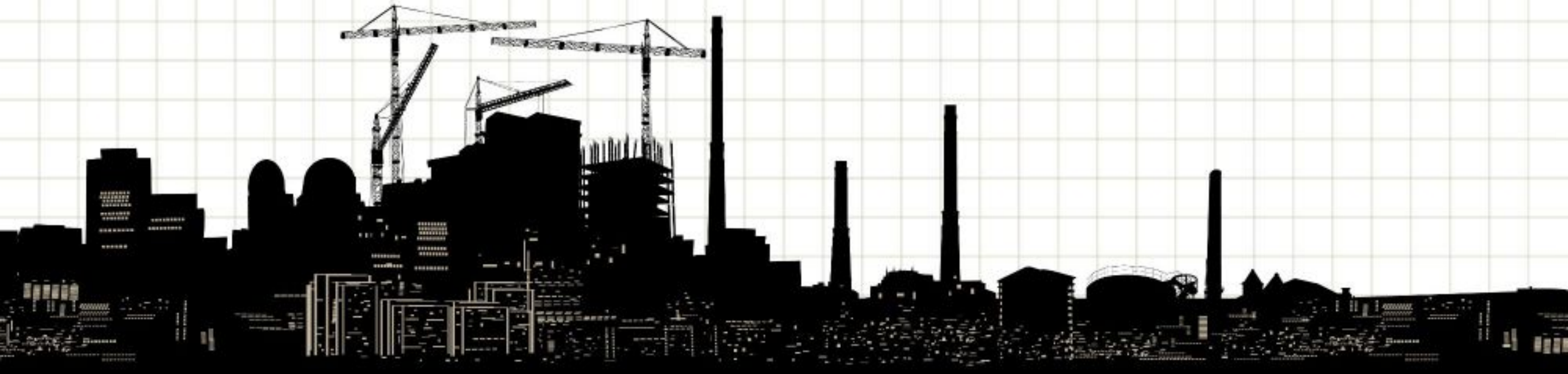




ERCOT DEMAND RESPONSE

Seasonal Readiness

5/6/2020



HOUSEKEEPING ITEMS

- Webinar is in listen only mode
- Use the Q&A panel to submit questions
- Webinar will be recorded and available at:
CPowerEnergyManagement.com/Ready20



AGENDA ITEMS

- 2020 Market Overview
- Program Information Review
- Updating Information
- Curtailment Planning Review
- Communications Alerts and Notifications
 - All Call System
- Recap

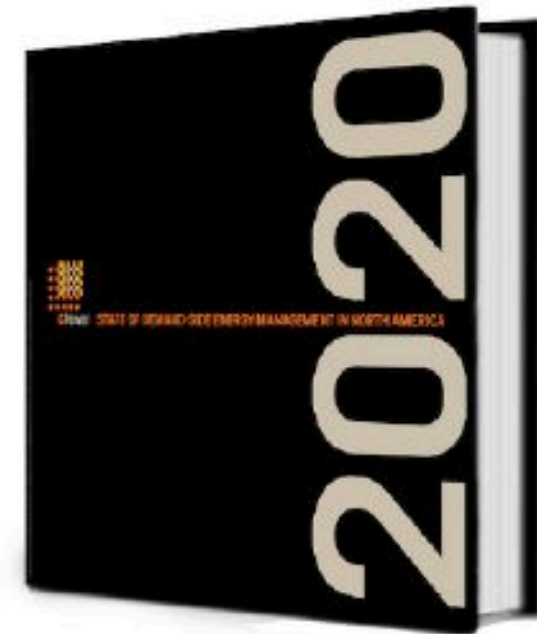
MARKET UPDATES – ERCOT

What You Need To Know

The definitive guide for organizations that use energy...**is back for 2020.**



13 CPower experts. 250 years of energy industry experience. One book.



Download CPower's State of the Demand Side Energy Market White Paper to see all major Texas updates.



PROGRAM INFORMATION

ERCOT Demand Response Programs

Program Snapshots

- [Emergency Response Service \(ERS\)](#)
- [Load Resource \(LR\)](#)
- [Utility Demand Response Programs](#)

Program Snapshots provide a very quick review and reference of all of the Texas demand response programs. Access any time and share.



