



eDART Users Group - Generation

10/07/2016

- Owners Report Maintenance
- Outage Ticket Business Rule Changes
- Reactive Testing Tickets



Owners Report Maintenance

- Owners Report Maintenance was discussed during the August eDART User Group meeting and two concerns were raised:
 - No notifications sent out when unit outage access has been granted
 - No restrictions placed on the users who can grant unit outage access to another Generation Owner
- eDART enhancements planned for November/December to address aforementioned concerns.

- Generation Owners required to provide an email address for notifications of changes to the Owners Report.
 - Verification of the provided email address is required.
 - If no email address is provided, no access will be granted to Owners Report Maintenance.
 - Group email address is highly recommended.
 - Each user who has Generation R/W access to create outage tickets still able to grant Owners Report visibility to other GOs on a unit by unit basis.
 - Request form will be provided.
- Email notifications will be sent from eDART whenever there are changes to the Owners Report Maintenance form.

- SOS-G rep (or Operations Manager) required to submit request for eDART Gen Read/Write user to be set up as GO-ADMIN.
 - Request form will be provided.
- GO-ADMIN can:
 - Grant Owners Report visibility to other GOs.
 - Authorize other users from a list of Gen R/W users in Admin's company for access to the Owners Report Maintenance form.
- Authorized users can grant Owners Report visibility to other GOs.

- Changes to list of GO-ADMIN and Authorized Users will be emailed to the provided company email address.
- Un-authorized Gen users:
 - R/O access to Owners Report Maintenance and History reports.
 - Can see GO Admin and Authorized Users' user IDs/names.

Owners Report

Owners Report Authorization
Owners Report Auth. History
Owners Maintenance
Owners Maint. History
Owners Report

Owners Report Authorization

Company: [eDART Test Company](#) Verified: Yes
 Notif. Email: test@pjmtest.com
 Company Admin.: dummyAdmin

Authorized Users

Add User
 Remove

Submit Form
Refresh
Main Menu

Owners Report Maintenance History

Company: [eDART Test Company](#) Last 30 days only:

Unit	Company	Action	User	Timestamp
Test Unit 1	PJM Test Company	Insert	testUser	10/05/016 15:21
Test Unit 2	eDART Test Company	Delete	testUser	10/05/016 15:20
Test Unit 3	eDART Test Company	Delete	testUser	10/05/016 15:20

Refresh
Main Menu

Owners Report Authorization History

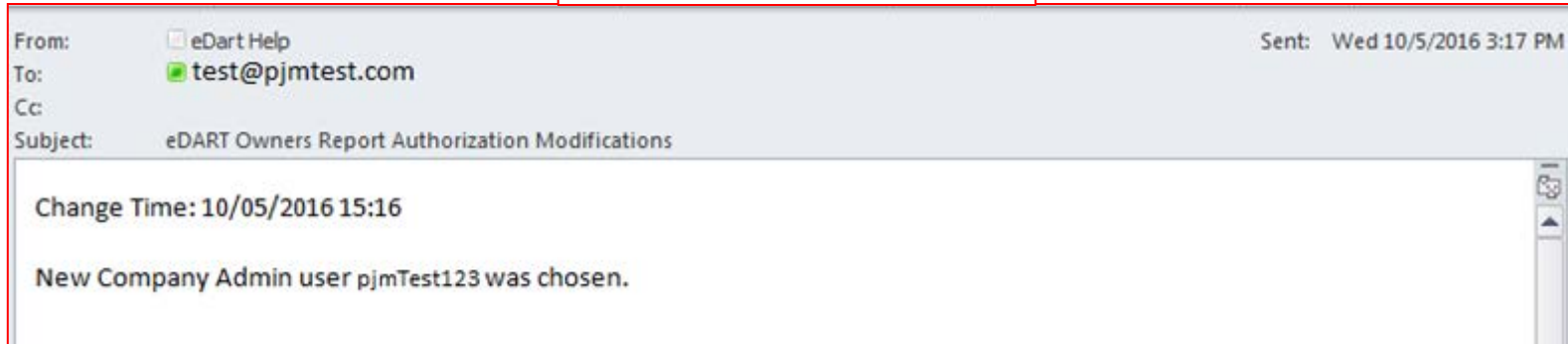
Company: [eDART Test Company](#) Last 30 days only:

Company Data						
Admin User	Notification Email	Verify Flag	Resend Flag	Action	User	Timestamp
dummy	test@pjmtest.com	Yes	No	Delete	dummy user	10/05/016 15:16
	test@pjmtest.com	Yes	No	Delete	EDART System	10/05/016 15:15
	test@pjmtest.com	No	No	Delete	EDART System	10/05/016 13:40
	test@pjmtest.com	No	Yes	Insert	dummy user	10/05/016 13:35

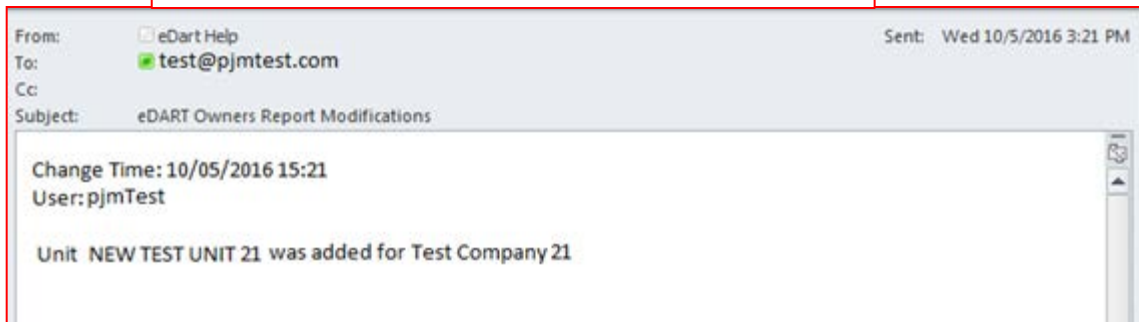
Authorized users			
User	Action	User	Timestamp
dummy1	Insert	dummy	10/05/016 15:39

Refresh
Main Menu

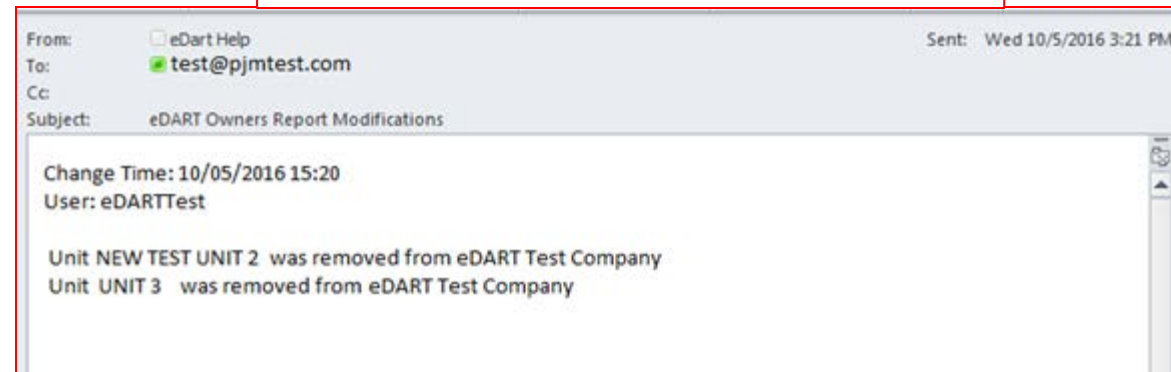
GO-ADMIN selected



Owners Report visibility granted



Owners Report visibility removed



- Case 1:
 - No company email set up.
 - No user can edit Owners Report Maintenance form (ORM).

- Case 2:
 - Company has email set up.
 - No GO-ADMIN assigned.
 - All R/W users have edit rights to ORM.
 - Email notification sent to company when edits made to ORM.

- Case 3:
 - Company has email set up.
 - GO-Admin assigned.
 - Email notification sent to company when GO-Admin is assigned or removed.
 - No authorized users.
 - Only GO-Admin has edit rights to ORM.
 - Email notification sent to company when edits made to ORM.
 - **If GO-Admin loses access, company reverts to Case 2.**

- Case 4:
 - Company has email set up.
 - GO-Admin assigned.
 - GO-Admin assigns Authorized User(s).
 - Email notification sent to company when GO-Admin or Authorized User(s) is assigned or removed.
 - Only GO-Admin and Authorized users have edit rights to ORM.
 - Email notification sent to company when edits made to ORM.
 - **If GO-Admin loses access; authorized users still have edit rights to ORM. Company can request another GO-Admin.**



