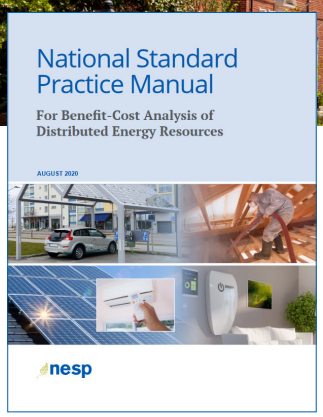
2023-2024

National Standard Practice Manual

CASE STUDY:

Maryland



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NATIONAL ENERGY SCREENING PROJECT

Maryland Unified BCA Case Study

Introduction

This case study illustrates how the state of Maryland developed a common framework and process to assess the cost-effectiveness of distributed energy resources (DERs) based on the principles of the National Standard Practice Manual for Benefit Cost Analysis of Distributed Energy Resources (NSPM)[1]. As established by the Maryland Public Service Commission Docket 9674, a new proceeding was opened to develop a Unified Benefit-Cost Analysis (UBCA) test for the state through a Work Group process.

In 2021, Maryland first applied the NSPM in the context of one specific DER (electric vehicles) followed by applying it to another DER (energy efficiency). NESP documented these two processes using the NSPM in an earlier Maryland case study (2020-2022), which concluded with the Maryland Commission issuing Order 90212 supporting the recommendation made by the Commission staff leader of the electric vehicle working group following the successful application of the NSPM with regard to electric vehicles and energy efficiency.

The NSPM, created by the National Energy Screening Project (NESP), offers a comprehensive set of guiding principles for assessing the cost-effectiveness of DERs. The purpose of this is to inform policies, strategies, and programs that support state energy goals. The manual is applicable to all types of electric and gas utilities as well as all jurisdictions where electric or gas utility customers fund DERs. The NSPM identifies eight core principles that should be followed in developing and applying cost-effectiveness tests to DERs, presented in *Figure 1*.

The NSPM also recommends a five-step process for states to develop a primary, jurisdiction-specific benefit-cost test for DERs. These steps are:

1. Articulate applicable policy goals
2. Include All Utility System Impacts
3. Decide Which Non-Utility System Impacts to Include (based on applicable policy goals)
4. Ensure that Benefits and Costs are Properly Addressed
5. Establish Comprehensive, Transparent Documentation

[1] DERs addressed include energy efficiency (EE), demand response (DR), distributed generation (DG) and distributed storage (DS), as well as to electrification of transportation vehicles (EV) and buildings or industry (BE). See Section II.4 for a full discussion of DER definitions for electrification technologies.

Figure 1: Fundamental NSPM Benefit-Cost Analysis Principles

Principle 1	**Treat DERs as a Utility System Resource** DERs are one of many energy resources that can be deployed to meet utility/power system needs. DERs should therefore be compared with other energy resources, including other DERs, using consistent methods and assumptions to avoid bias across resource investment decisions.
Principle 2	**Align with Policy Goals** Jurisdictions invest in or support energy resources to meet a variety of goals and objectives. The primary cost-effectiveness test should therefore reflect this intent by accounting for the jurisdiction's applicable policy goals and objectives.
Principle 3	**Ensure Symmetry** 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.
Principle 4	**Account for Relevant, Material Impacts** Cost-effectiveness tests should include all relevant (according to applicable policy goals), material impacts including those that are difficult to quantify or monetize.
Principle 5	**Conduct Forward-Looking, Long-term, Incremental Analyses** Cost-effectiveness analyses should be forward-looking, long-term, and incremental to what would have occurred absent the DER. This helps ensure that the resource in question is properly compared with alternatives.
Principle 6	**Avoid Double-Counting Impacts** Cost-effectiveness analyses present a risk of double-counting of benefits and/or costs. All impacts should therefore be clearly defined and valued to avoid double-counting.
Principle 7	**Ensure Transparency** Transparency helps to ensure engagement and trust in the BCA process and decisions. BCA practices should therefore be transparent, where all relevant assumptions, methodologies, and results are clearly documented and available for stakeholder review and input.
Principle 8	**Conduct BCAs Separately from Rate Impact Analyses** Cost-effectiveness analyses answer fundamentally different questions than rate impact analyses. Cost-effectiveness analyses should therefore be conducted separately from rate impact analyses.

