

2012 Market Update for PJM: January and February

Members Committee

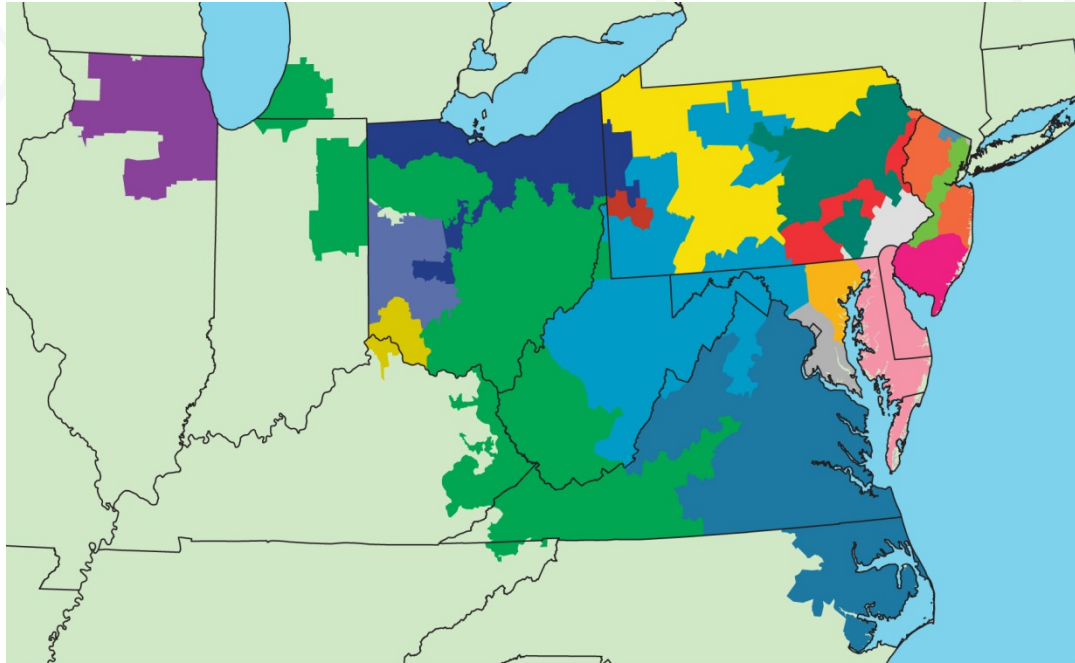
April 23, 2012

Joe Bowring



Monitoring Analytics

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



Legend




















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

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

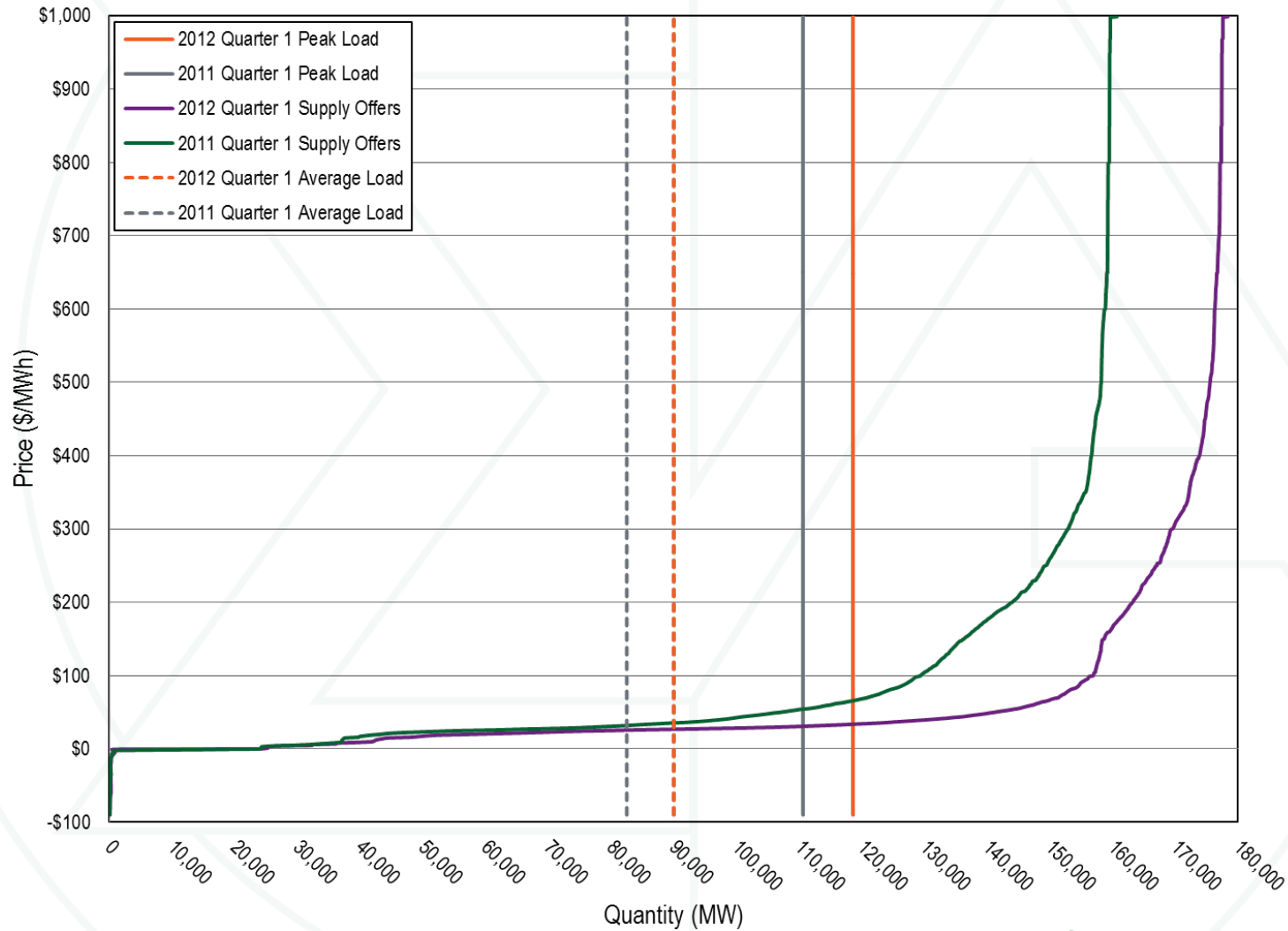


Table 2-2 PJM generation (By fuel source (GWh)): January-February 2011 and 2012

	Jan-Feb 2011		Jan-Feb 2012		Change in Output
	GWh	Percent	GWh	Percent	
Coal	62,076.0	49.7%	55,529.6	41.3%	(10.5%)
Standard Coal	59,999.7	48.0%	53,710.4	40.0%	(10.1%)
Waste Coal	2,076.2	1.7%	1,819.2	1.4%	(0.4%)
Nuclear	43,840.1	35.1%	48,300.9	36.0%	10.2%
