

Market Monitor Report

MC Webinar
April 24, 2017

Joe Bowring



Monitoring Analytics

Fuel Cost Policies Review Update

As of 4/14/2017:

- **81 percent of PJM units have algorithmic, verifiable, and systematic fuel cost policies that accurately calculate the short run marginal cost of fuel.**
- **Of the remaining 19 percent, 15 percent have failed the IMM's evaluation, 3 percent are under review (submitted between 4/12 and 4/14) and 1 percent have not submitted a fuel cost policy.**

Fuel Cost Policy Status 4/14/2017

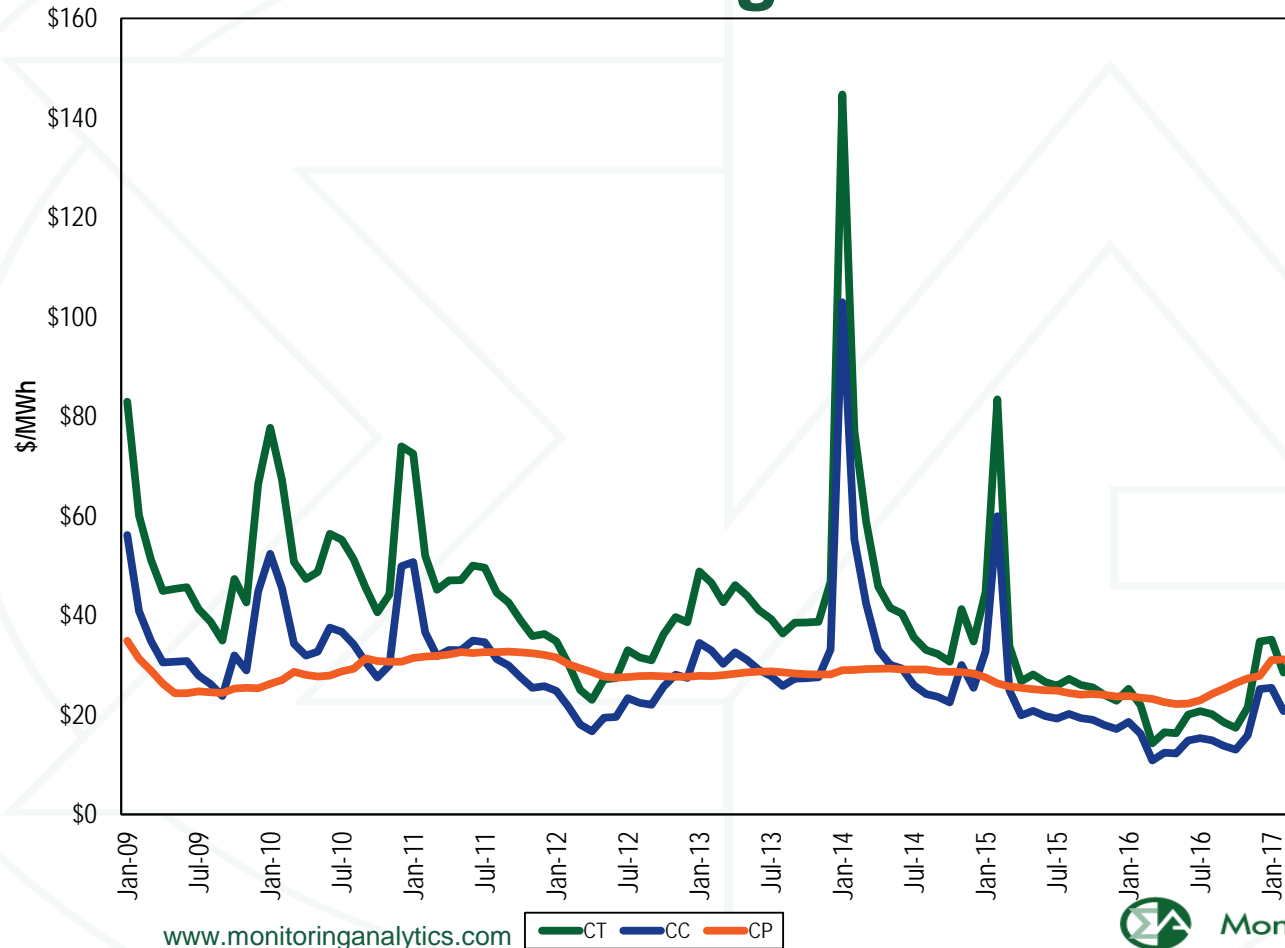
MMU Categories	Units	Percent
Passed	1,099	81%
Submitted	40	3%
Failed	205	15%
Not Submitted	14	1%
Total	1,358	100%

