



# FERC Order No. 841 – Requested Adjustments Project

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# FERC 841 Background

- In November 2019, FERC responded to CAISO's compliance filing for FERC Order 841. FERC generally accepted the filing, but took exception to certain proposed provisions.
- In response to FERC's directives, the CAISO responded with a further compliance filing to address three (3) issues as noted below.
  1. Reflecting storage resources' physical and operational characteristics in the CAISO tariff
  2. Lowering the minimum capacity requirements for storage resources to provide ancillary services from 500kW to 100 kW
  3. Ensuring that the CAISO's metering practices allow for storage resources to participate in the retail and wholesale markets

## FERC 841 Background, cont.

- As a result of the further compliance filing, this new FERC 841 – Requested Adjustments Project was initiated.
- System changes and process for removing charges to be effective on **October, 1 2020.**

Note that the scope of this Project is separate and apart from the scope and implementation of the previous FERC 841 – NGR Model Project which was implemented in 2019.

# DEFINITIONS

# Definitions

Abbreviation/Term	Definition
A/S	Ancillary Services
BPM	Business Practice Manual
BRQ	Business Requirements
CAISOME	CAISO Meter Entities
GRDT	Generator Resources Data Template
KWh	Kilowatt hour
M&CI	Model and Contract Implementation Department
MWh	Megawatt hour
NGR	Non-Generating Resource
SCME	Scheduling Coordinator Meter Entity
UDC	Utility Distribution Company

# REQUESTED ADJUSTMENTS OVERVIEW

# FERC 841 Adjustment #1

- CAISO has included at the Tariff level operational and technical constraints for storage resources which are currently identified in the Master File and Market Instruments BPM.
- Master File Parameters
  - Tariff Section 4.6.11
  - Tariff Section 27.9:
    - Identifies applicable parameters for NGRs and Pump-Storage Hydro Units
    - Based on stakeholder discussions, Legal removed one set of parameters to proposed Tariff change
    - All parameters noted in Tariff changes already exist in Master File

## FERC 841 Adjustment #2

- CAISO has lowered its minimum capacity requirements for ancillary services from 500 kW to 100 kW for storage resources. (Tariff - Appendix K revised)
- Adding 100kW minimum for A/S
  - Tariff Appendix K (A1.1.1, B1.1, C1.1)
    - Regulation
    - Spin
    - Non-Spin

# FERC 841 Adjustment #3

- Update at the Tariff level CAISO's current metering and accounting practices as specified in the Metering BPM to allow for simultaneous participation in both retail and wholesale markets.
- Metering Practices
  - New Tariff Section 10.1.3.4
    - (a) CAISOME – Tariff provisions already covered in BPM
    - (b) SCME – Tariff provisions already covered in BPM

# FERC 841 Adjustment #4

- FERC directs the CAISO to exempt a distributed or behind-the-meter storage resource from wholesale charges where it already pays retail charges for its charging energy.

- M&CI and Settlement Requirements

- New Tariff Section 10.1.3.4

“Effective [October 1, 2020], for any Non-Generator Resource where the Utility Distribution Company or retail utility verifies in writing to the CAISO that it is unable or unwilling to net out from its retail billing any energy purchases associated with the Non-Generator Resource’s charging pursuant to CAISO settlement, the CAISO will not settle the Non-Generator Resource’s negative Energy for charging.”

## FERC 841 Adjustment #4, cont.

- To avoid duplicative billing where a UDC or retail utility is unable or unwilling to separate wholesale and retail charges, the CAISO will exempt a storage resource from wholesale charges for negative energy used for charging.
  - Administrative changes to allow an NGR to be classified in the Master File as being exempt from CAISO charges for negative energy (charging)
  - System changes to remove CAISO charges for negative energy for NGRs that are classified as exempt from such charges in the Master File

# Adjustment Process

- NGRs subject to duplicate billing will be identified and indication of such will be managed in Master File
- Possible for consumers with small behind-the-meter resources in non-CPUC jurisdictions
- Would not apply for primarily wholesale/transmission resources, or where the only retail charges are for station power
- The NGR is **not assessed** charges for the “charging” of the NGR
- CAISO will zero out any settlement for the resource where its Energy is below 0 MWh in a settlement interval
- Authorized entity (Requestor) must provide CAISO required information to request a “No Net” indicator for an NGR
- CAISO has established a process to confirm the Requestor’s claim that the identified NGR is associated with a UDC or retail utility that does not net out its billing between wholesale and retail

