

# **Generation 201**

## **Generation Reporting and eDART**

**State & Member Training**

- Generation Outage Reporting

- **Objectives and Key Concepts**

- Types of Outages

- Forecasted Planned
    - Maintenance
    - Unplanned/Forced
    - Partial or De-ratings

- Outage Examples

- Outage Reporting



- Upon completion you should know:
  - The categories of unit outages
  - The reporting criteria for each category
  - The information needed to report to PJM
  - Parties to report to
  - Unit reactive outage reporting responsibilities
  - References -
    - PJM Pre-Scheduling Operations Manual - M-10
      - Section 2 (MW Outage Reporting)
    - PJM Generator Operational Requirements Manual – M-14D
      - Attachment D



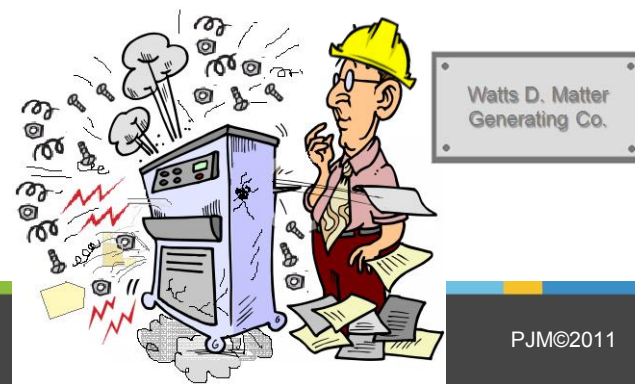
- PJM does not “schedule” when outages should take place.
- PJM only accepts or rejects outage request.
- Generation owner determines its own best time to schedule an outage.
- PJM only rejects requests when the reliability of the PJM RTO is affected.
- All outage requests analyzed together.



**PJM is responsible for coordinating and approving requests for outages of generation and transmission facilities for the reliable operation of the RTO**

**The electronic Dispatcher Application and Reporting Tool (eDART) provides communications with PJM generation operators regarding unit outage requests, updates to reactive capability curves (D-curves), governor status, power system stabilizer status and AVR status.**

**Both capacity and energy only resources shall provide generator outage data to support PJM obligations as a Reliability Coordinator to report generator outage information required for reliability analysis (TOP-003 R1).**



- Generation Outage Reporting
  - Objectives and Key Concepts
  - **Types of Outages**
    - **Forecasted Planned**
    - Maintenance
    - Unplanned/Forced
    - Partial or De-ratings
  - Outage Examples
  - Outage Reporting



- Scheduled well in advance
- Usually occur during lower load periods
- Have flexible start dates
- Pre-determined duration
- May last several weeks
  - Examples: Overhauls, Nuclear Refueling, Annual Inspections



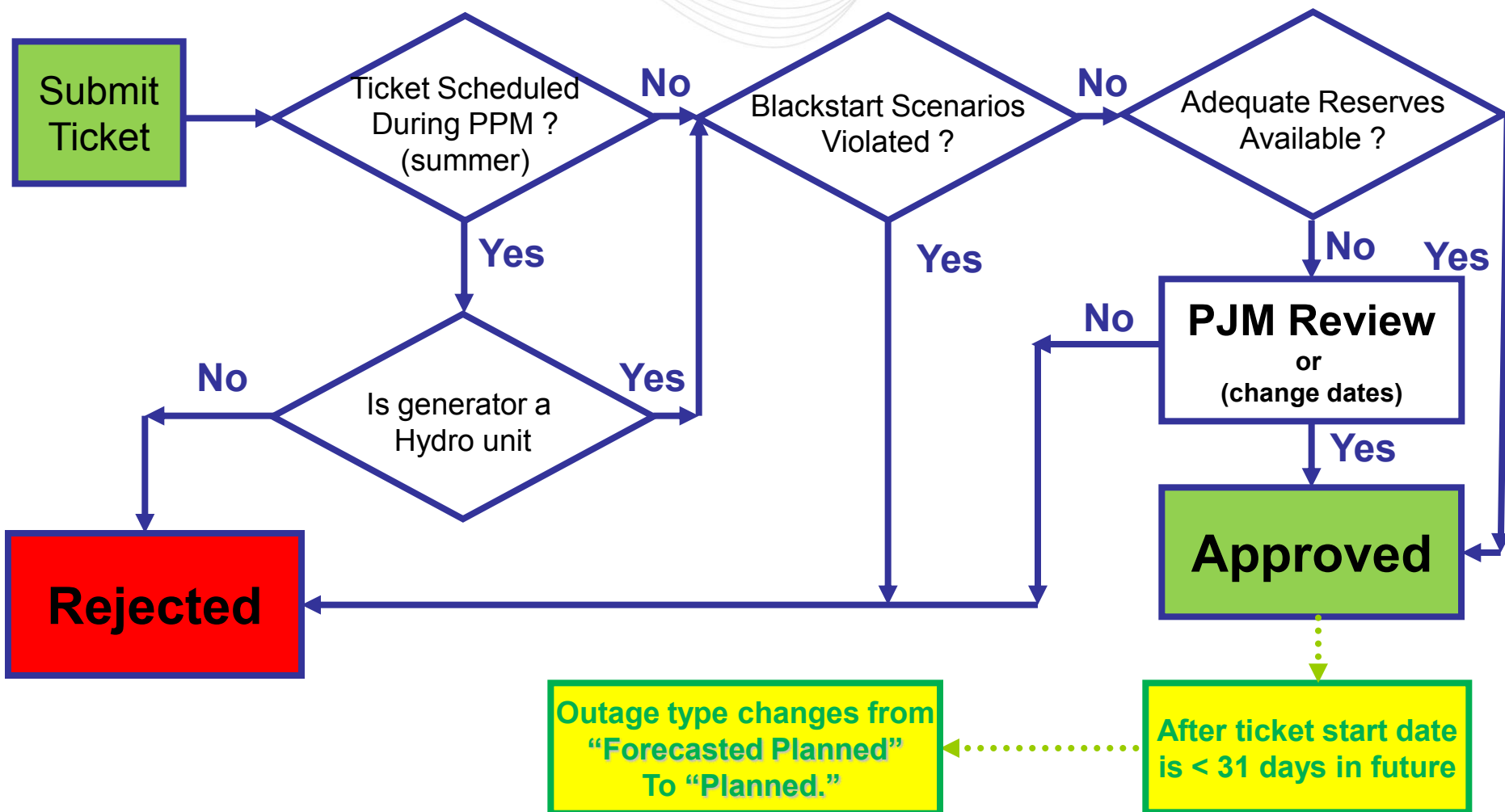
- Minimum of 30 days notice
  - Can be scheduled 3 years into future
- If outage denied, member re-submits
- Submitted through eDART
- Applies to MW Outages only
- Outage approval can be withdrawn with at least 24 hours notice
  - Only done for reserves or reliability
- Ed Hoey - 610-666-8844
  - FAX - 610-666-4282





- Generation owners submit MW outages of greater than 31 days in the future, and up to 3 years in the future as “Forecasted Planned.”
- Each evening the eDART system will automatically change to “Planned” all “Forecasted Planned” outage due to start in less than 31 days.
- Once ticket is changed to “Planned,” and has a status of approved, a reduction revision can be submitted, but only to decrease the amount of reduction.
- Start date can be increased only (no more than 30 days into the future)
- End date may be changed
- Other than cancellation, no other changes can be made.





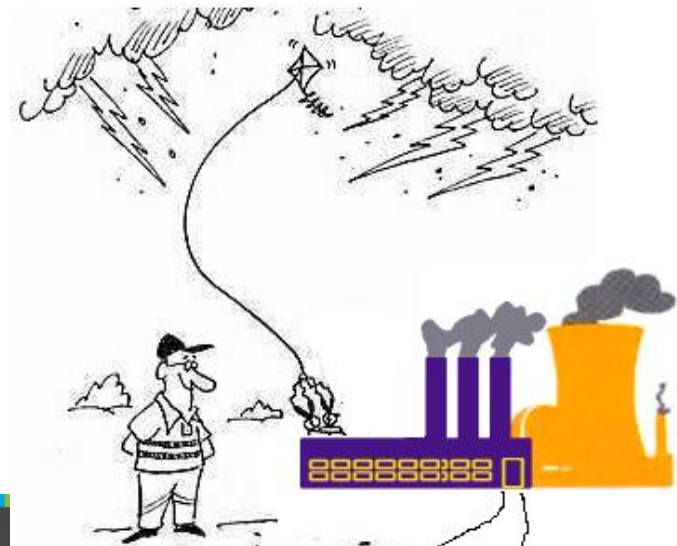
- Ticket Scheduled During PPM?
  - Peak Period Maintenance (PPM) is defined as the weeks containing the 24<sup>th</sup> through the 36<sup>th</sup> Wednesdays of the calendar year with each week beginning on a Monday.
  - Usually from about Mid-June through Early September

**{Typically Mid-June to Early/Mid September}**

A 4x3 grid of calendar months. The months are arranged in four rows and three columns: January, February, March; April, May, June; July, August, September; October, November, December. Each month is represented by a small grid with a header row and several data rows, all in a light blue and white color scheme.

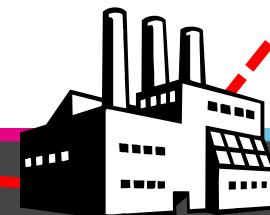
January	February	March
April	May	June
July	August	September
October	November	December

- Blackstart Scenarios Violated?
  - In the simplest terms this means no more than one critical blackstart unit planned outage per station.
  - Some transmission zones have other specific outage requirements that will be verified.

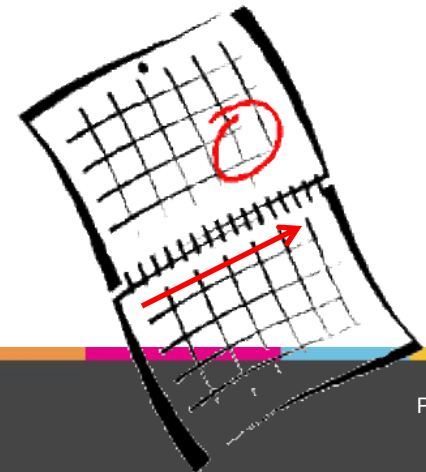


## Adequate Reserves Available?

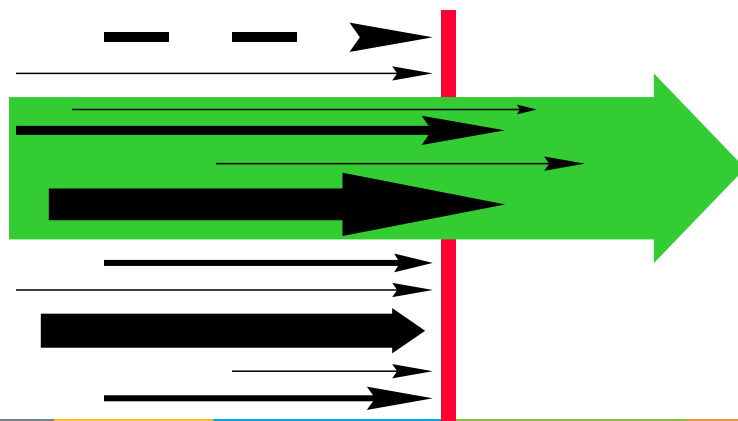
- If Adequate Reserves are not available the generation owner may opt for PJM to review it, or they can make an adjustment to the ticket.
- In the Summer months, and the shoulder months of Spring and Fall, PJM maintains installed capacity reserves of 15.5% for 2011
  - PJM does not set a summer reserve target for outages
  - Financial incentives typically limit summer outages
- In the Winter months, after removing units on a planned outage, PJM maintains 26% available reserves above each winter week's peak.



- Extension begins same time planned outage ends
- Must be for original scope of work that is taking longer than anticipated
- Not for unexpected problems or delays
- Request must be submitted 48 hours prior to end of original planned outage
  - Through eDART



- Approved planned outage may be rescheduled to within the 30 day timeframe:
  - If approved by PJM
  - Cannot extend the “moved” planned outage
    - becomes Forced after original timeframe



- Generation Outage Reporting
  - Objectives and Key Concepts
  - **Types of Outages**
    - Forecasted Planned
    - **Maintenance**
    - Unplanned/Forced
    - Partial or De-ratings
  - Outage Examples
  - Outage Reporting

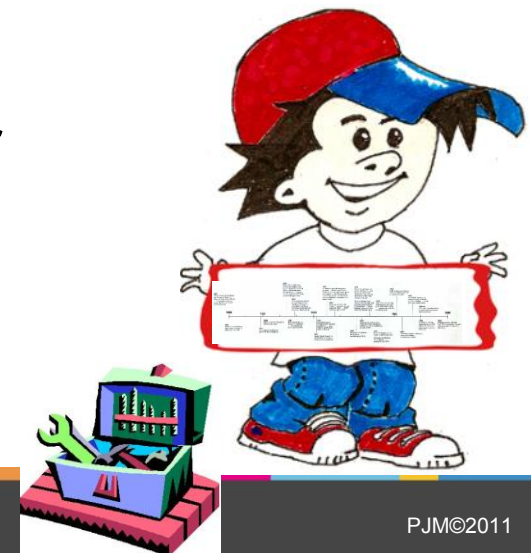




- Outages that may be **deferred** beyond the next weekend **(Next Monday Morning, 0800hrs)**
- Work has to be done before next planned outage
- Flexible dates
- Much shorter than planned outages
- Predetermined duration



- Timeline
  - Weekend Period - Friday at 2200 to Monday at 0800
- Limitations
  - Peak Period - 9 days
  - Non-Peak Period - Unlimited
- Peak Periods
  - 24th thru 36th Wed. of calendar year



- Extension beyond its original end date
- Extension begins same time maintenance outage ends
- Must be for original scope of work that is taking longer than anticipated
- Not for unexpected problems or delays
- Must be submitted prior to original end date
- If extended beyond 9 days in PPM season, outage becomes Unplanned



- If a company requests a maintenance outage during the Peak Period Maintenance Season, PJM denies the outage, and the company takes the outage anyway...
  - The company has the option to enter the outage as a “forced outage” or a “maintenance outage”
  - If the company does not enter a “forced outage”, the “Peak Period Maintenance Compliance Penalty” will be assessed
  - If the company enters a “forced outage”, the “Peak Period Maintenance Compliance Penalty” will not be assessed but the forced outage will affect the units EFORD



- If the company takes an “unapproved” maintenance outage, then they are assessed this Peak Period Maintenance Penalty
- Formula for penalty:

***Charge = Rate \* MW Amount***

**Peak Season  
Maintenance  
Compliance  
Penalty Charge**

**=**

**Weighted Average  
Resource Clearing  
Price + the higher of  
(.2 \* Weighted Average  
Resource Clearing  
Price or \$20/MW-day**

**\***

**Daily Peak Season  
Maintenance Shortfall for  
RPM Resource  
Commitments \* (1-  
Effective EFORd)**

(most companies take a forced outage of short duration)

	B	C	D	E	F	G	H	I	J	K
1										
2		Report Creation Timestamp (EPT):								
3		End Date:								
4	4000.02	4000.04	4001.21	4001.22	4001.24	3001.26	3001.34	3001.35	3001.28	4000.07
5	Customer Code	Date	Resource ID	Resource Name	Deficiency Type	Deficiency MW	Wtd-Avg Resource Clearing Price (\$/MW)	Deficiency Rate (\$/MW)	Deficiency Charge (\$)	Version
6										
7										
8										

## Deficiency Types:

Generation Resource Rating Test Failure

Capacity Resource Deficiency

Qualifying Transmission Upgrade Compliance Penalty

Peak Season Maintenance Compliance Penalty

## Supporting Calculations

**Deficiency Rate (3001.35) = Wtd-Avg Resource Clearing Price (3001.34) + MAX(0.2 \* Wtd-Avg Resource Clearing Price, 20)**

**Deficiency Charge (3001.28) = Deficiency MW (3001.26) \* Deficiency Rate (3001.35)**

## Peak-Hour Period Availability

Measures if generation resource was available during critical peak-hour periods during DY

