

IN THE MATTER OF the Ontario Energy Board Act 1998,
Schedule B to the Energy Competition Act, 1998, S.O. 1998, c.15;

AND IN THE MATTER OF an Application by Horizon Utilities
Corporation for an Order or Orders approving just and reasonable
distribution rates and other service charges for the distribution of
electricity, effective January 1, 2015.

INTERROGATORIES OF
BUILDING OWNERS AND MANAGERS ASSOCIATION, GREATER TORONTO
(“BOMA”)

July 4, 2014

Interrogatories

1. Reference: Exhibit 2, Tab 6, Appendix 2-4, Horizon Distribution System Plan, Appendix D, Distribution System Plan Workbook; Customer Consultation Report, April 2014, page 17
 - (a) To what does Horizon attribute the small, non-representative sample (111 residential customers/8 business customers out of 247,000 customers) that filled out the online workbook? What would a statistically significant sample of (a) residential customers; and (b) business customers; be for this type of study.
 - (b) Confirm that no response from business customers (the 11) were included in the report.
 - (c) What steps will Horizon take to ensure that next year's study has a more representative sample?
 - (d) Ibid, page 20: 81% of residential customers reported an outage in the last twelve months. How many of the outages were due to the two severe storms in 2013? Were comparable studies done in earlier years? What were the results?
 - (e) Ibid, page 26: The results from residential and business customers differed as to whether the duration of, or number of interruptions during a year was more important. Why is this, in your view?
 - (f) Ibid, pages 27, 29:
 - (i) What is meant by the term "running-to-failure", as used in the workbook? Does Horizon interpret running-to-failure to mean replacing the system component when it fails? Please explain. Is it the same as adopting a reactive approach to managing the asset? Please explain fully.
 - (ii) It appears that a large percentage of both the residential and commercial respondents preferred running-to-failure "so long as resulting power service interruption is quickly restored" (page 29), as opposed to replacing equipment that is still working. What impact does this finding have on Horizon's approach to asset management. Please discuss.

Which of the twenty-two asset categories listed in the application does Horizon "run-to-failure"?
 - (iii) What evidence can Horizon offer on the relative costs of repairing/replacing the twenty-two asset categories when they fail, versus replacement (refurbishment, repair) prior to failure? Please discuss fully, and include among the costs incurred by replacing assets before failure, the opportunity cost of capital.

- (g) Ibid, page 37: Many food services establishments mentioned two hours as a maximum outage before food spoils. What efforts does Horizon take to ensure if there are outages, they can be restored within two hours?
- (h) Has Horizon considered establishing a reserve account for asset renewals as suggested by some of the business respondents? Please discuss.
- (i) Ibid, pages 39, 42: What information does Horizon provide its customers with respect to its energy efficiency, demand management, conservation, sustainability, renewable energy and distributed generation policies? Please discuss fully.
- (j) Ibid, page 40: Does Horizon advise customers, on a regular basis (state frequency), of how the funds it collects through rate increases are spent? If not, why not? Please discuss. Does it intend to discuss this issue more fully in the future?
- (k) Ibid, page 42: In repairing outages, what priorities does Horizon employ? Are businesses restored first? Please explain.
- (l) Ibid, page 43: How and how much does Horizon communicate with its customers during outages, with respect to likely duration, etc.? Please provide quantitative data if available.
- (m) Ibid, page 44: Does Horizon plan to have annual consultations with its customers along the lines of the current exercise? How does the consultation relate to the annual customer satisfaction surveys (Ex4, T3, App 4-1).
- (n) Ibid, page 45: Does Horizon have the ability to advise its business customers by email of information on outages, etc.? What about mobile apps that would provide updates to customer account contacts and service restoration times?
- (o) Ibid, page 45: What lesson did Horizon take from its experience during the 2013 ice storm and 2013 summer storm? What plans has it formulated for another severe storm?
- (p) Ibid, page 62: What would the answer likely have been had you asked, are you "satisfied" with the job Horizon is doing?
- (q) Ibid, page 66: Why in your view was the percentage about 50% in favour of spending to maintain the same level of outages, as opposed to further spending to reduce the frequency of outages?
- (r) Ibid, page 67: 35% had non-weather related outages. What were the main causes of these outages? What data can Horizon provide on the incidence of failure of different pieces of equipment that result in outages over the last few years.

