Haris Ginis
Technical Manager
Regulatory Applications
Regulatory Affairs

tel 416-495-5827
haris.ginis@enbridge.com
EGIRegulatoryProceedings@enbridge.com

Enbridge Gas Inc.
500 Consumers Road
North York, Ontario M2J 1P8

VIA EMAIL and RESS

June 28, 2024

Nancy Marconi
Registrar
Ontario Energy Board
2300 Yonge Street, Suite 2700
Toronto, Ontario, M4P 1E4

Dear Nancy Marconi:

Re: Enbridge Gas Inc. (Enbridge Gas or the Company)
Ontario Energy Board (OEB) File No. EB-2022-0335
Integrated Resource Planning (IRP) Pilot Projects
Updated Application and Evidence

On July 19, 2023, Enbridge Gas applied to the OEB pursuant to section 36 of the Ontario Energy Board Act, 1998, S.O. 1998, c. 15, Schedule B, for an Order or Orders approving the cost consequences of the IRP Plans for two IRP Pilot Projects (the Parry Sound Pilot Project and the Southern Lake Huron Pilot Project), including approval to record the associated costs in the IRP costs deferral accounts. The primary objectives of the Pilot Projects were to develop an understanding of how enhanced targeted energy efficiency (ETEE) programs impact peak hour flow/demand and to develop an understanding of how to design, deploy, and evaluate ETEE programs. Furthermore, on November 3, 2023 in accordance with Procedural Order No. 2, Enbridge Gas filed written interrogatory responses.

On November 10, 2023, Enbridge Gas filed a letter notifying the OEB that, on November 8, 2023, NRCan informed the Company that it will be discontinuing new entrants into the Canada Greener Homes Grant in Q1 2024. As a result of the change, Enbridge Gas stated that it expects it will be required to file updates to the Company's evidence including its interrogatory responses. On November 17, 2023, the OEB issued Procedural Order No. 3 and placed the proceeding in abeyance pending the filing of Enbridge Gas's updated evidence.

On December 21, 2023, Enbridge Gas filed updates to the Company's evidence including its interrogatory responses. The updates primarily reflected Enbridge Gas's proposal to replace the incentives previously funded by NRCan with funding from the Pilot Projects budget to maintain the level of incentives the Company believes are required to drive the high levels of ETEE program uptake to achieve the necessary peak hour demand reductions.

On January 12, 2024, Enbridge Gas filed a letter requesting that the OEB continue to hold the proceeding in abeyance to allow time for the Company to assess the impacts (if any) to the application and evidence arising from the OEB's recent Decision and Order on Enbridge Gas's Application for 2024 Rates – Phase 1 (EB-2022-0200). On February 29, March 26, April 30 and June 7, 2024, Enbridge Gas filed letters regarding the status of the application and the planned changes it will be proposing for the application. Enbridge Gas indicated that it will be withdrawing the Parry Sound Pilot Project from the application and revising the Southern Lake Huron Pilot Project. Enbridge Gas indicated that it expects to file updates to the Company's application and evidence including its interrogatory responses by June 28, 2024.

Further to the application and evidence filed on July 19, 2023 (and updated on December 21, 2023), Enbridge Gas is filing updates to the exhibits listed at Table 1. A detailed summary of the amendments to the application and evidence can be found at Exhibit A, Tab 3, Schedule 1.

Table 1 – Evidence Updates

Exhibit	Description
Exhibit A-2-1	
Header	Update to reflect withdrawal of Parry Sound Pilot Project (PS Pilot) Update to reflect revision to Southern Lake Huron Pilot Project (SLH Pilot) area
Paras. 1, 2 & 6	Update to reflect withdrawal of PS Pilot
Para. 3	Update to reflect withdrawal of PS Pilot Update to reflect removal of supply-side Integrated Resource Planning alternatives (IRPA)
Para. 4	Update to reflect addition of PS Pilot demand-side IRPAs to SLH Pilot Update to reflect removal of supply-side IRPAs
Para. 5	Update to reflect withdrawal of PS Pilot Update to reflect commencement of procurement of hourly metering devices Correction to SLH Pilot term (to 2023-2027)
Para. 8	Update to reflect removal of economic assessment due to removal of baseline facility alternatives
Para. 9	Update to reflect withdrawal of PS Pilot Correction to SLH Pilot term (to 2023-2027)
Para. 10	Update to applicant contact information Update to reflect date of amended application
Attachment 1	Update to reflect revised SLH Pilot area
Exhibit A-3-1	New (Project Update Summary)
Exhibit B-1-1	
Para. 2	Correction to typographical error on reference (to Exhibit C, Tab 1, Schedule 2)
Paras. 3, 4 & 6	Update to reflect withdrawal of PS Pilot Update to reflect revisions to SLH Pilot
Para. 5	Correction to SLH Pilot term (to 2023-2027)
Para. 7	Update to reflect revisions to SLH Pilot
Paras. 8 & 11	Update to reflect withdrawal of PS Pilot

Para. 9	Update to reflect revised SLH Pilot cost, including correction to include inflation Update to reflect withdrawal of PS Pilot Update to reflect removal of economic assessment due to removal of baseline facility alternatives
Figure 1	Update to reflect revised SLH Pilot area
Para. 15	Update to reflect revised SLH Pilot area Update to reflect revised SLH Pilot baseline facility need
Paras. 14, 16 – 17 & 19	Update to reflect revised SLH Pilot area
Figures 2 – 3	Update to reflect revised forecasted peak hour demands for SLH Pilot area
Table 1	Update to reflect revised customer attachment forecast
Para. 18	Update to description of Old Lakeshore Rd project
Exhibit B-1-2	
Para. 3	Update to reflect withdrawal of PS Pilot
Paras. 4 & 10 – 11	Update to reflect removal of baseline facility alternatives
Para. 6	Update to reflect removal of supply-side IRPAs Update to reflect removal of economic assessment due to removal of baseline facility alternatives
Exhibit C-1-1	Update to reflect removal of baseline facility alternatives
Exhibit C-1-2	
Para. 1	Update to reflect removal of supply-side IRPAs Update to reflect withdrawal of PS Pilot
Paras. 2 & 10	Update to reflect withdrawal of PS Pilot
Para. 12	Update to reflect revisions to SLH Pilot
Exhibit D-1-1	Update to reflect withdrawal of PS Pilot
Exhibit D-1-2	
Para. 2 & 5	Update to reflect removal of supply-side IRPAs
Paras. 3 – 4	Update to reflect revisions to SLH Pilot demand-side alternatives including the addition of advanced technologies previously part of the PS Pilot
Para. 6	Update to reflect revised SLH Pilot area
Para. 7	Correction to SLH Pilot term (to 2023-2027) Update to reflect withdrawal of PS Pilot Update to reflect removal of supply-side IRPAs
Table 1	Update to SLH Pilot timeline
Paras. 8 – 62	Update to include information previously provided within PS Pilot description (D-1-1), due to withdrawal of PS Pilot. Information updated to reflect characteristics of SLH Pilot area
Para. 10	Update to reflect revisions to advanced technologies, including timelines related to market adoption
Table 2	Update to reflect revised SLH Pilot area Update to 2022 data with 2023 data
Table 3	Update to 2022 data with 2023 data
Para. 50	Update to Clean Home Heating Initiative results
Paras. 53 – 56	Update to information regarding types of common natural gas heat pumps

Para. 60	Update to reflect status of thermal energy storage testing
Para. 63	Update to reflect withdrawal of PS Pilot
Para. 64	Update to reflect 2024 survey results related to smart thermostats in SLH Pilot area
Table 12	Update to include date of previous survey related to smart thermostats (2022) Update to reflect revised SLH Pilot area
Table 13	Update to reflect 2024 survey results related to smart thermostats in SLH Pilot area
Para. 66	Update to reflect revised timeline for demand response (DR) program
Para. 70	Update to reflect status of IESO DR program
Para. 72	Update to reflect removal of baseline facility alternatives Update to reflect revised SLH Pilot area
Table 14	Update to reflect revised SLH Pilot area Update to reflect additional demand-side IRPAs for SLH Pilot
Exhibit D-1-3	
Paras. 1, 7, 10, 28 – 29	Update to reflect withdrawal of PS Pilot
Para. 2	Update to reflect that existing hourly flow measurement devices for residential and small commercial customers will be leveraged, rather than incremental devices being installed
Para. 5	Update to reflect withdrawal of PS Pilot Update to reflect that full coverage of hourly flow measurement devices no longer being pursued
Para. 8	Update to reflect revisions to SLH Pilot Update to reflect that existing hourly flow measurement devices for residential and small commercial customers will be leveraged, rather than incremental devices being installed Update to number of hourly flow measurement device installations for large commercial and industrial customers Update to reflect revised approach to hourly flow measurement devices for large commercial and industrial customers
Para. 17	Update to reference for location of Enhanced Targeted Energy Efficiency (ETEE) information within pre-filed evidence
Para. 20	Update to reflect revised approach to hourly flow measurement devices for large commercial and industrial customers
Para. 26	Update regarding potential engagement of third-party evaluation consultant
Para. 37	Update to reflect removal of baseline facility alternatives
Exhibit E-1-1	
Paras. 1 & 13	Update to reflect removal of economic assessment due to removal of baseline facility alternatives
Para. 2	Correction to SLH Pilot term (to 2023-2027) Update to reflect withdrawal of PS Pilot Update to reflect revised SLH Pilot cost, including correction to include inflation Update to reflect removal of economic assessment due to removal of baseline facility alternatives
Para. 3	Update to reflect withdrawal of PS Pilot Update to reflect removal of baseline facility alternatives
Paras. 4 – 8 & Tables 1 – 3	Update to reflect removal of baseline facility alternatives and associated costs Update to reflect revised SLH Pilot costs, including correction to include inflation Update to reflect revised SLH Pilot area
Paras. 10 & 12	Update to reflect revised SLH Pilot costs

Attachments 1 – 2	Update to reflect withdrawal of PS Pilot Update to reflect revised SLH Pilot costs, including correction to include inflation
Attachments 3 – 7	Update to reflect removal of economic assessment due to removal of baseline facility alternatives
Exhibit E-1-2	
Para. 2	Update to reflect status of 2024 rates application
Para. 3	Update to reflect withdrawal of PS Pilot and corresponding cost allocation/recovery treatment
Para. 5	Update to reflect withdrawal of PS Pilot Update to reflect removal of supply-side IRPAs
Tables 1 – 2 & Para. 10	Update to reflect withdrawal of PS Pilot Update to reflect revised SLH Pilot costs
Para. 7	Update to reflect withdrawal of PS Pilot Update to reflect removal of baseline facility alternatives
Para. 8	Update to reflect withdrawal of PS Pilot
Para. 9	Update to reflect revised SLH Pilot costs
Attachments 1 – 4	Update to reflect withdrawal of PS Pilot Update to reflect revised SLH Pilot costs
Exhibit F-1-1	
Paras. 3 – 4, 10 & 19 – 20	Update to reflect withdrawal of PS Pilot
Paras. 9 & 15 – 17	Update to reflect stakeholder consultation conducted regarding amended IRP Pilot Project application
Exhibit F-1-2	
Paras. 1 – 2	Update to reflect withdrawal of PS Pilot
Paras. 3 – 5	Update to reflect Indigenous consultation activities up to June 12, 2024
Exhibit F-1-3	Update to reflect Indigenous consultation activities up to June 12, 2024

The above noted submission has been filed electronically through the OEB's RESS and will be made available on Enbridge Gas's website.

If you have any questions, please contact the undersigned.

Sincerely,

Haris Ginis

Haris Ginis
Technical Manager, Regulatory Applications

c.c. David Stevens (Aird & Berlis LLP, Enbridge Gas Counsel)
Stephanie Cheng (OEB staff)
Intervenors (EB-2022-0335)

EXHIBIT LIST

A – ADMINISTRATION

Exhibit	Tab	Schedule	Contents of Schedule	
A	1	1	Exhibit List	
	2	1	Application	
			Attachment 1 – Pilot Project Map	/u
	3	1	Project Update Summary	/u

B – PROJECT NEED

Exhibit	Tab	Schedule	Contents of Schedule
B	1	1	Project Need
		2	IRP Framework Guiding Principles

C – ALTERNATIVES & PROJECT DESCRIPTION

Exhibit	Tab	Schedule	Contents of Schedule
C	1	1	Baseline Facility Alternatives
		2	Pilot Project Alternatives

D – PROPOSED PROJECT

Exhibit	Tab	Schedule	Contents of Schedule
D	1	1	Pilot Project Description (Parry Sound)
		2	Pilot Project Description (Southern Lake Huron)
		3	Evaluation & Monitoring

E – PROJECT COST AND ECONOMICS

Exhibit	Tab	Schedule	Contents of Schedule
E	1	1	Pilot Project Costs & Economics
			Attachment 1 – O&M Cost Summary
			Attachment 2 – Capital Cost Summary
			Attachment 3 – PS Facility NPV
			Attachment 4 – PS IRPA NPV
			Attachment 5 – SLH Facility NPV
			Attachment 6 – SLH IRPA NPV
			Attachment 7 – Economic Assumptions
		2	Cost Recovery and Allocation
			Attachment 1 – IRP Capital Costs Revenue Requirements
			Attachment 2 – Allocation 2025 IRP Operating & Capital Costs Account Balances
			Attachment 3 – Unit Rates for Disposition 2025 Operating & Capital Costs Account Balance
			Attachment 4 – Bill Impacts for Typical Small & Large Customers 2025 Operating & Capital Costs Account Balance

F – STAKEHOLDERING

Exhibit	Tab	Schedule	Contents of Schedule
F	1	1	Stakeholdering – General
			Attachment 1 – Letter of Support – Town of Parry Sound
			Attachment 2 – Letter of Support – City of Sarnia

F – STAKEHOLDERING

Exhibit	Tab	Schedule	Contents of Schedule
F	1	1	Attachment 3 – Letter of Support – Town of Plympton-Wyoming
		2	Stakeholdering - Indigenous Consultation
		3	Indigenous Consultation Report

ONTARIO ENERGY BOARD

IN THE MATTER OF the *Ontario Energy Board Act, 1998,* S.O. 1998, c. 15, Schedule B; and in particular section 36 thereof;

AND IN THE MATTER OF an application by Enbridge Gas Inc. for an order or orders approving the cost consequences of an Integrated Resource Planning ("IRP") Plan for an IRP Pilot Project in the City of Sarnia and Village of Point Edward. /u

APPLICATION

1. On July 22, 2021, the Ontario Energy Board ("OEB") issued the first iteration of the IRP Framework for Enbridge Gas Inc. ("Enbridge Gas" or the "Company") (EB-2020-0091, Appendix A). Section 12 of the IRP Framework states,

> "Enbridge Gas is expected to develop and implement two IRP pilot projects. 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".

In accordance with the IRP Framework, Enbridge Gas hereby applies to the OEB pursuant to section 36 of the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15, Schedule B (the "Act"), for an Order or Orders approving the cost consequences of an IRP Plan for an "IRP Pilot Project", including approval to record the associated costs in the IRP costs deferral accounts. /u

2. As a result of updates to Enbridge Gas's 10-year capital forecast in 2024, the Company amended the Application in June 2024 and withdrew the Parry Sound Pilot Project from the Application. Additionally, the Southern Lake Huron Pilot Project was revised. For background and context regarding the amended Application including Enbridge Gas's decision to withdraw the Parry Sound Pilot /u

Project from the Application and the revisions to the Southern Lake Huron Pilot Project, please refer to Exhibit A, Tab 3, Schedule 1.

3. The Southern Lake Huron Pilot Project is designed to implement demand-side IRP Alternatives ("IRPAs"), including enhanced targeted energy efficiency ("ETEE") programming and a residential demand response ("DR") program in the City of Sarnia and Village of Point Edward. The Southern Lake Huron Pilot Project will provide learnings on the selected IRPAs regarding future IRPA design, performance and potential for scalability. /u

4. The Southern Lake Huron Pilot Project proposes to implement a suite of ETEE programming for residential, commercial and industrial customers in the City of Sarnia and the Village of Point Edward, including an enhanced version of existing DSM offerings, a limited ETEE offering for electrification measures (featuring limited units of electric air source heat pumps and electric ground source heat pumps for residential only), a new ETEE offering for advanced technologies (featuring limited units of simultaneous hybrid heating, natural gas heat pumps and thermal energy storage), as well as a residential DR program. The primary objectives of the Southern Lake Huron Pilot Project are to develop an understanding of how ETEE programs and DR programs impact peak hour flow/demand and to develop an understanding of how to design, deploy, and evaluate ETEE and residential DR programs. /u

5. The Southern Lake Huron Pilot Project is proposed to be implemented with a term of 2023-2027, subject to the timing of receipt of a Decision and Order of the OEB approving the associated IRP Plans and their respective cost consequences (including accounting treatment). As described in Exhibit D, the Company requires at least four months, from the receipt of a Decision and Order of the OEB, to implement ETEE programming in the market. /u

6. For ease of reference and to assist the OEB with preparation of the notice of application for the IRP Pilot Project, a map of the IRP Pilot Project area is included as Attachment 1 to this Exhibit. /u

7. If the OEB determines that it will conduct a hearing for this application, then Enbridge Gas requests that it proceed by way of written hearing in English.

8. Pursuant to section 36 of the Act, Enbridge Gas requests an Order or Orders of the OEB approving the cost consequences of the IRP Plans for the IRP Pilot Project and the proposed accounting treatment to record costs of the same in the IRP costs deferral accounts for later disposition and recovery.[1] Additional details regarding Pilot Project costs and accounting are set out in Exhibit E. Enbridge Gas is not seeking approval for other IRP Plan components contemplated by the OEB's IRP Decision such as the cost-benefit test (i.e. DCF+), incentives related to IRP alternatives and attribution of savings between IRP and Demand Side Management activities. Enbridge Gas will include evidence and proposals related to these items as part of the first non-pilot IRP Plan application. Enbridge Gas believes these issues do not need to be adjudicated as part of the IRP Pilot application. /u

9. To accommodate for uncertainty and flexibility in the Pilot Project budget, Enbridge Gas notes its understanding that the 25% cost adjustment threshold, as noted in the OEB's IRP Framework Decision,[2] will be applicable to the Pilot Projects, such that Enbridge Gas is not required to seek approval for cost adjustments within 25% of the total proposed Pilot Project budget. Enbridge Gas notes its expectation that it will have flexibility in the allocation of annual budgets between the years included in the pilot term of 2023-2027. This flexibility will /u

[1] EB-2020-0091 OEB Decision and Accounting Order (September 2, 2021), Schedule A; Deferral Account No. 179-385 and 179-386.

[2] EB-2020-0091, July 22, 2021, Appendix A, p.21.

allow Enbridge Gas to be responsive to learnings and feedback and allow for adjustments to the program design as necessary.

10. Enbridge Gas requests that copies of all documents filed with the OEB in connection with this proceeding be served on it and on its counsel, as follows:

(a) The Applicant:

Haris Ginis
Technical Manager, Regulatory Applications

Address: 500 Consumers Road
North York, ON M2J 1P8

Telephone: 416-495-5827

E-Mail: EGIRegulatoryProceedings@enbridge.com
haris.ginis@enbridge.com

(b) The Applicant's counsel:

David Stevens
Aird and Berlis LLP

Address: Brookfield Place, P.O. Box 754
Suite 1800, 181 Bay Street
Toronto, ON
M5J 2T9

Telephone: (416) 863-1500

Fax: (416) 863-1515

E-Mail: dstevens@airdberlis.com

/u

DATED at the City of Chatham, Ontario this 28th day of June 2024.

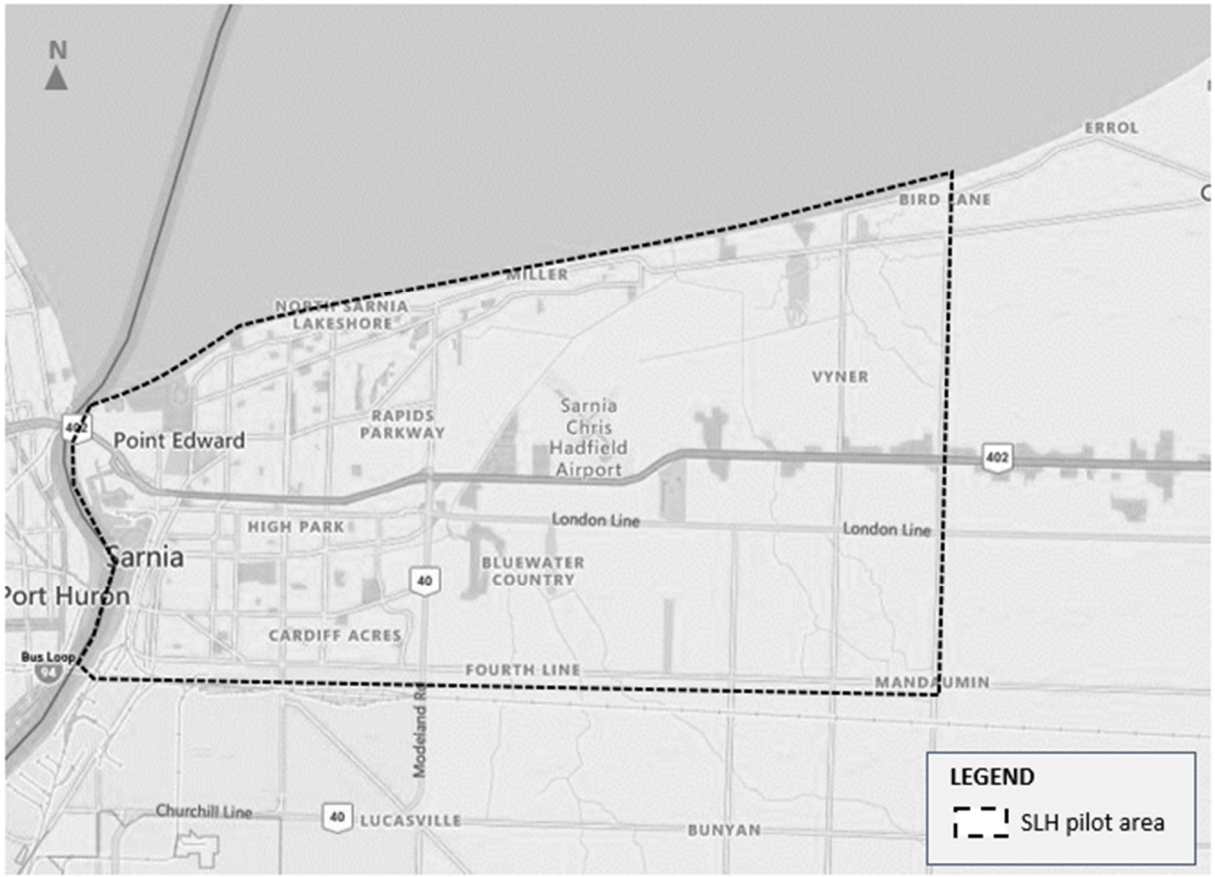
ENBRIDGE GAS INC.

_____

Haris Ginis,
Technical Manager, Regulatory Applications

PILOT PROJECT MAP

Figure 1 – Southern Lake Huron Pilot Project Area



PROJECT UPDATE SUMMARY

1. On July 19, 2023, Enbridge Gas applied to the OEB pursuant to section 36 of the *Ontario Energy Board Act, 1998,* S.O. 1998, c. 15, Schedule B (the "Act"), for an Order or Orders approving the cost consequences of the IRP Plans for two IRP Pilot Projects (the Parry Sound Pilot Project and the Southern Lake Huron Pilot Project), including approval to record the associated costs in the IRP costs deferral accounts.

2. Each Pilot Project proposed to implement a suite of demand-side and supply-side alternatives. The primary objectives of the Pilot Projects were to develop an understanding of how enhanced targeted energy efficiency ("ETEE") programs impact peak hour flow/demand and to develop an understanding of how to design, deploy, and evaluate ETEE programs.

3. On August 8, 2023, the OEB issued a Notice of Hearing and subsequently established initial procedural steps within Procedural Order No. 1 (dated September 7, 2023) and Procedural Order No. 2 (dated October 5, 2023) including the filing of Enbridge Gas's written interrogatory responses. On November 3, 2023, in accordance with Procedural Order No. 2, Enbridge Gas filed written interrogatory responses.

4. On November 10, 2023, Enbridge Gas filed a letter notifying the OEB that, on November 8, 2023, NRCan informed the Company that it will be discontinuing new entrants into the Canada Greener Homes Grant around Q1 2024. As a result of the change, Enbridge Gas stated that it expects it will be required to file updates to the Company's evidence and interrogatory responses.

5. On November 17, 2023, the OEB issued Procedural Order No. 3 and placed the proceeding in abeyance pending the filing of Enbridge Gas's updated evidence. The OEB directed Enbridge Gas to confirm as soon as possible the date by which the Company will file its updated evidence. The OEB also determined that a technical conference will be held on a date to be scheduled following the filing of Enbridge Gas's updated evidence.

6. On November 30, 2023, Enbridge Gas filed a letter stating that it expects to file all relevant evidence updates by the end of 2023. On December 21, 2023, Enbridge Gas filed updates to the Company's evidence including its interrogatory responses. The updates primarily reflected Enbridge Gas's proposal to replace the incentives previously funded by NRCan with funding from the Pilot Projects budget to maintain the level of incentives the Company believes are required to drive the high levels of ETEE program uptake to achieve the necessary peak hour demand reductions.

7. On January 12, 2024, Enbridge Gas filed a letter requesting that the OEB continue to hold the proceeding in abeyance to allow time for the Company to assess the impacts (if any) to the application and evidence arising from the OEB's recent Decision and Order on Enbridge Gas's Application for 2024 Rates – Phase 1 (EB-2022-0200). Enbridge Gas indicated that it would provide an update regarding the status of its assessment by the end of February. On January 15, 2024, the OEB issued a letter confirming that the proceeding would continue to be held in abeyance pending a further update to be provided by Enbridge Gas by the end of February.

