

EB-2010-0131 1 2 HORIZON UTILITIES CORPORATION ("HORIZON UTILITIES") 3 **RESPONSES TO** 4 SCHOOL ENERGY COALITION INTERROGATORIES 5 DELIVERED: January 24th, 2011 6 7 **Question 19** 8 9 **Reference:** Ex. ½/2, App. 1-9(k) 10 With respect to the Regulatory Affairs Business Plan: P. 3. i) Please confirm that the plan to have a cost of service application every 11 a. two years, the next one being in 2013, is no longer applicable. 12 13 ii) Please provide details of all changes to the Regulatory Affairs Business Plan resulting from a four year rather than a two year COS cycle. 14

Please advise why, given the date of this Business Plan and the Board's

P. 4. Please advise whether any lobbying firms have been or are intended to be

P. 9. Please provide a copy of the review of regulatory processes in 2009 and

P. 12. Please advise what costs are included in the test year budget relating to

P. 15. Please reconcile the statement that three new roles are planned with the

renewable generation or photovoltaic sales, rentals or financing, planning for those

communications to all LDCs in 2010 on cost of service applications, this Business Plan

retained, and the total amounts included in the Test Year budget related to lobbying

was not amended before this Application was filed.

P. 4. Please provide a copy of the "advocacy strategy".

businesses, or regulatory steps designed to facilitate those businesses.

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statement on page 4 that two new roles are planned.

### Response:

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- 4 i) Please see Horizon Utilities' response to Board staff Interrogatory 41 where
- 5 Horizon Utilities acknowledges the current four year IRM period. Horizon Utilities does
- 6 not confirm that it may not have cause to submit another cost of service application in
- 7 2013 or, in more general terms, that it may not have reason to advance future rate
- 8 applications. The April 20, 2010 letter of the Board provides conditions under which it
- 9 may accept an advanced re-basing application. Horizon Utilities will consider the timing
- and need of its next re-basing application in the context of both IRM and the April 20,
- 11 2010 letter of the Board.
- 12 The Application provides evidence with respect to a trend of necessary and rising
- capital and operating costs that may not be adequately funded through the present IRM
- mechanism. Horizon Utilities will be regularly evaluating whether its operational and
- financial needs are adequately addressed by IRM and, if not, whether further advanced
- re-basing applications are warranted based on the conditions outlined in the April 20,
- 17 2010 letter of the Board.
- ii) Based on the response to i) the Regulatory Affairs Business Plan remains valid.
- In particular, the portion of the plan relating to 2011, and underlying the rates sought in
- this Application, remains valid. Please also refer to Horizon Utilities' response to Board
- 21 Staff Interrogatory 40, which provides further details on costs as they relate to this
- 22 Application.
- 23 iii) Please refer to the responses in i) and ii) above. The Board has not restricted LDCs
- from advancing re-basing applications as this Interrogatory may suggest. The April 20,
- 25 2010 letter of the Board has qualified the conditions under which such applications will
- 26 be considered.
- 27 b) As a result of competing priorities in 2009 and 2010, the advocacy strategy was
- 28 not completed.

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- 1 c) Horizon Utilities has engaged lobbyists in the past with respect to its regulated
- 2 electricity distribution operations. However, it does not presently have any lobbyists on
- 3 retainer. There are no current plans to retain a lobbyist. The Test Year budget does
- 4 not include any amounts specifically designated for lobbying activities.
- 5 d) Please find attached the following in regard to regulatory process reviews
- 6 completed in 2009 and 2010:
- Appendix 1 Compliance process; and
- Appendix 2 Month end process.
- 9 The following was also undertaken without specific process review documents:
- Customer contact for all customers was transferred to Customer Service;
- Work instruction for the settlement of customers that are billed weekly was
- developed and the activity was transferred to Customer Service;
- Customer Service assumed ownership of the EBT Hub provider contract; and,
- Review of Capital Contributions projects was formally transferred to Finance.
- 15 e) There are no costs in the Test Year budget for Regulatory Affairs that relate to
- the listed items.
- 17 f) Horizon Utilities confirms that there are three new roles planned as described in
- Horizon Utilities' response to Schools Energy Coalition Interrogatory 8 b).

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**Appendix 1 - Compliance Process** 

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Appendix 2 - Month-End Process

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6	DELIVERED: January 24 <sup>th</sup> , 2011
7	
8	Question 20
9	Reference: Ex. ½/2, App. 1-9(I)
LO	With respect to the Safety Business Plan:
l1	a. P. 8. Please provide the most recent "quarterly quality reports on IFS inputs".
l2 l3	<b>b.</b> P. 8. Please provide a copy of the Safety Matrix.
L4 L5 L6	c. P. 9. Please provide a copy of the OHSMS Implementation Plan.
L7	Response:
18 19 20 21	<b>a.</b> As outlined in the Safety Business Plan the department has begun inputting, tracking, and evaluating the extracted statistical information through its IFS business system inputs, relative to departmental inspections and incident investigations. Such information will be available at the end of the first quarter 2011 and provided to departments thereafter on a quarterly basis.
23	<b>b.</b> A copy of Horizon's 2010 Safety Matrix is attached as Appendix 1.
24 25	c. A copy of Horizon Utilities' multi-year OHSMS Implementation Plan is attached as Appendix 2.

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3	Appendix 1 – Safety Matrix
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Appendix 2 - Horizon Utilities' Multi-year OHSMS Implementation Plan



# CSA Z1000 Implementation Program

Multi-Year Safety Program Charter

December 15, 2008

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### 1. Introduction

As a program charter, this document lays the foundation for the multi-year CSA Z1000 Implementation Program. Highlighting the program focus, goals, objectives, scope, milestones and team organization, the program charter sets the stage for the creation of a work plan and successful management of the program. The program charter serves as a guideline at the beginning of the program and a reference document at later phases of the program.

## 2. Program Background and Focus

Horizon Utilities Corporation (Horizon) has determined it is necessary to implement a Health and Safety Management System (H&SMS) to continue to promote a safe work environment. In deciding the system/program requirements, Horizon took management requirements and integrated them with recommendations made from its Utility Risk Management (URM) safety audit. Together these requirements determined what program was necessary to enhance safety practices in the workplace. The safety management system/program that Horizon has chosen to adopt is CSA Z1000.

CSA Z1000 provides an integrated safety system that will enable the organization to continuously improve its health and safety performance, thus preventing injuries. Specifically by establishing, maintaining and improving processes and training to eliminate or control hazards and risks. The program supports an integrated Plan, DO, Check and Act process whereby all stakeholders in the organization have accountabilities to identify and mitigate risks, act within compliance, develop preventable measures and monitor and conduct corrective actions.

CSA Z1000 will be a co-operative program with EU&SA Zero Quest to achieve an ultimate goal of zero workplace injuries and more efficient safety practices for the Organization and its workers.

## 3. Participating Organizations

Role	Name of Individual(s) or Organization
Executive Sponsor and Approval Authority	Marjorie Richards, Vice President, Corporate Services
Steering Committee	Jason Caucci, Linesperson Dave Presley, 4 <sup>th</sup> class apprentice Dave Evans, Linesperson Jeff Koeppe, Linesperson Kathy Lerette, Vice President, Utility Operations Marjorie Richards, Vice President, Corporate Services Steve Strugar, Directors, Construction and Maintenance Andy Kerr, Manager, Healthy Workplace and Safety Shelley Parker, Director Customer Services Jim Patterson, Director Customer Connections Zoran Dabic, Manager Operational Improvement Nigel Harnanan, Specialist, Change Management
Stakeholders	Horizon Utilities business units

## 4. Initial Program Goals and Objectives

This program will be divided into six separate but interdependent elements. The goal and objectives of each process is provided below.

### 4.1. Commitment, Leadership, and Participation

"4.2.1 Commitment, Leadership, and effective participation are crucial to the success of an OHSMS" 1

**Goal:** Establish senior management accountability, and gain total worker participation and acceptance for the formal adoption of CSA Z1000.

### **Objectives**

### **Management Commitment and Leadership**

- Responsibility, accountability and authority: Senior leadership shall provide leadership for OHS activities and assume overall responsibility for the OHSMS.
- Management representatives: The organization's senior management shall designate
  one or more representatives of management who, irrespective of other responsibilities,
  have defined roles, responsibilities and authority for ensuring than an OHSMS is
  established, maintained and reviewed in accordance with the requirements of the
  Standard
- Worker participation: Worker participation is an essential aspect of the OHSMS in the
  organization. Senior leadership will provide workers with time and resources to
  participate effectively in the development of the OHS policy and in the process of
  OHSMS planning, implementation, training, evaluation and corrective action and
  encourage worker participation.
- Occupational health and safety policy: In consultation with workers, senior leadership shall establish and maintain the organization's OHS policy and shall ensure that the policy meets the requirements of CSA Z1000.

### 4.2. Planning

"4.3.1 Planning identifies and prioritizes hazards, risk, legal requirements, other requirements, management system deficiencies, and opportunities for improvement. The planning process is necessary to the establishment of appropriate objectives and targets, and plans to achieve compliance with legal requirements, other requirements, and a commitment to continual improvement." 1

**Goal:** Identify and prioritize hazards, risk, legal requirements, management system deficiencies and opportunities for improvement.

### Objectives

• **Review:** If the organization has an OHSMS, it shall be reviewed to assess conformance with the requirements in this standard.

- **Legal and other requirements:** The organization shall ensure access to legal requirements and periodically evaluate it compliance to these requirements.
- Hazard and risk identification and assessment: The organization shall establish and
  maintain a process to identify and assess hazards and risks on an ongoing basis. The
  results of this process shall be used to set objectives and targets and to develop
  preventative and protective measures.
- Occupational health and safety objectives and targets: The organization shall document OHS objectives and targets for relevant functions and levels within the organization, and establish and maintain a plan for achieving its objectives and targets.

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<sup>&</sup>lt;sup>1</sup> CSA Z1000-06 Occupational health and safety management

### 4.3. Implementation

"4.4.1 The organization shall determine, provide, and maintain the infrastructure and resources needed to achieve conformity to this standard. The organization should have access to persons competent to implement this standard."

**Goal:** Determine, provide, and maintain the infrastructure and resources needed to achieve conformity to the CSA Z1000 standard

### **Objectives**

- **Preventive and protective measures:** The organization shall establish and maintain a process to implement preventive and protective measures to address hazards and risks.
- *Emergency prevention, preparedness and response:* The organization shall establish and maintain procedure(s) to prevent, prepare for, and respond to emergencies.
- **Competence and training:** The organization shall establish and maintain procedures to define competencies of workers, ensure workers are competent and ensure workers are aware of their rights and responsibilities. Training should be provided to workers based on their duties and responsibilities.
- **Communication and awareness:** The organization shall establish and maintain procedures to communicate all aspects of the OHSMS both internally and externally.
- Procurement and contracting: The organization shall establish a process to evaluate purchased products and services to ensure that hazards and risks are identified, eliminated or controlled.
- **Management of change:** The organization shall establish and maintain procedures to identify, assess and eliminate or control OHS hazards and risks associated with new processes or changes to existing processes. A hazard and risk identification and assessment should be carried out before any modifications or introduction of new work methods, materials, processes, machinery or equipment in the workplace.
- Documentation: The organization shall create and maintain the documents and records specified by its OHSMS in order to implement the OHSMS effectively and to assess conformance with the requirements of this standard. The organization shall also establish and maintain a process for the control of documents and records to ensure conformance to OHSMS requirements.

### 4.4. Evaluation and Correction

"4.5.1 Clause defines requirements for

- (a) evaluation of performance of the OHSMS through monitoring and measurement, incident investigation and analysis, and internal audits
- (b) corrective action when nonconformances are found in the OHSMS
- (c) follow-up and assessment of the effectiveness of corrective actions, using both qualitative and quantitative measures; and
- (d) feedback for the planning process and input to the management review."2

**Goals:** Evaluate and measure performance of implemented processes and track incident investigation and correction.

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<sup>&</sup>lt;sup>2</sup> CSA Z1000-06 Occupational health and safety management

### **Objectives**

- Monitoring and measuring: The organization shall establish and maintain procedures to monitor, measure and record OHS performance and the effectiveness of the OHSMS on a regular basis.
- Incident investigation and analysis: The organization shall establish and maintain procedures for reporting and investigating work-related injuries, illnesses, fatalities, and OHS incidents, including near misses. The investigation of cause(s) of work-related injuries, illnesses and OHS incidents shall identify any failures in the OHSMS and shall be documented. Where appropriate, recommendations shall be developed and along with the investigators results, shall be communicated to the workplace parties. The recommendations shall form the basis of corrective action and shall be included in the management review.
- Internal audits: The organization shall establish and maintain an internal audit program
  that includes the criteria for auditor competency, the audit scope, frequency of audits, the
  audit methodology, reporting and planned intervals. The audit results, audit conclusions
  and any preventive or corrective action plans shall be documented and communicated to
  the affected workplace parties.

### 4.5. Management Review and Continual Improvement

"5.1 Senior management shall review the organization's OHSMS at planned Intervals to ensure its continuing suitability, adequacy, and effectiveness. This review shall include an assessment of the need for changes to the OHSMS, including the OHS policy and objectives." <sup>3</sup>

**Goal:** Review the documentation (polices and procedures) at regular intervals to ensure suitability, adequacy, and effectiveness.

### **Objectives**

• **Continual Improvement:** The management review shall include an assessment of opportunities for continual improvement. The organization should continually improve the effectiveness of the OHS policy and objectives.

- Review input: The input to the management review shall include results of audits, communications received from workers and external parties, performance of OHSMS, objectives and target results, status of corrective and preventive actions, follow up actions and recommendations for improvement.
- Review output: The output of the management review shall include any decisions and
  actions related to, the need for changes to OHSMS, improvements in processes,
  reporting on the outputs from objectives and targets. Action plans shall be developed
  from the management review. The organization shall have a process for recording and
  communicating the findings, conclusions and action plans of the management review to
  the persons responsible for action and the workers and worker representatives.

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<sup>&</sup>lt;sup>3</sup> CSA Z1000-06 Occupational health and safety management

## 4.6. Zero Quest

**Goals:** Ensure that the Zero Quest Program and CSA Z1000 are full integrated and inline with company directives.

### **Objectives**

- Integrate the Zero Quest and CSA Z1000 programs
- Achieve Zero workplace injuries

## 5. Program Schedule and Deliverables

Each year of the program will have an annual Plan with milestones and objectives.

## 6. Initial Program Milestones

**Table 1: Milestone Objectives** 

Milestone	Description	Authority
Commitment,	4.2.1.1 Responsibility, accountability, and authority – Senior	Marjorie Richards
Leadership, and	management to provide leadership and assign responsibility	
Participation	<b>4.2.2.2 Management representative</b> – Assign representative	
	<b>4.2.3 Worker Participation</b> – Gain participation and acceptance	
	4.2.4 Occupational health and Safety Policy – Establish and maintain	
	OHSP	
Planning	4.3.2 Review – Review Existing OHSP	Steve Strugar
	4.3.3 Legal and other requirements – Identify and ensure legal compliance	
	<b>4.3.4 Hazard and risk identification and assessment</b> – identify all hazards	
	4.3.5 Occupational health and safety objectives and targets – Set	
	targets and objectives	
Implementation	<b>4.4.2 Preventative and protective measures</b> – Develop and implement	Kathy Lerette
	hazard solution	
	<b>4.4.3 Emergency prevention, preparedness, and response</b> – Establish	
	and maintain procedures	
	4.4.4 Competence and Training – Make sure all employees are trained and	
	competent to task	
	4.4.5 Communication and awareness – Establish and maintain	
	communication channels	
	<b>4.4.6.1 Procurement</b> – Establish an evaluation process on all goods,	
	suppliers, and tools	
	<b>4.4.6.2 Contracting</b> – Establish and maintain procedures and policies	
	<b>4.4.7 Management of change</b> – Establish and maintain procedures to	
	identify, assess, and control/eliminate new hazards	
	<b>4.4.8.2 Control of documents</b> – Establish and maintain a procedure for	
	issuing, reviewing, and distributing documentation	
	<b>4.4.8.3 Control of records</b> – Establish and maintain a procedure to ensure	
	records are legible, identifiable and retrievable.	
Evaluation and	<b>4.5.2 Monitoring and measurement</b> – Establish and maintain procedures	Marjorie Richards
Correction	to monitor, measure and record health and safety performance	
	4.5.3 Incident investigation and analysis – Establish and maintain	

	procedure for reporting and investigating 4.5.4 Internal audits – Establish and maintain internal audit program 4.5.5 Preventative and corrective action – Establish and maintain preventative and corrective action procedures	
Management Review and Continual Improvement	<ul> <li>5.2 Continual improvement – Reviewing opportunities for improvement</li> <li>5.3 Review input – Review audits, communications and actions</li> <li>5.4 Review output – Review results of actions, allocation and of resources, and effectiveness of processes</li> </ul>	Kathy Lerette
Zero Quest	Integrate Zero Quest and CSA Z100 in terms of objectives and goals	Steve Strugar

## 7. Program Assumptions

An important strategic goal for Horizon Utilities is to become a Safety leader among Ontario LDCs. This goal is fundamental to the long-term growth objectives of the company, and will provide the company with prudent, work practices and procedures that identify and mitigate risk. The goal will support both the mission statement and one of the core values of the company.

## 8. Program Risks

Risk	Mitigation
Resourcing	Frequently updated resource plan
CSA Z1000 Implementation expertise	Consulting assistance
Scope creep	Program management

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- 1 approach. Horizon Utilities selected the vendor on the basis of their extensive
- 2 knowledge of the solution being procured, the provision of 24/7 service support and a
- 3 strong customer base within the Hamilton community.
  - b) Horizon Utilities has not yet realized any savings as a result of the Bar Coding Solution, since the solution was not fully implemented by the end of 2010. Although the bar coding hardware and software were installed in December 2010, the actual bar coding of inventory materials is planned for the end of the second quarter of 2011, when at such time we will be able to assess potential benefits. Horizon Utilities does not have any material or presentations related to actual or anticipated savings as a result of the Bar Coding solution implementation.
- c) During the fourth quarter of 2010, a Materials Management Strategy Plan was
- drafted, with the intent of formalising material management processes and practices.
- 13 That draft plan is currently under review and is planned for completion at the end of the
- 14 first quarter of 2011.

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- 15 d) Horizon Utilities follow industry 'best practice' as it relates to vehicle
- replacements. Such practice is the result of discussions with other electrical utilities,
- industry fleet groups, fleet leasing organizations and automotive manufacturers. Horizon
- Utilities Vehicle Replacement Plan was developed following such consultation. A copy
- of the Plan is attached as Appendix 1.
- 20 **e)** Please see d) above.
- 21 f) Horizon Utilities Workforce Labour Strategy and Plan is included in the
- Application in Exhibit 4, Tab 2, Schedule 6, Appendix 4-2. Such plan is the same as that
- requested in School Energy Coalition Interrogatory 17.
- 24 **g)** The FTEs listed on the Budget Summary Table on page 5 of the Supply Chain
- 25 Management 2011Business Plan were incorrect. Horizon Utilities has reviewed the
- information and has provided a corrected table below.

