2012 Market Update for PJM: January through August

Members Committee
September 24, 2012

Joe Bowring

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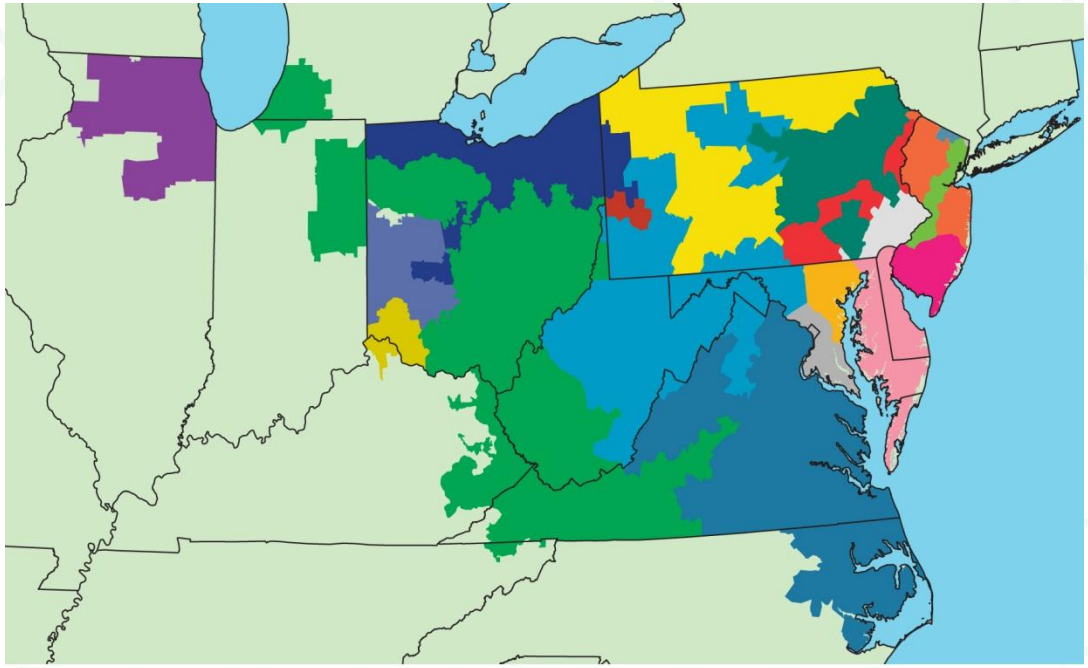
Figure 1-1 PJM's footprint and its 18 control zones



Legend

- Allegheny Power Company (AP)
- American Electric Power Co., Inc (AEP)
- American Transmission Systems, Inc. (ATSI)
- Atlantic Electric Company (AECO)
- Baltimore Gas and Electric Company (BGE)
- ComEd
- Dayton Power and Light Company (DAY)
- Delmarva Power and Light (DPL)
- Dominion
- Duke Energy Ohio/Kentucky (DEOK)
- Duquesne Light (DLCO)
- Jersey Central Power and Light Company (JCPL)
- Metropolitan Edison Company (Met-Ed)
- PECO Energy (PECO)
- Pennsylvania Electric Company (PENELEC)
- Pepco
- PPL Electric Utilities (PPL)
- Public Service Electric and Gas Company (PSEG)
- Rockland Electric Company (RECO)

Figure 2-1 Average PJM aggregate supply curves: January through August 2011 and 2012

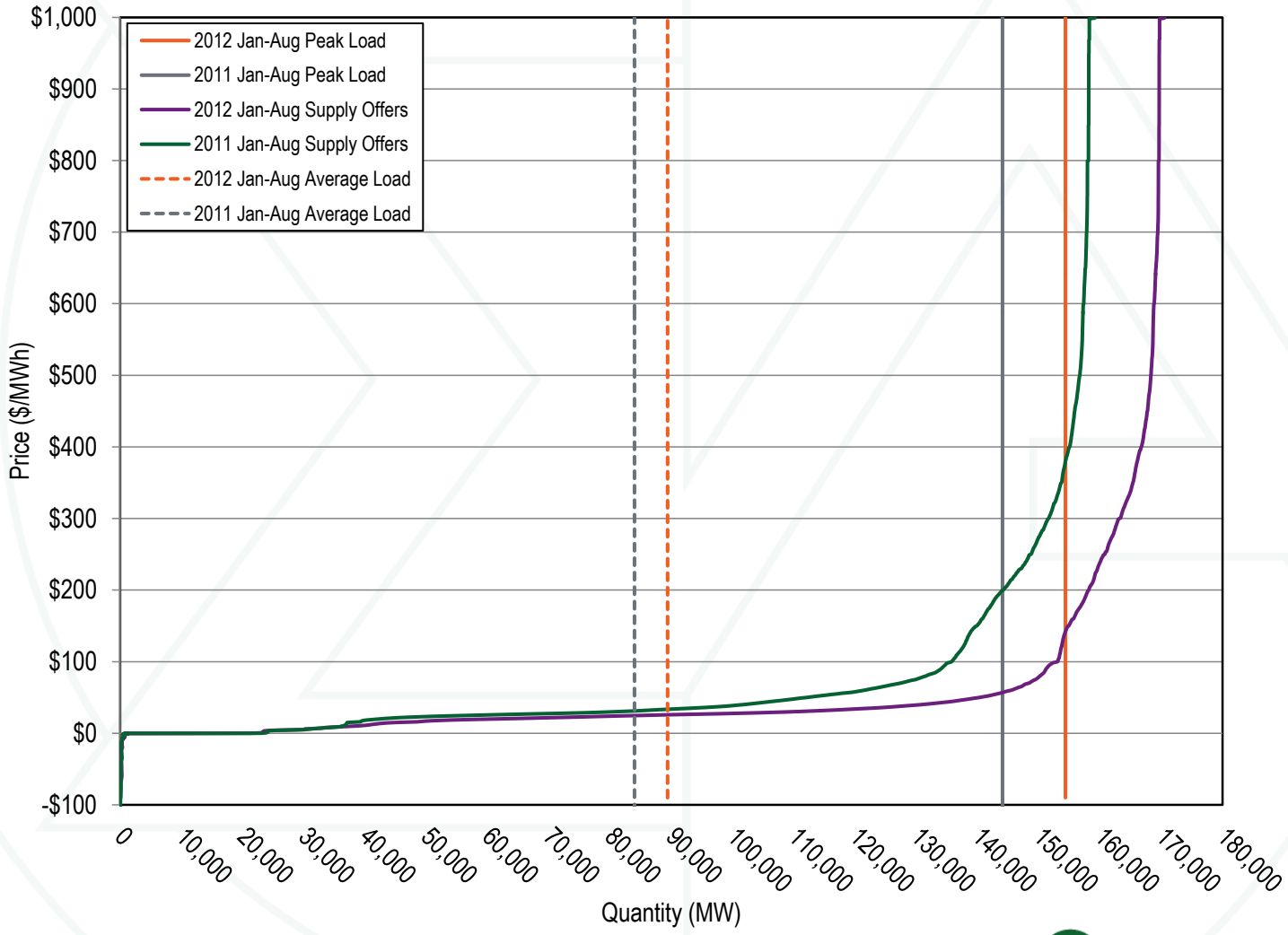


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Table 2-2 PJM generation (By fuel source (GWh)): January through August 2011 and 2012

