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October 7, 2024

2022-0335 Enbridge IRP Pilot
Pollution Probe Argument

Dear Ms. Marconi:

In accordance with OEB direction, please find attached Pollution Probe's Argument pertaining to the above noted proceeding.

Respectfully submitted on behalf of Pollution Probe.

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EB-2022-0335

ONTARIO ENERGY BOARD

Enbridge Gas Inc.
Integrated Resource Planning Pilot

POLLUTION PROBE SUBMISSION

October 7, 2024

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Background

On July 22, 2021, the Ontario Energy Board (OEB) issued its Decision in EB-2020-0091, which included an order for Enbridge Gas Inc. (Enbridge) to develop and implement two IRP Pilots prior to the end of 2022. Additional details pertaining to the purpose of the IRP Pilots and coordination with stakeholders was outlined in the OEB Decision and the related Integrated Resource Planning Framework (dated July 22, 2021 and appended to the Decision). Enbridge notified the OEB on December 22, 2022 that they were not on track to complete the two IRP Pilot projects for the end of 2022.

Enbridge applied to the OEB on July 19, 2023, under section 36 of the Ontario Energy Board Act, 1998, for approval of the cost consequences of the IRP Plans for two IRP Pilot Projects and the proposed accounting treatment to record costs of these Pilot Projects in the IRP costs deferral accounts for later disposition and recovery. Enbridge designed two IRP Pilot Projects to implement demand-side IRP Alternatives ("IRPAs") in combination with supply-side IRPAs in the communities of Parry Sound (the "Parry Sound Pilot Project") and the City of Sarnia and Town of Plympton Wyoming (the "Southern Lake Huron Pilot Project"). These IRP Pilot Projects aimed to mitigate identified system constraints and associated facility reinforcement projects, and were also intended to provide learnings regarding future IRPA design, performance, and potential for scalability.

On November 10, 2023, Enbridge wrote to the Ontario Energy Board advising, among other things, that NRCan was closing the application process for new entrants into the Greener Homes Grant program in Q1 of 2024. One of the two proposed IRP pilot projects relied in part on the installation of heat pumps supported by incentives under the HER+ DSM program delivered by Enbridge. The OEB indicated that a revised proposal for a pilot project that continues to include heat pumps would be helpful. In parallel, IESO launched its heat pump incentive program in 2024.

On June 28, 2024, Enbridge filed updates to its pre-filed evidence and interrogatory responses. Enbridge reassessed its Capital plan and determined that the baseline facility projects for Parry Sound and Southern Lake Huron are no longer in the Enbridge 10-year capital forecast. Enbridge decided to remove the Parry Sound Pilot Project and modify the location and scope of the Southern Lake Huron Pilot Project as detailed in its updated application. The OEB's IRP Technical Working Group (TWG) indicated the importance of developing and delivering IRP pilots in an expeditious manner given the delay from the original deadline from the OEB.

The OEB issued procedural orders to review the proposed Southern Lake Huron IRP Pilot. On September 5, 2024, the OEB issued Procedural Order No. 5 which indicated

that the OEB would not proceed by way of an Oral Hearing and instructed parties on a schedule for written submissions.

Context and Considerations

This proceeding represents the first of its kind, given that it is to review the first ever gas IRP pilot project. IRP Pilot Projects have been a long awaited and represent an important opportunity to test innovative IRP options beyond the status quo. It has been over three years since the OEB requested Enbridge to develop and implement two IRP Pilot projects in coordination with stakeholders including the OEB's IRP TWG. The numerous delays by Enbridge to develop and file an IRP pilot project may be viewed by the OEB as putting increased urgency on rushing through review of the project in order to get anything out the door. However, a rush to approve a poor IRP pilot design is not a win for the OEB, Ontario or its ratepayers. Only an appropriate IRP pilot design should be approved by the OEB for implementation. A poorly designed IRP pilot can cause irreparable harm for gas IRP in Ontario, while only a well designed IRP pilot will provide value and align with the OEB's intentions for IRP pilots as ordered in EB-2020-0091.

