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Ontario

BY E-MAIL

July 9, 2015

Kirsten Walli
Board Secretary
Ontario Energy Board
2300 Yonge Street, 27th Floor
Toronto, ON M4P 1E4

Dear Ms. Walli:

Re: Waterloo North Hydro Inc.
2016 Distribution Rate Application
OEB Staff Interrogatories
Board File No. EB-2015-0108

In accordance with Procedural Order No. 1, please find attached OEB staff's interrogatories in the above noted proceeding. Waterloo North Hydro and all intervenors have been copied on this filing.

Waterloo North Hydro's responses to interrogatories are due by July 31, 2015.

Yours truly,

Original Signed By

Jane Scott
Project Advisor – Electricity Rates & Prices

Attach.

Waterloo Hydro North Inc. (WNH)
2016 Cost of Service Rate Application
EB-2015-0108
OEB Staff Interrogatories
July 9, 2015

General

Staff-1
Updates

Upon completing all interrogatories from OEB staff and intervenors, please provide an updated RRWF in working Microsoft Excel format with any corrections or adjustments that WNH wishes to make to the amounts in the previous version of the RRWF included in the middle column. Please include documentation of the corrections and adjustments, such as a reference to an interrogatory response or an explanatory note.

Also upon completing all interrogatories from OEB staff and intervenors please provide any updates to the following Microsoft Excel documents in working format: PILS, any Appendix 2 changes (e.g. cost allocation, rate design, and bill impacts, and so on as required), EDDVAR spreadsheet, and the updated cost allocation model reflecting the revised revenue requirement in the updated RRWF.

Exhibit 1 – Administrative Documents

1-Staff-2
Ref: Exhibit 1, Figure 1.1
Figure 1.1 shows WNH's Corporate Entity Relationship Chart and Waterloo North Hydro Inc. as the only subsidiary of Waterloo North Hydro Holding Corporation. The Waterloo North Hydro website shows an additional subsidiary, entitled Lifetime Energy Inc.

(a) Please explain the relationship between Waterloo North Hydro Inc. and Lifetime Energy Inc.
(b) Confirm whether or not there are any transactions between the two affiliates, and if so please provide details.

1-Staff-3

Ref: Exhibit 1, Section 2.4.1.2, Strategic Imperatives Implementation, Table 1-2

Ref: Exhibit 2, Section 2.5.2.8, Service Quality and Reliability Performance, Table 2-37

(*Note that the second reference above is to the Table 2-37 found on page 95; the table numbers from page 88 to page 95 duplicate the table numbers which appear from page 62 to 66*)

In Tables 1-2 and 2-37 WNH Reliability Performance Targets, the SAIDI target is shown as 0.75-1.66 and the SAIFI target as 0.85-1.39.

(a) Please explain how WNH has arrived at these targets. OEB policy[1] establishes that a distributor's performance levels associated with SAIDI and SAIFI should remain within the range of its historical performance. In WNH's case, for reliability exclusive of supply and excluding major events, this should mean 0.75-0.88 for SAIDI and 0.85-1.86 for SAIFI.

(b) Please provide an explanation of why both duration and frequency of outages (excluding loss of supply and major events) have been increasing from 2011 to 2013.

1-Staff-4

Ref: Exhibit 1, Section 2.4.1.2, Strategic Imperatives Implementation

The results of the consultations with customers indicate that 84% of Residential respondents give 'social permission' for the proposed rate increase. How does WNH interpret the term 'social permission'?

1-Staff-5

Ref: Exhibit 1, Section 2.4.1.2, Strategic Imperatives Implementation

WNH has indicated that there have been cost savings as a result of moving into its new service center; namely 50% decrease in water use, 60% saving in energy and heating and cooling supplied by a geothermal field. Has WNH quantified these savings and where would they appear in the OM&A accounts or in Table 1-9?

1-Staff-6

Ref: Exhibit 1, Section 2.4.1.2, Strategic Imperatives Implementation

[1] Pg. 141, OEB 2006 Electricity Distribution Handbook, May 11, 2005

In 2014 WNH recorded a non-current derivative liability and a non-cash charge of $3.5M related to an interest rate swap agreement. The application states that "WNH has not budgeted any expense or income in the 2015 Bridge or 2016 Test Years as these balances fluctuate from year to year and are not known in advance.

(a) When this expense or income does materialize, please confirm that the ratepayer will either be held harmless if there is an expense or will not receive any compensation, if there is an income.
(b) Are there transaction costs related to this interest rate swap?
(c) If so, how are they accounted for?

1-Staff-7

Ref: Exhibit 1, Section 2.4.3, Customer Engagement

WNH indicates it was made significant efforts to engage its largest energy consumers. Please provide details of this effort, especially as it applies to the Large User and indicate what, if any, feedback WNH has heard and what impact this has had on the application.

1-Staff-8

Ref: Exhibit 1, Section 2.4.6, Administration

WNH has posted its most recent Conditions of Service on its website.

(a) Please identify any rates and charges that are included in the Applicant's Conditions of Service, but do not appear on the Board-approved tariff sheet, and provide an explanation for the nature of the costs being recovered through these rates and charges.
(b) Please provide a schedule outlining the revenues recovered from these rates and charges from 2011 to 2014 inclusive, and the revenues forecasted for the 2015 bridge and 2016 test years.
(c) Please explain whether, in the Applicant's view, these rates and charges should be included on the Applicant's tariff sheet of approved rates and charges.

1-Staff-9

Ref: Exhibit 1, Section 2.4.9, Letters of Comment

Following publication of the Notice of Application:

(a) Has WNH received any letters of comment in respect of this application?

(b) If yes, please confirm whether a reply was sent by WNH in response to such comments and if so, please file copies of such responses. If not, please explain why a response was not sent and advise whether WNH intends to respond and if so, indicate when responses will be filed with the OEB.

1-Staff-10

Ref: Exhibit 1, Attachment 1-1, Board Mandate

Point 5 of WNH's Board Mandate is to develop a Dividend Guideline.

(a) Please provide a copy of the Dividend Guideline.

(b) Please provide a history of dividends paid to the Holding Company for the last ten years.

1-Staff-11

Ref: Exhibit 1 – Attachment 1-8, Innovative Research Group, Inc. Customer Engagement Report

The report contained in Attachment 1-8 is dated April 2015. Please explain specifically what changes were made to this application as a result of the report before the application was filed on May 1, 2015.

1-Staff-12

Ref: Exhibit 1, Attachment 1-8, Innovative Research Group, Inc. Customer Engagement Report

In the above exhibit WNH describes its customer engagement initiatives and states that it conducted customer consultations and a workshop to discuss its 2016 rate application. Were any concerns raised about specific capital projects planned for 2016 during these consultations?

1-Staff-13

Ref: Exhibit 1, Attachment 1-8, Innovative Research Group, Inc. Customer Engagement Report, Residential Customer Primer, February 25, 2015, page 23

In the Residential Customer Primer, it was stated that the LRT is expected to spur development along the train route in both the residential and commercial sectors.

(a) When is the Light Rail Transit line expected to be completed?

(b) Was the expected development along the LRT line accounted for in the forecasted capital expenditures 2016-2020?
(c) If so, how?
(d) If not, why not?

1-Staff-14
Ref: Exhibit 1, Section 2.4.1.4, Budgeting and Accounting Assumptions
WNH has referred to 'Senior Management's overall spending plan' on page 55.
(a) Please provide a copy of Senior Management's overall spending plan, if available.
(b) If a copy is not available, please provide a description of the spending plan.
(c) Please explain how customer feedback and preferences are reflected in Senior Management's overall spending plan.

1-Staff-15
Ref: Exhibit 1, Attachment 1-10, 2014 Audited Financial Statement
Ref: Exhibit 3, Section 2.6.2, Load and Revenue Forecast
Note 2d in the above reference states that for the period 2011-2014 WNH achieved reductions of 7.5 MW and 62 GWh against the Conservation and Demand Management Targets in its license of 15.79 MW and 66.49 GWh respectively.
(a) Was this information based on final OPA (IESO) results?
(b) Has this failure to achieve the CDM targets been incorporated into the CDM adjustment to the load forecast provided in Exhibit 3?
(c) If so, how?

1-Staff-16
Ref: Exhibit 1, Attachment 1-14, OEB Issued WNH Scorecard
Please update the scorecard to include data for 2014.

1-Staff-17
Ref: Exhibit 1, Attachment 1-14, OEB Issued WNH Scorecard
Ref: PEG Report to the Ontario Energy Board, Empirical Research in Support of Incentive Rate Setting: 2013 Benchmarking Update, July 2014
Ref: EB-2010-0379, Spreadsheet Model for Benchmarking Ontario Power Distributors, May 7, 2015

WNH's scorecard shows that WNH has been assigned to Group 3 for Efficiency Assessment, based on the PEG July 2014 report. PEG has also provided LDCs with a spreadsheet that enables them to project future cost performance.

(a) Did WNH forecast their future cost performance for 2016-2020 based on the information provided in this application?

(b) If so, please provide the results.

(c) If not, please complete the forecast model, provide the results, any assumptions made and if WNH's efficiency assessment is forecasted to worsen, then please provide an explanation on why this is the case.

Exhibit 2 – Rate Base

2-Staff-18

Ref: Exhibit 2, Section 2.5.1.1, Overview, Appendix 2-BA

According to the Fixed Asset Continuity Schedules for 2011 to 2016, there were very few disposals for most fixed asset categories during this six year period. However, WNH's accounting policy is to remove assets from the accounts at the end of their estimated useful life (see Note 1 of the 2013 financial statements).

(a) Please explain why there are very few disposals on the fixed asset continuity schedules.

(b) Is Waterloo North in fact removing assets from its accounts at the end of their useful life? If so, why were no assets removed during this six year period for many asset classes?

2-Staff-19

Ref: Exhibit 2, Section 2.5.1.2, Gross Assets – Property, Plant and Equipment and Accumulated Depreciation, Table 2-20

Please provide a variance analysis for the Contributed Capital line in the above referenced table**.**

2-Staff-20

Ref: Exhibit 2, Section 2.5.1.2, Gross Assets – Property, Plant and Equipment and Accumulated Depreciation, page 44

(a) Please explain how relocations of fixed assets are accounted for. Are expenses related to relocations capitalized or expensed?

(b) Are any fixed asset disposals recorded related to the relocations?

(c) What is the net impact of the relocations on the rate base?

2-Staff-21

Ref: Exhibit 2, Section 2.5.1.3, Allowance for Working Capital

Ref: OEB Letter – Allowance for Working Capital, June 3, 2015

The letter at the above reference issued by the OEB indicated that that effective immediately, the OEB is a adopting a new default value of 7.5% (working capital allowance) of the sum of the cost of power and operating, maintenance and administration (OM&A) costs. As in the past, distributors who do not wish to use the default value can request approval for a distributor-specific working capital

allowance supported by the appropriate evidence from a lead-lag study or equivalent analysis.

Please indicate if WNH intends to adopt the 7.5% value in response to this letter or, alternatively, whether WNH plans to file a lead/lag study during the course of this proceeding.

