



MISO Demand Response Seasonal Preparation

CPower Panelists: Kellen Bollettino, Peter Dotson-Westphalen

5 / 23 / 24



Presenters



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CPower



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Housekeeping Items

- 01 Webinar is in listen only mode
- 02 Use the Q&A (Chat) panel to submit questions
- 03 This webinar is recorded
- 04 Find this webinar, deck and program info at: CPowerEnergy.com/ready2024/

Agenda Items

- | | | | |
|----|----------------------------|----|--|
| 01 | 2024 market overview | 04 | Curtailment plan review |
| 02 | Program information review | 05 | Communications, alerts & notifications |
| 03 | Updating information | 06 | Recap & meet the team |

Program Snapshots

MISO Demand Response Programs

- Load Modify Resource Program
- Demand Response Resource (DRR) – Energy
- Demand Response Resource (DRR) - Ancillary



Program snapshots provide a quick review of program rules and participation parameters.

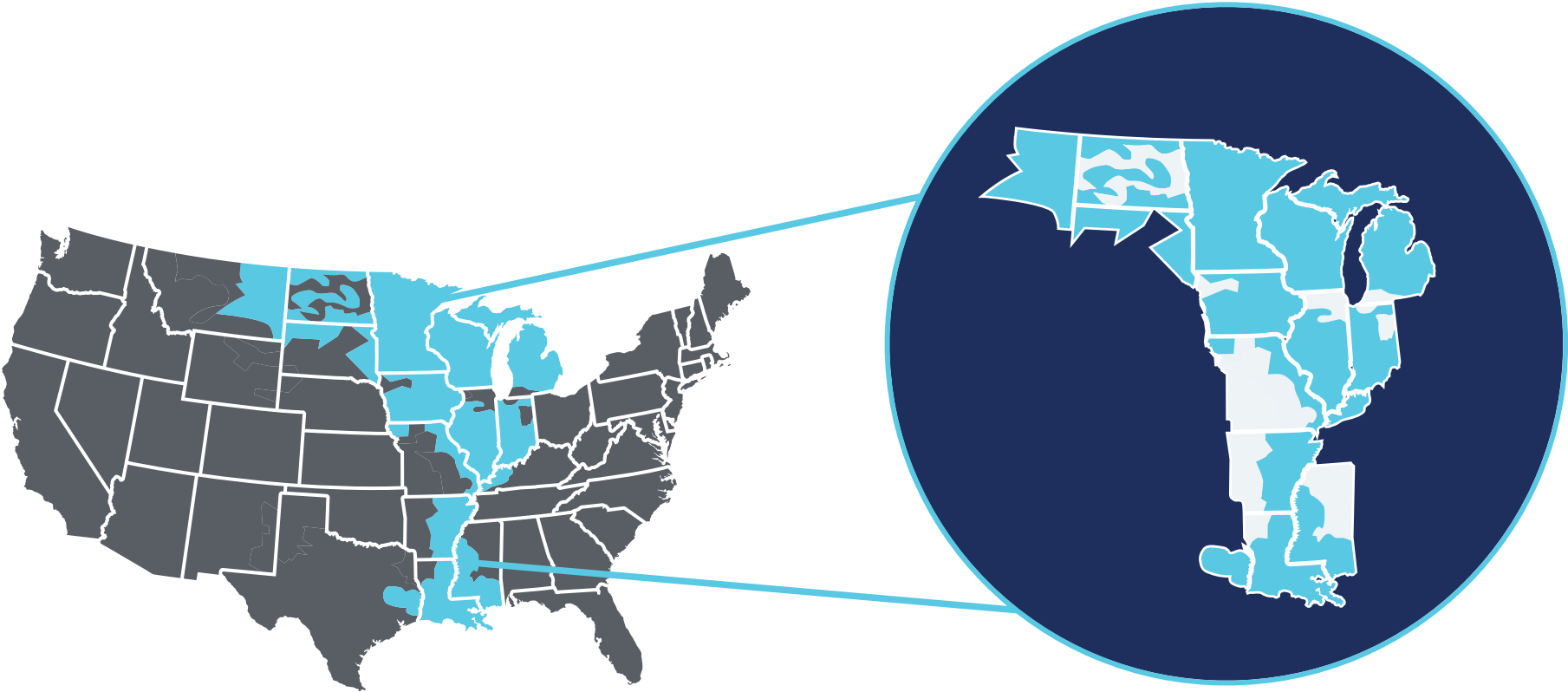


Key Updates

Important Market Updates

- Communications Test Date: Wed, June 6, 2024 (3 PM CT, 4 PM ET)
- 2024/25 Planning Resource Auction (PRA) seasonal auction clearing prices cleared very low
 - Fall & Spring shortfalls in Zone 5 (MO) caused prices to spike to CONE
 - Auction prices across the rest of MISO reflect adequate supply resources for 2024/25, but capacity shortfalls loom
 - Capacity surplus decreased by 30%, primarily in the North/Central MISO regions
 - IL and MI cleared ~\$7,000/MW for 2024/25, CPower customers are making 3x
- MISO DR Program Rules – Stakeholder Discussions
 - MISO continues work on revising accreditation rules for all resource types
 - Proposed LMR changes under discussion currently

MISO System Territory



Program Overview – Load Modifying Resources

Program Parameters	Load Modifying Resource
Location	Ameren Illinois and Michigan (MI limited to only customers taking electric service through an Alternative Energy Supplier)
Minimum Size	100 kW (Grouping is allowed).
Participation	Customer may participate in each Season. The Seasons are Summer (Jun-Aug), Fall (Sep-Nov), Winter (Dec-Feb), and Spring (Mar-May). Customers may elect different curtailment capabilities by Season.
Number & Duration of Events	In Summer and Winter, customers must be able to curtail up to five (5) times per Season, while in Fall and Spring, customers must be able to curtail up to three (3) times per Season. In total, customers participating in all Seasons must be available for up to sixteen (16) events per year. Each event may last up to four (4) hours.
