

## Meeting Notes

### Integrated Resource Planning Technical Working Group (EB-2021-0246)

#### Working Group Meeting #4

Meeting Date: April 26, 2022                      Time: 1:00 p.m. - 3:00 p.m.  
Location: MS Teams

#### Attendees

IRPTWG Members	Role
Michael Parkes	OEB staff representative (Working Group chair)
Stephanie Cheng	OEB staff representative
Chris Ripley	Enbridge Gas representative
Amrit Kuner	Enbridge Gas representative
Jay Shepherd, Shepherd Rubenstein Professional Corporation	Non-utility member
John Dikeos, ICF Consulting Canada Inc.	Non-utility member
Tammy Kuiken, DNV	Non-utility member
Cameron Leitch, EnWave Energy Corporation	Non-utility member
Chris Neme, Energy Futures Group	Non-utility member
Dwayne Quinn, DR Quinn & Associates Ltd.	Non-utility member
Kenneth Poon, EPCOR Natural Gas LP	Observer
Steven Norrie, Independent Electricity System Operator	Observer

Additional Attendees	Role
Valerie Bennett	OEB staff

#### Regrets

IRPTWG Members	Role
Amber Crawford, Association of Municipalities of Ontario	Non-utility member

#### Purpose

These notes summarize the information discussed during the working group (WG) meeting on each of the key points presented in the published materials.

These notes are for the Working Group purposes only and do not represent the view of the OEB

## Meeting Agenda

1. Preliminary Matters & Update/ Discussion on Working Group Activities including WG report and work plan (OEB staff, 30 minutes)
2. Discussion of comments on Enbridge Annual IRP report (Enbridge, 30 minutes)
3. IRPA Pilots (Enbridge, 1 hour)

### 1. Preliminary Matters & Discussion on Working Group Activities (WG Report and Work Plan)

Item Description	Discussion Comments/Outcome	Action Items
<p><a href="#">Meeting #3 Notes</a> OEB staff asked if there were any comments on meeting #3 notes</p>	<p>One correction had previously been noted via e-mail and incorporated. No additional changes flagged by the working group. Therefore, the notes are accepted by WG members.</p> <p><a href="#">Posterity Model</a> WG members inquired as to an update on the status of whether Enbridge can share the Posterity model filed in the St. Laurent proceeding and when they will receive this information (action item from WG meeting #3).</p> <ul style="list-style-type: none"> <li>• Enbridge indicated that the Posterity model will not be shared with the working group since the model does not belong to them. Enbridge provides their customer data to Posterity who then provides Enbridge with information used to assess IRPAs. Chris R. plans to draft an email to the working group addressing the rationale for Enbridge's course of action.</li> <li>• WG members including OEB staff noted concerns with lack of access to this information, as it is an important input into Enbridge's determinations on the technical and economic viability of IRPAs to meet system needs, and should not be a "black box".</li> <li>• WG members question whether Enbridge has grounds to withhold this information from the working group. OEB staff indicated that since this is not an adjudicative proceeding, the Working Group likely does not have authority to compel Enbridge to share the model. WG member requested that OEB staff seek opinion from legal counsel on this issue, as the authority of the WG stems from a board order.</li> </ul>	<p>OEB staff to post meeting #3 notes on IRP webpage</p> <p>Enbridge to provide response to WG request for Posterity model (including input from legal). OEB staff to request legal opinion from in-house counsel on WG's authority to compel information.</p>

<p><b>Scheduling of Future WG meetings</b></p> <p>OEB staff discussed the timing and scheduling of upcoming WG meetings. OEB also addressed the cost awards process for this working group</p>	<p><b>WG Meetings</b></p> <ul style="list-style-type: none"> <li>Several WG members have conflicts with the current scheduled times for the upcoming May (May 17) and June (June 21) WG meetings.</li> <li>Monthly meetings will continue over the summer, at times to be scheduled.</li> </ul> <p><b>Cost awards for WG Members</b></p> <p>OEB staff intends to initiate the cost awards process after June's WG meeting. Cost awards will cover the first 6 months of activity by WG members.</p>	<p>OEB staff will send out a doodle poll to determine the best available time slot for May-August 2022 WG meetings.</p>
<p><b>WG annual report</b></p> <p>OEB staff discussed the content and process regarding the filing of the WG annual report</p>	<p><b>Proposed approach</b></p> <p>As per the IRP decision, a report from the working group should be filed by the OEB in the same proceeding Enbridge files its annual IRP report. OEB staff discussed proposed approach regarding technical working group report. The proposed approach is to have the WG report drafted by OEB staff The WG report would be signed off by all WG members (including Enbridge members). However, there would be a section for individual comments for members to address matters where a consensus could not be reached. The individual comments section does not have to be signed off by the working group.</p> <p>WG members raised several concerns with this approach:</p> <ul style="list-style-type: none"> <li>Whether Enbridge needs to sign off on the WG report since the WG report is essentially evaluating Enbridge's annual IRP report/ actions/ deliverables. This makes the process circular if Enbridge needs to agree with their own report that the WG is evaluating. OEB staff indicated that Enbridge would not need to agree with all member comments, but would sign off that the report was an accurate representation of WG views.</li> </ul>	<p>OEB staff will circulate a first draft of the WG report in advance of May meeting</p>