2-Staff-22

Ref: Exhibit 2, Section 2.5.1.3, Allowance for Working Capital

Please update the working capital allowance calculation for the latest TOU and tiered RPP prices published by the OEB on April 20, 2015 in the Regulated Price Plan Price Report May 1, 2015 –April 30, 2016.

2-Staff-23

Ref: Exhibit 2, Section 2.5.1.3, Allowance for Working Capital, Table 2-24

According to Table 2-24, WNH has reduced the controllable expenses by $754k related to Allocated Depreciation. Please explain what this represents and why the adjustment was made?

2-Staff-24

Ref: Exhibit 2, Section 2.5.1.3, Allowance for Working Capital, Table 2-27

Ref: Exhibit 9, EDDVAR Model, Sheet 4

According to Table 2-27, WNH has no Residential or General Service < 50 kW customers not on RPP. Please confirm whether this is the case and if not, please adjust the Cost of Power calculation accordingly. Note that Sheet 4 of the EDDVAR Model shows non RPP kWh for these classes.

2-Staff-25

Ref: Exhibit 2, Section 2.5.1.4, Treatment of Stranded Assets Related to Smart Meter Deployment, Table 2-28

WNH states that it did not collect Contributed Capital from customers as part of the Smart Meter program implementation, and therefore no contributed capital is recorded in Table 2-28. However, the stranded meters are not smart meters; they are the conventional meters which were replaced by the smart meters.

(a) Please confirm that WNH did not collect a capital contribution for meters before the implementation of the Smart Meter program?

(b) If they did so, please include these capital contributions in Table 2-28 and recalculate the amount to be disposed.

(c) If not, please provide the reference in WNH's Conditions of Service in use at that time which indicates that the meter was part of the basic connection cost.

2-Staff-26

Ref: Exhibit 2, Section 2.5.2.2, Summary of Capital Expenditures, Table 2-31

Ref: Exhibit 4, Section 2.7.1, Table 4-1, Summary of OM&A Increases

The referenced table provides Capital Expenditures from 2011 to 2020.

(a) Please confirm that amounts for 2015 are forecasted, not actuals as stated.

(b) Please add 2011 Board approved capital expenditures (additions) to Table 2-31 in the OEB investment categories.

(c) Also please add a line showing the capital contributions for each year.

(d) The table below shows the following total expenditures for the forecast period:

$M	2015	2016	2017	2018	2019	2020
Total	21.3	19.1	18.9	18.8	17.6	17.9

The table shows forecast capital spending of approximately $21.3 million in 2015. The forecast level of spending for 2016-2020 is approximately $18.5 million each year. Please explain WNH's approach to the pacing of capital expenditures in the 2015-2020 period. Did WNH consider delaying any of the proposed 2015 or 2016 projects to have a more even spending profile throughout the forecast period? What would be the risks associated with such an approach?

(e) Please provide updated information for 2015 based on most recent actuals compared to the forecast provided in Table 2-31.

(f) The amounts shown for System Operations for 2015 and 2016 in Table 2-31 do not agree with the dollars shown on Table 4-1. Please reconcile.

2-Staff-27

Ref: Exhibit 2, Section 2.5.2.4, Capitalization of Overhead, Table 2-35 Overhead Rates

Please explain the 71% (from $55 to $94) increase from 2014 to 2015 in the vehicle rate for both a Tension stringer and puller and a Tension puller.

2-Staff-28

Ref: Exhibit 2, Section 2.5.2.8, Service Quality and Reliability Performance

Telephone Accessibility and Telephone Call Abandon Rate both exceed minimum standards[2]; however they show some volatility over the last five years.

(a) Please provide an explanation for the volatility.

(b) Please describe any planned initiatives to improve consistency in telephone service.

2-Staff-29

Ref: Exhibit 2, Section 2.5.2.2, Capital Projects Table 2011-2016, Table 2-38

From Table 2-38 for 2011 Board Approved compared to 2011 Actual, the following can be deduced:

	# of material projects in Board approved 2011 Capital Plan	# of material projects in Board approved 2011 Capital Plan with no actuals	% of material projects in Board approved 2011 Capital Plan completed	# of material projects in 2011 with actuals but not included in Board approved 2011 Capital Plan
System Access	15	12	20%	6
System Renewal	18	17	5.5%	24
System Service	2	1	50%	2

While OEB staff appreciates that it can be difficult to accurately forecast projects, especially those that are driven by a third party (System Access), the above would indicate that WNH's ability to forecast is rather poor. Has WNH done anything to improve its forecasting ability for 2016?

2-Staff-30

Ref: Exhibit 2, Table 2-38, Capital Projects Table – 2011-2016

In Table 2-38 WNH has provided a list of 2016 capital projects. The total Test Year 2016 gross capital expenditure for all projects is $19,078,917 (before including contributed capital).

[2] Sections 7.6 and 7.7, OEB Distribution System Code, April 15, 2015

(a) Are all of the projects and related capital expenditure of $19,078,917 that are listed in Table 2-38 expected to be placed in-service in 2016 and to be added to the 2016 Rate Base?

(b) If some of the projects that are listed in Table 2-38 are not expected to be in-service in 2016 and as a result will not be added to the 2016 Rate Base, please identify all such projects, the associated capital expenditure and the expected in-service date.

2-Staff-31

Ref: Exhibit 2, Table 2-1, Summary of Rate Base

WNH's forecasted 2016 rate base has increased by 44% from 2011 Board Approved.

(a) In its annual capital planning and implementation for the years 2011 to 2016 did WNH take into account the cumulative impact its capital expenditures would have on rate base and rates in 2016?

(b) How did this inform the pacing of investments identified in the DSP for 2016 forward?

2-Staff-32

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan

(a) Did WNH have any external assistance in preparing the Distribution System Plan? If so, please indicate who and the extent of their involvement.

(b) Did WNH have an external party review the Distribution System Plan? If so, please provide a copy of their comments.

2-Staff-33

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan

The DSP is lacking information on unit counts and unit costs that are used as assumptions to forecast investment amounts for the future years. If available, please provide the following information for each of the investment categories and project/material sub-project, for each of the years 2011 – 2020, detailed enough to calculate the investment amounts in the DSP:

(a) Number of asset components installed and to be installed.

(b) Number of asset components removed and to be removed.

(c) Capitalized cost per asset component.

2-Staff-34

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, pages 13 & 89

On page 13 WNH states "WNH's Mission, Vision, Corporate values and Strategic Imperatives that define the organization and are considered in strategic planning: Vision…Corporate Values…Strategic Imperatives…". In total 9 Strategic Initiatives are listed on page 13.

On page 89 WNH also states "For asset management purposes 7 of WNH's Strategic Imperatives have been adopted as Asset Management Objectives…" and then goes on to list the 7 strategic imperatives. WNH extensively outlines that each project aims to address some of these imperatives. In the Project Summaries, WNH has only referenced 5 of the Strategic Initiatives, not including Employee Relations and Development, Financial Performance and Shareholder and Community relations.

(a) Where applicable, for each of the capital projects and material capital sub-projects in Appendix G please identify and describe how the proposed project addresses the indicated strategic imperative(s).

(b) Why are only 5 of the 9 strategic imperatives addressed in project justifications in Appendix G?

(c) Please identify if only qualitative analysis, quantitative analysis, or both were completed to assess the impact contributed by each project and material sub-project in Appendix G to their respective strategic imperatives.

(d) Where analysis has been indicated in part c above please provide the documented analysis.

(e) Where an analysis has not been indicated please describe how WNH has determined that the proposed project or material sub-project addresses the strategic imperatives.

2-Staff-35

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, Table 1-4

In the table summarizing the average number of customers:

(a) Please explain how the customer growth has been projected mathematically.

(b) Please provide a sample calculation to illustrate with a step-by-step explanation.

2-Staff-36

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, Figure 1-4

In the referenced figure illustrating WNH peak demand:

(a) Please provide the goodness of fit of the two trend lines in the figure.

(b) Were these trend lines used to forecast future customer demand?

(c) Please provide alternative trend lines which do not assume linear growth but which are rather selected for best fit.

2-Staff-37

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, Table 1-5

(a) If available, please provide reports and/or analysis on power quality issues for each of the 20 largest customers provided in Table1-5 completed by WNH since 2011.

(b) Please describe how WNH addresses the special needs of its GS > 50kW and Large Use customers; contrasted to the way needs are addressed for smaller customer loads.

(c) Please provide a summary of any recent issues and resolutions with service to WHN's one large user.

(d) Do any projects/sub projects address the needs of the one large user?

2-Staff-38

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, page 19

WNH states *"The diverse nature of WNH's customer base indicates that the LDC is at very low risk of its largest customers discontinuing operations and stranding assets."* And *"WNH makes every effort to understand the benefits and challenges of its unique services area and integrate this information into its planning and investment decisions."*

Why does WNH believe that the LDC is at low risk of discontinued service by its largest customers?

2-Staff-39

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, page 25

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, page 37

WNH states *"The plan [DSP] was also informed by WNH's condition assessments and asset management plan, and by WNH's distribution system performance metrics".* In other sections WNH uses the Health Indices report developed by Kinectrics to support this DSP.

(a) Please provide WNH's condition assessment report and/or the Health Indices report by Kinectrics used to develop this DSP.
(b) Please provide WNH's asset management plan used to develop this DSP.
(c) Please provide any other report or study developed internally or by a 3rd party that was used by WNH to develop this DSP.

2-Staff-40
Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, pages 28 & 29
Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, page 91
Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, page. 103
The Asset Management Framework shown on Figure 3-1 describes a comprehensive framework implemented by WNH to drive optimal asset management decisions. It also outlines that all assets have undergone a condition assessment, are identified if they are under performing or at risk, and evaluated through a risk assessment. In addition, WNH in Section 1.3.2 System Renewal states *"WNH has established comprehensive data collection, asset inspection, testing, and maintenance programs to provide for continuous condition assessment and remediation of distribution system assets."* And *"WNH's projects have been identified by their age and condition as requiring replacement."*
For the risk assessment, WNH states on page 103 of this DSP that it *"… uses qualitative and semi-quantitative risk assessment methods to determine the severity of the asset condition or performance and the probability of occurrence. WNH's qualitative methods are based on the judgment, skills and experience of specialists and experts. WNH's semi- quantitative methods use classifications such as low, medium, high or immediate to provide relative levels of risk".*

(a) For each asset component please provide the following information in regards with the asset condition assessment:
    1. A list of factors included in the calculation of the asset condition and a formula used to calculate a condition.
    2. A measure of availability (in percent) of data used to calculate the asset condition relative to the actual formulation.
    3. Is there a threshold of data availability below which a condition assessment cannot be completed?
(b) Please describe a methodology or provide documentation, if available, used by WNH to identify underperforming or at risk assets, and to perform an asset risk assessment.