8. On February 29, 2024, Enbridge Gas filed a letter requesting that the proceeding continue to be held in abeyance and stated that the Company expects it will be able to provide an update regarding the status of its application by April 30, 2024. On March 12, 2024, the OEB issued a letter requesting that Enbridge Gas provide an

explanation regarding the issues impacting the application and the Company's plan to move the proceeding forward by March 26, 2024.

9. On March 26, 2024, Enbridge Gas filed a letter explaining that the Company is requesting that the OEB continue to hold the proceeding in abeyance as Enbridge Gas continues to assess impacts of changes to the Company's 10-year capital forecast resulting from the: (i) annual system reinforcement plan ("SRP") update, (ii) annual energy transition adjustments update, which are applied to the Company's 10-year demand forecast to reflect best available information in Ontario, and (iii) reduction in approved capital in the 2024 Rebasing Phase 1 (EB-2022-0200) Decision. Enbridge Gas went on to explain that these changes will impact the number of growth projects within the Company's 10-year forecast and may affect the baseline facility projects described within the application, as well as the number of projects to which the learnings from the pilot projects could be applied. Enbridge Gas stated that it expects to be able to provide a meaningful update regarding the status of the application by April 30, 2024 following consultation with the TWG.

10. On April 9, 2024, the OEB issued a letter stating that it is not opposed to Enbridge Gas's plan to consult with the TWG and accepts Enbridge Gas's request to continue holding the proceeding in abeyance until April 30, 2024. To avoid further delays to the proceeding, the OEB stated that it expects Enbridge Gas to provide a meaningful and detailed update by April 30, 2024 explaining any planned pilot project scope changes the Company proposes following its discussions with the TWG and, if necessary, the anticipated time it will take Enbridge Gas to update its application and evidence accordingly.

11. On April 30, 2024, Enbridge Gas filed a letter with details regarding the planned changes it will be proposing for the application. Within the letter, Enbridge Gas

explained that, as a result of the SRP update, the underlying system need and associated baseline facility projects for the Southern Lake Huron Pilot Project have been pushed out of the Company's 10-year capital forecast. Additionally, the baseline facility projects for the Parry Sound Pilot Project have been revised. Enbridge Gas went on to explain that it has determined, in consultation with the TWG, that it is appropriate, based on the best available information at the time, to move forward with the Southern Lake Huron Pilot Project focused solely on demand-side alternatives and with the Parry Sound Pilot Project focused solely on a supply-side alternative. Enbridge Gas indicated that it expects to file updates to the Company's application and evidence including interrogatory responses by June 28, 2024.

12. On June 7, 2024, Enbridge Gas filed a letter explaining that, in the course of the May 2024 energy transition and demand forecast adjustment updates, Enbridge Gas applied best available information to the Company's 10-year demand forecast and determined that the baseline facility projects for the Parry Sound Pilot Project have also been pushed out of the Company's 10-year capital forecast. As a result, Enbridge Gas indicated that it plans to withdraw the Parry Sound Pilot Project from the application and proceed with the Southern Lake Huron Pilot Project focused on demand-side alternatives. Enbridge Gas stated that it informed the TWG of the planned removal of the Parry Sound Pilot Project from the application on June 5, 2024. Enbridge Gas stated that it continues to expect to file updates to the Company's application and evidence including interrogatory responses by June 28, 2024.

13. This amended application reflects the updates described above (i.e., the withdrawal of the Parry Sound Pilot Project from the application and the updated Southern Lake Huron Pilot Project). The purpose of this Tab is to explain and contextualize the

updates reflected throughout this amended application. This Tab is organized as follows:

A. Withdrawal of Parry Sound Pilot Project from the Application
B. Updated Southern Lake Huron Pilot Project

14. For ease of reference, a complete list of all evidence updates is provided within the covering letter to the amended application.

A. Withdrawal of Parry Sound Pilot Project from the Application

15. In July 2023 Enbridge Gas proposed the Parry Sound Pilot Project consisting of the following demand-side and supply-side alternatives:
    - Demand-side alternative – Enhanced DSM
    - Demand-side alternative – ETEE offering for electrification measures (featuring limited units of electric air source heat pumps and electric ground source heat pumps for residential only)
    - Demand-side alternative – ETEE offering for Advanced Technologies (featuring limited units of simultaneous hybrid heating, natural gas heat pumps and thermal energy storage)
    - Supply-side alternative – Negotiated increased pressure agreement from TC Energy
    - Supply-side alternative – Compressed natural gas (“CNG”) injection, to defer the system need during the Pilot Project term

16. Furthermore, Enbridge Gas’s best available information at the time identified the following baseline facilities associated with the Parry Sound Pilot Project:

- 2025 Station Modification: A station modification of the Emsdale Check Measurement Station ("CMS") is required in 2025 to allow for the reduction of a pressure differential across the station. This allows for a higher outlet pressure from the station that will satisfy the required minimum inlet pressure to Parry Sound Town Border Station ("TBS"). The capital cost of the 2025 baseline station modification is approximately $2.0 million.
- 2027 Pipeline Reinforcement: Approximately 11.5 km of Nominal Pipe Size ("NPS") 6 steel 4,960 kPa MOP pipeline is required in 2027 to support Parry Sound system growth in response to forecasted increased market/customer demand. The proposed NPS 6 pipeline would replace and upsize a section of the existing NPS 4 pipeline(s) to provide more capacity commencing at the termination of the existing NPS 6 pipeline(s) and proceeding westward towards the town of Parry Sound. The capital cost of the 2027 baseline pipeline reinforcement is approximately $24.2 million.
- 2030 Pipeline Reinforcement: Approximately 750 m of NPS 4 steel 1,725 kPa MOP pipeline is required in 2030 to support Parry Sound system growth in response to forecasted increased market/customer demand. The proposed NPS 4 pipeline would extend from the outlet of Parry Sound TBS northward. The capital cost of the 2030 baseline pipeline reinforcement is approximately $2.2 million.

17. In the course of the annual SRP update in Q1 2024, the baseline facility alternatives associated with the Parry Sound Pilot Project were revised as follows:
    - 2025 Station Modification: No change.
    - 2027 Pipeline Reinforcement: The 11.5 km of NPS 6 steel 4,960 kPa pipe is deferred from 2027 to 2031, and has been reduced in length to 2.5 km.

- 2030 Pipeline Reinforcement: The 750 m of NPS 4 steel 1,725 kPa pipe reinforcement is no longer required in 2030.

18. As a result of the changes to the baseline facility alternatives, Enbridge Gas, in consultation with the TWG in April 2024, determined that it is appropriate, based on the best available information at the time, to move forward with the Parry Sound Pilot Project focused solely on the CNG injection supply-side alternative (in the event that increased pressure cannot be maintained through a continued pressure agreement with TC Energy) and with the Southern Lake Huron Pilot Project focused solely on demand-side alternatives. It was determined that learnings for demand-side alternatives can be better achieved at a more optimal cost by focusing on the Southern Lake Huron Pilot Project given that existing Encoder Receiver Transmitter ("ERT") technology is already in place within the Southern Lake Huron Pilot Project area. In contrast, ERTs are only in place in approximately 10% of the Parry Sound Pilot Project area and additional installations would have been required across the remaining area. To preserve the demand-side learnings that were unique to the Parry Sound Pilot Project (i.e., the inclusion of ETEE with advanced technologies and residential electrification) these alternatives would be moved to the Southern Lake Huron Pilot Project.

19. Following the SRP update described above, in the course of the May 2024 energy transition and demand forecast adjustment update process, Enbridge Gas determined that the baseline facility projects for the Parry Sound Pilot Project have been pushed out of the Company's 10-year capital forecast. CNG injection within the Parry Sound Pilot Project area was therefore no longer justified. Unlike demand-side alternatives which can be implemented in the absence of a baseline facility need to assess their impacts on peak hour/flow, the supply-side alternative of CNG injection presents the best opportunity for learnings when a baseline facility need exists.

Without a justifiable need for CNG injection within the Parry Sound Pilot Project area, Enbridge Gas determined that it is no longer reasonable to proceed with the Parry Sound Pilot Project. In June 2024, Enbridge Gas informed the TWG of the planned withdrawal of the Parry Sound Pilot Project from the IRP Pilot Projects application.

20. This amended application reflects the withdrawal of the Parry Sound Pilot Project from the application. Information regarding the Parry Sound Pilot Project related to activities that occurred prior to the withdrawal of the Parry Sound Pilot Project from the application have been maintained within the application for informational purposes. Specifically:
    - Matters related to Pilot Project selection, including the initial selection of the Parry Sound Pilot Project, can be found at Exhibit C, Tab 1, Schedule 2.
    - Matters related to Pilot Project stakeholdering, including stakeholdering related to the Parry Sound Pilot Project, can be found at Exhibit F.

B. Updated Southern Lake Huron Pilot Project

21. In July 2023 Enbridge Gas proposed the Southern Lake Huron Pilot Project consisting of the following demand-side and supply-side alternatives:
    - Demand-side alternative – Enhanced DSM with an increased focus on the commercial and industrial sector
    - Demand-side alternative – Demand Response (“DR”)
    - Supply-side alternative – CNG injection, to defer the system need during the Pilot Project term

22. Furthermore, Enbridge Gas’s best available information at the time identified the following baseline facilities associated with the Southern Lake Huron Pilot Project:

- 2025 New Station Build & Pipeline Reinforcement: A new pressure reducing station at Michigan Line and Blackwell Sideroad off the upstream 1,210 kPa MOP system as well as approximately 1,600 m of 420 kPa MOP NPS 6 PE pipeline on Blackwell Sideroad from Michigan Line to Lakeshore Road is required in 2025 to support Southern Lake Huron system growth in response to forecasted increased market/customer demand. The capital cost of the 2025 baseline station build and pipeline reinforcement is approximately $1.5 million.
- Pipeline Replacement in 2032: Approximately 2,500 m of NPS 2 and 4 ST 420 kPa MOP is required in 2032 due to the age and condition of the existing pipelines. The capital cost of the 2032 baseline pipeline replacement is approximately $1.7 million.

23. In the course of the annual SRP update in Q1 2024, the baseline facility alternatives associated with the Southern Lake Huron Pilot Project were pushed out of the Company's 10-year capital forecast. As a result of the changes to the baseline facility alternatives, Enbridge Gas, in consultation with the TWG in April 2024, determined that it is appropriate, based on the best available information at the time, to move forward with the Southern Lake Huron Pilot Project focused solely on demand-side alternatives. The CNG injection supply-side alternative is no longer required and was removed from the Southern Lake Huron Pilot Project. To preserve the demand-side learnings that were no longer being proposed for the Parry Sound Pilot Project as described above (i.e., the inclusion of ETEE with advanced technologies and residential electrification) these alternatives were moved to the Southern Lake Huron Pilot Project.
24. Furthermore, the initial Southern Lake Huron Pilot Project defined an "area of influence" (where changes in peak hour demand would most significantly impact the

identified system constraint) and a “greater Southern Lake Huron area” (where changes would not significantly impact the constraint). The previously defined “area of influence” included a small portion of the City of Sarnia and Plympton-Wyoming. Enhanced existing DSM offerings for all sectors were proposed to be limited to the “area of influence”, whereas enhanced existing DSM offerings for commercial and industrial sectors was proposed for the “greater Southern Lake Huron area”. Existing ERT coverage in the “area of influence” was limited and installation of additional ERTs would have been required across the Plympton-Wyoming portion, representing approximately 50% of the “area of influence”.

25. As a result of the changes to the identified system constraints for the Southern Lake Huron Pilot Project, the updated Southern Lake Huron Pilot Project no longer differentiates between an “area of influence” and a “greater Southern Lake Huron area”. Instead, the Southern Lake Huron Pilot Project will now target all of the City of Sarnia and Village of Point Edward with all demand-side alternatives. Increasing the size of the Southern Lake Huron Pilot Project area for the targeting of all enhanced DSM offerings allows Enbridge Gas to leverage existing ERT technology that is already in place across the larger area for residential and small commercial customers, including the associated available baseline data, and avoids the need for additional ERT installation. Implementing enhanced DSM across the larger Southern Lake Huron Pilot Project area is expected to support increased participation, reduce the timeframe required to obtain learnings related to the IRP Pilot Project’s objectives, and enhance the representative nature of the IRP Pilot Project when extrapolating learnings to other geographies.

26. This amended application reflects the updated Southern Lake Huron Pilot Project. The primary objectives of the Southern Lake Huron Pilot Project continue to be to develop an understanding of how ETEE programs impact peak hour flow/demand

and to develop an understanding of how to design, deploy, and evaluate ETEE programs.

27. As a summary, the updated Southern Lake Huron Pilot Project consists of the following demand-side alternatives:
    - Demand-side alternative – Enhanced DSM ETEE offerings targeting the full Southern Lake Huron Pilot Project area
    - Demand-side alternative – Demand Response (“DR”)
    - Demand-side alternative – ETEE offering for electrification measures (featuring limited units of electric air source heat pumps and electric ground source heat pumps for residential only)
    - Demand-side alternative – ETEE offering for Advanced Technologies (featuring limited units of simultaneous hybrid heating, natural gas heat pumps and thermal energy storage)

PROJECT NEED

Pilot Projects Overview

1. Within Enbridge Gas's Integrated Resource Planning ("IRP") proposal (EB-2020-0091), the Company requested approval to develop and initiate two pilot projects to test components of its IRP proposal. In its Decision and Order on Enbridge Gas's IRP Proposal (whereby the OEB established an IRP Framework for Enbridge Gas), the OEB noted that there was universal support for Enbridge Gas's pilot project request amongst intervenors and agreed with the Company's proposed approach. The OEB further noted that pilot projects are an effective approach to understand and evaluate how IRP can be implemented to avoid, delay, or reduce facility projects, and directed Enbridge Gas to apply to the OEB for approval of the IRP pilot projects by providing similar information to that of future IRP Plan applications.[1]

2. Following the OEB's Decision on Enbridge Gas's IRP proposal, the Company developed specific objectives for the pilot projects (described in detail at Exhibit C, Tab 1, Schedule 2). Enbridge Gas then selected two Pilot Projects that were able to meet those objectives. The Company considered several criteria when selecting the projects, including, but not limited to: /u

   (i) that the underlying system need identified in the Company's Asset Management Plan ("AMP") pass the binary screening criteria as defined in the IRP Framework;
   (ii) that the pilot project(s) should be expected to materially avoid, defer or reduce the facility requirements to address the identified system need;
   (iii) that the pilot project(s) should enable effective data collection and measurement of impacts on system peak hour flow/demand; and
   (iv) that the pilot project(s) should include IRP alternatives ("IRPAs") with potential to be scalable and offer transferrable learnings.

[1] EB-2020-0091, Decision and Order, July 22, 2021, p. 90.

3. As discussed in Exhibit C, Tab 1, Schedule 2, throughout the selection process Enbridge Gas engaged the IRP Technical Working Group ("TWG") to discuss key items such as: pilot project objectives, pilot project alternatives, pilot project selection criteria, and potential IRPAs. TWG members reviewed a draft version of the Company's initial Application in June 2023, which was filed in July 2023. /u

4. Following the initial selection of two pilot projects (the Parry Sound Pilot Project and the Southern Lake Huron Pilot Project), in June 2024 Enbridge Gas filed an amended Application and withdrew the Parry Sound Pilot Project from the IRP Pilot Project Application. For more information regarding the amended Application please refer to Exhibit A, Tab 3, Schedule 1. Enbridge Gas expects that where a member of the TWG has concerns with one or more elements of the proposed IRP Pilot Project application they will make this known through the regulatory approval process. /u

5. Through this Application, pursuant to section 36 of the Act, Enbridge Gas is seeking an Order or Orders of the OEB approving the cost consequences of, including accounting treatment to record the associated costs in the IRP costs deferral accounts,[2] for the proposed multi-year (2023-2027) Southern Lake Huron Pilot Project. /u

6. The Southern Lake Huron Pilot Project will employ demand-side IRPAs enabling the Company to gather transferrable learnings regarding IRPA design, performance and potential for scalability, including insights on peak flow reductions resulting from different customer types and on the impact of varying program designs on the adoption rates of IRPAs. The Southern Lake Huron Pilot Project is described at Exhibit D, Tab 1, Schedule 2. /u

[2] EB-2020-0091 OEB Decision and Accounting Order (September 2, 2021), Schedule A; Deferral Account No. 179-385 and 179-386.

7. The Southern Lake Huron Pilot Project will include:
    - ETEE programming (consisting of an Enhanced DSM offering, a limited ETEE offering for electrification measures, and a limited ETEE offering for advanced technologies); and /u
    - DR programming.

8. The primary objectives of the Southern Lake Huron Pilot Project are twofold: /u

    (i) ***Develop an understanding of how ETEE and DR programs impact peak hour flow/demand –*** This will be investigated for various groups of customers, and for various ETEE and DR program offerings. The learnings gained will help Enbridge Gas to evaluate and estimate the potential impact of such programming on other parts of its distribution system in the future, including to:
    - quantify actual peak hour flow reductions (m^3/hr) resulting from ETEE and DR programming by customer type by comparing peak hour flow per customer prior to and after ETEE and DR programming is implemented; and
    - evaluate DR event parameters on peak hour flow reductions and the adoption and persistence of customer participation in DR programming over time.

    (ii) ***Develop an understanding of how to design, deploy, and evaluate ETEE and residential DR programs –*** The learnings that Enbridge Gas is seeking to gain in this regard include to:
    - assess the impacts to participant uptake resulting from increased incentives for ETEE programming, which consists of a portfolio of measures;
    - assess the effectiveness of various marketing/community engagement tactics to generate awareness of and to increase ETEE/DR program participation;
    - understand differences in participant uptake within ETEE programming versus broad-based DSM programming;
    - understand the costs of ETEE programming (incentives, delivery costs, promotion costs, administration costs) versus broad-based DSM programming;

- gather learnings on customer barriers and contractor installation and service barriers to adoption for all measures and DR to support wider market deployment in potential future IRP applications;
- gather initial learnings of the impact of electrification measures on the local electric grid via engagement with Local Distribution Companies ("LDCs") to support future integrated energy planning with the electric sector;
- understand the cost of DR programming (i.e., incentives, delivery, promotion, administration);
- understand better any ratepayer equity-related implications of investing in geographic-specific offerings of ETEE and DR programming.

9. The total cost of the Southern Lake Huron Pilot Project is $14.2 M. Further detail on Pilot Project costs is provided at Exhibit E, Tab 1, Schedule 1. The primary objective of the Southern Lake Huron Pilot Project set out above is focused on gathering learnings and insights on the impacts of IRP alternatives to peak hour demand. Consistent with the OEB's encouragement, Enbridge Gas should use the Pilot Projects as a testing ground for an enhanced DCF+ test[3]; however, due to the timing of the TWG's review of the enhanced DCF+ test[4] and the timing of the current application, the Company intends to present a three-stage enhanced DCF+ as part of its first full IRP Plan application for adjudication, not as part of the current Application. Additionally, there are no baseline facility projects associated with the Southern Lake Huron Pilot Project. /u /u /u

10. Enbridge Gas will provide Pilot Project updates, key learnings, and outcomes to the OEB and stakeholders through the annual IRP Report that the Company files as part of its annual Non-Commodity Deferral Account Clearance and Earnings Sharing Mechanism application.[5]

[3] EB-2020-0091 (Appendix A), Integrated Resource Planning Framework for Enbridge Gas p.14
[4] The IRP TWG published a DCF+ Report May 30, 2023, that will help inform the DCF+ Test and the DCF+ Supplemental Guide (https://engagewithus.oeb.ca/28744/widgets/145882/documents/106273)
[5] EB-2020-0091 (Appendix A), Integrated Resource Planning Framework for Enbridge Gas p.22 (Monitoring and Reporting)

11. The remainder of this Exhibit describes the systems and associated constraints/needs that will be targeted through the Southern Lake Huron Pilot Project. /u

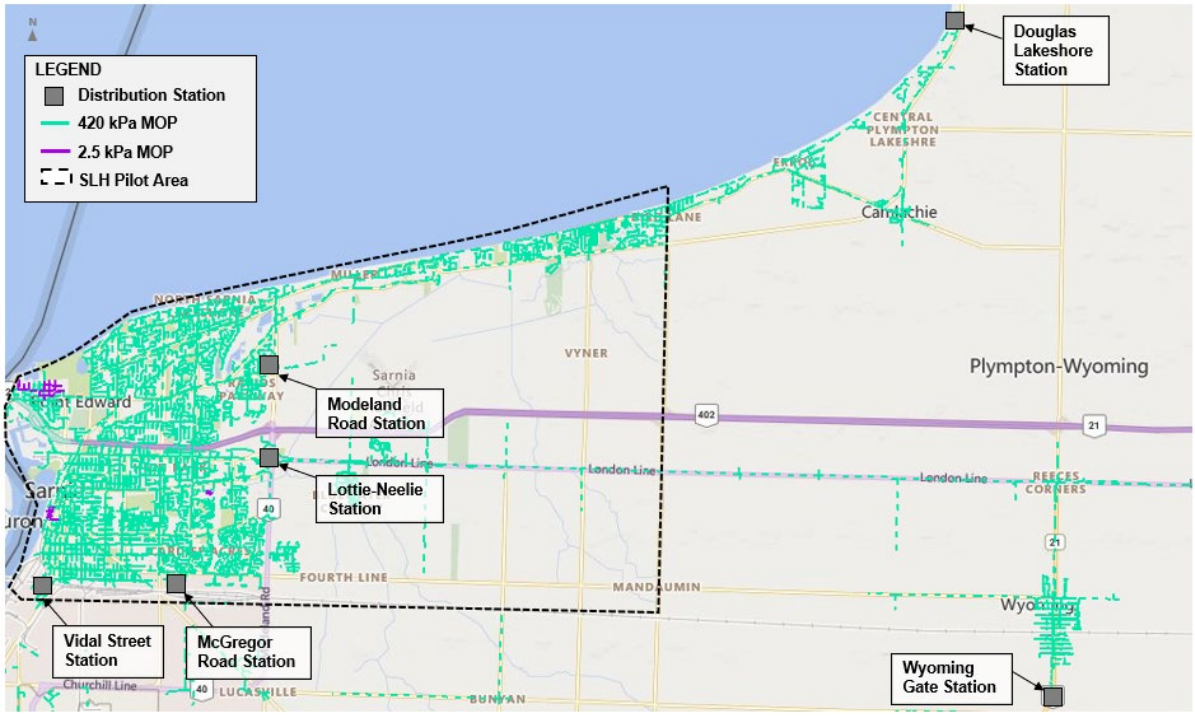
Southern Lake Huron System

12. The Enbridge Gas Southern Lake Huron distribution system supplies natural gas to customers located in the Lambton County area encompassing Sarnia, Plympton-Wyoming and surrounding areas. The Southern Lake Huron system receives gas from upstream higher pressure Enbridge Gas systems including the Sarnia Industrial system, the Petrolia system and the Hensall Transmission system. There are currently approximately 30,000 customers served by the Southern Lake Huron system.[6]

[6] The customers served by the Southern Lake Huron system are general service customers. With the exception of 1 interruptible service contract class customer, there are no other contract class customers served by the Southern Lake Huron system.