Summary	2010	2011	2012	2013
	Budget	Budget	Forecast	Forecast
# FTEs	29	30	31	32

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**Appendix 1 - Horizon Utilities Vehicle Replacement Plan** 



## Confidential Document Internal Use Only

## Horizon Utilities 2010–2014 Fleet Replacement Plan





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## Introduction

During the last few years Horizon Utilities has made efforts to introduce light duty Hybrid vehicles to the fleet and today represents 10% of our fleet. For the most part, Horizon Utilities has a new fleet compared to other utilities and industries. This is due to minimal replacement criteria and strategies that were not consistent with manufacturing and utility standards. With this in mind, the Fleet Group proceeded in conducting a full review of Horizon Utilities' existing fleet operations, replacements, practices, processes and activities during the fourth quarter of 2008. The review also includes information from other utilities, industries and manufacturing operational and replacement practices. After reviewing the results and gap analysis, Horizon Utilities under the Fleet Group will focus on a number of improvement initiatives; one of which is to develop this five year Vehicle Replacement Plan with strategic objectives and targets focusing on replacement criteria by vehicle class, vehicle specifications, turn key order approach and environmental focus.

The Fleet Replacement Plan should allow for planned fleet expansion, if necessary, and look at the possibility of refurbishing vehicles as much as possible if the vehicle fits all safety criteria, or deferring the replacement of some of the vehicles for a year or two.

## **Plan Objectives**

- Develop and implement a long term Vehicle Replacement Plan to support our customer's present and future needs
- Align our vehicle replacement criteria with utility, vehicle manufactures and other industries standards
- Develop vehicle specification standards by vehicle class to expedite delivery timelines and reduce processes
- Ensure that Horizon Utilities fleet operates in compliance with federal, provincial and municipal legislations, and specific licences
- Establish a fleet that can meet existing and future geographic challenges and environments
- Increase fleet inventory with vehicles powered by alternative sources of energy
- Reduce transportation capital expediters without affecting customers requirements
- The five year plan must support Horizon Utilities Environmental initiatives

## **Vehicle Replacement Criteria**

To date, Horizon Utilities has been replacing its fleet requirements without formal, factual, strategic replacement criteria. This has resulted in the replacement of vehicles before industry and manufacturing standards, and less priority and budget for smaller vehicles and trailers. After conducting a full review of our existing replacement practices and industry and manufacturing standards, Horizon Utilities has decide to establish a replacement criteria based on the following guidelines:

- Manufacturing Standards
- Industry Standards



- Non Industry Standards
- Vehicle Operational Conditions
- Vehicle Age
- Vehicle Total Mileage
- Highway Traffic Act ("HTA")
- Canadian Motor Vehicle Safety Standards ("CMVSS)
- All related CSA standards, specifically those that relate to aerial devices and hydraulic equipment
- Motor Vehicle Inspection Station ("MVIS") requirements
- Electrical & Utility Safety Association ("E&USA Rule Book") where applicable
- Corporate Health & Safety and Environmental Policies

## **Replacement Screening Process**

A "first pass" screening process is used based on vehicle age at which time, mileage, engine hours, utilization and power take off ("PTO") hours are documented. This provides a baseline to initiate the capital replacement process. During this time, vehicle utilization is also reviewed and discussions will take place with Business Unit ("BU") Managers/Directors on whether a vehicle should be retained, re-allocated or replaced with the same class of vehicle or a completely different vehicle configuration.

## **Vehicle Replacement Criteria**

Fleet Class	Replacement Criteria
Light Duty Vehicles:	Assessed at five years and every year after, and/or high mileage (excess of 150,000km)
	Replacement schedule: at 5 to 7 years
Heavy Duty Vehicles:	Assessed after 10 years service, and every year after, and/or high mileage (excess of 200,000 km)
	High engine hours (excess of 15,000 engine hours)
	Replacement schedule: 15 to 18 years
Trailers:	Trailer replacement will follow the same core principals as the vehicle replacement criteria with the following differences:
	Hub Meters being installed this year will determine trailer usage. This process will allow us to determine the "needed" trailers.
	When assessing trailer conditions, trailers will be refurbished rather than replaced.
	Where trailers cannot be refurbished due to application change or condition, trailers will be flagged for replacement.



## **Annual Replacement Schedule Plan**

Initiatives	Objectives	Targets
List of vehicles to be replaced is compiled	Fleet is assessed according to the Replacement Criteria Model.	May/June
Tender reflect "turn key" approach	Any changes in vehicle specifications are determined. Tenders are developed according to final specifications and published.	June/July
Fleet Capital Budget	Fleet capital budget is developed using figures from suppliers selected.	August/September
Order Placed	Tenders are awarded and Purchase Orders are issued.	January/February

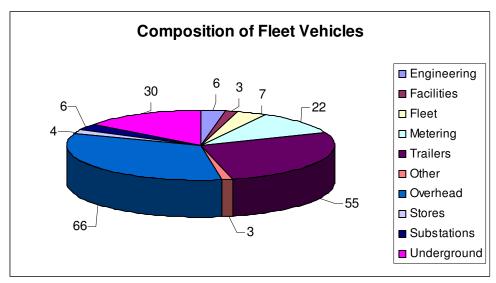
## **Risks & Mitigations**

The following risks & mitigations have been identified to prevent the deliverables and targets of the initiatives and strategies within this plan.

Risks	Mitigations
Capital Budget Reductions	Reassessed scheduled replacements and determine other options such as refurbishing or postponing the replacement.
Refocus of Environmental Strategies	Reduce initiative scope.
Future Rate Filing Requirements	Reassessed scheduled replacements and determine other options such as refurbishing or postponing the replacement.
New Vehicle Technologies	Ongoing understanding and knowledge of new technology.
Change to Customers Vehicle Requirements	Determined if the change is a short or long term. Reduce replacement forecasts and realign vehicles.
Outsourcing Initiatives	Understand the impact, and reduce replacement forecast scope.
Mergers	Proceed with safety related replacements and/or what is on order and hold any further orders.

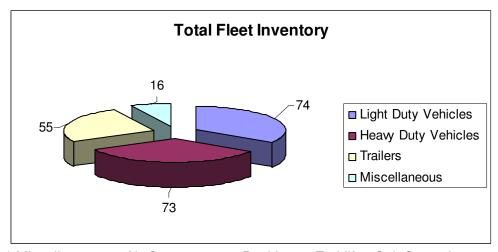


## **Current Composition of Vehicles**



<sup>\*</sup> Other – Outside Contractors, Conservation (CDM)

## **Total Fleet Inventory Structure:**



<sup>\*</sup> Miscellaneous – Air Compressors, Backhoes, Forklifts, Salt Spreaders



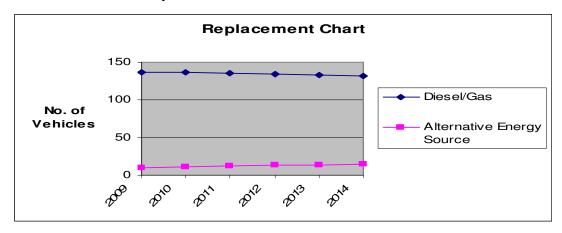
## **Alternative Energy Sources Vehicles**

Horizon Utilities is committed to be a leader in environmental initiatives and has identified its fleet as an area of focus to support our environmental social and community responsibilities. During this five year Vehicle Replacement Plan, Horizon Utilities will make every effort to replace 10% of its existing fleet with vehicles powered by alternative sources of energy, with the goal to reduce GHG Emissions and Carbon Footprint.

### Benefits of Hybrid and Electric Vehicles:

- Reduce operating costs
- Reduce fuel consumption
- Longer vehicle life cycle
- Operate PTO while stationary 4 + hours per day
- Reduce idling times
- Improve operating environment (quieter, lower emissions)
- Reduce carbon footprint (if mandated)
- Green image Community and social responsibility
- Improve air quality
- Reduce GHG emission (Global Warming)
- Reduce dependence on foreign oil
- Support sustainability initiative Global Reporting

### **Five Year Vehicles Replacement Plan Chart:**



<sup>\*</sup> The five year goal is to replace our fleet with vehicles powered by alternative sources of energy by 10%. The replacement plan may change yearly due to either availability of alternative technologies or other contributing factors, such as budget assessments or business unit needs.



## **Replacement Plan Key Initiatives**

Initiatives	Strategy	Targets
Establish Replacement	Establish a formal structured replacement	Q2, 2009
Criteria	criteria based on utility, other industries, and	
	regulation and manufacturer standards.	
Establish Specification	Develop standard vehicle specifications for all	Q2, 2010
Standards by Vehicle	vehicle classes to improve the delivery	
Classes	timelines and reduce costs.	
Assess yearly, replace or	Prior to proceeding with the replacement of any	Q2 of each
refurbish trailers	trailers, we need to understand Horizon Utilities	year
	trailer requirements and needs. Meter hubs	
	are being installed on most trailers during 2009	
	to started capturing the required data. Data	
	collected during 2009, will provide the Fleet	
	Group with the supporting data to plan and	
	make better decisions in the refurbishing	
	or/and replacement of equipment.	
Focus on Smaller Heavy	During the last few years we have purchased	Q2 of each
Duty Vehicles	larger vehicles for our fleet. Many of these	year
	vehicles cannot be used in older downtown	
	areas due to the narrow streets and overhead	
	tree limbs. Larger vehicles increase fuel	
	consumption, operating costs and emissions.	
Increase by 10% with Hybrid	Identify alternative means of energy to operate	Q4, 2010
and/or Electric Vehicles	vehicles to support environmental initiatives	
	and regulations.	
Turn Key Vehicle Order	Streamline the process and number of	Q2 of each
Approach	suppliers to procure a vehicle. To date it has	year
	taken two years to have a vehicle in service	
	from the day it was ordered. By then,	
	warranties have expired, increasing our	
Deduce Fleet Inventory	operating expenses.	Ongoing
Reduce Fleet Inventory	Establish a strategy to reduce our existing fleet	Ongoing
	inventory. Fleet will conduct ongoing selection	
	analysis and work with other Business Units to	
Replace Aging Fleet &	support this initiative.  A number of existing vehicles have surpassed	Q4, 2010
Trailers	their life cycle and have been scheduled for	Q4, ZUIU
Trailers	replacement during this five year plan.	
Paint St. Catharines existing	During the five year plan, schedule the newer	Q4, 2014
vehicles from white to green	St. Catharines vehicles to be painted green.	<b>ω</b> τ, 2014
Vehicles' Refurbishing	On the heavy duty vehicles, we have extended	Q4 of each
Opportunities	the replacement cycle to 15 - 18 years with an	year
Opportunities	assessment on the 10 year. During the	year
	assessment we may decide to refurbish vehicle	
	to extend its life cycle to meet budget	
	limitations.	
	minical 91101	



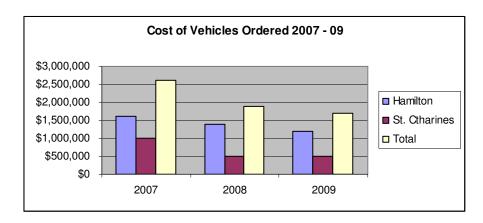
## **Five Year Replacement Forecast**

The following chart provides a five year replacement forecast of our fleet between Hamilton and St. Catharines, based on the new replacement criteria. This forecast may change due to yearly budget reviews and/or adjustment to business unit needs.

Centre	Vehicle Class	Replacement Year				
		2010	2011	2012	2013	2014
	Single Bucket Manlift Truck	2	1	1	1	1
	Knuckle Crane Truck	1	1	0	0	0
Hamilton	Passenger Vehicle/Cargo/Step Van	5	5	5	3	2
	Cable Pulling/Digger Derrick Truck	2	0	0	0	0
	Trailer	2	2	4	2	2
	Double Bucket MHAD Truck	0	2	0	0	0
	Heavy Duty / Light Duty Pickup	1	1	2	2	2
	Air Compressor	0	0	2	0	0
	SUV	0	0	0	2	0
	Flat Deck	0	0	3	0	7
	Prius Car	0	0	0	1	0
	TOTALS	13	13	16	11	14
	Single Bucket Manlift Truck	1	0	0	0	0
	Knuckle Crane Truck	0	0	0	0	0
	Passenger Vehicle/Cargo/Step Van	0	0	0	1	0
	Cable Pulling/Digger Derrick Truck	1	0	0	0	0
St. Catharines	Trailer	0	0	0	0	0
	Double Bucket MHAD Truck	1	0	0	0	0
	Heavy Duty / Light Duty Pickup	0	1	1	4	0
	Air Compressor	0	0	0	0	0
	SUV	0	0	0	0	0
	Flat Deck	0	0	0	0	0
	Prius Car	0	0	0	0	0
	TOTALS	3	1	1	5	0
		ı	I	ı	ı	ı
Grand Total	Hamilton & St. Catharines	16	14	18	16	14

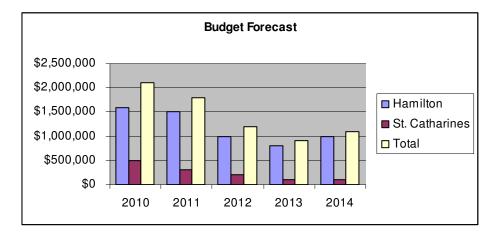


### Vehicles Ordered from 2007 to 2009



## **Five Year Budget Forecast**

The following chart provides a five year budget forecast of the vehicles planned to be replaced within this plan. The budget forecast will be reviewed annually during the budget process and is based on 2008 vehicle prices, our present understanding of vehicles requirements, our existing organization structure, and known technology.



## Conclusion

By implementing a long term Fleet Replacement Plan, Horizon Utilities will move forward in a better position to support our internal and external customers, reduce operating costs, decrease carbon footprint and continue to provide a safe and dependable fleet inventory.

By: Joseph Botas, Fleet Manager Prepared: September 1, 2009

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### HORIZON UTILITIES CORPORATION ("HORIZON UTILITIES") 3 **RESPONSES TO** 4 5

SCHOOL ENERGY COALITION INTERROGATORIES

DELIVERED: January 24th, 2011 6

7

#### **Question 22** 8

Reference: Ex. 2/1/3 9

- 10 With respect to Distribution Capital:
- P. 2 and 7. Please provide a list of the \$230 million of end-of-life assets, together 11 a.
- with the replacement dollars calculated for each. 12
- P. 7. Please advise the book value of the end of life assets. b. 13
- P. 10. Please add 2005 2007 to this graph. 14 C.
- d. P. 14. Please provide whatever data is in the Applicant's possession 15
- 16 benchmarking the age of the Applicant's assets or any asset category, to the ages of
- similar assets in use by other LDCs. 17

### Response:

18

- As a part of its ongoing review process for capital and operating plans Horizon 19 a)
- Utilities identified and has corrected a manual data input error and formulaic errors that 20
- inaccurately calculated total 'end of life' distribution asset costs. Based on such 21
- correction, Horizon Utilities has updated the 'end of life' distribution asset costs, which 22
- were originally calculated at \$230 million, such that they are now \$209 million. Horizon 23
- Utilities has also re-forecasted Figures 2 through 5 contained in Exhibit 2, Tab 3, 24
- 25 Schedule 2, Appendix 2-1, as requested by School Energy Coalition in question 25, to
- include both the original and revised values for review. Horizon Utilities has completed 26
- the table below, which identifies the distribution asset categories and the associated 27
- budgeted amounts for each category that are included in the \$209 million 'end of life' 28

- distribution asset costs. Despite these revisions, there are no implications or changes
- 2 required to the Application.

	Revised -				Original -	
	Beyond End		Revised Total	Average	Beyond End	Original Total
Asset Type	of Life	Units	Cost	Cost	of Life	Cost
Substation Switchgear	88%	N/A	N/A	N/A	88%	N/A
Substation Breakers	72%	N/A	N/A	N/A	72%	N/A
Substation Power Transformers	43%	N/A	N/A	N/A	43%	N/A
Cable - Primary XLPE (meters)	31%	578891.45	\$34,181,166	\$59.05	36%	\$38,081,733
Poles - Wood	29%	12714	\$61,008,073	\$4,798.50	26%	\$6,277,783
Cable - Secondary/Service (meters)	24%	513176.48	\$36,327,348	\$70.79	23%	\$40,483,467
Civil - Junction Boxes, Switching Cabinets	20%	370	\$1,551,000	\$4,191.89	20%	\$2,026,000
Overhead Transformer	19%	2703	\$11,846,575	\$4,382.75	19%	\$13,728,639
Conductor - Primary (meters)	17%	580752.51	\$32,422,972	\$55.83	19%	\$35,306,282
Poles - Concrete/Steel	12%	1134	\$6,707,519	\$5,914.92	14%	\$930,883
Conductor - Secondary/Service (meters)	12%	369238.13	\$21,245,695	\$57.54	14%	\$86,815,403
Submersible Transformer	5%	248	\$1,551,088	\$6,254.39	6%	\$2,169,610
Cable - Primary PILC (meters)	1%	3979.47	\$1,470,709	\$369.57	3%	\$1,766,907
Padmounted Transformer	2%	88	\$841,047	\$9,557.35	2%	\$1,157,656
Civil - Manhole, Vaults, Pads	0%	17	\$391,000	\$23,000.00	1%	\$437,000
Total	25%	2063312	\$209,544,193		26%	\$229,181,364

- b) Distribution assets are depreciated over the estimated useful life of the assets.
- As distribution assets are currently amortized over a 25 year period, the net book value
- 6 of these assets is zero."

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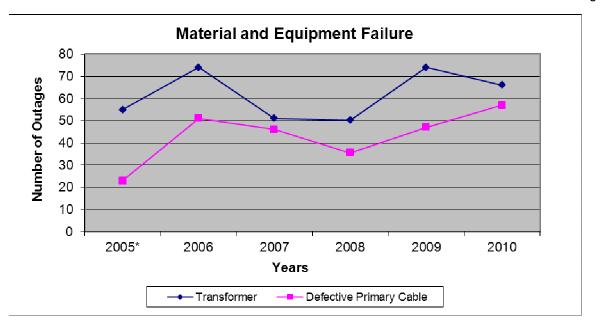
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c) Figure 2-7, Material and Equipment Failure (Exhibit 2, Tab 1, Schedule 3, Page 10) has been updated below to include failure data from 2005 to 2010 inclusive. The 2005 data supplied in the figure below is for the Hamilton service territory only, as asset failure data was not recorded consistently at St. Catharines Hydro, prior to the merger with Hamilton Hydro. Primary defective cable outages have been increasing over the past three years. Transformer failures are relatively high, when compared to failure levels in 2007 and 2008. Horizon Utilities re-iterates that without proactive replacements distribution assets will continue to age and degrade and be more susceptible to failure.