# Removal of Charges

- Removal of charges (force to \$0.00) will not be made unless:
  - Resource ID has a “No Net” indicator in Master File
  - Master File has passed the indicator to Settlements
  - Settlements disposes the imbalance (MWhs or \$\$\$) for removal of charges



# SYSTEM CHANGES

# Process Flow

Master File updated to allow NGRs to be classified as “No Net” for Settlement purposes

NGR resources will need to request a classification of “No Net” for Settlements purposes

If request approved, a GRDT change request will be made for the classification and M&CI will update the Master File

The Master File script with a “No Net” classification will be sent to Settlements for use as needed

If an NGR resource with a “No Net” classification has any settlement intervals with negative energy (MWh <0), the charges will be forced to \$0.00.

# Summary of Changes

- **Master File:**
  - Add a new indicator “No Net” that may be assigned to NGRs
    - APPLY\_WHLSSL\_CHARGE = ‘N’
- **GRDT:**
  - Add a new field for “No Net”

# Summary of Changes, cont.

- Settlements:
  - Receive new “No Net” indicator assigned to NGRs
  - Enable removal of charges for NGRs where:
    - NGR has a “No Net” indicator
    - MWh for any settlement interval is  $<0$  MWh
    - Force charges to \$0.00 for such settlement intervals
    - Handle imbalance of MWhs/\$\$ that are removed
  - Add/modify billing determinants as needed

# SETTLEMENT IMPLICATIONS

# Settlement Charge Code Impacts

Project	Charge Codes/Impacts
<p>FERC Order No. 841 – requested adjustment</p> <p>Effective date: 10/1/2020</p>	6011
	6460
	6470
	6474
	6475
	6482
	6488
	6824
	7070
	7071
	7077
	7081
	7087
	64600
	64700
	64740
64750	
IFM Net Amount PC	
RTM Net Amount PC	
Real Time Energy Quantity PC	
RUC Net Amount PC	

Note: for more information on Settlement impacts, attend the Settlements User Group bi-weekly meeting

# NEXT STEPS

# FERC 841 Milestones

<b>Date</b>	<b>Milestone</b>
July 27 – September 4, 2020	Market Simulation
October 1, 2020	Deployment
October 2020	Production Activation/ Effective Trade Date

# Market Simulation Overview

- Market Simulation to verify:
  - NGR resources are classified as “No Net” for settlement purposes
  - “No Net” NGRs do not receive charges for settlement intervals with negative MWh (MWh <0)
- How to get an NGR resource classified as “No Net”
  - Administrative process – M&CI Lead
  - Update to GRDT

# Market Simulation Preparation

- Preparations for Market Sim:
  - Create Registrations for NGRs with exemption for CAISO wholesale charges (BRQ001)
  - Register NGR resources in Master File per the following by 7/20/2020:
    - NGR resource at least one Resource ID must be flagged as APPLY\_WHLSL\_CHARGE = 'N'. (BRQ001, BRQ005, BRQ010)
  - Develop SQMD data sets for Resource IDs to be used in Mkt. Sim
    - NGR Resource ID by 7/23/2020

# Market Sim Scenario #1

Scenario Execution Trade Date(s): <TBD>	
Scenario #1	Demonstrate the initial settlement of DA, FMM, RT, RUC.
Description	Run the market for DA, FMM, RTM, RUC
Expected System Outcome	Awards to charge will be zeroed out from being settled.
Anticipated Settlement Outcome	CC 6011, 6460, 6470, 64600, 64700

# Market Sim Scenario #2

Scenario Execution Trade Date(s): <TBD>	
Scenario #2	Validate the Recalk settlement of DA, FMM, RT, RUC.
Description	Run the market for DA, FMM, RTM, RUC
Expected System Outcome	Awards to charge will be zeroed out from being settled.
Anticipated Settlement Outcome	CC 6011, 6460, 6470, 64600, 64700