13. Schematics of the Southern Lake Huron system are shown in Figure 1 below.

Figure 1 – Map of Southern Lake Huron Pilot Area /u



14. As noted in Figure 1, the Southern Lake Huron system is a 420 kPa MOP system of approximately 776 kilometers of pipelines of various sizes ranging from NPS 1-1/4 to NPS 12, supplied by six primary pressure reduction (Distribution) stations. There is approximately 7 kilometers of low-pressure (2.5 kPa MOP) pipelines fed by the 420 kPa MOP systems. The Southern Lake Huron system is heat sensitive and the peak/design condition occurs in the winter as most of the customers on this system are residential. /u

Southern Lake Huron System Need

15. The Company's 2023-2032 AMP identified a growth project to address a system constraint in the SLH System in response to forecasted increased market/customer demand: /u

> A new distribution station off of the existing 1,210 kPa system and a main extension to tie into the 420 kPa system north of Sarnia along the water is required.[7]

In the 2023-2032 AMP, the required in-service date to address the identified system need/constraint is 2032. However, based on the Company's current forecast of in-franchise demand growth and increasing peak period demands, the Southern Lake Huron system is no longer expected to require reinforcement in the 2025-2034 capital forecast. /u The SLH System is a long, stretched piping system, and is therefore very sensitive to changes in peak period demands. As a result, the addition of a large development or customer that is not currently included in the forecast may result in a baseline facility need once again within the 10-year capital forecast. /u

16. The current 10 year forecasted peak hour demands for the Southern Lake Huron System are shown in Figure 2 and for the SLH Pilot Area are shown in Figure 3. /u

[8] EB-2022-0200, Exhibit 2, Tab 6, Schedule 2, Appendix B, P. 83, Investment Code 30313

Figure 2 – Southern Lake Huron (Entire System) Forecasted Peak Hour Demands /u

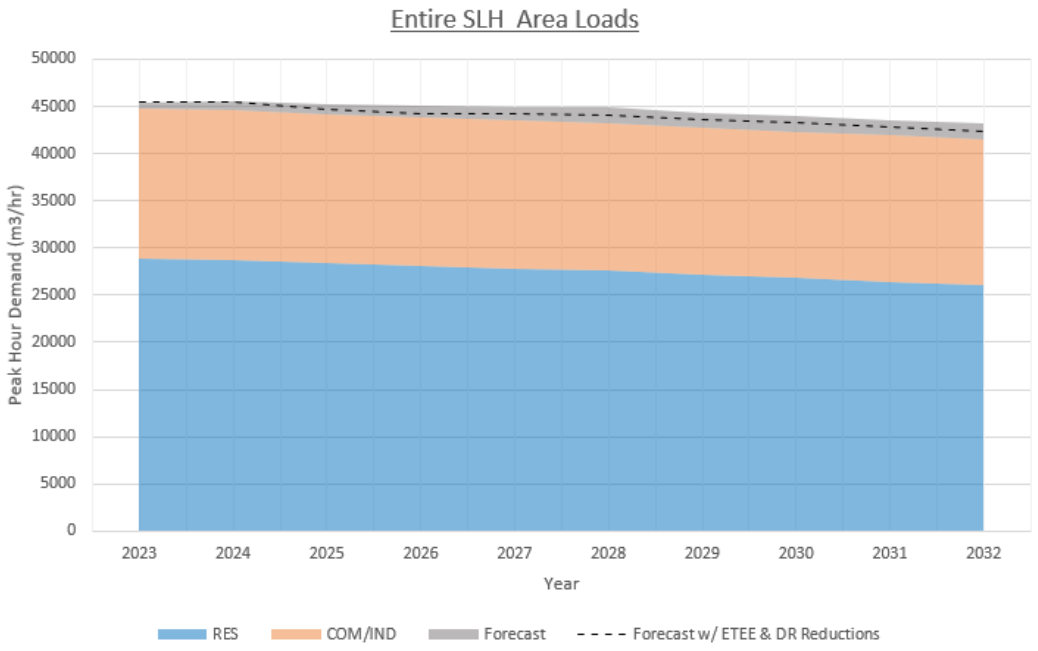
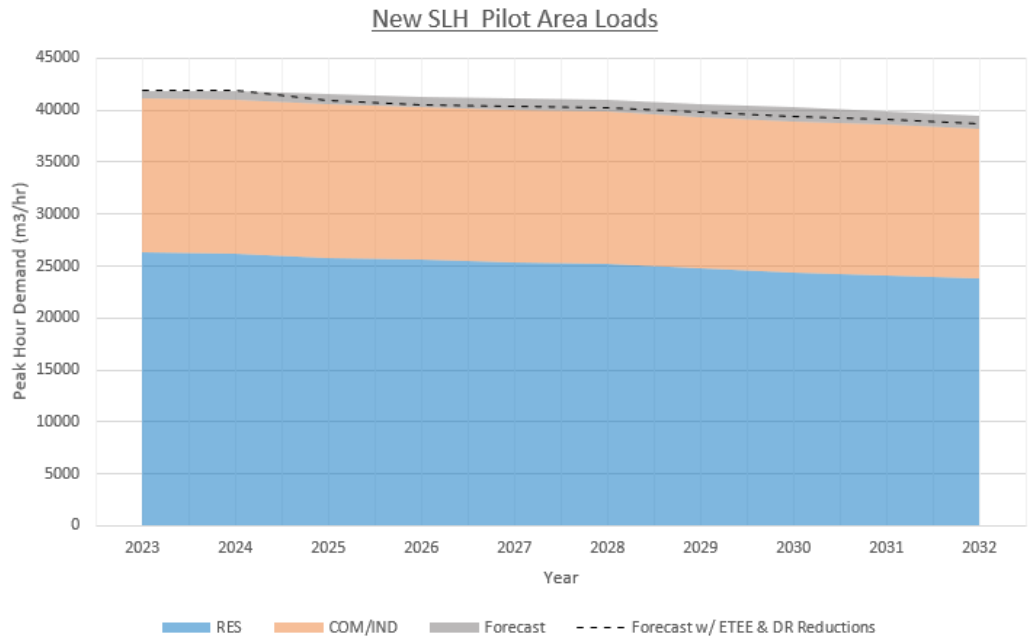


Figure 3 – Southern Lake Huron (Pilot Area) Forecasted Peak Hour Demands /u



17. The 10-year SRP customer forecast for new attachments for the Southern Lake Huron Pilot Area are shown in Table 1. This represents the new customers expected to be added in the area, and is not a net value. /u

Table 1: Southern Lake Huron Pilot Area 10-Year Customer Attachment Forecast /u

Year	Residential Attachements	Commercial Attachments
2023	95	15
2024	56	9
2025	56	8
2026	65	6
2027	78	5
2028	32	4
2029	23	3
2030	22	0
2031	21	0
2032	20	0

18. The Company's 2023-2032 AMP also addressed a secondary system need/constraint in the pilot area. This project, "Old Lakeshore Rd", involves the replacement of high-risk steel pipelines installed on or before 1970 as part of the vintage steel main program. The scope of this project includes the replacement of 1350 m of NPS 4 steel and 1090 m of NPS 2 steel distribution mains as well as 95 services.[8] The project is not considered part of the pilot project as potential peak hour reductions in the Southern Lake Huron area would not impact the project scope. /u

19. The Company's 2023-2032 AMP also highlighted other pipe replacement projects in the Southern Lake Huron Pilot Project area. These were reviewed during the Pilot Project selection process but were not considered further as the potential peak hour reductions in the Southern Lake Huron area would not impact the project scope(s). /u

[8] EB-2022-0200, Exhibit 2, Tab 6, Schedule 2, Appendix B, P. 83, Investment Code 30313

IRP FRAMEWORK GUIDING PRINCIPLES

1. In Sections 3 and 9 of the IRP Framework for Enbridge Gas (EB-2020-0091), the OEB set out guiding principles for IRP and directed Enbridge Gas to discuss how the IRP guiding principles have been addressed within each IRP Plan application. Furthermore, in Section 12, the OEB requested that Enbridge Gas's Pilot Project applications provide similar information and follow a consistent approach as future IRP Plan applications.

2. The OEB's IRP Framework for Enbridge Gas describes the guiding principles as follows:

    a. Reliability and Safety

    In considering IRPAs as part of system planning processes, Enbridge Gas's system design principles cannot be compromised, and the reliable and safe delivery of firm contracted peak period natural gas volumes to Enbridge Gas's customers must remain of paramount importance."[1]

    b. Cost-effectiveness

    IRPAs must be cost-effective (competitive) compared to Facility Alternatives and other IRPAs, including taking into account impacts on Enbridge Gas customers. [2]

    c. Public Policy

    IRP will be considered in a manner to ensure that it is supportive of and aligned with public policy, and in particular the OEB's statutory objectives for the natural gas sector.[3]

    d. Optimized Scoping

    Recognizing that reviewing IRPAs for every forecast infrastructure project would be extremely time intensive, binary screening should be undertaken, to confirm which forecast need(s) should undergo evaluation of IRPAs, and to ensure a focus at the outset on efficient and effective IRPA investment.[4]

[1] EB-2020-0091, IRP Decision, Appendix A - IRP Framework, Section 3, p. 5
[2] EB-2020-0091, IRP Decision, Appendix A - IRP Framework, Section 3, p. 5
[3] EB-2020-0091, IRP Decision, Appendix A - IRP Framework, Section 3, p. 5
[4] EB-2020-0091, IRP Decision, Appendix A - IRP Framework, Section 3, p. 5

e. Risk Management

Economic risks associated with both Facility Alternatives and IRPAs in meeting system needs are evaluated and appropriately mitigated. Risks and rewards are allocated appropriately between Enbridge Gas and its customers.[5]

3. Enbridge Gas's assessment of the IRP guiding principles in the context of the Pilot Project is described below. Enbridge Gas notes that not all IRP guiding principles are relevant to the Pilot Project, as the primary objectives of the Pilot Project are unique and differ from a traditional IRP Plan. The primary objectives of the Pilot Project are described in Exhibit B, Tab 1, Schedule 1. /u

Southern Lake Huron

Reliability and Safety

4. The Pilot Project will not impact the reliability and safe delivery of natural gas volumes to Southern Lake Huron system customers during peak periods over the course of the Pilot Project term, as there are no baseline facility needs associated with the Southern Lake Huron Pilot Project. /u

Cost-effectiveness

5. Enbridge Gas has collaborated with the TWG in determining components of an enhanced DCF+ test; however, at this time the enhanced economic test has not been finalized. Enbridge Gas will file a proposed enhanced DCF+ test along with the DCF+ Supplemental Guide together with the first IRP Plan application in the future. The Company is not seeking any determination from the OEB regarding the draft enhanced DCF+ test or associated Supplemental Guide as part of the current Application.

[5] EB-2020-0091, IRP Decision, Appendix A - IRP Framework, Section 3, p. 5

6. Importantly, as described in Exhibit B, Tab 1, Schedule 1, the primary objectives of the Southern Lake Huron Pilot Project are to gather learnings regarding demand-side alternatives, rather than to address an existing system constraint using the most cost-effective alternative. Enbridge Gas intends to implement learnings from the Southern Lake Huron Pilot Project (as they become available and where possible) into the enhanced DCF+ tests completed to support future IRP Plan applications. /u

Public Policy

7. The Southern Lake Huron Pilot Project was considered in a manner that ensures it is supportive of and aligned with public policy, and in particular the OEB's statutory objectives Section 2, subsections 3 and 5 for the natural gas sector which state:[6]

> 3. To facilitate rational expansion of transmission and distribution systems.
> 5. To promote energy conservation and energy efficiency in accordance with the policies of the Government of Ontario, including having regard to the consumer's economic circumstances.
> 5.1 To facilitate the maintenance of a financially viable gas industry for the transmission, distribution and storage of gas.

8. The Southern Lake Huron Pilot Project includes the deployment of a DR program and ETEE, the latter of which enhances existing energy conservation (DSM) programs promoting energy efficiency that support provincial greenhouse gas emission targets in Ontario.

Optimized Scoping

9. To efficiently assess the potential Pilot Projects, Enbridge reviewed its 2023-2032 AMP and applied the binary screening criteria as directed in the OEB's IRP Decision and Order to identified system needs.[7] Following the binary screening

[6] Section 2(3) and Section 2(5) of the OEB's statutory objectives for the natural gas section.
[7] EB-2020-0091, IRP Decision, Appendix A, Section 5.2, p.9

Enbridge Gas reviewed potential projects that:

a. Could reasonably be expected to either materially or entirely avoid, defer or reduce the underlying system need/constraint identified in Enbridge Gas's AMP.
b. Could enable effective data collection and measurement of the impact that IRPA investments on peak period (hourly) flows/demands.
c. Could act as a "proof-of-concept" for as wide a variety of IRPAs as possible in the future, with emphasis placed onto IRPAs that have potential for scalability and readily transferrable learnings.

10. In 2023 the Southern Lake Huron Pilot Project met the criteria above and was selected as a Pilot Project; however, due to updates in 2024 to Enbridge Gas's 10-year capital forecast and the corresponding impact it had on the IRP Pilot Project application, criteria (a) is no longer applicable to the Southern Lake Huron Pilot Project. For background and context regarding the amended IRP Pilot Project Application, please refer to Exhibit A, Tab 3, Schedule 1. Please see Exhibit C, Tab 1, Schedule 2 for more details regarding the Pilot Project selection process. /u

Risk Management

11. The effectiveness of the demand-side IRPAs in the Southern Lake Huron Pilot Project in reducing peak period (hourly) flows/demands will be monitored and evaluated throughout the duration of the Pilot Project. Changes to Pilot Project program design and delivery (ETEEs and DR) will be undertaken as needed and in accordance with the thresholds set out in the IRP Framework and discussed in Exhibit E. The Pilot Project will inform the design of future IRP Plans, including how to minimize the level of economic risk of an IRP Plan should it be unable to deliver the load reduction required to address the system need. /u

BASELINE FACILITY ALTERNATIVES

1. There are no baseline facility projects associated with the Southern Lake Huron Pilot Project, based on best available information as of June 2024. As explained in Exhibit A, Tab 3, Schedule 1, Enbridge Gas determined that notwithstanding this change, it is appropriate to proceed with the Pilot Project. /u

PILOT PROJECT ALTERNATIVES

1. Enbridge Gas considered a broad array of potential IRPAs, alone and in combination, when determining its Pilot Project objectives. Ultimately, the Company determined that the Pilot Project would primarily be focused on gathering transferrable learnings /u
regarding IRPA design, performance and potential for scalability, including insights on peak flow reductions from demand-side IRPAs (i.e., ETEE and DR programs). As a result, the primary objectives of the Pilot Project are twofold (outlined in Exhibit B, Tab /u
1, Schedule 1):
   (i) Develop an understanding of how ETEE and DR programs impact peak hour flow/demand; and
   (ii) Develop an understanding of how to design, deploy, and evaluate ETEE and residential DR programs.

2. Enbridge Gas broadly considered the following criteria when reviewing the 2023-2032 AMP to develop a list of potential Pilot Projects and IRPAs with a high probability of meeting the objectives set out above:
   - The underlying system need/constraint identified should pass the binary screening assessment set out in the IRP Framework for Enbridge Gas established by the OEB.
   - Potential Pilot Projects should reasonably be expected to either materially or entirely avoid, defer or reduce that same underlying system need/constraint identified in Enbridge Gas's 2023-2032 AMP.
   - Potential Pilot Projects should enable effective data collection and measurement of the impact that IRPA investments have had on distribution system peak period flow/demand to enhance Enbridge Gas's understanding of how any such reduction will impact the need for future facility projects, supporting future investment into cost-effective IRPAs.
   - Potential Pilot Projects should act as a "proof-of-concept" for selected IRPAs and

should have potential for scalability and readily transferrable learnings.

- Enbridge Gas initially expected to implement two Pilot Projects and determined that one Pilot Project should be focused on addressing a single identified system need/constraint, and the other should attempt to address multiple identified system needs/constraints (e.g., reinforcement vs. reinforcement & integrity). /u

3. Potential Pilot Projects were then evaluated and ranked using a weighted average scoring matrix based on the following considerations for each criterion:
   - ***System configuration*** – The ability to isolate the distribution system area for the purpose of measuring and quantifying the impacts of IRPA investments is important. Physical/hydraulic characteristics to evaluate in this regard include number of feeds, number of system low points, sensitivity of system (i.e. long stretches of pipe).
   - ***Balanced customer mix and potential for scalability*** – Having a project-specific customer mix that is generally representative of the Company's broader customer mix will contribute to learnings regarding IRPA scalability and transferability. Ideal projects will include a significant customer base and representative mix of general service customers (residential, commercial and low-income customers), and minimal seasonal customers.
   - ***Peak hourly flow data collection potential*** – The ability to measure and quantify the impacts of IRPAs on distribution system peak hour flows/demand is critical. The existence/availability of customer hourly measurement, as well as system flow measurement is highly beneficial in this regard.
   - ***Feasibility of supply-side IRPA implementation in the short-term*** – The ability to leverage supply-side alternatives as a short-term bridging solution to allow time for implementation of demand-side programs (e.g., ETEE and DR) is highly beneficial. Considerations in this regard include the viability of CNG injection, and applicability of market-based supply-side options.
   - ***Feasibility of demand-side IRPA implementation*** – A target market with

attributes (e.g., annual growth rate on the system, building vintages and past participation in DSM) indicating a high potential for successful implementation of ETEE and DR programming.

4. Table 1 below outlines the criteria and scoring matrix used to evaluate and rank the potential Pilot Projects, where a score of 1 indicates that a Pilot Project would inadequately satisfy the criterion and 5 indicates a Pilot Project would adequately satisfy the criterion.

Table 1 – Criteria and Scoring Matrix of Pilot Project Alternatives

		Multiple System Needs			Single System Need				
Criteria	**Weight**	**Southern Lake Huron**	**Ottawa**	**Brantford**	**Bayfield**	**Brooklin**	**Kemptville**	**Parry Sound**	**Southampton**
System configuration	15%	3	1	3	4	3	4	5	4
Balanced customer mix & potential for scalability	25%	4	5	4	2	2	3	2	2
Peak hourly flow data collection potential	25%	5	1	2	3	3	3	4	3
Feasibility of supply-side IRPA implementation in the short-term	15%	4	2	3	3	4	5	5	5
Feasibility of demand-side IRPA implementation	20%	3	1	2	5	2	3	4	2
Weighted Average	100%	**3.9**	2.2	2.8	3.3	2.7	3.5	**3.8**	3.0

5. The identified system needs under each category (i.e., Multiple vs. Single System Needs) that scored highest were selected to be the Pilot Projects; Southern Lake Huron and Parry Sound. While the other system needs identified were not selected as Pilot Projects, they will ultimately undergo an IRP assessment and, depending upon the outcomes of those assessments, may be included in future IRP plan applications.

6. Throughout the Pilot Project selection process, and in an iterative manner, Enbridge Gas sought and considered feedback from the TWG on the proposed Pilot Project objectives, alternatives, selection criteria, potential IRPAs and the Company's rationale for selecting the two Pilot Projects.

7. As noted in paragraph 2, the Company originally intended to select one pilot project focused on addressing a single identified system need/constraint, and a second pilot project focused on addressing multiple identified system needs/constraints. However, following pilot project selection, the Company re-assessed its distribution systems in both Pilot Project areas to better understand and estimate the potential impact of specific IRPAs and resulting reductions in peak hour flows/demand. Through this review, the Company determined that both Pilot Projects are expected to address multiple identified system needs.

Pilot Project 1 - Parry Sound

8. As noted in Table 1, Parry Sound scored highest in its category and therefore was selected as one of the Pilot Projects. The rationale supporting Enbridge Gas's decision follows:
   - ***System configuration*** – Parry Sound is a single-fed system consisting of a single (long-stretched) pipeline main supplied directly from a TCE mainline tap. This configuration provides an isolated system from which it is optimally possible to observe and measure the impacts of various IRPAs on distribution system peak period (hourly) flows/demand.
   - ***Balanced customer mix and potential for scalability*** – The customer base served by the Parry Sound system consists of a balanced mix of residential, commercial, and industrial customers. This customer mix is expected to foster transferable learnings.
   - ***Peak hourly flow data collection potential*** – Existing Parry Sound system station flow measurement is available at Emsdale CMS. While no existing hourly data measurement is available at the individual customer level, flow measurement at the gate station will enable analysis at the system level and can be used in conjunction with the customer level data to determine the cumulative impact of IRPAs.
   - ***Feasibility of supply-side IRPA implementation in the short-term*** – Two supply side options are available to the Parry Sound system to ensure that system

reliability is maintained over the course of the Pilot Project: CNG injection, and a market-based supply-side IRPA. CNG injection is an optimal bridging solution as the CNG injection volumes required are relatively low. As discussed in Exhibit B, Enbridge Gas is also currently utilizing a market-based supply-side IRPA to increase the system feed pressure from TCE at Emsdale CMS in order to defer the need for additional system facilities.

- ***Feasibility of demand-side IRPA implementation*** – Review of Parry Sound residential demographics and market characteristics from census data indicates that the community is composed of a relatively older population and vintages of building stock when compared to provincial averages (see Table 2). This suggests that a greater percentage of buildings in the community are built to older efficiency standards, resulting in a greater potential for ETEE programming to impact peak period flows/demand. The community also includes a balanced mix of commercial customers that will support transferrable learnings.

Table 2 – Parry Sound Residential Demographics

Demographics [1]	**Parry Sound**	**Ontario**
StatsCanada Geographic Level	Parry Sound, Town [Census Subdivision]	[Province]
Population (2021)	6,879	14,223,942
Average Age	49.4	41.8
Median Age	53.2	41.6
Total Private Dwellings	3,200	5,491,200
Single-Detached House	1,715	2,942,990
% Single-Detached House	54%	54%
Average Household Size	2.0	2.6
Household Characteristics		
Owner	60%	68%
Renter	40%	31%
Median Total Income of Household (2020$)	$62,000	$91,000
Period of Construction		
Before 1960	41%	23%
1961-1980	29%	27%
1981 -1990	11%	13%
1991-2015	17%	31%
2016-2021	3%	7%

9. An additional consideration that led to the selection of Parry Sound as a Pilot Project is that the distribution system has become very sensitive to small changes in hourly demand, due to the long length of pipeline supplying it and the reduction in TCE delivery pressures anticipated to take effect in November 2025. The sensitivity of the system suggests that it is optimal for testing a variety of ETEE offerings as any reduction in peak hour realized could have a more significant impact on the underlying identified system need/constraint.

10. Following the initial selection of the Parry Sound Pilot Project, the baseline facility alternatives for the Parry Sound Pilot Project were revised in 2024. As a result of the /u

[1] Statistics Canada – 2021 Census Profile - https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&SearchText=toronto&GENDERlist=1&STATISTIClist=1&DGUIDlist=2021A00053549032,2021A000235&HEADERlist=2,20,9,1,3

changes to the baseline facility alternatives, Enbridge Gas, in consultation with the TWG in April 2024, determined that it is appropriate, based on the best available information at the time, to move forward with the Parry Sound Pilot Project focused solely on the CNG injection supply-side alternative. Subsequently, in May 2024, Enbridge Gas determined that the baseline facility projects for the Parry Sound Pilot Project have been pushed out of the Company's 10-year capital forecast. CNG injection within the Parry Sound Pilot Project area was therefore no longer justified. Without a justifiable need for CNG injection within the Parry Sound Pilot Project area Enbridge Gas determined that it is no longer reasonable to proceed with the Parry Sound Pilot Project. In June 2024, Enbridge Gas informed the TWG of the planned withdrawal of the Parry Sound Pilot Project from the IRP Pilot Projects Application. For background and context regarding the amended IRP Pilot Project Application including Enbridge Gas's decision to withdraw the Parry Sound Pilot Project from the Application, please see to Exhibit A, Tab 3, Schedule 1.

Pilot Project #2 - Southern Lake Huron

11. As noted in Table 1, Southern Lake Huron scored highest in its category and therefore was selected as one of the Pilot Projects. The rationale supporting Enbridge Gas's decision follows:
    - ***System configuration*** – the SLH Area of Influence in the Southern Lake Huron system consists of a distribution system stretched along the shores of Lake Huron between two station feeds, as shown in Exhibit A, Tab 2, Schedule 1, Attachment 1. This system configuration provides a localized low-point and targeted area of focus, from which it is possible to observe and measure the impacts of various IRPAs on peak period flows/demand.
    - ***Balanced customer mix & potential for scalability*** – the customer base served by the Southern Lake Huron system consists of a balanced mix of residential, commercial, and industrial customers. This customer mix is expected to foster transferable learnings.

- ***Peak hourly flow data collection potential*** – Existing automated meter reader ("AMR") technology via encoder receive transmitters ("ERT") are equipped on most residential and smaller commercial customers within the entire Southern Lake Huron area, enabling the Company to collect and transmit hourly interval data from customer meters and to quantify the impacts of the proposed IRPAs on distribution system peak period flows/demand, significantly reducing the time and costs associated with data collection. Additionally, the availability of existing ERTs in Southern Lake Huron makes it an optimal system to test a residential DR program.
- ***Feasibility of supply-side IRPA implementation in the short-term*** – CNG injection is available to the Southern Lake Huron system to ensure that system reliability is maintained over the course of the Pilot Project. CNG injection is an optimal bridging solution as the CNG injection volumes required are relatively low.
- ***Feasibility of demand-side IRPA implementation –*** Review of the residential demographics and market characteristics from census data indicates that the Town of Plympton-Wyoming has similar building vintages to, and the City of Sarnia has slightly older homes, in comparison to provincial averages (see Table 3, below) and therefore rank competitively against other identified system needs/constraints with regard to potential for ETEE programming to impact peak period flows/demand and for transferrable learnings. These communities also include a balanced mix of commercial customers that will support transferrable learnings. A review of the 10-year customer attachment forecast for the Southern Lake Huron system indicates that the system has the lowest relative demand growth rate compared to other identified system needs, which is expected to increase the probability that peak period reductions achieved are sufficient to avoid the need for future facilities.

Table 3 – Sothern Lake Huron Residential Demographics

Demographics [2]	Plympton-Wyoming	Sarnia	Ontario
StatsCan Geographic Level	Plympton-Wyoming, Town [Census subdivision]	Sarnia, City (CY) [Census subdivision]	[Province]
Population (2021)	8,308	72,047	14,223,942
Average Age	43	44.8	41.8
Median Age	45.6	46	41.6
Total Private Dwellings	3,175	32,190	5,491,200
Single-Detached House	2,965	21,685	2,942,990
% Single-Detached House	93%	67%	54%
Average Household Size	2.6	2.2	2.6
Household Characteristics			
Owner	88%	68%	68%
Renter	12%	32%	31%
Median Total Income of Household (2020$)	$108,000	$77,500	$91,000
Period of Construction			
Before 1960	24%	36%	23%
1961-1980	32%	35%	27%
1981 -1990	10%	12%	13%
1991-2015	27%	15%	31%
2016-2021	6%	2%	7%

12. Following the initial selection of the Southern Lake Huron Pilot Project, in Q1 2024 Enbridge Gas determined that the baseline facility projects for the Southern Lake Huron Pilot Project have been pushed out of the Company's 10-year capital forecast. CNG injection within the Southern Lake Huron Pilot Project area was therefore no longer justified. As a result of the changes to the baseline facility alternatives, Enbridge Gas, in consultation with the TWG in April 2024, determined that it is appropriate, based on the best available information at the time, to move forward with the Southern Lake Huron Pilot Project focused solely on demand-side alternatives. Southern Lake Huron remains the best location to implement and evaluate demand- /u

[2] Statistics Canada – 2021 Census Profile https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/Page.cfm?Lang=E&SearchText=camlachie&DGUIDlist=2021A00053538035&GENDERlist=1,2,3&STATISTIClist=1&HEADERlist=0

side IRPAs given that existing hourly measurement via ERTs are already in place and provides the ability to scale for the implementation of ETEE. For background and context regarding the amended IRP Pilot Project Application including Enbridge Gas's decision to proceed with demand-side IRPAs for the Southern Lake Huron Pilot Project, please see Exhibit A, Tab 3, Schedule 1.