PROGRAM PARAMETERS

Emergency Response Service (ERS)

	10 Minute Demand Response Program (ERS 10)	30 Minute Demand Response Program (ERS30)
Notification	Customers will be notified of an event via email, phone, text and/or electronic signal per customers' instructions and must fully curtail within 10 minutes of start of	Customers will be notified of an event via email, phone, text and/or electronic signal per customers' instructions and must fully curtail within 30 minutes of start of
Minimum Size	No minimum size; accounts of under 100 kW curtailment will be aggregated.	
Participation	4-month contract periods starting February, June and October. Each period contains 8 optional time slots: Weekdays: 5-9AM (TP1), 9AM-1PM (TP2), 1-4PM (TP3), 4-7PM (TP4), 7-10PM (TP5) Weekends: 5-9AM (TP6), 3-9PM (TP7), Weekends/nights/all other hours including ERCOT holidays (TP8).	
Enrollment Deadline	One month before each contract period (January 1st, May 1st, September 1st).	
Distributed Generation	Can participate independently or in conjunction with Load.	
Metering / Direct Load Control (DLC)	Each account must have at least a 15-minute interval or smart meter (per ERCOT) and may also require CPower's metering solution, which provides one-minute usage data.	
	Customers over 1 MW of curtailable load Encouraged to use DLC via CPower's monitoring solutions.	No DLC requirement.
Number & Duration of Load Response Events	Customers may be called to curtail load for up to 12 hours per contract period.	
Testing	At a minimum, a 15 to 30-minute test event will be called once per year absent a successful event deployment.	
Capacity Payments	Customers are paid based upon the clearing price, contract capacity and participation hours.	
Settlements	Customers receive payments within 60 days of the end of the contract period.	
Compliance	Customers must meet their performance obligations during events and test events, and must meet their availability requirements all other committed times.	
Consequences of Non-Performance	Availability and performance factors are taken into consideration and can reduce payments.	



PROGRAM PARAMETERS

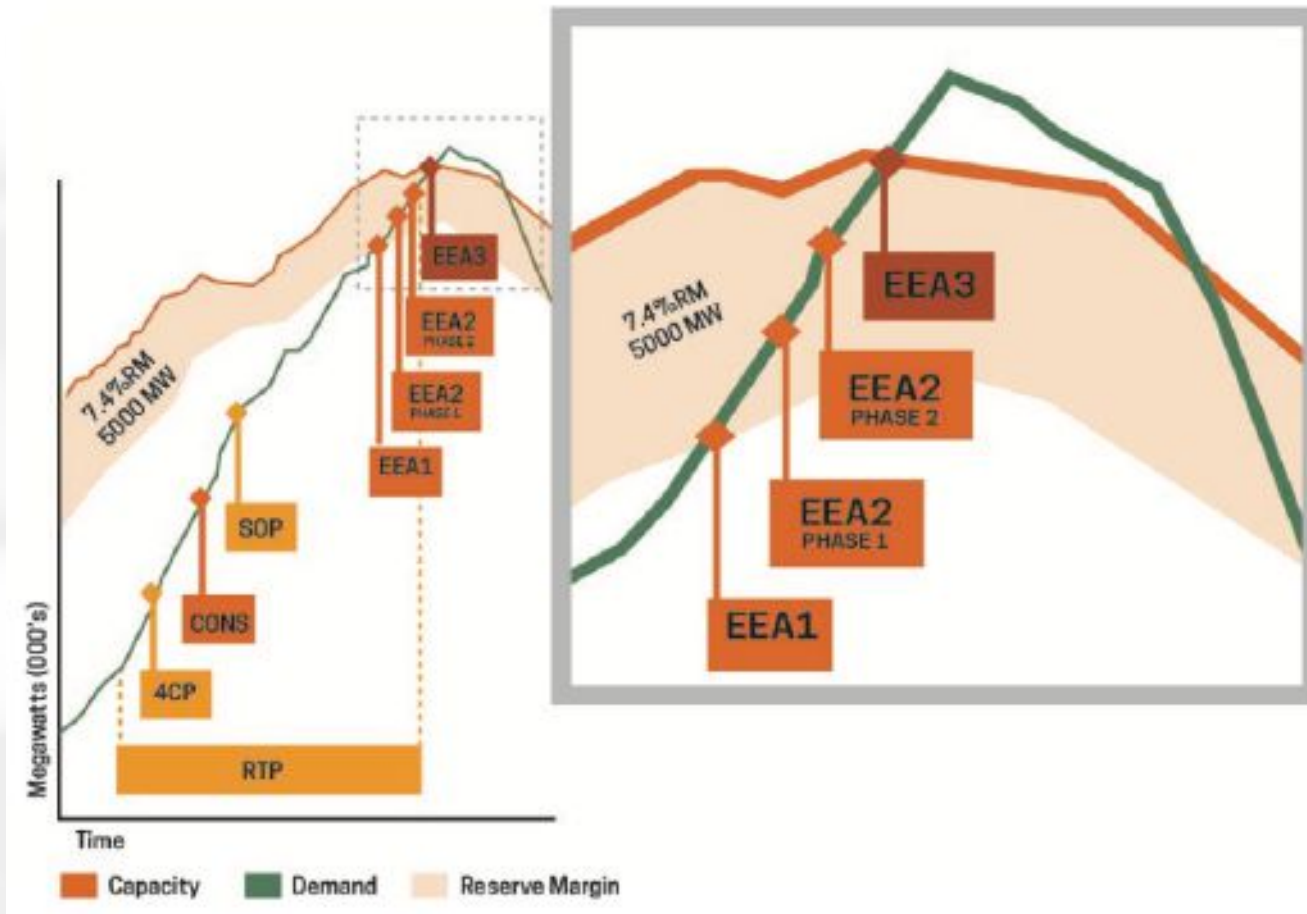
Load Resource (LR)

