Maine Department of Energy Resources
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To Whom It May Concern:

Competitive Energy Services ("CES") is a full-service energy consulting firm headquartered in Portland, Maine. We help commercial, industrial, and public end users across the U.S. navigate the energy landscape. CES works as an independent energy advisor, helping end users develop and execute energy supply purchasing strategies, assess and pursue onsite and offsite energy project opportunities, and translate energy policy and regulation in a way that can be understood and used by customers in their decision making. CES works with a variety of large end users across Maine that are interested in using energy storage to help manage rising electricity costs and to support Maine's grid decarbonization efforts in a cost-effective manner.

CES appreciates the Department's effort to solicit public input on the draft Request for Proposals for Energy Storage Projects Pursuant to 35-A M.R.S. §10313 (the "draft RFP") and to consider feedback to maximize participation in the RFP process. CES has four primary points of feedback on the draft RFP:

First, the final RFP should clarify that energy storage projects may be interconnected to non-PTF grid facilities or in a behind-the-meter configuration. This is not clear in the draft RFP.

Second, the deliverability requirements and standards included in Section 3.2.5 of the draft RFP appear to focus solely on front-of-the-meter energy storage systems, and do not contemplate a behind-the-meter, non-exporting energy storage system at a large end user's facility or campus.

Third, the pricing requirements in the draft RFP warrant clarification, in particular whether the Energy Market Adjustment should apply to behind-the-meter energy storage systems. While the Energy Market Adjustment may be appropriate to impose on front-of-the-meter energy storage projects, there are key differences for behind-the-meter systems that should be considered.

Fourth, CES agrees with the 3 MW minimum system size requirement included in the draft RFP, but we recommend DOER modifies Section 3.2.8 to permit consideration of larger behind-the-meter energy storage systems (i.e., 5-10 MW) that may be installed by CMP's or Versant's largest distribution-level customers. Efficiency Maine's Energy Storage Program caps incentive payments for behind-the-meter batteries at 3 MW. Large customers that take electric service at 12.5 kV should be given the opportunity to compete in the RFP process and to propose storage systems larger than 3 MW if they choose not to participate in Efficiency Maine's Energy Storage Program.

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Issue #1: Allowing Energy Storage Interconnected to Non-PTF Grid Facilities

Section 3.2.5 of the draft RFP states "The Delivery Point of an Eligible Project must be on a PTF located within ISO New England." The draft RFP defines a pool transmission facility ("PTF") as a facility rated 69 KV or above owned by a participating transmission owner over which ISO New England has operating authority in accordance with the terms set forth in the Transmission Operating Agreements. The draft RFP defines Delivery Point as the specific location on the Pool Transmission Facilities where Eligible Project shall charge and discharge the energy.

This requirement and the definition of Delivery Point warrant clarification. For example, if an energy storage system is interconnected to CMP's 34.5 kV transmission system, it will charge from and discharge its stored energy to the utility's non-PTF system. In a similar vein, if an energy storage system is interconnected behind-the-meter to a large end user's facility or campus, such that the system charges from and discharges stored energy to the internal electric distribution system owned and operated by the end user, it is not clear that this system would be considered an Eligible Project.

Section 3.2.5 goes on to state "For an Eligible Project connecting to a local distribution system, the Delivery Point shall be the ISO-NE pricing node (P-node) that electrically represents the Eligible Project's injection point onto the PTF system, as determined through ISO-NE asset registration, interconnection studies, or established nodal mapping." This sentence appears to permit energy storage projects to be electrically interconnected to non-PTF grid facilities, but it is worth noting that ISO-NE has established and utilizes P-nodes that fall outside the PTF system.

CES has provided recommended updates to the definition of Delivery Point and to Section 3.2.5 of the draft RFP later in the comments starting on page 6.

