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October 26-28, 2023
Northampton, MA

Settlements

Lesson 6A: Settlement Introduction Timeline

Forward Capacity Market (FCM 101)



The information contained in this presentation is applicable to FCA 18. If market rules related to FCA 19 and beyond are revised, participants need to comply with any applicable rules as approved by FERC. The ISO anticipates updating its training content for such changes, as time permits.

Mike Forrest

Associate Settlement Analyst, Market Development



Some slides or portions of slides may be intentionally hidden in the printed and posted versions of this presentation.

Topics

- Forward Capacity Market (FCM) Timeline for Settlement Processing
- Billing of FCM Settlement
- FCM Settlement Components
- Market Information Server (MIS) Reporting for FCM Settlement
- Validation Tools for FCM Settlement



Objectives

- Identify timeline for settlement processing
- Recall how and when FCM settlement is billed
- Identify FCM settlement components
- Identify validation tools for FCM settlement and where they can be found



Common Acronyms

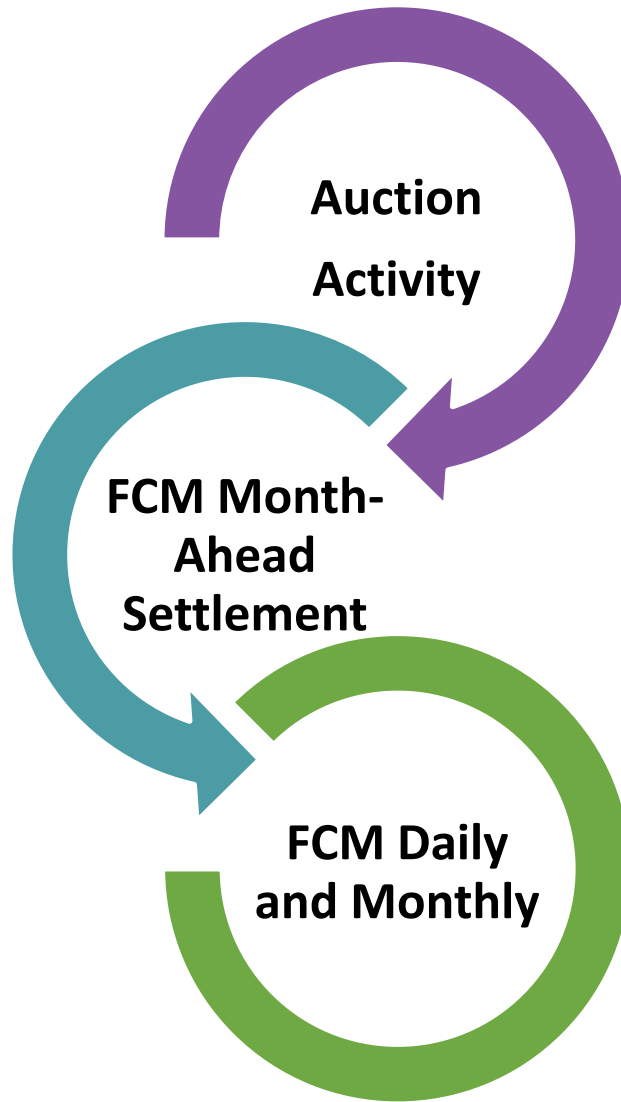
In Order of Appearance

FCM	Forward Capacity Market
MIS	market information server
CSC	capacity scarcity conditions
CSO	capacity supply obligation
MRA	monthly reconfiguration auction
ARA	annual reconfiguration auction
FCA	Forward Capacity Auction
ART	annual reconfiguration transaction