Gas	13,895.0	11.1%	24,601.7	18.3%	77.1%
Natural Gas	13,610.9	10.9%	24,226.3	18.0%	78.0%
Landfill Gas	284.0	0.2%	375.3	0.3%	32.1%
Biomass Gas	0.0	0.0%	0.1	0.0%	374.9%
Hydroelectric	2,031.6	1.6%	2,140.6	1.6%	5.4%
Wind	2,188.3	1.8%	2,804.8	2.1%	28.2%
Waste	884.2	0.7%	839.2	0.6%	(5.1%)
Solid Waste	669.6	0.5%	661.8	0.5%	(1.2%)
Miscellaneous	214.6	0.2%	177.5	0.1%	(17.3%)
Oil	65.5	0.1%	71.8	0.1%	9.7%
Heavy Oil	33.0	0.0%	42.3	0.0%	28.0%
Light Oil	29.2	0.0%	29.3	0.0%	0.2%
Diesel	2.1	0.0%	0.3	0.0%	(85.4%)
Kerosene	1.2	0.0%	0.0	0.0%	(100.0%)
Jet Oil	0.0	0.0%	0.0	0.0%	(45.3%)
Solar	2.9	0.0%	24.5	0.0%	735.2%
Battery	0.1	0.0%	0.1	0.0%	(25.1%)
Total	124,983.5	100.0%	134,313.2	100.0%	7.5%

Figure 2-2 PJM footprint annual peak loads: January and February for years 2003 to 2012