	<ul style="list-style-type: none"> <li>• Whether OEB staff is the appropriate author. OEB staff suggested this was appropriate since OEB staff is the chair of the working group, has an impartial stance, and has allocated time and resources to do so.</li> <li>• Whether the individual comments section of the WG report will essentially become WG members drafting their own submissions</li> <li>• Whether the outline for the WG report proposed by OEB staff places too much emphasis on other activities of the Working Group, and not enough on the review of Enbridge's annual IRP report, which (in the view of one WG member) is intended from the IRP decision to be the primary purpose of the WG report.</li> </ul> <p><b>Timing</b></p> <ul style="list-style-type: none"> <li>• The WG annual report is to be drafted in advance of the May WG meeting but will need final modifications to account for changes to Enbridge's annual report.</li> <li>• Enbridge has some concern that the timing of the WG report should not slip since Enbridge has a deadline for the filing of their annual IRP report at the end of May 2022.</li> </ul> <p>The working group agreed to consider a first draft of the WG report from OEB staff (which will take into account concerns raised by members) to see if any changes need to be made to the approach.</p>	
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<p><b>WG work plan</b></p> <p>OEB staff shared the draft work plan with WG members to seek feedback on the workstreams identified.</p>	<p>The terms of reference (ToR) call for OEB staff to establish a work plan with priority activities for the working group. In OEB's draft work plan, 5 workstreams are identified, speaking to the priority of tasks. It is a living document that will be kept up to date and will be included in the WG report to be filed by OEB staff.</p> <p><b>Workstream 4 – IRP considerations in Enbridge's rebasing application</b></p> <ul style="list-style-type: none"> <li>• OEB staff proposed an opportunity for Enbridge to inform the working group on how IRP is considered in their rebasing application, so WG members have a chance to provide comments before the application is filed. OEB staff feels this could be valuable since rebasing will impact Enbridge's operations over the next decade.</li> <li>• Some WG members question whether this workstream should be part of the working group agenda: <ul style="list-style-type: none"> <li>○ Some members note that comments made will not have an impact on Enbridge's rebasing application and in particular its asset management plan (AMP) due to timing of application (although WG comments may prove useful to intervenors). Member time may be better spent on other tasks.</li> </ul> </li> <li>• Enbridge confirmed that the details of the AMP will not be shared with the working group prior to the filing of its rebasing application. Therefore, Enbridge does not believe it will be helpful to get comments from the working group.</li> <li>• OEB staff will give more thought on whether workstream 4 is valuable given the points raised by WG members. Members can also comment on this item in the draft workplan.</li> </ul> <p><b>Other Tasks</b></p> <ul style="list-style-type: none"> <li>• Some WG members raised the need for Enbridge to undergo additional stakeholdering activities in advance of filing application. Enbridge responded that this will be dealt with separately.</li> </ul>	<p>OEB staff will post updated workplan on Sharepoint site. WG member comments on the draft WG work plan is requested by May 10, 2022</p>
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## 2. Discussion of Comments on Enbridge IRP Annual Report

