-1; page 7 and 8
Service Revenue Requirement	\$155,537	Attachment to I1-3-1; page 9
Less Revenue Offsets	(7,586)	C2-1-4 Attachment to I1-3-1; page 11
Base Revenue Requirement	\$147,951	Attachment to I1-3-1; page 11
Transformer Ownership Credit	1,159	Attachment to I1-3-1; page 14
TOTAL	\$149,110	



Interrogatory

Question #53

Reference: Exhibit H1, Tab 2, Schedule 1, Attachment 1

- a) On page 16 (of 27) Hydro Ottawa identifies multi-unit dwelling adjustments for residential and general service customers. Where these adjustments factored into the Cost Allocation Runs (i.e., used to reduce the customer count for residential and GS)?

Response

- a) In Attachment 1 to Exhibit H1-2-1, Hydro Ottawa's Cost Allocation Informational Filing, Hydro Ottawa estimated that there were approximately 60,000 individually metered residential customers residing in multi-unit dwellings, which represent 4,500 distributor connection points. Hydro Ottawa did not factor this information into the Cost Allocation model, in accordance with Section 7.7.1 of the Board Directions on Cost Allocation Methodology for Electricity Distributors (RP-2005-0317) that "no adjustments for multi-unit dwellings will be included in the present cost allocation filings".



Interrogatory

Question #54

Reference: Exhibit I1, Tab 3, Schedule 2

- a) Please reconcile the \$139 M 2008 distribution revenue figure on page 1 (line 17) with the \$131 M figure used in Table 1.
- b) Please provide a schedule that sets out the monthly revenues (excluding rate riders for regulatory assets and smart meters) by customer class for 2008 based on the application of approved 2007 rates for the period ending April 30, 2008 and the proposed 2008 rates thereafter. Note: The total revenue should reconcile to Hydro Ottawa's projected distribution revenue for 2008.
- c) Please provide a schedule indicating how the \$3.5 M deficiency was allocated to rate classes and what loads were used (e.g., 2006 or 2008) to determine the rate riders set out in Table 2.

Response

- a) The \$139M distribution revenue figure on page 1 (line 17) of Exhibit I1-3-2 refers to the calculated distribution revenue for the calendar year 2008 using 2008 forecasted kWhs, kW's and customer numbers and 2007 existing rates for January to April and the 2008 proposed rates for May to December. The \$131M distribution revenue figure in Table 1 is the calculated distribution revenue for the calendar year 2008 using 2008 forecasted kWhs, kW's and customer numbers and 2007 existing rates for January to April and the 2008 proposed rates, *adjusted to remove the*



1 *impacts of Smart Meters, accelerated depreciation and apprentices, for*
2 May to December.

3
4 b) Attachment 1 sets out the monthly revenues (excluding any rate riders) by
5 customer class for 2008 based on the application of approved 2007 rates
6 for the period ending April 30, 2008 and the proposed 2008 rates
7 thereafter. The total distribution revenue is \$139M.

8
9 c) In order to allocate the \$3.5M deficiency to the rate classes, Hydro Ottawa
10 determined that this amount represented a 3.56% deficiency on the
11 variable portion of the base revenue requirement and applied that
12 percentage to the existing 2007 variable distribution rate for each class.
13 This methodology is similar to the one that was used to calculate the
14 proposed 2008 rates (i.e., determine the deficiency percentage and then
15 apply it to the current rates). Attachment 2 shows the calculation of the
16 calendar year rate rider for each class.

Attachment 1 to VECC 54b

DISTRIBUTION REVENUE-Fixed[illegible]

DISTRIBUTION REVENUE-Variable

[illegible]

DISTRIBUTION REVENUE-Total

[illegible]

TOTAL

Transformer Ownership Credit	\$11,713,333	\$10,371,376	\$10,331,337	\$5,732,000	\$11,400,371	\$11,377,372	\$12,332,320	\$12,323,333	\$11,331,334	\$11,732,337	\$12,313,747	\$13,344,214	\$14,333,333
Hydro Ottawa's Projected Distribution Revenue for 2008										1,158,564			\$139,319,070

Attachment 2 to VECC Interrogatory 54 c)

10-1 RATES SCHEDULE (Part 1)