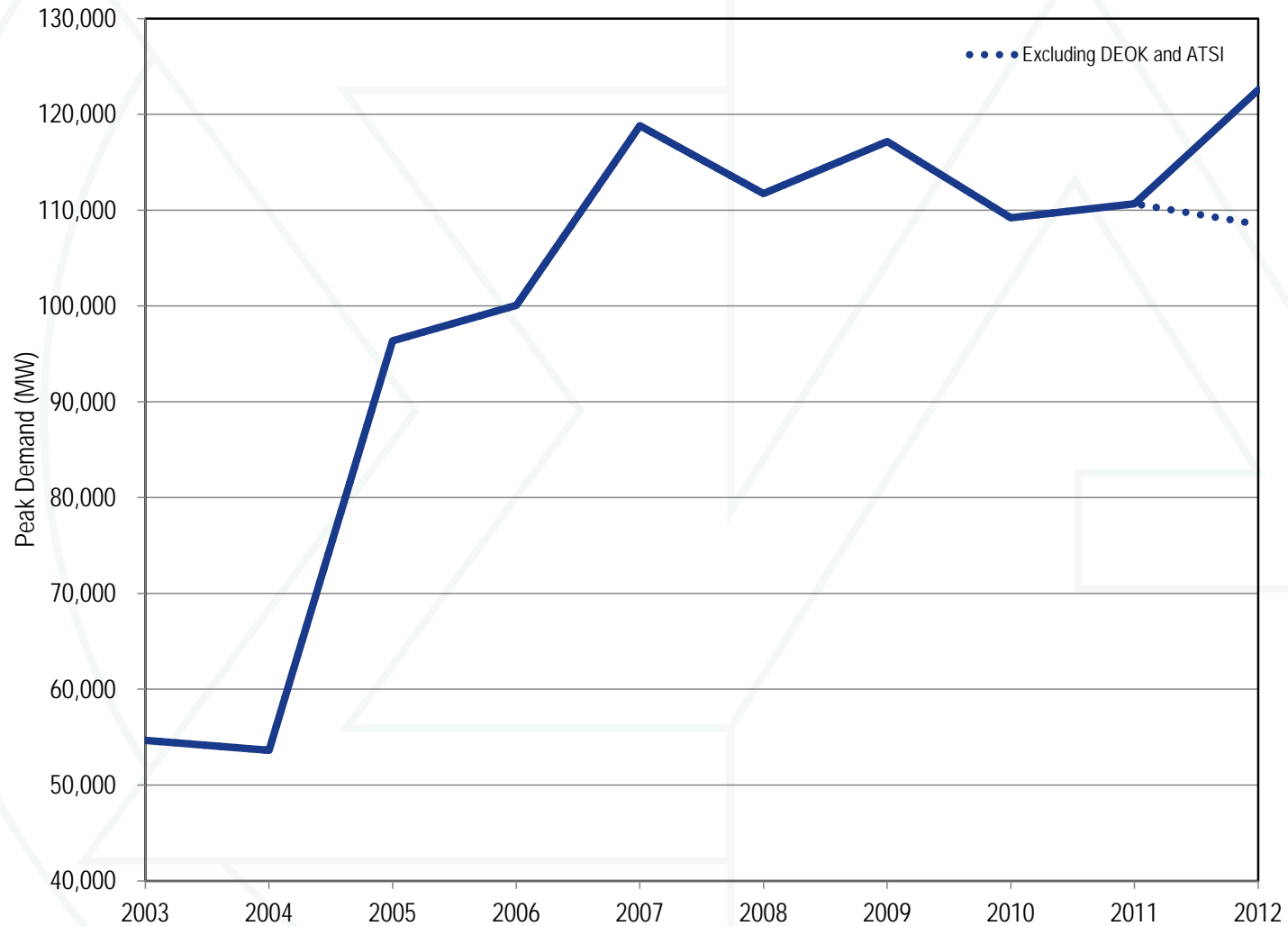


Table 2-4 Actual PJM footprint peak loads: January and February for years 2003 to 2012

Year (Jan-Feb)	Date	Hour Ending (EPT)	PJM Load (MW)	Annual Change (MW)	Annual Change (%)
2003	Thu, January 23	19	54,670	NA	NA
2004	Mon, January 26	19	53,620	(1,050)	(1.9%)
2005	Tue, January 18	19	96,362	42,742	79.7%
2006	Mon, February 13	20	100,065	3,703	3.8%
2007	Mon, February 05	20	118,800	18,736	18.7%
2008	Thu, January 03	19	111,724	(7,076)	(6.0%)
2009	Fri, January 16	19	117,169	5,445	4.9%
2010	Mon, January 04	19	109,210	(7,959)	(6.8%)
2011	Mon, January 24	8	110,659	1,448	1.3%
2012 (with DEOK and ATSI)	Tue, January 03	19	122,539	11,880	10.7%
2012 (without DEOK and ATSI)	Tue, January 03	19	108,519	(2,139)	(1.9%)

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

(Jan-Feb)	PJM Real-Time Load (MWh)		Year-to-Year Change	
	Average Load	Load Standard Deviation	Average Load	Load Standard Deviation
1998	28,206	3,810	NA	NA
1999	30,286	4,091	7.4%	7.4%
2000	31,641	4,539	4.5%	10.9%
2001	31,936	3,802	0.9%	(16.2%)
2002	30,377	3,952	(4.9%)	4.0%
2003	41,043	4,891	35.1%	23.8%
2004	41,360	5,445	0.8%	11.3%
2005	72,788	9,107	76.0%	67.3%
2006	81,743	8,801	12.3%	(3.4%)
2007	87,921	11,618	7.6%	32.0%
2008	85,182	10,117	(3.1%)	(12.9%)
2009	85,052	10,591	(0.2%)	4.7%
2010	85,619	8,900	0.7%	(16.0%)
2011	84,289	9,759	(1.6%)	9.7%
2012	90,036	9,594	6.8%	(1.7%)

