Analysis of the 2012/2013 RPM Base Residual Auction

MIC

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Joseph Bowring

Monitoring Analytics

- Market results: prices and quantities
- Supply and demand fundamentals
- Constrained LDAs and price separation
- Impacts of market design features:
  - o VRR Curve
  - o EFORd rule changes
  - o Reduction of demand by 2.5%
  - o Mitigation of demand resources
  - o Role of demand resources
- See: "Analysis of the 2012/2013 RPM Base Residual Auction" report for full details:
  - o http://www.monitoringanalytics.com/reports/Reports/2009

Table 1 Clearing prices and net CONE

LDA	Clearing Price ($/MW-day)	Net CONE ($/MW-day)
RTO	$16.46	$276.09
MAAC	$133.37	$176.44
EMAAC	$139.73	$212.50
PSEG North	$185.00	$212.50
DPL South	$222.30	$212.50

Table 2 Preliminary Market Structure Screen results: 2012/2013

RPM Markets	Highest Market Share	HHI	Pivotal Suppliers	Pass/Fail
RTO	17.4%	853	1	Fail
MAAC	17.6%	1071	1	Fail
EMAAC	32.8%	2057	1	Fail
SWMAAC	50.7%	4338	1	Fail
PSEG	84.3%	7188	1	Fail
PSEG North	90.9%	8287	1	Fail
DPL South	55.0%	3828	1	Fail

Table 3 ACR statistics: 2012/2013 RPM Base Residual Auction

Calculation Type	Number of Resources	Percent of Generation Resources Offered
Default ACR selected	476	42.0%
ACR data input (APIR)	118	10.4%
ACR data input (non-APIR)	2	0.2%
Opportunity cost input	8	0.7%
Default ACR and opportunity cost input	3	0.3%
Generating resources with offer caps	607	53.6%
Uncapped new generation resources	11	1.0%
Generation price takers	515	45.5%
Generation resources offered	1,133	100.0%
Capped existing demand resources	163	
Uncapped planned demand resources	38	
Demand resources with existing and planned portions	32	
Demand resources offered	233	
Uncapped energy efficiency resources	53	
Energy efficiency resources offered	53	
Total capacity resources offered	1,419	

Table 4 APIR statistics: 2012/2013 RPM Base Residual Auction

	Weighted-Average ($ per MW-day UCAP)						
	Combined Cycle	Combustion Turbine	Oil or Gas Steam	SubCritical/ SuperCritical Coal	Other	Opportunity Costs	Total
Non-APIR units							
ACR	$41.84	$32.61	$75.47	$207.54	$57.18		$110.84
Net revenues	$91.67	$35.29	$7.51	$396.82	$257.96		$208.65
Offer caps	$5.28	$14.40	$67.96	$11.31	$15.63	$136.48	$21.55
APIR units							
ACR	$218.10	$49.83	$177.52	$715.10	N/A		$464.65
Net revenues	$98.97	$15.62	$3.62	$508.00	N/A		$302.04
Offer caps	$119.12	$34.96	$173.89	$215.38	N/A		$167.62
APIR	$218.10	$26.59	$89.08	$559.97	N/A		$351.74
Maximum APIR effect							$1,155.57

Table 5 RSI Results: 2012/2013 RPM Base Residual Auction

	$RSI_{1\ 1.05}$	RSI_3	Total Participants	Failed RSI_3 Participants
RTO	0.84	0.63	98	98
MAAC/SWMAAC	0.77	0.54	15	15
EMAAC/PSEG	0.00	7.03	6	0
PSEG North	0.00	0.00	2	2
DPL South	0.00	0.00	3	3

Table 6 RTO offer statistics: 2012/2013 RPM Base Residual Auction

	ICAP (MW)	UCAP Without EFORd5	UCAP (MW)	Percent of Available ICAP	Percent of Available UCAP
Total internal RTO capacity (gen, DR, and EE)	179,791.2	171,155.0	169,953.3		
FRR	(26,302.1)	(24,270.9)	(24,264.8)		
Imports	4,152.4	3,835.9	3,831.6		
RPM capacity	157,641.5	150,720.0	149,520.1		
Exports	(2,783.9)	(2,668.0)	(2,637.1)		
FRR optional	(1,684.2)	(1,509.9)	(1,465.5)		
Excused	(48.0)		(44.2)		
Available	153,125.4	146,542.1	145,373.3	100.0%	100.0%
Generation offered	142,957.7		134,873.0	93.4%	92.8%
DR offered	9,535.4		9,847.6	6.2%	6.8%
EE offered	632.3		652.7	0.4%	0.4%
Total offered	153,125.4		145,373.3	100.0%	100.0%
Unoffered	0.0		0.0	0.0%	0.0%
Cleared in RTO	132,793.4		126,399.2	86.7%	87.0%
Cleared in LDAs	10,569.3		9,744.3	6.9%	6.7%
Total cleared	143,362.7		136,143.5	93.6%	93.7%
Uncleared in RTO	6,587.8		6,399.7	4.3%	4.4%
Uncleared in LDAs	3,174.9		2,830.1	2.1%	1.9%
Total uncleared	9,762.7		9,229.8	6.4%	6.3%
Reliability requirement			133,732.4		
Total cleared			136,143.5		
Short-Term Resource Procurement Target			3,343.3		
Net excess/(deficit)			5,754.4		
Resource clearing price ($ per MW-day)			$16.46	A	
Preliminary zonal capacity price ($ per MW-day)			$16.46	B	
Base zonal CTR credit rate ($ per MW-day)			$0.00	C	
Preliminary net load price ($ per MW-day)			$16.46	B-C	

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Table 7 Capacity modifications (ICAP): 2012/2013 RPM Base Residual Auction

	ICAP (MW)				
	RTO	MAAC	EMAAC	PSEG NORTH	DPL SOUTH
Generation increases	1,764.9	695.6	(1,003.0)	47.3	0.0
Generation decreases	(3,018.3)	(1,906.2)	336.0	(815.0)	(34.8)
Capacity modifications net increase/(decrease)	(1,253.4)	(1,210.6)	(667.0)	(767.7)	(34.8)
DR increases	9,006.0	4,586.6	(187.6)	65.4	62.5
DR decreases	(1,229.9)	(876.9)	1,621.8	0.0	0.0
DR modifications increase/(decrease)	7,776.1	3,709.7	1,434.2	65.4	62.5
EE increases	632.1	181.2	23.8	0.9	0.0
Net capacity/DR modifications increase/(decrease)	7,154.8	2,680.3	791.0	(701.4)	27.7
Duquesne Gen	3,210.0				
Duquesne DR	184.6				
Duquesne EE	0.2				
Net Internal Capacity Increase/(Decrease)	10,549.6	2,680.3	791.0	(701.4)	27.7

Table 8 Capacity modifications (UCAP): 2012/2013 Base Residual Auction

	UCAP (MW)				
	RTO	MAAC	EMAAC	PSEG NORTH	DPL SOUTH
Generation increases	1,655.8	661.3	328.0	42.3	0.0
Generation decreases	(2,507.6)	(1,500.7)	(713.2)	(551.3)	(31.8)
Capacity modifications net increase/(decrease)	(851.8)	(839.4)	(385.2)	(509.0)	(31.8)
DR increases	9,301.0	4,736.8	1,674.9	67.6	64.6
DR decreases	(1,272.3)	(907.1)	(194.0)	0.0	0.0
DR modifications increase/(decrease)	8,028.7	3,829.7	1,480.9	67.6	64.6
EE increases	652.5	186.9	24.4	0.9	0.0
Net capacity/DR modifications increase/(decrease)	7,829.4	3,177.2	1,120.1	(440.5)	32.8
EFORd effect	(944.1)	(502.1)	(185.1)	18.3	5.8
DR effect	(1.9)	(0.9)	(0.5)	0.0	0.0
Duquesne Gen	2,996.2				
Duquesne DR	190.8				
Duquesne EE	0.2				
Net Internal Capacity Increase/(Decrease)	10,070.6	2,674.2	934.5	(422.2)	38.6

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Table 9 Uncleared generation offers: 2012/2013 RPM Base Residual Auction

LDA	Technology Type	Age	Uncleared (MW)
PSEG North	Combustion Turbine	Planned	223.4
DPL South	SubCritical / SuperCritical Coal	20 to 30 years old	112.6
		30 to 40 years old	144.8
EMAAC	Combustion Turbine	Planned	223.4
	Oil or Gas Steam	10 to 20 years old	29.4
		30 to 40 years old	345.6
		40 to 50 years old	127.4
		Greater than 50 years old	183.6
	SubCritical / SuperCritical Coal	20 to 30 years old	112.6
		30 to 40 years old	144.8
		40 to 50 years old	444.6
		Greater than 50 years old	137.6
SWMAAC	Combustion Turbine	Planned	240.0
		30 to 40 years old	51.3
	Oil or Gas Steam	Greater than 50 years old	206.0
	SubCritical / SuperCritical Coal	40 to 50 years old	219.3
MAAC	Combustion Turbine	Planned	463.4
		30 to 40 years old	51.3
	Oil or Gas Steam	10 to 20 years old	29.4
		30 to 40 years old	394.6
		40 to 50 years old	127.4
		Greater than 50 years old	389.6
	Hydro	Greater than 50 years old	3.0
	SubCritical / SuperCritical Coal	20 to 30 years old	112.6
		30 to 40 years old	144.8
		40 to 50 years old	663.9
		Greater than 50 years old	137.6
RTO	Combustion Turbine	Planned	463.4
		Less than 10 years old	3,143.4
		30 to 40 years old	90.4
	Oil or Gas Steam	10 to 20 years old	29.4
		30 to 40 years old	605.4
		40 to 50 years old	127.4
		Greater than 50 years old	389.6
	SubCritical / SuperCritical Coal	Planned	117.1
		20 to 30 years old	112.6
		30 to 40 years old	144.8
		40 to 50 years old	685.3
		Greater than 50 years old	416.8
	Wind	Planned	17.0
	Hydro	Greater than 50 years old	3.0

Table 10 Offers greater than $35.00 on total RTO supply curve: 2012/2013 RPM Base Residual Auction

Offer/Technology Type	UCAP (MW)	Percent of Offers
DR	2,405.6	18.9%
EE	91.1	0.7%
Opportunity costs	1,664.9	13.1%
Oil/gas steam	2,807.6	22.1%
Supercritical coal	2,292.2	18.0%
Subcritical coal	1,790.5	14.1%
Combustion turbine (CT)	1,624.0	12.8%
Combined cycle	42.4	0.3%
Total	12,718.3	100.0%

