



# UNCERTAINTY PRODUCT MEMBER TESTING KICKOFF

PARTICIPANT TESTING KICKOFF

MARCH 1, 2023

*Working together to responsibly and economically  
keep the lights on today and in the future.*



SouthwestPowerPool



SPPorg



southwest-power-pool

# AGENDA

- Uncertainty Product Overview
- Testing Overview
- Testing Information and Schedule
- Helpful Information

# UNCERTAINTY PRODUCT OVERVIEW

# UNCERTAINTY RESERVE PRODUCT

Operating Reserve product

From portion of dispatchable/  
participating resource's capability

Reserved for potentially increasing  
net obligations for future intervals

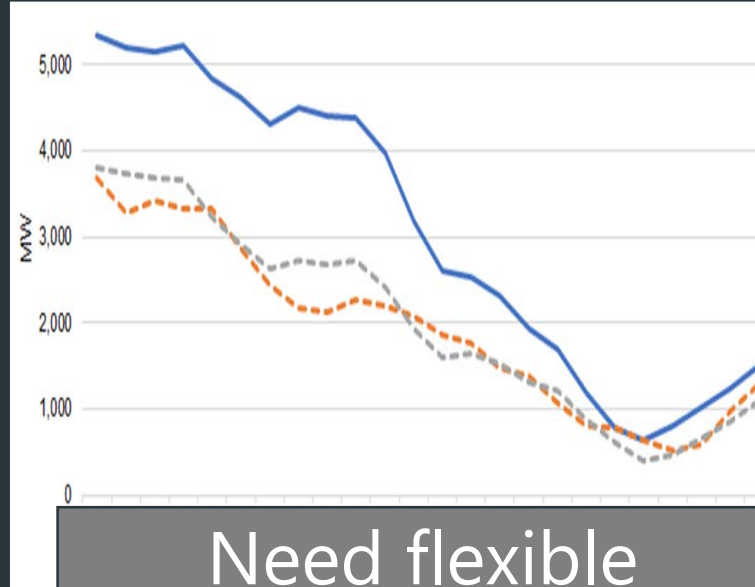




# WHY?



Increase in renewable-powered resources

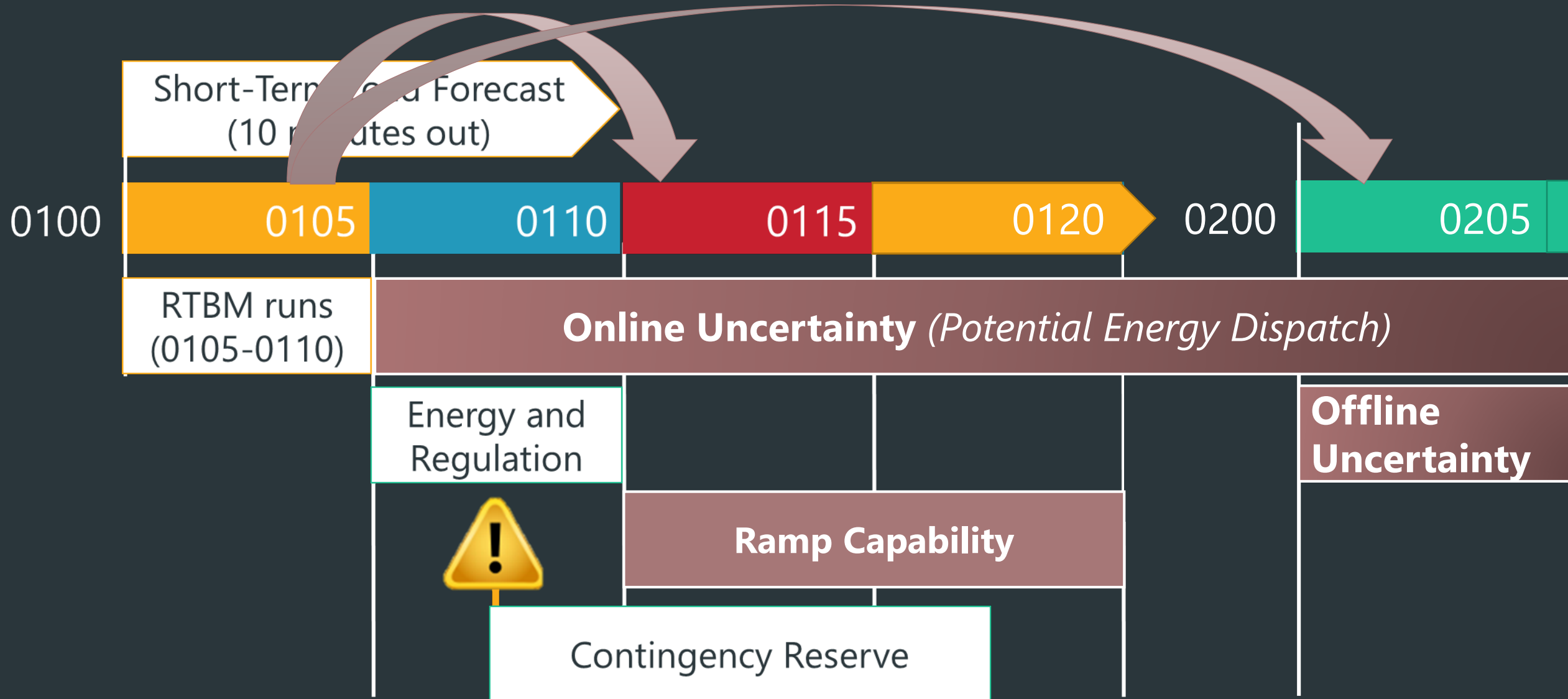


Need flexible capacity for forecast deviations



Address reliability issues associated with forecasts


# THE NEXT STEP FOR NEEDED FLEXIBILITY




Served from either ONLINE or OFFLINE generation that can respond within the product time horizon




