

December 2023



GOVERNOR'S
Energy Office

Maine Energy Storage Policy Overview

Vermont PUC Roundtable Discussion

December 7, 2023



**ENERGY
STORAGE
&
MAINE
ENERGY
AND
CLIMATE
POLICY**

Maine Won't Wait: Maine's 2020 four-year climate action plan identified energy storage as an important factor in achieving emissions reduction goals, maximizing the value of renewable energy on the grid.

Targets: L.D. 528 signed into law June 2021, established state storage targets, directed an Energy Storage Market Assessment.

Maine was the 9th state to codify energy storage targets. Maine's 2030 target of 400MW represents nearly 20% of Maine's electric demand. Significant given the state's relatively small power sector.

Maine Energy Storage Market Assessment

Sponsored by the State of Maine Governor's Energy Office

March 2022



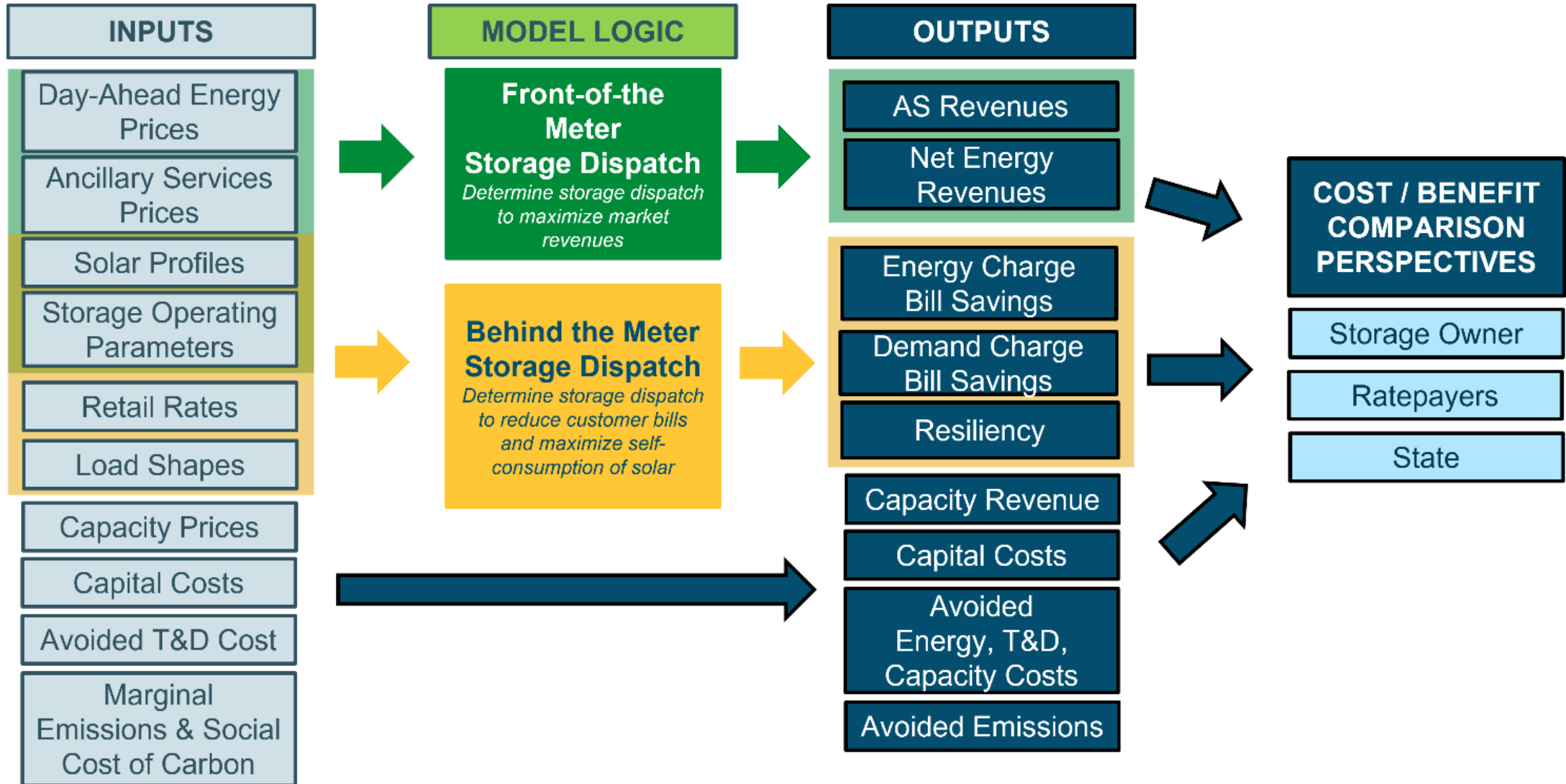
Directed by legislation to:

- Review the opportunities and challenges in achieving Maine's energy storage goals;
- Evaluate current and emerging storage technologies;
- Assess the market and policy landscape and hurdles to deployment; and
- Conduct a cost-benefit analysis of certain storage applications.

