Maine Quarterly Energy Storage Forum

Efficiency Maine Trust, Energy Storage Programs Summary

February 15, 2023

Agenda

- ESS PON Overview and Updates
- Coincident Peak (CP) Rate Structure
- Small Battery Offering Preview
- Q&A

ESS PON Overview

- Performance based incentive of $200 per kW for 5 years
- Based on 8 deployments during summer peak demand conditions (targeting the ISO NE ICAP hour and summer RNS peaks)

Eligible Projects

- KW reductions must be behind the meter or reductions in grid supplied power
- Size must be greater than 400 kW and not more than 3,000 kW
- Preapproval required

Application Requirements

1. Technical and financial proposal
2. Management and resource adequacy

October 2022 Updates

- Opened to all demand metered customers
- Increased upper size limitation from 1 MW to 3 MW
- Revised milestones to reflect input on typical construction schedules
- Refined language around summer peak demand periods

https://www.efficiencymaine.com/docs/Energy_Storage_System_Pilot_Program_PON-EM-023-2022.pdf

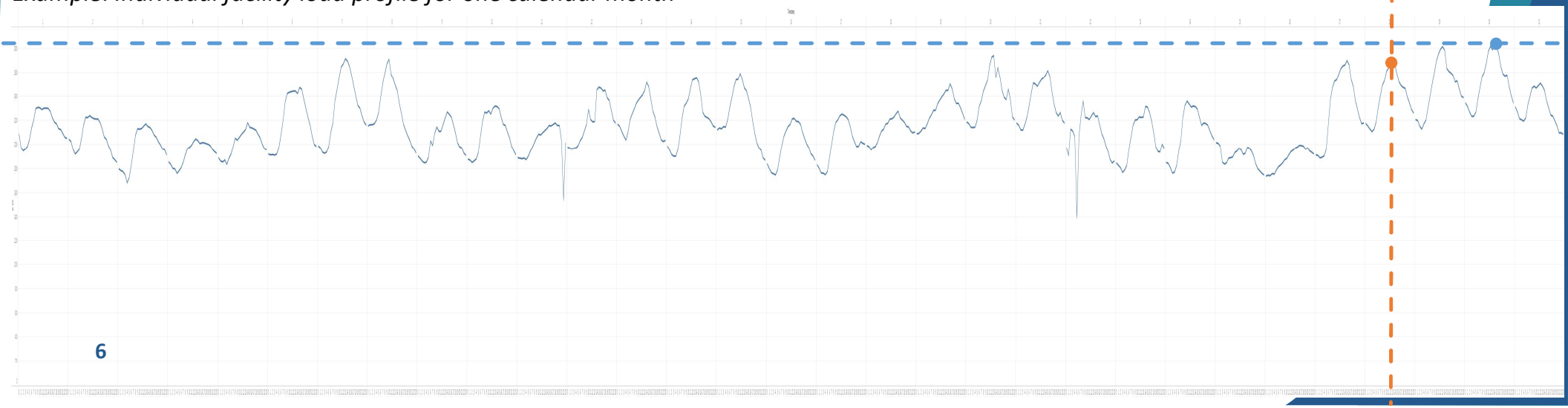
Coincident Peak (CP) Rate Structure

CP rates enable demand charge savings for customers with significant demand response efforts or with spiky load shapes, while still adhering to the principals of cost causation.