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

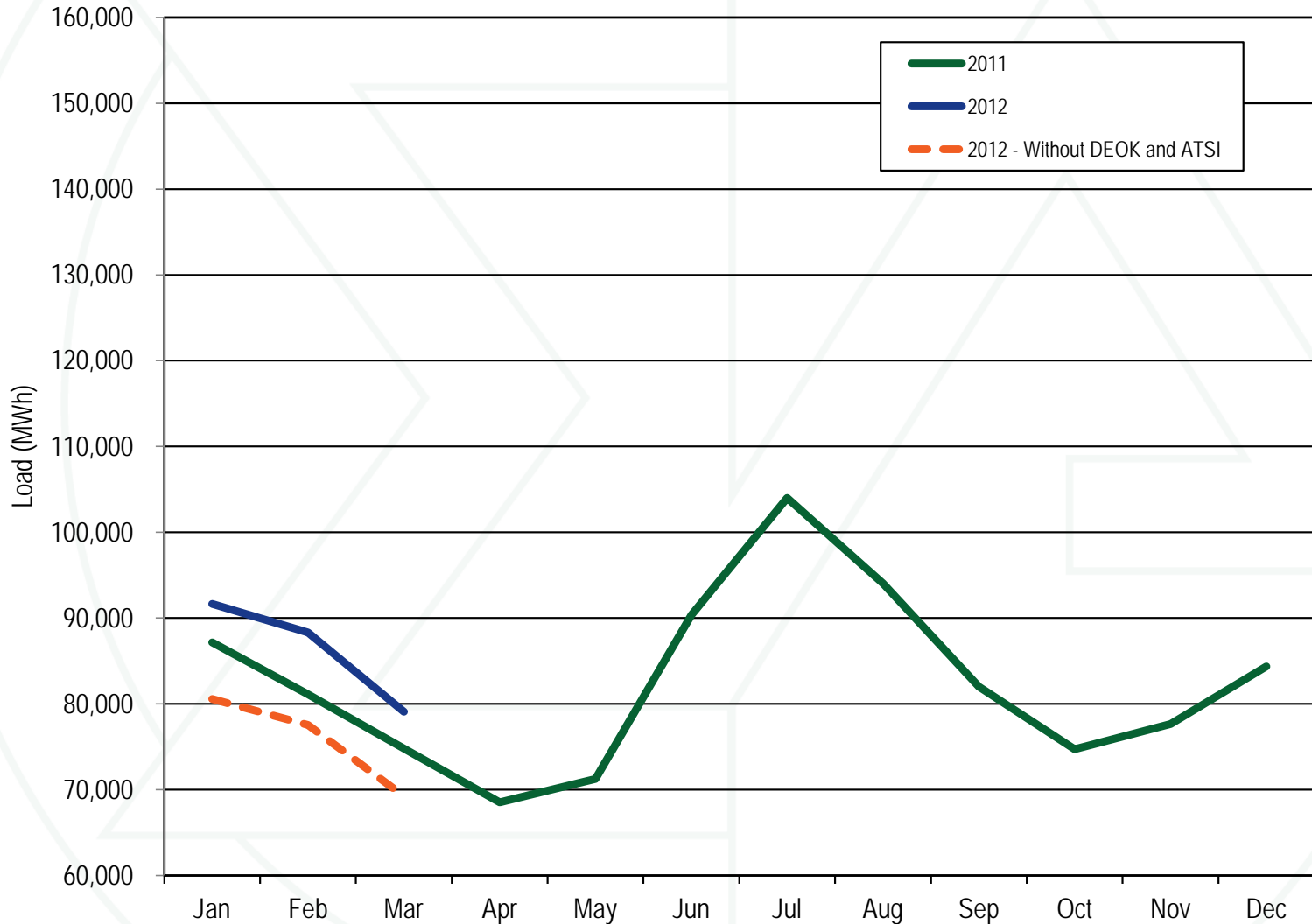


Table 2-37 PJM real-time, load-weighted, average LMP (Dollars per MWh): January and February for years 1998 through 2012

(Jan-Feb)	Real-Time LMP			Year-to-Year Change		
	Average	Median	Standard Deviation	Average	Median	Standard Deviation
1998	\$16.56	\$14.80	\$7.23	NA	NA	NA
1999	\$18.36	\$16.00	\$7.68	10.9%	8.1%	6.2%
2000	\$24.48	\$17.81	\$17.83	33.4%	11.3%	132.2%
2001	\$32.97	\$24.58	\$21.78	34.7%	38.1%	22.1%
2002	\$20.97	\$18.60	\$8.28	(36.4%)	(24.3%)	(62.0%)
2003	\$47.67	\$42.79	\$28.33	127.3%	130.0%	242.1%
2004	\$49.57	\$43.60	\$26.06	4.0%	1.9%	(8.0%)
2005	\$44.77	\$38.83	\$22.33	(9.7%)	(10.9%)	(14.3%)
2006	\$52.51	\$44.79	\$23.94	17.3%	15.3%	7.2%
2007	\$55.74	\$45.52	\$35.21	6.1%	1.6%	47.0%
2008	\$65.88	\$54.47	\$38.00	18.2%	19.7%	7.9%
2009	\$51.38	\$43.93	\$23.05	(22.0%)	(19.3%)	(39.3%)
2010	\$48.49	\$40.80	\$24.16	(5.6%)	(7.1%)	4.8%
2011	\$47.52	\$39.67	\$25.29	(2.0%)	(2.8%)	4.7%
2012	\$31.17	\$29.28	\$11.02	(34.4%)	(26.2%)	(56.4%)