	Jan-Aug 2011		Jan-Aug 2012		Change in
	GWh	Percent	GWh	Percent	Output
Coal	248,884.7	48.0%	226,610.1	41.9%	(8.9%)
Standard Coal	240,690.9	46.4%	219,663.0	40.6%	(8.4%)
Waste Coal	8,193.8	1.6%	6,947.2	1.3%	(0.5%)
Nuclear	173,744.1	33.5%	182,992.9	33.8%	5.3%
Gas	73,054.7	14.1%	106,104.2	19.6%	45.2%
Natural Gas	71,861.3	13.9%	104,581.2	19.3%	45.5%
Landfill Gas	1,193.2	0.2%	1,522.6	0.3%	27.6%
Biomass Gas	0.1	0.0%	0.3	0.0%	120.1%
Wind	7,234.5	1.4%	8,722.4	1.6%	20.6%
Hydroelectric	10,171.8	2.0%	8,930.5	1.7%	(12.2%)
Waste	3,612.7	0.7%	3,539.8	0.7%	(2.0%)
Solid Waste	2,759.3	0.5%	2,867.1	0.5%	3.9%
Miscellaneous	853.4	0.2%	672.7	0.1%	(21.2%)
Oil	1,994.8	0.4%	3,963.2	0.7%	98.7%
Heavy Oil	1,651.0	0.3%	3,735.2	0.7%	126.2%
Light Oil	315.8	0.1%	215.4	0.0%	(31.8%)
Diesel	15.9	0.0%	7.6	0.0%	(51.8%)
Kerosene	12.2	0.0%	4.8	0.0%	(60.2%)
Jet Oil	0.1	0.0%	0.0	0.0%	(29.4%)
Solar	33.5	0.0%	172.6	0.0%	415.7%
Battery	0.1	0.0%	0.3	0.0%	75.0%
Total	518,730.9	100.0%	541,035.9	100.0%	4.3%

Table 2-3 PJM generation (By fuel source (GWh)) excluding ATSI and DEOK zones: January through August 2011 and 2012

	Jan-Aug 2011		Jan-Aug 2012		Change in
	GWh	Percent	GWh	Percent	Output
Coal	248,884.7	48.0%	202,013.9	39.8%	(18.8%)
Standard Coal	240,690.9	46.4%	195,066.8	38.4%	(18.3%)
Waste Coal	8,193.8	1.6%	6,947.2	1.4%	(0.5%)
Nuclear	173,744.1	33.5%	175,782.6	34.6%	1.2%
Gas	73,054.7	14.1%	104,547.4	20.6%	43.1%
Natural Gas	71,861.3	13.9%	103,092.5	20.3%	43.5%
Landfill Gas	1,193.2	0.2%	1,454.6	0.3%	21.9%
Biomass Gas	0.1	0.0%	0.3	0.0%	120.1%
Hydroelectric	10,171.8	2.0%	8,930.5	1.8%	(12.2%)
Wind	7,234.5	1.4%	8,722.4	1.7%	20.6%
Waste	3,612.7	0.7%	3,539.8	0.7%	(2.0%)
Solid Waste	2,759.3	0.5%	2,867.1	0.6%	3.9%
Miscellaneous	853.4	0.2%	672.7	0.1%	(21.2%)
Oil	1,994.8	0.4%	3,960.1	0.8%	98.5%
Heavy Oil	1,651.0	0.3%	3,735.2	0.7%	126.2%
Light Oil	315.8	0.1%	213.0	0.0%	(32.5%)
Diesel	15.9	0.0%	6.9	0.0%	(56.5%)
Kerosene	12.2	0.0%	4.8	0.0%	(60.2%)
Jet Oil	0.1	0.0%	0.0	0.0%	(29.4%)
Solar	33.5	0.0%	172.6	0.0%	415.7%
Battery	0.1	0.0%	0.3	0.0%	75.0%
Total	518,730.9	100.0%	507,669.6	100.0%	(2.1%)

Figure 2-2 PJM footprint peak loads: January through August for years 2003 to 2012

