

The New Instantaneous Reserve Check

Overview and Functionality

June 2015

PJM State & Member Training Dept.



Objectives



Students will be able to:

- Identify the reporting guidelines and process for Instantaneous Reserve Check (IRC)

- The Instantaneous Reserve Check [IRC] is used to verify the PJM reserve situation at a given moment in time.
- Current process:
 - **PJM requests the IRC be populated via All-Call.**
 - **Generator Owners submit zonal reserve information via eDART IRC application.**
 - **IRC results used to determine if reserve shortages exist.**
- Current issues:
 - **Discrepancies are difficult to isolate and then resolve.**
 - **No way to proactively verify information directly within the IRC application ahead of IRC issuance.**

The New IRC Timeline



Start of Parallel Ops

“New” IRC will be in production and available to the Members along with the existing IRC tool
(Members will continue to use existing IRC)

Online JIT Training

Provide online training to the Gen Members which will review the tool and expectations

Test IRCs

Weekly and then daily IRC tests will take place to give Members the opportunity to test their functionality/ IRC process (Start on July 14th, 2015)

WEBEX Training

2 Webex training offerings prior to the official start date of the new tool to provide options for a refresh, Q&A, etc.

Go-Live for “New” IRC

This date will serve as the official start date for use of “New” IRC

The New IRC Timeline



- June – August 2015
 - Implementation of ‘New IRC’ occurred on 05/27
 - Legacy IRC functionality remains in place and is still the official tool.
 - PJM dispatch will continue to issue IRCs as is currently done.
 - Members will continue to be required to submit data via IRC.
 - Members may review data in New IRC.



The New IRC Timeline



- July – August 2015
 - **PJM Dispatch will issue weekly tests for New IRC (members will be notified that this is only a test).**
 - Every Tuesday, starting July 14 between 1500 -1600
 - Daily in late July/early August.
 - **Members will submit data via New IRC during tests.**
 - **PJM will follow up with non-reporters with a goal that all participate prior to September implementation.**
- September 2015
 - **New IRC becomes official tool (9/1).**
 - **PJM Dispatch will no longer issue IRC on old tool.**
 - **New IRC renamed to IRC in Q3 eDART release.**



- Enhancements:
 - **Unit by Unit Design:**
 - Reserve data pre-populated from PJM Markets and EMS systems on a Unit by Unit basis.
 - User option to acknowledge reserve values: all units or per unit.
 - User entry fields to submit changes to reserve values.
 - Any changes that actually impact IRC values should be submitted via eDART or eMKT, whichever applies
 - **IRC Self-Check:**
 - Display of current reserve data when IRC is not in progress.
 - Questions or issues with reserve values in Self-Check may be sent to IRC_help@pjm.com

The New IRC

- Company Reserve Data (Self-Check tool):
 - **Display of PJM view of company reserve data.**
 - **Updated every 5 minutes.**
 - **Available only when IRC is not in progress.**
- IRC Submission
 - **User can acknowledge reserve values displayed.**
 - **User can submit reserve values and acknowledge submissions.**



The New IRC

- IRC values can be verified, changed and acknowledged in the new IRC screen

IRC Company Data

Company: Alpha Energy
Request ID: 31100
User Name:
Request Timestamp: 07/07/2015 15:22
Posted Timestamp: 07/07/2015 16:43
Date Updated: 07/07/2015 15:35

PJM RTO & Reserve Pool Totals					
Reserve Category	RTO	RTO Req.	MAD	MAD Req.	
Operating Reserve	* 11692		9		
PRIMARY Reserve	* 3123	2033	7	2025	
SYNCHRONIZED Reserve	* 2140	1355	0	* 0	
Additional Reserve Info		RTO	RTO Req.	MAD	MAD Req.
Largest Contingency		1355		* 1350	
Adjusted Primary Reserve		* 2363		* -457	
Adjusted Synchronized Reserve(ASR)		* 1498		* -463	

Company Totals					
Time Range	Reserve Category	AP	CE	ATSI	RTO Total
0m-30m	OPERATING Reserve	* 0	0	0	* 0
	PRIMARY Reserve	0	0	0	0
	SYNCHRONIZED Reserve	0	0	0	0
	Non-synchronized Reserve (Quick Start)	0	0	0	0
0m-10m	-- NSR Hydro	0	0	0	0
	-- NSR Other	0	0	0	0
	Secondary Reserve	* 0	0	0	* 0
10m-30m	Beyond Secondary	0	320	298	618

Notes to PJM Operator (500 char. max.)

Apply Sort
Refresh
Back
Help

Note: Regulation assignments should not be included in the Synchronized Reserves unless the reserve is beyond the regulation bandwidth.