PILOT PROJECT DESCRIPTION (PARRY SOUND)

1. This Tab is no longer applicable. As part of Enbridge Gas's June 2024 amended Application the Company withdrew the Parry Sound Pilot Project from the Application. For background and context regarding the amended IRP Pilot Project Application including Enbridge Gas's decision to withdraw the Parry Sound Pilot Project from the Application, please refer to Exhibit A, Tab 3, Schedule 1.

/u

PILOT PROJECT DESCRIPTION (SOUTHERN LAKE HURON)

Southern Lake Huron Pilot Project Overview

1. The primary objectives of the Southern Lake Huron Pilot Project are to develop an understanding of how ETEE and DR programs impact peak hour flow/demand and to develop an understanding of how to design, deploy, and evaluate ETEE and DR programs, as detailed at Exhibit B, Tab 1, Schedule 1.

2. The Southern Lake Huron Pilot Project will include: /u
   - ETEE programming; and
   - DR programming.

3. The primary focus of the Southern Lake Huron Pilot Project will be on the implementation of ETEE and DR programming. The suite of ETEE and DR offerings for residential (including affordable housing), commercial and industrial customers in the Southern Lake Huron area will include:
   - Enhancement of existing DSM offerings for all market sectors (including new offerings for limited electrification and advanced technology measures) /u
   - Residential DR program

4. While the OEB's first-generation IRP Framework for Enbridge Gas does not support funding for electric IRPAs the OEB acknowledges that, "This may be an element of IRP that will evolve as energy planning evolves, and as experience is gained with the IRP Framework."[1] The proposed Southern Lake Huron Project offers a unique opportunity to explore the potential applicability and feasibility of electricity-based IRP measures in an isolated environment that can help support future broad-based integrated resource planning efforts with local LDCs and the IESO. Consideration for broader implementation of electrification measures would require an update to the /u

[1] EB-2020-0091, OEB Decision and Order (July 22, 2021), p. 35.

IRP Framework and further coordinated energy planning with the electric sector to ensure a holistic assessment of the impact these types of measures have on the respective grid and system.

5. As there will be an overlap between the ETEE programs and the existing broad-based DSM programs offered by the Company, consideration for an attribution approach to the funding and results is required. As there is currently no established approach to attribution between ETEE and DSM programs, a simplified approach whereby all incentives contributed by Enbridge Gas through the Pilot Project's ETEE programs will be funded by the Pilot Project. It should be noted that a general policy on the approach to DSM-IRP attribution is anticipated to be considered as part of the Company's first stand-alone IRP Plan application. /u

6. The geographic scope for the Southern Lake Huron Pilot Project ETEE programming will encompass Enbridge Gas customers located in the City of Sarnia and the Village of Point Edward in the County of Lambton. Please see Exhibit A, Tab 2, Schedule 1, Attachment 1 for a map of the Southern Lake Huron Pilot Project Area. /u

7. The Southern Lake Huron Pilot Project has a proposed term of 2023 to 2027. A timeline of major activities associated with the Pilot Project are shown in Table 1. The Company will require at least four months from OEB approval to implement ETEE and DR programming in the market and the timing of all aspects of the Pilot Project is subject to the ultimate date of receipt of a Decision and Order of the OEB approving the Company's current Application. /u

Table 1 – Southern Lake Huron Pilot Project Timeline /u

	2023			2024				2025				2026				2027			
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Regulatory																			
File Application																			
File Application Update																			
OEB Decision (Estimated)																			
Data Collection																			
Initial Engagement of C/I Customers																			
Hourly Measurement Installation (C/I)																			
Collection of Hourly Data [1]																			
Enhanced Targeted Energy Efficiency (ETEE) [2]																			
Finalize and Setup Programming																			
Deliver Residential ETEE																			
Deliver Commercial / Industrial ETEE																			
Evaluate and Refine Program Design																			
Demand Response (DR) [1]																			
Finalize and Setup Programming																			
Recruit Participants																			
Call DR Events																			
Evaluate and Refine Program Design																			
Monitoring & Evaluation																			
Analyze Baseline Data																			
Analyze Post Implementation Data																			
Evaluation of Pilot Project																			
Reporting																			
Pilot Updates in Annual Report																			
Pilot Report																			

Notes:

[1] Collection of hourly data in 2023/2024 corresponds to customers with existing hourly metering.

[2] Timing subject to date of OEB approval. At least four months after OEB approval is required.

Demand-Side IRPA – ETEE

8. A suite of ETEE offerings for residential (including affordable housing) and commercial/industrial customer sectors will be implemented in the Pilot Project area. Pilot Project offerings will leverage existing DSM programming approved by the OEB as part of Enbridge Gas's Application for Multi-Year Natural Gas Demand Side Management Plan 2022-2027 (the "2023-2025 DSM Plan Decision") (EB-2021-0002) where applicable, and will supplement the same with additional incentives, engagement, and/or marketing efforts to meet the specific objectives of the Pilot Project. Regardless of whether a Pilot Project ETEE offering aligns with an existing DSM program, customers in the Pilot Project area will continue to have full access to all other existing DSM programming. For example, the residential Smart Home /u

offering is not in scope of the Pilot Project ETEE programming, but residential customers will continue to have access to this offering.

9. Although DSM programming will be leveraged (and enhanced) for IRP ETEE programming purposes as part of the Pilot Project, there are key differences between the two. The objectives of the DSM Framework and IRP Framework are distinct from each other. As per the IRP Decision, "DSM is aimed at reducing annual natural gas usage, and IRP is aimed at reducing peak demand in specific geographic areas to replace infrastructure investment with an IRPA investment".[2] Furthermore, traditional DSM is focused on ensuring broad participation in the Company's service area, whereas ETEE is focused on programs that achieve a high penetration in a specific geography to reduce peak period system demands corresponding to an identified system constraint/need. This fundamental difference is expected to lead to ETEE requiring greater levels of funding per unit of energy savings targeted when compared to what traditional DSM would otherwise necessarily expend in the Pilot Project area.[3] /u

10. The Pilot Project ETEE programming will include three 'advanced technologies'. Simultaneous hybrid heating and thermal energy storage will be included within the offering for residential customers, while natural gas heat pumps will be included within the offering for both residential and commercial customers. These advanced technologies are not currently part of the 2023-2025 DSM Plan as they were not yet commercialized at the time of the OEB decision. The advanced technologies are anticipated to be commercially ready for market adoption in 2024. /u

11. Enbridge Gas has included these additional advanced technologies within the Pilot Project ETEE programming as they offer significant potential peak period flow/demand reductions as shown in Table 11. By including these advanced /u

[2] EB-2020-0091, July 22, 2021, Decision and Order, p.56.
[3] EB-2020-0091, October 15, 2020, Exhibit B, p.28.

technologies, Enbridge Gas can gain a better understanding of their peak gas reduction potential, as well as the applicability or feasibility of incorporating these technologies more broadly as ETEE measures in the future.

Market Analysis

12. The delivery of energy efficiency programming is generally implemented on a customer sector basis (residential, commercial, multi-residential, and industrial). Enbridge Gas intends to implement its Pilot Project ETEE programming using this same customer sector approach. A sectoral summary of the Enbridge Gas customers in the SLH Pilot Project Area is shown in Table 2. /u

Table 2 – Southern Lake Huron Pilot Area Customer Sector Breakdown /u

Sector	Number of Customers	Number of Customers (%)	% of 2023 Weather Normalized Annual System m^3 Load
Residential	25,452	91.1%	64.7%
Commercial	1,820	6.5%	26.1%
Multi-Residential	547	2.0%	7.6%
Industrial	112	0.4%	1.5%
Total	27,931	100.0%	100%

13. Within the commercial and industrial sector, understanding the size of the customer is vital to the engagement approach taken in energy efficiency programming. Table 3 provides a breakdown of commercial and industrial customers in the Southern Lake Huron Pilot Project area by the size of the customer on a natural gas consumption basis.[4] /u

[4] ETEE programming as part of the Pilot Project will not be applicable to contract service customers.

Table 3 – Southern Lake Huron Commercial and Industrial Sector Breakdown /u

Sector	Number of Customers	Number of Customers (%)	% of 2023 Weather Normalized Annual System m^3 Load
Small (<50K m^3)	1,849	95.7%	62.2%
Large (>50k m^3)	83	4.3%	37.8%
Total	1,932	100.0%	100.0%

IRP ETEE Pilot Project Offerings of Existing Programming

14. Existing 2023-2025 DSM Plan programming has been effective in delivering broad-based energy savings across Enbridge Gas's franchise area. In many cases, the existing measures offered by the Company's broad-based DSM programs will overlap with the Pilot Project's ETEE program measures offered, albeit with potentially adjusted delivery approaches reflecting the differing objectives/considerations for ETEE programs (to reduce peak period/design demand in a specific geographic location) compared to DSM programs (to generate broad-based energy savings).[5] Leveraging existing offerings with enhanced offers specific to the geographic scope of the Pilot Project is expected to result in an overall reduction in ETEE programming costs relative to developing net new ETEE offerings. Further, this ETEE programming approach can build on the existing market awareness of DSM programming. The benefits of this approach will be examined as part of the Pilot Project. As explained further below, the broad-based DSM programs expected to have the greatest impact on peak demand reduction are those that have been considered to be supplemented with additional IRP ETEE incentives. The Company's expectations in this regard will also be examined as part of the Pilot Project. The approach to the Pilot Project ETEE offerings, including attribution of costs and savings between the Pilot Project and existing broad-based DSM Programs, for each of the major customer sectors are discussed in the following sections. /u

[5] EB-2020-0091, Decision and Order, July 22, 2021, P.56: "DSM is aimed at reducing annual natural gas usage, and IRP is aimed at reducing peak demand in specific geographic areas to replace infrastructure investment with an IRPA investment."

Attribution Approach for the Pilot Project

15. The Pilot Project's ETEE program plans to leverage the existing DSM program, however, existing DSM programs operate and are governed under the DSM Framework. Under the DSM Framework, shareholder incentives for the Company are determined based on the results attributable to delivery of DSM programs. As such, an approach to the attribution of funding and results between the Pilot Project's ETEE programs and the Company's DSM programs is required and should be established in advance of the Pilot Project's implementation. There is currently no established approach to attribution between ETEE and DSM programs. As per the OEB's 2023-2025 DSM Plan Decision, "…the details of the overlap and any implications will be reviewed by the OEB as part of the IRP Plan application made by Enbridge Gas".[6] /u

16. Enbridge Gas is proposing that all incentives contributed by Enbridge Gas through the Pilot Project's ETEE programs (i.e. within the Pilot Project area) be funded by the Pilot Project and not by DSM programs. Accordingly, all results attributed to Enbridge Gas from the Pilot Project's ETEE program will be entirely attributed to the Pilot Project's ETEE program and not to DSM programs. /u

17. At this time, the approach explained below is applicable to the Pilot Project only. A general policy on the approach to DSM-IRP attribution is anticipated to be considered as part of the first stand-alone IRP Plan application filed by the Company. /u

18. For the purposes of illustrating the attribution approach for the Pilot Project programs, Table 4 demonstrates a scenario of how attribution is currently managed without the implementation of the Pilot Project programs. Table 5 demonstrates the same scenario, but inclusive of the implementation of the Pilot Project programs. /u

[6] EB-2021-0002, Decision and Order, November 15, 2022, p. 87

The illustrative examples in Tables 4 and 5 assume the implementation of a generic energy efficiency project of a DSM offering.

19. Without the implementation of the Pilot Project as shown in Table 4, the incentives funded by DSM are $2,350 and the full attribution of results goes to Enbridge Gas's DSM programs in this scenario. /u

Table 4: Illustrative Attribution Example – Energy Efficiency Measure without Pilot Project

Source of Funding	Customer Incentive	Customer Incentive Contribution %	Results Attribution
DSM	$2,350	100%	100%
Pilot Project	N/A	N/A	N/A
Total	$2,350	100%	100%

20. With the implementation of the Pilot Project as shown in Table 5, an additional $550 has been provided by Enbridge Gas for this measure, for a total incentive of $2,900. Based on the above proposed attribution approach for the Pilot Project, the full attribution of results will go to the Pilot Project. /u

Table 5: Illustrative Attribution Example – Energy Efficiency Measure with Pilot Project

Source of Funding	Customer Incentive	Customer Incentive Contribution %	Results Attribution
DSM	$0	0%	0%
Pilot Project	$2,900	100%	100%
Total	$2,900	100%	100%

21. As stated previously, there is an overlap of energy efficiency measures between DSM and ETEE programming. Not all measures that are included with DSM programs and offerings in the 2023-2025 DSM Plan are in scope for the Pilot Project. The Pilot Project will only stack additional incentives upon the specific 2023- /u

2025 DSM Plan programs and offerings indicated in Table 6 below. The selection of DSM offerings that would receive enhanced IRP ETEE incentives was based on measures that are expected to have the greatest impact on distribution system peak hour flows/demand in each targeted customer sector. Providing an additional incentive for these DSM programs will also help Enbridge Gas determine the impact of enriched incentives (up until 100% of the energy efficiency project cost) on the incremental take up of the measures. The 2023-2025 DSM Plan programs and offerings that are not in scope for the Pilot Project will continue to be available to customers within the Pilot Project area and will be funded through the DSM Plan budget.

Table 6 – Summary of DSM Offerings with IRP ETEE incentives

2023-2025 DSM Plan Program and Offerings	Pilot Project ETEE Customer Incentive Funding
Residential Program	**Yes**
Residential Whole Home	Yes
Residential Single Measure	No
Residential Smart Home	No
Low Income Program	**No**
Home Winterproofing	No
Affordable Housing Multi-Residential	No
Commercial Program	**Yes**
Commercial Custom	Yes
Prescriptive Downstream	Yes
Direct Install	Yes
Prescriptive Midstream	No
Industrial Program	**Yes**
Industrial Custom	Yes
Large Volume Program	**No**
Energy Performance Program	**No**
Building Beyond Code Program	**No**

Residential Sector

22. Enbridge Gas has a long history of delivering a whole home energy efficiency offering for residential customers. Starting in 2023, Enbridge Gas and NRCan had partnered to jointly fund an enhanced whole home energy efficiency program for residential customers in Ontario through the Home Efficiency Rebate Plus (HER+) offering, a combination of Enbridge Gas's residential whole home offering and NRCan's Canada Greener Homes Grant program[7]. It was an offering that was designed to educate and encourage residential homeowners to apply an energy efficiency lens to all their home renovation projects thereby leading to deep savings. Initially, Enbridge Gas had proposed to leverage the HER+ offering for the Pilot Project, however, NRCan provided an update in November 2023 describing NRCan's plan to halt new applicants into the Canada Greener Homes program in Q1 2024.[8] As a result, the Company can no longer leverage the HER+ offering for the Pilot Project and therefore proposes to leverage the residential whole home offering in market at the time of Pilot Project implementation and supplement with targeted engagement and additional incentives for selected residential measures within the Southern Lake Huron Pilot Project area. The incentive levels proposed in the Company's original Application filed on July 19, 2023 will remain unchanged and the incentive funding formerly provided by NRCan is now captured within the Pilot Project budget. The Company's focus on this sector is in part driven by the expectation that residential space heating is a significant contributor to peak period flows/demands, as well that there exists a significant potential to affect this load through the specific residential measures being targeted. /u

[7] Canada Greener Homes is the NRCan funding source of the HER+ offering.
[8] NRCan halted the intake into the Canada Greener Homes program in February 2024, however, all consumers who have entered the program before this cut-off date and complete their participation within the program rules by Q1 2027 are expected to be paid the rebates currently available from Canada Greener Homes. The Contribution Agreement with Enbridge Gas and NRCan remains in effect for the full term.

23. More specifically, as part of the Pilot Project ETEE residential whole home offering, the following DSM residential building envelope measures have been selected for enhanced incentives due to their potential to impact peak hour demands through space heating load reductions. /u

- Attic insulation
- Wall insulation
- Basement insulation
- Exposed floor insulation
- Air sealing

24. As noted above, ETEE incentives will be available to residential customers within the Southern Lake Huron Pilot Project area and will be delivered through the same channels as the existing residential whole home offering in the DSM programming portfolio as approved in the 2023-2025 DSM Plan Decision.[9] The proposed enhanced incentives will only be available for select piloted measures as provided in Table 7. The base DSM incentives for the other measures that participants of the ETEE residential whole home offering (e.g., windows/doors) will also be covered by the Pilot Project for ease of the attribution approach for the Pilot Project. /u

25. Enbridge Gas proposes to provide an ETEE incentive for the measures outlined in Table 7 that sets the maximum measure incentive amounts 23% - 27% above the original combined NRCan and OEB-approved DSM maximum measure incentive levels, depending on the measure.[10] The intent of the ETEE residential whole home offering is to provide as close to full cost incentive coverage for the selected measures as possible, however, the total incentive amount available to each customer is capped at 100% of the cost of the measure. In addition, the maximum total incentive available to participants in the ETEE-version of the residential whole home offering is $15,000 per participant (increased from the $10,000 per participant /u

[9] EB-2021-0002, Decision and Order, November 15, 2022, p. 18-33
[10] EB-2021-0002, Decision and Order, November 15, 2022, Schedule B.

maximum for Enbridge Gas customers of the original HER+ offering). It should be noted that due to the recency of the update from NRCan, there remains some uncertainty on the incentive structure (e.g., measure incentive tiers – increase attic insulation to at least R50 from less than R12[11]) of the DSM residential whole home offering that will be in market at the time of the Pilot Project ETEE implementation. The ETEE residential whole home offering will align measure incentive tiers with the DSM residential home offering and Enbridge Gas intends to provide enhanced incentive levels to the same degree as proposed in Table 7. However, Enbridge Gas requires flexibility in design and implementation of this offering to respond to changing market conditions (e.g., introduction of a new federal rebate program for these measures) throughout the duration of the Pilot Project. The proposed enhanced incentives may also be changed throughout the duration of the Pilot Project due to changes in the incentive structure of the base DSM residential whole home offering or Pilot Project program design decisions[12]. Changes to the incentive structure will be discussed with the TWG and reported on in the IRP Annual Report.

26. Targeted engagement and marketing activities within the Southern Lake Huron Pilot Project area for residential customers will be undertaken to encourage increased awareness and offering uptake. Marketing initiatives for this area may explore omnichannel mass media approaches for broader outreach, combined with direct to customer communications. Additionally, there is an opportunity to increase awareness and participation among local contractor networks, through the development of sales support materials. To optimize marketing effectiveness, a variety of creative imagery, messaging, tactics, and channels will be applied and evaluated based on driving interest and program participation. Campaigns will be /u

[11] The R-value is a measurement of insulation effectiveness. The higher the R-value, the greater reduction in energy loss for a building.
[12] On April 22, 2024, Enbridge Gas filed a letter with the OEB providing an update regarding DSM residential whole-home programming for the 2024 and 2025 program years. Included within the letter is an initial list of measures and incentives to be offered in the DSM offering. The ETEE offering leveraging the residential whole home offering may need to be updated to align, as necessary.

optimized over time based on learnings. All marketing materials will direct prospects to a program-specific landing page on the Enbridge Gas website, which will serve as the central location for information about ETEE in Southern Lake Huron.

Table 7 – Summary of Residential Whole Home Measures with Enhanced IRP Incentive

Pilot Project Residential Whole Home Measures	Reference Point Maximum Incentive (A)[13]	EGI Pilot Project Additional Incentive (B)	Pilot Project Maximum Incentive (C = A + B)
Attic/Cathedral Insulation			
Increase attic insulation to at least R50 from less than R12	$2,350	$550	$2,900
Increase attic insulation to at least R50 from greater than R12 up to R25	$800	$200	$1,000
Increase attic insulation to at least R50 from greater than R25 up to R35	$325	$75	$400
Increase cathedral/flat roof insulation to at least R-28 from R12 or less	$800	$200	$1,000
Increase cathedral/flat roof insulation to at least R-28 from greater than R12 up to R25	$325	$75	$400
Upgrade uninsulated cathedral ceiling/flat roof to at least R20 from R12 or less	$800	$200	$1,000
Exterior Wall Insulation			
For adding insulation value of at least greater than R20 for 100% of building	$6,750	$1,750	$8,500
For adding insulation value greater than R12 up to R20 to 100% of the building	$5,000	$1,200	$6,200
For adding insultation value greater than R7.5 up to R12 for 100% of building	$4,500	$1,200	$5,700
Exposed Floor Insulation			
For adding insulation value of at least R20 for entire exposed area (minimum area of 11 square meters or 120 square feet)	$450	$100	$550

[13] Reference Point Maximum Incentive is based on the values shown as stated in the DSM Decision (EB-2021-0002, Decision and Order, November 15, 2022, Schedule B) and used in the development and structure of the initial residential ETEE offering, however the values only remain relevant as the starting point for the Pilot Project ETEE programming.

Table 7 – Summary of Residential Whole Home Measures with Enhanced IRP Incentive (Continued)

Pilot Project Residential Whole Home Measures	Reference Point Maximum Incentive (A)[14]	EGI Pilot Project Additional Incentive (B)	Pilot Project Maximum Incentive (C = A + B)
Basement Insulation			
For sealing and insulating at least 80% of basement header to a minimum R20	$325	$85	$410
For sealing and insulating at least 50% of the entire basement slab by a minimum of R3.5	$550	$150	$700
For adding insulation value greater than R22 to 100% of basement	$2,000	$500	$2,500
For adding insulation value of R10 to R22 to 100% of basement	$1,400	$350	$1,750
For adding insulation value of R10 to R22 to 100% of exterior crawl space wall area, including header	$1,700	$400	$2,100
For adding insulation value of R10 to R22 to 100% of exterior crawl space wall area, including header	$1,400	$360	$1,760
For adding insulation value greater than R24 to 100% of crawl space ceiling	$1,050	$250	$1,300
Air Sealing			
Achieve base target	$725	$175	$900
Achieve 10% or more above base target	$1,050	$240	$1,290
Achieve 20% or more above base target	$1,300	$300	$1,600

Commercial and Industrial Sector

27. The commercial and industrial sectors are generally more diverse when compared to the residential sector, and as such, approaches to the commercial and industrial sectors encompass a variety of offerings. Enbridge Gas is proposing to leverage its /u

[14] Reference Point Maximum Incentive is based on the values shown as stated in the DSM Decision (EB-2021-0002, Decision and Order, November 15, 2022, Schedule B) and used in the development and structure of the initial residential ETEE offering, however, the values only remain relevant as the starting point for the Pilot Project ETEE programming.

existing DSM Plan offerings for the commercial and industrial market sectors, with the addition of a localized/enhanced approach.

28. Participation from small commercial and industrial customers will be important, as these types of customers are consistently part of many areas within the Enbridge Gas network where IRPAs may be applicable. Accordingly, ETEE programming in this sector must provide additional support for these customers to overcome the participation barriers typically experienced, which generally include: a lack of capital for improvements, and a lack of time/expertise to assess energy options using in-house resources. These barriers can be addressed by enhancing the existing DSM commercial and industrial direct install offering. The direct install offering is a “turnkey” solution whereby contracted service providers proactively engage with targeted customers and provide technical expertise and installation of eligible prescriptive measures. Furthermore, service providers deduct the financial incentive Enbridge Gas provides from the final energy efficiency project cost, and customers only pay the balance. The Pilot Project ETEE-version of the direct install offering for commercial and industrial customers will also leverage the existing downstream prescriptive offering for customers that are not interested in the direct install approach. /u

29. Energy efficiency solutions for commercial and industrial customers can vary significantly in terms of complexity and types of measures. For the more standard smaller customers noted above, the simpler prescriptive measure approach can be utilized, but for the typically larger complex buildings, more customized solutions may exist. As such, the Pilot Project will also leverage Enbridge Gas’s existing DSM commercial and industrial custom offering, which includes increased customer engagement along with the addition of enhanced incentives. /u

30. Similar to its proposed approach to residential ETEE, the Company’s focus on commercial and industrial customers is in part driven by the expectation that space /u

heating is a significant contributor to peak period flows/demands, as well that there exists a significant potential to affect this load through the specific measures being targeted.

31. As part of the ETEE programming for the commercial and industrial direct install and prescriptive offerings, the following measures will be initially included in the Pilot Project: /u

- Air curtains – shipping door
- Air curtains – pedestrian
- Dock door seals
- Destratification fans
- Ozone laundry
- Condensing makeup air unit
- Demand control kitchen ventilation (DCKV)
- Demand control ventilation (DCV)
- Energy recovery ventilators (incl. multi-residential in-suite)
- Heat recovery ventilators (incl. multi-residential in-suite)

32. As part of the ETEE programming for the commercial and industrial custom offering, measures with the potential to impact peak period (hourly) flows/demands will be targeted for Pilot Project, including: /u

- Measures with space heating end-use loads, and measures that can significantly reduce system peak period flows/demands (generally winter morning periods).
- Other end-uses that could significantly impact system peak period flows/demands may also be explored.

33. For the Pilot Project, small commercial and industrial customers will be classified as customers below 50,000 m^3 annualized gas consumption. Establishing this threshold will not restrict ETEE programming but will help guide effective targeting of /u

programming for commercial and industrial customers. The targeted ETEE offerings for this segment will be focused on the existing direct install offering where the current in-market offering includes an incentive to cover a portion of both the equipment and installation costs of the energy efficiency project. For the Pilot Project targeted measures, the proposed ETEE-version of the direct install offering will cover up to 100% of the energy efficiency project costs (including the equipment and installation costs of the project). Full cost coverage of the energy efficiency projects seeks to address the identified barrier of a lack of capital known to impact the participation levels of this target market segment.