This assessment was meant to help inform policy makers as they work to support a landscape ready to deploy storage to meet our goals and to most effectively capture the benefits of storage for the grid, society, and for ratepayers.



Modeling Methodology



Maine Energy Storage Goal:

At least 300 MW of installed capacity in Maine by December 31, 2025 and at least 400 MW by December 31, 2030.

As of 2023:

- **63 MW of operational grid-connected energy storage** in Maine with 100s of MW in the interconnection queue.
- **235 MW of new and existing projects in Maine have qualified for and cleared the 17th FCA**, committing to supplying capacity and demand-reduction services in 2026/2027.
- Visibility into operational capacity of customer-sited, behind-the-meter storage resources is limited.

HP 1512, LD 2030

An Act To Provide for Reimbursement of the Sales Tax Paid on Certain Battery Energy Storage Systems

Pursuant to the law, battery energy storage systems with a capacity of 50 MW or greater purchased between January 1, 2023 and December 31, 2025 will be eligible to submit a claim for tax reimbursement beginning July 1, 2023.

Includes:

- Energy storage systems
- Parts and accessories integral to an energy storage system
- Materials for the construction, repair or maintenance of an energy storage system

[L.D. 1850](#)

An Act Relating to Energy Storage and the State's Energy Goals

- Modifies the state's energy storage goals, allows the GEO to periodically evaluate and increase goal.
- Directs the GEO to develop a Maine Energy Storage Program to procure up to 200 MW of utility-scale energy storage.
- Directs the GEO to study long-duration energy storage.
- Directs the PUC to determine potential circumstances for utility ownership of energy storage.

L.D. 1850



Maine Governor's Energy Office (GEO)

Request for Information

Maine Energy Storage Program Development Pursuant to P.L. 2023, ch. 374

Issue Date: November 13, 2023
Subject: Request for Information Regarding the Development of the Maine Energy Storage Program Pursuant to P.L. 2023, ch. 374 (LD 1850)
Response Due Date: December 8, 2023
Submit Responses To: caroline.colan@maine.gov

Description

This is a Request for Information (RFI) issued by the Governor's Energy Office (GEO). The GEO, established within the Executive Department and directly responsible to the Governor, is the designated state energy office tasked with a wide range of activities relating to state energy policies, planning, and development.

This RFI seeks public input to inform the GEO's implementation of section 2 of Public Law 2023, chapter 374, *An Act Relating to Energy Storage and the State's Energy Goals* (LD 1850),¹ which was signed into law by Governor Janet Mills on June 30, 2023. This legislation builds upon the state's existing energy storage goals and makes clear Maine's intention to invest in energy storage infrastructure to increase grid reliability and support the integration of clean energy resources needed to meet the state's climate and clean energy goals in a cost-effective manner.

Section 2 of this legislation directs the GEO to evaluate designs for a program to procure commercially available utility-scale energy storage systems connected to the transmission and distribution systems, including, but not limited to, through the use of an index storage credit mechanism. Energy storage is defined in Maine statute as 'a commercially available technology that uses mechanical, chemical or thermal processes for absorbing energy and storing it for a period of time for use at a later time'.² The GEO interprets "utility-scale energy storage" to mean energy storage resources connected in front of the meter.

In evaluating programs for the procurement of energy storage systems, per statute, the GEO shall consider programs that are likely to be cost-effective for ratepayers and that are likely to achieve the following objectives:

- A. Advance both the State's climate and clean energy goals and the state energy storage policy goals established in Title 35-A, section 3145 through the development of up to 200 megawatts of incremental energy storage capacity located in the State;

¹ Public Law 2023, Chapter 374 (June 30, 2023).

² 35-A M.R.S. §2481.

Sec. 2. Maine energy storage program development. The Governor's Energy Office, established in the Maine Revised Statutes, Title 2, section 9, referred to in this section as "the office," shall, in consultation with the Public Utilities Commission, evaluate designs for a program to procure commercially available utility-scale energy storage systems connected to the transmission and distribution systems, including, but not limited to, through the use of an index storage credit mechanism.

The GEO shall consider programs that are likely to be cost-effective for ratepayers and that are likely to achieve the following objectives:

- A. Advance both the State's climate and clean energy goals and the state energy storage policy goals established in Title 35-A, section 3145 through the development of up to 200 megawatts of incremental energy storage capacity located in the State;
- B. Provide one or more net benefits to the electric grid and to ratepayers, including, but not limited to, improved reliability, improved resiliency and incremental delivery of renewable electricity to customers;
- C. Maximize the value of federal incentives; and
- D. Enable the highest value energy storage projects, specifically energy storage systems in preferred locations, projects that can serve as an alternative to upgrades of the existing transmission system and projects of optimal duration.