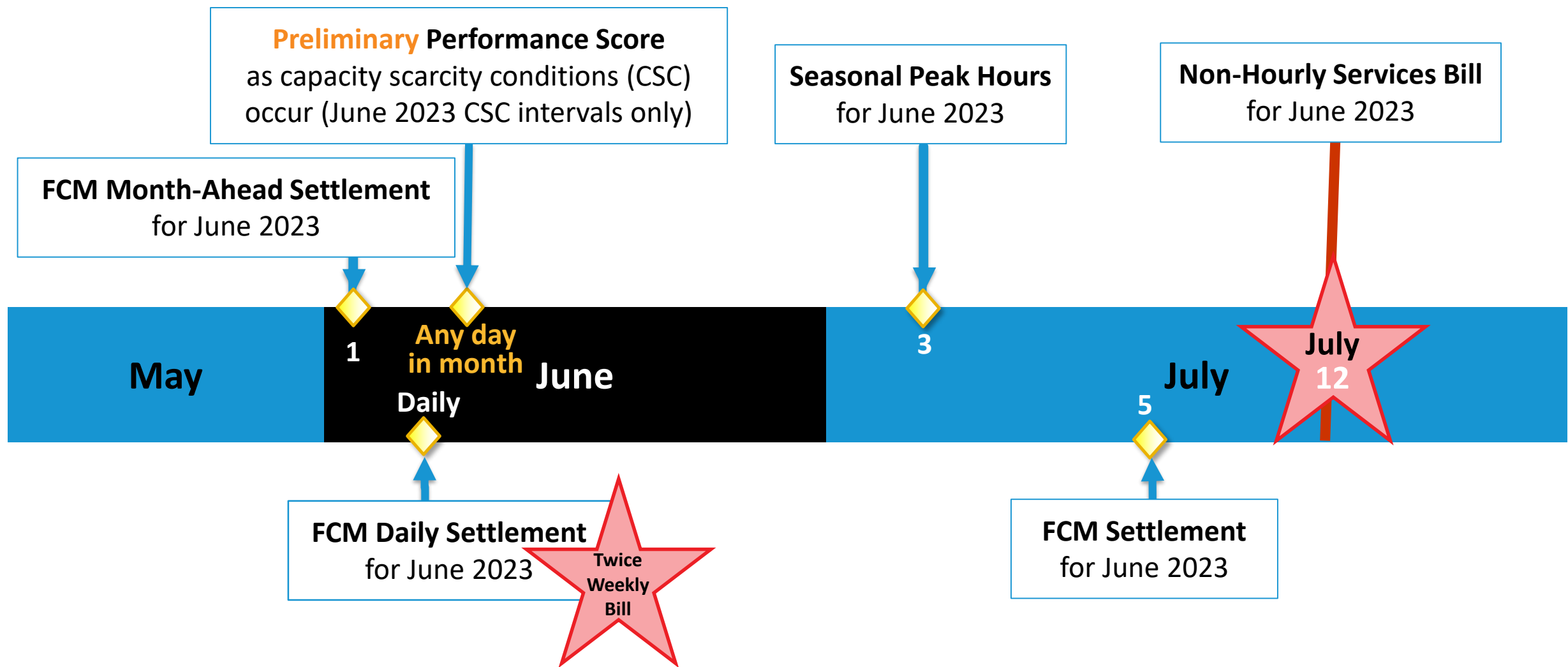
IPR	intermittent power resource
MRECO	multiyear-rate existing capacity supply obligation
CTR PPU	capacity transfer rights pool planned units
CTR TU	capacity transfer rights transmission upgrade
HQICC	Hydro-Québec interconnection capability credits
ZCO	zonal capacity obligation
CLO	capacity load obligation

PFP	pay-for-performance
FTC	failure-to-cover
CLO	capacity load obligation
RFR	retained for reliability
FTP	file transfer protocol
SA	security administrator
CSV	comma separated value

