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OFFICE OF THE ATTORNEY GENERAL



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April 11, 2025

Ms. Brinda Westbrook-Sedgwick
Public Service Commission
Of the District of Columbia Secretary
1325 G Street, N.W., Suite 800
Washington, DC 20005

**Re: GD-2019-04-M – In the Matter of the Implementation of 2019 Clean Energy
DC Omnibus Act Compliance Requirements**

Dear Ms. Westbrook-Sedgwick:

On behalf of the Department of Energy and Environment (DOEE), please find enclosed DOEE's Initial Comments on the Draft Benefit Cost Analysis Model (Comments) in the above-captioned proceeding. These Comments were prepared on behalf of, and under the control of, DOEE by Synapse Energy Economics, Inc. If you have any questions regarding this filing, please do not hesitate to contact the undersigned.

Respectfully submitted,

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GD-2019-04-M

INITIAL COMMENTS OF

DEPARTMENT OF

ENERGY AND

ENVIRONMENT

ON DRAFT BENEFIT COST

ANALYSIS MODEL

PREPARED BY SYNAPSE ENERGY

ECONOMICS, INC.,

ON BEHALF OF

THE DEPARTMENT OF ENERGY

AND ENVIRONMENT

Comments on the Draft Benefit-Cost Analysis Model

GD-2019-04-M

Prepared for the District of Columbia's Department of
Energy and Environment

April 11, 2025

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1. SUMMARY OF COMMENTS

On February 25, 2025, the Public Service Commission of the District of Columbia (PSC or Commission) requested comments on the benefit-cost analysis (BCA) model (BCA Model) and associated Guidebook developed in relation to the Clean Energy Act Implementation Working Group's (CEAIWG or Working Group) recommendations on the development of a standardized benefit-cost analysis framework in GD-2019-04-M.

After reviewing the BCA Model and Guidebook our key feedback includes the following.

- The BCA Model is a sound first step in implementing the CEAIWG's recommendations and the Commission's prior findings. The BCA Model generally complies with the Commission's order and includes relevant test impacts.
- The CEAIWG's recommendations and the Commission's order adopting the recommendations drew heavily from the National Standard Practice Manual (NSPM) for Benefit-Cost Analysis of Distributed Energy Resources.¹ The Guidebook should include a section that describes the framework used for evaluating costs and benefits within the BCA Model, which is largely based on the NSPM.
- Consistent with the Commission's findings, the BCA Model and framework should apply to all utility investments, including investments beyond those explicitly described as helping to reach climate goals. Application of the framework to all utility investments should be made clear in both the BCA Model and Guidebook.
- The Utility Cost test is by far the best way to indicate the impacts of utility investments on customers because all the costs and benefits in the Utility Cost test affect revenue requirements, which all customers pay for in their energy bills. Therefore, we recommend that the Utility Cost test replace the TRC as the secondary test in the BCA model and users guide.
- Some aspects of the model need improvement for better transparency and accuracy. As examples, the BCA Model is missing environmental impacts for other fuels and risk impacts, and several impacts are combined in the BCA model and should be valued separately. The NSPM provides a strong foundation for the additional framework elements that we find are currently missing from the Guidebook.
- All modeled inputs, especially avoided costs, should be developed by a third-party and updated at regular intervals, and could be developed as part of a joint effort with other Mid-Atlantic

¹ National Efficiency Screening Project, "National Standard Practice Manual for Benefit-Cost Analysis of Distributed Energy Resources," August 2020.



jurisdictions. The BCA Model inputs should make use of the NSPM’s companion document: the Methods, Tools and Resources handbook (MTR).²

- The primary BCA test developed by the Working Group should not be referred to as the Societal Cost Test because that label has some misconceptions associated with it, and does not reflect what was agreed to by the Working Group. Instead, the primary BCA test should be referred to as the DC Test.
- The BCA Model should provide more guidance to the user when populating inputs, and the user should have space within the BCA Model to document input assumptions.
- During Phase 2, Part B, the Commission and stakeholders can continue to improve the BCA Model and analyze the impacts of utility investments. The Commission should give special attention to considering equity impacts separately from the BCA Model.