Pollution Probe believes that the record is fairly clear and although an oral hearing could have provided an opportunity to consider additional elements to make the IRP Pilot more successful, there is sufficient information (including thorough Interrogatories and the Technical Conference) to fix the fatal flaws in the proposed Pilot project and ensure that the first IRP pilot is finalized and launched by 2025. Pollution Probe believes that, with the recommended adjustments, the Southern Lake Huron IRP Pilot can proceed and produce some IRP learnings in alignment with what the OEB intended in the IRP Decision. Some of the opportunities lost in this pilot can be considered for the second IRP pilot project.

Pollution Probe does not intend to replicate the record in this document, but there are some issues that warrant highlighting to ensure that the context and considerations are clear as the OEB assesses this first ever gas IRP Pilot Project in Ontario. Some additional references are included in the last section of this document which provide the recommendations required to make the IRP Pilot project successful (not perfect, but good enough to get the first IRP pilot moving forward). Too often pilot projects can be poorly designed and implemented, resulting in costs and resource allocation that do not provide the valuable results and learnings intended. It would be regretful to have that kind of scenario occur for this important IRP Pilot Project. Implementation challenges are not a new issue for gas IRP and careful consideration is required in advance to avoid creating (real or perceived) barriers to advancing timely gas IRP results in Ontario. Nobody would have forecasted in 2021, when the OEB IRP Decision and IRP Framework was issued, that we would be in this situation three years later with essential zero gas IRP outcomes achieved in Ontario. Had the OEB been able to see the future,

it would have likely been more prescriptive in what it expected Enbridge to do and under what timeframe.

IRP delivery and outcomes have been stalled at Enbridge. Enbridge has reported over the past three years on activities on an annual basis, but activities are different from the tangible IRP outcomes expected. There is a long list of concerns raised with Enbridge's lack of focus and progress on implementing IRP since 2021. Stakeholders have expressed concern about Enbridge's lack of compliance with the OEB's direction for IRP[1]. The challenges with Enbridge coordination with stakeholders including the OEB's IRP TWG are also well documented[2]. Little meaningful consultation has occurred, despite the significant opportunity for IRP alternatives and pilots to be considered across the thousands of Capital projects proposed by Enbridge. The OEB's IRP TWG was specifically developed to coordinate on IRP and the proposed IRP pilots, but there has been very limited opportunity for it to play the role intended by the OEB. Even based on the feedback provided by the OEB IRP TWG, Enbridge dismissed their input in favour of technologies that would retain natural gas customers[3]. This is a critical flaw in the proposed Southern Lake Huron IRP Pilot, as currently proposed by Enbridge.

It is surprising how long it has taken for Enbridge to put forward pilot proposals, given the thousands of Capital projects that Enbridge has proposed in each annual iteration of the ten year Asset Management Plan since 2021. Enbridge's recent Rebasing Capital request to the OEB was based on 3246 Capital projects listed in its Asset Management Plan[4]. Even using only the 2,278 projects that went through the IRP screening process by Enbridge[5], there is still a large set of projects for consideration. The fact that Enbridge is indicating that it only has one project where an IRP pilot is being considered is quite alarming, particularly when it is no longer deferring a Capital investment.

The OEB mandated open and proactive consultation as part of the IRP Decision and IRP Framework. This has been done by IESO for over a decade, which was the basis for the IRP Decision and Framework issued by the OEB. However, no municipalities were consulted on opportunities for an IRP pilot project aside from the two specific municipalities that Enbridge selected as the proposed pilot location[6]. It is not surprising that it has taken so long to move forward one single IRP pilot, if no communication or

[1] Example includes EB-2022-0133 OEB Decision, Exhibit N1, Tab 1, Schedule 1, Page 12, Section 7.
[2] Including OEB IRP TWG member comments in IRP Reports from 2021-2023 - Natural Gas Integrated Resource Planning (IRP) | Engage with Us (oeb.ca) and Final Transcript EB-2022-0200 Enbridge Gas Rebasing Vol 6, Page 102 lines 8-18
[3] REVISED Final Transcript for EB-2022-0335 Technical Conference August 27 2024, Page 132 line 26 to page 133 line 11.
[4] EB-2022-0200 Exhibit J12.2
[5] EB-2022-0200 EB-2022-0200 Final Transcript EB-2022-0200 Enbridge Gas Rebasing Vol 12, Page 46 line 7.
[6] Exhibit I.PP-30c and REVISED Final Transcript for EB-2022-0335 Technical Conference August 27 2024, Page 141 lines 19-24.

requests have been sent out to Ontario municipalities. This approach does not align with OEB direction.

