OSHAWA POWER

Exhibit 3:
Customer and Load Interrogatory Responses

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Exhibit 3 – Customer and Load Forecast Interrogatory Responses

3-Staff-96

Ref. 1: Exhibit 3 – Customer and Load Forecast, Pages 25-26,

Ref. 2: Load Forecast Model, sheet Economic, columns K and S

Question(s):

a) Please explain why the GDP change variable, which tracks change in GDP from 3 months prior to the current period would be more predictive of energy consumption in the large use rate class than the GDP from the current period.
b) As a scenario, please provide a scenario where a OEA GDP in the current period is used instead.
c) Please comment on suitability of an annual GDP growth factor to forecast quarter over quarter growth.
d) Has Oshawa PUC Networks had discussions with its large use customer regarding its plans for 2025 and 2026? If so, please provide. If not, why not?

Oshawa Power Response

a) The GDP change variable is used because of the high correlation between the OEA GDP variable and the trend variable (0.926). Overall, there is a downward trend in Large Use consumption so using the upward trending OEA GDP variable, without also including a trend variable, would indicate a weak correlation between Large Use consumption and OEA GDP.
b) This scenario is provided as “Supplemental IRR 96 - Large Use GDP Scenario”. The OEA GDP variable has a t-ratio of 1.33 and is not statistically significant. The Large Use kWh forecast in 2026 decreases from 34,931,300kWh to 34,499,714kWh and the kW forecast decreases from 77,832kW to 76,871kW.
c) GDP growth is applied to the GDP measure from the same quarter in the prior year so using an annual growth factor appropriately escalates GDP growth on an annual basis.

d) Yes. Oshawa Power reached out to its large user regarding its plans for 2025 and 2026 during the DSP related customer engagement – please see the Large Customer report for a summary of the discussion guide. Oshawa Power has also been in touch regarding the NWS Guidelines and how that may be able to be leveraged in collaboration, based on the large customer's DER plans. Finally, Oshawa Power has recently reached out to discuss opportunities to support the large customer with Save On Energy project development and will be including those resources in its eDSM plan, submitted later this month.

3-VECC-97

Ref. 1: Exhibit 3, p. 26 (Table 3-13)

Question(s):

a) It is noted that the t-ratio for the Trend variable is only -1.2. Why was this variable included in the regression equation?
b) Please provide a revised load forecast (i.e., regression model, regression statistics and forecast values for 2025 and 2026) where the regression model for the Large Use class does not include a Trend variable.

Oshawa Power Response

a) The trend variable is used because it produces lower annual and monthly percentage errors than could otherwise be produced. The annual mean percentage error is 6.1% in the original load forecast and 6.8% in the scenario provided in part b). The annual mean percentage error is 7.5% in the original load forecast and 7.9% in the scenario.
b) The revised load forecast is provided as "Supplemental IRR 97 Large Use No Trend Scenario". The scenario produces updated forecasts of 38,261,773kWh and 85,160kW in 2025 and 37,614,343kWh and 83,801kW in 2026. The regression statistics are provided below.

IRR Table 3-1: Regression Statistics

Model 5: Prais-Winsten, using observations 2015:01-2024:12 (T = 120)				
Dependent variable: GS_LU_NoCDM				
rho = 0.852358				
	coefficient	std. error	t-ratio	p-value
const	877,620	386,802.83	2.27	0.0252
HDD8	423	185.08	2.29	0.0240
CDD14	1,806	327.14	5.52	0.0000
MonthDays	69,987	12,564.34	5.57	0.0000
COVID_AM	(689,233)	189,243.88	(3.64)	0.0004
Shoulder	177,799	37,125.55	4.79	0.0000
OEA_GDPChange	2.08	0.97	2.14	0.0347
Statistics based on the rho-differenced data				
Sum squared resid	3.23E+12	S.E. of regression		169,120
R-squared	0.8473	Adjusted R-squared		0.8392
F(6, 113)	29.4689	P-value(F)		0.0000
rho	0.0094	Durbin-Watson		1.9807
Statistics based on the original data				
Mean dependent var	3,183,186	S.D. dependent var		419,982

3-Staff/VECC-98

Ref. 1: Exhibit 3, Page 31

Question(s):

a) For all customer classes, please provide actual customer connections by month for all months available in 2025

b) Please provide details of residential housing developments with number of in-service connections expected, by month in 2025 and 2026.