Table 11 Impact of EFORd-5 and elimination of EFORd risk offer segments

	Actual Auction Results		Without EFORd-5 Option		With EFORd Risk Offer Segment Option and Without EFORd-5 Option	
LDA	Clearing Prices ($/MW-day)	Cleared UCAP (MW)	Clearing Prices ($/MW-day)	Cleared UCAP (MW)	Clearing Prices ($/MW-day)	Cleared UCAP (MW)
DPL South	$222.30	1,241.5	$222.30	1,241.5	$222.30	1,241.5
PSEG North	$185.00	3,521.9	$185.00	3,521.9	$185.00	3,521.9
EMAAC	$139.73	31,080.2	$123.51	31,426.4	$138.00	31,094.3
MAAC	$133.37	65,452.4	$123.51	65,625.9	$133.37	65,452.4
RTO	$16.46	136,143.5	$14.84	136,143.5	$16.59	136,143.5

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Table 12 Impact of not reducing demand by short-term resource procurement

LDA	Actual Auction Results Clearing Prices ($/MW-day)	Cleared UCAP (MW)	Without Short-Term Resource Procurement Reduction Clearing Prices ($/MW-day)	Cleared UCAP (MW)
DPL South	$222.30	1,241.5	$222.30	1,305.5
PSEG North	$185.00	3,521.9	$185.00	3,558.2
EMAAC	$139.73	31,080.2	$185.00	31,635.0
MAAC	$133.37	65,452.4	$175.00	66,394.0
RTO	$16.46	136,143.5	$23.92	139,486.8

Figure 1 PJM RTO market supply/demand curves: 2012/2013 RPM Base Residual Auction

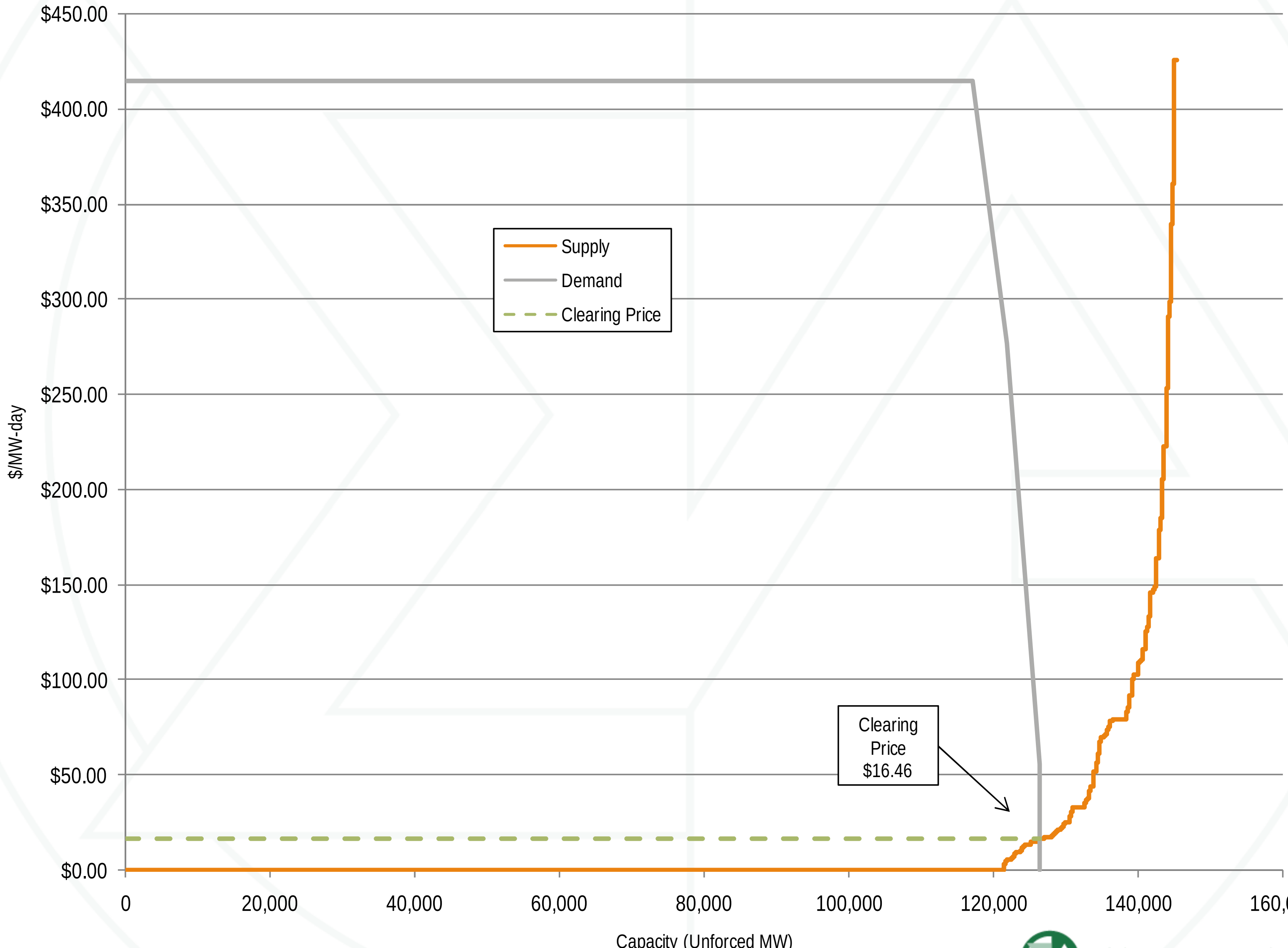

Figure 2 PJM as a single market supply/demand curves at reliability requirement: 2012/2013 RPM auction

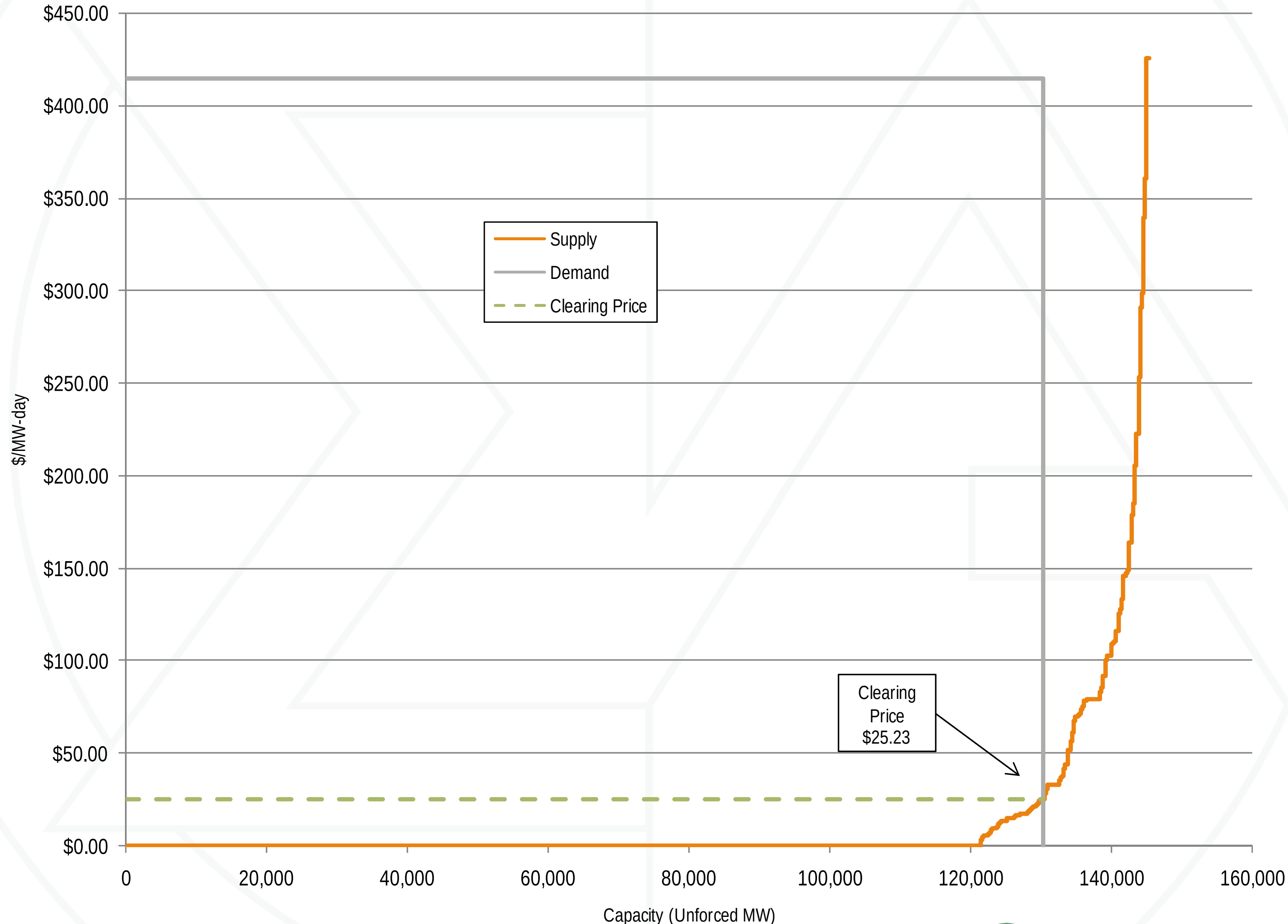

Figure 3 PJM RTO supply/demand curves at reliability requirement: 2012/2013 RPM auction

