



# Emergency Procedures Enhancements



Chidi Ofoegbu, Sr. Engineer

Market Implementation Committee



December 02, 2020

Product - Action Required	Deadline	Who May Be Affected
<p>Enhancements released to Train. No action is necessary</p>	<p><b>December, Date TBD</b></p>	<p>Up to 10 minute outage to UI for users.</p>
<p>Enhancements released to Production. No action is necessary</p>	<p><b>January 20, 2021</b></p>	<p>Up to 30 minute outage to UI for users.</p>



	2020									2021		
	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar
2020/2021 Enhancements									Train: TBD 	 Prod: Jan 20		

**Legend**


-  Start Date
-  End Date



- Allows for a more visual selection of messages
- Users can create multiple profiles
- Profile list allows users to easily edit a profile or add a new one
  - Users select a Profile that drives their dashboard view
- Profile selection also available on dashboard
- PJM Default profile sends emails for and displays all postings issued within the RTO
- Current profile selections will be migrated as initial user profiles
- Removal of unused Government Agency functionality

- Create new profiles to add custom messaging profiles
- Dashboard Default indicates which profile is selected for view upon login
- Profile Enabled indicates which profiles are set up to receive email notifications and are available for dashboard filtering

My Tools ▾
PJM (USER) | Profiles | Sign Out | Contact | Help


Emergency Procedures

## Profile List

Profiles

The settings in the profiles below drive your Emergency Procedures Dashboard View, as well as allow you to Enable your custom Email profiles. The PJM Default Profile displays all postings in the dashboard and receives all email notifications.

[Create New Profile](#)

Dashboard Default	Profile Enabled	Profile Name	Description	Enabled Email Addresses	Total Email Addresses	Actions
<input checked="" type="radio"/>	<input checked="" type="checkbox"/>	Profile A	State of Virginia	2	3	<a href="#">✎</a> <a href="#">🗑</a>
<input type="radio"/>	<input checked="" type="checkbox"/>	Profile B	State of Illinois	1	1	<a href="#">✎</a> <a href="#">🗑</a>
<input type="radio"/>	<input type="checkbox"/>	Profile C	Personal profile	1	1	<a href="#">✎</a> <a href="#">🗑</a>
<input type="radio"/>	<input type="checkbox"/>	PJM Default Profile	The PJM Default Profile displays all postings (including PJM Drills) for all Message Types and all Regions.	N/A	N/A	

[Save Changes](#)

- Within each profile, users can select which Message Types and Regions they'd like to receive emails for
- Special Notice is selected by default for all user profiles

**Profile Settings**

Profile name \*  
Profile A

Description

Profile options:

Profile Enabled

Include PJM Diffs

Regions \* (0 of 24 total)  
All

Message types \*

Available message types (28)

- Emergency Energy Request
- Emergency Load Algmt Reduction Action
- Emergency Voluntary Energy Only Demand Response
- Gas Pipeline Contingencies
- Geomagnetic Disturbance Action
- Geomagnetic Disturbance Warning
- HLV Action
- HLV Warning
- High System Voltage
- Hot Weather Alert

Include PAI

Selected message types (1)

