

Integrated Resource Planning

Fall 2023 Regional Update Webinar



GTA West Region
Nov. 28, 2023

Megan:

Thanks to everyone who has joined today's call. We are looking forward to sharing more information about IRP with you as well as the needs and potential projects that have been identified in your region.

My name is Megan Robinson – Senior Advisor, Community Engagement IRP.

Also, on the call presenting today are:

Chris Ripley

- Manager Integrated Resource Planning

Kurtis Lubbers

- Supervisor Distribution Optimization Engineering

Whitney Wong

- Specialist, Integrated Resource Planning

David Moffat

- Advisor Integrated Resource Planning

Winter weather driving

Ensure your vehicle is ready for winter weather



- Install winter tires.
- Keep washer fluid full.
- Pack a winter safety kit.
- Maintain proper tire pressure.
- Keep the gas tank at least half-full.
- Clean all debris from your vehicle.
- Keep your rear window defroster in working order.

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Megan:

Before we move on to the agenda, it is practice at Enbridge to begin each meeting with a safety moment. Today's will review 7 vehicle tips that can help with winter weather driving:

- 1) Installing winter tires – driving with all-season tires in winter conditions doesn't offer the maximum performance that you may need throughout the winter months.
- 2) Keeping your washer fluid full – a large amount of fluid can be used during a single storm so its best to keep it full
- 3) Packing a winter safety kit – a kit could include a matches, first aid kit, flares, flashlight & batteries, ice scraper, warm clothing, extra antifreeze, jumper cables, a small shovel, non-perishable food and water.
- 4) Maintaining proper tire pressure- a general recommendation is 30-35 PSI in winter temperatures.
- 5) Keeping the gas tank at least half full – if you find yourself stranded, it can keep your engine running until help arrives.
- 6) Cleaning all debris from your vehicle – by not doing this you can obstruct your vision or that of another drivers.
- 7) Keeping your rear-window defroster in working order – unsafe driving conditions occur when you can't see what is behind you.

Agenda

- Engagement process and webinar objectives
- Energy transition
- Integrated Resource Planning (IRP)
- Regional update
- Pilot project update
- Regional project discussion



Megan:

Today's agenda consists of:

- the engagement process and webinar objectives
- Energy Transition
- Integrated Resource Planning
- A regional update
- Pilot project update, and
- Regional project discussion

You can participate in this webinar by asking questions in the chat function by clicking on the Q&A tab at the top right of your screen.

The moderator will address questions at the end of the presentation.

We will also be posting all questions and responses on the regional planning website.

Engagement process and objectives

IRP engagement process:

- An open and public engagement process
- Ongoing sessions
- We welcome comments on how to improve the process

Objectives:

- Discuss Integrated Resource Planning
- Provide an update on planning underway
- Provide an update on the projects
- Seek feedback

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Megan:

This webinar is part of an ongoing series of IRP engagement sessions that are intended to promote dialogue with attendees to help inform regional planning.

The IRP engagement process includes:

- An open and public engagement process where participation and feedback is encouraged.
- Ongoing engagement sessions.
- And, comments on how to improve the process. Feedback can be shared with IRP team members or through the 'Have Your Say' online feedback form.

The objectives of this webinar are to:

- Discuss Enbridge Gas' Integrated Resource Planning (IRP) Initiatives
- Provide an update on natural gas planning underway within the region
- Provide an update on the Pilot Project and other potential projects, and
- Seek feedback on the demand forecast for the region to confirm current customer growth information