# PRODUCT FEATURES




One Product  
(Uncertainty Up)




New Offer Required for  
Offline Uncertainty



Qualify if Dispatchable  
& can Clear in Real-Time



Real-Time Balancing  
Market (RTBM) deploys



Hourly Values



Demand Curves similar  
to Regulation Reserve



# BENEFITS

## MARKET-BASED APPROACH

to managing uncertainty

## INCREASE RELIABILITY

by factoring statistical uncertainty impacts into commitment and dispatch

## REDUCE MAKE-WHOLE PAYMENTS (MWPs)

and impacts of price suppression resulting from out-of-market actions taken to maintain reliability

## PROVIDE TRANSPARENT PRICES

and a new revenue stream for online & offline resources that can participate

# UNCERTAINTY RESERVE PRODUCT TRAINING

*Registration Available:*  
[SPP Learning Center](#)

**NEW Virtual Instructor-Led  
Training (VILT)**

May 2, 2023:

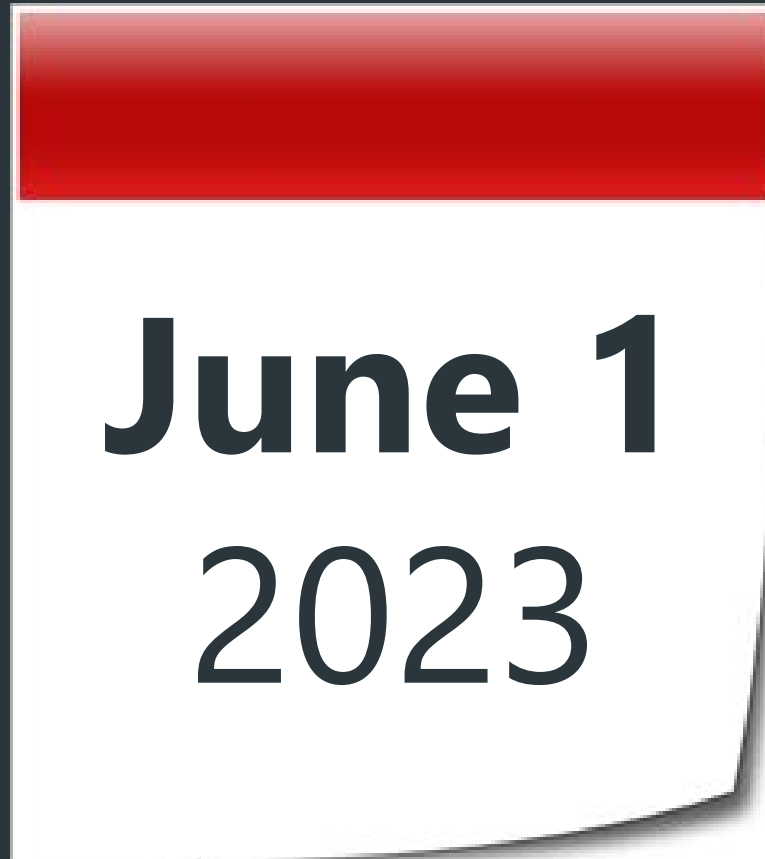
9:30 a.m. to 11:30 a.m. CT

May 17, 2023:

1:30 p.m. to 3:30 p.m. CT



# WHEN IS THIS CHANGE EFFECTIVE?



# TESTING OVERVIEW

MOS 2.12



# WHAT IS THE OBJECTIVE OF MEMBER TESTING?

Verify SPP & member systems/processes are prepared for implementation of Markets and Settlements software

Support MOS 2.12 Release (RR449 and RR496)



# WHO SHOULD TEST?

**Market Participants (MPs) who participate in the Integrated Marketplace AND:**

- ✓ Have resources that qualify to submit data for Uncertainty UP
- ✓ Have resources that submit data for offline supplemental reserve
- ✓ Query for Operating Reserve products clearing and Market Clearing Price (MCP) data
- ✓ Use a shadow settlement system

# SYSTEMS IMPACTED

Member & vendor-developed systems that utilize the following may be impacted:

- Markets UI/APIs
- Markets Public Data
- BSS UI / API
- Settlement Notifications API
- EQR (or FERC formatted EQR) API
- Shadow Settlement Systems
- Settlements Public Data

# WHAT ARE THE MEMBER TESTING EXPECTATIONS?

## Review MIPO

- Posted in project folder
- Determine impacts to your specific processes

## Verify Settlement Results

- Download results during active member testing

## Notify SPP with Issues

- Submit questions/issues in a timely manner
- Use the Request Management System (RMS)

## Notify SPP for more Testing

- Submit ticket if additional scenarios desired
- Use the Request Management System (RMS)



# WHAT ARE THE SPP TESTING EXPECTATIONS?

## SUPPORT

- Member testing in the Member Testing Environment (MTE)

## RESPOND

- To RMS tickets in a timely manner

## COMMUNICATE

- To Change User Forum (CUF) & Settlements User Forum (SUF) any testing changes/updates

## POST

- Known Issue Log weekly to Markets & Settlements project folder after testing starts

# TESTING INFORMATION AND SCHEDULE

# MARKET PARTICIPANT TESTING TIMELINE

MTE Available:  
3/20/23 – 5/2/23



# **MTE AVAILABLE: 3/20/23 – 5/2/23**

Testers need to:

- ✓ Submit Uncertainty Up (UncUP) & Offline Supplemental offer data
- ✓ Verify data is present & reasonable (Resource-owning MPs)
- ✓ Validate they have demand bids in Day-Ahead (DA) Market (Load MPs)
- ✓ Verify UncUP shows up as necessary in clearing & pricing sets

Primary impact to services used via MUI & API, as well as XML notifications

Requirements calculated at hourly granularity; Will be fixed after 0600 DA (same as Regulation requirements)



# TEST CASES

Provided to assist MPs with verifying changes during testing by using MUI and API

- API & MUI changes
- Public Data changes
- RTBM Operating Reserves
- Scarcity Demand Curve
- MCP Reports (RT and DA)
- Historical Offers

**Available 3/1/2023**



**SPREADSHEET**

# TESTING INFORMATION AND SCHEDULE

SETTLEMENTS TESTING

# SETTLEMENT CHANGES

- Six (6) new charge types.
- BSS UI/API changes to include UNCERTOBL
- EQR Data UI/API
- FERC formatted EQR UI/API
  - Per FERC's request, Uncertainty Product will be reported under FERC Product name (Supplemental Reserve).
  - Info in field 50 is the transaction's unique identifier and will start with DAUNC for the DA Uncertainty product and with RTUNC for RT Uncertainty product
- External Notifications (See full list in MIPO)
- Public Data (Operating Reserve (OPRE) Report)

# UNCERTAINTY PRODUCT TIMELINE

**January 10<sup>th</sup>**  
Draft Tech  
Specs Posted

**February 7<sup>th</sup>**  
Final Tech  
Specs Posted

**March 1<sup>st</sup>**  
Member  
Testing Kick-off  
Call

**March 29<sup>th</sup>**  
First  
Settlement  
Posting in MTE  
for OD 3/22

**May 9<sup>th</sup>**  
Last Settlement  
Posting in MTE  
for OD 5/2

**June 1<sup>st</sup>**  
Production



*Updated SMS web services enabled in MTE on 3/14 and in Production on 5/23.*

# MEMBER BID-TO-BILL TESTING DATES

Bid-to-bill testing includes Operating Dates 3/22-5/2:

- MPs should submit/update data (bids/offer for markets, meter/bilateral schedules for settlements) to test specific scenarios.
- Otherwise, markets uses the last submitted data for offers and bids, and settlements uses state estimator for meter.

