Housekeeping

Make sure to keep yourself muted unless you have a question

If you have a question, you may either ask over the phone or in the chat

If you want to ask a question, you can virtually “raise your hand” in WebEx
In this training, we will:

- Review the ISO’s responsibility with regards to emergency notices
- Discuss the current AWE process and how it is changing
- Walkthrough the new NERC EEA notification levels
- Looks at samples of NERC EEA notifications
- Review the process to subscribe/unsubscribe to notifications
- Discuss the resources you can use to get additional information
Poll Question

Are you familiar with the current California ISO AWE (Alerts, Warnings, Emergencies) notification levels?

A. Oh yes, VERY familiar
B. Yes, I get and use these pretty often
C. I’ve seen/heard of them once or twice
D. Sorry…what are AWEs?
EMERGENCY NOTICES OVERVIEW
First Things First…

• This training reviews the changes from the AWE notification system to the NERC EEA notifications system
  – Assuming some knowledge of current AWE notification system
  – If not, see the Emergency Response CBT on the learning center

• This change will be implemented into production on **May 1, 2022**.
When Might Energy Shortages Occur?

• Energy shortages can be caused by:
  – Persistent high heat
  – Equipment failure
  – Weather events
  – Natural disasters, such as wildfires

• These events are most likely to occur during the summer months

• System emergency notifications about these shortages can be statewide or limited to a local area
When Might Energy Shortages Occur?

- Emergency notifications may be issued a day in advance or on the day of the event in real-time
  - Depending on the severity of the situation

<table>
<thead>
<tr>
<th>Current AWE Levels</th>
<th>Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flex Alert</td>
<td>Ideally issued in advance</td>
</tr>
<tr>
<td>Restricted Maintenance Operations</td>
<td>Issued in real time or in advance</td>
</tr>
<tr>
<td>Transmission Emergency Alert</td>
<td>Issued in real time</td>
</tr>
<tr>
<td>Alert</td>
<td>Issued in advance – day ahead by 1500</td>
</tr>
<tr>
<td>Warning</td>
<td>Issued in real time</td>
</tr>
<tr>
<td>Stage 1</td>
<td>Issued in real time</td>
</tr>
<tr>
<td>Stage 2</td>
<td>Issued in real time</td>
</tr>
<tr>
<td>Stage 3</td>
<td>Issued in real time</td>
</tr>
</tbody>
</table>
The Responsibility of the California ISO

- The tariff requires the ISO to ensure procedures are in place to notify market participants and the public of potential energy shortages when electricity supplies get tight.
  - Outlined in tariff section 7.7.4
AWE to NERC EEA

- The ISO used AWE notifications (Alerts, Warnings, and Emergencies) to signal activation of system emergency procedures
  - AWE notifications have been in place since 1998

- On **May 1, 2022**, the ISO is changing its messaging system to align with NERC’s EEA (Energy Emergency Alert) designations
Why Make the Change?

The California ISO is making this change in order to:

• Align our emergency levels with the NERC standards
• Align our emergency levels with Reliability Coordinators and neighboring Balancing Authority procedures
• Ensure that we are all using the same “language” during shortages
## Current AWE Levels to Future Emergency Levels

<table>
<thead>
<tr>
<th>Current AWE Levels</th>
<th>Future Emergency Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flex Alert</td>
<td>Flex Alert</td>
</tr>
<tr>
<td>Restricted Maintenance Operations</td>
<td>Restricted Maintenance Operations</td>
</tr>
<tr>
<td>Transmission Emergency</td>
<td>Transmission Emergency</td>
</tr>
<tr>
<td>Alert</td>
<td>EEA Watch</td>
</tr>
<tr>
<td>Warning</td>
<td>EEA 1</td>
</tr>
<tr>
<td>Warning – triggering DR programs</td>
<td>EEA 2</td>
</tr>
<tr>
<td>Stage 1</td>
<td></td>
</tr>
<tr>
<td>Stage 2</td>
<td></td>
</tr>
<tr>
<td>Stage 3</td>
<td>EEA 3/EEA 3 – Firm Load Interruption</td>
</tr>
</tbody>
</table>
## Non-EEAs Levels

