

Ms. Nancy Marconi
OEB Registrar
Ontario Energy Board
P.O. Box 2319, 27th Floor
2300 Yonge Street
Toronto, ON M4P 1E4

February 9, 2023

**EB-2022-0200 Enbridge 2024 Rebasing Application
Pollution Probe Interrogatories to Applicant**

Dear Ms. Marconi:

In accordance with OEB direction, please find attached Pollution Probe's Interrogatories to the Applicant for the above noted proceeding.

Pollution Probe appreciates the coordination by parties and in particular SEC and ED for submitting a portion of their Interrogatories early. This has enabled Pollution Probe to validate it has mitigated duplication where possible. Pollution Probe is providing its Interrogatories before the deadline in an attempt to be helpful in a similar manner.

Respectfully submitted on behalf of Pollution Probe.



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Richard Carlson, Pollution Probe (via email)

ONTARIO ENERGY BOARD

**Enbridge Gas Inc.
2024 Rebasing**

POLLUTION PROBE INTERROGATORIES

February 9, 2023

**Submitted by: Michael Brophy
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Consultant for Pollution Probe**

1.4-PP-1

Reference: 1/4/1 para 1 - Enbridge Gas has over \$14 billion in regulated assets and serves over 3.8 million residential, commercial, and industrial customers in Ontario delivering heating to more than 75% of Ontario's homes". [Exhibit 1, Tab 4, Schedule 1, Paragraph 1]

- a) Please provide a breakdown by major category of the \$14 billion in regulated assets (e.g. pipelines, buildings, IT, etc.)
- b) Please confirm that the \$14 billion reference refers to regulated assets regulated by the Ontario Energy Board. If not, please clarify what portion is regulated by the Ontario Energy Board and replicate the answer for part "a" with the portion of assets regulated by the Ontario Energy Board.

1.4-PP-2

Please provide a table showing all capital projects (e.g. Leave to Constricts, etc.) approved by the OEB since last rebasing (i.e. MAADs proceeding and Decision), where capital recovery is requested in this proceeding (EB-2022-0200). In the table, please provide the following columns of information:

- Project name
- OEB docket number
- Total capital cost (forecasted / actual)
- Capital O/H amount (if included in total project capital cost)
- In-service date (actual or expected)
- Amortization period

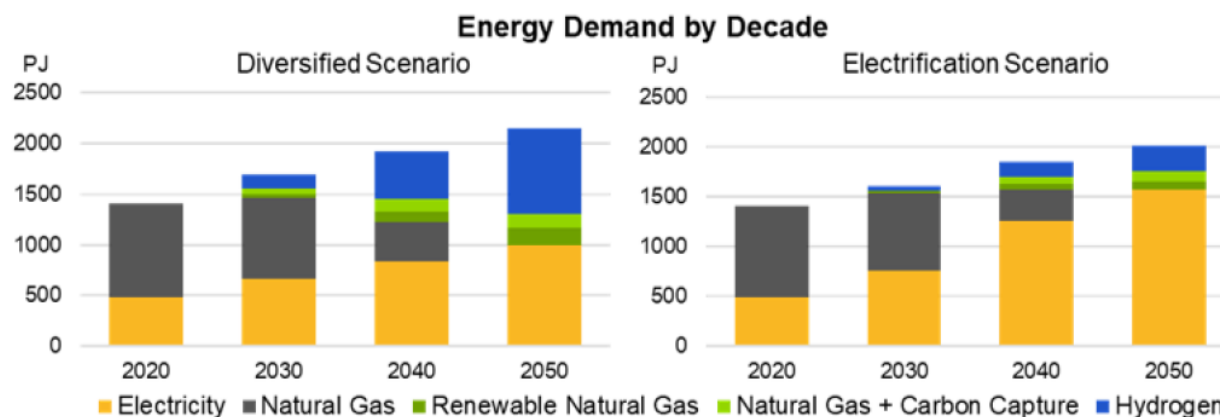
1.3.1-PP-3

Section 19.1 [Exhibit 1, Tab 3, Schedule 1] provides a consolidated list of the approvals Enbridge is requesting. The list includes specific documents.

Please confirm that Enbridge is not seeking OEB approval of any other Enbridge documents (e.g. policies, manuals, plans, etc) not on the list in Section 19.1. If incorrect, please provide the full list.

