Daliana Coban Director, Regulatory Applications & Business Support Toronto Hydro-Electric System Limited 14 Carlton Street | Toronto, Ontario, M5B 1K5 Visit us at: www.torontohydro.com Email: regulatoryaffairs@torontohydro.com



via Regulatory Electronic Submission System (RESS)

May 9, 2024

Ms. Nancy Marconi, Registrar Ontario Energy Board PO Box 2319 2300 Yonge Street, 27th floor Toronto, ON M4P 1E4

Dear Ms. Marconi:

Re: OEB File No. EB-2023-0195, Toronto Hydro-Electric System Limited ("Toronto Hydro") 2025-2029 Custom Rate Application for Electricity Distribution Rates and Charges – Interrogatories for Pacific Economics Group (Exhibit M1) and Enerlife Consulting (Exhibit M2) May 2, 2024 Reports

In accordance with Procedural Order No. 5, please find enclosed Toronto Hydro's interrogatories on the following Exhibits:

- Exhibit M1 prepared by Pacific Economics Group Research LLC ("PEG") entitled "CIR 2.0 for Toronto Hydro-Electric System Limited" on behalf of OEB Staff; and
- Exhibit M2 prepared by Enerlife Consulting entitled "EB-2023-0195 Toronto Hydro-Electric System Limited 2025-2029 Rates Application Building Owners and Managers Association Expert Evidence" on behalf of BOMA.

Sincerely,

Daliana Coban Director, Regulatory Applications & Business Support Toronto Hydro-Electric System Limited

Cc: Charles Keizer and Arlen Sternberg, Torys LLP; all intervenors

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

AND IN THE MATTER OF an Application by Toronto Hydro-Electric System Limited for an Order or Orders approving just and reasonable distribution rates and other service charges for the distribution of electricity, effective January 1, 2025.

INTERROGATORIES FROM TORONTO HYDRO-ELECTRIC SYSTEM LIMITED ("Toronto Hydro")

- M1-TH-001 Reference: PEG Framework Report, p. 5 "OEB Staff retained PEG to provide an independent expert appraisal and commentary on THESL's CIR proposal and ScottMadden's evidence."
 - Please provide the engagement letter and all related materials including any RFP and proposal response, and all written instructions provided to PEG, related to the preparation of PEG's report.
- M1-TH-002 Reference: PEG Framework Report, p. 8 "We also recommend replacing the average weekly earnings of Ontario workers in the revenue cap index inflation measure with Statistics Canada's fixed-weight index ("FWI") of average hourly earnings ("AHE") in Ontario. This is a more accurate measure of labor price inflation. An FWI AHE was recently adopted by the AUC as a component of its inflation factor formula."
 - a) Does PEG recommend the OEB transition its sector-wide Inflation Factor to the use of the FWI AHE as opposed to the currently used Average Weekly Earnings? If not, why not?
 - b) Please provide all facts and analysis performed by PEG, and any related documents, on which PEG relies to conclude that the fixed-weight index ("FWI") of average hourly earnings ("AHE") in Ontario is a more accurate measure of labor price inflation.
- M1-TH-003 Reference: PEG Framework Report, p. 17 "In energy distribution, the number of customers served has been found to be a sensible stand-alone measure of growth in operating scale. When the scale of the utility business is multidimensional, growth in its scale can be measured by a scale index."
 - a) Please provide examples and descriptions of scale indices utilized in other jurisdictions?

- M1-TH-004 Reference: PEG Framework Report, p.24-25 "In Ontario, ARMs that are based primarily on forecasts have been used on a few occasions to regulate power distributors and Enbridge Gas Distribution."
 - a) Please confirm that since the Renewed Regulatory Framework was adopted in October 2012 the OEB approved multi-year ARMs based primarily on forecasts in the following docket numbers.

| Applicant | Docket Number |
|----------------|---------------|
| Toronto Hydro | EB-2012-0064 |
| Enbridge Gas | EB-2012-0459 |
| Oshawa PUC | EB-2013-0101 |
| Horizon | EB-2014-0002 |
| Toronto Hydro | EB-2014-0116 |
| Hydro Ottawa | EB-2015-0004 |
| Kingston Hydro | EB-2015-0083 |
| Hydro One | EB-2017-0049 |
| Toronto Hydro | EB-2018-0165 |
| Hydro Ottawa | EB-2019-0261 |
| Hydro One | EB-2021-0110 |