Maryland UBCA Work Group and Process

Work Group

The Commission retained an expert consulting team, consisting of Energy Futures Group, Rabago Energy, Schiller Consulting, and E4TheFuture (with AnnDyl) (collectively, the 'consultants') to provide subject matter expertise and facilitation services to support the Maryland UBCA Work Group. The Work Group participants consisted of organizational representation from:

State Agencies & Energy Organizations	Maryland Electric & Gas Utilities	Consulting Firms
MD PSC Technical Staff	Columbia Gas	Clean Grid Advisors
Maryland Office of People's Counsel (OPC) (represented by both OPC staff and its consultants from Synapse Energy Economics	Exelon Utilities • Baltimore Gas & Electric • Delmarva Power • Pepco	Demand Side Analytics
Maryland Energy Administration	Potomac Edison	Energy Policy Design Institute
Department of Housing & Community Development (represented by Cadmus	Southern Maryland Electric Cooperative	Guidehouse
American Council for Energy Efficient Economy	Washington Gas	Hungeling Analytics
Northeast Energy Efficiency Partnerships		Loper Energy

Over the course of ten months, eight Work Group meetings were held, covering the topics below:

- **Meeting #1:**
  - Background on the scope and definitions for the Work Group, an overview of the NSPM for DERs, and a review of existing DER BCA practices in Maryland
- **Meetings #2-#4:**
  - Consultant Team presented and facilitated Work Group input on applying the NSPM process for establishing a primary Maryland-specific benefit-cost test for all DERs
  - Work Group members were tasked with completing assignments on behalf of their company/ organization to inform meeting discussions related to:
    - utility system impacts (USIs) included in Maryland BCAs
    - which USIs are conceptually applicable and material to different DERs
    - an initial applicable policy inventory to determine if any policies should be added or excluded as well as which policies should be prioritized
    - categories of non-USOs that priority policies suggest relate to state goals
- **Meeting #5:**
  - The Consultant Team provided a draft version of the first five chapters of the UBCA report and solicited feedback from the Work Group in advance of this meeting.
  - Consultant Team recommendations and Work Group feedback was discussed.
- **Meeting #6:**
  - The Consultant Team provided a recommendation for a primary MD-UBCA Test, as well as recommendations for secondary tests.
- **Meeting #7:**
  - Discussed several other considerations, including the geographic boundary for estimating values for important categories of impacts, discount rates, and the level of aggregation of DER investments to which the MD-UBCA should be applied to determine whether a DER initiative merits investment.
- **Meeting #8:**
  - The Work Group members discussed and provided feedback on a revised draft of the Maryland UBCA report produced by the Consultant Team.

NSPM 5-Step Process in Maryland

Step 1: Articulate Applicable Policy Goals

The Work Group identified more than 20 applicable energy policies from which the state's key goals and objectives can be determined. These policies generally included a list of statutes, state energy plans, or Maryland Public Service Commission orders. However, the Work Group decided to ultimately focus on a set of seven "priority policies," summarized below.

Table 1: Maryland Energy Policies Prioritized for Review

Name and Source	Type	DER Applicability
Climate Solutions Now Act of 2022 (Chapter 38 / SB 528)	Statute	All DERs
EmPOWER Maryland Energy Efficiency Act of 2008 (Public Utilities §7-211)	Statute	principally EE and DR (also EV pilot)
***NEW* Maryland's Climate Pollution Reduction Plan,** Maryland Department of Environment, Dec. 2023	State Plan	All DERs
Transforming Maryland's Electric Grid, Maryland Public Service Commission Public Conference 44 (PC44)	MD PSC Order	All DERs except EE
Energy Storage - Targets and Maryland Energy Storage Program - Establishment 2023 (Chapter 570 / HB 910; Public Utilities §7-216, §7-216.1)	Statute	DS
Energy Storage Pilot Project Act of 2019 (Chapter 427 / SB 573; Public Utilities §7-216)	Statute	
Building Energy Transition Plan, Maryland Commission on Climate Change, Nov. 2021	State Plan	EE,DR,BE

Step 2: Ensure All Utility System Impacts (USIs) are Included

The Work Group reviewed utility system impacts (USIs) currently included in Maryland's cost-effectiveness analyses of energy efficiency (EE), electric vehicles, and distributed storage (DS) pilot. The Work Group identified gaps and inconsistencies in the current practices.