1.10-PP-4

Reference: Figure 4 Exhibit 1, Tab 10, Schedule 5, Page 15



- Please provide a table (or source spreadsheet) showing PJ and percent of total by energy type shown in legend (for each time period and scenario shown in the table).
- For the hydrogen shown in each scenario please indicate the expected source of the hydrogen and whether it would be transmitted/distributed via a pure hydrogen pipeline or a blend. If it is a blend, please indicate the percent blending for each scenario and by time period shown in the graph.
- Please provide the expected lifecycle emissions (e.g. lifecycle Kg CO₂e per PJ). for the hydrogen included in Figure 4 above. Please provide calculations or references that provide the source of the emission intensity assumptions.
- Please provide details on how carbon capture would occur (e.g. technology/process for capture and where would the captured CO₂ be stored) in the scenarios Enbridge has identified.
- Does Enbridge have a reference on the potential geological sequestration of CO₂ in Ontario? If yes, what is the total in tonnes of CO₂ storage available? Please provide the report or related references.
- Please explain the difference between “natural gas” and “natural gas with carbon capture” outlined in the Energy Transition scenarios provided by Enbridge.
- For the “natural gas with carbon capture” scenario, please explain what “carbon capture” assets (if any) Enbridge would expect to be in rate base as part of the regulated utility business.

1.10-PP-5

- a) Please provide examples of Enbridge customers that have made a commitment to move to natural gas with carbon capture.
- b) Please explain who regulates hydrogen in Ontario and under what authority.
- c) For the scenario including 100% hydrogen, please provide what responsibility and regulatory authority the OEB would have in regulating pure hydrogen production and/or infrastructure (e.g. hydrogen pipelines) in Ontario, if any.

1.10-PP-6

- a) As part of Sustainability efforts as outlined in the evidence, Enbridge established Scope 3 emission metrics to track performance. Please provide the Scope 3 metrics, goals and current results against target. [Enbridge Sustainability Report - Exhibit 1, Tab 10, Schedule 3, Page 1]
- b) As part of Sustainability efforts as outlined in the evidence, Enbridge has linked emissions goals to compensation and financing [Enbridge Sustainability Report - Exhibit 1, Tab 10, Schedule 3, Page 1]. Please provide the details Enbridge is using to link emission goals to compensation and financing. Please also provide the most recent results and their impact on compensation and financing.
- c) According to the Sustainability Report referenced in Enbridge evidence, Enbridge has achieved 20% of its goal to reach Net Zero by 2050 [Enbridge Sustainability Report - Exhibit 1, Tab 10, Schedule 3, Page 1]. Please provide a copy of the plan and related materials (e.g. scorecards, PowerPoint reporting, etc.) to achieve Net Zero by 2050 and provide the current progress against the plan.
- d) Please also provide any materials (reports, PowerPoint decks, etc.) outlining how the 20% progress against the Net Zero 2050 goal was achieved (i.e. what activities have been undertaken and the contribution of each activity).
- e) Please provide details on what additional progress against the Net Zero by 2050 goal will be achieved by implementing the proposed Rebasing plan as outlined in the application.

1.10-PP-7

Reference: PollutionProbe_IR_AppendixB_Enbridge2022Q3Presentation_20230209

Please provide a copy of the strategy documents for both Core Growth and Low Carbon Growth per slide 5 of the Enbridge presentation noted above.

1.10-PP-8

Reference: “The OEB expects that, at a minimum, the level of natural gas savings from DSM programs during the next multi-year term will be the equivalent of at least 0.6% of sales in 2026, 0.8% of sales in 2027 and 1.0% of sales in each year from 2028 through to the end of 2030, relative to the prior year on a weather normalized basis”. [EB-2021-0002 Decision and Order, Page 4]

- a) Please explain how Enbridge's Rebasing application and related load forecast complies with the OEB direction to reduce net natural gas volumes beginning in 2026?
- b) If the Enbridge Rebasing application is not in alignment with OEB direction for annual net reductions in natural gas throughput, please provide what elements of the application will need to change and when Enbridge would be in a position to provide those updates.
- c) The Posterity Group analysis appears to be the fastest way to provide modelling results in alignment with OEB direction (i.e. reductions of at least 0.6% of sales in 2026, 0.8% of sales in 2027 and 1.0% of sales in each year from 2028 through to the end of 2030, relative to the prior year on a weather normalized basis). Please provide an updated scenario from Posterity Group to reflect the net throughput modeling assumption starting in 2026.

