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February 1, 2024

EB-2023-0125 – OEB Benefit-Cost Analysis Framework
Pollution Probe Comment on draft Phase One Benefit-Cost Analysis Framework

Dear Ms. Marconi:

In accordance with Ontario Energy Board (OEB) direction, below are the comments from Pollution Probe for the draft Phase One Benefit-Cost Analysis (BCA) Framework for Addressing Electricity System Needs (Framework) issued by the OEB December 2023.

Pollution Probe has also had the opportunity to review the comments from Chris Neme of the Energy Futures Group[1] and appreciates that these comments were made available prior to the OEB deadline to assist all parties. Mr. Neme has provided relevant and valuable expertise to the OEB, including sitting on various committees and working groups. If the OEB actions the advice that Pollution Probe submitted November 9, 2023, Mr. Neme would make a valuable contributor if the OEB establishes a working group to resolve the issues that will arise as the BCA Framework is finalized and operationalized. Pollution Probe is also open to providing additional input and support as the BCA Framework is developed and operationalized. Although BCA is not new to Ontario, other jurisdictions are ahead of Ontario and leveraging their knowledge and experience (e.g. via the NSPM toolset) will help Ontario unlock the full benefits of DERs through an efficient and inclusive approach.

General Comments

The OEB indicates that "the intent of the BCA Framework is to encourage the development of solutions that are in the best interests of both an electricity distributor's customers and Ontario's energy customers more broadly and to help level the playing field between NWS and traditional poles-and-wires infrastructure solutions to meet an electricity system need"[2] [Emphasis added].

Overall, the draft Framework released for review and comment is inadequate to meet Ontario's objectives for advancing cost-effective DER solutions or leveling the playing field between Non-Wire Solution (NWS) and traditional poles-and-wires infrastructure solutions. Significant adjustments are required to fix the issues in the draft Framework and it is recommended that the OEB republish the draft Framework after the issues are resolved.

[1] EFG_BCAComments_20240126
[2] OEB-Draft-BCA-Framework-20231214 Section 2.1

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As noted previously by Pollution Probe, the work of the Future of Energy Innovation (FEI) Working Group and related DER initiatives have led to enhanced understanding of issues and a set of recommendations. However, the pace of real change needed to unlock the benefits of DERs for Ontario consumers and communities remains slow and must be accelerated. Real needs and real technical solutions exist today, but the regulatory requirements and solutions are lagging. Publishing a Phase 1 document which relies on an overly restrictive approach has a high potential to further restrict progress in unlocking DER opportunities for Ontario consumers and the related energy system.

The OEB notes that the December 2023 version of the Framework is Phase 1 in the OEB's BCA Framework development process. The OEB notes that "… the OEB **may** expand on the direction provided for this form of BCA in a later Phase 2". The OEB and Guidehouse have taken a narrow approach with the draft Framework published (i.e. the Distribution Service Test as the mandatory test[3]) and it is unclear why the OEB has not leveraged more inclusive and customer focused BCA test in the draft Framework, aligned with industry best practice. Delaying this to a potential Phase 2 is inefficient and not recommended.

Pollution Probe recommends that the OEB republish the draft Framework to address these gaps and remove the DST as the mandatory test for BCA. It may seem like that will cause a short-term delay, but it will actually avoid long-term delays in making real DER progress vs. trying to operationalize an inadequate BCA Framework. Applying a very restrictive test like the Distribution Service Test (DST) could also undermine DER industry activities that are already under development. This is something the OEB indicated it wished to avoid.

A narrow and incomplete approach is not a best practice approach and does not align with leading North American regulatory best practice, such as outlined in the National Standard Practice Manual for DERs (NSPM)[4]. Some references to NSPM were included in the draft Framework, but overall the proposed draft Framework does not align well with the NSPM. It is unclear why only a limited Framework has been proposed now by the OEB and when more inclusive elements would be available for use. Constraining DER Innovation and solutions will slow the progress of cost-effective DER solutions now and in the future. **It is recommended that the OEB leverage the best practice approach outlined in the NSPM**. Going it alone in Ontario outside of best practice jurisdictions in North America will create unnecessary work, misalignment and inefficiencies.

