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October 26-28, 2023
Northampton, MA

Settlements

Lesson 6B: Supplier-Side Settlement (FCM Daily Credits)

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.

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

FCM Daily Credits



Topics

- Forward Capacity Market (FCM) Daily Credit and Charge Calculations for Capacity Supply Obligations (CSOs)
 - Awarded in Forward Capacity Auction (FCA)
 - Acquired or Shed Through Reconfiguration Auction
 - Acquired or Shed Through CSO Bilateral
- Multi-Year CSO Credit Calculations



Objectives

- Recognize Forward Capacity Market (FCM) credit and charge calculations for capacity supply obligations (CSOs)
 - Calculate resource supply monthly credit
 - Calculate resource daily credit



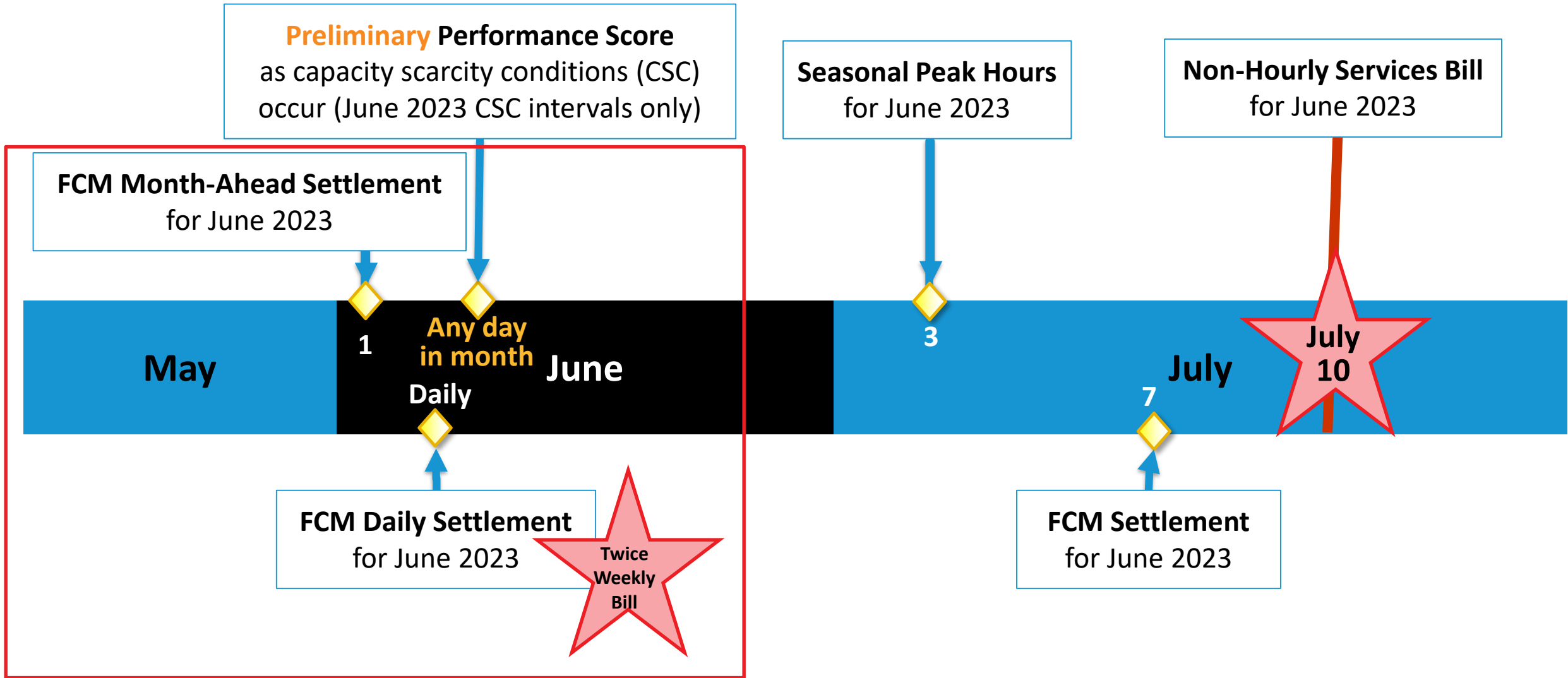
Common Acronyms

In Order of Appearance

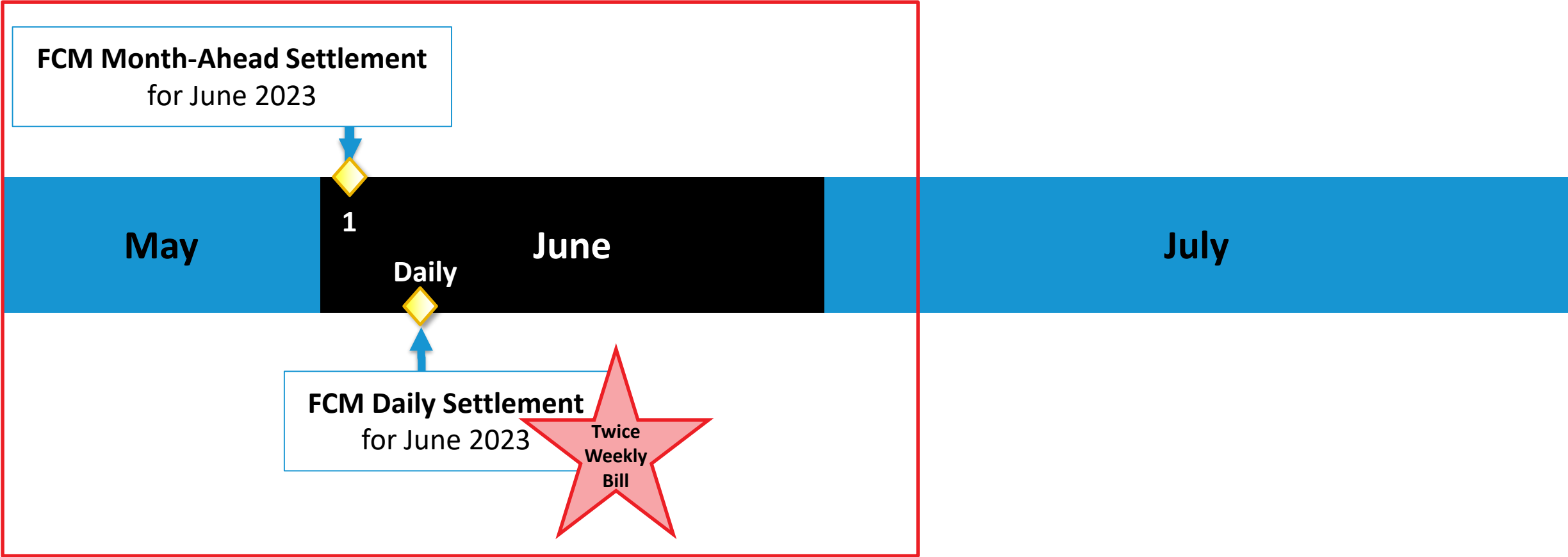
FCM	Forward Capacity Market
CSO	capacity supply obligation
CSC	capacity scarcity conditions
MIS	market information server
MRECO	multiyear-rate existing capacity supply obligation
FCA	Forward Capacity Auction

ARA	annual reconfiguration auction
MRA	monthly reconfiguration auction
RA	reconfiguration auction
ART	Annual Reconfiguration Transaction
DCR	demand capacity resource
CCP	capacity commitment period

FCM Settlement Processing Timeline: June 2023



FCM Settlement Processing Timeline: June 2023



FCM Month-Ahead Settlement



- New FCM Cost Allocation settlement as of June 2022
- Issued on the first business day of the month
- A non-financial settlement
- It calculates: FCM Credit, FCM Rates and FCM Charges
- It is an input to the FCM Daily Calculation

FCM Month-Ahead Settlement
for June 2023



FCM Daily Settlement

- New FCM cost allocation settlement as of June 2022
- A financial Settlement
- FCM Daily Credit and FCM Daily Charges
- Market information server (MIS) reports (approx.) 4 business days



[Forecasted Billing Schedule](#)