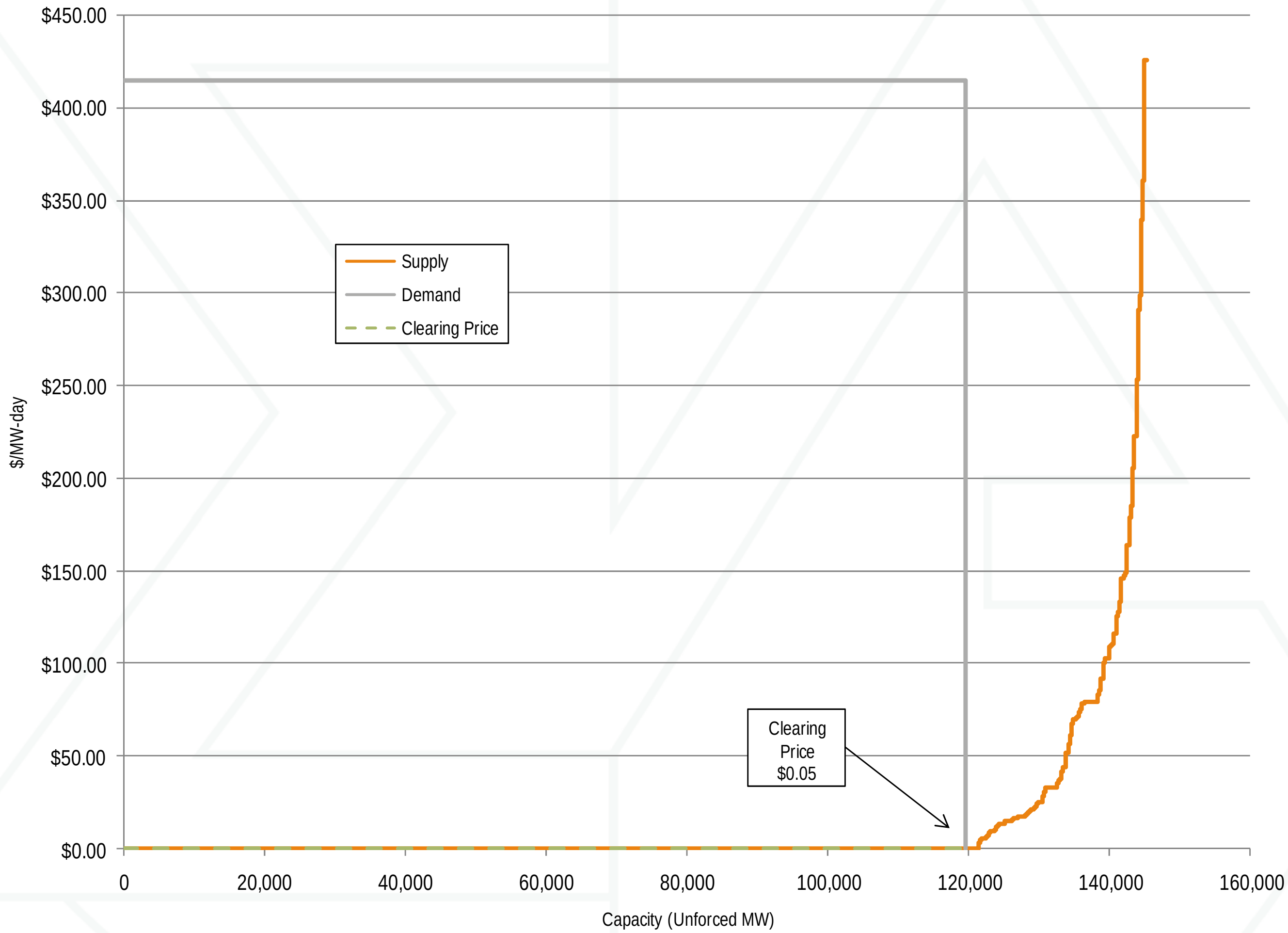

Figure 4 PJM RTO market supply/demand curves: 2011/2012 and 2012/2013 RPM Base Residual Auctions

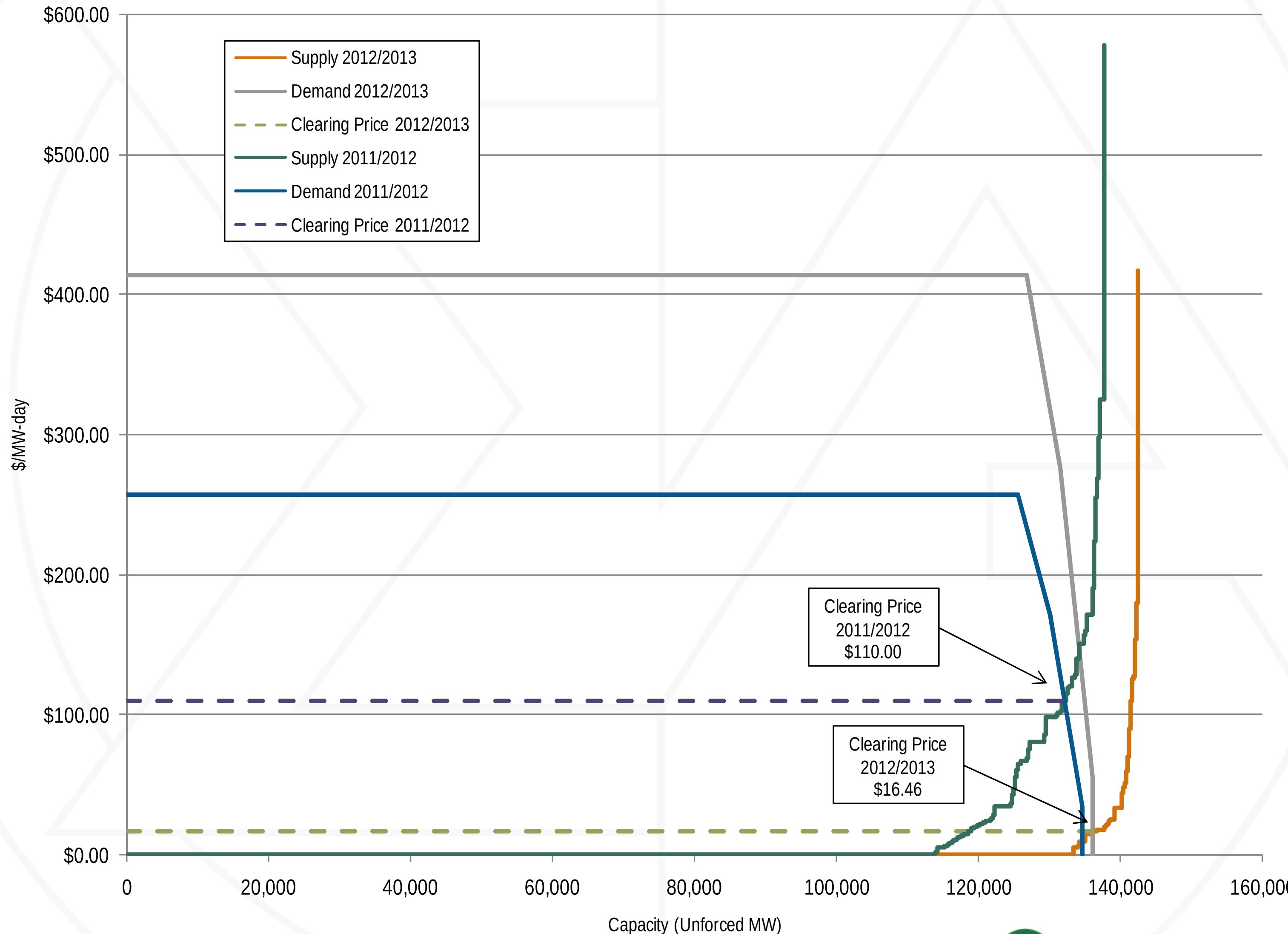

Figure 5 RTO market supply/demand curves: Impact of constraints on price formation