The draft BCA Framework as published does not align with the recommendation from the FEI reports. Use of the DST over that of Societal Cost Test (or even the Energy System Test as referenced in the draft Framework) will have long-term negative impacts to advancing DERs in Ontario, particularly in consideration of the Energy Transition and expected enhanced electrification solution needs. OEB DER focus has included non-LDC DERs[5] which would be undermined if the DST is used as a primary (and mandatory) test[6].

[3] Per Section 2.3 of the Draft Framework
[4] National Standard Practice Manual - NESP (nationalenergyscreeningproject.org)
[5] OEB FEI direction specifically focused on non-LDC DER solutions first.
[6] All definitions of DER including the NSPM definition include a broad range of solutions and should align with broader customer and community benefits to maximize deployment. Ignoring the broader benefits undermines the business case for Ontario consumers and communities to participate in DER programs.

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A narrow restrictive approach does not align with what the OEB has stated about its intent to support DERs in Ontario. Even the most recent Minister's Letter of Direction[7] highlighted the need for the OEB to be more innovative in expanding DERs in Ontario, including[8]:

> *"DERs, through behind-the-meter and front-of-meter technologies, can be used as cost-effective alternatives to conventional electricity infrastructure. They can also help consumers better manage their energy costs and capitalize on investments like roof-top solar, electric vehicles (EVs), batteries, and responsive air conditioners and water heaters. I expect the OEB will continue to work with the Ministry and the IESO toward the Ministry's stated commitment of developing and assessing local and market opportunities for DERs, including through alternative energy business models."*

In addition, Recommendation 17 from the Electrification and Energy Transition Panel Report[9] requested by the Minister of Energy also indicates:

> *"To make full use of the innovation in distributed energy resources and the electricity distribution sector, the OEB and IESO must continue to find ways within their existing mandates and in anticipation of the clean energy economy policy commitment (Recommendation 1) to provide proactive and transparent thought leadership on regulatory policy and critically review and revise their existing policies and processes."*

In general, the draft BCA Framework does not align with Provincial policy direction. The Minister has requested that the OEB consider more integrated energy solution (i.e. aligning and optimizing across consumer energy use), which requires a more inclusive system approach. The draft Framework suggestion of using the DST also does not align with the IESO local distribution program approach, specifically the DR programs for constrained municipalities.

Effective functioning of the BCA Framework will require all the elements to be in place and ensure that they function effectively in a clear manner. **It is recommended that the Societal Cost Test be applied from the start as the primary test and that the DST and EST be only tests for consideration, rather than the primary mandatory test**. Wording in the draft Framework is confusing and may have been intended to allow other tests to be used, but the wording related to the DST overshadows that intended flexibility. Like other regulatory guidance and tools, there is cumulative industry effect once a Framework is published for use. They expand through use and fine-tuning (including regulatory Decisions) to set a tone and approach for broader utility adoption. Starting with the right foundation is critical to success. It is difficult (but not impossible) to add significant changes after this process has begun. It is ideal to have all elements available at the start and make adjustments along the way to ensure the tools are achieving the desired outcomes.

Pollution Probe recommends that the OEB put in place transparent and clear metrics to measure the success of the DER Framework. The intent of the Framework is to unlock the broad range of DER solutions to serve Ontario consumers and energy system. Without objective metrics, it will be difficult to measure progress and course-correct if the Framework (and related OEB tools) are not delivering on the

[7] letter-of-direction-from-the-Minister-of-Energy-20231129
[8] letter-of-direction-from-the-Minister-of-Energy-20231129
[9] Electrification and Energy Transition Panel | ontario.ca

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intended outcomes. If you don't measure it, you can't manage it. A simple scorecard can be developed to measure real DER deployment both at an LDC level and aggregated to show progress across Ontario. Pollution Probe encourages the OEB to publish LDC and Provincial level DER results to gauge whether progress is being made on real results.