- PJM will measure generation availability performance during peak load periods.
- The peak hour periods are defined based on summer and winter operating periods when high demand conditions are likely to occur.
- Defined Peak-Hour Periods:
  - Summer: June through August, hours ending 15:00 EPT through hour ending 19:00 EPT, on non-holiday weekdays
  - Winter: January and February, hours ending 8:00 EPT through 9:00 EPT and hours ending 19:00 EPT through 20:00 EPT, on non-holiday weekdays.
- Total number of hours is approximately 500 hours (can vary from year to year)





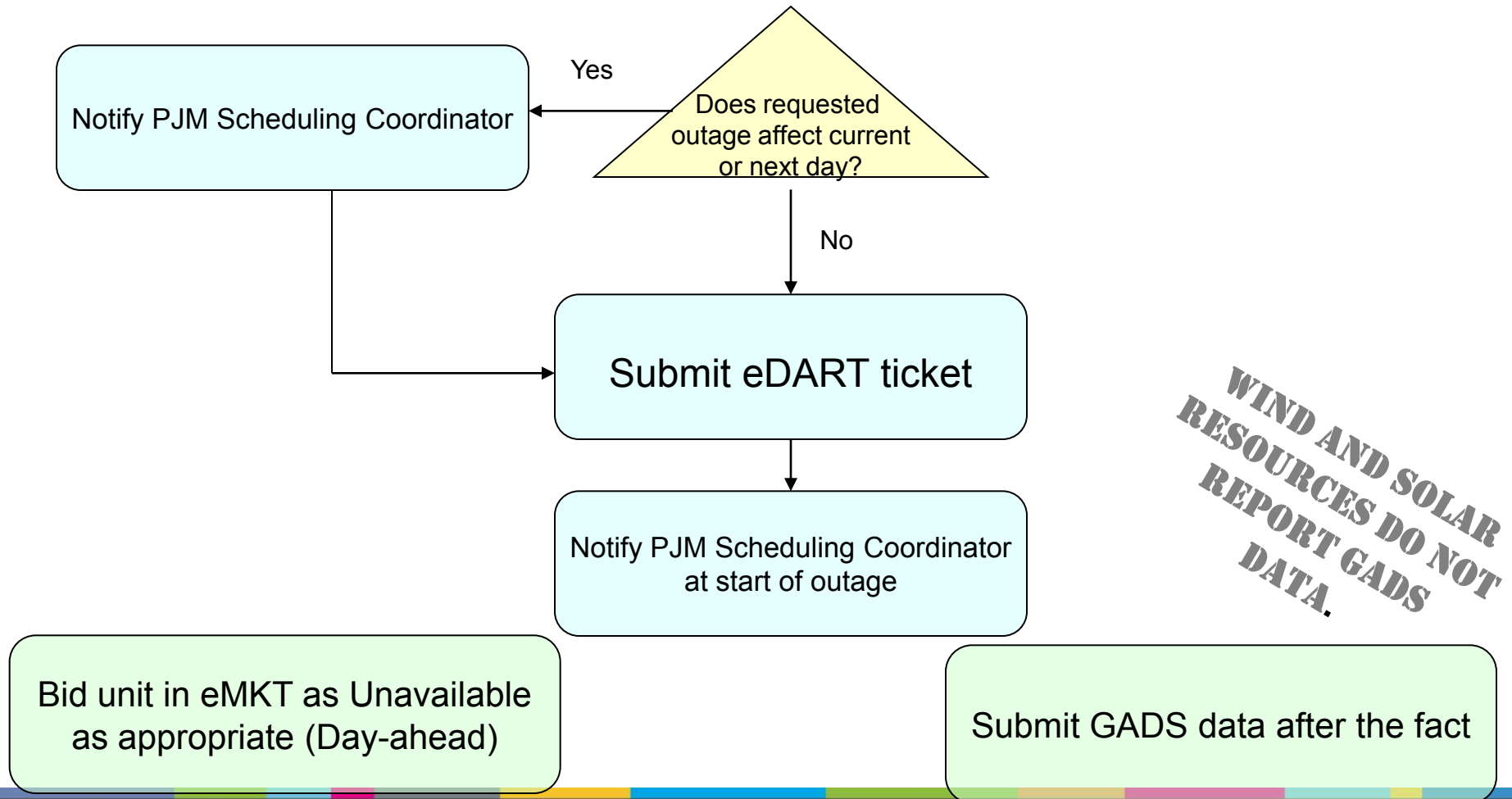
## Peak-Hour Period Availability

Measures if generation resource was available during critical peak-hour periods during DY

Charge	Rate	MW Amount	Assessed	Billed	Allocated
Peak-Hour Period Availability Charge	Daily Peak-Hour Period Availability Charge Rate = Provider's Weighted Average RCP in LDA	Net Peak Period Capacity Shortfall for RPM Resource Commitments in LDA	Daily	Retroactively for entire DY in August bill (issued in September) after conclusion of DY	Resource providers that have negative Net Peak Period Capacity Shortfalls (capped at excess shortfall * Daily Peak-Hour Availability Charge Rate). Remaining Charges to LSEs based on their Daily UCAP Obligation
	Daily Peak-Hour Period Availability Charge Rate = Net CONE in LDA	Net Peak Period Capacity Shortfall for FRR Capacity Plan Commitments in LDA			



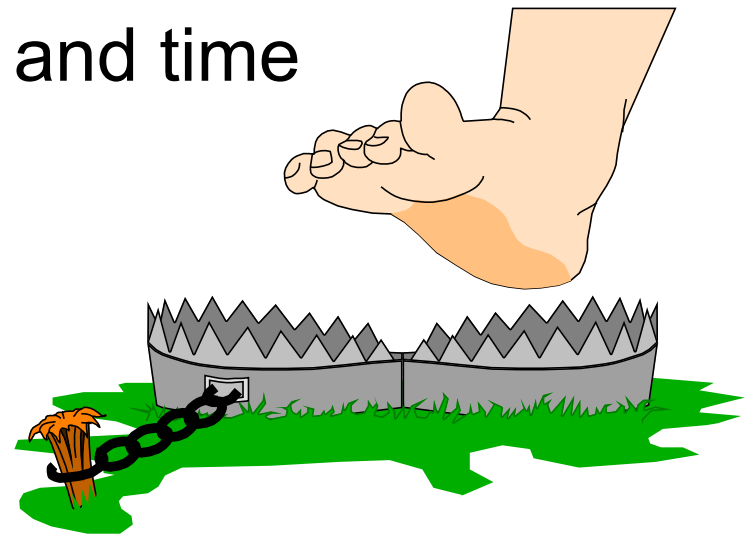
# Summary - Process for Maintenance Outage



- Generation Outage Reporting
  - Objectives and Key Concepts
  - **Types of Outages**
    - Forecasted Planned
    - Maintenance
    - **Unplanned/Forced**
    - Partial or De-ratings
  - Outage Examples
  - Outage Reporting



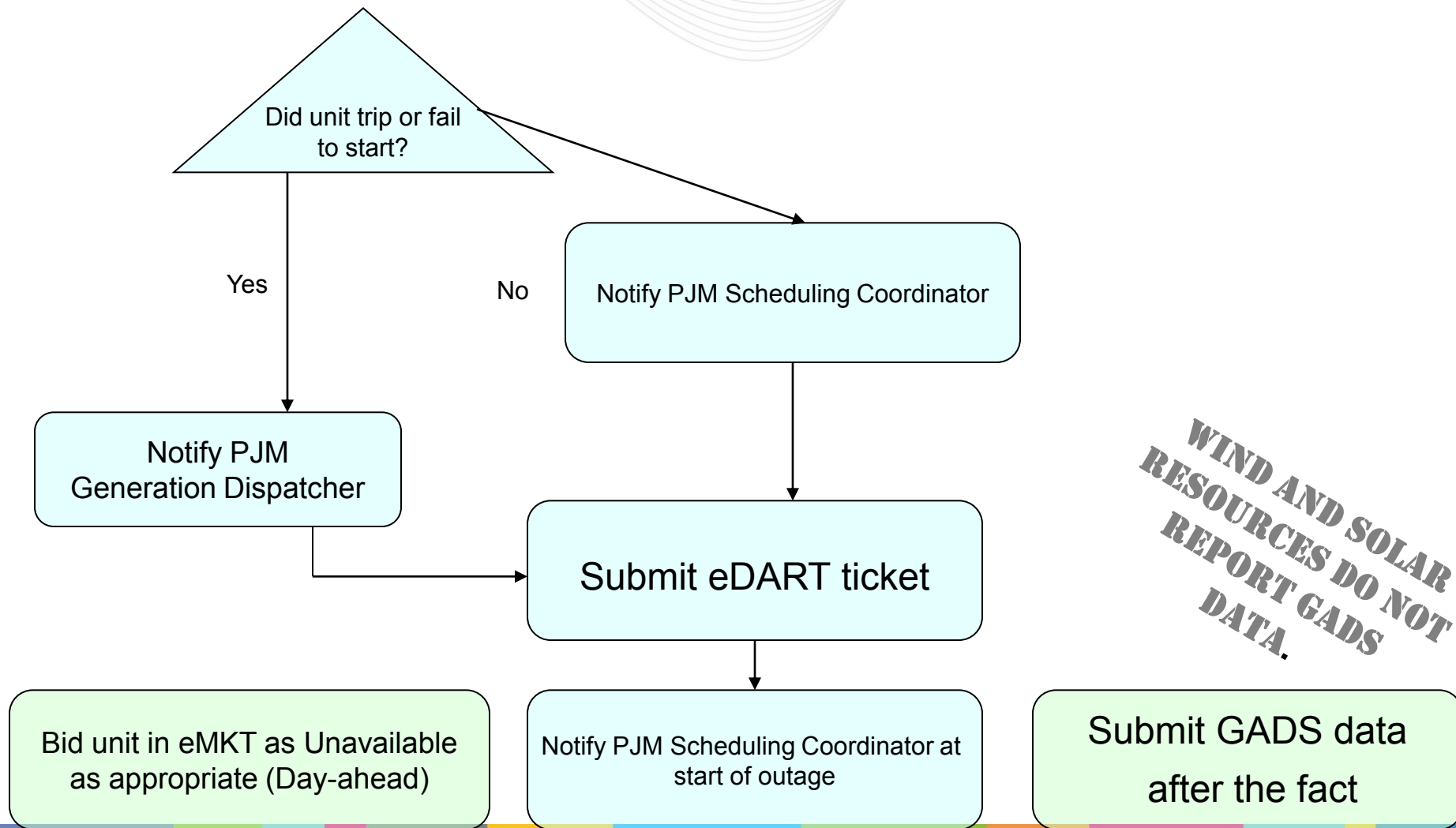
- Immediate unit trip
- Unit tripped by plant operator
- Advise PJM of outage as promptly as possible
  - Verbal notification to PJM GD
- Provide expected return date and time
- Submit outage information



- Responsibilities upon an Unplanned Outage:
  - Notify PJM Generation Operator
  - Update Unit Limits/Status in eMKT
    - Unit Hourly Update screen
      - More later!
  - Submit eDART ticket in timely manner
    - When unit status is known
  - Submit eGADS data
    - By 20<sup>th</sup> day of following month



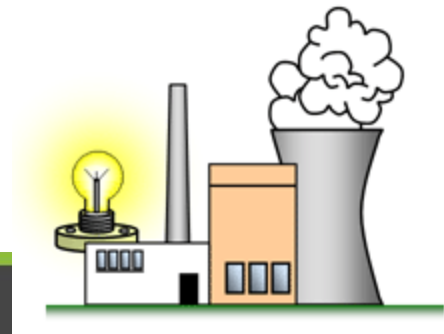
# Summary - Process for Unplanned/Forced Outage



- Generation Outage Reporting
  - Objectives and Key Concepts
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    - Forecasted Planned
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  - Outage Examples
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- Outages less than the full capacity
- Types
  - Planned
  - Maintenance
  - Unplanned
- Rules and Regulations are same as full outages
- Extensions fall under same criteria as full outages



**Wind farms are modeled as a single unit in eDART with a capability equal to the sum of all turbines at full output.**

**Wind farm aggregate turbine outage/derate information is required to validate and enhance the accuracy of the PJM wind power forecast.**

**Generation owners should not provide outage tickets related to wind speed or lack of wind since specific turbine parameters will be modeled within the forecast tool.**

**Wind resources shall report any outage of one megawatt or more with a duration of one hour or longer.**

**Outages shall be submitted on aggregate plant capacity by outage type.**

**Details on generation outages can be located in PJM Manual M-10 Pre-Scheduling Operations**

**Details on the PJM eDART tool can be located at:  
<http://www.pjm.com/markets-and-operations/etools/edart/edart-training-presentations.aspx>**



- Wind Farm has 50 turbines and has an installed capacity of 50 MW at full load
  - Each turbine has an installed capacity of 1 MW
  - Capacity value for RPM is 7 MW
- If 10 turbines are out for maintenance, Wind Farm will submit an outage ticket for 10 MW
- Wind forecasting tool will now assume that Wind Farm is at 4/5 of its capability and adjust forecast based on this and expected wind speed
- Correct outage data is critical to providing an accurate wind power forecast!



- Generation Outage Reporting
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  - **Outage Examples**
  - Outage Reporting



- A maintenance outage is submitted
- PJM determines outage should be postponed beyond weekend
- Unit fails before 0800 on Monday
- Outage is considered WHAT?

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## Unplanned/Forced Outage

- A maintenance outage is submitted
- PJM determines outage can start
- Company decides to postpone outage
- Unit fails before new start time
- Outage is considered WHAT?

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## Unplanned/Forced Outage

- A maintenance outage is submitted
- PJM determines outage should be postponed beyond weekend
- Generation Owner begins outage before Monday
- Outage is considered WHAT?

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**Depends.**

**Could be Unplanned/Forced Outage or Maintenance. (Depending if unit enters the outage as forced, if not the Peak Season Maintenance Compliance Penalty will be assessed.)**

**(Assuming this outage occurred during the Peak Period Maintenance Season)**

- A maintenance outage request is submitted during the Peak Period Maintenance season
- PJM approves the maintenance outage
- Generation Owner extends the maintenance outage beyond 9 days
- Outage is considered WHAT?

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**Maintenance Outage for 9 days then  
Unplanned/Forced for remainder of outage.**

- A unit is on a Planned outage for Annual Inspection
- Near completion of this outage, a problem with an ID fan is discovered which causes the unit to be unavailable for 5 days after the scheduled end of the Planned Outage
- Outage is considered WHAT?

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**Planned Outage. The 5 day extension would be Unplanned/Forced because it is for a different reason than the Planned outage**

- A wind unit is scheduled day-ahead to produce energy for a particular hour.
- Due to a change in atmospheric conditions there is no wind during that hour in real-time.
- There is no problem with the unit and it could be and would be producing energy were the winds present.
- Outage type would be what?

---

**This should not be entered as an outage.**



- Generation Outage Reporting
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  - Types of Outages
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  - **Outage Reporting**



- **Dispatch**

- Master Coordinator

- 610-666-8809
    - All Outages
    - Clearing of outage tickets

- Generation Dispatcher

- 610-666-8807
    - Outages of units on- line or scheduled to come on- line



- **eDART**
  - Web based tool - MORE TO COME!
- **eMKT**
  - Unit modeled correctly - hourly updates
  - Used for Real-time Economic Dispatch limits/status
- **GADS** - **G**enerator **A**vailability **D**ata **S**ystem

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***NOTE: Each system is independent and does not share data between applications***



- **eDART**

- Used for scheduling or reporting of generation and transmission outages
- Used in real-time and near-term capacity analysis
- Other Dispatcher applications and reports incorporated into eDART



- **eMKT**

- Used for scheduling generation in the 2-Settlement market
- Used to change unit limits or status in real-time in response to unit problems
  - Unit status changes in real-time must also be reported verbally to PJM GD
- Feeds PJM SCED – Security Constrained Economic Dispatch System
- Ancillary Service markets

- **eGADS**

- GADS = Generator Availability Data System
- Generator outages reported AFTER the fact (by 20th day of the following month)
- Must comply to GADS data standards (more detail)
- Used in forced outage rate calculation and to send to NERC
- CODA



- **eDART GEN Checkout**

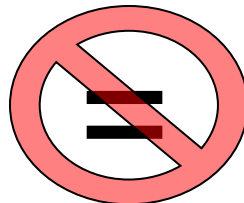
- Used to compare generation availability in eMKT to eDART
- Differences are displayed in Gen Checkout application
- Differences must be rectified in either eMKT or eDART
- Ensures consistency of data between applications
- More information on GEN Checkout later in GEN-201 class

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## eDART

Unit A

Available generation = 100 MW



## eMKT

Unit A

Available generation = 150 MW

**Which system is correct?**

The eDART logo, with a yellow lightning bolt above the word "eDART" in a bold, sans-serif font.

