

Load Management Testing Requirements

MIC

Pete Langbein

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- Test requirement developed based on Limited DR availability requirements:
 - Limited DR only required for 10 days for 6 hours per day during the summer months
 - CP requires DR to be available on annual basis for up to 15 hours per day
- Test performance (123%) does not reflect prior event performance (97%)
- Mandatory Load Management has not been dispatched in over 5 years (but accounts for > 5% of overall capacity)
 - Low Frequency, High Impact event – critical to perform when needed

DR load reduction capability under a variety of conditions is not clear

- Testing reflective of LM product availability requirements
- Testing results consistent with expected performance during LM events under various conditions (time of day, time of year, etc.)
- Both resource capability and PJM/CSP communications are tested
- Test notification process aligns with actual event process (i.e.: Emergency messages prior to LM event day)
- Streamline process for resource energy compensation for reductions provided when performing tests (Currently done through economic DR)
- Load not paying for CP DR winter testing through an uplift mechanism
- LM will be compensated for test events
- Avoid unnecessary testing
- Align rules for PRD (note: PJM waiting for FERC Order on PRD)

DR load reduction capability under a variety of conditions is not clear





Status Quo - Load Management Test Key Components

Design Components	Status Quo
Testing performance requirement waiver (you don't need to test if this happens)	Registration(s) dispatched for mandatory load management event
Who schedules test/retest	CSP
Test/retest duration	1 hour
Test/Retest period	Summer Only, Non NERC holiday weekday
Test/Retest window (these are hours when test can be conducted)	Summer period product definition hours of 10am (HE11) -10pm (HE22).
Registration test deployment requirement	All Registrations with same CSP in same zone of same product type at same time that were not dispatched in an event.
Test event limit (number of times test may be performed)	Unlimited
Retest qualification	Zonal Load reduction >75% of committed MW in test. CSP may elect to conduct a retest for registrations that did not reach their MW commitment
Retest registration eligibility	registrations that failed to meet Summer ICAP reduction value
Retest event limit (number of times retest may be performed)	Unlimited
Resource Test Compliance Target	Summer average RPM commitment from June 1st through September 30th
Energy market compensation (and associated cost allocation) during test/retest hours	No direct payment.

CSP directed, one 2 hour test/yr, advanced notification of day/hour to prepare, unlimited CSP directed test and retest

PJM directed, one 2 hour test/yr, 3 tier advanced notification, second PJM directed test and unlimited CSP directed retest

PJM directed, two 3.5 hour tests, 1 in summer and 1 in winter, 2 tier advanced notification, 1 PJM directed retest per season

Status Quo

CSP1

CSP2

PJM1a

PJM3

IMM

PJM directed to short season, one 2 hour test/yr, 4 tier advanced notification, second test and unlimited CSP directed retest

PJM directed, one 5 hour test/yr, 2 tier advanced notification, unlimited CSP directed retest if performance >75%

All proposals include energy compensation during the test & 23/24 DY implementation