1.10-PP-9

Reference: “Enbridge Gas is excited and confident about the role the Company can play in supporting customers, the province, and municipalities in achieving their GHG emission reduction goals.”

- a) Please provide specific examples of where Enbridge has helped municipalities reach their emission reduction goal?
- b) Has Enbridge partnered with any municipalities to develop and/or deliver an IRP Plan to deliver on a municipality's energy and emission plan goals? If yes, please provide details.

- c) Please provide a summary of Enbridge collaboration with Ontario municipalities related to their energy and emission plans. Please include specific results achieved (reduction of energy and GHG emissions) per municipality.
- d) Please provide a breakdown by Ontario municipality of the incremental energy and emission reductions that will be achieved based on Enbridge's Rebasing application.
- e) Please provide an update (since the EB-2020-0091 OEB Decision in 2021) on development and implementation of IRP alternatives in coordination with the City of Ottawa. Please also describe the timing of additional IRP alternatives to be implemented in alignment with the City of Ottawa's Energy Evolution Plan based on Enbridge's Rebasing application.

1.10-PP-10

In EB-2022-0086 Enbridge indicated that it has an internal policy requirement to purchase offsets to ensure that any new pipeline project align with Enbridge's Net Zero policy.

- a) Please provide a copy of the policy requiring Enbridge to offset emissions for projects.
- b) Please provide an update on the purchase of offsets related to the Corunna project approved by the OEB in EB-2022-0086 and when they were (or plan to be) purchased.
- c) Please provide Enbridge's estimated cost to purchase an offset per tonne of CO₂e.

1.10-PP-11

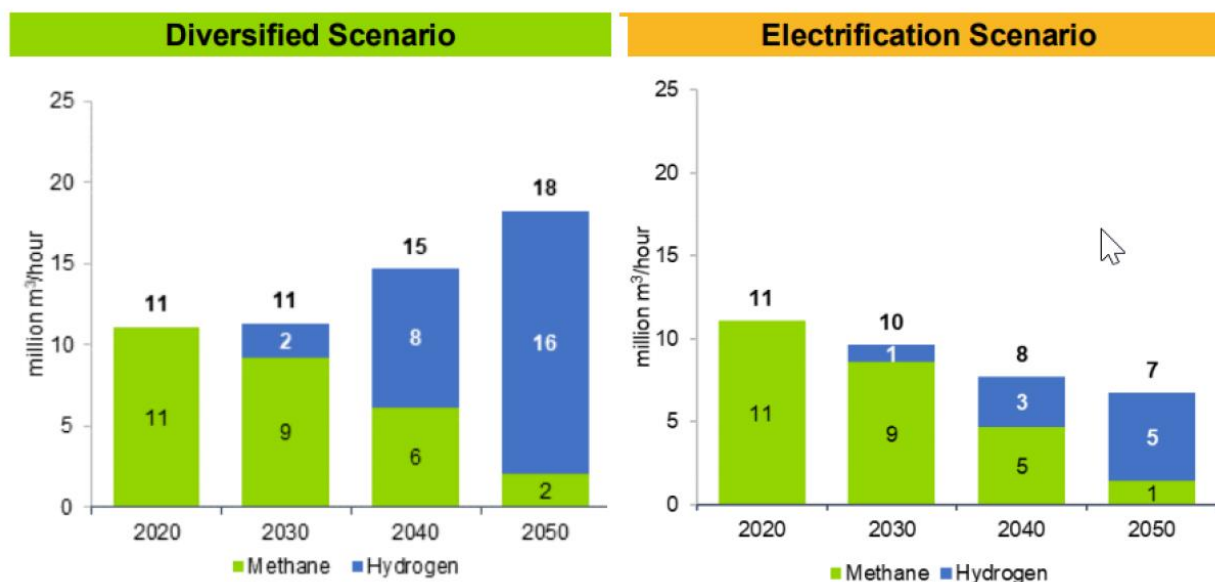
In EB-2022-0203 Enbridge indicated that the Project was not assessed as an individual project with respect to its greenhouse gas ("GHG") emissions impacts. However, the emissions associated with these facilities will be included as part of Enbridge Gas's overall GHG emissions inventory and will be addressed as part of the Company's overall GHG strategy to reduce emissions [EB-2022-0203 Exhibit I.PP.10b]. Please explain which budget line item in the current filing includes funding to offset emissions to these kinds of projects and provide a list of the projects where emissions are estimated to be mitigated.