Defining terms

- Regional Network Service (RNS) Peak: Maximum hour of demand throughout a utility's transmission territory
  - Occurs monthly
  - These peaks determine how much utilities must pay to ISO-NE
- **Non-coincident peak (NCP):** a facility's maximum demand (kW) in a month
- **Coincident peak (CP):** the demand (kW) at a facility during the hour of the monthly RNS peak

Example: Individual facility load profile for one calendar month



How CP rates change price signals

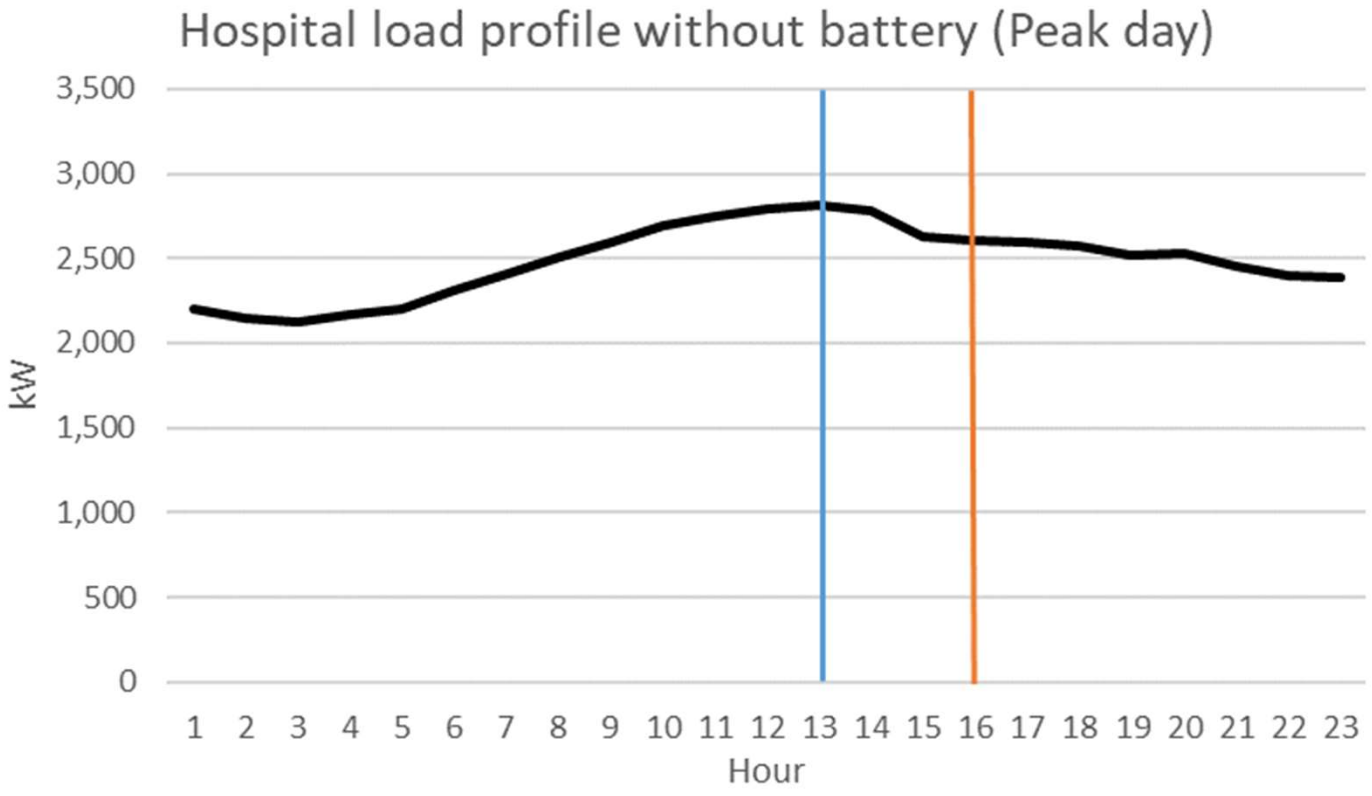
	Large Rate Class (CMP)**	Medium Rate Class (CMP)
Status quo*	$20/kW NCP	$16/kW NCP
Coincident peak rate*	$5/kW NCP + $19/kW CP	$4/kW NCP + $19/kW CP

**approximate prices*

***for simplicity, combining on-peak and shoulder components of non-coincident peak under the assumption that they are roughly equal in kW*

