

# Market Monitor Report

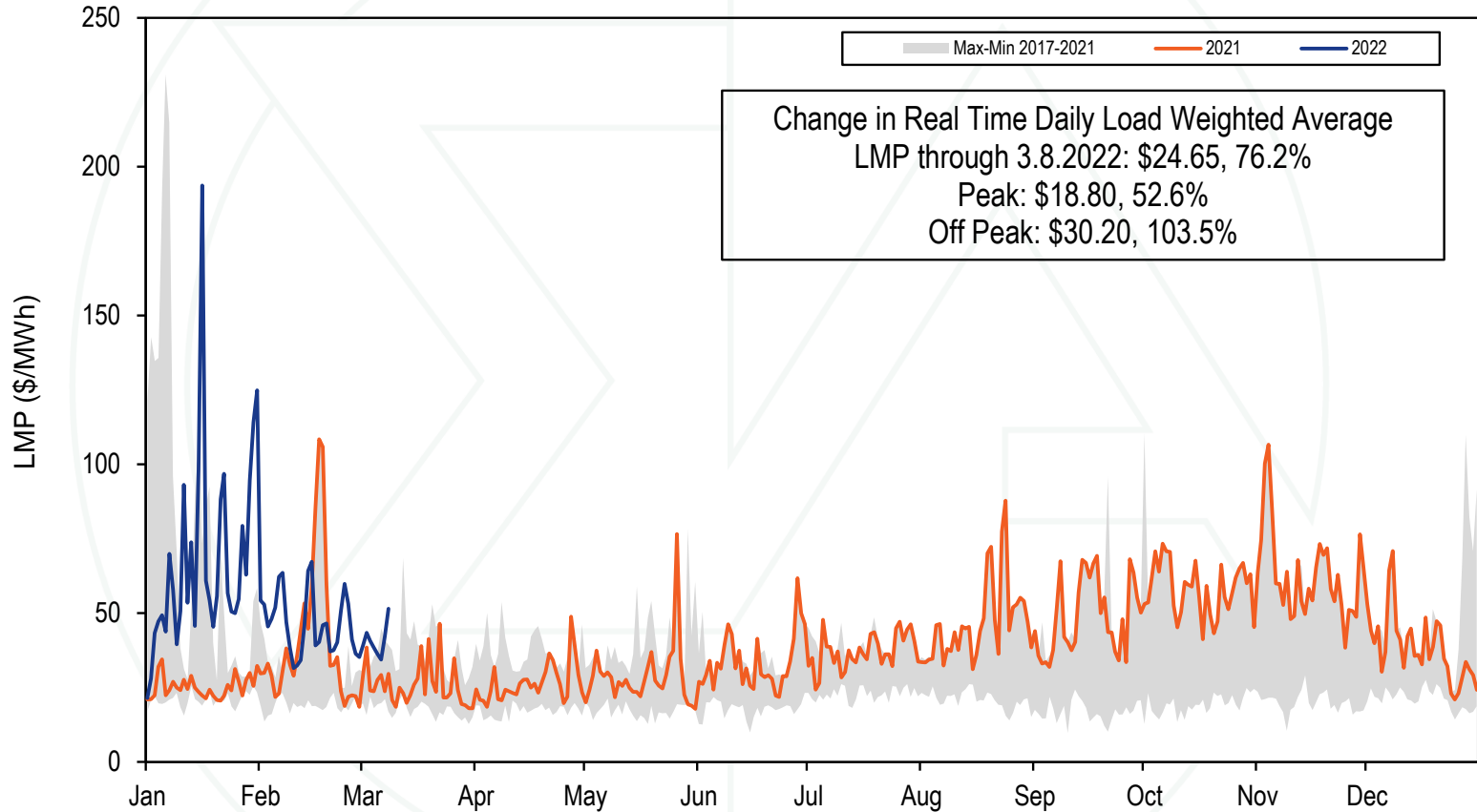
MC Webinar  
03.21.2022

IMM

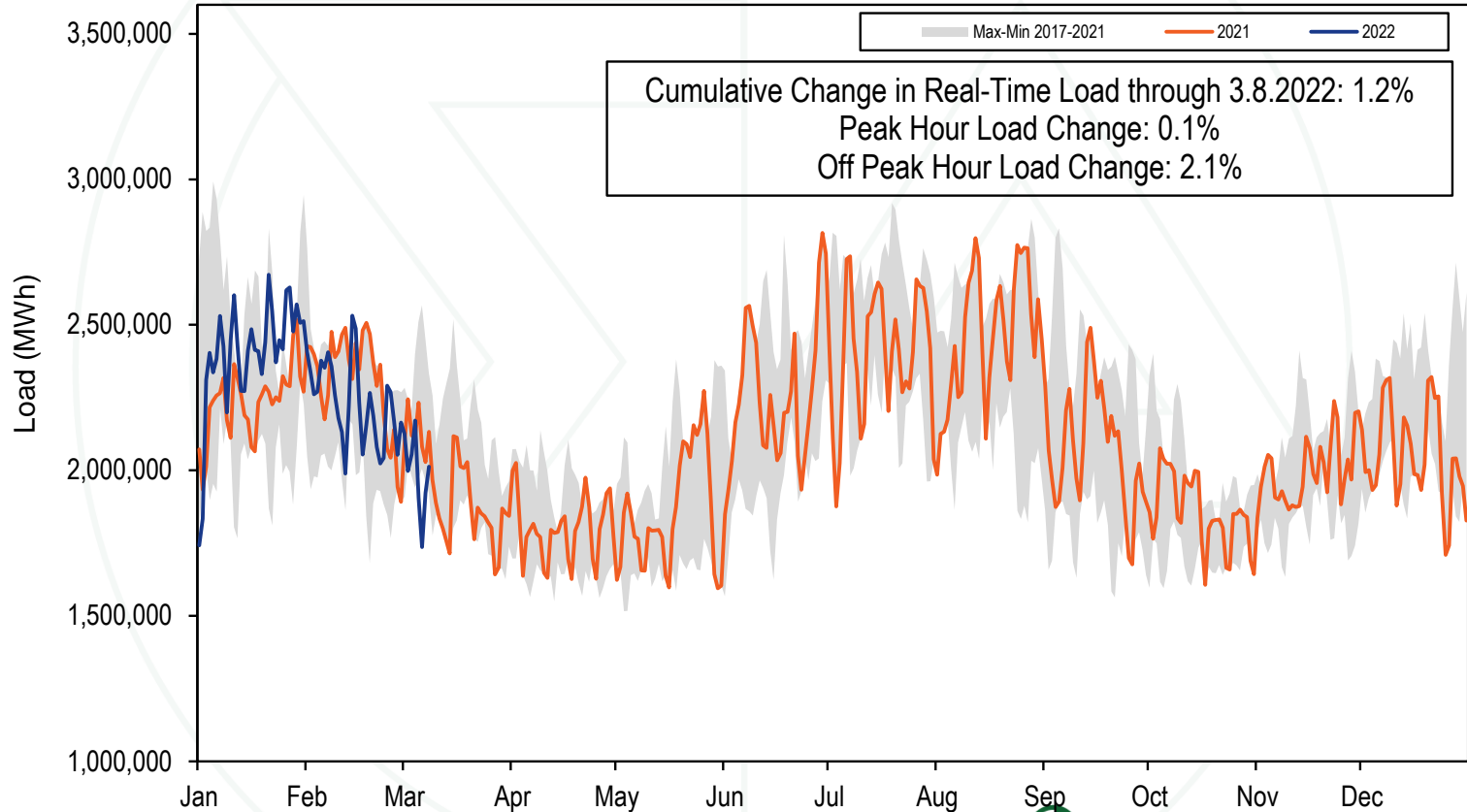


Monitoring Analytics

# 2022 YTD PJM Real-Time LMP



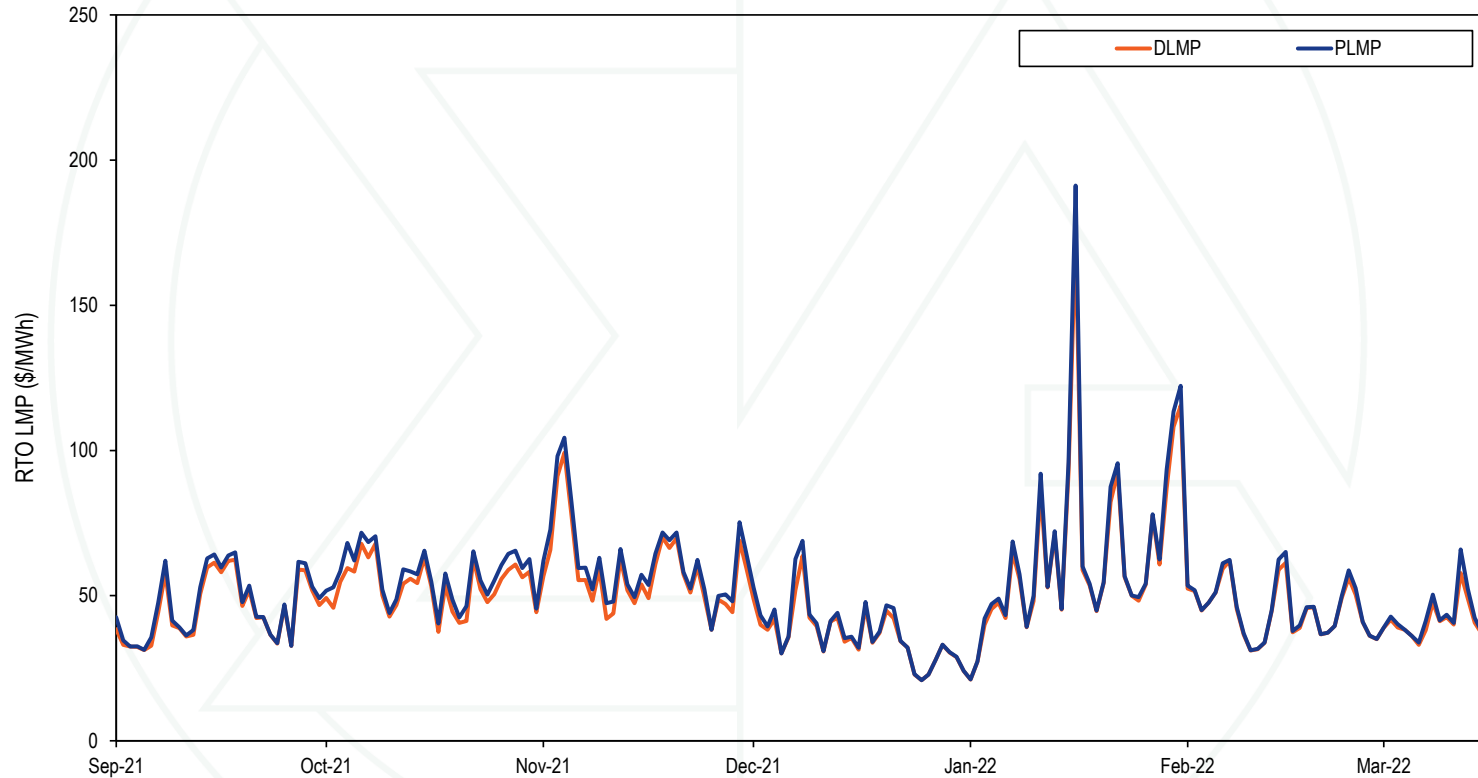
# 2022 YTD PJM Real-Time Daily Load



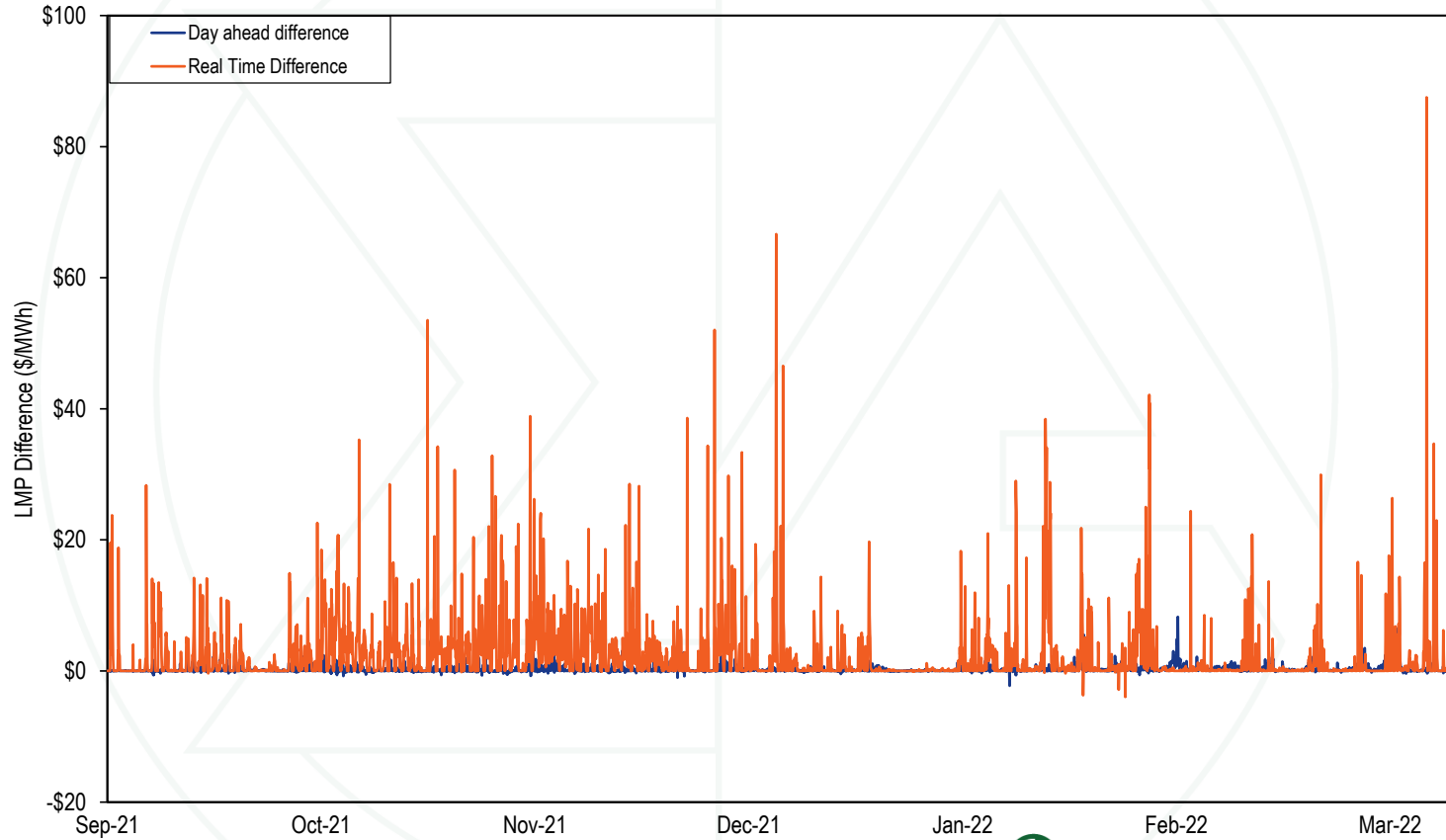
# Monthly Average Load-Weighted DLMP and PLMP

Year	Month	Day-Ahead