\*Hamilton Only

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d) The only data in Horizon Utilities' possession that benchmarks the age of Horizon Utilities' assets or any asset category, to the ages of similar assets in use by other LDCs is that which was analyzed during the development of a merger business case between Horizon Utilities and Guelph Hydro Electric Systems Inc. ("GHESI") in 2007/2008. Such merger did not proceed.

Horizon Utilities and GHESI engaged Kinectrics Inc., an engineering consulting firm, to perform a due diligence review of asset condition and operational and environmental issues for both utilities. The Kinectrics Inc. document is being provided in confidence for reasons which are outlined in the cover letter accompanying Horizon Utilities' interrogatory responses.

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#### HORIZON UTILITIES CORPORATION ("HORIZON UTILITIES") 3 **RESPONSES TO** 4 5

#### SCHOOL ENERGY COALITION INTERROGATORIES

DELIVERED: January 24th, 2011 6

7

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- 17 similar assets in use by other LDCs.

#### Response:

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- the table below, which identifies the distribution asset categories and the associated 27
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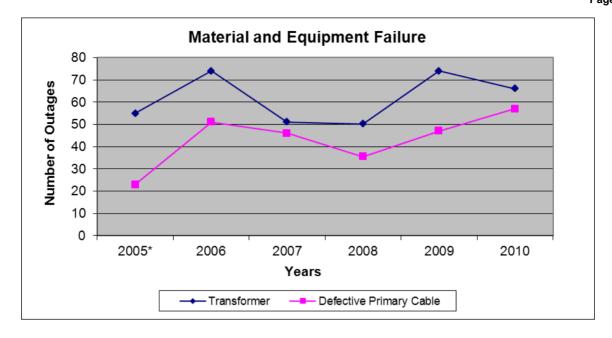
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Horizon Utilities and GHESI engaged Kinectrics Inc., an engineering consulting firm, to perform a due diligence review of asset condition and operational and environmental issues for both utilities. An excerpt from the resulting report, dated January 23, 2008, included the following data and analysis provided as Appendix 1 below.

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1	EB-2010-0131
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3 4 5	HORIZON UTILITIES CORPORATION ("HORIZON UTILITIES") RESPONSES TO SCHOOL ENERGY COALITION INTERROGATORIES
6	DELIVERED: January 24 <sup>th</sup> , 2011
7	
8	Question 23
9	Reference: Ex. 2/2/4, p. 1
10	Please provide details on the \$9.4 million of end of life removals in 2009.
11	Response:
12	Please refer to Exhibit 2, Schedule 2, Tab 2, Page 3, Figure 2-10 "Fixed Asset
13	Continuity Schedule as at December 31, 2009" which provides for the disposals of fixed
14	assets in 2009. The "Disposal" column provides for the breakdown of end of life
15	removals by fixed asset account.

1 EB-2010-0131

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# HORIZON UTILITIES CORPORATION ("HORIZON UTILITIES") RESPONSES TO SCHOOL ENERGY COALITION INTERROGATORIES

6 **DELIVERED: January 24<sup>th</sup>, 2011** 

7

#### 8 Question 24

- 9 **Reference: Ex. 2/3/1**
- 10 With respect to the Year over Year analyses:
- 11 a. Please advise which of the capital projects in this exhibit that are listed as
- intended to be in-service in 2010 actually became used and useful in 2010.
- b. P. 50. Please advise the renewal projects totals for each of 2007 through 2011,
- on a consistent basis with the \$19,734,731 reported here.
- 15 c. P. 56. Please advise the number of transformers replaced in each of 2007
- 16 through 2010.
- 17 **d.** P. 57. Please advise why a five year project to replace 1,000 poles at 200 poles
- per year, started in 2007, is not finished in 2011.
- 19 e. P. 62. Please identify the fourth project referred to on page 61 but not included
- 20 in table 2-38.
- 21 f. P. 68. Please advise the Vansickle TS power quality (or the range) for each of
- 22 2007 through 2010.
- 23 **g.** P. 74. Please explain "an underlying set of interdependent IT enablers",
- 24 including examples.

#### 1 Response:

- 2 a. The table below lists the capital projects that were intended to be put into service
- 3 in 2010 with their corresponding In-Service dates:

Project Name	Year	In-Service date
St.Joseph Hospital (Project significantly completed. 2 primary	2010	December 2010
feeders are energized, 2 backup expected February 2011)		
VSM91 and VSM92 NRH and Load Relief)	2010	April 2011
Vansickle TS Capacity Allocation	2010	December 2010
Underground Renewal (Hamilton)	2010	December 2010
Overhead Renewal (Hamilton)	2010	December 2010
Subdivision Development	2010	December 2010
Brock University 2 <sup>nd</sup> Feed	2010	January 2011
New VSM51 Feeder Expansion to tie to CTM17	2010	March 1, 2011
Taylor Phase 2 of 3 Substation Conversion	2010	December 2010
Overhead Renewal (St.Catharines)	2010	December 2010
Hughson Phase 3 of 6 Substation Conversion	2010	October 2010
Underground Renewal (St.Catharines)	2010	December 2010
350MCM to 500MCM PILC for Henderson	2010	June 2010
Caroline SS Conv Ph 3 of 6	2010	October 2010
Residential Services	2010	December 2010
St.Catharines Downtown Network Conversion	2010	December 2010

- b. The following table provides renewal project totals, with actual expenditures for
- 6 2007 to 2009 and estimated expenditures for 2010 to 2011.

4

	2007	2008	2009	2010	2011 Test
	Actual	Actual	Actual	YE Expected	Budget
Renewal	\$8,137,381	\$8,452,500	\$22,298,894	\$12,353,791	\$19,734,731

**c.** The following table provides the number of proactive distribution transformers replaced in each year from 2007 to 2010.

Year	Number of Transformers
	Replaced
2007	64
2008	31
2009	49
2010	18

d. The 24' pole replacement project was initiated due to minimum clearance requirements over roads travelled by vehicular traffic that were not maintained due to existing sub-standard pole heights. The result of such clearance requirements not being maintained was a number of outages associated with large vehicles taking down the overhead lines and causing outages starting in 2006. The 24' pole replacement project was started in late 2007. In 2008, the project activities consisted of engineering, inspections and prioritization.

Horizon Utilities completed 77 of the pole replacements between 2009 and 2010. In September of 2008 the City of Hamilton passed a bylaw prohibiting trucks from accessing the roadways associated with this project. Since the implementation of the bylaw, Horizon Utilities has seen an elimination of outages related to 'downed overhead line' incidences on the subject roadway. When the 24' pole replacement project was reprioritized in 2009 the score assigned to the project was quite low, mostly due to the elimination of related outages. On the basis of the new low score assigned, Horizon

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- 1 Utilities decided to plan for this project over several years. Although Horizon Utilities is
- 2 planning to complete the project by 2013, it may continue for several additional years, if
- 3 in fact other distribution projects are scored as higher in priority.
- 4 e. The fourth project referred to on page 61, but not included in table 2-38 is the
- 5 Spadina SS SP4, SP7, OT7. The project should have been included in table 2-38. The
- 6 following table includes the four projects which meet or exceed the \$100,000 materiality
- 7 threshold, including Spadina SS SP4, SP7, OT7.

Description	Project Cost
	(\$000)
Conductor Upgrades	352
New Vansickle TS Feeder	1,257
Substation Transformer Replacement	300
Spadina SS SP4, SP7, OT7	205
Other Project	96
Total	2210

f. The following table provides the power factor range at Vansickle TS for each of 2007 1 through 2010.

Year	Minimum Power Factor	Maximum Power Factor
2007	0.74	0.94
2008	0.80	0.97
2009	0.80	0.94
2010	0.76	0.95

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q. An "underlying set of interdependent IT enablers" refers to an interconnected set of network communications devices, security devices, physical security hardware and device management software required to support implementation of IP-enabled Remote Terminal Units, switches and transformers at remote locations, such as substations. These enablers may be connected to back office systems that are used to manage the distribution system, like SCADA (System Control and Data Acquisition) and load management systems. Examples of these enablers are Cisco Wireless Network Access Points, Cisco Wireless Controllers, Cisco ASA Firewalls, Cisco IP Switches, Telecommunications Media Converters, Remote Network Device Management & Alerting software, and Security Information & Event Management systems that provide device connectivity, telecommunications, security management and alerting, remote

These technologies are essential to ensure that remotely connected distribution system assets can be connected to Horizon Utilities' back office systems, can be remotely managed, and are secure from cyber threats.

management and device monitoring of distribution system assets.

1	EB-2010-0131
2	
3 4 5	HORIZON UTILITIES CORPORATION ("HORIZON UTILITIES") RESPONSES TO SCHOOL ENERGY COALITION INTERROGATORIES
6	DELIVERED: January 24 <sup>th</sup> , 2011
7	
8	Question 25
9	Reference: Ex. 2/3/2, App. 2-1
LO	With respect to the Asset Management Plan:
l1	a. P. 13-16. Please provide the numerical data behind Figures 2 through 5.
l2 l3	<b>b.</b> P. 20. Please add 2005, 2006 and 2010 to Figure 9.
L4	Response:
15 16 17 18 19	a) Horizon Utilities has provided the original numerical data underlying Figures 2 through 5, as found in the Application in Exhibit 2, Tab 3, Schedule 2, Appendix 201, Page 13 to 16, in addition to the revised numerical data as corrected and indicated in response to School Energy Coalition interrogatory 22. Both sets of data can be found in the tables below. Dollar values beyond 2013 are no adjusted for inflation.

### Figure 2 Data

20 Ye	20 Year Financial Forecast				
Year		Expenditure			
2010	\$	30,700,000			
2011	\$	33,000,000			
2012	\$	36,000,000			
2013	\$	39,000,000			
2014	\$	42,000,000			
2015	\$	45,000,000			
2016	\$	45,000,000			
2017	\$	45,000,000			
2018	\$	45,000,000			
2019	\$	45,000,000			
2020	\$	45,000,000			
2021	\$	45,000,000			
2022	\$	45,000,000			
2023	\$	45,000,000			
2024	\$	45,000,000			
2025	\$	45,000,000			
2026	\$	45,000,000			
2027	\$	45,000,000			
2028	\$	45,000,000			
2029	\$	45,000,000			
2030	\$	45,000,000			

# Figure 3 Data

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	Original - In Filing					
Year	Renewal	Non-Renewal	Customer Demand			
i eai	Grand Total	Grand Total	With Contributions			
2010	\$28,866,914	\$11,337,473	\$19,210,000			
2011	\$34,935,614	\$8,065,000	\$11,230,000			
2012	\$34,869,085	\$7,850,000	\$14,850,000			
2013	\$37,818,136	\$6,795,000	\$8,830,000			
2014	\$32,774,328	\$6,400,000	\$8,830,000			
2015	\$29,215,980	\$4,295,000	\$8,830,000			
2016	\$28,584,609	\$4,450,000	\$8,830,000			
2017	\$30,087,466	\$4,280,000	\$8,830,000			
2018	\$39,124,749	\$4,350,000	\$8,830,000			
2019	\$29,406,332	\$4,145,000	\$8,830,000			
2020	\$31,260,149	\$4,580,000	\$8,830,000			
2021	\$29,420,217	\$4,200,000	\$8,830,000			
2022	\$31,620,899	\$4,115,000	\$8,830,000			
2023	\$31,663,113	\$4,265,000	\$8,830,000			
2024	\$34,035,172	\$4,265,000	\$8,830,000			
2025	\$33,179,834	\$6,750,000	\$8,830,000			
2026	\$36,053,586	\$6,600,000	\$8,830,000			
2027	\$35,500,876	\$6,600,000	\$8,830,000			
2028	\$47,870,233	\$4,600,000	\$8,830,000			
2029	\$35,430,995	\$2,130,000	\$8,830,000			
2030	\$28,313,870	\$2,200,000	\$8,830,000			

	Revised					
Vaar	Renewal	Non-Renewal	Customer Demand			
Year	Grand Total	Grand Total	With Contributions			
2010	\$46,943,426	\$10,337,473	\$19,210,000			
2011	\$27,133,493	\$8,065,000	\$11,230,000			
2012	\$27,642,169	\$7,850,000	\$14,850,000			
2013	\$33,079,095	\$6,795,000	\$8,830,000			
2014	\$33,570,109	\$6,400,000	\$8,830,000			
2015	\$34,400,316	\$4,295,000	\$8,830,000			
2016	\$31,498,825	\$4,450,000	\$8,830,000			
2017	\$28,830,691	\$4,280,000	\$8,830,000			
2018	\$28,815,589	\$4,350,000	\$8,830,000			
2019	\$30,306,204	\$4,145,000	\$8,830,000			
2020	\$38,875,263	\$4,580,000	\$8,830,000			
2021	\$28,925,446	\$4,200,000	\$8,830,000			
2022	\$31,633,039	\$4,115,000	\$8,830,000			
2023	\$29,616,034	\$4,265,000	\$8,830,000			
2024	\$32,367,590	\$4,265,000	\$8,830,000			
2025	\$32,218,539	\$6,750,000	\$8,830,000			
2026	\$33,637,946	\$6,600,000	\$8,830,000			
2027	\$32,960,382	\$6,600,000	\$8,830,000			
2028	\$38,930,816	\$4,600,000	\$8,830,000			
2029	\$40,180,902	\$2,130,000	\$8,830,000			
2030	\$37,746,984	\$2,200,000	\$8,830,000			

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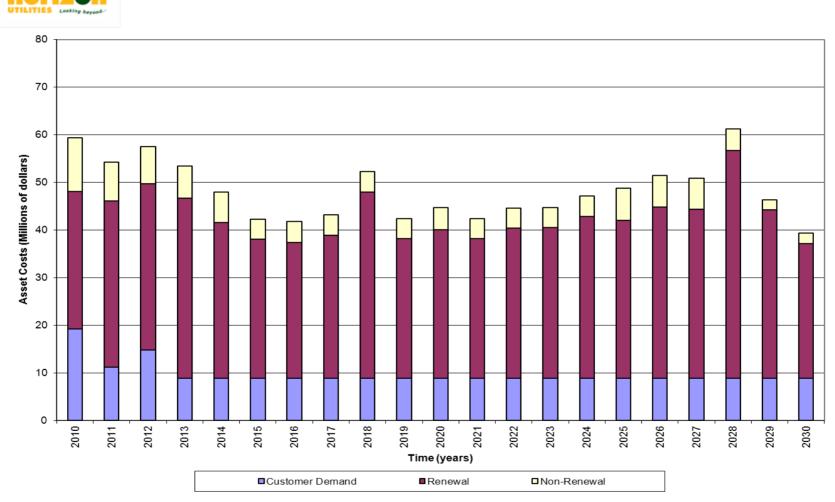
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Original - All Major Expenditures, Exhibit 2, Tab 3, Schedule 2, Appendix 2-1 Figure 3, page 14

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Figure 2: Gross Capital Expenditures (Raw Data) for 2010-2030 by Type

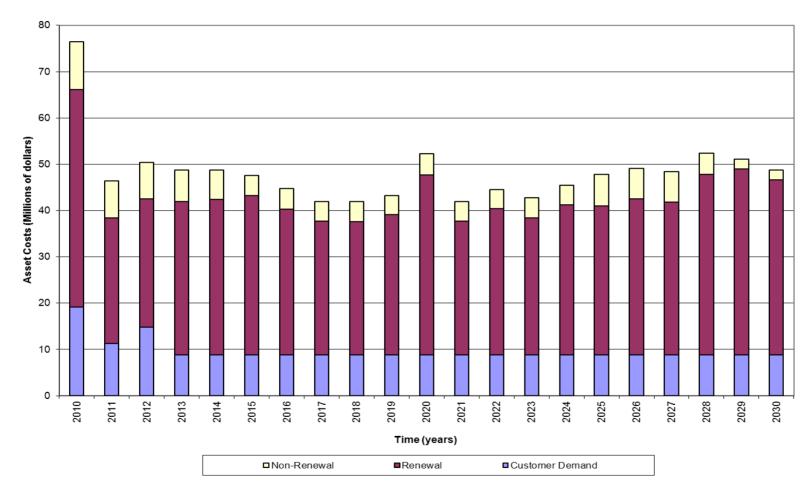
September 2009





#### Figure 2: Gross Capital Expenditures (Raw Data) for 2010-2030 by Type

January 2011



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# Figure 4 Data

	Original - In Filing								
Year	Backlog	Lines Overhead	Lines Underground	Transformers	Civil	Poles	Voltage Conversion	Substations	
2010	\$11,459,068	\$4,139,276	\$4,039,412	\$1,754,979	\$107,500	\$159,627	\$6,600,000	\$377,181	
2011	\$11,459,068	\$6,183,810	\$5,328,793	\$2,424,493	\$571,500	\$197,208	\$9,000,000	\$1,000,000	
2012	\$11,459,068	\$5,495,704	\$4,970,260	\$3,958,306	\$447,500	\$281,547	\$11,000,000	\$1,000,000	
2013	\$11,459,068	\$7,518,684	\$6,577,624	\$1,933,882	\$312,500	\$277,257	\$13,000,000	\$1,000,000	
2014	\$11,459,068	\$4,520,823	\$7,866,275	\$1,172,849	\$82,500	\$284,021	\$9,000,000	\$1,000,000	
2015	\$11,459,068	\$4,404,985	\$5,700,825	\$1,011,420	\$184,000	\$322,708	\$9,000,000	\$1,000,000	
2016	\$11,459,068	\$4,032,879	\$5,340,624	\$1,979,096	\$253,000	\$300,716	\$9,000,000	\$750,000	
2017	\$11,459,068	\$3,551,023	\$8,219,499	\$1,181,162	\$355,000	\$254,070	\$9,000,000	\$750,000	
2018	\$11,459,068	\$4,488,886	\$6,139,253	\$10,354,995	\$420,500	\$317,703	\$9,000,000	\$750,000	
2019	\$11,459,068	\$5,894,796	\$4,933,137	\$996,592	\$182,500	\$366,056	\$9,000,000	\$750,000	
2020	\$11,459,068	\$4,972,255	\$6,399,821	\$1,596,881	\$247,500	\$543,295	\$9,000,000	\$750,000	
2021	\$11,459,068	\$5,496,708	\$5,255,944	\$1,198,515	\$262,500	\$372,462	\$9,000,000	\$150,000	
2022	\$11,459,068	\$5,769,034	\$6,625,255	\$2,014,801	\$167,500	\$499,528	\$9,000,000	\$150,000	
2023	\$11,459,068	\$4,630,539	\$7,678,546	\$2,777,422	\$147,500	\$366,782	\$9,000,000	\$150,000	
2024	\$11,459,068	\$5,545,465	\$7,317,453	\$3,074,417	\$703,500	\$351,788	\$9,000,000	\$150,000	
2025	\$11,459,068	\$3,678,717	\$7,612,651	\$4,660,692	\$486,000	\$288,644	\$9,000,000	\$150,000	
2026	\$11,459,068	\$4,284,745	\$11,010,407	\$4,419,192	\$237,500	\$284,781	\$9,000,000	\$150,000	
2027	\$11,459,068	\$4,720,745	\$9,190,179	\$4,175,331	\$1,131,000	\$489,549	\$9,000,000	\$150,000	
2028	\$11,459,068	\$3,942,783	\$9,653,411	\$4,356,076	\$11,049,500	\$270,360	\$9,000,000	\$150,000	
2029	\$11,459,068	\$4,825,850	\$7,332,478	\$3,349,811	\$519,000	\$332,577	\$9,000,000	\$150,000	
2030		\$5,562,360	\$10,556,906	\$3,705,227	\$532,000	\$349,242	\$9,000,000	\$150,000	