**Please see the Help button for an explanation.

All numbers on this form have been rounded for display.

IRC Company Unit Data

If you do not wish to acknowledge any unit, please uncheck the acknowledge check box prior to clicking Recalc/Submit.

Unit Name	ACAP	Unit Type	Zone	Eco Max	Real-Time MW	Regulating	Synchronized Reserves	Quick Start NSR	Secondary	Beyond Secondary	Acknowledge
Generator 1	160	Diesel/CT	PJMCZ	151	146	0	0	0	5	0	<input checked="" type="checkbox"/>
Generator 2	161	Diesel/CT	PJMCZ	154	148	0	0	0	6	0	<input checked="" type="checkbox"/>
Generator 3	162	Diesel/CT	PJMCZ	163	0	0	0	0	0	160	<input checked="" type="checkbox"/>
Generator 4	165	Diesel/CT	PJMCZ	163	0	0	0	0	0	160	<input checked="" type="checkbox"/>
Generator 5	153	Diesel/CT	PJMCZ	149	150	0	0	0	0	0	<input checked="" type="checkbox"/>
Generator 6	155	Diesel/CT	PJMCZ	149	149	0	0	0	0	0	<input checked="" type="checkbox"/>
Generator 7	157	Diesel/CT	PJMCZ	149	151	0	0	0	0	0	<input checked="" type="checkbox"/>
Generator 8	156	Diesel/CT	PJMCZ	149	146	0	0	0	1	0	<input checked="" type="checkbox"/>
Generator 9	160	Diesel/CT	PJMCZ	152	0	0	0	0	0	149	<input checked="" type="checkbox"/>
Generator 10	160	Diesel/CT	PJMCZ	152	0	0	0	0	0	149	<input checked="" type="checkbox"/>
Generator 11	160	Diesel/CT	PJMCZ	152	157	0	0	0	0	0	<input checked="" type="checkbox"/>
Generator 12	160	Diesel/CT	PJMCZ	152	158	0	0	0	0	0	<input checked="" type="checkbox"/>

Company Reserve Data



IRC Company Data

Company: Request Timestamp: 06/11/2015 13:31 Date Updated: 06/11/2015 13:33
 Request ID: 50065 Posted Timestamp:
 User Name: castew

Company Totals						
Time Range	Reserve Category	PJMCZ	DOM	AEP	CE	RTO Total
0m-30m	OPERATING Reserve	130	0	0	0	130
0m-10m	PRIMARY Reserve	94	0	0	0	94
	SYNCHRONIZED Reserve	55	0	0	0	55
	Non-synchronized Reserve (Quick Start)	39	0	0	0	39
	-- NSR Hydro	13	0	0	0	13
	-- NSR Other	26	0	0	0	26
10m-30m	Secondary Reserve	0	0	0	0	0
30m-180m	Beyond Secondary	48	0	0	0	48

Notes to PJM Operator (500 char. max.)

Note the updates to my reserve data.

Apply Sort

Refresh

Recalc/Submit

Main Menu

Help

Note: Regulation assignments should not be included in the Synchronized Reserves unless the reserve is beyond the regulation bandwidth.

