

Unit Outage and Ramp Coordination

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Generation Department

SOS
June 6, 2019

- Coordinating Transmission Outages with scheduled Generation Outages and Effect on Reliability Studies
- Longer Ramp Up Periods Compared to Other Unit Types
- Short Lead Time for Updates on Breaker Close to Full Ramp Up
- Understanding Need for Ticket to Extend through Ramp Up

New Generator Ticket

User ID: froggd	Company: PJM Interconnection		
Generation Type: Nuclear ▼	Unit Name: TEST UNIT 44 ROBOT ▼		

Company Ticket ID: 1234567	Date <small>(MM/DD/YYYY)</small>	Hour <small>(HH24:MI)</small>
Description: <div style="border: 1px solid gray; padding: 5px; min-height: 100px;"> Scheduled Refuel/other repairs. Unit will be back online 5/27. Unit will reach full load by 5/31. </div>	Est./Ramp Start:	05/12/2019 23:00
	Est. End:	05/31/2019 08:00
	Est. Early Return :	05/31/2019 08:00
	End Date Unknown	<input type="checkbox"/>
	Informational:	<input type="checkbox"/>

Daily Job: # Days: Start Day Delta:

MW
Volt. Reg.
MVAR
Governor
MVAR Test
PSS

MW Ticket Info

	Date <small>(MM/DD/YYYY)</small>	Hour <small>(HH24:MI)</small>		
Est. Ramp Complete:	05/14/2019	08:00	Ticket Reduction: 198	Inst. Cap: 198
Company Switch Start:	<input type="text"/>	<input type="text"/>	Cause:	Annual Inspections/Refuel ▼
Company Switch End:	<input type="text"/>	<input type="text"/>	Outage Type:	Forecasted Planned ▼

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[EDART] - [DEV] - [GENERATION - REVIEW | REVISE]

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GENERATION TICKET EDITOR

Ticket ID	313347	Company	PJM Interconnection	Company Ticket ID	1234567	ICAP	198 MW	Dual Fuel Flag	<input type="checkbox"/>
User ID	froggd	Submitted	4/11/2019 14:38:40	Control Zone	OVEC	Original Reduction	198 MW	Primary Fuel	N/A
Gen Type	Nuclear	Unit Name	TEST UNIT 44 ROBOT	Informational	NO	Effective Reduction	198 MW	Secondary Fuel	N/A
Cause	Outage Type	Ticket Status		Est. Start / Ramp Start	05/12/2019 23:00:00	Switch Start	00/00/00 00:00	Black Start Unit	<input type="checkbox"/>
Annual Inspections/Refuel	Forecasted Planned	Approved		Est. Ramp Complete	05/14/2019 08:00:00	Switch End	00/00/00 00:00		
Related Ticket ID				Est. End	05/31/2019 08:00:00	Actual Start	00/00/00 00:00		
				Est. Early Return	05/31/2019 08:00	Actual End	00/00/00 00:00		
						Forced Date	00/00/00 00:00		

Description (4000 Character Limit)

Scheduled Refuel/other repairs. Unit will be back online 5/27. Unit will reach full load by 5/31.