(c) Please provide a description of risk qualitative and semi-quantitative assessment methods. Please explain how both these type of methods are used together for risk assessment. Please identify whether risk is assessed at the asset level or only at a project level.
(d) For each of the considerations given to the age, condition, risk please provide a breakdown of how much each influences the determination of project impact when identifying and prioritizing projects, if available.
(e) Please provide a list of assets have been identified for the purpose of the current DSP as underperforming or at risk, with associated condition assessment rating and risk assessment rating, if available.
(f) Please identify those assets from part e that are included in 2016 projects and what projects in Appendix G of the DSP they are part of.
(g) Please identify those assets from part e that are included in 2017 – 2020 capital spending in the DSP.

2-Staff-41

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, page 31

WNH states *"...SCADA & Communications work which involves integrating devices such as electronic reclosers and fault indicators into WNH's SCADA and Outage Management System. These improvements will reduce the time needed to restore power to customers during an unplanned outage."* In addition, in the 2016 Capital Project Summary, WNH justifies the project that includes installation of reclosers, fault indicators and a pilot project for automating underground switchgear.

(a) Please provide a description of how locations and feeders are determined for the installation of automation and communication such as electronic reclosers and fault indicators.
(b) Please provide a list of Worst Performing Feeders (WPF) for each of the years, 2011 – 2014.
(c) Please provide locations and feeders that had 22 reclosers installed in 2014. Please provide a description of how locations were determined for the installation of reclosers for 2014 project. Please identify how many reclosers in 2014 were installed on the feeders from the WPF list.
(d) Please provide explanation of capital spending of $1,181,173 on Distribution Automation in 2015.

(e) Please provide locations and feeders that have new reclosers installed in 2015. Please provide a description of how locations were determined for the installation of reclosers for 2015 project. Please identify how many reclosers in 2015 were and will be installed on the feeders from the WPF list.

(f) Please provide locations and feeders where the 20 new reclosers are going to be installed at in 2016. Please provide a description of how locations were determined for the installation of reclosers for 2016 project. Please identify how many reclosers in 2016 are to be installed on the feeders from the WPF list.

(g) Please fill out the following table below:

	2014	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
# of reclosers installed							
Capital cost per recloser							
# of underground switchgear installed							
Capital cost per underground switchgear							

(h) Please confirm that no further investments in communication infrastructure are required to support overhead and underground distribution automation project till 2020 as planned. If further investments are required, please identify the amounts to be spent for each of the years, what category and what project includes these investments and provide project details.

(i) Please provide 2011, 2012 and 2013 Annual Service Continuity Reports.

2-Staff-42

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, page 36

WNH states *"...WNH's own analytics to determine Typical Useful Life (TUL) of its assets".* Please provide a list and description of WNH's "own analytics".

2-Staff-43

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, page 38

WNH states "...*WNH's historic renewal investments in underground lines have been focused for the most part on its oldest and poorest performing assets (Group 1);…"* and *"WNH also has been experiencing an increase in condition and reliability problems with the oldest sections of WNH's 15 kV direct buried underground distribution (Group 2)…*" Please quantify the reliability impacts on SAIDI and SAIFI associated with these assets for 2011 – 2014.

2-Staff-44

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, page 39

WNH states *"All 5 [4.16 kV MSs] are scheduled to be retired by 2018 in coordination with the rebuilding of the last of WNH's 4.16 kV distribution. Major components of these stations will range in age from 41 to 69 years at retirement.*" How have expected proceeds from the sale of MS properties been accounted for in the total capital requirements?

2-Staff-45

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, page 44

WNH states that it "*has reduced line losses from 5.0% in 2006 to 3.4% in 2014 through these and other initiatives*".

(a) What System Line Losses are projected by WNH in 2015 – 2020 through a retirement of the remaining 5 MS's by 2018?

(b) Please provide a breakdown of the initiatives leading to improved system losses.

2-Staff-46

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, pages 44-45

In these two pages WNH lists the following savings:

- Line losses: *"…savings that flow directly to the benefit of the ratepayers in the lower cost of power. Currently savings are estimated to be $2.4 million annually."*
- DS decommissioning: *"Total annual savings in Stations O&M are estimated to average $100,000 annually."*

- Distribution Automation: *"Total annual savings in O&M by the end of 2016 are expected to average $12,000 annually. This will increase over the forecast period with investments proposed in this DS Plan, to approximately $40,000 annually."*
- AM Software: *"Total annual savings in O&M by the end of 2016 are expected to average $90,000 annually."*
- 4.16kV retirement: *"Total estimated savings in inventory costs of $112,000 are expected as the 4.16 kV distribution system is retired by 2018."*

With respect to the above savings:

(a) Please provide calculations of all benefits in the form of an Excel spreadsheet.

(b) Please note any assumptions made within the spreadsheet.

2-Staff-47

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, page 45

Ref: Exhibit 4, Operating Expenses, Table 4-7, Cost Driver Table

WNH states "*Implementation of asset management software along with the investments already made in GIS, ODS, and Cognos will allow WNH to have stronger and more efficient practices in asset health determination, asset prioritization and investment planning. Currently this is still a labour intensive process for WNH. Total annual savings in O&M by the end of 2016 are expected to average $90,000 annually*". Thus, total savings over a five-year period 2016 – 2020 can reach about $450,000.

Is $90,000 in annual savings in O&M in asset health determination, asset prioritization and investment planning shown in Table 4-7 – Cost Driver Table? If yes, please explain what cost drivers include these annual savings.

2-Staff-48

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, page 47

WNH states *"…adaptive maintenance program based on inspection findings and keeping with industry best practices"*.

(a) Please highlight "Best Practice" activities undertaken by WNH in the area of maintenance and asset management.

(b) Please provide any reports/studies completed internally or by a third party to benchmark WNH's practices with industry best practices.

2-Staff-49

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, page 48

WNH states *"…Seeking to enhance its current heuristic approach to cost minimization with an algorithmic based tool set."* Please provide a description of the heuristic approach currently utilized by WNH.

2-Staff-50

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, page 50

WNH states *"…To mitigate the risk of variable System Access requests, WNH attempts to pace Condition and Performance investments with Mandated and Customer-Driven investments in a strategy to develop executable and sustainable investment plans."*

(a) Please clarify how WNH uses the variable nature of system access requests in the pacing of other investments.

(b) Please illustrate the above using an example.

2-Staff-51

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, Section 2.3

WNH identifies performance indicators that provide "*feedback as to the effectiveness of its operating performance*". WNH provides the following indicators:

"Customer Oriented Performance

- *Consumer Bill Impacts;*
- *Reliability;*
- *Power Quality;*
- *Stray Voltage.*

Cost Efficiency and Effectiveness with respect to Planning Quality and DS PLAN Implementation

- *Planning Quality Indicators;*
- *Operating Efficiency Indicators;*

Asset and/or System Operations Performance

- *Supply System Reliability Indicators;*
- *Typical Useful Life (TUL); and*
- *Asset Health Indices"*

(a) Please provide a description of specific measures and metrics for each of the aforementioned indicators. For each of the measures and metrics

please provide a brief description of its purpose, form (e.g. formula if quantitative metric) and motivation (e.g. consumer, legislative, regulatory, coporate). Please use the following table:

Indicator	Measure/metric	Purpose	Form	Motivation
Customer Oriented Performance				
Consumer Bill Impacts;				
Reliability;				
Power Quality;				
Stray Voltage				
Cost Efficiency and Effectiveness with respect to Planning Quality and DS PLAN Implementation				
Planning Quality Indicators;				
Operating Efficiency Indicators				
Asset and/or System Operations Performance				
Supply System Reliability Indicators;				
Typical Useful Life (TUL);				
Asset Health Indices				

(b) Please provide targets and actual values for each of the measures or metrics for each year 2011 – 2014 and an outlook till the end of 2015.

(c) Please provide targets for each of the measures or metrics identified on this page for each of the years 2016 – 2020, if available.

(d) Please provide a detailed description of the methodology used to forecast each of the measures or metrics for 2016 – 2020 and specific calculations that were used to come up with the forecasted values (in MS Excel spreadsheet).

2-Staff-52

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, page 67

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, page 89

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, Appendix G

One of the asset management objectives outlined by WNH is Reliability. Reliability is also identified as a performance indicator used by WNH to measure Customer Oriented Performance and Asset and/or System Operations Performance. In addition, reliability improvements are often identified as a main driver for capital projects.

(a) Please provide the projected reliability metrics (SAIDI and SAIFI, excluding Major Event Days, with and without Loss of Supply) for the forecast period 2016 – 2020 considering all investments proposed are executed.
(b) Please provide the same projected reliability metrics for the forecast period for each investment category, if available.
(c) Please provide the quantitative reliability (Customer Minutes Interrupted and Customer Interruptions) impact or benefits of each of the projects in Appendix G, if available.
(d) Please provide a minimum system renewal and system service capital spending amount in 2016 – 2020 that is required to maintain system reliability within the identified target level of SAIFI 0.75 – 1.66 and SAIDI 0.85 – 1.39 exclusive of Major Event Days and Loss of Supply (as identified in Table 2-9: WNH Reliability Targets, Exhibit 2, Attachment 2-1, page 74).

2-Staff-53

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, page 68

WNH states that "*An analysis of bill impacts for all customer classes …forms part of the decision making process before the final investment plan is approved by WNH senior management and the WNH Board of Directors*." What instructions did the WNH Board of Directors provide to WNH staff with respect to bill impacts for all customer classes resulting from this 2016 application?

2-Staff-54

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, page 73

Significant portion of the capital plan is being delivered by contractors. "*WNH utilizes a mixture of permanent staff, part-time staff and contract services to execute its investment plans in a cost effective manner. WNH maintains relatively consistent staffing levels which allows it to perform most of the O&M work; approximately 65% of annual capital overhead construction and approximately 90% of all capital engineering work. In underground capital construction 100% of*

the civil work and 80% of the electrical installation is completed by contracted services. In stations, nearly 100% of all O&M is performed by WNH staff. Capital projects vary considerably project by project. Overall, contracted services are utilized where they can be most effective in both cost and execution".

(a) What is a total capital spending portion of system access, system renewal and system service to be delivered by contractors in 2011 – 2015?

(b) What will be an average percentage of work in these three programs delivered by contractors in 2016 – 2020?

(c) How does WNH compare costs effectiveness and efficiency between contractors and work done internally?

(d) Has WNH completed any analysis or study to compare cost effectiveness and efficiency between contractors and internal construction crews? If yes, please provide all documentation related to any analysis or study.

(e) Has WNH investigated an option to perform capital construction of the civil work by internal crews?

(f) Please provide an average contract price or an average unit price increase for capital construction costs for civil work, overhead construction, underground construction for each of the year 2011 – 2015 and a forecast for 2016.

(g) What procedures and practices does WNH have in place to ensure that contractors have enough incentives for continuous improvement and do not raise an average unit price by more than inflation minus productivity factor?