Outage Ticket Business Rule Changes

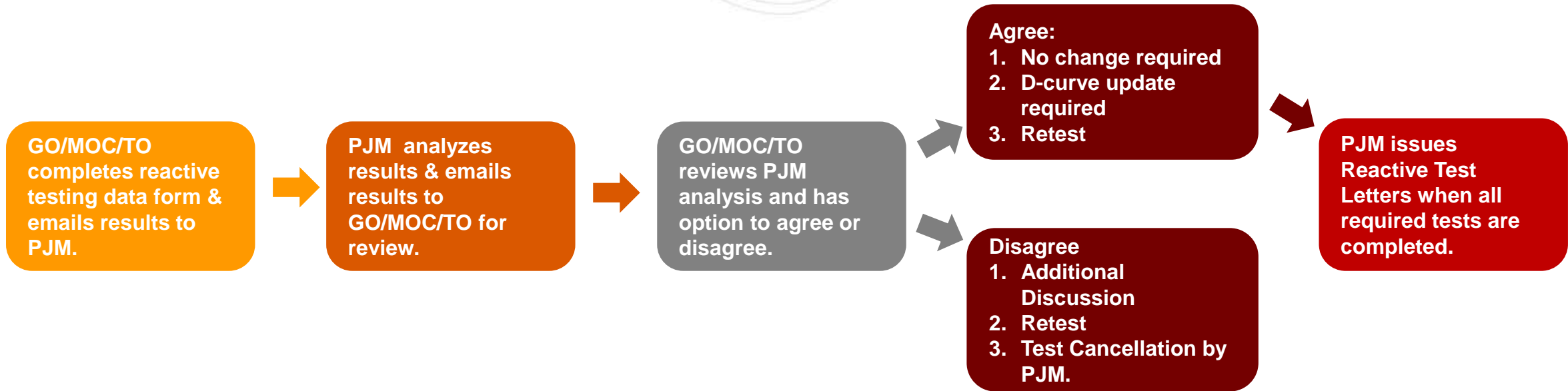
- All MW outage tickets, except Unplanned outage tickets, can only be started up to 1 hour in advance of the Est. Start Time.
 - E.g. if Est. Start Time = 10/10/2016 10:00, Switch Start Time cannot be before 10/10/2016 09:00.
 - If rule is violated, eDART will return an error message: “Switch Start Time is more than 1 hour in advance of estimated start time. Please revise estimated start time”.
 - To start a ticket earlier than the allowed time, submit a revision to the Est. Start Time. If the outage is approved for the earlier Est. Start Time, an earlier Switch Start Time can be submitted.

- Using the example above, if GO wants to start the outage at 08:00, submit revision to change Est. Start Time to 08:00 and if approved, Switch Start Time can be as early as 07:00.
- Planned outages cannot be started early if the Est. Start Time – 1 hour falls into peak period maintenance.
 - E.g. if Est. Start Time = 09/09/2017 00:00, user will not be allowed to submit a Switch Start Time of 09/08/2017 23:00 as this falls into the 2017 Summer Peak Period Maintenance Margin Season (06/12/2017 to 09/08/2017).
 - If the rule is violated, eDART will return an error message: “Planned outages can’t start during peak period maintenance”

Reactive Testing Results

- Per PJM Manual M14D:
 - Generators and synchronous condensers that meet testing requirements shall perform reactive testing.
 - GO/MOC/TOs required to test ~20% of their assets/year.
 - Reactive test results shall be submitted to PJM within 30 days after each portion of the test.
 - All portions of reactive testing on a facility shall be completed within 6 calendar months after initial test.