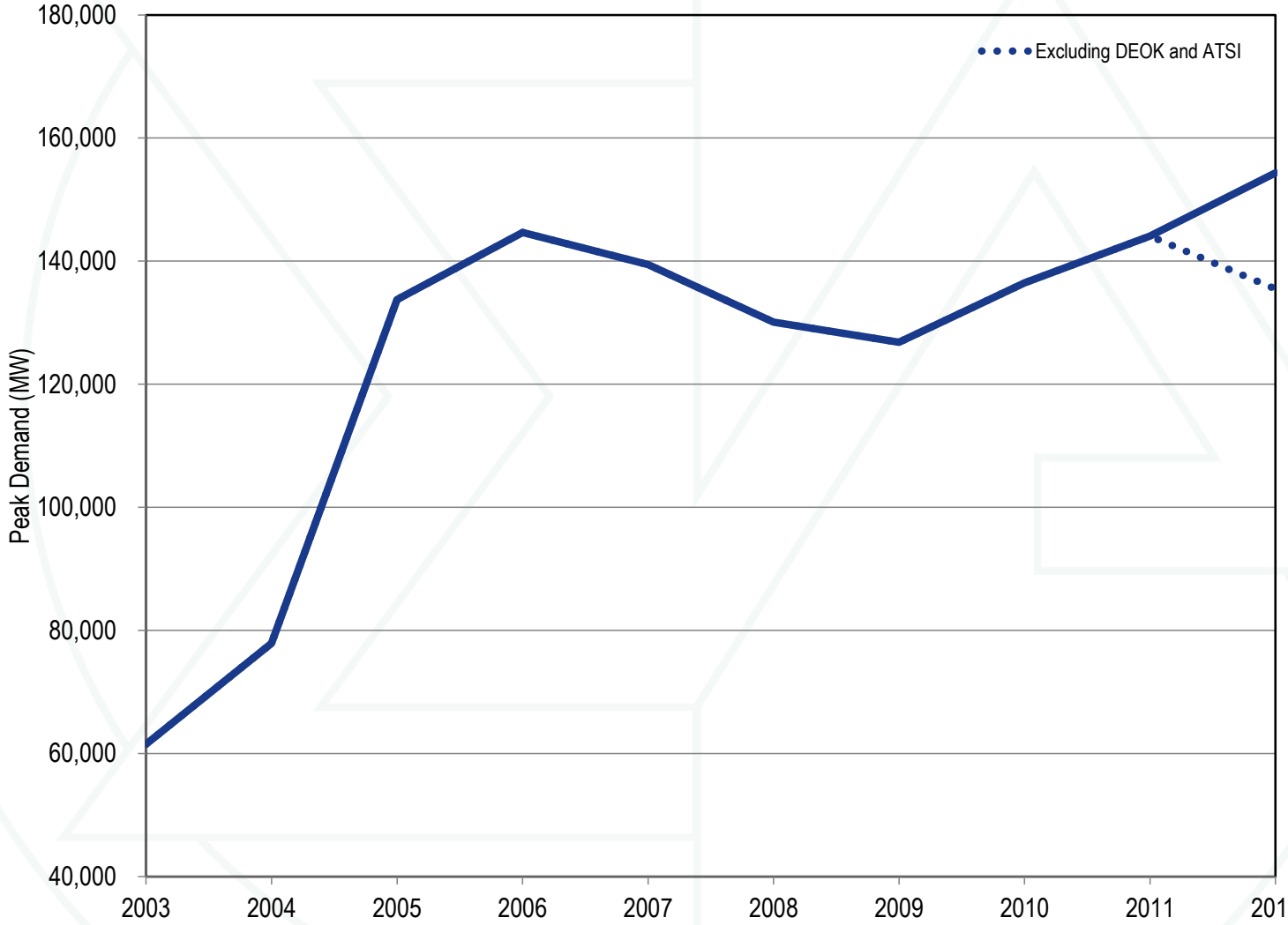

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Table 2-4 Actual PJM footprint peak loads: January through August for years 2003 to 2012

(Jan - Aug)	Date	Hour Ending (EPT)	PJM Load (MW)	Annual Change (MW)	Annual Change (%)
2003	Fri, August 22	16	61,499	NA	NA
2004	Tue, August 03	17	77,887	16,387	26.6%
2005	Tue, July 26	16	133,761	55,875	71.7%
2006	Wed, August 02	17	144,644	10,883	8.1%
2007	Wed, August 08	16	139,428	(5,216)	(3.6%)
2008	Mon, June 09	17	130,100	(9,328)	(6.7%)
2009	Mon, August 10	17	126,798	(3,302)	(2.5%)
2010	Tue, July 06	17	136,460	9,662	7.6%
2011	Thu, July 21	17	144,063	7,603	5.6%
2012 (with DEOK and ATSI)	Tue, July 17	17	154,344	10,281	7.1%
2012 (without DEOK and ATSI)	Tue, July 17	18	135,478	(8,585)	(6.0%)

Table 2-28 PJM real-time average hourly load: January through August for years 1998 through 2012

	PJM Real-Time Load (MWh)		Year-to-Year Change	
(Jan-Aug)	Average Load	Load Standard Deviation	Average Load	Load Standard Deviation
1998	29,030	5,786	NA	NA
1999	30,372	6,379	4.6%	10.3%
2000	30,340	5,782	(0.1%)	(9.4%)
2001	31,301	6,201	3.2%	7.2%
2002	35,523	8,930	13.5%	44.0%
2003	38,258	7,304	7.7%	(18.2%)
2004	44,838	10,639	17.2%	45.7%
2005	77,681	17,752	73.2%	66.9%
2006	81,560	15,853	5.0%	(10.7%)
2007	83,444	15,304	2.3%	(3.5%)
2008	80,955	14,441	(3.0%)	(5.6%)
2009	77,635	14,003	(4.1%)	(3.0%)
2010	81,679	16,242	5.2%	16.0%
2011	83,978	18,023	2.8%	11.0%
2012	88,150	17,010	5.0%	(5.6%)

Figure 2-8 PJM real-time average hourly load: Calendar year 2011 through August of 2012

