



# Stakeholder Requests for Operational Data & Information

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## *Analysis of Potential Solutions*

Jon Gravelin

SENIOR MANAGER, CONTROL ROOM OPERATIONS

Jin Hua Thian

DIRECTOR, MARKET PERFORMANCE AND INTEGRATION



# Background

- At the September 5, 2024 NEPOOL Participants Committee meeting, the ISO received requests for additional discussion around operational data and reporting information related to Capacity Scarcity Conditions (CSC)
- Subsequently, the ISO issued a request for stakeholder input on the type of data and information that participants are looking for, the proposed delivery method and timeframe for providing such information
  - Stakeholder requests were accepted through September 27, 2024
- For each request, the ISO also sought rationale on the intended use of the information to understand what particular data could achieve the objective and how it will be useful for stakeholders

# Ongoing Assessment of Stakeholder Feedback

- The ISO appreciates the thoughtful and constructive feedback stakeholders provided that will help enhance the operational data that the ISO provides
- Today's discussion will focus on updates since the November RC on proposed enhancements to notifications and the Morning Report and additional requests related to Settlements data
  - Appendix 1 contains an overview of the stakeholder requests that were reviewed at the [November 2024 RC meeting](#)
- The ISO has assessed the remaining requests for feasibility and has determined that some requests may be addressed in the long-term and others may not be feasible

# Goals & Objectives

- In considering these requests, the ISO has the following goals and objectives in developing enhancements:
  - Consider the needs and concerns of stakeholders
  - Enhance data and information provided on a CSC following an event
  - Provide appropriate data and information in a timely manner to promote informed decisions
  - Maintain confidentiality of market sensitive information

# UPDATES FOLLOWING NOVEMBER RC

# Notification Enhancements

- There were many requests for enhanced notifications of real-time (RT) contract curtailments (*i.e.*, exports), with a focus on event declarations (*i.e.*, MLCC 2 and OP-4 Actions)
  - Curtailment Notifications
    - Target Date – January 1, 2025
    - **Implemented – December 18, 2024** – ISO improved the timeframe for notification of RT only contract curtailments such that all notifications will be made in near real-time (*i.e.*, within 10-15 minutes of the curtailment being made)
  - Other System Conditions (*i.e.*, MLCC 2 and OP-4 Actions)
    - Currently posted on the “[Notices](#)” section of the ISO website and on the “ISO to Go” app in RT
      - Future update to ISO to Go expected to enhance notification capabilities
    - Automated email notifications are currently available via [subscription](#) to “Emergency Operating System Notices” or “All Notices”

# Capacity Reporting Enhancements

- *Phase 1*
  - Major improvements:
    - New Next Day Operational Capacity Report
      - Currently sent as an email distribution to “All Notices”
        - » Contact ISO Participant Support for subscription assistance
      - Will transition to a web posting similar to Morning Report in Phase 2
    - Elimination of 0400 Preliminary Morning Report
    - Modified Timing of Morning Report
      - Morning Report now posted 1hr earlier at 0800
    - New In Day Capacity Update
      - Posted at 1200 as an update to the Morning Report
  - Target Date – January 1, 2025
  - **Implemented – December 19, 2024** (for Operating Day 12/20/24)

# Capacity Reporting Enhancements, cont'd

- *Phase 2*
  - Major improvements
    - Transition Next Day Operational Capacity Report to a web posting
      - ISO is evaluating feasibility of inclusion in “ISO to Go”
    - Finalize transition to three uniquely named reports
      - Next Day Operational Capacity Report – 1600 day prior
      - Morning Report – 0800
      - Operational Capacity Update Report – 1200
    - Revision and realignment of report definitions, tool-tips, and text
    - New data fields
      - Breakdown of Total Reserves
        - » Fast-Start
        - » On-Line Non-Fast Start resources
      - Additional outage information
        - » Aggregate values of Planned vs Forced Outages and Reductions
      - Aggregate Value of “Uncommitted Available Generation (non-Fast Start)” Specifically for the Evening Peak
  - Target Date – June 2025