- (s) Ibid, page 68: Why were outages for residents in multi-residential buildings under five stories much higher than the number of outages experienced by residents in buildings over five stories? What are most likely reasons and has Horizon been addressing them?
- (t) Ibid, pages 68, 69: Spend to maintain (46%) but to reduce (26%) outages in your area. Why does it vary by area, eg. Downtown Hamilton residents are more supportive of spending to reduce outages? Same question for duration.
- (u) Ibid, page 71: What is Horizon spending on new technology by type of technology 64% to 74%? What types of new technology has it invested in the last 5 years? In the next few years? Please provide dollar amounts.
- (v) Ibid, page 74: Why does the question posed omit buildings in the first option? Does this not bias the response?
- (w) Please provide a copy of the retainer and terms of reference provided to the consultant.
2. Reference: The 4kV and 8kV Conversion Program (Ex 2, Sch 6, Appendix 2-4, Appendix F, p4).

Preamble:

- The 2015-2019 tranche for this program comprises \$66 million of the total renewal expenditures of \$148 million over the IRM term. Total IRM plan capital is \$229 million including customer access, service and building capital.
 - The principle driver of the revenue deficiency is an increase in distribution system investments to review aging infrastructure and address declining system reliability (Ex 1, T2, Sch 6, p3 of 42).
 - The original (4kV/8kV) plan was initiated in 2008 using the distribution assets as the primary driver for renewal and conversion. Ibid. Appendix F
 - BOMA would like to have more information on the rationale for the 4kV/8kV conversion program, its history, and the calculations that demonstrate it is both necessary and desirable.
- (a) Id, p3: Please provide a copy of the original plan from 2008 and the 2009 update.
- (b) Id, p3: Please provide a copy of the AESI 2010 Substation Asset Condition Assessment (Id, p4).
- (c) Id, p3: Please provide a copy of the design model referred to on p3 (Id, p3).

- (d) Please provide in a single table, the condition assessment of the 28 substation assets, currently set out in pages 13-40 of Appendix F,
- (i) Please explain the "weightings" assigned to various (but often different) items in the substation ratings in pages 13-40. Provide examples to illustrate.
 - (ii) Please explain the difference in relative weightings of specific assets in the assessments. For example, in some of these assessments, the transformer condition is given a thirty percent weighting; in others, twenty-five percent.
 - (iii) How do the assessments and weightings of outdoor and indoor stations differ, eg. John versus Kenilworth?
 - (iv) For each station assessment in the Renewal Program compare the assessment with the assessments in the Kinetrics Study.
 - (v) What are the factors that are used to assign ACA for stations' civil structures?
 - (vi) Please explain what smart grid strategies will be incorporated in each component of the 4 kV/8kV conversion programs during the term of the customized IRM, 2015-2019.
 - (vii) (a) Please provide a table like those on pages 43 and 44, which show for each station and feeders which originate from it, for which work will be done on the 4/8kV conversion program during the 2014-2019 period, the capital expenditure per year per system component, eg. 4 kV to 13/27/kV conversions, station switchgear, and transformer poles. For the conversion program, provide a year by year description of the planned renewal/conversion per year which shows clearly which assets are being replaced with other assets, and which existing assets are being removed and not replaced and what interim upgrades to assets that will subsequently be removed or replaced are being made .
 - (b) Please explain how 4/8kV the station and line components were selected for work in the 2014-2019 period. Describe each category of asset, and in each operating region separately.
 - (viii) Which stations and the areas covered by feeders for those stations, has 4/8kV conversion work was done once the period 2008-2014, inclusive? Please provide the data which demonstrate the impacts on frequency of outages, duration, total repair cost, as compared to the data for these stations and feeders in the years before this work took place.
- (e) Preamble:

- A major initiative driving the increased renewed investment are Horizon's 4 kV and 8 kV Renewal Program (Exhibit 1, Tab 2, Schedule 6, page 13).
 - Exhibit 2, Tab 6, Schedule 1, page 16 of 74, Table 2-46; As noted above, the proposed 4 kV/8 kV related investments are approximately \$65 million over the IR term.
 - The Kinectrics Report conclusion, as summarized in part, by Horizon (Ibid, page 6 of 74) (See also Figure 2-1, Health Index of All Asset Groups, Ibid, page 6 of 74), included the statement that "Horizon Utilities substations infrastructure investments in recent years has been effective in improving the overall health of the substation asset groups as compared to the previous asset condition assessments. Substation transformers are in good shape with substation circuit breakers and switchgear being in adequate conditions. A small portion of breakers remain in poor condition."
 - Against this assessment, please explain why Horizon is contemplating replacing the twenty-eight substations with higher voltage lines over a forty year term, and \$65 million worth of expenditures of over the IR term alone on that project. (See also Figure 2-1, Health Index of All Asset Groups, Ibid, page 6 of 74).
 - Why is it economic and necessary for Horizon to continue a program that has as one of the primary objectives the removal of the remaining twenty-eight substations?

(f) Exhibit 2, Tab 1, Schedule 1, page 1: The Conversion

"Conversion to a higher voltage line will provide greater security as the higher voltage system is designed with more redundancy, better interoperability and requires no intermediary substation assets."

Please provide a more detailed explanation of each of these advantages, including a definition of which is meant by "more redundancy and better interoperability".

(g) Ref. DSP (Appendix F) p1

Please provide data from Horizon's experience which documents the extent to which the external lines losses for 4/8kV lines are higher than from 13-8kV and 27.6kV lines.

3. Reference: Summary of Application (Exhibit 1, Tab 2, Schedule 6)

Preamble: The major drivers of Horizon's Distribution System Plan include the necessary system renewal investments in the distribution system, especially 4/8K asset renewal program, underground renewal programs and buildings renewal programs.

- (a) (Exhibit 1, Tab 2, Schedule 6): Please confirm that Horizon uses a Health Index approach developed by Kinetrics to determine when assets should be renewed, through either replacement, refurbishment, more intensive maintenance or otherwise. Please differentiate that approach from an end-of-life approach, based on a design (nameplate) expected asset life. Please discuss.
- (b) With respect to the relevance of the Kinetrics ACA Report to the 4kV/8kV/station/renewal program, Horizon states at p4 of the Program Description (Appendix F6 to the DSP) that:

"The updated asset condition information has been used to update the plan, but this new information has just re-enforced the decisions made in previous years, and has had no material impact to the findings and necessity of the overall plan."

- (i) Please confirm that, Horizon does not rely on the Kinetrics Report to justify the content of the 4kV/8kV replacement plan. Please discuss fully.
- (ii) Please describe in detail the extent to which the 4kV/8kV/station asset renewal investments for 2011-2019 are determined by the Health Index of the relevant assets as determined by Kinetrics. To the extent that under the plan investments are made to replace assets that are not in poor or very poor condition with newer assets. Please discuss and justify. Please provide a quantitative analysis if possible.
- (c) Horizon states an unacceptable Health Index distribution occurs when:
- (i) at least 20% of the assets within the group have a H1 of either "very poor" or "poor"; or
- (ii) the assets within the group, which have a very poor or poor health index, require a significant five-year investment (greater than \$5,000,000).

Why does meeting only the second criteria result is an unacceptable HI? Isn't the asset condition the critical factor is, regardless of the likely required investment? Please discuss.

- (d) Please provide the comprehensive cost/benefit analysis of the 4kV/8kV replacement program that was done prior to launching the program.
4. DSP Appendix C. KPMG report:
- (a) Please provide the terms of reference/retainer letter or equivalent between Horizon and KPMG.
- (b) When was KPMG retained to review the Kinetric ACA. When was the final report submitted that "recognized Horizon feedbacks".