2. INTRODUCTION

2.1. Background

The CleanEnergy DC Omnibus Amendment of 2018 charges the Commission with considering the effects on global climate change when regulating utility companies.³ To facilitate its review, the Commission convened the Clean Energy Act Implementation Working Group, which in November 2021 released a report recommending the Commission adopt a framework for benefit-cost analyses to use when assessing regulated activities that can result in climate impacts.⁴ In December 2023, the Commission adopted several of the CEAIWG’s recommendations, and ordered the development of a BCA model to screen utility investments (Order No. 21938).⁵ The draft BCA Model was released in February 2025, and the Commission now seeks comment on the model and accompanying Guidebook.⁶

With its approval of the CEAIWG’s recommendations, the Commission opened Phase 2 of the BCA screening process. The Commission further divided Phase 2 into Parts A and B.

² National Efficiency Screening Project, “Methods, Tools and Resources: A Handbook for Quantifying Distributed Energy Resource Impacts for Benefit-Cost Analysis,” March 2022, <https://www.nationalenergyscreeningproject.org/resources/quantifying-impacts/>

³ CleanEnergy DC Omnibus Amendment of 2018, § 103.

⁴ Clean Energy Act Implementation Working Group, “Framework for Compliance with the Clean Energy Omnibus Amendment Act of 2018 (the CEDC Act) of the District of Columbia,” Case No. GD-2019-04-M, November 16, 2021.

⁵ Public Service Commission of the District of Columbia, GD-2019-04-M, Order No. 21938, December 8, 2023.

⁶ Public Service Commission of the District of Columbia, GD-2019-04-M, Notice dated February 25, 2025.

- Phase 2, Part A is intended to establish the interim BCA model for screening utility investments using the Societal Cost Test (SCT) and the Total Resource Cost Test (TRC).
- Phase 2, Part B is intended to refine the BCA model, including completion of more difficult to quantify portions of the test.

2.2. BCA Model and Guidebook

The BCA Model is an Excel spreadsheet tool designed to evaluate and compare utility electric and natural gas investments intended to contribute to DC's climate goals. The BCA Model screens for cost-effectiveness by using the SCT as the primary test and the TRC as the secondary test.

The user of the BCA Model adds inputs specific to the investment being screened, including financial and savings inputs, and assumptions such as measure life and a net-to-gross ratio (see the "Interactive Dashboard" tab of the BCA Model). The model uses those inputs, combined with pre-determined inputs such as avoided costs, to calculate the multiple benefits resulting from the investment, as well as lifetime carbon savings in tons of CO₂e, lifetime energy savings in MMBtu, and the resulting net benefits and benefit cost ratios. The model user has the option to save and compare results from different investment inputs and scenarios (see the "Portfolio Viewer" tab of the BCA Model).

2.3. Experience

Tim Woolf and Erin Malone of Synapse Energy Economics (Synapse) provide these comments on the draft BCA Model to the DC Department of Energy and Environment (DOEE).

Tim Woolf has over 40 years of experience analyzing technical and economic aspects of energy and environmental issues. He served four years as a commissioner at the Massachusetts Department of Public Utilities, where he played a leading role in developing the Commonwealth's clean energy policies. He has extensive experience with all aspects of benefit-cost analysis and was the lead author of the National Standard Practice Manual for Assessing Cost-Effectiveness of Distributed Energy Resources. He is a lead technical advisor for the National Energy Screening Project.

Ms. Malone specializes in assessing energy efficiency policy, program design, and implementation. Since joining Synapse in early 2012, much of her work has focused on energy efficiency cost-effectiveness, rate and bill impacts, and best practices for energy efficiency. She has developed and modified Excel-based benefit-cost screening tools for use in Massachusetts, Rhode Island, Vermont, New Hampshire, and other jurisdictions. Prior to joining Synapse, Ms. Malone served as an economist in the Electric Power Division at the Massachusetts Department of Public Utilities, specializing in the review of electric utilities' energy efficiency activities.