There have been many excuses put forward for no IRP results, but at the end of the day profit from installing Capital has exceeded the 'carrots and sticks' put in place by the OEB to pursue more cost-effective IRP alternatives. Without OEB remediation, Ontario can expect this trend to continue without any tangible outcomes to persist into the future. Although this IRP Pilot proceeding is not specifically about remediating IRP delivery, this context is very important as the OEB considered what it expects out of the proposed IRP Pilot Project. If we are sitting here in 2027 with no tangible learnings from the Pilot that can be applied more broadly to accelerating IRP in Ontario, we should consider it a failure.

Enbridge indicates that it expects to be able to proceed with detailed planning and implementation in 2025[7] and that completion of the proposed Pilot would occur in 2027[8]. Enbridge indicates that it should be in a position to begin reporting on the Pilot in 2026[9]. It is unclear what specific reporting Enbridge is committing to in 2026 or what the OEB will require as interim reporting in 2026. Would this just be a few sentences of updates or sharing of actual results to-date? Although interim reporting is important for high level visibility of progress, the more fulsome reporting and analysis will only be available in 2027.

There is significant opportunity immediately (in 2024 and into 2025) to enhance Pilot partnership and learning opportunities as the IRP Pilot is finalized and implemented. Enbridge acknowledged the experience and resources IESO can bring to IRP during the Technical Conference[10], but failed to consult over the 3 years of pilot project development and include it in the Pilot design filed with the OEB. It is unclear why this partnering is being put off for future consideration instead if implementing now. There is an opportunity now for those synergies, cost-efficiencies and learning opportunities to be added to what Enbridge has proposed if the OEB includes specific direction in its Decision. Enbridge evidence indicated that it "may" engage with stakeholders like IESO. Even during the Technical Conference when the benefits of partnership were highlighted, Enbridge only agreed to a minor commitments and left others as "may" instead of "will"[11]. The failure of Enbridge to make these logical commitments, compounds the lack of partnership through development of the Pilot as filed.

[7] EGI_ARGChief_20240924, Page 1.
[8] Exhibit D, Tab 1, Schedule 2, Page 3 – proposed project schedule
[9] EGI_ARGChief_20240924, Page 1.
[10] REVISED Final Transcript for EB-2022-0335 Technical Conference August 27 2024, Page 62 lines 20-27.
[11] REVISED Final Transcript for EB-2022-0335 Technical Conference August 27 2024, Page 67 line 25 to page 69 line 10.

The Southern Lake Huron Pilot area now included the City of Sarnia. As the OEB is aware, some of the largest gas users in Ontario are located in the City of Sarnia. The OEB has encouraged Enbridge to include Interruptible options as part of IRP alternatives previously. There was limited opportunity to explore those options in detail through this proceeding. However, the OEB should encourage Enbridge to include additional Interruptible rate alternatives as part of future IRP pilots and non-pilot options.

Recommendations

This is not a 'business as usual' proceeding and if executed prudently, the results from this proceeding could have positive (or negative) impacts across Ontario for decades to come. The OEB should not under-estimate the importance of advancing IRP in relation to the broader context of the Energy Transition under way in Ontario. As outlined in the OEB's 2021 Decision "The pilots are expected to be an effective approach to understand and evaluate how IRP can be implemented to avoid, delay, or reduce facility projects"[12].