Status Quo



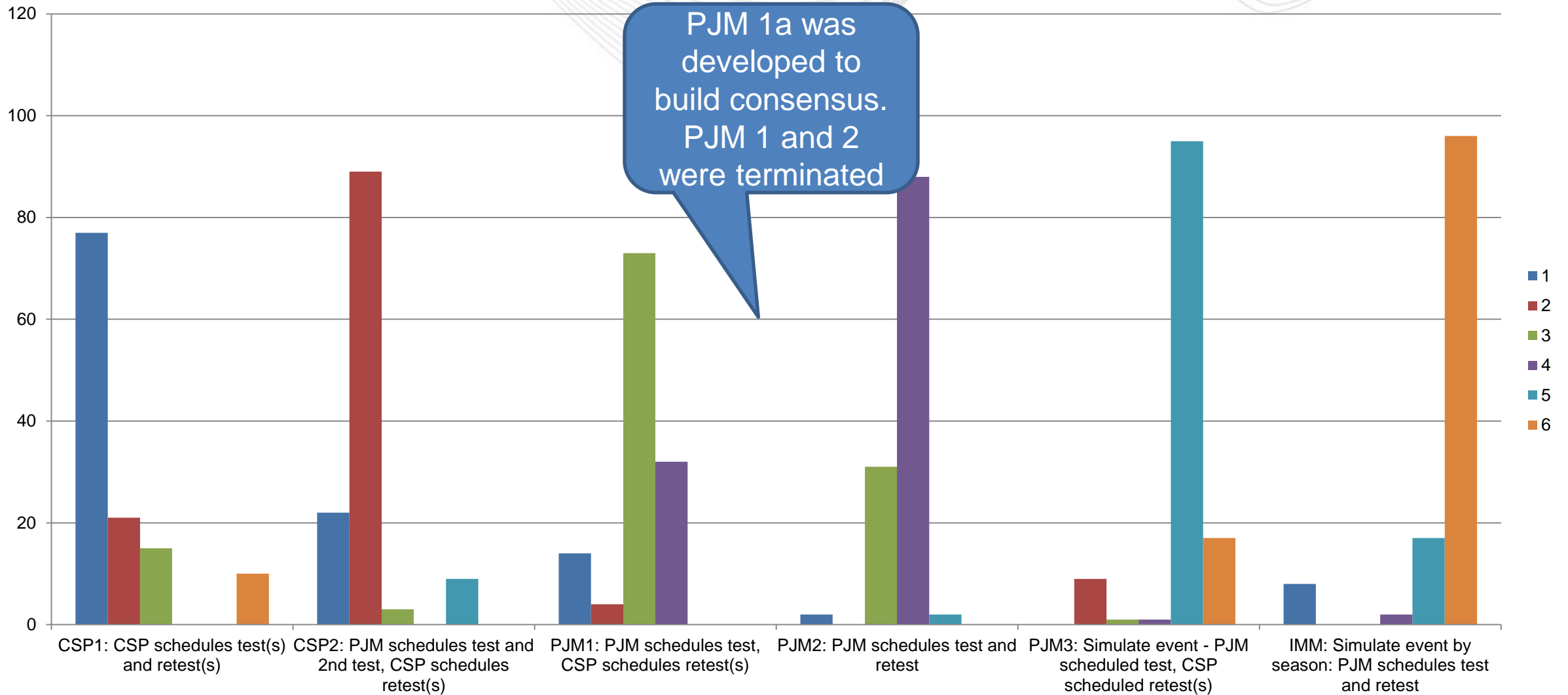
	CSP1: CSP schedules test(s) and retest(s)	CSP2: PJM schedules test and 2nd test, CSP scheduled retest(s)	PJM1a: PJM schedules test, CSP schedules retest(s) or PJM schedules retest based on test performance	PJM3: Simulate event - PJM scheduled test, CSP scheduled retest(s)	IMM: Simulate event by season: PJM schedules test and retest
Who schedules test/retest	Test: CSP Retest: CSP	Test: PJM Optional 2nd test: PJM Retest: CSP	Test: PJM Retest: CSP or PJM based on Test performance	Test: PJM Retest: CSP	PJM
Test/retest duration	2 hours	2 hours	2 hours	5 hours	3 1/2 hours
Test/Retest period	Test: PJM determines if summer or winter weekday prior to DY. Retest: Same season	same as CSP1 but shorter test periods/seasons Retest: Same season	same as CSP 1, with data collection extension	same as CSP1 but includes weekends	Same as CSP 1
Test/Retest window (hours when test can be conducted)	Summer and Winter Period: HE12 - HE18	Same as CSP1	Same as CSP1	-Summer period product definition hours of 10AM-10PM -Non-summer period product definition hours of 6AM-9PM	Same as PJM3
Registration test deployment requirement	All Registrations with same CSP in same zone at same time that were not dispatched in an event.	All CSPs by zone. Test is only required if dispatched for event.	Same as CSP2	Same as CSP2	Same as CSP2 but 1 test in summer and 1 test in winter if no event in season
Test event limit (number of times test may be performed)	Status quo - Unlimited	Up to 2 test(s) - PJM schedules Second full zone optional test	One test for all CSPs per zone per year. If CSP does not qualify for CSP directed retest, then may request PJM directed retest	One test for all CSPs per zone per year. If CSP does not qualify for retest, then test results are final	2 Tests: Test must be performed in summer and winter when there is no event during the season
Retest qualification www.pjm.com	Status quo - Zonal Load reduction >75%	retest: same as CSP1 Second test: Notify PJM up to 90 days	Same as CSP1, otherwise CSP notifies PJM to conduct 2 nd test	Same as CSP1	Same as PJM1a but on seasonal basis