Notification	Customer may elect to receive 2-6 hours notice prior to an LMR event. However, notification times longer than 2 hours require additional documentation to support the extended notice time.
Compensation	Program capacity payment incentives vary year-over-year, and pricing may vary from Season to Season within a given year.
Baseline	LMRs may use either a Firm Service Level (FSL) or Demand Reduction baseline option. FSL is a "drop to" measurement, with performance based upon the difference between the LMR's Seasonal Peak Load Contribution and the FSL. Several consumption-based baseline options exist for measuring Demand Reductions, including the option to develop a custom baseline methodology.
Settlements	Customers are paid annually their portion of the capacity payments.
Compliance	Customers are required to curtail at least their committed load during tests and events.
Consequences of Non- Performance	Penalties for failure to respond or to reach target. Penalty = LMP * Shortfall, plus potential to lose capacity payments for months remaining in the Planning Year. Multiple performance failures may result in being denied participation in future years.
Testing	1-hr test required if no events are called. Option to forego test and supply supporting documentation of curtailment plan and expected load reduction, however, if electing this option, non-performance penalties will be tripled.
Enrollment Deadline	February 1 for a June 1 start.
Metering	Each account must have a hourly interval meter either through their utility or CPower. Generation resources must be directly metered.



Review & Update Information

Reviewing and updating your organization's contact information



- **Responsible Parties for Notifications: Make Sure All Relevant Contacts Are Up-to-Date**
 - Make sure to send the persons' names, email addresses and phone numbers
 - Any changes to former or added staff on your current notification group



- **Review and Save Important CPower Contact Information**
 - **CPowerDispatch@mg.CPowerEnergy.com**
 - Add the CPower Dispatch number to your cell phones – “Demand Response Notification”
 - **410-346-5907**



- **Review Your Plan:**
 - Make sure your plan is still accurate and aligns with your curtailment commitments and resources.

