



BCA Handbook

Stakeholder Session: Project Plan Review

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Agenda

- Guidehouse's Goals for this Session
- Key Concepts
 - Discretionary vs. Non-Discretionary System Needs
 - The Two Tests
 - Programs and Projects
 - Market Development Costs
- BCA Handbook Outline
- Questions to Stakeholders

Guidehouse's Goals

Our goal for this presentation is to prime stakeholders to review the Project Plan and provide feedback.

- **The purpose of the BCA Handbook is to help LDCs address electricity system needs.** We want feedback on Handbook content that will help LDCs develop robust BCAs.
- **We want to use specific examples relevant to LDCs.** If there are specific DER implementation needs that could be served by DERs as NWAs, or any other specific information relevant to the BCA Handbook that you would like to see used in an example, please share these.
- **The Plan is intended to provide an early look at Handbook content.** To help stakeholders provide specific and actionable feedback, the Plan includes a very detailed outline of the Handbook itself. Some sections of the “outline” are effectively early drafts of Handbook content.

Key Concepts

DERs as NWAs for Discretionary vs. Non-Discretionary System Needs

A system need is non-discretionary when it must be met for the LDC to comply with applicable codes, standards, laws or regulations.

Non-Discretionary



When a DER is evaluated as a possible NWA for a non-discretionary need, the principal benefit included is the avoided costs of the otherwise required solution.

A DER solution is preferred when the avoided cost benefits (of avoiding/deferring the poles-and-wires solution) exceed the DER's costs.

Discretionary



When a DER is evaluated as a possible NWA for a discretionary need all solutions (DER and traditional) should be assessed with entirely separate BCAs. Avoided costs of an alternative solution are not considered benefits.

A DER solution is preferred when its benefits, net of costs, exceed those of all other alternatives considered (including taking no action).

The Benefit-Cost Analysis Tests

	Distribution Service Test	Energy System Test
Priority	The DST must be performed for all BCAs	The EST may be performed, at the LDC's discretion, or if requested by the OEB.
Perspective	Analogous to Program Administrator Cost (PAC) test in intention, but specific to LDC boundaries. <i>What maximizes value of distribution service to LDC's customers?</i>	Analogous to bulk system PAC in intention but may include additional system benefits and costs. <i>What maximizes value to provincial ratepayers as a whole?</i>
Primary Benefits	Primary benefit streams must be estimated by the LDC using the best available information specific to the underlying system need being served.	Ideally, custom bulk system benefits will be developed with the IESO through the IRRP process. Generic values are available to use as place-holders, but must be replaced by IESO values, when available.

Distribution Service Test

“This [test] includes the costs of distribution service... and changes to the value of the distribution service... experienced by distribution customers.” - Report of the BCA Subgroup

Impacts, Costs, and Benefits for a Non-Discretionary System Need

Energy System Impact Type – From BCA Sub-Group Report	Costs	Benefits
Distribution Cost	DER capacity acquisition costs	
Distribution Capacity		Avoided cost benefits: deferral of poles-and-wires solution capital costs.
Distribution O&M	DER admin and EM&V costs	Avoided cost benefits: deferral of poles-and-wires solution O&M costs.
Distribution Ancillary Services	Incremental distribution ancillary services costs to integrate DER.	Incremental distribution ancillary services benefits from DER
Risk	Qualitative or quantitative assessments of uncertainty.	
General Impacts (Affecting Distribution Service Directly)	Reliability	Reliability, resilience, planning value, innovation & market transformation

Costs and benefits for the DST will be specific to distribution need being served and DER being used.