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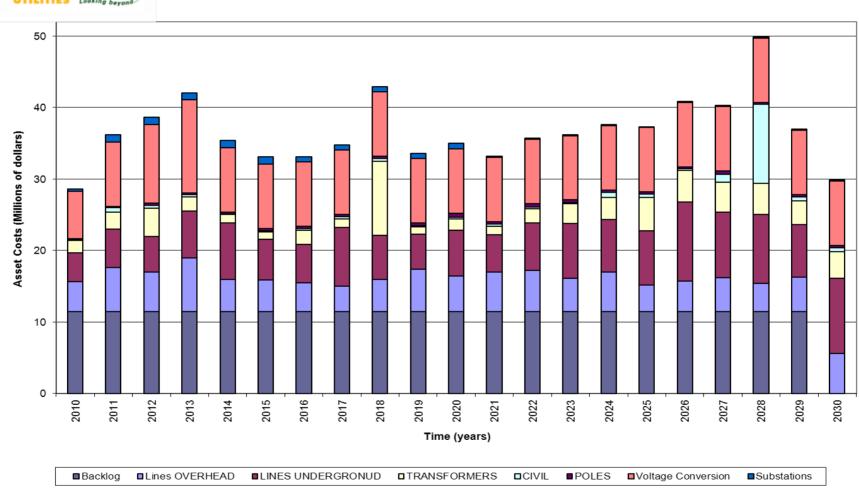
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Original Major Asset Renewal Type Exhibit 2, Tab 3, Schedule 2, Appendix 2-1 Figure 4, page 15



Figure 3: Distribution Renewal 2010-2030 Breakdown by General Asset Category

September 2009



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# Figure 4 Data - Revised

	Original - In Filing								
Year	Backlog	Lines Overhead	Lines Underground	Transformers	Civil	Poles	Voltage Conversion	Substations	
2010	\$11,459,068	\$4,139,276	\$4,039,412	\$1,754,979	\$107,500	\$159,627	\$6,600,000	\$377,181	
2011	\$11,459,068	\$6,183,810	\$5,328,793	\$2,424,493	\$571,500	\$197,208	\$9,000,000	\$1,000,000	
2012	\$11,459,068	\$5,495,704	\$4,970,260	\$3,958,306	\$447,500	\$281,547	\$11,000,000	\$1,000,000	
2013	\$11,459,068	\$7,518,684	\$6,577,624	\$1,933,882	\$312,500	\$277,257	\$13,000,000	\$1,000,000	
2014	\$11,459,068	\$4,520,823	\$7,866,275	\$1,172,849	\$82,500	\$284,021	\$9,000,000	\$1,000,000	
2015	\$11,459,068	\$4,404,985	\$5,700,825	\$1,011,420	\$184,000	\$322,708	\$9,000,000	\$1,000,000	
2016	\$11,459,068	\$4,032,879	\$5,340,624	\$1,979,096	\$253,000	\$300,716	\$9,000,000	\$750,000	
2017	\$11,459,068	\$3,551,023	\$8,219,499	\$1,181,162	\$355,000	\$254,070	\$9,000,000	\$750,000	
2018	\$11,459,068	\$4,488,886	\$6,139,253	\$10,354,995	\$420,500	\$317,703	\$9,000,000	\$750,000	
2019	\$11,459,068	\$5,894,796	\$4,933,137	\$996,592	\$182,500	\$366,056	\$9,000,000	\$750,000	
2020	\$11,459,068	\$4,972,255	\$6,399,821	\$1,596,881	\$247,500	\$543,295	\$9,000,000	\$750,000	
2021	\$11,459,068	\$5,496,708	\$5,255,944	\$1,198,515	\$262,500	\$372,462	\$9,000,000	\$150,000	
2022	\$11,459,068	\$5,769,034	\$6,625,255	\$2,014,801	\$167,500	\$499,528	\$9,000,000	\$150,000	
2023	\$11,459,068	\$4,630,539	\$7,678,546	\$2,777,422	\$147,500	\$366,782	\$9,000,000	\$150,000	
2024	\$11,459,068	\$5,545,465	\$7,317,453	\$3,074,417	\$703,500	\$351,788	\$9,000,000	\$150,000	
2025	\$11,459,068	\$3,678,717	\$7,612,651	\$4,660,692	\$486,000	\$288,644	\$9,000,000	\$150,000	
2026	\$11,459,068	\$4,284,745	\$11,010,407	\$4,419,192	\$237,500	\$284,781	\$9,000,000	\$150,000	
2027	\$11,459,068	\$4,720,745	\$9,190,179	\$4,175,331	\$1,131,000	\$489,549	\$9,000,000	\$150,000	
2028	\$11,459,068	\$3,942,783	\$9,653,411	\$4,356,076	\$11,049,500	\$270,360	\$9,000,000	\$150,000	
2029	\$11,459,068	\$4,825,850	\$7,332,478	\$3,349,811	\$519,000	\$332,577	\$9,000,000	\$150,000	
2030		\$5,562,360	\$10,556,906	\$3,705,227	\$532,000	\$349,242	\$9,000,000	\$150,000	

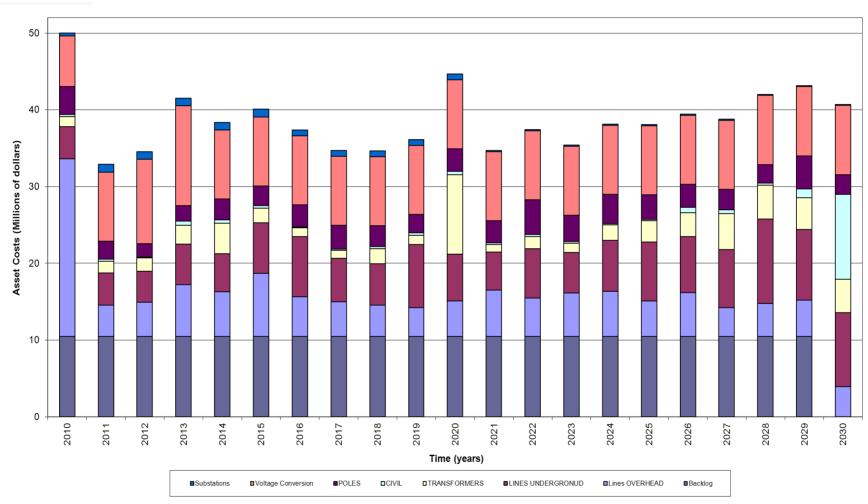
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Revised Major Asset Renewal Type Exhibit 2, Tab 3, Schedule 2, Appendix 2-1 Figure 4, page 15



Figure 3: Distribution Renewal 2010-2030 Breakdown by General Asset Category

January 2011



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# Figure 5 Data

Veer	H <i>A</i>	MILTON CONDUCTO	)R	HAMILTON CABLE			
Year	HAM Primary OH	HAM Secondary OH	HAM Service OH	HAM Primary UG	HAM Secondary UG	HAM Service UG	
2010	\$707,869	\$1,013,690	\$2,274,894	\$1,433,640	\$1,243,116	\$293,604	
2011	\$774,828	\$1,712,884	\$2,819,280	\$1,385,540	\$2,383,600	\$633,075	
2012	\$632,541	\$1,515,601	\$1,659,957	\$1,314,167	\$1,013,140	\$314,300	
2013	\$966,952	\$2,009,601	\$2,175,292	\$2,243,862	\$1,781,106	\$388,106	
2014	\$1,159,369	\$1,096,136	\$1,084,390	\$3,054,757	\$1,685,961	\$312,642	
2015	\$1,333,293	\$644,338	\$1,169,940	\$2,076,546	\$1,501,098	\$287,384	
2016	\$1,169,514	\$407,680	\$913,220	\$2,764,529	\$1,284,323	\$293,104	
2017	\$979,806	\$464,351	\$704,812	\$5,525,087	\$1,190,932	\$290,165	
2018	\$1,430,492	\$791,137	\$1,214,558	\$4,200,204	\$633,875	\$126,069	
2019	\$3,095,682	\$529,967	\$1,093,851	\$3,043,723	\$1,115,975	\$200,980	
2020	\$1,925,096	\$882,156	\$1,186,655	\$4,665,145	\$1,101,522	\$216,660	
2021	\$1,528,856	\$923,113	\$1,069,843	\$3,369,164	\$1,261,618	\$320,555	
2022	\$2,536,896	\$624,917	\$1,076,687	\$4,157,248	\$1,333,221	\$343,688	
2023	\$1,960,732	\$604,338	\$628,245	\$4,077,400	\$1,739,666	\$560,871	
2024	\$1,334,509	\$1,007,014	\$1,176,850	\$2,472,310	\$1,793,988	\$715,736	
2025	\$691,286	\$766,312	\$927,378	\$3,397,083	\$2,144,349	\$643,301	
2026	\$1,503,794	\$407,449	\$594,093	\$4,020,920	\$2,526,138	\$824,290	
2027	\$591,508	\$348,437	\$638,936	\$4,695,349	\$2,208,404	\$589,965	
2028	\$838,535	\$342,521	\$739,436	\$6,049,677	\$1,958,341	\$496,290	
2029	\$1,275,744	\$431,233	\$1,009,927	\$5,436,951	\$733,771	\$118,327	
2030	\$1,905,486	\$482,130	\$941,621	\$8,092,086	\$1,198,471	\$426,939	

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### Original- Renewal Breakdown by Asset Type Exhibit 2, Tab 3, Schedule 2, Appendix 2-1 Figure 5, page 16

Veer		SCH CONDUCTOR		SCH CABLE			
Year	SCH Primary OH	SCH Secondary OH	SCH Service OH	SCH Primary UG	SCH Secondary UG	SCH Service UG	
2010	\$131,336	\$7,544	\$3,943	\$389,030	\$361,302	\$318,720	
2011	\$85,096	\$387,128	\$404,594	\$230,495	\$266,227	\$429,855	
2012	\$151,712	\$749,268	\$786,626	\$417,293	\$777,547	\$1,133,812	
2013	\$124,002	\$1,619,619	\$623,217	\$615,680	\$363,534	\$1,185,335	
2014	\$194,783	\$490,164	\$495,981	\$933,042	\$450,769	\$1,429,104	
2015	\$168,119	\$587,551	\$501,744	\$565,498	\$413,836	\$856,463	
2016	\$297,694	\$741,794	\$502,976	\$861,447	\$50,864	\$86,356	
2017	\$907,435	\$308,245	\$186,374	\$376,364	\$251,947	\$585,005	
2018	\$902,657	\$112,653	\$37,389	\$936,933	\$145,177	\$96,996	
2019	\$799,517	\$188,760	\$187,020	\$189,248	\$114,647	\$268,564	
2020	\$839,002	\$80,059	\$59,287	\$118,542	\$186,991	\$110,962	
2021	\$1,731,921	\$150,534	\$92,440	\$156,937	\$96,216	\$51,454	
2022	\$1,309,621	\$114,166	\$106,747	\$85,341	\$221,354	\$484,403	
2023	\$1,311,136	\$86,232	\$39,857	\$330,626	\$447,207	\$522,776	
2024	\$1,967,546	\$33,098	\$26,448	\$630,434	\$423,734	\$1,281,250	
2025	\$1,017,368	\$230,920	\$45,454	\$578,820	\$177,022	\$672,075	
2026	\$1,252,285	\$321,650	\$205,474	\$2,080,876	\$372,185	\$1,185,997	
2027	\$1,638,906	\$687,790	\$815,168	\$1,139,969	\$166,934	\$389,559	
2028	\$611,127	\$692,557	\$718,607	\$419,846	\$211,029	\$518,228	
2029	\$1,171,949	\$471,115	\$465,883	\$550,267	\$246,228	\$246,934	
2030	\$1,128,346	\$584,715	\$520,062	\$587,977	\$108,493	\$142,939	

V	TRANSFORMERS							
Year	HAM OH Tx	HAM Pad Tx	HAM Sub Tx	SCH OH Tx	SCH Pad Tx	SCH Sub Tx		
2010	\$683,636	\$57,368	\$438,685	\$281,641	\$293,648	\$0		
2011	\$748,563	\$244,585	\$419,515	\$520,002	\$402,070	\$89,758		
2012	\$720,218	\$371,619	\$556,048	\$873,613	\$1,214,868	\$221,941		
2013	\$819,639	\$109,680	\$953,157	\$12,380	\$39,025	\$0		
2014	\$312,477	\$155,958	\$409,090	\$72,956	\$120,231	\$102,138		
2015	\$369,200	\$188,288	\$394,838	\$23,508	\$15,856	\$19,729		
2016	\$467,379	\$441,291	\$340,604	\$247,607	\$437,725	\$44,490		
2017	\$294,346	\$120,270	\$253,381	\$214,526	\$240,609	\$58,029		
2018	\$299,445	\$5,973,036	\$313,135	\$555,890	\$1,528,005	\$1,685,484		
2019	\$202,116	\$50,150	\$203,679	\$328,056	\$212,590	\$0		
2020	\$623,266	\$73,761	\$423,756	\$438,576	\$15,856	\$21,666		
2021	\$225,667	\$436,781	\$174,943	\$207,550	\$128,813	\$24,761		
2022	\$718,575	\$454,542	\$304,644	\$388,030	\$149,009	\$0		
2023	\$548,270	\$572,585	\$453,602	\$431,722	\$751,514	\$19,729		
2024	\$715,736	\$524,833	\$618,664	\$395,074	\$742,543	\$77,567		
2025	\$1,367,077	\$938,957	\$607,422	\$236,848	\$1,467,162	\$43,226		
2026	\$1,353,698	\$1,196,945	\$469,087	\$765,507	\$630,859	\$3,095		
2027	\$1,138,364	\$956,257	\$720,346	\$280,555	\$1,076,714	\$3,095		
2028	\$968,779	\$1,715,808	\$889,243	\$448,814	\$333,431	\$0		
2029	\$701,023	\$714,719	\$382,855	\$976,385	\$574,829	\$0		
2030	\$1,482,497	\$998,459	\$726,139	\$251,920	\$246,213	\$0		

Veer		POLES								
Year	HAM Wood	HAM Concrete	SCH Wood	SCH Concrete						
2010	\$135,438	\$9,433	\$14,755	\$0						
2011	\$164,824	\$3,571	\$14,473	\$14,340						
2012	\$218,175	\$11,912	\$15,269	\$36,191						
2013	\$224,926	\$5,463	\$20,237	\$26,631						
2014	\$261,820	\$6,576	\$10,846	\$4,780						
2015	\$252,200	\$15,326	\$42,840	\$12,342						
2016	\$209,429	\$37,587	\$51,778	\$1,922						
2017	\$189,787	\$14,264	\$45,239	\$4,780						
2018	\$225,643	\$37,450	\$54,610	\$0						
2019	\$282,411	\$39,479	\$31,875	\$12,291						
2020	\$355,157	\$128,578	\$59,560	\$0						
2021	\$180,854	\$94,946	\$92,565	\$4,097						
2022	\$339,047	\$81,461	\$77,653	\$1,366						
2023	\$234,326	\$29,084	\$102,689	\$683						
2024	\$214,935	\$28,073	\$103,318	\$5,463						
2025	\$179,082	\$27,010	\$80,503	\$2,049						
2026	\$137,014	\$26,682	\$100,601	\$20,486						
2027	\$118,623	\$20,764	\$197,887	\$152,276						
2028	\$89,624	\$20,612	\$52,234	\$107,890						
2029	\$90,719	\$38,290	\$125,723	\$77,845						
2030	\$123,287	\$15,124	\$109,086	\$101,745						

Year	Civil Assets - HAM				Civil Assets - SCH			
Tear	SC/JB/SP/JC - Ham	Manholes - Ham	Vaults - Ham	Pads/Bases - Ham	SC/JB/SP/JC - SCH	Manholes - SCH	Vaults - SCH	Pads/Bases - SCH
2010	\$2,500	\$0	\$0	\$0	\$105,000	\$0	\$0	\$0
2011	\$42,500	\$69,000	\$0	\$0	\$460,000	\$0	\$0	\$0
2012	\$7,500	\$0	\$0	\$0	\$440,000	\$0	\$0	\$0
2013	\$17,500	\$0	\$0	\$0	\$295,000	\$0	\$0	
2014	\$17,500	\$0	\$0	\$0	\$65,000	\$0	\$0	\$0
2015	\$20,000	\$92,000	\$12,000	\$0	\$60,000	\$0	\$0	
2016	\$0	\$23,000	\$0	\$0	\$230,000	\$0	\$0	
2017	\$0	\$0	\$0	\$0	\$355,000	\$0	\$0	
2018	\$32,500	\$276,000	\$12,000	\$10,000	\$90,000	\$0	\$0	
2019	\$67,500	\$0	\$0	\$0	\$115,000	\$0	\$0	\$0
2020	\$115,000	\$0	\$0	\$0	\$132,500	\$0	\$0	
2021	\$100,000	\$0	\$0	\$0	\$162,500	\$0	\$0	\$0
2022	\$52,500	\$0	\$0	\$0	\$115,000	\$0	\$0	
2023	\$0	\$0	\$0	\$0	\$147,500	\$0	\$0	\$0
2024	\$56,000	\$115,000	\$0	\$0	\$532,500	\$0	\$0	\$0
2025	\$6,000	\$0	\$0	\$0	\$480,000	\$0	\$0	
2026	\$112,000	\$46,000	\$12,000	\$0	\$67,500	\$0	\$0	
2027	\$9,500	\$851,000	\$48,000	\$10,000	\$212,500	\$0	\$0	\$0
2028	\$10,000	\$3,657,000	\$1,848,000	\$2,590,000	\$582,500	\$46,000	\$576,000	\$1,740,000
2029	\$70,000	\$299,000	\$0	\$10,000	\$140,000	\$0	\$0	\$0
2030	\$125,000	\$207,000	\$0	\$0	\$200,000	\$0	\$0	\$0