Including all USIs ensures that the cost-effectiveness test at least assesses whether total utility system costs are reduced or increased by the investment. However, this does not mean that there will be a non-zero value included for every BCA of every DER. Further, some of the categories of USIs are not applicable to some DERs or are applicable but not material enough to routinely include in a test.

An impact is referred to as "not material" if the magnitude of the impact is not considered of sufficient magnitude to materially affect BCA results.

Tables 2-3 below illustrate the applicability and materiality of electric USIs and gas USIs by DER.

Table 2: Applicability and Materiality of Electric Utility System Impacts by DER

Impact Type	Impact	EE	DR	DG	DS	EV	BE
Generation	Energy Generation	✓	✓	✓	✓	✓	✓
	Capacity	✓	✓	✓	✓	✓	✓
	Environmental Compliance	✓	✓	✓	✓	✓	✓
	RPS/CES Compliance	✓	NM	✓	NM	✓	✓
	Market Price Effects	✓	✓	✓	✓	✓	✓
	Ancillary Services	✓	✓	✓	✓	✓	✓
Transmission	Transmission Capacity	✓	✓	✓	✓	✓	✓
	Transmission System Losses	✓	✓	✓	✓	✓	✓
Distribution	Distribution Capacity	✓	✓	✓	✓	✓	✓
	Distribution System Losses	✓	✓	✓	✓	✓	✓
	Distribution O&M	✓	✓	✓	✓	✓	✓
	Distribution Voltage	NM	NM	✓	✓	NM	NM
General	Financial Incentives	✓	✓	✓	✓	✓	✓
	Utility Direct Investments in DERs	✓	✓	✓	✓	✓	✓
	Program Administration	✓	✓	✓	✓	✓	✓
	Utility Performance Incentives	✓	✓	✓	✓	✓	✓
	Credit and Collection	✓	NM	✓	NM	✓	✓
	Risk	✓	✓	✓	✓	✓	✓
	Reliability & Resilience	✓	✓	✓	✓	✓	✓

✓ Impacts that are both applicable and material

NM Not material, or not large enough to merit routine inclusion

Table 3: Applicability and Materiality of Gas Utility System Impacts by DER

Impact Type	Impact	EE	DR
Energy	Fuel & Variable O&M	✓	✓
	Capacity and Storage	✓	✓
	Environmental Compliance	✓	NM
	Market Price Effects	✓	NM
Transmission	Pipeline Capacity	✓	✓
	Pipeline Losses	✓	✓
Distribution	Local Delivery Capacity	✓	✓
	Local Delivery Line Losses	✓	✓
General	Financial Incentives	✓	✓
	Utility Direct Investments in DERs	✓	✓
	Program Administration	✓	✓
	Utility Performance Incentives	✓	✓
	Credit and Collection	✓	NM
	Risk	✓	✓
	Reliability & Resilience	✓	✓

✓ Impacts that are both applicable and material

NM Not material, or not large enough to merit routine inclusion

Step 3: Account for all Relevant Non-Utility System Impacts (Non-USIs)

Relevancy of non-USIs was based on policy goals identified in Step 1. Examples and descriptions of non-USIs within three different categories (other fuel impacts, host customer impacts, and societal impacts) are found in Tables 4-6 below.

Table 4: Other Fuel Impacts

Impact	Description and Examples
Commodity	Fuel and related O&M costs of other fuels
Environmental Compliance	Cost of actions to comply with environmental regulations of other fuels
Market Price Effects	Change in prices for other fuels resulting from changes in levels of consumption
Other Utility System Impacts	If gas DER, impacts on electric system (e.g., gen. capacity, T&D, reliability , etc.)
	If electric DER, impact on gas system (e.g., T&D, storage, reliability, etc.)

