Generation Initial Training Program

eDART Intro & Gen Checkout

PJM State & Member Training Dept.

Students will be able to:

- Identify the tools used to participate in the various PJM markets

eDART

– A suite of electronic applications used to facilitate dispatcher-to-dispatcher communications, along with other engineering communication and coordination functions with regards to:

- Unit outage requests

- Updates to reactive capability curves (D-curves)

- Voltage regulator statuses among
  other generation and
  transmission functionalities

eDART

- eDART's benefits to PJM membership include:

  - A quick, 24/7 process for outage and model change request submittal

  - Easy access to comprehensive information

  - A simple and user-friendly online interface

- Through eDART, a user can filter outage information based on:

  - Start date, end date, ticket number and other criteria to help ease the dissemination of information to help make a comprehensive range of reports

eDART Applications

Production

- Feedback
- My eDART
- Upload
- Download
- Hydro Calculator
- Gen. Tickets
- Trans. Tickets
- Instantaneous Reserve Check
- Minimum Gen. Report
- PJM Status Report
- NERC Data
- Facility Data
- Online Help
- Logout

Used to schedule the output of Susquehanna River Hydroelectric Assets

(IRC)
Used to verify if enough reserve MW available.

Used to verify generation will not over-exceed light load margins.

Used to record and schedule:

-Generator MW Outages

-Voltage Regulator Outages

-Governor Outages

-D-Curve Adjustments

-Reactive Tests

Reactive Test Results Tickets: submit test results and download test letter.

GO Survey: view and respond

Blackstart Calculator used to capture unit data and determine critical load in system restoration plans

Voltage Schedules: view and acknowledge

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Used to view non-generator transmission facility outages.

Current Status Report
15 minute snapshot of current status

Peak Status Report
Forecast of system condition for the peak of the day

Gen Checkout
Used to compare and highlight discrepancies between Market Gateway bids and Available Capacity. Brings Markets and Operations together in real-time

Used to manage PSSE mapping information for the purpose of sending and receiving info to/ from NERC SDX

What is Gen Checkout ?

- eDART Generation Checkout – This program compares:

  - Unit schedule availability/bid data in Markets Gateway,

  - Unit outages submitted via Generator Ticket (eDART)

  - Stated capability to ensure accurate market data and capacity/reserve projections

- Generation Checkout occurs twice daily

  - 02:00 to check out for the same day

  - 13:30 to check out for the next day

Discrepancy Handling

Gen Checkout is basically a reporting mechanism

- All resolutions handled via Markets Gateway and/or Gen tickets

- Resolutions for the Today Report must be handled by 0400

  – All call initiates process at approx. 2:00 am

- Resolutions for the Tomorrow Report must be handled by 14:15

  – 13:30 unit commitment report triggers Gen Checkout

> For more information on Markets Gateway functionality, please go to
> **http://www.pjm.com/markets-and-operations/etools/markets-gateway.aspx**
>
> For more information on eDART – Generator Ticket functionality, please go to
> **http://www.pjm.com/markets-and-operations/etools/edart.aspx**

Comparison Overview

- Gen Checkout on a per unit basis, lists the Markets Gateway values and compares them to outages in eDART

- Any issues are highlighted (yellow ⬜ or red 🟥)

- Companies "Acknowledge" when Markets Gateway values are in sync with outage availability (within a specified tolerance)

  – Acknowledgement will be for Today or Tomorrow

Gen Type	Warn. Level %	Ack. Level %
Combustine Turbine	15	20
Diesel	20	50
Hydro	99	200
Nuclear	5	10
Renewable	99	200
Steam/Fossill	15	20
Wind	99	200