Year	Backlog	Voltage Conversion	Substations
2010	\$11,459,068	\$6,600,000	\$377,181
2011	\$11,459,068	\$9,000,000	\$1,000,000
2012	\$11,459,068	\$11,000,000	\$1,000,000
2013	\$11,459,068	\$13,000,000	\$1,000,000
2014	\$11,459,068	\$9,000,000	\$1,000,000
2015	\$11,459,068	\$9,000,000	\$1,000,000
2016	\$11,459,068	\$9,000,000	\$750,000
2017	\$11,459,068	\$9,000,000	\$750,000
2018	\$11,459,068	\$9,000,000	\$750,000
2019	\$11,459,068	\$9,000,000	\$750,000
2020	\$11,459,068	\$9,000,000	\$750,000
2021	\$11,459,068	\$9,000,000	\$150,000
2022	\$11,459,068	\$9,000,000	\$150,000
2023	\$11,459,068	\$9,000,000	\$150,000
2024	\$11,459,068	\$9,000,000	\$150,000
2025	\$11,459,068	\$9,000,000	\$150,000
2026	\$11,459,068	\$9,000,000	\$150,000
2027	\$11,459,068	\$9,000,000	\$150,000
2028	\$11,459,068	\$9,000,000	\$150,000
2029	\$11,459,068	\$9,000,000	\$150,000
2030		\$9,000,000	\$150,000

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Original Renewal Breakdown by Asset Type Exhibit 2, Tab 3, Schedule 2, Appendix 2-1 Figure 5, page 16

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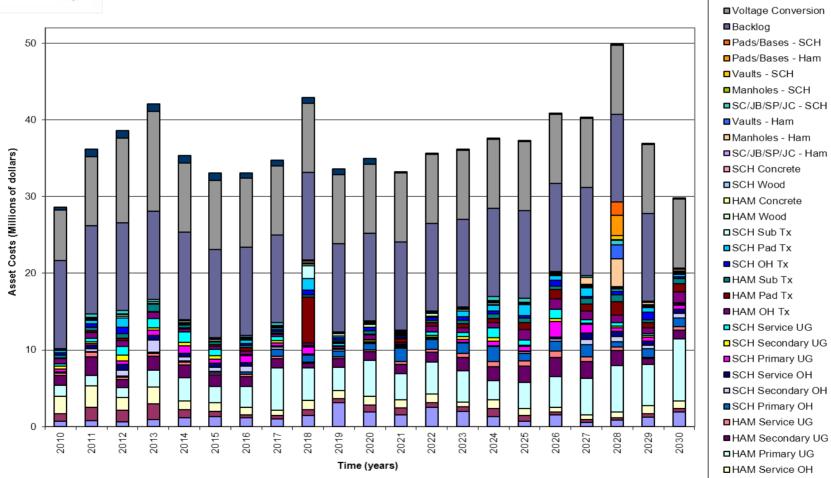
■ HAM Secondary OH
■ HAM Primary OH

September 2009

■ Substations



Figure 4: Distribution Renewal 2010-2030 Detailed Breakdown by Asset Type



Veer	H <i>A</i>	MILTON CONDUCTO	)R	HAMILTON CABLE			
Year	HAM Primary OH	HAM Secondary OH	HAM Service OH	HAM Primary UG	HAM Secondary UG	HAM Service UG	
2010	\$1,359,793	\$10,375,344	\$10,068,268	\$1,917,479	\$1,373,690	\$199,122	
2011	\$1,013,423	\$788,598	\$1,572,646	\$1,410,727	\$1,415,858	\$147,564	
2012	\$707,869	\$1,013,690	\$2,593,292	\$1,433,640	\$1,243,116	\$293,604	
2013	\$774,828	\$1,712,884	\$3,355,214	\$1,385,540	\$2,383,600	\$633,075	
2014	\$632,541	\$1,515,601	\$1,968,346	\$1,314,167	\$1,013,140	\$314,300	
2015	\$966,952	\$2,009,601	\$2,871,443	\$2,243,862	\$1,781,106	\$388,106	
2016	\$1,159,369	\$1,096,136	\$1,697,769	\$3,054,757	\$1,685,961	\$312,642	
2017	\$1,333,293	\$644,338	\$1,250,605	\$2,076,546	\$1,501,098	\$287,384	
2018	\$1,169,514	\$407,680	\$979,351	\$2,764,529	\$1,284,323	\$293,104	
2019	\$979,806	\$464,351	\$919,659	\$5,525,087	\$1,190,932	\$290,165	
2020	\$1,430,492	\$791,137	\$1,315,956	\$4,200,204	\$633,875	\$126,069	
2021	\$3,095,682	\$529,967	\$1,258,135	\$3,043,723	\$1,115,975	\$200,980	
2022	\$1,925,096	\$882,156	\$1,222,159	\$4,665,145	\$1,101,522	\$216,660	
2023	\$1,528,856	\$923,113	\$1,224,886	\$3,369,164	\$1,261,618	\$320,555	
2024	\$2,536,896	\$624,917	\$1,184,294	\$4,157,248	\$1,333,221	\$343,688	
2025	\$1,960,732	\$604,338	\$637,605	\$4,077,400	\$1,739,666	\$560,871	
2026	\$1,334,509	\$1,007,014	\$1,338,323	\$2,472,310	\$1,793,988	\$715,736	
2027	\$691,286	\$766,312	\$973,914	\$3,397,083	\$2,144,349	\$643,301	
2028	\$1,503,794	\$407,449	\$600,780	\$4,020,920	\$2,526,138	\$824,290	
2029	\$591,508	\$348,437	\$638,936	\$4,695,349	\$2,208,404	\$589,965	
2030	\$838,535	\$342,521	\$739,436	\$6,049,677	\$1,958,341	\$496,290	

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# Revised Renewal Breakdown by Asset Type Exhibit 2, Tab 3, Schedule 2, Appendix 2-1 Figure 5, page 16

Veer		SCH CONDUCTOR		SCH CABLE			
Year	SCH Primary OH	SCH Secondary OH	SCH Service OH	SCH Primary UG	SCH Secondary UG	SCH Service UG	
2010	\$203,266	\$571,491	\$574,451	\$476,894	\$157,399	\$78,382	
2011	\$306,828	\$242,836	\$168,901	\$391,665	\$346,188	\$437,917	
2012	\$131,336	\$7,544	\$3,943	\$389,030	\$361,302	\$318,720	
2013	\$85,096	\$387,128	\$404,594	\$230,495	\$266,227	\$429,855	
2014	\$151,712	\$749,268	\$786,626	\$417,293	\$777,547	\$1,133,812	
2015	\$124,002	\$1,619,619	\$623,217	\$615,680	\$363,534	\$1,185,335	
2016	\$194,783	\$490,164	\$495,981	\$933,042	\$450,769	\$1,429,104	
2017	\$168,119	\$587,551	\$501,744	\$565,498	\$413,836	\$856,463	
2018	\$297,694	\$741,794	\$502,976	\$861,447	\$50,864	\$86,356	
2019	\$907,435	\$308,245	\$186,374	\$376,364	\$251,947	\$585,005	
2020	\$902,657	\$112,653	\$37,389	\$936,933	\$145,177	\$96,996	
2021	\$799,517	\$188,760	\$187,020	\$189,248	\$114,647	\$268,564	
2022	\$839,002	\$80,059	\$59,287	\$118,542	\$186,991	\$110,962	
2023	\$1,731,921	\$150,534	\$92,440	\$156,937	\$96,216	\$51,454	
2024	\$1,309,621	\$114,166	\$106,747	\$85,341	\$221,354	\$484,403	
2025	\$1,311,136	\$86,232	\$39,857	\$330,626	\$447,207	\$522,776	
2026	\$1,967,546	\$33,098	\$26,448	\$630,434	\$423,734	\$1,281,250	
2027	\$1,017,368	\$230,920	\$45,454	\$578,820	\$177,022	\$672,075	
2028	\$1,252,285	\$321,650	\$205,474	\$2,080,876	\$372,185	\$1,185,997	
2029	\$1,638,906	\$687,790	\$815,168	\$1,139,969	\$166,934	\$389,559	
2030	\$611,127	\$692,557	\$718,607	\$419,846	\$211,029	\$518,228	

V	TRANSFORMERS							
Year	HAM OH Tx	HAM Pad Tx	HAM Sub Tx	SCH OH Tx	SCH Pad Tx	SCH Sub Tx		
2010	\$623,772	\$43,303	\$175,611	\$271,335	\$135,367	\$39,459		
2011	\$597,997	\$26,947	\$372,501	\$388,960	\$110,992	\$30,951		
2012	\$683,636	\$57,368	\$438,685	\$281,641	\$293,648	\$0		
2013	\$748,563	\$244,585	\$419,515	\$520,002	\$402,070	\$89,758		
2014	\$720,218	\$371,619	\$556,048	\$873,613	\$1,214,868	\$221,941		
2015	\$819,639	\$109,680	\$953,157	\$12,380	\$39,025	\$0		
2016	\$312,477	\$155,958	\$409,090	\$72,956	\$120,231	\$102,138		
2017	\$369,200	\$188,288	\$394,838	\$23,508	\$15,856	\$19,729		
2018	\$467,379	\$441,291	\$340,604	\$247,607	\$437,725	\$44,490		
2019	\$294,346	\$120,270	\$253,381	\$214,526	\$240,609	\$58,029		
2020	\$299,445	\$5,973,036	\$313,135	\$555,890	\$1,528,005	\$1,685,484		
2021	\$202,116	\$50,150	\$203,679	\$328,056	\$212,590	\$0		
2022	\$623,266	\$73,761	\$423,756	\$438,576	\$15,856	\$21,666		
2023	\$225,667	\$436,781	\$174,943	\$207,550	\$128,813	\$24,761		
2024	\$718,575	\$454,542	\$304,644	\$388,030	\$149,009	\$0		
2025	\$548,270	\$572,585	\$453,602	\$431,722	\$751,514	\$19,729		
2026	\$715,736	\$524,833	\$618,664	\$395,074	\$742,543	\$77,567		
2027	\$1,367,077	\$938,957	\$607,422	\$236,848	\$1,467,162	\$43,226		
2028	\$1,353,698	\$1,196,945	\$469,087	\$765,507	\$630,859	\$3,095		
2029	\$1,138,364	\$956,257	\$720,346	\$280,555	\$1,076,714	\$3,095		
2030	\$968,779	\$1,715,808	\$889,243	\$448,814	\$333,431	\$0		

Voor		POLES							
Year	HAM Wood	HAM Concrete	SCH Wood	SCH Concrete					
2010	\$2,288,073	\$1,147,997	\$142,772	\$70,979					
2011	\$2,054,066	\$29,575	\$295,063	\$0					
2012	\$1,474,877	\$82,809	\$166,568	\$0					
2013	\$1,677,665	\$29,575	\$171,675	\$124,213					
2014	\$2,075,115	\$106,469	\$209,400	\$313,491					
2015	\$2,030,578	\$47,319	\$256,990	\$230,682					
2016	\$2,638,414	\$59,149	\$128,495	\$41,404					
2017	\$2,380,017	\$136,043	\$444,663	\$112,383					
2018	\$1,813,673	\$325,321	\$571,264	\$17,745					
2019	\$1,661,372	\$130,128	\$524,195	\$41,404					
2020	\$1,900,836	\$319,909	\$699,759	\$0					
2021	\$2,068,676	\$343,065	\$376,653	\$106,469					
2022	\$2,625,360	\$1,194,814	\$699,585	\$0					
2023	\$1,378,000	\$881,323	\$1,104,629	\$35,490					
2024	\$2,247,606	\$727,535	\$819,596	\$11,830					
2025	\$1,744,904	\$266,171	\$1,180,600	\$5,915					
2026	\$1,607,232	\$266,171	\$1,081,356	\$47,319					
2027	\$1,627,242	\$260,256	\$745,704	\$17,745					
2028	\$1,086,075	\$266,171	\$908,303	\$177,448					
2029	\$1,053,204	\$195,192	\$1,747,962	\$1,319,027					
2030	\$828,603	\$207,022	\$590,648	\$934,557					

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### Revised Renewal Breakdown by Asset Type Exhibit 2, Tab 3, Schedule 2, Appendix 2-1 Figure 5, page 16

Year	Civil Assets - HAM			Civil Assets - SCH				
	SC/JB/SP/JC - Ham	Manholes - Ham	Vaults - Ham	Pads/Bases - Ham	SC/JB/SP/JC - SCH	Manholes - SCH	Vaults - SCH	Pads/Bases - SCH
2010	\$87,500	\$46,000	\$0	\$0	\$120,000	\$0	\$0	\$0
2011	\$62,500	\$0	\$0	\$0	\$205,000	\$0	\$0	\$0
2012	\$2,500	\$0	\$0	\$0	\$105,000	\$0	\$0	\$0
2013	\$42,500	\$69,000	\$0	\$0	\$460,000	\$0	\$0	\$0
2014	\$7,500	\$0	\$0	\$0	\$440,000	\$0	\$0	\$0
2015	\$17,500	\$0	\$0	\$0	\$295,000	\$0	\$0	\$0
2016	\$17,500	\$0	\$0	\$0	\$65,000	\$0	\$0	
2017	\$20,000	\$92,000	\$12,000	\$0	\$60,000	\$0	\$0	\$0
2018	\$0	\$23,000	\$0	\$0	\$230,000	\$0	\$0	\$0
2019	\$0	\$0	\$0	\$0	\$355,000	\$0	\$0	\$0
2020	\$32,500	\$276,000	\$12,000	\$10,000	\$90,000	\$0	\$0	\$0
2021	\$67,500	\$0	\$0	\$0	\$115,000	\$0	\$0	\$0
2022	\$115,000	\$0	\$0	\$0	\$132,500	\$0	\$0	\$0
2023	\$100,000		\$0	\$0	\$162,500		\$0	\$0
2024	\$52,500		\$0	\$0	\$115,000		\$0	\$0
2025	\$0	\$0	\$0	\$0	\$147,500	\$0	\$0	\$0
2026	\$56,000	\$115,000	\$0	\$0	\$532,500	\$0	\$0	\$0
2027	\$6,000	\$0	\$0	\$0	\$480,000		\$0	\$0
2028	\$112,000	\$46,000	\$12,000	\$0	\$67,500	\$0	\$0	-
2029	\$9,500	\$851,000	\$48,000	\$10,000	\$212,500	\$0	\$0	\$0
2030	\$10,000	\$3,657,000	\$1,848,000	\$2,590,000	\$582,500	\$46,000	\$576,000	\$1,740,000

Year	Backlog	Voltage Conversion	Substations
2010	\$10,477,210	\$6,600,000	\$377,181
2011	\$10,477,210	\$9,000,000	\$1,000,000
2012	\$10,477,210	\$11,000,000	\$1,000,000
2013	\$10,477,210	\$13,000,000	\$1,000,000
2014	\$10,477,210	\$9,000,000	\$1,000,000
2015	\$10,477,210	\$9,000,000	\$1,000,000
2016	\$10,477,210	\$9,000,000	\$750,000
2017	\$10,477,210	\$9,000,000	\$750,000
2018	\$10,477,210	\$9,000,000	\$750,000
2019	\$10,477,210	\$9,000,000	\$750,000
2020	\$10,477,210	\$9,000,000	\$750,000
2021	\$10,477,210	\$9,000,000	\$150,000
2022	\$10,477,210	\$9,000,000	\$150,000
2023	\$10,477,210	\$9,000,000	\$150,000
2024	\$10,477,210	\$9,000,000	\$150,000
2025	\$10,477,210	\$9,000,000	\$150,000
2026	\$10,477,210	\$9,000,000	\$150,000
2027	\$10,477,210	\$9,000,000	\$150,000
2028	\$10,477,210	\$9,000,000	\$150,000
2029	\$10,477,210	\$9,000,000	\$150,000
2030		\$9,000,000	\$150,000

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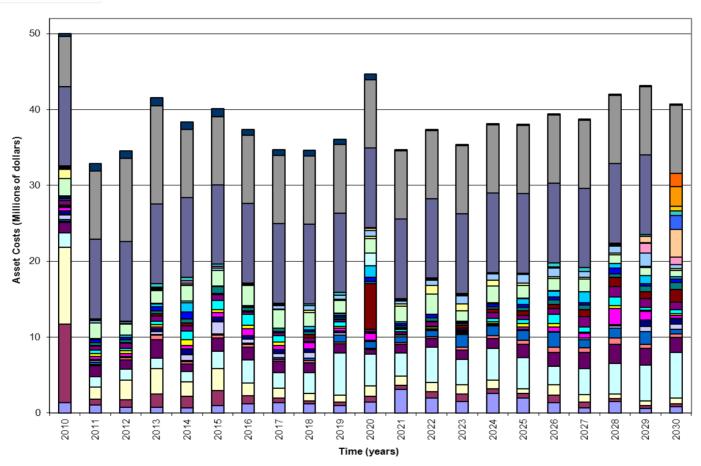
Revised Renewal Breakdown by Asset Type Exhibit 2, Tab 3, Schedule 2, Appendix 2-1 Figure 5, page 16

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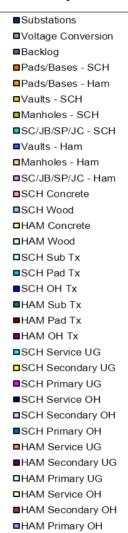
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Figure 4: Distribution Renewal 2010-2030 Detailed Breakdown by Asset Type

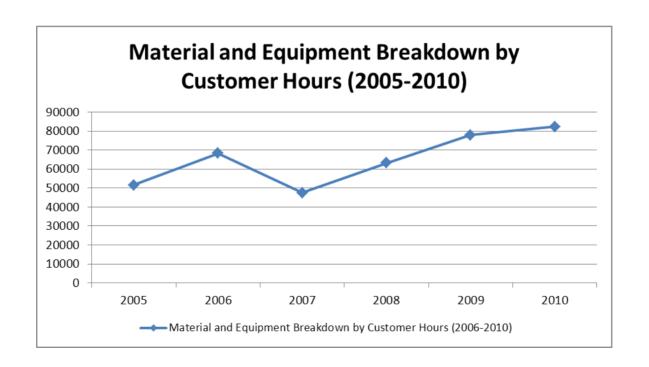


#### January 2011



a) Figure 9, Material and Equipment Breakdown by Customer Hours (Exhibit 2, Tab 3, Schedule 2 page 20) has been updated below to include failure data from 2005 to 2010 inclusive. In examining the graph provided it is apparent that customer hours of interruption caused by failing assets has been increasing since 2007. As previously mentioned without increased capital for proactive replacements assets will continue to age and degrade and be more susceptible to failure ultimately increasing outages to customers.