1.10-PP-12

- a) Please provide all examples in Ontario or North America where gas distribution pipelines have been converted for blending hydrogen with natural gas.
- b) Please provide all examples in Ontario or North America where gas transmission pipelines have been converted for blending hydrogen with natural gas.
- c) Please provide all examples in Ontario or North America where gas distribution pipelines have been converted for distributing pure (100%) hydrogen with natural gas.
- d) Please provide all examples in Ontario or North America where gas transmission pipelines have been converted for transmitting pure (100%) hydrogen.

1.10-PP-13

Reference: Figure 5 Exhibit 1, Tab 10, Schedule 5, Page 16



For the hydrogen shown in each scenario please indicate the expected source of the hydrogen and whether it would be transmitted/distributed via a pure hydrogen pipeline or a blend. If it is a blend, please indicate the required percent blending for each scenario and by time period shown in the graph.

1.10-PP-14

Reference: Canadian Standards Association Guidance – see
PollutionProbe_IR_AppendixA_CSA

- a) Has Enbridge consulted with Canadian Standards Association on its application and evidence? If yes, please provide a copy of related correspondence.
- b) Please confirm Enbridge's understanding of the CSA notice for delivery and use of hydrogen in Ontario.
- c) Did Enbridge analyze CSA codes & standards in its consideration for low carbon fuels such as hydrogen? If yes, please provide a copy of the materials (e.g. reports, analysis, presentations, email confirmations, etc.)

1.10-PP-15

References:

"The OEB expects that Enbridge Gas will monitor developments and bring their learnings to the rebasing application or a future stand-alone application for the Program" [EB-2020-0066 Decision, Page 21]

Enbridge Gas indicated that it will provide "reporting on Program results (participation, costs, RNG volumes etc.), RNG procurement approaches and experience, observations on the competitive market, discussion of the impact of the CFS, and details relating to go-forward proposals for the future of the Program" [EB-2020-0066 Enbridge Gas reply argument, paragraph 61]

- a) Please provide all developments and learnings related to environmental attributed for Ratepayer funded RNG, in accordance with the OEB's direction.
- b) Please provide Enbridge's RNG Program report on its experience in accordance with its commitment in EB-2020-0066.

1.10-PP-16

- a) Please confirm that hydrogen gas is less energy dense than natural gas and show what calculation Enbridge is using to calculate the additional volume of hydrogen gas required to replace each cubic meter of natural gas.
- b) Please indicate what incremental pipeline capital costs (due to hydrogen transmission/distribution) are included in the Diversified Scenario for each timeframe.

1.10-PP-17

Reference: Guidehouse Pathways to Net Zero Emissions for Ontario Report

“While this study aims to adequately simulate an increasingly integrated electricity and gas system in Ontario, the results of this analysis are not intended to dictate when and where infrastructure investments will take place.” [Exhibit 1, Tab 10, Schedule 5, Attachment 2, Page 2]

- a) Please confirm that the Guidehouse report referenced by Enbridge in its Energy Transition evidence is only a simulation and not intended to dictate infrastructure or timing. If that is incorrect, please explain why this disclaimer has been applied to the modelling and report.
- b) Please explain how Enbridge has translated information from the Guidehouse report into specific infrastructure investments in the USP, AMP and other investment planning documents (e.g. capital plan, revenue plan, etc.).
- c) Please provide a copy of the RFP, contract and statement of work for the Pathways to Net Zero Emissions for Ontario project and report.
- d) Please confirm that the Pathways to Net Zero Emissions for Ontario Report was funded and/or under-taken in partnership with IESO and if not, please explain why not given the significant assumptions on electricity use in Ontario.
- e) Please provide which accounts (e.g. O&M, Capital, DSM, IRP Deferral Account, etc.) were used to pay for the Pathways to Net Zero Emissions for Ontario Report and the percent of funding per account if funding was split between accounts.

1.10-PP-18

References: “Enbridge Gas commissioned Guidehouse to evaluate two different scenarios that achieve net zero emissions for Ontario by 2050” [Exhibit 1, Tab 10, Schedule 5, Attachment 2, Page 3].