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

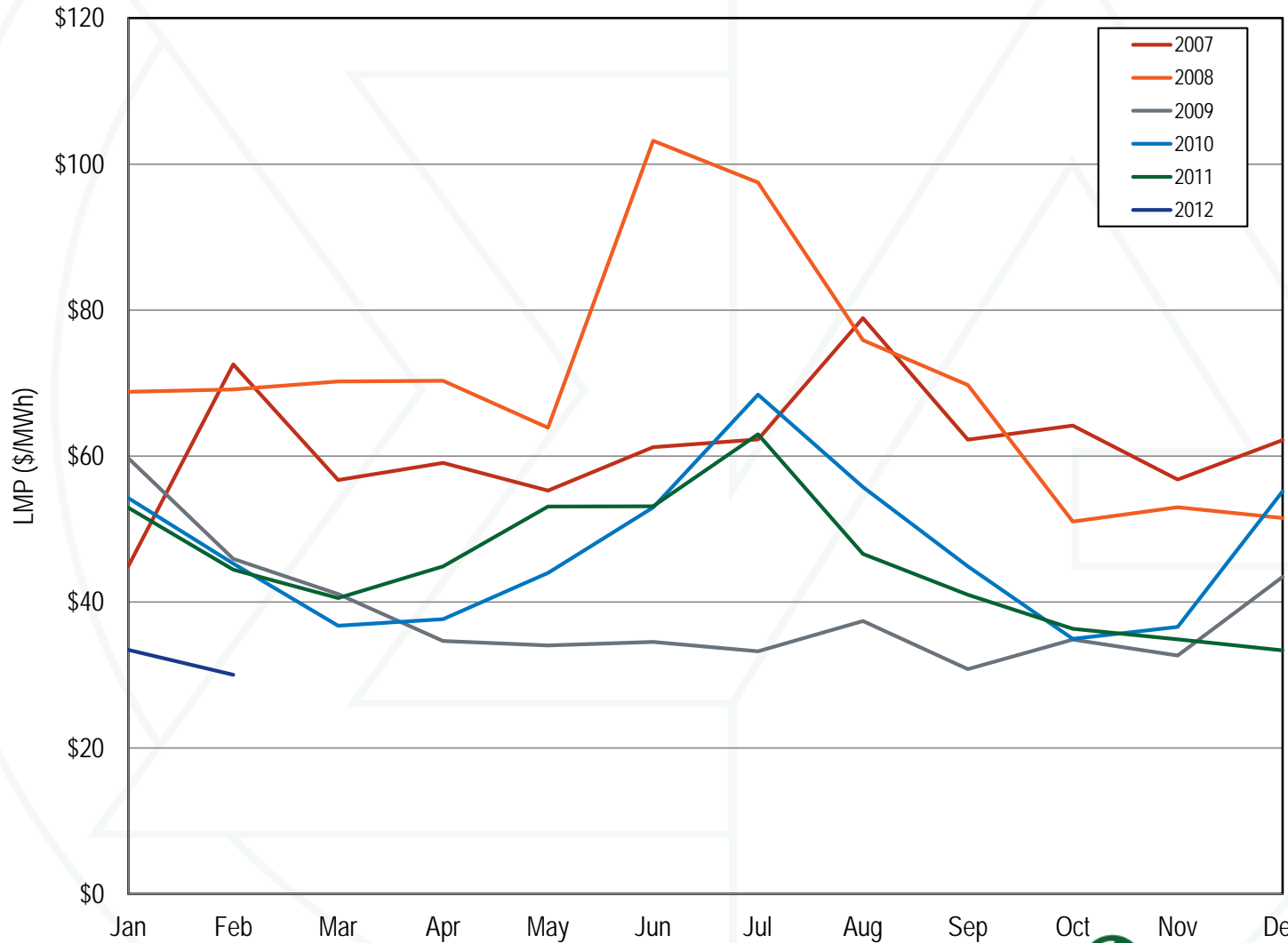


Figure 2-17 Spot average fuel price comparison: 2011 through January-February 2012