10 Minute Responsive Reserve Ancillary Service Program

Minimum Size	Minimum load reduction offer of 100 kW.
Participation	Year-round, 24 hours per day.
Enrollment Deadline	No deadline; Customer must first be registered as a Resource with ERCOT which can take 90+ days
Metering / Direct Load Control (DLC)	Two second demand data (provided by CPower monitoring solution) and an under-frequency relay are ERCOT requirements. Customers must have DLC via CPower monitoring solution.
Number & Duration of Load Response Events	Customers may be called to curtail load for several hours. Deployments can be either all LRs currently committed or a subset.
Notification	Customers will be notified of certain events via email, phone, and/or electronic signal per customers' contracted instructions and must fully curtail within 10 minutes of start of event. Immediate curtailment via Under Frequency Relay (UFR) upon system frequency reaching 59.7 Hz for 20 cycles.
Testing	At a minimum, a 15- to 30-minute test event will be called once a year absent successful event deployment.
Compliance	Customers must meet their performance obligations during events and test events and availability requirements all other committed times.
Capacity Payments	Customers receive recurring monthly payments for committing load to the program. The payment is based on either a fixed price or hourly market rates varying by market conditions and ERCOT curtailable load requirements.
Settlements	Customers receive monthly payments within 30 days of end of month.
Consequences of Non-Performance	Customer failure to curtail load results in suspension, termination and/or penalties. Fixed Price customers will be required to pay replacement costs if unable to participate in the market.

EVENT HISTORY

Emergency Response Service (ERS)



EVENT HISTORY

Load Resource (LR) and Emergency Response Service (ERS)

Load Resource (LR)

Year	# of System-wide VDI Events	# of System-wide UFR Events	# of Local UFR Events
2008	3	0	1
2009	0	0	0
2010	2	0	2
2011	3	0	4
2012	0	0	3
2013	0	0	3
2014	1	0	1
2015	0	0	1
2016	0	0	0
2017	0	0	0
2018	0	0	0
2019	0	0	0
Avg. #	0.75	0	1.25
Avg. Duration (minutes)	133	0	21

Emergency Response Service (ERS)

