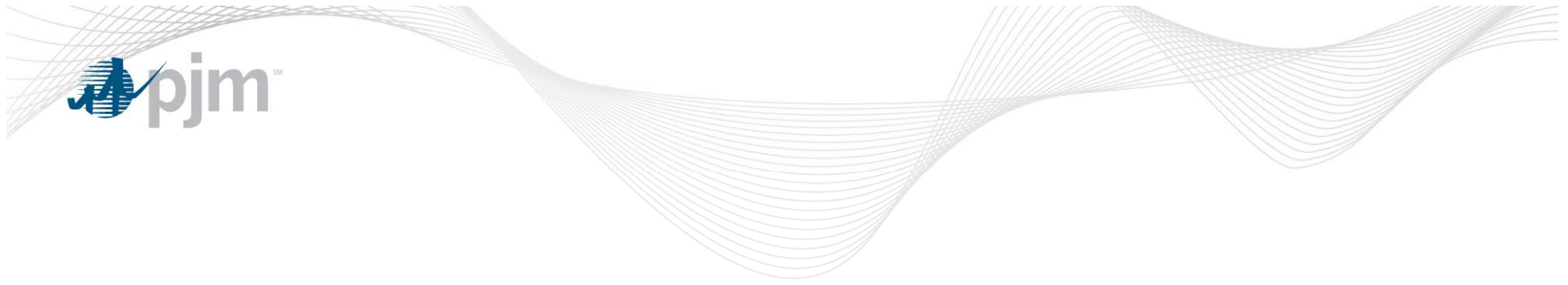




# Enhancements Scheduled for December 11<sup>th</sup> Release

**December 7, 2009**  
**EDUG – G Meeting**



# eDART Power System Stabilizer (PSS) Enhancements

- Capture of PSS Outages NERC Requirement.
- Currently in certain cases PJM notified over the phone.
  - More audit ability necessary
- Request was made at last EDUG meeting to better formalize In or Out Service and Emergency or Non Emergency for Voltage Regulator and Governor outage tickets.

**New Generator Ticket**

User ID:  Company: **PJM TEST**

Generation Type:  Unit Name:

Company Ticket ID:

Date (MM/DD/YY) Hour (HH24:MI)

Description:

Est./Ramp Start:

Est. End:

End Date Unknown

MW Volt. Reg. MVAR Governor MVAR Test

**Governor Ticket Info**

Governor Out of Service:  Emergency:

Clear Submit Form Main Menu

Old Governor Ticket

**New Generator Ticket**

User ID:  Company: **PJM Test**

Generation Type:  Unit Name:

Company Ticket ID:

Date (MM/DD/YY) Hour (HH24:MI)

Description:

Est./Ramp Start:

Est. End:

End Date Unknown

MW Volt. Reg. MVAR Governor MVAR Test PSS

**Governor Ticket Info**

Out of Service:  Yes  No

Emergency:  Yes  No

Clear Main Menu

New Governor Ticket

- Old version of Governor Ticket used a checkbox approach.
- New version has a yes and no radio button.
  - Default is a Yes for Out of Service and No for Emergency.

# Voltage Regulator Ticket Change

**New Generator Ticket**

User ID: id      Company: PJM TEST  
 Generation Type: [dropdown]      Unit Name: [dropdown]

Company Ticket ID: [input]      Date (MM/DD/YY)      Hour (HH24:MI)

Description: [text area]      Est./Ramp Start: [input] [input]      Est. End: [input] [input]      End Date Unknown

MW    Volt. Reg.    MVAR    Governor    MVAR Test

**Voltage Regulator Ticket Info**  
*The Voltage Regulator should always be in service if available.*  
 Voltage Regulator Out of Service:     Emergency:

Clear    Submit Form    Main Menu

Old Voltage Regulator Ticket

**New Generator Ticket**

User ID: id      Company: PJM TEST  
 Generation Type: [dropdown]      Unit Name: [dropdown]

Company Ticket ID: [input]      Date (MM/DD/YY)      Hour (HH24:MI)

Description: [text area]      Est./Ramp Start: [input] [input]      Est. End: [input] [input]      End Date Unknown

MW    Volt. Reg.    MVAR    Governor    MVAR Test    PSS

**Voltage Regulator Ticket Info**  
*The Voltage Regulator should always be in service if available.*  
 Out of Service:  Yes     No  
 Emergency:  Yes     No