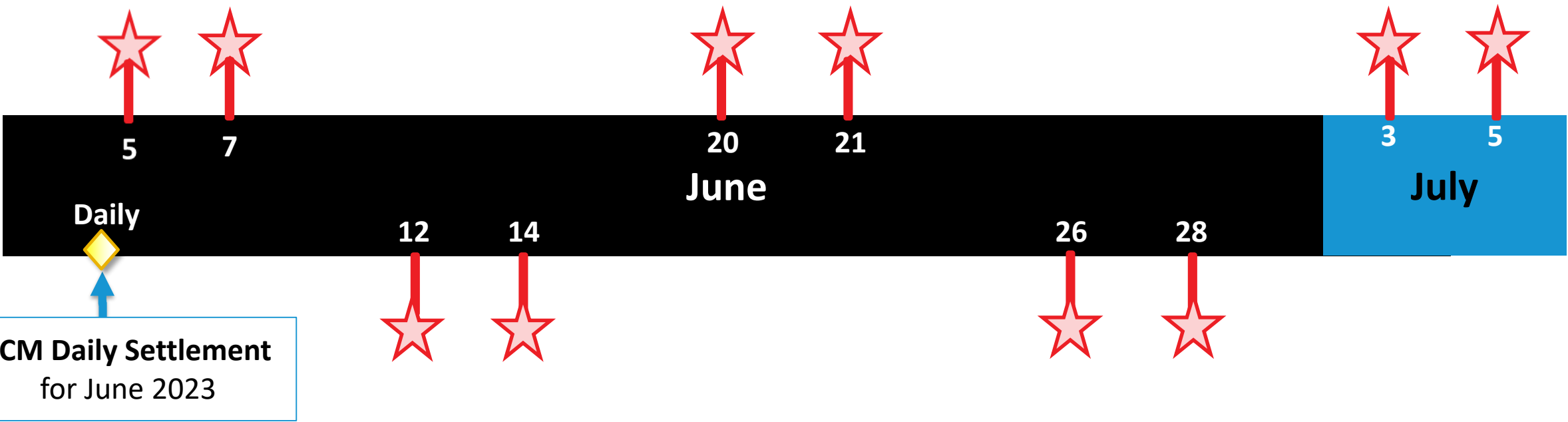
Forward Capacity Market Credit Calculation Process



FCM Settlement Processing Timeline: June 2023

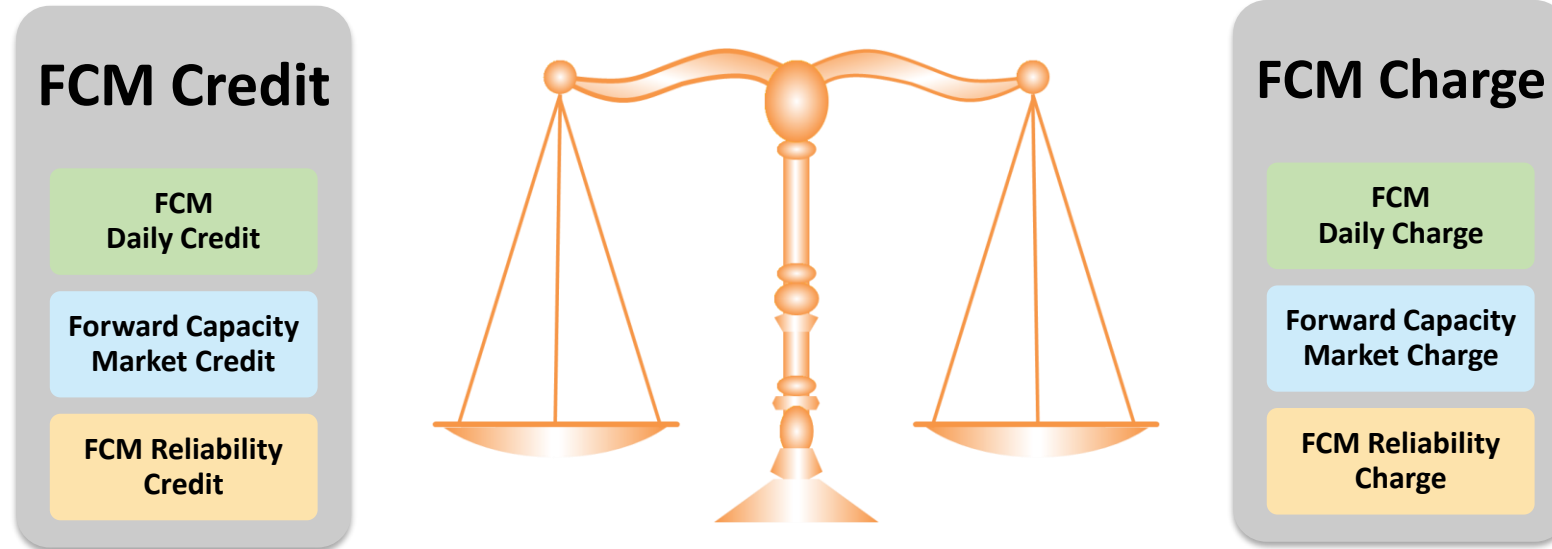


FCM Daily Settlement



Forward Capacity Market Activities and Settlement

- Participants can acquire and shed capacity supply obligation (CSO) amounts for a given resource in various annual auctions
- For each obligation month of a commitment period, participants may also adjust a resource's CSO amount via a bilateral capacity supply obligation transfer, or by submitting a bid or offer into a monthly reconfiguration auction