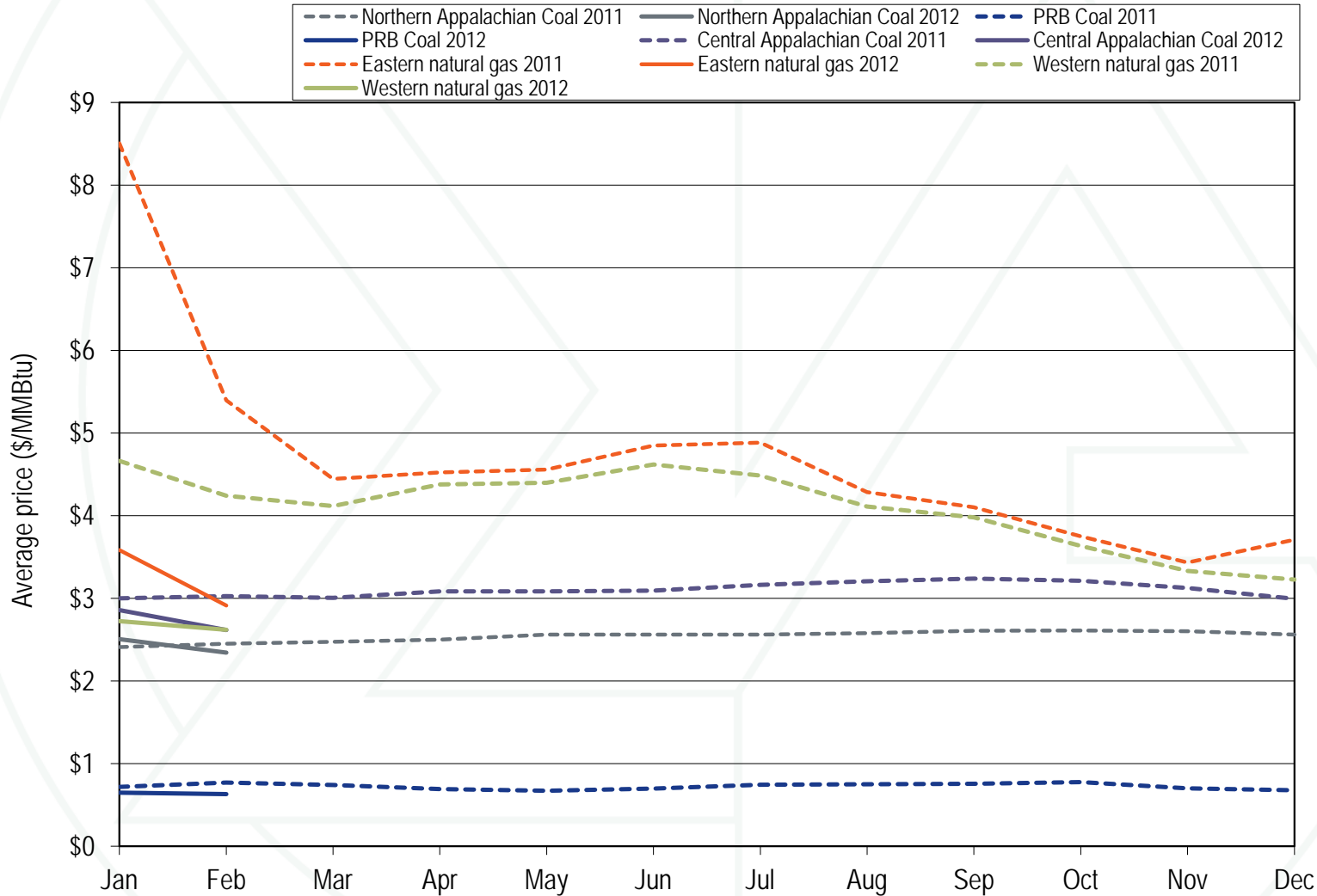


Table 2-7 Real-time offer-capped unit statistics: January and February 2012

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	0	3	52
80% and < 90%	0	0	0	0	0	2
75% and < 80%	0	0	1	0	0	5
70% and < 75%	2	0	0	0	0	6
60% and < 70%	0	0	1	1	1	9
50% and < 60%	2	1	0	1	1	14
25% and < 50%	2	1	2	2	1	19
10% and < 25%	0	0	1	2	3	10