Before and during this proceeding, Pollution Probe and other stakeholders made suggestions to Enbridge for changes needed on the proposed IRP Pilot Project. Enbridge has not adjusted the design or approach based on this feedback. Pollution Probe questioned Enbridge on several of those recommendations in the Technical Conference in an attempt to understand why stakeholder feedback was not included in the IRP Pilot Project design. Enbridge agreed that many of the recommendations make sense (including alignment and coordination with IESO on Pilot delivery and leveraging existing IESO knowledge and evaluation approaches rather than spending gas ratepayer funds on recreating the wheel). Enbridge should have filed a more adequate IRP Pilot design in its (original or updated) application, but the failure to meaningfully take stakeholder feedback into consideration, has resulted in an IRP Pilot Project that is inadequate as filed. With adjustments to address the fatal flaws, the Pilot could proceed and add value as intended.

Enbridge indicates that the Southern Lake Huron IRP Pilot Project will allow Enbridge to design, implement and monitor a variety of IRPAs including enhanced targeted energy efficiency (enhanced demand side management measures, limited electrification measures, and limited advanced technology measures) and demand response[13]. Furthermore, Enbridge indicates that the testing, monitoring and reporting proposed for the Southern Lake Huron IRP Pilot Project will help ensure that the experience and learnings from the implemented IRPAs can be used to evaluate, design and implement

[12] EB-2020-0091 dec_order_EGI_IRP_20210722, page 24.
[13] EGI_ARGChief_20240924, Page 1.

future IRP plans[14]. Pollution Probe agrees with those objectives for the IRP Pilot Project. However, those objectives will not be achieved based on Enbridge's current Pilot design. Modifications are required to achieve those objectives.

The following are the recommendations proposed by Pollution Probe to the OEB.

Recommendation #1:

Pollution Probe recommends that the OEB approve proceeding with the IRP Pilot in the Southern Lake Huron area, subject to the changes and conditions required to remove current design flaws to ensure that the IRP Pilot has a reasonable likelihood of success. Even though there is no longer a facility need to be addressed in the Southern Lake Huron area, Pollution Probe agrees that it is reasonable and appropriate to proceed with a pilot in this area, subject to the adjustments recommended. This will begin to help mitigate the lack of progress on the requisite IRP Pilots since 2021.

Recommendation #2:

Pollution Probe recommends that the OEB require Enbridge to file the final IRP Pilot design with the OEB and participants to this proceeding prior to pilot implementation and not later than February 15, 2025. When Enbridge files the final IRP Pilot design, it should also file an updated version of the Posterity report on analysis related to the initial Southern Lake Huron Pilot Project[15]. The updated Posterity report should match the final IRP Pilot design and be used to compare actual IRP Pilot results against those modeled in advance to understand how modelled results compare to actual results and opportunities to improve modeling in the future.

Recommendation #3:

The OEB should require that the Southern Lake Huron IRP Pilot Project be finalized and implemented by July 1, 2025, with public interim reporting in 2026 and that the Pilot be completed prior to June 1, 2027 (Note: the forecasted schedule indicates end of Q1 2027). A detailed Final Report outlining all the activities, outcome and learnings from the IRP Pilot Project is to be filed prior to December 31, 2027.

Recommendation #4:

Pollution Probe recommends that the OEB require the gas measures be removed from the IRP Pilot, specifically, hybrid heating, natural gas heat pumps and gas-fired thermal energy storage (although non-gas energy storage could be considered). The proposed funds should be reallocated to the other measures, such as electric cold-climate air

[14] EB-2020-0091 dec_order_EGI_IRP_20210722, page 24.
[15] Posterity report for Southern Lake Huron IRP Pilot project is included in Exhibit JT1.5, Attachment 1.

source heat pumps. This was a strong recommendation by the OEB IRP TWG and it was dismissed by Enbridge in favour of technologies that would retain natural gas customers[16], rather than maximize IRP benefits. There are more cost effective and modern non-gas technologies available today that should be used.