Forward Capacity Market Activities and Settlement

Settlement occurs on **net** position at the **start** of each obligation month

Two points to keep in mind:

1. This is a forward market; payments are not due until delivery month (i.e., not when you first assume or shed a CSO)
2. Being a *net* settlement, it is possible that a credit or charge is due, even if the resource has no capacity supply obligation (CSO = 0 MW)



Forward Capacity Market Activities and Settlement, *continued*

On the next two slides we will look at an example of a hypothetical resource's net position in the month of October

In this example:

- We will see how the participant acquired a capacity supply obligation (CSO) for the resource, and how, in the various reconfiguration auctions, adjusted the resource's CSO amount
- In October, the generator is going to be on a planned maintenance outage and has actually shed the entire CSO for that month in a monthly reconfiguration auction



Forward Capacity Market Activities and Settlement – Auction Activity

					During Commitment Period	
	February 2020	June 2021	August 2022	March 2023	October 2023 (<i>obligation month</i>)	
Auction	FCA	ARA 1	ARA 2	ARA 3	mRA	
Clearing Price	\$3.80	\$1.11	\$1.34	\$0.40	\$0.65	
See note 1.	100				...	
See note 2.		10			...	
See note 3.			(20)		...	
See note 4.				(7)	...	
See note 5.					(83)	
Total CSO (MW)	100	110	90	83	0	

Notes

1. 100 MW capacity supply obligation (CSO) awarded in Forward Capacity Auction (FCA)
2. 10 MW supply offer cleared in Annual Reconfiguration Auction (ARA) 1
3. 20 MW demand bid cleared in Annual Reconfiguration Auction (ARA) 2
4. 7 MW demand bid cleared in Annual Reconfiguration Auction (ARA) 3
5. 83 MW demand bid cleared in October monthly Reconfiguration Auction (mRA) conducted in August 20

Forward Capacity Market Activities and Settlement – Monthly Settlement

- Net position shown here is for the obligation month of October from the prior slide
- This simplified example shows how settlement is based on the net of all auction activity
 - Having a capacity supply obligation (CSO) of zero does not necessarily mean there will not be a credit or charge
 - If the FCA had cleared at a higher price, the resource may have been charged instead of credited
- With FCM cost allocation, the payment is in the FCM daily

Settlement

October 2023 (obligation month)	
CSO (MW)	Price(\$/kW-mo.)
100	\$3.80
10	\$1.11
(20)	\$1.34
(7)	\$0.40
(83)	\$0.65
0	

Total credit/charge (+/-)
payable in October 2023 - November 2023

October 2023 (Settlement)
\$380,000
\$11,100
(\$26,800)
(\$2,800)
(\$53,950)
\$307,550



Components of Forward Capacity Market Settlement

FCM settlement fits into four primary components:

FCM Supply-Side Settlement (Daily Credit)	FCM Annual Reconfiguration Transaction (ART)	FCM Demand-Side Settlement (Daily Charges)	FCM Monthly Credits and Charges
<p>Includes:</p> <p>Payments and charges to resources for capacity supply obligations (CSO) activity</p>	<p>Includes:</p> <p>Opportunity for parties to acquire/shed CSO with price certainty</p>	<p>Includes:</p> <p>Charge allocation for net FCM credits and self-supply</p>	<p>Includes:</p> <ul style="list-style-type: none">• Pay-for-Performance credits and charges• Failure-to-cover (FTC) charges and charge adjustments• Retained for reliability credit and charges

FCM Supply-Side Settlement (Daily Credits)