Figure 4-1 History of capacity prices: Calendar year 1999 through 2014

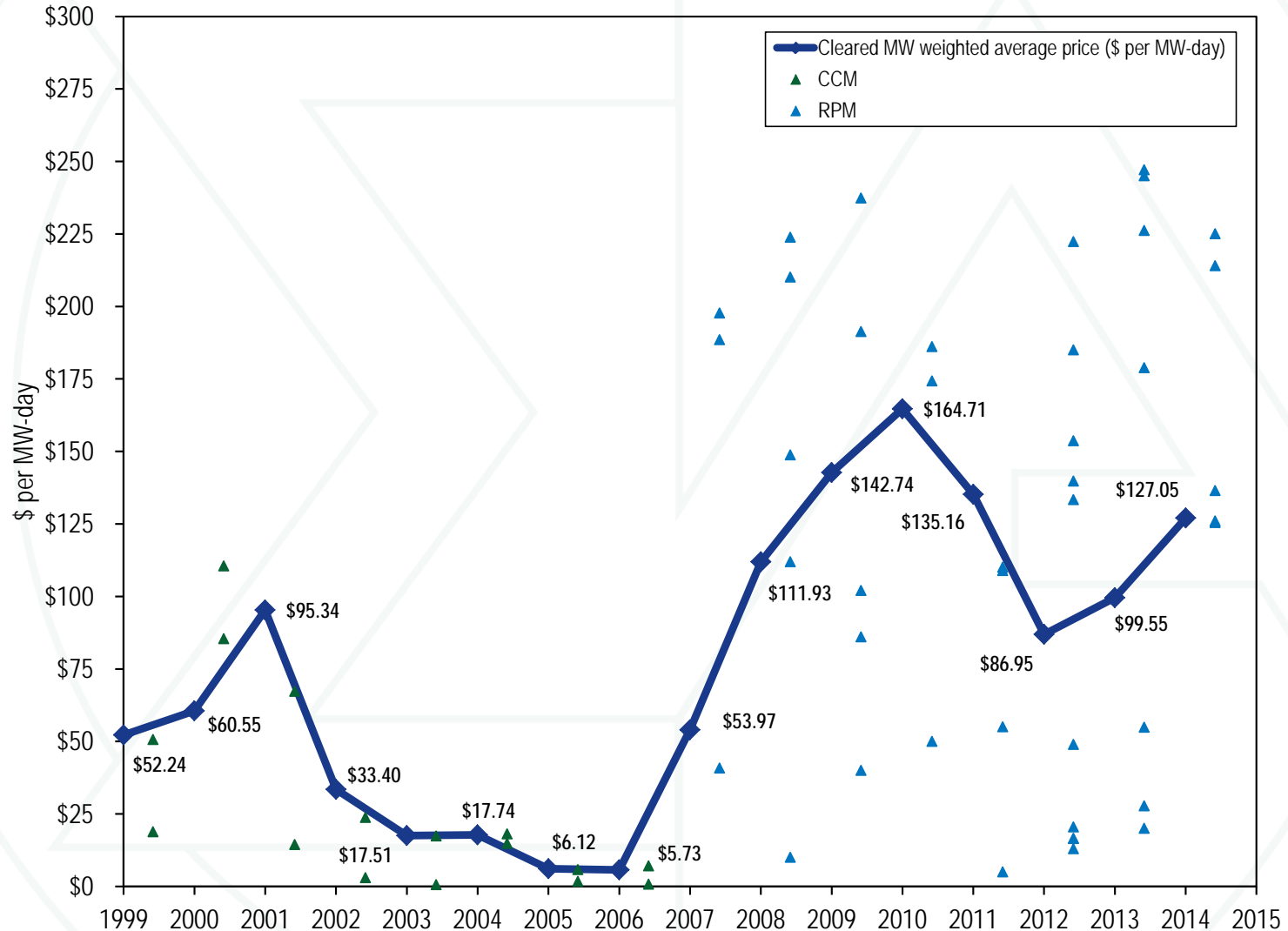


Table 11-11 Summary of PJM unit retirements (MW), Calendar year 2011 through 2019

	MW
Retirements 2011	1,322.3
Retirements 2012	440.0
Planned Retirements 2012	6,749.0
Planned Retirements Post-2012	9,574.7
Total	18,086.0

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

	2011 Charges				2012 Charges			
	Day-Ahead	Synchronous Condensing	Balancing	Total	Day-Ahead	Synchronous Condensing	Balancing	Total
Jan	\$12,373,099	\$110,095	\$49,326,904	\$61,810,098	\$8,311,574	\$15,362	\$27,317,468	\$35,644,404
Feb	\$8,940,203	\$139,287	\$26,567,990	\$35,647,480	\$5,858,308	\$18,592	\$24,532,362	\$30,409,262
Mar	\$6,837,719	\$66,032	\$24,021,865	\$30,925,615				
Apr	\$4,405,102	\$13,011	\$18,762,006	\$23,180,118				
May	\$7,064,934	\$39,417	\$46,178,207	\$53,282,558				
Jun	\$8,303,391	\$9,056	\$62,118,948	\$70,431,396				
Jul	\$4,993,311	\$238,127	\$106,596,647	\$111,828,085				
Aug	\$8,360,392	\$104,982	\$55,142,158	\$63,607,531				
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	\$21,313,302	\$249,382	\$75,894,894	\$97,457,578	\$14,169,882	\$33,955	\$51,849,830	\$66,053,666
Share of Charges	21.9%	0.3%	77.9%	100.0%	21.5%	0.1%	78.5%	100.0%