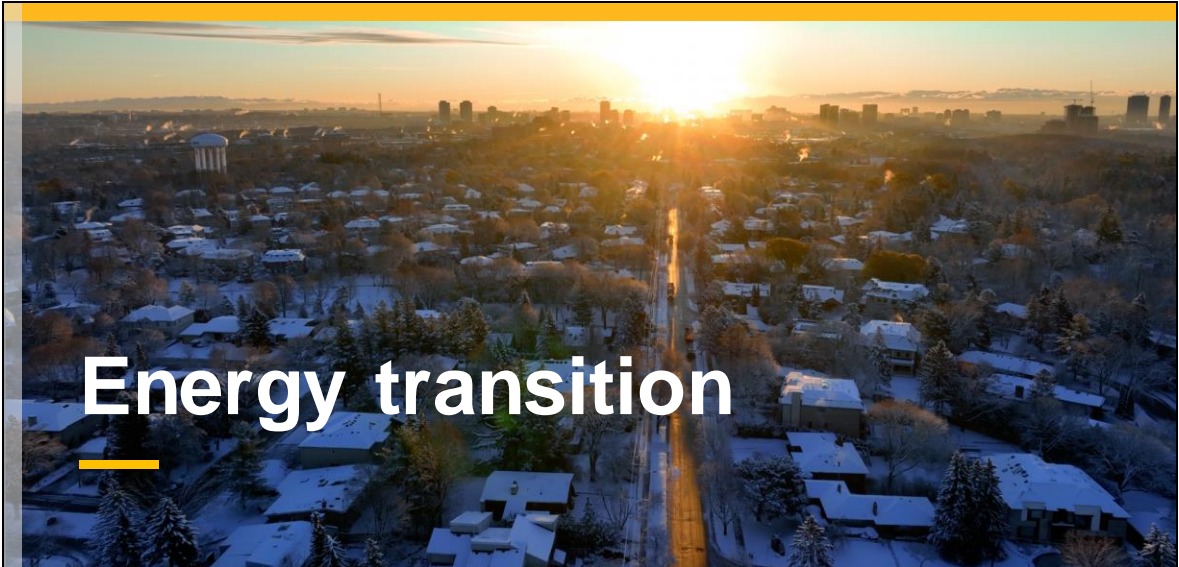
As a reminder

- We are not here to debate government, environmental or regulatory policy.
- We will not be seeking feedback on regulatory proceedings or facility projects that are already in flight or part of an ongoing Leave to

Construct (“LTC”) proceeding.

- We are not opening additional lanes of inquiry for projects that have filed their LTC or are in LTC proceedings.

Enbridge Gas is committed to supporting the achievement of federal and provincial emissions targets and today Chris Ripley will talk about integrated resource planning and the role it plays in supporting the energy transition. Chris.



Energy transition

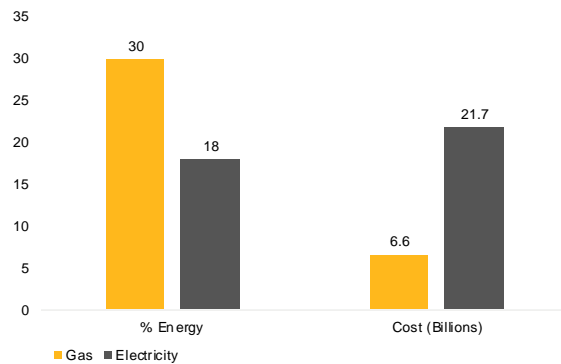


Ontario's energy systems

Ontario's energy system reality

Natural gas provides almost twice the energy needs of Ontario's at less than 1/3 the cost

Ontario's energy mix*



*% Energy: Canada's Energy Future 2023 reports database. Cost Electricity: \$18.6B operating revenues, OEB's 2022 yearbook and \$3.1B Renewable CostShift Subsidy estimate, Financial Accountability Office of Ontario's Report, Ontario's Energy and Electricity Subsidy Programs, February 2022. Cost Gas: Total operating revenues for Ontario's gas distributors, OEB's 2022 yearbook.

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Chris:

Natural gas is a critical component of Ontario's current energy supply. Approximately 75% of Ontario homes rely on natural gas for home and hot water heating. Overall, 30% of Ontario's energy, almost double that of electricity, is served by natural gas at less than 1/3 of the cost.

Ontario has a reliable electricity supply today because of natural gas-fired generation. Electricity can't be efficiently stored, and renewable power requires a backup that can ramp up quickly to meet Ontario's energy needs when the wind doesn't blow, the sun doesn't shine, or above-ground infrastructure is impacted by climate events like ice or high winds.

Within the next 20 years, energy demand is set to increase by 25 % as forecasted by the International Energy Agency (IEA). At the same time, we recognize residents of Ontario are concerned about reducing carbon emissions. Under the Paris Agreement, Canada committed to a target to reduce GHG emissions by 30% below 2005 levels by 2030. In April 2021 Prime Minister Trudeau increased Canada's 2030 emissions reduction target to 40-45%.

Some say a simple solution to reduce emissions would be to eliminate fossil fuels and electrify everything. Enbridge believes a focus on achieving net zero via only electrification overlooks market-ready, low and zero-carbon solutions. These can affordably support near-term emissions reductions by leveraging the existing gas and electric infrastructure versus an electric-only option.

In our view, a coordinated approach to energy system planning – between natural gas and electricity - is required for a successful energy transition

Enbridge Gas' role in Ontario's energy transition

With approximately 30 percent of Ontario's emissions coming from the use of natural gas, Enbridge Gas will have an important role in energy transition.

Enbridge Gas is committed to supporting government with the achievement of their clean energy plans.