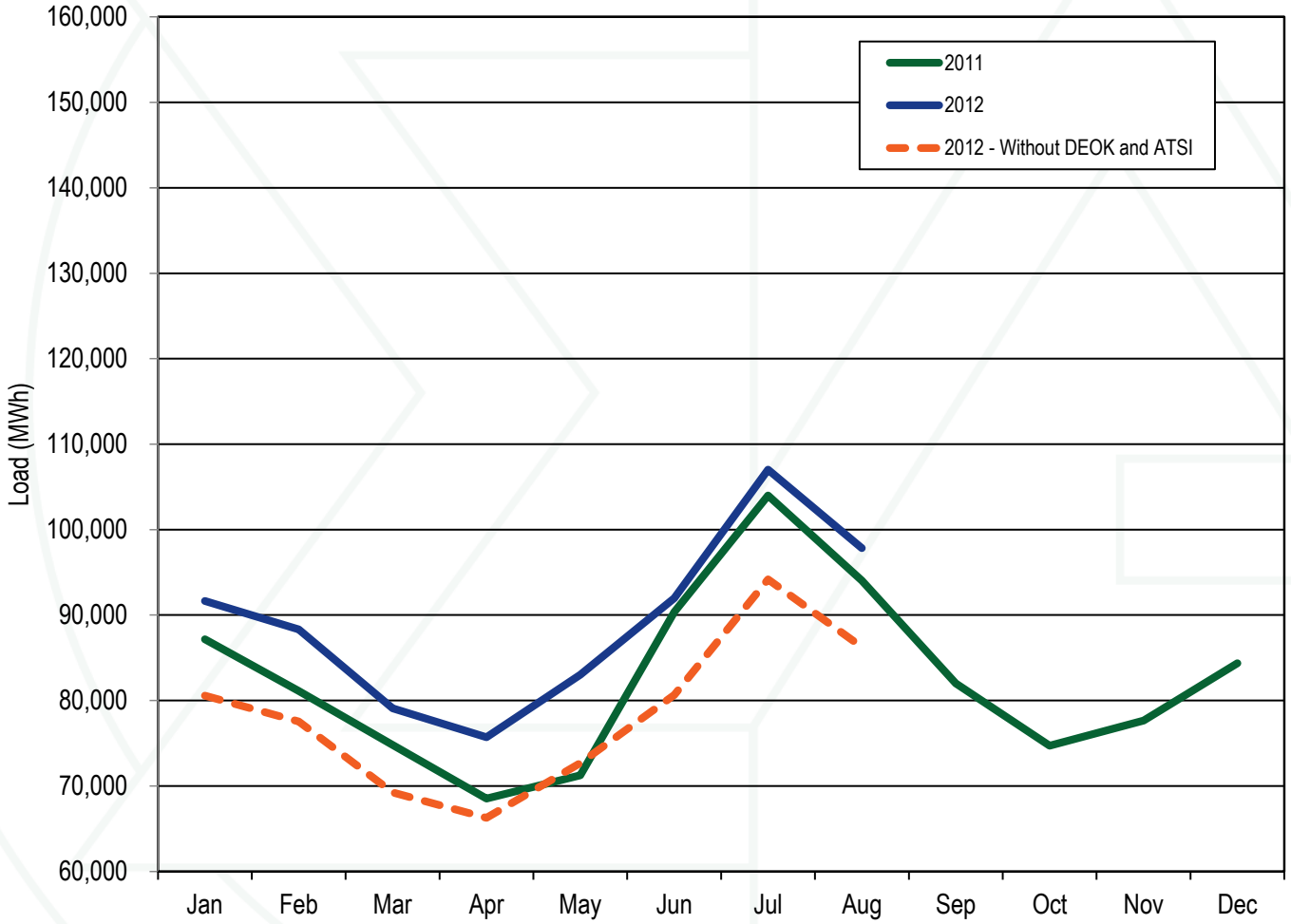

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Table 2-37 PJM real-time, load-weighted, average LMP (Dollars per MWh): January through August for years 1998 through 2012

	Real-Time, Load-Weighted, Average LMP			Year-to-Year Change		
(Jan-Aug)	Average	Median	Standard Deviation	Average	Median	Standard Deviation
1998	$26.07	$18.10	$46.80	NA	NA	NA
1999	$40.42	$20.05	$109.95	55.1%	10.8%	134.9%
2000	$28.49	$19.34	$27.49	(29.5%)	(3.6%)	(75.0%)
2001	$42.45	$28.95	$67.81	49.0%	49.7%	146.7%
2002	$31.88	$22.68	$30.16	(24.9%)	(21.6%)	(55.5%)
2003	$44.60	$39.58	$27.13	39.9%	74.5%	(10.1%)
2004	$46.99	$44.00	$22.25	5.4%	11.2%	(18.0%)
2005	$58.15	$48.38	$34.68	23.8%	10.0%	55.9%
2006	$58.62	$48.94	$42.06	0.8%	1.2%	21.3%
2007	$61.78	$55.97	$37.22	5.4%	14.4%	(11.5%)
2008	$78.15	$67.84	$44.40	26.5%	21.2%	19.3%
2009	$40.56	$35.45	$19.49	(48.1%)	(47.7%)	(56.1%)
2010	$50.49	$40.72	$30.02	24.5%	14.9%	54.0%
2011	$50.50	$39.12	$38.46	0.0%	(4.0%)	28.1%
2012	$34.89	$29.77	$25.75	(30.9%)	(23.9%)	(33.1%)

Figure 2-16 PJM real-time, monthly, load-weighted, average LMP: Calendar years 2007 through August 2012