2-Staff-55

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, page 75

"*WNH believes its Depreciation Componentization List to be in general compliance to the Kinectrics Report. All but 2 of WNH's adopted TUL's fell within the study's minimum – maximum ranges. In the first instance, WNH has assigned a TUL of 45 years for its overhead conductor assets instead of 50 years. This is due to the fact that in most renewal projects, the conductors need to be replaced at the same time as the pole. The TUL of WNH's poles is 45 years. In the second instance, WNH's TUL for towers/cable, antenna was set at 50 years. The report minimum TUL was 60 for this category. This has not been the experience of WNH nor its communication service provider. For the remaining assets, 23 agree with the min TUL, 13 are in mid-range and 10 agree with the Kinectrics Report's maximum TUL*".

(a) Please identify distribution and transmission asset components that WNH agreed with the Kinectrics Report's maximum TUL.
(b) Please identify other asset components that WNH agreed with the Kinectrics Report's maximum TUL.
(c) Please provide documentation used by WNH to justify min TUL within Kinectrics report's range for each of the asset components.
(d) Please provide asset failure data analysis, asset scrapped data analysis, and any other analysis based on the asset age used to justify the useful life for each of the asset components in WNH system.
(e) Please calculate Depreciation for 2016, if WNH were to apply mid-range values for each of the asset components that currently have min TUL, and also if WNH were to apply maximum TUL for those asset components.

2-Staff-56

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, page 77

WNH states "*The bill impact feedback WNH received through its customer consultations has been considered in the development of this DS Plan*". However, in Exhibit 1, Attachment 1-8, Innovative Research Group, Inc. Customer Engagement Report, Workbook Appendix: Waterloo North Hydro's 2016 Rate Application Review, page 19 informed customers that an anticipated increase of the WNH distribution portion is to be 2.9% instead of an actual increase 5.49% – 16.46% for Residential, General Service, and Large Users, as indicated in Table 1-13 – Total Bill Impacts, Exhibit 1, p. 75.

In addition, in Exhibit 1, Attachment 1-8, Innovative Research Group, Inc. Customer Engagement Report, Workbook Appendix: Waterloo North Hydro's 2016 Rate Application Review, page 77, customers identified "lower/reduce rates" as the most important service amongst all the others (except "nothing" and "don't know") improvement that WNH can do. Moreover, the number of customers that picked "lower/reduce rates" response is higher than all the other reasons combined ((except "nothing" and "don't know").

(a) Please explain how a 2.9% rate increase that was shown to the customers in the workbook and 76% acceptance of this particular rate increase were considered in preparation of the DSP.
(b) Please explain if a higher priority has been given to the projects that provide a rate reduction or if postponing system renewal, system service and general plant investments to post rate filing period (after 2020) were analyzed to consider the biggest customer preference "lower/reduce rates"

when they were asked to how WNH could improve their service. If yes, please provide the details.

(c) Please describe what options WNH considered in refining the DSP following customer engagement.

(d) Please explain in detail cost drivers that led to the increase from the forecasted rate increase of 2.9% in January 2015 to 5.49% - 16.46% rate increased in the submitted application in May 2015.

(e) Can WNH ensure that the support rate of 76% acceptance of rate increase would have been the same if the customers had known that the actual rate increase is in the range of 5.49% – 16.46% instead of 2.9%?

2-Staff-57

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, Table 2-12

Please explain how an overall WNH Historical Staffing Level is used "*to monitor distribution system planning process performance.*"[3]

2-Staff-58

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, page 83 7

Please explain how WNH uses "TUL" as a performance indicator.

2-Staff-59

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, page 88

With respect to section 3.0 Asset Management Process; please list any asset management standards which are utilized by WNH and describe the extent to which their requirements are embedded in the process.

2-Staff-60

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, Section 3.1

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, Appendix G

WNH states "*WNH's Asset Management strategy identifies and prioritizes investments that achieve multiple objectives to aid in maximizing the value of its investments. It also considers maintenance and refurbishment alternatives to lower the life cycle costs of its assets*". Further in the document WNH describes an asset management prioritization process. Appendix G identifies investment priority for each of the project in the Part B of the project summary description.

[3] p. 11, section 5.2.3.a, OEB Filing Requirements for Electricity Transmission and Distribution Applications Chapter 5, March 28, 2013

(a) Please provide a document that describes a prioritization method with values and weighting that is used by WNH to prioritize investments.
(b) Please describe a scoring system or a tool utilized by WNH to assign a value to a project in accordance with the asset management objectives.
(c) Please explain how project costs are taken into account through a prioritization process.
(d) WNH has a ranking investment priority score from 1 to 15 for each of the projects described in Appendix G. However, a rank of 1 is missing. Please identify what project has a ranking #1.
(e) Do the sub-projects identified within each of the project have the same or different investment priority? Please explain. If priority scoring is performed at a sub-project level, please provide a score for each of the sub-project identified in Appendix G. Please describe life-cycle cost calculations methodology for its assets and life-cycle cost components that are used by WNH to consider maintenance and refurbishment alternatives.

2-Staff-61
Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, page 89
Ref: ISO 55000 Standards for Asset Management
WNH "*for asset management purposes 7 of WNH's Strategic Imperatives have been adopted as Asset Management Objectives*". As indicated by ISO 55000 Asset Management standard, an asset management objective should be specific and measurable. Please provide specific and measurable objectives for each of the strategic imperatives that guided the Asset Management Strategy and ultimately the Distribution System Plan.

2-Staff-62
Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, page 90
WNH states that "*The ranking of these objectives [strategic imperatives] has proven to remain consistent over time and has guided WNH's Asset Management processes*". Please provide a ranking of asset management objectives that guides WNH's Asset Management processes.

2-Staff-63
Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, page 94
Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, page 103

WNH states on page 94 *"Deficiencies are categorized by the degree of noncompliance to a target, the estimated time to failure and consequence of failure."* On page 103 "*As previously stated WNH's asset condition, age and performance targets are either prescribed (i.e. OEB, IESO) or adopted (i.e. IEC, IEEE, CEA, industry best practices). Utilizing the judgment, skills and experience of in-house and contracted subject matter experts, WNH analyses and compares actual asset condition and performance to target parameters. The degree to which these targets are approached or exceeded helps define the relative probability that the asset may physically fail or may fail to meet performance targets*".

(a) Please identify all the performance targets used by WNH to develop the DSP and consequential actions that WNH takes to remediate a failure of the asset to meet the target.
(b) For each project and material sub-project please provide the degree of noncompliance to a target (along with the target), estimated time to failure, and consequence of failure.

2-Staff-64

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, pages 109-118

Please provide the following information for all TS equipment that is planned to be replaced in 2016 – 2020:

(a) Asset condition assessment as a result of the latest maintenance and inspection program that justifies proactive replacement and/or refurbishment/upgrade of the unit (apart from just using TUL).
(b) For each asset unit, please provide project # in Appendix G of the Distribution System Plan that replaces or refurbishes/upgrades this unit.

2-Staff-65

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, page 120

Please provide asset condition assessment for transformers DS #27 and DS #29 as a result of the latest maintenance and inspection program as well as oil testing results.

2-Staff-66

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, pages 120-126

WNH states that "*based on the analysis of condition assessments performed by Kinectrics and WNH, WNH expects to replace approximately 550 – 650 poles per year during the 2016 – 2020 time frame*".

(a) Please reconcile a statement that "*poles with remaining fibre strength between 50% and 67% are scheduled to be replaced in 1 - 2 years*" on page 123 with a statement "*poles with a health index of "Very Poor" and poles with a remaining wood fibre strength of < 67% present a high risk of failure, and are recommended to be replaced within the next 12 months*" on page 126.

(b) Please provide a justification to replace 550 – 650 poles a year during 2016 – 2020, considering that a total number of poles in Very Poor, Poor and Fair condition is 1,257.

(c) Please identify how 550 – 650 poles to be replaced annually are distributed amongst projects identified in Appendix G of the DSP.

(d) Please provide data that shows the percentage of structurally failed poles that have a remaining fibre strength of 50% - 67%.

(e) Please provide a distribution of fibre strength test results for poles by each of the age group.

2-Staff-67

Ref Exhibit 2, Attachment 2-1, Distribution System Plan, page 126

According to the above reference, approximately 100 poles are replaced per year due to relocations, damage from motor vehicle accidents, service upgrades, etc.

(a) Are costs of the replacement poles capitalized or expensed? If the costs are capitalized, what amount was capitalized related to replacement poles in 2014?

(b) How were the replaced poles recorded in WNH's accounts?

(c) Were amounts removed from account 1830 but not included in the "Disposals" column on the fixed asset continuity schedules?

(d) If so, what amount of NBV was removed from Account 1830 for 2011 to 2014?

(e) How are the costs related to the removals and replacements reflected in the current rate proceeding?

(f) What is the net impact of the removals and replacements on the rate base?

(g) What is the estimated NBV of poles included in the 2013 financial statements that are no longer in service? The following factors suggest the NBV of these poles may be material:

- WNH's accounting policy is to only remove assets that are not specifically identifiable at the end of the estimated average services life.
- 45 year estimated service life for the poles
- WNH replaces approximately 100 poles per year due to damage, relocations, etc.

2-Staff-68

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, pages 127-130

WNH states "*Currently at 36-37 years of age and past their TUL, the oldest sections of WNH's 15 kV direct buried underground distribution has been experiencing an increase in condition and reliability problems. Proposed investments for the replacement of these assets are included in WNH's DS Plan*".

(a) What parameters are used to identify a cable condition?

(b) Please provide failure data that will support this claim.

(c) Please provide a failure data for direct-buried cables that shows a correlation of cable age and increased failure rates per meter of cable.

2-Staff-69

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, pages 131-135

Please describe the rationale and quantification of the decision to replace distribution transformers reactively rather than proactively.

2-Staff-70

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, pages 136

Please describe in detail WNH's plan for the reverification of smart meters to maintain compliance with Measurement Canada regulations. Where a proposed plan exists, please provide a unit count per year which will be re-verified along with how the reverification program will be carried out.

2-Staff-71

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, Table 3-46

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, Appendix G, page 57

WNH's future direction in major IT software systems includes ERP purchase in 2015/16, implementation in 2016/17 and production cutover on 2017/18.

(a) Please confirm that capital spending to purchase and implement ERP systems is included in GP category.
(b) Please confirm that total ERP capital costs are below materiality threshold of $175,000.
(c) If total ERP capital costs exceed materiality threshold, please provide a business case and a financial model with a calculated financial metrics such as NPV, IRR, Payback period to justify ERP project.

2-Staff-72

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, page 177

Regarding the new CIS system WNH states *"WNH performed a cost/benefit analysis and determined a 3 year payback for this investment based on reduction of annual maintenance fees alone. The new software will have improved customer support capabilities, enhanced field based service order processing, and streamlined and automated billing related routines leading to improved productivity and organizational effectiveness with a measurable annual reduction of $100,000 in maintenance fees."*

Please provide the cost/benefit analysis completed to justify the CIS system.

2-Staff-73

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, page 179

Investments in new CIS exceed a materiality threshold by more than two times and new investments in Asset Management Software exceed a threshold by more than 50%. Please provide a business case and a financial model with a calculated financial metrics such as NPV, IRR, Payback period to justify an implementation of new Customer Information System and Asset Management Software.

