

ORDER NO. 91424

Unified Benefit Cost Analysis (UBCA)	*	BEFORE THE
Framework for Distributed Commission	*	PUBLIC SERVICE COMMISSION
Energy Resources	*	OF MARYLAND
	*	_____
	*	
	*	Case No. 9674
	*	_____

Issue Date: November 22, 2024

**ORDER ACCEPTING THE PROPOSED UBCA FRAMEWORK
AND AUTHORIZING PHASE II**

On May 17, 2024, the work group tasked by the Commission with developing a Maryland-specific unified benefit cost analysis (“UBCA”) framework to address the cost-effectiveness of all distributed energy resources (“DERs”) filed its final report. The recommendations and proposed framework put forth in the report were reached by consensus. In this Order, the Commission largely approves the recommendations of the work group and directs the establishment of Phase II proceedings in order to address the implementation of the framework, among other matters as noted herein.

Background

On December 1, 2021, as part of Case No. 9478, the leader of the PC44 Electric Vehicle (“EV”) Work Group recommended that the Commission open a new proceeding to examine a UBCA framework for all DERs in Maryland.¹ In support of the

¹ Maillog No. 238014: Case No. 9478, *In the Matter of the Petition of the Electric Vehicle Work Group for Implementation of a Statewide Electric Vehicle Portfolio* (“EV Work Group Petition”) (December 1, 2021). *See also*, Public Conference 44 (“PC44”), *In the Matter of Transforming Maryland’s Electric Distribution Systems to Ensure that Electric Service Is Customer-Centered, Affordable, Reliable and Environmentally Sustainable in Maryland*.

recommendation, the Work Group Leader noted that, as the grid continues to modernize, “it is important that the Commission has a framework in place to measure the cost-effectiveness and potential rate impacts across all DERs to ensure future projects can be adequately reviewed in support of meeting Maryland’s climate and energy policies,” as well as to help ensure consistency in the determination of relevant value streams for different DERs.²

On December 16, 2021, the Commission issued a Notice initiating Case No. 9674 to explore the process for developing a proposed UBCA framework for DERs in Maryland. The Commission noted that it would accept comments from interested parties on the topics of (1) the practical use of a UBCA for stakeholders, (2) the role of a UBCA in Commission proceedings, and (3) suggested methodologies, procedures, or vehicles for developing the UBCA.³

Comments were filed on February 16, 2022 by the Maryland Energy Administration (“MEA”),⁴ The Potomac Edison Company (“Potomac Edison”),⁵ jointly by Baltimore Gas and Electric (“BGE”), Delmarva Power & Light Company (“Delmarva”), and Potomac Electric Power Company (“Pepco”) (collectively, “the Exelon Utilities”),⁶ Northeast Energy Efficiency Partnerships (“NEEP”),⁷ the Commission’s Technical Staff (“Staff”),⁸ the Building Performance Association (“BPA”),⁹ the Maryland

² EV Work Group Petition at 2.

³ Maillog No. 238236.

⁴ Maillog No. 239138.

⁵ Maillog No. 239152.

⁶ Maillog No. 239156.

⁷ Maillog No. 239169.

⁸ Maillog No. 239170.

⁹ Maillog No. 239172.

Office of People’s Counsel (“OPC”),¹⁰ Ceres,¹¹ and Washington Gas Light Company (“Washington Gas”).¹²

On February 23, 2022, the Commission held a legislative-style hearing to explore the process for developing a UBCA framework for all DERs in Maryland. Although it did not file written comments, the Regulatory Assistance Project presented oral comments at the hearing.

On May 13, 2022, the Commission issued Order No. 90212 establishing a work group to address the development of a Maryland-specific UBCA framework.¹³ The Commission noted that the cost-benefit analyses utilized often involved the application of different tests across multiple DERs, leading to the possibility of inconsistent results which could cause overinvestment or underinvestment in DERs. The Commission found that the development of a UBCA could assist with the identification of the least-cost means to achieve Maryland’s policy goals, increase transparency and efficiency in the assessment of energy resources, and provide the utilities with greater regulatory certainty in preparing filings.¹⁴ The Commission directed the work group to consider the principles and steps included in the National Standards Practice Manual (“NSPM”), the existing work of the EV Benefit Cost Work Group, the EmPOWER Maryland work groups, and the Energy Storage Work Group in Case No. 9619, as well as the socioeconomic equity considerations raised by MEA in its comments.¹⁵

¹⁰ Maillog No. 239173.

