February 1, 2024

Nancy Marconi
Registrar
Ontario Energy Board
2300 Yonge Street, P.O. Box 2319
Toronto ON, M4P 1E4

Dear Ms. Marconi,

RE: EB-2023-0125: Draft Phase One Benefit-Cost Analysis Framework, - Energy Probe Comments

In its letter of December 14, 2023, the OEB invited registered stakeholder participants to provide written feedback on the draft Framework. The following is the feedback of Energy Probe Research Foundation (Energy Probe) specific sections of the draft Framework. Text in italics are quotes from the draft Framework.

2.3 Interpreting BCA Outcomes

Electricity distributors have the option of employing the EST in addition to the DST to evaluate potential NWSs. The passing criteria when using the EST are identical to those of the DST noted above.

Electricity distributors may propose (with supporting rationale) that an NWS found to be marginally7 non-cost-effective when applying the DST is still the preferred option to meet a system need.8 The OEB will consider approving such proposals when there are compelling qualitative impacts that support the deployment of the specific NWS and/or the EST provides further justification as to the feasibility of a given NWS.

Energy Probe Feedback
It is not clear if the results of the DST and EST are additive, like the treatment of Stage 1 and Stage 2 results in EBO 134. Energy Probe suggests that they should not be additive.

3.1.2 Forward Looking Uncertainty

Expected-value calculations may be based on sensitivity analyses or scenario reviews conducted as part of the BCA, on historical data, or documented outcomes from similar or analogous projects. Supporting evidence must be provided for any probability estimates used in expected-value calculations.

Energy Probe Feedback
Probability estimates used in expected value calculations should consider the probability that the NWS will not be able to deliver the expected outcome due to incorrect design or faulty installation. Energy Probe believes that there is a high probability of this because there is not much experience with NWS in Ontario.

3.1.4. Symmetrical Treatment

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.

Energy Probe Feedback
The benefits and costs should be presented from the perspective of distributor's ratepayers because they are the ones who will be required to pay for the proposed NWS. Benefits to parties that are not ratepayers of the distributor should not be included in the analysis. For example, NWS proposals where the ratepayers of the distributor are required to bear the costs of the NWS while the benefits accrue to the society at large should not be acceptable.

3.1.5. Incremental Analysis

In quantifying the benefits and costs of value streams, electricity distributor's BCAs should consider only impacts incremental to the reference scenario that captures the business-as-usual outcome. BCAs must articulate the reference scenario in enough detail such that it is evident that the impacts considered in the BCA are, in fact incremental.

Energy Probe Feedback
If the implementation of NWS requires capital expenditures on systems to maintain reliability and power quality, then these should be included in the BCA.

3.2.2. Net Present Value / Discounted Cash Flow Analysis

All value streams included in the cost-effectiveness tests must be evaluated on a net present value basis, in constant dollars. Consistent with the IESO's guidance for the economic analysis of NWSs, electricity distributors should use a real social discount rate of 4% for discounting cash

flows to present value, and an assumed inflation rate of 2% for conversions between nominal and constant dollars.

Where input values used by an electricity distributor reflect a different inflation rate assumption, that assumption may be used to deflate the value stream to constant dollars, and the reasoning included in the BCA documentation.

The use of the social discount rate to capture the time-value of money is consistent with the perspectives of both the DST and EST, which is to maximize the long-term net benefit of distribution service and the energy system (respectively) for customers (see Sections 4.1 and 4.2). Electricity distributors weighted average cost of capital (WACC), among other factors, should be used in annualizing the revenue requirement associated with lump-sum capital investments, but this revenue requirement is then discounted at the societal discount rate (plus inflation) for the purposes of assessing the benefits to customers of deferring such investments (see Section 5.1.1.1). The WACC should not be used for estimating the net present value of any value stream included in the cost-effectiveness tests.

Energy Probe Feedback

A distributor's BCA must be presented from the perspective of the distributor's ratepayers who will be required to pay for the NWS and face the risk that NWS will not deliver the promised benefits. The risk to the ratepayers is reflected in the WACC of the distributor. This risk greater than the risk to the society at large as reflected in the social discount rate since the society at large will not be required to pay through increased rates to pay for the wires solution if the NWS does not deliver the promised benefits. Energy Probe believes that the use of the social discount rate is wrong and the OEB specify that WACC must be used.

3.2.4. Study Period

The study period – the length of time into the future considered by the BCA – should be determined by the alternatives being considered and should generally be sufficiently long to capture the costs and benefits under comparison.

For example, in the case where a transformer station upgrade is deferred by five years using an NWS, the study period would extend to the year in which the station upgrade is fully depreciated (e.g., 40 years after the deferred need date). This would allow for a comparison of the net present value of the lifetime annualized cost to customers of the transformer upgrade whether it was installed at the need date, or five years later at the deferred date.

Energy Probe Feedback

The example given suggest that the BCA for the deferral of a transformer upgrade should cover costs and benefits for five years of the deferral and 40 years of the depreciation of the transformer, a total of 45 years. It is not clear how the costs of NWS and the depreciation of the NWS are to be treated. The NWS may have a life that is much shorter than the life of the transformer.

4.1. Distribution Service Test

Table 1: DST Impact Categories indicates that only qualitative information is required in the BCA on *Distribution Services Ancillary Services Costs.*

Energy Probe Feedback
It is not clear what are Ancillary Services. If ancillary services are investments in control systems, these may be large and should be treated as quantitative information, not qualitative information.

Respectfully submitted on behalf of Energy Probe.

Tom Ladanyi

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