The OEB indicates that elements like the binary screening from the gas Integrated Resource Planning (IRP) Framework could provide a useful guide for when BCA screening is required. Unfortunately the gas IRP Framework has failed to provide tangible IRP results[10] since it was launched in 2021. Pollution Probe cautions the OEB on using gas IRP Framework elements until the Framework can be fixed to deliver tangible results. Including only tools to screen out potential DER (and IRP) solutions rather than a more balanced approach to ensure they are appropriately considered can reinforce the existing culture of using tradition pipes and wires solutions over more innovative and cost-effective DER/IRP solutions. It is also important that utilities do not leave projects until it is too late to seriously consider DER/IRP alternatives[11]. This has been a chronic problem for gas pipeline applications[12]. It will be important to look at DER results as a percent of utility projects and programs to demonstrate that more cost effective DER solutions are not simply being screened out prematurely. If several years go by without any tangible results, it would suggest that the Framework is not delivering effectively.

<u>The Benefit-Cost Analysis (BCA) Framework Document</u>

The draft Framework Section 1.2. 'Context for Use' indicates that "the use of NWSs by distribution utilities is considered an element of Conservation and Demand Management (CDM). This Framework provides direction to electricity distributors on the development of the BCA required to accompany any application to deploy an NWS. It is the role of the OEB to facilitate the implementation of the best solutions to meet system needs". CDM is one element within the definition of DERs and ensuring that the Framework enables a full range of NWSs will be critical to setting a foundation that supports current programs (e.g. CDM) and future opportunities. Unfortunately, use of the Distribution System Test (DST) as the primary (and only mandatory[13]) test is narrowly restrictive and will result in a significant portion of DER opportunities (including CDM) from being implemented. It is very confusing in the draft Framework to define the DST as the principal and mandatory BCA test, and then in Section 2.3 indicating that the Energy Systems Test (EST) can be used instead of the DST. It would be less confusing just to indicate that either test is considered acceptable, or even better include the Societal Cost Test as the principal test or at the very least an option. Many DER opportunities that have broader consumer and system benefits will not have those benefits considered by the OEB if the DST is deemed as the principal (and mandatory) cost effectiveness test. Despite the fact that the OEB would not be restricted by this Framework in making application Decisions, the draft Framework as written will be interpreted by stakeholders (and likely OEB Commissioners) as not supporting DER solutions if they fail the DST, which is overly restrictive and not characteristic of the full range of benefits.

[10] Zero tangible gas IRP projects have been implemented or submitted to the OEB for review and validation.
[11] The OEB could add wording in Section 3.2.6. 'Projects and Programs' to ensure sufficient time to consider DER options.
[12] Including excessively claiming an emergency timing exemption for projects when there was plenty of time to consider proper alternatives when the projects were first identified in the utility asset plans. This has resulted in no alternatives being brought forward to the OEB in lieu of traditional pipeline solutions even when such alternatives exist. The OEB has highlighted this issue in various Decisions and indicated that these issues will require examination in Phase 2 of EB-2022-0200.
[13] Per Section 2.3 of the Draft Framework

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The draft Framework Section 3.1.4. 'Symmetrical Treatment ', correctly indicates that "asymmetrical treatment of benefits and costs associated with a project can lead to a biased assessment of the net benefits of that project. Impacts should be treated symmetrically when considering benefits and costs". This is an essential principle, but as noted above the proposed draft Framework and primary/mandatory use of the DST does not enable proper symmetrical treatment of the benefits and costs for many of the cost-effective DER solutions available in Ontario.

For the reasons outlined above, it is recommended that the OEB not require the DST as the principal (and mandatory) test[14] for conducting DER cost effectiveness assessment. The OEB could use DST as simply one screen option for consideration, but by excluding other important considerations, the DST will hamper the OEB's goal to unlock the value of DERs to Ontario energy consumers and the broader energy system. Use of the DST as outlined in the draft Framework includes all the costs associated with DERs, but only a portion of the benefits. This is not a symmetrical approach.