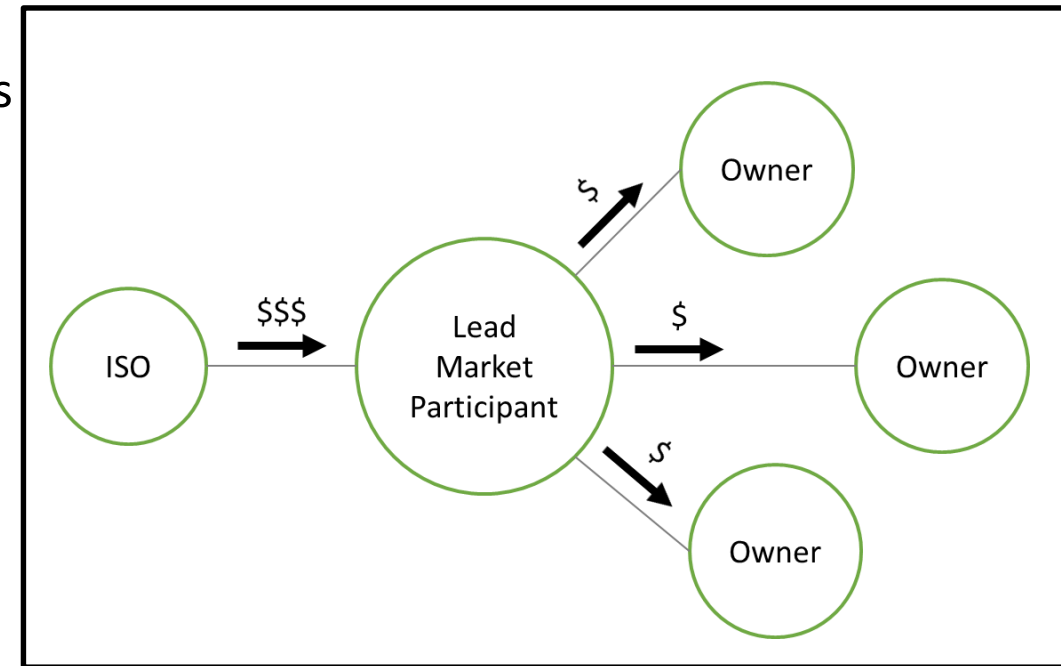
What are Forward Capacity Market Credits?

- Compensation or charges to resources based on activity for obligation month
- From market activities in:
 - Forward Capacity Auction
 - Substitution auction
 - Multiyear-rate existing capacity supply obligation (MRECO)
 - CSO bilateral transactions
 - Monthly
 - Reconfiguration auctions
 - Annual
 - Monthly



Who Receives Forward Capacity Market Credits?

- Net FCM credits are issued to lead market participant of a resource with a capacity supply obligation or lead asset owner of an asset without a CSO MW that receives a payment
- Why?
 - An FCM resource has a single entity responsible for all of its FCM activity – the resource's lead market participant
 - FCM resource activity includes delist bids, bilateral transactions, and reconfiguration auction bids and offers
 - Where multiple assets are mapped to a resource, and/or underlying asset(s) have multiple owners, ISO New England cannot determine on which owner's behalf a particular activity was submitted



Input Values Used for Resource Forward Capacity Market Credits

- Capacity supply obligation (CSO) MW
- Associated payment rate for specific obligation and its base capacity commitment period
- Multiple obligations may be obtained through same process
 - Various types of obligations and payment rates from FCA
 - Existing or new
 - Self-supply - the payment rate for Self-supply is zero (0)
 - Multi-year commitments
 - Bilateral transactions for an obligation month
 - Monthly
 - Multiple reconfiguration auctions for an obligation month
 - Up to three (3) annual or monthly

How is Forward Capacity Market Credit Calculated?