<table>
<thead>
<tr>
<th>AWE Levels</th>
<th>NERC EEA Levels</th>
<th>BA What is happening?</th>
<th>What’s Needed?</th>
<th>By When?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flex Alert</td>
<td>N/A</td>
<td>Potential energy shortages or gas curtailments, ongoing grid issue (fire, natural disaster), variable or uncertain temperature forecast, cloud cover, etc.</td>
<td>Public awareness to reduce the demand for energy by voluntary means</td>
<td>Ideally issued in advance – day ahead</td>
</tr>
<tr>
<td>Restricted Maintenance Operations</td>
<td>N/A</td>
<td>Actual or potential impacts to balancing and/or transmission operations</td>
<td>Reschedule planned work to keep equipment and resources in service if outages could threaten grid reliability</td>
<td>Give advanced notice (1 day+) if possible</td>
</tr>
<tr>
<td>Transmission Emergency</td>
<td>N/A</td>
<td>Could be system wide or could be local transmission limitation</td>
<td>Load management procedures may be in effect in impacted area</td>
<td>Issued in real time – current/next hour(s)</td>
</tr>
</tbody>
</table>

- **Flex Alert**: Ideally issued in advance – day ahead
- **Restricted Maintenance Operations**: Give advanced notice (1 day+) if possible
- **Transmission Emergency**: Issued in real time – current/next hour(s)
## NERC EEA Levels Explained

<table>
<thead>
<tr>
<th>AWE Levels</th>
<th>NERC EEA Levels</th>
<th>BA What is happening?</th>
<th>RC Confirm/ Translate</th>
<th>What’s Needed?</th>
<th>By When?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alert</td>
<td>EEA Watch</td>
<td>Day ahead analysis is forecasting one or more hours energy deficient</td>
<td>All available generation projected to be in use</td>
<td>Additional bids, incremental dispatch</td>
<td>Issued in advance – day ahead by 1500</td>
</tr>
<tr>
<td>Warning</td>
<td>EEA 1</td>
<td>Real time analysis is forecasting one or more hours energy deficient</td>
<td>All available generation in or projected to be in use</td>
<td>Be prepared for dispatch of DR resources</td>
<td>Issued in real time, ideally hours ahead</td>
</tr>
<tr>
<td>Warning – dispatched RDRR</td>
<td>EEA 2</td>
<td>DR/ interruptible/ non-firm load dispatched-off</td>
<td>Load management procedures in effect</td>
<td>Additional bids, incremental dispatch, emergency assistance, evaluate transmission limitations (TTC/SOL)</td>
<td>Issued in real time – current/ next hour(s)</td>
</tr>
<tr>
<td>AWE Levels</td>
<td>NERC EEA Levels</td>
<td>BA What is happening?</td>
<td>RC Confirm/Translate</td>
<td>What’s Needed?</td>
<td>By When?</td>
</tr>
<tr>
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</tr>
<tr>
<td>Stage 1</td>
<td>EEA 2</td>
<td>All available UDC/MSS energy</td>
<td>Load management procedures in effect, able to maintain contingency reserves</td>
<td>Additional bids, incremental dispatch, incrementally reduce exports, emergency assistance, evaluate transmission limitations</td>
<td>Issued in real time - current/ next hour(s)</td>
</tr>
<tr>
<td>Stage 2</td>
<td>EEA 3</td>
<td>Counting armed firm load as non-spin contingency reserves</td>
<td>BA unable to maintain CR, firm load interruption is imminent</td>
<td>Emergency assistance, evaluate transmission limitations</td>
<td>Issued in real time - current/ next hour(s)</td>
</tr>
<tr>
<td>Stage 3</td>
<td>EEA 3</td>
<td>Unable to maintain CR, manual load shedding is starting/ in progress</td>
<td>Unable to maintain CR, firm load interruption is in progress</td>
<td></td>
<td>Issued in real time – “w/ in 10 minutes” current/ next hour(s)</td>
</tr>
</tbody>
</table>
Main Takeaways

• **Warning = EEA 1, RDRR dispatch = EEA2**
  – EEA1 = Corresponds to what covered in an AWE “Warning”
  – EEA 2 = Aligned with dispatch of RDRR programs (as always) and AWE Stage 1
    • CAISO enforces but customers may dispatch before this level

• **Stage 2 and Stage 3 combined into EEA 3**
  – Stage 2 (AWE) = Arming firm load as non-spin contingencies
  – Stage 3 (AWE) = Firm load shed is eminent
    • Combined into EEA 3, but blast call (and load interruption notification) is only done when load shed is required
Questions
EMERGENCY NOTICES
The ISO Communications Method document houses information on all of the ways that we send out emergency notification information.
# Notification Methods

<table>
<thead>
<tr>
<th></th>
<th>Twitter</th>
<th>MNS</th>
<th>GMS</th>
<th>EA notification</th>
<th>Notice</th>
<th>Customer service email</th>
<th>System status update email</th>
<th>Blast call</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restricted Maintenance Operations</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flex Alert (day ahead)</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flex Alert (day of)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EEA Watch (day of)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EEA 1</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EEA 2</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EEA 3</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>All clear</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

The California ISO has issued an Energy Emergency Alert (EEA) Watch Notice.

