Price Responsive Demand proposed changes - examples

DRS

August 29th, 2017

Location #	Customer Load Profile	Summer PLC (MW) \[1\]	Summer FSL (MW) \[2\]	Summer Nominated DR Value (MW) (3) = (1) -(2)	Winter Peak Load (MW) (4)	Winter Weather Adjustment Factor (5)	Weather Adjusted Winter Peak Load (MW) (6) = (4) *(5)	Winter FSL (MW) 7	Winter Nominated DR Value (MW) 8 = (4) - (7)	Annual Nominated DR Value (MW) 9 = Min (3 & 8)
1	Winter load lower than summer load	10	5	5	8	1.05	8.4	5	3.4	
2	Winter load higher than summer load	10	5	5	12	1.05	12.6	5	7.6	
3	Winter load equal to summer load	10	5	5	10	1.05	10.5	5.5	5	
4	Summer only DR (A/C Cycling)	10	4	6	6	1.05	6.3	6.3	0	
5	Winter only DR (Ski Load)	1	0	1	12	1.05	12.6	11.6	1	
Registration		**41**	**19**	**22**			**50.4**	**33.4**	**17**	**17**

Column	
1	Summer PLC based on the current process
4	Winter Peak Load = customer peak on 5 winter CP days from HE7 through HE21 (Capacity Performance DR availability requirement) for Dec/Jan/Feb
5	Winter Weather Adjustment Factor published and applied by PJM = Weather Normalized Winter Peak/Actual Winter Peak
9	Annual Nominated DR Value based on registered nominated amount

Additional Notes

Capacity Reduction will be used for Add Back in Summer and Non-summer periods

Winter Peak Load is adjusted up for transmission and distribution line loss factor

Winter load reductions may not exceed Winter Peak Load.

Load has already been grossed up for losses

		1	2	3	4=3*2		Summer Event		Winter Event	
						(10)	(11) = (1) - (10)+(4)	(12)	(13) = (6) - (12) + (4)
Location #	Customer Load Profile	Summer Expected Peak Load (MW)	MESL	MESL Adjust Factor	MESL Adjust Amount	Load (MW)	Load Reduction (MW)	Load (MW)	Load Reduction (MW)
1	Winter load lower than summer load	10	5	0.05	0.25	5	5.25	5.5	4.75
2	Winter load higher than summer load	10	5	0.05	0.25	5	5.25	6	4.25
3	Winter load equal to summer load	10	5	0.05	0.25	5	5.25	5	5.25
4	Summer only DR (A/C Cycling)	10	5	0.05	0.25	3	7.25	6.3	3.95
5	Winter only DR (Ski Load)	1	0	0.05	0	1	0	5.6	0
Registration		41					23		18.2

1) Used MESL adjust amount to reflect adjust load reduction.
2) PRD uses Expected Peak Load which is PLC times Zonal Forecast Peak / Zonal W/N Peak.
3) Load has already been grossed up for losses

Location #	Customer Load Profile	Summer PLC (MW) 1	Weather Adjusted Winter Peak Load (MW) (6) = (4) *(5)	Summer Event		Winter Event	
				Load (MW (10)	Load Reduction (MW) (11) = (1) - (10)	Load (MW (12)	Load Reductio n (MW) (13) = (6) - (12)
1	Winter load lower than summer load	10	8.4	5	5	5.5	2.9
2	Winter load higher than summer load	10	12.6	5	5	6	6.6
3	Winter load equal to summer load	10	10.5	5	5	5	5.5
4	Summer only DR (A/C Cycling)	10	6.3	3	7	6.3	0
5	Winter only DR (Ski Load)	1	12.6	1	0	5.6	7
Registration		41	50.4		22		22

Event	1	2	3	
hourly PRD shortfall (MW)	1	1	1	
hours in event	4	4	4	

Existing event penalty (PRD)

PRD Provider's Weighted Final Zonal Capacity Price ($/MWDay)	$150	$150	$150	
adder (> 1.2 or $20)	$30	$30	$30	
daily deficiency charge ($/MWDay)	$180	$180	$180	
days in year	365	365	365	
penalty rate, $/MW-year	$65,700	$65,700	$65,700	Total across events
event penalty amount	$65,700	0	0	$65,700

Proposed event penalty (same as DR)

Net Cone, $/MW-day	$300	$300	$300	
days in year	365	365	365	
denominator, hours	30	30	30	
penalty rate, $/MWh	$3,650	$3,650	$3,650	Total across events
event penalty amount	$14,600	$14,600	$14,600	$43,800

Current:

1) PRD event compliance penalty charge for a subsequent event shall only be assessed on the portion of the shortfall that exceeds the maximum event compliance shortfall in any prior events.   In effect, this may act as a stop loss provision

2) A PRD Provider's Weighted Final Zonal Capacity Price is the average of the Final Zonal Capacity Price and the price component of the Final Zonal Capacity Price due to the Third Incremental Auction, weighted by the Nominal PRD Values committed by such PRD Provider in Base Residual Auction and Third Incremental Auction.

Proposed:

3) Proposed event penalty will have same stop loss provision applicable to DR but is not included in this example