

## Meeting Notes

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

#### Working Group Meeting #8

Meeting Date: July 19, 2022      Time: 2:00 p.m. - 4:00 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                    |
| Whitney Wong  | Enbridge Gas representative                    |
| Amber Crawford,<br>Association of Municipalities of Ontario   | Non-utility member                             |
| Tamara Kuiken,<br>DNV   | Non-utility member                             |
| Dwayne Quinn,<br>DR Quinn & Associates Ltd.                   | Non-utility member                             |
| Jay Shepherd,<br>Shepherd Rubenstein Professional Corporation | Non-utility member                             |
| Steven Norrie,<br>Independent Electricity System Operator     | Observer                                       |
| Kenneth Poon,<br>EPCOR Natural Gas LP                         | Observer                                       |

| Additional Attendees | Role                 |
|----------------------|----------------------|
| Valerie Bennett      | OEB staff            |
| Craig Fernandes      | Enbridge Gas guest   |
| Cara-Lynne Wade      | Enbridge Gas guest   |
| Malini Giridhar      | Enbridge Gas guest   |
| Alex Tiessen         | Posterity Consultant |
| Dave Shipley         | Posterity Consultant |
| Paula Claudino       | Posterity Consultant |

#### Regrets

| IRPTWG Members                               | Role               |
|--|--------------------|
| Cameron Leitch,<br>EnWave Energy Corporation | Non-utility member |
| Chris Neme,<br>Energy Futures Group          | Non-utility member |
| John Dikeos,<br>ICF Consulting Canada Inc.   | 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.

## Meeting Agenda

1. Preliminary matters (10 min)
2. Enhanced targeted energy efficiency IRPA (10 min)
3. Post-irpa end use model (45 min)
4. IRP Pilots (45 min)
5. Next steps (10 min, or as time permits)

### 1. Preliminary Matters

| Item Description   | Discussion Comments/Outcome   | Action Items  |
|--|---|---|
| Meeting #6 Notes<br>OEB staff asked if there were any comments on draft meeting #6 notes | There were no comments on meeting #6 notes. Therefore, the notes are accepted by working group members.   | OEB staff to post meeting #6 notes on IRP webpage             |
| Cost Claims  | Reminder to WG members that cost claims must be filed by this Thursday, July 21, 2022. Contact Mike P and/or OEB staff if you have any questions regarding the process. | WG members must file cost claims by the deadline of Jul 21/22 |

### 2. Enhanced Targeted Energy Efficiency (ETEE)

This agenda item of the WG meeting was presented by Enbridge Staff, Craig Fernandes.

| Item Description  | Discussion Comments/Outcome   | Action Items  |
|---|---|---|
| Continued discussion on approach to a geotargeted Enhanced Targeted Energy Efficiency (ETEE) pilot. | <p>Enbridge led the discussion leveraging ETEE slides from last WG meeting with additional points denoted in red font to provide more context. WG members note several concerns over some of Enbridge's assumptions as noted below.</p> <p><b>Derating factor of 20%</b></p> <ul style="list-style-type: none"> <li>• Some WG members do not agree with the assumption of a default derating factor of 20%</li> <li>• WG member questions whether there is a derating factor used for other capital investments. Enbridge confirms there is not. WG member also notes that Enbridge regularly overbuilds pipeline investments in areas where anticipated growth does not materialize. Hence,</li> </ul> | <p>Enbridge to confirm what the derating factor covers per the ICF report and will report back to the WG.</p> <p>Enbridge will clarify what was done for Ingleside/Deep River project (along with any learnings) and will update the WG via email</p> |