- b) Please confirm that the ACM is an attrition relief mechanism that is also based primarily on forecasted capital costs, which are reviewed and approved in the utility's cost of service rebasing
- c) Please confirm that since the ACM became available in 2014, the OEB approved forecast-based ACMs in the following docket numbers:

| Applicant | Docket Number | | | |
|------------------------|---------------|--|--|--|
| Wellington North Power | EB-2015-0110 | | | |
| Energy + | EB-2018-0028 | | | |
| Greater Sudbury Hydro | EB-2019-0037 | | | |
| Algoma Power | EB-2019-0019 | | | |
| London Hydro | EB-2023-0037 | | | |

- M1-TH-005 Reference: PEG Framework Report, p. 50 "PIMs tend to be limited to situations where incentives are conspicuously weak and performance really matters."
 - a) Aside from cost-efficiency which is incentivized by the stretch factor, please identify the financial incentives currently embedded within Ontario's commonly deployed rate frameworks (i.e. Annual IR, Price Cap IR, CIR 1.0) for each of the following areas of performance:

- i. Reliability, as measured via outage duration and frequency;
- ii. Physical and cyber security enhancements;
- iii. Timely connections and service upgrades;
- iv. Customer satisfaction;
- v. Employee safety;
- vi. Continuous improvement in management governance per international standards
- vii. Grid modernization; and,
- viii. The deferral or avoidance of traditional capital investments via non-wires solutions.

M1-TH-006 Reference: PEG Framework Report, p. 67 "As CIR evolved to typically feature multiyear forecasts for most capex and a clawback of capital cost savings that weakened incentives, PEG's perception is that the Board has become increasingly disenchanted with extensive reliance on forecasting in ARM design and outspoken in its request for another ARM design method."

- a) Please provide all facts and analysis, and any related documents including any correspondence (including emails) and memoranda received from OEB staff or the OEB, on which PEG relies to reach the conclusion that the Board is increasingly disenchanted and outspoken with reliance on forecasting?
- M1-TH-007 Reference: PEG Framework Report, p. 87 "Ontario distributors have often had variance account treatment of certain costs that result from external events (e.g., changes in government policies) and are hard to predict accurately. In the case of Toronto Hydro, it seems reasonable to accord Y factor treatment for this reason in the new plan to cost categories that include the following.
 - externally initiated plant locations and expansions
 - Hydro One contributions
 - o costs occasioned by the Getting Ontario Connected Act"
 - a) Please confirm that Y factor treatment in this context refers to the subjecting of noted costs to a symmetrical Variance Account.
- M1-TH-008 Reference: PEG Framework Report, p. 85 "Toronto Hydro could be assigned a gross plant additions budget in each year of the new plan that is similar (in the dollars of the next plan) to their average plant additions during the expiring plan less a cost efficiency markdown."
 - a) PEG refers to the "new plan" and the "expiring plan", please clarify what is meant by the "next plan".

- M1-TH-009 Reference: PEG Framework Report, p. 86 "Note also that just adjusting the revenue cap index for total customer growth won't fully compensate Toronto Hydro for the costs of high-rise condo connections"
 - a) Please confirm that the inclusion of customer growth in the revenue cap index also won't fully compensate Toronto Hydro for the costs of: (i) hyperscale data centers and other large loads (e.g. transit), and (ii) service upgrades to accommodate the increasing load needs of existing customers

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

AND IN THE MATTER OF an Application by Toronto Hydro-Electric System Limited for an Order or Orders approving just and reasonable distribution rates and other service charges for the distribution of electricity, effective January 1, 2025.

INTERROGATORIES FROM TORONTO HYDRO-ELECTRIC SYSTEM LIMITED ("Toronto Hydro")

M2-TH-001 References:

Enerlife Report, p. [page 5: "Section 1.3.3 Commercial Customer Information"] Enerlife Report, p. [page 9: "Section 2.2 Empirical Data - Gaining Insight into Commercial Building Energy Usage"] Enerlife Report, p. [page 12: "Section 2.2.3 Impact of Electrification in Commercial Buildings"]

Preamble 1: "There are also great differences between commercial building types, where, for example, office buildings, grocery stores, community centres, hospitals and schools have entirely different ownership, building systems, energy profiles and decarbonization opportunities. Conservation and electrification planning and forecasting for this broad and diverse sector require in-depth, disaggregated customer information, including customer connections, commercial building types, and interval meter data. BOMA requested some of this information in interrogatories, which was not provided. The analysis for this report has been limited by the lack of reliable and consistent commercial customer information, including customer breakdown by rate class, sector and building types."

a) On pages 5, 9 and 12, the report references data collected from numerous commercial buildings. Please provide all the data utilized by Enerlife to construct the model, including a breakdown of customers by rate class, sector, and building types.