VS.

The eGADS logo, with a yellow lightning bolt above the word "eGADS" in a bold, sans-serif font.

- On-the-fact**

- Operational Tool**

- Operating Capacity
- Forced Outage (FO)
- Planned Outage (PO)
- Maintenance Outage (MO)
- Outage Extensions
- Partial Outages
- Start Time
- Clear Ticket
- Used for Operational Decisions**

- After-the-Fact**

- Database for Statistical Analysis**

- Installed Capacity
- Unplanned Outage (U1,U2,U3,U4)
- Planned Outage (PO)
- Maintenance Outage (MO)
- Outage Extensions
- Partial Outages
- Start Time/End Time
- Used to determine unit performance (EFORd) and Reserve Requirement determination.**

- **Monthly Performance Data:**

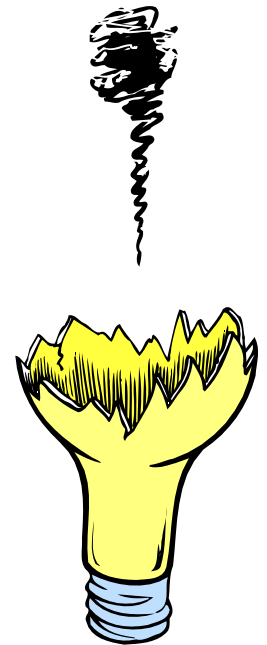
- One record for each unit every month
- MW Net Maximum and Dependable Capacity
- MWH Net Generation
- Number of Actual and Attempted Starts
- Service Hours
- Reserve Shutdown Hours
- Pumping and Condensing Hrs (if applicable)
- Loading Characteristics of Unit





## • Event Data

- One record each time unit is unavailable or output is restricted (or on Reserve Shutdown for units reporting those events)
- Type of Event
- Start / End date and time of event
- Available Capacity During Event
- Cause Code - from NERC
- Other Optional Data

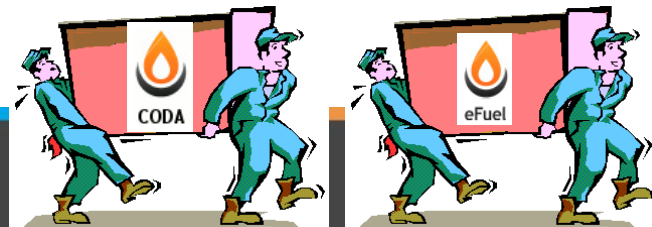


- Effective Forced Outage Rate (Demand) or  $EFOR_d$ 
  - Provides the basis for Unforced Capacity
  - Requires reporting GADS data directly to PJM
    - Based on NERC / GADS reporting
    - Verification, Testing and Reporting Requirements (PJM Green Book)
    - Unit Performance Measurements
    - 12 Month Rolling Average Unit Performance
    - PJM web based GADS / GORP System
    - Substantial penalties for late / bad data
      - (up to \$500 a day for data not submitted in accordance with published guidelines)
    - data required by the 20th day after proceeding month
    - IF data missing and NOT addressed, IT will be assumed as FORCED Outage

## • CODA: **C**ost **O**ffer **D**ata **A**pplication:

**CODA replaces eFuel  
September 15, 2010**

- CODA is maintained by Monitoring Analytics and is used to fulfill the mission of PJM's Independent Market Monitor under PJM's Market Monitoring Plan (Attachment M of the PJM Open Access Transmission Tariff)
- Data collected is similar to that of the EIA-923 form
- Monitoring Analytics will audit and enforce participation requirements.
- Monitoring Analytics will use the data for verification and analysis of generator costs.
- Monitoring Analytics treats all submitted data as confidential in accordance with the PJM Tariff.



- **Fuel Policy**

- Save and manage fuel policy documents for all your units.

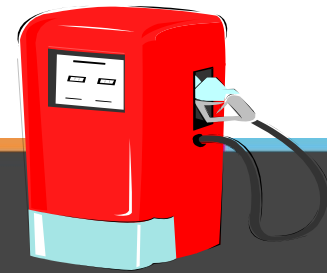
- **Fuel Data**

- Monthly entry of fuel delivery and consumption data.

- **Opportunity Cost Calculator**

- For units with environmental run time restrictions, enter data by 6:00 PM, and have an opportunity cost calculated by 6:00 AM the next morning.

- Each company can have different users with access to each of the data screens
- Accounts can be set up to give access to one function, but restrict access to other functions.



## Fuel Policy

- Any PJM member with generating units that may be offer capped or that chooses to offer on a cost basis must submit a fuel cost policy to the PJM MMU for approval. (PJM Manual 15)
- All Fuel Policies will be required to be submitted through the CODA Fuel Policy screen.
- The MMU will use a unit's fuel policy to verify that costs are consistent with company/unit policy.
- Fuel policies assigned to units can only be changed after one year. Exceptions made by request to the MMU.

## Fuel Policy Template

- A fuel policy document template is available on the Monitoring Analytics website:

<http://www.monitoringanalytics.com/tools/tools.shtml>



## Fuel Data

- Each company must review and document their fuel costs at minimum once per month (12 times per year).
- Each review must occur within forty (40) days of the preceding review.
- Review results will be used to determine whether or not a fuel cost update is necessary.
- The documentation of fuel costs must be filed via CODA .  
([PJM Manual 15](#))



# Data Submission Requirements By Unit Type

Unit Type	Fuel Policy	Sched 2	Sched 3	Sched 4	Sched 5	Sched 6	Sched 7	Sched 8	Sched 9	Unit Data
Fossil/Organic Plant $\geq$ 10 MW	A	M	M	M	M	S	S	A	NR	M
Fossil/Organic Plant < 10 MW	A	M	M	M	M	S	S	A	NR	M
Nuclear	A	NR	NR	NR	M	S	S	NR	NR	M
Hydro, Wind, Solar, Geothermal	NR	NR	NR	NR	M	S	S	NR	NR	M

Requirement	Monthly	Annual	Not Required	See Schedules for Detail
Abbreviation	M	A	NR	S (for Non-Utility Plants)



**Fuel Data Schedule 1:**

**Fuel Data Schedule 2: Cost and Quality of Fuel Receipts – Plant Level  
Contract Information, Receipts and Costs**

**Fuel Data Schedule 3: Boiler Information: Fuel Consumption**

**Fuel Data Schedule 4: Fossil/Organic Fuel Stocks**

**Fuel Data Schedule 5: Generator Information**

**Fuel Data Schedule 6: Source and Disposition of Electricity**

**Fuel Data Schedule 7: Annual Revenues from Sales for Resale**

**Fuel Data Schedule 8A: Environmental-Byproduct Disposition**

**Fuel Data Schedule 8B: Environmental-Financial Information**

**Fuel Data Schedule 8C: Environmental-Boiler NO<sub>x</sub> Controls**

**Fuel Data Schedule 8D: Environmental-Cooling System Info**

**Fuel Data Schedule 8E: Environmental-Flue Gas Particulate Collection**

**Fuel Data Schedule 8F: Environmental-Flue Gas Desulfurization**

**Fuel Data Schedule 9: Comments**

• **Details for information entry available in CODA User Guide**

[http://www.monitoringanalytics.com/tools/docs/CODA\\_User\\_Guide\\_20100903.pdf](http://www.monitoringanalytics.com/tools/docs/CODA_User_Guide_20100903.pdf)



- Schedules 1, 2, 3, 4, 5 and 9 must be filled in monthly.
  - Participants will report Monthly fuel delivery and consumption data into CODA by the end of the month following the data month.
  - **Example: July data must be reported by the end of August.**
- Schedules 6, 7 and 8 must be filled in annually.
  - Participants will report annual data requirements (for Schedule 6 through Schedule 8) no later than 45 days after the form opens for data entry – typically around March 31 following the end of the reporting year.



- eGADS/CODA Assistance
  - eGADS online help within the eGADS tool
  - CODA Training Presentation User Guide on MMU Website
    - <http://www.monitoringanalytics.com/tools/tools.shtml>
- Contacts
  - eGADS
    - [gadssupport@pjm.com](mailto:gadssupport@pjm.com)
  - CODA
    - [coda@monitoringanalytics.com](mailto:coda@monitoringanalytics.com)



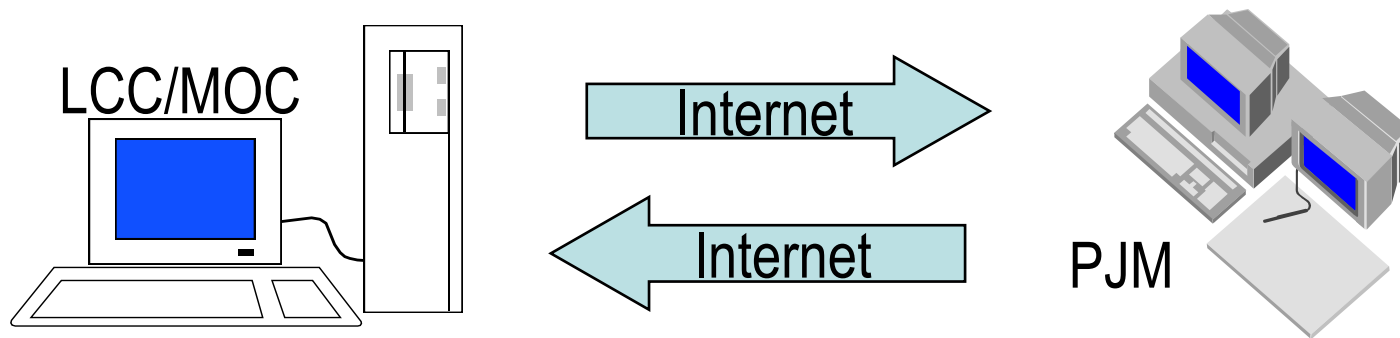
- eDart

- **General Overview**

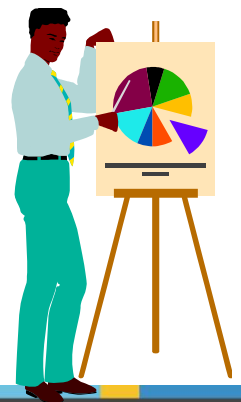
- How to Create a New Generation Outage Ticket
    - View, Revise, Cancel Generator Outage Ticket
    - Other Required Generation Unit Information Reporting Through eDART
    - eDart Generation Reports

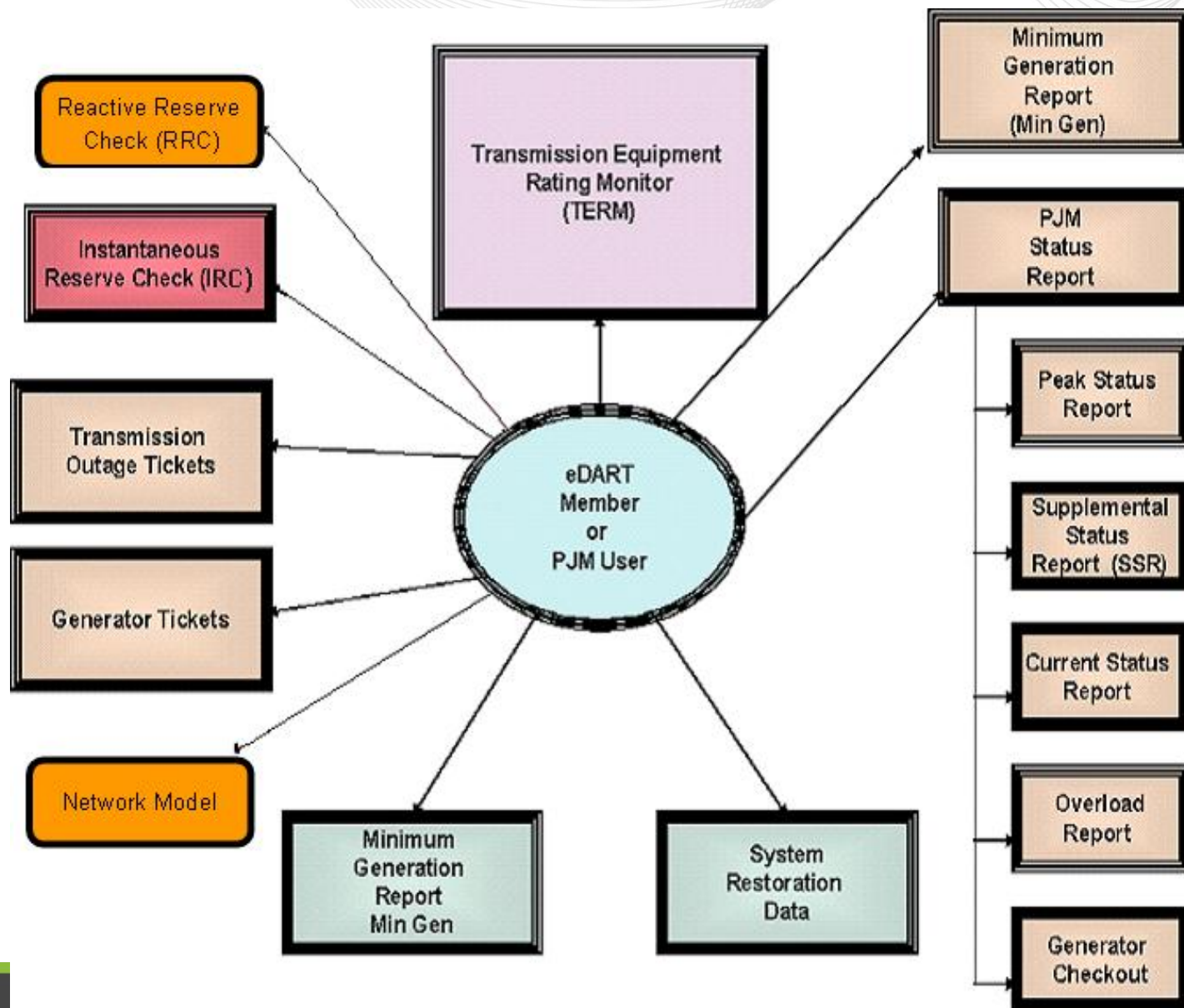


- **eDART** stands for Dispatcher Applications and Reporting Tool
- eDART is an internet tool for submitting Generation and Transmission operations and planning data to PJM and retrieving operations data from PJM



- Quicker outage submittal
  - Available 24/7
- More information about requested Generation and Transmission outages
- Better documentation and tracking of status and activity on outage ticket
- Electronic interface for data portability into other applications