- a) Please explain how Enbridge identified the two scenarios that formed the scope for the Guidehouse analysis/report and if they are custom scenarios for Enbridge or if they were selected from existing publicly available scenarios.
- b) Please explain why Enbridge developed the two scenarios for assessment rather than have Guidehouse select the scenarios based on Enbridge criteria.

1.10-PP-19

Reference Guidehouse (2021). European Hydrogen Backbone: Analysing the future demand, supply and transport of hydrogen. Available:

https://gasforclimate2050.eu/wp-content/uploads/2021/06/EHB_Analysing-the-future-demand-supply-and-transportof-hydrogen_June-2021.pdf

- a) Guidehouse references the above Guidehouse report to suggest that existing gas pipelines can be used to transport pure hydrogen. It appears that Guidehouse is referencing transmission pipelines and not distribution pipelines in the report referenced. Please confirm this understanding or provide the reference that provides the full range of existing natural gas infrastructure that could be operated with 100% hydrogen.
- b) Is the Guidehouse 2021 European report the only reference Guidehouse has to support pipeline compatibility assumption or are there third party report references Guidehouse can provide to validate this assumption? Please provide copies (or links to) all reports Guidehouse has related to this assumption.
- c) If this assumption is not correct and new pipelines would be needed instead of leveraging existing pipeline infrastructure. Please confirm what impact that would have on the cost of the Diversified Scenario.

1.10-PP-20

Reference: Guidehouse Pathways to Net Zero Emissions for Ontario Report

- a) Please provide a list of stakeholders consulted in development of the Guidehouse Report.
- b) Please provide a list of stakeholders and their related feedback based on Enbridge sharing (via presentation, email, meeting or other approach) the Guidehouse Report and/or related information and findings.
- c) Have any stakeholders identified concerns or issues with the Guidehouse Report (report, information, analysis or findings)? If yes, please provide a summary of stakeholder feedback and any actions Enbridge intends to take to address the feedback.

1.10-PP-21

Reference: Posterity Group - Energy Transition Scenario Analysis [Exhibit 1, Tab 10, Schedule 5, Attachment 1,]

- a) Is the Diversified Scenario in the Posterity Energy Transition Scenario Analysis the same as the Diversified Scenario in the Guidehouse Pathways to Net Zero Emissions for Ontario Report? If not, please identify the differences.
- b) Please provide a copy of the RFP, contract and statement of work for Posterity Group work related to this application including the Energy Transition Scenario Analysis project.
- c) Please provide which accounts (e.g. O&M, Capital, DSM, IRP Deferral Account, etc.) were used to pay for the Energy Transition Scenario Analysis project and the percent of funding per account if funding was split between accounts.

1.10-PP-22

Reference: Posterity Group - Energy Transition Scenario Analysis [Exhibit 1, Tab 10, Schedule 5, Attachment 1,] - "the Diversified Portfolio scenario has the highest gas volume as this scenario has the most hydrogen volumes, which are driven by low carbon gas mandates and enhanced support for deployment of hydrogen."

- a) Posterity Group's footnote indicates that "The volumetric energy density of hydrogen was captured in the model: blending hydrogen increases annual volume (m3) even if energy demand (PJ) remains the same". Is the increased gas demand in the Diversified Scenario entirely due to the fact that more gas is required when hydrogen is blended or also due to other factors? If it is due (in part) to other factors, please explain.
- b) What factor did Posterity Group use to model the increase in gas demand capacity for blended hydrogen vs. natural gas?

1.10-PP-23

Reference: Posterity Group - Energy Transition Scenario Analysis (ETSA) project.
“Annual gas volume decreases 8% by 2030, 21% by 2038, and 29% by 2050, relative to 2019 in the ETI scenario, whereas an overall increase in annual gas volume is observed in the Diversified Portfolio scenario.” [Exhibit 1, Tab 10, Schedule 6, Attachment 1]