Year	# of ERS10 Events	# of ERS30 Events
2008	0	N/A
2009	0	N/A
2010	0	N/A
2011	2	N/A
2012	0	0
2013	0	0
2014	1	1
2015	0	0
2016	0	0
2017	0	0
2018	0	0
2019	1	2
Avg.	0.33	0.38

PROGRAM PARAMETERS

Utility Commercial Load Management Programs

	Centerpoint	Oncor
Notification	Customers will be notified of an event via email, phone, text and/or electronic signal per customers' instructions and must fully curtail within 30 minutes of start of event.	Customers will be notified of an event via email, phone, text and/or electronic signal per customers' instructions and must fully curtail within 30 minutes of start of event.
Minimum Size	Participants are required to have a normal aggregate peak demand of 750 kW or greater, with each participating site having at least 250 kW normal peak demand and capable of curtailing at least 100 kW. Participants must be non-residential customers taking service at the distribution level and/or be a non-profit customer or government entity, including educational installations.	Minimum of 100kW in demand saving for each project with min of 100kW peak per meter; Commercial customers with Oncor Meter or advanced meter, non residential, non transmission (unless government/non-profit/educational institution).
Participation	June - Sept; 1 - 7 p.m. CST; Mon-Fri (excludes Federal holidays).	June - Sept; 1 - 7 p.m. CST; Mon-Fri (excludes Federal holidays)
Enrollment Deadline	December 17 th	April 20 th
Metering/Direct Load Control (DLC)	Each account must have at least a 15 minute interval or smart meter (per ERCOT) and may also require CPower's monitoring solution, which provides one-minute usage data.	Each account must have at least a 15 minute interval or smart meter (per ERCOT) and may also require CPower's monitoring solution, which provides one-minute usage data.
Number & Duration of Load Response Events	Up to 4 unscheduled events, up to 4 hours each. Called during ERCOT-declared EEA2, or in anticipation of an EEA2 or called at Centerpoint's discretion for local needs. Maximum is six curtailments (including testing described below) and 22 hrs/yr	Min 1 hour and Max 25 hours during the performance period; events min 1 hour and max 4 hours.
Testing	1 or 2 scheduled test(s) of 1-3 hours	One 3 hour required test in May or June. The kW average performed will be contracted kW for June-Sept.
Baseline Measurement	Average of the like hours from top 5 of the last 10 program days. There is a potential day-of adjustment (capped at +/- 20%) that looks at the two hours leading up to an event notification and the like hours from the same top 5 of the previous 10 program days that can adjust the baseline up or down depending on the usage on the day of the event.	Average of the like hours from top 5 of the last 10 program days. There is a potential day-of adjustment (capped at +/- 20%) that looks at the two hours leading up to an event notification and the like hours from the same top 5 of the previous 10 program days that can adjust the baseline up or down depending on the usage on the day of the event.
Capacity Payments	Customers are paid \$31.50/kW, based upon the average performance across all event hours.	Customers are paid \$38/kW, based upon the average performance across all event hours
Settlements	Customers receive payments by the end of November.	Customers receive payments by the end of November.
Compliance	Customers must meet their performance obligations during events and test events, and must meet their availability requirements all other committed times.	Customers must meet their performance obligations during events and test events, and must meet their availability requirements all other committed times.
Consequence of Non-compliance	Payment reductions based upon actual performance	Payment reductions based upon average actual performance (minimum of 25% performance required to receive payment)

PROGRAM PARAMETERS

CPS Energy Demand Response Program

	Program 1	Program 2	Program 3	Program 4
PERFORMANCE PERIOD	July 1 to August 31	June 1 to September 30	June 1 to September 30	June 1 to September 30
CALL AHEAD NOTICE	2 hours	2 hours	1 hour	30 minutes
MAX EVENTS PER YEAR	18	25	6	25
MAX HOURS PER YEAR	55	75	25	75
2018 EVENT HISTORY	18	19	6	19
PRICE PER kW	\$47	\$70	\$31	\$73