# Market Sim Scenario #3 & #4

Scenario Execution Trade Date(s): <TBD>	
Scenario #3	Validate the settlement of Real Time unaccounted, Real Time uninstructed energy
Description	Run the market for DA, FMM, RTM, RUC where awards are not fully met.
Expected System Outcome	Awards are not fully met, triggering unaccounted or uninstructed charge codes.
Anticipated Settlement Outcome	CC 6474, 6475, 6824, 64740, 64750

Note: Market Sim scenarios #3 and #4 are similar except that the ISO will publish an Initial Statement in scenario #3 and a Recalk Statement in #4

# Market Sim Scenario #5 & #6

Scenario Execution Trade Date(s): <TBD>	
Scenario #5	Validate dispatch and settlement of uneconomic dispatches to charge to show new bid cost recovery eligibility
Description	Run the market for FMM, RTM and trigger Bid Cost Recovery
Expected System Outcome	Resource will be ineligible for BCR for intervals that the resource is charging but uneconomic.
Anticipated Settlement Outcome	CC 6620, 6630, 66200

Note: Market Sim scenarios #5 and #6 are similar except that the ISO will publish an Initial Statement in scenario #5 and a Recalk Statement in #6

# Market Sim Scenario #7

Scenario Execution Trade Date(s): <TBD>	
Scenario #7	Validate settlement of exceptional dispatch to charge.
Description	Exceptional Dispatch to charge
Expected System Outcome	Resources exceptionally dispatched to charge will not be settled for this instruction.
Anticipated Settlement Outcome	CC 6482, 6488

# RESOURCES

# BPMs impacted

BPM	Description of Impact(s)
Market Instruments	Attachment B - Adding new attribute in Master File and GRDT
Metering	Will include description of the process and requirements for assigning new classification to NGRs for exemption of charges for “charging energy”
Settlements & Billing	Configuration changes to exempt NGRs having the new classification for exemption of charges for “charging energy”

## Resources – Regulatory Filing and Orders Page

- Information related to this FERC Order 841 filing can be found on the following CAISO web page at:
  - Response to Order on Further Compliance - Order 841 - Electric Storage Participation (ER19-468)

Home>Rules>Regulatory>Regulatory filings and orders

<http://www.caiso.com/rules/Pages/Regulatory/RegulatoryFilingsAndOrders.aspx>

## Resources - Release Planning Page

- Information for this initiative can be found under Fall 2020 Releases located on the following CAISO webpage at:
  - Business Requirements (BRS)
  - Market Simulation Structured Scenarios
  - Draft Configuration Output Guide

Home>Stay Informed>Release Planning>FERC Order No. 841 requested adjustments

<http://www.caiso.com/informed/Pages/ReleasePlanning/Default.aspx>

# Final Questions



For more detailed information on anything presented, please  
visit our website at:

[www.caiso.com](http://www.caiso.com)

Or send an email to:  
CustomerReadiness@caiso.com

# CAISO Customer Questions

**The following slides list questions the CAISO received during the FREC 841 training webinar and their corresponding answers.**

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# CAISO Customer Questions

**Q: Where will this process be documented outside of this training”**

**A: This will process will be documented in the Metering BPM**

**Q: How will the ISO know if charged energy for these identified NGRs are retail or wholesale?**

**A: All charges for these types of identifies recourses will be “zeroed out”. No distinction on retail or wholesale charges will be made**

# CAISO Customer Questions

**Q: If an NGR is identified as one of these resources, does that preclude it from being used as an Ancillary Service?**

**A: No, they would still be able to participate as an AS**

**Q: Approximately how many NGRs fall into this category?**

**A: We currently do not have a metric on how many but expectations are not many**

# CAISO Customer Questions

**Q: How will this process be integrated with co-located resources where NGRs are paired with VERs?**

A: If you have a co-located resources where NGRs paired with VERs have a mingled retail/ wholesale meter, please submit a CIDI ticket with your question. If not, non-issue

**Q: Will the ISO publish an examples that entities can refer back to?**

A: The ISO has requested entities to submit a request to include their resources in the Market Sim process. Please see Market Sim scenarios document

# CAISO Customer Questions

**Q: Where is the requirement for virtual resources to be included in Market Sim?**

**A: No specific requirements needed, companies just need to submit which resources they want to have participating, though the window may be closed/ closing soon for resource submittal**