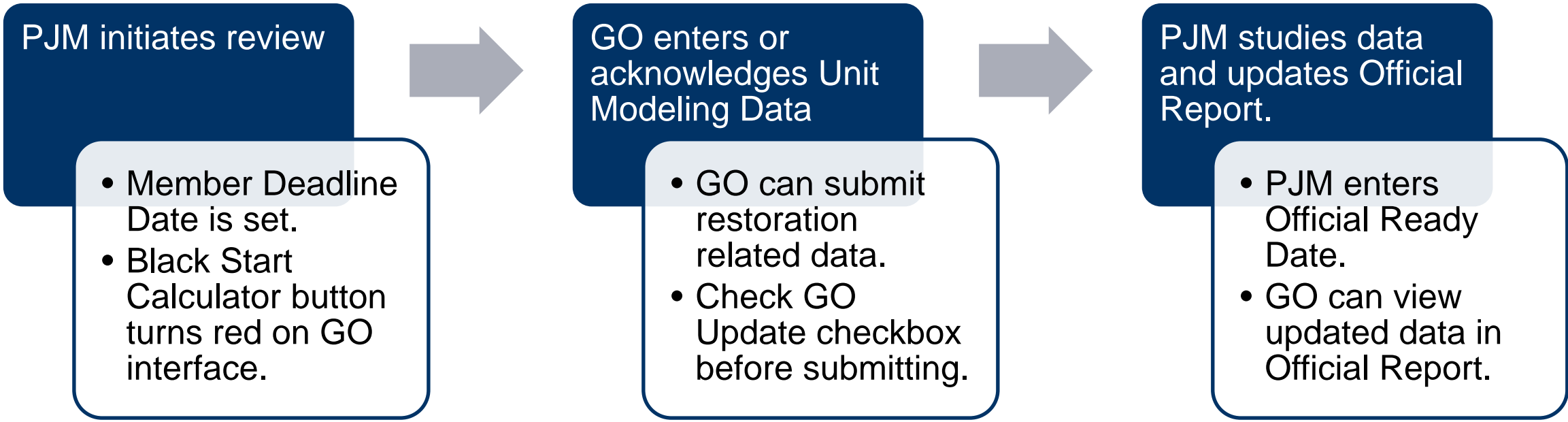




# PJM eDART Black Start Calculator

eDART Generation Companies

- Enhance visibility/awareness of current and future Black Start and Critical Loads
- Enhance tracking and completion of required items prior to new units coming in service or retiring or terminating Black Start service.
- Minimize rework by using the same baseline data across PJM/GO/TO.
- Reduce reliance on email as documentation between PJM/GO/TO.



PJM TEST  
Production

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



### Generator Tickets Main Menu

Summer Peak Period Maintenance Margin Season  
Start: 06/11/2018 End: 09/07/2018

Current Maintenance Margin  
Western-Southern 0

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

	MW	Voit. Reg.	MVAR	Governor	MVAR Test	PSS
Submitted Tickets	1	0	0	0	0	0
Revised Tickets	0	0	0	0	0	0
Current Tickets	9	0	0	0	0	0
Approved Tickets	125	0	0	0	0	0
Future Tickets	125	0	0	0	0	0
Approved No Start	0	0	0	0	0	0
Active Beyond End	0	0	0	0	0	0
Recalled Tickets	0					
Forced Tickets						
Tickets History						

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

[Blackstart Test Upload](#)
[Blackstart Test Download](#)
[Blackstart Calculator](#)

[GO Survey](#)

### Reactive Result Tickets

[Create Reactive Result Ticket](#)
[View Reactive Result Tickets](#)
[Company Unit Report](#)

Status	Total
Saved	
PJM Review	
GO Data Required	
GO Review	
GO No Response	
New Default D-Curve Under Review	
Awaiting Test Letter	
Test Letter Issued	3
MOD-025 only, no PJM Letter	



## No Action Required

**BlackStart Calculator Main Menu**

[Official Report](#)

**Currently in Review**

Nothing in review

## Action Required

**BlackStart Calculator Main Menu**

[Official Report](#)