Issue #2: Allowing Behind-the-Meter Energy Storage Proposals

Regarding the second issue, the deliverability requirements in Section 3.2.5 of the draft RFP appear to focus solely on front-of-the-meter, market-facing energy storage systems. Large-scale behind-the-meter energy storage installations (i.e., 5-10 MW) can also fulfill DOER's statutory objectives for the RFP's competitive procurement but have notable differences in interconnection procedures and market participation rules compared to front-of-the-meter energy storage systems. CES recommends that these differences are reflected in the RFP to ensure that proposals for behind-the-meter energy storage systems, either by subtransmission customers or distribution-level customers, are not rejected simply because they cannot meet deliverability standards that do not apply to these projects.

In the Definitions section of the RFP, Net Contract Capacity is defined as the sustainable capacity in MW specified in the Energy Storage Contract at which the Energy Storage facility can deliver power to the grid. CES recommends updating this definition to clarify that Net Contract Capacity is the sustainable capacity in MW specified in the Energy Storage Contract at which the Energy Storage facility can deliver stored energy to the grid or to the host end user's internal electric system.

Section 3.2.5 begins with the statement: "The Energy Storage Project must be able to charge and discharge throughout the term of the contract. It is the responsibility of the bidder to satisfy the delivery requirement". It is not clear what "delivery requirement" means in this context. CES recommends this sentence is either removed or expanded to clarify what this requirement means.

Section 3.2.5 goes on to state "The bidder will be responsible for all costs associated with and/or arising from: (a) interconnecting its project to charge and discharge on the PTF system at both the Network Capability Interconnection Standard ("NCIS") and Capacity Capability Interconnection Standard (CCIS); and (b) for ensuring that the Energy Storage System is recognized in ISO-NE's settlement system as injected in the ISO-NE energy market at the specified and agreed Delivery Point. The bidder must interconnect at CCIS at its full injection capability that receives NCIS regardless of whether or not the bidder elects to participate in the capacity market."

It is important to note that a behind-the-meter energy storage system would not participate in the capacity market as a generating resource, but rather as an active demand capacity resource ("ADCR") that is tied to the host's electric load. The system's charging and discharging would not utilize an ISO-NE pricing node but rather would be tied to the end user's load asset identification number and would be incorporated into the host's retail electricity supply purchasing.

Finally, Section 3.2.5 states: "All bidders must have either: (a) signed an interconnection agreement for capacity network service prior to the initiation of the Transitional Cluster Study; (b) be actively participating in the Transitional Cluster Study; and/or (c) have detailed plans for submitting an interconnection request for Capacity Network Resource service with ISO-NE in the 2026 Cluster Request Entry Window."

A non-exporting behind-the-meter battery storage system would not be able to meet this requirement. First, because the system would participate in the ISO-NE capacity market as an ADCR, ISO-NE's Schedule 22 (Large Generator Interconnection Procedures) and Schedule 23 (Small Generator Interconnection Procedures) for a generating facility do not apply. This means the storage system would not be able to obtain Capacity Network Resource Service and would not be subject to the CCIS and NCIS standards set forth in Schedule 22 and Schedule 23. Second, due to its non-exporting interconnection configuration, which would initially be studied by CMP as a Level 3 interconnection pursuant to Maine Public Utilities Commission Chapter 324, the system would not directly participate in the ISO-NE energy market and therefore would not be recognized in ISO-NE's settlement system.

Section III.13.1.4.1.1.3 of ISO-NE Market Rule 1 governs the interconnection review analysis for ADCRs:

> For each New Demand Capacity Resource that is an Active Demand Capacity Resource, the ISO shall perform an analysis based on the information provided in the New Demand Capacity Resource Show of Interest Form to determine the amount of capacity that the resource could provide by the start of the associated Capacity Commitment Period. This

> analysis shall be performed consistent with the criteria and conditions described in ISO New England Planning Procedures. Where, as a result of this analysis, the ISO determines that because of deliverability impacts such a New Demand Capacity Resource that is otherwise accepted for participation in the Forward Capacity Auction or interim reconfiguration auction process in accordance with the other provisions and requirements of this Section III.13.1 cannot deliver any of the capacity that it would otherwise be able to provide (in the absence of the other relevant Existing Capacity Resources), then that New Demand Capacity Resource will not be accepted for participation in the Forward Capacity Auction, or the interim reconfiguration auction qualification process for that resource shall be terminated and the ISO will notify the Project Sponsor of such termination.