Clear    Main Menu

New Voltage Regulator Ticket

- Old version of Voltage Regulator Ticket used a checkbox approach.
- New version has a yes and no radio button.
  - Default is a Yes for Out of Service and No for Emergency



# Revision Ticket

### Generator Ticket (Review/Revise)

User ID: SUPER2 Ticket Number: 17806 Company: PJM TEST  
Generation Type: Steam/Fossil Unit Name: qwert Est./Ramp Start: 12/11/2012 12:12  
Ticket Status: Canceled by Company Timestamp: 05/17/2006 15:24 Est. End: 12/12/2013 12:12  
Company Ticket ID : TEST4 Actual Start:  
Actual End:

Description	PJM Comments
TEST4	

#### Governor Ticket Info

Out of Service: No Emergency: No

[Submit](#) [Refresh](#) [History Log](#) [Main Menu](#)

Revisions					
Rev. ID	User ID	Rev. Start Date Time	Rev. End Date Time	Rev. Status	Timestamp
23645	SUPER2	12/12/2012 12:12		Canceled by Company	05/17/2006 15:24

### Generator Ticket (Review/Revise)

User ID: id Ticket Number: 14897 Company:  
Generation Type: Diesel/CT Unit Name: Qwert Est./Ramp Start: 02/04/2003 00:00  
Ticket Status: Received Timestamp: 08/06/2002 15:44 Est. End: 02/10/2003 00:00  
Company Ticket ID : Actual Start:  
Actual End: 08/03/2005 15:57

Description	PJM Comments
test test test	

#### Voltage Regulator Ticket Info

The Voltage Regulator should always be in service if available.  
Out of Service: No Emergency: No

[Cancel Ticket](#) [Add New Revision](#) [Submit](#) [Refresh](#) [History Log](#) [Main Menu](#)

Revisions					
Rev. ID	User ID	Rev. Start Date Time	Rev. End Date Time	Rev. Status	Timestamp
24797	id	02/04/2003 00:00		Canceled by Company	10/19/2009 10:50
24796	id3	02/04/2003 00:00		Canceled by Company	10/19/2009 10:50
24795	welco	02/04/2003 00:00		Canceled by Company	10/19/2009 10:50
24794	id	02/04/2003 00:00		Canceled by Company	10/19/2009 10:50

- No changes were made on the Revision form for Governor and Voltage Regulator Tickets.

Generator Tickets Main Menu						
Summer Peak Period Maintenance Margin Season						
Start: 06/15/2009 End: 09/11/2009						
Current Maintenance Margin						
Mid-Atlantic					N/A	
Western-Southern					N/A	
Create New Ticket		View/Revise Ticket				
	MW	Volt. Reg.	MVAR	Governor	MVAR Test	PSS
Submitted Tickets	1	0	0	1	0	1
Revised Tickets	0	0	0	0	0	0
Current Tickets	0	1	2	0	0	0
Approved Tickets	5	0	1	0	0	0
Future Tickets	0	0	0	0	0	0
Tickets History						
Owners Report	Maint. Margin Log	D-Curve Report		Blackstart XLS Upload		

- New generator ticket type to be added called PSS.

- Note: Only units with PSS will have ability to enter tickets of this type. Initial identifier of PSS units gathered internally.*

- A new column will be added to the ticket counts in the Generation Menu for PSS tickets.

### New Generator Ticket

User ID: ID      Company: PJM TEST  
 Generation Type:        Unit Name:  

---

Company Ticket ID:        Date:        Hour:    
(MM/DD/YY)      (HH24:MI)

Description:        Est./Ramp Start:      
 Est. End:      
 End Date Unknown

MW
Volt. Reg.
MVAR
Governor
MVAR Test
PSS

**Power System Stabilizer Ticket Info**

Out of Service:       Yes       No  
 Emergency:             Yes       No

Clear
Submit Form
Main Menu

- New PSS Outage ticket type similar to Governor Outage ticket type.
- Yes and No radio buttons for both Out of Service and Emergency.
- *Note: PSS button only available for units with PSS.*