2-Staff-74

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, page 192, Table 4-5a

Please provide a table with approved (OEB approved for 2011 and Board of Directors' approved for 2012-2015) vs. actual capital expenditures for each historical year (2011-2015).

2-Staff-75

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, page 201

(a) Please reconcile Tables 4-11a and 4-11b to eliminate an impact of a change from CGAAP to RCGAAP to ensure correct comparison of 2011 – 2015 period with 2016 – 2020 proposed investments. Provide approximate numbers if detailed reconciliation is very time consuming.

(b) While the change in accounting practices is stated to affect SA, SS and GP, it is presumed to affect SR as well. Please confirm.

(c) Please provide a variance analysis for investment fluctuations in each of the DSP category between 2016/2017, 2017/2018, 2018/2019, 2019/2020.

2-Staff-76

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, page 204

Please provide a total of O&M savings due to the DSP for each year 2016 – 2020.

2-Staff-77

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, Appendix C, page 4

Please provide the "*5 Year Capital IT plan*" document referred to in the above reference.

2-Staff-78

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, Appendix G

For each project and material sub-project in Appendix G, which involve replacing or refurbishing existing equipment, please provide:

(a) List of discrete assets encompassed within each;

(b) Age of each asset;

(c) Condition of each asset;

(d) Asset risk, as identified through the described "qualitative and semi-quantitative" approach on page 103, Exhibit 2, Attachment 2-1.

2-Staff-79

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, Appendix G, pages 1-3, Light Rail Transit Relocations

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, pages 40-41

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, Table 2-1
Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, Table 4-5A

WNH states "*Roadway relocations represent WNH's second largest proposed investment in this asset category. In 2016 WNH proposes to make material investments of $2.5 million over 10 various projects. This represents approximately 37% of all 2016 System Access investments and 13% of WNH's total 2016 investment plan (Table 1-14). This is NOT typical of the level of investment proposed in the 2017 – 2020 forecast period due mostly to the LRT project. In this multi-year project (2014 – 2016) WNH is expecting to invest approximately $6.3 million in relocation work and expecting to recover approximately 60% from the Region of Waterloo.*

Roadway relocations are one of the most difficult activities to forecast. Despite best efforts at consulting with roadway authorities, the scope, timing, and more importantly the financial impact of relocation projects on WNH's DS Plan remains uncertain until shortly before construction. Table 1-14 illustrates WNH's proposal in 2016 for material investments of $1.8 million over 7 various projects for the LRT project and $703,000 over 3 projects for other municipal relocations. Investments in the LRT, which is a one-off project, is expected to be complete by the end of 2016. The investments in other municipal relocations are more typical of that proposed during the forecast period."

In addition, WNH describes the details of this project in Appendix G and also mentions that LRT Relocation is "*a special one-off project"*. However, overall system access investments will fluctuate only from $5,892,104 to $6,622,858 in 2016 – 2020, assuming that this LRT Relocations of $1.8M is atypical and presents a one-off expense.

Please provide the following information for Light Rail Transit Relocations project:

(a) Capital spending on LRT Relocations in 2014 and 2015.
(b) Actual cost recovery rate for spending in 2014 and 2015.
(c) Confirmation that there are only 7 projects for the LRT relocations for material investments of $1.8M in 2016.
(d) Any documents that have been developed to support a statement "*Approximately 20% of the work involves assets that are near end of life*".
(e) What is a percentage of poles that will be relocated as a result of this activity that are in a Very Poor and Poor condition?
(f) Please provide "negotiated cost recovery terms" document that supports a statement to "*… recover approximately 60% of the over all costs for the entire project as compared to approximately 30% under* PSWHA".

(g) List of other atypical Relocation projects and respective capital spending that are planned to be executed in 2017 – 2020 to support approximately the same level of investments in system access category.

2-Staff-80

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, Appendix G, page 7

2016 Capital Project Customer Connections has the following individual projects covered in this project category:

WNH Project	Sub Project	Project Name	Total
06EN04	4	Third Party Attachments	$14,084
06EN07	1	New Overhead Service Connections/Upgrades	$727,131
06EN11	1	New UG Service Connections/Upgrades	$1,429,245
11DG01	1	FIT Distributed Generator Connections	$46,516
11DG01	3	MicroFIT Distributed Generator Connections	$40,788
		Total	$ 2,257,764

The project also shows comparable investments in 2011 – 2015:

2011:	$2,316,512
2012:	$2,382,786
2013:	$2,236,601
2014:	$2,372,048
2015:	$2,242,481

Two of these areas are orders of magnitude larger than the others. Please provide comparable investments in 2011 – 2015 for each of the following projects: New Overhead Service Connections/Upgrades and New UG Service Connections/Upgrades.

2-Staff-81

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, Appendix G, page 8

Ref: Exhibit 2, Table 2-38, Capital Projects

WNH states "*Customer connection projects are driven by customer requests and the specific requirements of the customer. Design and methodology for such projects are standardized through WNH policies and practices and in line with WNH Conditions of Service. Alternatives are limited as servicing options are standardized, but if alternatives exist, they are normally the choice of the customer. For example, the decision between an overhead or underground*

service is that of the customer, unless municipality places development conditions requiring underground servicing".

(a) What was an average cost per customer connection for each OH and UG service in 2011 – 2015?

(b) What was an average customer contribution per customer connection for each OH and UG service in 2011 – 2015?

(c) Please explain the significant (approximately $1M) increase in New Underground Service Connections/Upgrades in 2015 and 2016 compared to 2014 Actual, as shown in Table 2-38.

2-Staff-82

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, Appendix G, page 10

2016 Capital Project Expansions (Subdivisions) has the following individual project covered in this project category:

WNH Project	Sub Project	Project Name	Total
06EN10	16	Subdivisions - 200 lots	$593,795
		Total	$ 593,795

This amount covers 200 new subdivision lots. The project also shows comparable investments in 2011 – 2015:

2011:	$1,009,825
2012:	$1,458,126
2013:	$833,390
2014:	$737,710
2015:	$386,520

Please provide the number of new subdivisions lots connected in 2011 – 2015 within this project category.

2-Staff-83

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, Appendix G, page 13

WNH states "*2012 and 2013 included AMI system modifications required to improve communication system performance. 2015 and 2016 investment requirements are increased to comply with Measurement Canada recommendations and increase in large customer metering Installations*".

(a) Please provide specific details about what investments are being made to comply with Measurement Canada recommendations and explain which recommendations are mandatory to make in 2016.
(b) Please provide detail on the number of meters for each of the customer class to be installed in 2016 and associated investment amounts.

2-Staff-84

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, Appendix G, page 19

Ref" Exhibit 2, Attachment 2-1, Distribution System Plan, Appendix F

WNH has planned a project to renew underground cables and replace transformers in the "Lakeshore North" area and indicated the information used to justify the project is sourced from "*Field inspection, failure history, asset condition data*." In Appendix F "Service Continuity Report" WNH states "*2014 continued to depict a trend of failing devices in the southwest quadrant of Lakeshore North subdivision and the northwest quadrant of Lakeshore subdivision*."

(a) Please provide details of the data that has driven this proposal.
(b) WNH states, *"WNH prepared a 5 year plan for replacing the high voltage cables and transformers proactively with the sections listed below scheduled to be completed in 2016"* and based on the cost summary this program is moving into its sixth year. Please provide details of the overall project plan including year of completion.

2-Staff-85

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, Appendix G, page 23

WNH has planned a project under System Renewal to replace "*Failing Conductor*" which "*have a tendency to become brittle as they age and fail prematurely*".

(a) Please explain how this tendency is reflected in the "TUL" for this asset.
(b) In Table 3-3 of the DSP. "*Distribution Line Length by Voltage Level*" is presented, without mention of conductor sizing. At the same time, spending on this program has increased from $200k to $1Million in recent years. Please indicate the amount of these small conductors that are on the system and approximate the overall program duration and scale.

2-Staff-86

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, Appendix G, page 35

WNH has planned a project under System Renewal called "*Overhead Line Refurbishment (4kV)*" which is a voltage conversion project of assets that are in *"good condition"* for the purpose of decommission 4kV substations. Please provide the business case in terms of either reliability or avoided costs including value of land that is sold etc.

2-Staff-87

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, Appendix G, page 45

WNH has planned a project under System Renewal called "*Station Breaker Renewal*" which driven by "*experiencing a number of mechanical failures*". Please provide details on the failures experienced and the reliability and cost impact.

2-Staff-88

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, Appendix G, page 49

WNH has planned a significant project called "Contingency Enhancement". It is not clear what an "Contingency Enhancement" project consists of, however WNH states *"For the most part, the projects consist of rebuilding existing pole lines which are near or at the end of their useful life and in poor condition with ones that carry additional circuits in order to provide required tie and sectionalizing points".*

(a) Please describe specifically what the project scope is.
(b) Please provide details of the reliability issues that have driven this proposal and the expected improvement as a result of the project.
(c) Please estimate the System Renewal Benefit associated with the project.
(d) WNH states, "*This project has no comparable investments in the historical period in the system service category*." The scope reads like a line construction project, which would presumably have comparators. Please re-assess for comparative information.

2-Staff-89

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, Appendix G, page 53

WNH has planned a significant project called “Distribution Automation”.

(a) Please provide details of the reliability issues that have driven this proposal and the expected improvement as a result of the project.

(b) The Distribution Automation project is proposed as a multi-year commitment. Please provide details and approximate costs of the general 5 year plan. Of particular concern is the level of investment required to realize the expected reliability gains.

2-Staff-90

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, Appendix G, page 61

WNH’s future direction in major IT software systems includes Asset Management Software purchase in 2016, including production cutover. Please expand the project description to include any supporting projects to collect condition data, develop health index formulations and project priorities.

2-Staff-91

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, Appendix G, page 65

WNH’s future direction in fleet management includes the purchase of an “RBD” type truck in 2016. WMH’s fleet assessment (Table 3-48) would suggest multiple large trucks, small trucks and trailers are at or will be at “Typical Useful Life” during the period of this study. Please indicate the expected fleet renewal strategy over the period of this study considered as an overall program?

2-Staff-92

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, Appendix H

WNH has provided 5 photos of assets in “poor” condition. Three of these photos are of padmounted transformers, and two are of poles and cross arms. Figure 3-3 of the DSP called “*Wood Pole Health Index*” indicates that pole health is categorized as *“Very Poor”, “Poor”, “Fair”, “Good”, and “Very Good”*, whereas padmounted transformers are given a ranking based on *TUL*.

(a) Please provide details of the assessment criteria that generates the “Poor” assessment.

(b) Please describe how this condition assessment is used in the planning process.

Exhibit 3 – Operating Revenue

3-Staff-93

Ref: Exhibit 3, Section 2.6.1, Load and Revenue Forecast

WNH states that they used the amount of electricity (in kWh) purchased from the IESO for the regression analysis used in this application. Has WNH accounted for:

(a) any distributed generation within the WNH's service territory, and
(b) any low voltage purchases through delivery points embedded within the WNH service territory?
(c) If not, please revise the load forecast.