Energy System Test

“A solution is preferred if it results in the greatest net energy system benefits to energy customers overall... This test determines whether provincial ratepayers as a whole will be better off by implementing the DER as opposed to the alternatives.” - Report of the BCA Subgroup

Impacts, Costs, and Benefits for a Non-Discretionary System Need

Energy System Impact Type – From BCA Sub-Group Report	Costs	Benefits
Distribution Value	Most distribution impacts should also be counted as part of the EST, avoiding double-counting	
Transmission Capacity <i>(adjusted for losses)</i>		Avoided cost benefits: deferral of poles-and-wires solution capital costs.
Generation Capacity <i>(adjusted for losses)</i>		Avoided cost benefits: deferral of cost of procuring of marginal generation capacity
Energy <i>(adjusted for losses)</i>	Incremental DER energy requirements by time-period.	DER energy cost savings by time-period.
Ancillary Services	Incremental distribution ancillary services costs to integrate DER.	Incremental distribution ancillary services benefits from DER
Risk	Qualitative or quantitative assessments of uncertainty.	

Costs will be specific to the DER being used.

Ideally, benefit estimates should be obtained from IESO through IRRP process. Where this is not practical for project timelines, the Handbook will identify generic values for system benefits sourced from IESO documents that may be used.

Projects and Programs

Consistent with the requirements for justifying capital expenditures in the [DSP Filing Guidelines](#), LDCs may develop BCAs either for *projects* or *programs*.

Projects



System need is large, centralized, and relatively certain.

For example: long-term load growth in a region requires a new transformer station.

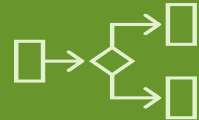
Programs



Many smaller, scattered system needs likely to recur (justifying up-front investment in human capital and processes).

For example: EV adoption clustering on specific feeders.

Decision Driver



Whether a project or program is appropriate is determined by the characteristics of system *need*, not the DER solution.

Market Development: The Cost of a Level Field

Guiding Principle #3 of the Framework for Energy Innovation:

“Drive Sector Performance – Does the policy promote economic efficiency and cost-effectiveness? Does it support a level playing field for DER solutions?”

Market Development Costs

- LDCs have always met system needs with poles-and-wires solutions within living memory.
- DERs are new and using them as NWAs is new.
- A level playing field between DERs and poles-and-wires requires development of operational capabilities, management workflows, and improved DER performance certainty.

BCAs and Market Development

- Early adopters will contribute disproportionately to defraying the costs of market development.
- Distributors may propose, with written justification, that costs related to market development may be excluded from the BCA.
- *Alternatively*, longer-term benefits to market development may be included in the BCA.

This is consistent with the OEB’s objective of facilitating innovation, and provided special consideration for *“innovative projects and programs”* (DSP Filing Requirements, Section 5.4.1.1)

Project Plan Summary

The most critical piece for stakeholders' review is the Handbook Outline

Project Plan

1. **Introduction.** Institutional context.
2. **BCA Documentation in Ontario and Other Jurisdictions.** Sources reviewed by Guidehouse to support Handbook development.
3. **Key Considerations for the BCA Handbook.** Top-of-mind issues informing Handbook content.
4. **BCA Handbook Outline**

BCA Handbook Outline

1. **Introduction**
2. **Purpose and Use.** When is a BCA required & how does it integrate with other filing guidance?
3. **General Methodological Considerations.** What to include and how to include it.
4. **Cost Effectiveness Tests.** Descriptions of tests, summary of impacts considered.
5. **Benefits and Costs.** How to source impact values
6. **Reporting Requirements.** Structure and required content of BCAs
7. **Examples.** Three summary (purely illustrative) examples of BCAs.

Questions for Stakeholders

Key Questions to Guide Review of the Project Plan and BCA Handbook Outline.

- 1. Content.** What additional information could be included in the Handbook that would help LDCs to assess the value of DERs for meeting system needs?
- 2. Impacts.** For the DST and EST, are the proposed impacts and their suggested applicability correctly aligned with the purpose and intent of each test?
- 3. Examples.** The BCA Handbook will include three summary worked examples of BCAs for different DER NWAs. What types of system needs, DER solutions, and practical constraints should these examples address? The more specific the detail that can be provided here, the better.
- 4. Inputs.** We expect that the most significant benefits and costs of DERs will be derived from project- and program-specific information. Are you aware of any material impacts for which generic values are available and might be used?

Your Guides

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