

# 2017/2018 RPM BRA Sensitivity Analysis

MIC-BRA Sensitivity  
Update

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# Table 1 Summary of sensitivity results: 2017/2018 RPM Base Residual Auction

Scenario	Scenario Description	RPM Revenue (\$ per Delivery Year)	Difference from Actual Results	
			RPM Revenue (\$ per Delivery Year)	Percentage
0	Actual Results	\$7,512,229,630	NA	NA
1	Annual Resources Only	\$9,738,222,922	\$2,225,993,292	29.6%
2	No Offers for DR or EE (Generation Resources Only)	\$16,859,658,203	\$9,347,428,573	124.4%
3	No Short-Term Resource Procurement Target Reduction from VRR Curve	\$9,947,329,539	\$2,435,099,909	32.4%
3A	No Short-Term Resource Procurement Target Reduction	\$9,967,834,187	\$2,455,604,557	32.7%
4	No Short-Term Resource Procurement Target Reduction and Annual Resources Only	\$10,932,522,889	\$3,420,293,259	45.5%
5	No Short-Term Resource Procurement Target Reduction and No Offers for DR or EE (Generation Resources Only)	\$23,870,404,571	\$16,358,174,941	217.8%

# Table 2 Reserves cleared in excess of IRM with peak load forecast reduced by Short-Term Resource Procurement Target: 2017/2018 RPM Base Residual Auction

Scenario	Scenario Description	Cleared MW (UCAP)	Cleared MW (ICAP)	Reserves Cleared in Excess of IRM
0	Actual Results	167,003.7	177,004.5	4.4%
1	Annual Resources Only	166,237.1	176,191.9	3.8%
2	No Offers for DR or EE (Generation Resources Only)	163,713.2	173,516.9	2.0%

# Table 3 Reserves cleared in excess of IRM using alternate calculation method: 2017/2018 RPM Base Residual Auction

Scenario	Scenario Description	Cleared MW (UCAP)	Cleared MW (ICAP)	Reserves Cleared in Excess of IRM
0	Actual Results	167,003.7	177,004.5	3.9%
1	Annual Resources Only	166,237.1	176,191.9	3.4%
2	No Offers for DR or EE (Generation Resources Only)	163,713.2	173,516.9	1.6%
3	No Short-Term Resource Procurement Target Reduction from VRR Curve	170,362.5	180,564.4	3.8%
3A	No Short-Term Resource Procurement Target Reduction	170,362.5	180,564.4	3.8%
4	No Short-Term Resource Procurement Target Reduction and Annual Resources Only	170,037.8	180,220.2	3.5%
5	No Short-Term Resource Procurement Target Reduction and No Offers for DR or EE (Generation Resources Only)	164,969.8	174,848.8	(0.0%)

# Table 4 Scenario 1: Impact of DR product types

LDA	Product Type	Actual Auction Results		Annual Resources Only	
		Clearing Prices (\$ per MW-day)	Cleared UCAP (MW)	Clearing Prices (\$ per MW-day)	Cleared UCAP (MW)
RTO	Limited	\$106.02	2,322.1		
	Extended Summer	\$120.00	7,163.3		
	Annual	\$120.00	157,518.3	\$157.80	166,237.1
RTO Total			167,003.7		166,237.1
PSEG	Limited	\$201.02	177.5		
	Extended Summer	\$215.00	154.8		
	Annual	\$215.00	5,778.4	\$220.00	6,103.4
PSEG Total			6,110.7		6,103.4
PPL	Limited	\$40.00	41.7		
	Extended Summer	\$53.98	183.3		
	Annual	\$120.00	9,123.5	\$157.80	10,543.8
PPL Total			9,348.5		10,543.8

# Table 5 Scenario 2: Impact of DR and EE

LDA	Product Type	Actual Auction Results		No Offers for DR or EE	
		Clearing Prices (\$ per MW-day)	Cleared UCAP (MW)	Clearing Prices (\$ per MW-day)	Cleared UCAP (MW)
RTO	Limited	\$106.02	2,322.1		
	Extended Summer	\$120.00	7,163.3		
	Annual	\$120.00	157,518.3	\$282.16	163,713.2
RTO Total			167,003.7		163,713.2
PSEG	Limited	\$201.02	177.5		
	Extended Summer	\$215.00	154.8		
	Annual	\$215.00	5,778.4	\$282.16	6,177.1
PSEG Total			6,110.7		6,177.1
PPL	Limited	\$40.00	41.7		
	Extended Summer	\$53.98	183.3		
	Annual	\$120.00	9,123.5	\$282.16	9,879.3
PPL Total			9,348.5		9,879.3