Special Notice

Updated from multi-select drop down

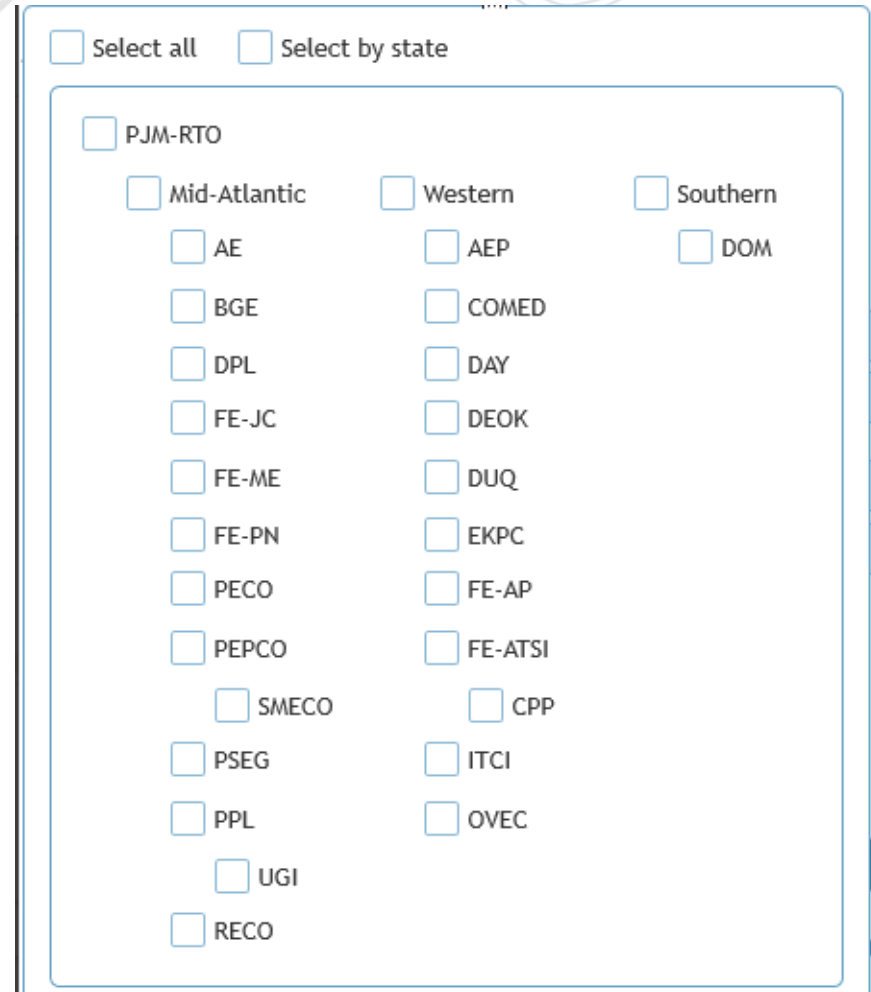
Email Addresses (3)

New email address  Add

Email Address	Enabled	Receive Full Text	Status	Actions
profileA@pjm.com	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Confirmed	
footers@gmail.com	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Confirmed	
pineapples@pjm.com	<input type="checkbox"/>	<input type="checkbox"/>	Enter confirmation code	

[Back to Profile List](#) [Save Profile](#)

- New Region drop down organized by region hierarchy
- Users will receive all messages that apply for the specific region(s) selected
  - E.g. If you only select DUQ, you will still get messages issued to Western and PJM RTO



The screenshot shows a web interface for selecting regions. At the top, there are two checkboxes: "Select all" and "Select by state". Below this is a large container for "PJM-RTO" with three sub-sections: "Mid-Atlantic", "Western", and "Southern". Each sub-section contains a list of regional codes with checkboxes. The "Mid-Atlantic" section includes AE, BGE, DPL, FE-JC, FE-ME, FE-PN, PECO, PEPCO, SMECO, PSEG, PPL, UGI, and RECO. The "Western" section includes AEP, COMED, DAY, DEOK, DUQ, EKPC, FE-AP, FE-ATSI, CPP, and ITCI. The "Southern" section includes DOM. All checkboxes are currently unchecked.

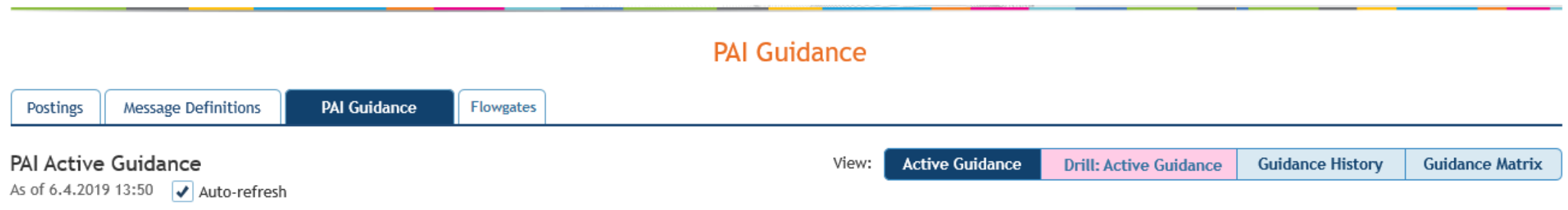
- Updates made to ensure PAI events are more easily understood
  - Dashboard banner will also include PAI start time