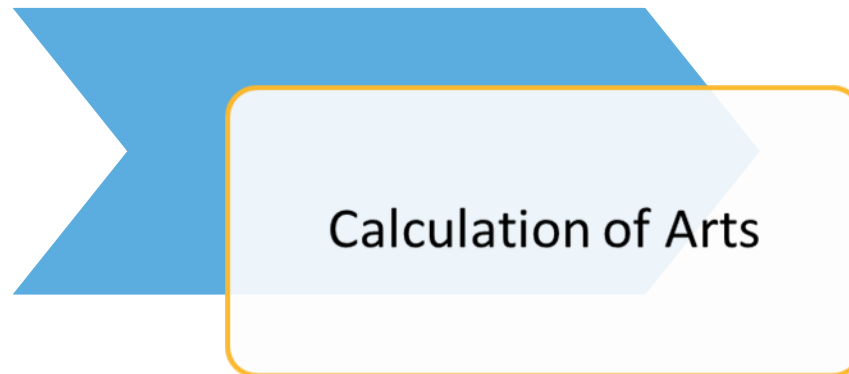
- Forward Capacity Auction (FCA) obligations
- Reconfiguration auction activities
- Capacity supply obligation (CSO) bilateral transactions



FCM Annual Reconfiguration Transaction (ART)

Includes:

Opportunity for parties to acquire/shed CSO with price certainty



FCM Demand-Side Settlement (Daily Charges)

Includes:

- FCA Charges
- IPR Charges
- ARA Charges
- MRA Charges
- MRECO Charges
- CTR PPU Charges
- CTR TU Charges
- Self-Supply Charges
- HQICC Charges
- Daily ZCO MW
- Daily CLO MW
- Daily Rates
- FCM Month CLO Charges
- FCM Daily Charges



FCM Cost
Allocation Training

Month-Ahead
Calculation

FCM Daily Credits

FCM Monthly Credits and Charges

- Pay-for-performance (PFP) which measures performance for obligated generator, import, and demand resources
 - Under performance: Receive a **charge**
 - Over performance: Receive a **credit**
 - Performance is measured during any five-minute scarcity condition (system or zonal)
 - Resources without capacity supply obligation are eligible to receive capacity performance payments
- Failure-to-cover (FTC)
 - Charge to a capacity resource that has not demonstrated the ability to deliver the full amount of its CSO MW by the end of the month
 - FTC charge adjustment based on the failure-to-cover (FTC) charges and the pro rata share of the capacity load obligation (CLO) MW
- Resources retained for reliability (RFR) credits and charges

Questions

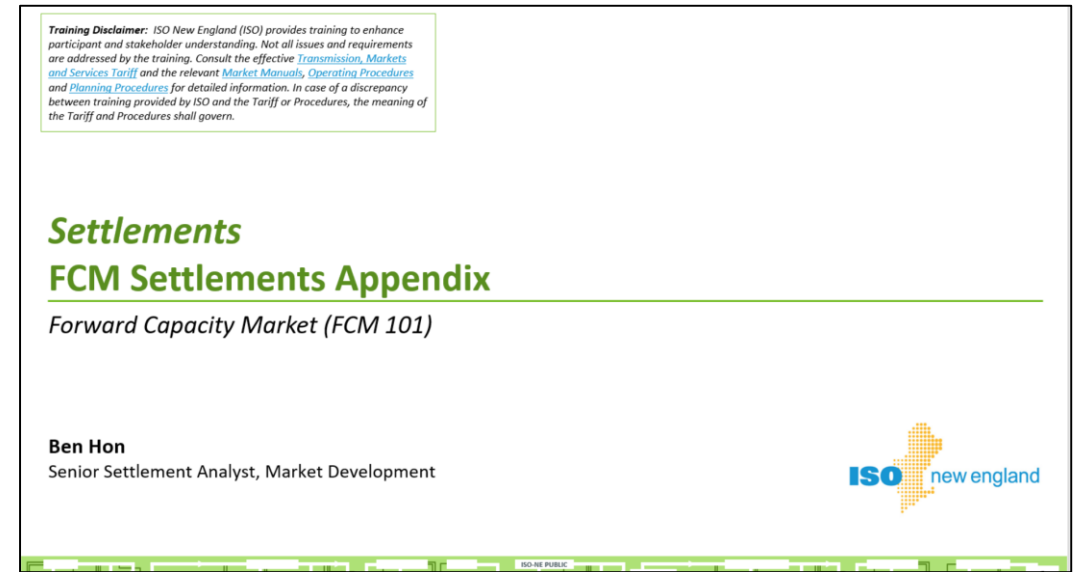
Market Information Server (MIS) Reports

- Reports that provide details of Forward Capacity Market (FCM) activity for a month
- Available via a file transfer protocol (FTP) site
 - Secure site
 - Access required to view reports
 - Security administrator (SA) assigns FTP access
- Reports are in comma separated value (CSV) format
 - A macro is available on the external site