Curtailment Review

Plan Effective Date: 5/9/2024

Curtailment Plan Summary

Executive Summary Overview

The Customer has agreed to participate in the following Demand Response (DR) program(s) at the listed facilities. The intent of this document is to provide guidance on how to successfully respond to demand response events. This includes a list of curtailment measures and provides a basic understanding of program requirements. Please notify the CPower Engineering team at Engineering@CPowerEnergyManagement.com if you have any changes to your facility, curtailment actions, or any other information listed in this Curtailment Plan.

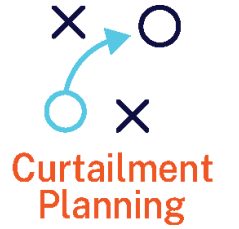
<p>Utility Account Information</p> <p>Company: <u>Company ABC</u></p> <p>Facility #: <u>Facility 123</u></p> <p>Address: <u>1111 Apple Street</u></p> <p>City: <u>This City</u></p> <p>State: <u>MI</u></p> <p>Zip: <u>55555</u></p>	<p>Facility Information</p> <p>EDC Utility: <u>ASG55556JJ123</u></p> <p>Account Number(s): _____</p> <p>Account Number(s): _____</p> <p>Account Number(s): _____</p> <p>Account Number(s): _____</p>
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Enrolled Program

	Curtailment Estimates				
		Summer		Winter	
<input type="checkbox"/> Demand Response Resources	Load Shed	0	kW	0	kW
<input type="checkbox"/> Duke Energy Indiana - CallOption	Load Shed	0	kW	0	kW
<input type="checkbox"/> Duke Energy Indiana - PS-15/5	Load Shed	0	kW	0	kW
<input type="checkbox"/> Peak Demand Management Program	Load Shed	0	kW	0	kW
<input type="checkbox"/> Consumers Energy Demand Response Program	Load Shed	0	kW	0	kW
<input type="checkbox"/> Demand Response Resource Ancillary Services	Load Shed	0	kW	0	kW
<input type="checkbox"/> Demand Response Resource Energy	Load Shed	0	kW	0	kW
<input checked="" type="checkbox"/> Load Modifying Resource	Load Shed	1150	kW	350	kW
<input type="checkbox"/> MISO Emergency Demand Response	Load Shed	0	kW	0	kW

Check with your account manager to:

- Ensure bid amounts are accurate
- Ensure contacts are up-to-date



Curtailment Plan:

- CPower curtailment plans outline the various curtailment strategies that your facility may implement during a demand response event.
- Let us know if you need to update an existing plan!
- If you don't already have a curtailment plan, we can schedule a meeting with CPower Engineering to review your strategy and develop a plan.