Table 5: Host Customer Impacts

Impact	Description and Examples
Energy Impacts	
DER Measure Costs	The portion of DER measure costs born by the host customer (e.g., cost net of utility incentives)
Transaction Costs	Non-financial costs to install DERs (e.g., application fees, time spend facilitating installation, paperwork)
Interconnection Fees	Costs paid by customers to interconnect DERs to the electric grid
Risk	Uncertainty regarding price volatility, power quality and performance of DER equipment
Resilience	Ability to adapt to changing conditions and withstand, respond or recover from disruptions
Tax Incentives	Government tax incentives (or other incentives) that defray the cost of DERs
Non-Energy Impacts	
Asset Value	Changes in the value of a home or business as a result of the DER (e.g., increased building value)
Water cost impacts	Costs or cost savings from increased or decreased water consumption resulting from DER installation
O&M costs	Changes in operation and maintenance costs
Productivity	Other changes in productivity (e.g., reduced business waste streams, increased worker productivity)
Economic well-being	Economic impacts beyond bill savings (e.g., reduced service terminations, reduced foreclosures)
Comfort	Changes in comfort (e.g., thermal, noise and lighting quality)
Amenity	Changes in other values (e.g., less refrigeration capacity, more "free time", performance uncertainty)
Health & Safety	Changes in air quality or other factors affecting medical costs, availability for work/school, deaths, etc.
Empowerment	Satisfaction from ability to control energy consumption and bills
Pride	Satisfaction from contributing to social good (e.g., from reduced environmental footprint)

Table 6: Societal Impacts

Impact	Description and Examples
Resilience	The societal impact of critical customers' (e.g., hospitals, fire stations, police, water treatment facilities, etc.) ability to maintain operations during utility
Greenhouse Gas Emissions	Impact of changes in GHG emissions on society and the environment
Other Environmental	Impact of changes in other emissions or land use
Public Health	Changes in medical outcomes and costs
Energy Security	Changes in energy independence

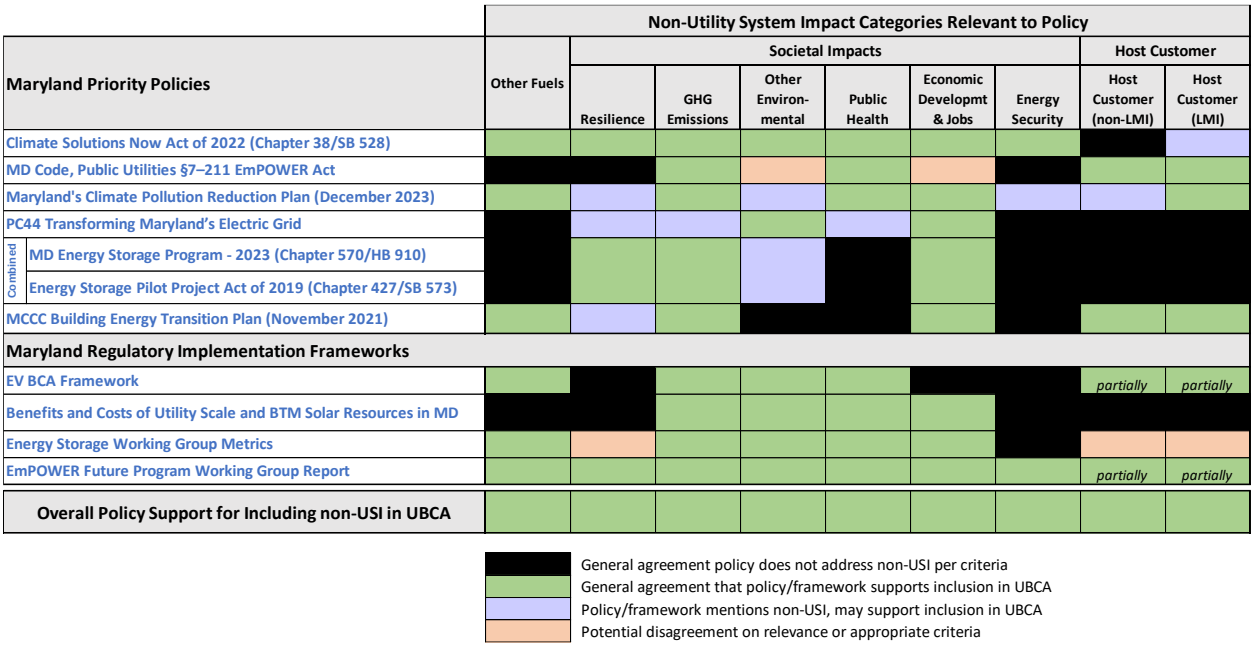
To determine the relevancy of the above non-USIs to include in the MD-UBCA, the Consultant Team polled Work Group members. They were asked what levels of reference to state policy goals and objectives they believed should be sufficient to consider a non-USI based on three different criteria:

A. The policy requires an action or desired outcome related to a non-utility system impact.
B. The policy document explicitly states that a non-utility system impact is an objective.
C. The policy makes reference to a non-utility system impact but does not explicitly state that the impact is an objective.

