

Dual Fuel Schedule Requirements Education

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Markets Implementation Committee

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- Summary the existing energy market must offer requirements for Generation Capacity Resources
- Review Markets Gateway functions on fuel limitation and parameter limit exception

Generation Capacity Resources

For resources not rendered on generator planned, maintenance, or forced outage

Shall submit offers for available capacity, including any portion that is self-scheduled

Intermittent & Capacity Storage Resources

Shall satisfy the must offer requirement by either self-scheduling or offering the unit as a dispatchable resource

Hourly day-ahead self-scheduled values may vary hour to hour from the capacity commitment

- **Schedule vs. Unit**

- Offer curve, startup and no load costs, startup and notification times, operational limits are schedule based.
- Values in “Unit > Hourly Updates” override schedule values. Eco limits, Emer limits and commit status(MustRun, Emergency, Economic, Not available) apply to the whole unit on all schedules.

- **Daily vs. Hourly**

- Any hourly changes made on the Offer Updates or Detail Updates screens in Markets Gateway supersede the daily values.
- Hourly Min Run time and Notification time are considered only in Real-time market
- DA market only consider schedule’s daily availability. After re-bid, Only Dual Fuel units can submit hourly differentiated schedule available for cost-based schedules for uncommitted hours.

The information on the “Unit Limitations” page is **used for situational awareness and multi-day operations planning**. The parameters entered on this page **are not** utilized in the Day-Ahead or Real-Time Market clearing engines.

- “Unit Level” Limitations**
- Limitation Type: Cooling Water, Demineralized Water, or Other Consumables
- “Fuel Level” Limitations**
- Select Fuel Type related to limitation
 - Limitation Type: Emissions, Onsite Fuel

Enter hours remaining at full load between limitation start and end times

Enter additional hours at full after end time (e.g. from fuel delivery or roll-over of emissions hours)

Yes or No

Calculation using actual on hours to count down Member-entered “Hrs. Remaining at Full Load” to create a dynamic estimate of runtime remaining due to a limitation

- Bilaterals
- Con Edison
- Demand
- ▶ Demand Response
- ▼ Generator
 - Unit
 - Schedules**
 - Dispatch Lambda
 - Market Results
 - Regulation Market
 - Synchronized Reserve Mar
 - Day-Ahead Scheduling Res
 - Unit Limitations
- Interface Pricing
- Opportunity Cost Calculator
- Parameter Limits
- Price Responsive Demand
- Pseudo Tie Transaction
- ▶ Public
 - System Utilities
 - Up-To-Transaction
 - Virtual
 - Weather Forecast

Market Day
Portfolio
Location
Schedule

Offers
Offer Updates
Detail
Detail Updates
Manager
Selection
Availability Update
Restriction Information
TPS Schedule Switch

Operational Restrictions

Operational Restriction Other

Dual Fuel

Dual Fuel Availability MW's to Transition
 Time to Transition (mins)

Pipeline Switching

Pipeline A	<input type="text"/>	A to B Transition Time (mins)	<input type="text"/>
Pipeline B	<input type="text"/>	A to B Transition MW	<input type="text"/>
Pipeline C	<input type="text"/>	A to C Transition Time (mins)	<input type="text"/>
Pipeline D	<input type="text"/>	A to C Transition MW	<input type="text"/>
		A to D Transition Time (mins)	<input type="text"/>
		A to D Transition MW	<input type="text"/>

Gas Day Nominations (Beginning 10:00AM of Market Day)

Pipeline/LDC Name	Type	Current Firm Nomination (Dths)	Current Total Nomination (Dths)	No Nomination Reason

“Schedules > Restriction Information > Operational Restrictions Other” field was left in place for Dispatcher’s awareness. Resource Limited Units should be reported to PJM through the “Unit Limitations” page of the PJM Markets Gateway.

When an actual physical constraint affect the operational parameter of a unit, it is possible to request the Temporary Exception from “Parameter Limits > Exception” tab on Markets Gateway. Temporary Exception is not modeled in DA or RT clearing engines directly. It allows a unit to modify the parameter on cost schedules or price PLS schedule.

- Generator
- Unit
- Schedules
- Dispatch Lambda
- Market Results
- Regulation Market
- Synchronized Reserve Ma
- Non-Synchronized Reserv
- Secondary Reserve Marke
- Unit Limitations
- Interface Pricing
- Opportunity Cost Calculator
- Parameter Limits
- Price Responsive Demand
- Pseudo Tie Transaction
- Public
- System Utilities

Participant
Exception
Approve

Request ID	Location	Min. MW	Max. MW	Min. Runtime	Max. Runtime	Min. Downtime	Max. Daily Starts	Max. Weekly Starts	Turn Down Ratio	Request Type	Start Date	End Date	Justification	Status
<input checked="" type="checkbox"/>	<input type="text"/>			<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	Temp Except	<input type="text"/>	<input type="text"/>	<input type="text"/>	Pend

Submit requested parameter value

Type shall be 'Temp Except'

Must enter justification for the exception

Chair:

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SME/Presenter:

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Dual Fuel Schedule Requirements - Education



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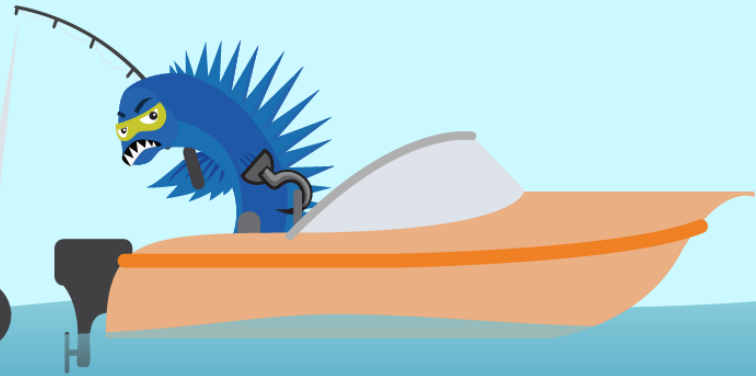
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**PROTECT THE
POWER GRID**

**THINK BEFORE
YOU CLICK!**



**BE ALERT TO
MALICIOUS PHISHING
EMAILS**



**Report suspicious email activity to PJM.
Call (610) 666-2244 or email it_ops_ctr_shift@pjm.com**