# SETTLEMENTS-RELATED DATA



# Capacity Supply Obligation (CSO) Data Request

- **Request:** More prospective provision of the total CSO used in the Balancing Ratio (BR) calculation, regardless of a CSC event
  - Total CSO in BR = Total CSO less Total Energy Efficiency (EE) CSO
  - Currently available to Market Participants in Forward Capacity Market (FCM):
    - *Total CSO:* Provided in FCM Preliminary Capacity Load Obligation MIS Report approximately 3-5 business days before beginning of month
    - *Total CSO in BR:* Provided in FCM Capacity Performance Score Preliminary MIS report approximately 5 business days after Capacity Scarcity Condition (CSC) event
- **Enhancement:**
  - Addition of new public prospective monthly report coincidental with FCM month-ahead settlements MIS report, approximately 3-5 business days before beginning of month:
    - Total CSO
    - Total EE CSO
    - Total CSO in BR
  - Target Date – Late January 2025, coincident with FCM Preliminary Capacity Load Obligation MIS Report
    - Note: Report will be prospective for February 2025

# CSO Data Request, cont'd

## Example

### Balancing Ratio Capacity Supply Obligation Report

The Forward Capacity Market (FCM) is an auction-based approach to ensuring New England's electricity system has sufficient capacity to meet demand. A portfolio of supply and demand resources is selected to provide the capacity through a competitive Forward Capacity Auction (FCA) process. Resources bidding in the FCA are paid the market clearing price for capacity and accept a capacity supply obligation (CSO), a financially binding obligation to provide the stated amount of capacity.

#### 1.1 Total CSO used in Balancing Ratio Calculation

The following table shows the monthly CSO MW used in the Balancing Ratio Calculation:

Month	Energy Efficiency Measures CSO MW	Total CSO MW	Balancing Ratio CSO MW
Aug 24	2,492,243	32,379,779	29,887,536

To be added to list of reports in [Market Performance Reports](#) section of ISO website

# CSO Data Request, cont'd

- **Request:** Changes to FCM Preliminary Capacity Load Obligation MIS Report to include:
  - (i) Total CSO and aggregate Energy Efficiency
  - (ii) Actual Capacity Provided (ACP) by generation, import, and demand response
- **Enhancement:**
  - New monthly report with prospective Total CSO information (from previous slide) will address request (i)
  - Addition of ACP breakout details (*i.e.*, generation, import, demand response) to Weekly Market Report after preliminary Pay-for-Performance settlement to address (ii)
    - Note: Item (ii) only applicable with CSC occurrence (*i.e.*, ready for implementation, but not reportable without an associated CSC event)