- a) Posterity indicates that for 2050 there is a 29% decrease in gas volumes in Enbridge’s Energy Transition Initiative (ETI) scenario and a net increase for the Diversified Scenario. The Diversified Scenario indicates that there is no natural gas and only a very limited amount of “natural gas and carbon capture”. Please explain why the natural gas volumes in 2050 are not at or near zero under that scenario.
- b) Please confirm that Posterity’s reference to “gas volumes” for the purposes of assessing Enbridge’s scenarios and rebasing application do not equate to natural gas volumes. If that is correct, please provide a description of what is included and what percent of each component is included in Posterity’s analysis.
- c) Please explain the gas volume impact for the Posterity analysis if all hydrogen in the scenarios was removed (i.e. not distributed through the regulated natural gas infrastructure)
- d) Please provide a copy of the RFP, contract and statement of work for Posterity Group work related to this application including the Energy Transition Scenario Analysis project.
- e) Please provide which accounts (e.g. O&M, Capital, DSM, IRP Deferral Account, etc.) were used to pay for the Energy Transition Scenario Analysis project and the percent of funding per account if funding was split between accounts.

1.10-PP-24

Reference: Posterity Group - “The 2050 end-user GHG emissions were modeled at 33 Mt CO₂/yr, with the annual gas volumes being composed of 97% natural gas, about 3% RNG, and <1% of hydrogen in the ETI scenario. In contrast, the 2038 end-user emissions for the Diversified Portfolio Scenario were 22 Mt CO₂/yr, which highlight the emission reduction effectiveness of measures assumed within the Diversified Portfolio scenario.” [Exhibit 1, Tab 10, Schedule 6, Attachment 1]

Please confirm that the ETI and Diversified Scenario modeling referenced by Posterity Group does not achieve Net Zero end-use emissions by 2050. If incorrect, please explain how that is achieved in the scenarios modelled by Posterity Group.

1.10-PP-25

Reference: Posterity Group - Energy Transition Scenario Analysis (ETSA) project.
[Exhibit 1, Tab 10, Schedule 6, Attachment 1]

- a) Posterity Group removed CCS due to current uncertainty over when and how it will be implemented in Ontario. Please provide Posterity Group's rationale and explain why this represents a prudent modelling assumption.
- b) Posterity Group adjusted demand-side management (DSM) program spending to be a 3% increase year-over-year (similar to application EB-2021-0002 currently in front of the Ontario Energy Board). The OEB (EB-2021-0002) Decision only provided a three year approval to Enbridge based on the need to significantly increase DSM results (i.e. net system throughput reductions) starting in 2026 and beyond. Did Posterity Group flatline DSM for 2026 and beyond or include escalation factors to align with the OEB's direction. Please explain.

1.14-PP-26

Reference: NGV Program

- a) Please provide a current summary of capitalized assets in the NGV Program and indicate which portion serves company (i.e. Enbridge) purposes vs. non-company (i.e. open market) customers.
- b) Please provide the most recent net profit (revenues less costs) statement for the NGV Program.
- c) Given Enbridge's expressed interest in pivoting to hydrogen over natural gas, please explain why the NGV program should not be phased out in favour of migrating to hydrogen for transport where electric vehicles are not adequate.
- d) Please provide any studies, analysis or other related materials Enbridge has on the potential for the NGV Program to become a stranded asset.

2.1-PP-27

- a) Please explain the different in purpose and use between Enbridge's Utility System Plan (USP) and Asset Management Plan (AMP)? Also please explain how these documents are used in a coordinated manner to prioritize asset investment decisions.
- b) When the OEB sets Enbridge capital expenditures (annually or during an incentive rate period), please explain how (if at all) the USP and/or AMP enable Enbridge to specifically prioritize which capital investments should be undertaken over others within the approved capital envelope.

2.1-PP-28

Reference: Exhibit 2, Tab 1, Schedule 1 Table 2

- a) Over the current rebasing period net regulated capital rate base has grown from \$13.139 billion to \$15.542 billion. Please explain how the OEB MAADs application approval aligns with this net increase. If part of this net increase is beyond the OEB MAADs Decision approval, please explain where the additional increase to rate base over this period has occurred.
- b) Please estimate what portion of the \$15.542 and \$16.184 billion in Table 2 is expected to be in rate base in 2050 (i.e. not fully depreciated by 2050).

2.4-PP-29

Prior to amalgamation, both EGD and Union had separate overhead capitalization policies which were approved by the OEB. The amalgamation of EGD and Union required Enbridge to review all existing accounting policies to identify where alignment was required. Enbridge is requesting OEB approval to capitalize indirect overheads for the Rebasing period.

Please outline what the impact would be over the rebasing period if the OEB does not allow Enbridge to capitalize indirect overheads as requested.