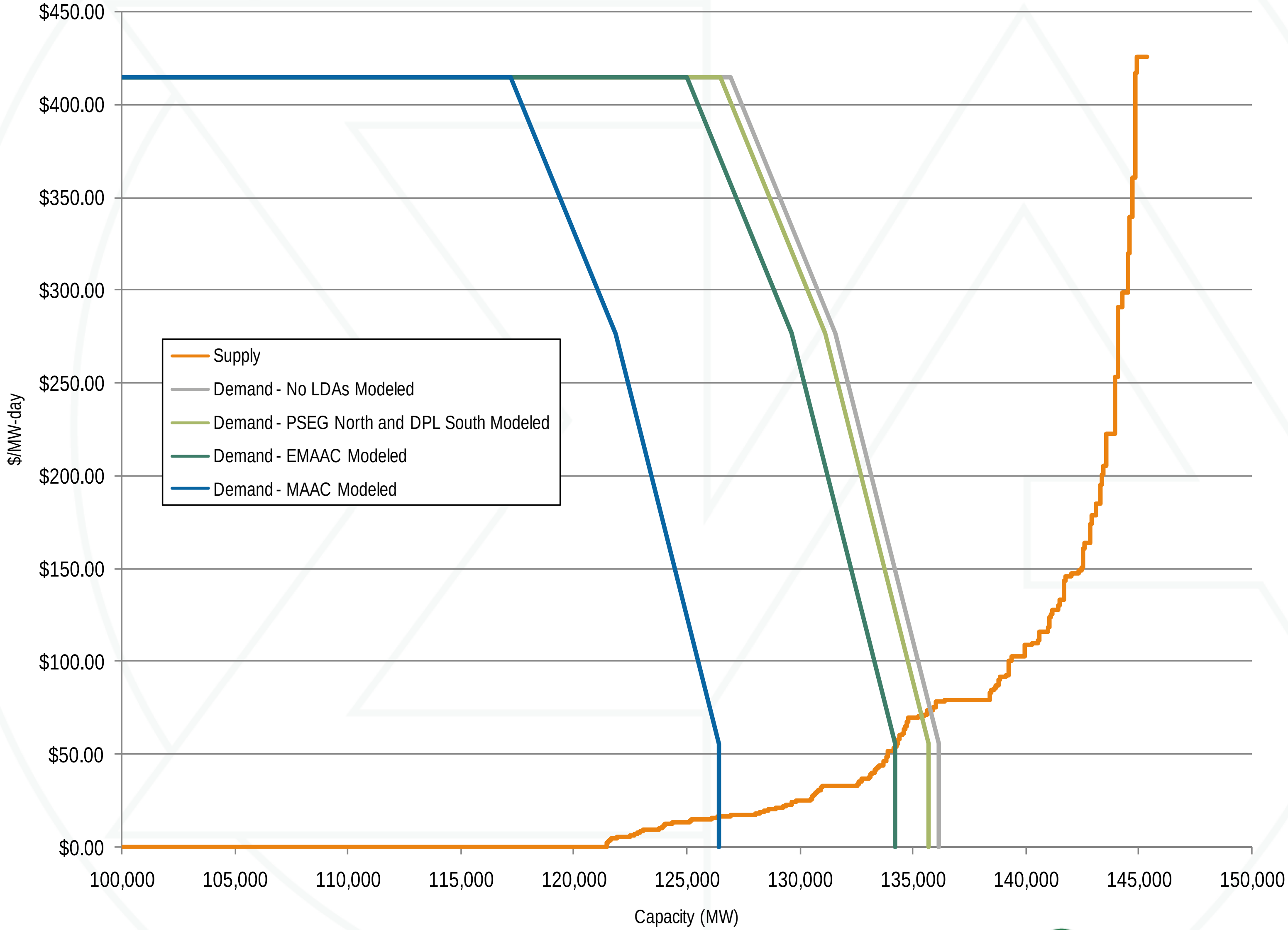

Figure 6 PJM RTO mitigated and unmitigated supply curves: 2012/2013 RPM auction

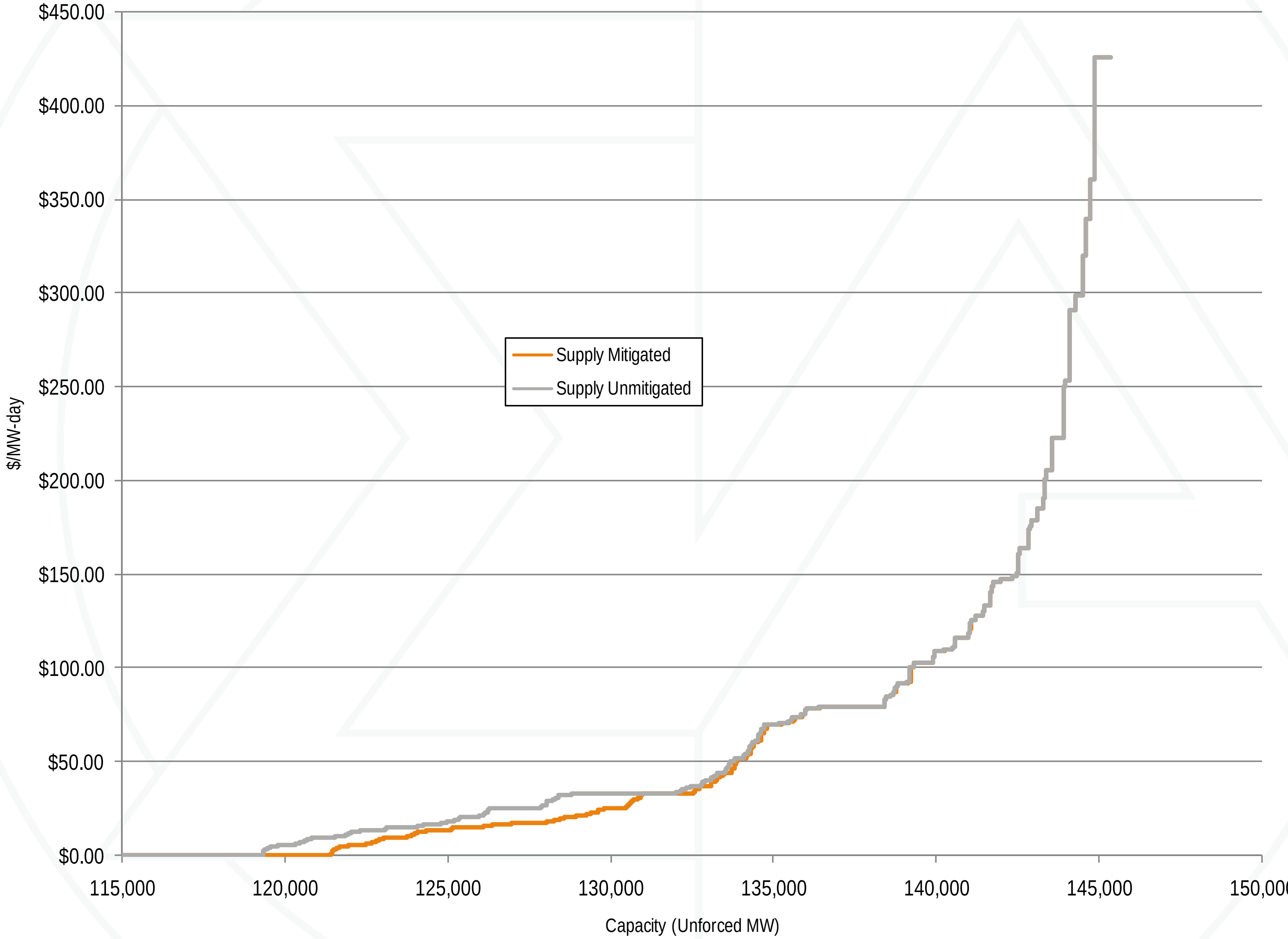

Table 13 MAAC offer statistics: 2012/2013 RPM Base Residual Auction

	ICAP (MW)	UCAP (MW)	Percent of Available ICAP	Percent of Available UCAP
Total internal MAAC capacity (gen, DR, and EE)	72,707.2	69,003.9		
Imports	0.0	0.0		
RPM capacity	72,707.2	69,003.9		
Exports	(685.0)	(685.0)		
Excused	(40.2)	(36.4)		
Available	71,982.0	68,282.5	100.0%	100.0%
Generation offered	66,930.8	63,066.4	92.9%	92.3%
DR offered	4,870.0	5,029.2	6.8%	7.4%
EE offered	181.2	186.9	0.3%	0.3%
Total offered	71,982.0	68,282.5	100.0%	100.0%
Unoffered	0.0	0.0	0.0%	0.0%
Cleared in RTO	58,237.8	55,708.1	80.9%	81.6%
Cleared in MAAC	10,110.6	9,321.8	14.0%	13.7%
Cleared in EMAAC	18.2	18.6	0.0%	0.0%
Cleared in PSEG North and DPL South	440.5	403.9	0.6%	0.6%
Total cleared	68,807.1	65,452.4	95.6%	95.9%
Uncleared	3,174.9	2,830.1	4.4%	4.1%
Reliability requirement		72,125.0		
Total cleared		65,452.4		
CETL		6,377.0		
Total Resources		71,829.4		
Short-Term Resource Procurement Target		1,673.9		
Net excess/(deficit)		1,378.3		
Resource clearing price ($ per MW-day)		$133.37	A	
Preliminary zonal capacity price ($ per MW-day)		$133.46	B	
Base zonal CTR credit rate ($ per MW-day)		$3.83	C	
Preliminary net load price ($ per MW-day)		$129.63	B-C	

Figure 7 PJM MAAC market supply/demand curves: 2012/2013 RPM Base Residual Auction

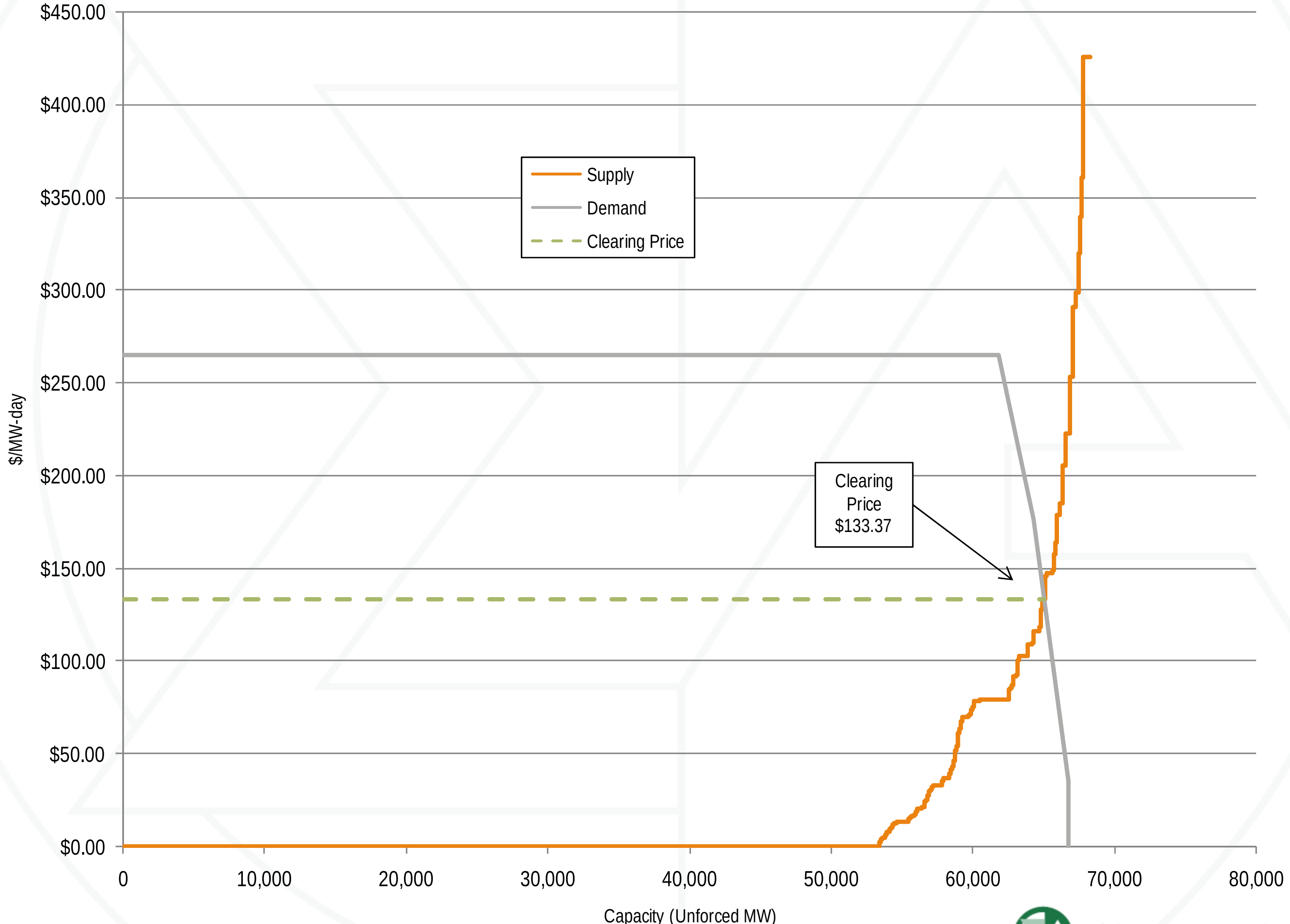

Figure 8 PJM MAAC market supply/demand curves at the reliability requirement: 2012/2013 RPM Base Residual Auction