Critical Care Facility Pilot

Baseline load profile



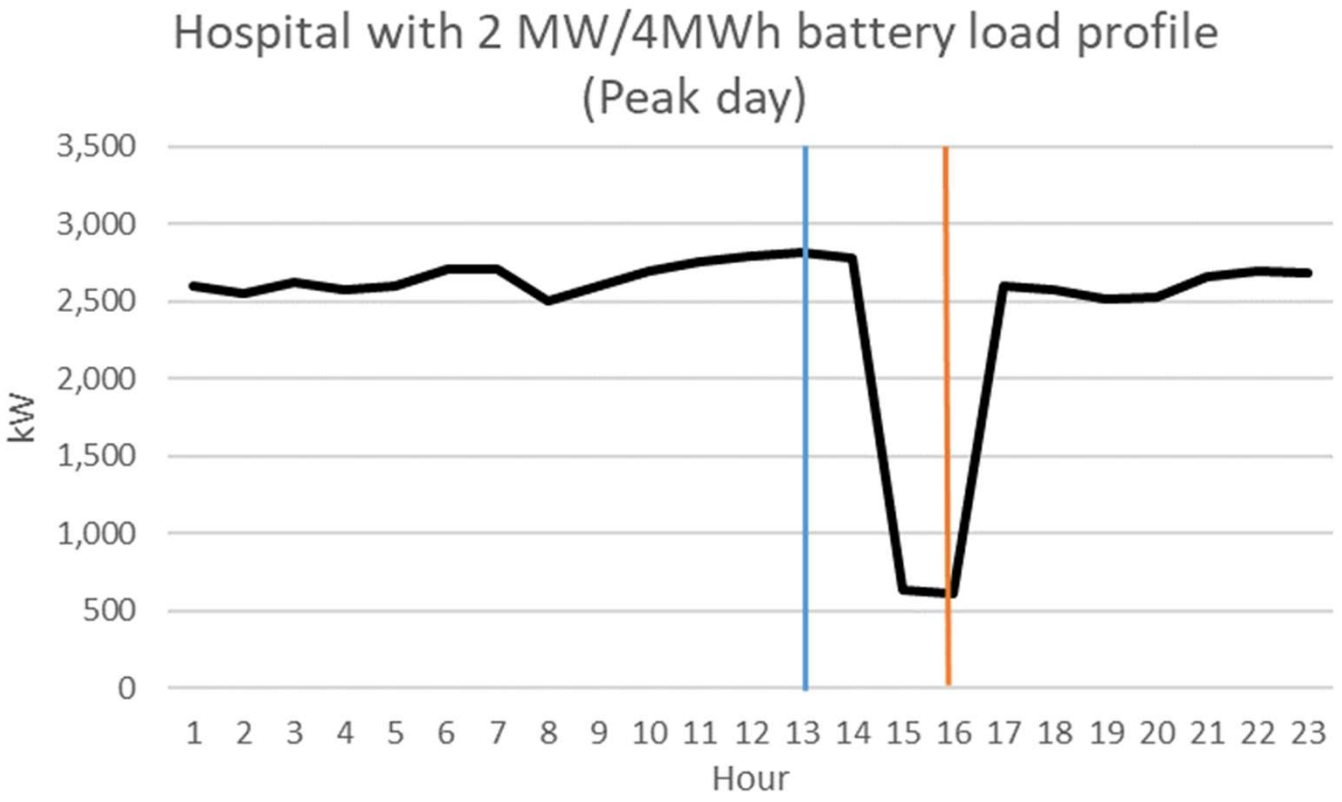
NCP: 2,813 kW

CP: 2,609 kW

Critical Care Facility Pilot

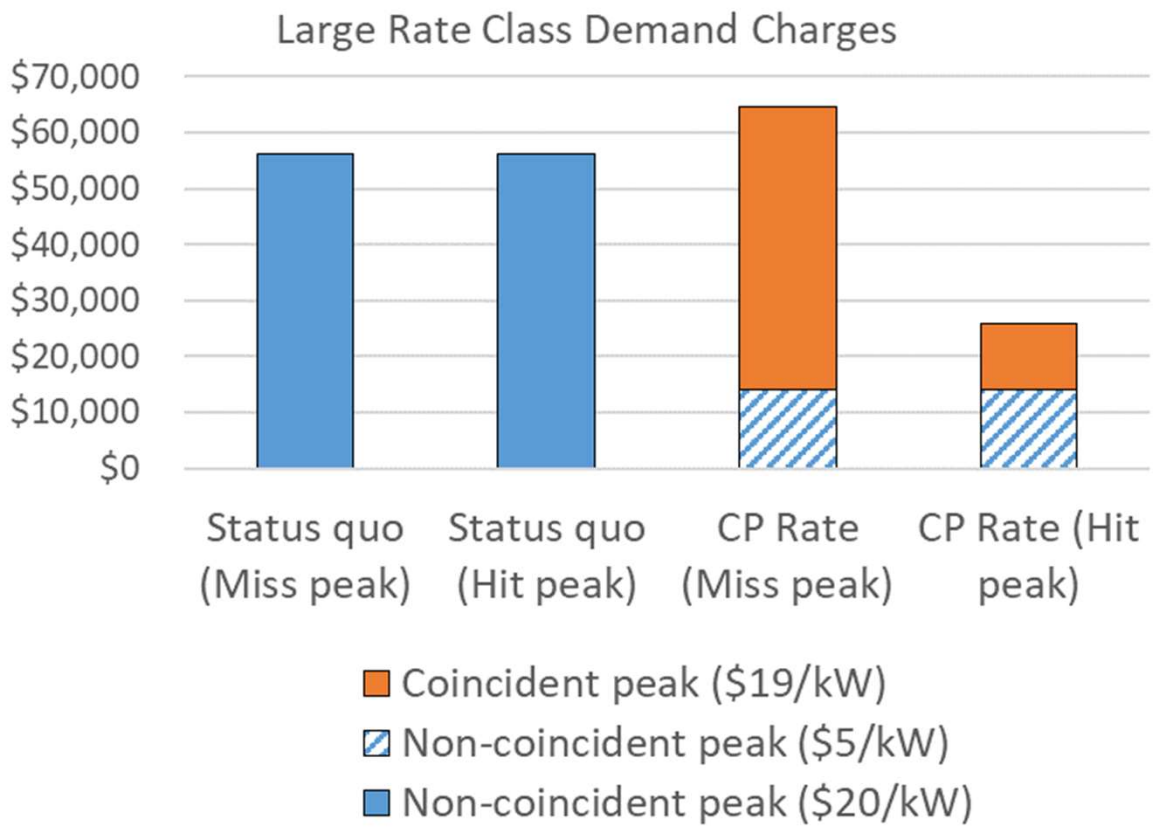
Load profile with successful battery dispatch, known as "hitting the peak"

Curtailment Service Providers (CSPs) can predict peaks based on weather forecasts, real-time pricing