**Currently in Review**

Member Deadline Date	Units/Loads	Not Answered GO
12/19/2017	1	1
12/23/2017	1	1
01/10/2018	1	1
01/15/2018	1	1
02/27/2018	1	0

### Generator Tickets Main Menu

Summer Peak Period Maintenance Margin Season  
Start: 06/11/2018 End: 09/07/2018

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

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

	MW	Volt. Reg.	MVAR	Governor	MVAR Test	PSS
Submitted Tickets	0	0	0	0	0	0
Revised Tickets	1	0	0	0	0	0
Current Tickets	12	0	0	0	0	0
Approved Tickets	1	0	0	0	0	0
Future Tickets	0	0	0	0	0	0
Approved No Start	1	0	0	0	0	0
Active Beyond End	12	0	0	0	0	0
Recalled Tickets	0					
Forced Tickets						
Tickets History						

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

[Blackstart Test Upload](#)
[Blackstart Test Download](#)
[Blackstart Calculator](#)

[GO Survey](#)

### BlackStart Calculator Main Menu

[Official Report](#)

#### Currently in Review

Member Deadline Date	Units/Loads	Not Answered GO
02/14/2018	6	2

Select Unit Modelling Data to enter data.

### BlackStart Review

Member Deadline: 02/14/2018

GO Company: Gen Company

Record Status: GO not Answered  
GO Answered

Display:  Unit Detailed Data  Unit Modeling Data

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Member Deadline	GO Company	Name	Unit Type	TO Zone	Record Type	Record Status
02/14/2018	Gen Company	UNIT ABC	Nuclear	PJM	Unit	GO not Answered
02/14/2018	Gen Company	UNIT DEF	Gas	PJM	Unit	GO not Answered

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[Help](#)
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Entry fields pre-populated where possible

“GO Update” checkbox **MUST** be checked in order to submit/acknowledge data

### BlackStart Review

Member Deadline:     GO Company:     Record Status:

Display:  Unit Detailed Data     Unit Modeling Data

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Member Deadline	GO Company	Name	Unit Type	TO Zone	Record Type	Record Status	Unit will black start solely on primary or secondary fuel	Total Start-Up (MWs)	Total Start-Up (MVAR)	Unit MIN Stable Load (MWs)	Required time to reach MIN stable load (Minutes)	Largest Motor (MWs)	Largest Motor Power Factor	Largest Motor Transformer Z%	Largest Motor Transformer R%	Largest Motor Transformer X%	Largest Motor Transformer High Side Voltage (kV)	Largest Motor Transformer Low Side Voltage (kV)	Largest Motor Transformer Base (MVA)	2nd Largest Motor (MWs)	2nd Largest Motor Power Factor	3rd Largest Motor (MWs)	3rd Largest Motor Power Factor	Nuclear Unit One-Line	GO Update	
02/14/2018	Gen Company	UNIT ABC	Nuclear	PJM	Unit	GO not Answered	No on Prim. and Yes on Sec. ▾	10.2					0.27												<a href="#">Download</a> <a href="#">Upload</a>	<input type="checkbox"/>
02/14/2018	Gen Company	UNIT DEF	Gas	PJM	Unit	GO not Answered	▾	<input type="text" value="1"/>	<input type="text" value="2"/>	<input type="text" value="3"/>	<input type="text" value="4"/>	<input type="text" value="5"/>	<input type="text" value="6"/>	<input type="text" value="7"/>	<input type="text" value="8"/>	<input type="text" value="9"/>	<input type="text" value="10"/>	<input type="text" value="11"/>	<input type="text" value="12"/>	<input type="text" value="13"/>	<input type="text" value="14"/>	<input type="text" value="15"/>	<input type="text" value="16"/>		<input type="checkbox"/>	

[Submit Form](#)    [Help](#)    [CSV Export](#)    [Main Menu](#)