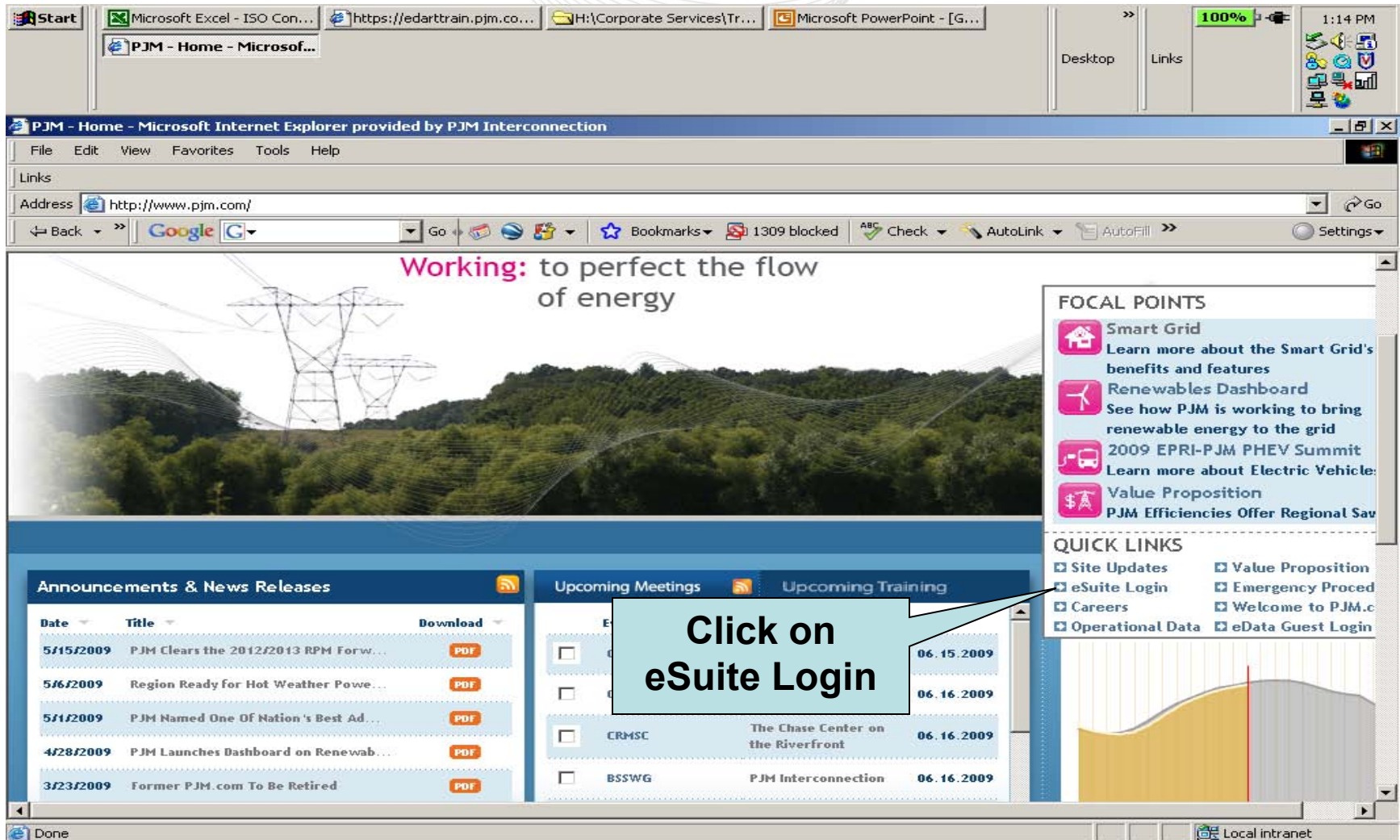




- eDart
  - General Overview
  - **How to Create a New Generation Outage Ticket**
  - View, Revise, Cancel Generator Outage Ticket
  - Other Required Generation Unit Information Reporting Through eDART
  - eDart Generation Reports







The screenshot shows a Windows XP desktop with the following elements:

- Taskbar:** Includes Start button, open applications (Microsoft Excel, Internet Explorer, Microsoft PowerPoint), and system tray (100% volume, 1:14 PM).
- Internet Explorer:**
  - Title Bar:** PJM - Home - Microsoft Internet Explorer provided by PJM Interconnection
  - Address Bar:** http://www.pjm.com/
  - Navigation:** Back, Forward, Stop, Reload buttons.
  - Content:**
    - Header:** "Working: to perfect the flow of energy" with a background image of power lines over a forest.
    - FOCAL POINTS:**
      - Smart Grid: Learn more about the Smart Grid's benefits and features
      - Renewables Dashboard: See how PJM is working to bring renewable energy to the grid
      - 2009 EPRI-PJM PHEV Summit: Learn more about Electric Vehicle
      - Value Proposition: PJM Efficiencies Offer Regional Sav
    - QUICK LINKS:**
      - Site Updates
      - eSuite Login (highlighted by a callout box)
      - Careers
      - Operational Data
      - Value Proposition
      - Emergency Proced
      - Welcome to PJM.c
      - eData Guest Login
    - Announcements & News Releases:**

Date	Title	Download
5/15/2009	PJM Clears the 2012/2013 RPM Forw...	PDF
5/16/2009	Region Ready for Hot Weather Powe...	PDF
5/11/2009	PJM Named One Of Nation's Best Ad...	PDF
4/28/2009	PJM Launches Dashboard on Renewab...	PDF
3/23/2009	Former PJM.com To Be Retired	PDF
    - Upcoming Meetings:**

Meeting	Date
CRMSC	06.15.2009
The Chase Center on the Riverfront	06.16.2009
BSSWG	06.16.2009
PJM Interconnection	06.16.2009
    - Upcoming Training:** (Empty section)





**PJM eSuite - Microsoft Internet Explorer provided by PJM Interconnection**

File Edit View Favorites Tools Help

Links

Address <https://esuite.pjm.com/mui/>

Back Forward Stop Reload Home Google G Go Bookmarks 1309 blocked Check AutoLink AutoFill Settings

> Login > Upload > E-mail

**Customer Support**  
If you have any questions, please call the Member Relations Hotline at 810-866-8980 or 866-400-8980.

**My Account**  
Change my password, edit my information and view my account history.  
[My Account](#)

**Tool Documentation**  
PJM offers information about eTools, including user guides, manuals and frequently asked questions (FAQ). Each eTool page has links to detailed information about that tool.

**New Users Registration**  
Startup form for first-time eTools Participant Company (primary account) - use "CAM Form A" [Participant Authorization Form](#) (DOC) (Required Once)  
Startup and subsequent changes to designation of CAM(s) and additional tools access - use "CAM Form B" [CAM Designation](#)

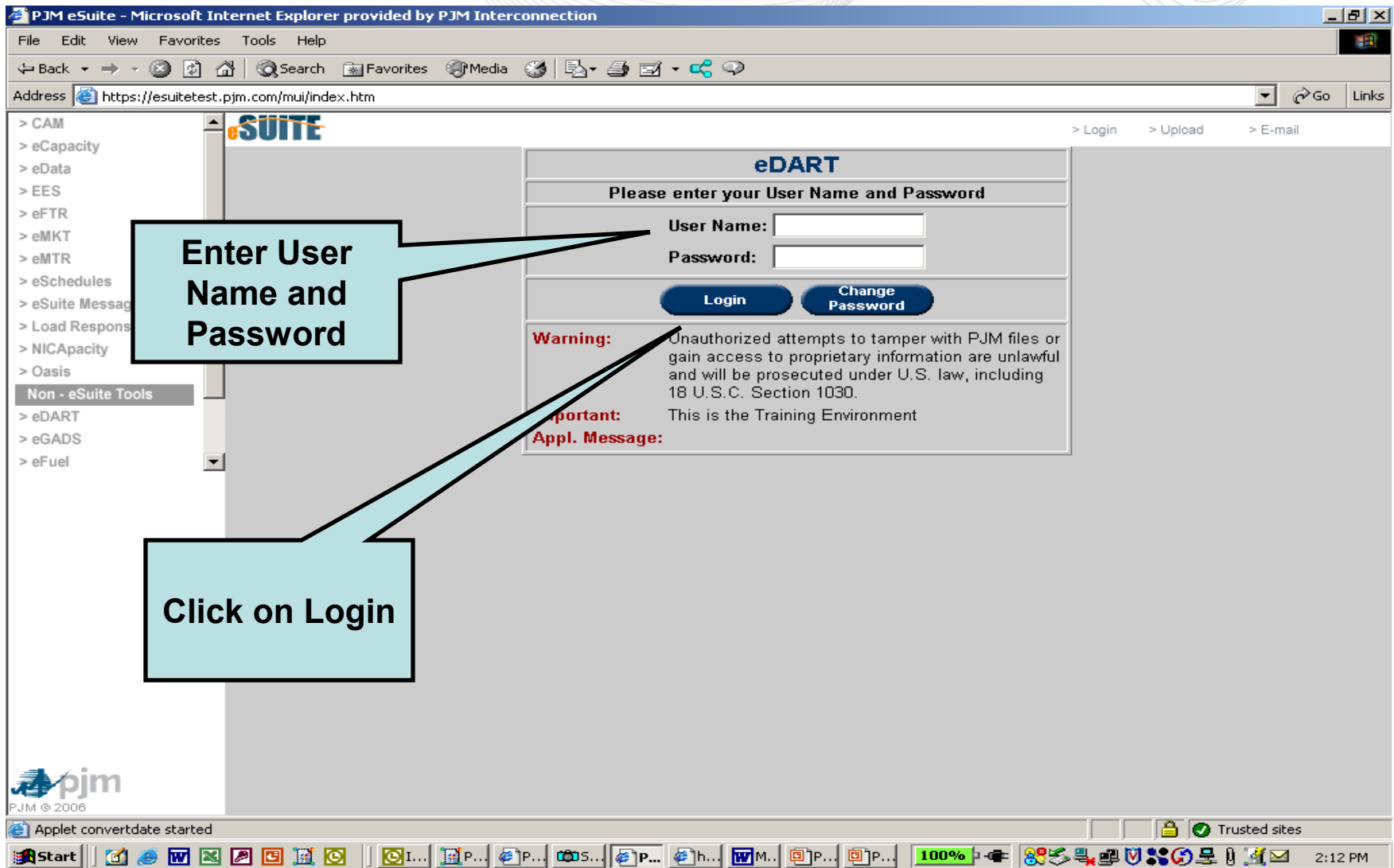
**PJM eTools**  
PJM Interconnection's eTools, including eSuite, are a group of sophisticated Internet-based software applications that allow members to transact much of their business online. Using PJM's eTools gives members real-time data about the electric system. They can buy and sell power, arrange transmission service, schedule contract purchases, carry out business strategies and make critical business decisions.

**Non - eSuite Tools**  
> eDART  
> eGADS  
> eFuel  
> Emerg. Procedures  
> RPM-ACR

**System Requirements**  
The minimum system requirements are those necessary to run the Windows 95 or Windows NT operating systems. [<More>](#)

**General eTool Information**  
[eSuite Sandbox Registration Procedures](#)  
[eSuite FAQ](#) (PDF)

**Click on eDART**



**PJM eSuite - Microsoft Internet Explorer provided by PJM Interconnection**

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media Print Mail News RSS Feeds

Address <https://esuitetest.pjm.com/mui/index.htm> Go Links

> CAM  
> eCapacity  
> eData  
> EES  
> eFTR  
> eMKT  
> eMTR  
> eSchedules  
> eSuite Message  
> Load Response  
> NICApacity  
> Oasis  
**Non - eSuite Tools**  
> eDART  
> eGADS  
> eFuel

**eDART**

Please enter your User Name and Password

User Name:

Password:

Login Change Password

**Warning:** Unauthorized attempts to tamper with PJM files or gain access to proprietary information are unlawful and will be prosecuted under U.S. law, including 18 U.S.C. Section 1030.

**Important:** This is the Training Environment

**Appl. Message:**

**Enter User Name and Password**

**Click on Login**

PJM © 2006

Applet convertdate started

Trusted sites

100%

2:12 PM

Click on  
Gen. Tickets

SBTG6

Feedback

My eDART

Upload

Download

Gen. Tickets

Instantaneous  
Reserve Check

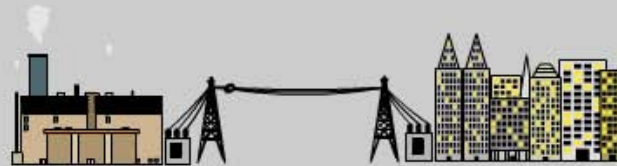
Minimum  
Gen. Report

PJM Status  
Report

Online Help

Logout

eDART



Click on  
"Create New  
Ticket"

## Generator Tickets Main Menu

Summer Peak Period Maintenance Margin Season

Start: 06/13/2011 End: 09/09/2011

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	0	0	0	0	0	0
Revised Tickets	0	0	0	0	0	0
Current Tickets	0	0	0	0	0	0
Approved Tickets	0	0	0	0	0	0
Future Tickets	0	0	0	0	0	0
Tickets History						

Owners Report

Maint. Margin Log

D-Curve Report

Blackstart  
XLS Upload

Blackstart  
File Download

SBTG6

Feedback

My eDART

Upload

Download

Gen. Tickets

Instantaneous  
Reserve Check

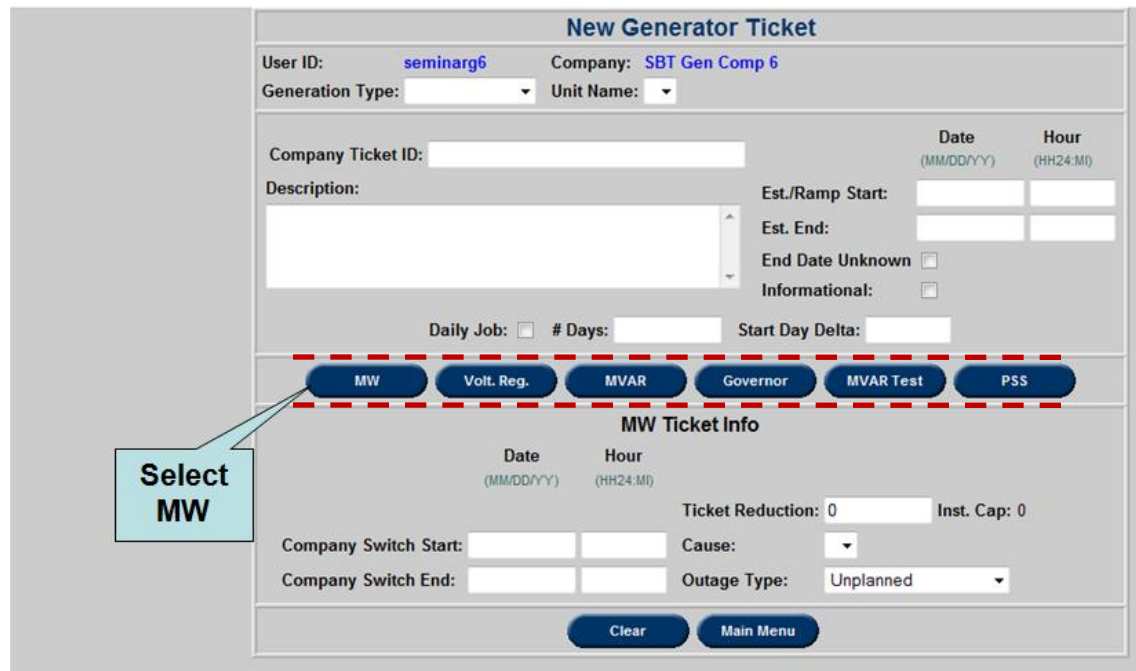
Minimum  
Gen. Report

PJM Status  
Report

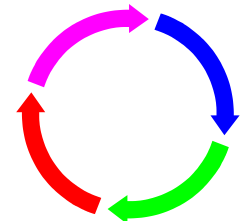
Online Help

Logout

- General Section
  - Fields common to each ticket type



- Type Specific Section
  - Fields for specific ticket type



SBTG6

Feedback

My eDART

Upload

Download

Gen. Tickets

Instantaneous  
Reserve Check

Minimum  
Gen. Report

PJM Status  
Report

Online Help

Logout

## New Generator Ticket

User ID: **seminarg6**

Company: **SBT Gen Comp 6**

Generation Type:

Unit Name:

Company Ticket ID:

Date  
(MM/DD/YY)

Hour  
(HH24:MI)

Description:

Est./Ramp Start:



Est. End:



End Date Unknown ☐

Informational: ☐

Daily Job: ☐

# Days:

Start Day Delta:

MW

Volt. Reg.