For each obligation month, Resource Supply Monthly credit is calculated as sum of the product of each capacity supply obligation (CSO) multiplied by associated payment rate

$$\begin{aligned} \text{Resource Supply Monthly Credit} = & (\text{FCA CSO} \times \text{Payment Rate} \times 1000) \\ & + (\text{ARA CSO} \times \text{ARA Clearing Price} \times 1000) \\ & + (\text{MRA CSO} \times \text{MRA Clearing Price} \times 1000) \\ & + (\text{Bilateral CSO} \times \text{Bilateral Payment Rate} \times 1000) \end{aligned}$$

Calculation is the same for all resource types:

- Generating
- Import
- Demand

FCA = Forward Capacity Auction | MRA = monthly reconfiguration auction | ARA = annual reconfiguration auction





Questions

The FCM path of a non-intermittent generator ...



Resource CSO MW for a Generating Resource

Generating resource qualified capacity = 190 MW

FCA 180 MW (Existing)	CSO = 180 MW
Annual RA 10 MW (Acquire)	CSO = 190 MW
Monthly RA -5 MW (Transfer)	CSO = 185 MW

The FCM path of a non-intermittent generator ...



Resource Supply Monthly Credit for a Generating Resource

CSO Component Source	CSO Component MW (A)	Payment Rate (\$/kW-mo) (B)	CSO Component Credit (A x B x 1000)
FCA – New Capacity	0	\$2.001	\$0
FCA – Existing Capacity	180	\$2.001	\$360,180
FCA – Self-supply	0	\$0.000	\$0
Annual Reconfiguration Auction	10	\$1.930	\$19,300
Monthly Reconfiguration Auction	(5)	\$2.010	(\$10,050)
Net Bilateral CSO	0	\$2.000	\$0
Totals	185		\$369,430

The FCM path of a non-intermittent generator ...



Supply Daily Credit for a Generating Resource June 2022

Detail	Dollars	Number of Days	Resource Daily Credit
Resource Supply Credit	\$369,430	30	\$12,314
Annual Reconfiguration Transaction (ART) Payment	\$ 75,000	30	\$ 2,500
Supply Daily Credit			\$14,814

The FCM path of a demand capacity resource...



Resource CSO MW for a Demand Capacity Resource (DCR)

DCR qualified capacity = 2 MW

FCA 0 MW	CSO = 0 MW
Annual RA 2 MW (Acquire)	CSO = 2 MW
Monthly RA 1 MW (Transfer)	CSO = 1 MW
Net Bilateral 0 MW	CSO = 1 MW

The FCM path of a demand capacity resource...



Resource Supply Monthly Credit for a Demand Capacity Resource (DCR)

CSO Component Source	CSO Component MW (A)	Payment Rate (\$/kW-mo) (B)	CSO Component Credit (A x B x 1000)
FCA – New Capacity	0	\$2.001	\$ 0
Annual Reconfiguration Auction	2	\$1.930	\$3,860
Monthly Reconfiguration Auction	(1)	\$2.010	(\$2,010)
Net Bilateral CSO	0	\$2.000	\$ 0
Totals	1.000		\$1,850

The FCM path of a demand capacity resource...



Supply Daily Credit for a Demand Capacity Resource (DCR)

Detail	Dollars	Number of Days	Resource Daily Credit
Resource Supply Credit	\$1,850	30	\$62
ART Payment	0	30	\$ 0
Supply Daily Credit			\$ 62

The FCM path of an intermittent generator ...



Resource CSO MW for an Intermittent Resource

Intermittent Resource qualified capacity = 2.6 MW

FCA 2.6 MW	CSO = 2.6 MW
Annual RA 0 MW (Acquire)	CSO = 2.6 MW
Monthly RA 1.1 MW (Transfer)	CSO = 1.5 MW
Net Bilateral 0 MW	CSO = 1.5 MW

The FCM path of an intermittent generator ...



Resource Supply Monthly Credit for an Intermittent Resource

CSO Component Source	CSO Component MW (A)	Payment Rate (\$/kW-mo) (B)	CSO Component Credit (A x B x 1000)
FCA – New Capacity	2.6	\$2.001	\$5,203
Annual Reconfiguration Auction	0	\$1.930	\$0
Monthly Reconfiguration Auction	(1.1)	\$2.010	(\$2,211)
Net Bilateral CSO	0		\$0
Totals	1.5		\$2,992

The FCM path of an intermittent generator ...