- (c) Please provide copies of the feedback Horizon provided to KPMG and the additional feedback Horizon supplied on Jan 21, 2014 and Jan 23, 2014 (see page unnumbered, entitled "Version Control" of KPMG Report).
 - (d) Please explain fully why Horizon hired KPMG to review the Kinetrics study.
 - (e) Please confirm that KPMG:
 - (i) did not do an independent condition analysis of the Horizon assets
 - (ii) did not create its own Health Index for those assets
 - (iii) KPMG accepted ACA effective ages, determined by ACA's work
 - (iv) agreed with Kinetric's choices as to which assets should be "reactively replaced and which assets proactively replaced", and agreed that the distinction was valid
 - (v) corroborated the Kinetric Flagged-for-Action list by essentially duplicating the calculations by which Kinetrics assembled the list from its effective age of assets analysis
 - (vi) concluded that the Kinetric consistently applied its methodology to arrive at effective asset dates, failure/survival curves, and for the production of a Flagged-for-Action list based on asset conditions. If the above an accurate characterization of what KPMG did, to the extent it is not, please explain.
 - (f) What does Horizon understand an independent assurance review to mean (p3).
 - (g) Id, p6: Please provide a copy of the KPMG questionnaire referred to in bullet 3.
 - (h) Please confirm your understanding that under the reactive replacement approach, the assets are replaced as they fail. If that the same as a run-to-failure approach.
 - (i) Please explain the shift in language from "in theory" to "in practice" in stating the advantages of reactive vs proactive asset replacement differential; "practice" on p9, (last section of second paragraph) vs "theory" in executive summary p1 (last sentence in fourth paragraph).
 - (j) Id, p13:
 - (i) What is meant by the term "normalized comparison"
 - (ii) What is meant by the term "look-up methods"
5. DSP Appendix E. Renewable Energy/Regional Plans
- (a) Please provide a copy of the Board letter dated March 28, 2013

- (b) P3:
 - (i) What is the average time between an application to connect counsel and a successful connection.
 - (ii) When does Horizon expect the remainder of the 54 applications to the connected
- (c) P5: Why does Horizon not intend to connect any solar facilities as owned by Solar Sunbelt General Partnership ("SSGP") during the IRM. Does SSGP not operate within the Horizon franchise. Please discuss fully.
- (d) P6: Please explain the rationale for the IEEE 1547 rule that generation on a feeder must not exceed 33% of the minimum feeder load. Please provide a copy of the IEEE 1547 document. How many of Horizon's feeders are length are in the same position as the one cited in the evidence. What measures has Horizon taken or is it taking to ensure that these requirements do not stymie the growth of distributed generation in its franchise. Are there any other technical conditions/constraints that have, or may limit the growth of distributed generation in its franchise..
- (e) P12: Given the small size of the typical rooftop solar project, why does Hydro One Nebo Transformer station lack capacity to handle it. Hydro One is currently expanding the capacity of Nebo. Will it be able to handle the generation. Please explain the nature of the constraint at Nebo. Please explain fully, especially the short circuit resilience issue.

6. Regional Plans

- (a) P23: Please provide more detail on the Brant sub-region IRRP. Please confirm that in both the Brant and the Burlington-Nanticoke plans all CDM options, including distributed generation are being considered. Please provide the draft plans.
- (b) P-: Will the 4kV/8kV conversion plan per se allow additional generation to be added the higher voltage feeders relative to the original 4/8kV. Please explain fully.

7. Ex1, T2, Sch 6, p1 – Summary of the Plan

Preamble: "The other (1-X) approach to IRM ratemaking will not result in sufficient regulated cash flow to support the rising investment requirements."

- (a) Please provide a quantitative analysis to demonstrate the truth of the above statement.

- (b) Please show what reductions in proposed CAPEX/OMA would be necessary to match the available cash flow from a traditional 1-X IRM using accepted Board numbers for inflation, productivity and stretch factors.

The above analysis should consider the particulars of Horizon's capital structure and dividend policy

- (c) Please confirm that the proposed IRM plan is essentially a 5 year cost of service plan. If not, please provide the characteristics that make it different from a 5 year cost of service plan and from 5 successive one year cost of service plans, Please explain fully. Illustrate the differences where appropriate.