3-Staff-94

Ref: Exhibit 3, Section 2.6.1, Load and Revenue Forecast

WNH states that in this application, as in its previous cost of service application, it did not use individual class rate regression analysis because in the previous application the R^2 results ranged from 41.7%-59%.

(a) Did WNH try to develop class regression models for the 2016 rate application?
(b) If so, what were the R^2 results?
(c) If so, how do the kWh and kW results using class rate regression compare to WNH's current forecasts?
(d) If not, please prepare regression analysis for each class and provide the results of the models.

3-Staff-95

Ref: Exhibit 3, Section 2.6.1, Load and Revenue Forecast

Ref: Exhibit 2, Attachment 2-1, Distribution System Plan

WNH states that it has used the average of actual values for 2011-2014 for the forecast of the Employment variable.

(a) Where is the historical data for this variable obtained from?
(b) Please update this variable with the latest information for 2015.
(c) Is a forecast not provided by the same source? If so, please provide it.
(d) Why does WNH feel that the period 2011-2014 is representative of 2015 and 2016, when at the end of 2014 the trend in the second half of 2014 was positive?

(e) How does WNH reconcile keeping this variable constant when it also states in its DSP on page 17 that “WNH operates in a robust regional economy” and that “system peak demand has a tendency to rebound from recessions faster than other Ontario jurisdictions”?

3-Staff-96

Ref: Exhibit 3, Section 2.6.1., Load and Revenue Forecast

Ref: Exhibit 3, Table 3-6

Table 3.6 provides historical actual Total System Purchases compared to what the model would have predicted given the actual conditions. WNH states that because there is no Board approved method to weather normalize actual data, they are not able to provide weather normal actuals, only weather normal forecasts.

(a) Would WNH agree that if the following was done, it would result in ‘weather normal’ for historical years:

- run the regression model for historical years using all actual dependent variables including HDD and CDD for the actual year.(A)
- run the regression model for historical using all actual dependent variables except use normal HDD and CDD values.(B)
- Apply the weather normalization factor (B/A) from the above two runs for each year to the actual purchases.

(b) Please provide the results of running the regression model for 1996 to 2014 as per the above process.

3-Staff-97

Ref: Exhibit 3, Section 2.6.1., Load and Revenue Forecast

Please provide further information on the HDD and CDD data, i.e. what base temperature is used for counting the days?

3-Staff-98

Ref: Exhibit 3, Section 2.6.1, Load and Revenue Forecast, Table 3.6, Total System Purchases

WNH is proposing to use normal weather based on 19 years. Please explain the reason behind this choice.

3-Staff-99

Ref: Exhibit 3, Section 2.6.1, Load and Revenue Forecast

The application states that "*to determine the total weather normalized energy billed forecast, the total system weather normalized purchases forecast is adjusted by a historical loss factor*" and shows the result as 1,513.1/1.365 = 1,459.9. In fact 1,513.1/1,459.9 = 1.03644. Nevertheless, why has WNH used a historical loss factor to adjust the forecasted total purchases and not the proposed loss factor of 3.62%?

3-Staff-100

Ref: Exhibit 3, Section 2.6.1, Load and Revenue Forecast, Table 3-7 Historical Customer/Connection Date, Table 3-8, Growth Rate in Customers/Connections & Table 3-9 Customer/Connection Forecast

Table 3-8 shows the geo-mean for growth rates for the number of customers or connections in each class.

(a) Did WNH use the geo-mean for each class to forecast the number of customers or connections for 2015 and 2016?

(b) If no, then how were the forecasted number of customers and connections arrived at?

(c) WNH states that the number of Residential Customers increased by 429 in 2014, yet Table 3-7 shows an increase from 2013 to 2014 of 48,191-47,602 = 589. Please explain.

(d) WHN states that it had increased the number of Residential customers in 2015 and 2015 by 600. In fact, in Table 3-9 the increase in Residential customers in 2015 is only 514. Please explain.

(e) WNH states that it has increased the number of GS < 50 kW customers in 2015 and 2016 by 39 and 34 respectively. In fact, in Table 3-9 the increase in GS < 50 kW customers is 49 and 36 respectively. Please explain.

3-Staff-101

Ref: Exhibit 3, Section 2.6.1, Load and Revenue Forecast, Table 3-12, Forecast Annual kWh Usage per Customer/Connection

Ref: Report of the Board Review of the Board's Cost Allocation Policy for Unmetered Loads EB-2012-0383, November 19, 2013

In Table 3-10, Forecast Annual kWh Usage per Customer/Connection, the forecast for Street Lighting declines slightly for 2015 and 2016 and increases for

Unmetered Scattered Load. OEB staff is aware that there is a trend in communities to install more efficient street lighting. OEB staff is also aware of a similar trend for other unmetered loads.

In the second reference, the Board commented on communications between distributors and unmetered load customers:

> *"The Board believes that there should be ongoing communication between distributors and unmetered load customers. This will enable the municipalities and other unmetered load customers to bring to the attention of their distributor any technological changes that impact the electricity consumption or the load profiles of their unmetered loads. Unmetered load customers should be able to determine, and distributors should be able to validate, what the appropriate consumption levels and load profiles are for particular devices that will reflect the technology used in street lights and other unmetered loads."*[4]

OEB staff is interested in determining the level of customer engagement WNH has undertaken in preparing this application.

(a) Please state if WNH discussed with street lighting providers plans related to technology for new and replacement devices that would affect electricity loads in the municipalities that it serves.
(b) If it did not, please describe how the reduction was developed.
(c) Please state if WNH discussed with other unmetered load customers plans related to technology for new and replacement devices that would affect electricity loads.
(d) If it did not, please describe how the reduction was developed.
(e) If WNH did not engage its customers to assist in setting a forecast of electricity demand, please, on a best efforts basis, consult with them and review the forecast in light of the discussion.

3-Staff-102

Ref: Exhibit 3, Section 2.6.1, Load and Revenue Forecast, Table 3.12, Forecast Annual kWh Usage per Customer/Connection

Please provide further details on how the forecasted annual kWh usage per customer/connection for 2015 and 2016 was derived, with specific reference to the preceding Table 3-11's growth rates.

[4] 3.1.4 The Board's Approach

3-Staff-103

Ref: Exhibit 3, Section 2.6.1, Load and Revenue Forecast, Tables 3-20, 3-21 and 3-22

The following table was developed from information contained in Tables 3-20, 3-21 and 3-22. The highlighted rows were calculated based on the two rows above the highlighted one. Please reconcile the numbers shown in the highlighted rows with the numbers from Table 3-22 for each class.

kW	Table		GS > 50 kW	LU	S/L	Embedded	Direct
	3-20	2014	1,726,654	166,649	12,738	21,568	72,407
	3-21	Growth	0.2459%	0.1838%	0.2780%	0.2276%	0.1850%
2014 plus growth		2015	1,730,900	166,955	12,773	21,617	72,541
	3-22	2015	1,749,824	170,073	21,240	71,803	12,785
	3-21	Growth	0.2459%	0.1826%	0.2780%	0.2276%	0.1850%
2015 plus growth		2016	1,735,156	167,260	12,809	21,666	72,675
	3-22	2016	1,746,786	173,581	21,115	71,406	12,620

3-Staff-104

Ref: Exhibit 3, Section 2.6.1, Load and Revenue Forecast

The monthly data used for the load forecasting model includes number of peak hours, yet the equation provided on page 11 does not include this variable. Please confirm whether or not number of peak hours is used in the regression equation and if so what is the coefficient?

3-Staff-105

Ref: Exhibit 3, Section 2.6.2, Accuracy of Load Forecast and Variance Analysis

Please update Tables 3-33 and 3-34 to reflect most available 2015 actuals.

3-Staff-106

Ref: Exhibit 3, CDM Adjustment and LRAMVA

WNH states that CDM results from 2011 to 2013 and half of 2014 have already been captured in the forecast through the use of actual data in the regression analysis and that the other half of 2014, 2015, and half of 2016 have been included in the CDM manual adjustment to the load forecast. WNH has used the 'expected' savings from the 2014 CDM programs in making this adjustment.

(a) Has WNH received any preliminary results from the IESO for 2014 CDM programs?

(b) If so, does an update need to be made to the CDM manual adjustment to the load forecast?

(c) If WNH receives its final 2014 CDM from the IESO during this proceeding, please update the load forecast accordingly.

3-Staff-107

Ref: Exhibit 3, Section 2.6.1, Load and Revenue Forecast, Tables 3-2, 3-6 and 3-20.

Ref: Kitchener-Waterloo-Cambridge-Guelph Integrated Regional Resource Plan (KWCG IRRP), April 28, 2015

The following table has been produced using data from the referenced tables. The losses shown are as a percentage of purchases and the 2015 and 2016 have been updated for the CDM adjustment as per the sales.

Year	Purchases GWh	Growth	Sales GWh	Growth	Sales MW	Growth	Losses
2003	1,270		1,217		1718		4.2%
2004	1,294	1.9%	1,250	2.7%	1735	1.0%	3.4%
2005	1,359	5.0%	1,305	4.4%	1770	2.0%	4.0%
2006	1,373	1.0%	1,326	1.6%	1793	1.3%	3.4%
2007	1,424	3.7%	1,368	3.1%	1820	1.5%	3.9%
2008	1,422	-0.1%	1,371	0.2%	1834	0.8%	3.6%
2009	1,412	-0.7%	1,360	-0.7%	1848	0.8%	3.6%
2010	1,479	4.8%	1,426	4.8%	1940	5.0%	3.6%
2011	1,489	0.7%	1,437	0.8%	1998	3.0%	3.5%
2012	1,496	0.5%	1,449	0.8%	2066	3.4%	3.1%
2013	1,493	-0.2%	1,448	-0.1%	2042	-1.2%	3.0%
2014	1,491	-0.1%	1,447	-0.1%	2000	-2.1%	2.9%
2015	1,506	1.1%	1,453	0.4%	2026	1.3%	3.5%
2016	1,499	-0.5%	1,446	-0.5%	2026	0.0%	3.6%

(a) Please confirm that these numbers are accurate.

(b) Please explain why losses as a percentage of purchases are increasing in 2015 and 2016 when WNH's distribution loss factor is decreasing.

(c) Page 20 of the recently issued KWCG IRRP states that the Gross Demand (MW) for Waterloo North Hydro's service area is forecast to grow at annual rates of 3.2%. Please reconcile this with the 0% growth in MW sales in WNH's load forecast.

(d) Please file a copy of the completed KWCG-IRRP, issued April 28, 2015.

3-Staff-108

Ref: Exhibit 3, Section 2.6.3, Other Revenue

Ref: Filing Guidelines, Section 2.6.3

Why has WNH included interest on Deferral and Variance accounts in Account 4405 when the Filing Guidelines specifically state that it is not to be included?

3-Staff-109

Ref: Exhibit 3, Section 2.6.3, Other Revenue

WNH states that the primary driver of the variance in USoA Account 4305 of $740,042 in 2014 was the adjustment to reflect the USoA Account 1576 balance. Please explain this further.