- Actively working on solutions to help meet Ontario's energy needs, while reducing emissions cost effectively.
- Enbridge Gas has set a net zero by 2050 target for emissions from our own operations, with an interim goal of reducing emissions intensity.

The gas distribution system in Ontario is a resource that can be leveraged to enable further greenhouse gas (GHG) reductions beyond 2030, including net zero.



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Chris:

We recognize that energy transition is starting to unfold in Ontario and there are aggressive emission reduction goals set by Canada. We also recognize that our natural gas system and the product that we deliver will need to change to support these emission reduction goals – given that approximately 30% of Ontario's emissions are from the use of natural gas.

We are committed to supporting energy transition in Ontario, and we have taken the following steps so far:

- We are actively investing in low-carbon solutions that support cost-effective emission reductions – while continuing to safely and reliably meet Ontario's energy needs
- We have set net-zero targets for emissions from our own operations

Enbridge Gas's distribution, transmission and storage assets are vast and invaluable in providing reliable and resilient energy to Ontario. Our system can support a net-zero future – and the extent to which our system can be utilized in the transition must be further analyzed and understood before any decisions are made with regards to the best pathway forward in Ontario. Enbridge has the scale and experience to support the transition to a net-zero future and is delivering innovative solutions across the sector.

Integrated Resource Planning



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Actions to achieve net zero

“Safe-bet” actions to take today to reach net zero:



Maximize energy efficiency

Reduce energy use.



Optimize energy system planning

Co-ordinate electric and gas system planning.



Invest in low-carbon gases

Transition to increasing amounts of renewable natural gas (RNG) and hydrogen over time.



Utilize carbon capture and storage

Invest in carbon capture and storage (CCS) for heavy industry and blue hydrogen production.

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Chris:

Whichever pathway the province takes to achieve net zero, there are some actions that Enbridge Gas believes are safe bets. These actions are considered safe bets because they can deliver near-term GHG reductions, and/or maintain flexibility until the best pathway is chosen.

Safe bet actions include:

- Continuing to focus on delivering energy efficiency programs, with a focus on maintaining alignment with federal, provincial and municipal programs to ensure the costs and impacts are minimized.
- Optimizing and integrating gas and electric systems through coordinated system planning and through physically integrating systems in buildings through hybrid heating.
- Investing in carbon capture, utilization and storage for heavy industry and hydrogen production.

Whichever pathway the province takes to achieve net zero, there are some actions that Enbridge Gas believes are safe bets. These actions are considered safe bets because they can deliver near-term GHG reductions, and/or maintain flexibility until the best pathway is chosen.

Integrated Resource Planning

The energy landscape in Ontario is evolving

Integrated Resource Planning (IRP) is an enhanced planning strategy and process.¹

Enbridge Gas evaluates non-pipeline alternatives that could be used to defer or avoid implementing a traditional pipe project to meet a system need.

Consideration is given to safety, cost-effectiveness, and the ability of alternative solutions to meet customer demands reliably.



¹ IRP Framework was published by the OEB on July 22, 2021.

Chris:

As the energy landscape continues to evolve, there is a growing interest in low carbon alternatives to meet energy needs and as the largest natural gas distributor in Ontario, Enbridge Gas knows it will play a meaningful and integral role in the province's path towards energy transition.

So what is integrated resource planning? IRP is an enhanced planning strategy and process where we evaluate non-pipeline alternatives that could be used to defer or avoid implementing a traditional pipe project to meet a system need. Consideration is given to safety, cost-effectiveness, and the ability for alternative solutions to meet customer demands reliably. In other words, it helps us to find alternative ways to meet customer demand for energy without increasing our pipeline infrastructure.

Enbridge Gas is committed to supporting the province, municipalities, and Indigenous communities in achieving their clean energy goals. Annual IRP stakeholder activities will support ongoing dialogue between all parties to ensure energy and climate plans are known and factored into Enbridge Gas's system planning.

IRP regional stakeholder activities are important to better understand the local initiatives and policies that may affect natural gas demand. The learnings from stakeholder sessions are then incorporated into our demand forecasting processes and allows us to plan for the future.

IRP alternatives (IRPAs)

Non-pipeline alternatives can include:

- **Demand side alternatives:**

- Enhanced Targeted Energy Efficiency (ETEE) programs
- Demand Response programs

- **Supply-side alternatives:**

- Compressed natural gas (CNG) or liquified natural gas (LNG)
- Carbon-neutral renewable natural gas and hydrogen
- Adding supply through upstream deliveries

Alternatives can be implemented individually or in combination to meet the system need cost-effectively and within the required timeframe.