2.4. Our review

We reviewed the BCA Model and Guidebook in detail. We compared it to the Commission's decisions in Order No. 21938 adopting the CEAIWG's recommendations, to the CEAIWG's report, and to the



guidance provided in the NSPM for Benefit-Cost Analysis of Distributed Energy Resources. We reviewed the BCA Model's structure and the impact values generally to assess whether the model will produce results that are accurate, transparent, and appropriate for screening utility investments. We also entered illustrative energy efficiency measures into the BCA Model to assess its functionality and review the draft results.

3. BCA FRAMEWORK

3.1. Describing the framework

The Commission indicated that a standard BCA framework should be developed in Phase 2, Part A.⁷ The BCA Model and Guidebook do not currently describe the framework for the BCA tests that the model is applying.

We recommend that the Guidebook include a section that describes the framework used for evaluating costs and benefits in the BCA Model. This will provide important background and foundation for designing and using the BCA Model over time. As stated in the NSPM for DERs, the framework should include three elements:

- A set of **fundamental principles** that serve as the foundation for assessing the cost-effectiveness of potential utility investments in an economically sound and policy-neutral manner.
- A **multi-step process** for developing or informing a jurisdiction's primary test - the Jurisdiction-Specific Test (JST) - as guided by the NSPM principles.
- Guidance on **when and how to use secondary tests** to inform (a) the prioritization of cost-effective utility investments, as determined by a primary JST, and (b) decisions around marginally non-cost-effective utility investments.

The fundamental principles should include the following:

1. Treat DERs as utility system resources.
2. Align the BCA test with policy goals.
3. Ensure symmetry.⁸
4. Account for relevant, material impacts.
5. Conduct forward-looking, long-term, incremental analysis

⁷ Public Service Commission of the District of Columbia, GD-2019-04-M, Order No. 21938, December 8, 2023, page 17.

⁸ Symmetrical treatment in the accounting of benefits and costs is necessary to avoid bias toward any one resource, whereby both benefits and costs are included (or both excluded) for each relevant type of impact. For example, if the full range of utility system costs are included, then the full range of utility system benefits should be included in the cost-effectiveness analysis, even if hard to quantify.

6. Avoid double-counting impacts
7. Ensure transparency
8. Conduct BCAs separately from rate impact analyses.

The multi-step process has already been conducted through the Working Group. Table 1 in Section 5.1 presents the impacts that the Working Group decided to include in the primary test. We recommend that the Guidebook include a description of the Working Group process and the impacts that are included in the primary test.

When and how to use the secondary TRC test should be described in the Guidebook. In general, secondary tests can be used as a way to prioritize cost-effective utility investments, to make decisions about marginally cost-effective utility investments, or to conduct sensitivities regarding the results of the primary test. The TRC test is not the right test to evaluate affordability, as implied by the Commission.⁹ The Utility Cost test is by far the best way to indicate the impacts of utility investments on customers because all the costs and benefits in the Utility Cost test affect revenue requirements, which all customers pay for in their energy bills. Therefore, we recommend that the Utility Cost test replace the TRC as the secondary test in the BCA model and users guide.

Principle #8 requires that BCAs be conducted separately from rate, bill, and participation analyses. The Guidebook should state clearly that the BCA tool is not intended to estimate rate, bill, and participation impacts, but these should be modeled separately.

3.2. The DC Test

We recommend that the primary test be renamed to something that is specific to the District of Columbia, e.g., the DC Test. This is important because the DC Test is not the same as a societal cost test.

A societal cost test label brings some misconceptions with it. First, it implies that all societal impacts are or should be included in the test, which is not the case for the DC Test. For example, jobs are not included in the DC Test, and maybe there are other impacts. Second, there are some impacts that might be treated differently from a societal perspective than from a regulatory perspective. This is true for transfer payments. Some parties argue that tax incentives and wholesale market price effects (DRIPE) are transfers and should therefore not be included as a benefit under the SCT. While this might be true for a societal perspective, it is not true from a regulatory perspective.