# CSO Data Request, cont'd

## *Example of ACP breakout details*

### Weekly Market Summary



### Actual Capacity Provided by Resource Type July 29-August 4, 2024

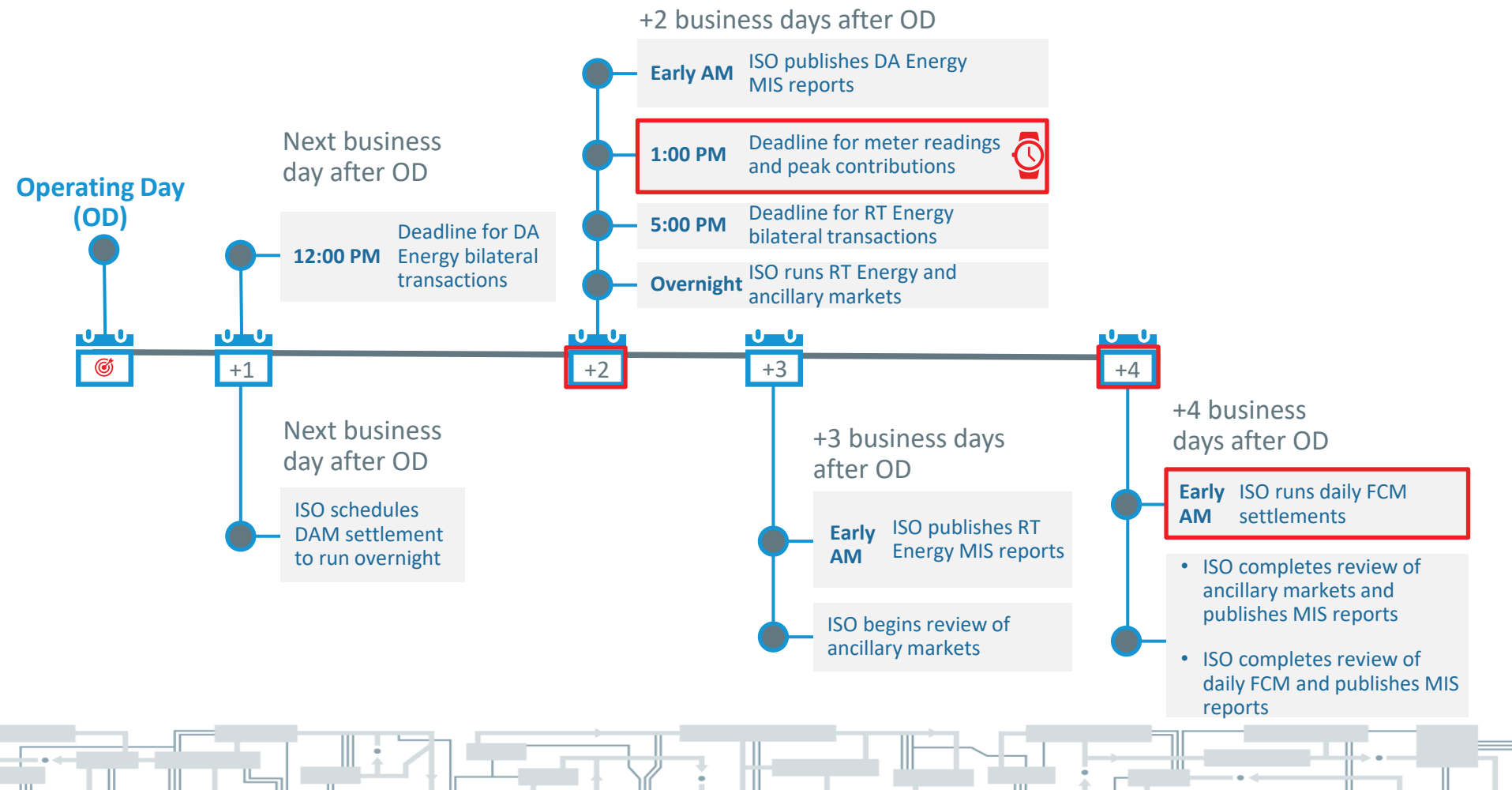
Day	5-Minute Interval Beginning	Resources w/ CSO ACP MW			PFP Only ACP MW			Total ACP MW
		DR	GEN	IMPORT	DR	GEN	IMPORT	
8/1/2024	16:55	507	22,896	2,175	0	884	2,175	26,743
8/1/2024	17:00	505	22,964	2,242	0	821	2,242	26,513
8/1/2024	17:05	516	22,967	2,242	0	590	2,242	27,262
8/1/2024	17:50	516	22,968	2,242	0	591	2,242	27,303
8/1/2024	17:55	517	22,990	2,242	0	584	2,242	27,303
8/1/2024	18:00	505	22,400	2,242	0	528	2,175	26,513

Weekly Market Reports are currently located on [Market Performance Reports](#) section of ISO website