M2-TH-002 Reference: Enerlife Report, p. [page 7: "Section 2.1 Conservation and Electrification in Commercial Buildings – Myths and Facts"]

Preamble 1: "Electrification Facts: In most commercial buildings, hybrid electrification can reduce fossil fuel consumption and related emissions by 90% or more without costly in-building and upstream electrical service upgrades."

- a) Please provide the study that verifies the 90% assertion.
- b) Please confirm the 90% assertion is accurate across all building types.

M2-TH-003 Reference:

Enerlife Report, p. [pages 8-9: "Section 2.2.1 CDM Potential in Commercial Buildings"]

Preamble 1: "Enerlife applies data-driven performance-based conservation to estimate achievable electricity savings potential for individual buildings, portfolios and sectors. Empirical targets are set, typically at the top-quartile level of the benchmark charts. Target adjustments are applied to account for material differences between individual buildings, including weather and heating/cooling system types. Achievable savings are then determined for each building as the difference between its actual and target electricity use. The methodology is applied by commercial landlords and large-scale programs in Ontario's hospital, municipal, K-12 schools, multi-residential and post-secondary sectors for planning and directing energy efficiency programs...."

- a) Please provide all supporting evidence, including a schedule (working excel file), that sets out the calculations used to estimate achievable electricity savings including breakdown of empirical targets and target adjustments, for each building type.
- M2-TH-004 Reference: Enerlife Report, p. ["pages 9-11: Section 2.2.2 Expected CDM Savings in Commercial Buildings 2025 to 2029 Period"]

Preamble 1: "Drawing from this direct experience with many commercial building owners/managers, Enerlife forecasts that, in the Toronto Hydro service area, 50% of this electricity consumption savings potential shown in Table 2-1 will be achieved by the end of this proceeding's period (i.e. by the end of 2029)..."

"The expected CDM electricity consumption cumulative savings during the 2024 to 2029 period are listed in Table 2-2 below, based on 50% of the potential savings shown in Table 2-1 being achieved by 2029. Enerlife's projected average commercial sector CDM savings of 1.7% (annual reduction) is generally consistent with what was included in the Toronto Hydro load forecast and the APS targets."

- a) Please provide all supporting evidence, including a schedule (working Excel file), that:
 - i. Sets out the derivation of the 50% of electricity consumption savings potential shown in Table 2-1
 - Sets out the calculations of projected average commercial sector CDM savings of 1.7% from individual 2024-2029 commercial building types in Table 2-2. Please provide the calculations including the weighted kWh share by building type used to derive to average of 1.7% and the related number of buildings this related load represents.

M2-TH-005 References: Enerlife Report, p. [page 11: Section 2.2.3 "Impact of Electrification in Commercial Buildings"] Enerlife Report, p. [page 16: Section 2.2.4 "Electrification Adoption in Commercial Buildings – 2025 to 2029 Period"] Enerlife Report, p. [page 4: Section 1.3.2 "Electrification in Commercial Buildings"]

> Preamble 1: "Electrification in commercial buildings has already started. A growing number of new buildings including CIBC Square and Humber River Hospital have heat recovery chillers and other heat pump technology. Many public- and private-sector commercial building owners are planning, setting targets and taking action towards net zero greenhouse gas emissions. The strategies, methods and market dynamics of the low carbon energy transition in the commercial sector are very different from the residential or industrial sectors."

Preamble 2: "Based on discussions with a number of clients, Enerlife expects a steady increase in market penetration over the 2024-2029 period, averaging 2% per year, for commercial buildings in Toronto, predominantly "hybrid" electrification with existing fossil-fuel-fired heating continuing in use during peak demand periods."

Preamble 3: "Enerlife estimated the adoption of electrification (primarily switching from natural gas heating to electric heat pump technology) and its impact on commercial buildings in Toronto during the 2025-2029 period based on its knowledge of installations already in operation or development and involvement in energy transition planning for a number of major owners. In commercial buildings, almost all current electrification installations and planning use "hybrid" solutions (with natural gas backup), and Enerlife expects this trend to continue during the 2025-2029 period (discussed in Section 2)."