Supply Daily Credit for an Intermittent Resource

Detail	Dollars	Number of Days	Resource Daily Credit
Resource Supply Credit	\$2,992	30	\$100
ART Payment	0	30	\$ 0
Supply Daily Credit			\$100



Questions

How is a Multi-Year Capacity Supply Obligation Compensated?

- Prior to FCA 9, new capacity resources clearing an FCA could elect to have capacity supply obligation (CSO) and payment rate apply for up to four additional capacity commitment periods (CCPs)
 - Beginning with FCA 9, resources may elect to have CSO and capacity clearing price apply for up to six additional capacity commitment periods
- Payment rate associated with such an election is indexed to Handy-Whitman Index of Public Utility Construction Costs
 - Total Other Production Plant Index for North Atlantic Region
- Initial year of multi-year commitment is base year
- Rate in each subsequent year of multi-year commitment is adjusted based on changes in Handy-Whitman Index



Note: Beginning with FCA 16 (June 2025 – May 2026) , resources may no longer take on a multi-year CSO

Resource with Multi-Year CSO

Adjusted
FCA Payment Rate



FCA
Payment Rate



(

Current Year
Inflation Index Factor



Base Year
Inflation Index Factor

)

Capacity Commitment Period	Rate Prior to Inflation Index Adjustment (\$/kW-month)	Handy Whitman Index Value*	% Change from Base Year	Rate Adj. for Inflation Index (\$/kW-month)
Year 1	\$4.631	500	N/A	\$4.631
Year 2	\$4.631	525	5%	\$4.863
Year 3	\$4.631	545	9%	\$5.048
Year 4	\$4.631	555	11%	\$5.140
Year 5	\$4.631	540	8%	\$5.001

*For settlement, this will be the most recently published Handy-Whitman Index of Public Utility Construction Costs as of the end of calendar year prior to capacity commitment period. Index rates shown here are illustrative only, and not actual rates.

Resource Supply Monthly Credit for Multi-Year CSO

- Let's look at an example of a generating resource with a new CSO of 30 MW
- If a multi-year treatment were elected, payments for first three capacity commitment periods (CCPs) would be:

Commitment Period / Capacity Component	CSO MW (A)	Payment Rate (\$/kW-mo) (B)	CSO Component Credit (A x B x 1000)
CCP1 – New Capacity (multi-year treatment elected)	30	\$4.631	\$138,930
CCP2 – Existing, multi-year	30	\$4.863	\$145,890
CCP3 – Existing, multi-year	30	\$5.048	\$151,440

MRECO = Multiyear-rate existing capacity supply obligation

Resource Supply Monthly Credit for Multi-Year CSO, *continued*

Resource Supply Monthly Credit for resource with MRECO

CSO Component Source	CSO Component MW (A)	Payment Rate (\$/kW-mo) (B)	CSO Component Credit (A x B x 1000)
FCA – MRECO CSO	30	\$4.631	\$138,930
Annual Reconfiguration Auction	0	0	\$0
Monthly Reconfiguration Auction	0	0	\$0
Net Bilateral CSO	0	0	\$0
Totals	30		\$138,930

MRECO = Multiyear-rate existing capacity supply obligation

Resource Supply Monthly Credit for Multi-Year CSO, continued

Supply Daily Credit for a Resource with MRECO

Detail	Dollars	Number of Days	Resource Daily Credit
Resource Supply Credit	\$138,930	30	\$4,631
ART Payment	\$0	30	\$0
Supply Daily Credit			\$4,631

The Big Picture

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

- FCM Daily Credit
- FCM Daily Charge
- Forward Capacity Market Credit
- Forward Capacity Market Charge
- FCM Reliability Credit
- FCM Reliability Charge