- **66 percent of natural gas units have passed the IMM's evaluation.**

PJM Load: January through March 1998 through 2017

Jan-Mar	PJM Real-Time Demand (MWh)				Year-to-Year Change			
	Load		Load Plus Exports		Load		Load Plus Exports	
	Standard Load	Standard Deviation	Standard Demand	Standard Deviation	Standard Load	Standard Deviation	Standard Demand	Standard Deviation
1998	28,019	3,762	28,019	3,762	NA	NA	NA	NA
1999	29,784	4,027	29,784	4,027	6.3%	7.0%	6.3%	7.0%
2000	30,367	4,624	30,367	4,624	2.0%	14.8%	2.0%	14.8%
2001	31,254	3,846	33,452	3,704	2.9%	(16.8%)	10.2%	(19.9%)
2002	29,968	4,083	30,988	3,932	(4.1%)	6.1%	(7.4%)	6.1%
2003	39,249	5,546	41,600	5,701	31.0%	35.8%	34.2%	45.0%
2004	39,549	5,761	41,198	5,394	0.8%	3.9%	(1.0%)	(5.4%)
2005	71,388	8,966	79,319	9,587	80.5%	55.6%	92.5%	77.8%
2006	80,179	8,977	86,567	9,378	12.3%	0.1%	9.1%	(2.2%)
2007	84,586	12,040	90,304	12,012	5.5%	34.1%	4.3%	28.1%
2008	82,235	10,184	89,092	10,621	(2.8%)	(15.4%)	(1.3%)	(11.6%)
2009	81,170	11,718	86,110	11,948	(1.3%)	15.1%	(3.3%)	12.5%
2010	81,121	10,694	86,843	11,262	(0.1%)	(8.7%)	0.9%	(5.7%)
2011	81,018	10,273	86,635	10,613	(0.1%)	(3.9%)	(0.2%)	(5.8%)
2012	86,329	10,951	91,090	11,293	6.6%	6.6%	5.1%	6.4%
2013	91,337	10,610	95,835	10,452	5.8%	(3.1%)	5.2%	(7.4%)
2014	98,317	13,484	104,454	12,843	7.6%	27.1%	9.0%	22.9%
2015	97,936	13,445	102,821	13,855	(0.4%)	(0.3%)	(1.6%)	7.9%
2016	89,322	13,262	92,777	13,409	(8.8%)	(1.4%)	(9.8%)	(3.2%)
2017	87,598	11,208	92,791	11,295	(1.9%)	(15.5%)	0.0%	(15.8%)