Testing scenarios used to help produce results for Uncertainty to help with Shadow Settlements.

Scorecard utilized to track scenario progress.

- Scorecards provide a summary of which testing scenarios were triggered for which Operating Dates for each AO and MP.
- Scorecards updated and published for project weekly during member testing.

# SETTLEMENT SCENARIOS

## Unstructured / Base Settlement Calculations

- DA Market clearing Uncertainty Online and Offline
- RUC Market clearing/commitments Uncertainty Online and Offline
- CIR resources with DA Market clearing Uncertainty Online and Offline
- CIR resources with RUC clearing/commitments Uncertainty Online and Offline

## Make-Whole Payment Calculations

- MCR Transitions in DA and clearing Uncertainty in Real-Time (RT)
- MCR clears Uncertainty in DA and in RT transitions
- Non-MCR clear Uncertainty in DA with DA Market commitment
- Non-MCR clear Uncertainty in RT with RUC Market commitment

## Out-of-Merit Energy Calculations

**Non-Performance** – A resource fails to provide Uncertainty in RT

## Repricing Uncertainty Product

# SCENARIO CALENDAR

## MARCH

S	M	T	W	T	F	S
19	20	21	22	23	24	25
26	27	28	29	30	31	

## APRIL

S	M	T	W	T	F	S
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29

## MAY

S	M	T	W	T	F	S
		1	2	3	4	5

First OD: 03/22/23 (posts on 03/29/23)  
 Last OD : 05/02/23 (posts on 05/09/23)

Scenario	Date
<b>Unstructured / Base Settlement Calculations*</b> <ul style="list-style-type: none"> <li>- Day Ahead Market clearing Uncertainty products</li> <li>- RUC Market clearing Uncertainty products</li> <li>- CIR Resources w/Day Ahead Market clearing Uncertainty products</li> <li>- CIR Resources w/RUC clearing Uncertainty products</li> </ul>	03/22/23 - 04/16/2023
<b>Make Whole Payment Scenarios</b> <ul style="list-style-type: none"> <li>- Non MCR clear Uncertainty products in DA with DA MKT Commitment</li> <li>- Non MCR clear Uncertainty in RT with RUC MKT Commitment</li> <li>- MCR transitioning in DA and clearing Uncertainty in Real-Time</li> <li>- MCR clears Uncertainty in DA and in RT transitions</li> </ul>	03/27/23 - 03/31/23
<b>Out-of-Merit Energy Scenarios</b>	04/03/23 - 04/07/23
<b>Repricing Scenarios for Uncertainty Products</b>	04/11/23 - 04/13/23
<b>Non Performance -- A resource fails to provide Uncertainty in Real-Time</b>	04/10/23 - 04/14/23
<b>Scenario Reruns if needed</b>	04/17/23 - 05/02/23



# ADDITIONAL ENHANCEMENTS

In addition, following settlement enhancement also included with project:

ID	Summary	Comments	IM/ WEIS
ITSETL-9840	Meter Data UI Validation to reject file if top down load has submitted zeros for the day	This will create a new validation to reject a Meter Data submission if the top down load has submitted zeros for the entire day.	Both
ITSETL-8370	BSS UI -> Create Contract Tab -> Drop-Down for Reserve Zone Contains extra values	The BSS UI is displaying invalid Reserve Zones in the create contact tab. RZ1 - RZ5 will be removed.	East
ITSETL-8699	BSS- Contract name overlap when termination date = effective date	Bilateral contracts can't have overlapping dates. But there seems to be a defect where you can't make a contract if one already exists with a start date that matches the termination date of the contract you are trying to create.	East

# MEMBER TESTING SETTLEMENT CALENDAR

An accelerated calendar will be used in MTE so the S53 posts **28 days** after operating date.

**NOTE:** There will be no S120s posted during this testing. The first three weeks of member testing will contain only S7s and last three weeks will contain S7s and S53s.