Use of the Societal Cost Test[15] as a principal BCA test would better apply a system wide consideration of costs and benefits. It is not possible to enables DERs as part of the successful Energy Transition without considering the broader benefits and linkages to consumers, communities and the system. Consumers and communities take DER actions for a broad set of reasons and by enabling these relative costs and benefits to be treated in the BCA test, it will lead to better and more integrated results[16]. For example, if a consumer (or community emergency center) can be incented to install batteries for power security and the utility can leverage those benefits for the system, the benefits and net costs to the local distributor are only part of the inputs that should be considered. This ensures that the costs used in the calculations only include the incremental costs, or that the full costs also compare to the full benefits related to the DER implementation. There is a certain level of utility (or stakeholder) baseline costs that occur in the DER baseline and those costs should be removed from the calculation or if all costs are included, all benefits (including societal) must also be included. Use of the DST alone creates an artificial silo for BCA that does not represent reality.

Pollution Probe recommends that the OEB add a section in the Framework to promote more holistic solutions done in partnership and/or through leveraging other consumer investments. This will avoid a siloed implementation approach and ensure that LDCs appropriately partner/coordinate with other stakeholders. The best DER solutions are often those implemented by customers and effectively integrated into the system to achieve system benefits. Why should ratepayers bear the full costs when there are other options. As noted above, there are benefits beyond those of the local distribution system that drive stakeholders to implement or support DERs when LDCs enable that to happen. An integrated approach can avoid costs to ratepayers by leveraging investment from other stakeholder in a manner that meets the needs of the stakeholder and can unlock benefits to the grid. There are significant resources already available that could be leveraged by LDCs (e.g. bi-directional EVs) if there was the proper guidance, requirements and incentives for consumers and/or LDCs.

[14] Per Section 2.3 of the Draft Framework
[15] Or TRC Plus Test used by the OEB for DSM
[16] Siloed approaches will not be successful to meet Ontario future energy needs, as outlined in the letter-of-direction-from-the-Minister-of-Energy-20231129

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To ensure a more holistic and integrated approach for DER consideration in Ontario, **Pollution Probe recommends that the OEB adopt the NSPM definition for DERs in the OEB's Framework document**:

> *Distributed Energy Resources (DERs) are resources located on the distribution system that are generally sited close to or at customers' facilities. DERs include EE, DR, DG, DS, EVs, and increased electrification of buildings. DERs can either be on the host customer side of the utility interconnection point (i.e., behind the meter) or on the utility side (i.e., in front of the meter). DERs are mostly associated with the electricity system and can provide all or some of host and/or support the utility system by reducing demand and/or providing supply to meet energy, capacity, or ancillary services (time and locational) needs of the electric grid.*

Pollution Probe recommends that the OEB add another criteria "Customer benefits and Impacts" to the list in Section 3.1. 'What to Include' (Similar wording should be included in Section 6. 'FILING REQUIREMENTS'**).** This would ensure that the LDC consider net benefits and related impacts to customers. It would also ensure that there has been sufficient consumer analysis to validate that the proposed option meets customer needs. Doing a BCA without any consideration of consumer benefits and impacts is limiting the role consumers have in making DERs successful/unsuccessful in achieving their goal. Opening the door to a proactive customer approach will advance DERs much faster than an LDC could do with utility investments alone[17]. A siloed approach using the DST without any broader consideration of net benefits or consumer impacts is a recipe for disaster.

Pollution Probe recommends that wording be added to Section 3.1.3. 'Difficult to Quantify and Qualitative Impacts' to indicate that it is better to estimate an input based on best available information than to simply ignore it. Leaving assumptions out of the BCA just because they are difficult to quantify can have a more significant impact than using a best available estimate. Using this approach will also have the added benefit of providing an evergreen catalogue of best available assumptions that can be leveraged and improved by the OEB and LDCs over time.

Section 3.2.2. 'Net Present Value / Discounted Cash Flow Analysis' indicates that "All value streams included in the cost-effectiveness tests must be evaluated on a net present value basis, in constant dollars". It is unclear why the analysis would not be done using the discounted cash flow with the societal discount rate and inflation factors provided in that section. The proposed use of the Social Discount rate is supported and represents appropriate best practice.