34. The cost coverage of the existing offering and the proposed enhanced Pilot Project ETEE offering for each of the measures is provided in Table 8. /u

35. One of the delivery and engagement approaches the Company proposes to deploy in this ETEE-version of the direct install offering is to have a more involved connection with local contractors and secure their interest and support to participate in the ETEE's promotion and delivery. Local contractors are typically more trusted by local businesses and residents, where these contractors are a known entity and likely have built relationships among the community that can support the promotion and uptake of the ETEE offerings. The approach for this small segment will also include consultation and engagement with community-based organizations that understand the needs of businesses in the area and can support building program awareness. These are some of the delivery approaches the Company will be considering in advance of moving forward into a more formalized planning phase following receipt of OEB approval. /u

Table 8 – Summary of Existing C/I DSM Measures with Enhanced IRP Incentive

Measure Name	Eligible Sectors	% of Cost Covered in Existing Direct Install Offer [1]	Estimated % of Cost Covered for the Pilot Project ETEE Offering
Air Curtain Shipping Door (Dock In): 8x8 to 10x10	All	Up to 90%	Up to 100%
Air Curtain Shipping Door (Drive Thru): 10x10 to 20x20	All	Up to 90%	Up to 100%
Dock Door Seals - Compression & Shelter: 8x8 8x10 10x10	All	Up to 100%	Up to 100%
Air Curtain Pedestrian Doors: Single, Double & w/Vestibule	All	N/A[2]	Up to 100%
Destratification Fans: 20 & 24 Ft Fans	All	N/A[2]	Up to 100%
Demand Control Kitchen Ventilation	All Commercial Kitchens	Up to ~85%	Up to 100%
Ozone Laundry	All Comm Laundry	N/A[2]	Up to 100%
Condensing Makeup Air (Constant, 2 speed & VFD)	All except Retail	N/A[2]	Up to 100%
Demand Control Ventilation	Office, Retail, select spaces in Hotel / Motel and Entertainment	N/A[2]	Up to 100%
Energy Recovery Ventilator	All including in-suite MURB	N/A[2]	Up to 100%
Heat Recovery Ventilator	All including in-suite	N/A[2]	Up to 100%

[1] Values as currently offered in market through DSM offerings as of June 20, 2023. Values presented to provide an illustration of incentive enhancements proposals and subject to change.

[2] Measure is not currently available in Direct Install offer as of June 20, 2023.

36. For the Pilot Project, large-sized commercial and industrial customers will be classified as customers above 50,000 m^3 annualized gas consumption. The ETEE programming for the large commercial and industrial segment will be focused on the existing custom offering that has been primarily delivered by Enbridge Gas energy solution advisors (“ESAs”). For the Pilot Project targeted measures, the ETEE-version of the custom offering proposes to provide enhanced incentives up to twice that of the existing DSM offering (up to 50-75% of the full energy efficiency project costs including equipment and installation costs of the project) as described in Table 9. The delivery approach of this ETEE offering would require local ESAs employing customized marketing outreach and customer engagement strategies. The proposed enhanced incentives for the commercial and industrial ETEE programming may be /u

changed at the discretion of Enbridge Gas throughout the duration of the Pilot Project as a result of changes in the incentive structure of the existing commercial and industrial DSM offerings or Pilot Project program design decisions.

Table 9 – Summary of Existing C/I DSM Custom Offer with Enhanced IRP Incentives

Category	Current DSM Custom Offering [1]	Current DSM Custom Offering Incentive Maximum [1]	Pilot Project ETEE Custom Offering [2]	Pilot Project ETEE Custom Offering Incentive Maximum [2]
Custom - Commercial	$0.25 / m^3	50% of the Energy Efficiency Upgrade Costs or $100,000 per Project	$0.50 / m^3	50-75% of the Total Project Cost or $150,000 per Project
Custom - Industrial	$0.20 / m^3 for the up to 50K m3 saved; $0.10 / m^3 above 50K m^3 saved	50% of the Energy Efficiency Upgrade Costs or $200,000 per Project	$0.40 / m^3 for the up to 50K m3 saved; $0.20 / m^3 above 50K m^3 saved	50-75% of the Total Project Cost or $300,000 per Project
Energy Assessments	$1,500-$10,000 Varies by Previous Year Consumption	50% of Audit Costs	Maximum Incentive of $3,000-$20,000 (Double Current Offer)	75% of Audit Costs

[1] Values as currently offered in market through DSM offerings as of June 20, 2023. Values presented to provide an illustration of incentive enhancements proposals and subject to change.
[2] Pilot Project ETEE Custom offering values are subject to change pending finalization of in-market delivery approach at the time of implementation.

37. The ETEE-version of the prescriptive offering will provide enhanced incentives up to twice that of the existing DSM offering. While it is anticipated that most commercial and industrial customers would take advantage of the ETEE direct install offering and the associated incentive levels since many of the measures under the existing DSM downstream prescriptive offering are captured under the ETEE-version of the direct install offering (as shown in Table 8), the inclusion of an ETEE prescriptive downstream offering provides additional flexibility and choice for customers. The delivery of the ETEE-version of the prescriptive downstream offering would be covered by the delivery approaches described previously under the ETEE-version of the direct install and custom offerings.

/u

38. Targeted engagement and marketing activities within the Southern Lake Huron Pilot Project area for commercial and industrial customers will be undertaken to encourage increased awareness and offering uptake. Given the diversity of commercial and industrial customers in this area, Enbridge Gas will leverage business intelligence data to target and tailor campaign messaging to specific business types to test impact on driving results. Over time, campaigns will be optimized based on learnings to leverage the most successful tactics. Marketing efforts will target commercial and industrial customers as well as contractors and trade networks through targeted communication tactics to generate program awareness and participation. All marketing materials will direct prospects to program-specific landing pages on the Enbridge Gas website, which will serve as the central location for information about commercial and industrial offerings. /u

Affordable Housing Sector

39. Enbridge Gas energy efficiency offerings for the affordable housing market segment have historically experienced high levels of participation and success. The existing DSM affordable housing offerings under the 2023-2025 DSM Plan portfolio already provides no-cost programming for qualified Enbridge Gas customers located in the Pilot Project area. Affordable housing program offerings under the 2023-2025 DSM Plan portfolio will continue to be available and will remain funded through DSM. As such, the Company is not proposing to provide enriched incentives to customers as part of ETEE for affordable housing programming as these programs are already no-cost to customers, but rather the Company may enhance marketing activities for existing DSM program offerings (e.g., direct marketing strategies). Marketing objectives for Affordable Housing customers in Southern Lake Huron Pilot Project area will focus on increasing local participation in the Home Winterproofing (“HWP”) program. Enbridge Gas will consider geotargeting this area with direct to customer communications tactics. Furthermore, Enbridge Gas will explore opportunities to cross-promote Residential and Affordable Housing programs as applicable. /u

Limited ETEE Offering for Electrification Measures

40. On a limited participant basis, the Company proposes to offer additional incentives for cold climate air source heat pumps ("ccASHP") and ground source heat pumps ("GSHP") in the Pilot Project ETEE-version of the residential whole home offering. While the first-generation IRP Framework does not yet make provisions for Enbridge Gas to explicitly fund electric IRPAs, it acknowledges that, "This may be an element of IRP that will evolve as energy planning evolves, and as experience is gained with the IRP Framework."[15] The Company believes the Pilot Project offers a unique opportunity to evaluate the potential applicability and feasibility of electrification measures in an isolated environment. Enbridge Gas expects that broader implementation of electrification measures in the future will require integrated energy planning across energy sources, including discussion and engagement between Enbridge Gas and the electric sector, to ensure a holistic assessment of the impact of these types of measures on the respective grid and system. To support and inform such future works and collaboration, and to maximize the potential learnings resulting from the Pilot Project, Enbridge Gas is proposing to include incentives for ccASHP and GSHP in conjunction with its ETEE-version of the residential whole home offering. /u

41. The additional incentives for ccASHP and GSHP will be capped at 20 participants and 10 participants, respectively. It is expected the additional electrical load demand from these limited number of measures would not have a material impact to the local grid. /u

42. This limited ETEE offering will follow the same approach described in the Residential Sector Approach under the ETEE-version of the DSM residential whole home offering with the additional maximum measure incentive levels detailed in Table 10. As noted earlier, there remains some uncertainty on the incentive structure of the /u

[15] EB-2020-0091, OEB Decision and Order (July 22, 2021), p. 35.

DSM residential whole home offering that will be in market at the time of the Pilot Project ETEE implementation. The ETEE residential whole home offering will align measure incentive tiers with the DSM residential whole home offering and Enbridge Gas intends to provide enhanced incentive levels to the same degree as proposed in Table 10[16]. However, as stated previously, Enbridge Gas requires flexibility in design and implementation of this offering to respond to changing market conditions (e.g., introduction of a new federal rebate program for these measures) throughout the duration of the Pilot Project. As this limited offering is inclusive of measures that are part of the DSM residential whole home offering, it is expected most of the costs for the promotion and delivery are covered under the enhanced DSM ETEE offering. The Company also proposes to work closely with participants taking up this offering and the equipment installation contractors to better understand the experience with installing these systems in homes (e.g., upgrading electrical panel, comfort/reliability during very cold days, cost considerations etc.).

[16] On April 22, 2024, Enbridge Gas filed a letter with the OEB providing an update regarding DSM residential whole-home programming for the 2024 and 2025 program years. Included within the letter is an initial list of measures and incentives to be offered in the DSM offering. The ETEE offering leveraging the residential whole home offering may need to be updated to align, as necessary.

Table 10 – Summary of Residential Whole Home Electric Measures with Enhanced IRP Incentive

Pilot Project Residential Whole Home Measures	Reference Point Maximum Incentive (A)[17]	EGI Pilot Project Additional Incentive (B)	Pilot Project Maximum Incentive (C = A + B)
Space Heating Heat Pump			
Install a ground source heat pump – full system.	$6,500	$3,500	$10,000
Replace a ground source heat pump – heat pump unit only.	$4,000	$2,000	$6,000
Install a variable capacity cold climate air source heat pump (ccASHP) system. The system must be intended to service the entire home.	$3,250	$1,750	$5,000
Install a complete new or replacement variable capacity cold climate air source heat pump (ccASHP) system, intended to service the entire home.	$6,500	$3,500	$10,000

Limited ETEE Offering for Advanced Technologies

43. As part of the ETEE programming, Enbridge Gas proposes to incentivize three technologies through an advanced technology ETEE offering within the Pilot Project: /u

- Simultaneous hybrid heating
- Natural gas heat pump
- Thermal energy storage

44. The three advanced technologies have been evaluated against the following criteria to be included in the ETEE offering: /u

- Can reduce system peak load
- Can lower energy costs for customers
- Can benefit a large number of customers
- Are already or will be commercially available in Ontario before 2025 heating season

[17] Reference Point Maximum Incentive is based on the values shown as stated in the DSM Decision (EB-2021-0002, Decision and Order, November 15, 2022, Schedule B) and used in the development and structure of the initial residential ETEE offering, however the values only remain relevant as the starting point for the Pilot Project ETEE programming.

- Offer additional benefits such as resiliency, customer choice, and alignment with net-zero transition

45. In addition to helping Enbridge Gas achieve the Pilot Project objectives described in Exhibit B, Tab 1, Schedule 1, the inclusion of advanced technologies in the Pilot Project is intended to build further learnings to support wider market deployment in potential future IRP applications, through contractor installation and service experiences for these advanced technologies. Residential incentives for simultaneous hybrid heating, natural gas heat pumps and thermal energy storage will be capped at 40 participants, 20 participants and 40 participants, respectively. Incentives for commercial natural gas heat pumps will be capped at 5 participants. /u

46. For the three advanced technologies, Enbridge Gas is proposing to offer incentives in conjunction with its ETEE-version of the residential whole home offering. Incentives have been derived similarly for each technology, with the approach of providing incentives such that the cost to homeowners for upgrading to one of these more advanced systems is comparable to the cost of replacement of their existing system (using a furnace and gas water heater as the baseline). The proposed incentives would cover up to 60% of the energy efficiency project costs (including equipment and installation costs of the project), utilizing a direct install delivery model for the region. The direct install delivery model is a turnkey solution whereby contracted service providers would engage with target customers, quote, and install an efficiency measure in their buildings where a financial incentive is paid directly to the contracted service provider. /u

47. The forecasted peak reduction possible through implementation of the advanced technologies as part of Southern Lake Huron Pilot Project ETEE programming are included in Table 11. Additional information on each technology is further described in the sections below. /u

Table 11 – Summary of Advanced Technology Forecasted Peak Hour Reductions

Technology	Approx. Peak Reduction	Approx. Consumption Reduction
Simultaneous hybrid heating	30-50%	Up to 50%
Natural gas heat pump	25-30%	30-50%
Thermal energy storage	20%	Minimal

Simultaneous Hybrid Heating

48. Traditional hybrid heating systems use both gas heating equipment (i.e., air handling unit and water heater), electric heating equipment (i.e., ASHP) and a controller that switches between the two heating sources. Simultaneous hybrid heating uses a smart controller to optimize the operation of both gas equipment and electric equipment simultaneously, providing impactful reductions in energy consumption as well as emissions and cost. /u

49. With the integration of a smart controller with a high efficiency gas equipment and appropriately sized electric equipment, the simultaneous hybrid heating system can reduce natural gas distribution system peak period flow/demand up to 50% and save up to 50% in energy consumption and associated costs per household. These savings are a result of programming the controller to run electric ASHP at full capacity during peak heating hours (and not during peak electric hours) and utilizing a new high efficiency gas heating system to provide supplementary (top up) heating as required. /u

50. Hybrid heating systems are currently being adopted across the province[18], and simultaneous hybrid heating systems have an opportunity to also be scalable. Hybrid heating systems are fully available in the market, but there remains room for ongoing innovation with smart controllers and optimizing operational efficiencies. /u

[18] The Clean Home Heating Initiative achieved 1,495 installations by the end of the program in February 2024.

51. Similar to the Limited Electric Measures ETEE Offering, hybrid heating systems will switch heating load from gas to electric, and while the IRP Framework does not allow for incremental funding for electric IRPAs, the Company believes the Pilot Project would be an isolated environment in which electrification measures with respect to their potential future applicability and/or feasibility under IRP can be evaluated. /u

52. For the Southern Lake Huron Pilot Project, Enbridge Gas is proposing to include a limited number of simultaneous hybrid heating systems in the ETEE offerings for the residential sector only. /u

Natural Gas Heat Pump

53. A natural gas heat pump ("GHP") is an air source heat pump powered by natural gas that can provide building space heating, and cooling as well as domestic hot water ("DHW") heating. Two types of GHPs are most common: /u

- Gas engine driven vapor compression
- Absorption

54. GHPs operate at greater than 100% efficiency. With the total delivered energy in the 120–160% efficiency range, GHPs can provide impactful reductions in energy consumption, hence significantly lowering GHG emissions as compared to conventional heating and cooling equipment. For residential homes, switching from a traditional natural gas furnace and hot water heater to a GHP can save approximately 30-40% on annual energy costs for homeowners. For commercial applications, gas heat pumps can replace boilers or integrate with a rooftop unit to provide high efficiency space heating and cooling, saving up to 50% of energy consumption. /u

55. Additionally, GHPs can help to reduce natural gas system peak period flow/demand for building space and DHW heating in comparison to natural gas furnaces and boilers, since the gas utilization efficiency of GHPs is expected to remain above 100% up to -30 degrees Celsius outdoor air temperature. Depending on the types of GHPs, peak demand can be lowered by up to 30% for residential applications. Furthermore, these reductions in demand through efficiency improvement will not shift natural gas load to another fuel source (e.g., electricity). /u

56. Commercial GHPs are already commercialized, and residential models are expected to be commercially available starting in 2024. As GHPs become more commercially available, there is potential for GHPs to replace traditional furnaces, boilers and water heaters in residential homes and commercial buildings, which would correspond to peak hour and annual system demand reductions. /u

57. As GHPs are relatively new to Canada, their cost is relatively high compared to natural gas furnaces and water heaters for residential homes. Incentives provided through the Southern Lake Huron Pilot Project will help to offset the upfront cost of GHPs for customers, enabling them to benefit from the GHP technology in their early stages of market availability. With economies of scale, GHP equipment costs are expected to decline over time and market adoption is expected to increase. /u

58. For the Southern Lake Huron Pilot Project, Enbridge Gas proposes to include a limited number of GHPs for both residential and commercial sectors. /u

Thermal Energy Storage

59. Thermal energy storage (“TES”) uses a phase change material (“PCM”) as the storage medium to store thermal energy that can be used later during natural gas system peak period flow/demand. Since TES uses PCM as the storage medium, the units are much smaller than traditional water heater tanks that hold a similar amount of energy. /u

60. Depending on the size of the unit, TES can reduce natural gas peak period demand by up to 20% (the entire water heating load) by charging the storage medium with both hydronic gas equipment (boiler or tankless water heater) and off-peak electricity and then dispatching that energy to offset domestic water heating. Participants can expect to see lower energy costs as a result of efficiency gains from the TES unit compared to traditional water heaters. When electric charging of TES is available, participants can also expect to see additional energy cost reductions as the smart controller can optimize charging of the system during off-peak times when electric energy is less expensive. /u

61. TES is currently commercially available for residential applications and can be programmed to achieve natural gas system peak shaving without impacting the comfort of customers. The TES also does not require electricity to run any pumps and can therefore be used for water heating in the event of a power grid outage. /u

62. Enbridge Gas is proposing to include TES in the ETEE offerings for the residential sector. /u

<u>Demand Side IRPA - Demand Response</u>

63. For the Southern Lake Huron Pilot Project, Enbridge Gas is proposing to offer a residential DR program in the Pilot Project area. The DR program will seek to understand the impact of shifting hourly gas flows/demands during peak periods on the distribution system. The program is targeting residential customers in the Pilot Project area with natural gas central heating systems controlled by an eligible Wi-Fi-connected smart thermostat with DR capabilities (including, but not limited to devices manufactured by Ecobee, Google Nest, Emerson Sensi, and Honeywell). The program will apply a bring-your-own-device (“BYOD”) approach, leveraging the existing smart thermostats of customers. Customers will be financially incented to enroll in the DR program in exchange for allowing Enbridge Gas to control their smart thermostat during the winter heating season; specifically, during peak demand /u

response events. The geographic scope of the DR offering will include the entire Southern Lake Huron Pilot Project area as outlined in Exhibit A, Tab 2, Schedule 1, Attachment 1.

64. In addition to the market analysis of targeted customers located within the Southern Lake Huron Pilot Project area presented in Exhibit C, Tab 1, Schedule 2, it was also critical that the Company develop an understanding of the number of existing natural gas customers/services situated within the Pilot Project area with existing smart thermostats in order to accurately assess the potential number of DR program participants. Accordingly, the Company developed an estimate of existing customers in the Pilot Project area with eligible smart thermostats of 16% (see Table 12) using region-specific summarized data provided by thermostat manufacturers in 2022 (i.e., Google Nest, Ecobee, and Emerson Sensi). In 2024 another survey was conducted using revised parameters for postal codes and natural gas space heating requirements which indicated that there are 3,900 smart thermostats in the Pilot Project area resulting in a similar adoption rate of 16% (see Table 13). /u

65. To verify the reasonability of its estimate, the Company compared it to recent public statements made by the IESO and the province of Ontario,[19] which claim that there are approximately 600,000 smart thermostats in use in buildings across the province and nearly three-quarters (~75%) of those buildings are single family homes. Considering that the number of single-family homes (single detached, semi-detached, and row) in Ontario is 3,750,000,[20] the average number of single-family homes equipped with a smart thermostat is 12%.[21]

---

[19] Ontario.ca - https://news.ontario.ca/en/backgrounder/1002356/ontario-to-provide-new-and-expanded-energy-efficiency-programs; The Energy Mix - https://www.theenergymix.com/2022/10/06/ontario-opens-new-programs-to-shave-peak-electricity-use/#:~:text=The%20IESO%20estimates%20there%20are,Energy%20Mix%20in%20an%20email

[20] Stats Canada - https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&SearchText=ontario&DGUIDlist=2021A00053538035,2021A00053538030,2021A000235&GENDERlist=1&STATISTIClist=1&HEADERlist=0

[21] (600,000 × 75%) ÷ 3,750,000 = 12%

Table 12 – Summary of Estimated Smart Thermostats for Previously Proposed Pilot Area (2022 Survey)[22] /u

Area	Number of Single-Family Residential Customers	% Customers in Areas of the Total Customers in the Pilot Project Area	Estimated Number of Smart Thermostats	% Smart Thermostats Per Customers in Area
SLH Area of Influence	4,090	15%	800	20%
Greater Southern Lake Huron Area	22,390	85%	3,500	15%
Total	26,480	100%	4,300	16%

Table 13 – Summary of Estimated Smart Thermostats for Pilot Project Area (2024 Survey)[23] /u

Number of Single-Family Residential Customers in Pilot Project Area	Estimated Number of Smart Thermostats	% Customers with Smart Thermostats
24,300	3,900	16%

66. For the first year of the DR offering, an up-front enrollment incentive of $55 will be provided to customers that enroll to participate in the program. For every heating season the participant remains enrolled in the program and meets eligibility requirements (including participation in at least 50% of DR event hours each heating season), they will receive an additional $25 incentive. Enbridge Gas expects to call approximately 10 total DR events during the program's first heating season (2025/2026) depending on how cold the winter is. Registered participants who choose to consistently opt-out of DR events (e.g., by manually overriding temperature setbacks during DR event hours, or taking their thermostats offline during DR event hours) may be subject to removal from the offering. As the /u

[22] The survey was conducted prior to the revisions to the Southern Lake Huron Pilot Project area.
[23] The survey was conducted after revisions to the Southern Lake Huron Pilot Project area. Estimate of the number of units in Pilot Project area from smart thermostat manufacturers.

Company undertakes the DR offering and learns more about the market for gas demand response programming, there may be a need to adjust incentive levels to optimize uptake. The proposed Pilot Project budget accounts for such incentive flexibility (i.e., increased uptake over budgeted participation and incentive levels). Changes to the incentive levels will be discussed with the TWG and reported in the Company's IRP Annual Report.

67. DR events typically occur between November 1 and April 1, which aligns with the standard winter heating season for the Enbridge Gas distribution system. DR events for the DR offering are expected to take place at varying temperatures during the heating season which will support the establishment of a correlation between outdoor temperature and reheat from setback times. On days when DR events occur, the smart thermostat setpoint temperatures will be controlled (i.e., set at a specified setpoint) between midnight and noon and can be changed by up to 2 degrees Celsius more than once during the event. For example, a DR event may involve a 2-degree Celsius setback of the smart thermostat temperature for a duration of 3 hours between the hours of 7-10 a.m. in the morning.

68. A distributed energy resource management system ("DERMS") service provider will be contracted to support the delivery of this offering.[24]

69. Most of the DR program marketing activities are likely to be handled by the DERMS service providers and/or using the smart thermostat manufacturer user interface platforms (i.e., thermostat mobile apps). The DR offering may also be promoted by Enbridge Gas through traditional marketing activities within the Pilot Project area. Marketing initiatives for this area may explore omnichannel mass media approaches. Marketing tactics, design concepts, and channels will be evaluated and adapted

[24] A DERMS service provider is a firm that provides software services to facilitate and optimize the management and coordination of smart thermostats to ensure the effectiveness of DR events.

over time to optimize overall performance of initiatives in driving interest and participation.

70. To drive increased DR program participation and retention levels, Enbridge Gas may also consider implementing loyalty marketing initiatives (e.g., focused on recognizing and rewarding program participants). /u

71. In 2023, the IESO launched their residential BYOD demand response program province-wide. The IESO Residential DR program targets the summer electric peak cooling seasons whereas the Enbridge Gas DR program will target the winter gas peak heating seasons. Potential collaboration discussions are on-going between Enbridge Gas and the IESO including using the same DERMS service provider. Synergies associated with this collaboration may include DERMS provider system cost savings and increased shared participant uptake in overlapping target areas.

Impact of Pilot Project on Customer Demands

72. Based on the proposed ETEE and DR programming in the Pilot Project area, the budgeted number of participants and corresponding estimated peak hour savings are summarized in Table 14. The ETEE budgeted participation levels were developed by analyzing the customers in the SLH Pilot Project area and setting target ETEE programming uptake levels for the relevant sectors based on the proposed ETEE delivery approaches and experience in the energy efficiency market. The ETEE peak hour reductions were estimated as a function of the participation levels, annual energy efficiency percentage savings by sector (assuming a 1:1 annual to peak percentage conversion where applicable), and peak design loads per customer by sector in the Pilot Project area. The DR budgeted participation levels were developed by analyzing the customers in the SLH Pilot Project area along with the estimated number of smart thermostats in the area. The DR peak hour reductions were estimated based on values from jurisdictional scans adapted and applied to the customers in Pilot Project area. /u

Table 14 – Summary of Estimated Peak Hour Savings in SLH by Program /u

	2025	2026
ETEE - Enhanced DSM		
Budgeted Number of Participants	741	751
Estimated Peak Reduction - Cumulative (m^3/hr)	179.7	364.1
ETEE - Electrification Measures		
Budgeted Number of Participants	30	0
Estimated Peak Reduction - Cumulative (m^3/hr)	24.5	24.5
ETEE - Advanced Technology - Gas Heat Pump		
Budgeted Number of Participants	15	10
Estimated Peak Reduction - Cumulative (m^3/hr)	8.1	13.5
ETEE - Advanced Technology - Simultaneous Hybrid Heating		
Budgeted Number of Participants	24	16
Estimated Peak Reduction - Cumulative (m^3/hr)	12.5	20.8
ETEE - Advanced Technology - Thermal Energy Storage		
Budgeted Number of Participants	24	16
Estimated Peak Reduction - Cumulative (m^3/hr)	4.9	8.2
Demand Response		
Budgeted Number of Participants	382	509
Estimated Peak Reduction - Cumulative (m^3/hr)	84.0	196.0

EVALUATION AND MONITORING

1. To inform on the objectives of the Southern Lake Huron Pilot Project, as defined in Exhibit B, Tab 1, Schedule 1, the following section details the required data collection and evaluation plans for each objective. /u

Objective #1 – Develop an understanding of how ETEE and DR programs impact peak hour flow/demand.