Figure 2 provides a summary of the Work Group's responses in scoring the relevance of impacts based on policy language articulated in various priority Maryland policies and orders. The green

areas show where there was consensus by the Work Group that the policy supports inclusion of the impact in a UBCA.

Figure 2: Reference to Non-Utility System Impact Goals by Policy



In the case of host customer impacts, the Work Group reviewed this full range of impacts and determined their applicability and materiality to different DERs. They determined that in some cases, certain impacts would not be applicable to all DER types or use cases, while in other cases certain impacts may be conceptually applicable but not large enough to be material. There were also some cases where it was determined that certain categories of impacts would not likely be material in typical near-term applications or use cases of DERs but could become material in the medium- to longer-term.

Table 7 summarizes the key host customer impacts that are both applicable and material to different DERs.

Table 7: Host Customer Impacts Applicable and Material to DERs

Impact	EE	DR	DG	DS	BE	EV
Energy Impacts						
DER Measure Costs	✓	✓	✓	✓	✓	✓
Transaction Costs	✓	✓	✓	✓	✓	✓
Interconnection Fees	NA	NA	✓	NA	NA	NA
Risk	✓	NA	✓	✓	✓	✓
Reliability	NA	NA	NA	NA	NA	NA
Resilience	✓	NA	✓	✓	NA	✓
Tax Incentives	✓	NA	✓	✓	✓	✓
Non-Energy Impacts						
Asset Value	✓	NA	✓	✓	✓	NA
Water cost impacts	✓	NA	NA	NA	NA	NA
O&M costs	✓	NA	✓	✓	✓	✓
Productivity	✓	NA	NA	NA	NA	NA
Economic well-being	✓	NM	✓	✓	✓	✓
Comfort	✓	NA	NA	NA	✓	NA
Amenity	✓	✓	NA	NA	✓	✓
Health & Safety	✓	NA	NA	NA	✓	NA
Empowerment	✓	NA	✓	✓	✓	✓
Pride	✓	NM	✓	NM	✓	✓

✓ Impacts that are both applicable and material

NA Impacts that are not applicable to a given DER

NM Impacts that are conceptually applicable but "not material" or large enough to merit routine inclusion in the MD UBCA test

One of the challenges with considering host customer impacts is that there are many of them; they also vary considerably for different types of customers and for different DERs. Thus, it may be challenging to comprehensively include host customer impacts in benefit-cost analyses for all DERs without investment in new research and analysis.

Further, symmetry—a key NSPM principle—is especially important in this case to ensure that both customer costs and benefits are included. The Work Group recognized the importance of ensuring symmetrical treatment of costs and benefits, and it agreed to address this as part of a recommended Phase II (see last section of this case study).

Step 4: Ensure Key BCA Principles are Applied

This step can be found at different points in the NSPM process, and during the implementation of a BCA provides general guidance on the importance of ensuring symmetrical treatment of costs and benefits, avoiding double counting, and including costs and benefits that may be difficult to monetize or quantify numerically. The Work Group recommended a Phase II process to address some of these steps, discussed in the "Phase II Recommendation" section below.

One example of "double counting" is ensure that accounting for societal Public Health impacts is not already accounted for as part of societal Other Environmental impacts, which typically includes health impacts associated with changes in criteria air pollutant emissions

Step 5: Transparency in the Process

Throughout the NSPM process, Work Group members provided both written and verbal feedback on two report drafts during Work Group meetings and subgroup meetings. They also provided responses to non-binding "polls" held and input in the "chat box" during these meetings. The Consultant Team also held follow-up discussions with several Work Group members between meetings to clarify homework assignments and talk through perspectives of members' responses. Meeting notes were circulated after each meeting to ensure comments were heard and understood, and the next steps in the process were made clear. Step 5 also applies more broadly to ensuring that once the test is developed through a transparent stakeholder process, the input assumptions used in the BCA are clearly documented, including underlying methodologies, and the BCA results are documented using template reporting tables supported by commission staff and the stakeholders.