It is also important to call the test the DC Test because it is unique to DC, as it includes impacts specific to DC's policies and the Working Group's efforts, and to avoid confusion with tests used in other states. The DC Test is a jurisdiction-specific test, and should be labeled as such for the sake of clarity and transparency.

⁹ Public Service Commission of the District of Columbia, GD-2019-04-M, Order No. 21938, December 8, 2023, page 22.

This new name should be described in the Guidebook and applied throughout the Guidebook and the BCA Model.

3.3. Distributional equity analysis

The Working Group and the PSC order require that equity be accounted for in evaluating utility investments, and an approach for accounting for equity is currently being developed as Phase 2, Part B.

We recommend that any equity analyses be conducted separately from the BCA Model. There are many aspects to energy equity that cannot be easily monetized and analyzed in a computer model. We recommend against developing a single, monetary input to reflect equity issues in the BCA test or the BCA Model. Further, we recommend the Guidebook clearly explain that the equity analyses be conducted separately from the model.

Our above recommendations are consistent with a recent guide on distributional equity analysis (DEA) prepared by the experts who developed the NSPM.¹⁰ The DEA guide is designed to support the Commission and stakeholders in accounting for equity impacts of utility investments by describing an analytical framework for DEAs in the context of cost-effectiveness evaluations. The Commission should use the recommendations from this report when developing its approach and tools for considering equity.

3.4. Application of the framework to utility investments

The BCA Model and framework should apply to all utility investments, both supply side and demand side investments. This includes investments beyond those explicitly described as helping to reach climate goals. This approach is consistent with the Commission's findings that use of a societal cost test is intended to capture more impacts than just climate impacts, and that a standardized framework can apply to utility proposals.¹¹ Application of the framework to all utility investments should be made clear in both the BCA Model and Guidebook.

4. FINDINGS FROM REVIEWING THE MODEL

Generally, we find the BCA Model complies with the Commission's direction to provide a BCA model based on the CEAIWG's report. The BCA Model and accompanying Guidebook provide the data and

¹⁰ US Department of Energy, "Distributional Equity Analysis for Energy Efficiency and Other Distributed Energy Resources, A Practical Guide," May 2024, <https://www.nationalenergyscreeningproject.org/resources/distributional-bca/>.

¹¹ Public Service Commission of the District of Columbia, GD-2019-04-M, Order No. 21938, December 8, 2023, pages 21-22.

information requested by the Commission for Phase 2, Part A. Most of the impact values included in the model appear to be appropriate and reasonable, especially for Phase 2, Part A, which is designed to quickly implement a reliable model to screen utility investments.

We also found there are several ways in which the BCA Model could be improved. Some impacts and model elements need improvement, either immediately during Part A or later during Part B, to ensure robust, transparent results. We provide more detail on our findings in the sections that follow.

4.1. Impacts included in the tests

The BCA Model clearly identifies the cost and benefit impacts included in the DC and TRC tests (see the “Benefits & Costs Viewer” tab of the BCA Model). Table 1 summarizes the impacts included in the BCA Model, using the impact terminology presented in the BCA Model, grouped by the NSPM’s suggested impact organization.

Generally, most of the impacts required by the Commission and recommended by the NSPM and CEAIWG report are included in the BCA Model, either calculated in the BCA Model consistent with the Commission’s direction for Part A, or flagged to be included during Part B.

There are a few key impacts missing from the model, as summarized below.