2. To support the peak hour impact evaluation of ETEE, Enbridge Gas will leverage existing hourly flow measurement on residential/small commercial customers and will install additional hourly flow measurement on larger commercial/industrial customers in the Pilot Project area, where data will be collected for the duration of the Pilot Project. Customers will be grouped by type and their peak hour flows will be estimated at the beginning and the end of the Pilot Project. The average flow change in customers that did not participate in ETEE (baseline) will be compared with the change in those that did participate. This difference will be the net impact of ETEE. /u

3. To support the peak hour impact evaluation of DR, the same flow measurement will be used to create hourly flow estimates at various temperatures. For customers participating in DR, their peak hourly flow estimates will be compared with the actual flow data on event days. The difference between estimated flows and actual flows for a group of participants will be the net impact of DR.

4. The data collection and monitoring details as well as data evaluation process, for ETEE and DR are respectively outlined below.

Data Collection and Monitoring – ETEE

5. In order to evaluate the impact of ETEE on peak hour flow, hourly flow measurement and data from customers in the Pilot Project area is a critical component. Typically, /u

actual flow data for individual customers is collected on a bi-monthly interval for billing purposes which typically results in 6 readings per year. Hourly flow measurement will support the analysis of trends by customer type and allow for a more representative sample size that can be more easily extrapolated to Enbridge Gas's total franchise area. Additionally, hourly customer flow data provides greater granularity of customer consumption at specific times of day, whereas bi-monthly data would average and trend customer habits over a wide range of degree days. Acquiring more frequent hourly data closer to the design day heating degree day, will provide more data allowing for higher confidence and better forecasted flow during colder temperatures. Additionally, hourly customer flow data provides greater granularity of customer consumption at specific times of day, whereas bi-monthly data would average and trend customer habits over a wide range of degree days. Acquiring more frequent hourly data closer to the design day heating degree day, will provide more data allowing for higher confidence and better forecasted flow during colder temperatures.

6. Currently at a system level, daily to peak hour conversion factors and profiles are recalculated annually using actual hourly gate station flows. This unique non-dimensional profile represents all of the customers downstream of the gate stations combined. While this is a good representation of the entire customer group downstream of the gate station on systems, granularity at a customer level and their change in usage is unavailable. Further, new customers are added to the system each year and existing system customer's usage changes. This presents further challenges to the Company in its attempt to understand individualized trends when looking at overall system trends absent individual hourly metering.

7. In lieu of the typical bimonthly readings, hourly data from customer meters can be made available through either: i) Automated meter reading ("AMR") technology via encoder receiver transmitters ("ERTs"), which is primarily compatible with residential and smaller commercial meter sets, and/or ii) more advanced metering technology,

which is ideal for larger commercial or industrial meter sets. The data can be collected through receivers placed in vehicles that drive the meter routes, which will result in more frequent meter reading to download the additional data from ERTs, or via existing telecom infrastructure to allow for remote access.

/u

8. In the Southern Lake Huron Pilot Project area, most residential and small commercial customers are equipped with existing ERTs. These existing ERTs were previously only read at the same bi-monthly frequency but have presently been configured to start recording hourly data. Additional installation of approximately 50 hourly measurement devices would be required for the larger commercial and industrial customers within the pilot area. Due to the customized nature of procurement and installation of hourly measurement devices for these types of customers, a more individualized approach is planned. Enbridge Gas plans to initiate engagement with larger commercial and industrial customers within the pilot area in 2024, in advance of an OEB decision for the IRP Pilot Project application, to identify businesses that are interested in participating in the proposed ETEE programming and to subsequently initiate the implementation of individualized metering solutions for those customers. This approach will minimize the number of incremental hourly measurement installations that are required by focusing on the subset of customers that express interest in participating in the program, when compared to an alternative approach such as targeting the largest customers of a specific building type (e.g., manufacturing facilities, etc.). Such alternative approach, where ETEE participation may not occur during the Pilot Project, would provide limited value to the Pilot Project's objectives and may require more measurement upgrades at other customer facilities that do participate in the ETEE programming. This approach will also advance the timelines associated with metering installations to support the collection of as much baseline data as possible prior to the implementation of ETEE measures. The associated costs for Southern Lake Huron hourly measurement are shown in Exhibit E, Tab 1, Schedule 1. /u

9. Measurement should be in place the year prior to the implementation of ETEE to allow for baseline consumption levels to be established, and subsequently allow for a comparison against post implementation consumption levels to determine the change. /u

10. Customer hourly flow data will be continuously collected and recorded throughout the years to allow for the analysis of seasonality in flow changes. /u

11. Weather data, including temperature and windspeed, will be utilized and matched against hourly customer flow to isolate the impact of weather on flows.

Data Analysis and Evaluation Plan - ETEE

12. Evaluation of the peak hourly flow reductions in the Pilot Project area will be split into two parts: i) an assessment of each customer's peak hourly forecasted design day flow before and after ETEE implementation, and ii) evaluation of how the peak hourly flow by customer grouping was impacted by ETEE. This evaluation will compare the change in flows of customers that did not participate in ETEE with the change in flows of customers that did participate.

Assessment of Peak Hourly Flow

13. Distribution systems are designed to provide safe and reliable service under peak hourly flow conditions that typically is associated with an extreme cold day that has been previously experienced. This is considered a design day heating degree day. The degree day calculation also requires the determination of the base temperature (temperature at which space heating starts), and the effect of wind speed on heat loss. Since this design condition occurs infrequently, customer consumption data is not typically available at this specific condition and their raw data cannot be used for hydraulic design without additional analysis. Extrapolation of customer flow data to the

local design day heating degree day is required to estimate total flows under this design condition.

14. A detailed hourly flow analysis will be performed on the customers profile, to determine base temperature (temperature at which space heating starts), the base flow (estimated flow when heating is not required), and the heating flow per degree day. This allows for an estimation of the peak hour flows that can be used for hydraulic modeling at any Degree Day. This analysis will be performed on customer data before and after implementation of ETEE programming.

15. Through review of the customer's peak hour flow profile over the duration of the Pilot Project term, noise and trends in individual customer gas usage will be identified where possible (short term variations in customer flow, examples being: customer being on vacation, business failing, temporary change in habits, etc.).

Analysis of ETEE impacts to Peak Hourly Flow

16. Peak hourly flow estimates as well as other data (including customer type, weather information, participation information for ETEE programming, etc.) will be used to perform an analysis on the impact of ETEE on peak hourly flow for customer groupings and measures type.

17. Customers that elect not to participate in ETEE programming in the Pilot Project area will form a control group for each customer type to determine changes to customer flow occurring from factors external to the Pilot Project ETEE programming. Examples of factors that could influence customer flow in the medium-long term include commodity pricing, changes in occupancy, customer habits, equipment and building changes not related to ETEE programming. ETEE programming will replace select broad based DSM programs in the Pilot Project areas (see Exhibit D, Tab 1, Schedule 2) and participants of the remaining broad based DSM programs during the Pilot

/u

Project timeframe will be excluded from the control group, which will ensure that changes to peak hourly flow in the control group are not a result of broad based DSM programs.

18. For customers that participate in ETEE in the Pilot Project area, their calculated peak hourly consumption after ETEE will be compared to the base peak hourly consumption before ETEE. This information will be analyzed by groups of customers in each customer type. The average change will be compared with the control group to determine the averaged net impact.

19. Additional analysis can be completed on specific measures and groupings of measures and a consultant may be engaged depending on number of participants and the complexity.

20. Larger commercial and industrial customers participating in the Pilot may require more specialized analysis, since control group data may not be available for their specific use of natural gas. Due to the diversity of customer types within these sectors, smaller sample sizes for each distinct type of customer is expected and efforts to create generalized learnings will be made on a best-efforts basis. /u

Data Collection and Monitoring - DR

21. Similar to ETEE, customer hourly flow data and corresponding weather data is required in order to determine the impact of DR program on individual customer impacts relative to others on the system and on their combined peak hour usage. Unique to the DR program, thermostat data will also be collected from the relevant manufacturers if available.

Data Analysis & Evaluation Plan - DR

22. The DR evaluation will use the same analysis as ETEE which will be performed on customer flow data to determine the base temperature (temperature at which space heating starts), the base flow (estimate flow when heating is not required), and the heating flow per degree day. This allows for an estimation of their typical hourly gas usage based on the actual weather conditions be compared with their actual consumption during DR events. DR events involve the adjustment of the smart thermostat temperature setpoint as discussed in Exhibit D, Tab 1, Schedule 2. The difference between these two values is the impact of DR on their flow at this degree day.

23. Data from the thermostat manufacturers (such as runtime, set points, heating stage etc.), if available, will be layered on top of hourly customer flow data to isolate and quantify base versus heating flow, and to more fully understand the impact of DR on total gas usage.

24. DR event data at various temperatures will be used to assess the relationship between outdoor temperature and reheat time required from setback temperature. This relationship is important to understand in order to help extrapolate the results to the design day heating degree day. Where a relationship exists, customers with different building sizes and vintages will be compared to look for trends that can be used to predict non-participant smart thermostat users behaviour.

25. Participants will be grouped together to evaluate the combined effect of staggering the initiation time of reheat from setback and how it can effect the morning peak system flows. Using event results from varying temperatures, an extrapolated prediction of design day heating degree day benefits will be assessed.

Objective #2 – Develop an understanding of how to design, deploy, and evaluate ETEE and residential DR programs

26. To support the programming evaluation of ETEE and DR, the evaluation plan will include process and outcome evaluation approaches. These approaches will include conducting surveys and interviews along with data analysis of financial and participation results. In undertaking these evaluation plans, a third-party consultant may be engaged to assist the Company in optimizing the learnings for Objective #2. If engaged, the third-party consultant could provide support at the start of the Pilot Project regarding data collection and throughout the duration of the Pilot Project to provide in-year feedback, and could produce a report at the end of the Pilot Project regarding successes and learnings. /u

Monitoring and Evaluation Plan - ETEE

27. From a process evaluation perspective, ETEE participants will be engaged via market research to better understand participant perspectives on ETEE program design, including but not limited to the program participant journey and effectiveness of incentive levels as well as marketing and engagement initiatives. Interviews with key service providers, contractors, Pilot Project-engaged internal staff, and other key stakeholders (e.g. municipal staff) may be conducted to assess the program delivery implementation.

28. From an outcome evaluation perspective, financial spending and participation in ETEE programming will be tracked and assessed against the financial budgets and participation forecasts in this application for the respective Pilot Projects. These tracked ETEE values will also be assessed against broad-based DSM programming at an Enbridge Gas franchise scale (on a percentage basis or scaled-down approach) and in comparison to regions with similar demographics to the Pilot Project area in the respective years of the Pilot Project. Evaluation of the Pilot Project ETEE results in comparison to the same respective year DSM results will provide a generally /u

consistent control of variables. Evaluation in comparison to the DSM results of previous years for the respective Pilot Project areas can also provide good insights, but higher variabilities in the program design and market conditions can exist.

29. The ETEE evaluation plan for the second objective will follow the schedule presented in Table 1 of Exhibit D, Tab 1, Schedule 2 for the Southern Lake Huron Pilot Project. /u

Monitoring and Evaluation Plan – DR

30. From a process evaluation perspective, program participants will be engaged via surveys upon registration to better understand initial participant perspectives on DR program design including but not limited to participant characteristics, participation behaviours during events, and effectiveness of marketing initiatives. Program participants will also be surveyed at the end of each heating season windows to gauge participant satisfaction levels and gain insights for improvements. Interviews with the DERMS service providers, Pilot Project-engaged internal staff, and other key partners (e.g. IESO, municipalities) may be conducted to assess the program delivery implementation.

31. From an outcome evaluation perspective, DR program spending and participant levels will be tracked and assessed against the financial budgets and participation forecasts in this application for the DR programming. The incentive offers, program parameters, and engagement efforts may change through the duration of the Pilot Project and assessing the impact of these changes against participation levels and program spending will be key to understanding effective DR programming delivery.

32. The DR evaluation plan for the second objective will follow the schedule presented in Table 1 of Exhibit D, Tab 1, Schedule 2 for the Southern Lake Huron Pilot Project.

Reporting and Results

33. Enbridge Gas will provide Pilot Project updates and key learnings to the OEB and stakeholders through the IRP Annual Report that the Company files as part of its annual Non-Commodity Deferral Account Clearance and Earnings Sharing Mechanism application.[1]

34. As results become available on the primary objectives of the Pilot Project (understanding impact on peak hour flows, and understanding of how to design, deploy and evaluate ETEE and DR programs), these results will be reported to the OEB and stakeholders and subsequently integrated into future IRP plans. This will reduce the risk of these future IRP plans by ensuring program design and measures implemented will deliver a more consistent known peak hour savings, and the resultant impact on future facility need can be more closely estimated. Results will also inform better estimates on the costs of ETEE programing.

35. It is expected that the availability of peak hourly data may allow for a greater understanding of customer usage patterns by customer type and could provide insight that will support future system design and demand forecasting.

36. Based on the evaluation methods outlined above, where conclusions can be drawn on the Pilot Projects' impact on peak hour flow of specific customers groups, the need for detailed monitoring of individual customer hourly consumption data may not be required in future IRP Plans. This will provide cost savings on future IRP plans by reducing the amount of metrology required on those customers. In instances where the results are inconclusive, detailed monitoring of individual customer hourly consumption data may be required on a go-forward basis.

[1] EB-2020-0091 (Appendix A), Integrated Resource Planning Framework for Enbridge Gas p.22 (Monitoring and Reporting)

37. Upon conclusion of the Pilot Project term, the results from the Pilot Projects evaluation will be reviewed to determine next steps. /u

PILOT PROJECT COSTS & ECONOMICS

1. This Exhibit provides a detailed overview of the Pilot Project costs and economic analysis that was completed. As explained in Exhibit B, the objectives and selection of the Pilot Projects centered around gaining learnings on ETEE and DR and not on the cost-effectiveness of the proposed IRP alternatives. While the OEB encouraged Enbridge Gas to use the Pilot Projects as a testing ground for an enhanced DCF+ test,[1] due to the timing of the TWG's review of the enhanced test[2] and the timing of the current Application, the Company will defer presenting a three-stage enhanced DCF+ test for adjudication until its first IRP Plan application. Additionally, there are no baseline facilities associated with the Pilot Project. /u

2. The total cost for the Southern Lake Huron Pilot Project over the proposed term of 2023-2027 is estimated to be $14.2 M, as outlined below in Table 1. A further breakdown of the costs between operating and maintenance (O&M) and capital expense for the Pilot Project is provided at Exhibit E, Tab 1, Schedule 1, Attachments 1 and 2. /u

3. Enbridge Gas notes its understanding that the 25% cost adjustment threshold, as noted in the OEB's IRP Framework Decision[3], will be applicable to the Pilot Project, such that Enbridge Gas is not required to seek approval for cost adjustments within 25% of the total proposed Pilot Project budget. Enbridge Gas notes its expectation that it will have flexibility in the allocation of annual budgets between the years included in the pilot term of 2023-2027. This flexibility will allow Enbridge Gas to be responsive to learnings and feedback and allow for adjustments to the program designs as necessary. /u

[1] EB-2020-0091, July 22, 2021, Appendix A, P. 24.
[3] EB-2020-0091, July 22, 2021, Appendix A, P.21
[3] EB-2020-0091, July 22, 2021, Appendix A, P.21

Southern Lake Huron Project Costs

4. As detailed in Table 1, the total cost for the Southern Lake Huron Pilot Project is estimated to be $14.2 M, excluding overheads[4]. The costs (both O&M and capital in nature) are subdivided into: /u

   i) Direct Pilot IRPA (Line 4): Costs totaling $12.4 M associated directly with the implementation of IRPAs as part of the Southern Lake Huron Pilot Project and, /u

   ii) Pilot Learnings Costs (Line 8): Costs totaling $1.8 M associated with obtaining learnings critical to fulfilling the Pilot Project objectives, as outlined in Exhibit B, Tab 1, Schedule 1. These learnings / fulfilling the pilot project objectives is not only critical to the Pilot Projects but also to all future non-pilot IRP plans. /u

Table 1 - Summary of Southern Lake Huron Pilot Project Budget ($)

Line No.	Particulars ($)	2023	2024	2025	2026	2027	Total
1	**Direct Pilot IRPA**						
2	Demand Side IRPA	-	-	5,864,400	5,260,137	382,884	**11,507,420**
3	Other Costs (O&M)	34,100	80,100	319,136	325,519	166,015	**924,869**
4	**Total Direct Pilot IRPA**	**34,100**	**80,100**	**6,183,536**	**5,585,655**	**548,898**	**12,432,289**
5	**Pilot Learnings**						
6	Data Collection & Analysis (O&M)	-	80,100	582,567	413,123	421,386	1,497,177
7	Hourly Metering Installs (Capital)	-	80,100	194,189	-	-	274,289
8	**Total Pilot Learning**	**-**	**160,200**	**776,756**	**413,123**	**421,386**	**1,771,466**
9	**Total Pilot**	**34,100**	**240,300**	**6,960,292**	**5,998,779**	**970,284**	**14,203,755**

Direct Pilot IRPA Costs

5. The total Direct Pilot IRPA costs for the Southern Lake Huron Pilot Project is $12.4 M, and is summarized in Exhibit E, Tab 1, Schedule 1, Attachments 1 (Line 8). Additional details and breakdown of the proposed budget for each category are provided below. /u

[4] Overheads associated with Pilot Project costs can be found Exhibit E, Tab 1, Schedule 1, Attachment 2 [5] Both ETEE costs and peak hour reductions are being studied as part of this Pilot Project and the calculated values below are based on initial estimates

6. Demand Side IRPA costs include the proposed budget for various ETEE and DR programming. Table 2 provides a breakdown of the budgets by ETEE and DR program, and is further categorized by incentive, promotion & delivery, and administrative costs. Explanation supporting the budget components can be found in Exhibit D, Tab 1, Schedule 2. /u

Table 2 - Breakdown of ETEE and DR Budget ($) /u

Line No.	Particulars ($)	2023	2024	2025	2026	2027	Total
1	**ETEE**						
2	ETEE - Enhanced DSM						
3	Incentive Cost	-	-	2,806,865	2,885,639	-	**5,692,504**
4	Promotion & Delivery	-	-	1,409,480	1,403,714	285,215	**3,098,409**
5	Administrative Cost	-	-	18,864	18,789	-	**37,653**
6	**Enhanced DSM Total**	-	-	**4,235,209**	**4,308,142**	**285,215**	**8,828,565**
7	ETEE - Electrification Measures *						
8	Incentive Cost	-	-	332,896	-	-	**332,896**
9	Promotion & Delivery	-	-	22,193	-	-	**22,193**
10	Administrative Cost	-	-	-	-	-	-
11	**Electrification Measures Total**	-	-	**355,089**	-	-	**355,089**
12	ETEE - Advanced Technology						
13	Incentive Cost	-	-	643,154	437,345	-	**1,080,499**
14	Promotion & Delivery	-	-	241,349	156,421	-	**397,770**
15	Administrative Cost	-	-	26,521	17,770	-	**44,291**
16	**Advanced Technology Total**	-	-	**911,024**	**611,536**	-	**1,522,560**
17	**Total ETEE**	-	-	**5,501,322**	**4,919,678**	**285,215**	**10,706,214**
18	**DR**						
19	Incentive Cost	-	-	35,176	63,383	37,059	**135,618**
20	Promotion & Delivery	-	-	317,360	267,115	60,610	**645,086**
21	Administrative Cost	-	-	10,542	9,960	-	**20,502**
22	**Total DR**	-	-	**363,078**	**340,459**	**97,669**	**801,206**
23	**Total Demand Side IRPA**	-	-	**5,864,400**	**5,260,137**	**382,884**	**11,507,420**

*Note: Majority of Promotion & Delivery cost is captured under ETEE - Enhanced DSM.

7. For illustrative purposes, a high-level cost comparison of the ETEE and DR offerings (cost per estimated peak hour reduction for each offering) is summarized in Table 3.[5] /u

[5] Both ETEE costs and peak hour reductions are being studied as part of this Pilot Project and the calculated values below are based on initial estimates

It is expected there may be higher costs associated with the Advanced Technology offerings in comparison to Enhanced DSM offerings, as they are net new measures and in the early stages of market adoption. Explanation supporting the budgets and estimated savings can be found in Exhibit D, Tab 1, Schedule 2.

Table 3 - Comparison of Cost ($) per Estimated Peak Hour Reduction (m^3/hr) /u

Line No.	Demand Side IRPA Programs	$ per m^3 Peak reduction ($/$m^3$/hr)[6]
1	ETEE - Enhanced DSM	$24,250
2	ETEE – Advanced Technologies (Gas Heat Pump)	$39,950
3	ETEE – Advanced Technologies (Simultaneous Hybrid Heating)	$33,250
4	ETEE – Advanced Technologies (Thermal Energy Storage)	$35,200
5	DR	$4,100[7]

8. For the Limited ETEE Offering for Electrification Measures, the corresponding high-level cost per estimated peak hour reduction is calculated at $14,500 per m^3/hr. However, this is not a true representation of the cost per peak hour reduction. The budgets presented for the electrification measures represent only the incentives, where the promotion and delivery costs are predominantly captured under Enhanced DSM as it is expected these measures will be delivered in combination with the other residential whole home measures as described in Exhibit D, Tab 1, Schedule 2. Additionally, this cost does not take into consideration or reflect the impact on the electric grid and associated costs. Further coordinated energy planning and discussion with the electric sector would be required to fully quantify such impacts and any potential associated costs. /u

[6] Values presented are cumulative budgets of ETEE or DR programs and based on estimated peak hour reduction at the end of the Pilot Project term.
[7] Values presented for Demand Response programming may not reflect the true costs of this alternative as costs and peak reductions do not persist for multiple years in the same way energy efficiency measures do and require on-going DR programming.

9. Other costs include:
   (i) Stakeholdering - Costs associated with community engagement and stakeholdering to support the Pilot Projects. Additional explanation to support this budget item can be found in Exhibit F, Tab 1, Schedule 1.
   (ii) Administrative / Legal – Costs associated with third-party/external support of the Pilot Projects and the current Application (i.e., application development and OEB hearing process).
   (iii) Incremental FTE – Costs associated with incremental full-time employees required to support the implementation, monitoring and/or data analysis of the Pilot Projects across the duration of the Pilot Project term.

Pilot Learnings Costs

10. The total Pilot Learnings costs for the Southern Lake Huron Pilot Project is $1.8 M, and is summarized in Exhibit E, Tab 1, Schedule 1, Attachments 1 and 2 (Line 12 and Line 1 respectively). Additional details and a breakdown of the proposed budget for O&M and capital costs are provided below. /u

11. Pilot Learnings costs include the proposed budget for incremental items that support obtaining learnings that are critical to not only achieving the Pilot Project objectives, but also to the success of future non-pilot IRP Plans. As such, these incremental costs have been excluded from the economic analysis. These types of costs may also be required in future non-pilot IRP Plans to support the success of future IRP investments. Enbridge Gas hopes to gain a better understanding of the magnitude of these costs going-forward through the Pilot Project.

12. The total Pilot Learnings O&M Cost for the Southern Lake Huron Pilot Project is $1.5 M, as detailed in Exhibit E, Tab 1, Schedule 1, Attachment 1 (Line 12), and includes: /u

(i) Data Collection & Analysis – Data collection costs include hourly data collection via increased meter reading frequency, as well as deployment of market research surveys. It also includes associated external/third-party consultant costs with a placeholder estimate for consultant support in completing analysis of hourly data and evaluation of the Pilot Project. These activities will support the initial development of the methodology and process for completing analysis on peak hour impact from ETEE and will be leveraged to support future IRP assessments, investments and Plans. Additional explanation supporting this budget item can be found in Exhibit D, Tab 1, Schedule 3. /u

13. The total Pilot Learnings Capital Costs for the Southern Lake Huron Pilot Project is $0.3 M, as summarized in Exhibit E, Tab 1, Schedule 1, Attachment 2 (Line 1), and includes: /u

    (i) *Hourly Metering Costs & Installs* – Capital costs associated with procurement of hourly metering equipment and installation of equipment onto customer meter sets within the Southern Lake Huron Pilot Project area. The associated learnings from the Pilot Projects will help to inform IRP-related metrology/measurement requirements going forward. Additional explanation supporting this budget item can be found in Exhibit D, Tab 1, Schedule 3. /u

Operating & Maintenance Costs

Line No.	Particulars ($000)	2023	2024	2025	2026	2027	Total
	Southern Lake Huron IRPA						
	Demand Side Alternative						
1	ETEE - Enhanced DSM	-	-	4,235.2	4,308.1	285.2	8,828.6
2	ETEE – Electrification Measures	-	-	355.1	-	-	355.1
3	ETEE – Advanced Technology	-	-	911.0	611.5	-	1,522.6
4	DR	-	-	363.1	340.5	97.7	801.2
	Other O&M						
5	Stakeholdering	1.7	-	-	-	-	1.7
6	Administrative / Legal	32.5	80.1	-	-	-	112.6
7	Incremental FTE	-	-	319.1	325.5	166.0	810.7
8	Total Direct O&M Costs	34.1	80.1	6,183.5	5,585.7	548.9	12,432.3
	Pilot Learnings O&M						
12	Data Collection & Analysis	-	80.1	582.6	413.1	421.4	1,497.2
13	Total Southern Lake Huron O&M Costs	$ 34.1	$ 160.2	$ 6,766.1	$ 5,998.8	$ 970.3	$ 13,929.5

Line No.	Particulars ($000)	Capital Costs 2023	2024	2025	2026	2027	Total
	Southern Lake Huron IRPA						
	Pilot Learnings Capital Costs						
1	Hourly Metering Costs & Installs	-	80.1	194.2	-	-	274.3
2	Indirect Overheads	-	19.0	40.8	-	-	59.8
3	Total Southern Lake Huron Capital Costs	$ -	$ 99.1	$ 235.0	$ -	$ -	$ 334.1

Exhibit E, Tab 1, Schedule 1, Attachments 3 to 7 are no longer applicable as the baseline facility alternatives associated with the Pilot Projects have been pushed out of the Company's 10-year capital forecast. For background and context regarding the amended IRP Pilot Project Application including the updates to the baseline facility alternatives associated with the Pilot Projects, please refer to Exhibit A, Tab 3, Schedule 1.