¹¹ Maillog No. 239182.

¹² Maillog No. 239187.

¹³ Maillog No. 240668.

¹⁴ *Id.* at 10-11.

¹⁵ *Id.* at 11-13.

In establishing the work group, the Commission also provided certain caveats. First, the Commission noted that the UBCA should be flexible to account for differences in DERs, including differences in costs and benefits. Second, the Commission stated that it does not intend to surrender its discretion by adopting an inflexible mathematical formula that would mandate approval or rejection of a project. Lastly, the Commission emphasized that a UBCA should not be designed to substitute for the utilities' independent, experienced judgment as to how to maintain safe and reliable service on utility systems.¹⁶

A July 5, 2023 Notice issued by the Commission stated that the work group would be facilitated by E4TheFuture Inc. along with support from the Commission.¹⁷

Work Group Recommendations

The work group filed its report (“the Report”) on May 17, 2024.¹⁸ In the Report, the work group noted that it functioned collaboratively throughout its entire process, thereby allowing for productive discussions and constructive feedback. The work group explained that the recommendations put forth in the Report were largely reached by consensus and developed through the analysis and consideration of NSPM guidance, work group input, existing Maryland BCA practices, Maryland policy direction, and BCA practices of other states.¹⁹

The Report included recommendations for a primary MD-UBCA Test as well as two secondary tests, and the categories and specific impacts - costs and benefits - to include in these tests. The Report also included recommendations on several aspects of how the

¹⁶ *Id.* at 12.

¹⁷ Maillog No. 303887.

¹⁸ Maillog No. 309737: Maryland Unified Benefit-Cost Analysis Framework for Distributed Energy Resources - Work Group Report (May 17, 2024).

¹⁹ One exception to the consensus was the discount rate recommendation. *Id.* at 4.

MD-UBCA Test should be applied, such as selection of discount rates, BCA assessment level, geographic coverage, and application in different regulatory contexts. A recommendation was also made for a next phase associated with implementing the MD-UBCA Test and conducting distributional equity analyses.²⁰

The Report provided a high-level summary of impacts to be included in the recommended primary MD-UBCA Test, as shown below.

<i>Primary MD-UBCA Test Summary²¹</i>		
Impact Category	Impact Sub-Category	Specific Impacts
Utility System	Electric or Gas	All ²²
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 ²³	Greenhouse Gas Emissions
		Other Environmental
		Public Health
		Resilience
Energy Security		

²⁰ *Id.*

²¹ *Id.* at 41.

²² Tables S-2: Applicability and Materiality of Electric Utility System Impacts by DER and S-3: Applicability and Materiality of Gas Utility System Impacts by DER in the Report provide detailed breakdowns of the utility system impacts that are currently considered to be applicable and material for each type of DER. *Id.* at 5-6.

²³ Table S-4: Applicability and Materiality of Non-Utility System Impacts identifies the Other Fuels and Societal impacts applicable for each DER. *Id.* at 7.

The Report noted that the inclusion of host customer impacts, while consistent with State policy, will be challenging, as little analysis has been conducted to identify and quantify non-energy impacts of DERs other than energy efficiency; thus, Maryland will need to commit to investing in the analysis of host customer impacts in order to apply the primary UBCA Test in an appropriately balanced manner.²⁴ The Report also noted that economic development and job creation should not be mathematically included in the UBCA because they are driven by, and therefore overlapping with, other impacts included in the UBCA. The Report further stated that equity impacts in DER investments and strategies should not be included in the UBCA, as such impacts will require a separate analysis referred to as a Distributional Equity Analysis (“DEA”).²⁵

The Work Group recommended two secondary tests to supplement the primary MD-UBCA Test: the Total Resource Cost (“TRC”) Test, which would include utility system impacts, other fuel impacts, and host customer impacts, and the Utility Cost Test (“UCT”), which includes only utility system impacts.²⁶

The Work Group recommended using a 2.0 percent real societal discount rate for the primary and secondary tests, noting that this is approximately equal to the current, long-term average real rate of return on 10-year U.S. Treasury bond yields, as well as the rate currently being used in Maryland to assess cost-effectiveness of the EmPOWER programs.²⁷ The work group suggested that the Commission consider using both the 2.0 percent real discount rate as well as a higher real discount rate for a sensitivity analysis in

²⁴ *Id.* at 5.