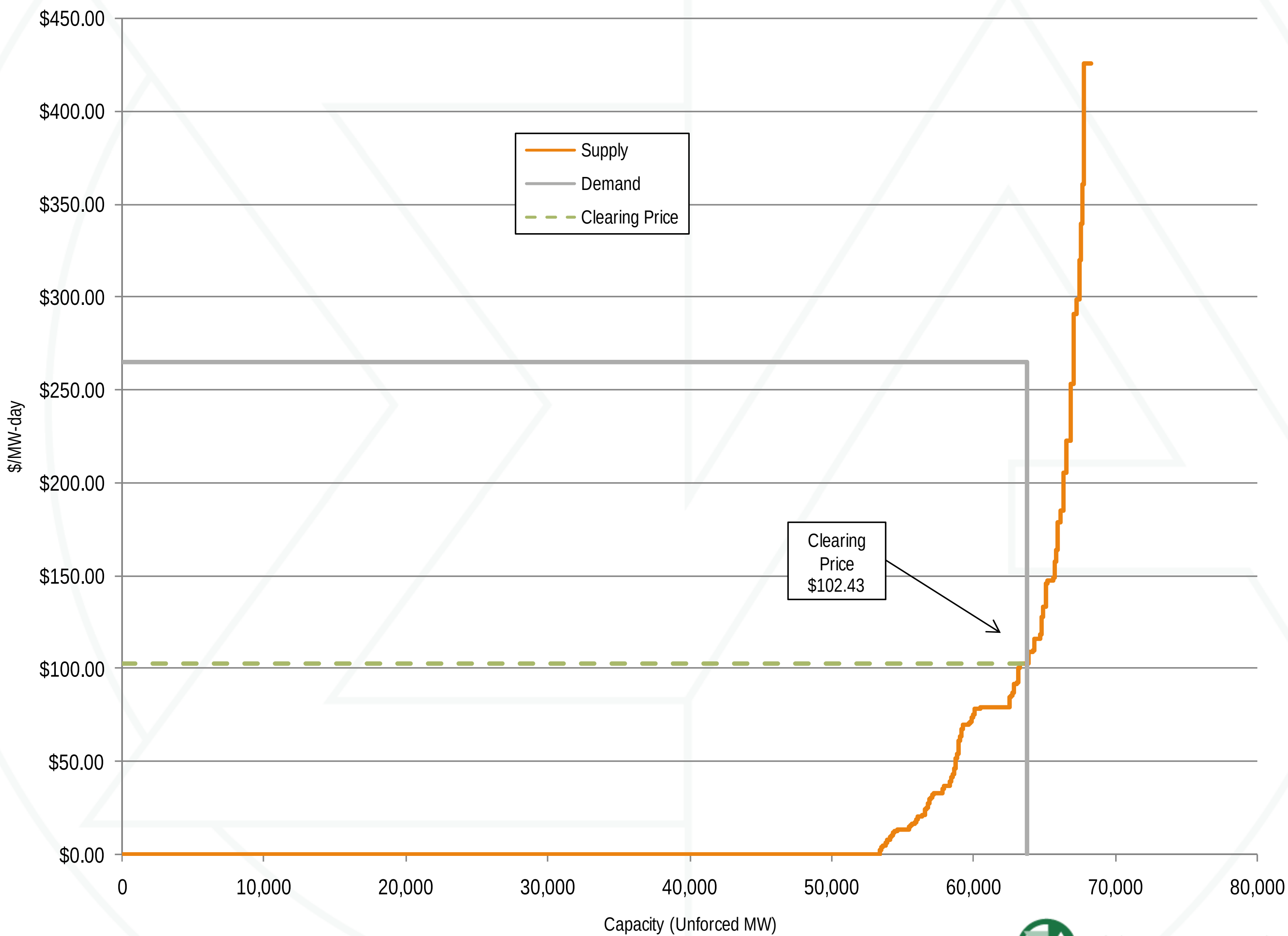

Table 14 EMAAC offer statistics: 2012/2013 RPM Base Residual Auction

	ICAP (MW)	UCAP (MW)	Percent of Available ICAP	Percent of Available UCAP
Total internal EMAAC capacity (gen, DR, and EE)	35,479.9	33,667.5		
Imports	0.0	0.0		
RPM capacity	35,479.9	33,667.5		
Exports	(685.0)	(685.0)		
Excused	0.0	0.0		
Available	34,794.9	32,982.5	100.0%	100.0%
Generation offered	33,040.3	31,170.8	94.9%	94.5%
DR offered	1,730.8	1,787.3	5.0%	5.4%
EE offered	23.8	24.4	0.1%	0.1%
Total offered	34,794.9	32,982.5	100.0%	100.0%
Unoffered	0.0	0.0	0.0%	0.0%
Cleared in RTO	28,566.0	27,519.9	82.1%	83.5%
Cleared in MAAC	3,584.5	3,137.8	10.3%	9.5%
Cleared in EMAAC	18.2	18.6	0.1%	0.1%
Cleared in PSEG North and DPL South	440.5	403.9	1.3%	1.2%
Total cleared	32,609.2	31,080.2	93.7%	94.2%
Uncleared	2,185.7	1,902.3	6.3%	5.8%
Reliability requirement		40,145.0		
Total cleared		31,080.2		
CETL		9,079.0		
Total Resources		40,159.2		
Short-Term Resource Procurement Target		922.8		
Net excess/(deficit)		937.0		
Resource clearing price ($ per MW-day)		$139.73	A	
Preliminary zonal capacity price ($ per MW-day)		$139.82	B	
Base zonal CTR credit rate ($ per MW-day)		$4.64	C	
Preliminary net load price ($ per MW-day)		$135.18	B-C	

Figure 9 PJM EMAAC market supply/demand curves: 2012/2013 RPM Base Residual Auction

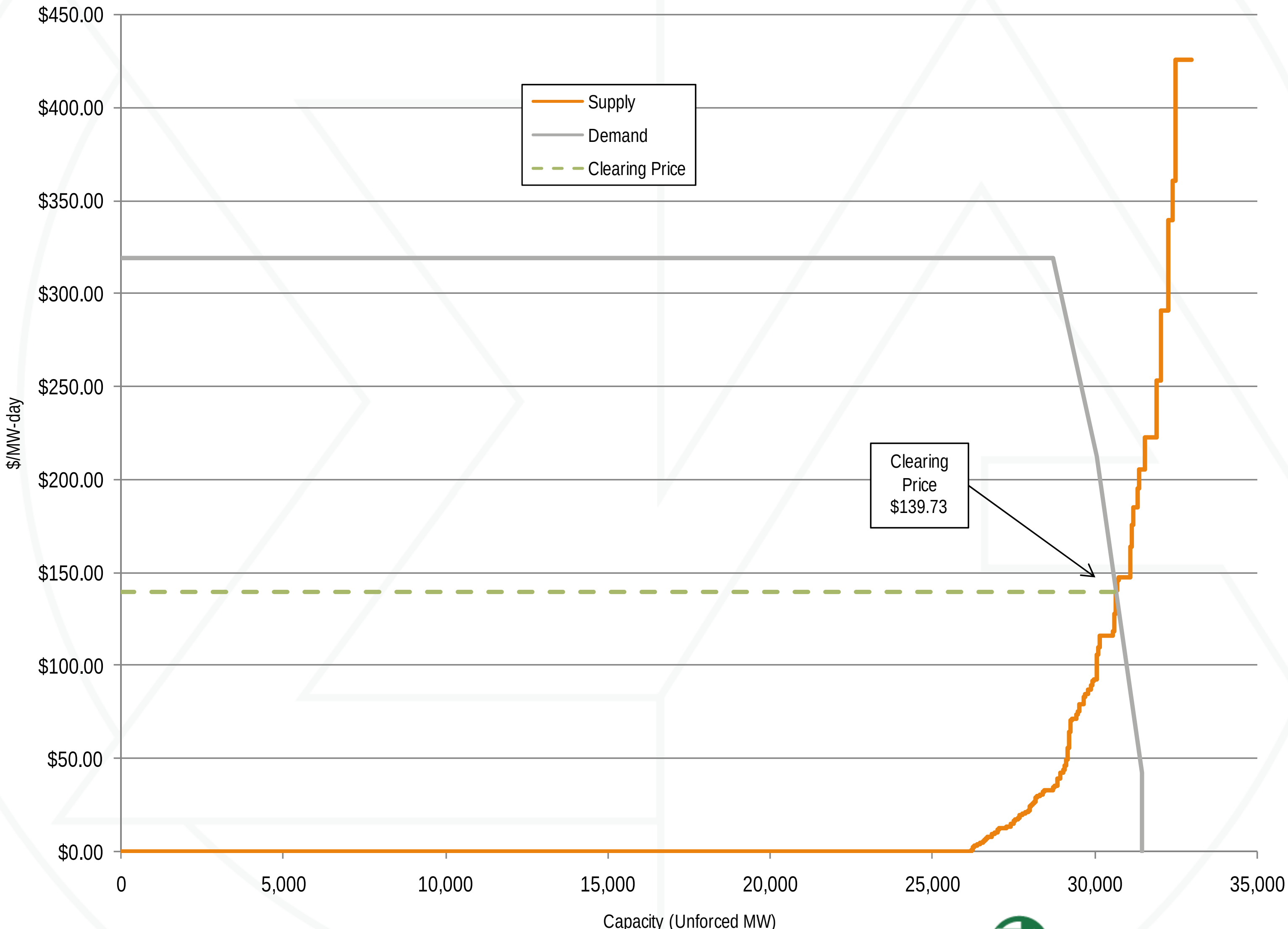

Table 15 PSEG North offer statistics: 2012/2013 RPM Base Residual Auction

	ICAP (MW)	UCAP (MW)	Percent of Available ICAP	Percent of Available UCAP
Total internal PSEG North capacity (gen, DR, and EE)	4,121.3	3,745.3		
Imports	0.0	0.0		
RPM capacity	4,121.3	3,745.3		
Exports	0.0	0.0		
Excused	0.0	0.0		
Available	4,121.3	3,745.3	100.0%	100.0%
Generation offered	4,055.0	3,676.8	98.4%	98.2%
DR offered	65.4	67.6	1.6%	1.8%
EE offered	0.9	0.9	0.0%	0.0%
Total offered	4,121.3	3,745.3	100.0%	100.0%
Unoffered	0.0	0.0	0.0%	0.0%
Cleared in RTO	3,129.9	2,895.6	75.9%	77.3%
Cleared in MAAC	629.0	517.4	15.3%	13.8%
Cleared in EMAAC	0.0	0.0	0.0%	0.0%
Cleared in LDA	118.2	108.9	2.9%	2.9%
Total cleared	3,877.1	3,521.9	94.1%	94.0%
Uncleared	244.2	223.4	5.9%	6.0%
Reliability requirement		6,324.0		
Total cleared		3,521.9		
CETL		2,755.0		
Total Resources		6,276.9		
Short-Term Resource Procurement Target		136.8		
Net excess/(deficit)		89.7		
Resource clearing price ($ per MW-day)		$185.00	A	
Preliminary zonal capacity price ($ per MW-day)		$162.87	B	
Base zonal CTR credit rate ($ per MW-day)		$13.22	C	
Preliminary net load price ($ per MW-day)		$149.65	B-C	

Figure 10 PJM PSEG North market supply/demand curves: 2012/2013 RPM Base Residual Auction