CES has included recommended updates to Section 3.2.5 of the draft RFP later in the comments starting on page 6.

Issue #3: Clarification of Pricing Requirements

The third issue relates to the pricing requirements included in Section 4.2 of the draft RFP. First, it is not clear whether the "General" pricing structure detailed in Section 4.2.1 is intended as a standalone pricing scenario, or if the intent of this subsection is to inform bidders that the Capacity Value adjustment must be assumed in the pricing that bidders offer under Sections 4.2.2 and 4.2.3.

CES recommends the final version of the RFP clarifies whether the fixed price proposal in Section 4.1.1 is a required standalone pricing scenario, and that the capacity value adjustment also applies to the required pricing submission Section 4.2.2 but for front-of-the-meter energy storage systems only. CES recommends that DOER provides bidders flexibility in Section 4.2.3 to provide alternative fixed price proposals that may not include a capacity value adjustment, such as an energy storage project that is treated as a load reducer.

Second, the Energy Market Adjustment ("EMA") noted in Section 4.2.2 and detailed in Appendix C is not appropriate to impose on behind-the-meter energy storage systems. DOER has noted that the EMA is intended to provide an incentive for bidders to maximize their energy market revenues while mitigating costs to ratepayers. While that may be true and necessary for front-of-the-meter energy storage systems whose sole purpose is to participate in ISO-NE markets, CES recommends that DOER carefully considers how application of the EMA would impact a behind-the-meter storage system where the use cases are different and energy storage system charging and discharging would interact with the host end user's retail electricity supply purchasing strategy.

A non-exporting behind-the-meter storage system would be operated to reduce the host's grid demand during the local utility's monthly peak load hour and during ISO-NE's seasonal peak load hour, thereby generating transmission savings, capacity tag savings, retail energy savings, and ADCR payments by shifting the host's grid demand outside of the local utility's on-peak hours. Adding the EMA to this stack of use cases is overkill and will likely cause a bidder to increase its fixed price proposal pricing for a behind-the-meter system.

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While a non-exporting behind-the-meter energy storage system can reduce an end user's market energy costs each month by shifting the host's grid demand to off-peak hours, the savings realized by the host will depend on whether it purchases retail supply on a 100% spot market basis. Large end users have flexibility in how they procure market energy and may choose to hedge blocks of power and fix energy market pricing during ISO-NE's off-peak period (11 P.M. to 7 A.M. on business days and all hours on weekends and holidays) while purchasing on-peak volumes on either the day-ahead market or the real-time spot market. This type of procurement strategy would enable the end user to maintain price certainty on a portion of its annual grid electricity supply costs while leaving flexibility to maximize the value of the energy storage system to reduce on-peak energy costs. We raise this example to highlight that energy arbitrage value depends on retail purchasing strategy, and that the EMA is not a one-size-fits-all solution. We recommend providing space and flexibility for bidders to propose pricing structures that they believe will produce the most cost-effective solution and will not distort bid pricing that would ultimately make contracts more expensive for other ratepayers.

Issue #4: 3 MW Sizing Minimum

DOER has invited comments on whether the minimum project size of 3 MW noted in Section 3.2.4 of the draft RFP should be maintained, adjusted, or eliminated. CES recommends that DOER maintains the 3 MW minimum size requirement but modifies Section 3.2.8 to permit the consideration of larger energy storage systems (i.e., 5-10 MW) that are installed behind the meter by a distribution-level customer. Section 3.2.8 of the draft RFP states "Projects that are eligible for participation in the Efficiency Maine Trust Energy Storage System Program are not Eligible Projects in this RFP." CES recommends Section 3.2.8 is updated to read "Eligible Projects cannot participate in the Efficiency Maine Trust Energy Storage System Program."