3-Staff-110

Ref: Exhibit 3, Table 3-37, Other Revenue with Variances

Please confirm that the inclusion of Account 4310 Regulatory Credits in Other Revenue for the Test Year 2016 is how WNH is proposing to account for the Provincial Rate Protection amount received from the IESO.

3-Staff-111

Ref: Exhibit 3, Table 3-37, Other Revenue with Variances

Ref: Exhibit 3, Table 3-2, Summary of Load and Customer/Connection Forecast

2011 Board Approved Other Revenue on this table is $1,164,444 and 2016 proposed Other Revenue is $1,181,606, only a 1.5% increase over 5 years. Given that customer numbers have increased over the same period by 5.4%, please explain why Other Revenue has not followed suit.

Exhibit 4 – Operating Expenses

4-Staff-112
Ref: Exhibit 4, Section 2.7.1, Overview, Table 4-2, Overall Cost Trends
In the referenced table, which explains the change in OM&A from 2011 Board approved to 2016, there is an adjustment of ($1.6M) entitled 'Remove 2016 Salary Costs in Overhead Change as included in Change Operating Portion of Salary/Wages'. Please explain in more detail what this adjustment represents.

4-Staff-113
Ref: Exhibit 4, Section 2.7.1, Overview, page 8
At the above reference, WNH states that they have used an inflation rate of 2% on non-labour items and that this is within the range of rates set out in Toronto Dominion Bank's October 2014 quarterly economic forecast.

(a) Please provide a copy of the Toronto Dominion Bank's October 2014 quarterly economic forecast which sets out the range of inflation rates.
(b) Also please provide a copy of Toronto Dominion Bank's latest quarterly economic forecast.
(c) Why has WNH not used the latest IPI factor of 1.6% issued by the OEB on October 30th, 2014?

4-Staff-114
Ref: Exhibit 4, Section 2.7.1, Overview, page 9
WNH has included $207,336 in 2016 for new user fees to its Software Provider as a result of the implementation of smart meters.

(a) Please explain what this charge is for, and
(b) If this a new charge, or an increase of an existing charge?

4-Staff-115
Ref: Exhibit 4, Section 2.7.1, Overview, page 9, Increase in Billing/Collection/Collection Revenue for Implementation of Monthly Billing

(a) Please provide the number of Residential and GS <50 kW customers that are currently billed on a monthly and on a bi-monthly basis.
(b) WNH indicates that for its calculation of the forecasted costs to implement monthly billing, it has forecasted an increase in the percentage of its customers on E-billing to 15% from the current 6.8% of customers currently enrolled. Please describe the Applicant's efforts to promote E-billing to its customers.

(c) Please describe other initiatives that the Applicant has undertaken, or intends to undertake, to manage the costs of monthly billing for all customers.

4-Staff-116

Ref: Exhibit 4, Section 2.7.1, Overview, page 11, Post-Retirement Benefits

WNH has recovered OPEBs in rates previously.

(a) Please indicate if OPEBs were recovered on a cash or accrual accounting basis for each year since WNH started to recover OPEBs.
(b) Please complete the table below to show how much more than the actual cash benefit payments, if any, have been recovered from ratepayers from the year WNH started recovering amounts for OPEBs.
(c) Please describe what WNH has done with the recoveries in excess of cash benefit payments.

OPEBs	First year of recovery to 2011	2012	2013	2014	2015	2016	Total
Amounts included in rates							
OM&A							
Capital							
Sub-total							
Paid benefit amounts							
Net excess amount included in rates greater than amounts actually paid							

4-Staff-117

Ref: Exhibit 4, Table 4-6, Summary of Recoverable OM&A Expenses
Ref: Chapter 2 Appendices, Tab 2-JA

In the referenced table, it appears that the column entitled 2015 Bridge vs 2014 Actual (Column L) is actually calculating 2015 Bridge vs 2013 Actual. (Column K minus Column G instead of Column K minus Column I). Please correct the Table and the Appendix 2-JA.

4-Staff-118
Ref: Exhibit 4, Tables 4-6 and 4-6A, Summary of Recoverable OM&A Expenses
Ref: Chapter 2 Appendices, Tab 2-JA
The proposed OM&A costs in 2016 of $13,679,334 represents an increase of $4,029,193 or 41.8% over the 2011 actual OM&A. Adjusting for the change in capitalization policies, the increase is still $1,725,866 or 17.9%.

(a) Please identify any customer engagement that supports the increases proposed in this application.
(b) Further, how has the Applicant communicated these benefits to its customers, and how did customers respond? Please provide some examples, including any customer feedback. If no communications took place, please explain why not.
(c) Please identify what improvements in services and outcomes the applicant's customers will experience in 2016 and during the subsequent IRM term as a result of increasing the provision for OM&A.
(d) Please identify any initiatives considered and/or undertaken by WNH, including any analysis conducted, to optimize plans and activities from a cost/value perspective.

4-Staff-119
Ref: Exhibit 4, Section 2.7.2, Summary and Cost Driver Tables, Table 4-8, FTE Comparison
The referenced table shows a forecasted number of FTEs for 2015 as 133.11, an increase of 1.99 FTEs from 2014 actual. Please provide an update on actual FTEs to date in 2015.

4-Staff-120
Ref: Exhibit 4, Section 2.7.2, Summary and Cost Driver Tables, Table 4-11B, Recoverable OM&A Cost per Customer and FTE- OM&A Costs Reflecting MIFRS Impact and all FTE including Students and Contract Staff
In the above referenced table, WNH has provided OM&A cost per customer and per FTE with and without the impact to OM&A from capitalization changes:

(a) Please confirm the following annual growth and Cumulative Annual Growth Rate (CAGR) for OM&A/customer as shown in the following table:
(b) Please explain the reasons for the extreme variability in the annual growth rates of OM&A/customer.

	2011	2012	2013	2014	2015	2016
	$ 184.57	$ 207.45	$ 194.37	$ 210.52	$ 201.04	$ 201.59
Yearly Growth		12.4%	-6.3%	8.3%	-4.5%	0.3%
CAGR	1.78%					

4-Staff-121

Ref: Exhibit 4, Section 2.7.3.1, Employee Compensation Breakdown

Ref: Exhibit 4, Table 4-24, Summary of Wage Increase by Year

WNH states that the current collective agreement with the IBEW will expire on March 31, 2016. In that contract WNH's negotiated wage increase was 2.75% for 2014, 1.75% as of April 2014, 1% as of October 2014 and 2.5% for 2015. Table 4-24 shows the projected increase for 2016 will be 1.5% as of April and 1.0% as of October. These projections are based on current wage settlements.

(a) Have contract discussions been started with IBEW?

(b) If so, please provide a status update on these discussions.

(c) What is WNH's plan to manage costs should actuals be greater than projections for 2016?

4-Staff-122

Ref: Exhibit 4, Tables 4-19 to 4-23, Year over Year variances FTEs

Ref: Exhibit 4, Table 4-17, Summary of Turnover in Employees

From the above-referenced tables, the net change in FTEs can be determined as shown below. Table 4-17 provides the number of retirements, both actual and forecasted, until 2020. On the table below, for each year please show the number of actual/forecasted newly hired apprentices plus other changes in FTEs to reconcile back to the net change in FTEs. Please also provide the forecasted change in overall headcount over the next four years. (i.e. the green shaded areas).

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Retirements	**-5**	**-3**	**-6**	**-4**	**-11**	**-5**	**-9**	**-4**	**-10**	**-6**
Apprentices										
Contract/Co-op/Student		**4.1**	**-0.3**	**-0.2**	**-2.9**	**-2**				
Other										
Net Change		**4.3**	**4.6**	**-1.4**	**2**	**-1**				

4-Staff-123

Ref: Exhibit 4, Table 4-13 OM&A Programs Table

OEB staff notes that the 2016 forecast of Administrative Expenses shows a 33% increase from 2011 Actual (mainly due to a 105% increase in Other Services Purchased), which appears to indicate that WNH is not achieving any economies of scale from its customer growth.

(a) Why are WNH customers not enjoying the benefits of scale economy in administrative expenses?
(b) Please provide further details on the reasons for the increase in Other Services Purchased.
(c) Please describe WNH's efforts to determine best practices and achieve efficiencies in Administrative Expenses.

4-Staff-124

Ref: Exhibit 4, Table 4-13 OM&A Programs Table

OEB staff notes that WNH's 2016 forecasted Meter Reading Expenses have increased by 107% from 2011 actual, which would appear to indicate that WNH has not achieved any cost benefits in this area from its smart meter deployment.

(a) Please explain the changes in staffing and processes that have led to this significant cost increase.
(b) Please explain what actions WNH proposes, if any, to address this significant increase.

4-Staff-125

Ref: Exhibit 4, Section 2.7.3.2, Shared Services and Corporate Cost Allocation

WNH indicates that it provides services to its Parent Company, Waterloo North Hydro Holding Company (WNHHC), for which they are allocated costs.

(a) Does WNH pay WNHHC for any services?
(b) If so, what are those services and what was the amount paid for them?
(c) Is WNH forecasting receiving any services from WNHHC in the Bridge or Test years?
(d) If so, what USoA account have these costs been included in?

4-Staff-126

Ref: Exhibit 4, Section 2.7.3.4, One-Time Costs, Table 4-37, Regulatory Costs Appendix 2-M

In the above referenced table, WNH is proposing to recover the one-time costs related to the 2016 cost of service application preparation in the amount of $425,000 over a 5-year period, which means over the test year and the subsequent IRM term (i.e. 2016 to 2020). The proposed annual one-time cost to be recovered is $85,000.

(a) Why is WNH estimating that its current proceeding will cost more than two and one half times that of the approved cost of its previous cost of service application?
(b) Upon what assumptions has WNH made this projection?

4-Staff-127

Ref: Exhibit 4, Section 2.7.4, Depreciation, Amortization and Depletion, Tables 4-43 to 4-45,

In the three referenced tables, for USoA 1880 Meters (Smart Meters), the Gross Asset amount remains at $6,265,880 for 2014-2016.

(a) Please confirm whether WNH is forecasting the installation of any Smart Meters in the Bridge and Test years.
(b) If yes, what account have these been included in?
(c) If no, why not.

4-Staff-128

Ref: Exhibit 4. Section 2.7.5, Payments in Lieu of Taxes (PILS) and Property Taxes, Table 4-55

On the 2012 Actual column in the referenced table, there is an adjustment for $2,176,883. The adjustment is described as: "*Other Misc: PY SM recovery reducing sch 9 per MOF audit"*. Please provide additional information regarding this item.

4-Staff-129

Ref: Exhibit 4. Section 2.7.5, Payments in Lieu of Taxes (PILS) and Property Taxes, page 104

The application states ""*In 2012, WNH received a tax re-assessment of $76,364 for 2009 and 2011, resulting in a variance. In 2013, a CRA Audit resulted in additional taxes payable of $121,102 for years 2008 to 2012*."

(a) Please provide descriptions of the audit adjustments.
(b) How did Waterloo North account for the reassessments for regulatory purposes?

(c) How are the reassessments reflected in the current rate application?