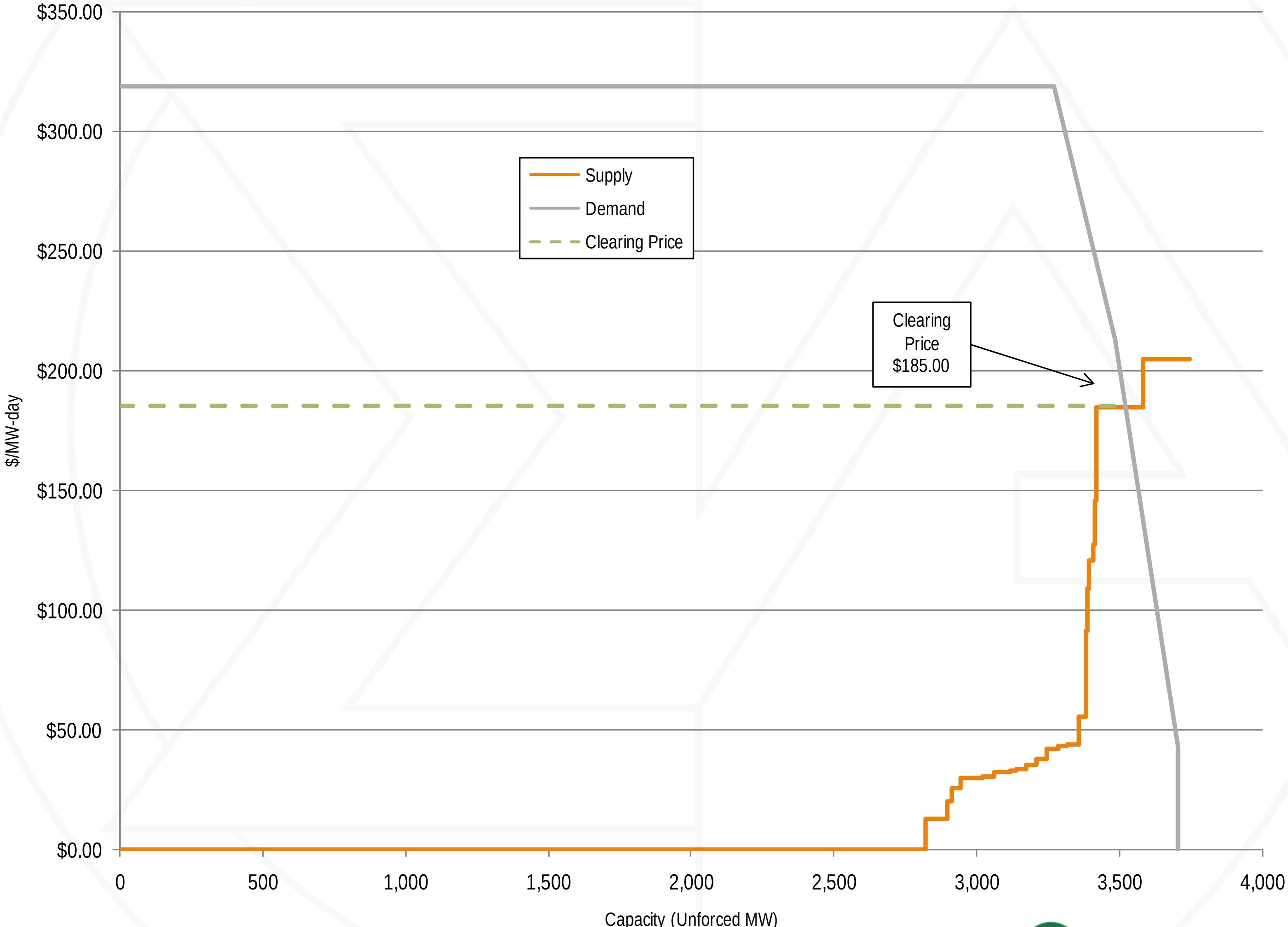

Figure 11 PJM PSEG North market supply/demand curves at reliability requirement: 2012/2013 RPM Base Residual Auction

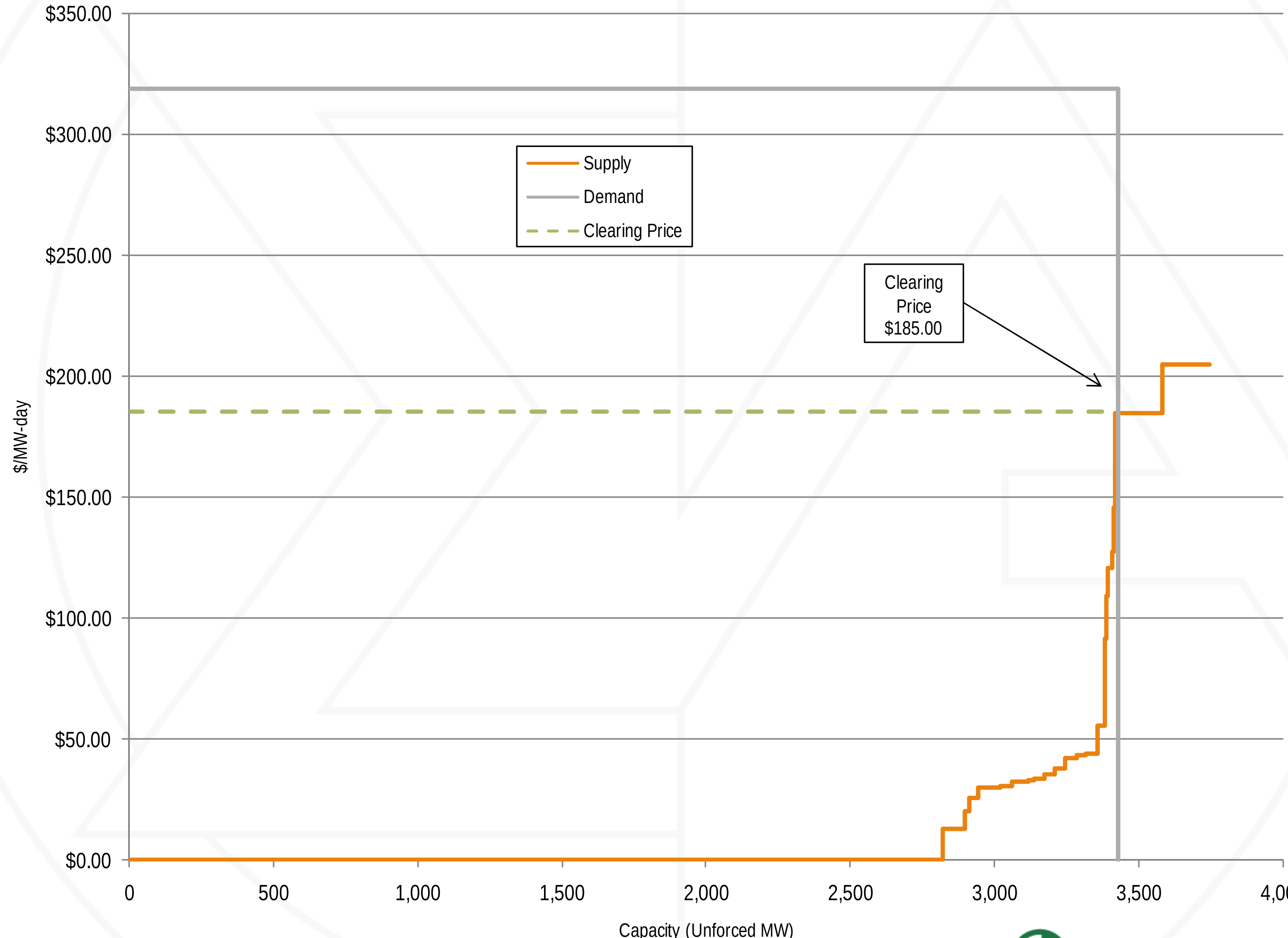

Table 16 DPL South offer statistics: 2012/2013 RPM Base Residual Auction

	ICAP (MW)	UCAP (MW)	Percent of Available ICAP	Percent of Available UCAP
Total internal DPL South capacity (gen, DR, and EE)	1,582.5	1,498.9		
Imports	0.0	0.0		
RPM capacity	1,582.5	1,498.9		
Exports	0.0	0.0		
Excused	0.0	0.0		
Available	1,582.5	1,498.9	100.0%	100.0%
Generation offered	1,520.0	1,434.3	96.1%	95.7%
DR offered	62.5	64.6	3.9%	4.3%
EE offered	0.0	0.0	0.0%	0.0%
Total offered	1,582.5	1,498.9	100.0%	100.0%
Unoffered	0.0	0.0	0.0%	0.0%
Cleared in RTO	923.9	892.7	58.3%	59.5%
Cleared in MAAC	52.1	53.8	3.3%	3.6%
Cleared in EMAAC	0.0	0.0	0.0%	0.0%
Cleared in LDA	322.3	295.0	20.4%	19.7%
Total cleared	1,298.3	1,241.5	82.0%	82.8%
Uncleared	284.2	257.4	18.0%	17.2%
Reliability requirement		3,035.0		
Total cleared		1,241.5		
CETL		1,746.0		
Total Resources		2,987.5		
Short-Term Resource Procurement Target		64.0		
Net excess/(deficit)		16.5		
Resource clearing price ($ per MW-day)		$222.30	A	
Preliminary zonal capacity price ($ per MW-day)		$169.63	B	
Base zonal CTR credit rate ($ per MW-day)		$6.64	C	
Preliminary net load price ($ per MW-day)		$162.99	B-C	

Figure 12 PJM DPL South market supply/demand curves: 2012/2013 RPM Base Residual Auction

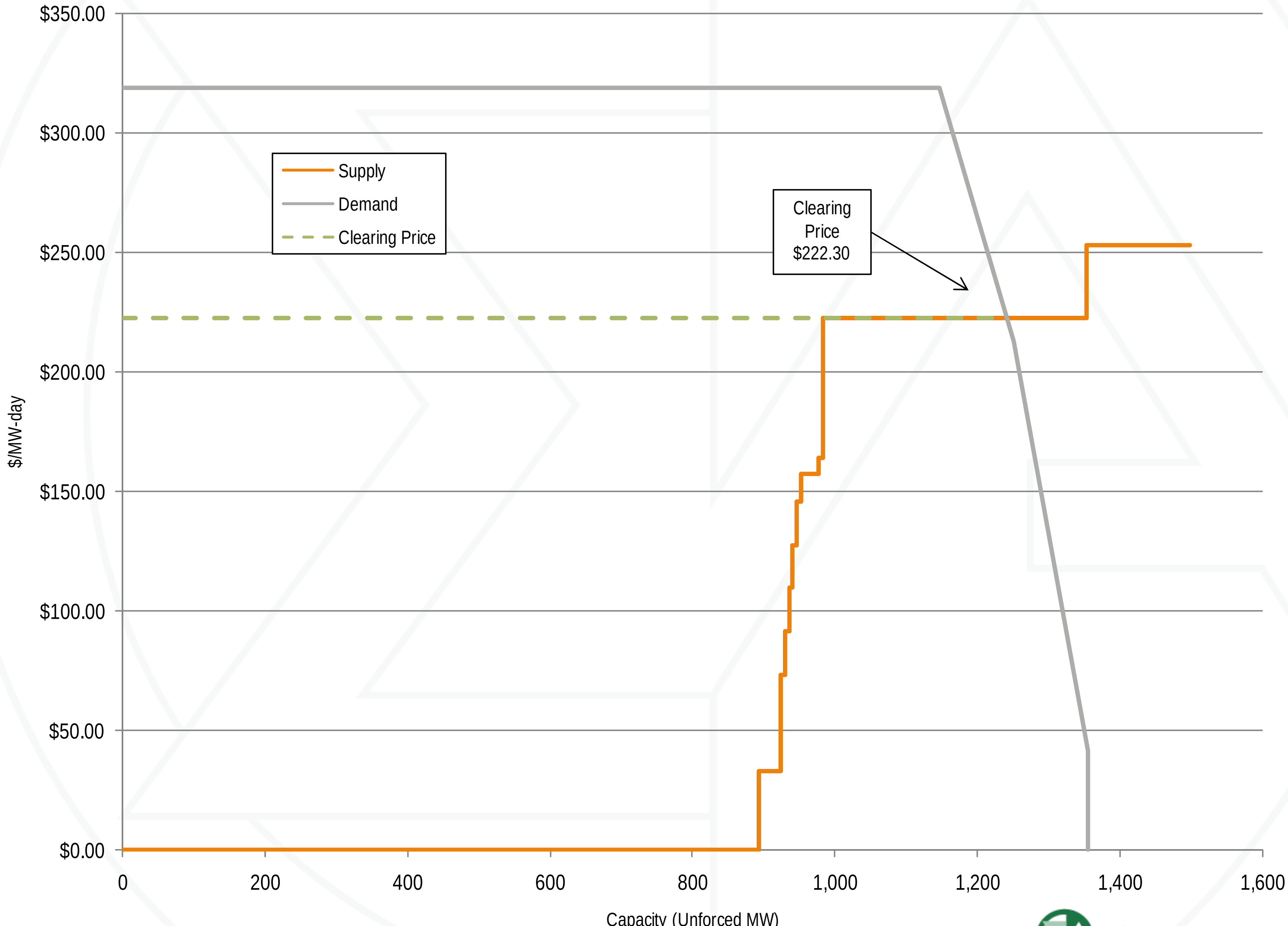

Figure 13 PJM DPL South market supply/demand curves at reliability requirement: 2012/2013 RPM Base Residual Auction