Commercial and industrial end users that take electric service from a utility's distribution system are eligible to participate in the Efficiency Maine Trust Energy Storage System Program. However, the Program effectively limits energy storage system sizing to 3 MW due to the annual incentive award cap.[1] The largest distribution customers in Maine that take electric service at 12.5 kV have grid demands between 5 MW and 10 MW. Efficiency Maine's Energy Storage Program is not suited to support energy storage installations at these facilities unless a system is downsized to 3 MW. This is suboptimal from the standpoint of maximizing demand management capabilities and potential resiliency applications for the host facility or campus.

Allowing large distribution-level customers to participate in the RFP process with behind-the-meter energy storage projects greater than 3 MW would help maximize participation in the RFP process and enable Maine end users to fully contribute towards DOER's goals set forth in the RFP.

[1] The Program's incentive rate is currently $200/kW-season, with an annual award cap of $600,000 per year.

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Recommended Modifications to the Draft RFP

Definitions:

Active Demand Capacity Resource: one or more demand response resources located within the same dispatch zone, that is registered with ISO-NE, assigned a unique resource identification number by ISO-NE, and participates in the ISO-NE capacity market to fulfill a market participant's capacity supply obligation pursuant to Section III.13 or Section III.15 of ISO-NE Market Rule 1.

Behind-the-Meter: An interconnection configuration through which an Energy Storage Project discharges stored energy to an end user's internal electric distribution system at a facility located in Maine.

Delivery Point: The specific location Eligible Project shall discharge its stored energy.

Front-of-the-Meter: An interconnection configuration through which an Energy Storage Project discharges stored energy to the local transmission and distribution utility's electric system.

Net Contract Capacity: The sustainable capacity in MW specified in the Energy Storage Contract at which the Energy Storage facility can deliver stored energy to the grid or to the host end user's internal electric distribution system.

Network Resource Interconnection Service: The Interconnection Service selected by the Interconnection Customer to interconnect its Generating Facility to the Administered Transmission System in accordance with the Network Capability Interconnection Standard, as defined by ISO New England in Schedule 22, Large Generator Interconnection Procedures, or in Schedule 23, Small Generator Interconnection Procedures, as applicable.

3.2.5 Interconnection and Deliverability: The Energy Storage Project must be able to charge and discharge throughout the term of the contract. The Delivery Point must be located so that T&D Utilities are not responsible for wheeling charges to move energy to and from the Pool Transmission Facility (PTF). The T&D Utilities will not be responsible for any costs other than the payment of the bid prices.

In order for an Energy Storage Project to be considered an Eligible Project, the Energy Storage Project must either be electrically interconnected to a PTF located within ISO New England, to CMP's non-PTF transmission system, to Versant's non-PTF transmission system, to a local electric distribution system in Maine, or to an end user's internal electric distribution system at a facility in Maine.

For a Front-of-the-Meter Eligible Project connecting to a local distribution system, the Delivery Point shall be the ISO-NE pricing node (P-node) that electrically represents the Eligible Project's injection point onto the PTF system, as determined through ISO-NE asset registration,

interconnection studies, or established nodal mapping. If a final P-node has not yet been assigned, an Eligible Project may provide a proposed or representative P-node based on the expected interconnection location, along with a description of the basis for that selection.

The bidder will be responsible for all costs associated with and/or arising from: (a) interconnecting its project to charge from and discharge to the Delivery Point; and (b) for Front-of-the-Meter Energy Storage Projects, ensuring that the Energy Storage System is recognized in ISO-NE's settlement system as injected in the ISO-NE energy market at the specified and agreed Delivery Point. For Front-of-the-Meter Energy Storage Projects, the bidder must interconnect at CCIS at its full injection capability that receives NCIS regardless of whether or not the bidder elects to participate in the capacity market.

At no time will one or more T&D Utilities assume the responsibility of Lead Market Participant, as defined by ISO-NE.