²⁵ *Id.*

²⁶ *Id.* at 7-8.

²⁷ *Id.* at 8 and 46.

only the UCT secondary test, as it includes only utility system impacts and would provide a different perspective with respect to the time value of money.²⁸

Regarding the level at which assessments should be performed, the work group recommended not applying cost-effectiveness screening at the measure, individual customer, or project level, but rather at the program level, unless a different approach is merited based on certain considerations including but not limited to advancing equity, market transformation objectives, and pilot programs.²⁹

The work group recommended the following geographic boundaries be applied to all of the recommended tests:

Impact Type	Recommended Boundary
Federal Financial Incentives	State Boundary
Market Price Effects	State Boundary
GHGs	Global Boundary
Criteria Pollutant Emissions	Regional Boundary
Jobs and Economic Development ³⁰	State Boundary

The work group noted that the UBCA Test can be utilized in a wide variety of regulatory contexts, including programs, procurement, planning, and infrastructure investments. While the application of the test will vary from one context to another, the

²⁸ *Id.* at 8 and 48. The recommendation to use a 2.0 percent discount rate for the UCT secondary test was not supported by one work group member. *Id.* at 48-49.

²⁹ *Id.* at 9 and 54-55.

³⁰ As previously stated, the work group does not recommend that jobs and economic development be mathematically included in the UBCA Test, but rather should be the subject of separate analyses considered in concert with the UBCA results. Inclusion of jobs and economic development in the geographic boundary discussion is only to note that, when such analyses are undertaken, they should focus on the impact made within Maryland’s state borders. *Id.* at 8.

goal of implementing the UBCA is to ensure consistency in the test's application and the impacts that are accounted for to achieve the state's policy goals.³¹

Finally, the work group acknowledged that the Report focused on what impacts should be included in the primary and secondary tests, but not on how to determine the impacts. The work group asserts that further work will be required to develop how to monetize or otherwise quantify an impact, or whether and how to address the impact qualitatively. As a result, the work group recommends that the Commission initiate a Phase II process to address these issues and others, including the development of recommendations for conducting the aforementioned DEA for DER investments.³²

COMMISSION DECISION

Currently, cost-benefit analyses presented to the Commission involve the application of different tests and assumptions across DERs, leading to the possibility of inconsistent results and over- or under-investments. As directed by the Commission, the work group put forth a collaborative recommendation for a uniform analysis based in large part on the principles and processes of the NSPM, resulting in primary and supplemental tests that are intended to assist with regulatory decisions regarding whether a DER acquisition and/or investment is merited.

The Commission finds that the tests recommended by the work group were developed through a detailed, collaborative process, and that utilization of the tests would be beneficial to ensure that all DERs are assessed in a consistent manner against each other and alternatives, thereby increasing transparency and efficiency in the evaluation process,

³¹ *Id.* at 9.

³² *Id.* at 9-10.

as well as optimizing investments in DERs. The Commission therefore approves, in principle, the framework put forth in the Report for the primary MD-UBCA Test, and the TRC and UCT as secondary tests, subject to the terms and parameters stated herein. The use of the framework still needs to be implemented across the various DER proceedings, and the nuances of the framework may require modification during the implementation phase.

The Commission reiterates its intention to retain flexibility in approving programs that involve cost-effectiveness testing, and that approval or rejection of a project will not be mandated solely by the outcome of a MD-UBCA Test. Additionally, while the Commission will look for consistency across DER types, it will entertain deviations to cost-effectiveness testing as appropriate. Finally, given that a primary purpose of the UBCA is to follow state policy, and the fact that state policies are constantly evolving, the Commission recognizes the need to periodically reassess the primary and secondary tests to ensure that they are in keeping with their intended purposes. The Commission therefore directs that the MD-UBCA Test, the TRC Test, and the UCT be revisited every four years or, at the Commission's discretion, more often, as needed. During the Phase II authorized herein, the work group is directed to develop and propose processes and procedures to maintain these tests over time.