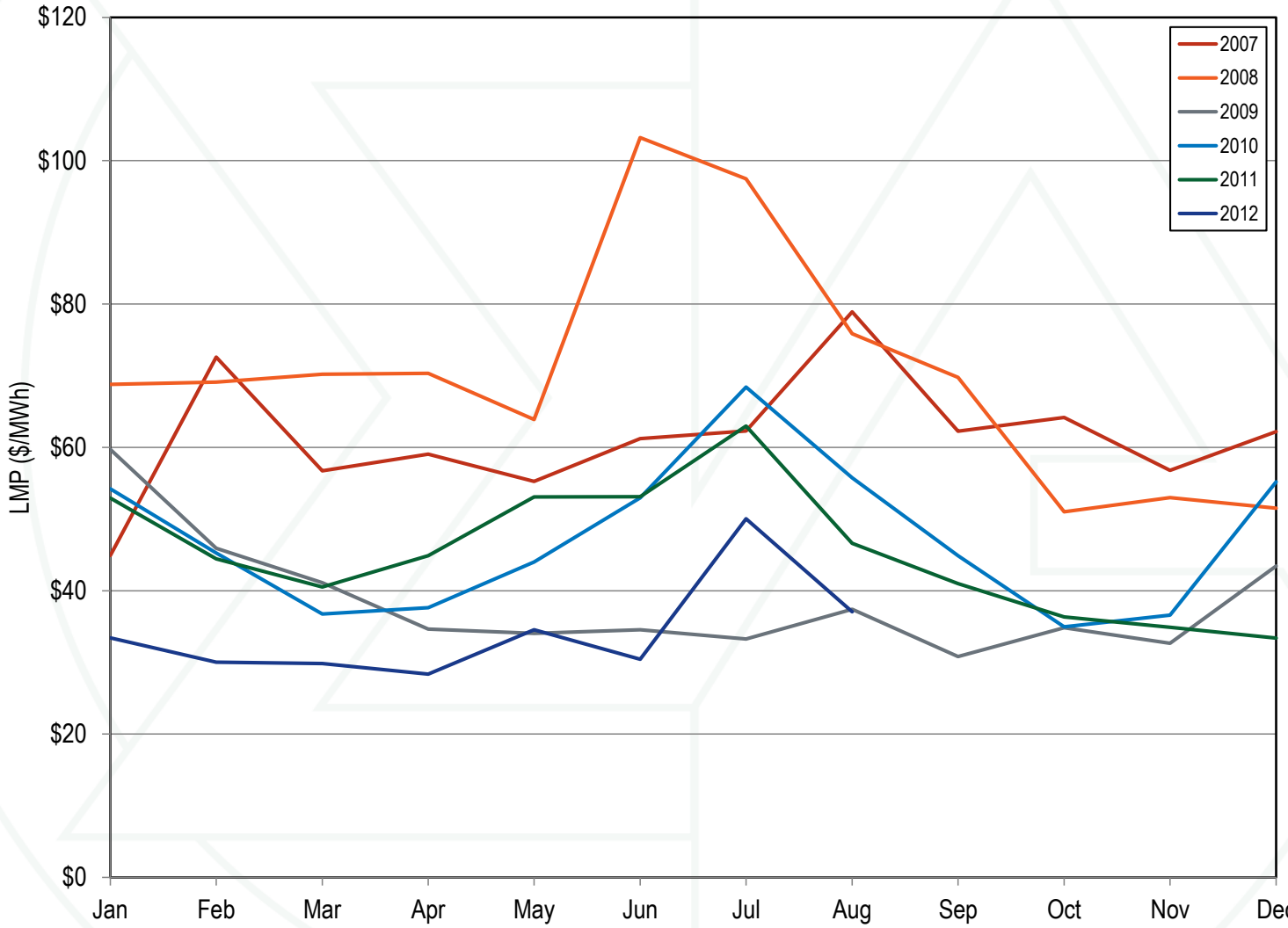

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Figure 2-17 Spot average fuel price comparison: 2011 through August 2012

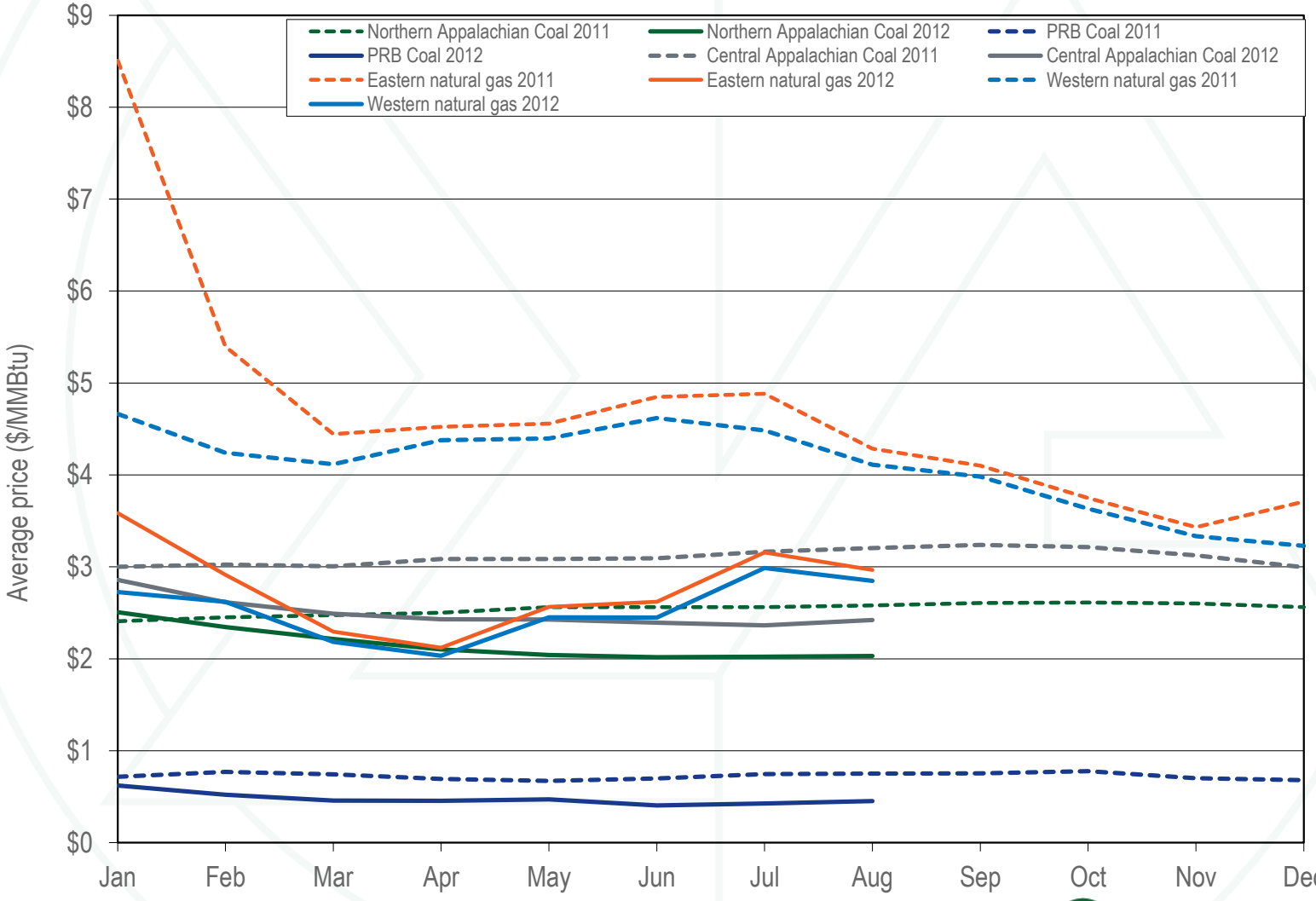

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Figure 2-18 Spot average fuel cost of generation of CP, CT, and CC: 2011 through August 2012