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Chris:

The Ontario Energy Board approved several IRP alternatives including:

Demand side alternatives that focus on lowering peak hour energy use through energy efficiency programs such as Enhanced Targeted Energy Efficiency (ETEE) programs or Demand Response programs. Enbridge will offer a variety of programs to help reduce peak consumption including upgrades to building envelope and more efficient heating equipment.

Demand Response is a program where Enbridge will install smart thermostats in a customer's home and controlling the thermostat during a very cold event by preheating the home's temperature or lowering the temperature by a few degrees. While this may seem small, if enough homes and businesses in an area participate it can lower the peak hour consumption helping to defer or downsize pipeline projects.

The OEB also approved supply side alternatives that focus on bringing more energy to a region through the use of compressed natural gas (CNG) or liquified natural gas, carbon-neutral renewable natural gas or additional supply through other pipelines. These alternatives can be implemented individually or in combination to meet the system need cost-effectively and within the required timeframe.

How we are planning our system today With IRP

- Demand forecast
- System modelling
- Asset management plan (AMP)
- IRP and LTC assessment process



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Chris:

To plan our system Enbridge follows an annual process that includes reviewing the future natural gas demands, modelling how those demands impact our natural gas system and then determines where new projects are required to meet system demands.

Following the identification of new system needs, Enbridge scopes and documents new facility projects that are required over the next 10 years and include those in a document called the Asset Management Plan.

Following the identification of projects in the AMP Enbridge starts the process of evaluating the projects for IRP alternatives.

IRP assessment process

Enbridge Gas uses a four-step IRP assessment process to determine the best approach to meet system needs:

1. Identification of constraints
2. Binary screening criteria (pass/fail)
3. Two-stage evaluation process
 - Technical evaluation
 - Economic evaluation
4. Periodic review

The IRP assessment process allows Enbridge Gas to focus on investments where there is a reasonable expectation that a proposed project could efficiently and economically meet the system need.



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Chris:

The IRP assessment process consists of 4 steps including:

Identification of Constraints in the AMP as noted on the previous slide . There are over 3000 projects in the AMP which would require significant time if Enbridge had to evaluate every single project. Therefore, the OEB approved a set of screening criteria to make sure Enbridge can focus on projects where IRP alternatives can be applied.

Said another way the screening criteria help us reduce the number of projects from the IRP assessment process. These criteria include emergency projects, customer specific projects where the customer is paying for the entire project and if the projects are below \$2 million.

For all of the projects that pass the screening phase we move to a Two-Stage Evaluation Process

- The technical Evaluation stage is where – Assesses the technical viability of potential IRPAs to reduce peak demand to the degree required to meet the identified system need, using best available information to determine whether an IRP Plan including one or more alternatives would be a viable option.
- Economic Evaluation – The three-phase economic test that compares the IRP plan(s) to the pipeline option to determine which alternative is optimal.

Following the assessments, we then conduct Periodic Reviews to evaluate whether future project needs have changed or if the IRP alternatives can meet the system need.

Technical evaluation process

1. Review and confirm if the existing scope should be modified prior to the evaluation of an IRP alternative.
2. Determine the feasibility of supply-side alternatives.
 - Considerations for CNG: Location of injection and flow rates required
 - Considerations for market-based supply side options: Availability of additional natural gas capacity or pressure upstream to impact project scope
3. Determine the feasibility of demand-side alternatives.
 - Considerations for ETEE: Demand reduction required, time horizon to achieve reductions, firm contract demand on the system, theoretical potential ETEE reductions, system-specific constraints
4. Determine the overall technical feasibility of IRPA implementation.

Growth driven projects have the highest IRP value

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Chris:

I am going to dive a little deeper into the technical evaluation process. For each project that passes the technical screening Enbridge will review the project scope, timing and confirm the forecast for that particular area to ensure that the correct project need is being evaluated. Enbridge will meet with municipalities, local electric utilities, and large customers to understand the future energy needs for the area, including the review of any community or municipal energy plans that exist for the region.

We will then look at all the potential alternatives to determine if one or more in combination can defer or downsize the facility project. Energy efficiency programs for customers take time to develop and implement so there will be projects where Enbridge will need to implement a supply side alternative for a few years to help defer a project, until the energy efficiency programs are implemented and reducing the peak demands on our system.

Following completion of the technical evaluation Enbridge Gas will compare the facility project and IRP alternatives from an economic perspective. The most optimal solution, technically and economically, will be brought forward to the OEB for approval.