All bidders must have either: (a) signed an interconnection agreement for capacity network service prior to the initiation of the Transitional Cluster Study; (b) be actively participating in the Transitional Cluster Study; (c) for Front-of-the-Meter Energy Storage Projects, have detailed plans for submitting an interconnection request for Capacity Network Resource service with ISO-NE in the 2026 Cluster Request Entry Window; and/or (d) for Behind-the-Meter Energy Storage Projects, have detailed plans for submitting a Level 3 interconnection request to the local transmission and distribution utility in 2026, for submitting a proposed plan application to ISO-NE if required, and, if applicable, for obtaining ISO-NE approval as an Active Demand Capacity Resource. The bidder must detail the status (and conclusions, as available) of interconnection applications and studies. The Energy Storage Project shall comply with all ISO-NE, Northern Maine Independent System Administrator (NMISA), and FERC interconnection requirements, as applicable. All technical reports or system impact studies should approximate the ISO-NE interconnection process, including but not limited to clear documentation of study technical and cost assumptions, reasoning, and justification of such assumptions. An Eligible Project connecting to a local distribution system must also comply with all applicable interconnection requirements of the interconnecting distribution utility.

The burden is on bidders to provide the Department with information, analysis, and studies required by the Department to make a determination that the proposal includes all costs associated with completing the upgrades that would be required by ISO-NE's NCIS and CCIS, if applicable. Bidders must provide adequate information and analyses regarding the upgrades and must explain how the identified upgrades will satisfy this interconnection standard.

3.2.8 Efficiency Maine Trust Energy Storage System Program: Eligible Projects cannot participate in the Efficiency Maine Trust Energy Storage System Program

4.2.1 Fixed Price Proposal with Capacity Value Adjustment (Required): A bidder must propose a monthly payment, Bid Price, in $/kW-month for the term of the Energy Storage Contract. Prices must be in nominal dollar terms. The Bid Price may be the same each year or escalate over time at a fixed annual escalation rate. The Seller shall hold title and ownership to all market revenues from monetization of Energy, Capacity, and other sources associated with the Project. Bidders shall provide all assumptions and expected revenues in the CPPD Form available on the RFP Website. A Capacity Value will be netted out of either Fixed Price Proposal and therefore will offset some portion of the fixed monthly payment. The Capacity Value will be calculated using the following formula:

$$CV = CCP \times rMRI_{Proxy}$$

Where:
CV is the Capacity Value
CCP is the applicable annual or seasonal capacity clearing price in $/kw-month, and
rMRIProxy is the seasonal accreditation factor calculated by ISO-NE for the applicable energy storage system duration, or lesser value if duration does not match published values, or, if applicable, for Active Demand Capacity Resources for a Behind-the-Meter Energy Storage Project.

4.2.2 Fixed Price Proposal with Energy Market Adjustment (Required): Proposals for Front-of-The-Meter Energy Storage Projects must include a fixed price in $/kW-month that accounts for an adjustment based on expected energy market revenues in addition to an adjustment for Capacity Value as set forth in Section 4.2.1. Appendix C provides the formula that will be used to calculate the Energy Market Adjustment (EMA). Behind-the-Meter Energy Storage Projects are not required to submit a fixed price proposal that incorporates the EMA.

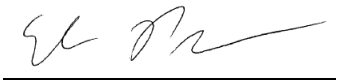
4.2.3 Alternative Fixed Price Proposal (Optional): Bidders may submit an alternative pricing option that does not account for an adjustment based on expected energy market revenues. Under this proposal the Bidder shall provide a fixed price in $/kW-month, and that price will not be adjusted based on energy market conditions. Bidders may propose other adjustments as appropriate and/or applicable depending on the planned use cases for the Energy Storage Project that result in cost-effective solutions.

5.1.1 Site Control:

7. Describe and provide a map of the proposed interconnection path and electrical configuration. Describe how the bidder plans to gain interconnection site control, and any rights that must be obtained by the interconnecting utility for that interconnection.

CES appreciates DOER's consideration of these comments. We look forward to reviewing the final version of the RFP once it is released.

Respectfully,



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