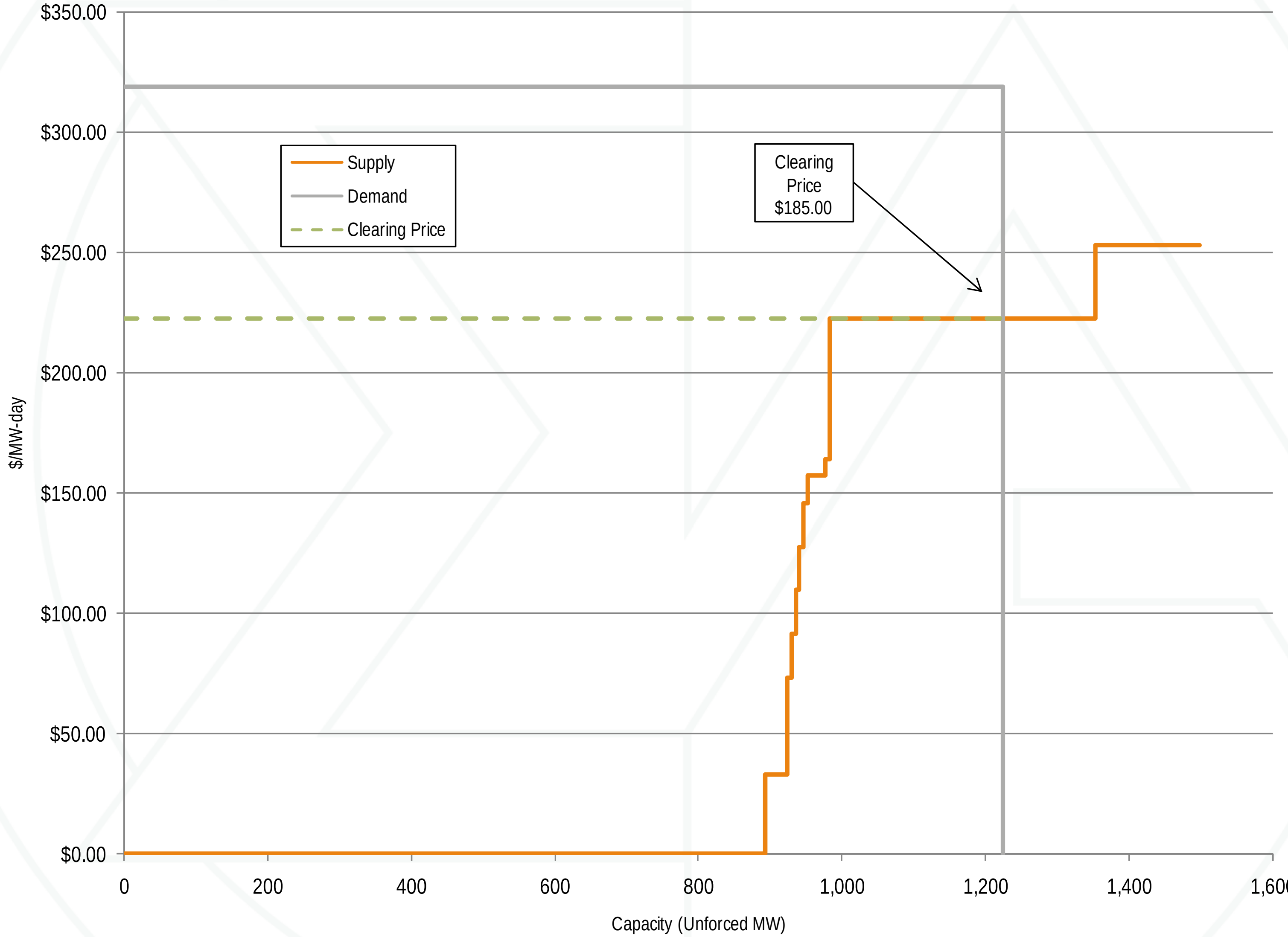

Table 17 DR and EE statistics

	2010/2011 BRA		2011/2012 BRA		2012/2013 BRA	
	ICAP (MW)	UCAP (MW)	ICAP (MW)	UCAP (MW)	ICAP (MW)	UCAP (MW)
DR Planned Offered	935.6	967.9	1,407.3	1,456.0	4,077.9	4,211.5
DR Existing Offered	0.0	0.0	190.0	196.4	5,457.5	5,636.1
Total DR Offered	935.6	967.9	1,597.3	1,652.4	9,535.4	9,847.6
EE Offered					632.3	652.7
DR Planned Cleared	908.0	939.0	1,129.5	1,168.5	1,366.6	1,411.1
DR Existing Cleared	0.0	0.0	190.0	196.4	5,457.5	5,636.1
Total DR Cleared	908.0	939.0	1,319.5	1,364.9	6,824.1	7,047.2
EE Cleared					551.3	568.9

Table 18 DR mitigation impact

	Actual Auction Results				No Mitigation of DR			
LDA	Clearing Prices ($/MW-day)	Cleared UCAP (MW)	Gen Cleared (MW)	DR and EE Cleared (MW)	Clearing Prices ($/MW-day)	Cleared UCAP (MW)	Gen Cleared (MW)	DR and EE Cleared (MW)
DPL South	$222.30	1,241.5	1,176.9	64.6	$222.30	1,241.5	1,176.9	64.6
PSEG North	$185.00	3,521.9	3,453.4	68.5	$185.00	3,521.9	3,453.4	68.5
EMAAC	$139.73	31,080.2	29,421.8	1,658.4	$139.73	31,080.2	29,421.8	1,658.4
MAAC	$133.37	65,452.4	60,548.8	4,903.6	$133.37	65,452.4	60,548.8	4,903.6
RTO	$16.46	136,143.5	128,527.4	7,616.1	$17.30	136,143.5	129,295.7	6,847.8

Table 19 DR mitigation and short-term resource procurement impact

	Actual Auction Results				No Mitigation of DR and Without Short-Term Resource Procurement Reduction			
LDA	Clearing Prices ($/MW-day)	Cleared UCAP (MW)	Gen Cleared (MW)	DR and EE Cleared (MW)	Clearing Prices ($/MW-day)	Cleared UCAP (MW)	Gen Cleared (MW)	DR and EE Cleared (MW)
DPL South	$222.30	1,241.5	1,176.9	64.6	$222.30	1,305.5	1,240.9	64.6
PSEG North	$185.00	3,521.9	3,453.4	68.5	$185.00	3,558.2	3,489.7	68.5
EMAAC	$139.73	31,080.2	29,421.8	1,658.4	$185.00	31,635.0	29,867.7	1,767.3
MAAC	$133.37	65,452.4	60,548.8	4,903.6	$175.00	66,394.0	61,247.9	5,146.1
RTO	$16.46	136,143.5	128,527.4	7,616.1	$30.00	139,486.8	132,344.3	7,142.5

Table 20 DR and EE Offer Impact

LDA	Actual Auction Results Clearing Prices ($/MW-day)	Actual Auction Results Cleared UCAP (MW)	Two Thirds of Actual DR or EE Offers Clearing Prices ($/MW-day)	Two Thirds of Actual DR or EE Offers Cleared UCAP (MW)	One Third of Actual DR or EE Offers Clearing Prices ($/MW-day)	One Third of Actual DR or EE Offers Cleared UCAP (MW)	No DR or EE Offers Clearing Prices ($/MW-day)	No DR or EE Offers Cleared UCAP (MW)
DPL South	$222.30	1,241.5	$222.30	1,241.5	$222.30	1,307.0	$264.66	1,434.3
PSEG North	$185.00	3,521.9	$178.26	3,396.8	$222.30	3,699.6	$264.66	3,676.8
EMAAC	$139.73	31,080.2	$178.26	30,865.8	$222.30	30,701.3	$264.66	30,248.2
MAAC	$133.37	65,452.4	$178.26	64,643.6	$222.30	63,404.1	$264.66	61,823.8
RTO	$16.46	136,143.5	$19.31	136,143.5	$51.53	136,143.5	$178.78	133,568.2