# Settlement Only Generator (SOG) Data Request

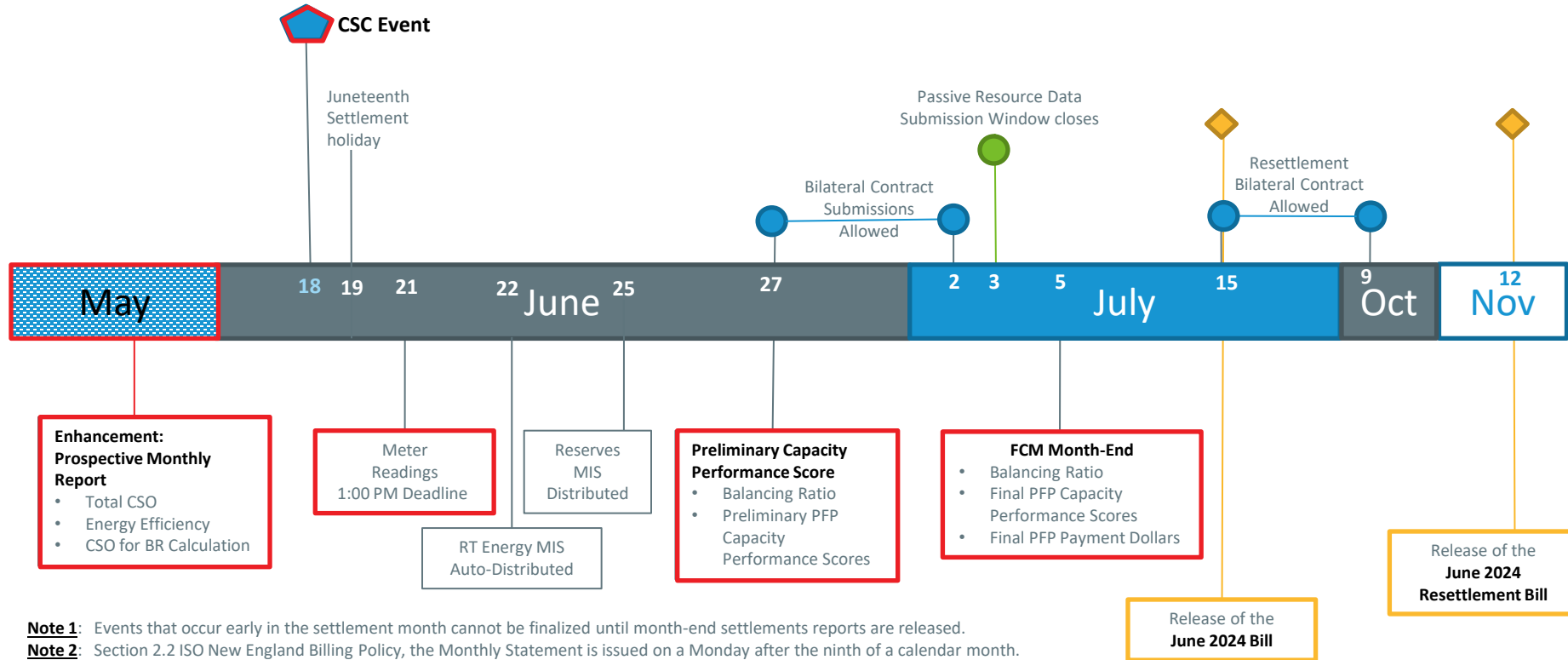
- **Request:** Historical 5-min Energy data produced by SOGs
- **Existing Solution:**
  - Historical hourly data available on “[Weekly Market Data 53 Weeks](#)” report on [Market Performance Reports](#) section of ISO website
    - Report updated weekly
  - Market Participants can divide hourly data by 12 to obtain 5-min Energy data

# Overview of Daily Settlements for an Operating Day



# Overview of Capacity Scarcity Condition (CSC) Event

## Example – June 18, 2024 Event: Actual Work-Flow



**Note 1:** Events that occur early in the settlement month cannot be finalized until month-end settlements reports are released.

**Note 2:** Section 2.2 ISO New England Billing Policy, the Monthly Statement is issued on a Monday after the ninth of a calendar month.

**Note 3:** Bilateral contracts and Passive Resource meter data can impact the Balancing Ratio in the FCM Month-End settlement.