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|  | <p>there is concern that Enbridge may be derating for an overbuild.</p> <ul style="list-style-type: none"><li>• There is debate on differing levels of certainty between DSM (focused on overall savings) versus the ETEE pilot which is focused on peak hour impact.</li><li>• WG member questions whether derating factor covers forecast uncertainty regarding customer uptake; or is it covering error variability in the amount of peak demand reduction or both. Enbridge believes it is both but will cross reference the ICF report and report back to WG.</li><li>• Enbridge notes that prior to the filing of the ETEE pilot application, sensitivity analysis will be conducted where results will lead to further discussion with the working group and potential refinement of assumptions and plan.</li></ul> <p><b>Contract Customers (case by case basis)</b></p> <ul style="list-style-type: none"><li>• WG member notes the importance of looking at contract customers on a case-by-case basis since contract customers have tools in their toolkit that residential customers do not.</li><li>• Enbridge confirms the assumptions noted per the slides were for general service industrial customers and that contract customers will be looked at on a case-by-case basis.</li><li>• There was additional WG discussion on the need to potentially amend contracts and the importance of considering the legal implications if contract customers were part of the ETEE pilot (reducing contractual demand). Enbridge confirms that discussions have begun with internal legal team on this matter.</li></ul> <p><b>General Comments</b></p> <ul style="list-style-type: none"><li>• WG members are concerned that Enbridge is looking at this pilot from the wrong perspective – a forecast, when it should be a budget/target (something Enbridge should meet and achieve).</li><li>• Enbridge notes the plan is to propose a suite of ETEE (which can include</li></ul> |  |
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|  | <p>demand response, where applicable) to address a particular need. However, the means and methodology must fall within the budget, restrictions and policy boundaries set out by the OEB. This may place limitations on Enbridge's ability to make adjustments on approved IRPAs.</p> <p><b>Net versus Gross impact</b></p> <ul style="list-style-type: none"> <li>Some WG members are also not in agreement with Enbridge's proposal to forecast and track results on a gross basis only. WG member indicated that pilot design should look at a way to measure net impact (build into pilot design)</li> </ul> |  |
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### 3. Posterity

This agenda item of the WG meeting was presented by 3 Posterity Consultants on the call – Alex Tiessen, Dave Shipley and Paula Claudino.

| Item Description  | Discussion Comments/Outcome  | Action Items   |
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| <p><b>Posterity Model</b></p> <p>Posterity is working with Enbridge to support their IRPA analysis using Enbridge's Navigator End-Use Model. The presentation will be focused on walking through the Navigator software/ model and the main information inputs.</p> | <p><b>Issue:</b> Posterity confirms they will not supply a copy of the software code to the WG since it is a proprietary model. However, Posterity can share the inputs (with Enbridge's approval). This is of concern to WG members since the group is interested in the algorithms utilized. WG members believe that if the model is used in OEB proceedings, Posterity will eventually have to share the software code. Posterity does not believe this to be true.</p> <p><b>Background: Navigator Tool</b></p> <p>Posterity notes that the Navigator tool reduces the chance of human error since it eliminates calculations being manually performed in excel. Moreover, Posterity notes the model runs 1000 times faster than excel allowing for various test scenarios to be computed in a timely and accurate manner. Navigator is a visual basic product written from scratch by Dave but will be rewritten in Python language.</p> <p><b>WG member discussion on Posterity Model:</b></p> <ul style="list-style-type: none"> <li>WG members note the importance of inputs being split by vintage of building stock since there is a huge difference in terms of energy efficiency opportunity depending on</li> </ul> | <p>Posterity to provide examples of peak factor calculations</p> |