2.4-PP-30

Reference: The capitalization of indirect overheads was one such area of alignment to provide a harmonized approach for the Company that meets the guidelines specified by the OEB Uniform System of Accounts for Class A Gas Utilities, and US GAAP. [Exhibit 2, Tab 4, Schedule 2, Page 2]

- a) Please provide the specific guideline language Enbridge is referring to above.
- b) Please confirm that capitalization of indirect overheads under US GAAP is only allowed when a regulatory decision is in place to enable that approach (i.e. if the OEB does not provide put it in place as a regulatory approval Enbridge would not be able to capitalize indirect overheads under US GAAP). If that is not correct, please explain.
- c) Please confirm what amount and portion of annual capital costs are related to indirect overheads.

2.5-PP-31

Reference: "Of the 2,278 investments that were evaluated through Enbridge Gas's IRP Binary Screening, 878 investments passed the screening, relating to \$10.4 billion worth of projects that will progress to the technical evaluation."

- a) In Enbridge's stakeholder consultation it indicated that only a portion of the projects in the AMP have been screened for IRP purposes. Please indicate when the remaining projects will be screened and how that will be communicated to the OEB and stakeholders.
- b) Please explain what passing the screening means and what Enbridge's process is for technical evaluation of projects that passed the screening.
- c) For the projects moving forward to an IRP alternatives assessment (e.g. economic evaluation), please provide an estimated date for when the assessment will be complete for each project.
- d) Is it correct that $2,278 - 878 = 1,400$ projects in the IRP failed the Binary screening and what are the next steps for those projects?
- e) Please provide a copy of the completed screenings for all projects screened out of the 2,278 investments.

2.5-PP-32

Enbridge has indicated that RNG projects may not be included in the AMP or undergo the IRP considerations as part of the AMP process [EB-2022-0203, Exhibit I.PP.3]. Please identify which RNG projects are excluded/included from the AMP and related process. Please explain why RNG projects are excluded.

2.5-PP-33

- a) Please provide the scope and/or Terms of Reference for the IRP Technical Working Group.
- b) Please provide the Enbridge scorecard, objectives and progress to-date related to Integrated Resource Planning (IRP) in alignment with the OEB's EB-2020-0091 Decision and related IRP Framework.

2.5-PP-34

Enbridge indicated that Phase 1 of the Low Carbon Energy Project (LCEP) is complete and that Phase 2 is in planning. Enbridge also indicates that an additional \$8.9 million of system reinforcement costs are included in this application related to accommodating hydrogen blending.

- a) Enbridge Gas estimates that the GHG reductions associated with using blended gas having 2% hydrogen by volume in the BGA would be between 97-120 tonnes of carbon dioxide equivalent (tCO₂e) per year. [EB-2019-0294 Decision, page 1]. Please provide the actual annualized tonnes of carbon dioxide equivalent (tCO₂e) avoided from the LCEP and provide the calculations used to determine the avoided emission compared to those if blending had not occurred.
- b) Please provide the current (i.e. most recent) blending percentage rate and the average blending percent since the LCEP project was commissioned.
- c) Enbridge Gas agreed with the reporting requirements proposed by OEB staff. Enbridge Gas agreed that some reporting will be appropriate in the context of the upcoming rebasing proceeding, providing the OEB and parties with interim information about the Project before full reporting is provided. Reporting on the ongoing customer communication is required to ensure that customers report on their experience with the blended gas and the performance of their equipment. The OEB makes these reporting commitments a condition of proceeding with the Project. [EB-2019-0294 Decision, page 14]. Given Enbridge is asking to accelerate Phase 2 of the project. Please provide a copy of the final report for Phase 1.

2.6-PP-35

The OEB expects that two IRP pilot projects will be selected and deployed by the end of 2022 as proposed by Enbridge Gas [EB-2020-0091 Decision, page 9]. Please provide an update on the status of the pilot and the current schedule related to planning, approval, deployment and reporting.