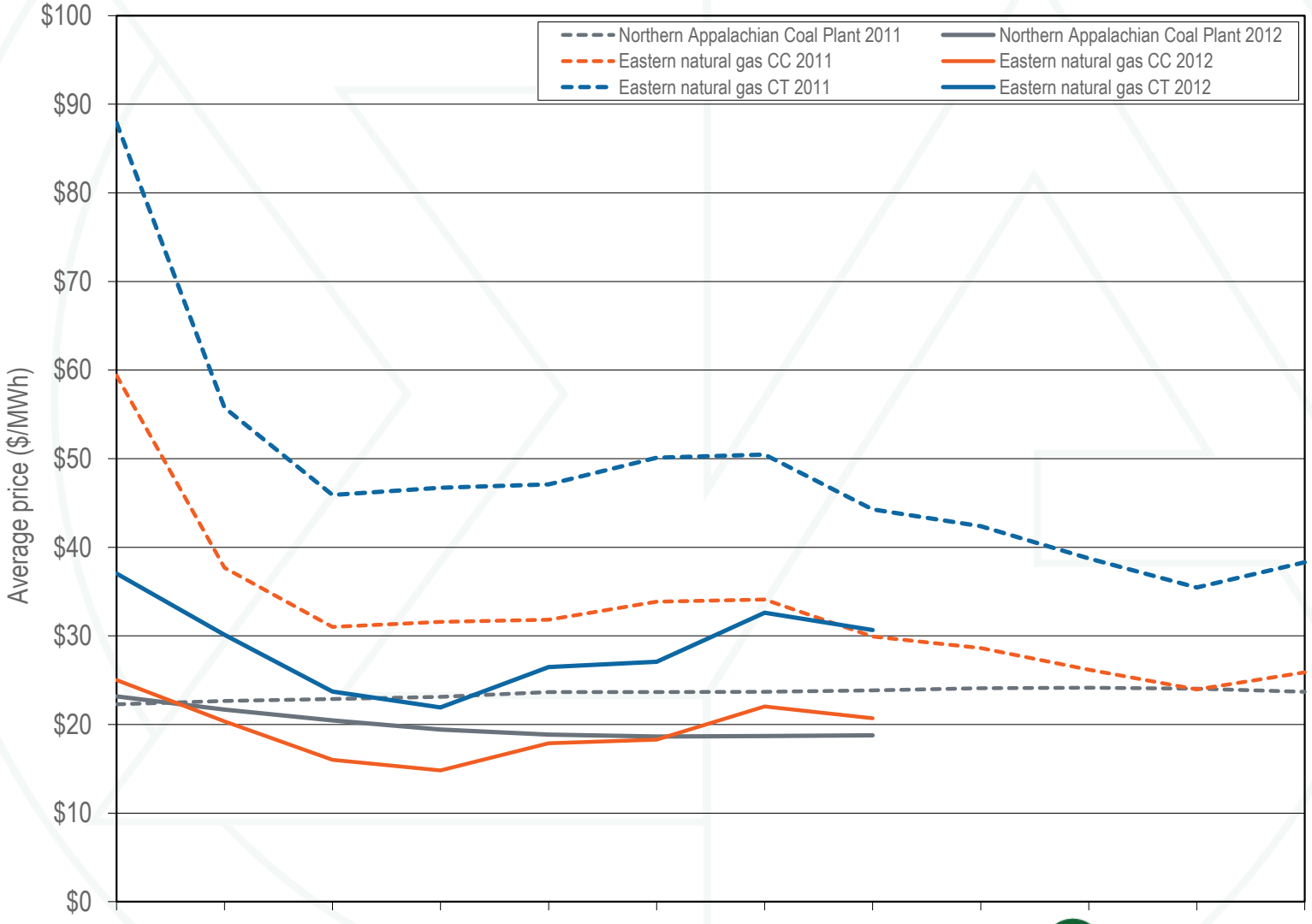

Table 2-7 Real-time offer-capped unit statistics: January through August 2012

Run Hours Offer-Capped, Percent Greater Than Or Equal To:	2012 Offer-Capped Hours					
	Hours ≥ 500	Hours ≥ 400 and < 500	Hours ≥ 300 and < 400	Hours ≥ 200 and < 300	Hours ≥ 100 and < 200	Hours ≥ 1 and < 100
90%	0	0	0	1	1	1
80% and < 90%	0	0	1	1	1	5
75% and < 80%	0	0	0	0	1	0
70% and < 75%	1	0	0	0	1	2
60% and < 70%	1	0	0	1	0	10
50% and < 60%	4	0	1	0	0	9
25% and < 50%	10	2	2	1	8	38
10% and < 25%	2	2	0	5	3	61

Table 4-3 PJM Installed Capacity (By fuel source): January 1 and August 31, 2012

	1-Jan-12		31-Aug-12	
	MW	Percent	MW	Percent
Coal	75,190.4	42.0%	79,912.2	43.0%
Gas	50,529.3	28.3%	51,995.2	27.9%
Hydroelectric	8,047.0	4.5%	7,879.8	4.2%
Nuclear	32,492.6	18.2%	33,164.9	17.8%
Oil	11,217.3	6.3%	11,526.0	6.2%
Solar	15.3	0.0%	47.0	0.0%
Solid waste	705.1	0.4%	736.1	0.4%
Wind	657.1	0.4%	779.6	0.4%
Total	178,854.1	100.0%	186,040.8	100.0%