Item Description	Discussion Comments/Outcome	Action Items
<p>Addressing Comments from WG Members on Enbridge's draft IRP Annual Report</p> <p>Enbridge discussed comments provided by WG members (via e-mail and via comments in draft files) on Enbridge annual IRP report. Not all comments were discussed, as OEB asked WG members if there are any key areas of concern they would like to highlight to Enbridge in the IRP report for clarification/updates</p>	<p>WG member asked if May 31 was a hard deadline for filing annual IRP report. Enbridge indicated that there was some flexibility, but this was Enbridge's preference as the report is a mandatory component of its annual DVA application.</p> <p>Some areas of concern with the annual IRP report highlighted by WG members are noted below:</p> <p><b>General</b></p> <ul style="list-style-type: none"> <li>WG member notes the general message received from reading the annual IRP report is the limited work Enbridge has done on IRP apart from building a website.</li> <li>Enbridge acknowledges the limited content in this year's IRP report and attributes this to a timing issue with a December 31, 2021 cut off date, and not because of Enbridge's productivity.</li> <li>Enbridge informed the working group that the AMP (identifying system needs) was completed April 25, 2022. As a result, Enbridge now has a lot of work that lies ahead with screening potential projects and compiling the IRP appendix. However, WG members noted that Enbridge has been working on the AMP for over a year and several projects like St. Laurent had already been screened for IRP alternatives. WG member suggested that Enbridge representatives on the IRP working group should have been actively involved in these determinations, and these screenings should be noted in the IRP report.</li> </ul> <p><b>Stakeholder Engagement</b></p> <p>There are diverging views between Enbridge and various WG members when it comes to when stakeholders should be engaged in options to meet system needs, and the extent of reporting on such activities by Enbridge in its annual report.</p>	<p>Enbridge to update annual report taking into consideration both the written and verbal comments provided by the working group. Enbridge will document how they considered WG comments.</p> <p>To get to draft #2 of the annual report, Enbridge may follow up individually with WG members if required.</p>



	<ul style="list-style-type: none"><li>• WG member suggested that Enbridge should talk to customers to identify their needs and preferences before developing a plan.</li><li>• Enbridge indicated that stakeholders should be engaged on solutions for specific system needs once AMP is filed in Nov 2022. Enbridge highlights the importance of researching different regions to know where constraints exist and questions why they would approach a customer without knowing if there is an issue/constraint first.</li><li>• However, other WG members add that constraints do not change overnight. Enbridge should know what problems are on the horizon and should take those forward to stakeholder customers, to avoid predetermining the proposed solution and including it in the rebasing application.</li></ul> <p>Despite the differing views on the timing of stakeholder engagement, Enbridge confirmed they have various stakeholder activities underway for indigenous communities and municipalities. WG members suggested for Enbridge to revise this section of the IRP report to describe what stakeholder engagement is already underway, and what would be done after AMP filing.</p> <p>A WG member also suggested broader stakeholder engagement for process planning questions that are not region specific. Enbridge responded that this is part of the evidence in the rebasing application.</p> <p><b>IRP Website</b></p> <ul style="list-style-type: none"><li>• WG member noted that the IRP website cannot be reached from the Enbridge or Sustainability page. Enbridge will check to ensure website is functioning as intended</li><li>• WG member suggested having the option on the website to view all regions as opposed to selecting a specific location. Enbridge agreed to add this functionality.</li></ul> <p><b>Details of Aspects of IRP Assessment</b></p> <ul style="list-style-type: none"><li>• Members noted that the level of detail</li></ul>	
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	<p>regarding several aspects of the IRP assessment process was very high-level in the IRP report. Areas noted include the details of the binary screening process, the system modeling done to confirm a constraint, the approach to demand forecasting, the details of baseline facilities and the level of redundancy built into system planning. Enbridge indicated that the annual IRP report was only a high-level summary of these aspects, and more details in these areas would be included or referenced in the rebasing application, or has been included in the record for the IRP proceeding. Member indicated that, where possible, the annual IRP report could highlight what has changed in Enbridge's approach due to the IRP decision.</p> <p><b>Results of IRP screening for specific system needs</b></p> <ul style="list-style-type: none"><li>• WG member noted that IRP decision requires Enbridge to include list of forecasted needs for a 10-year horizon highlighting status and results of IRPA consideration (e.g. where IRPAs have been screened out). Enbridge confirms that this will be an appendix in the AMP. However, it can not be included in the current year's annual IRP report since previous AMP did not include IRP. Enbridge will provide this information in next year's IRP report. WG member suggested identifying in the report where there are OEB requirements for the annual IRP report that Enbridge has yet to complete. Enbridge agreed.</li></ul> <p><b>Best available information</b></p> <ul style="list-style-type: none"><li>• WG member noted that the IRP annual report's appendix on best available information on IRPAs is quite limited. This information is important because it is a starting point for technical and economic evaluation of IRPAs in meeting system needs. Example: Adding mention of Posterity analysis of feasibility of DSM.</li></ul>	
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### 3. IRPA Pilots

Enbridge provided materials outlining the pilot objectives, general criteria, and 4 IRPA categories Enbridge is considering. Details of the discussion are detailed in the table below. Since the AMP was recently completed, Enbridge anticipates they will need the month of May to review the AMP, complete initial screening, and will return with 6-10 potential pilots targeting specific system needs for consideration by the working group meeting in June 2022.