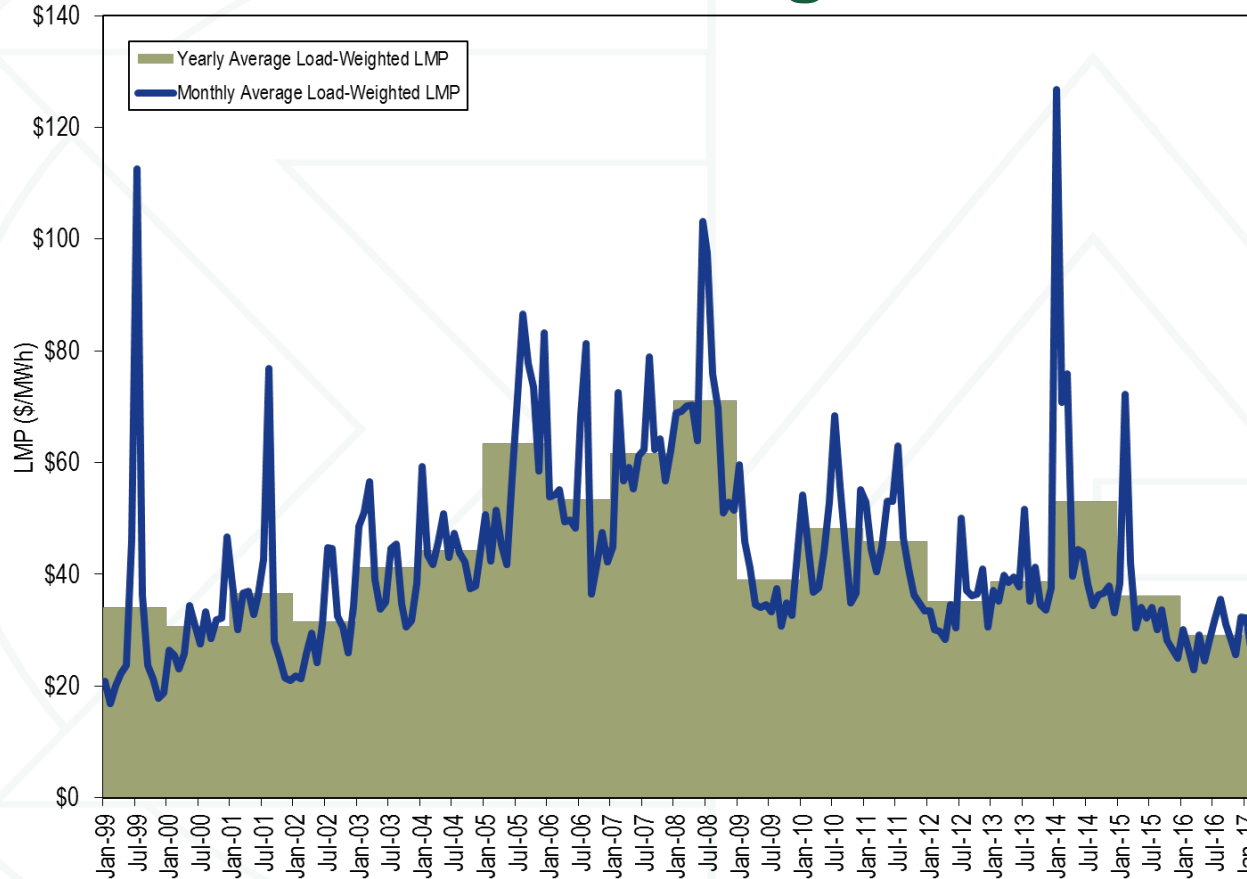
Short run marginal costs



PJM LMP: January through March 1998 through 2017

Jan-Mar	Real-Time, Load-Weighted, Average LMP			Year-to-Year Change		
	Average	Median	Standard Deviation	Average	Median	Standard Deviation
1998	\$18.13	\$15.80	\$8.14	NA	NA	NA
1999	\$19.38	\$16.90	\$7.66	6.9%	7.0%	(5.9%)
2000	\$25.10	\$18.25	\$17.22	29.5%	8.0%	124.9%
2001	\$35.16	\$27.38	\$21.52	40.1%	50.0%	25.0%
2002	\$23.01	\$19.89	\$9.93	(34.6%)	(27.4%)	(53.8%)
2003	\$51.93	\$46.12	\$30.99	125.6%	131.9%	211.9%
2004	\$48.77	\$43.22	\$24.62	(6.1%)	(6.3%)	(20.6%)
2005	\$48.37	\$42.20	\$22.62	(0.8%)	(2.4%)	(8.1%)
2006	\$54.43	\$47.62	\$23.69	12.5%	12.9%	4.7%
2007	\$58.07	\$50.60	\$34.44	6.7%	6.3%	45.4%
2008	\$69.35	\$60.11	\$36.56	19.4%	18.8%	6.2%
2009	\$49.60	\$42.23	\$23.38	(28.5%)	(29.8%)	(36.1%)
2010	\$45.92	\$39.01	\$22.99	(7.4%)	(7.6%)	(1.7%)
2011	\$46.35	\$39.11	\$24.26	0.9%	0.3%	5.5%
2012	\$31.21	\$29.25	\$12.02	(32.7%)	(25.2%)	(50.5%)
2013	\$37.41	\$32.79	\$19.90	19.9%	12.1%	65.7%
2014	\$92.98	\$51.62	\$134.40	148.5%	57.4%	575.3%
2015	\$50.91	\$33.51	\$46.43	(45.2%)	(35.1%)	(65.5%)
2016	\$26.80	\$23.45	\$13.98	(47.4%)	(30.0%)	(69.9%)
2017	\$30.28	\$26.26	\$13.08	13.0%	12.0%	(6.4%)

PJM LMP: 1999 through March 2017



FERC Order 831 Offer Cap Verification

- **Any offer above \$1,000 per MWh requires verification of marginal costs, including demand response resources.**
- **The MMU will contact CSPs to obtain data on the marginal costs of demand response resources.**

Monitoring Analytics, LLC

2621 Van Buren Avenue

Suite 160

Eagleville, PA

19403

(610) 271-8050

MA@monitoringanalytics.com

www.MonitoringAnalytics.com

