Company
Docket No. 26-08-05
Response to Interrogatory CAE-16
Date of Submission: August 28th, 2026
Witness: Jennifer Runyon Eversource, Logan Taricani United Illuminating, Sergio Carrillo Connecticut Green Bank

Question:

CAE-16 Program Administrator Order No. 3 Compliance, August 3, 2026, Att. 2, p. 75. Explain why the Ratepayer Impact Measure (RIM) score is substantially higher under Avoided Energy Supply Costs (AESC) Counterfactual 6 than under AESC Counterfactual 1. In the response, identify the assumptions and modeling differences that account for the increase in the RIM score under Counterfactual 6.

Response:

The AESC uses various counterfactual scenarios to help isolate the impact of various distributed energy resources and the programs and policies that support them. In general, a counterfactual that excludes continued support and deployment of a specific resource type (e.g., energy efficiency or behind-the-meter ("BTM") energy storage), should be selected to evaluate policies that support this type of resource. This approach acknowledges that there may be diminishing returns to certain resources types; the impact on the electric power system of the first unit of a resource is likely to be larger than the impact of the thousandth unit. Thus, counterfactuals that exclude a resource type that may not deploy without programmatic support more accurately evaluate the impact of a program that promotes that resource type.

The 2024 Avoided Energy Supply Costs ("AESC") includes a variety of counterfactuals, including Counterfactual 1 ("CF1") and Counterfactual 6 ("CF6").[1] Under CF1, New England program administrators are assumed to install no new energy efficiency, demand response, or building electrification resources after 2023. However, non-programmatic or market-driven adoption of these resources continues. In particular, the AESC modeling indicates that the vast majority of behind-the-meter ("BTM") storage deployment occurs outside of programs under CF1 (AESC 2024, Chapter 1, p. 17; pp. 97 and 104). By contrast, CF6 continues program-driven energy efficiency, demand response, and electrification, but it also assumes no BTM storage, either programmatic or non-programmatic (AESC 2024, p. 73). Consequently, CF6 removes the BTM storage resource that would otherwise be available to the system while retaining the additional electrification-related load growth. These assumptions produce materially different underlying supply-demand conditions.

Historically, CF1 (or similar scenarios in previous AESC studies) has been used to study energy efficiency programs, including Connecticut's Conservation & Load Management ("C&LM")

[1] Avoided Energy Supply Components in New England, 2024 Report, *available at*: https://www.synapse-energy.com/sites/default/files/AESC%202024.pdf

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program.[2] This is appropriate because CF1 excludes the resource types (namely, energy efficiency, demand response, and building electrification) that the C&LM Plan promotes. The 2021 AESC, which was used in the initial evaluation of the ESS program, did not include a counterfactual that isolated the impacts of BTM energy storage; therefore, there was no counterfactual specifically suited to evaluating a BTM energy storage program available. It is true that continuing to evaluate the ESS program under CF1 after the 2024 AESC was released provided some continuity in underlying assumptions; on the other hand, it remains the case that CF6 (or future counterfactuals that isolate the impact of BTM storage) is the most appropriate scenario for evaluating the ESS program.[3]The Ratepayer Impact Measure ("RIM") benefit-cost ratio is 1.55 under AESCCF1 and 3.69 under AESC CF6, representing an increase of approximately 138%. The differences are attributable due to different input assumptions from the AESC, primarily, higher avoided capacity benefits modeled under CF6. Program costs remain the same, as these are not derived from the AESC.

The following table summarizes the RIM benefit and cost streams under the two counterfactuals:

RIM Benefit/Cost Stream	**CF1 ($)**	**CF6 ($)**	**Diff. ($)**	**Diff. (%)**
Avoided Generation Capacity - Cleared – Passive	$1,252,014	$1,486,613	$234,599	19%
Avoided Generation Capacity - Cleared – Active	$419,866	$498,066	$78,200	19%
Avoided Generation Capacity - Uncleared - Passive	$9,339,870	$10,217,618	$877,748	9%
Avoided Generation Capacity - Uncleared - Active	$4,061,209	$4,403,262	$342,053	8%
Avoided T&D Capacity - Passive	$33,382,133	$33,382,133	$0	0%

[2] 2025-2027 C&LM Plan (filed with DEEP on Nov. 7, 2024) at 181 (see Note 2 in Figure 62), *available at*:: https://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/6b31d3583406937085258bce00697bcf/$FILE/2025%202027%20CT%20Plan%20(11-01-24).pdf.

[3] See, for example, the discussion of the appropriate selection of reference cases in Section 2.6 of the Methods, Tools and Resources handbook, which is a companion document to the National Standard Practice Manual, available at: https://naseo.org/nesp/mtr/chapter02

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Avoided T&D Capacity - Active	$11,484,730	$11,484,730	$0	0%
Reliability - Passive	$1,039,408	$1,548,466	$509,058	49%
Reliability - Active	$380,683	$573,596	$192,913	51%
DRIPE Capacity Impacts - Intrastate - Passive	$7,732,184	$32,499,882	$24,767,698	320%
DRIPE Capacity Impacts - Rest of Region - Passive	$26,402,779	$111,583,700	$85,180,921	323%
DRIPE Capacity Impacts - Intrastate - Active	$3,675,461	$13,163,659	$9,488,198	258%
DRIPE Capacity Impacts - Rest of Region - Active	$12,664,868	$45,261,808	$32,596,940	257%
Subtotal: Utility Benefits - Peak Savings	**$111,835,205**	**$266,103,533**	**$154,268,328**	**138%**
Subtotal: Utility Benefits - Energy Savings	($340,374)	($274,554)	$65,820	19%
Subtotal: Participant Bill	$1,503,211	$1,503,211	$0	0%
Subtotal: Incentives (RIM net = Upfront + Performance - Claw back)	$54,318,442	$54,318,442	$0	0%
Subtotal: Program Administrative Costs	$16,309,907	$16,309,907	$0	0%
TOTAL BENEFITS (RIM) = Peak Savings + Energy Savings	**$111,494,831**	**$265,828,979**	**$154,334,148**	**138%**
TOTAL COSTS (RIM) = Participant Bill Savings + Incentives + Admin	**$72,131,560**	**$72,131,560**	**$0**	**0%**
RIM Benefit Cost Ratio	**1.55**	**3.69**	**2.14**	**138%**

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The most significant difference between CF1 and CF6 is the treatment and resulting valuation of Demand Reduction Induced Price Effects ("DRIPE") associated with capacity. The four Capacity DRIPE benefit streams increased by approximately $152 million in aggregate (highlighted in blue), from approximately $50.5 million under CF1 to approximately $202.5 million under CF6. These additional Capacity DRIPE benefits account for approximately 98.6% of the total $154.3 million increase in RIM benefits. Thus, while several other peak related benefit streams also increase under CF6, the difference in Capacity DRIPE is the principal reason the overall RIM benefit-cost ratio is substantially higher under CF6.