Gen Checkout Logic
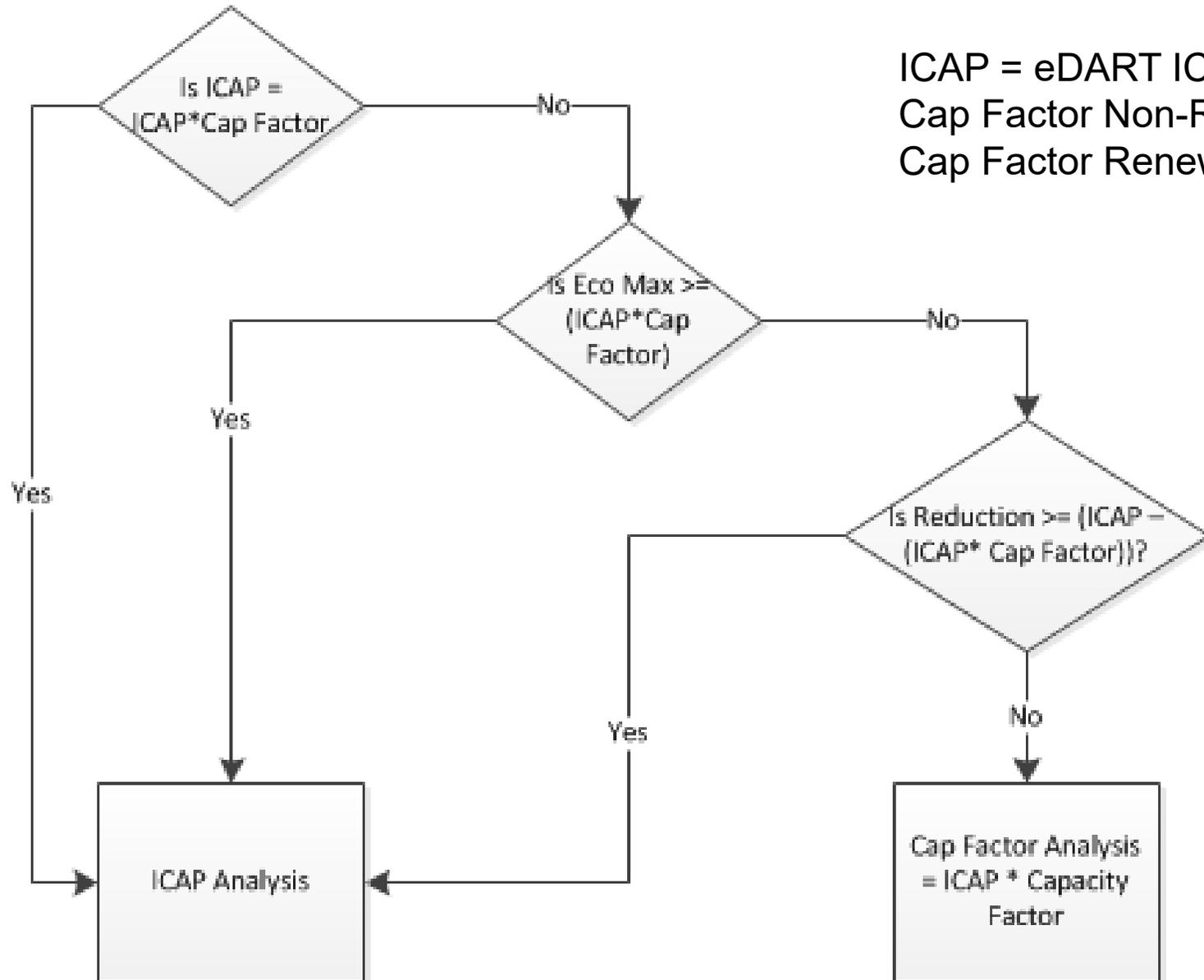
ICAP = eDART ICAP
Cap Factor Non-Renewable = 1
Cap Factor Renewable < 1

Gen Checkout Calculations

ICAP Analysis

Condition	Adjusted Capacity, ADJ. ICAP	Adjusted ICAP Diff (%)
Economic	$Adj.ICAP_{EC} = ICAP + Amb.Adj. - \text{Re}\,duct - Incremental$ $* Incremental = EmergencyMax - EconomicMax$	$DIFF = \dfrac{ADJ.CAP_{EC} - EconomicMax}{ADJ.CAP_{EC}} \times 100$
Emergency	$Adj.ICAP_{EM} = ICAP + Amb.Adj. - \text{Re}\,duct$	$DIFF = \dfrac{ADJ.CAP_{EM} - EmergencyMax}{ADJ.CAP_{EM}} \times 100$

*Note: Ambient Air values will be the opposite sign of what is
reported in Generator Tickets
-For Cap Factor Analysis, ICAP = ICAP*Capacity Factor

Questions?

PJM Client Management & Services
Telephone: (610) 666-8980
Toll Free Telephone: (866) 400-8980
Website: www.pjm.com

The Member Community is PJM's self-service portal for members to search
for answers to their questions or to track and/or open cases with
Client Management & Services