RFI responses due December 8

Energy Storage System Projects



Efficiency Maine's Energy Storage System (ESS) Program Opportunity Notice (PON) offers performance based incentives for the deployment of energy storage systems during summer peak demand conditions.

All demand metered customers (commercial, nonprofits, institutions and government) are eligible to participate.

Eligible Projects

Eligible projects must be interconnected behind the facility utility meter and must be located in Maine with a Maine electric utility account. Awarded incentives will be based on the amount of facility electric load (kW) that the proposed system can reduce during summer peak demand hours. Additionally, awarded systems must:

- Be approved by the Trust prior to installation.
- Be at least 20 kW.
- Maintain a minimum 80% round-trip efficiency.
- Be able to collect and transmit 15-minute interval data.
- Carry a 10-year manufacturer warranty.
- Be UL-listed or certified by another nationally recognized testing lab.

**Efficiency Maine Trust
Load Management
Initiative**

L.D. 1986

An Act Relating to Net Energy Billing and Distributed Solar and Energy Storage Systems

- Reforms the state's existing net energy billing programs, reducing costs for ratepayers.
- Directs the PUC to examine and reports on the costs & benefits from distributed generation and ensure benefits accrue to ratepayers.
- Establishes a new distributed solar and energy storage program utilizing federal funds and administered by the GEO.

L.D. 1591

An Act to Promote Economic Reuse of Contaminated Land Through Clean Energy Development

- Establishes a program to repurpose PFAS contaminated agricultural land for solar energy development through a competitive procurement.
- Directs the GEO to report on the impacts of the state's RPS policy on energy prices, greenhouse gas reductions, and the economy.

L.D. 496

An Act to Address Battery Storage System Decommissioning and Clarify Solar Energy Development Decommissioning

- Adds a requirement for any battery energy storage system of 2 MW or greater to get approval of a decommissioning plan from DEP prior to construction.

L.D. 327

An Act to Provide Maine Ratepayers with Equitable Access to Interconnection of Distributed Energy Resources

- Reforms the state's procedures for interconnection (Chapter 324) of solar and energy storage resources to the electric grid.
- Requires the PUC to align its interconnection rules with best practices.
- Requires the PUC to appoint an interconnection ombudsperson to assist in dispute resolution and convene stakeholders.

New interconnection procedures for small generators (Chapter 324)

STATE OF MAINE
PUBLIC UTILITIES COMMISSION

Docket No. 2023-00103

November 3, 2023

MAINE PUBLIC UTILITIES COMMISSION
Amendments to Small Generator
Interconnection Procedures
(Chapter 324)

ORDER ADOPTING RULE
AND STATEMENT OF
FACTUAL AND POLICY
BASIS

BARTLETT, Chair; SCULLY and GILBERT, Commissioners

I. SUMMARY

Through this Order, the Commission adopts amendments to its Small Generator Interconnection Procedures Rule (Chapter 324). This rulemaking makes changes to facilitate the interconnection process for all levels of generation facilities and implements the requirements of legislation.

- Follows national best practices from BATRIS and IREC's 2023 Model Interconnection Procedures.
- Adds a definition for energy storage system (ESS) that aligns with state statute.
- Directs the development of an ESS Application Information Form as a standard form.
- The amended rule does not require T&D Utilities to consider ESS operating profiles when interconnecting ESS.
- The amended rule does not add any requirements regarding assumptions with respect to when an ESS may charge from the Distribution System.
- Requires the PUC to hire an ombudsperson to settle disputes, and report and track additional metrics related to interconnection (LD 327).

Upcoming: PUC inquiry regarding Utility Control or Ownership of Energy Storage (Docket # 2023-0316)

- Case Details:

Case Number:	2023-00316	Case Status:	Open
Utility/Industry Type :	Multiple	Utility/Industry Subtype :	Multiple
Case Type :	COMMISSION INITIATED	Case Subtype :	INQUIRY
Pertaining to Utility/Company :	MAINE PUBLIC UTILITIES COM	Case Title :	COMMISSION INITIATED INQUIRY REGARDING UTILITY CONTROL OR OWNERSHIP OF ENERGY STORAGE
Initiating Filer :	ME PUBLIC UTILITIES COMMISSION	Case Start Date :	11/29/2023

Maine Energy Plan: Pathway to 2040

- **Key Dates:**
 - Kickoff webinar: August 22, 2023
 - Plan complete early 2024
- **Modeling multiple energy demand scenarios based on established requirements, including granular electricity projections**
 - Robust projections to inform state planning, funding, and utility planning
- **Modeling multiple supply mixes to determine cost-effective pathways to 100% clean energy by 2040 and meet established requirements**
 - RPS, offshore wind, storage
- **Retained The Brattle Group, Evolved Energy Research and Consensus Building Institute**
- **2040 Energy Plan will include modeling and policies**