Load-Weighted Average				Real-Time Load-Weighted Average			
		DLMP	PLMP	Difference	Percent Difference	DLMP	PLMP	Difference	Percent Difference
2021	Sep	\$46.00	\$46.14	\$0.13	0.3%	\$47.73	\$49.63	\$1.90	4.0%
2021	Oct	\$57.86	\$57.98	\$0.12	0.2%	\$54.53	\$58.42	\$3.89	7.1%
2021	Nov	\$60.76	\$61.00	\$0.24	0.4%	\$59.27	\$63.01	\$3.74	6.3%
2021	Dec	\$37.74	\$37.85	\$0.11	0.3%	\$37.37	\$38.92	\$1.55	4.2%
2021	Sep - Dec	\$50.30	\$50.46	\$0.15	0.3%	\$49.47	\$52.20	\$2.73	5.5%
2022	Jan	\$63.93	\$64.15	\$0.22	0.3%	\$66.43	\$69.06	\$2.64	4.0%
2022	Feb	\$49.75	\$50.13	\$0.39	0.8%	\$45.93	\$46.76	\$0.83	1.8%

# Daily Average Real-Time DLMP and PLMP



# Hourly Difference: PLMP – DLMP



# Fast Start Units as a Percent of Marginal Units

Year	Month	Dispatch Run				Pricing Run			
		CT	Diesel	Wind	All Fast Start Units	CT	Diesel	Wind	All Fast Start Units
2021	Sep	2.2%	0.8%	0.0%	3.0%	6.7%	1.3%	0.0%	8.1%
2021	Oct	3.2%	1.4%	0.0%	4.6%	11.1%	2.1%	0.0%	13.3%
2021	Nov	3.2%	0.3%	0.0%	3.5%	11.3%	0.6%	0.0%	11.9%
2021	Dec	1.4%	0.3%	0.2%	1.8%	4.4%	0.6%	0.1%	5.2%
2022	Jan	1.3%	0.3%	0.2%	1.8%	5.0%	0.9%	0.2%	6.2%
2022	Feb	0.6%	0.2%	0.3%	1.2%	3.3%	0.5%	0.3%	4.0%