8. Productivity (Ex4, T3, Sch4, p4, Table 4-43)

- (a) Please provide the supporting calculations that underpin the dollar value of productivity gain you have shown in table 4-43.
 - (i) Show the calculation separately for each of the 10 horizontal lines, Construction and Maintenance, IT & Tech, Customer Service, Supply Chain Management and Finance.
 - (ii) Please justify your assumption that in every case the productivity driven savings will last throughout the IRM period.
- (b) Given the importance of customer service to the "Horizon brand" as noted in the the 15th Annual Customer Satisfaction Study why would you contract out a portion of your customer service (call centre overload). Please provide a cost benefit analysis for that decision.

9. Annual Customer Satisfaction Survey

- (a) p8: How are "secure customers" and "at risk customers" defined?
- (b) p12: Are the "competitors" other utilities in Ontario or are they all the other businesses in Ontario that the contractor has surveyed.
- (c) p35: To what do you attribute the 73% rating on "provides good value for money", which is below the company's ratings on other criteria.

10. Revenue and Rates

- (a) 2015 revenue relative to 2014 revenue increased 11% for the residential class but 20% for general service under 50kV class and 26% for the general service over 50kV. Please explain fully the cost allocation changes, rate design, or revenue to cost ratio changes or other factors that account for these different rates of class revenue growth in the first test year. Please discuss fully.

- (b) p(iii) Please confirm that the Hydro One Transformer Station listed, and others that step down voltages are owned by HONI which is responsible for monitoring, maintaining, refurbishing and expending these stations. Where the station listed are approaching limited time ratings (please define) HONI that will deal with the issues in a timely fashion. Please provide details, including the amount of liaisons/communications Horizon has with HONI.
- (c) p(iii) Please confirm that the projected growth rate in energy (levels) for the IRM period is 25% for the utility as a whole. What are the forecast growth rates for each customer class

11. Ex4 – Operating Costs

- (a) Ex4, T1, S1, p4, Table 4-2: Please confirm that the cumulative IRM period cash flow from the application over what Horizon would receive in a 1- X IRM is found in columns 2015 and 2016 in the last line of the table and is approximately \$24 million. If not, please explain what the cumulative differential is over the 5 year period 2015-2019.
- (b) (i) Please provide the Table 2 comparison using the Board approved productivity of 72% for the 2012 and 2013 year rather than 0.
- (ii) Please justify applying 0% productivity retroactively to 2012 and 2013.

12. Operating Costs

Preamble. The Company's OMA cost per customer has risen from \$216.50 in 2011 (Board Approval as converted by MIFRS), to \$249.85 in 2014, to \$257.41 (2015 test year) to \$275.56 (2019 test year), an increase of 59.00 over a 8 year period on an average of \$7.5/year about 3.5 per year for 8 years. That seems excessive. Please explain the 2015 OMA of 62.6 million compared to the 2012 OMA of 51.5, an annual increase of 7%, which is even more excessive.

13. Interoperate Services and Corporate Cost Allocation

Preamble:

- The organization chart for which shows the ownership of Horizon Utilities ("HU") and its affiliated companies is found at Ex1, T9, Sch2, p3. Horizon also states (Ex4, T4, Sch 3, p1) that HU has 4 divisions, Electricity Distribution Operations ("EDO"), Customer-Care ("CC"), Conservation and Demand Management ("CDM") and Solar Solutions General Partnership ("SSGP"). BOMA assumes that CC and CDM are divisions of HU. The evidence states "the revenues, activities and financial accounts of CC and CDM are treated separately from EDO for the purposes of this application".

- With respect to the CDM and CC divisions of HU, services are provided by EDO to the CDM and CC divisions and vice versa.
- (a) Are the non-EDO divisions managed separately from EDO. Do they have their own management teams. Do they report to the President of EDO, or are they separately managed entities. If so, what is their purpose. Why are they accounted for separately, "for the application".
 - (i) When was the decision made to established these separate divisions and entities and for what reasons.
 - (ii) Please provide copies of the 2009 and 2014 Service Agreements between Horizon, its affiliate and separate divisions.
 - (iii) Please provide a copy of the Horizon's current Agreement with the OPA for CDM.
 - (iv) Please provide the number of FTES in the CDM division, or in EDO but doing CDM work.

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