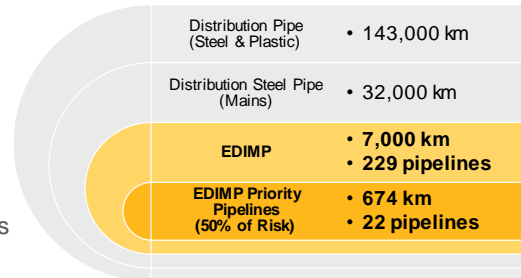
EDIMP

Enhanced Distribution Integrity Management Program (EDIMP) aims to implement targeted programs to manage the integrity threats of higher priority distribution pipelines by improving the understanding of:

- Asset condition
- Fitness for service
- Risks associated with the operation of those assets

If the results of these targeted integrity programs impact the pipeline replacement project scope in the AMP, IRP will re-evaluate the feasibility based on the updated scope.

Distribution populations



Values are estimates and may change based on the EDIMP population refinement.

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Chris:

Now moving onto EDIMP, which stands for Enhanced Distribution Integrity Management Program (EDIMP)

Enbridge Gas is implementing the EDIMP to target the management of integrity concerns on our higher priority distribution pipelines. This requires Enbridge Gas to conduct integrity related assessments on these higher priority distribution pipelines to improve our understanding of:

- The condition of the asset
- Whether the asset is fit for service
- And if there are any risks associated with operation

The EDIMP related work may determine that a full replacement of the pipeline is not warranted based on enhanced asset health findings. On the other hand, it could also determine that significant unexpected issues requiring planned capital investments or urgent intervention is required to address the integrity concerns on the pipeline.

If the results of these targeted integrity programs impact the pipeline replacement project scope in the AMP, IRP will subsequently re-evaluate of feasibility of IRP implementation based on the updated scope.

There are no projects currently within the scope of EDIMP in the (GTA West) Region.

Pilot project update

IRP pilot overview

Enbridge Gas has filed an application for two IRP pilot projects as directed by the OEB – one in the Town of Parry Sound, and the second in Southern Lake Huron area.

Key pilot objectives

- Develop an understanding of how to design, deploy and evaluate potential Enhanced Targeted Energy Efficiency (ETEE) and Demand Response (DR) programs.
- Gain insight into how potential ETEE measures and DR programs impact peak-hour demand.

IRPAs

- Demand side: ETEE and DR
- Supply side: Market-based supply and compressed natural gas (CNG)



Map of Parry Sound pilot area

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Whitney:

Under the direction of the OEB, Enbridge Gas has developed and filed an application for two IRP pilot projects. One of which is located in the Town of Parry Sound and the other in Southern Lake Huron area (which includes the City of Sarnia and the Town of Plympton-Wyoming in the County of Lambton.).

While these two pilots are not located in this particular webinar's region, this is an important project for IRP to highlight as these pilots are focused around exploring and gaining learnings for two IRP alternatives - ETEE (enhanced targeted energy efficiency) and DR (demand response) programs.

Understanding how to design and implement these IRPAs as well as their impact on peak hour demand will help to support IRP assessments for all projects in all regions moving forward.

To provide a bit more insight into what ETEE is, it involves offering targeted energy efficiency programs, such as providing incentives towards energy efficiency equipment to home owners and businesses within a specific area, in efforts to reduce the peak period natural gas demand in that area. The ETEE program itself could look at incremental incentives to traditional energy efficiency programs, or could look at introducing new offerings and technologies as well.

So while some of you may be familiar with our traditional energy efficiency programs, as those have been in place for some time and available to all Enbridge Gas customers today, the concept of enhancing them as using them to reduce peak demand requires more investigation and is one of the main focuses for the pilots.

The other IRP alternative we're interested in learning as part of this pilot is Demand Response. This involves offering a program that would target residential customers and provide incentives to participants to lower their thermostats during peak times as requested by Enbridge Gas, essentially shifting load off-peak period gas demand.

To help support the analysis on the impact to peak demand, we are looking to install hourly metering within the customer base in both these pilot areas. This has no impact on the customer side of things, but what it allows us to do is collect more granular data at a customer level.

On the supply-side, market based supply and compressed natural gas (CNG) also will play a part in these pilots, but it will be leveraged in the background as needed while we test ETEE and DR in this area.

Within each pilot location, different combinations of these IRPAs and types of programming have been proposed.

IRP pilot regulatory update

- **July 19:** Enbridge Gas filed the IRP Pilot Projects Application with the OEB.
- **Sept. 26:** OEB Staff, intervenors and Enbridge Gas filed submissions on the proposed issues list.
- **Oct. 20:** Written interrogatories (IRs) filed with the OEB.
- **Nov. 3:** Enbridge Gas filed written responses to IRs with the OEB.
- **Nov. 10:** OEB Staff, intervenors and Enbridge Gas filed comments regarding the need for a technical conference.
- **Nov. 17:** OEB issued PO No.3 to put this proceeding in abeyance, pending the filing of updated evidence by Enbridge Gas in light of recent market changes that impact the ETEE program design and budget.