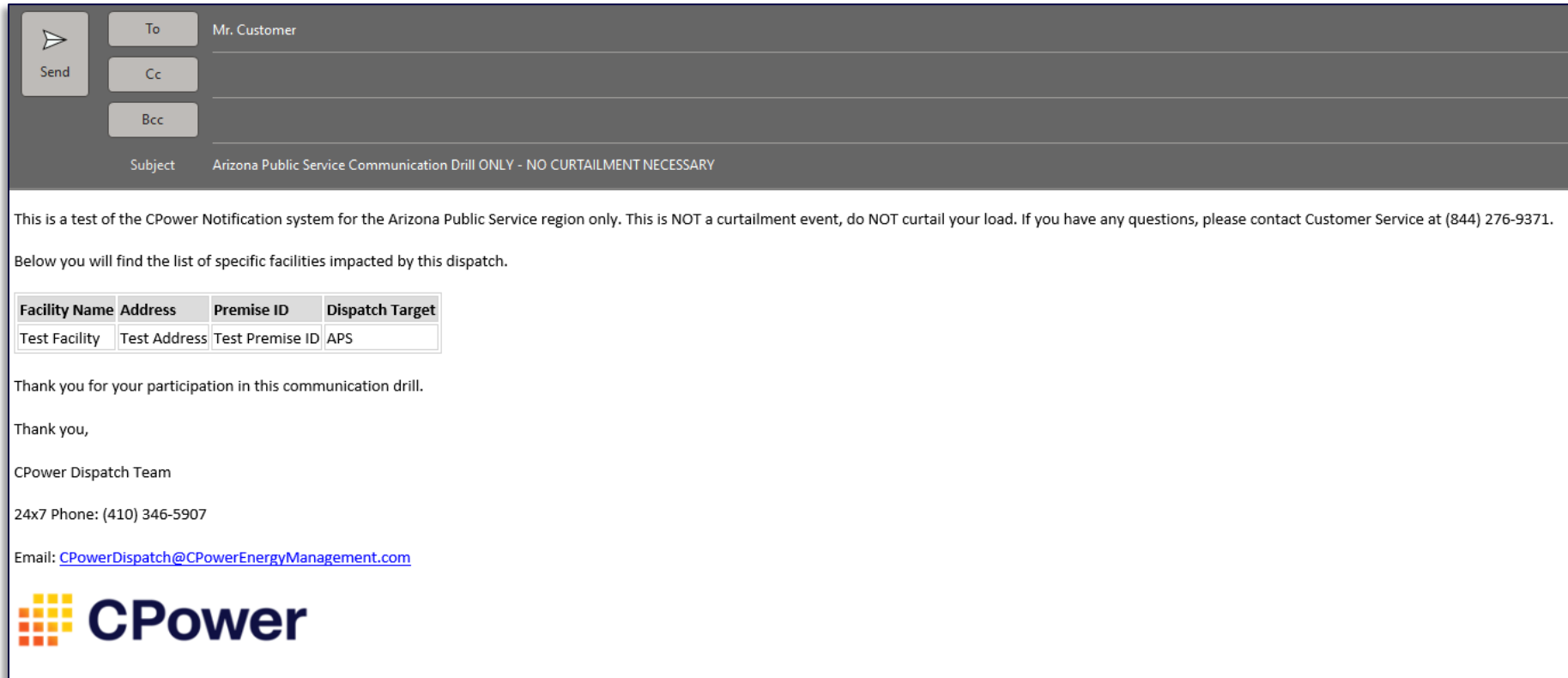
Distributed Energy Resources:

- Let us know if you've added any DER assets to your facility – i.e. Solar, battery, backup generation, etc.

Dispatch Notification

Communications Drill

- Communication Drill: June 6, 2024 [3 PM CT, 4 PM ET]
 - This is only a test. DO NOT curtail.



The screenshot shows an email composition or preview window. On the left is a 'Send' button with a right-pointing arrow. The header area contains fields for 'To' (Mr. Customer), 'Cc', and 'Bcc'. The 'Subject' field contains the text 'Arizona Public Service Communication Drill ONLY - NO CURTAILMENT NECESSARY'. The main body of the email contains the following text:

This is a test of the CPower Notification system for the Arizona Public Service region only. This is NOT a curtailment event, do NOT curtail your load. If you have any questions, please contact Customer Service at (844) 276-9371.

Below you will find the list of specific facilities impacted by this dispatch.

Facility Name	Address	Premise ID	Dispatch Target
Test Facility	Test Address	Test Premise ID	APS


Thank you for your participation in this communication drill.

Thank you,

CPower Dispatch Team

24x7 Phone: (410) 346-5907

Email: CPowerDispatch@CPowerEnergyManagement.com

 CPower

CPower Dispatch Team



100% in house Dispatch Operations

ensures accuracy and helps identify and resolve issues in real time so you can perform to your potential.



All Call System Functionality

Understanding The CPower Dispatch System

- **The All Call System utilizes:**
 - Phone
 - Email
 - Text Message
 - The System notifies all relevant contacts based on the program notification requirements
- **The All Call System will:**
 - Be activated by CPower Dispatch Operators
 - For both comms test and events
 - Send important preparation, start and completion notifications by utility, zone, or ISO.



All Call System Functionality

Understanding The CPower Dispatch System

▪ Phone Number for Events and Tests

- **410-346-5907** (Save as CPower or Dispatch)
 - Also sends text message alerts
- This is the direct line of our 24x7 dispatch service desk.

▪ Emails for Events and Tests:

- CPowerDispatch@mg.CPowerEnergyManagement.com
- Ensure this address is added to your safe sender list.