Section 3.2.3. relates to Discretionary vs. Non-Discretionary System Needs. This section has the potential to cause some confusion when trying to determine which term to use. Most DER solutions will address (current or future) issues that would otherwise require LDC spending in line with their Distribution System Plan[18]. If a DER solution reduces or removes the need to implement a poles-and-wires solution that was in the LDC Distribution System Plan, then it would typically be considered a Non-Discretionary system need for DER BCA purposes. The OEB should make it clear that DER alternatives should be

[17] An example is the high success rate for air-source heat pumps to provide cost-effective heating and cooling, which have outpaced the installation of traditional heating systems. Providing the right information and incentives to consumers enables customer choice to accelerate results in real time.

[18] Utilities put forward their DSP in support of their 5 year incentive plans and DERs need to be part of that consideration OEB Decisions are issued.

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considered and prioritized when developing the Distribution System Plan. It is also important that supply side alternatives do not get a different classification from demand side alternatives that are more cost effective from a consumer and system perspective. Demand side alternatives align more closely with decreased energy and emissions policy than incremental supply options. As noted earlier, the DST also favours supply options over more efficient demand side options since consumer cost benefits are excluded. This is not the case if the Societal Cost Test is applied.

Section 4. 'DISTRIBUTION SERVICE AND ENERGY SYSTEM BCAs' indicates that "Electricity distributors must include a distribution service BCA in their filings, and may include an energy system BCA". This sets an unlevel playing field for cost-effective DERs. **Pollution Probe recommends that the OEB indicate that electricity distributors must include an assessment of distribution service options in their filings in accordance with the OEB's BCA Framework**. This sets a clear expectation that DER alternatives must be considered where appropriate, not just an optional consideration. Similar wording should be included in Section 6. 'FILING REQUIREMENTS'.

Section 5.1. 'Distribution Service BCA Benefits and Costs' correctly identifies that "There is not, at present, a centrally defined set of generic values that electricity distributors may use formulaically for conducting the DST". That is also true of the EST and SCT. That is why **Pollution Probe recommends that the OEB maintain an 'evergreen' appendix of best practice assumptions which can be updated by the OEB on an annual basis**. This should not prohibit a utility from bringing forward more up to date or appropriate assumptions, but the appendix of DER BCA assumptions would provide a solid baseline toolset for utilities. Having a common baseline resource is more efficient than requiring each utility to build its own resources. This type of approach has been successfully leveraged in Ontario for other purposes such as DSM/CDM.

BCA Framework Template & Example

It is critical that the Framework and related examples are applicable across the full range DER solutions. These would include those delivered directly by LDCs, those delivered by others (e.g. consumers, municipalities, etc.), or a combination of both. It will be important to provide an illustrative menu of DER solutions that represent the full range of DER potential options and test the Template against those options to ensure that there is not an unintended bias toward a narrow range of solutions. Those kinds of tool biases create systematic barriers and act as an invisible disincentive to LDCs.

It is problematic to provide just one example when there is a broad range of opportunities related to DER implementation. More examples should be published, including those currently installed by customers and municipalities that have added benefits to the system[19]. There are also case studies relevant to the NSPM that could be leveraged[20]. The purpose of the BCA Framework is to unlock innovative DER solutions and only providing one limited example is not aligned with that goal. The OEB could explore assistance from other organisation (e.g. Energy4TheFuture, Energy Futures Group, etc.) if they are having trouble developing other examples. After the draft Framework is updated, it is recommended to circulate half a dozen examples with the updated draft Framework for review and comments. These could include DR, energy efficiency (combined gas and electric), bi-directional EVs,

[19] Even leveraging assets already installed by customers for peak load reduction (e.g. GA busting)
[20] BCA Use Case Examples - NESP (nationalenergyscreeningproject.org)

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battery storage, air-source heat pumps (similar to the IESO program). One example from each element included in the NSPM DER definition would be useful.

Thank you for the ability to provide comments and Pollution Probe is committed to supporting the OEB as it continues to advance DERs in Ontario. Please reach out should you have questions on anything included above.

Respectfully submitted on behalf of Pollution Probe.

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