This lesson is directed at one of the six line items

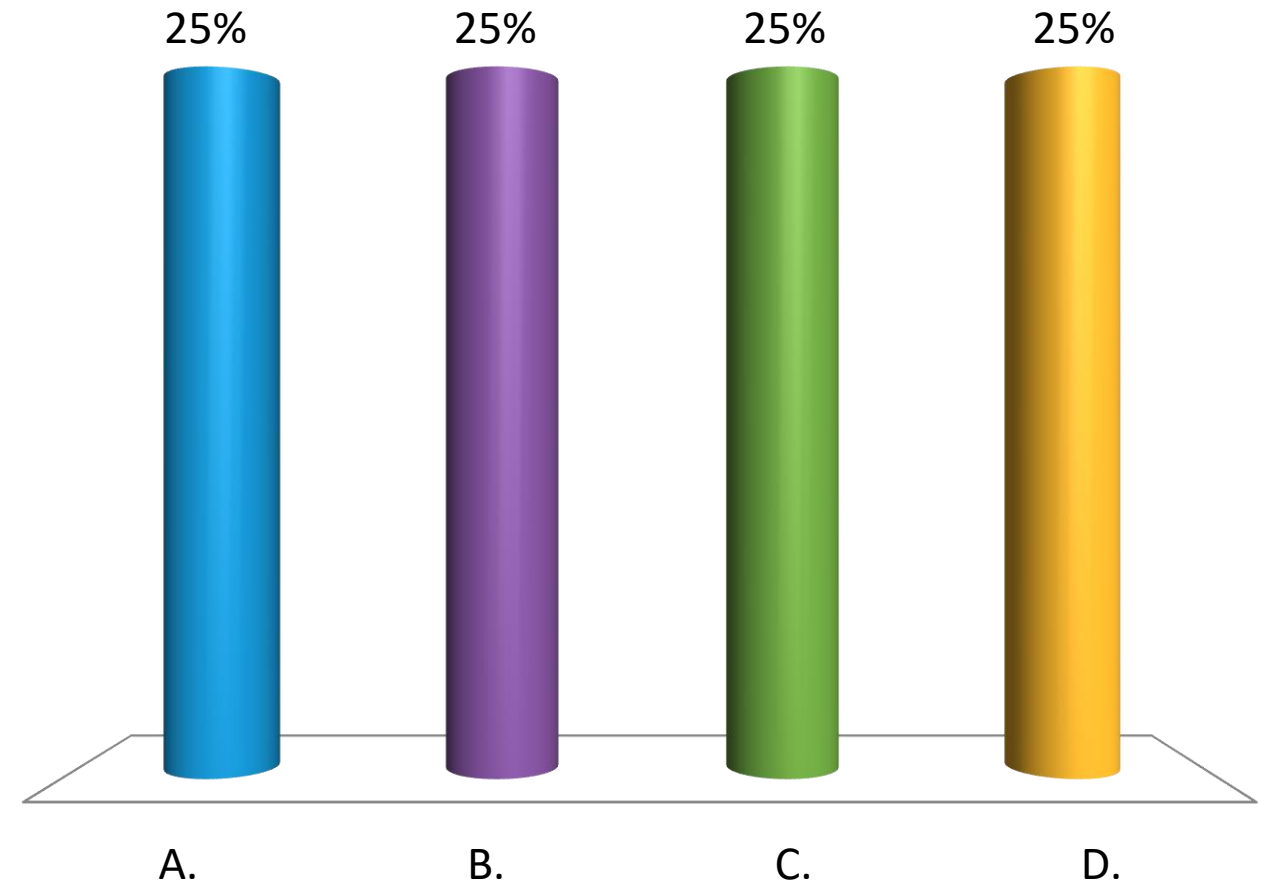
You learned:

- How to calculate FCM Daily Credit



When calculating credits, what payment rate is applied to self-supply?

- A. Forward Capacity Auction (FCA) Clearing Price
- B. Forward Capacity Auction (FCA) Payment Rate
- C. Annual Reconfiguration Auction (ARA) Clearing Price
- ✓ D. None of the above