All Call System Functionality

Phone and Email Messages



■ Phone Call Message

- Greeting and prompt to play message
- The entire message must be heard before confirmation.
- Upon message completion, “did you understand?” will be asked.
- Press **(1)** for yes, **(2)** for no. **(1)** will end the notifications to that contact, **(2)** Will repeat the message.



■ Email

- An event email will be sent by the system (if you have email set up for notification).
- There is no need to reply to the email.

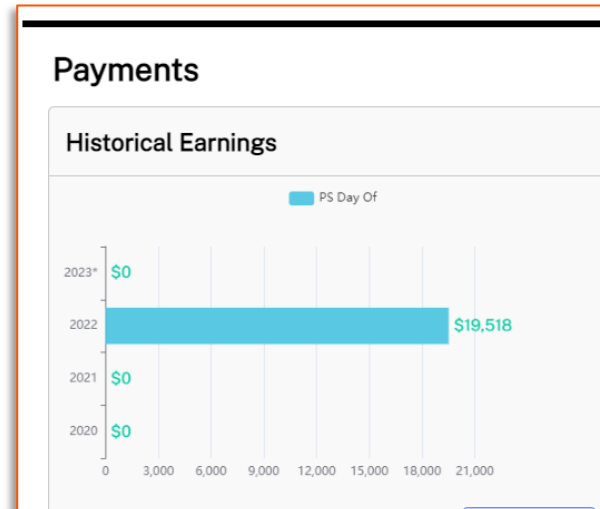


■ Text/SMS (smartphones only)

- An event notification text will be sent to your phone (if you have text notification set up).
- You will reply, and type the word “yes” into the body of the text and send.
- We must receive TXT acknowledgments back within 2 hours of sending dispatch notices.
- After that time, the system closes down, and we will not register an acknowledgement.

CPower Portal

- CPower Portal provides real-time:
 - Payments & historical payments
 - Request payment access through your CPower contact
 - Usage if metered



Payments

Earnings History Check/ACH History

All Sites To [View Report](#) [Export](#)

Region	Program	Payment Period Start Date	Payment Period End date	Amount
+ APS	PS Day Of	9/1/2022	9/30/2022	\$4,520.76
+ APS	PS Day Of	8/1/2022	8/31/2022	\$4,860.00
+ APS	PS Day Of	7/1/2022	7/31/2022	\$5,138.16
+ APS	PS Day Of	6/1/2022	6/30/2022	\$4,999.11
TOTAL				\$19,518.02

Note: Site level payment details are rounded to the nearest penny so totals may appear slightly different than adding the rounded details.

Recap

Important things to remember

- Season Begins June 1, 2024
- Be sure to update dispatch contacts
- Respond to test and communications drills
 - **Comms Test Date:** Wed, June 6, 2024 (3 PM CT, 4 PM ET)
- Make sure you have back-up personnel in case of emergency
- Ensure everyone reviews this training
- Review curtailment plan and/or curtailment strategy
- Make sure metering is up and running and accurate



Additional Resources

One Stop Shop for Demand Side Energy Management



Download white papers, webinars, blogs, case studies
and more at
[CPower's online publication,
The Current](#)



[View this webinar](#) and content as well
as all other markets we serve on our
Seasonal Readiness Portal

CPower's MISO Energy Team

Meet Your Local Team!



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Thank You!

Questions & Answers



Program Overview – Load Demand Response Resource (DRR-Ancillary)