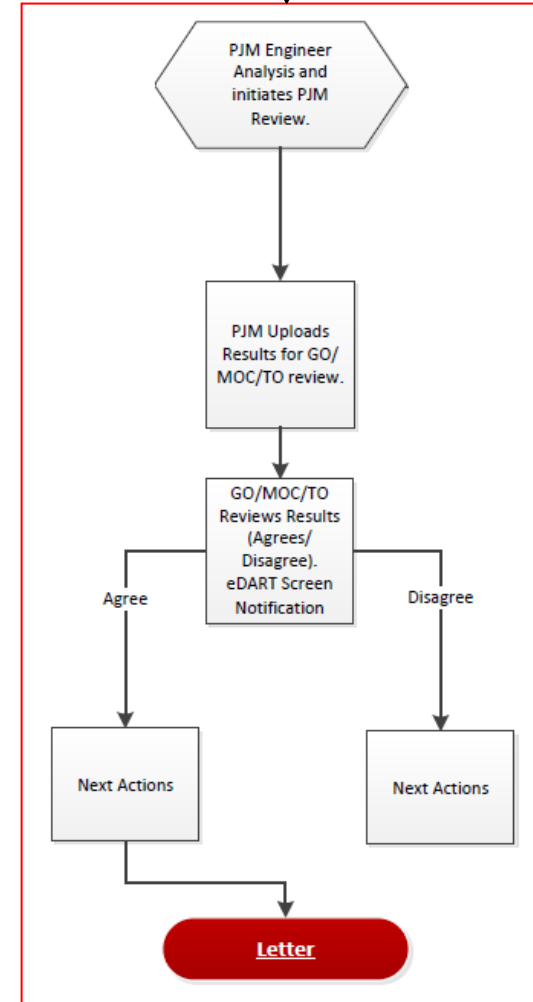
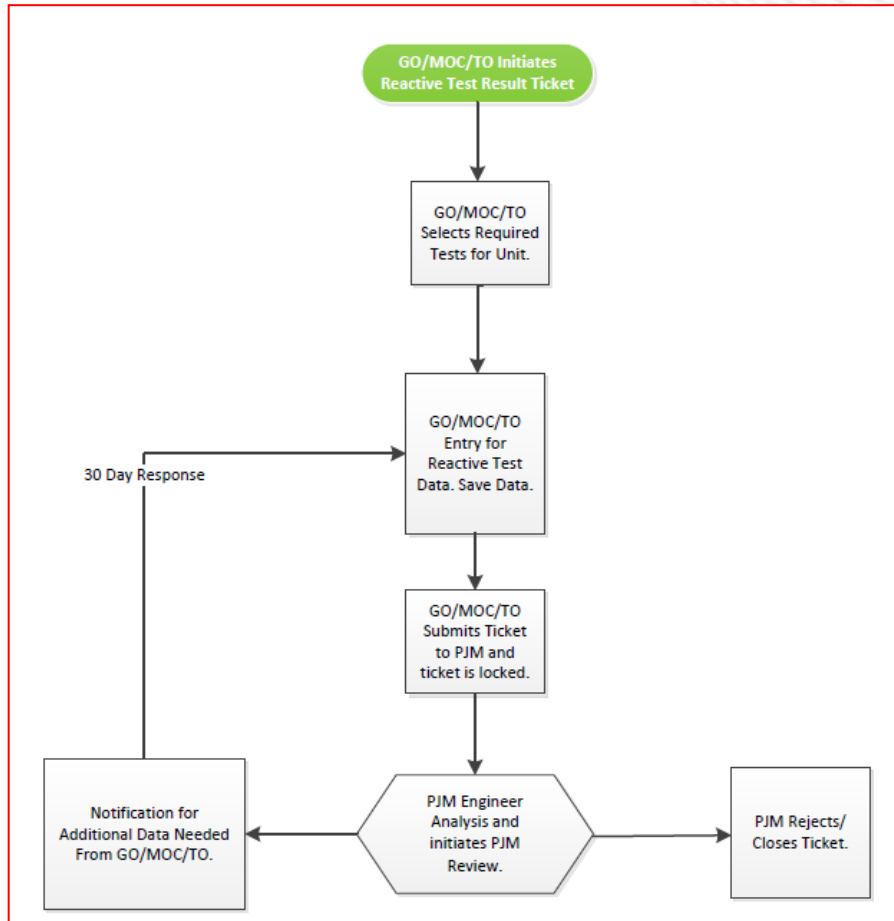
Note No changes are proposed for the scheduling or performing of reactive tests.*



- Test results and analysis are sent via e-mail.
 - Emails may be deleted.
 - Multiple versions of test results/analysis via emails may exist causing confusion.
 - Email communication is less secure.
- Test Tracking is difficult due to:
 - Volume of testing.
 - GO/MOC/TO performing different test types on different dates.
 - Amount of time between identification and resolution of issues.
- Data requests are cumbersome.