Figure 4-1 History of capacity prices: Calendar year 1999 through 2015

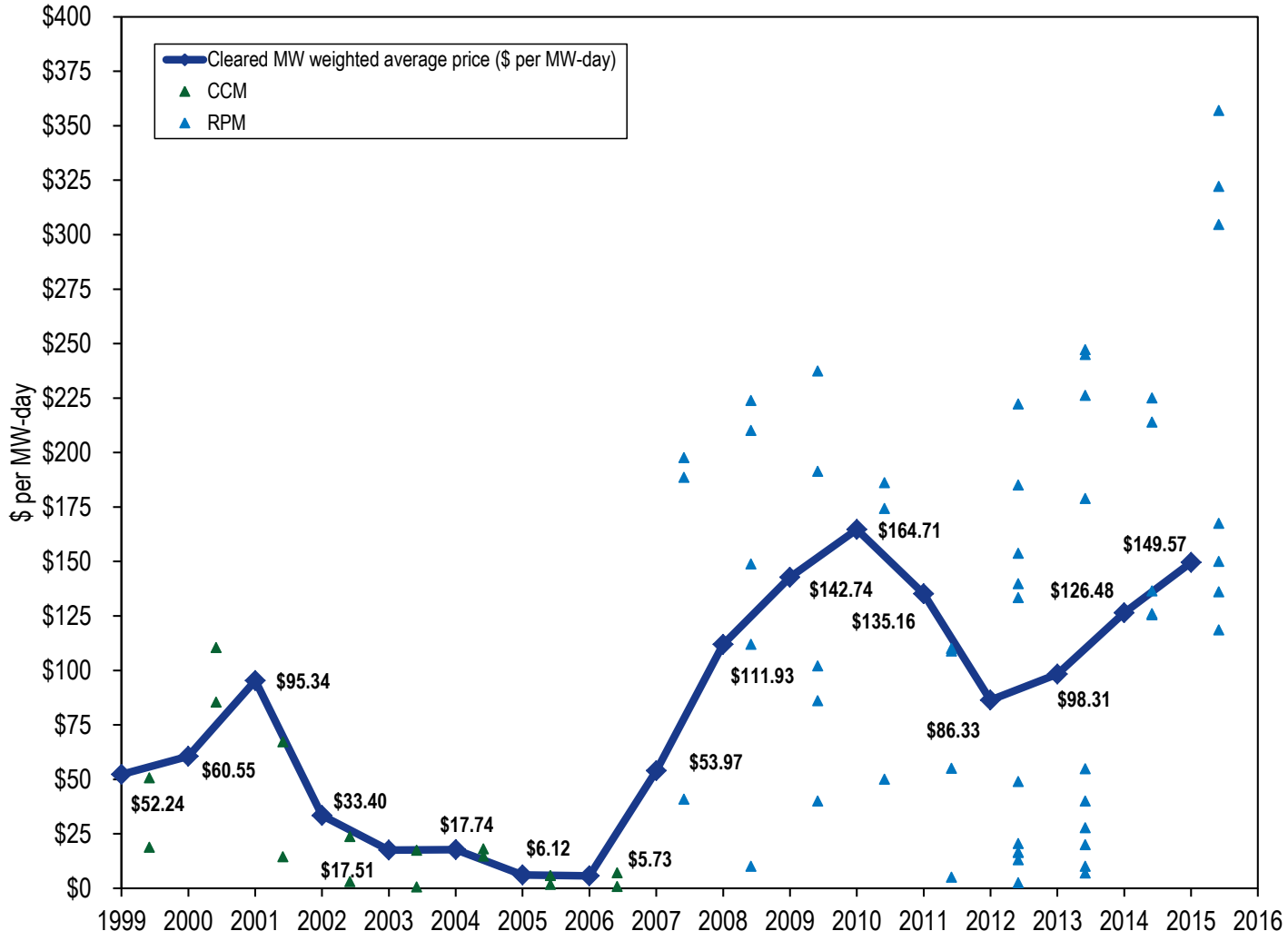

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Table 11-11 Summary of PJM unit retirements (MW), Calendar year 2011 through 2019 (as of September 1, 2012)

	MW
Retirements 2011	1,322.3
Retirements 2012	6,010.0
Planned Retirements 2012	951.9
Planned Retirements Post-2012	10,724.6
Total	19,008.8

Table 3-7 Monthly operating reserve charges: Calendar years 2011 and 2012

	2011				2012			
	Day-Ahead	Synchronous Condensing	Balancing	Total	Day-Ahead	Synchronous Condensing	Balancing	Total
Jan	$12,373,099	$110,095	$47,090,369	$59,573,563	$8,311,574	$15,362	$27,462,370	$35,789,306
Feb	$8,940,203	$139,287	$26,607,792	$35,687,282	$5,858,308	$18,592	$24,869,649	$30,746,549
Mar	$6,837,719	$66,032	$23,238,170	$30,141,921	$3,852,873	$1,648	$29,702,257	$33,556,779
Apr	$4,405,102	$13,011	$18,764,254	$23,182,366	$2,967,302	$0	$34,168,700	$37,136,002
May	$7,064,934	$39,417	$43,540,784	$50,645,135	$7,956,965	$0	$43,624,632	$51,581,597
Jun	$8,303,391	$9,056	$59,886,618	$68,199,066	$6,988,065	$0	$45,838,477	$52,826,542
Jul	$4,993,311	$238,127	$106,596,647	$111,828,085	$11,773,101	$0	$68,122,184	$79,895,284
Aug	$8,360,392	$104,982	$55,142,158	$63,607,531	$8,715,160	$0	$48,170,005	$56,885,165
Sep	$6,249,240	$40,878	$36,617,421	$42,907,539				
Oct	$5,133,837	$0	$20,415,483	$25,549,319				
Nov	$7,063,847	$0	$19,528,707	$26,592,554				
Dec	$7,593,046	$0	$24,716,729	$32,309,775				
Total	$61,278,151	$720,007	$380,866,792	$442,864,950	$56,423,348	$35,603	$321,958,274	$378,417,225
Share of Charges	13.8%	0.2%	86.0%	100.0%	14.9%	0.0%	85.1%	100.0%

Figure 3-2 Daily balancing operating reserve rates ($/MWh): January through August 2012