Table 1. Impacts included in BCA Model

Impact	DC Test	TRC	Part A or B
Utility System Impacts			
Electric System			
Energy and Ancillary Services (includes DRIPE)	X	X	A
Generation Capacity	X	X	A
Transmission Capacity and System Losses	X	X	A
Distribution Capacity, O&M, and Voltage	X	X	A
Distribution System Losses	X	X	A
Credit and Collection Costs	X	X	A
RPS Compliance (Includes Env. Compliance)	X	X	A
Gas System			
Energy and Capacity (includes Environmental Compliance)	X	X	A
Transmission Capacity	X	X	A
Distribution Capacity	X	X	A
Distribution O&M	X	X	A
Market Price Effects (DRIPE)	X	X	A
Credit and Collection Costs	X	X	A
Both Electric and Gas Systems			
O&M	X	X	A
Program Administration Costs	X	X	A
Interconnection Fees	X	X	A
Utility Performance Incentives	X	X	A

Impact	DC Test	TRC	Part A or B
Locational and Temporal Value of DER	X	X	B
Reliability	X	X	B
Resilience	X	X	B
Host Customer Impacts			
Propane	X	X	A
Fuel Oil	X	X	A
Gasoline	X	X	A
Avoided Water Costs	X	X	A
Host Portion of DER Costs	X	X	A
Host Transaction Costs	X	X	A
Financial Incentives (non-ratepayer funded)	X	X	A
Tax Incentives (non-State)	X	X	A
Host Customer Non-Energy Impacts	X		A
Low-Income Impacts (Equity)	X		B
Moderate-Income Impacts (Equity)	X		B
Societal Impacts			
CO2	X		A
CH4	X		A
N2O	X		A
Nox	X		A
SO2	X		A
PM (including subset of PM2.5)	X		A
HFCs	X		B
SF6	X		B
Upstream Emissions	X		B
Racial Equity	X		B
Energy Burden (Equity)	X		B
Public Health	X		B

Environmental impacts for other fuels

The BCA Model includes avoided costs for other fuels, including propane, oil, gasoline, and water in both the DC and TRC tests. The BCA Model does not appear to consider the environmental impacts associated with other fuels, which should be included in the DC Test.

Environmental elements for other fuels must be included in the DC Test in order for results produced by the BCA Model to be consistent with the recommendations of the Working Group.¹² This is especially important for screening programs that promote switching away from other fuels to electricity and/or

¹² Clean Energy Act Implementation Working Group, “Framework for Compliance with the Clean Energy Omnibus Amendment Act of 2018 (the CEDC Act) of the District of Columbia,” Case No. GD-2019-04-M, November 16, 2021, page 26.

natural gas, as is the case with heat pumps, electric vehicles, and other electrification efforts. Without these impacts, the Commission cannot accurately evaluate and compare utility proposals.

The BCA Model should be modified during Phase 2, Part A to include the environmental impacts associated with other fuels.

Risk

The BCA Model does not appear to account for risk impacts, either for utility systems or host customers.

According to the NSPM, avoided risk for the utility system includes “uncertainty including operational, technology, cybersecurity, financial, legal, reputational, and regulatory risks.”¹³ Avoided risk for the host customer includes “uncertainty including price volatility, power quality, outages, and operational risk related to failure of installed DER equipment and user error; this type of risk may depend on the type of DER.”¹⁴

The CEAIWG explicitly recommended that risk be included in the DC Test, which the Commission adopted.¹⁵ The BCA Model should be modified to include risk impacts for both the utility system and host customer during Phase 2, Part B.¹⁶

Non-Energy Impacts

According to the NSPM, Non-Energy Impacts (NEIs) are benefits and costs that are separate from the energy saved or produced by DERs. Such impacts can either be a cost or a benefit, and the presence, direction, and magnitude of these impacts will depend upon many factors, including the type of DER, the

¹³ National Efficiency Screening Project, “National Standard Practice Manual for Benefit-Cost Analysis of Distributed Energy Resources,” August 2020, pages 4-2 and 4-12; see also pages 4-9 and 4-14 to 4-15 for a discussion on risk.

¹⁴ National Efficiency Screening Project, “National Standard Practice Manual for Benefit-Cost Analysis of Distributed Energy Resources,” August 2020, page 4-15; see also page 4-16 for a discussion on risk.

