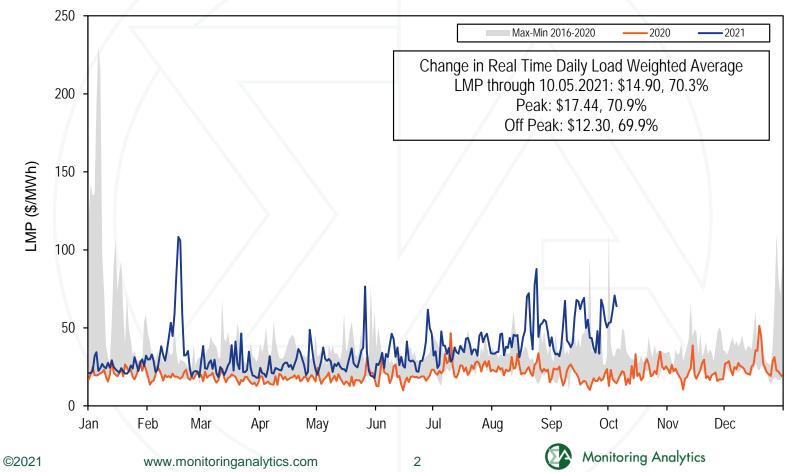
Market Monitor Report

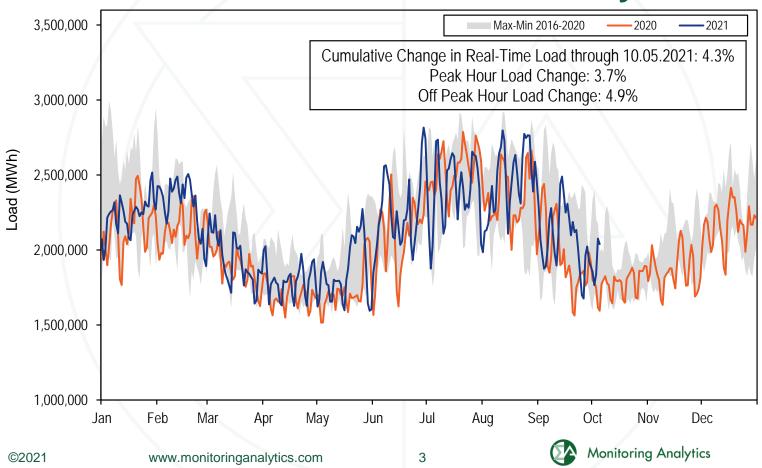
MC Webinar October 18, 2021 **IMM**



Year to Date PJM Real-Time LMP



Year to Date PJM Real-Time Daily Load



Maximum Emergency Generation

- There are two ways to designate offered resources in the energy market as maximum emergency generation:
 - Entire unit as maximum emergency.
 - MW greater than a unit's economic maximum MW up to emergency maximum MW.
- Maximum emergency MW can only be dispatched by PJM if a maximum emergency generation action is declared. (Manual 13, Section 2.3.2)
- The rules for designating generation as maximum emergency are defined in OA Schedule 1 Sec 1.10.1A(d).

Intermittent Resources

- Intermittent resources such as wind and run of river hydro units submit forecast maximum output as economic maximum MW and update these values throughout the day.
- If the emergency maximum MW is not simultaneously updated, the difference between the emergency maximum and the economic maximum values is considered available maximum emergency generation.
- These resources are unlikely to be able to load this additional capacity if PJM were to declare a maximum emergency action.

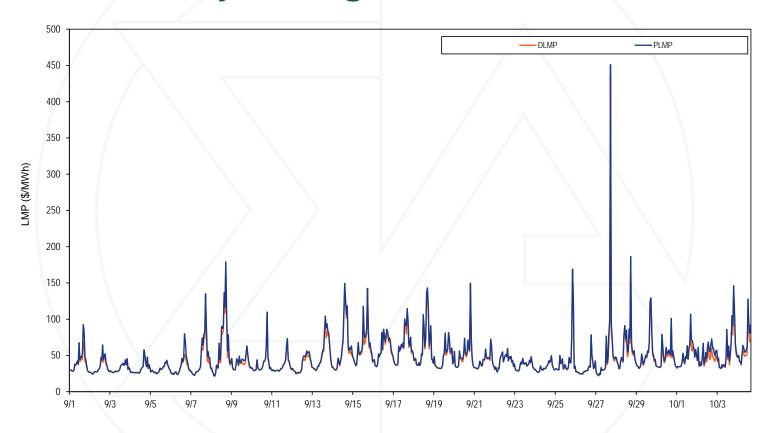
Fast Start Pricing

- From September 1 through October 7, the average increase in PJM average real-time prices as a result of fast start pricing was 4.7 percent, \$2.22 per MWh.
- From September 1 through October 7, the average increase in PJM average day-ahead prices as a result of fast start pricing was 0.3 percent, \$.12 per MWh.
- DLMP is the dispatch price: the price that would have resulted if PJM price formation had not been modified by fast start pricing.
- PLMP is the fast start price: the price paid by load.