Figure 9 – Revised Material and Equipment Breakdown by Customer Hours (2005-2010)



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1		EB-2	2010-0131
2			
3 4 5		HORIZON UTILITIES CORPORATION ("HORIZON UTILITIES") RESPONSES TO SCHOOL ENERGY COALITION INTERROGATORIES	
6		DELIVERED: January 24 <sup>th</sup> , 2011	
7			
8	Ques	stion 26	
9	Refe	<b>erence:</b> Ex. 2/4/1, App. 2-3	
LO	With	respect to the Lead/Lag Study:	
l1	a.	Please file in confidence Exhibit JX1.3 from EB-2007-0697.	
12 13	b.	P. 2. Please quantify the impact of using the statutory due date as oppositual payment date for GST and HST.	osed to
L4	c.	P. 4. Please explain how larger customers impact the 30.27 day Service	e Lag.
L5 L6	d.	P. 5. Please estimate whether 2009 was a representative year for the p calculating Collections Lag.	ourpose of
L7 L8	e.	P. 11. Please advise whether this interest lead time implies that interest prepaid. Please provide details of any prepayment arrangements.	t is being
L9	Resp	ponse:	
20	<b>a.</b> Ho	orizon Utilities has submitted Exhibit JX1.3 from EB-2007-0697 in confider	ice.
21 22 23	excep	orizon Utilities payments for GST and HST are made on the statutory due opt where the statutory due date is a weekend or holiday, in which case Hots on the business day immediately preceding the due date.	
24 25 26	From	ne calculation of the weighted 30.27 day service lag is shown in the Table n the Table, note that larger customers (i.e., General Service > $50$ kW and contribute, on a weighted basis, approximate $\frac{1}{2}$ % of the total of 30.27 day	Large

								Service Lag
	Numb	oer of Customers/	Accounts	Weightin	g Factors	Mic	l Points	Days
Rate Classification	Monthly	Bi Monthly	Total	Monthly	Bi Monthly	Monthly	Bi Monthly	
Residential		212,580	212,580	0.00%	90.49%	15.21	30.42	27.52
General Service < 50		17,979	17,979	0.00%	7.65%	15.21	30.42	2.33
General Service > 50	2,216		2,216	0.94%	0.00%	15.21	30.42	0.14
Large Users	12		12	0.01%	0.00%	15.21	30.42	0.00
Unmetered and								
Scattered		1,879	1,879	0.00%	0.80%	15.21	30.42	0.24
Sentinel		250	250	0.00%	0.11%	15.21	30.42	0.03
Streetlights	4		4	0.00%	0.00%	15.21	30.42	0.00
Total	2,232	232,688	234,920					30.27 days

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3

- d. At the time of filing the 2011 COS Application, Horizon Utilities assumption was that
- 4 2009 was a representative year for calculating the collections lag. The premise for this
- 5 conclusion was that if all customers paid their bills exactly when they were due, Horizon
- 6 Utilities would not realize any revenue from the assessment of late payment charges.
- As shown in the Table below, the Company's audited financial statements available at
- 8 www.horizonutilities.com indicate that for the three years 2007, 2008, and 2009,
- 9 recorded revenues from late payment charges were, on average, about \$1.11 million.
- The value for 2009, \$1.17 million, while slightly higher than the three year average, is
- within the boundary of reasonableness to conclude that 2009 was a representative year
- 12 for calculating the collections lag. In light of the new customer service standardization
- rules, particularly the introduction of the Arrears Management Program, it is very likely
- that the collection lag will increase in 2011 and future years as a result.

	Reve	Revenues from		
	Late	Late Payment		
	C	Charges		
Year		\$000s		
2007	\$	1,023		
2008	\$	1,134		
2009	\$	1,168		
Average	\$	1,108		

15

16

- e. No, interest expenses are not being pre-paid. Interest payments on the Promissory
- Notes are made on January 30 and July 30 and January 23 and July 23 of any given
- year using current year customer revenues. It is the timing of when interest payments

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- are made within the year relative to the mid-point of the year that produces a negative
- 2 expense lead time of 62.74 days.

1	EB-2010-0131
2	
3 4 5	HORIZON UTILITIES CORPORATION ("HORIZON UTILITIES") RESPONSES TO SCHOOL ENERGY COALITION INTERROGATORIES
6	DELIVERED: January 24 <sup>th</sup> , 2011
7	
8	Question 27
9	<b>Reference:</b> Ex. 4.1.1, p. 2
10	Please provide details of any cost deferrals from past years, and all memoranda,
11	presentations, and other documentation describing or justifying those deferrals.
12	Response:
13	Please see Horizon Utilities' responses to Consumers Council of Canada Interrogatory
14	1 and Board staff Interrogatory 5 b).

1	EB-2010-0131
2	
3 4	HORIZON UTILITIES CORPORATION ("HORIZON UTILITIES") RESPONSES TO
5	SCHOOL ENERGY COALITION INTERROGATORIES
6	DELIVERED: January 24 <sup>th</sup> , 2011
7	
8	Question 28
9	<b>Reference:</b> Ex. 4/2/3, p. 9
10	Please advise which departmental budget includes the Office of the SVP and CFO.
11	Response:
12	The departmental budget for the Office of the Senior Vice President and Chief Financial
13	is incorporated within the general and administrative budgets for the regulated electricity
14	distribution operations. Copies of the 2008 to 2011 detailed budgets for this
15	department are provided in Horizon Utilities' response to Consumers Council of Canada
16	Interrogatory 17.

1	EB-2010-0131
2	
3	HORIZON UTILITIES CORPORATION ("HORIZON UTILITIES") RESPONSES TO
5	SCHOOL ENERGY COALITION INTERROGATORIES
6	DELIVERED: January 24 <sup>th</sup> , 2011
7	
8	Question 29
9	<b>Reference:</b> Ex. 4/2/5, p. 2
10	Please explain what "Organizational Capacity – Management/Non-trades" means, and
11	provide details on the numbers in that line.
12	Response:
13	In Exhibit 4, Schedule 2, Tab 5 page 2, the term Organizational Capacity –
14	Management /Non-trades references such management FTE's that are not part of the
15	skilled trades or union group and are related to new FTE's for various business
16	requirements identified in 2011 to 2013.
17	For detail on the numbers provided in the line referenced on Page 2, please refer to
18	Horizon Utilities' response to Consumers Council of Canada Interrogatory 30.

1 EB-2010-0131

2

## HORIZON UTILITIES CORPORATION ("HORIZON UTILITIES") RESPONSES TO

#### SCHOOL ENERGY COALITION INTERROGATORIES

6 **DELIVERED: January 24<sup>th</sup>, 2011** 

7

5

#### 8 Question 30

- 9 **Reference:** Ex. 4/2/6
- 10 With respect to the OM&A Variances:
- 11 a. For each of the new positions listed in this exhibit, please advise who is doing
- these functions now, and what that person will be doing once the new position is filled.
- 13 If there are resulting cost savings, please quantify with timing.
- b. P. 1. Please advise what percentage of the Applicant's workforce retired in 2007,
- 15 2008 and 2009.
- 16 c. P. 3. Please confirm that the 13 full-time management and non-trade staff listed
- here and on Table 4-4 are in addition to the new hires listed in Table 4-3.
- 18 **d.** P. 13. Please confirm that existing regulatory and finance staff are not currently
- trained on "technical accounting standards".
- 20 **e.** P. 19. Please advise the nature of the approval being sought from the Board
- with respect to GEA expenditures planned for 2012 and 2013.
- 22 **f.** P. 24. Please provide a copy of the Cyber Security Assessment.
- 23 g. P. 31. Please advise how are the "three core data management functions"
- currently provided, and what are the gaps in that functionality being addressed with this
- 25 project?

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#### Response:

1

- 2 **a)** Line maintainer and Network Operator Apprentices
- 3 This is a developmental position that Horizon is investing in in order to meet the
- 4 requirements of the workforce going forward.
- 5 Grid Engineer
- 6 Currently, renewable connection applications and connections are being performed by
- 7 two people on a part time basis. There are no existing resources that are focused on
- 8 smart grid investigations. The requirement to hire this position is to ensure that Horizon
- 9 can meet an anticipated growing demand for renewable applications and connections
- as well as support the requirements for smart grid investigations. The hiring of the
- Grid Engineer will allow the resources providing support to these activities currently to
- re-focus on the key requirements of their role.
- 13 Grid Shift Supervisor
- Previous to 2005, the Network Operating Department had this role. This individual was
- responsible for front line supervision of staff, assisting in the day to day operations of
- the control room, administration of the SCADA system and overseeing the operator
- development program. When this position was vacated the hiring of a backfill was
- postponed in an attempt to mitigate costs. Duties of this position were absorbed by the
- sole Manager in the department. Currently, this manager has accountability for
- 20 performing both managerial duties and frontline supervisory duties for a staff of 17. This
- 21 is not a sustainable level of management span for a group of this size and the
- 22 management of a 24 hour operation. The Manager works overtime on a regular basis
- and is on call 365 days per year. Further, the Manager is eligible for retirement in 2012.
- The introduction of this role will allow for closer management of the operating team,
- supervisory presence outside of just core hours of work, a reduction in management
- overtime and shared on call responsibility. Further, the hiring of Operator Apprentices
- in both 2010 and 2011 (4 in total) will require additional coaching and support to ensure
- 28 apprentices are progressing appropriately towards full competency.

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- 1 Project Specialist, Operational Improvement
- 2 Currently this role is largely being performed by external project management
- 3 professionals. The utilization of external resources is often focused on specific project
- 4 activities and does not allow for leveraging of resources for other projects in the
- 5 department. The addition of this expertise will provide the department with operational
- leadership in the form of advanced project and process management activities and the
- 7 development and maintenance of key performance indicators required to effectively
- 8 monitor progress towards established goals.
- 9 Manager, Engineering Applications, Data Warehousing Specialist and Engineering
- 10 Applications Specialist
- 11 These functions currently do not exist at Horizon. The company must develop a core
- 12 competence in data management and warehousing to support new engineering
- applications planned for implementation such as enterprise data warehousing, GIS
- 14 (Graphical Information Systems), ODS (Operational Data Store), OMS (Outage
- Management System) and smart grid related applications. The existing IT staff does
- not have the required expertise or the capacity to support these new initiatives. These
- 17 new initiatives will not be possible without additional support staff to focus on the
- implementation and support of the new engineering applications environment.
- 19 ERP Application Specialist
- 20 This function is currently being performed entirely by a contract resource. The
- introduction of an ERP system in 2008 makes this an ongoing requirement and thus
- requires a full time resource on staff.
- 23 Financial Analyst-Capital Projects
- 24 Some of the responsibilities of this role are currently being performed by the
- 25 Supervisors in the Engineering Design group. The effectiveness of this approach is
- limited as the necessary time cannot be dedicated to these activities due to core
- 27 engineering design demands. A financial analyst will ensure that critical analysis of
- 28 construction and maintenance activities for productivity improvement measurement,

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- contractor costing analysis, project estimating, asset modeling and variance reporting
- 2 using activity based costing unit costs. Such analysis is required to ensure capital and
- 3 operating expenditures are provided in a detailed manner that supports annual
- 4 budgeting, monthly forecasts, asset management and cost of service filings.
- 5 It is not anticipated that hard cost savings will be achieved in the short term with the
- 6 addition of this role. However, the quality of output will improve with appropriate
- 7 productivity improvements being quantified and more accurate forecasting. Further, this
- 8 hire will result in additional capacity at the Supervisor level to allocate to core
- 9 engineering design activities.
- 10 Commodity Management Specialist
- Horizon's annual purchasing requirement is approximately \$45 million. This level of
- spending is currently supported by only one commodity management resource. This
- lack of resourcing has resulted in lost opportunities for strategic sourcing of goods for
- approximately 50% of the annual spend. Further, Horizon has planned an expansion of
- its capital programs that will further increase demands on procurement resources.
- 16 Director, Project Management Office
- 17 Currently, there is no resource allocated to effectively coordinate and manage the
- numerous business initiatives at Horizon and to ensure that all of such are appropriately
- 19 planned, resourced, and successfully completed in accordance with timelines and
- 20 budgets. Today, each individual department manages its own projects without
- 21 expertise in formal project management methodologies. The position is being
- 22 introduced as a continuous improvement strategy and will provide coordination and
- support and an enterprise review and alignment of projects across the organization.
- 24 Manager, Documents and Records
- 25 Currently there is no resource accountable for this function at Horizon. Individual
- departments manage their own paper and electronic records and documents. While
- Horizon has a Record Retention Policy for physical documents it lacks a system that will
- 28 allow for the more efficient and effective management of records and documents. The

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- introduction of this position will provide a central resource to monitor the record and
- 2 retention policies, and the introduction of a record/document management system. This
- will result in a more efficient approach to accessing and management of records and
- 4 better security for record retention.
- 5 Manager, Regulatory Applications
- 6 Currently, rate applications and monitoring of general regulatory and accounting
- 7 requirements are prepared and managed by a cross-section of the regulatory staff. This
- 8 position has been created in order to address regulatory capacity needs, and is
- 9 necessary in order to support increases in the volume of work related to new or
- changes to the existing regulatory framework in Ontario. Such a position will support a
- dedicated approach to regulatory applications in future. Staff currently working on these
- activities will focus this additional time on other core Regulatory functions.
- 13 Rates Analyst
- 14 Currently Horizon Utilities has 3 Rates Analysts that support the required analysis
- associated with Reporting, Recordkeeping and Retention ("RRR") filings, analysis and
- reconciliation of regulatory variance accounts and distribution revenue, as well as
- maintain the settlement systems software. An additional resource is required to be able
- to sustain and manage the increase in business analysis capacity. Based on an
- increase in the amount of regulatory reporting and business analysis required, Horizon
- 20 Utilities has additional capacity demands going forward that will require an additional
- 21 analyst in Regulatory Affairs.
- 22 Finance-General Clerk
- In 2008 Horizon, as part of its ERP implementation, took significant steps towards
- improving the purchasing/procurement/payments processes. A number of gaps were
- 25 identified and further work ensued to analyze the accounts payable function. During
- this analysis Horizon evaluated progress based on some key performance indicators
- comparing also to some general benchmarks available on the market. Further, there

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- has been a steady increase in volume in this area over the last 3 years. This trend will
- 2 continue as with planned increases in the operating and capital programs.
- 3 Currently, there is one full time and one contract resource supporting this function. The
- 4 new full time employee will assume the functions of the contract resource.
- 5 Financial Advisor/Modeler
- 6 Currently, some of these functions are being performed by the Director, Budgeting and
- 7 Business Analysis and the Vice President Finance. This work is incremental to the
- 8 existing full time duties for these positions.
- 9 Further, some of the essential work intended under this function will only be undertaken
- at the time the new Budget and Forecasting Software solution is implemented, refer to
- 11 Appendix 1-9(h) in Exhibit 1 / Tab 2 / Schedule 2).
- 12 Customer Connections Key Accounts Representative
- 13 This is a new position created to develop better working relationships with Horizon
- Utilities' largest and most influential customers in order to gain a better understanding of
- their operation and plans as they impact Horizon Utilities.
- This is consistent with the Board findings, March 24, 2010 to Horizon Utilities Z-factor
- submission EB 2009 -0332 which states "The Board shares the concerns raised by
- 18 Energy Probe related to Horizon's lack of customer service staff dedicated to large
- 19 customers and is of the view that Horizon should have developed a better working
- 20 relationship with the Subject Customer in order to gain a better understanding of its
- operations and business, and its future plans, particularly given the relative size of the
- 22 customer."
- b) The retirement levels in each of 2007, 2008 and 2009 are 1%, 1% and 4 %
- 24 respectively.
- c) The 13 full time management and non-trade staff listed in Table 4-4 are in addition to
- the new hires listed in Table 4-3.

- d) Existing regulatory and finance staff are trained on current "technical accounting
- 2 standards" to the extent required to perform their existing job duties.
- 3 The reference to Exhibit 4, Tab2, Schedule 6, Page 13 specifically relates to the
- 4 implementation of IFRS. The introduction and implementation of IFRS will require
- 5 specific training on all IFRS Accounting Standards, as well as on-going training related
- to the introduction of new IFRS Accounting Standards and/or changes to existing IFRS
- 7 Accounting Standards throughout the coming years.
- 8 With respect to IFRS Accounting Standards, these standards will continue to evolve
- 9 over time. As the standards evolve, training will be required in order to ensure that
- regulatory and finance staff remain current with respect to these standards.
- 11 The increasing complexity of the regulatory framework, stemming from various
- legislative and regulatory policy initiatives (e.g. Green Energy Act) and the introduction
- of "Modified IFRS" for regulatory reporting, also increases the level of ongoing training
- required to maintain current knowledge levels on accounting standards.
- e) Please refer to Board staff Interrogatory 31.
- 16 **f)** Horizon Utilities is filing the Cyber Security Assessment Report from May 6<sup>th</sup>, 2009.
- 17 This report is being filed confidentially due to the sensitive nature of the information.
- 18 g) The following describes how the three core data functions identified are currently
- 19 being provided:
- 20 Real Time Decision Support is currently only being done in Network Operations via the
- 21 SCADA system to provide data for real time management of the distribution grid.
- 22 Currently there are no real time data analytics applications utilizing this data as Horizon
- Utilities does not have the required hardware or software collect, process or manage the
- volume of data being collected. Effective utilization of this data would allow its use for
- other utility operations activities such as, load management or load transfers between
- feeders during maintenance, distribution system maintenance and capital construction
- 27 activities.

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- 1 Operation Decision Support is currently only being done in a limited manner as the
- volumes of data being collected are too large for the tools and models used to perform
- 3 systems planning and asset management. Most of the data being collected today was
- 4 not available from older distribution system devices.
- 5 Planning & Business Decision Support utilizing data collected from SCADA, smart grid
- 6 devices and smart meters is used in a limited way in AMI applications. These activities
- 7 are not enterprise tools and are primarily performed using user desktop analytical tools
- 8 such as, Microsoft Excel or Microsoft Access. These products cannot manage or
- 9 consolidate the volumes of data being collected. Currently there are planning or
- decision support analytics applications utilizing this data as Horizon Utilities does not
- have the required hardware or software collect, process or manage the volume of data
- being collected. Historical data is currently being archived until such time that Horizon
- 13 Utilities has the appropriate hardware and application technology to support
- management, storage, and processing of the transaction volumes, and the business
- analytics tools to analyze the data.
- The gaps in functionality that would be addressed by the Enterprise Data Warehouse
- 17 project are:
- a) Provision of an appropriate data warehousing hardware and database environment to
- 19 effectively store, manage and consolidate the billions of transactions currently being
- 20 collected annually from SCADA, intelligent grid devices and smart meters;
- b) Improved performance of transactional systems, such as, SCADA and Daffron CIS,
- by offloading historical transactions to a platform and application systems appropriately
- 23 designed to manage, store, process and consolidate the billions of transactions
- 24 generated by these systems annually, thereby eliminating the need to upgrade the
- transactional systems hardware environments;
- 26 c) Provide enterprise data analytics and reporting tools, applications and support to
- 27 maximum utilization of transactional data being collected and to provide ability to utilize
- historical data in long-term system planning, system load shaping for rate analysis and

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- in asset management and maintenance programs;
- 2 d) Insure there is appropriate hardware capacity and tools to collect, manage and
- 3 support incremental transactions that will be generated by planned intelligent devices as
- 4 they are introduced to the distribution system during the planning period.