MVAR

Governor

MVAR Test

PSS

Select  
MW

## MW Ticket Info

Date  
(MM/DD/YY)

Hour  
(HH24:MI)

Ticket Reduction:

Inst. Cap:

Company Switch Start:



Cause:

Company Switch End:



Outage Type:

Unplanned

Clear

Main Menu

# New Megawatt Ticket

User ID and  
Company is  
generated by  
login

Select  
Generation Type  
from pull-down  
menu

Select Unit  
name from pull-  
down menu

User ID: **seminarg6** Company: **SBT Gen Comp 6**  
Generation Type:  Unit Name:

Company Ticket ID:

Date  
(MM/DD/YY)

Hour  
(HH24:MI)

Description:

Optional field for  
company  
internal ticket  
number

Est./Ramp Start:

Est. End:

End Date Unknown ☐

Informational: ☐

Enter brief work  
description in  
free form text  
box if required

Daily Job: ☐ # Days:  Start Day Delta:

MW

Volt. Reg.

MVAR

Governor

MVAR Test

PSS

## MW Ticket Info

Date  
(MM/DD/YY)

Hour  
(HH24:MI)

Ticket Reduction:  Inst. Cap: 0

Company Switch Start:

Cause:

Company Switch End:

Outage Type:

Clear

Submit Form

Main Menu



**Enter Est./Ramp  
Start and Est.  
End date and  
hour**

**Check End Date  
Unknown if applicable  
(only applies to  
Unplanned Outages)**

**Enter the MW  
Reduction  
(Inst. Cap will be  
auto populated)**

**Select Outage Cause and Type from pull-down menus**



- **Entering a new megawatt ticket is a  
“Three Step Process”**

1) Ticket Creation

2) Switch (actual) Start Time Entry

3) Switch (actual) End Time Entry



FESC  
Production

- Feedback
- My eDART
- Upload
- Download
- Hydro Calculator
- Gen. Tickets**
- Trans. Tickets
- Instantaneous Reserve Check
- Minimum Gen. Report
- PJM Status Report

Select the Gen. Tickets Button. This will open the Generator Tickets Main Menu.

Select the Create New Ticket Button. This will open the New Generator Ticket form.

Enter the Generation Type, Unit Name, Est. / Ramp Start Time and Est. End Time

### Generator Tickets Main Menu

Summer Peak Period Maintenance Margin Season  
Start: 06/13/2011 End: 09/09/2011

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	0	0	0
Revised Tickets	0	0	0	0	0	0
Current Tickets	5	0	0	0	0	0
Approved Tickets	34	0	0	0	0	0
Future Tickets	35	0	0	0	0	0
<b>Tickets History</b>						

Owners Report Maint. Margin Log D-Curve Report

Blackstart XLS Upload Blackstart File Download

### New Generator Ticket

User ID: noeyep Company: FirstEnergy Solutions Corp.

Generation Type: Wind Unit Name: CASSELMAN

Company Ticket ID: \_\_\_\_\_

Description: \_\_\_\_\_

Est./Ramp Start: 05/18/11 16:00  
Est. End: 05/18/11 22:00

End Date Unknown ☐  
Informational: ☐

Daily Job: ☐ # Days: \_\_\_\_\_ Start Day Delta: \_\_\_\_\_

MW Volt. Reg. MVAR Governor MVAR Test PSS

### MW Ticket Info

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

Ticket Reduction: 0 Inst. Cap: 35

Company Switch Start: \_\_\_\_\_ Cause: N/A  
Company Switch End: \_\_\_\_\_ Outage Type: Unplanned

Clear Submit Form Main Menu

**New Generator Ticket**

User ID: **hoeyp** Company: **FirstEnergy Solutions Corp.**  
 Generation Type: **Wind** Unit Name: **CASSELMAN**

Company Ticket ID:  Date (MM/DD/YYYY) Hour (HH24:MI)  
 Description:  Est./Ramp Start: 05/18/11 16:00  
 TEST TICKET Est. End: 05/18/11 22:00  
 End Date Unknown ☐  
 Informational: ☐  
 Daily Job: ☐ # Days:  Start Day Delta:

**MW** **Volt. Reg.** **MVAR** **Governor** **MVAR Test** **PSS**

**MW Ticket Info**

Date (MM/DD/YYYY) Hour (HH24:MI)  
 Ticket Reduction:  Inst. Cap: 35  
 Company Switch Start:  Cause: **Inspections**  
 Company Switch End:  Outage Type: **Maintenance**

**Clear** **Submit Form** **Main Menu**

Enter the Ticket Reduction (amount),  
Cause and Outage Type.

Click the Submit Form Button

**Ticket Validation Form**

Ticket ID	Est. Start Date	Est. End Date	MW Reduction
New Ticket	05/18/11	05/18/11	35

The above tickets were found and are scheduled to run during the same time as this newly submitted ticket

**Submit Form** **Back**

**Generator Tickets Main Menu**

Summer Peak Period Maintenance Margin Season						
Start: 06/13/2011 End: 09/09/2011						
Current Maintenance Margin						
Mid-Atlantic					N/A	
Western-Southern					N/A	

[Create New Ticket](#)
[View/Revise Ticket](#)

	MW	Volt	P.g.	MVAR	Governor	MVAR Test	PSS
<b>Submitted Tickets</b>	1	0	0	0	0	0	0
<b>Revised Tickets</b>	0	0	0	0	0	0	0
<b>Current Tickets</b>	5	0	0	0	0	0	0
<b>Approved Tickets</b>	34	0	0	0	0	0	0
<b>Future Tickets</b>	35	0	0	0	0	0	0
<a href="#">Tickets History</a>							

[Owners Report](#)
[Maint. Margin Log](#)
[D-Curve Report](#)

[Blackstart XLS Upload](#)
[Blackstart File Download](#)

The new ticket will appear in the Submitted Tickets column.



**Enter the Company Switch Start Time after the work begins.**

**Generator Ticket (Review/Revise)**

User ID: **hoeyep** Ticket Number: **796046** Company: **FirstEnergy Solutions Corp.**

Generation Type: **Wind** Unit Name: **CASSELMAN** Est./Ramp Start: **05/18/2011 16:00**

Ticket Status: **Approved** Timestamp: **05/18/2011 09:24** Est. End: **05/18/2011 22:00**

Company Ticket ID :

Actual Start:

Actual End:

Description: **TEST TICKET** PJM Comments:

**MW Ticket Info**

Date: Time: Ticket Reduction: **35** Installed Cap: **35**

Informational: **No**

Company Switch Start: Cause: **Inspections**

Company Switch End: Outage Type: **Maintenance**

**Buttons:** Cancel Ticket, Add New Revision, Submit, Refresh, History Log, Main Menu

**Generator Ticket (Review/Revise)**

User ID: **hoeyep** Ticket Number: **796046** Company: **FirstEnergy Solutions Corp.**

Generation Type: **Wind** Unit Name: **CASSELMAN** Est./Ramp Start: **05/18/2011 16:00**

Ticket Status: **Approved** Timestamp: **05/18/2011 09:24** Est. End: **05/18/2011 22:00**

Company Ticket ID :

Actual Start:

Actual End:

Description: **TEST TICKET** PJM Comments:

**MW Ticket Info**

Date: Time: Ticket Reduction: **35** Installed Cap: **35**

Informational: **No**

Company Switch Start: **05/18/2011 16:00** Cause: **Inspections**

Company Switch End: Outage Type: **Maintenance**

**Buttons:** Cancel Ticket, Add New Revision, Submit, Refresh, History Log, Main Menu

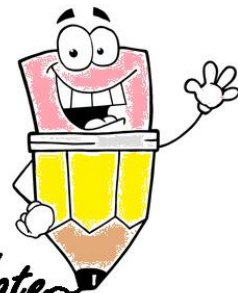
**Actual time this entry was made was 5/18/2011 @ 09:48 – Over 6 hours before the Est. / Ramp Start time entered when the Ticket was created.**

**Entering a Company Switch Start Time before the “Actual” Est. / Ramp Start time will result in the error below. The Company Switch Start time must also be entered no later than 2 hours after the Est. / Ramp Start time.**

**Generation Ticket Error**

Error Message: **Switch Start Date cannot be in the future or later than current time - 2 hours.**

**Back**



*Take Notes*

- 3 Steps

## 1) Creation

- Entry of Est. / Ramp Start & Est. End Times

## 2) Start

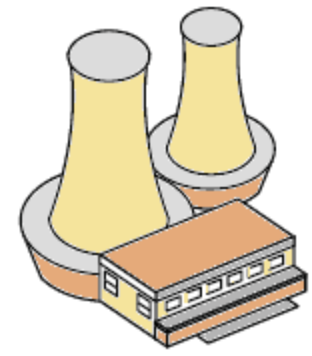
- Entry of Company Switch Start Time
  - Can not be entered before (early) the Est. / Ramp Start time
  - Must be entered no later than 2 hours after the Est. / Ramp Start time.

## 3) End

- Entry of Company Switch End Time
  - Must be entered no later than 2 hours after the Est. End time.



- Designed mainly for larger units, which could take hours to come off line.
- For example:
  - A 1000 MW unit is generating at full load
    - Ramp Start
      - The time the unit starts down (from 1000 MW)





- **Company Switch Start Date/Time**
  - Call up ticket and enter “Switch Start Date/Time.”
  - Scheduling Coordinator will then Approve/Disapprove
- **Company Switch End Date/Time**
  - Call up ticket and enter “Switch End Date/Time.”
  - Master Coordinator will then Approve/Disapprove
  - This enhancement will *not* eliminate a phone call to the Scheduling Coordinator at the actual Start/End times of an outage.
  - Verbal notifications of unit status changes must still be provided to PJM
    - Master Coordinator if just clearing ticket
    - Generation Dispatcher if clearing ticket and bringing unit online
- **NOTE: This is not meant to eliminate any verbal communications with the PJM Generation Dispatcher when a generating unit is coming On or Off-line for an outage.**

## New Generator Ticket

User ID: seminarg6
Company: SBT Gen Comp 6

Generation Type:  
Unit Name:

Company Ticket ID:  

Description:

Date (MM/DD/YY)   Hour (HH24:MI)  

Est./Ramp Start:    

Est. End:    

End Date Unknown ☐

Informational: ☐

Daily Job: ☐
# Days:  
Start Day Delta:

MW
Volt. Reg.
MVAR
Governor
MVAR Test

### MW Ticket Info

Date (MM/DD/YY)   Hour (HH24:MI)  

Company Switch Start:    

Company Switch End:

Ticket Reduction: 0 Inst. Cap: 0

Cause:  

Outage Type: Unplanned

Clear
Main Menu

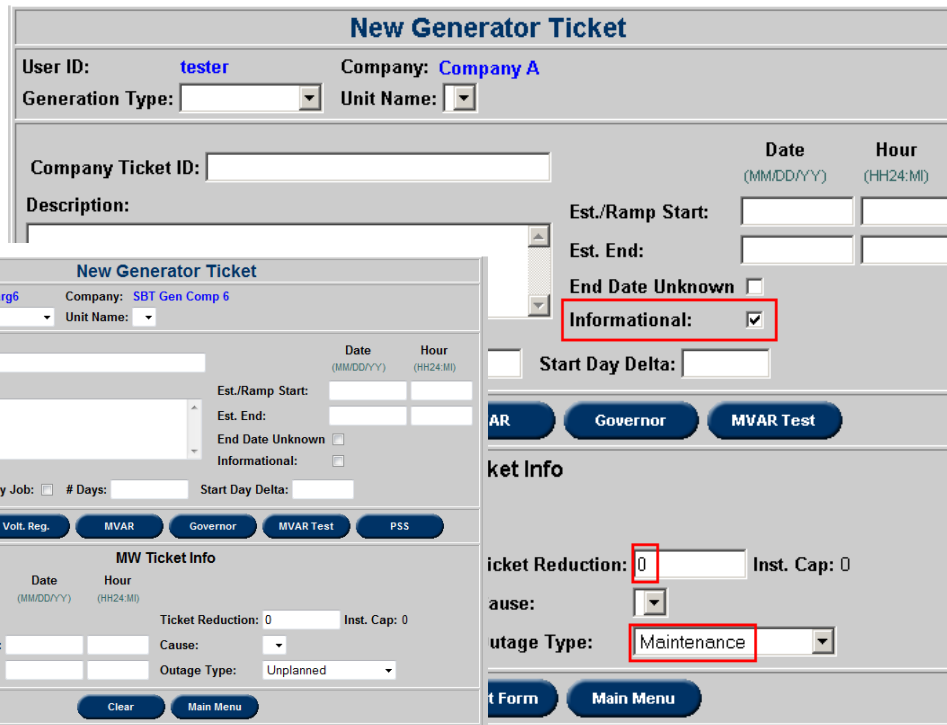
Multiple Day Data Entry

Check Information if maintenance work is being performed with no megawatt reduction

- New checkbox for MW tickets; „Informational“ to flag Info only tickets.
- Requirements:
  - MW Reduction = 0
  - Outage Type = Maintenance
- For other non-Informational tickets, MW Reduction cannot be 0.
- Current ticket approval cycle applies to Informational tickets.



- When creating a new MW ticket and Informational is checked, reduction will automatically be populated with 0 and outage type changed to „Maintenance“.



**New Generator Ticket**

User ID: **tester** Company: **Company A**  
 Generation Type:  Unit Name:

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

Est./Ramp Start:    
 Est. End:    
 End Date Unknown ☐  
**Informational: ☒**  
 Start Day Delta:

AR Governor MVAR Test

**ket Info**

cket Reduction: **0** Inst. Cap: 0  
 ause:   
 utage Type: **Maintenance**

Form Main Menu

---

**New Generator Ticket**

User ID: **seminarg6** Company: **SBT Gen Comp 6**  
 Generation Type:  Unit Name:

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

Est./Ramp Start:    
 Est. End:    
 End Date Unknown ☐  
 Informational: ☐

Daily Job: ☐ # Days:  Start Day Delta:

MW Volt. Reg. MVAR Governor MVAR Test PSS

**MW Ticket Info**

Date (MM/DD/YY)  Hour (HH24:MI)   
 Ticket Reduction: 0 Inst. Cap: 0  
 Company Switch Start:  Cause:   
 Company Switch End:  Outage Type:

Clear Main Menu

- When submitting a revision to an Informational ticket and the revision has a non-zero reduction, „Informational“ will change to „No“ but the outage type will remain as „Maintenance“.

### Generator Ticket (Review/Revise)

**User ID:** tester    **Ticket Number:** 10231    **Company:** Company A  
**Generation Type:** Diesel/CT    **Unit Name:** DIESEL UNIT A    **Est./Ramp Start:** 08/26/2008 17:00  
**Ticket Status:** Submitted    **Timestamp:** 08/26/2008 14:37    **Est. End:** 08/31/2008 10:00  
**Company Ticket ID :** Info Test    **Actual Start:**  
**Actual End:**

**Description**  
Info Ticket

**PJM Comments**

#### MW Ticket Info

Date	Time	Ticket Reduction: 0	Installed Cap: 16
Company Switch Start:		Informational: <span>No</span>	Cause: Other
Company Switch End:		Outage Type: Maintenance	

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

#### Revisions

Rev. ID	User ID	Rev. Start Date Time	Rev. End Date Time	MW Reduction	Eff. Date Time	Rev. Status	Timestamp
7572	tester			<span>5</span>	08/26/2008 14:39	Submitted	08/26/2008 14:39

**Multiple day outage entry example. This example is for 3 days.**

**Enter unit data and start date / time and end date / time for first day.**

**New Generator Ticket**

User ID: **hoeyep** Company: **North Carolina Electric Membership Corporation**

Generation Type: **Diesel/CT (Small Unit)** Unit Name: **OUTER BANKS DIESELS**

Company Ticket ID:

Description: **TEST TICKET ONLY**

Est./Ramp Start: **09/06/2010 00:01**

Est. End: **09/06/2010 02:00**

End Date Unknown ☐

Informational: ☐

Daily Job: ☒ # Days: **3** Start Day Delta: **1**

MW Volt. Reg. MVAR Governor MVAR Test PSS

**MW Ticket Info**

Date:  Hour:

Ticket Reduction: **0** Inst. Cap: **18**

Company Switch Start:  Cause: **Other**

Company Switch End:  Outage Type: **Maintenance**

Clear **Submit Form** Main Menu

**Multiple day data entry.**  
**Check “Daily Job” button.**  
**Enter number of days (3 in this example).**  
**Enter “Start Day Delta” of 1. Each Ticket will then be created 1 day apart.**  
**Click the “Submit Form” button.**

### Ticket Validation Form

Ticket ID	Est. Start Date	Est. End Date	MW Reduction
New Ticket	09/06/2010 00:01	09/06/2010 02:00	0
New Ticket	09/07/2010 00:01	09/07/2010 02:00	0
New Ticket	09/08/2010 00:01	09/08/2010 02:00	0

The above tickets were found and are scheduled to run during the same time as this newly submitted ticket

**Submit Form** **Back**

The ticket validation form will open listing the tickets that will be created. If the list is correct, click the "Submit Form" button.