2.6-PP-36

Please provide a description, blending percentage and current status of the hydrogen blending examples provided by Enbridge including: Atco Gas and Pipelines Ltd (Atco Gas) in Alberta, Gazifère Inc.(Gazifère) in Québec, FortisBC Energy Inc. (FEI) in British Columbia, Southern California Gas Company and NW Natural in the U.S, Minneapolis CenterPoint Energy , New Jersey Resources, Dominion Energy Inc. in Utah, CenterPoint Energy Inc. in Minneapolis, NW Natural in Oregon and Chesapeake Utilities Corp in Florida. [Reference: Exhibit 4, Tab 2, Schedule 6, pages 3-4]

2.6-PP-37

Reference: Exhibit 2, Tab 6, Schedule 2, Appendix A, Page 29 – Proposed Hydrogen Study

- a) Please provide the scope of work for the proposed Hydrogen Study.
- b) Please explain why a hydrogen study is capital rather than O&M.

2.6-PP-38

Reference: EB-2022-0200, Exhibit 2, Tab 6, Schedule 2, Page 139 (Section 5.2.4.6.1.7)

Please provide a copy of the RNG Strategy.

4.1-PP-39

Reference: “In the Diversified scenario, hydrogen plays a large role in building heat. Since hydrogen is less energy dense on a volumetric basis than natural gas, the volumetric peak demand in the Diversified scenario increases...” [Figure 4 Exhibit 1, Tab 10, Schedule 5, Page 15]

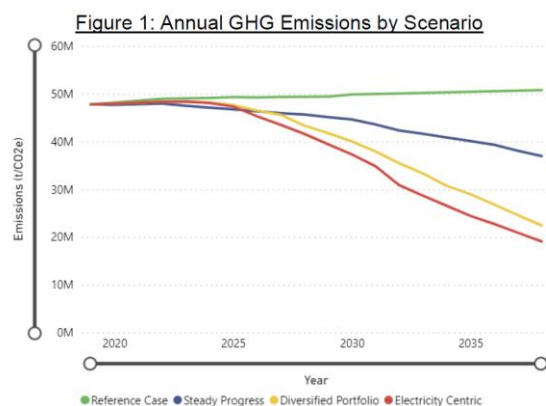
- a) Please show the calculation comparing the volume of hydrogen required for 1 MJ compared the volume of natural gas required for 1 MJ of energy.
- b) Please confirm what volume of hydrogen (as a gas in a pipeline) would be required to replace 1 cubic meter of natural gas to provide the same amount of energy.

9.1-PP-40

- a) Please provide the current total and details of any amounts in the *ICM Deferral Account (Account No. 179-159)*. When does Enbridge intend to clear amounts in this account?
- b) Please provide the current total and details of any amounts in the *Panhandle Reinforcement Project Costs (Account No. 179-156)*. If the account is empty, please explain why it is needed?
- c) Please provide the current total and details of any amounts in the *Expansion of Natural Gas Distribution Systems Variance Account (Account No. 179-380)*.
- d) Please provide the current total and details of any amounts in the *Integrated Resource Planning (IRP) Operating Costs Deferral Account (Account No. 179-385)*
- e) Please provide the current total and details of any amounts in the *IRP Capital Costs Deferral Account (Account No. 179-386)*.

10.5-PP-41

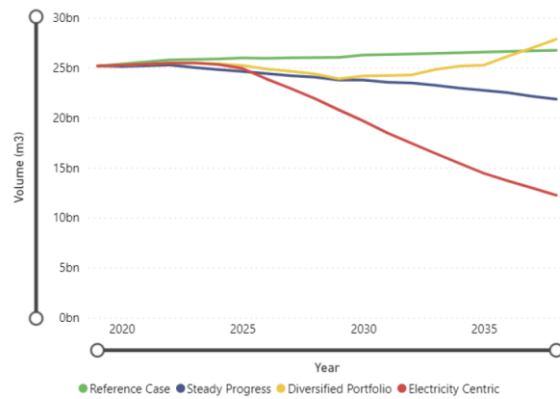
Reference: Figure 1, Exhibit 1, Tab 10, Schedule 5, Page 7 (pg 9 is volume gas)



- a) Which scenario does Enbridge recommend for consideration and why?
- b) Are the emissions reductions in Figure 1 due to decreased natural gas usage? If not, please explain.

10.5-PP-42

Reference: Figure 1, Exhibit 1, Tab 10, Schedule 5, Page 9



- Please replicate Figure 1 with PJ on the y-axis and all other information the same.
- In 2028 what is the decreased use in natural gas (units and %) per scenario compared to the 2024 Reference Case?
- Please provide a table showing the volume and percent by year of low carbon gas for each scenario.