Recommended Primary Maryland UBCA Test and Secondary Tests

The purpose of the primary BCA test is to answer the question: *Does a DER investment reduce or increase costs, given a jurisdiction's policy objectives, and therefore does it merit utility investment?*

Based on the process described above, the Work Group recommended a Primary MD-UBCA Test, summarized in the table below.

Table 8: Recommended Primary Maryland UBCA Test

Impact Category	Impact Sub-Category	Specific Impacts	Included in Test
Utility System	Electric or Gas	All	✓
Non-Utility System	Other Fuels	Gas Utility Impacts from Electric DERs	✓
		Electric Utility Impacts from Gas DERs	
		Other Fuel Impacts (Propane, Gas, etc.)	
	Host Customer	All	✓
	Societal	Greenhouse Gas Emissions	✓
		Other Environmental	✓
		Public Health	✓
		Resilience	✓
		Energy Security	✓

In addition to the recommended primary MD-UBCA, the Work Group also recommended two secondary tests. Considering the results of one or more secondary test along with the primary MD-UBCA test can be important to inform decisions regarding DER investments that marginally pass or fail the primary test, inform decisions on how much utility support to provide to a DER program or initiative, and inform decisions on how much utility support to provide to a DER program or initiative. The Work Group's recommended secondary tests are:

1. **Total Resource Cost (TRC) Test**- Consideration of the TRC is effectively mandated as a secondary test for efficiency programs by HB 864. Including it in the UBCA framework enables comparisons across DERs. This secondary test would help the Commission understand the sensitivity of DER cost-effectiveness to the inclusion or exclusion of societal impacts.
2. **Utility Cost Test (UCT)**- This test includes only utility system impacts, providing a narrow perspective of the direct financial impacts of DER investments on utility system costs.

Table 9: Recommended Secondary Tests

Impact Category	Impact Sub-Category	Specific Impacts	Included in Test	
			Total Resource Cost Test	Utility Cost Test
Utility System	Electric or Gas	All	✓	✓
Non-Utility System	Other Fuels	Gas Utility Impacts from Electric DERs	✓	-
		Electric Utility Impacts from Gas DERs		-
		Other Fuel Impacts (Propane, Gas, etc.)		-
	Host Customer	All	✓	-
	Societal	Greenhouse Gas Emissions	-	-
		Other Environmental	-	-
		Public Health	-	-
		Resilience	-	-
		Energy Security	-	-

Other topics addressed during the Work Group process to inform application and implementation of the proposed Maryland UBCA included: selection of discount rate(s), treatment of geographic boundaries for certain impacts, and BCA assessment levels, as described below.

Discount Rate Selection

The selection of a real discount rate for use in cost-effectiveness analyses should be a function of a jurisdiction's policies, or the regulator's perspective. The more those policies reflect a broader range of societal concerns, the stronger the argument for using a societal discount rate or something close to a societal discount rate. The more that the policies focus on primarily or exclusively utility system impacts, the stronger the case for a higher discount rate. The Work Group recommended the following for test discount rates:

- **Primary MD-UBCA Test –** Use 2% as its real discount rate. This is approximately equal to the current, long-term average real rate of return on 10-year U.S. Treasury bond yields.[2]
- **Secondary test #1 –** Total Resource Cost (TRC) Test - Use a 2% real societal discount rate. Using the same discount rate as in the primary UBCA test will allow for an "apples-to-apples" comparison that enables an understanding of the implications of removing societal impacts from cost-effectiveness assessments.
- **Secondary test #2 – Utility Cost Test –** Conduct sensitivity analyses using both a 2% real discount rate and a higher discount rate. Analysis using the same real discount rate as used in the primary UBCA test enables understanding of the portion of net benefits under the primary test that are coming from the utility system. This also enables consideration of equity issues in program design while still applying a more societal perspective to what is cost-effective. Analyses using a higher real discount rate provide a different perspective with respect to the time value of money.

Geographic Boundaries

Questions arose during the NSPM process regarding the proper applicable geographic boundaries for categories of different impacts in the MD-UBCA primary test and secondary tests. The Work Group's boundary recommendations for each impact are outlined in the table below:

Table 10: Recommendations on Geographic Boundaries for Quantifying Key UBCA Impacts

Impact Type	Recommended Boundary
Federal Financial Incentives	State Boundary
Market Price Effects	State Boundary
Greenhouse Gas Emissions (GHGs)	Global Boundary
Criteria Pollutant Emissions	Regional Boundary
Jobs and Economic Development	State Boundary

[2] https://home.treasury.gov/resource-center/data-chart-center/interest-rates/TextView?type=daily_treasury_real_yield_curve&field_tdr_date_value=2024

BCA Assessment Level

The cost-effectiveness of DERs can be measured at a variety of different levels of aggregation – what is sometimes called "assessment level." These levels are referred to as measure-level, customer-level, program-level, sector-level, and portfolio-level.