Oshawa Power Response

a) Actual customer connections are provided below.

IRR Table 3-2: 2025 Customer Connections

	2024	2025	2025	2025	2025	2025	2025
	Dec	Jan	Feb	Mar	Apr	May	Jun
Residential	58,046	58,088	58,095	58,260	58,313	58,314	58,315
GS<50 kW	4,297	4,301	4,306	4,319	4,321	4,311	4,323
GS 50-999 kW	519	519	523	520	521	514	511
GS 1,000 to 4,999 kW	17	17	17	17	17	17	17
Large Use	1	1	1	1	1	1	1
Street Lights	14,448	14,448	14,448	14,448	14,448	14,526	14,526
Sentinel Lights	19	19	19	19	19	19	19
Unmetered	262	262	263	263	263	264	264

b) As of June 2025, there are 725 remaining residential lots yet to be connected in subdivisions where distribution assets on the right of way are already installed and energized. There are also 4 more subdivisions that are approaching energization of distribution assets (constructed by the developer – Alternative bid) - Approximately 720 lots. Several other subdivisions are under construction by the developer under the Alternative bid that Oshawa power has not been given definitive energization dates for.

3-VECC-99

Ref. 1: Exhibit 3, p. 31

Preamble:

The Application states:

“While Residential customer counts are not a component of the regression model, they are forecast for the purpose of rate setting. The geometric mean of the annual growth

from 2017 to 2024 was used to forecast the growth rate from 2024 to 2026. This is an 8 year forecast as growth from 2016 to 2017 was extraordinary and not reflective of recent or expected Residential customer count growth."

Question(s):

a) What accounted for the "extraordinary" Residential growth between 2016 and 2017?
b) The Residential growth between 2019 and 2020 also appears to be an anomaly. Why was this period included in the determination of the expected Residential customer count growth?

Oshawa Power Response

a) There were some large developments in the Windfields development area between the intersections of Conlin Road East and Simcoe Street North and Simcoe Street North and Winchester Road E, in 2016 and 2017. Multiple phases of Dantonbury and Kingmeadow subdivisions were noteworthy developments that were constructed and energized during that time.
b) The 2016 to 2017 growth rate was excluded and the 2019 to 2020 was included because the extent that the 2016 to 2017 growth rate is different from the average growth rate is significantly greater than the extent that the 2019 to 2020 growth rate deviates from the average. The growth rate from 2019 to 2020 deviates from the average 2015 to 2024 growth by 2.0%, while the growth rate from 2016 to 2017 deviates from the average growth rate by 5.1%.

3-Staff-100

Ref 1: Exhibit 3, Page 32-39

Question(s):

a) Please provide details on number of customers re-classed between general service rate classes from 2018 to 2019 including customer counts and volumes transferring rate classes from 2018 to 2019.

b) Please provide any additional insight into the reductions in GS < 50 kW and growth in other general service rate classes.

c) As a scenario, please provide energy and resulting demand forecasts for all general service rate classes where a dummy variable is included indicating the years 2019 to 2026.

d) As a scenario, please provide customer connection forecasts in all general service rate classes reflecting growth from 2019 to 2024.

Oshawa Power Response

a) A total of 48 accounts were reclassified between GS rate classes from 2018 to 2019. The total load of these customers was 9,904,161 kWh (average of 2018 and 2019 loads).

b) In late 2018, Oshawa Power undertook a comprehensive rate reclassification review to ensure customers were in the proper rate class for the OREC and GA modifier set up for 2019.

c) This scenario is provided as "Supplemental IRR 100c GS Dummy" and the results are summarized below. The Dummy variable is not statistically significant in the GS 50-999kW or GS 1,000 to 4,999kW regressions.

IRR Table 3-3: Dummy Variable Scenarios

2026				
Rate Class	As Filed		Scenario	
	kWh	kW	kWh	kW
GS < 50	128,276,139		131,799,864	
GS 50-999	326,060,504	826,398	324,576,706	822,644
GS 1,000-4,999	74,664,595	178,388	74,665,539	178,390

d) The scenario is provided in the table below.

IRR Table 3-4: Customer Connections Forecast Scenario

Customers		
Rate Class	As Filed	Scenario
GS < 50	4,523	4,524
GS 50-999	518	513
GS 1,000-4,999	18	18

3-VECC-101

Ref. 1: Exhibit 3, p. 42

Preamble:

The Application states:

"The Street Lighting, Sentinel Light, and Unmetered Scattered Load classes are non-weather sensitive classes. Device counts for each class reflect mid-year averages and are forecast on the geometric mean growth rate from 2016 to 2024, with the exception of the Sentinel Lighting class which is forecast to continue at the same device count it has had since 2019."