# Table 6 Scenario 3: Impact of Short-Term Resource Procurement Target

LDA	Product Type	Actual Auction Results		No Short-Term Resource Procurement Target Reduction from VRR Curve	
		Clearing Prices (\$ per MW-day)	Cleared UCAP (MW)	Clearing Prices (\$ per MW-day)	Cleared UCAP (MW)
RTO	Limited	\$106.02	2,322.1	\$145.02	2,322.1
	Extended Summer	\$120.00	7,163.3	\$157.80	7,288.7
	Annual	\$120.00	157,518.3	\$157.80	160,751.7
RTO Total			167,003.7		170,362.5
PSEG	Limited	\$201.02	177.5	\$207.22	175.4
	Extended Summer	\$215.00	154.8	\$220.00	157.0
	Annual	\$215.00	5,778.4	\$220.00	6,056.7
PSEG Total			6,110.7		6,389.1
PPL	Limited	\$40.00	41.7	\$75.00	63.4
	Extended Summer	\$53.98	183.3	\$87.78	161.6
	Annual	\$120.00	9,123.5	\$157.80	10,421.5
PPL Total			9,348.5		10,646.5



# Table 7 Scenario 3A: Impact of Short-Term Resource Procurement Target

LDA	Product Type	Actual Auction Results		No Short-Term Resource Procurement Target Reduction	
		Clearing Prices (\$ per MW-day)	Cleared UCAP (MW)	Clearing Prices (\$ per MW-day)	Cleared UCAP (MW)
RTO	Limited	\$106.02	2,322.1	\$157.80	4,476.4
	Extended Summer	\$120.00	7,163.3	\$157.80	5,339.1
	Annual	\$120.00	157,518.3	\$157.80	160,547.0
RTO Total			167,003.7		170,362.5
PSEG	Limited	\$201.02	177.5	\$220.00	201.2
	Extended Summer	\$215.00	154.8	\$220.00	130.9
	Annual	\$215.00	5,778.4	\$220.00	6,057.0
PSEG Total			6,110.7		6,389.1
PPL	Limited	\$40.00	41.7	\$157.80	350.0
	Extended Summer	\$53.98	183.3	\$157.80	79.8
	Annual	\$120.00	9,123.5	\$157.80	10,284.6
PPL Total			9,348.5		10,714.4



# Table 8 Scenario 4: Impact of Short-Term Resource Procurement Target and DR product types

LDA	Product Type	Actual Auction Results		No Short-Term Resource Procurement Target Reduction and Annual Resources Only	
		Clearing Prices (\$ per MW-day)	Cleared UCAP (MW)	Clearing Prices (\$ per MW-day)	Cleared UCAP (MW)
RTO	Limited	\$106.02	2,322.1		
	Extended Summer	\$120.00	7,163.3		
	Annual	\$120.00	157,518.3	\$173.76	170,037.8
RTO Total			167,003.7		170,037.8
PSEG	Limited	\$201.02	177.5		
	Extended Summer	\$215.00	154.8		
	Annual	\$215.00	5,778.4	\$225.00	6,381.6
PSEG Total			6,110.7		6,381.6
PPL	Limited	\$40.00	41.7		
	Extended Summer	\$53.98	183.3		
	Annual	\$120.00	9,123.5	\$173.76	10,546.7
PPL Total			9,348.5		10,546.7

# Table 9 Scenario 5: Impact of Short-Term Resource Procurement Target, DR and EE

LDA	Product Type	Actual Auction Results		No Short-Term Resource Procurement Target Reduction and No Offers for DR or EE	
		Clearing Prices (\$ per MW-day)	Cleared UCAP (MW)	Clearing Prices (\$ per MW-day)	Cleared UCAP (MW)
RTO	Limited	\$106.02	2,322.1		
	Extended Summer	\$120.00	7,163.3		
	Annual	\$120.00	157,518.3	\$396.46	164,969.8
RTO Total			167,003.7		164,969.8
PSEG	Limited	\$201.02	177.5		
	Extended Summer	\$215.00	154.8		
	Annual	\$215.00	5,778.4	\$396.46	6,421.7
PSEG Total			6,110.7		6,421.7
PPL	Limited	\$40.00	41.7		
	Extended Summer	\$53.98	183.3		
	Annual	\$120.00	9,123.5	\$396.46	9,879.3
PPL Total			9,348.5		9,879.3

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