March / April 2023						
Sun	Mon	Tues	Wed	Thu	Fri	Sat
19	20	21	22	23	24	25
				S7 Data Due	22-Mar-23	
26	27	28	29	30	31	1
S7 Data Due	23-Mar-23	S7 Data Due 24-Mar-23	S7 Data Due 25-Mar-23	S7 Data Due 26-Mar-23	S7 Data Due 27-Mar to 29-Mar-23	
			S7 Posting 22-Mar-23	S7 Posting 23-Mar-23	S7 Posting 24-Mar-23	
2	3	4	5	6	7	8
S7 Data Due	30-Mar-23	S7 Data Due 31-Mar-23	S7 Data Due 1-Apr-23	S7 Data Due 2-Apr-23	S7 Data Due 3-Apr to 5-Apr-23	
<u>SD</u>	<u>4/1</u> <u>4/2</u> <u>4/3</u>					
S7 Posting 25-Mar-23	26-Mar-23 27-Mar-23	S7 Posting 28-Mar-23	S7 Posting 29-Mar-23	S7 Posting 30-Mar-23	S7 Posting 31-Mar-23	
				Invoice Posting 6-Apr-22		
9	10	11	12	13	14	15
S7 Data Due	6-Apr-23	S7 Data Due 7-Apr-23	S7 Data Due 8-Apr-23	S7 Data Due 9-Apr-23	S7 Data Due 10-Apr to 12-Apr-23	
<u>SD</u>	<u>4/8</u> <u>4/9</u> <u>4/10</u>				S53 Data Due 22-Mar to 24-Mar-23	
S7 Posting 1-Apr-23	2-Apr-23 3-Apr-23	S7 Posting 4-Apr-23	S7 Posting 5-Apr-23	S7 Posting 6-Apr-23	S7 Posting 7-Apr-23	
				Invoice Posting 13-Apr-22		
16	17	18	19	20	21	22
S7 Data Due						
S53 Data Due						
<u>SD</u>						
S7 Posting						
May 2023						
Sun	Mon	Tues	Wed	Thu	Fri	Sat
30	1	2	3	4	5	6
S7 Data Due	27-Apr-23	S7 Data Due 28-Apr-23	S7 Data Due 29-Apr-23	S7 Data Due 30-Apr-23	S7 Data Due 1-May to 2-May-23	
S53 Data Due	8-Apr-23	S53 Data Due 9-Apr-23	S53 Data Due 10-Apr-23	S53 Data Due 11-Apr-23		
<u>SD</u>	<u>4/29</u> <u>4/30</u> <u>5/1</u>					
S7 Posting 22-Apr-23	23-Apr-23 24-Apr-23	S7 Posting 25-Apr-23	S7 Posting 26-Apr-23	S7 Posting 27-Apr-23	S7 Posting 28-Apr-23	
S53 Posting 1-Apr-23	2-Apr-23 3-Apr-23	S53 Posting 4-Apr-23	S53 Posting 8-Mar-23	S53 Posting 9-Mar-23	S53 Posting 10-Mar-23	
				Invoice Posting 4-May-22		
7	8	9	10	11	12	13
S7 Posting						
S53 Posting						
<u>SD</u>	<u>5/6</u> <u>5/7</u> <u>5/8</u>					
S7 Posting 29-Apr-23	30-Apr-23 1-May-23	S7 Posting 2-May-23				
S53 Posting 11-Mar-23	12-Mar-23 13-Mar-23	S53 Posting 14-Mar-23				
				Invoice Posting 11-May-22		

\* Meter Data and BSS Data

\* Meter Data and BSS Data due by 12:00pm CPT for the Specified Operating Date(s).

Settlement Calendars (PDF / Excel) are posted to the MTE Portal (<https://marketplace-mte.itespp.org/pages/settlement-calendars>).



# HELPFUL INFORMATION

# HELPFUL LINKS

## [Uncertainty Product](#)

- [MIPO](#)
- Settlements
- Known Issues Log – Posted each Friday

## [Future Technical Specifications Folder](#)

- [Marketplace Markets Web Service 37.0 20230207](#)
- [Settlement Management System API XML Specifications 20230202](#)

Training: Registration available [here](#).

# QUESTIONS? SUBMIT TICKET VIA RMS

<https://spprms.issuetrak.com/login.asp>

## Submit Request

Request Template: **1**

Request Status:

\* Request Type:

\* Subtype 1: **2**

\* Subtype 2: **3**

## STEPS

1. Select "Submit an Inquiry" Request Template
2. Select Subtype 1 = "Projects/ Initiatives"
3. Select Subtype 2 = "Uncertainty Product"