The Report recommends the establishment of a Phase II to support the implementation of the approved tests, as well as the development of a means to assess the distribution of costs and benefits. The work group put forward four topics for consideration within Phase II:

1. Identifying appropriate methodologies for accounting for DER impacts (monetized or quantified assessments) to include in the UBCA;
2. Providing guidance on conducting distributional equity analysis alongside BCAs to inform how DER investments will impact priority populations/communities (e.g., underserved populations) relative to other customers;
3. Providing guidance on conducting a Maryland economic development analysis that accounts for net job creation, including direct and potentially indirect jobs; and
4. Providing guidance on conducting rate and bill impact analysis alongside BCAs to understand equity impacts across customer classes/sectors, including assessing not only the monetary impacts for the rate classes as a whole, but also how various rate designs impact customers with varying consumption rates and patterns.

The Commission agrees that a Phase II is necessary for implementation and assessment purposes, and that the Phase II process shall be bifurcated. The first portion will address implementation of the UBCA across the various DER proceedings, cover the issues associated with topic one of the four topics proposed for a Phase II, and identify appropriate methodologies for accounting for DER impacts to include in the UBCA. The work group will provide updates and make recommendations to the Commission associated with the progress of the first portion. In the second portion, the work group is authorized to consider the other three topics, as well as additional matters that may be identified by the work group, and to make recommendations to the Commission. The Commission authorizes the work group to address all listed topics simultaneously, with priority given to the first portion identified above.

Pepco is directed to work with the Commission to either re-engage E4TheFuture or initiate a new RFP process for the leadership of Phase II. The Work Group Leader and the hired consultants that manage Phase II shall coordinate with the Commission's other existing work groups where cost-effectiveness testing has been previously developed. This includes, but is not limited to, the Energy Storage Program Work Group, the DSP Work Group, the Electric Vehicle Work Group, and the EmPOWER Maryland Evaluation Advisory Group.³³ The Work Group Leader shall develop a process with the other work groups for addressing the Phase II requirements of this order for DERs and utility investments, and will file a proposed timeline after coordinating with the other work groups, as well as file updates every six months on the UBCA Work Group's progress.³⁴

In coordination with the other work groups, the UBCA Work Group shall (1) evaluate existing cost benefit analyses against the UBCA report recommendations and determine what should or should not change,³⁵ (2) determine the process for implementing, and implement, the UBCA Test across the DERs and utility investments, and (3) evaluate the issues listed under topic one within the UBCA framework report for Phase II. Additionally, when considering the issues under topic one of Phase II, the parties should weigh the benefit of developing an input against the cost to develop said input when making recommendations. The Commission also directs that all societal impacts be stated in the primary and secondary tests, even if the value is zero, as, in such instances, the Commission

³³ The work group should determine whether it is appropriate or not for some or all Phase II topics pertinent to the EmPOWER programs to be spearheaded by the EmPOWER Evaluation Advisory Group.

³⁴ The Commission considers utility investments to include wires and non-wires alternatives and that the UBCA test should apply to these investments as well.

³⁵ The UBCA work group shall provide justification for all deviations from the UBCA report recommendations as well as identify when the Commission should expect to see the utilization of a UBCA Test broken down by DER.

would benefit from the inclusion of discussions, evaluations, or quantifications of how an investment will enable Maryland policies such as storage.

IT IS THEREFORE, this 22nd day of November, in the year Two Thousand Twenty-Four, by the Public Service Commission of Maryland, **ORDERED**:

- (1) that the proposed framework for the MD-UBCA and secondary tests of TRC and UCT are approved subject to the parameters stated herein; and
- (2) that Phase II be initiated in accordance with the direction specified herein.

/s/ Frederick H. Hoover, Jr. _____

/s/ Michael T. Richard _____

/s/ Kumar P. Barve _____

/s/ Bonnie A. Suchman _____

Commissioners