- a) How did Enerlife factor into its forecast the diverse range of buildings in Toronto Hydro's territory (e.g. spanning from multi-units residential buildings ("MURBs") to various commercial properties), in determining the adoption rate of electrification?
- b) How did Enerlife factor into its forecast the varied strategies, methodologies, and market dynamics of the low-carbon energy transition in the commercial sector? How did it incorporate rate classes into that assessment?
- c) Please specify the number of commercial buildings among BOMA Toronto members that have completed their building electrification transition plans by Q1, 2024, for (1) Heat Recovery and (2) Electrification (e.g., ASHP) installations, which were utilized in calculating the electrification adoption rates for 2025-2029 as detailed in Sections 1.3 and 2.2.

d) Please complete the tables below according to BOMA customers' building development known plans, along with supportive evidence.

BOMA Member Energy Transition Projects: Small Size Buildings

| | units | 2025 | 2026 | 2027 | 2028 | 2029 |
|-----------------|----------------------------|------|------|------|------|------|
| Heat Recovery | # of projects | | | | | |
| | Electrification kWh Impact | | | | | |
| | Electrification kW Impact | | | | | |
| Electrification | # of projects | | | | | |
| | Electrification kWh Impact | | | | | |
| | Electrification kW Impact | | | | | |

BOMA Member Energy Transition Projects: Large Size Buildings

| | units | 2025 | 2026 | 2027 | 2028 | 2029 |
|-----------------|----------------------------|------|------|------|------|------|
| Heat Recovery | # of projects | | | | | |
| | Electrification kWh Impact | | | | | |
| | Electrification kW Impact | | | | | |
| Electrification | # of projects | | | | | |
| | Electrification kWh Impact | | | | | |
| | Electrification kW Impact | | | | | |

BOMA Member Energy Transition Projects: All Buildings

| | units | 2025 | 2026 | 2027 | 2028 | 2029 |
|-----------------|----------------------------|------|------|------|------|------|
| Heat Recovery | # of projects | | | | | |
| | Electrification kWh Impact | | | | | |
| | Electrification kW Impact | | | | | |
| Electrification | # of projects | | | | | |
| | Electrification kWh Impact | | | | | |
| | Electrification kW Impact | | | | | |

M2-TH-006 Reference: Enerlife Report, p. [page 12: "Section 2.2.3 Impact of Electrification in Commercial Buildings"]

Preamble 1: "Figure 2-2 below presents the progression of natural gas and electricity energy use intensities (EUIs) for a representative small size office building in Toronto from its 2010 baseline, through its 2018-19 performance, to the cost-effective energy efficient target (improved from median to top quartile performance through operation and management optimization). The final two decarbonization steps are then application of ventilation and process heat recovery. In this case, 50% energy reductions come from CDM."

- a) How did Enerlife determine that the building used for the baseline was representative of all commercial buildings in Toronto? If it is not representative of all commercial buildings, what is it representative of, and how did Enerlife come to that conclusion? Please provide supporting evidence with respect to determining its status as a representative building.
- b) Please provide all supporting evidence, including a schedule (working excel file), that sets out the calculations used to derive the information shown in Figure 2-2.

M2-TH-007 Reference: Enerlife Report, p. [pages 12-13: "Section 2.2.3 Impact of Electrification in Commercial Buildings"]

Preamble 1: "...shows the corresponding impacts of CDM, heat recovery and heat pumps on electricity demand in the winter and summer (i.e. winter peak and summer peak), showing a modest increase in annual peak demand. Importantly, Figure 2-4 highlights the >95% reduction in natural gas use and associated emissions for this example, with the residual occurring in the coldest occupied hours of the year."

- a) What is the source of the "Original Demand" shown in Figure 2-3?
- b) Please provide all supporting evidence, including a schedule (working excel file), that sets out the calculations used to derive the information shown in Figure 2-3 and 2-4.
- M2-TH-008 References: Enerlife Report, p. [Page 14: "Section 2.2.3 Impact of Electrification in Commercial Buildings"] Enerlife Report, p. [Pages 39-43: Appendix B]

Preamble: "While absolute electricity and natural gas intensities vary, and the type of equipment used to recover waste heat also varies (e.g. while roof-top air-source heat pumps are commonly used in schools and smaller buildings, heat recovery chillers and

ASHP boilers are used in large buildings and hospitals), the same electrification progression steps and results are appliable to most commercial building types."