*Schedule of Distribution Rates and Charges
Effective May 1, 2008*

			20.33%	LV	3.56%
Customer Class	Item Description	Unit	2007	2008	Rate Year Rider
<u>RESIDENTIAL</u>					
	Monthly Service Charge	per month	\$7.50	\$9.02	
	Distribution Volumetric Rate	per kWh	\$0.0183	\$0.0220	\$0.0002 \$0.0008
<u>GENERAL SERVICE</u>					
<u>Less than 50 kW</u>					
	Monthly Service Charge	per month	\$8.56	\$10.30	
	Distribution Volumetric Rate	per kWh	\$0.0180	\$0.0217	\$0.0002 \$0.0008
<u>GENERAL SERVICE</u>					
<u>Greater than 50 kW < 1500 kW</u>					
	Monthly Service Charge	per month	\$247.39	\$297.69	
	Distribution Volumetric Rate	per kW	\$2.5463	\$3.0640	\$0.0749 \$0.1089
<u>GENERAL SERVICE</u>					
<u>Greater than 1500 < 5000 kW</u>					
	Monthly Service Charge	per month	\$3,977.89	\$4,786.70	
	Distribution Volumetric Rate	per kW	\$2.3357	\$2.8106	\$0.0800 \$0.0999
<u>Large Use (> 5000 kW)</u>					
	Monthly Service Charge	per month	\$14,446.68	\$17,384.06	
	Distribution Volumetric Rate	per kW	\$2.5918	\$3.1188	\$0.0901 \$0.1109
<u>Unmetered Scattered Load</u>					
	Monthly Service Charge	per month	\$4.28	\$5.15	
	Distribution Volumetric Rate	per kWh	\$0.0191	\$0.0230	\$0.0002 \$0.0008
<u>Sentinel Lighting</u>					
	Monthly Service Charge	per month	\$1.68	\$2.02	
	Distribution Volumetric Rate	per kW	\$6.3974	\$7.6982	\$0.0568 \$0.2737
<u>Street Lighting</u>					
	Monthly Service Charge	per month	\$0.32	\$0.39	
	Distribution Volumetric Rate	per kW	\$2.4671	\$2.9687	\$0.0556 \$0.1056
<u>Standby</u>					
<u>Greater than 50 kW < 1500 kW</u>					
	Monthly Service Charge	per month	\$95.41	\$114.81	
	Distribution Volumetric Rate	per kW	\$1.2732	\$1.5321	\$0.0545
<u>Standby</u>					
<u>Greater than 1500 < 5000 kW</u>					
	Monthly Service Charge	per month	\$95.41	\$114.81	
	Distribution Volumetric Rate	per kW	\$1.1679	\$1.4054	\$0.0500
<u>Standby</u>					
<u>Large Use (> 5000 kW)</u>					
	Monthly Service Charge	per month	\$95.41	\$114.81	
	Distribution Volumetric Rate	per kW	\$1.2960	\$1.5595	\$0.0554



Interrogatory

Question #55

Reference: Exhibit I1, Tab 4 Schedule 1

- a) The substantial balance in the RSVA-Transmission account suggests that there is a mismatch between the Retail Transmission Connection rates and the cost of Transmission Connection service. As a result, why is it appropriate to use Retail Transmission Connection revenues to allocate LV Charges?

Response

- a) Hydro Ottawa has allocated LV Charges based on the percentage that each class contributes to the total Retail Transmission Connection revenue. No evidence exists which would indicate that one class is contributing to the variance account more or less than other classes.



Interrogatory

Question #56

Reference: Exhibit I1/Schedule 7/Tab 1

a) Based on a recent 12 consecutive months of actual billing data, please indicate the percentage of total residential customers that:

- Consume less than 100 kWh per month
- Consume 100 -> 250 kWh per month
- Consume 250 -> 500 kWh per month
- Consume 500 -> 750 kWh per month

Response

a) Based on a recent 12 consecutive months of actual billing data, Hydro Ottawa's residential customers have the following consumption levels:

	%
Consume less than 100 kWh per month	1.21
Consume 100 - 250 kWh per month	6.87
Consume 250 - 500 kWh per month	23.67
Consume 500 - 750 kWh per month	27.65
Consume > 750 kWh per month	40.60
Total	100.00