Export data to CSV file

One-Line Upload/Download for Nuclear Units only

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD
1	Member Deadline	GO Comp ID	Name	Unit Type	TO Zone	Record T	Record St	PJM Defa	Official F	Unit wil	Total Star	Total Sta	Unit MIN	Requirec	Largest N	Largest N	Largest N	Largest N	Largest N	Largest N	Largest N	Largest N	Largest N	2nd Large	2nd Large	3rd Large	3rd Largest M	Motor Power	Factor	
2	2/14/2018	Gen Comp	7080	UNIT ABC	Nuclear	PJM	Unit	GO not Ar	No on Prim.	And Yes	No on Pri	10.2					0.27													
3	2/14/2018	Gen Comp	1295	UNIT DEF	Gen	PJM	Unit	GO not Ar	No			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
4																														
5																														
6																														

All extra selected Unit Modelling Data columns are exported into .csv file





# GO Black Start Calculator – Official Report Default View

**BlackStart Official Report**

TO Zone: **PJM** Restoration Zone: **PJM** GO Company: **Gen Company** Restoration Type: **Black Start  
Critical Load (Nuclear)  
Non-Critical Load** From Date: **01/23/2018** To Date: **01/24/2018**

Display:  Unit Detailed Data  Unit Modeling Data

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GO Company	Name	Unit Type	TO Zone	Record Type	Total Start-Up (MWs)	Total Start-Up (MVAR)	Restoration Type
Gen Company	UNIT ABC	Nuclear	PJM	Unit			Critical Load
Gen Company	UNIT DEF	Nuclear	PJM	Unit	10.0	50	Critical Load
Gen Company	UNIT GHI	Nuclear	PJM	Unit	100	50	Critical Load
Gen Company	UNIT JKL	Hydro	PJM	Unit			Black Start
Gen Company	UNIT MNO	Bio Mass	PJM	Unit			
Gen Company	UNIT PQR	Nuclear	PJM	Unit			Critical Load

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# GO Black Start Calculator – Official Report Default View

	A	B	C	D	E	F	G	H	I
1	GO Company	Name	Unit Type	TO Zone	Record Type	Total Start-Up (MWs)	Total Start-Up (MVAR)	Restoration Type	
2	Gen Company	UNIT ABC	Nuclear	PJM	Unit			Critical Load	
3	Gen Company	UNIT DEF	Nuclear	PJM	Unit	10	50	Critical Load	
4	Gen Company	UNIT GHI	Nuclear	PJM	Unit	100	50	Critical Load	
5	Gen Company	UNIT JKL	Hydro	PJM	Unit			Black Start	
6	Gen Company	UNIT MNO	Bio Mass	PJM	Unit				
7	Gen Company	UNIT PQR	Nuclear	PJM	Unit			Critical Load	

Note: For all “CSV Export” functions, only displayed data will be exported to .csv file



# GO Black Start Calculator – Official Report

## Unit Detailed Data View

**BlackStart Official Report**

TO Zone:  Restoration Zone:  GO Company:  Restoration Type:  From Date:  To Date:

Display:  Unit Detailed Data  Unit Modeling Data

GO Company	Name	Unit Type	TO Zone	Record Type	Total Start-Up (MWs)	Total Start-Up (MVAR)	Restoration Type	ICAP	Unit Effective Date	Unit Terminate Date	Prim. Fuel	Sec. Fuel	Hot Start Time (Hours)	Cold Start Time (Hours)	Ramp Rate (MWs/Minute)
Gen Company	UNIT ABC	Nuclear	PJM	Unit			Critical Load	900	07/01/2000		Tires				
Gen Company	UNIT DEF	Nuclear	PJM	Unit	10.0	50	Critical Load	1000	03/06/2007		Synthesis Gas from Petroleum Code	DualFuel:Natural Gas + Other Gases			
Gen Company	UNIT GHI	Nuclear	PJM	Unit	100	50	Critical Load	1000	03/06/2007		Synthesis Gas from Petroleum Code	DualFuel:Natural Gas + Other Gases			
Gen Company	UNIT JKL	Hydro	PJM	Unit			Black Start	140	12/12/2017		Unknown				
Gen Company	UNIT MNO	Bio Mass	PJM	Unit				100	12/07/2017		Unknown				
Gen Company	UNIT PQR	Nuclear	PJM	Unit			Critical Load	500	10/17/2013		Unknown				