Returning to the "Generator Tickets Main Menu" shows there are now 3 tickets in the submitted queue. Clicking the "Submitted Tickets" button opens the Submitted Tickets Form.

### Generator Tickets Main Menu

Summer Peak Period Maintenance Margin Season  
Start: 06/14/2010 End: 09/10/2010

Current Maintenance Margin  
Western-Southern N/A

**Create New Ticket** **View/Revise Ticket**

	MW	Volt. Reg.	MVAR	Governor	MVAR Test	PSS
<b>Submitted Tickets</b>	3	0	0	0	0	0
<b>Revised Tickets</b>	0	0	0	0	0	0
<b>Current Tickets</b>	0	0	0	0	0	0
<b>Approved Tickets</b>	0	0	0	0	0	0
<b>Future Tickets</b>	3	0	0	0	0	0
<b>Tickets History</b>						

**Owners Report** **Maint. Margin Log** **D-Curve Report** **Blackstart XLS Upload**

### Submitted Tickets

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

**Apply Sorting** **Go to Filter**

Ticket ID	Comp. Ticket ID	Submission Date/Time	Ticket Type	Unit Type	Outage Type	Unit Name	Installed Capacity	Reduction	Est. Start Date/Time	Cause
<a href="#">762405</a>		09/02/2010 14:57	MW	Diesel/CT (Small Unit)	Maintenance	OUTER BANKS DIESELS	18	0	09/06/2010 00:01	Other
<a href="#">762406</a>		09/02/2010 14:57	MW	Diesel/CT (Small Unit)	Maintenance	OUTER BANKS DIESELS	18	0	09/07/2010 00:01	Other
<a href="#">762407</a>		09/02/2010 14:57	MW	Diesel/CT (Small Unit)	Maintenance	OUTER BANKS DIESELS	18	0	09/08/2010 00:01	Other
<b>Total</b>								0		

**Go to Filter** **Main Menu**

Click the link to open the ticket.

### Generator Ticket (Review/Revise)

User ID: hoeyep Ticket Number: 762405 Company: North Carolina Electric Membership Corporation

Generation Type: Diesel/CT (Small Unit) Unit Name: OUTER BANKS DIESELS Est./Ramp Start: 09/06/2010 00:01  
Ticket Status: Submitted Timestamp: 09/02/2010 14:57 Est. End: 09/06/2010 02:00  
Company Ticket ID : Actual Start: Actual End:

**Description** **PJM Comments**

TEST TICKET ONLY

**MW Ticket Info**

Date Time Ticket Reduction: 0 Installed Cap: 18  
Informational: Yes Cause: Other  
Company Switch Start: Company Switch End: Outage Type: Maintenance

**Cancel Ticket** **Add New Revision** **Submit** **Refresh** **History Log** **Main Menu**



- eDart
  - General Overview
  - How to Create a New Generation Outage Ticket
  - **View, Revise, Cancel Generator Outage Ticket**
  - Other Required Generation Unit Information Reporting Through eDART
  - eDart Generation Reports



SBTG6

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## Generator Tickets Main Menu

Summer Peak Period Maintenance Margin Sea

Start: 06/13/2011 End: 09/09/2011

Current Maintenance Margin

Mid-Atlantic

N/A

Western-Southern

N/A

Click the  
View/Revise  
button

Create New  
Ticket

View/Revise  
Ticket

	MW	Volt. Reg.	MVAR	Governor	MVAR Test	PSS
Submitted Tickets	0	0	0	0	0	0
Revised Tickets	0	0	0	0	0	0
Current Tickets	0	0	0	0	0	0
Approved Tickets	0	0	0	0	0	0
Future Tickets	0	0	0	0	0	0
Tickets History						

Owners Report

Maint. Margin Log

D-Curve Report

Blackstart  
XLS Upload

Blackstart  
File Download

## Generator Ticket Selection Form

Company: [SBT Gen Comp 6](#)

<b>Ticket Type</b>	<b>Ticket ID</b>	<b>Comp. Ticket ID</b>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<b>Outage Type</b>	<b>Unit Type</b>	<b>Unit Name</b>
<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/>	<input type="text"/>
	<b>Reduction</b>	<b>Installed Capacity</b>
	Equal to <input type="text"/>	Equal to <input type="text"/>
<b>Cause</b>	<b>Ticket Status</b>	<b>Revision Status</b>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<b>Submission Date (MM/DD/YY)</b>	<b>Est. Start Date (MM/DD/YY)</b>	<b>Est. End Date (MM/DD/YY)</b>
From: <input type="text"/> To: <input type="text"/>	From: <input type="text"/> To: <input type="text"/>	From: <input type="text"/> To: <input type="text"/>
<b>Actual Start Date (MM/DD/YY)</b>	<b>Actual End Date (MM/DD/YY)</b>	<b>Occuring During (MM/DD/YY)</b>
From: <input type="text"/> To: <input type="text"/>	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"/>		

Select Filter  
Criteria, or Click  
on Apply Filter

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Feedback

My eDART

Upload

Download

Gen. Tickets

Instantaneous  
Reserve Check

Minimum  
Gen. Report

PJM Status  
Report

Online Help

Logout

Click on Ticket ID

PJM eSuite - Microsoft Internet Explorer

Address: https://edarttrain.pjm.com/edartsql/edart\_gen.ticket\_rev?p\_ticket\_id=20466

by PJM Interconnection

File Edit View Favorites Tools Help

es Media Print Mail Links

> Login > Upload > E-mail

## Generator Outage Tickets

Apply Sorting Go to Filter

Ticket ID	Comp. Ticket ID	Ticket Type	Outage Type	Submittal Date	Unit Name	MW Reduction	Status
<a href="#">20466</a>	124	MW	Maintenance	01/25/2006	TEST_UNIT_F1	50	Submitted
<a href="#">20466</a>	124	MW	Maintenance	01/25/2006	TEST_UNIT_F1	50	Submitted
<a href="#">20468</a>	124	MW	Maintenance	01/25/2006	TEST_UNIT_F1	50	Submitted
<a href="#">20468</a>	124	MW	Maintenance	01/25/2006	TEST_UNIT_F1	50	Submitted
<a href="#">20469</a>	124	MW	Maintenance	01/25/2006	TEST_UNIT_F1	50	Submitted
<a href="#">20469</a>	124	MW	Maintenance	01/25/2006	TEST_UNIT_F1	50	Submitted
<a href="#">20472</a>	1244	MW	Unplanned	01/25/2006	TEST_UNIT_F1	60	Submitted
<a href="#">20472</a>	1244	MW	Unplanned	01/25/2006	TEST_UNIT_F1	60	Submitted
<a href="#">20473</a>		MW	Unplanned	01/26/2006	TEST_UNIT_F1	850	Submitted
<a href="#">20473</a>		MW	Unplanned	01/26/2006	TEST_UNIT_F1	850	Submitted
<a href="#">20476</a>	124	MW	Maintenance	01/26/2006	TEST_UNIT_F1	50	Submitted
<a href="#">20476</a>	124	MW	Maintenance	01/26/2006	TEST_UNIT_F1	50	Submitted
<a href="#">20477</a>	124	MW	Maintenance	01/26/2006	TEST_UNIT_F1	50	Submitted
<a href="#">20477</a>	124	MW	Maintenance	01/26/2006	TEST_UNIT_F1	50	Submitted

Back Main Menu

FRANK

Upload

Download

Gen. Tickets

Trans. Tickets

Instantaneous Reserve Check

Minimum Gen. Report

PJM Status Report

PJM © 2006

https://edarttrain.pjm.com/edartsql/edart\_gen.ticket\_rev?p\_ticket\_id=20466

100% 2:17 PM

eDART Generation Outage Tickets - Microsoft Internet Explorer provided by P...

## New Revision

	Date	Time
Revised Start/Ramp Date/Time:	<input type="text"/>	<input type="text"/>
Revised Ramp Complete Date/Time:	<input type="text"/>	<input type="text"/>
Revised End Date/Time:	<input type="text"/>	<input type="text"/>
MW Reduction: <input type="text"/>	Eff. Date/Time: <input type="text"/>	<input type="text"/>

Complete  
Revision pop-up  
And Click on  
Update

## View Ticket (Review/Revise)

Company:

3/2004 12:55

Est./Ramp Start: 06/23/2004 18:00  
Est. End: 06/24/2004 18:00  
Actual Start:  
Actual End:

PJM Comments

View Outage Info

Est. Ramp Complete: 06/23/2004 19:00  
Reduction this Ticket: -2  
Cause: Ambient Air (Ambient Conditions)

Installed Cap: 34  
Outage Type: Maintenance

Click on  
Add New  
Revision

- Upload
- Download
- Gen. Tickets
- Trans. Tickets
- TERM
- Instantaneous Reserve Check
- Minimum

- The process to calculate maintenance margins will be automated.
- The Maintenance Margin will be analyzed through out the year and not just during peak periods.
- The PPMM Start and End Dates will be displayed under “Summer Peak Period Maintenance Margin Season” on the main menu.
- Based on the results of the margin calculations, user will see 0, N/A or the PPMM value under “Current Maintenance Margin”.



## Generator Tickets Main Menu

Summer Peak Period Maintenance Margin Season

Start: 06/13/2011 End: 09/09/2011

Current Maintenance Margin	
Mid-Atlantic	N/A
Western-Southern	N/A

PPM MW value  
will appear here

Create New  
Ticket

View/Revise  
Ticket

	MW	Volt. Reg.	MVAR	Governor	MVAR Test	PSS
Submitted Tickets	0	0	0	0	0	0
Revised Tickets	0	0	0	0	0	0
Current Tickets	0	0	0	0	0	0
Approved Tickets	0	0	0	0	0	0
Future Tickets	0	0	0	0	0	0
Tickets History						

Owners Report

Maint. Margin Log

D-Curve Report

Blackstart  
XLS Upload

Blackstart  
File Download



## Maintenance Margin Log

**From Date:**

**To Date:**

**Region:** Mid-Atlantic  
Western-Southern

**Last 30 Days:** ☐

Submit Form
Main Menu

Region	Date	Margin	Timestamp
Mid-Atlantic	06/03/2011	N/A	05/29/2011 05:12
Western-Southern	06/03/2011	N/A	05/29/2011 05:12
Mid-Atlantic	06/02/2011	N/A	05/27/2011 08:12
Western-Southern	06/02/2011	N/A	05/27/2011 08:12
Mid-Atlantic	06/01/2011	N/A	05/27/2011 08:12
Western-Southern	06/01/2011	N/A	05/27/2011 08:12
Mid-Atlantic	05/31/2011	4290.7937	05/29/2011 05:12
Mid-Atlantic	05/31/2011	7300.9431	05/27/2011 08:12
Western-Southern	05/31/2011	N/A	05/27/2011 08:12
Mid-Atlantic	05/30/2011	7353.4902	05/29/2011 05:12
Mid-Atlantic	05/30/2011	N/A	05/27/2011 08:12
Western-Southern	05/30/2011	N/A	05/27/2011 08:12

Main Menu

- Submitted
- Approved
  - MW Ticket
  - Reactive Ticket
    - Received
- Active
- Complete
- Denied
  - MW Ticket
  - Reactive Ticket
- Cancelled by Company
- Cancelled by PJM

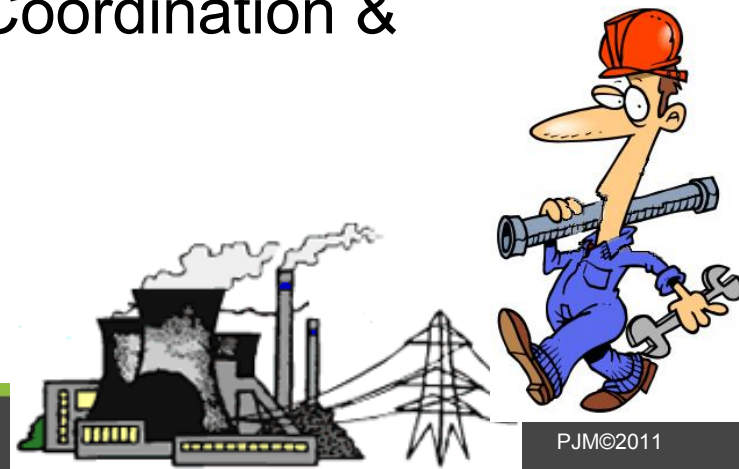


- **Submitted**

- Original status of ticket upon submittal

- **Approved**

- **MW Ticket** - Ticket status changed to Approved by PJM upon review and approval
  - **Reactive Ticket** - Ticket status changed to Received by PJM upon receipt of ticket by PD (MVAR & VR) or Interregional Coordination & Compliance Dept. (Gov.)
    - Displayed as Approved on Menu



- **Denied**

- **MW Ticket** - Ticket status changed to Denied by PJM upon review and denial
- **Reactive Ticket** - Tickets status can not be changed to Denied



- **Active**

- Ticket status changed to Active upon input of an actual outage start date by PJM

- **Complete**

- Ticket status changed to Complete upon input of an actual end date by PJM



- **Cancelled by Company**

- Ticket status changed to Cancelled by Company if company initiates cancellation of ticket
  - Verbal notification required to PJM if change affects current or next operating day!