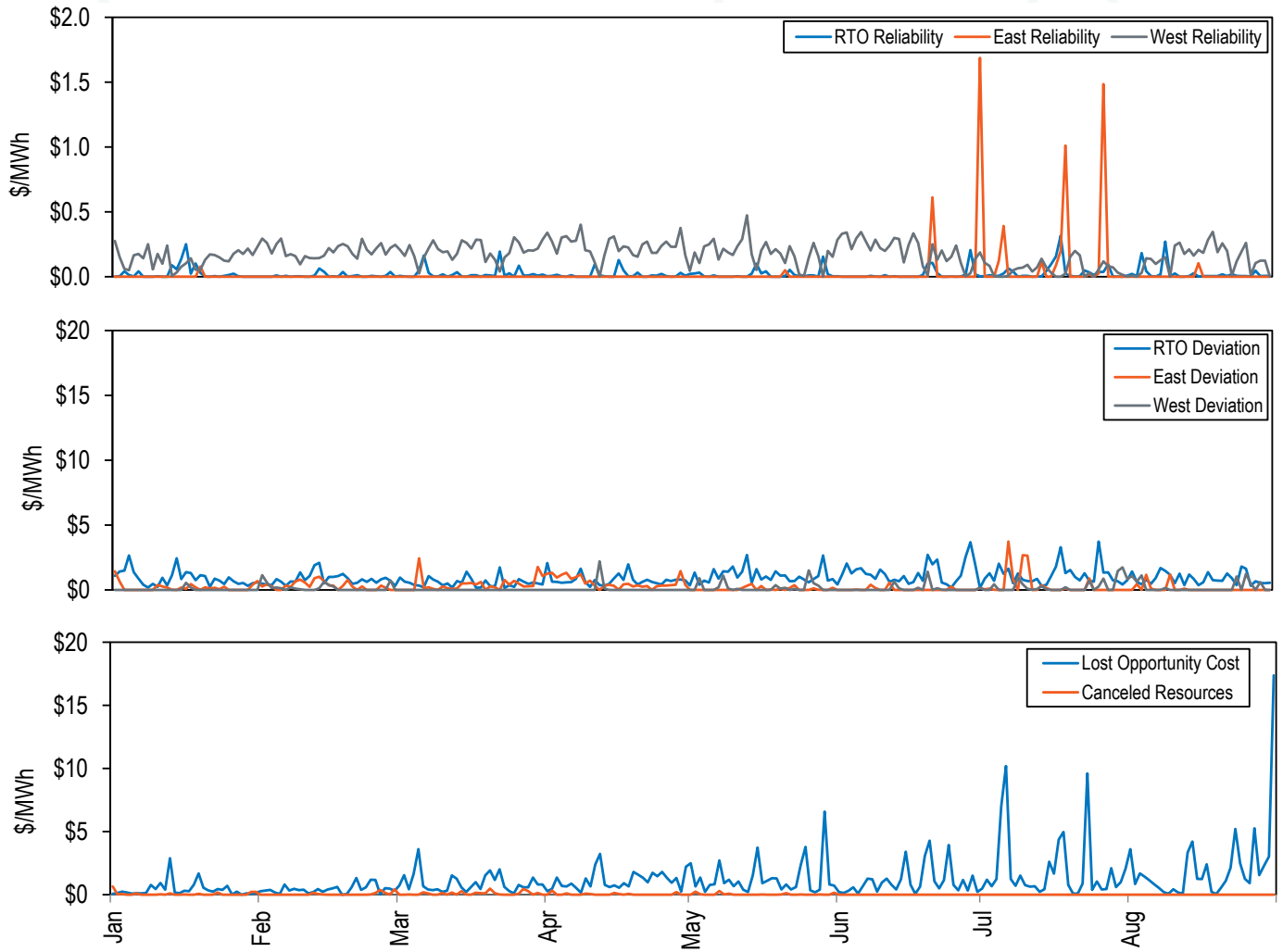

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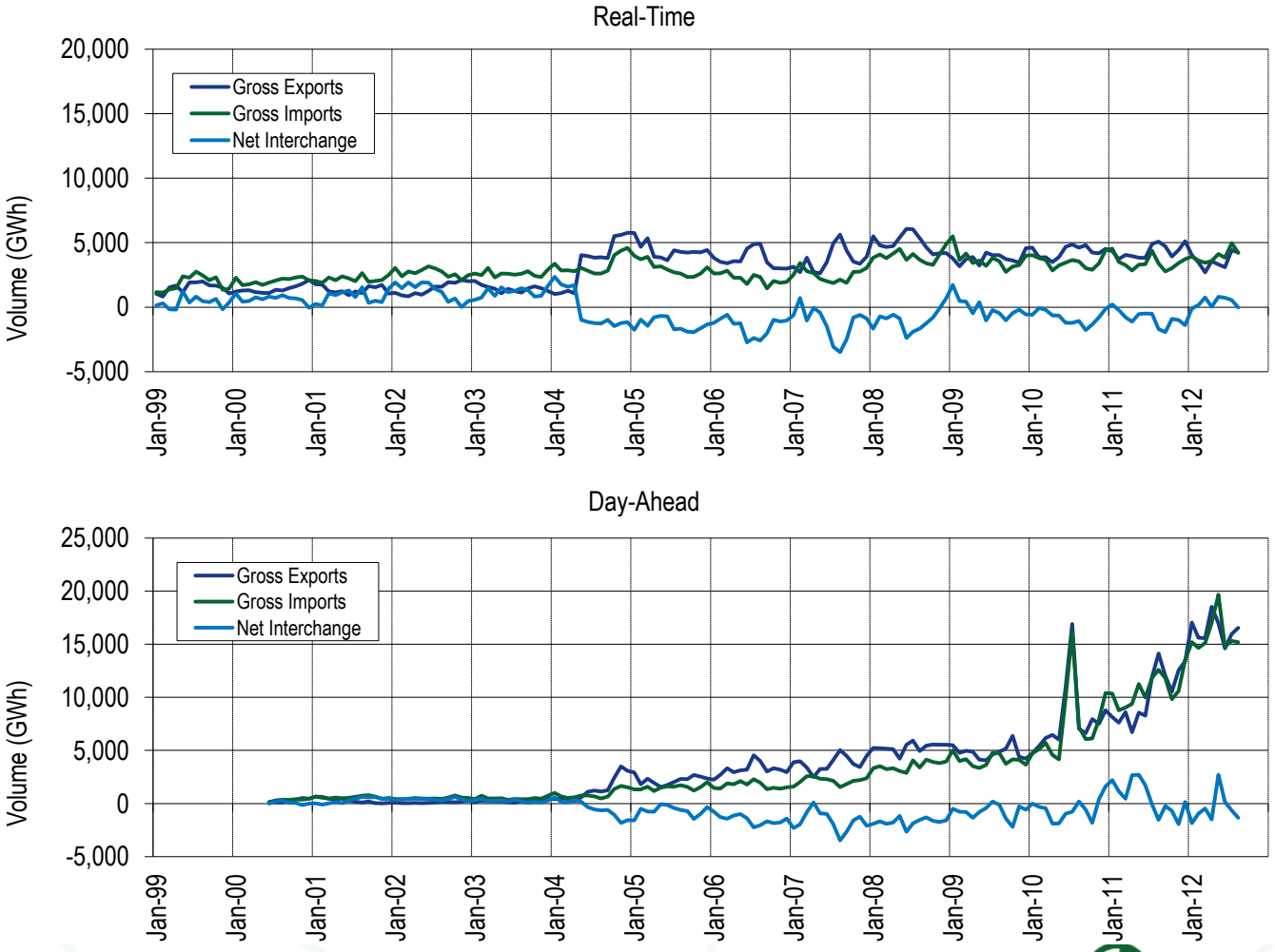
Table 3-11 Operating reserve rates statistics ($/MWh): January through August 2012

		Rates Charged ($/MWh)			
Region	Transaction	Maximum	Average	Minimum	Standard Deviation
East	INC	17.9166	2.4135	0.3299	1.8585
	DEC	17.9683	2.5120	0.4698	1.8550
	DA Load	0.3658	0.0985	0.0000	0.0679
	RT Load	1.6900	0.0460	0.0000	0.1730
	Deviation	17.9166	2.4135	0.3299	1.8585
West	INC	17.9166	2.2804	0.3299	1.9018
	DEC	17.9683	2.3789	0.4092	1.9028
	DA Load	0.3658	0.0985	0.0000	0.0679
	RT Load	0.4726	0.1913	0.0022	0.0890
	Deviation	17.9166	2.2804	0.3299	1.9018

Figure 8-2 PJM real-time and day-ahead scheduled import and export transaction volume history: January, 1999 through August, 2012



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Key Legal/Regulatory Matters

- **NOPR Adopting NAESB M & V Standards for DSR (RM05-5)**
- **EPA Proposed Rule re NESHAP RICE (EPA-HQ-OAR-2008-0708)**
- **Capacity Portability Inquiry (AD12-16)**
- **RPM CONE Settlement (ER12-513)**
- **GenOn RMR Filing (ER12-1901)**

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