DR CP Penalty Review

DRS

July 20, 2016

- Daily Deficiency
- Event Performance
- Test Performance

- Daily Deficiency Rate applied will be commitment-specific
- Daily Deficiency Rate for Shortfalls due to Base Commitments is based on party's Weighted Average RCP for base commitments for such resource
- Daily Deficiency Rate for Shortfalls due to CP commitments is based on party's Weighted Average RCP for CP commitments for such resource
- Daily Deficiency Rate = party's commitment-specific WARCP for such resource plus higher of [0.2 * commitment–specific WARCP for such resource OR $20/MW-day]

Capacity Resource clears MWs in BRA & 2nd IA with Base & CP MWs Cleared

	BRA MWs Cleared (UCAP MWs)	BRA RCP ($/MW-day)	2nd IA MWs Cleared (UCAP MWs)	2nd IA RCP ($/MW-day)	Total Commitments (UCAP MWs)	WARCP ($/MW-day)	DDR ($/MW-day)
Base	90	$100	0	$120	90	$100.00	$ 120.00
CP	100	$200	5	$220	105	$200.95	$ 241.14
Total	190		5		195		

Base WARCP = [(90 MW *$100/MW-day)+(0 MW *$120/MW-day)]/90 MW = $100.00/MW-day
Base DDR = $100/MW-day + (0.2*100/MW-day) = $120/MW-day

CP WARCP = [(100 MW *$100/MW-day)+(5 MW *$220/MW-day)]/105 MW = $200.95/MW-day
CP DDR = $200.95/MW-day + (0.2*200.95/MW-day) = $241.14/MW-day

- Non-performance assessment ("event compliance")
  - Performance measured hour by hour (may or may not include lead time, depends on situation)
  - Non-summer measured based on CBL, summer based on similar approach as today
  - Performance aggregated for all registration dispatched for area defined by Emergency Action (instead of CAA)
  - Penalty rate based on net CONE and not revenue
    - Non-Performance Charge Rate for CP Resources ($/MWh) = [LDA Net CONE ($/MW-day) * number of days in Delivery Year]/30
    - If LDA Net CONE = $300/MW-day, the Non-Performance Charge Rate = [$300/MW-day * 365 days]/30 = $3,650/MWh
    - Non-Performance Charge Rate for Base Capacity Resources ($/MW-hr) = [Weighted Average Resource Clearing Price ($/MW-day) for such resource * number of days in Delivery Year]/30
- Test non-performance
  - Same as today

Reference	Variable	Registration (summary)		HE14	HE15	HE16	HE17	HE18	
M&V Type	FSL					Lead time	60		
Dispatch Start	13:20					Notify tim	12:20		
Dispatch End	17:20								
				Hourly compliance calculation					
1	Minutes Dispatched			40	60	60	60		20
2 = 1/60	% hour dispatched			67%	100%	100%	100%		33%
3	compliance hour?			partial	full	full	full	na	
4	PLC (MW)	10.0		10.0	10.0	10.0	10.0	na	
5	FSL (MW)	5.0		5.0	5.0	5.0	5.0	na	
6	Load (MW)			7.0	11.0	7.0	4.0	na	
7	Line loss factor	1.10		1.10	1.10	1.10	1.10	na	
8 = 4 - (6*7), floor at 0	Load Reduction (MW) grossed up for losses			2.30	0.00	2.30	5.60	na	
9 = 4 - (5*7)	Capacity committment Icap (MW)	4.5		4.5	4.5	4.5	4.5	na	
10 = 9 * 2	Expected Performance = Capacity committment Icap (MW) * % hour dispatched			3.0	4.5	4.5	4.5	na	
11 = 9 - 10	Hourly Compliance Icap (MW)			-0.70	-4.50	-2.20	1.10	na	

- Numbers in ICAP: UCAP conversation includes DR Factor and FPR factor through 17/18 and then DR factor eliminated and only use FPR factor
- Compliance done on hourly basis not event basis

- Any excess DR capacity load reductions will be eligible for bonus payment
  - Performance is first aggregated across products and across Emergency Action area for all registrations dispatched by PJM for the hour.
  - Volume of load reduction eligible for bonus payment is based on capacity compliance calculation for registrations dispatched.
    - FSL/GLD in summer
    - CBL in non-summer
  - Who is eligible for bonus payments?
    - All Load Management CP and Base registrations dispatched by PJM (or LDR, XDR, ADR if used as a substitute)
    - All Economic DR registrations dispatched by PJM for 18/19 DY and beyond.

- Emergency Action Area (for capacity shortage) = JCPL/PSEG/PECO

- PJM dispatches DR in summer or winter: JCPL/PSEG/PECO, Emergency/Pre-Emergency, 30/60/120 lead time, CPDR/BaseDR.

- DR performance will be aggregated across all registrations dispatched
  - Over-compliance will receive bonus payment

- Product substitution is not applicable (all products dispatched)

- Retroactive replacement transactions not applicable (performance already aggregated)

DR Resource initial Shortfall / Over-Performance MW during PAH

RPM Resource	CP Expected Performance	Base Expected Performance	Actual Performance	CP Initial Shortfall	Base Initial Shortfall	Over-Performing MW
JCPL DR	10	0	5	5	-	-
PSEG DR	10	10	9	1	10	-
PECO DR	0	10	12	-	-	2
	20	20	26	6	10	2

Allocation of net Shortfall / Over-Performance MW to DR Resources

RPM Resource	CP Allocated Shortfall	Base Allocated Shortfall	CP Penalty Rate ($/MWh)	Base Penalty Rate ($/MWh)	CP Penalty	Base Penalty
JCPL DR	3.3	0	$ 3,200.00	$ 2,555.00	$ 10,560.00	$ -
PSEG DR	0.7	10	$ 3,400.00	$ 2,555.00	$ 2,380.00	$ 25,550.00
PECO DR	0	0	$ 3,200.00	$ 2,555.00	$ -	$ -
	4	10			$ 12,940.00	$ 25,550.00

1. DR Performance first calculated on Resource level for CP and Base
2. Resource level performance aggregated to calculate the net CP and Base Performance for the Emergency Action Area
   - Net CP Shortfall = 4 MW   [CP Initial Shortfall (6) – Over-Performance MW (2)]
3. Net CP and Base Performance allocated back to resources pro rata based on the resource's CP and Base Shortfall or Over-Performance MW

- Same requirements/penalties as today where:
  - Base registrations in zone must test simultaneously for a one-hour period during any hour when a LM event may be called during June – September
  - CP registrations in zone must test simultaneously for a one-hour period during any hour when a LM event may be called during June-October or the following May.