The Work Group recommended the following regarding the level of aggregation at which the Maryland Commission should apply the UBCA to inform its decisions regarding which DER investments merit regulatory support:

- **Apply cost-effectiveness screening at the program level.** While this should be the default for informing determinations of whether a proposed DER investment merits regulatory support based solely on cost-effectiveness, this could be modified based on the following considerations:
    - Equity
    - Market transformation
    - Enabling other cost-effective programs
    - Pilot programs
    - Other policy objectives and/ or statutory requirements
- **Do not apply cost-effectiveness screening at the measure level.**
    - There could be important reasons for including non-cost-effective DER investments that could enable the installation of many cost-effective DER measures in the future.
- **Do not apply cost-effectiveness screening at the individual customer or project level.**
    - This level of analysis is not feasible for all individual customers, it is typically only possible for large business customers for whom the transaction costs of one-on-one interaction can be justified.

Phase II Recommendation

The Work Group recommended a Phase II process to support the implementation of primary and secondary test recommended in this report, as well as to ensure the Commission's decision on the framework for utility investments in DERs can consider not only BCA results, but also rate and bill impacts, and economic development and equity impacts. Phase II topics could include:

1. Identifying appropriate methodologies for accounting for DER impacts to include in the UBCA[3];
2. Providing guidance on conducting a distributional equity analysis alongside BCAs to inform how DER investments will impact priority populations/communities relative to other customers[4];

[3] Using resources such as Methods, Tools & Resources for Quantifying DER Impacts (NESP, 2022) – MTR Handbook, a companion document to the NSPM.

[4] The Commission could explore potential technical assistance resources from LBNL to assist the state in conducting a DEA using Distributional Equity Analysis for Energy Efficiency and Other DERs (US DOE, 2024).

3. Providing guidance on conducting a Maryland economic development analysis that accounts for net job creation, including direct and potentially indirect jobs[5]; and
4. Providing guidance on conducting rate and bill impact analyses alongside BCAs to understand equity impacts across customer classes/sectors.[6]

Conclusion

The Unified BCA Work Group, leadership, and Consultant Team collaborated over the course of ten months to provide the recommendations herein for the Commission's consideration on a UBCA framework for Maryland and steps going forward to support its implementation. The recommendations include a primary Maryland UBCA Test, two secondary tests, selected discount rates for the tests, impact boundaries, and aggregation levels. The detailed Maryland UBCA report was submitted to the Commission on May 17, 2024. On November 22, 2024 the Commission issued Order No. 91424 and approved the Work Group's recommendations to adopt the MD-UBCA Test and authorize Phase II.

In the Order, the PSC first outlines the background of examining UBCA framework for all DERs in Maryland and the Commission's Orders. Next, they summarize the Work Group recommendations filed in the May 17, 2024 Report. Lastly, the Order explains the Commission's decision in response to the Report's recommendations.

The decision first approves use of the MD-UBCA Test, the TRC Test, and the UCT and directs that all three be revisited every four years or, at the Commission's discretion, more often, as needed. In addition to approving the tests, the Order authorizes the establishment of Phase II as recommended by the Work Group to handle implementation and assessment of the testing framework. They specify that Phase II should be a bifurcated process where the first portion covers identifying appropriate methodologies for accounting for DER impacts to include in the UBCA. The second portion authorizes the work group to consider the three other topics presented in the Report, any additional topics, and to make recommendations to the Commission. Commission staff are directed to retain a consultant in 2025 to support Phase II work.

This case study will be updated once Phase II is completed.

[5] See MTR Handbook (NESP, 2022), Chapter 7.4 Macroeconomic Impacts.
[6] Methodologies can include building from experience gained in the EmPOWER Maryland program, the Electric Vehicle Benefit/Cost Analysis Methodology (PC44 EV-BCA Work Group in Case 9478) section on rate assessments, utility cost of service studies, and other resources.