Item Description	Discussion Comments/Outcome	Action Items
<p>General Questions / Comments</p>	<p><b>Hydrogen</b> WG member questions whether hydrogen is being considered as a potential IRPA pilot. Enbridge feels the tech is in its infancy stage so it may not be suitable for pilot testing just yet</p> <p><b>Renewable Gas</b></p> <ul style="list-style-type: none"> <li>WG member questions why renewable natural gas (RNG) is on the list and wants clarification on what makes it an IRPA.</li> <li>Enbridge notes RNG is named in the OEB decision. Enbridge agreed that, in principle, RNG is a subset of NG supply options, which could also include conventional natural gas produced locally. It is the location of the injection point that makes RNG or other natural gas supply sources a potential IRPA (supply downstream from the constraint).</li> </ul> <p><b>Upcoming Pilot Discussions</b></p> <ul style="list-style-type: none"> <li>Enbridge plans on bringing a list of potential projects with details to identify what pilots the working group is interested in testing</li> </ul>	
<p>General Pilot Criteria</p>	<p><b>Long vs. Short term Projects</b> Enbridge clarifies that reference to “long-term” and “short-term” in the proposed pilot descriptions is a reference to when the system constraint needs to be met, not when the IRPA targeting the constraint is implemented.</p> <p>WG members expressed a desire for pilots to enable learnings within 6-12 months so Enbridge can apply those learnings into future AMPs (although the pilots may run for longer periods of time). They do not want pilots where learnings can only be applied in 5 years time. Enbridge confirms that the timing factor will be</p>	

	<p>evaluated and addressed for each specific pilot. WG member noted that pilot should not be set up for failure by being rushed to deliver results on a time frame that is too compressed, in order to address a near-term need.</p> <p><b>Cost Effectiveness</b> Enbridge clarifies positive cost effectiveness of a pilot is a target but will not prevent a pilot from moving forward if it has great potential. WG members agreed that the pilots should not be required to be cost-effective, noting that the methodology for the cost effectiveness test (DCF+) will still be in development and methodological changes could potentially change the results of the test, and that pilots may incorporate measures/approaches to facilitate learning, even if this lowers cost-effectiveness.</p> <p><b>Customer Mix</b> All other things being equal, WG member noted that a diverse customer mix for the pilots is preferred. Enbridge confirms that the customer mix will be specifically addressed for each pilot.</p> <p><b>Scalability</b> WG members note that the pilots selected should be representative of Enbridge's system needs and customer mix. This factor falls under the scalability criterion.</p>	
<p><b>Pilot #1:</b> Enhanced Targeted Energy Efficiency (ETEE) + Supply side IRP</p>	<p>WG members generally support this IRPA, but made some suggestions to improve effectiveness.</p> <p><b>Customer Mix</b> WG member noted concern if there are large customers disinterested in participating, as this will significantly impact the results of the pilot</p> <p><b>Automated meter reading (AMR)</b></p> <ul style="list-style-type: none"> <li>Enbridge Gas indicated that the IRPA would be an area with a single source natural gas feed, at a single gate station with hourly metering and telemetry. Enbridge would supplement this with strategically placed AMR at a random sample of customers at targeted customer locations. Enbridge believes this will</li> </ul>	<p>To be further discussed at upcoming working group meetings. For the working group meeting in May, Enbridge requests for a DSM colleague to join. No objections received from the working group.</p>