Forward Capacity Market Settlement MIS Reports Listing

- Detailed listing of Forward Capacity Market (FCM) settlement market information server (MIS) reports are included in the [FCM Settlements Appendix](#)
- Reports are categorized by settlement name and include a description of when report is released and what is included



Divisional Accounting for Forward Capacity Market

Subaccounts

- Divisional accounting option provides market participants with ability to assign Forward Capacity Market (FCM) resources to subaccounts
- Divisional accounting is an optional feature that allows a market participant to assign market activity to a subaccount or division for settlement reporting
 - When this feature is enabled, participant's settlement reports will include subaccount information
 - An informational report that shows billing by subaccount is issued with each bill



[Quick Start Guide for Divisional Accounting](#)

Federal Energy Regulatory Commission Electric Quarterly Reporting

Forward Capacity Market (FCM) activities are reported on SP_EQR report issued monthly to each lead market participant or lead asset owner



[Markets and Operations > Settlements > FERC Electric Quarterly Reporting](#)

Bill Invoice Line Items

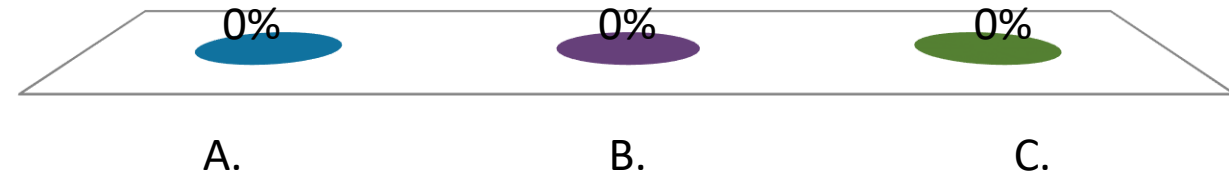
Six Forward Capacity Market (FCM) line items may appear on your bill invoice:

Invoice / Remittance Advice							
BL_INVOICE_00000000A							
Company A							
Date: 06/01/2023 and Version: 07/10/2023 12:49:08 GMT							
Line Items							
Line	Description	Bill From	Bill To	Document Ref	Quantity	Unit of Measure	Net Amount
Numb ▼	String ▼	Timestamp ▼	Timestamp ▼	String ▼	Number ▼	String ▼	\$ ▼
1	FCM Daily Credit	06/28/20203	06/29/20203				\$ 200.00
2	FCM Daily Charge	06/28/20203	06/29/20203				\$ (50.00)
3	Forward Capacity Credit	06/01/20203	07/01/20203				\$ 1,000.00
4	Forward Capacity Charge	06/01/20203	07/01/20203				\$ (200.00)
5	FCM Reliability Credit	06/01/20203	07/01/20203				\$ -
6	FCM Reliability Charge	06/01/20203	07/01/20203				\$ -



How do you gain access to the FCM settlement MIS reports for your organization?

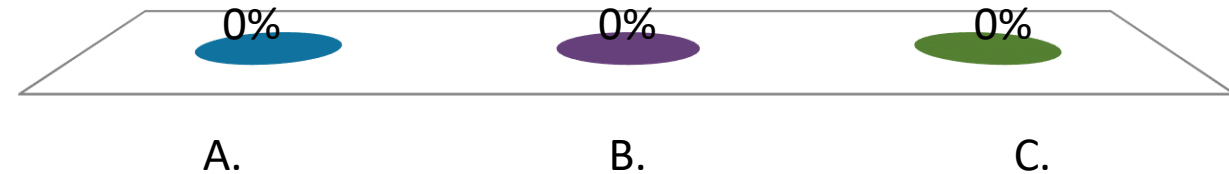
- A. Contact ISO New England Participant Support & Solutions
- B. Contact Information Technology (IT) department of one's organization
- ✓ C. Contact security administrator of one's organization



Q1 of 2


When was the initial Forward Capacity Market settlement for June 2023 billed?