Question(s):

For Street Lighting and USL why was the geometric mean growth rate from 2016 to 2024 used as opposed to that from 2015 to 2024?

Oshawa Power Response

For USL, there was a relatively large drop in connections from 2015 to 2016, followed by a gradual level of growth from 2016 to 2024. Including the 2015 to 2016 growth rate would result in no growth in the rate class to the test year, which is not consistent with the class's recent trends. The Street Lighting geometric mean growth rate period of 2016 to 2024 was used to be consistent with the USL time period.

3-VECC-102

Ref. 1: Exhibit 3, p. 30 (Table 3-21), p. 32 (Table 3-24), p. 34 (Table 3-27), p. 37 (Table 3-31) and p. 40 (Table 3-35)

Ref. 2: Load Forecast Model, Normalized Annual Summary Tab

Question(s):

a) Please explain why the Residential Normalized No CDM (column D) values in Table 3-21 for the years 2015-2024 don't match those in the Load Forecast Model under Normal Predicted No CDM (column D).
b) Please explain why the GS<50 Normalized No CDM (column D) values in Table 3-24 for the years 2015-2024 don't match those in the Load Forecast Model under Normal Predicted No CDM (column R).
c) Please explain why the GS 50-999 Normalized No CDM (column D) values in Table 3-27 for the years 2015-2026 don't match those in the Load Forecast Model under Normal Predicted No CDM (column AC).
d) Please explain why the GS 1,000-4,999 Normalized No CDM (column D) values in Table 3-31 for the years 2015-2024 don't match those in the Load Forecast Model under Normal Predicted No CDM (column AN).
e) Please explain why the Large Use Normalized No CDM (column D) values in Table 3-35 for the years 2015-2024 don't match those in the Load Forecast Model under Normal Predicted No CDM (column AY).

Oshawa Power Response

a) - e) The tables in Exhibit 3 correspond to the tables beginning in row 44 of the 'Normalized Annual Summary' tab. The load forecast model includes two sets of "Normalized" loads for each class, one set based on prediction models using normalized weather and one set that begins with actual consumption and adjusts only for the difference between actual weather and normal weather. The tables in rows 2 to 16 correspond to the prediction models and the tables in rows 44 to 58, and included in Exhibit 3, correspond to the actuals adjusted for normal weather.

3-CCMBC-103

Ref. 1: Exhibit 3, Page 50

Question(s)

a) Evidence from other OEB proceedings indicates that the peak load of typical residential home with a Level 2 EV charger is equivalent to 3 to 5 homes without a Level 2 EV charger. What has been the experience of Oshawa PUC Networks?

b) Has Oshawa PUC Networks needed to install higher capacity distribution transformers to deal with higher peak loads from customers with Level 2 EV chargers?

Oshawa Power Response

a) Oshawa Power executed a Grid Innovation Fund project called “Feeder Level Forecasting and Data Disaggregation for DER Identification” in partnership with Peak Power and Hatch Engineering. Through this project, residential level 2 charging (7kW/h or higher) was identified and disaggregated from smart meter data with a 90% degree of accuracy. This study found that, on average, the load for EV users is slightly higher than 1 kW/h, while for non-EV users, it is slightly less than 1 kW/h. This is consistent with Natural Resources Canada’s National average coincident load impact for light duty-EVs of 1.2 kW per EV. Their report goes on to say “These values vary regionally due to fleet mix and climate. It is important to note that these are system-wide averages; as one gets closer to the grid edge (e.g., feeders or transformers serving 10s to 1000s of homes) these loads can become less predictable with the potential for higher impacts in certain areas”, suggesting that, at this time, a wide range of load impacts a across time horizons and proximity to grid edge are plausible. Oshawa Power has not done any other studies to-date with respect to household EV charging loads.

b) Oshawa Power does not currently track data on the percent of proactive transformer upgrades triggered wholly or in part by EV charger-related service requests. In terms of reactive transformer upgrades, Oshawa Power has recently become of aware of transformer equipment issues that occurred during July 2025,

which may be attributable (wholly or in-part) to EV charging. A root cause analysis of the issues will be done later this year.