"Analyses for representative office buildings, K-12 schools and hospitals are provided in Appendix B. Table 2-3 below summarizes the results of these analyses and shows the electrification progression steps and their impact on electricity and natural gas usage (consumption and peak demand) for different commercial building types"

- a) How did Enerlife determine that these equipment types are most common among all commercial buildings in Toronto? If it is not most common among all commercial buildings, what is the subset, and how did Enerlife come to that conclusion? Please provide supporting evidence with respect to determining these equipment types are most common, and how common "most" is (i.e. percentage of all buildings in Toronto by type).
- b) For each building type, what are the sources or assumptions used to derive consumption and demand for:
 - i. Original electricity usage and peak demand
 - ii. Electricity usage and peak demand with heat recovery
 - iii. Electricity usage and peak demand with air source heat pumps (ASHPs)
- c) Please provide a detailed description and the explanation of the difference between 1st Stage Heat Recovery and Final Stage Recovery outlined in Table 2-3.
- d) Please indicate the sample size used for building category to determine archetypes in Table 2-2.
- e) Please provide all supporting evidence by building category including the customer load data including a schedule (working excel file), that sets out the calculations used to derive the information shown in Table 2-3 and Appendix B.

M2-TH-009 Reference:

Enerlife Report, p. [Page 16: "Section 2.2.4 Electrification Adoption in Commercial Buildings – 2025 to 2029 Period"]

Preamble: "Based on discussions with a number of clients, Enerlife expects a steady increase in market penetration over the 2024-2029 period, averaging 2% per year, for commercial buildings in Toronto, predominantly "hybrid" electrification with existing fossil-fuel-fired heating continuing in use during peak demand periods. By this estimate, 12% of commercial buildings in Toronto would have adopted electrification by the end of 2029 as described above."

- a) What was the number of clients Enerlife had the discussions with to determine the adoption rate for electrification of 2%?
- b) Were these clients with whom discussions were had a representative sample of BOMA members? Was this a representative sample of all building owners in Toronto? Are the buildings owned or managed by these clients representative of all the buildings in Toronto? For any answer in the affirmative, please explain how that was determined and file corresponding evidence.
- c) What level of uncertainty surrounds the assumption of an average annual increase of 2% in market penetration for commercial buildings in Toronto?
- d) Please provide all supporting evidence, including a schedule (working excel file) by commercial building type, that sets out the derivation of the 2% average steady increase in market penetration in commercial buildings in Toronto.
- e) Please confirm if Enerlife meant to state "12% of commercial buildings of BOMA Toronto members in Toronto would have adopted electrification by the end of 2029 as described above". If not, please elaborate how Enerlife determined the anticipated impact on all buildings within Toronto.
- f) What assumptions were made to allocate the impacts of building electrification among the rate classes?
- g) Please provide all supporting evidence for 2024-2029, including a schedule (working excel file), that sets out the derivation of average 2% per year of market penetration over 2024-2029 period leading to 12% of commercial buildings in Toronto adopting electrification by the end of 2029.

M2-TH-010 Reference:

Enerlife Report, p. [Pages 20-21: Section 3.2 Alternative Load Forecast Scenario One]

Preamble: "Generating this scenario requires three steps:

- 1. Remove the expected commercial CDM impact incorporated in the original Toronto Hydro load forecast from all the GS rate classes - The Business CDM variable used in Toronto Hydro's multivariate regression includes impacts of both commercial and industrial CDM programs. Only the impact from commercial CDM programs have been removed.
- 2. Align Enerlife's expected CDM impact as listed in Table 2-2 (2024 to 2029 CDM impact by building type) to two rate class categories: i) CSMUR and ii) Total GS rate

classes (which include GS<50kW, GS 50 to 999 kW, GS 1,000 to 4,999 kW and the Large User Rate Classes).

3. Incorporate Enerlife's expected CDM impact by rate class to the CSMUR, GS<50kW, GS 50 to 999 kW, GS 1,000 to 4,999 kW and the Large User Rate Classes."

"Table 3-5, Table 3-6, and Table 3-7 below presents the Alternative Load Forecast Scenario One. Enerlife's CDM analysis impacts the multi-residential condo/apartment, commercial and institutional buildings only. As such, only CSMUR, GS<50kW, GS50-999kW, GS1,000-4,999kW and Large User Rate Classes are affected."