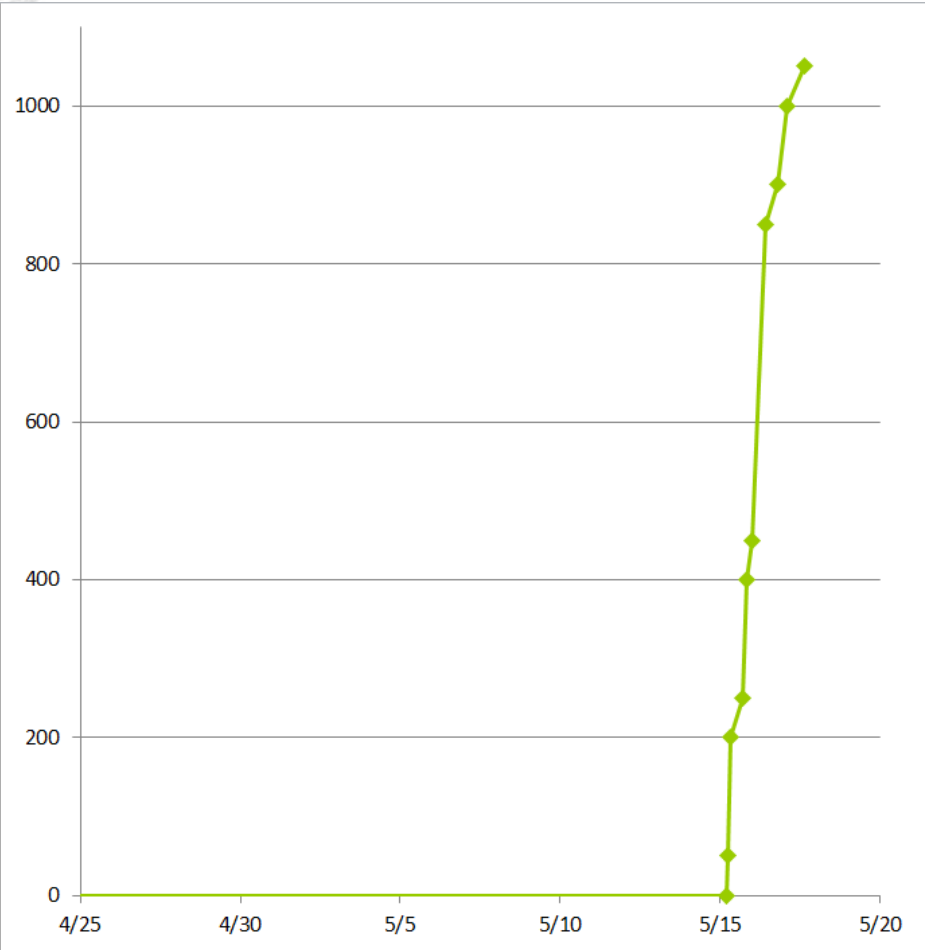
PJM Comments (4000 Character Limit)

Auto Approval Comments

Exit	Print	Add Revision	History Log	Comments Log	Study Results	Switch Log	Attachments (0)
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Revision ID	User	Revised Start Date	Revised Ramp Complete	Revised End Date	Mw Reduction	Effective Date	Revision Status	Timestamp
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Start Time	End Time	Start MW	End MW	Reduction	Duration	Description of Work
4/1/2019 0:01	5/15/2019 5:00	0	0	1055	26days 5:00:00	
5/15/2019 5:00	5/15/2019 6:00	0	50	1005	1:00:00	
5/15/2019 6:00	5/15/2019 7:30	50	200	855	1:30:00	
5/15/2019 7:30	5/15/2019 16:30	200	250	805	9:00:00	
5/15/2019 16:30	5/15/2019 20:00	250	400	655	3:30:00	
5/15/2019 20:00	5/15/2019 23:45	400	450	605	3:45:00	
5/15/2019 23:45	5/16/2019 9:30	450	850	205	9:45:00	
5/16/2019 9:30	5/16/2019 19:00	850	900	155	9:30:00	
5/16/2019 19:00	5/17/2019 2:30	900	1000	55	7:30:00	
5/17/2019 2:30	5/17/2019 15:30	1000	1050	5	13:00:00	
5/17/2019 15:30	5/17/2019 18:00	1050	1055	0	2:30:00	



- Does this warrant moving forward with an new edart field for end of outage ramp detail?
- Any thoughts on method to standardize communication of ramp details at the end of outages to TOs and PJM?
 - Similar to ramp details at the start of the outage
- Other suggestions?
 - Further education/awareness (Operator Seminar)
 - Case by case conference calls