# REMAINING REQUESTS & NEXT STEPS

# Future Capacity Information Enhancements

- **Request:** Expansion of capacity reporting to publish estimated surplus during each hour of the day
- **Enhancement:**
  - Hourly Capacity Information
    - Hourly Aggregate Data
      - Total Available Capacity (CSO) – Morning Report Line H
      - System Load Forecast – Morning Report Line I
      - Reserve Requirement – Morning Report Lines J & M
      - Capacity Requirement – Morning Report Line K
      - Capacity Surplus – Morning Report Line L
    - Target Date – 4<sup>th</sup> Quarter 2025

# Future Capacity & Operational Information Enhancements

- Additional explanatory materials pertaining to operational reporting
  - ISO is currently evaluating additional options for providing explanations of the definitions, terms, calculations, and data presented in various operational reports
    - Some of the data and information that the ISO is considering for inclusion:
      - Market/dispatch signals that indicate “deployment” of resource reserves
      - Location of information showing real-time implementation of MLCC 2 and OP-4 actions
      - Where participants can access “Technology model forecasts” (*e.g.*, Solar and Wind)
      - How to identify a specific location of a CSC event, if not system-wide
- Target Date – Mid-February 2025 and Beyond

# Potential Long-Term Requests – Operational Data

- The following data/displays are currently being considered and evaluated by the ISO for feasibility and project requirements:
  - Aggregate Storage Capabilities (*e.g.*, battery production & charging)
    - Due to the current small quantity, there is little value now. However, this is being considered for future needs
  - Real-time outage tracking (aggregate forced outages)
  - Real-time Reserve Tracking
- Target Date – 2026 and Beyond



# Potential Long-Term Requests – Settlements Data

- Aggregate MW values of underperforming and overperforming resources
  - The ISO is continuing to assess what data can be shared publicly without violating the Information Policy
    - *Note: Only applicable with CSC occurrence*
  - If the ISO determines that this data can be shared, the ISO is considering whether it could be added to the existing Weekly Market Report

Weekly Market Reports are currently located on [Market Performance Reports](#) section of ISO website

# Requests Found to be Infeasible

- Publication of the fully detailed capacity information for each hour of the day
  - Full set of data contained in the current three capacity reports not available for each hour of the day
- Addition of a fourth publication of the full capacity report
  - Not feasible to devote additional System Operator time to another instance of the full capacity report



# Next Steps

- The ISO will continue to develop the enhanced reporting detailed in this presentation for both operational data and settlements data
- The ISO will provide updates to stakeholders as enhancements are implemented
- The ISO will continue to consider the remaining requests as its reporting processes evolve



# Questions





# APPENDIX 1

## *Overview of Stakeholder Requests*

# Overview of Stakeholder Feedback

- In total, the ISO received ~40 requests for data or reporting enhancements from 11 different entities
- These requests generally fall into four main categories:
  - Capacity Supply Obligation (CSO) Data
  - Operational Data and Information
  - Morning Report (Capacity Reporting)
  - CSC and Capacity Performance Information

# CSO Data

- **Request:** Improved availability and details around CSO-related information
- **Rationale:** Allows participants to have a better understanding of the resource types and quantities available for the ISO to meet system requirements

# Operational Data and Information

- **Request:** Enhanced participant awareness of operational conditions, resource availability, and resource outages
- **Rationale:** Participants can leverage information to make informed decisions to better position resources in Day-Ahead (DA) and Real-Time (RT) markets
  - Also enhances participant understanding of resource dispatch and reserve availability



# Morning Report (Capacity Reporting)

- **Request:** More granular and timely information to provide a snapshot of expected conditions as the system approaches the daily peak hour
- **Rationale:** Participants can evaluate information for changing system conditions and consider self-commitment



# CSC and Capacity Performance Information

- **Request:** Additional and more granular generator performance data following events
- **Rationale:** Allows participants to better self-assess generator performance, understand values and calculations used under Pay for Performance (PFP), and more rapidly determine penalties following events



## APPENDIX 2

### *Examples of Existing Operational Reports and CSC Information*

# Existing Operational Reports and CSC Information

- [Morning Report](#)
- [Seven-Day Forecast](#)
- [Three-Day System Demand Forecast](#)
- [21-Day Energy Assessment Forecast and Report](#)
- [Historical FCM Capacity Scarcity Condition Summaries](#)
- [Capacity Scarcity Condition Reports](#)
- [OP-4 Implementation Summaries](#)
- [Energy, Load, and Demand Reports](#)