- Test results, analysis results, test status, open issues will be submitted/tracked in eDART.
- Increases visibility of tests and ensures open items are addressed and not lost due to volume or time between identification/resolution of issues or eDART unit ownership transfers.
- Allow GO/MOC/TO to run reports for last test date; units that are due/past due for testing, late test result submittals, etc.
 - Historical data will not be prepopulated with the exception of date of last official test letter.
- Enhances PJM's data analysis abilities.
- eDART is a more secure system than email; standardized communication.

Proposed eDART Reactive Test Result Process



- Within ticket:
 - Select unit
 - Select required test type(s) per PJM Manual 14D: Attachment E
 - Enter reactive result data
 - Upload additional files to support result data (Optional)
 - Link MVAR Test ticket for each test type
 - Save or Submit

Electronic version of Reactive Capability Testing form to be available in eDART.

Reactive Capability Testing Form Sheet 1

Submission Date _____

Test Type Reactive Leading Full Load Reactive Leading Minimum Load Reactive Leading Synchronous Condensers
 Reactive Lagging Full Load Reactive Lagging Minimum Load Reactive Lagging Synchronous Condensers

Tested By _____ eDart Test Ticket # _____
 Test Analysis Contact _____ Analysis Contact Email _____
 Company _____ Analysis Contact Phone # _____
 Plant _____ Unit _____
 Date of Test _____ Start time of test (hh:mm EPT) _____
 (End time of test will be calculated by PJM based on test type)

Previous Test Date _____ Cooling Water Temperature _____
 Ambient Temperature, F _____ Ambient Relative Humidity _____
 Normal Hydrogen Pressure, PSIG _____ Actual Hydrogen Pressure, PSIG _____
 Blackstart: Yes No Test Results Limited by System Conditions and PJM notified:
 Data Type: Staged Operational Automatic Voltage Regulator verified in service:

Metered MVAR Location*

A Low-Side Gross
 G Low-Side Net
 F High-Side Net

*Location for the basis of the chart D-Curve (Check one box only)

Check Locations with Telemetered Data.

↑ Power flow in the same direction as arrows should be indicated as positive.

If the facility sufficiently comparable to this simplified diagram or provided points please attach an addendum to this form with the requisite material.

Data Telemetry Verified between the plant, the MOC and PJM as per M14D, E.4.1: _____ / _____ / _____ (mm/dd/yy) (hh:mm)

Location	Current Test**			Stated Capability		Additional Comments
	Voltage	Real Power	Reactive Power	Real Power	Reactive Power	
A	kV	MW	Mvar	MW	Mvar	
B	kV	MW	Mvar	MW	Mvar	
C	kV	MW	Mvar	MW	Mvar	
D	kV	MW	Mvar	MW	Mvar	
E	kV	MW	Mvar	MW	Mvar	
F	kV	MW	Mvar	MW	Mvar	
G	kV	MW	Mvar	MW	Mvar	

**Use the Average of all Test Data for Reactive Lagging Tests at Full Load and fill out supplement on sheet 2

Generator Voltage Schedule _____ kV Generator Voltage PT Ratio _____
 System Voltage Schedule _____ kV System Voltage PT Ratio _____

GSU Nameplate Data
 Tap Setting: _____ kV Impedance: _____ % Capability: _____ MVA

Sheet 1: Version 2

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- Once PJM has analyzed the results, GO/MOC/TO can:
 - Review PJM analysis which may include feedback on test issues.
 - Agree/Disagree with PJM analysis and take next action.
Examples include:
 - Submit new Default D-Curve
 - Retest
 - Further PJM Review

- Upon completion of all required actions, a test letter will be uploaded by PJM and can be viewed/downloaded by the GO/MOC/TO.
- All records will be saved on the ticket and ticket will be completed.

- Users can view a report of Reactive Result tickets by using the filtering feature available in eDART.
Users can search by:
 - Ticket ID
 - Unit Type
 - Unit Name
 - Ticket Status
- Users will be able to open a ticket in the report
 - Depending on the status, the ticket can be viewed or edited.

- Target is 2016 Q4 eDART release
 - Web forms for data entry and reports.
 - XML/Browserless interface to be available Q1 2017.
 - On **May 1, 2017**, current email process will no longer be supported.
- Tool available in sandbox environment per normal release schedule.
- GO/MOC/TOs can use tool in production environment to provide feedback/possible enhancements for 2017 Q1 eDART release.
- Allows GO/MOC/TOs full access to all assets.

- Current email process can be used in parallel or in lieu of reactive result tool if GO/MOC/TOs are not ready for 2016 Q4 implementation.

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