Fast Start Impacts: PJM Daily Average LMP

MP PLMP 46 42.54 06 34.58 48 32.48 37 32.58	4.09	Percent 10.6%	DLMP 34.74	PLMP 34.75	Difference	Percent
06 34.58 48 32.48 37 32.58			34.74	24.75		
48 32.48 37 32.58	1.51			34.75	0.02	0.0%
32.58		4.6%	33.69	33.71	0.01	0.0%
	-	0.0%	32.93	32.93	0.01	0.0%
	0.21	0.7%	31.31	31.32	0.01	0.0%
24 31.36	0.12	0.4%	31.96	31.98	0.01	0.0%
74 35.68	2.94	9.0%	33.44	33.48	0.03	0.1%
21 47.56	3.34	7.6%	40.08	40.15	0.07	0.2%
77 62.03	4.26	7.4%	39.79	39.77	(0.01)	0.0%
79 41.39	1.60	4.0%	39.73	39.76	0.03	0.1%
39.10	0.25	0.6%	36.03	36.05	0.01	0.0%
96 36.29	0.33	0.9%	38.05	38.11	0.07	0.2%
48 38.16	1.67	4.6%	45.61	45.86	0.25	0.5%
57 52.98	2.31	4.6%	63.15	63.40	0.25	0.4%
72 62.85	3.13	5.2%	56.46	56.72	0.26	0.5%
37 64.20	2.83	4.6%	59.95	60.18	0.22	0.4%
59.73	1.68	2.9%	57.08	57.39	0.31	0.6%
98 63.85	1.87	3.0%	58.92	59.12	0.20	0.3%
37 64.91	2.54	4.1%	54.90	55.06	0.17	0.3%
48 47.73	1.25	2.7%	48.25	48.51	0.26	0.5%
34 53.43	1.59	3.1%	49.66	49.86	0.20	0.4%
26 42.72	0.46	1.1%	44.54	44.69	0.15	0.3%
56 42.68	0.12	0.3%	42.74	42.85	0.11	0.3%
36.59	0.07	0.2%	39.39	39.46	0.07	0.2%
50 33.66	0.16	0.5%	35.48	35.49	0.02	0.0%
48 46.99	0.52	1.1%	34.05	34.05	0.00	0.0%
58 32.69	0.01	0.0%	33.32	33.32	0.00	0.0%
99 61.66	2.67	4.5%	44.59	44.78	0.19	0.4%
74 61.16	2.42	4.1%	51.24	51.39	0.15	0.3%
32 53.08	1.25	2.4%	51.89	52.10	0.21	0.4%
75 49.13	2.38	5.1%	49.90	50.11	0.21	0.4%
17 51.69	2.51	5.1%	47.97	48.10	0.12	0.3%
79 52.87	7.08	15.5%	47.70	47.89	0.19	0.4%
78 58.39	3.61	6.6%	50.85	50.88	0.03	0.1%
48 68.13	8.65	14.5%	67.12	67.29	0.17	0.3%
25 62.06		6.5%	66.89	66.98	0.09	0.1%
		5.6%	64.64	64.80	0.16	0.3%
37 71.67		8.3%	67.87	68.18	0.32	0.5%
		1 7%	46.65	46.77	0.12	0.3%
	87 71.67 19 68.45	87 71.67 3.80 19 68.45 5.26	87 71.67 3.80 5.6% 19 68.45 5.26 8.3% 43 49.65 2.22 4.7%	87 71.67 3.80 5.6% 64.64 19 68.45 5.26 8.3% 67.87 43 49.65 2.22 4.7% 46.65	87 71.67 3.80 5.6% 64.64 64.80 19 68.45 5.26 8.3% 67.87 68.18 43 49.65 2.22 4.7% 46.65 46.77	87 71.67 3.80 5.6% 64.64 64.80 0.16 19 68.45 5.26 8.3% 67.87 68.18 0.32

PJM Hourly Average RT PLMP and DLMP



Fast Start Pricing by Zone

- Fast start pricing has different impacts by zone.
- For example, from September 1 through October 7, the average increase in PEPCO average real-time prices as a result of fast start pricing was 5.3 percent, \$2.78 per MWh.
- For example, from September 1 through October 7, the average increase in PECO average real-time prices as a result of fast start pricing was 3.6 percent, \$1.44 per MWh.