Many of the gas technologies proposed in the Pilot are less efficient and counter to maximizing IRP results. For example, electric cold-climate heat pumps are much more prevalent and cost-effective with efficiencies up to 500%, where gas heat pumps are less efficient, uncompetitive and were specifically excluded by the OEB for use in the Enbridge DSM programs for those reasons and more. Best available information clearly indicates that electric cold-climate air source heat pumps are significantly more cost effective than natural gas[17], while operating at temperatures well below peak heating days[18]. Enbridge agreed that electric heat pumps installed would need to be cold climate and sized appropriately for the full heating load at peak. Anything different is a design planned for failure.

Also, hybrid heating is a redundant extra cost since an electric cold-climate air sourced heat pump when sized appropriately can carry the peak heating requirements without the need for any back-up. Adding hybrid heating off a natural gas furnace with a controller complicates the pilot design and undermines the results from the more efficient electric cold-climate air source heat pump.

Certain technologies (e.g. gas heat pumps, Hybrid Heating[19], etc.) proposed by Enbridge in the Pilot design would lock-in natural gas use[20] rather than promote non-gas options aligned with the true intent of IRP. For example, Enbridge has indicated that a gas heat pump (GHP) technology is currently unviable and when specific GHP product becomes viable, the Enbridge Sustain affiliate will offer a financing option to all new home customers and run pilots with builders in new homes and gather gas customers via builders[21]. It may be fine for an Enbridge unregulated affiliate to promote options that lock-in natural gas use, but it is not appropriate for a regulated utility IRP pilot.

[16] REVISED Final Transcript for EB-2022-0335 Technical Conference August 27 2024, Page 132 line 26 to page 133 line 11.
[17] PollutionProbe_IR_AppendixB_CanmetReport_20231013, page 20, Figure 6.
[18] J18.7 EB-2022-0200 confirmed a wide range of ccASHPs that operate below -30 degrees Celsius. This aligns with manufactured specifications.
[19] "Hybrid heating will serve as a bridge and mitigate the impacts of Electrification" - PollutionProbe_Correspondence_Appendix_EGI_IRR-Re.HRAI Motion_20240826, Page 122.
[20] PollutionProbe_Correspondence_Appendix_EGI_IRR-Re.HRAI Motion_20240826, Page 127 – "Hedge against energy transition: Maintain customers as customers shift to alternatives with push to net-zero."
[21] PollutionProbe_Correspondence_Appendix_EGI_IRR-Re.HRAI Motion_20240826, Page 20 – GHP row

Recommendation #5:

The evaluation and monitoring plan should be developed and delivered with IESO, leveraging existing best practices to reduce time and costs associated with creating protocols from scratch.

Enbridge indicates that it has developed data collection and evaluation plans to support the two main objectives of the SLH IRP Pilot Project, which are: (i) to evaluate and observe the impact of ETEE and DR programs on peak demand; and (ii) to understand how to design, deploy, and evaluate ETEE and residential DR programs[22]. However, Enbridge confirmed during the proceeding that it has not actually developed detailed plans for the IRP Pilot and did not plan to do so until after an OEB Decision[23].

Pollution Probe recommends that the OEB require the evaluation plan to also provide a detailed assessment of actual results against the Posterity modeling analysis for the pilot, in order to assist in enhancements to modeling on a go-forward basis.

All Pilots monitoring data should be shared with IESO to ensure a collaborative IRP approach and sharing of best available information. Given that many of the IRP Pilot measures relate to electricity, this would assist in identifying any data issues.

IESO and the OEB IRP TWG should be engaged throughout the development of the monitoring and evaluation plans and have an opportunity to review draft materials as they become available. Comments and recommendations should be incorporated into the final documents. A summary of engagements, comments and recommendations should be documented and included in the Final Report for the IRP Pilot.

Recommendation #6:

Pollution Probe recommends that the OEB require Enbridge to maximize partnership opportunities with IESO as the IRP Pilot project design is finalized and throughout the IRP Pilot implementation. This should include maximizing coordination of resources, protocols (e.g. evaluation) and incentives to improve pilot design and enhance the cost-effectiveness for gas ratepayers. Enbridge should provide details on how this was undertaken and the outcomes in the Final Report for the IRP Pilot. Enbridge acknowledged the benefits of partnering with IESO, but did not fully commit to leveraging that opportunity[24]. This gap needs to be closed in the OEB Decision.