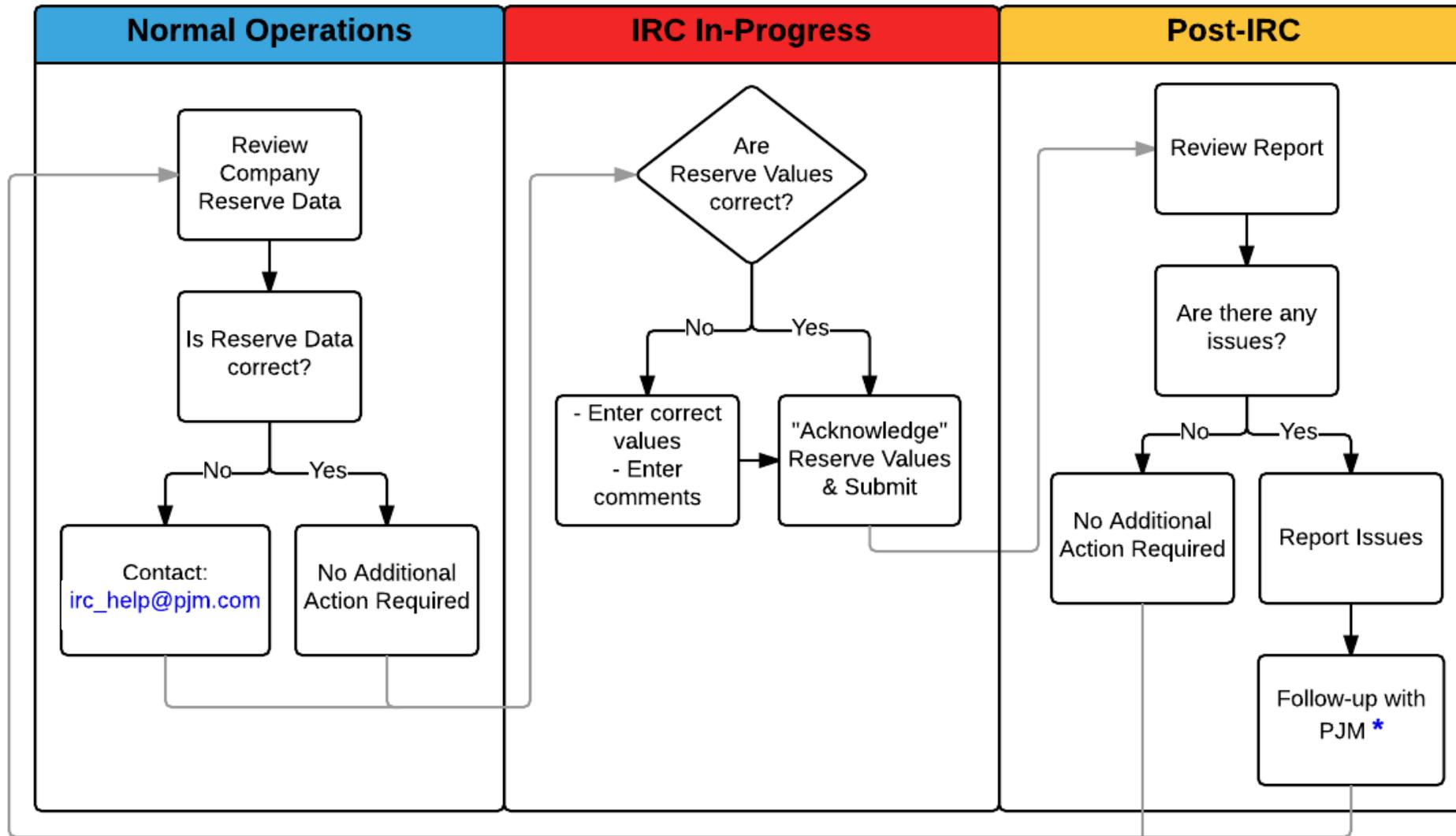
**Please see the Help button for an explanation.

All numbers on this form have been rounded for display.

IRC Company Unit Data

If you do not wish to acknowledge any unit, please uncheck the acknowledge check box prior to clicking Recalc/Submit.

1														Select All / None
Unit Name	ACAP	Unit Type	Zone	Eco Max	Real-Time MW	Regulating	Synchronized Reserves	Quick Start NSR	Secondary	Beyond Secondary	Acknowledge			
Steam 4	850	Coal	PJMCZ	850	825	0	25	0	0	0	0	0	0	<input checked="" type="checkbox"/>
Unit 2	1125	Nuclear	PJMCZ	1125	1125	0		0	0	0	0	0	0	<input type="checkbox"/>
Hydro 5-8	525	Run of River	PJMCZ	525	475	50		0	0	0	0	0	0	<input type="checkbox"/>
Unit 8	100	Solar	PJMCZ	100	98	0		0	0	0	0	0	0	<input type="checkbox"/>
Unit 6	675	Nuclear	PJMCZ	675	675	0		0	0	0	0	0	0	<input type="checkbox"/>
Unit 9	375	Natural Gas	PJMCZ	375	345	0	30	0	0	0	0	0	0	<input type="checkbox"/>
Unit 1	750	Nuclear	PJMCZ	750	750	0		13	0	0	0	0	0	<input checked="" type="checkbox"/>
Unit 3	130	Wind	PJMCZ	150	150	0		13	0	0	0	0	0	<input checked="" type="checkbox"/>
Hydro 1-4	700	Pumped Storage	PJMCZ	700	425	200		13	0	0	0	0	0	<input checked="" type="checkbox"/>
Unit 4	30	CT	PJMCZ	0	0	0		0	0	0	0	0	0	<input type="checkbox"/>
Steam 1-3	48	CC	PJMCZ	0	0	0		0	0	0	48	0	0	<input type="checkbox"/>



* If the issues involve reserve discrepancies - please contact PJM Generation Dispatch: 610-666-8806

* If issues involve XML upload, missing units or process questions, please contact: irc_help@pjm.com

Questions



If you have any questions, please email them to the IRC hotline at: IRC_help@pjm.com