Fast Start Impacts: Zonal Average Differences

	Average	Average		Difference
ZONE	DLMP	PLMP	Difference	Pecent
AECO	39.87	41.34	1.47	3.7%
AEP	47.59	49.91	2.32	4.9%
APS	48.43	50.81	2.39	4.9%
ATSI	47.10	49.36	2.26	4.8%
BGE	52.39	55.14	2.75	5.2%
COMED	45.43	47.68	2.25	4.9%
DAY	49.34	51.74	2.40	4.9%
DEOK	47.51	49.83	2.32	4.9%
DOM	54.15	56.72	2.57	4.7%
DPL	40.56	42.06	1.50	3.7%
DUQ	46.40	48.63	2.23	4.8%
EKPC	47.21	49.53	2.31	4.9%
JCPL	40.73	42.33	1.60	3.9%
METED	48.56	50.97	2.40	5.0%
OVEC	46.59	48.87	2.28	4.9%
PECO	40.03	41.47	1.44	3.6%
PENELEC	44.68	46.78	2.10	4.7%
PEPCO	52.56	55.34	2.78	5.3%
PPL	42.88	44.79	1.92	4.5%
PSEG	40.85	42.46	1.61	3.9%
RECO	41.69	43.43	1.73	4.2%
nitoringanalytics.com		10	U	Monitoring Analytic

Daily Fast Start Marginal Unit Intervals

	Pricing Run		Dispatch Run			
			Fast Start			Fast Start
Date	Total MG Unit	FS MG Unit	Percent	Total MG Unit	FS MG Unit	Percent
Sep 01	484	95	20%	465	12	3%
Sep 02	333	27	8%	333	10	3%
Sep 04	355	5	1%	355	1	0%
Sep 05	395	2	1%	397	1	0%
Sep 06	446	40	9%	439	15	3%
Sep 07	576	74	13%	556	28	5%
Sep 08	615	80	13%	605	34	6%
Sep 09	307	23	7%	307	12	4%
Sep 10	316	3	1%	315	2	1%
Sep 11	398	4	1%	396	3	1%
Sep 12	475	65	14%	480	21	4%
Sep 13	681	142	21%	670	64	10%
Sep 14	647	130	20%	643	57	9%
Sep 15	783	123	16%	773	29	4%
Sep 16	494	57	12%	489	13	3%
Sep 17	671	91	14%	662	27	4%
Sep 18	677	79	12%	666	25	4%
Sep 19	602	56	9%	615	28	5%
Sep 20	774	54	7%	752	11	1%
Sep 21	921	14	2%	911	2	0%
Sep 22	812	38	5%	839	20	2%
Sep 23	569	3	1%	571	1	0%
Sep 24	713	9	1%	706	5	1%
Sep 25	650	35	5%	653	7	1%
Sep 26	607	1	0%	607	1	0%
Sep 27	1128	65	6%	1119	38	3%
Sep 28	1142	77	7%	1146	17	1%
Sep 29	1121	60	5%	1121	47	4%
Sep 30	636	59	9%	652	30	5%
Oct 02	535	121	23%	522	50	10%
Oct 03	572	89	16%	570	56	10%
Oct 04	675	172	25%	699	82	12%
Oct 05	581	106	18%	569	32	6%
Oct 06	549	77	14%	558	16	3%
Oct 07	590	107	18%	582	21	4%
Average	624	62	10%	621	23	4%

©2021

PJM Fuel Inventory Data Request

- On October 11, 2021, PJM announced a recurring data request regarding fuel (coal and oil) and consumables inventory and deliveries.
- The data will be reported in eDART.
- The MMU recommends that all generation owners respond to these data request promptly and as accurately as possible.
- Accurate responses are essential for PJM and the MMU to meet their responsibilities.
- The MMU will monitor responses to these data requests.

Monitoring Analytics, LLC
2621 Van Buren Avenue
Suite 160
Eagleville, PA
19403
(610) 271-8050

MA@monitoringanalytics.com www.MonitoringAnalytics.com

©2021