Whitney:

In terms of where we are with this Pilot Project right now, this application was filed with the OEB earlier this year in July. We're currently going through the standard regulatory steps, including defining an issues list for this proceeding, and responding to interrogatories submitted by intervenors. In light of some recent changes in the market that has an impact to the proposed ETEE program design and budget, the OEB has placed this proceeding in abeyance and on pause in order to provide time for Enbridge to make the necessary updates to the application. We are working to establish the timelines so we can continue to move this pilot application forward.

Regional project discussion



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GTA West Region overview



The GTA West Region currently has 24 growth related and 55 non-growth related investments in the AMP.

Growth related investments

- 19 have been technically evaluated.
- 5 remain to be technically evaluated by the end of 2023.

Non-Growth related investments

- 28 have been technically evaluated.
- 27 remain and results to be reflected in the 2025 – 2034 AMP.

Kurtis:

My name is Kurtis Lubbers and I work in the Distribution Optimization Engineering team at Enbridge Gas.

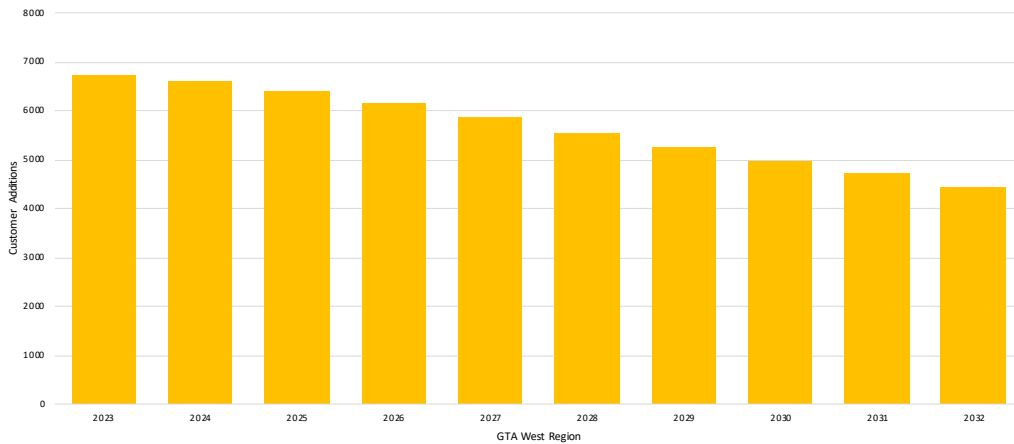
What we primarily do in DOE is hydraulic modelling of the systems across the franchise to peak hour design conditions, and now this includes supporting IRP analysis and initiatives.

Today I'll be speaking a bit more about the GTA West Region and some of the Technical IRP Evaluations we are performing as one of our accountabilities. The GTA West Region is shown in pink on the slide and circled in red. This region covers areas stretching from Mississauga to Orangeville north to Collingwood and Barrie area.

As noted, this region has 24 growth related and 5 non-growth-related investments in the AMP.

We have already reviewed a significant amount of the projects in this region, and are aiming to complete the growth projects by year end and the remainder in early 2024.

Regional needs



Gradual Decline in the Forecasted Rate of Customer Additions Over the Years

Kurtis:

The GTA West region customer attachment forecast is shown here, and I do want to note these values are based on the 2022 long range planning forecast. This is updated annually.

As you can see, there is a gradual decline in the forecasted rate of customer additions over the years which is critical to our assessments.

This has been accounted for in the IRP assessment process when modelling for the demand reductions required by various IRPAs.

A number of factors are considered when evaluating future customer additions and natural gas demand forecasts including location, zoning, and energy transition factors.

Enbridge Gas is accepting feedback through the form that will be delivered to you following this webinar as well as on our webpage through the “Have Your Say” function.

Key projects – GTA west region

Growth and system expansion related

To provide reliable, secure, and affordable natural gas supply to meet the growth in demand of the respective systems.

Investment name	In service date
NW 2103 Dundalk XHP Reinforcement SRP	2024
Erin IP System Reinforcement	2028
NW 2103 Erin XHP Reinforcement SRP	2031

Kurtis:

Growth and System expansion related projects serve the purpose of providing reliable, secure, and affordable natural gas supply to meet the growth demand of the systems

As mentioned earlier, growth projects tend to have higher IRP value vs condition based projects.