The screenshot shows the PJM Emergency Procedures Internal - Stage dashboard. At the top, there is a navigation bar with 'My Tools', 'Stage', and 'AD-EMERPROC-PJMReadOnly-STG'. Below this is a 'Postings' section with a banner that reads: 'Performance Assessment Interval is in effect within the RTO. See PAI Active Guidance for further information.' Below the banner are tabs for 'Postings', 'Message Definitions', 'Message Priorities', 'PAI Guidance Matrix', 'PAI Active Guidance', 'Flowgates', 'Regions', and 'Emergency Bid Form'. There are also filters for 'Effective From', 'Effective To', 'Regions', 'Message Types', 'PJM Drill', 'Include', 'Active Only', and 'PAI Only'. Below the filters is a table of postings. The table has columns for 'History', 'Msg ID', 'Priority', 'Message Type', 'Effective Start Time', 'Regions', 'Emergency Message', 'Effective End Time', and 'Actions'. The first row shows a message with ID 104154, priority Action, and message type 'Pre-Emergency Load Mgmt Reduction Action'. The second row shows a message with ID 104153, priority Action, and message type 'Curtailment of Non-Essential Buildings'. Red boxes and arrows highlight specific changes: 'Dashboard banner updated' points to the banner, 'Icons removed' points to the 'History' column, and 'Hyperlinks in matching format' points to the 'Regions' column.

History	Msg ID	Priority	Message Type	Effective Start Time	Regions	Emergency Message	Effective End Time	Actions
	104154	Action	Pre-Emergency Load Mgmt Reduction Action	10.19.2020 16:52	<a href="#">AEP</a> <a href="#">BGE</a> <a href="#">PEPCO</a>	See <a href="#">PAI Active Guidance</a> tab A Pre-Emergency Load Mgmt Reduction Action has been issued. Load reduction start times can be found by clicking on the hyperlink(s) in the Regions column. Load reductions are until released by PJM. Reductions are mandatory based on PJM's DR Hub for specific registration details. Lead times for Product(s) dispatched: test		<a href="#">Q</a>
	104153	Action	Curtailment of Non-Essential Buildings	10.19.2020 16:45	COMED PJM	See <a href="#">PAI Active Guidance</a> tab		<a href="#">Q</a>



- Combination of PAI Guidance Matrix and Drill/PAI Active Guidance
- Active Guidance will be displayed by default.
- Drill Active Guidance will only be displayed if there is an active Drill PAI message.
  - Drills do not occur during when a real-time PAI is in effect
- Guidance History is a newly available report.



The screenshot shows a software interface for PAI Guidance. At the top, the text "PAI Guidance" is displayed in orange. Below this is a horizontal navigation bar with four tabs: "Postings", "Message Definitions", "PAI Guidance" (which is highlighted in dark blue), and "Flowgates". Underneath the navigation bar, the text "PAI Active Guidance" is shown, followed by "As of 6.4.2019 13:50" and a checked "Auto-refresh" checkbox. To the right, there is a "View:" section with four buttons: "Active Guidance" (highlighted in dark blue), "Drill: Active Guidance" (highlighted in pink), "Guidance History", and "Guidance Matrix".

## PAI Guidance

- Collapsible lists of guidance, ordered by severity
- Users can disable auto-refresh

Postings
Message Definitions
PAI Guidance
Regions
Emergency Bid Form

**PAI Active Guidance**

As of 6.4.2019 13:50  Auto-refresh

View: Active Guidance Guidance History Guidance Matrix

▼ **Level 3 Guidance (3)**

Zone	Applicable Time	Message Type	Msg ID	Issued Time
AMPT	2019-06-04 13:45	Load Shed Directive	104154	2019-06-04 13:45
PEPCO	2019-06-04 13:45	Load Shed Directive	104150	2019-06-04 13:45
UGI	2019-06-04 13:47	Load Shed Directive	104158	2019-06-04 13:47

**Online Generator**      Online generators should follow PJM basepoints or manual dispatch instructions, if provided. Online generators that underperform may be assessed a Non-Performance Charge. NOTE: Online generators that produce MW above the PJM basepoint will not be eligible for Bonus Performance Credits. MW above the PJM basepoint may be assessed deviation charges.