COST ALLOCATION AND RECOVERY

1. In the IRP Decision[1], the OEB approved two IRP Costs deferral accounts for the period 2021 to 2023. In Enbridge Gas's 2024 Rebasing Application, Enbridge Gas proposed to continue the IRP Costs deferral accounts in 2024 and through the 2025 to 2028 IR term as the accounts are still required to support IRP.[2] The two IRP Costs deferral accounts are:
    - The IRP Operating Costs Deferral Account (179-385) records incremental IRP general administrative costs, as well as incremental operating and maintenance costs and ongoing evaluation costs for approved IRP plans.
    - The IRP Capital Costs Deferral Account (179-386) records the actual annual revenue requirement of project costs eligible to be capitalized for inclusion in rate base as part of approved IRP plans where Enbridge Gas owns and operates the IRPA.

2. Enbridge Gas proposes to include the IRP Pilot Project costs in the IRP Costs deferral accounts because the project costs are incremental to the costs that support Enbridge Gas's 2024 current-approved interim rates.[3] /u

3. Enbridge Gas proposes to include the IRP Pilot Project operating costs for the Southern Lake Huron Pilot Project in the IRP Operating Costs Deferral Account and the actual annual revenue requirement for the IRP Pilot capital cost for the Southern Lake Huron Pilot Project in the IRP Capital Costs Deferral Account. Additionally, costs related to the development of the Parry Sound Pilot Project will be recorded in the IRP Operating Costs Deferral Account. Enbridge Gas will bring /u

[1] EB-2020-0091.
[2] EB-2022-0200, Exhibit 9, Tab 1, Schedule 2, page 2.
[3] There are no IRP Pilot Project costs included in the forecast of operating or capital costs supporting Enbridge Gas's 2024 Rebasing (EB-2022-0200) application.

forward actual balances in the IRP Costs deferral accounts annually with its Non-Commodity Deferral Account Clearance and Earnings Sharing Mechanism application.

4. The IRP Decision[4] requires cost allocation to be included in an IRP Plan application. Enbridge Gas's proposal for the cost allocation of the Pilot Project costs is outlined further below.

Project Costs

5. The Southern Lake Huron Pilot Project includes demand-side (ETEE, and DR) and project specific IRPA costs.[5] A summary of the costs for the Southern Lake Huron Pilot Project is provided in Table 1. /u

[4] EB-2020-0091, Decision and Order, July 22, 2021, page 87.
[5] Exhibit D, Tab 1, Schedule 1.

/u

Table 1
Summary of IRP Pilot Project Costs ($000)

Line No.		2023	2024	2025	2026	2027	2028	Total
		(a)	(b)	(c)	(d)	(e)	(f)	(g)
	Southern Lake Huron Project							
1	Operating Costs (1)	34	160	6,766	5,999	970	-	13,929
2	Capital Costs (2)	-	99	235	-	-	-	334
3	Total	34	259	7,001	5,999	970	-	14,264
4	Total Pilot Costs	34	259	7,001	5,999	970	-	14,264

Notes:
(1) Exhibit E, Tab 1, Schedule 1, Attachment 1.
(2) Exhibit E, Tab 1, Schedule 1, Attachment 2.

6. Operating costs of the IRP Pilot Projects will be recorded in the IRP Operating Costs Deferral Account and the annual revenue requirement associated with capital costs of the IRP Pilot Projects will be recorded in the IRP Capital Costs Deferral Account. The annual revenue requirement associated with the capital costs is provided at Attachment 1. The expected balance in the IRP Costs Deferral Accounts is provided in Table 2.

Table 2
IRP Costs Deferral Account Balances ($000)

Line No.		2023	2024	2025	2026	2027	2028
		(a)	(b)	(c)	(d)	(e)	(f)
	IRP Operating Costs Deferral Account (1)						
1	Southern Lake Huron Project	34	160	6,766	5,999	970	-
2	Total	34	160	6,766	5,999	970	-
	IRP Capital Costs Deferral Account (2)						
3	Southern Lake Huron Project	-	-	(1)	57	55	53
4	Total	-	-	(1)	57	55	53
5	Total IRP Costs Deferral Account Balance	34	160	6,765	6,056	1,025	53

Notes:
(1) IRP Operating Costs Deferral Account balance for the Southern Lake Huron Pilot Project operating costs per Table 1, line 1.

(2) IRP Capital Costs Deferral Account balance for the Southern Lake Huron Pilot Project capital costs relate to the revenue requirement on the capital cost per Exhibit E, Tab 1, Schedule 2, Attachment 1. The revenue requirement was calculated based on the capital costs per Table 2, which include overheads, as provided at Exhibit E, Tab 1, Schedule 1, Attachment 2.

Cost Allocation

7. Enbridge Gas proposes to allocate the IRP Operating Costs and the IRP Capital Costs deferral account balances related to the Southern Lake Huron Pilot Project to Union South in-franchise rate classes in proportion to Union South design day demands, excluding design day demands served directly off transmission lines. The proposed cost allocation methodology is consistent with the allocation of distribution mains in the Union South rate zone in Union's 2013 OEB-approved Cost Allocation Study. The proposed cost allocation methodology is the same as the allocation methodology that would be used for the majority of assets that would be installed under a similar facility project.

8. Enbridge Gas has proposed harmonized cost allocation methodologies in the 2024 Rebasing application that are different than the cost allocation methodology described above. If the OEB approves cost allocation methodologies that are different than described in this Application, Enbridge Gas may propose a change to the allocation methodology as part of the Non-Commodity Deferral Account Clearance and Earnings Sharing Mechanism application where disposition is requested for actual IRP Pilot Project costs. /u

Bill Impacts

9. Enbridge Gas has provided an illustration of the largest annual bill impact of the IRP Pilot Projects for a typical customer in each rate zone based on the year 2025. The 2025 balance of $6.765 million is the largest IRP Pilot Project deferral balance between 2023 and 2028 as provided in Table 2. /u

10. The typical residential customer bill impact associated with disposition of the 2025 IRP Costs deferral account balances for the Pilot Projects is:
    - No impact for a residential customer consuming 2,400 m^3 in the EGD rate zone.
    - No impact for a residential customer consuming 2,200 m^3 in the Union North rate zone. /u
    - A charge of $2.94 for a residential customer consuming 2,200 m^3 in the Union South rate zone. /u

11. The estimated unit rate and bill impact associated with the disposition of the 2025 IRP Costs deferral account balances for typical customers by rate class is provided at Attachment 3 and Attachment 4, respectively.

IRP Capital Costs Revenue Requirement - Southern Lake Huron Pilot Project

Line No.	Particulars ($000s)	2023 (a)	2024 (b)	2025 (c)	2026 (d)	2027 (e)	2028 (f)
	Incremental Rate Base Investment						
1	Capital Expenditures (1)	-	99	235	-	-	-
2	Average Rate Base	-	-	41	317	287	258
	Incremental Revenue Requirement Calculation:						
	Return on Incremental Rate Base: (2)						
3	Long-term Debt Interest	-	-	1	8	7	7
4	Short-term Debt Interest	-	-	0	0	0	0
5	Preference Shares	-	-	-	-	-	-
6	Equity	-	-	1	11	10	9
7	Total Return on Incremental Rate Base	-	-	2	19	17	16
	Incremental Operating Expenses:						
8	Depreciation Expense (3)	-	-	2	30	30	30
9	Total Incremental Operating Expenses	-	-	2	30	30	30
	Incremental Income Taxes:						
10	Return on Equity and Preference Shares (line 5 + line 6)	-	-	1	11	10	9
	Utility Timing Differences						
11	Add: Depreciation Expense (line 8)	-	-	2	30	30	30
12	Less: Current Year Tax Deductions	-	-	(20)	(19)	(18)	(17)
13	Taxable Income (line 10 + line 11 + line 12)	-	-	(16)	22	22	22
14	Income Taxes Before Gross Up (line 13 x 26.5%) (4)	-	-	(4)	6	6	6
15	Total Incremental Income Taxes After Gross Up (line 14 / (1-26.5%) (4) (5)	-	-	(6)	8	8	8
16	Total Incremental Revenue Requirement (line 7 + line 9 + line 15)	-	-	(1)	57	55	53

Notes:

(1) Capital expenditures including indirect overheads per Exhibit E, Tab 1, Schedule 1, Attachment 2.

(2) The return on rate base is calculated based on Union's 2013 Board-approved capital structure:

Capital Structure	Component %	Cost Rate	Return Component
Long-term Debt	61.30%	6.53%	4.00%
Short-term Debt	-0.03%	1.31%	0.00%
Preference Shares	2.74%	3.05%	0.08%
Equity	36.00%	8.93%	3.21%
Total	100.00%		7.30%

(3) Depreciation expense at Board-approved depreciation rates.

(4) Enbridge Gas's current provincial and federal tax rate is equal to 26.5%.

(5) Incremental taxes related to utility timing differences are negative if the capital cost allowance deduction in arriving at taxable income exceeds the provision of book depreciation in the year.

Allocation
2025 IRP Operating & Capital Costs Account Balance

Line No.	Particulars	Allocation ($000s) Union South Distribution Demand (1)	Operating Costs Southern Lake Huron (2)	Capital Costs Southern Lake Huron (2)	Allocation Total
		(a)	(b)	(c)	(d)
	EGD Rate Zone				
1	Rate 1	-	-	-	-
2	Rate 6	-	-	-	-
3	Rate 9	-	-	-	-
4	Rate 100	-	-	-	-
5	Rate 110	-	-	-	-
6	Rate 115	-	-	-	-
7	Rate 125	-	-	-	-
8	Rate 135	-	-	-	-
9	Rate 145	-	-	-	-
10	Rate 170	-	-	-	-
11	Rate 200	-	-	-	-
12	Rate 300	-	-	-	-
13	Total EGD Rate Zone	-	-	-	-
	Union North Rate Zone				
14	Rate 01	-	-	-	-
15	Rate 10	-	-	-	-
16	Rate 20	-	-	-	-
17	Rate 25	-	-	-	-
18	Rate 100	-	-	-	-
19	Total Union North Rate Zone	-	-	-	-
	Union South Rate Zone				
20	Rate M1	31,063	4,329	(1)	4,328
21	Rate M2	11,510	1,604	(0)	1,604
22	Rate M4	2,539	354	(0)	354
23	Rate M5	44	6	(0)	6
24	Rate M7	2,142	298	(0)	298
25	Rate M9	-	-	-	-
26	Rate M10	-	-	-	-
27	Rate T1	813	113	(0)	113
28	Rate T2	443	62	(0)	62
29	Rate T3	-	-	-	-
30	Total Union South Rate Zone	48,554	6,766	(1)	6,765
31	Total In-Franchise (3)	48,554	6,766	(1)	6,765

Notes:
(1) Union South distribution demand allocation is in proportion to forecast 2024 Union South in-franchise design day demands, excluding demands served directly off transmission lines. 2024 forecast used as the 2025 forecast not available at the time of filing the Application.
(2) Allocated in proportion to column (a).
(3) The total balance in columns (b) to (c) from Exhibit E, Tab 1, Schedule 2, Table 2.

Unit Rates for Disposition
2025 IRP Operating & Capital Costs Account Balance

Line No	Particulars	Account Balance for Disposition (1) ($000s)	2024 Forecast Usage (2) (10^3m^3)	Billing Units	Unit Rate for Disposition
		(a)	(b)	(c)	(d) = (a/b*100)
	EGD Rate Zone				
1	Rate 1	-	5,011,588	10^3m^3	-
2	Rate 6	-	4,799,240	10^3m^3	-
3	Rate 9	-	-	10^3m^3	-
4	Rate 100	-	27,429	10^3m^3	-
5	Rate 110	-	1,068,281	10^3m^3	-
6	Rate 115	-	381,873	10^3m^3	-
7	Rate 125	-	824,971	10^3m^3	-
8	Rate 135	-	52,646	10^3m^3	-
9	Rate 145	-	15,714	10^3m^3	-
10	Rate 170	-	323,254	10^3m^3	-
11	Rate 200	-	188,852	10^3m^3	-
12	Rate 300	-	-	10^3m^3	-
13	Total EGD Rate Zone	-			
	Union North Rate Zone				
14	Rate 01	-	976,880	10^3m^3	-
15	Rate 10	-	341,664	10^3m^3	-
16	Rate 20	-	929,101	10^3m^3	-
17	Rate 25	-	126,831	10^3m^3	-
18	Rate 100	-	1,076,378	10^3m^3	-
19	Total Union North Rate Zone	-			
	Union South Rate Zone				
20	Rate M1	4,328	3,238,864	10^3m^3	0.1336
21	Rate M2	1,604	1,343,314	10^3m^3	0.1194
22	Rate M4	354	592,623	10^3m^3	0.0597
23	Rate M5	6	59,493	10^3m^3	0.0103
24	Rate M7	298	789,737	10^3m^3	0.0378
25	Rate M9	-	90,073	10^3m^3	-
26	Rate M10	-	-	10^3m^3	-
27	Rate T1	113	431,289	10^3m^3	0.0263
28	Rate T2	62	5,005,643	10^3m^3	0.0012
29	Rate T3	-	249,200	10^3m^3	-
30	Total Union South Rate Zone	6,765			
31	Total In-Franchise	6,765			

Notes:
(1) Exhibit E, Tab 1, Schedule 2, Attachment 2, column (d).
(2) 2024 forecast usage used as the 2025 forecast usage not available at the time of filing the Application.

Bill Impacts for Typical Small and Large Customers
2025 IRP Operating & Capital Costs Account Balance

Line No.	Particulars	Unit Rate for Disposition (1) (cents/m³)	Annual Volume		Bill Impact ($)
		(a)	(b)	(c)	(d)
	EGD Rate Zone				
1	Rate 1 - Residential	-	2,400	m³	-
2	Rate 6 - Heating & Other Uses	-	22,606	m³	-
3	Rate 6 - General Use	-	43,285	m³	-
4	Rate 100 - Small	-	339,188	m³	-
5	Rate 110 - Small	-	598,568	m³	-
6	Rate 110 - Average	-	9,976,121	m³	-
7	Rate 115 - Small	-	4,471,609	m³	-
8	Rate 125 - Average	-	2,315,000	m³	-
9	Rate 135 - Average	-	598,567	m³	-
10	Rate 145 - Average	-	598,568	m³	-
11	Rate 170 - Average	-	9,976,121	m³	-

Notes:
(1) Exhibit E, Tab 1, Schedule 2, Attachment 3, column (d).

Bill Impacts for Typical Small and Large Customers
2025 IRP Operating & Capital Costs Account Balance

Line No.	Particulars	Unit Rate for Disposition (1) (cents/m³)	Annual Volume		Bill Impact ($)
		(a)	(b)	(c)	(d)
	Union North Rate Zone				
1	Rate 01 - Residential	-	2,200	m³	-
2	Rate 10	-	93,000	m³	-
3	Rate 20 - Small	-	3,000,000	m³	-
4	Rate 20 - Large	-	15,000,000	m³	-
5	Rate 25 - Average	-	2,275,000	m³	-
6	Rate 100 - Small	-	27,000,000	m³	-
7	Rate 100 - Large	-	240,000,000	m³	-
	Union South Rate Zone				
8	Rate M1 - Residential	0.1336	2,200	m³	2.94
9	Rate M2	0.1194	73,000	m³	87
10	Rate M4 - Small	0.0597	875,000	m³	522
11	Rate M4 - Large	0.0597	12,000,000	m³	7,163
12	Rate M5 - Small	0.0103	825,000	m³	85
13	Rate M5 - Large	0.0103	6,500,000	m³	673
14	Rate M7 - Small	0.0378	36,000,000	m³	13,602
15	Rate M7 - Large	0.0378	52,000,000	m³	19,647
16	Rate M9 - Small	-	6,950,000	m³	-
17	Rate M9 - Large	-	20,178,000	m³	-
18	Rate T1 - Small	0.0263	7,537,000	m³	1,980
19	Rate T1 - Average	0.0263	11,565,938	m³	3,038
20	Rate T1 - Large	0.0263	25,624,080	m³	6,731
21	Rate T2 - Small	0.0012	59,256,000	m³	731
22	Rate T2 - Average	0.0012	197,789,850	m³	2,441
23	Rate T2 - Large	0.0012	370,089,000	m³	4,567
24	Rate T3	-	272,712,000	m³	-

Notes:
(1) Exhibit E, Tab 1, Schedule 2, Attachment 3, column (d).

STAKEHOLDER ENGAGEMENT

Overview

1. Within Enbridge Gas's IRP Proposal, Enbridge Gas requested approval of its three-component stakeholder engagement process including project-specific targeted consultation and engagement initiatives for IRPAs or IRP Plans.[1] The targeted engagement proposal included stakeholders from the specific geographic area relevant to the IRPA. This Exhibit outlines targeted engagement conducted specific to the Pilot Projects.

Stakeholder Engagement

2. Prior to the Pilot Project selection process, Enbridge Gas presented the preliminary Pilot Project information to the Technical Working Group ("TWG") [2], where Enbridge Gas defined the objectives and general criteria that it would use to guide the Pilot Project selection process. The selection criteria described in Exhibit C, Tab 1, Schedule 2, then formed the basis for a 'Pilot Evaluation Criteria and Scoring Matrix' that was applied to potential Pilot Project options.

3. Enbridge Gas also conducted initial stakeholder engagement sessions with the local municipalities, local electric distribution companies ("LDC"), Hydro One and the Independent Electricity System Operator ("IESO"). Within these engagement sessions, Enbridge Gas provided an overview of the Pilot Projects and sought input that helped confirm the forecasted system needs were appropriate. In addition, Enbridge Gas held one-on-one sessions with the municipalities and LDCs to discuss system constraints and the potential for program coordination on IRPAs. Further details regarding Enbridge Gas's stakeholder engagement for each Pilot Project are provided below.

---

[1] EB-2020-0091, Decision and Order, July 22, 2021, P. 63
[2] Natural Gas Integrated Resource Planning (IRP) | Engage with Us (oeb.ca)

Please note that Enbridge Gas withdrew the Parry Sound Pilot Project from the IRP Pilot Project Application in June 2024, as described in more detail at Exhibit A, Tab 3, Schedule 1. /u

4. During Pilot Project implementation, Enbridge Gas plans to conduct community-level targeted engagement with residents, businesses and interested community members in the Southern Lake Huron area. The various IRPA programs may be refined if required based on input received from stakeholders. /u

Parry Sound Stakeholder Engagement:

5. Enbridge Gas held a meeting on December 15, 2022, with representatives from the Municipality of Parry Sound, Lakeland Power Distribution, IESO, and Hydro One. The objective of this meeting was to provide a description of the Parry Sound Pilot Project, introduce key concepts and personnel, and ensure Enbridge Gas was connecting with the appropriate individuals in each organization. After a presentation from Enbridge Gas, discussion topics included confirmation of Enbridge Gas's regional needs and growth projects for the area. Initial feedback suggested that Enbridge Gas's customer addition forecasts are aligned with other regional planners.

6. Follow-up meetings were held on February 22 and March 8, 2023, with smaller, more focused groups that included IESO, Hydro One, Parry Sound municipal staff and Lakeland Power to continue the review and discuss Enbridge Gas's Parry Sound system demand forecast and the associated system needs. Municipal staff indicated that based on historical trends, approximately 50 homes and 6 commercial additions are forecasted per year over the next 10-year horizon, with a declining trend over that timeframe. However, they also noted there has been an observed increase in growth and development within past two years that exceeds the historical growth trends. This aligned with Enbridge Gas's forecast and recent observed growth in the area.

7. Enbridge Gas has also already begun stakeholder engagement initiatives to engage the local Parry Sound community. An open house session was held on May 10, 2023 at the Charles W Stockey Centre & Bobby Orr Hall of Fame in Parry Sound. During this open house event Enbridge Gas had ten attendees from the Town of Parry Sound, an environmental conservation and ecological organization and private citizens. Feedback received ranged from concern over natural gas supply and capacity issues and how growth plans submitted by the municipality are factored into the forecast, to opportunities to promote more energy efficiency, interest in the IRP offers and concern over energy affordability.

8. Following the stakeholder discussions and the community engagement event, Enbridge Gas provided a presentation on the IRP Pilot Projects at the Town of Parry Sound council meeting on June 20, 2023, and July 4, 2023. A resolution was passed that indicated Council's support for Enbridge Gas' IRP Pilot Project in Parry Sound and is included as Attachment 1 to this Exhibit.

9. In May 2024 Enbridge Gas notified all stakeholders who had signed up for updates through the Enbridge Gas Regional Planning and Engagement webpage, inclusive of the IESO and municipal staff at the Town of Parry Sound, that the Pilot Projects were being revised to reflect recent updates to the Company's 10-year capital forecast. Enbridge Gas provided an overview of the planned Pilot Project updates at that time and informed stakeholders that the Company had filed a letter with the OEB (dated April 30, 2024) regarding the updates and next steps. Furthermore, in June 2024, Enbridge Gas filed another letter with the OEB (dated June 7, 2024) stating that the Company had recently determined that the baseline facility projects for the Parry Sound Pilot Project have been pushed out of the Company's 10-year capital forecast and, without a justifiable need for localized CNG injection within the Parry Sound area, it was no longer reasonable to proceed with the Parry Sound Pilot Project. Enbridge

/u

Gas notified Parry Sound municipal staff on June 11, 2024 that the Company planned to withdraw the Parry Sound Pilot Project from the updated IRP Pilot Project application, which Enbridge Gas planned to file by June 28, 2024. For background and context regarding the amended IRP Pilot Project application and Enbridge Gas's decision to withdraw the Parry Sound Pilot Project from the updated IRP Pilot Project application, please refer to Exhibit A, Tab 3, Schedule 1.

10. Enbridge Gas has developed a Parry Sound pilot specific web page[3] to provide members of the community access to information and updates on the Pilot Project, and a forum to provide comments through a "Have your say" function. The open house materials are also available on the webpage. Enbridge Gas will update the web page to reflect the decision not to proceed with the Parry Sound Pilot Project. /u

Southern Lake Huron Stakeholder Engagement:

11. Enbridge Gas held a meeting on January 16, 2023, with representatives from the Municipalities of the City of Sarnia, County of Lambton and the Town of Plympton – Wyoming, and the IESO. The objective of this initial meeting was to provide a description of the Southern Lake Huron Pilot Project, introduce key concepts and personnel, and ensure Enbridge Gas was connecting with the appropriate individuals in each organization. After a presentation from Enbridge Gas, discussion topics included confirmation of Enbridge Gas's regional needs and growth projects for the area. Initial feedback suggested that Enbridge Gas's customer addition forecasts are aligned with other regional planners.

12. Follow-up meetings were held on February 15, 22 and 23, 2023 with additional staff from the Town of Plympton – Wyoming, City of Sarnia, and Bluewater Power (the local LDC serving the region), IESO and Hydro One to continue the review and discuss

[3] Parry Sound Pilot Project - Regional Planning & Engagement | Enbridge Gas

Enbridge Gas's Southern Lake Huron system demand forecast and the associated system needs. Municipal staff indicated that historical trends forecasted approximately 20-30 residential homes per year. However, they also noted there has been an observed increase in growth and development since COVID which have significantly exceeded the historical growth trends. This aligned with Enbridge Gas's forecast and recent observed growth in the area.

13. Enbridge Gas has also already begun stakeholder engagement initiatives to engage the local communities of the City of Sarnia, the County of Lambton, and the Town of Plympton – Wyoming. An open house session was held on May 17, 2023 at the Camlachie Community Center in Camlachie. During the South Huron Lakes open house event Enbridge Gas had six attendees from the municipality, business organization and private citizens. Feedback and conversations from this event centered around the IRPA program offerings and general interest in demand side management programs available to agriculture customers.

14. Following the stakeholder discussions and the community engagement event, Enbridge Gas provided a presentation on the IRP Pilot Projects at the City of Sarnia council meeting on June 12, 2023, and at the Town of Plympton-Wyoming council meeting on June 28, 2023 and July 12, 2023. Both the City of Sarnia and town of Plympton-Wyoming have passed a resolution indicating Councils' support for Enbridge Gas' IRP Pilot in Southern Lake Huron, they are included at Attachments 2 and 3 to this Exhibit.

15. In May 2024 Enbridge Gas notified all stakeholders who had signed up for updates through the Enbridge Gas Regional Planning and Engagement webpage, inclusive of the IESO and municipal staff at the City of Sarnia, the County of Lambton, the Town of Plympton– Wyoming, and the Village of Point Edward, that the Pilot Projects were being revised to reflect recent updates to the Company's 10-year capital forecast.

/u

Enbridge Gas provided an overview of the planned Pilot Project updates at that time and informed stakeholders that the Company had filed a letter with the OEB (dated April 30, 2024) regarding the updates and next steps.