3-VECC-104

Ref. 1: Exhibit 3, pp. 51-53

Ref. 2: Load Forecast Model, EV Forecast Tab

Question(s):

a) Please explain the basis for the assumption that the number of vehicles sold in Ontario will increase by 2% per annum in 2025 and 2026 (per page 51).

b) In the Load Forecast Model, EV Forecast Tab, it appears that the ½ adjustment has been applied twice for 2025 and 2026. First in Rows 16, 21, 26, 53, 58 and 64 where the cumulative kWhs are determined for the various types of EVs and used in the calculation of the incremental and cumulative kWh calculations by customer class in Rows 152-166. However, these results then include a further ½ year adjustment in Rows 169 to 173. Please review and either: i) explain why there is no double counting of the ½ year adjustment or ii) revise the forecast if there is double counting.

c) What was the basis for the judgement used to determine the allocation of incremental EV consumption to rate classes (per page 53)?

d) What was the basis for the 20% load factor used to determine incremental EV billing demand (per page 53)?

Oshawa Power Response

a) The increase in the number of vehicles in Ontario is forecast based on Ontario population growth trends, for example: Ontario Long Term Report, Chapter 1: Demographic Trends and Projections: https://www.ontario.ca/document/ontarios-long-term-report-economy-2024/chapter-1-demographic-trends-and-projections-2024.

b) Elenchus confirms the half-year adjustment is double counted. This is corrected in

the updated load forecast filed with interrogatory responses.

c) The allocation of EV consumption was determined by Elenchus and Oshawa Power and were informed by factors such as the number of customers in each rate class, prior discussions between Elenchus and other LDCs, and Oshawa Power's judgmental assessment of EV uptake by type of customer.

d) The 20% EV load factor is based on judgement considering a number of factors including typical EV load factors, different types of charging, and the coincident of charging EVs during the customer's monthly peak demand hour. Single EVs typically have load factors lower than 20%, however, GS 50 to 999 kW, GS 1,000 to 4,999 kW, and Large Use customers are more likely to have multiple vehicles charging at different times and will manage charging to some extent to avoid charging at their peak hour. Elenchus notes the OEB has set a load factor threshold of 20% for EV charging stations to be eligible for the EVC Rate. Though this threshold is the upper limit, the 20% factor considers the ability for GS >50 kW customers to manage EV charging loads.

3-Staff/CCC/VECC-105

Ref. 1: EB-2025-0014, Exhibit 3 – Customer and Load Forecast, Section 3.6.2. Electric Heating, Page 54

Preamble:

Oshawa PUC Networks provides a forecast of additional loads from electric heating, stating that 0.2% of existing Residential and GS<50 kW class customers will convert from natural gas to electric heating annually and 17.5% of new Residential and GS<50 kW class customers will have electric heating.

Question(s):

a) Please provide an explanation of the methodology Oshawa PUC Networks used to arrive at these numbers. Please cite any external source if necessary.

b) Please clarify what proportion of new and converting electric heating customers Oshawa PUC Networks is forecasting will have fully electric heating systems vs. hybrid (natural gas/electric) heating systems, and the methodology Oshawa PUC Networks used to arrive at these numbers. Please cite the external source if necessary.

c) Were these estimates informed in any way by discussion or sharing of information with Enbridge Gas Distribution regarding their forecasting assumptions around electrification of heating? If so, please describe.

Oshawa Power Response

a) Oshawa Power anticipates there will be some degree of increased electric heating in the test year that is above what would be reflected in historic volumes, however, it does not have substantial data on heating conversions. Without reliable data or external forecasts to assess heating conversions, the 17.5% rate for new connections with electric heating systems and 0.2% rate of existing customers is based on judgement. This judgement is informed by heat pump conversions in Ontario in recent years, and an expectation that electricity heating will increase from the historic period to the test year. The forecast was informed IESO's Pathways to Decarbonization assumption that 100% of new sales of space heating equipment will be electricity by 2035, and NRCan's National Energy Use Database data (https://oee.nrcan.gc.ca/corporate/statistics/neud/dpa/showTable.cfm?type=CP&sector=res&juris=on&year=2022&rn=21&page=0).

b) The percentages indicate the amount of household heating that will arise from existing and new connections. Oshawa Power does not have sufficient data to forecast the share of customers with electric heating will cease to have natural gas heating.

c) No.