4-Staff-130

Ref: Exhibit 4, Table 4-57, Property Taxes

Please explain the 114% increase in Property Taxes from 2011 to 2016.

4-Staff-131

Ref: Exhibit 4, Table 4-58, Summary of Requested LRAM Amounts

Ref: Exhibit 3, Table 3-19, Alignment of Non-Normal to Weather Normalized Forecast

Table 4-58 shows that there is no lost revenue, and hence no CDM savings for the Large User class in 2011 to 2013.

(a) Please explain why there are no CDM savings associated with the Large User class?

(b) Has the one Large User chosen to not participate in any CDM programs?

(c) Table 3-19 indicates no adjustment to the load forecast for the Large User in 2015 and 2016 related to CDM, which implies that WNH does not expect this customer to participate in any future CDM initiatives. Is there a reason for this?

4-Staff-132

Ref: Exhibit 4, Table 4-60, Calculation of LRAMVA

Please provide a reconciliation of the kWh and kW shown in Table 4-60 under CDM in 2011 Forecast with the total of 66.49 GWh agreed to in WNH's Approved 2011 COS Settlement.

Exhibit 5: Cost of Capital and Capital Structure

5-Staff-133
Ref: Exhibit 5, Section 2.8.2
WNH reports that the current actual interest rate for the Junior Promissory Note is 6.445%, which is 1 1/8% above the Board's deemed long term debt currently in WNH's rates, which is 5.22%. Please reconcile the 6.445% to 5.22% + 1.125% = 6.345%.

Exhibit 6: Calculation of Revenue Deficiency or Sufficiency
No interrogatories

Exhibit 7 – Cost Allocation

7-Staff-134
Ref: Exhibit 7, Section 2.10.1, Cost Allocation Study Requirements
Please provide a copy of the original correspondence from HONI concerning the cost allocation for the Embedded Distributor Class which is quoted on page 9 of the reference.

7-Staff-135
Ref: Exhibit 7, Section 2.10.3
Ref: Cost Allocation Model
The Revenue to Cost ratio for the Large User class has fallen from 90.77% in 2011 to 76.65% in 2016.

(a) Has there been a change in what costs are allocated to this class which would account for this decrease? What evidence or new information is the basis for the change?
(b) Sheet I7.1 of the Cost Allocation Model shows 2 meters for 1 Large User. Please confirm that this is correct.
(c) As there is only one Large User, would it not be possible to directly allocate some costs, e.g. the contributed capital paid by this one customer?

7-Staff-136

Ref: Cost Allocation Model

Ref: OEB Letter – New Cost Allocation Policy for Street Lighting Rate Class, June 12, 2015

Ref: Cost Allocation to Different Types of Street Lighting Configurations (EB-2012-0383), prepared by Navigant Consulting Ltd., June 12, 2015

On June 12, 2015, the OEB issued its letter outline the new policy regarding cost allocation for the street lighting class. The letter approved recommendations provided in the referenced report, prepared by Navigant Consulting Ltd. Navigant Consulting Ltd.'s report recommended the use of a "street lighting adjustment factor" instead of the number of connections for the allocation of primary and line transformer assets.

The report also used the 4NCP values as the basis of the calculation of the street lighting adjustment factor. Please provide an updated cost allocation study (when the revised model is issued) reflecting the changes adopted by the OEB's new cost allocation policy for the street lighting class.

7-Staff-137

Ref: Exhibit 7, Appendix 7-1, Cost Allocation Model, Input Sheet I6.1

On Tab I6.2 Customer Data Worksheet, WNH records number of customer and number of connections for street lighting, sentinel lighting, and USL. For street lighting there are 13,828 devices and 1,909 connections, a ratio of 7.243583 devices to connections.

(a) What has WNH done to determine the number of connections?

(b) How does WNH maintain the records for connections to devices?

Exhibit 8- Rate Design

8-Staff-138
Ref: Exhibit 8, Section 2.11.1
Ref: A New Distribution Rate Design for Residential Electricity Customers (EB-2012-0140), April 2, 2015
Ref: Revised Chapter 2 Appendices, Version 2.4, July 7, 2015
WNH is proposing to maintain the current fixed/variable split for all classes and has requested an exemption from the requirement to initiate a move to fully fixed for the Residential class over four years. However, WNH has also said it would update the 2016 application after details of implementing the policy are available.

(a) Please complete Sheet 2-PA New Rate Design Policy for Residential Customers issued by the OEB on July 7, 2015 as part of the Revised Chapter 2 Appendices.
(b) Given the results of the above spreadsheet, is WNH prepared to move to a fully fixed for the Residential class over four years starting in 2016?

8-Staff-139
Ref: Exhibit 8, Section 2.11.1, Table 8.5
WNH is proposing increases to fixed rates above the ceiling for all classes except Residential and Street lighting, as a result of increasing the revenue requirement and maintaining the fixed/variable split. Please provide the rationale for any proposed fixed rate that exceeds the ceiling for that rate class.

8-Staff-140
Ref: Exhibit 8, Section 2.11.1
WNH is proposing to collect the funds required for the Transformer Ownership Credit (TOC) from the General Service < 50 kW and General Service > 50 kW classes.

(a) Does the one Large User own their transformation facilities?
(b) If so, how are they compensated?
(c) Please provide the 2016 forecast of kWs for each class eligible to receive the TOC and the details behind the calculation of the proposed increases to the variable rates for each class.

8-Staff-141

Ref: Exhibit 8, Attachment 8-2 Current Tariff of Rates
Exhibit 8, Attachment 8-3 Proposed Tariff of Rates

On the proposed tariff of rates for the microFIT class, WNH has included The Monthly Rates and Charges- Regulatory Component, which are not included in the Current Tariff of Rates. Is WNH proposing to start charging these Regulatory rates to the microFit class customers?

8-Staff-142

Ref: Exhibit 8, Attachment 8-4, Bill Impacts
Ref: http://www.energy.gov.on.ca/en/clean-energy-benefit/
Ref: http://www.fin.gov.on.ca/en/tax/drc/

As stated in the second and third reference above, the Ontario Clean Energy Benefit is scheduled to end on December 31, 2015 and the Ontario government is removing the Debt Retirement Charge (DRC) from residential electricity users' bills after December 31, 2015. Please recalculate the bill impacts for those affected by these changes.

Exhibit 9 – Deferral and Variance Accounts

9-Staff-143

Ref: Exhibit 9, Section 2.12, Deferral and Variance Accounts Overview, Table 9-1

There appears to be a discrepancy of $786,660 for account 1595 as at December 31, 2014. Per Table 9-1, the amounts for Account 1595 are:

1595 – 2010	$828,886
1595 – 2011	$86,501
1595 – 2012	$383,242
1595 – 2013	$211,575
Total	$1,510,204

Per the 2014 trial balance, the balance is $723,544. Please explain.

9-Staff-144

Ref: Exhibit 9, Section 2.12.5, Account 1576, Accounting Changes Under CGAAP

Please provide copies of any reports prepared by KPMG with respect to assisting with determining the level of PP&E componentization and determining which overheads were eligible or not eligible for capitalization.

9-Staff-145

Ref: Exhibit 9, Section 2.12.5, Account 1576, Accounting Changes Under CGAAP, Table 9-16, Proposed Account 1576 Rate Rider Calculation

Ref: Exhibit 7, Cost Allocation, page 7

WNH is proposing to return $853k to customers in disposing of Account 1576 and states that this balance is related to capital costs. In the Exhibit 7 reference, WNH states that there are no capital costs associated with the Embedded Distributor Class. If this is the case, then why is WNH proposing to include the Embedded Distributor Class in the disposition of Account 1576?

9-Staff-146

Ref: Exhibit 9, Section 2.12.6, Retail Service Charges

Please provide the relative costs and revenues that go into accounts 1518 and 1548 and what the forecast is for 2016 and indicate where these amounts have been deducted from OM&A.

9-Staff-147

Ref: Exhibit 9, Section 2.12.7, Disposition of Deferral and Variance Accounts

WNH received OEB approval on March 19, 2015, EB-2014-0119 for the disposition of Group 1 balances at December 31, 2013 and interest projected on these balances to April 30, 2015. The resulting rate riders are shown on WNH's current Tariff of Rates (Attachment 8-2) as being effective until April 30, 2016 yet do not appear on the Proposed Tariff of Rates (Attachment 2-Z). How is WNH proposing to deal with these rate riders?

9-Staff-148

Ref: Exhibit 9, Section 2.12.9, Other Variance Accounts, Table 9-23, Capital Gain Variance

As part of WNH's 2011 CoS Settlement Agreement, WHN agreed to return 75% of the Net after Tax Gain on the sale of the existing Administration Building and Service Centre to customers over a three year period and establish a variance account to track the difference between the estimated and actual amounts. WNH provided the following information in the application:

	Estimate	Actual
Selling Price	$ 7,300,000	$ 7,100,000
Selling Costs	-$ 900,000	-$ 290,600
Cleanup Costs	included in selling Costs	-$ 1,353,059
Net Book Value	-$ 3,600,000	-$ 3,545,641
Taxes	-$ 800,000	-$ 381,881
Gain on Sale	$ 2,000,000	$ 1,528,819
75%	$ 1,500,000	$ 1,146,614
Monies Refunded to Customers		$ 1,579,471
Variance Owing from Customers		$ 432,857

(a) Please explain the variance between the estimated total selling and cleanup costs of $900,000 and the actual of $1,643,659.

(b) WNH indicates that it has deferred the taxes and calculated the present value. When has WNH assumed the taxes will be payable?

9-Staff-149

Ref: Exhibit 9, Section 2.12.12, Cost of Eligible Investments for Connection of Qualifying Generation Facilities – Provincial Rate Payers.

Ref: Exhibit 2, Section 2.5.2.5, Cost of Eligible Investments for Connection of Qualifying Generation Facilities

Waterloo North Hydro has requested approval for recover of $7,776/year based one qualifying expansion project in 2013 for $117,320.

(a) Please provide further details of this project and why it qualifies for an expansion project (eligible for 17% direct benefit) versus a REI investment project (eligible for 6% direct benefit).
(b) Please explain why WNH is proposing to update Appendix 2-FC for any future Board issued cost of capital parameters, when the Appendix states that values from the last cost of service are to be used.
(c) The OEB issued APH guidance related to eligible investments as defined under O.Reg. 330/09 under the OEB Act on March 31, 2015.Has WNH followed this guidance (Question #10) as it relates to this project?
(d) How does WNH propose to continue to receive the Provincial Rate Protection from the IESO in subsequent IRM years?

9-Staff-150
Ref: Exhibit 9, Deferral and Variance Accounts Overview
Ref: Exhibit 2, Attachment 2-1, Distribution System Plan, page 27

WNH states in its DSP that it "*is currently working to convert the population of general service customers not covered by Smart or Interval metering over the next five years.*"

(a) Is WNH seeking a deferral account for MIST meter costs in this application?
(b) Does the capital budget for 2014, 2015 or 2016 include any expenditure on MIST meters? If yes, please provide the amount of investment in each year.
(c) What is the projected MIST meter investment in each of 2017 through 2020?