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

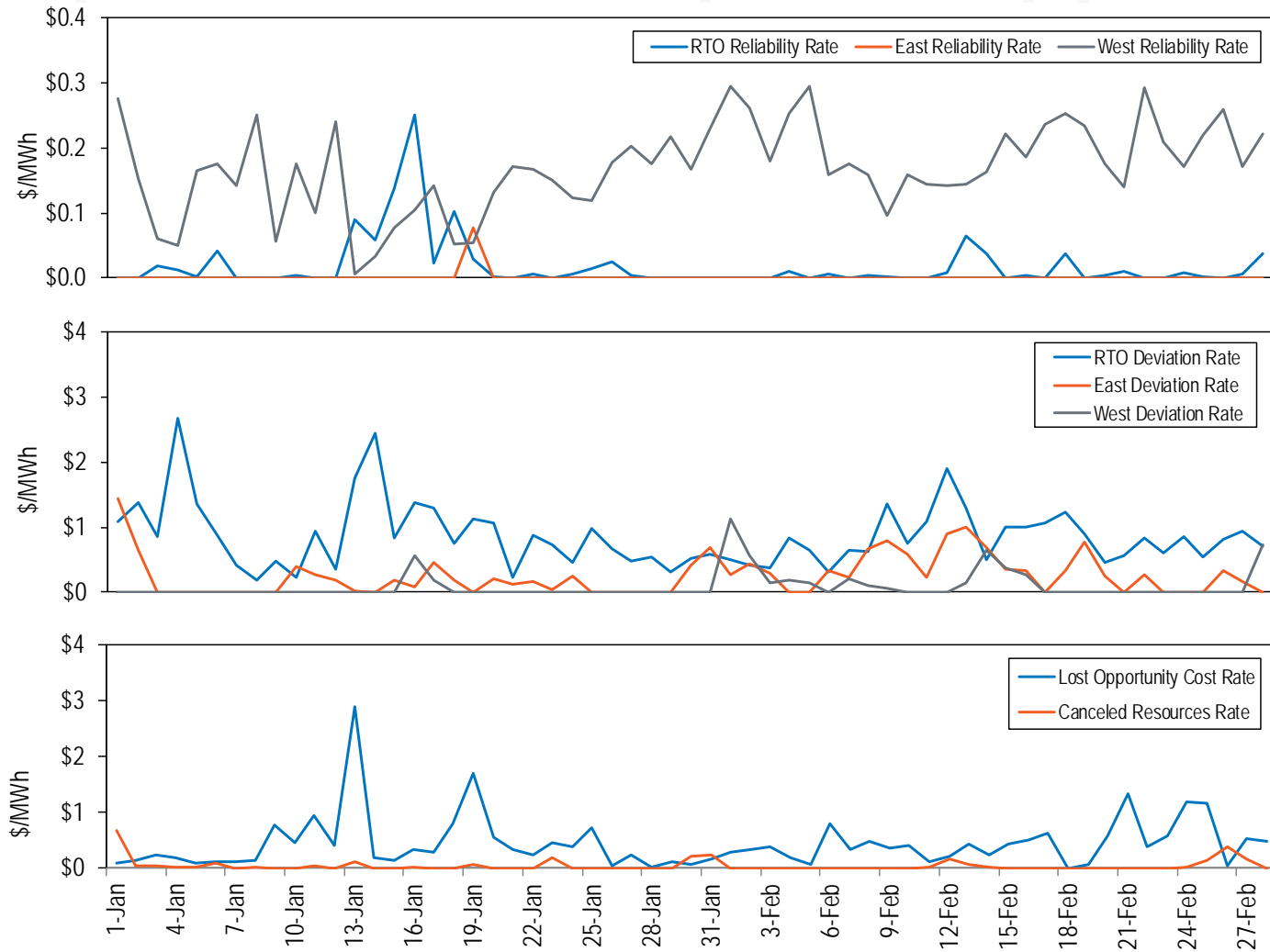


Table 3-11 Operating reserve rates statistics (\$/MWh): January through February 2012

Region	Transaction	Rates Charged (\$/MWh)			Standard Deviation
		Maximum	Average	Minimum	
East	INC	4.7585	1.5877	0.3299	0.7829
	DEC	4.8128	1.6881	0.4698	0.7736
	DA Load	0.2171	0.1004	0.0185	0.0543
	RT Load	0.2506	0.0191	0.0000	0.0423
	Deviation	4.7585	1.5877	0.3299	0.7829
West	INC	4.7490	1.4290	0.3299	0.7194
	DEC	4.8032	1.5294	0.4698	0.7143
	DA Load	0.2171	0.1004	0.0185	0.0543
	RT Load	0.3540	0.1879	0.0574	0.0634
	Deviation	4.7490	1.4290	0.3299	0.7194

Table 3-42 ALR and voltage support units' credits impact on the balancing operating reserve rates (\$/MWh): January through February 2012

Category	Region	Balancing Operating Reserve Rates (\$/MWh)		Impact	
		Without Units' Credits	Current	(\$/MWh)	Percentage
Reliability	RTO	0.017	0.019	0.0016	9.3%
	East	0.001	0.001	0.0000	0.0%
	West	0.003	0.167	0.1641	5,627.1%
Deviation	RTO	0.842	0.867	0.0256	3.0%
	East	0.253	0.253	0.0000	0.0%
	West	0.092	0.092	0.0000	0.0%

Key Legal/Regulatory Matters

- **DC Energy Complaint (EL12-8-000)**
- **NYISO Interface Pricing (ER09-1281)**
- **Order No. 755/Regulation Compliance (ER12-1204)**
- **Generation Queue Reform (ER12-1177)**
- **FE Complaint re FTRs (EL12-19)**
- **FE Complaint re ARRAs (EL12-50)**



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