NCP: 2,813 kW

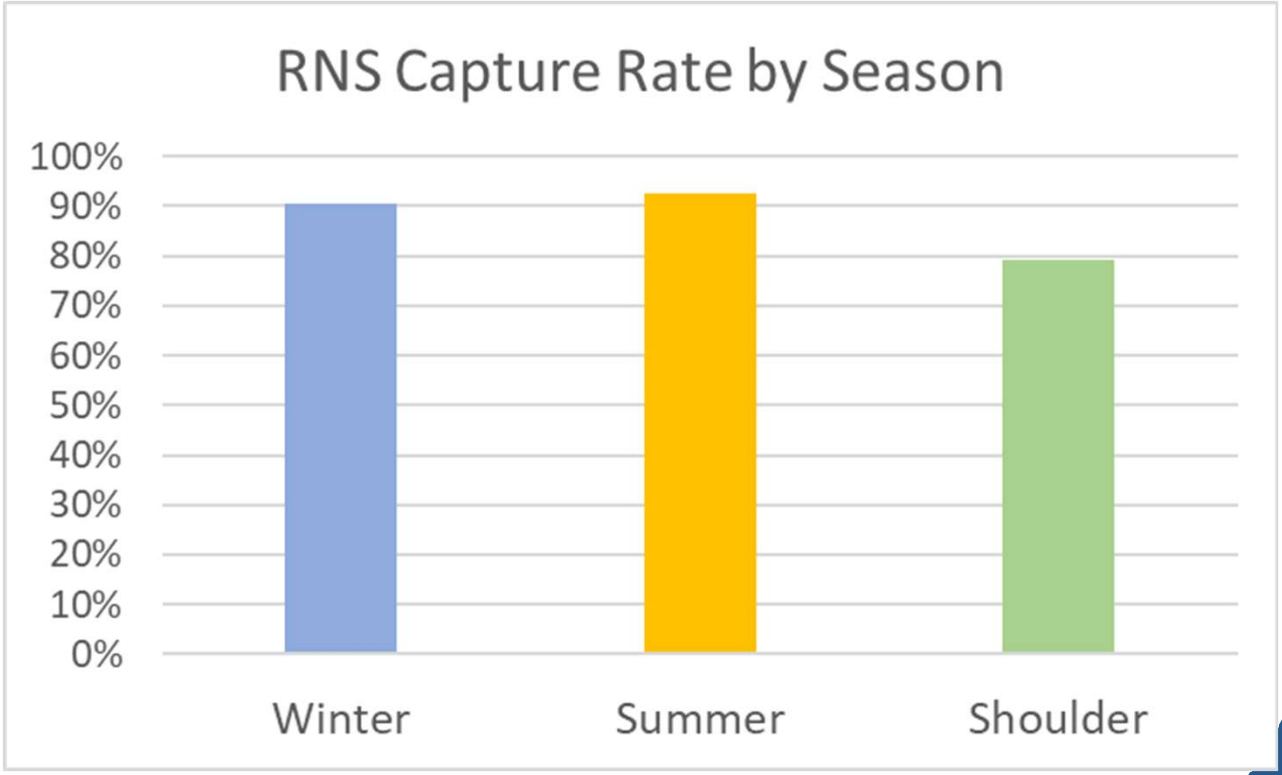
CP: 609 kW


Large Rate Class Demand Charges
$70,000
$60,000
$50,000
$40,000
$30,000
$20,000
$10,000
$0
Status quo (Miss peak)
Status quo (Hit peak)
CP Rate (Miss peak)
CP Rate (Hit peak)
Coincident peak ($19/kW)
Non-coincident peak ($5/kW)
Non-coincident peak ($20/kW)

ACES Energy Storage Study (Massachusetts)

- Apr 2019-Oct 2021
- 7 Participants
- RNS Capture Rate =

$$\frac{\text{\# of successful peak hits}}{\text{\# of months attempted}}$$



Small Battery Program Preview

Small Battery Program - Measure Considerations

BYOD Residential Battery Dispatch

- $TBD/kW performance (average) per capacity period

BYOD Small Commercial Battery Dispatch

- $TBD/kW performance (average) per capacity period

Opportunities to leverage Efficiency Maine "Green Bank" for lease to own program

High level program design considerations:

- Run through Efficiency Maine's DERMS provider VirtualPeaker, vendors dictated by this service
- June - September
- 2pm - 7pm
- No more than 60 times per capacity season
- A maximum of 3 hours per event

Q&A

For additional questions about the ESS PON, please contact:

Jesse Remillard, Custom Programs Manager

- 207-368-2558
- Jesse.remillard@efficiencymaine.com