- A. In *non-hourly services bill* issued in August 2023
- B. In *non-hourly services bill* issued in September 2023
- ✓ C. In twice weekly bill and the *non-hourly services bill* issued in July 2023



Where Can I Find Tools to Help Validate Forward Capacity Market Settlements?

Settlement validation tools are available on [ISO New England website](#); select [Markets and Operations > Settlements > Understanding the Bill](#)



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Billing, Settlements, and Tariff Reports

Power System Forecast and Status

Morning Report

Seven-Day Capacity Forecast

Three-Day System Demand Forecast

Current Power System Status

Seasonal System Outlook

Settlements

Understanding the Bill


Billing Disputes

Settlement and Metering Holidays

Quarterly Settlements Forum

Metering and Resettlement Deadlines

Tariff Rates



Where Can I Find Tools to Help Validate Forward Capacity Market Settlements?, *continued*

In the **Understanding the Bill** section, three key selections are available:

- [Sample Invoice and Remittance Advice](#) (billing samples)
- [Billable Line-Item Descriptions](#) (includes calculation summaries, a.k.a. calculation trees)
- [MIS Report Descriptions, Templates, and Samples](#) (MIS reports)

Markets and Operations > Settlements

Understanding the Bill

IN THIS SECTION

- Settlements
- Understanding the Bill**
- Billing Disputes
- Settlement and Metering Holidays
- Quarterly Settlements Forum
- Metering and Resettlement Deadlines
- Tariff Rates
- Rate Development of Regional Transmission Charges
- Generation Information System
- Emergency Power Sales and Purchases
- FERC Electric Quarterly Reporting
- Pricing-Node Table

ISO New England releases billing statements electronically twice a week. The following materials define and describe the billing process:

- [ISO Billing Policy](#) PDF—the billing and payment procedures defined in Exhibit 1D within the *ISO New England Inc. Transmission, Markets, and Services Tariff*
- [Billing Process Summary](#) PDF—a brief introduction to the billing process for new customers and a guide to available settlement-related resources, including timelines, metering and billing schedules, and other settlement documents

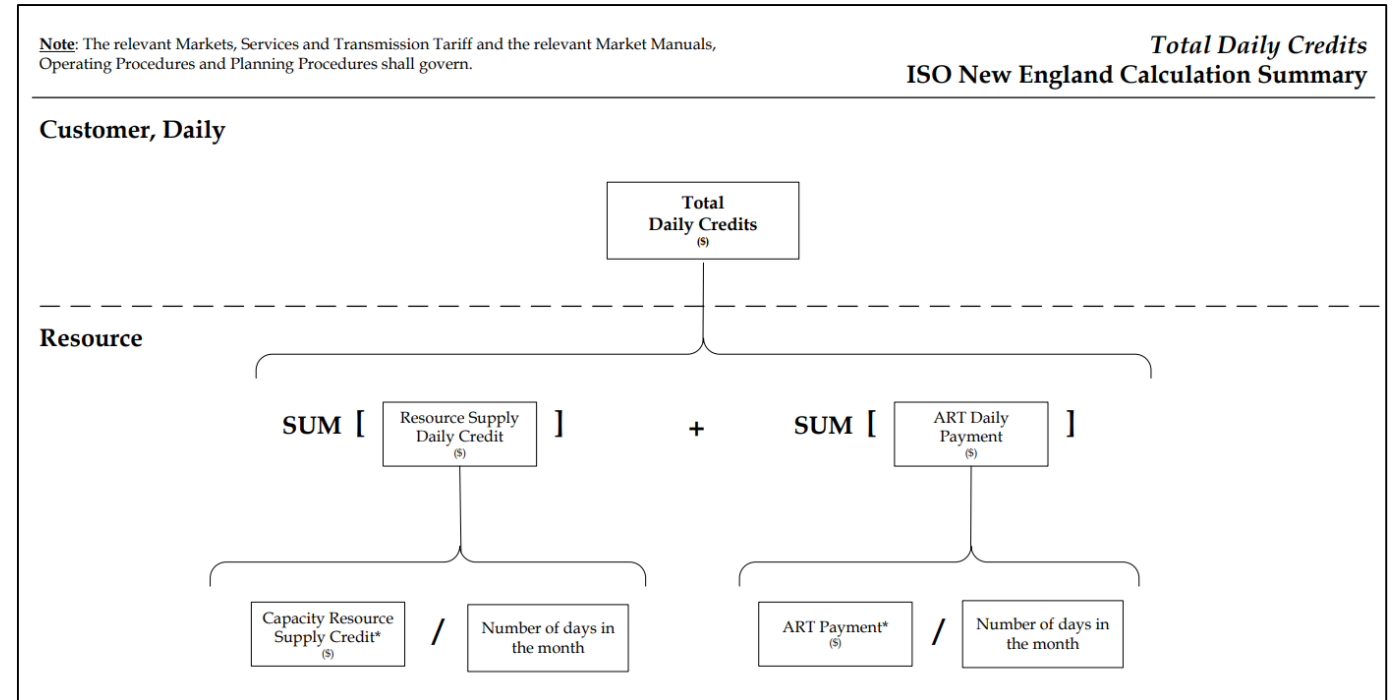
For detailed guidance on the billing process and statements, see the following:

- [Sample Invoice and Remittance Advice](#)—a sample bill containing detailed information related to each component/section of the billing statement, including explanations, tips, and key differences between invoices and remittance advice
- [ISO Statement Issuance Document](#) PDF—an explanation of invoice issuance dates and their associated payment and remittance due dates
- [Billable Line-Item Descriptions](#)—links to detailed explanations of each line item found on ISO bills, including related Market Information Server (MIS) Reports, calculation trees, and supporting documents
- [MIS Report Descriptions, Templates, and Samples](#)—an alphabetical listing of MIS reports with links to report descriptions and explanations, information on report availability, templates, and sample files

RELATED LINKS


What are Calculation Summaries?

- Illustrations of calculations used in settlement process for specified market
- Available by Forward Capacity Market (FCM) bill line item
- Available on Billable Line-Item Descriptions page (*referenced on previous slide*)




How to Access Quarterly Settlements Forum Materials

Markets and Operations > Settlements > Quarterly Settlements Forum



Settlements

- Understanding the Bill
- Billing Disputes
- Settlement and Metering Holidays
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Quarterly Settlements Forum

IN THIS SECTION

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Understanding the Bill

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Access recordings, slides, and other materials for ISO New England’s quarterly web conferences on settlements topics, including information on any upcoming changes to settlements and billing.

Accessing the Forum

- Upcoming forum dates and details can be found on [ISO-TEN \(the ISO’s Training and Events Network\)](#). You can also visit the [ISO calendar](#) pages for March, June, September, and December to view and register for upcoming forum events, see any posted materials, and subscribe to receive email notices when materials are posted.
- Links to recordings on ISO-TEN of previous forums are included below.
- For help joining a forum, [see our Web Conferencing Support page](#).

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- Energy, Load, and Demand Reports
- Operations Reports
- Billing, Settlements, and Tariff Reports
- Auctions Reports
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Markets Data and Information

- Day-Ahead and Real-Time Energy Markets
- Forward Capacity Market
- Financial Transmission Rights
- Forward Reserve Market and Real-Time Reserve Pricing
- Net Commitment-Period Compensation
- Regulation Market
- Voltage Support
- Blackstart Service
- Demand Resources
- Winter Program Payment Rate

Power System Forecast and Status

- Morning Report
- Seven-Day Capacity Forecast
- Three-Day System Demand Forecast
- Current Power System Status
- Seasonal System Outlook

Market Performance

- Market Performance Reports
- Load Costs

Market Monitoring and Mitigation

- Internal Market Monitor
- External Market Monitor

Market Development

- Wholesale Markets Project Plan



Settlements

- Understanding the Bill
- Billing Disputes
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Transmission Operations and Services

- Transmission Service Types
- Transmission Outage Scheduling
- OASIS Materials
- Operational Transmission Limits



Facilitating competitive markets and reliable wholesale electricity delivery in New England

Summary

In this lesson, you learned:

- Timeline for settlement processing
- How and when FCM settlement is billed
- Components of Forward Capacity Market (FCM) settlement
- Validation tools for FCM settlement and where they can be found



Questions