# PSS Review/Revise Functionality

**Generator Ticket Selection Form**

Company: PJM TEST

Ticket Type	Ticket ID	Comp. Ticket ID
PSS	<input type="text"/>	<input type="text"/>
Outage Type	Unit Type	Unit Name
N/A (Reactive Tickets) Planned Unplanned Maintenance Forecasted Planned	<input type="text"/>	<input type="text"/>
	Reduction	Installed Capacity
	Equal to <input type="text"/>	Equal to <input type="text"/>
Cause	Ticket Status	Revision Status
<input type="text"/>	<input type="text"/>	<input type="text"/>
Submission Date (MM/DD/YYYY)	Est. Start Date (MM/DD/YYYY)	Est. End Date (MM/DD/YYYY)
From: <input type="text"/> To: <input type="text"/>	From: <input type="text"/> To: <input type="text"/>	From: <input type="text"/> To: <input type="text"/>
Actual Start Date (MM/DD/YYYY)	Actual End Date (MM/DD/YYYY)	Occuring During (MM/DD/YYYY)
From: <input type="text"/> To: <input type="text"/>	From: <input type="text"/> To: <input type="text"/>	From: <input type="text"/> To: <input type="text"/>

[Apply Filter](#) [Main Menu](#)

**Generator Ticket (Review/Revise)**

User ID: tester123 Ticket Number: 23816 Company: PJM Test

Generation Type: Diesel/CT Unit Name: QWEERT Est./Ramp Start: 05/08/2003 00:00  
Ticket Status: Canceled by Company Timestamp: 05/06/2003 20:29 Est. End: 05/08/2003 00:20  
Company Ticket ID : Actual Start: Actual End:

Description	PJM Comments
TEST TEST TEST TEST. This is a TEST of the new enhancements. TEST TEST TEST.	

**Power System Stabilizer Ticket Info**  
Power System Stabilizer Out of Service: Yes Emergency: No

[Submit](#) [Refresh](#) [History Log](#) [Main Menu](#)

Revisions					
Rev. ID	User ID	Rev. Start Date Time	Rev. End Date Time	Rev. Status	Timestamp
32202	tester123		05/08/2003 00:30	Canceled by Company	05/06/2003 20:29

- PSS Outage revision ticket similar to Governor Outage revision ticket.
- Same date revision and log availability as Governor Outage revision ticket.

Ticket History		
Company: PJM TEST		
Ticket ID	Unit Type	Unit Name
<input type="text"/>	<input type="text"/>	<input type="text"/>
Company Ticket ID	Reduction	Installed Capacity
<input type="text"/>	Equal to <input type="text"/>	Equal to <input type="text"/>
Outage Type	Ticket Type	Cause
<input type="checkbox"/> Planned <input type="checkbox"/> Unplanned <input type="checkbox"/> Maintenance <input type="checkbox"/> Forecasted Planned	PSS	<input type="text"/>
Est. Start Date (MMDDYY)	Est. End Date (MMDDYY)	
From: <input type="text"/> To: <input type="text"/>	From: <input type="text"/> To: <input type="text"/>	
Actual Start Date (MMDDYY)	Actual End Date (MMDDYY)	
From: <input type="text"/> To: <input type="text"/>	From: <input type="text"/> To: <input type="text"/>	
		<input type="button" value="Apply Filter"/> <input type="button" value="Main Menu"/>

- PSS ticket type to be added to the Ticket History Report.
- Report data display to be similar to Governor Outage ticket type.

Ticket History (PJM Test)									
		<input type="button" value="Apply Filter"/>		<input type="button" value="Go to Filter"/>					
1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Ticket ID	Comp. Ticket ID	Unit Name	Emergency	PSS Out of Service	Est. Start Date/Time	Est. End Date/Time	Actual Start Date/Time	Actual End Date/Time	Status
294258	mw volt. test1	Unit XYZ	No	No	01/05/2009 12:00	02/05/2009 12:00	11/02/2008 00:00		Active
294259	mw volt test2	Unit YYY	No	Yes	01/05/2009 12:00	02/05/2009 12:00			Canceled by PJM
294290		Unit ABCD	No	No	04/02/2009 00:00	04/25/2009 11:11	04/07/2009 00:00		Active
294291	VoltReg Test	Unit 222222	No	Yes	04/20/2009 00:00	04/25/2009 11:11	04/14/2009 00:00		Active
294292	VoltReg Test2	Unit 23987	No	No	04/20/2009 01:23	05/20/2009 01:23			Canceled by PJM
<input type="button" value="Back"/>									

**Generation Owners Report**

Company: **PJM Test**

Ticket ID:

Ticket Type: **PSS**

Unit Name:

Outage Type: **Planned**  
Unplanned  
Maintenance  
Forecasted Planned

New Default Filter:

Capacity: Equal to

Reduction: Equal to

Estimated Start Date (MM/DD/YYYY): From:  To:

Estimated End Date (MM/DD/YYYY): From:  To:

Actual Start Date (MM/DD/YYYY): From:  To:

Actual End Date (MM/DD/YYYY): From:  To:

Tickets Occurred During (MM/DD/YYYY): From:  To:

Active Tickets:

Apply Filter Refresh Main Menu

- PSS Ticket type to be added to the Owners Report.
- Report data display to be similar to Governor Outage ticket type.