	<p>provide good data collection to better understand how different customers will react to different measures.</p> <ul style="list-style-type: none"> <li>• WG members suggested Enbridge carefully review the need for and extent of customer metering, noting that Enbridge already has a lot of information on customer demand and on the peak demand impact of measures that can be drawn on, and metering data may not be necessary for all measures (i.e. those where impact is quite well known). The goal is to know what happens at peak hour and what measures can be put in place to reduce peak hour.</li> <li>• Enbridge notes AMRs needs to be installed but could require a year of baseline data to assess impact of IRPA. Members expressed concern for this delay, and indicated that if a baseline established through AMR is absolutely necessary, it should be in place for the coming heating season, to avoid losing another year of pilot implementation.</li> </ul> <p>Enbridge acknowledges the concerns raised by WG members but is fairly certain this will be selected as one of the pilots. Therefore, further details will be discussed at future working group meetings.</p>	
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<p>Pilot #2: Compressed Natural Gas (CNG) / Liquified Natural Gas (LNG)</p>	<p>Working group discussion was primarily focused on clarifying how the pilot would be implemented. This is summarized below:</p> <p><b>Learnings</b> Enbridge plans to own this type of equipment for peak shaving purposes in addressing short term needs. Enbridge believes this will allow them to learn more about how to use the equipment</p> <p><b>Location</b></p> <ul style="list-style-type: none"> <li>Enbridge clarifies it can potentially deploy equipment at a specific customer site or within its pipeline network, serving multiple customers. WG members advise for Enbridge not to rule out specific customers. Enbridge agrees to look at both network and individual customers as possible injection sites.</li> </ul> <p><b>Other Comments and Considerations</b></p> <ul style="list-style-type: none"> <li>WG members seek clarification on the difference between pilot #1 vs. pilot #2, in terms of the supply-side component. WG member noted that CNG could also be implemented as part of pilot #1, and the additional learnings may not justify a separate pilot. Enbridge indicated that the supply-side component in pilot #1 may be a method that has previously been used (e.g. contracted deliveries), whereas pilot #2 would test a new approach to address peak shaving.</li> <li>WG member noted that LNG may require more upfront capital investment, and may be less desirable for that reason. Enbridge generally agreed that LNG was likely to have a larger capital component.</li> </ul>	
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<p>Pilot #3: Demand Response</p>	<p>Working group discussion was focused on key points to consider when structuring a demand response pilot.</p> <p><b>Customer Mix</b></p> <ul style="list-style-type: none"> <li>Enbridge plans to focus the pilot on residential and small commercial customers. WG member noted it would be undesirable to have too many contract customers.</li> </ul> <p><b>DR Options</b></p> <ul style="list-style-type: none"> <li>WG member notes it may be desirable for Enbridge to test multiple approaches to delivering DR (e.g. direct thermostat control by the utility, or customer-controlled, potentially in response to price signals). This will result in more learnings like which option is more responsive. Members noted that aggregators had had success in delivering DR capacity for the electricity system.</li> <li>WG member suggested that there may be synergies between EE and DR and Enbridge could look at combining these, potentially increasing savings and reducing marketing costs (e.g. customers may be more willing to participate in DR if their house has been insulated).</li> </ul>	
<p>Pilot #4: Demand Response (version 2)</p>	<p>Main difference between pilot #3 and #4 is that pilot #4 is focused on contract customers. To be further discussed in upcoming meetings.</p> <p>WG member requests for 1 of the 10 pilots to be presented by Enbridge in upcoming meetings to involve contract customer utilizing dynamic pricing as a form of demand response</p>	

### List of Action Items

Action Item	Assignment/ Owner	Due Date
Post meeting #3 notes	OEB staff	As soon as possible
Circulate summary of meeting #4 outcomes	OEB staff	As soon as possible
Draft Confidentiality Agreement for WG members	OEB staff	As soon as possible

Create doodle poll to secure monthly WG meeting dates and times for May through to August 2022	OEB staff	As soon as possible
Provide draft #2 of annual IRP report for WG consideration	Enbridge Gas	Early May 2022
Post draft WG workplan for member comments	OEB staff	Early May 2022
Provide draft #1 of annual TWG report for WG consideration	OEB staff	Prior to May 2022 WG meeting
Verify with respective legal counsel on whether information on the Posterity model can and should be shared with the working group	OEB staff and Enbridge	May 2022 WG meeting
Return with more detailed materials on pilots for WG consideration	Enbridge Gas	Meetings #5 and 6 (May & June 2022)
Further discuss guidance on DCF+ test	All WG members	Future working group meeting(s), likely including May 2022.
Establish agenda for meeting #5	OEB staff (with input from Enbridge Gas)	Prior to meeting #5