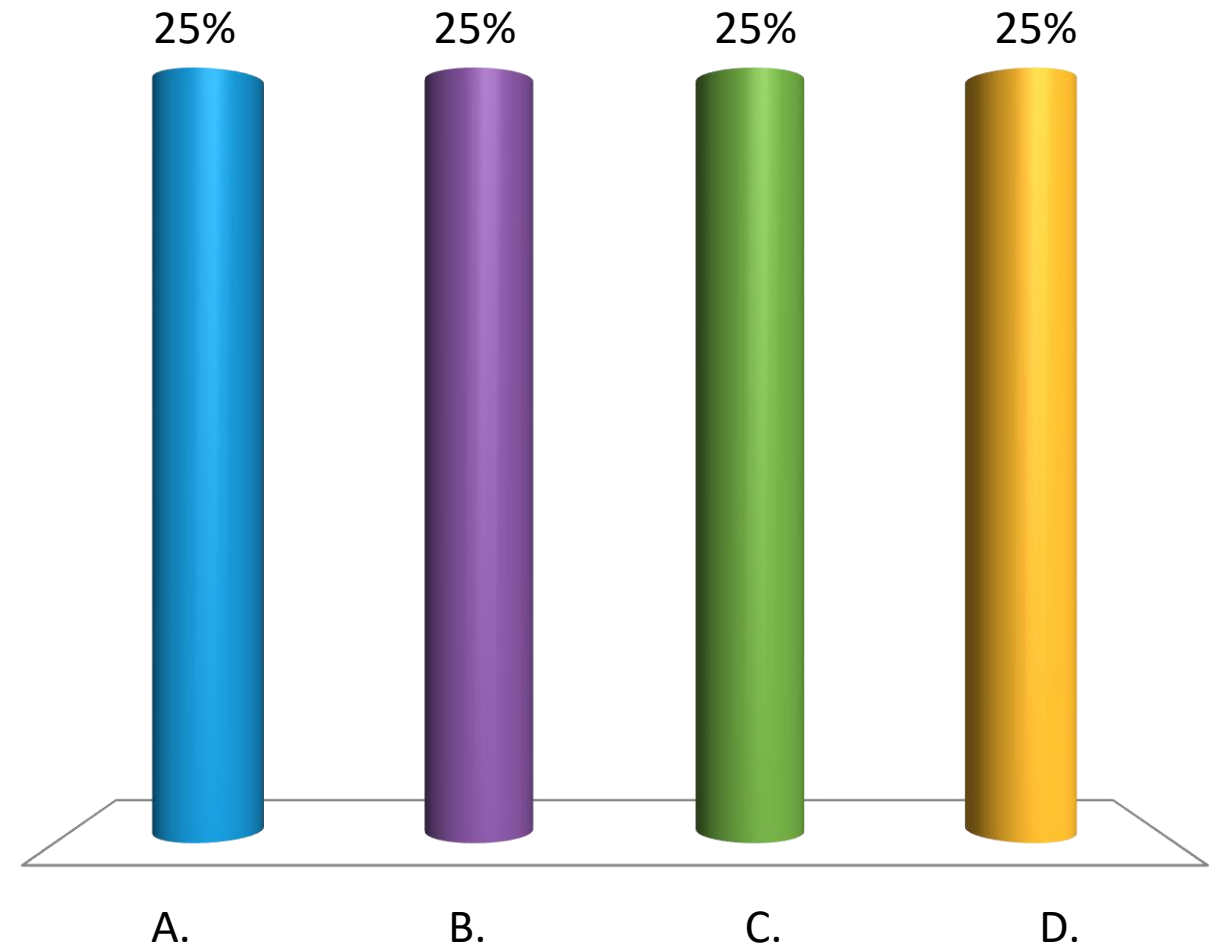


Q1 of 2

For resources with a multi-year capacity supply obligation (CSO), how is the payment rate modified between years?



- A. Payment rate is indexed to the Handy-Whitman Index
- B. Payment rate is set to the applicable Forward Capacity Auction (FCA) payment rate for each year
- C. Payment rate is indexed to the inflation rate
- D. Payment rate does not change



Q2 of 2

Summary

In the *FCM Daily Credits* lesson, you learned about:

- FCM credit and charge calculations for Capacity Supply Obligations (CSOs)
 - Awarded in FCA
 - Acquired or shed through a reconfiguration auction
 - Acquired or shed through a CSO bilateral
- Multi-year CSO credit calculations
- Calculated the resource supply monthly credit
- Calculated the resource daily credit





Questions