**Generation Owners Report (PJM Test)**

*This report does not automatically contain Forecast Planning Tickets. If you want to include them, please change your selection by clicking Go to Filter.*

Apply Filter Go to Filter

Ticket ID	Comp. Ticket ID	Unit Name	Emergency	PSS Out of Service	Est. Start Date/Time	Est. End Date/Time	Actual Start Date/Time	Actual End Date/Time	Status
32981		Unit 1	No	No	12/12/2005 12:00	12/12/2007 12:00			Canceled by Company

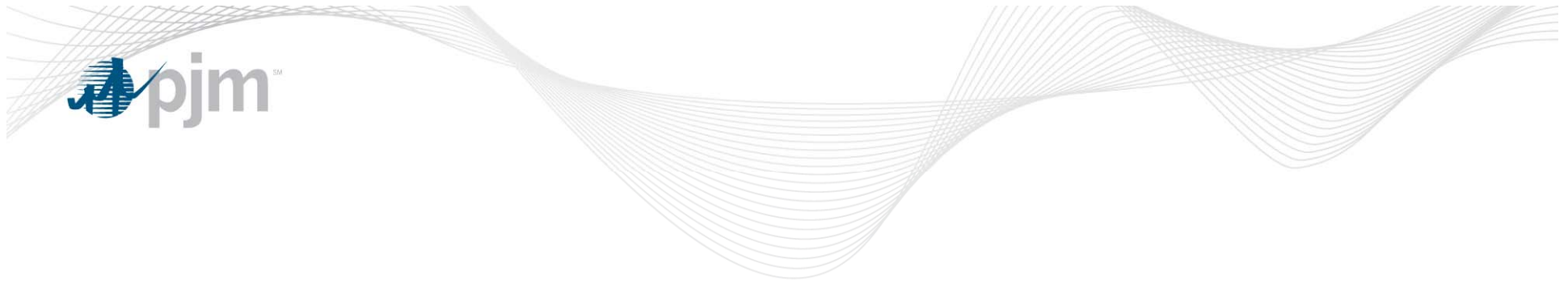
Back

D-Curve Report (PJM TEST)									
Unit Name	Unit Type	Installed Capacity	Voltage Control Philosophy	Metered MVAR Value	Power System Stabilizer	EMS Equipment Name	MW Point	MVAR Min	MVAR Max
Unit 1	Diesel/CT	34	TBD	TBD	No	XXXXXX FR 1 GEN UNIT	10	↕	↕
						XXXXXX FR 1 GEN UNIT	35	↕	↕
						XXXXXX FR 1 GEN UNIT	36	↕	↕
						XXXXXX FR 1 GEN UNIT	37	↕	↕
						XXXXXX FR 1 GEN UNIT	38	↕	↕
						XXXXXX FR 1 GEN UNIT	39	↕	↕
						XXXXXX FR 1 GEN UNIT	40	↕	↕
Unit 1	Diesel/CT	32	TBD	TBD	Yes	YYYYYY FR 2 GEN UNIT	10	↕	↕
						YYYYYY FR 2 GEN UNIT	35	↕	↕
						YYYYYY FR 2 GEN UNIT	36	↕	↕
						YYYYYY FR 2 GEN UNIT	37	↕	↕
						YYYYYY FR 2 GEN UNIT	38	↕	↕
						YYYYYY FR 2 GEN UNIT	39	↕	↕
						YYYYYY FR 2 GEN UNIT	40	↕	↕
						YYYYYY FR 2 GEN UNIT	41	↕	↕

[Back](#)

- Identification of units having Power System Stabilizer will be added to the D-Curve Report.





# XML Throttling

- Throttling implemented. However, it will not be activated unless needed. In this case, DXC will be informed.
  - eDART
    - Throttled by download type and User ID.
  - Emergency Procedures
    - Two downloads every five minutes. Verified using IP address.