# GO Black Start Calculator – Official Report

## Unit Detailed Data View

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	GO Company	Name	Unit Type	TO Zone	Record Ty	Total Start	Total Star	Restoratic	ICAP	Unit Effective Date	Unit Term	Prim. Fue	Sec. Fuel	Hot Start	Cold Start	Ramp Rate (MWs/Min)	
2	Gen Company	UNIT ABC	Nuclear	PJM	Unit			Critical Lo	900	7/1/2000		Tires					
3	Gen Company	UNIT DEF	Nuclear	PJM	Unit	10	50	Critical Lo	1000	3/6/2007		Synthesis	DualFuel:Natural Gas + Other Gases				
4	Gen Company	UNIT GHI	Nuclear	PJM	Unit	100	50	Critical Lo	1000	3/6/2007		Synthesis	DualFuel:Natural Gas + Other Gases				
5	Gen Company	UNIT JKL	Hydro	PJM	Unit			Black Start	140	12/12/2017		Unknown					
6	Gen Company	UNIT MNC	Bio Mass	PJM	Unit				100	12/7/2017		Unknown					
7	Gen Company	UNIT PQR	Nuclear	PJM	Unit			Critical Lo	500	10/17/2013		Unknown					



# GO Black Start Calculator – Official Report Unit Modeling Data View

**Black Start Official Report**

TO Zone:  Restoration Zone:  GO Company:  Restoration Type:  From Date:  To Date:

Display:  Unit Detailed Data  **Unit Modeling Data**

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GO Company	Name	Unit Type	TO Zone	Record Type	Total Start-Up (MWs)	Total Start-Up (MVAR)	Restoration Type	Unit will black start solely on primary or secondary fuel	Unit MIN Stable Load (MWs)	Required time to reach MIN stable load (Minutes)	Largest Motor (MWs)	Largest Motor Power Factor	Largest Motor Transformer Z%	Largest Motor Transformer R%	Largest Motor Transformer X%	Largest Motor Transformer High Side Voltage (kV)	Largest Motor Transformer Low Side Voltage (kV)	Largest Motor Transformer Base (MVA)	2nd Largest Motor (MWs)	2nd Largest Motor Power Factor	3rd Largest Motor (MWs)	3rd Largest Motor Power Factor	Nuclear Unit One-Line
Gen Company	UNT ABC	Nuclear	PJM	Unit			Critical Load																
Gen Company	UNT DEF	Nuclear	PJM	Unit	10.0	50	Critical Load																<a href="#">Download</a>
Gen Company	UNT GH	Nuclear	PJM	Unit	100	50	Critical Load																
Gen Company	UNT IJL	Hydro	PJM	Unit			Black Start																
Gen Company	UNT MNO	Bio Mass	PJM	Unit																			
Gen Company	UNT PQR	Nuclear	PJM	Unit			Critical Load																

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# GO Black Start Calculator – Official Report Unit Modeling Data View

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
1	GO Company	Name	Unit Type	TO Zone	Record Type	Total Start-Up (MWs)	Total Start-Up (MVAR)	Restorati	Unit will	Unit MIN	Required	Largest N	Largest N	Largest N	Largest N	Largest N	Largest N	Largest N	Largest N	2nd Large	2nd Large	3rd Large	3rd Largest	Motor Power	Power Factor
2	Gen Company	UNIT ABC	Nuclear	PJM	Unit				Critical Load																
3	Gen Company	UNIT DEF	Nuclear	PJM	Unit	10		50	Critical Load																
4	Gen Company	UNIT GHI	Nuclear	PJM	Unit	100		50	Critical Load																
5	Gen Company	UNIT JKL	Hydro	PJM	Unit				Black Start																
6	Gen Company	UNIT MNO	Bio Mass	PJM	Unit																				
7	Gen Company	UNIT PQR	Nuclear	PJM	Unit				Critical Load																