Program Parameters	Demand Response Resource (DRR) - Ancillary Services Market Participation
Location	Ameren Illinois and Michigan (MI limited to only customers taking electric service through an Alternative Energy Supplier)
Minimum Size	1 MW (Grouping is allowed).
Participation	Bids are submitted daily into the Day-Ahead and/or Real-Time markets on an hourly basis.
Number & Duration of Events	Must be available to curtail amount offered as available for the maximum number of hours indicated in daily offers.
Notification	Customers participating in the Day-Ahead market will receive hourly schedules based upon awarded offers once the Day-Ahead market clears. Customers may adjust schedules in the Real-Time market. Customers must be available within the notification time for the ancillary service product for which bids have been submitted (10 or 30 minutes for reserve products).
Compensation	Paid based the Day-Ahead market clearing price for the applicable ancillary services product offered x MW offered/awarded, plus energy payments for MWh delivered when dispatched.
Baseline	DRRs (Type 1) use a Demand Reduction (consumption) baseline calculated for each hour when scheduled to provide reserves, with optional adjustments for weather sensitivity or other anomalies (maximum of +/-20% Weekday baselines are based upon the average of the metered load from the ten (10), but no less than five (5), most recent eligible weekdays from the past 45 days. Weekend/Holiday baselines are based upon the average of the metered load from the four (4), but no less than two (2), most recent eligible weekend days or holidays from the past 45 days. Customers utilizing generation must have their generator separately metered, and the metered generator output will be subtracted from the Demand Reduction described above.
Settlements	Customers are paid annually their portion of the net ancillary service and energy payments for all hours in which the DRR has cleared offers in the ancillary services market.
Compliance	Customers are required to curtail at least their committed load (offered daily) during events.
Consequences of Non-Performance	Penalties are assessed for underperformance when dispatched for reserve products. Penalties are calculated hourly, with the formula (Scheduled MW - Delivered MW) x Real Time LMP.
Testing	DRR (Type 1) participating in the ancillary services market must complete a pre-qualification test demonstrating ability to respond within the notice time applicable to the ancillary services product(s) for which it intends to qualify prior to entering the market, and are subject to annual testing requirements once participating.
Enrollment Deadline	Rolling deadline of 30-days prior to the MISO Commercial Model Update that falls on the first day of the first month of each calendar quarter
Metering	DRR Type 1 must have a 5-min interval meter either through their utility or CPower. Generation resources must be directly metered.

Program Overview – Load Demand Response Resource (DRR-Energy)

Program Parameters	Demand Response Resource (DRR) - Energy Market Participation
Location	Ameren Illinois and Michigan (MI limited to only customers taking electric service through an Alternative Energy Supplier)
Minimum Size	1 MW (Grouping is allowed)
Participation	Bids are submitted daily into the Day-Ahead and Real-Time markets on an hourly basis.
Number & Duration of Events	Must be available to curtail amount offered as available for the maximum number of hours indicated in daily offers.
Notification	Customers participating in the Day-Ahead market will receive hourly schedules based upon awarded offers once the Day-Ahead market clears. Customers may adjust schedules in the Real-Time market.
Compensation	Paid the Day-Ahead LMP for hours during which offers submitted have cleared (subject to the Net Benefits Threshold test).
Baseline	DRRs (Type 1) use a Demand Reduction (consumption) baseline calculated for each hour when scheduled to provide energy, with optional adjustments for weather sensitivity or other anomalies (maximum of +/-20%). Weekday baselines are based upon the average of the metered load from the ten (10), but no less than five (5), most recent eligible weekdays from the past 45 days. Weekend/Holiday baselines are based upon the average of the metered load from the four (4), but no less than two (2), most recent eligible weekend days or holidays from the past 45 days. Customers utilizing generation must have their generator separately metered, and the metered generator output will be subtracted from the Demand Reduction described above.
Settlements	Customers are paid annually their portion of the net energy market payments for all hours in which the DRR has cleared offers in the energy market.
Compliance	Customers are required to curtail at least their committed load (offered daily) during hours in which offers have cleared.
Consequences of Non-Performance	Penalties are assessed for underperformance when dispatched for energy. Penalties are calculated hourly, with the formula (Scheduled MW - Delivered MW) x Real-Time LMP.
Testing	DRR (Type 1) participating in the energy market must complete a pre-qualification test prior to entering the market, and are subject to annual testing requirements once participating.
Enrollment Deadline	Rolling deadline of 30-days prior to the MISO Commercial Model Update that falls on the first day of the first month of each calendar quarter
Metering	DRR (Type 1) must have a 5-min interval meter either through their utility or CPower. Generation resources must be directly metered.

Make decision if we want this slide or not.