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- added in 2010 and can be reconciled to Ex. 4/2/10, p. 11. In 2011 Appendix 4-2 in 4/2/6
- 2 provides for 11 "Net Added Positions" which form part of the total number of new
- positions outlined in Ex. 4/2/10, p. 11
- 4 **b.** Please see the table below which includes actual Staffing impacts for 2010.

Summary of Staffing Changes and Recruitment Plans					
Staffing Impact	2010	2011	2012	2013	2014
Staff decrease due to Retirement and Attrition	9	18	16	15	10
Staff Increases due to Increased Capital Spending	3	6	5	6	4
Advanced Hiring Requirements for Retirement and Attrition	4	5	2	1	2
Total Advanced Hiring Requirement		5	2	1	2
Total non-advanced Hiring Requirement	17	24	21	21	14
Total Hiring Requirement	21	29	23	22	16
Net Added Positions	7	11	7	7	6

5

6

7

8

- c. This is identified in the footnote. The source is a document prepared by the
- Electricity Sector Council (formed jointly by Canadian Electricity Association and Human
- Resources and Skills Development Canada (federal government). The document was
- 9 produced in 2008 and in entitled "Powering Up the Future, 2008, Labour Market
- 10 Information Study
- 11 **d.** A formal study was not completed on attrition rates. The attrition rates used in the
- study were based on a 3 year average (2006 to 2008).
- e. Page 10 of 4/2/6, Appendix 4-2, refers to the assumption that there is a limit to
- the number of apprentices that can be effectively and safely integrated into operations
- and is an area that is being reviewed further. An assumption regarding this ratio was
- provided as an input to the manpower model. The ratios were chosen based on
- discussions with experienced line trade supervisory staff at Horizon Utilities.
- As of As of January 1, 2011 Horizon plans to hire 1 Contractor Inspector and 3 Design
- 19 Technicians by the end of 2014 as provided in analysis and supported as part of

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- 1 Workforce Labour Strategy and Plan, Exhibit 2, Tab 2, Schedule 6, Appendix 4-2, page
- 2 16.

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6	DELIVERED: January 24 <sup>th</sup> , 2011
7	
8	Question 32
9	<b>Reference:</b> Ex. 4/2/10, p. 11
10 11	Please explain the following increases in yearly base wages per person from 2009 to 2010:
12 13 14 15 16	<ul> <li>a. Executive – 18.7%</li> <li>b. Management – 14.1%</li> <li>c. Non-Union – 17.0%</li> <li>d. Union – 8.7%</li> </ul>
17	Response:
18	a. Please refer to the response for Energy Probe 47 a)
19	b. Please refer to the response for Energy Probe 47 b)
20	c. Please refer to the response for Energy Probe 47 c)
21 22 23	d. Yearly base wages are calculated in this table by taking the total compensation and dividing by the number of employees in this category. Between 2009 and 2010 there is an increase of approximately \$2.48 million. This increase can be attributed to:
24	<ul> <li>Negotiated wage increase of 3% or approximately \$705,000</li> </ul>
25 26	<ul> <li>Vacancies reflected in 2009 actuals are not reflected in 2010 budget figures.</li> <li>This accounts for a variance of approximately \$1.2 million</li> </ul>
27 28	• increase in FTE's in this employee category of 7 positions equivalent to approximately \$410,000

EB-2010-0131 1 2 HORIZON UTILITIES CORPORATION ("HORIZON UTILITIES") 3 RESPONSES TO 4 SCHOOLS ENERGY COALITION INTERROGATORIES 5 DELIVERED: January 24th, 2011 6 7 **Question 33** 8 **Reference:** Ex. 5/1/1, p. 3 9 Please advise the regulatory basis for the proposed adjustment to long term debt rate in 10 July, 2012, and the mechanism proposed to implement that adjustment. 11 Response: 12 Horizon Utilities is unaware of regulatory basis to make such an adjustment. 13 The proposal was offered as a means of balancing ratepayer and utility interests. 14 As provided in the referenced exhibit, it is Horizon Utilities' intention to refinance the 15 \$116MM note ("Refinanced Debt") that matures on July 31, 2012 using the same 16 process as its \$40MM financing described in Exhibit 5, Tab 1, Schedule 1, Page 2-3. 17 Such refinancing will occur within the early part of the incentive rate mechanism ("IRM") 18 period. The amount of refinancing may be more or less than \$116MM (although more is 19 expected) depending on the total long-term financing requirements for Horizon Utilities 20 at the time of refinancing. 21 In this Application, Horizon Utilities' proposal is to make an adjustment to the Long-22 Term Debt Rate in the IRM proceeding, retroactive to the time of refinancing that is 23 reflective of the debt rate on the Refinanced Debt. It was Horizon's view that such 24 adjustment would be consistent with the concept of the Fair Return Standard as 25 discussed in the Report of the Board on the Cost of Capital for Ontario's Regulated 26 Utilities, EB-2009-0084, Section 3.1. Horizon Utilities acknowledges that cost of debt 27 28 may not have been at the core of the concept of the Fair Return Standard dealt with by

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- the Board in that report but one could draw similarities. This would keep both the
- 2 ratepayers and the utility neutral with respect to the debt cost of the Refinanced Debt.
- 3 Horizon Utilities acknowledges that there are uncertainties as to the regulatory basis or
- 4 mechanisms upon which it may adjust its Long-Term Debt Rate within the IRM period
- and Horizon's interpretation of the applicability of the Board's Fair Return Standard in
- 6 this case. The rate on the Refinanced Debt will undoubtedly be different than the
- 7 existing note, and will result in either reduced or additional costs. Horizon Utilities'
- 8 intent was and is driven by its desire to keep the ratepayers and the utility harmless in
- 9 this matter.
- Despite the fact that there are no known mechanisms available for adjustment at the
- time of the refinancing, perhaps there are a few options that might be explored during
- this Application process:
- 1. Leave the 6.10% rate as proposed for the test year unchanged until the next re-
- basing application. This option presents risks to both the utility and its ratepayers
- given rate volatility with respect to Government of Canada benchmark bonds and the
- risk premiums paid by utilities which, in addition to issuance costs, comprise the
- effective rate on its long-term debt instruments.
- 18 2. Horizon Utilities could endeavour to forecast the cost of the Refinanced Debt and
- adjust the Long Term Debt Rate in the Application on some weighted average basis
- that recognizes both the current cost of the existing note and the forecast cost of the
- \$116MM Refinanced Note. This mechanism presents risks similar to 1.
- 22 3. Within this Application, Horizon Utilities could seek to request a future adjustment to
- its Long-Term Debt Rate using the same methodology resolved in this Application
- within its next IRM adjustment following the refinancing. At such time and as part of
- the IRM application, Horizon Utilities would propose to submit an adjustment to the
- Long-Term Debt Rate, retroactive to the time of refinancing, that is reflective of the
- debt rate on the Refinanced Debt and also removes the impact of the former debt
- rate approved by the Board on the current note. Such adjustment would be

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- consistent with the concept of recovery of the actual cost of debt incurred by Horizon
- 2 Utilities. This would also hedge ratepayer costs and utility recoveries with respect to
- the debt cost of refinancing the existing \$116MM promissory note.
- 4. Horizon Utilities could seek the approval of a variance account, effective as of the
- date of the refinancing, to track the difference, from that time and until the effective
- date of rates with respect to the next re-basing application, between:
- a. Long Term Debt Cost approved for this Application computed as the product of Deemed Long-Term Debt and the Long-Term Debt Rate;
- b. Revised Long-Term Debt Cost computed on the same basis in a) but adjusting
   for the difference between the 6.1% rate, previously approved and proposed for
   the 2011 test year, for the \$116MM note and the debt rate for the Refinanced
   Debt.
- Under this option, Horizon Utilities would seek the disposition of the variance account in its next re-basing application. Similar to option 3, this approach would hedge ratepayer costs and utility recoveries with respect to the debt cost of refinancing the existing \$116MM promissory note.
- Horizon Utilities submits that Options 3 and 4 appropriately balance ratepayer and utility
- interests. Horizon Utilities will seek to review these options with the Board and
- intervenors at the appropriate time in the remaining process for the disposition of this
- 20 Application.

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3 4 5	HORIZON UTILITIES CORPORATION ("HORIZON UTILITIES") RESPONSES TO SCHOOL ENERGY COALITION INTERROGATORIES
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7	
8	Question 34
9	Reference: Ex. 5/1/2, App. 5-2
10	Please file a copy of the final signed note.
11	Response:
12	The final promissory note is attached below.
13	Please note that the interest rate on the final signed note is 4.89%, as compared to
14	[4.92%] on the draft note filed with the 2011 Cost of Service application. The final
15	interest rate was slightly lower as a result of lower than estimated issuance costs.

#### PROMISSORY NOTE

Maturity Date:

July 21, 2020

Interest Rate Per Annum:

4.89%

**Interest Payment Dates:** 

January 21 and July 21 in each year

Initial Interest Payment Date:

January 21, 2011

Principal Amount:

\$40,000,000

HORIZON UTILITIES CORPORATION (the "Corporation") for value received and intending to be legally bound hereby, promises to pay to or to the order of HORIZON HOLDINGS INC. ("HHI") on the Maturity Date, or on such earlier date as the Principal Amount may become due in accordance with the provisions of this Promissory Note, the Principal Amount in lawful money of Canada and to pay interest on the Principal Amount at the Interest Rate Per Annum from the date hereof on each Interest Payment Date including the Maturity Date, with interest on overdue interest and principal accruing at the same rate per annum.

#### **Covenants of the Corporation and Other Provisions**

Schedule A to this Promissory Note contains additional terms and conditions which form part of and are incorporated into this Promissory Note. All defined terms used in this Promissory Note shall, unless otherwise defined herein, have the meanings defined in Section 1.1 of Schedule A hereto.

[EXECUTION PAGE FOLLOWS]

IN WITNESS WHEREOF Horizon Utilities Corporation has caused this Promissory Note to be signed by its President and Chief Executive Officer and its Senior Vice President and Chief Financial Officer as of July 21, 2010.

#### HORIZON UTILITIES CORPORATION

By:

Max A. Cananzi

President and Chief Executive Officer

By:

John G. Basilio

Senior Vice President and Chief Financial Officer

[signature page for Promissory Note made by Horizon Utilities Corporation]

# SCHEDULE A TO PROMISSORY NOTE MADE BY HORIZON UTILITIES CORPORATION IN FAVOUR OF HORIZON HOLDINGS INC.

#### ARTICLE 1 INTERPRETATION

#### 1.1 Definitions

In this Schedule A, which forms a part of this Promissory Note, unless otherwise specified herein or there is something in the subject matter or context inconsistent therewith, the following terms have the respective meanings indicated below:

"Affiliate" means, with respect to any Person, any other Person which, directly or indirectly through one or more Persons, Controls, is Controlled by, or is under common Control with, such Person.

"Business Day" means any day, other than a Saturday or Sunday, on which Canadian Imperial Bank of Commerce in Toronto, Ontario is open for commercial banking business during normal banking hours in Toronto, Ontario.

"Canadian GAAP" means, as at any date of determination, accounting principles generally accepted in Canada, as such principles may be amended, varied or replaced by International Financial Reporting Standards (IFRS) then in effect and generally accepted in Canada.

"Capital Lease Obligation" means any monetary obligation of the Corporation or a Designated Subsidiary under any leasing or similar arrangement which, in accordance with Canadian GAAP, would be classified as a capital lease and for the purposes hereof, the amount of Capital Lease Obligations shall be the capitalized amount thereof, determined in accordance with Canadian GAAP.

"Contingent Liability" means any agreement, undertaking or arrangement by which any Person guarantees, endorses or otherwise becomes or is contingently liable upon (by direct or indirect agreement, contingent or otherwise, to provide funds for payment, to supply funds to, or otherwise to invest in, a debtor, or otherwise to assure a creditor against loss) the Obligation of any other Person (other than by endorsements of instruments in the course of collection), or guarantees the payment of dividends or other distributions upon the shares of any other Person. The amount of any Person's Obligation under any Contingent Liability shall (subject to any limitation set forth therein) be deemed to be the outstanding principal amount (or maximum principal amount, if larger) of the Obligation guaranteed thereby.

"Control", "Controls", "Controlled" and similar expressions mean a relationship between two Persons wherein one of such Persons has the power, through the ownership of Securities, by contract or otherwise, to direct the management and policies of the other of such Persons, and includes, in the case of a corporation, the ownership, either directly or indirectly through one or more Persons, of Securities of such corporation carrying more than 50% of the votes that may be cast to elect the directors of such corporation either under all circumstances or under some circumstances that have occurred and are continuing (other than Securities held as collateral for a

bona fide debt where the holder thereof is not entitled to exercise the voting rights attached to the Trust Indenture), provided that such votes, if exercised, are sufficient to elect a majority of the directors of such corporation.

"Corporation" means Horizon Utilities Corporation, an Ontario corporation.

"**Debentures**" means the 4.77% Senior Unsecured Debentures, Series A due July 21, 2020 issued by HHI pursuant to the Trust Indenture.

"Designated Subsidiary" means each Subsidiary of the Corporation which is designated as a "Designated Subsidiary" (as defined in the Trust Indenture) in accordance with the Trust Indenture.

"Event of Default" has the meaning defined in Section 3.1.

"Financial Instrument Obligations" means, with respect to any Person at any time, the obligations of such Person under any transaction that is a rate swap, basis swap, forward rate transaction, commodity swap, commodity option, commodity future, equity or equity index swap or option, bond, note or bill option, interest rate option, forward foreign exchange transaction, cap, collar or floor transaction, currency swap, cross-currency rate swap, swaption, currency option or any other similar transaction (including any option to enter into any of the foregoing) or any combination of the foregoing to the extent of the net amount due to or accruing due by the Person thereunder (determined by marking the same to market at such time in accordance with its terms).

"Funded Obligations" means, with respect to any Person, all Indebtedness created, assumed or guaranteed which matures by its terms on, or is renewable at the option of such Person to, a date more than 18 months after the date of the original creation, assumption or guarantee thereof.

"HHI" means Horizon Holdings Inc., an Ontario corporation.

"Indebtedness" means (without duplication), with respect to any Person:

- (a) all Obligations of such Person for borrowed money, including Obligations with respect to bankers' acceptances and contingent reimbursement obligations, including those related to letters of credit and other financial instruments,
- (b) all Obligations issued or assumed by such Person in connection with its acquisition of property in respect of the deferred purchase price of that property,
- (c) all Capital Lease Obligations and Purchase Money Obligations of such Person, and
- (d) all Contingent Liabilities of such Person in respect of any of the foregoing.

"Interest Payment Date" has the meaning set forth on the first page of this Promissory Note.

"Interest Rate Per Annum" has the meaning set forth on the first page of this Promissory Note.

"Maturity Date" means July 21, 2020.

"Non-Recourse Debt" means, with respect to a Person, any Indebtedness incurred to finance the creation, development, construction or acquisition of an asset of the Person (and any extensions, renewals or refunding of any such Indebtedness) provided that the recourse of the obligee thereof against the Person is limited in all circumstances (other than in respect of false or misleading representations or warranties) to the asset (including all rights and benefits relating to or arising out of such asset) in each case other than Principal Property.

"Obligations" means (without duplication), with respect to any Person, all items which, in accordance with Canadian GAAP, would be included as liabilities on the liability side of the balance sheet of such Person as of the date at which Obligations are to be determined and all Contingent Liabilities of such Person in respect of any of the foregoing.