- The Dundalk XHP Reinforcement project will be reviewed in more detail later this year, as there is significant growth in the area and the current scope is being revised. Enbridge is planning to install CNG on this system to allow deferral in the meantime.
- After more review, the future phases of Erin IP reinforcement are no longer required and no IRPAs are applicable, that said the system will be reviewed additionally as part of another project on the system.
- We will discuss more about the Erin XHP reinforcement in the following slides

Key projects – GTA west region

Integrity and condition related

Projects required as part of the integrity management program to mitigate risks of corrosion, vintage steel main, pipeline failure, geohazards.

Investment name	In service date
Lisgar Station	2025
GTAW Parkway Gate Station Rebuild Phase 2	2024
WINSTON CHURCHILL AND STEELES FEEDER	2024
VPM - Erin Township	2025
Vista Dr_GTA West_Area 20_1529	2032

Kurtis:

Integrity and Condition Related projects are required as part of the integrity management program to mitigate risks of corrosion, vintage steel main, pipeline failure, geohazards, etc.

Shown here are a few key projects in the GTA West region, but unfortunately these tend to have low IRP value.

For example the first three projects are all Station Condition related and IRPAs generally do not apply.

We will discuss some of the pipe projects in the following slides being Erin Township Vintage Plastic and the Vista Drive replacement project.

NW 2103 erin XHP reinforcement SRP

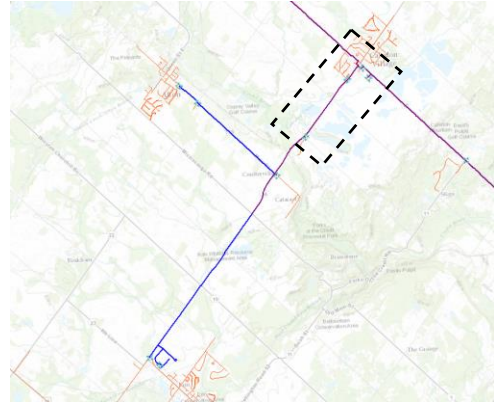
The Erin XHP system is forecasted to require reinforcement in 2031

Scope

- 4.0 km reinforcement of NPS 6 ST pipe and associated facilities
- Current estimate is \$6.3 million (including Overheads)
- Includes demands and considerations from existing customers and forecasted growth
- Other facility alternatives and routes will be considered in the detailed design phase closer to the date

IRPAs to be evaluated for this project

- CNG injection at the system constraint points to defer project
- ETEE to defer and/or reduce project
- System-wide reverse open season and request to convert to IT demand for contract customers



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Kurtis:

This system is forecasted to require reinforcement in 2031. The current facility project is about 4 km of 6in extra high pressure pipe and the associated valve sites.

The current area assumed for reinforcement is shown in the black dashed box.

Enbridge will be evaluating several IRPA's for this project, we are aiming to evaluate CNG injection at one or more locations, and evaluate ETEE in surrounding communities on this system.

ETEE could be reviewed in conjunction with other projects on this system such as the project on the next slide as well which is downstream of this location.

VPM – erin township

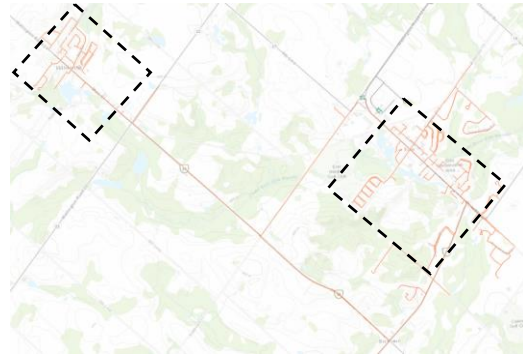
This project is part of the Vintage Plastic Replacement Program

Scope

- Replacement of 2.7 km NPS 4 PE and 10.0 km of NPS 2 PE pipe throughout the system
- Remaining scopes and phases are being refined depending on the actual repair or broader replacement strategy

IRPAs to be evaluated

- ETEE could potentially reduce project scope pipe sizes and will need to be economically evaluated as part of the alternatives once confirmed
- CNG will not support deferral for a replacement project



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Kurtis:

This project is part of the Vintage Plastic Replacement Program – a significant amount of Plastic pipe in this system is up for replacement.

Nearly 3km of 4in and 10km of 2in vintage plastic pipe is in scope.

As indicated, ETEE on the general service customers could be technically viable to reduce pipe sizes, but will be dependent on the economics and will likely provide low value.

Detailed scopes and economics will be reviewed moving forward as the phases are clarified.

The replacement areas are located throughout the dashed boxes on the diagram. Some areas have already been replaced.