¹⁵ Clean Energy Act Implementation Working Group, “Framework for Compliance with the Clean Energy Omnibus Amendment Act of 2018 (the CEDC Act) of the District of Columbia,” Case No. GD-2019-04-M, November 16, 2021, pages 9-10, recommendation B.1.4.

Public Service Commission of the District of Columbia, GD-2019-04-M, Order No. 21938, December 8, 2023, page 17.

¹⁶ Refer to National Efficiency Screening Project, “Methods, Tools and Resources: A Handbook for Quantifying Distributed Energy Resource Impacts for Benefit-Cost Analysis,” March 2022, <https://www.nationalenergyscreeningproject.org/resources/quantifying-impacts/>, Chapter 10, which discusses accounting for risk and uncertainty in BCA tests. Risk is not often accounted for in BCA tests, and when it is, jurisdictions have used an adder (in terms of a percentage of total benefits or a \$/kWh adder).

specific DER technology, the host customer, and more.¹⁷ NEIs can accrue to the utility system, the host customer, and society.

The BCA Model captures three types of non-energy impacts: host customer NEIs, equity-specific low-income NEIs, and equity-specific moderate-income NEIs.¹⁸ All three impacts are only included in the DC Test, and not the TRC test. Host customer NEIs are a user input into the BCA Model while low-income and moderate-income impacts are flagged for inclusion during Phase 2, Part B.

We have two primary concerns with how NEIs are presented in the BCA Model: inclusion in the TRC test and inputs for host customer NEIs.

TRC test

The TRC test is designed to capture benefits and costs that accrue to the utility system and to the host customer.¹⁹ The three categories of NEIs included in the BCA Model (host customer, low-income, and moderate-income) impact both the host customer and society. The BCA Model should separately identify the host customer impacts from the societal impacts for all NEIs. The impacts that are specific to the host customer should be included in both the TRC and DC Tests. The impacts that are specific to society should be included in just the DC Test.

To not include these impacts in the TRC test is inconsistent with the symmetry principle of the NSPM, which states: “Asymmetrical treatment of benefits and costs associated with a resource can lead to a biased assessment of the resource. To avoid such bias, benefits and costs should be treated symmetrically for any given type of impact.”²⁰

Host customer NEIs inputs

The user can enter into the BCA Model an annual dollar value for host customer NEIs, and that annual value is expected to continue for each year of the investment’s lifetime.

DERs can create a variety of NEIs for host customers, including economic well-being, comfort, and improved safety. We are concerned that a simple annual dollar value input may not sufficiently capture all host customer NEIs.

The proposed approach to valuing host customer NEIs may be sufficient for Phase 2, Part A. However, for Phase 2, Part B, more consideration should be given to increasing transparency for calculating the

¹⁷ National Efficiency Screening Project, “National Standard Practice Manual for Benefit-Cost Analysis of Distributed Energy Resources,” August 2020, page 4-18.

¹⁸ We use the term “equity” here consistent with how it is used in the BCA Model. We assume the BCA Model is attempting to capture societal impacts, rather than a distributional equity analysis.

¹⁹ National Efficiency Screening Project, “National Standard Practice Manual for Benefit-Cost Analysis of Distributed Energy Resources,” August 2020, page E-3.

²⁰ National Efficiency Screening Project, “National Standard Practice Manual for Benefit-Cost Analysis of Distributed Energy Resources,” August 2020, page iv.

many varied NEIs a host customer can experience from participation. This increased transparency could go in the BCA Model itself, and/or in the Guidebook in a section that provides more guidance to model users and the inputs they enter into the model.

Separately, the BCA Model could be modified to allow the user to estimate host customer NEIs by using a percentage of total benefits, in the event the user does not have NEI-specific estimates readily available.