#### "Permitted Encumbrances" means any or all of the following:

- (a) any Security Interest that secures the Obligations of a Designated Subsidiary that existed prior to the date on which it became a Designated Subsidiary and that (i) was not incurred in contemplation of such Person becoming a Designated Subsidiary, and (ii) is not applicable to the Corporation or any other Designated Subsidiary or the properties or assets of the Corporation or any other Designated Subsidiary;
- (b) any Security Interest granted by the Corporation or a Designated Subsidiary to secure the Debentures;
- (c) any Purchase Money Mortgage or Capital Lease Obligation of the Corporation or a Designated Subsidiary;
- (d) any Security Interest on a property or asset acquired by the Corporation or a Designated Subsidiary that secures the Obligations of a Person (whether or not such Obligations were assumed by the acquiring Person) which Security Interest existed at the time such property or asset was acquired and that (i) was not incurred in contemplation of such property or asset being acquired, and (ii) is not applicable to the Corporation or any other Designated Subsidiary or the properties or assets of the Corporation or any other Designated Subsidiary;
- (e) any Security Interest given in the ordinary course of business by the Corporation or a Designated Subsidiary to any bank or banks or other lenders to secure any Indebtedness payable on demand or maturing within 18 months of the date such Indebtedness is incurred or of the date of any renewal or extension thereof;
- (f) any Security Interest granted by a Designated Subsidiary in favour of the Corporation or a Wholly-Owned Designated Subsidiary;
- (g) any Security Interest on or against cash or marketable debt securities pledged to secure any non-speculative Financial Instrument Obligation incurred in the ordinary course of business for risk management purposes that hedges Indebtedness of the Corporation or a Designated Subsidiary;

- (h) any Security Interest granted, assigned, mortgaged, charged or hypothecated by the Corporation or a Designated Subsidiary on any assets other than Principal Property to secure any corresponding Non-Recourse Debt;
- (i) any Security Interest for taxes, payments in lieu of taxes, assessments, government charges or claims that are being contested in good faith and in respect of which appropriate provision is made in the financial statements of the Corporation in accordance with Canadian GAAP;
- any Security Interests securing appeal bonds or other similar Security Interests arising in connection with contracts, bids, tenders or court proceedings (including surety bonds, security for costs of litigation where required by law and letters of credit) or any other instruments serving a similar purpose;
- (k) a lien or deposit under workers' compensation, social security or similar legislation or good faith deposits in connection with bids, tenders, leases, contracts or expropriation proceedings, or deposits to secure public or statutory obligations or deposits of cash or obligations to secure surety and appeal bonds;
- (l) a lien or privilege imposed by law, such as builders', carriers', warehousemen's, landlords', mechanics' and material men's liens and privileges, and any lien or privilege arising out of judgments or awards with respect to which the Corporation or a Designated Subsidiary at the time is prosecuting an appeal or proceedings for review and with respect to which it has secured a stay of execution pending such appeal or proceedings for review; or liens for taxes, payments in lieu of taxes, assessments or governmental charges or levies not at the time due and delinquent or the validity of which is being contested at the time by the Corporation or a Designated Subsidiary in good faith; or undetermined or inchoate liens, privileges and charges incidental to current operations which have not at such time been filed pursuant to law against the Corporation or a Designated Subsidiary or which relate to obligations not due or delinquent; or the deposit of cash or Securities in connection with any lien or privilege referred to in this clause (1);
- (m) any minor encumbrance, including, easements, rights-of-way, servitudes or other similar rights in land granted to or reserved by other Persons, rights-of-way for sewers, electric lines, telegraph and telephone lines and oil and natural gas pipe lines and other similar purposes, or zoning or other restrictions as to the use of real properties, which encumbrances, easements, servitudes, rights of way or other similar rights and restrictions do not in the aggregate materially detract from the value of such properties or materially impair their use in the operation of the business of the Corporation or a Designated Subsidiary;
- (n) any right reserved to or vested in any municipality or governmental or other public authority by the terms of any lease, license, franchise, grant or permit acquired by the Corporation or a Designated Subsidiary, or by any statutory provision, to terminate any such lease, license, franchise, grant or permit or to

purchase assets used in connection therewith or to require annual or other periodic payments as a condition to the continuance thereof;

- (o) a lien or right of distress reserved in or exercisable under any lease for rent and for compliance with the terms of such lease;
- (p) any Security Interest granted by the Corporation or a Designated Subsidiary to a public utility or any municipality or governmental or other public authority when required by such utility, municipality or other authority in connection with the operations of the Corporation or such Designated Subsidiary;
- (q) any reservation, limitation, proviso or condition, if any, expressed in any original grants to the Corporation or a Designated Subsidiary from the Crown;
- (r) other Security Interests permitted under the Trust Indenture; and
- (s) any extension, renewal, alteration, substitution or replacement, in whole or in part, of any Security Interest referred to in the foregoing clauses (a) through (q), provided the extension, renewal, alteration, substitution or replacement of such Security Interest is limited to all or any part of the same property that secured the Security Interest extended, renewed, altered, substituted or replaced the principal amount of the Obligations secured thereby is not thereby increased, the terms of the Indebtedness secured thereby is not shortened and the terms and conditions thereof are no more restrictive in any material respect than the Security Interest so extended.

"Person" means any individual, corporation, body corporate, limited partnership, general partnership, joint stock company, association, joint venture, association, company, trust, bank, fund, governmental authority, municipal corporation or other entity or organization, whether or not recognized as a legal entity.

"Prime Rate" means the rate of interest expressed as a rate per annum which HHI's principal Canadian bank designates as its prime rate and which establishes from time to time the reference rate of interest such bank will use to determine the rate of interest, expressed as its prime rate of interest, that it will charge for demand loans in Canadian dollars made in Canada, as such rate may be adjusted from time to time.

"Principal Amount" has the meaning set forth on the first page of this Promissory Note.

"Principal Property" means any fixed assets of the Corporation or any Subsidiary of the Corporation used for the transformation or distribution of electricity in Ontario and any revenues and rights associated with such fixed assets.

"Purchase Money Mortgage" means any Security Interest created, issued or assumed by the Corporation or a Designated Subsidiary to secure a Purchase Money Obligation; provided that such Security Interest is limited to the property (including the rights associated therewith) acquired, constructed, installed or improved using the funds advanced to the Corporation or such Designated Subsidiary in connection with such Purchase Money Obligation.

"Purchase Money Obligation" means Indebtedness of the Corporation or a Designated Subsidiary incurred or assumed to finance the purchase price, in whole or in part, of any property (except any Indebtedness which constitutes a Funded Obligation and which was incurred or assumed to finance the purchase price, in whole or in part, of any shares, bonds or other Securities) or incurred to finance the cost, in whole or in part, of construction or installation of or improvements to any real property or fixtures provided that such Indebtedness is incurred or assumed within 24 months after the purchase of such real property or fixtures or the completion of such construction, installation or improvements, as the case may be, and includes any extension, renewal or refunding of any such Indebtedness, so long as the principal amount thereof outstanding on the date of such extension, renewal or refunding is not increased.

"Securities" means any stock, shares, units, partnership interests, equity interests, instalment receipts, voting trust certificates, bonds, debentures, notes, other evidences of indebtedness, or other documents or instruments commonly known as securities or any certificates of interest, shares or participations in temporary or interim certificates for, receipts for, guarantees of, or warrants, options or rights to subscribe for, purchase or acquire any of the foregoing.

"Security Interest" means any assignment, mortgage, charge (whether fixed or floating), hypothec, pledge, lien, security interest or other encumbrance on or interest in property or assets that secures payment of any Indebtedness or Obligation.

"Subsidiary" means (a) any corporation of which there is owned, directly or indirectly, by or for the Corporation and/or by or for any corporation in like relation to the Corporation, voting shares which, in the aggregate, entitle the holders thereof to cast more than 50% of the votes which may be cast by the holders of the outstanding voting shares of such first mentioned corporation for the election of its directors and includes any corporation in like relation to a Subsidiary, or (b) any other Person of which at least a majority of voting ownership interest is at the time, directly or indirectly, owned by or for the Corporation and/or by or for any corporation in like relation to the Corporation.

"Trust Indenture" means the trust indenture dated as of July 21, 2010 between HHI, as issuer, and Computershare Trust Company of Canada, as trustee, as amended, supplemented and restated from time to time, including pursuant to the first supplemental indenture dated as of July 21, 2010 between HHI and Computershare Trust Company of Canada providing for the issuance of the Debentures.

"Wholly-Owned Designated Subsidiary" means a Designated Subsidiary all of the outstanding shares in the capital of which are owned, directly or indirectly, by or for the Corporation and/or by or for one or more other Wholly-Owned Designated Subsidiaries.

#### 1.2 Interpretation Not Affected by Headings

The division of this Promissory Note (including this Schedule A) into Articles, Sections and clauses, and the insertion of headings are for convenience of reference only and shall not affect the construction or interpretation hereof.

#### 1.3 Extended Meanings

In this Promissory Note, unless otherwise expressly provided herein or unless the context otherwise requires, words importing the singular number include the plural and *vice versa*; words importing gender include the masculine, feminine and neuter genders; the word "including" when used herein means "including, without limitation" and the word "includes" when used herein means "includes, without limitation"; references to "**Promissory Note**", "**hereto**", "**hereto**", "**herein**", "**hereof**", "**hereby**", "**hereunder**" and similar expressions refer to this Promissory Note, and not to any particular Article, Section, clause or other portion hereof, and include all Schedules and amendments hereto, modifications or restatements hereof; and the expressions "**Article**", "**Section**", "**clause**" and "**Schedule**" followed by a number, letter, or combination of numbers and letters refer to the specified Article, Section or clause of or Schedule to this Promissory Note.

#### 1.4 Day Not a Business Day

If any day on which an amount is to be determined or an action is to be taken hereunder is not a Business Day, then such amount shall be determined or such action shall be taken at or before the requisite time on the next succeeding day that is a Business Day at such location.

#### 1.5 Currency

Except as otherwise provided herein, all references in this Promissory Note to "Canadian dollars", "dollars" and "\$" are to lawful money of Canada.

#### 1.6 Statutes

Each reference in this Promissory Note to a statute is deemed to be a reference to such statute as amended, re-enacted or replaced from time to time.

#### 1.7 Applicable Law

This Promissory Note shall be governed by and construed in accordance with the laws of the Province of Ontario and the laws of Canada applicable in the Province of Ontario without giving effect to the principles of the conflicts of law thereof and shall be treated in all respects as an Ontario instrument. Any legal action or proceedings with respect to this Promissory Note shall be brought in the courts of the Province of Ontario, and such courts shall have non-exclusive jurisdiction to deal with all matters relating to the interpretation of, or enforcement of rights under, this Promissory Note.

#### 1.8 Enurement

This Promissory Note will enure to the benefit of and be binding upon HHI and the Corporation and their respective successors and assigns.

#### 1.9 Invalidity

Each of the provisions contained in this Promissory Note is distinct and severable and a declaration of invalidity, illegality or unenforceability of any such provision or part thereof by a

court of competent jurisdiction shall not affect the validity or enforceability of any other provision of this Promissory Note.

#### 1.10 Entire Agreement

This Promissory Note constitutes the entire agreement between the Corporation and HHI pertaining to the subject matter hereof and supersedes all prior correspondence, agreements, negotiations, discussions and understandings, whether written or oral.

#### 1.11 Time of the Essence

Time is of the essence of this Promissory Note.

#### 1.12 Limitation Periods

To the extent that any limitation period applies to any claim for payment of obligations or remedy for enforcement of obligations under this Promissory Note, it is agree that:

- (a) any limitation period is expressly excluded and waived entirely if permitted by applicable law;
- (b) if a complete exclusion and waiver of any limitation period is not permitted by applicable law, any limitation period is extended to the maximum length permitted by applicable law;
- (c) to the extent that any of the obligations arising under this Promissory Note are expressed to be payable on demand, the limitation period shall not begin before an express demand for payment of the relevant obligations is made in writing by HHI to the Corporation;
- (d) any applicable limitation period shall begin afresh upon any payment or other acknowledgment by the Corporation of its relevant obligations; and
- (e) this Promissory Note is a "business agreement" as defined in the *Limitations Act*, 2002 (Ontario) if that Act applies to it.

## ARTICLE 2 COVENANTS OF THE CORPORATION

#### 2.1 General Covenants

The Corporation hereby covenants and agrees with HHI as follows:

the Corporation will duly and punctually pay or cause to be paid to HHI, without any deduction or set-off whatsoever, the Principal Amount on the Maturity Date (or such earlier date as the Principal Amount may become due and payable under the terms of this Promissory Note) and interest accrued on the Principal Amount at the Interest Rate Per Annum on each Interest Payment Date, including the Maturity Date, and otherwise in the manner specified in this Promissory Note;

- (b) the Corporation will and will cause each Designated Subsidiary to maintain its corporate existence (provided however a Designated Subsidiary may cease to maintain its corporate existence if all of its assets are or have been conveyed to the Corporation or another Designated Subsidiary) and will carry on and conduct or will cause to be carried on and conducted its business and the business of its Designated Subsidiaries in a proper and efficient manner and will keep or cause to be kept proper books of account and make or cause to be made therein true and faithful entries of all its dealings and transactions in relation to its business and the business of its Designated Subsidiaries, as the case may be, all in accordance with Canadian GAAP, provided that nothing herein contained will prevent the Corporation from ceasing to operate or from causing any Designated Subsidiary to cease to operate any premises or property if in the opinion of the Directors it is advisable and in the best interests of the Corporation or the Designated Subsidiary concerned to do so;
- (c) the Corporation will maintain, and will take all necessary corporate actions to ensure that each Designated Subsidiary maintains, in force such policies of insurance in such amounts issued by insurers of recognized standing covering the properties and operations of the Corporation and its Designated Subsidiaries as are customarily held by similar entities engaged in the same or similar businesses in similar locations; and
- (d) the Corporation will, and will cause each Designated Subsidiary to, from time to time, pay or cause to be paid all taxes (including transfer taxes), rates, levies, payments in lieu of taxes, assessments (ordinary or extraordinary), government fees or dues lawfully levied, assessed or imposed upon or in respect of its respective property or any part thereof or upon its income and profits as and when the same become due and payable and to withhold and remit any amounts required to be withheld by it from payments due to others and remit the same to any government or agency thereof, provided however, that the Corporation and its Designated Subsidiaries shall have the right to contest in good faith and diligently by legal proceedings any such taxes, rates, levies, payments in lieu of taxes, assessments, government fees or dues and, during such contest, may deliver or defer payment or discharge thereof.

#### 2.2 Negative Pledge

The Corporation will not, and will not permit any Designated Subsidiary to, create, assume or suffer to exist any Security Interest on any of its assets to secure any Obligation without the prior written consent of HHI, provided that this Section 2.2 shall not apply to or operate to prevent the creation, assumption of existence by the Corporation or any Designated Subsidiary of Permitted Encumbrances.

#### 2.3 Amalgamation, Merger and Sale of Assets

The Corporation may not, in a single transaction or a series of related transactions, amalgamate or consolidate with or merge into any other Person, or permit any other Person to amalgamate or consolidate with or merge into the Corporation, or directly or indirectly transfer,

sell, lease or otherwise dispose of all or substantially all of its property or assets on a consolidated basis to any Person, except for an amalgamation, consolidation, merger, transfer, sale, lease or other disposition of property and assets that is not prohibited by the Trust Indenture.

#### 2.4 Limitation on Funded Obligations

The Corporation will not and will ensure that no Designated Subsidiary, directly or indirectly, guarantees, incurs, issues or otherwise becomes liable for or in respect of any Funded Obligations unless no default or Event of Default shall have occurred and be continuing at the time of, or as a consequence of, such Funded Obligation having been incurred and such Funded Obligation is otherwise incurred in compliance with the Trust Indenture.

### ARTICLE 3 DEFAULTS AND REMEDIES

#### 3.1 Events of Default

Each of the following events shall be an "Event of Default" in respect of this Promissory Note:

- (a) the Corporation fails to make payment of the Principal Amount when the same becomes due, whether at the Maturity Date or otherwise, and any such failure continues for a period of five days; or
- (b) the Corporation fails to make payment of any interest on any Interest Payment Date and any such failure continues for a period of 30 days; or
- (c) the Corporation fails to perform or observe any of its covenants under Sections 2.2, 2.3 and 2.4 of this Promissory Note; or
- (d) the Corporation fails to observe and perform any other obligation under this Promissory Note and such failure continues for more than 60 days after written notice thereof is provided to the Corporation by HHI; or
- (e) there occurs an "Event of Default" (as defined in the Trust Indenture) under the Trust Indenture.

#### 3.2 Acceleration

If any Event of Default occurs, HHI may in its discretion give notice to the Corporation Borrower declaring all Obligations owing under this Promissory Note or any of them to be due and payable, in which case all such Obligations shall be immediately due and payable without presentment, demand, protest or further notice of any kind, all of which are hereby expressly waived by the Corporation.

Notwithstanding the immediately preceding paragraph, upon the occurrence of an "Event of Default" (as defined in the Trust Indenture) under any of Sections 8.1(f), 8.1(g), 8.1(h) or 8.1(i) of the Trust Indenture then, without prejudice to the other rights of HHI, without any

notice or action of any kind by HHI, and without presentment, demand or protest, the Obligations owed by the Corporation under this Promissory Note shall immediately become due and payable.

#### 3.3 Enforcement by HHI

Upon the occurrence of an Event of Default and during its continuance, HHI may take such action or proceedings in compliance with applicable requirements of law that HHI, in its sole discretion, deems expedient to enforce payment of the Principal Amount, of interest accrued on the Principal Amount and of any other amounts owing under this Promissory Note, all without any additional notice, presentment, demand, protest or other formality, all of which are expressly waived by the Corporation.

HHI shall be entitled and empowered to file such proofs of claim or debt, amendments of proofs of claim or debt, petition or other document as may be necessary or advisable in order to have the claims of HHI allowed in any insolvency, bankruptcy, liquidation or other judicial proceedings relative to the Corporation or its creditors or relative to or affecting its property.

HHI shall also have power at any time and from time to time to institute and to maintain such suits and proceedings as it may be advised shall be necessary or advisable to preserve and protect its interests.

No delay or omission by HHI in exercising any right or power accruing to it upon the occurrence of an Event of Default shall impair any such right or power or shall be construed to be a waiver of such Event of Default or acquiescence therein, and no act or omission of HHI shall extend to or be taken in any manner whatsoever to affect any subsequent Event of Default or the rights resulting therefrom.

#### 3.4 Application of Money

Any money received by HHI following exercise of its rights pursuant to this Article 3 or as a result of legal or other proceedings against the Corporation or any Designated Subsidiary pursuant hereto, or from any trustee in bankruptcy or liquidator of the Corporation, shall be applied, as follows:

- (a) first, in payment or in reimbursement to HHI of its costs, charges, expenses, advances or other amounts incurred by HHI in connection with the enforcement of this Promissory Note, together with interest thereon as herein provided;
- (b) second, in payment of accrued and unpaid interest on the Principal Amount and other amounts of interest accrued and unpaid under this Promissory Note;
- (c) third, in payment of the Principal Amount; and
- (d) fourth, in payment of the surplus, if any, of such money to the Corporation.

#### 3.5 Remedies Cumulative

The rights and remedies of HHI under this Promissory Note are cumulative and are in addition to and not in substitution for any rights or remedies provided by applicable law. Any single or partial exercise by HHI of any right or remedy for a default or breach of any term, covenant, or condition in this Promissory Note shall not be deemed to be a waiver of or to alter, affect, or prejudice any other right or remedy or other rights or remedies to which HHI may be lawfully entitled for the same default or breach. Any waiver by HHI of the strict observance, performance or compliance with any term, covenant, or condition in this Promissory Note and any indulgence granted by HHI shall be deemed not to be a waiver of any subsequent default.

#### 3.6 Concerning Interest

- (a) All interest on the Principal Amount shall accrue from day to day and shall be payable in arrears, calculated on the actual number of days elapsed from and including, as applicable, the date of this Promissory Note or the previous Interest Payment Date to but excluding the next following Interest Payment Date. If interest is not paid on the date it is due, the Principal Amount shall continue to bear interest at the Interest Rate Per Annum from time to time, both before and after maturity, default and judgment, and overdue interest shall bear interest at the same rate, compounded monthly, and be payable on demand.
- (b) Any rate that is calculated with reference to a period (the "deemed interest period") that is less than the actual number of days in the calendar year of calculation is, for the purposes of the *Interest Act* (Canada), equivalent to a rate based on a calendar year calculated by multiplying that rate of interest by the actual number of days in the calendar year of calculation and dividing by the number of days in the deemed interest period. All calculations of interest and fees under this Promissory Note shall be made on the basis of the nominal rates described herein and not on the basis of effective yearly rates or on any other basis that gives effect to the principle of deemed reinvestment. It is acknowledged that there is a material difference between the stated nominal rates and effective yearly rates taking into account reinvestment, and that they are capable of making the calculations required to determine effective yearly rates.
- (c) If the date for payment of any amount of principal or interest in respect of this Promissory Note is not a Business Day, then payment shall be made on the next following Business Day.