3-VECC-106

Ref. 1: Exhibit 3, p.57

Ref. 2: Load Forecast Model, CDM Tab and CDM Framework Tab

Ref. 3: EB-2020-0048, OPUCN 2021 LRAMVA Workform, 2015-2020 LRAM Tab and Persistence Report Tab

Question(s):

The CDM savings from 2016 and 2017 programs used in the current Application (per the CDM Tab) don't match those filed by Oshawa PUC Networks in its 2021 Rate Application (per the LRAMVA Workform). Please reconcile.

Oshawa Power Response

The CDM figures for 2016 and 2017 are consistent with the April 2019 Participation and Cost Report, which was filed in Oshawa Power's 2021 rate application as "OPUCN_P_C Report OPUCN-2018_20200724". The LRAMVA workform in the 2021 Rate Application did not include unverified savings reported in the April 2019 Participation and Cost Report. This includes 2016 Save on Energy Retrofit savings of 6,400kWh, 2017 Save on Energy Coupon Program savings of 11,294kWh, 2017 Save on Energy Heating and Cooling Program savings of 90,525kWh, and 2017 Save on Energy Retrofit savings of 2,667,878kWh. Additionally, the '5. 2015-2020 LRAM' tab excluded verified Save on Energy Retrofit savings of 6,288,659kWh that was attributable to Street Lighting (excluded in cell AW65 of the '7. Persistence Report' tab).

3-VECC-107

Ref. 1: Exhibit 3, p.57

Ref. 2: Load Forecast Model, CDM Tab and CDM Framework Tab

Ref. 3: IESO 2023 Efficiency Report (2021-2024 Conservation and Demand Management Framework)

Ref. 4: IESO 2025-2027 DSM Plan (www.ieso.ca/Sector-Participants/IESO-News/2025/01/2025-2027-Electricity-Demand-Side-Management-Program-Plan-Released-0131)

Question(s):

According to the IESO's 2023 Efficiency Report (p. 23), the actual cumulative savings from the 2021-2023 programs were only 76% of the target amounts (as used in the Load Forecast model) – per Reference #3. Also, the IESO has issued new savings targets for 2025 and 2026 – per Reference #4. Please revise the Load Forecast Model to incorporate these updates.

Oshawa Power Response

The load forecast filed with interrogatory responses includes revisions to 2021-2023 CDM programs and accounts for forecast 2025-2026 eDSM.

3-VECC-108

Ref. 1: Exhibit 3, p. 9

Ref. 2: Load Forecast Model, Summary Tables Tab

Ref. 3: Chapter 2 Appendices, Tab ZA – Commodity Expense Forecast

Ref. 4: DVA Continuity Schedule, Billing Determinants Tab

Preamble:

In Exhibit 3 and the Load Forecast Model, the 2026 forecast kWh for the GS 50-999 class is 326,060,504 kWh. This is also the value used in the Cost Allocation model and the RRWF. However, in the DVA Continuity Schedule the total forecast kWh for the GS 50-999 class is 332,271,433 kWh, where the difference appears to be 6,220,990 kWh associated with a Wholesale Market Participant.

Question(s):

a) Please confirm that Oshawa PUC Networks' GS 50-999 class includes one or more customers that are Wholesale Market Participants.

b) If part (a) is confirmed, please clarify: i) whether the historical loads used to develop the GS 50-999 regression model included the total deliveries to the GS 50-999 class or just those associated with non-Wholesale Market Participants and ii) if the historical data used did not include the Wholesale Market Participant(s), how the 2026 load forecast for the Wholesale Market Participant(s) was developed.

c) Please reconcile the discrepancies in the GS 50-999 load forecast for 2026 as between the Exhibit 3/Load Forecast Model and the DVA Continuity Schedule.

d) As necessary, please revise the Load Forecast Model, Cost Allocation Model, the RRWF and the DVA Continuity Schedule.

Oshawa Power Response

a) Confirmed.

b) The historical loads used to develop the GS 50-999kW forecast did not include Wholesale Market Participants. The 2026 forecast for the Wholesale Market Participants in the DVA Continuity schedule is 2024 actual volumes.

c) The load forecast has been revised to include the WMP volumes for the GS 50-999kW rate class. Actual 2024 kWh and kW volumes have been added to the GS 50-999kW class, consistent with the DVA Continuity Schedule.

d) The load forecast has been revised and the updated loads are included in the revised load forecast model filed with interrogatory responses, the cost allocation model, RRWF, and the DVA Continuity Schedule.