- **Cancelled by PJM**

- Ticket status changed to Cancelled by PJM if PJM initiates cancellation of ticket
  - Verbal notification given to company



- eDart
  - General Overview
  - How to Create a New Generation Outage Ticket
  - View, Revise, Cancel Generator Outage Ticket
  - **Other Required Generation Unit Information Reporting Through eDART**
  - eDart Generation Reports



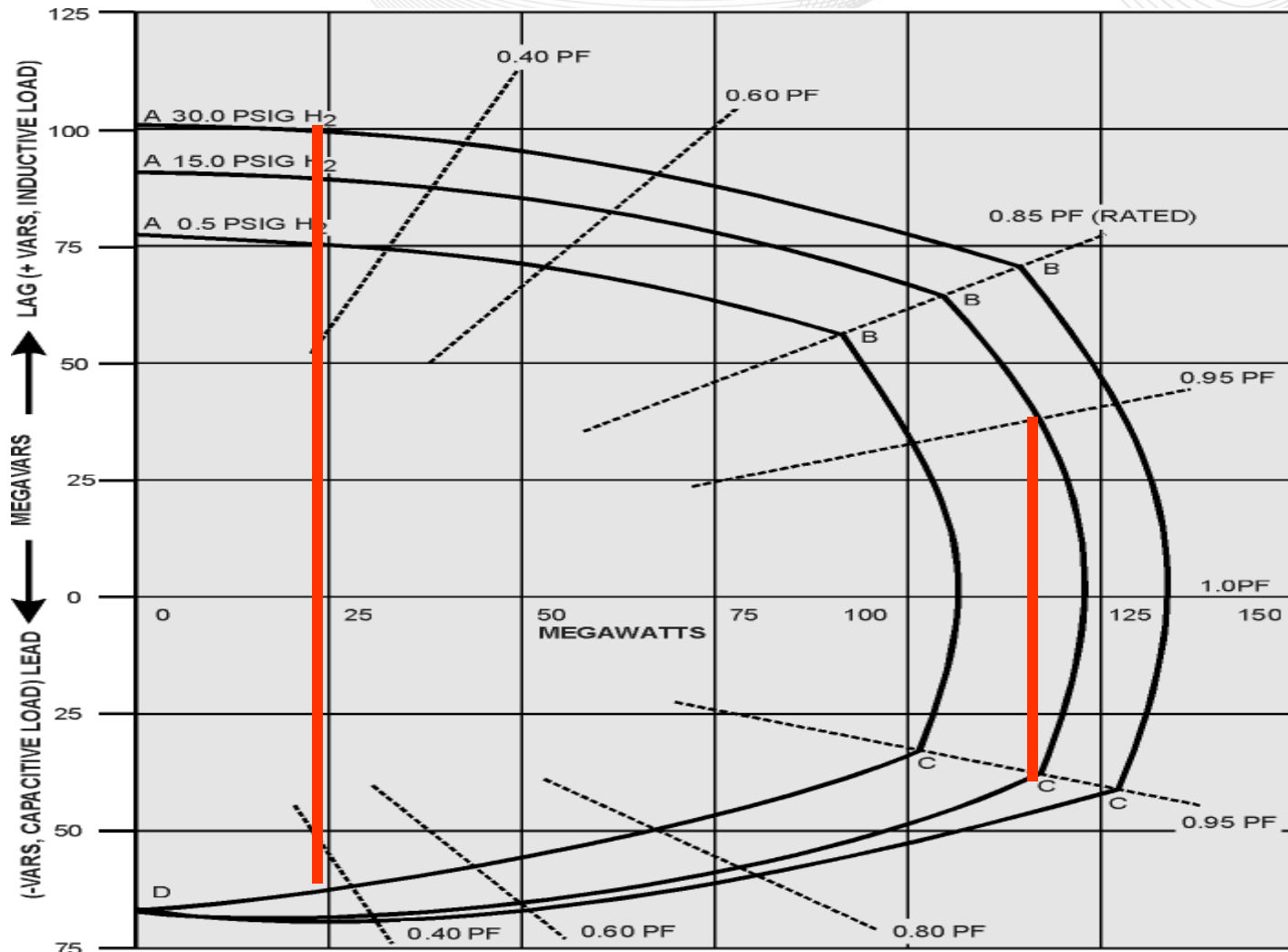


- Generation Owners required to report through eDART
  - MW Outages (just described)
  - **Unit MVAR Capability changes**
  - Voltage Regulator Outages
  - Unit Governor Outages
  - Power System Stabilizer
  - MVAR Testing Ticket



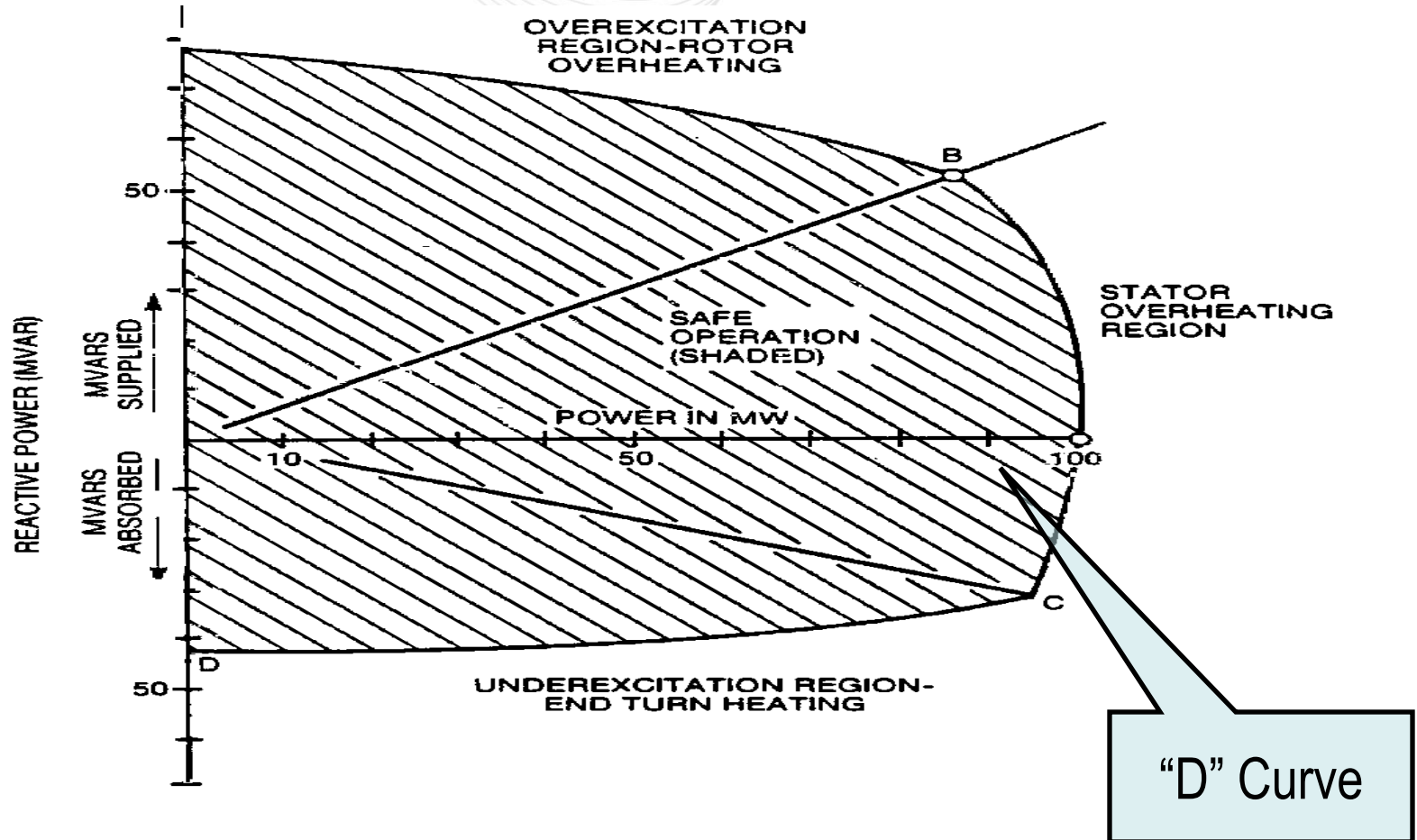
- Estimated Start Date/Time must be prior to Estimated End Date/Time
- Estimated End Date/Time can only be Unknown for Emergency Tickets
- MVAR Ticket Only
  - MVAR Max values must decrease or stay constant as MW Point value increases
  - MVAR Min values must increase or stay constant as MW Point value increases





CURVE AB LIMITED BY FIELD HEATING  
 CURVE BC LIMITED BY ARMATURE HEATING  
 CURVE CD LIMITED BY ARMATURE CORE END HEATING

ND9051\1GEN22



**GENERATOR CAPABILITY CURVE**

- Data to be reported for each unit:

## 1) **Continuous Unit Reactive Capability Curve**

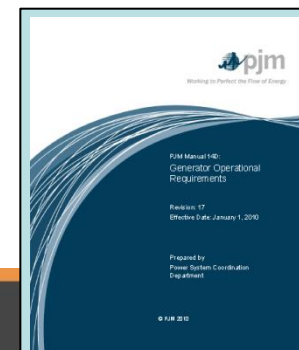
- Required
- Realistic usable reactive output
- Sustainable over the operating range of unit
  - Temperature restrictions (>95 degrees) accounted for
- Used in PJM EMS
- Report through eDART

## 2) **Design Unit Reactive Capability Curve**

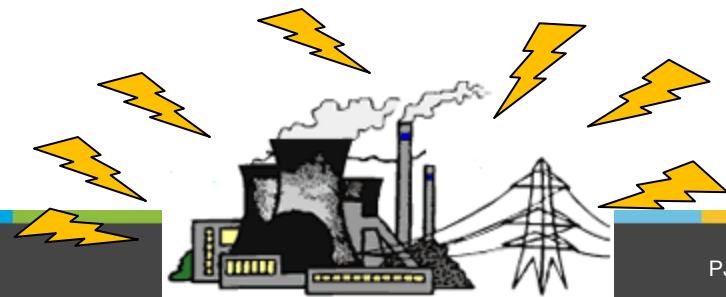
- Provide if available
- Theoretical reactive output of unit
- Used to validate other reactive data that is reported
- Forward to PJM Generation Dept (not through eDART)



- Rules listed in Attachment D of Generator Operational Requirements – Manual M14D
  - MW and MVAR are NET at the LOW side of the unit step up transformer
    - excluding station service load
  - Minimum of 2 points MUST be provided
  - Maximum of 8 points MAY be provided
  - Must maintain “shape” of Reactive Capability Curve



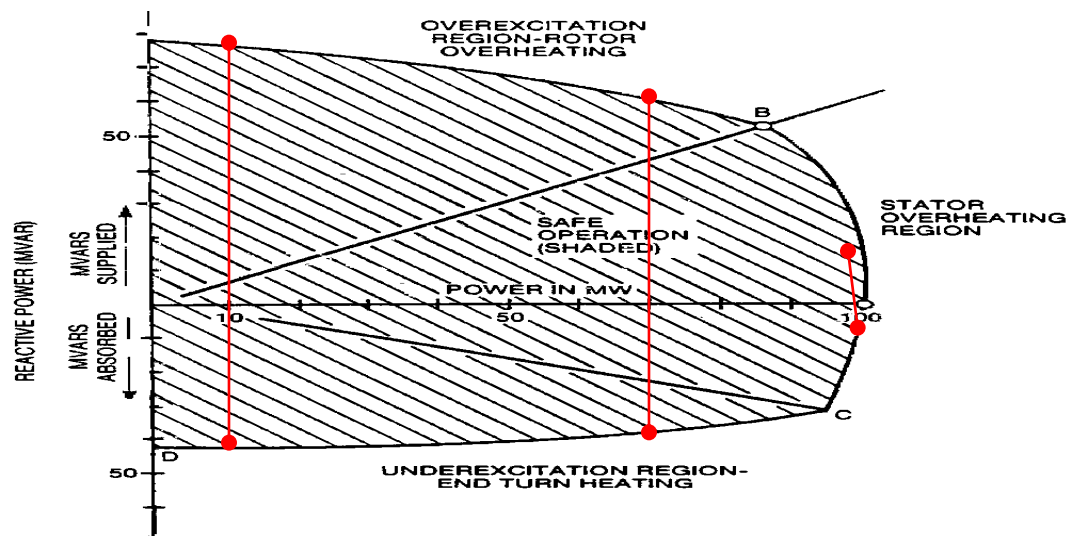
- Real-Time Unit Reactive Capability Reporting Process
- Generation Owner/operator must report the following information immediately to PJM Power Dispatcher and the respective LCC
  - Whenever a unit's reactive capability is reduced or planned to be reduced
  - Whenever a unit's actual reactive output has reached a limit that is less than the unit's normal specified capability
  - Whenever a unit's automatic voltage regulation is off or planned to be off





- Data Format

	MW	Minimum MVAR	Maximum MVAR
Point 1	10	-50	80
Point 2	70	-45	75
Point 3	100	-10	20
Point 4			
Point 5			
Point 6			
Point 7			
Point 8			



GENERATOR CAPABILITY CURVE

## New Generator Outage Ticket

User ID: \_\_\_\_\_ Company: \_\_\_\_\_  
 Generation Type:  Unit Name:   
 Company Ticket ID:  Date (MM/DD/YY):  Hour (HH24:MI):   
 Description:  Est./Ramp Start:  Est. End:   
 End Date Unknown ☐

Emergency: ☐ New Default: ☒

Capability Adj. MVAR Adder:

EMS Equipment Name	Initial			Adjusted		
	MW Points	MVAR Limit Min	MVAR Limit Max	MW Points	MVAR Min	MVAR Max
1 GEN UNIT	10	-4	8	<input type="text"/>	<input type="text"/>	<input type="text"/>
1 GEN UNIT	35	-4	8	<input type="text"/>	<input type="text"/>	<input type="text"/>
1 GEN UNIT	36	-4	8	<input type="text"/>	<input type="text"/>	<input type="text"/>
1 GEN UNIT	37	-4	8	<input type="text"/>	<input type="text"/>	<input type="text"/>
1 GEN UNIT				<input type="text"/>	<input type="text"/>	<input type="text"/>
1 GEN UNIT				<input type="text"/>	<input type="text"/>	<input type="text"/>
1 GEN UNIT				<input type="text"/>	<input type="text"/>	<input type="text"/>
1 GEN UNIT				<input type="text"/>	<input type="text"/>	<input type="text"/>

Click on MVAR button

Check "Emergency" if change was unplanned

Check "New Default" if change is permanent

Ability to shift entire D curve

Unit MW/MVAR capability and adjustment fields appear.

- Generation Owners required to report through eDART
  - MW Outages (previously described)
  - Unit MVAR Capability changes (just described)
  - **Voltage Regulator Outages**
  - Unit Governor Outages
  - Power System Stabilizer
  - MVAR Testing Ticket



Select Generation Type and Unit Name

Enter Start/End date and hour

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- Feedback
- My eDART
- Upload
- Download
- Gen. Tickets
- Instantaneous Reserve Check
- Minimum Gen. Report
- PJM Status Report
- Online Help
- Logout

Click on Volt. Reg. button

Check Out of Service and/or Emergency

### New Generator Ticket

User ID: **seminarg6** Company: **SBT Gen Comp 6**

Generation Type: **Nuclear** Unit Name: **Comp 6 Nuclear**

Company Ticket ID:

Description:

Est./Ramp Start:

Est. End:

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** **Submit Form** **Main Menu**

- Generation Owners required to report through eDART
  - MW Outages (previously described)
  - Unit MVAR Capability changes (previously described)
  - Voltage Regulator Outages (just described)
  - **Unit Governor Outages**
  - Power System Stabilizer
  - MVAR Testing Ticket



# Governor Tickets

Select Generation Type and Unit Name

Enter Start/End date and hour

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Feedback

My eDART

Upload

Download

Gen. Tickets

Instantaneous Reserve Check

Minimum Gen. Report

PJM Status Report

Online Help

Logout

**New Generator Ticket**

User ID: **seminarg6** Company: **SBT Gen Comp 6**

Generation Type:  Unit Name:

Company Ticket ID:

Description:

Est./Ramp Start:

Est. End:

End Date Unknown ☐

**Governor Ticket Info**

Out of Service: ☐ Yes ☒ No

Emergency: ☐ Yes ☒ No

Click on Governor button

Check Out of Service and/or Emergency

- Generation Owners required to report through eDART
  - MW Outages (previously described)
  - Unit MVAR Capability changes (previously described)
  - Voltage Regulator Outages (just described)
  - Unit Governor Outages
  - **Power System Stabilizer**
  - MVAR Testing Ticket





- Capture of PSS Outages NERC Requirement
- Currently in certain cases PJM notified over the phone
  - More audit ability necessary



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.*
- 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:  

Description:

Date (MM/DD/YY)  

Hour (HH24:MI)  

Est./Ramp Start:    

Est. End:    

End Date Unknown ☐

MW
Volt Reg
MVAR
Governor
MVAR Test
PSS

**Power System Stabilizer Ticket Info**

Power System Stabilizer Out of Service: ☐ Emergency: ☐

Clear
Submit Form
Main Menu

- New PSS Outage ticket type similar to Governor Outage ticket type.
- Checkboxes available for Out of Service and Emergency.
- *Note: PSS button only available for units with PSS.*

**Generator Ticket Selection Form**

Company: Baltimore Gas Electric Company

**Ticket Type** (highlighted): PSS

**Outage Type** (highlighted): N/A (Reactive Tickets), Planned, Unplanned, Maintenance, Forecasted Planned

**Unit Type**: [Dropdown]

**Reduction**: Equal to [Dropdown] [Text Box]

**Installed Capacity**: Equal to [Dropdown] [Text Box]

**Ticket Status**: [Dropdown]

**Revision Status**: [Dropdown]

**Submission Date (MM/DD/YYYY)**: From: [Text Box] To: [Text Box]

**Est. Start Date (MM/DD/YYYY)**: From: [Text Box] To: [Text Box]

**Est. End Date (MM/DD/YYYY)**: From: [Text Box] To: [Text Box]

**Actual Start Date (MM/DD/YYYY)**: From: [Text Box] To: [Text Box]

**Actual End Date (MM/DD/YYYY)**: From: [Text Box] To: [Text Box]

**Occuring During (MM/DD/YYYY)**: From: [Text Box] To: [Text Box]

**Buttons**: Apply Filter, Main Menu

**Generator Ticket (Review/Revise)**

User ID: id Ticket Number: 0 Company: PJM TEST

Generation Type: Diesel/CT Unit Name: Unit name 1 Est./Ramp Start: 04/02/2009 00:00

Ticket Status: Active Timestamp: 04/16/2009 08:56 Est. End: 04/25/2009 11:11

Company Ticket ID: Actual Start: 04/07/2009 00:00 Actual End:

**Description**: This is a test

**PJM Comments**

**Power System Stabilizer Ticket Info** (highlighted): Power System Stabilizer Out of Service: ☐ Emergency: ☐

**Buttons**: Add New Revision, Submit, Refresh, History Log, Main Menu

**Revisions** (highlighted):

Rev. ID	User ID	Rev. Start Date Time	Rev. End Date Time	Rev. Status	Timestamp
435632	id	04/02/2009 00:00		Received	04/16/2009 09:02
435631	ID	04/20/2009 00:00		Canceled by Company	04/16/2009 08:30
435630	id	04/13/2009 00:00		Submitted	04/16/2009 09:02

- 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="radio"/> Planned <input type="radio"/> Unplanned <input type="radio"/> Maintenance <input type="radio"/> Forecasted Planned	PSS	<input type="text"/>
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"/>	
Actual Start Date (MM/DD/YYYY)	Actual End Date (MM/DD/YYYY)	
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 all ticket type report filters.
- Report data display to be similar to Governor Outage ticket type.