This all said, the ETEE will be reviewed and evaluated in conjunction with the project on the upstream XHP system to determine any potential efficiencies for both.

As mentioned earlier, there was also a growth need on this system in the AMP, but the Erin IP system reinforcement is no longer required after more review.

Vista drive gta west area 20



This investment is part of the Vintage Steel Mains Replacement Program

Scope:

- Replace 2200m NPS 2 ST, 400m NPS 4 ST and 276 services
 - Timing planned for 2032, current estimate is \$4.8 million (Including Overheads)
- Entire project can be replaced with NPS 2 PE 420 kPa
 - This fails the Technical Review, no IRP required



Pipe to be replaced in Mississauga.

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Kurtis:

Shown here are some summary points regarding a pipe replacement project in Mississauga around Vista Heights area.

The general area of pipe replacement is within the highlighted black box in the figure.

The project is currently planned as a replacement of 2" and 4" Steel vintage pipes and the associated services, approximately 280 for this project.

The reason this project Fails Technical review is because Enbridge Gas can replace all these pipes with NPS 2, therefore no IRPA is required as we would not install smaller pipe main in the road allowance.

It should be noted that although we can replace with all NPS 2, Enbridge may install some larger pipelines along critical paths to maintain system resiliency but this will be determined in the future during a detailed design phase.

I hope a few of these examples provides some context for those watching.

Feedback and next steps



Feedback from stakeholder engagement initiatives is necessary to inform our IRP activities.

We welcome feedback on the following:

- Information that could affect natural gas demand that Enbridge Gas has not considered for this area and/or that you believe Enbridge Gas should be aware of, such as:
 - New residential/commercial
 - Industrial developments
 - New Municipal or Community Energy Plans
 - Municipal energy policy, etc.
- Feedback on the specific areas discussed today including potential IRPA opportunities.

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David:

- Feedback is an important part of informing our IRP activities and is a driving force behind these sessions.
- We're always looking for feedback on:
 - Information that could affect natural gas demand that we might not have considered for this area or that you believe we should be aware of, such as:
 - New residential or commercial developments
 - Industrial developments
 - New Municipal or Community Energy Plans, and
 - Municipal energy policy, etc.
- We would also like to hear feedback on the specific area's discussed today including potential IRPA opportunities.

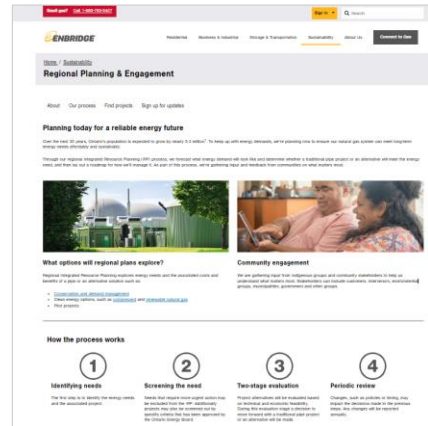
How to stay involved



Visit our Regional Planning webpage to:

- Sign up for email updates to receive information on upcoming stakeholder events and webinars.
- Register for events.
- Review regional pages that include all IRP projects in your community.
- Submit feedback through 'Have your Say'.
- Search for other IRP information as required.

Sign up for email updates today!



enbridgegas.com/sustainability/regional-planning-engagement

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David:

The best way to stay involved is to visit our Regional Planning webpage to:

- Sign-up for email updates to receive information on upcoming stakeholder events and webinars
- Register for events
- Review regional pages that include all IRP projects in your community
- Submit feedback through the 'Have your Say' form on our webpage, and
- Search for other IRP information as required

So, check your inbox and stay tuned for the latest information. If you need to contact us directly reach out to irp@enbridge.com

Q&A



David:

At time we'd like to open the floor to the audience for any questions related to the content we've covered today or IRP in general. We're always looking to improve our presentation materials so we would really appreciate it if you could complete the short survey linked in the chat below and send us your feedback.

What impact will IRP efforts have on Natural Gas Rates:

IRP efforts are designed to solve capacity issues in the most cost-effective way, including measures that can help customers with their energy efficiency.

Does this mean Enbridge won't be investing in new infrastructure in our communities:

Enbridge Gas will continue to invest in our communities and IRP efforts will help ensure we are looking at the most cost-effective alternatives.

What's the best way to stay involved?

The best way to stay connected is through our website - I'll share a link in the chat - When you signed up for this webinar you were automatically added to our email update list.

So, check your inbox and stay tuned for the latest information. If you need to contact us directly reach out to irp@enbridge.com

Thank you



Thank you all for joining us today and a special thank you to all of our presenters, remember to check your inbox for news and updates about everything IRP.