4.2. Using current input assumptions

The BCA Model uses a variety of sources for avoided costs and other inputs, with the Guidebook providing information on the data sources and methodology used to estimate each avoided cost stream. The tool relies heavily on a value of distributed energy resources (VDER) study prepared by Synapse, as well as data from EPA, NREL, EIA, and other sources. Most of the studies and inputs are dated from 2022 and 2023, and are likely to rely on data and assumptions from prior years.²¹

Our recommendations on input assumptions provided below are based on the successful approach to estimating avoided costs in New England. Every three years, the utilities and stakeholders in New England sponsor the development of an avoided energy cost study.²² Stakeholders are involved in the study discussions and development, while the utilities generally fund the report. The study develops avoided costs for electricity, natural gas, other fuels, price effects, reliability, capacity, and the social cost of carbon. The study authors produce a detailed report, including state-specific avoided costs. The results of the study are used in energy efficiency and other DER BCA models throughout New England, for review and decision making in various regulated proceedings.

Timing

We are concerned that by the time the BCA Model is ready for use, the input assumptions will already be multiple years out of date. It is important to update assumptions with some level of frequency. This ensures results are relevant and allows the Commission to make timely, informed decisions. However, this alone should not delay the development and use of the BCA Model for Phase 2, Part A. The BCA Model sources generally appear appropriate for this initial model development stage. For Phase 2, Part B and later iterations of the BCA Model, the BCA Model inputs should be updated to reflect the latest data and information. We recommend all modeled inputs, especially avoided costs, be updated at regular, defined intervals (e.g., every 1-3 years) to ensure they reflect the latest market trends and conditions.

²¹ Synapse Energy Economics, “Value of Distributed Energy Resources Study for the District of Columbia,” FC-1130-2023-M-759, October 25, 2023.

²² Synapse Energy Economics, Avoided Energy Supply Costs in New England (AESC), <https://www.synapse-energy.com/avoided-energy-supply-costs-new-england-aesc>.

Comprehensive study

The BCA Model relies on many data sources and employs several assumptions. While the Guidebook provides information on this data, it would be more transparent if a single comprehensive study provided all avoided cost inputs in one source. For Phase 2, Part A, the BCA Model consultants developed both the model structure and the model inputs, which is appropriate for this phase. For Phase 2, Part B, we recommend a third party develop all avoided cost inputs and assumptions for use in the BCA Model. We also recommend the third party make use of the NSPM’s companion document for this purpose: the Methods, Tools and Resources handbook (MTR).²³ The MTR can help determine how to calculate the values of the costs and benefits used in BCAs.

Joint study

Utilities in DC and surrounding Mid-Atlantic jurisdictions including Maryland should consider joining forces to develop avoided costs. The study results could be used both in the Commission’s BCA Model, and in the models used by the DC Sustainable Energy Utility to screen DERs. This process would provide consistent modeling across the region to reflect the interconnected nature of energy markets, reduce costs to ratepayers for evaluation studies, and provide a robust and transparent stakeholder process.

4.3. Combination of impacts

The BCA Model combines some impacts with each other, including the following:

- Electric energy, ancillary services, and DRIPE impacts are combined with each other.
- Environmental compliance impacts are combined with RPS compliance for both electric and gas.
- Gas energy, capacity, and environmental compliance impacts are combined with each other.

These impacts should be separately identified and modeled to increase transparency and ensure impacts are not inadvertently under- or over-estimated. Combining impacts is also contrary to the Commission’s decision to quantify all benefits, even those that are difficult to quantify.²⁴

Separate avoided costs values for these combined impacts might not be readily available for Phase 2, Part A. The BCA Model should be modified during Phase 2, Part A to allow for impacts to be modeled separately, and the inputs for these impacts can be developed during Phase 2, Part B of the proceeding.

²³ National Efficiency Screening Project, “Methods, Tools and Resources: A Handbook for Quantifying Distributed Energy Resource Impacts for Benefit-Cost Analysis,” March 2022, <https://www.nationalefficiencyscreeningproject.org/resources/quantifying-impacts/>.

²⁴ Public Service Commission of the District of Columbia, GD-2019-04-M, Order No. 21938, December 8, 2023, page 19.