**Ticket History**

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 XXXXXX	No	No	01/05/2009 12:00	02/05/2009 12:00	11/02/2008 00:00		Active
294259	mw volt test2	Unit YYYYYY	No	Yes	01/05/2009 12:00	02/05/2009 12:00			Canceled by PJM
294290		Unit ZZZZZZ	No	No	04/02/2009 00:00	04/25/2009 11:11	04/07/2009 00:00		Active
294291	VoltReg Test	Unit 111111	No	Yes	04/20/2009 00:00	04/25/2009 11:11	04/14/2009 00:00		Active
294292	VoltReg Test2	Unit 222222	No	No	04/20/2009 01:23	05/20/2009 01:23			Canceled by PJM



**Generation Owners Report**

Company: PJM TEST

Ticket ID:

Ticket Type: **PSS**

Unit Name:

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

New Default Filter: ☐

Capacity:  Reduction:

Estimated Start Date (MM/DD/YYYY):  Estimated End Date (MM/DD/YYYY):

Actual Start Date (MM/DD/YYYY):  Actual End Date (MM/DD/YYYY):

Tickets Occurred During (MM/DD/YYYY):  Active Tickets: ☐

From:  To:

Apply Filter Refresh Main Menu

- This includes the Generator and Transmission Owners Reports.

Generation Owners Report									
This report does not automatically contain Forecast Planning Tickets. If you want to include them, please change your selection by clicking Go to Filter.									
<div>Apply Filter</div> <div>Go to Filter</div>									
1									
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
<div>Back</div>									

D-Curve Report									
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	OYSTERCR FR 1 GEN UNIT	10	↕	↕
						OYSTERCR FR 1 GEN UNIT	35	↕	↕
						OYSTERCR FR 1 GEN UNIT	36	↕	↕
						OYSTERCR FR 1 GEN UNIT	37	↕	↕
						OYSTERCR FR 1 GEN UNIT	38	↕	↕
						OYSTERCR FR 1 GEN UNIT	39	↕	↕
						OYSTERCR FR 1 GEN UNIT	40	↕	↕
Unit 1	Diesel/CT	32	TBD	TBD	Yes	OYSTERCR FR 1 GEN UNIT	41	↕	↕
						OYSTERCR FR 2 GEN UNIT	10	↕	↕
						OYSTERCR FR 2 GEN UNIT	35	↕	↕
						OYSTERCR FR 2 GEN UNIT	36	↕	↕
						OYSTERCR FR 2 GEN UNIT	37	↕	↕
						OYSTERCR FR 2 GEN UNIT	38	↕	↕
						OYSTERCR FR 2 GEN UNIT	39	↕	↕
						OYSTERCR FR 2 GEN UNIT	40	↕	↕
						OYSTERCR FR 2 GEN UNIT	41	↕	↕

Back

- Identification of units having Power System Stabilizer will be added to both the generator and transmission versions of the D-Curve Report.



- Generation Owners required to report through eDART:
  - MW Outages (previously described)
  - Unit MVAR Capability changes (previously described)
  - Voltage Regulator Outages (previously described)
  - Unit Governor Outages (just described)
  - **MVAR Testing Ticket**



# MVAR Testing Tickets

Select Generation Type and Unit Name

Enter Start/End date and hour of MVAR Testing

Click on MVAR Test button

**New Generator Ticket**

User ID: **seminarg6** Company: **SBT Gen Comp 6**

Generation Type:  Unit Name:

Company Ticket ID:

Description:

Est./Ramp Start:

Est. End:

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

**MVAR Test**

**Current eDART D-Curve**

EMS Equipment Name	MW Points	Min	Max

Clear Main Menu

"D-curve" data is displayed for reference

Changes to MVAR Capability as result of test must be submitted through a MVAR ticket (previously described).

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Feedback

My eDART

Upload

Download

Gen. Tickets

Instantaneous Reserve Check

Minimum Gen. Report

PJM Status Report

Online Help

Logout

- eDart
  - General Overview
  - How to Create a New Generation Outage Ticket
  - View, Revise, Cancel Generator Outage Ticket
  - Other Required Generation Unit Information Reporting Through eDART
  - eDart Generation Report
  - Updates to eDART



Click on Submitted Tickets

SBTG6

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Report

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## Generator Tickets Main Menu

Summer Peak Period Maintenance Margin Season

Start: 06/13/2011 End: 09/09/2011

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	0	0	0	0	0	0
Revised Tickets	0	0	0	0	0	0
Current Tickets	0	0	0	0	0	0
Approved Tickets	0	0	0	0	0	0
Future Tickets	0	0	0	0	0	0
Tickets History						

Owners Report

Maint. Margin Log

D-Curve Report

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The screenshot displays the 'Submitted Outages' section of the PJM eSuite application. A sidebar on the left contains navigation links such as CAM, eCapacity, eData, EES, eFTR, eMKT, eMTR, eSchedules, eSuite Messages, Load Response, NICCapacity, Oasis, and Non - eSuite Tools. The main content area features a table of outages with the following data:

Ticket ID	Comp. Ticket ID	Submission Date/Time	Ticket Type	Unit Type	Outage Type	Unit Name	Installed Capacity	Reduction	Est. Start Date/Time	Cause
<a href="#">20466</a>	124	01/25/2006 09:51	MW	Steam/Fossil	Maintenance	TEST_UNIT_F1	850	50	05/01/2020 00:00	Environmental
<a href="#">20466</a>	124	01/25/2006 09:51	MW	Steam/Fossil	Maintenance	TEST_UNIT_F1	850	50	05/01/2020 00:00	Environmental
<a href="#">20468</a>	124	01/25/2006 09:52	MW	Steam/Fossil	Maintenance	TEST_UNIT_F1	850	50	05/01/2020 00:00	Environmental
<a href="#">20468</a>	124	01/25/2006 09:52	MW	Steam/Fossil	Maintenance	TEST_UNIT_F1	850	50	05/01/2020 00:00	Environmental
<a href="#">20469</a>	124	01/25/2006 09:52	MW	Steam/Fossil	Maintenance	TEST_UNIT_F1	850	50	05/01/2020 00:00	Environmental
<a href="#">20469</a>	124	01/25/2006 09:52	MW	Steam/Fossil	Maintenance	TEST_UNIT_F1	850	50	05/01/2020 00:00	Environmental
<a href="#">20472</a>	1244	01/25/2006 09:57	MW	Steam/Fossil	Unplanned	TEST_UNIT_F1	850	60	06/01/2050 00:00	Opacity
<a href="#">20472</a>	1244	01/25/2006 09:57	MW	Steam/Fossil	Unplanned	TEST_UNIT_F1	850	60	06/01/2050 00:00	Opacity
<a href="#">20473</a>		01/26/2006 08:07	MW	Steam/Fossil	Unplanned	TEST_UNIT_F1	850	850	05/01/2020 12:00	Pump Work/Problem
<a href="#">20473</a>		01/26/2006 08:07	MW	Steam/Fossil	Unplanned	TEST_UNIT_F1	850	850	05/01/2020 12:00	Pump Work/Problem
<a href="#">20476</a>	124	01/26/2006 10:02	MW	Steam/Fossil	Maintenance	TEST_UNIT_F1	850	50	05/01/2020 00:00	Environmental

## Generator Tickets Main Menu

Summer Peak Period Maintenance Margin Season

Start: 06/13/2011 End: 09/09/2011

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

0

0

0

0

0

0

Revised Tickets

0

0

0

0

0

0

Current Tickets

0

0

0

0

0

0

Approved Tickets

0

0

0

0

0

0

Future Tickets

0

0

0

0

0

0

Tickets History

Owners Report

Maint. Margin Log

D-Curve Report

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Reserve Check

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PJM Status  
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Logout

Click on Tickets  
History

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> eCapacity  
> eData  
> EES  
> eFTR  
> eMKT  
> eMTR  
> eSchedules  
> eSuite Messages  
> Load Response  
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> Oasis  
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> eDART  
> eGADS  
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## Outage History

Company: **Frank Gen**

<b>Ticket ID</b>	<b>Unit Type</b>	<b>Unit Name</b>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<b>Company Ticket ID</b>	<b>Reduction</b>	<b>Installed Capacity</b>
<input type="text"/>	Equal to <input type="text"/>	Equal to <input type="text"/>
<b>Outage Type</b>	<b>Ticket Type</b>	<b>Cause</b>
Planned Unplanned Maintenance Forecasted Planned	MW <input type="text"/>	<input type="text"/>
<b>Est. Start Date (MM/DD/YY)</b>	<b>Est. End Date (MM/DD/YY)</b>	
From: <input type="text"/> To: <input type="text"/>	From: <input type="text"/> To: <input type="text"/>	
<b>Actual Start Date (MM/DD/YY)</b>	<b>Actual End Date (MM/DD/YY)</b>	
From: <input type="text"/> To: <input type="text"/>	From: <input type="text"/> To: <input type="text"/>	

Apply Filter Main Menu

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> eCapacity  
> eData  
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> eFTR  
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> eMTR  
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> Oasis  
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> eDART  
> eGADS  
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Trans. Tickets  
Instantaneous Reserve Check  
Minimum Gen. Report  
PJM Status Report

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## Outage History

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

Apply Filter Go to Filter

1	Ticket ID	Comp. Ticket ID	Unit Type	Outage Type	Unit Name	Installed Capacity	Reduction	Est. Start Date/Time	Est. End Date/Time	Actual Start Date/Time	Actual End Date/Time	Cause
	20466	124	Steam/Fossil	Maintenance	TEST_UNIT_F1	850	50	05/01/2020 00:00	05/01/2020 23:00			Environmenta
	20466	124	Steam/Fossil	Maintenance	TEST_UNIT_F1	850	50	05/01/2020 00:00	05/01/2020 23:00			Environmenta
	20468	124	Steam/Fossil	Maintenance	TEST_UNIT_F1	850	50	05/01/2020 00:00	05/01/2020 23:00			Environmenta
	20468	124	Steam/Fossil	Maintenance	TEST_UNIT_F1	850	50	05/01/2020 00:00	05/01/2020 23:00			Environmenta
	20469	124	Steam/Fossil	Maintenance	TEST_UNIT_F1	850	50	05/01/2020 00:00	05/01/2020 23:00			Environmenta
	20469	124	Steam/Fossil	Maintenance	TEST_UNIT_F1	850	50	05/01/2020 00:00	05/01/2020 23:00			Environmenta
	20472	1244	Steam/Fossil	Unplanned	TEST_UNIT_F1	850	60	06/01/2050 00:00	06/01/2050 23:00			Opacity
	20472	1244	Steam/Fossil	Unplanned	TEST_UNIT_F1	850	60	06/01/2050 00:00	06/01/2050 23:00			Opacity
	20473		Steam/Fossil	Unplanned	TEST_UNIT_F1	850	850	05/01/2020 12:00	05/01/2020 16:00			Pump Work/Proble
	20473		Steam/Fossil	Unplanned	TEST_UNIT_F1	850	850	05/01/2020 12:00	05/01/2020 16:00			Pump Work/Proble
	20476	124	Steam/Fossil	Maintenance	TEST_UNIT_F1	850	50	05/01/2020	05/01/2020			Environmenta

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## Generator Tickets Main Menu

Summer Peak Period Maintenance Margin Season

Start: 06/13/2011 End: 09/09/2011

Current Maintenance Margin

Mid-Atlantic

N/A

Western-Southern

N/A

Create New  
Ticket

View/Revise  
Ticket

SBTG6

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Logout

MW Volt. Reg. MVAR Governor MVAR Test PSS

Submitted Tickets

0

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0

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0

0

Revised Tickets

0

0

0

0

0

0

Current Tickets

0

0

0

0

0

Approved Tickets

0

0

0

0

0

Future Tickets

0

0

0

0

0

Tickets History

Click on D-Curve  
Report

Owners Report

Maint. Margin Log

D-Curve Report

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> eMKT  
> eMTR  
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> eSuite Messages  
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> NICapacity  
> Oasis  
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> eDART  
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> eFuel

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Minimum Gen. Report  
PJM Status Report

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## D-Curve Report

Company: **Frank Gen**

Unit Type	Unit Name	EMS Equipment Name
All		

All  
Combined Cycle  
Diesel/CT  
Diesel/CT (Small Unit)  
Geothermal  
Hydro  
Hydro - Run of River  
Nuclear  
Nug  
Solar  
Steam/Fossil

Submit Main Menu

Select Unit Type and Unit Name from pull-downs and click on Submit Form

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- eDart
  - General Overview
  - How to Create a New Generation Outage Ticket
  - View, Revise, Cancel Generator Outage Ticket
  - Other Required Generation Unit Information Reporting Through eDART
  - eDart Generation Report
  - Updates to eDART



- This process was added to coordinate the overall review of the Reactive Capability Curves in order to keep all Generation Operators, Transmission Operators and PJM Dispatch in sync with the reactive capability of the system



- Automated process for coordination of bi-annual D-Curve Review Process
- When a Generation Operator is asked to review capability curves, a notification message will be posted to the log-in screen labeled, “Application Message”
- Generation Operators will update D-Curve information in their systems
- D-Curve button will change to **RED** on the Generation Menu and remain so until company completes the review process by updating the information in their system

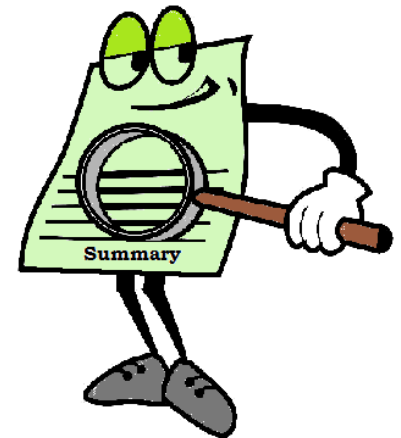


- Once the information is entered for all units, the Generation Operator can acknowledge the report by clicking the “Acknowledge” button on the D-Curve Report
- The D-Curve button will then return to its **BLUE** color





- Generator Outage Types
  - Forecasted Planned, Maintenance, Unplanned
- Reporting methods for outages
  - eDART, eMKT, eGADS, Verbal
- eDART Functionality
  - MW Outages, MVAR Capability changes, Voltage Regulator Outages, Governor Outages, MVAR Testing



- MW Tickets
  - 610-666-8809 (PJM)
- MVAR and VR Tickets
  - 610-666-8808 (PJM)
- Governor Tickets - 610-666-8924
- Technical Support - 610-666-8886



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