	CSP1: CSP schedules test(s) and retest(s)	CSP2: PJM schedules test and 2nd test, CSP scheduled retest(s)	PJM1a: PJM schedules test, CSP schedules retest(s) or PJM schedules retest based on test performance	PJM3: Simulate event - PJM scheduled test, CSP scheduled retest(s)	IMM: Simulate event by season: PJM schedules test and retest
Retest event limit (number of times retest may be performed)	Status Quo - Unlimited	Same as CSP1	CSP directed = CSP1 PJM directed = One	Same as CSP1	One per season.
Notification time prior to test	Status quo - 48 hours prior to test	Prior to start of test month - all zones that will be tested. Week-ahead: PJM provides CSP a 5-day window 5 business days in advance 10am, day before the operating day - all zones that will be tested. Event Day - CSP notified for each Registration based on lead time	Prior to start of test month - all zones that will be tested. 10am, day before the operating day - all zones that will be tested. Event Day - CSP notified for each Registration based on lead time	Day before - By 2pm Event Day - Registration notified based on lead time	10am, day before the operating day - all zones that will be tested. Event Day - CSP notified for each Registration based on lead time
Notification time prior to retest	Status quo - 48 hours prior to test	Same as CSP1	CSP directed = CSP1 PJM directed is day before and event day notifications.	Same as CSP1	Same as test
Resource Test Compliance Target	Summer average RPM commitment if tested in the Summer season. Winter average RPM commitment if tested in the Winter season.	Same as CSP1	Status Quo - Summer average RPM commitment from June 1st through September 30 th		Summer average RPM commitment for Summer test. Winter average RPM commitment for Winter season test..



DRS Poll Results: Please rank each package using 1 for your favorite, and 6 for your least favor





Load Management Testing Requirements - Work Plan (2019-2020)

Detailed Work Plan	Feb (2019)	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan (2020)	Feb (2020)
Provide Education - DRS	27th	28th											
Document Interests - DRS	27th	28th											
Develop Components - DRS		28th	24th										
Develop Component Options - DRS		28th	24th	28th	19th								
Develop Packages - DRS				28th	19th								
DRS Build Consensus				28th	19th	23rd	13th	5th					
First Read @ MIC							7th						
Vote @ MIC								11th					
First Read @ MRC								26th					
Vote @ MRC									31st				
Vote @ MC										No Mtg	5th		
PJM Board												No Mtg	x
FERC Filing													x
New rules effective												2023/2024 Delivery Year	

- Test Event Compliance
 - RAA
 - Schedule 6 PROCEDURES FOR DEMAND RESOURCES AND ENERGY EFFICIENCY, Sections H and K
 - Schedule 6.1 PRICE RESPONSIVE DEMAND
 - OATT Attachment DD.11A, DEMAND RESOURCES TEST FAILURE CHARGE
 - OA Schedule 1, Section 8.9, Reporting and Compliance
 - PJM Manual 18, PJM Capacity Market, Section 8.8 Load Management Test Compliance
- Test Event Energy Settlements
 - PJM Manual 28: Operating Agreement Accounting, Section 11: PJM Load Response Programs Accounting
 - PJM Manual 11: Energy & Ancillary Services Market Operations, Section 10: Overview of the Demand Resource Participation