4.4. Modeled period

The BCA Model estimates impacts through 2050. This timeframe may not capture all impacts from utility investments. For example, an investment made in 2027 could have impacts for 25 years, extending through to 2051. The current BCA Model would not capture the full range of impacts from this investment, truncating benefits in the last year. This approach is likely to underestimate lifetime savings and benefits, which reduces the accuracy and credibility of the results.

We suggest expanding the modeled horizon to at least 2060 to better capture the impact of utility investments. For Phase 2, Part A, the time horizon could easily be extended to 2060 by holding constant the 2050 values, and building out the structure of the model to accommodate an additional 10 years. For Phase 2, Part B, the inputs in later years could be estimated with more precision as part of a comprehensive avoided cost study.

5. MODEL CLARITY AND USABILITY

In general, the BCA Model is well formatted, documented, and annotated, and captures complicated analyses. The Benefit and Costs Viewer tab is especially helpful.

There are several ways the BCA Model could be further improved to increase transparency and usability.

5.1. Input guidance

The BCA Model user needs more guidance for populating the inputs on the Interactive Dashboard. The Guidebook does not provide any context for the user other than high level definitions for the Financial Incentive inputs. The user may be confused and enter incorrect data, producing inaccurate results.

We recommend the BCA Model include more notes, definitions, and examples to guide the user into providing the correct inputs. While the Guidebook may contain some of this information, it will be helpful for the user to see the guidance directly with the inputs.

Examples of potentially confusing inputs include the following.

- It is unclear whether the O&M Costs and Financial Incentives should be for the utility or the host customer, or whether Financial Incentives should be separate from the Program Administration Costs.
- The user may not know the difference between the Host Portion of DER Costs and the Host Transaction Costs.
- Financial Incentives and Tax Incentives specify non-ratepayer funded values, which implies that the other costs should be ratepayer funded costs.

- Generation, transmission, and distribution peak savings are all user inputs. This data may be difficult for the user to provide separately. It is also unclear how these different peaks are used throughout the model when entering the inputs. For example, should the user enter the same value for all three peaks if it does not have data for each peak?

5.2. Support for user inputs

The users of the BCA Model are likely to develop inputs outside of the BCA Model. For example, if a user is looking to screen 100 energy efficiency measures, those measure-level inputs and assumptions will need to be calculated elsewhere and then aggregated before they can be entered into the BCA Model.

It would be more transparent if the BCA Model provided space for users to memorialize all input assumptions. This could be done by adding a free-form tab to the BCA Model (to accommodate different input assumptions for different technologies and investments) where the user can populate their input assumptions, then link those values to the input cells on the Interactive Dashboard tab.

5.3. Protected cells

Much of the BCA Model is password protected, such that the model user cannot update certain sections of the model. This includes inputs that will need to be modified over time, such as when avoided costs need updating to reflect the latest market conditions. Protecting cells may be appropriate in some instances, but it makes reviewing and modifying the model a challenge.

5.4. Design suggestions

The Interactive Dashboard tab includes results, inputs, and some calculations. It may be cleaner to separate these items into separate tabs. The user may confuse which values can and should be updated with values that are intended to remain unchanged by the user.

The “Portfolio Viewer” feature is valuable for comparing scenarios. However, the BCA Model only allows one scenario for inputs and results on the Interactive Dashboard and Benefits & Costs Viewer tabs. It would be even more helpful if there were a way to switch between saved inputs for each modeled scenario.

5.5. Possible modeling errors

We noticed a few areas where results appeared different from what we would have expected, and wanted to flag them as possible areas for investigation.

- It is unclear whether the NPV formula is being used correctly in the BCA Model. Costs entered in 2025 dollars are being discounted when they should not be.
- Portfolio Viewer tab: It is unclear if the figure starting in cell O12 is updating correctly with results. Specifically, it may not show CO₂e (tons) that are less than zero.



- Benefits and Costs Viewer tab: cell J17 should likely reference column J instead of column I.



CERTIFICATE OF SERVICE

I certify that on April 11, 2025, a copy of DOEE's Initial Comments on the Draft Benefit Cost Analysis Model was served on the following parties via electronic mail:

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