[22] EGI_ARGChief_20240924, Page 17.
[23] REVISED Final Transcript for EB-2022-0335 Technical Conference August 27 2024, page 157 line 21 to page 158 line 3.
[24] REVISED Final Transcript for EB-2022-0335 Technical Conference August 27 2024, Pages 68-69.

Recommendation #7:

The OEB indicated that "The IRP pilot project costs are to be tracked in the IRP Costs deferral accounts, and recovery can be requested annually for prudently incurred costs"[25]. Pollution Probe supports the OEB's determination that a prudency review of the IRP Pilot project costs be done at the time Enbridge requests clearance of those costs from the IRP deferral accounts. Pollution Probe recommends that the filing for recovery of costs occur after the filing of the Pilot Final Report (which include the cost-effective coordination activities and outcomes) which will include benefits and costs related to the project.

Pollution Probe notes that Enbridge is planning to considered any costs not related to the Southern Lake Huron IRP Pilot Project separately (e.g. any stranded costs related to the Parry Sound pilot). Pollution Probe supports that proposal so that costs related to the Southern Lake Huron IRP Pilot Project are self-contained.

Recommendation #8:

Although OEB direction has been clear about the need to implement IRP for non-pilots as Enbridge implements its Capital plans and avoids any perception that IRP pilots would delay real-time IRP alternatives for Capital projects, the OEB may wish to reinforce this message in its Decision if it believes that Enbridge may consider approval of the IRP Pilot project as an opportunity to delay non-Pilot IRP opportunities that are available. The OEB indicated in its IRP Decision that "While the OEB understands Enbridge Gas's reasoning behind waiting for the conclusion of the pilot projects before developing other IRP Plans, this should not be a barrier to addressing a system need through a non-pilot IRP Plan, if an exceptional time-limited opportunity arises prior to the completion of the pilots"[26]. The OEB has also added IRP to the issues list in EB-2024-0111 in an effort to consider opportunities to get IRP results on track.

Recommendation #9:

Pollution Probe recommends that the OEB reiterate the requirement for Enbridge to bring forward a second IRP Pilot project as soon as is practically possible and no later than June 2025, in coordination with stakeholders including the OEB's IRP TWG. The second Pilot project should avoid, delay, or reduce a planned facility project in the Enbridge's Capital Plan, in accordance with the OEB's previous direction. Pilot development should be conducted more in line with the OEB's consultation expectations, including with the OEB's IRP TWG and relevant stakeholders (e.g.

[25] EB-2020-0091 dec_order_EGI_IRP_20210722, page 91.
[26] EB-2020-0091 dec_order_EGI_IRP_20210722, page 90.

Ontario municipalities) that were not effectively consulted during development of the Southern Lake Huron IRP Pilot Project.

The OEB should also directly address Enbridge's interpretation of the OEB's EB-2020-0091 Decision requiring Enbridge to complete two IRP pilots in accordance with OEB direction. The OEB Decision requiring that two IRP pilots be completed was very clear. However, Enbridge indicated during this proceeding that "we don't feel a second pilot is required to comply with the spirit of the OEB's expectation"[27]. It seems inappropriate for Enbridge to only implement some OEB Decisions and ignore other OEB direction. There has been no change to the OEB's Decision since it was issued in 2021. Stakeholders have been concerned that Enbridge has been out of compliance with the OEB's direction for IRP[28] and this pattern will continue unless the OEB is able to put mitigation in place that gets gas IRP on track in Ontario.

[27] REVISED Final Transcript for EB-2022-0335 Technical Conference August 27 2024, Page 142 lines 5-20.
[28] EB-2022-0133 OEB Decision, Exhibit N1, Tab 1, Schedule 1, Page 12, Section 7 and Final Transcript EB-2022-0200 Enbridge Gas Rebasing Vol 6, Page 102 lines 8-18.