MINIMUM SIZE	Minimum curtailment of 50 kW per site, or an aggregation of 4+ sites for 100 kW.
EVENT WINDOW	1-7pm CT.
DURATION OF EVENTS	Events average 2-4 hours.
BASELINE (CBL)	10 day average for non-holiday, weekend or event days.
SETTLEMENTS	Utility statement credits or a check at the end of season (estimated October).
COMPLIANCE	Pay for performance. Customer credited for 1 - 150% performance.
CONSEQUENCES OF NON-PERFORMANCE	No penalties for under/no performance.
TESTING	Communication test required before season, no performance test event.
ENROLLMENT DEADLINE	May 15 th , 2019.
METERING	Interval meter required. CPS will replace non-compliant meters at no cost to customers.
ELIGIBILITY	Generators not permitted. Sites can not participate in an ERS program option that overlaps the program availability window.

REVIEW & UPDATE INFORMATION

Reviewing and Updating Your Contact Information



- **Responsible Parties for Notifications:** Make sure all of relevant contacts are up to date.
 - Make sure to send the persons' names, email address and phone numbers
 - Any changes to former or added staff on your current notification group



- **Whitelist CPower email domains and add dispatch number:**
 - CPowerDispatch@dccnotify.com , CPowerDispatch@dccbackup.com
 - Add the CPower Dispatch number to your cell phones – “Demand Response Notification”
 - 410-346-5907



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

CURTAILMENT PLAN

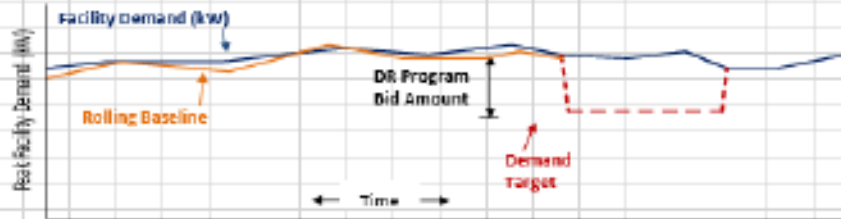
Sample Plan Review

Demand Response Curtailment Plan - ACME CUSTOMER

CA Demand Response Curtailment Plan for CUSTOMER - 2017 SCE AMP Program

Page 1 of 2

Must drop facility peak demand (kW) to a specific level below a rolling baseline established during the previous day of operation.
This baseline will change on a continual basis and will not be known prior to the event.



Event Performance Measurement	Bid Amount
Summer events: Reduce facility demand by <input type="text" value="700"/> kW from average demand prior to event	
Winter events: Reduce facility demand by <input type="text" value="N/A"/> kW from average demand prior to event	

Event Contacts:
The following facility contacts will be notified by E-mail and cell/office phone:

Name	Job Title	Work Phone	Cell Phone	E-Mail
CUSTOMER NAME 1	Operations Manager	888-888-8888		test@test.com
CUSTOMER NAME 2	Operations Supervisor	717-717-7177		test@test.com

Responsible Person: Mr. Customer Back-Up Person: Mrs. Customer

- Make sure all event responder communication links are on line and ready to receive event notifications.
- Make sure the persons assigned to execute the load curtailment actions know what they are required to do.
- Make sure business lines to maintain the load curtailment until the event is terminated by C Power Corp.

NOTE: Load curtailment steps should be completed 15 minutes before the announced start time of the event.

What to check:

Ensure bid amounts are correct

Ensure contacts are correct

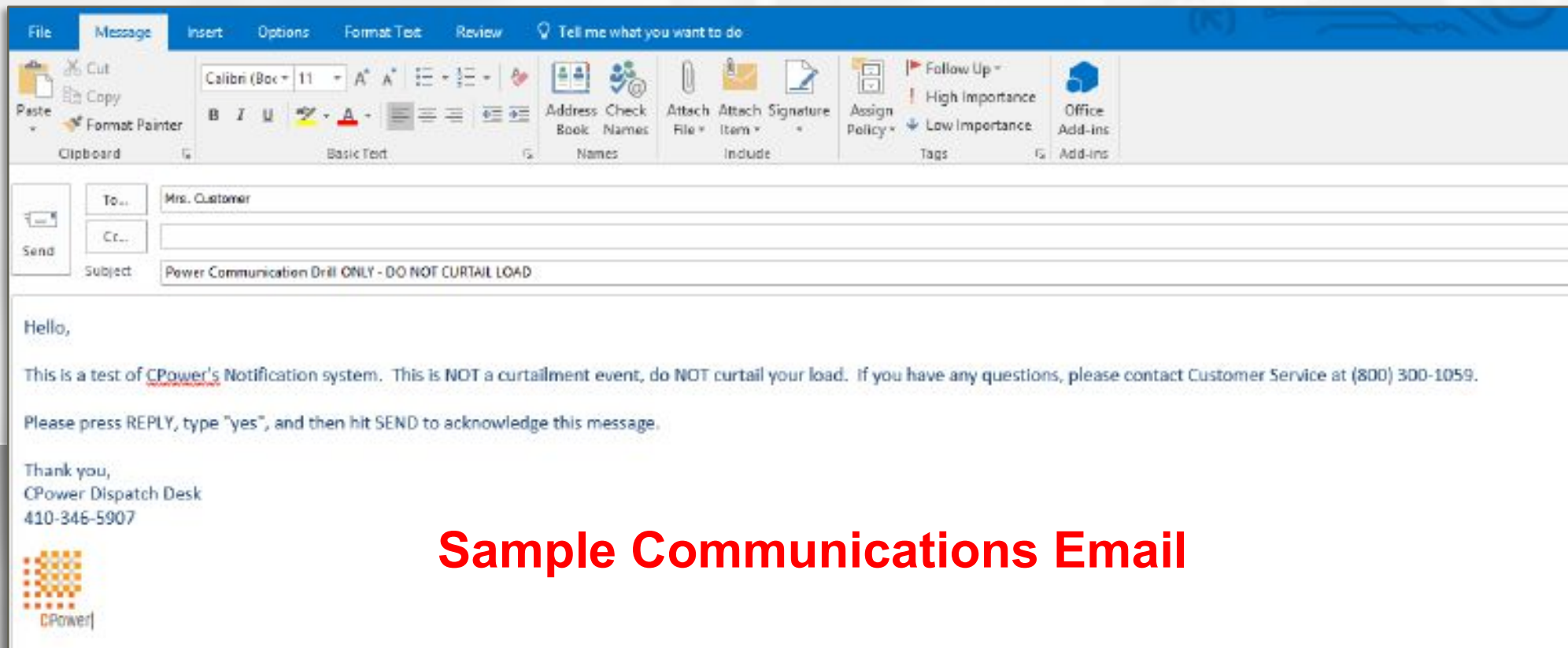
Ensure responsible parties are assigned (primary and backup)



DISPATCH NOTIFICATIONS

Communications Drill

- Testing done on as needed basis for your site, with advance notice
- This is only a drill to test communications
- DO NOT Curtail



CPOWER DISPATCH

24/7/365 At The Ready For You



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 System will:**
 - Be activated by CPower Dispatch Operators
 - For both test and real 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
 - Also sends text message alerts
 - This is the direct line of our 24x7 dispatch service desk
- **System Sends Email Alerts From:**
 - CPowerDispatch@dccnotify.com
 - CPowerDispatch@dccbackup.com
 - Ensure these addresses are whitelisted in your email system



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)
- When the email is received, hit reply and type “yes” in the body of the email to confirm understanding
- Send the email back to the dispatch operator email
- We must receive email acknowledgments back within 2 hours of sending dispatch notices.
- After that time the system closes down and we will not register an acknowledgement



Text

- 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

RECAP

Things to Remember

- Deadline for seasonal adjustments for ERS bid: May 8, 2020
- Season Begins June 1, 2020 – Sept 30, 2020
- Be sure to update contacts
- 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

Your One Stop For Demand Side Energy Management



Learn the basics with CPower's [Demand Side Energy Management 101 Video Series](#)



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**SEASONAL
READINESS
2020**

View this webinar and content as well as all other markets we serve on our Seasonal Readiness Portal

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THANK YOU

Visit:

CPowerEnergyManagement.com/Snapshots for program participation snapshots

Or [CPowerEnergyManagment.com/Ready20](https://CPowerEnergyManagement.com/Ready20) for this training on demand