**Offline Generator**      PJM will directly call generators that are available to help mitigate the emergency. Generators that are not able to meet the PJM dispatch instructions may be assessed a Non-Performance Charge.

**Pre-Emergency Load Management  
Emergency Load Management**      PJM will directly call Load Management resource owners that are available to help mitigate the emergency. Load Management resources that are not able to meet the PJM dispatch instructions may be assessed a Non-Performance Charge.

▶ **Level 2 Guidance (6)**

▶ **Level 1 Guidance (15)**

**No Active Guidance (3)**

There is no active guidance for the following transmission zones.

DUQ  
EKPC  
PSEG

- Users can search previously issued PAI messages
- Drills are highlighted in pink
  - Not in default view

**PAI Guidance**

[Postings](#) | [Message Definitions](#) | **[PAI Guidance](#)** | [Regions](#) | [Emergency Bid Form](#)

**Guidance History** View: [Active Guidance](#) | **[Guidance History](#)** | [Guidance Matrix](#)

Effective From \*  Effective To \*  PJM Drill  Include

Zone	Category	Applicable Time	End Time	Message Type	Msg ID	Issued Time
AEP	Level 2	2.13.2020 07:30	2.13.2020 12:30	Deploy All Resources Action	104154	2.13.2020 07:00
AEP	Level 3	2.13.2020 09:30	2.13.2020 11:30	Load Shed Directive	104150	2.13.2020 09:10
DEOK	Level 3	2.13.2020 09:30	2.13.2020 11:15	Load Shed Directive	104158	2.13.2020 09:10
DAY	Level 3	2.13.2020 09:32	2.13.2020 12:49	Load Shed Directive	104157	2.13.2020 09:12
AEP	Level 1	2.13.2020 10:45	2.13.2020 13:15	Primary Reserve Warning	104152	2.13.2020 10:45
DOM	Level 1	2.13.2020 11:55	2.13.2020 14:05	Maximum Generation Emergency Action	104160	2.13.2020 11:55
DPL	Level 1	2.13.2020 11:57	2.13.2020 14:16	Maximum Generation Emergency Action	104160	2.13.2020 11:57
DPL	Level 1	2.1.2020 11:57	2.3.2020 14:16	Maximum Generation Emergency Action	104160	2.1.2020 11:57

Records Per Page: 15 << < (1 of 1) > >>

- **User Profile Enhancements**
  - Ability for users to set up profiles and manage preferences for their dashboard view, summary view of profile selections and ability to manage email notifications per profile
- **Zone/Region Hierarchy**
  - Functionality to view and apply the hierarchy between EP regions
- **PAI Enhancements**
  - Enhancements to the PAI functionality and reports resulting from October 2019 PAI events feedback.
- **Removal of unused Government Agency functionality**

# Product Details

The Emergency Procedures tool informs PJM members, PJM personnel and other interested parties about important and/or emergency events as they occur within the PJM Regional Transmission Organization (RTO). Examples of emergency events include hot weather alerts, transmission loading relief (TLR) procedures and minimum generation events.

## **Key Product Features**

- Allows PJM dispatchers and reliability coordinators to post emergency procedures messages for all to see.
- User access, which permits email notification setup, to Emergency Procedures is available in Account Manager.
  - Guest access is also available via the Guest Sign In.

Presenter:  
Chidi Ofoegbu,  
[Chidi.Ofoegbu@pjm.com](mailto:Chidi.Ofoegbu@pjm.com)

SMEs:  
Emergency Procedures Admins,  
[EPAdmin@pjm.com](mailto:EPAdmin@pjm.com)



### Member Hotline

(610) 666 – 8980

(866) 400 – 8980

[custsvc@pjm.com](mailto:custsvc@pjm.com)