- a) Toronto Hydro understands that Enerlife only removed 2024-2029 Commercial CDM savings from its Business CDM variable in its multivariate regression modelling.
 Please confirm Toronto Hydro's understanding for the removal of Commercial CDM savings from its Business CDM variable.
 - If yes, please provide a schedule (working excel file) that derives the removal of Commercial CDM Savings from Toronto Hydro's Business CDM variable.
 - ii. If no, please explain how the Commercial CDM savings were removed.
- b) Please explain how the CDM impacts from multi-residential condo/apartment, commercial and institutional buildings was applied to the CSMUR, GS<50kW, GS50-999kW, GS1,000-4,999kW and Large User Rate Classes.
- c) Please provide all supporting evidence, including a schedule (working excel file), that sets out the calculations used to derive the information shown in Tables 3-5, 3-6, and 3-7.

M2-TH-011 *Reference:*

Enerlife Report, p. [Pages 21-23: "Section 3.3 Alternative Load Forecast Scenario Two"]

Preamble: "Generating the alternative load forecast scenario 2 requires two steps:

- 1. Align Enerlife's expected electrification impact as described in sections 2.2.3 and 2.2.4 (i.e. 2024 to 2029 electrification impact by building type) to two rate class categories: i) CSMUR and ii) Total GS rate classes (which include GS<50kW, GS 50 to 999 kW, GS 1,000 to 4,999 kW and the Large User Rate Classes).
- 2. Incorporate Enerlife's expected electrification impact by rate class to the CSMUR, GS<50kW, GS 50 to 999 kW, GS 1,000 to 4,999 kW and the Large User Rate Classes."

"Table 3-8, Table 3-9, and Table 3-10 below present the Alternative Load Forecast Scenario Two. Enerlife's electrification analysis impacts the multi-residential condo/apartment, commercial and institutional buildings only. As such, only CSMUR, GS<50kW, GS50-999kW, GS1,000-4,999kW and Large User Rate Classes are affected."

- a) Please explain how electrification impacts from multi-residential condo/apartment, commercial and institutional buildings were applied to the CSMUR, GS<50kW, GS50-999kW, GS1,000-4,999kW and Large User rate classes.
- b) Please provide all supporting evidence, including a schedule (working excel file), that sets out the calculations used to derive the information shown in Tables 3-8, 3-9, and 3-10.

M2-TH-012 Reference: Enerlife Report, p. [Page 19: Table 3-4 "Toronto Hydro 2025 to 2029 Winter and Summer Peaks"]

Preamble: "To estimate the impact of Load Forecast Scenarios One and Two on Toronto Hydro's distribution system winter and summer peak demand, a 2025 to 2029 forecast of winter and summer peak demand by rate class (as shown in Table 3-4 below) is estimated based on information provided in Table 3-3 (winter and summer peak by class), Table 3-1 (non demand billed rate classes' 2025 to 2029 kWh growth) and Table 3-2 (demand billed rate classes' 2025 to 2029 kW growth)."

a) Provide the excel model to demonstrate how the co-incident peak is derived for the years 2026-2029.

M2-TH-013 References: Enerlife Report, p. [Page 21: Table 3-7 "Impact of Alternative Load Forecast Scenario 1 on 2025 to 2029 Toronto Hydro Distribution System Peak"] Enerlife Report, p. [Page 23: Table 3-10 "Impact of Alternative Load Forecast Scenario 2 on 2025 to 2029 Toronto Hydro Distribution System Peak"]

a) Provide the excel model to demonstrate how the co-incident peak is derived for Scenarios 1 and 2.

M2-TH-014 References: Enerlife Report, p. [Page 25: Section 4.1.2 "The Impact of Electrification - Alternative Scenario Two vs. Alternative Scenario One"] Enerlife Report, p. [Page 5: Section 1.4.3 "Coordination Among Stakeholders"]

Preamble 1: "Enerlife estimated the adoption of electrification (primarily switching from natural gas heating to electric heat pump technology) and its impact on commercial buildings in Toronto during the 2025-2029 period based on its knowledge of installations already in operation or development and involvement in energy transition planning for a number of major owners. In commercial buildings, almost all current electrification installations and planning use "hybrid" solutions (with natural gas backup), and Enerlife expects this trend to continue during the 2025-2029 period (discussed in Section 2)."

Preamble 2: The low carbon transition which is just beginning will see a massive transformation in all aspects of the commercial buildings' sector which has to navigate great uncertainties including government policy, market demand, economic factors and technology. It requires active involvement from many stakeholders.

a) What level of confidence does Enerlife have in their estimation of the adoption of electrification (switching from natural gas heating to electric heat pump technology) in commercial buildings in Toronto from 2025 to 2029 given the uncertainties and predictability of the building electrification technology? How was that confidence level calculated or otherwise determined?