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|  | <p>the age of a building. Posterity notes they have to ability to do this, but presentation materials have been based off Achievable Potential Study.</p> <ul style="list-style-type: none"> <li>• Some WG members question the ability to validate the Posterity model to give WG members confidence that the model forecasts expected results within a reasonable range. However, another WG member notes that the WG should not have unrealistic expectations regarding accuracy as the model is essentially a potential study where results are typically adjusted +/- 30%. Under this view, the model is useful in assessing whether it is plausible to achieve a level of energy savings for an approximate level of cost effectiveness.</li> <li>• WG member questions whether behavioral and financial inputs of the model are engineering assumptions and if adoption assumptions are based on empirical study – Posterity confirms it is not. There was discussion over the use of payback model as a starting point and thereby adjusted, but this is of concern to WG members as some believe that method has been debunked.</li> <li>• WG member questions the set up of the peak factor formula since the peak factor cannot be the same in base consumption and modified (Up) consumption as they have different load shapes. Posterity will share examples with the WG to bring clarity on this matter.</li> <li>• WG member questions how Enbridge intends to use the Posterity model for IRPAs since it appears to only be applicable in preliminary stage of the initial screening. Enbridge confirms they will feed Posterity detailed customer data to run the model. Once Enbridge gets the numbers back from Posterity, if the results show there is potential to satisfy/ eliminate/ defer needs in future, Enbridge can start planning and developing a geotargeted program. As such, Posterity is anticipated to go beyond the technical assessment into a deeper dive by giving them all the data they need to run those models (e.g. types of commercial customers like convenience stores vs.</li> </ul> |  |
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|  | apartments vs. bakery, since they have very different energy needs). |  |
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#### 4. IRP Pilots

| Item Description  | Discussion Comments/Outcome   | Action Items   |
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| <p><b>7 Potential Pilots</b></p> <p>In the pre-meeting materials, Enbridge provided details on 7 single IRP Pilot Options along with an evaluation matrix (not completed for the specific pilots). Through discussion, Enbridge is interested in seeking feedback from the WG on what information is missing/ good/ bad/ what they should focus on so Enbridge can narrow down to 2-3 potential pilots by September 2022.</p> | <p><b>St. Laurent Update</b></p> <p>WG member noted that Enbridge has been approaching the top 5 customers in the St. Laurent area to discuss the need for a new pipeline. There is talk of potentially refiling an amended St Laurent application. As such, WG members share some concern that they should not be wasting time talking about IRPAs for St. Laurent if Enbridge will not consider it. Enbridge confirms they are looking at some of the recommendations in the OEB decision regarding improving monitoring capabilities and looking at the operational ability of the existing pipeline in the St Laurent area. The work is expected to be completed this year. This would not preclude additional consideration of IRPAs.</p> <p><b>Asset Management Plan</b></p> <p>WG members continue to request access to Enbridge's AMP, and related information including demand forecast assumptions, to support discussion of pilots. One WG member noted that information on the system needs in the AMP would be useful even if the underlying demand forecast assumptions were not provided, but another member disagreed. WG member noted that the AMP can be used to see how common or frequent specific types of system needs and customer mixes are across Enbridge's system, to help prioritize potential pilots that will be scalable and representative. Enbridge confirms the AMP is still a work in progress and not in a format that is ready for filling. However, Chris R will follow up with Malini to see what aspects of the AMP they can provide to the WG.</p> <p><b>General Comments on Pilots</b></p> <ul style="list-style-type: none"> <li>WG member notes that Demand Response has not been mentioned as a possible solution for any of the system needs for the</li> </ul> | <p>Chris R. will speak to Malini to see what Enbridge can provide from the AMP to the WG.</p> <p>Enbridge plans on presenting a few more potential pilots at the August 23 WG meeting.</p> <p>WG members can send any comments to Enbridge on the specific pilots based on the materials available at this time, as soon as possible. The comments should be circulated to all WG members.</p> <p>Enbridge to provide larger maps for potential pilots identified and to provide more detailed information on these 7 potential pilots including whether constraints are validated (best efforts for Aug 23 meeting)</p> |