Figure 14 RTO DR and EE Supply Mitigated and Unmitigated Supply Curves

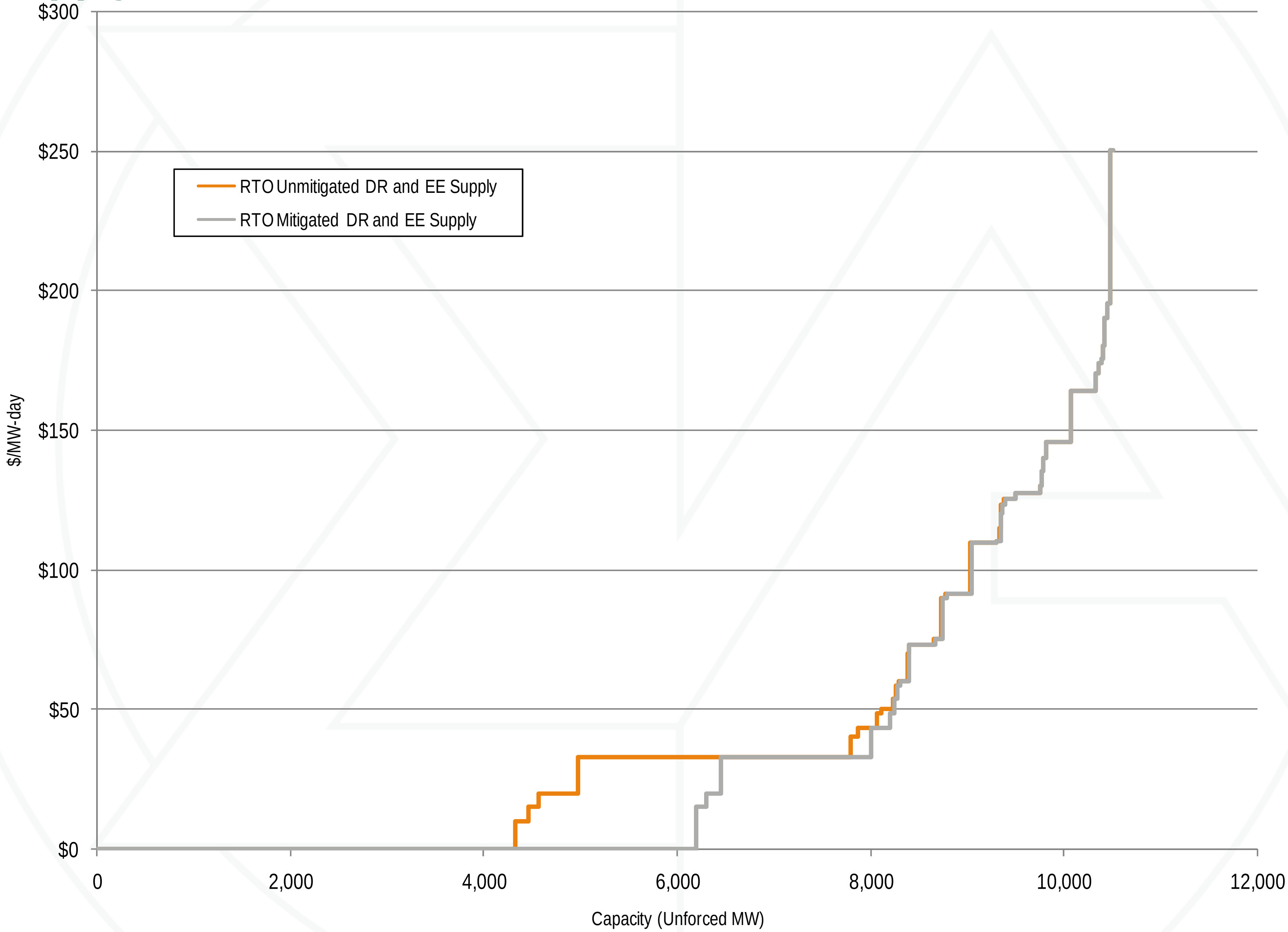

Figure 15 MAAC DR and EE Mitigated and Unmitigated Supply Curves

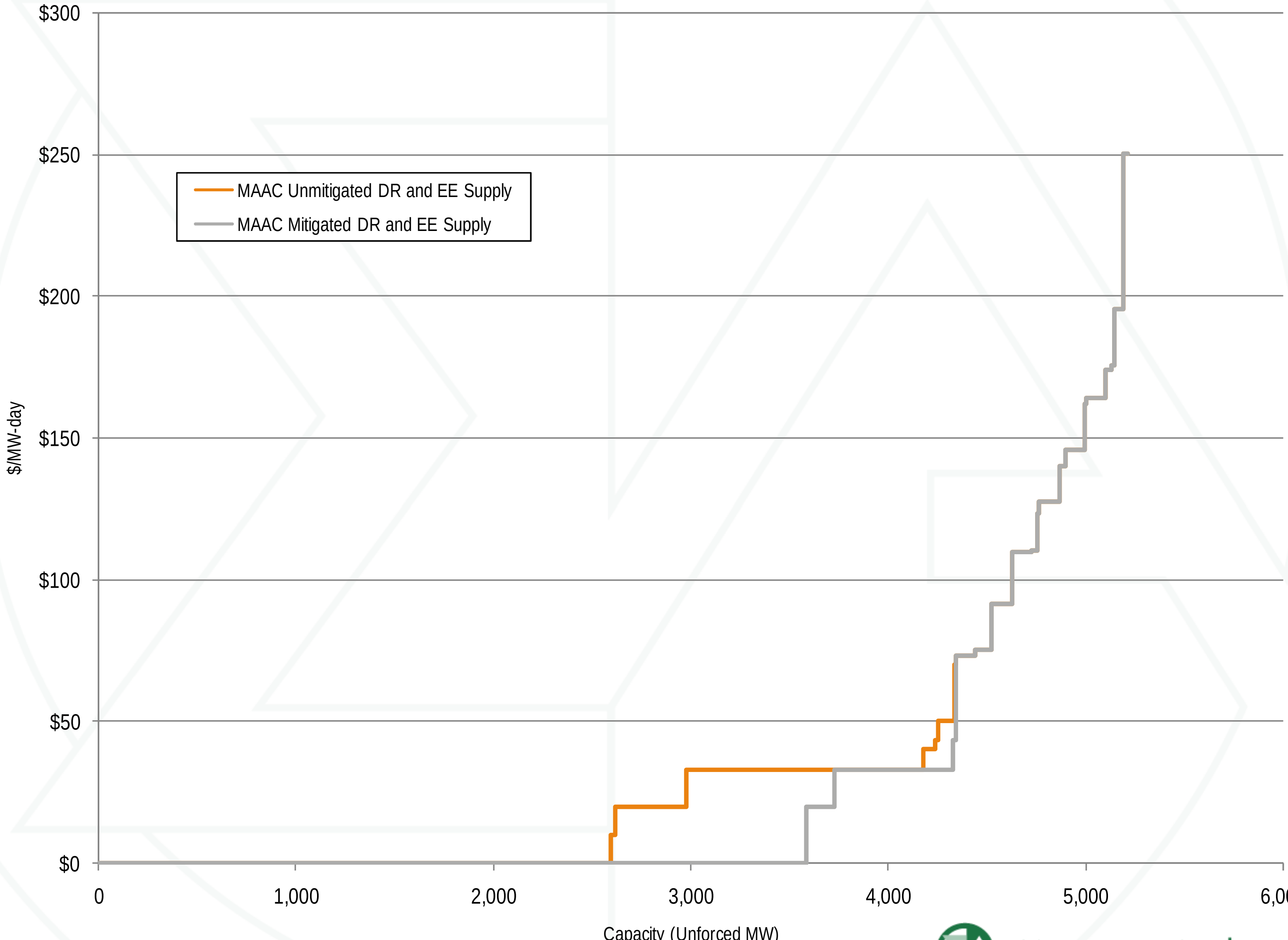

Figure 16 EMAAC DR and EE Mitigated and Unmitigated Supply Curves

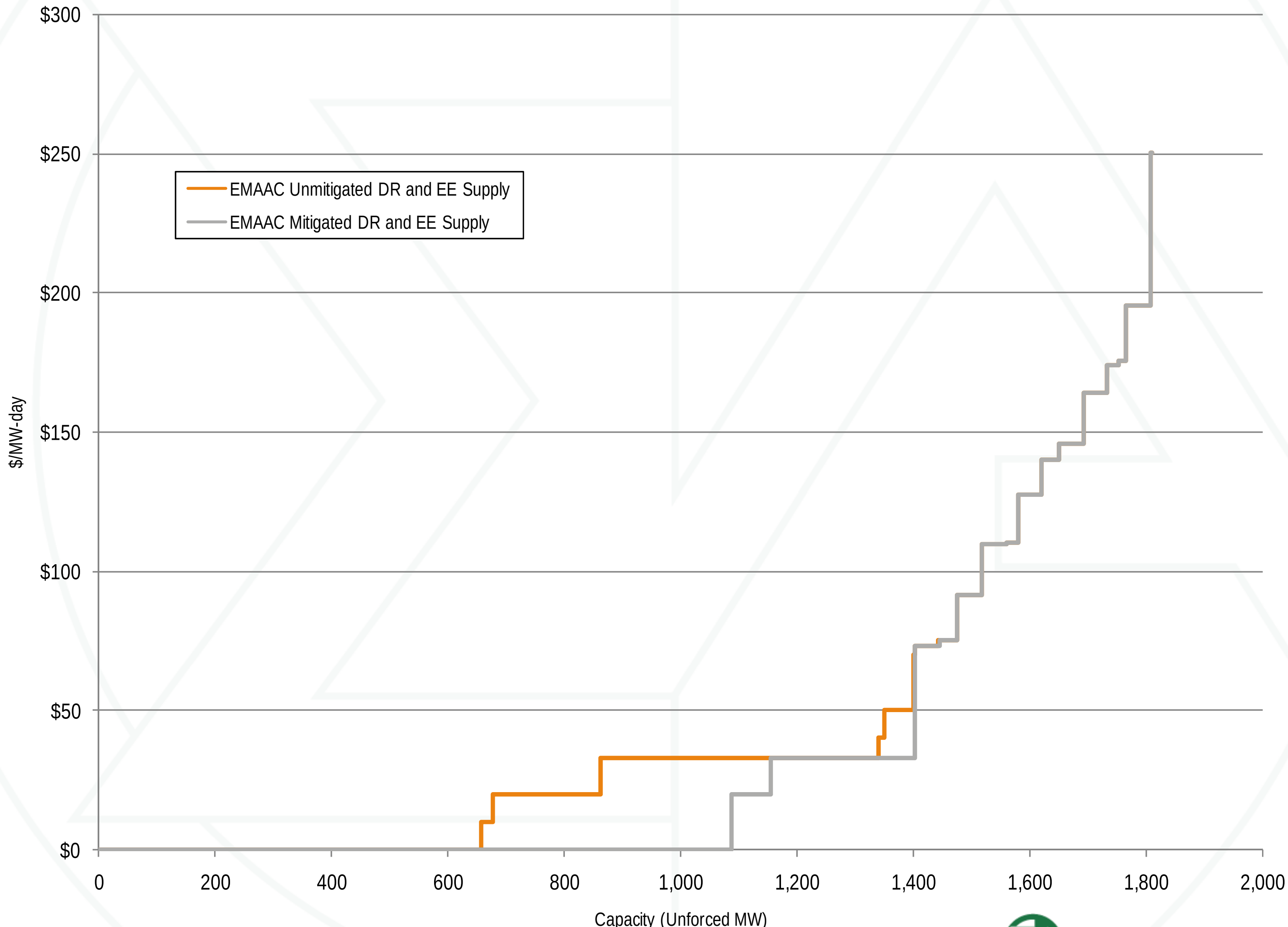

Table 21 PJM LDA CETL and CETO Values: 2012/2013 RPM Base Residual Auction

	MAAC	EMAAC	SWMAAC	PS	PS NORTH	DPL SOUTH
CETO	5,600.0	7,440.0	5,990.0	6,290.0	2,720.0	1,520.0
CETL	6,377.0	9,079.0	7,400.0	6,356.0	2,755.0	1,746.0

Monitoring Analytics, LLC
2621 Van Buren Avenue
Suite 160
Eagleville, PA
19403

(610) 271-8050

MA@monitoringanalytics.com

www.MonitoringAnalytics.com