**Reason:**
TEST TEST TEST

CaISO is forecasting an energy deficiency, with all available resources in use.

Conservation efforts are encouraged during this time, and energy market participants are encouraged to offer additional supplemental energy and ancillary service bids. During this time, participating customers may be directed by utilities to use generators approved for emergencies, or to reduce load following the protocols of each utility's programs.

For more information, view the CAISO System Emergency fact sheet [here](http://www.caiso.com/Document/SystemAlertsWarningsandEmergencies/).

Monitor system conditions on Today's Outlook [here](http://www.caiso.com/Today'sOutlook/Pages/default.aspx) and contact local electric utilities for details about their respective load reduction programs.
Phone notifications

Phone alerts and the CAISO Today app will be updated to reflect the new EEA notifications levels as of May 1, 2022.
SUBSCRIBING TO EA NOTIFICATIONS
EA Notification Distribution List

- CAISO will be updating the AWE/EA notification distribution list
- CAISO will send an email notification to all contacts in the AWE/EA notification distribution list **tomorrow afternoon (4/21)**
Subscribing and Unsubscribing

• If you receive the email notification and would like to be removed from the distribution list:
  – respond to the email requesting to be removed from the distribution list

• If you do not receive the email notification by 4/22 and would like to be added to the distribution list:
  – Submit a CIDI ticket with “EA request for addition” in the Subject field requesting to be added

Remember to check your junk and/or trash folders in case the notification email ends up in one of these folders!
Hello,

Effective MM/DD/YYYY, the California ISO will be changing its Alerts, Warnings, and Emergency (AWE) notifications to Energy Emergency Alert (EEA) notifications to match the North American Reliability Corporation’s (NERC) alert designations. You are receiving this notification because you or someone in your organization has requested that you receive the CAISO Grid Energy Emergency Alert Watch (EEA Watch) e-mails. If you would like to be removed from this distribution list, please respond to this email requesting to be removed from the list.

If you know someone from your organization that would like to be added to the distribution list, please submit a CIDI Inquiry Ticket with “EA request for addition” in the Subject field and include the name and email of the person to be added in the Description field. If you do not have access to CIDI, you can work with someone from your team to submit a ticket on your behalf. If your team does not have access to CIDI, you can submit an inquiry through our Contact Us page: https://www.caiso.com/Pages/ContactUs.aspx

For more information on this update, please refer to the CAISO System Emergency Fact Sheet: http://www.caiso.com/Documents/SystemAlertsWarningsandEmergenciesFactSheet.pdf

Monitor system conditions on Today’s Outlook (http://www.caiso.com/TodaysOutlook/pages/default.aspx) and check with local electric utilities for additional information.

Thank you,"
Access to CIDI - Yes

- If **you** do not have access to CIDI, please work with someone on your team who has access to submit a ticket.
If your team does not have access to CIDI, you can submit an inquiry on our Contact Us page:

- Be sure to include “EA request for addition” and the name and email of the person to be added in the Comment field.
ADDITIONAL RESOURCES
Additional Resources – Operational Procedures

NERC Standards
- **COM-002-4 - Operating Personnel Communications Protocol**
- **EOP-011-1 – Emergency Operations**

RC West Procedures
- **RC0410 – System Emergencies**

CAISO BA Procedures
- **4420 – System Emergency**
- **4410 – Emergency Assistance**
- **4510 – Load Management**
- **4510A**
Operational procedures can be found on www.caiso.com
AWE to NERC EEA Learning Video

• The ISO has created a **short, 10 minute video** that reviews these changes

• We encourage you to watch and share within your organization!

• The training video can be found:
  – On the Learning Center
  – On the release page
Poll Question

How prepared do you feel for the changes from the AWE notification system to the NERC EEA notification system?

A. Bring it on!
B. I think I’m good to go…
C. I want to go through the material a few more times
D. Truthfully, I’m still a bit confused
Final Questions
Please take time to fill out our training evaluation!

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

www.caiso.com

Or email us at CustomerReadiness@caiso.com