16. On May 23, 2024, Enbridge Gas met with municipal staff for the Village of Point Edward and discussed the update to the Southern Lake Huron Pilot Project. Furthermore, Enbridge Gas provided a presentation regarding the IRP Pilot Project at a council meeting on May 28, 2024 and resolution was passed that indicated Council's support for Enbridge Gas's IRP Pilot Project in the Village of Point Edward[4]. /u

17. On May 27, 2024, Enbridge Gas notified municipal staff from the Town of Plympton-Wyoming that the Southern Lake Huron Pilot Project would no longer be targeted to their community in the updated IRP Pilot Project application and would instead be focused on the City of Sarnia and the Village of Point Edward, as the baseline facility need associated with the Southern Lake Huron Pilot Project was no longer in the Company's 10-year capital forecast and this revised approach would leverage the advanced meter reading technology already in place in other communities. On June 4, 2024 Enbridge Gas communicated with City of Sarnia municipal staff to advise them of the update for the Southern Lake Huron Pilot Project for their community. Enbridge Gas's update letter regarding the IRP Pilot Project is scheduled to be included at the City of Sarnia council meeting on July 8, 2024. /u

18. Enbridge Gas has also developed a South Huron Lake pilot specific web page[5] to provide members of the community access to information and updates on the Pilot Project, and a forum to provide comments through a "Have your say" function. The open house materials are also available on the webpage. Any future stakeholder

[4] Please see the Village of Point Edward Council Meeting Minutes, May 28, 2024, pp. 1 - 2: https://pub-pointedward.escribemeetings.com/filestream.ashx?DocumentId=21701
[5] Southern Lake Huron Pilot Project - Regional Planning & Engagement | Enbridge Gas

engagement initiatives such as a potential webinar, including dates and times, will be published on the Pilot Projects' web pages[6], and events will be promoted using digital ads on social media channels and online news publications, and at local arenas.

19. Enbridge Gas anticipates that by taking a variety of approaches to engagement sessions and outreach efforts, the Company expects to learn which approaches (i.e., in-person, project materials available on web site, webinar, or a combination of) are most effective at reaching audiences. Learnings may also indicate that all types of engagement sessions and outreach efforts are required, as they may target and reach different demographics. /u

Regional Planning Website:

20. Throughout the term of the Pilot Project, Enbridge Gas will maintain a presence on its Regional Planning Web Pages where stakeholders interested in the Southern Lake Huron Pilot Project can log on to check on the status of the Project, view any updates, and/or submit comments. When stakeholders register for updates, they will be notified of updates via email. The link can be found below: /u

    - Southern Lake Huron Project: https://www.enbridgegas.com/sustainability/regional-planning-engagement/southern-lake-huron-project

[6] Southern Lake Huron Pilot Project - Regional Planning & Engagement | Enbridge Gas

9.5.2

TOWN OF Parry Sound

THE CORPORATION OF THE TOWN OF PARRY SOUND
RESOLUTION IN COUNCIL

NO. 2023 – 094

DIVISION LIST	YES	NO
Councillor **G. ASHFORD**	___	___
Councillor **J. BELESKEY**	___	___
Councillor **P. BORNEMAN**	___	___
Councillor **B. KEITH**	___	___
Councillor **D. McCANN**	___	___
Councillor **C. McDONALD**	___	___
Mayor **J. McGARVEY**	___	___

DATE: July 4, 2023

MOVED BY:

SECONDED BY:

CARRIED: ✓ **DEFEATED:** _____ **Postponed to:** _____

Whereas the purpose of Enbridge Gas' Integrated Resource Planning (IRP) Parry Sound Pilot Project is to test and better understand the impacts that enhanced targeted energy efficiency (ETEE) has on reducing the natural gas system's peak period demand; and

Whereas ETEE involves offering targeted energy efficiency programs that support a reduction in peak period natural gas demands; and

Whereas the learning's from this Pilot Project will lead to better decision making and informed system development, and shape asset management planning for years to come; and

Whereas the Pilot Project represents an opportunity for the Town of Parry Sound to participate in the energy transition in Ontario; and

Whereas participating customers in Parry Sound will benefit through enhanced energy efficiency programming that can help reduce consumption and potentially lower energy bills;

Now Therefore, the Council of the Corporation of the Town of Parry Sound hereby supports Enbridge Gas' Integrated Resources Planning (IRP) Parry Sound Pilot Project.

Mayor Jamie McGarvey

THE CORPORATION OF THE CITY OF SARNIA
City Clerk's Department
255 Christina Street N. PO Box 3018
Sarnia ON Canada N7T 7N2
519-332-0330 (phone) 519-332-3995 (fax)
519-332-2664 (TTY)
www.sarnia.ca clerks@sarnia.ca

June 20, 2023

Chris Ripley
Manager of Integrated Resource Planning
Enbridge Gas Inc.
50 Keil Drive North
Chatham, Ontario N7M 5M1

RE: Southern Lake Huron Integrated Resource Planning Pilot Project Letter of Support

The purpose of this letter is to confirm that at its meeting held on June 12, 2023, Sarnia City Council adopted the following resolution:

> ***That Sarnia City Council supports the Southern Lake Huron Integrated Resource Planning Pilot Project.***

Sincerely,

Amy Burkhart
City Clerk

The Town Of
PLYMPTON-WYOMING

Chris Ripley
Enbridge Gas
50 Keil Drive North
Chatham, Ontario, N7M 5M1

DELIVERED VIA EMAIL to: David.Moffat@enbridge.com

July 14th 2023

Re: Southern Lake Huron Integrated Resource Planning Pilot Project

Dear Chris,

Please be advised that at the Regular Council Meeting on July 12th 2023, the Town of Plympton-Wyoming Council passed the following motion, supporting Enbridge Gas and the Southern Lake Huron Integrated Resource Planning Pilot Project:

Motion 2
Moved by Councillor John van Klaveren
Seconded by Councillor Alex Boughen
That Council direct staff to send a letter of support to Enbridge for the Southern Lake Huron IRP Pilot Project.

Carried.

If you have any questions, please do not hesitate to contact me by phone or email at dgiles@plympton-wyoming.ca.

Sincerely,

Denny Giles
Deputy Clerk
Town of Plympton-Wyoming

STAKEHOLDERING – INDIGENOUS CONSULTATION

1. In Enbridge Gas's opinion, the current decision before the OEB to approve the cost consequences of the Pilot Projects does not trigger the duty to consult. However, consistent with Enbridge Gas's Indigenous Peoples Policy and commitment to engagement with Indigenous groups, Enbridge Gas sent email notification of the IRP pilot areas to Indigenous groups located within ten kilometers of the two pilot areas included in the initial Application. Accordingly, notifications were sent to Aamjiwnaang First Nation, Chippewas of Kettle and Stony Point First Nation and Wasauksing First Nation. Attachment 1 to this Exhibit contains a log of correspondence and associated attachments for the Pilot Projects. /u

2. In addition, Enbridge Gas also notified Indigenous groups in all operating regions of the Regional Engagement sessions held in April and May 2023, which included both the Northern and Southwest Regions where the initially identified pilot projects are located, in case these Indigenous groups had an interest in participating in the sessions. /u

3. In December 2023, Enbridge Gas provided the Indigenous groups with an update, providing a weblink to the Regional Planning & Engagement website which includes information on the pilot projects, presentation slides from the Regional Engagement session webinars, and the ability to sign up for more information. /u

4. In May 2024, Enbridge Gas sent email notifications to Aamjiwnaang First Nation and Chippewas of Kettle and Stony Point First Nation to provide updates regarding the Southern Lake Huron Pilot Project and the Company's plan to file an amended IRP Pilot Project Application by June 28, 2024. /u

5. In June 2024, Enbridge Gas sent an email notification to Wasauksing First Nation advising that the Company will not be continuing with the Parry Sound Pilot Project. /u

Enbridge Gas Indigenous Engagement Log

Log updated as of June 12, 2024

Aamjiwnaang First Nation (AFN)					
Line Item	**Date**	**Method of Engagement**	**Summary of Enbridge Gas Inc. ("Enbridge Gas") Engagement Activity**	**Summary of Community's Engagement Activity**	**Issues or Concerns raised and how addressed by Enbridge Gas including any substantive Attachments**
1.0	April 4, 2023	Email	An Enbridge Gas representative emailed the Aamjiwnaang First Nation (AFN) representative to advise of the Integrated Resource Plan pilot occurring within the City of Sarnia and Municipality of Plympton-Wyoming. The email contained a link directing AFN to the Enbridge Gas website for more information. The Enbridge Gas representative offered to set up a meeting to discuss the pilot project and provide more information in general.		Please see line-item attachment 1.0
1.1	June 13, 2023	Email	An Enbridge Gas representative emailed the AFN representative to advise that the website for the pilot project has been updated with the slides from the Open House, updated map and more information on IRP in general. The Enbridge Gas representative provided the website link. The Enbridge Gas representative offered to set up a meeting to discuss the pilot project and provide more information in general.		Please see line-item attachment 1.1
1.2	December 21, 2023	Email	An Enbridge Gas representative emailed the AFN representative to provide a weblink to the Regional Planning & Engagement website which includes information on the pilot projects, presentation slides from the Regional Engagement session		

/u

			webinars, and a sign up for more information.		
1.3	May 31, 2024	Email	An Enbridge Gas representative emailed the AFN representative to provide them an update on the Southern Lake Huron pilot project. The email provided further details on the purpose of the pilot and that updates to the OEB application will be filed at the end of June 2024.		
Chippewas of Kettle and Stony Point First Nation (CKSPFN)					
2.0	March 14, 2023	Email	An Enbridge Gas representative emailed the Chippewas of Kettle and Stony Point (CKSPFN) representative to advise of the Integrated Resource Plan pilot occurring within the City of Sarnia and Municipality of Plympton-Wyoming. The email contained a link directing CKSPFN to the Enbridge Gas website for more information. The Enbridge Gas representative offered to set up a meeting to discuss the pilot project and provide more information in general.		Please see line-item attachment 2.0
2.1	June 13, 2023	Email	An Enbridge Gas representative emailed the CKSPFN representative to advise that the website for the pilot project has been updated with the slides from the Open House, updated map and more information on IRP in general. The Enbridge Gas representative provided the website link. The Enbridge Gas representative offered to set up a meeting to discuss the pilot project and provide more information in general.		Please see line-item attachment 2.1
2.2	December 21, 2023	Email	An Enbridge Gas representative emailed the CKSPFN/Three Fires Group (TFG) representative to provide a weblink to the		

			Regional Planning & Engagement website which includes information on the pilot projects, presentation slides from the Regional Engagement session webinars, and a sign up for more information.		
2.3	May 31, 2024	Email	An Enbridge Gas representative emailed the CKSPFN/TFG representative to provide them an update on the Southern Lake Huron pilot project. The email provided further details on the purpose of the pilot and that updates to the OEB application will be filed at the end of June 2024.		
Wasauksing First Nation (WFN)					
3.0	March 14, 2023	Email	An Enbridge Gas representative emailed the Wasauksing First Nation (WFN) representative to advise of the Integrated Resource Plan pilot occurring within the Town of Parry Sound. The email contained a link directing WFN to the Enbridge Gas website for more information. The Enbridge Gas representative offered to set up a meeting to discuss the pilot project and provide more information in general.		Please see line-item attachment 3.0
3.1	June 12, 2023	Email	An Enbridge Gas representative emailed the WFN representative to advise that the website for the pilot project has been updated with the slides from the Open House, updated map and more information on IRP in general. The Enbridge Gas representative provided the website link. The Enbridge Gas representative offered to set up a meeting to discuss the pilot project and provide more information in general.		Please see line-item attachment 3.1

/u

3.2	December 19, 2024	Email	An Enbridge Gas representative emailed the WFN representative to provide a weblink to the Regional Planning & Engagement website which includes information on the pilot projects, presentation slides from the Regional Engagement session webinars, and a sign up for more information.			/u
3.3	June 12, 2024	Email	An Enbridge Gas representative emailed the WFN representative to provide them an update on the Parry Sound pilot project. The email advised WFN that the pilot project would not be continuing.			/u

Line-item attachment 1.0

From: Lauren Whitwham
To: Matt Stone
Subject: Enbridge IRP: Southern Lake Huron
Date: Monday, April 3, 2023 12:11:08 PM

Hi Matt,

I'm not sure who would be interested in this at Aamjiwnaang but I wanted to pass it along.

Enbridge Gas is looking to develop an understanding of how to design, deploy and evaluate enhanced targeted energy efficiency (ETEE) and demand response (DR) programs and to recognize how ETEE & DR impacts peak hour demands.
This pilot project is located within the City of Sarnia and Municipality of Plympton-Wyoming. Information on the pilot project can be found here: https://www.enbridgegas.com/sustainability/regional-planning-engagement/southern-lake-huron-project
I just noticed the map of this project looks like it is within Aamjiwnaang First Nation and this is not the case. This is an error on Enbridge's part. The pilot does not extend past Churchill and we will work on making adjustments to correct.
Enbridge Gas is required (as directed in the EB-2020-0091 IRP Framework Proceeding) to apply to the OEB for approval of the IRP pilot Projects. Enbridge Gas currently plans to file the application to the OEB on May 15.

If you are interested in learning more or having a meeting to discuss the pilot project further, please let me know.

Thanks,
Lauren

Lauren Whitwham
Senior Advisor, Community & Indigenous Engagement, Eastern Region

Public Affairs, Communications & Sustainability

Line-item attachment 1.1

From: Lauren Whitwham
To: Cathleen O"Brien; Courtney Jackson; lrosales@aamjiwnaang.ca
Subject: Updated website: Enbridge IRP: Southern Lake Huron
Date: Tuesday, June 13, 2023 9:39:52 AM

Good morning,

As this pilot process is within close proximity to Aamjiwnaang First Nation, I wanted to provide some updated information on the Southern Lake Huron pilot process.

The website for the Southern Lake Huron Pilot project has been updated with the slides from the Open House, an updated map and more information on what IRP is. The slides are two large to attached to the email so I encourage you to review them on the website.

This pilot will take place on individual Enbridge Gas customers homes.

Southern Lake Huron Pilot Project - Regional Planning & Engagement | Enbridge Gas

Enbridge Gas is required (as directed in the EB-2020-0091 IRP Framework Proceeding) to apply to the OEB for approval of the IRP pilot Projects. Enbridge Gas currently plans to file the application to the OEB in the coming month.

If you are interested in learning more or having a meeting to discuss the pilot project further, please let me know.

Thanks,
Lauren

Line-item attachment 1.2

From: Chasity Pilecki
To: Cathleen O"Brien; Lynn Rosales; Courtney Jackson
Cc: Megan Robinson; Gabrielle Lapalme
Subject: Enbridge Gas - Integrated Resource Planning Webinar Recap
Date: Thursday, December 21, 2023 2:23:00 PM
Attachments: image001.png

Good afternoon,

We would like to share an update on Enbridge Gas' Integrated Resource Planning (IRP) for your information. Links to regional presentations with transcription can be found here.

Highlights include:

- Integrated Resource Planning
- Energy transition
- Pilot project updates
- Regional updates
- Projects

Be sure to sign up for updates to stay informed about upcoming events and IRP news in your region.

Please reach out me with any questions or to set up a meeting to further discuss topics featured in the presentations.

Happy Holidays!

Kindest regards,

Line-item attachment 1.3

From: Chasity Pilecki
To: Lynn Rosales; Courtney Jackson
Subject: Update: Enbridge IRP: Southern Lake Huron
Date: Friday, May 31, 2024 2:09:05 PM
Attachments: image001.png

Good afternoon,

This email is to provide an update of the IRP Pilot Project for Southern Lake Huron.

Pilot project updates

In 2023, Enbridge Gas filed an application with the Ontario Energy Board (OEB), (EB-2022-0335) for IRP pilot projects in Southern Lake Huron (SLH).

On April 30, 2024, Enbridge Gas filed a letter with the OEB to advise it is updating the IRP pilot projects. The SLH Pilot Project will be focused solely on demand-side alternatives offered to customers to reduce their peak natural gas usage. Details on the project are as follows:

- SLH Pilot Project will include the following demand-side alternatives available to the expanded Pilot Project target area of the City of Sarnia:
    - *Enhanced demand side management offerings*
    - *Residential demand response offerings*
    - *Advanced technologies and residential electrification measures*

The Pilot Projects are being revised to reflect recent updates to the 10-year capital forecast and to focus on achieving learnings in a manner that optimizes budget and timeline efficiencies. Learnings for the demand-side alternatives can be better achieved by focusing on the SLH Pilot Project due to existing metering technology already in place in Sarnia, which can measure hourly natural gas usage for residential and small commercial customers.

Enbridge Gas will file associated updates to the Company's application by June 28, 2024.

If you have questions on IRP, we'd be happy to set up a call to provide further information on what it is and why we are doing it.

Kindest regards,

Line-item attachment 2.0

From: Lauren Whitwham
To: Consultation
Cc: Emily Ferguson
Subject: Enbridge IRP: Southern Lake Huron
Date: Tuesday, March 14, 2023 8:43:54 AM

Hi there,

I wanted to make you aware of an Integrated Resource Planning alternative that is being proposed by Enbridge Gas.

Enbridge Gas is looking to develop an understanding of how to design, deploy and evaluate enhanced targeted energy efficiency (ETEE) and demand response (DR) programs and to recognize how ETEE & DR impacts peak hour demands.
This pilot project is located within the City of Sarnia and Municipality of Plympton-Wyoming.
Information on the pilot project can be found here:
https://www.enbridgegas.com/sustainability/regional-planning-engagement/southern-lake-huron-project
Enbridge Gas is required (as directed in the EB-2020-0091 IRP Framework Proceeding) to apply to the OEB for approval of the IRP pilot Projects. Enbridge Gas currently plans to file the application to the OEB on May 15.

If you are interested in learning more or having a meeting to discuss the pilot project further, please let me know.

Thanks,
Lauren

Lauren Whitwham
Senior Advisor, Community & Indigenous Engagement, Eastern Region

Public Affairs, Communications & Sustainability

Line-item attachment 2.1

From: Lauren Whitwham
To: Consultation
Cc: verna.george@kettlepoint.org
Subject: Updated website: Enbridge IRP: Southern Lake Huron
Date: Tuesday, June 13, 2023 9:15:00 AM

Good morning,

Three Fires Group had expressed an interest for information about the Enbridge Gas Integrated Resource Planning pilots/projects. As this pilot process is within close proximity to Kettle and Stony Point First Nation, I wanted to provide some updated information on the Southern Lake Huron pilot process.

The website for the Southern Lake Huron Pilot project has been updated with the slides from the Open House, an updated map and more information on what IRP is. The slides are two large to attached to the email so I encourage you to review them on the website.

Southern Lake Huron Pilot Project - Regional Planning & Engagement | Enbridge Gas

Enbridge Gas is required (as directed in the EB-2020-0091 IRP Framework Proceeding) to apply to the OEB for approval of the IRP pilot Projects. Enbridge Gas currently plans to file the application to the OEB in the coming month.

If you are interested in learning more or having a meeting to discuss the pilot project further, please let me know.

Thanks,
Lauren

Line-item attachment 2.2

From: Chasity Pilecki
To: Consultation; Kimberly Bressette; verna.george@kettlepoint.org; Jordan George
Cc: Megan Robinson; Gabrielle Lapalme
Subject: Enbridge Gas - Integrated Resource Planning Webinar Recap
Date: Thursday, December 21, 2023 2:29:00 PM
Attachments: image001.png

Good afternoon,

We would like to share an update on Enbridge Gas' Integrated Resource Planning (IRP) for your information. Links to regional presentations with transcription can be found here.

Highlights include:

- Integrated Resource Planning
- Energy transition
- Pilot project updates
- Regional updates
- Projects

Be sure to sign up for updates to stay informed about upcoming events and IRP news in your region.

Please reach out me with any questions or to set up a meeting to further discuss topics featured in the presentations.

Happy Holidays!

Kindest regards,

Line-item attachment 2.3

From: Chasity Pilecki
To: Jessica Wakefield; verna.george@kettlepoint.org; Consultation
Subject: Enbridge IRP Update
Date: Friday, May 31, 2024 2:15:08 PM
Attachments: image001.png

Hi Jessica,

In the past, Three Fires Group had shown an interest in the Integrated Resource Planning (IRP) process of Enbridge Gas and wanted to be informed. We had sent a couple of emails to TFG in regards to the pilot project that is being conducted on some residential meters within the City of Sarnia. This email is to provide some updates on that pilot project.

For your background, IRP is about evaluating non-pipeline alternatives that could be used to defer or avoid implementing a traditional pipeline project to meet a system need. Consideration is given for safety, cost-effectiveness and the ability for alternative solutions to meet customer demand reliably.

Pilot project updates

In 2023, Enbridge Gas filed an application with the Ontario Energy Board (OEB), (EB-2022-0335) for IRP pilot projects in Southern Lake Huron (SLH) and Parry Sound.

On April 30, 2024, Enbridge Gas filed a letter with the OEB to advise it is updating the IRP pilot projects. The SLH Pilot Project will be focused solely on demand-side alternatives offered to customers to reduce their peak natural gas usage. Details on the project are as follows:

- SLH Pilot Project will include the following demand-side alternatives available to the expanded Pilot Project target area of the City of Sarnia:
    - *Enhanced demand side management offerings*
    - *Residential demand response offerings*
    - *Advanced technologies and residential electrification measures*

The Pilot Projects are being revised to reflect recent updates to the 10-year capital forecast and to focus on achieving learnings in a manner that optimizes budget and timeline efficiencies. Learnings for the demand-side alternatives can be better achieved by focusing on the SLH Pilot Project due to existing metering technology already in place in Sarnia, which can measure hourly natural gas usage for residential and small commercial customers.

Enbridge Gas will file associated updates to the Company's application by June 28, 2024.

If you have questions on IRP, we'd be happy to set up a call to provide further information on what it is and why we are doing it.

Kindest regards,

Line-item attachment 3.0

From: Sarah Crowell
To: lands@wasauksing.ca
Cc: council5@wasauksing.ca
Subject: Parry Sound, pilot project
Date: Tuesday, March 14, 2023 10:45:12 AM

Hi there,

I wanted to make you aware of an Integrated Resource Planning alternative that is being proposed by Enbridge Gas.
This pilot project will cover the homes and businesses of Enbridge Gas customers in the Town of Parry Sound. Information on the pilot can be found at:
https://www.enbridgegas.com/sustainability/regional-planning-engagement/parry-sound-project
Enbridge Gas is looking to develop an understanding of how to design, deploy and evaluate enhanced targeted energy efficiency (ETEE) and demand response (DR) programs and to recognize how ETEE & DR impacts peak hour demands.

Enbridge Gas is required (as directed in the EB-2020-0091 IRP Framework Proceeding) to apply to the OEB for approval of the IRP pilot Projects. Enbridge Gas currently plans to file the application to the OEB on May 15.

If you are interested in learning more or having a meeting to discuss the pilot project further, please let me know.

Miigwetch,
Sarah

Sarah O'Donnell Crowell
Senior Advisor, Community & Indigenous Engagement, Northern Ontario

Public Affairs, Communications & Sustainability
Enbridge Inc.

Cell: 705-507-3980 | sarah.crowell@enbridge.com
1211 Amber Drive, Thunder Bay, Ontario P7B 6M4
Safety. Integrity. Respect. Inclusion.

Line-item attachment 3.1

From: Sarah Crowell
To: lands@wasauksing.ca
Subject: Parry Sound pilot project update
Date: Tuesday, June 13, 2023 9:58:07 AM

Good morning,

As this pilot project is within close proximity to Wasauksing First Nation, I wanted to provide some updated information on the Parry Sound pilot project. Please share with others who may be interested as well.

The website for the Parry Sound Pilot project has been updated with the slides from the Open House, an updated map and more information on what IRP is. The slides are too large to attach to the email so I encourage you to review them on the website.

Parry Sound Pilot Project - Regional Planning & Engagement | Enbridge Gas

Enbridge Gas is required (as directed in the EB-2020-0091 IRP Framework Proceeding) to apply to the OEB for approval of the IRP pilot projects. Enbridge Gas currently plans to file the application to the OEB in the coming month.

If you are interested in learning more or having a meeting to discuss the pilot project further, please let me know.

Miigwetch, and have a great day!
Sarah

Line-item attachment 3.2

From: Sarah Crowell
Sent: Tuesday, December 19, 2023 9:05 AM
To: lands@wasauksing.ca
Subject: Enbridge Gas' Integrated Resource Planning (IRP)

Good morning!

We would like to share an update on Enbridge Gas' Integrated Resource Planning (IRP) for your information. Links to regional presentations with transcription can be found here.

Highlights include:

- Integrated Resource Planning
- Energy transition
- Pilot project updates
- Regional updates
- Projects

Be sure to sign up for updates to stay informed about upcoming events and IRP news in your region.

And please reach out me with any questions or to set up a meeting to further discuss topics featured in the presentations.

Miigwetch, have a great day!

Sarah

Line-item attachment 3.3

From: Sarah Crowell
To: lands@wasauksing.ca
Subject: Update: IRP Pilot Project, Parry Sound
Date: Wednesday, June 12, 2024 12:59:54 PM

Good afternoon,

This email is to provide an update of the IRP Pilot Project for the Parry Sound Pilot Project.

Pilot project updates

In 2023, Enbridge Gas filed an application with the Ontario Energy Board (OEB), (EB-2022-0335) for IRP pilot projects in Parry Sound and Southern Lake Huron. On June 7, 2024, Enbridge Gas filed a letter with the OEB to update them on the IRP pilots.

In the letter, Enbridge Gas advised the OEB that it has determined that the underlying system need and associated baseline facility projects for the Parry Sound Pilot Project have been pushed out of the Company's 10-year capital forecast, and therefore Enbridge Gas plans to withdraw the PS Pilot Project from its IRP Pilot Projects application.

Enbridge Gas will not be continuing with the IRP pilot in Parry Sound.

If you have any questions or concerns, feel free to reach out.

Miigwetch,

Sarah