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|  | <p>7 pilots and questions whether this solution is still being considered. Enbridge confirms it is still a possibility and they are looking into this option with some of the bigger customers by reducing demand through incentives during peak periods, but does not see a DR program for general service customers as a likely initial pilot (unless WG disagrees).</p> <ul style="list-style-type: none"><li>• WG member questions whether constraints have been validated or if it is based off a model. Enbridge confirms it is a mix. Some are based off models; some are identified as low-pressure points in Enbridge's system today. Enbridge plans to return to the WG by flagging whether a constraint is validated for each identified pilot. WG member also encourages the prioritization of constraint validation and for Enbridge to invest in the tools to do so.</li><li>• WG member inquires on the rationale for why these 7 specific pilots/system needs were selected – was it based on Enbridge's AMP? Enbridge confirms it is a mix of projects that have a degree of varying needs in terms of timing, volume, location, etc. They are more self identified samples and Enbridge confirms they are planning to bring more potential pilots for WG consideration.</li><li>• WG members question whether ETEE is completely siloed from DSM in the pilots or if there are opportunities to integrate. Enbridge notes the purpose of DSM and ETEE are slightly different. However, WG member encourages for DSM programs to be leveraged (where they can) instead of having Enbridge reinvent the wheel with ETEE programs (e.g. home retrofit program with different incentive package for pilots). Enbridge notes they are considering this.</li><li>• WG member requests larger maps and more detailed information for each potential pilot to be provided in support of each potential pilot identified by Enbridge (not new materials, but materials Enbridge already has for its internal analysis). This includes things like gross analysis, source documents, reports on the condition of the</li></ul> |  |
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|  | <p>existing pipe to be replaced, population/ regional plan, etc. WG members may not read all the materials, but they would like access to the source documents should they need to reference it to give an informed input. Another WG member noted that having access to the preliminary analysis conducted by Enbridge (scoring against screening criteria) would be helpful.</p> <p><b>Parry Sound Pilot</b><br/>WG member notes that the long pipeline is coming from TransCanada where they enhanced the ability to compress gas going North and South. WG member suggests contacting TransCanada to inquire on their ability to increase the pressure to that line; if they can, Enbridge can potentially forego a significant investment that is not necessary. Enbridge confirms they are in dialogue with TransCanada for any system needs close to TransCanada lines.</p> <p><b>Sarnia Pilot</b><br/>Enbridge to provide update in August WG meeting for this potential pilot as they still need to understand the status of the need for vintage steel main replacement and whether IRPAs could address such a need.</p> |  |
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## 5. Next Steps

| Item Description | Discussion Comments/Outcome  | Action Items  |
|------------------|--|---|
| Future Meetings  | <p>The next meeting (#9, August 9) will be focused on the DCF+ test. Enbridge provided a quick update to the WG that Chris R. intends on bringing other Enbridge staff to upcoming DCF+ subgroup meetings to better facilitate discussions. Enbridge hopes to reach agreement (if not consensus) on the enhanced DCF+ test so it can be used as part of the pilot discussions. OEB staff also indicated they will have new materials for this meeting.</p> <p>The following meeting (#10, August 23) will likely focus entirely on pilots.</p> | OEB staff (with input from Enbridge Gas) to develop agenda and circulate materials for meetings #9 and #10. |



## List of Action Items

| Action Item   | Assignment/ Owner                        | Due Date                     |
|---|--|------------------------------|
| Post meeting #6 notes   | OEB staff                                | As soon as possible          |
| Circulate summary of meeting #8 outcomes  | OEB staff                                | As soon as possible          |
| File cost claims  | WG members                               | July 21, 2022                |
| Provide any comments (in writing) on the 7 potential pilots to Enbridge   | WG members                               | As soon as possible          |
| Enbridge to clarify the following items with the WG: <ul style="list-style-type: none"> <li>• What Derating factor covers per ICF report</li> <li>• Outcome/ learnings from Ingleside/Deep River project</li> </ul>   | Enbridge                                 | As soon as possible          |
| Posterity to provide example(s) of peak factor calculations   | Posterity in collaboration with Enbridge | As soon as possible          |
| Enbridge to return to the WG with some details of the AMP/demand forecast (to be determined)  | Enbridge                                 | Meeting #10                  |
| Additional potential pilots with the following updated information for old and new pilots: <ul style="list-style-type: none"> <li>• Larger maps</li> <li>• More detailed information (access to source documents)</li> <li>• Identification of whether constraints are validated</li> </ul> | Enbridge                                 | Best efforts for Meeting #10 |
| Establish agenda for meeting #9 (DCF+) and #10  | OEB staff (with input from Enbridge Gas) | Prior to meetings #9 and #10 |