# Fast Start Impacts: Zonal Average Differences

Sep 2021 - Feb 2022								
Zone	Day-Ahead				Real-Time			
	Average DLMP	Average PLMP	Difference	Difference Percent	Average DLMP	Average PLMP	Difference	Difference Percent
ACEC	\$44.75	\$44.89	\$0.15	0.3%	\$45.77	\$47.42	\$1.66	3.6%
AEP	\$50.73	\$50.93	\$0.20	0.4%	\$49.18	\$51.08	\$1.90	3.9%
APS	\$52.99	\$53.20	\$0.21	0.4%	\$51.75	\$53.74	\$1.99	3.8%
ATSI	\$50.59	\$50.79	\$0.20	0.4%	\$48.43	\$50.26	\$1.83	3.8%
BGE	\$59.83	\$60.04	\$0.21	0.4%	\$58.50	\$60.98	\$2.47	4.2%
COMED	\$42.51	\$42.70	\$0.19	0.4%	\$40.64	\$42.68	\$2.04	5.0%
DAY	\$52.91	\$53.12	\$0.21	0.4%	\$51.17	\$53.08	\$1.91	3.7%
DUKE	\$51.63	\$51.83	\$0.20	0.4%	\$49.32	\$51.17	\$1.85	3.8%
DOM	\$58.10	\$58.30	\$0.19	0.3%	\$58.48	\$60.78	\$2.31	3.9%
DPL	\$51.40	\$51.62	\$0.22	0.4%	\$51.81	\$54.76	\$2.95	5.7%
DUQ	\$49.54	\$49.74	\$0.20	0.4%	\$47.57	\$49.34	\$1.77	3.7%
EKPC	\$51.74	\$51.94	\$0.20	0.4%	\$49.88	\$51.75	\$1.87	3.7%
JCPLC	\$47.01	\$47.17	\$0.16	0.3%	\$47.85	\$49.73	\$1.88	3.9%
MEC	\$55.27	\$55.44	\$0.16	0.3%	\$54.21	\$56.25	\$2.04	3.8%
OVEC	\$50.14	\$50.34	\$0.20	0.4%	\$48.38	\$50.20	\$1.81	3.8%
PECO	\$45.09	\$45.23	\$0.14	0.3%	\$46.03	\$47.79	\$1.76	3.8%
PE	\$52.93	\$53.13	\$0.20	0.4%	\$50.32	\$52.05	\$1.72	3.4%
PEPCO	\$58.58	\$58.79	\$0.21	0.4%	\$58.43	\$60.88	\$2.45	4.2%
PPL	\$49.65	\$49.81	\$0.16	0.3%	\$48.38	\$50.20	\$1.82	3.8%
PSEG	\$48.52	\$48.67	\$0.15	0.3%	\$49.98	\$51.96	\$1.98	4.0%
REC	\$51.37	\$51.52	\$0.15	0.3%	\$52.84	\$54.96	\$2.12	4.0%



# Fast Start Impacts: Hub Average Differences

Sep 2021 - Feb 2022

Hub	Day-Ahead				Real-Time			
	Average DLMP	Average PLMP	Difference	Difference Percent	Average DLMP	Average PLMP	Difference	Difference Percent
AEP GEN HUB	\$49.55	\$49.75	\$0.20	0.4%	\$47.61	\$49.41	\$1.80	3.8%
AEP-DAYTON HUB	\$49.93	\$50.13	\$0.20	0.4%	\$47.96	\$49.84	\$1.88	3.9%
ATSI GEN HUB	\$49.66	\$49.86	\$0.20	0.4%	\$47.30	\$49.09	\$1.80	3.8%
CHICAGO GEN HUB	\$41.81	\$41.99	\$0.19	0.4%	\$39.67	\$41.67	\$2.00	5.0%
CHICAGO HUB	\$42.77	\$42.97	\$0.19	0.4%	\$40.89	\$42.95	\$2.06	5.0%
DOMINION HUB	\$57.01	\$57.21	\$0.19	0.3%	\$57.20	\$59.40	\$2.21	3.9%
EASTERN HUB	\$50.35	\$50.57	\$0.22	0.4%	\$50.61	\$53.35	\$2.74	5.4%
N ILLINOIS HUB	\$42.44	\$42.63	\$0.19	0.5%	\$40.55	\$42.58	\$2.03	5.0%
NEW JERSEY HUB	\$47.37	\$47.52	\$0.15	0.3%	\$48.53	\$50.43	\$1.90	3.9%
OHIO HUB	\$49.62	\$49.82	\$0.20	0.4%	\$47.49	\$49.39	\$1.91	4.0%
WEST INT HUB	\$51.81	\$52.00	\$0.20	0.4%	\$50.50	\$52.44	\$1.95	3.9%
WESTERN HUB	\$54.64	\$54.85	\$0.21	0.4%	\$52.55	\$54.56	\$2.01	3.8%

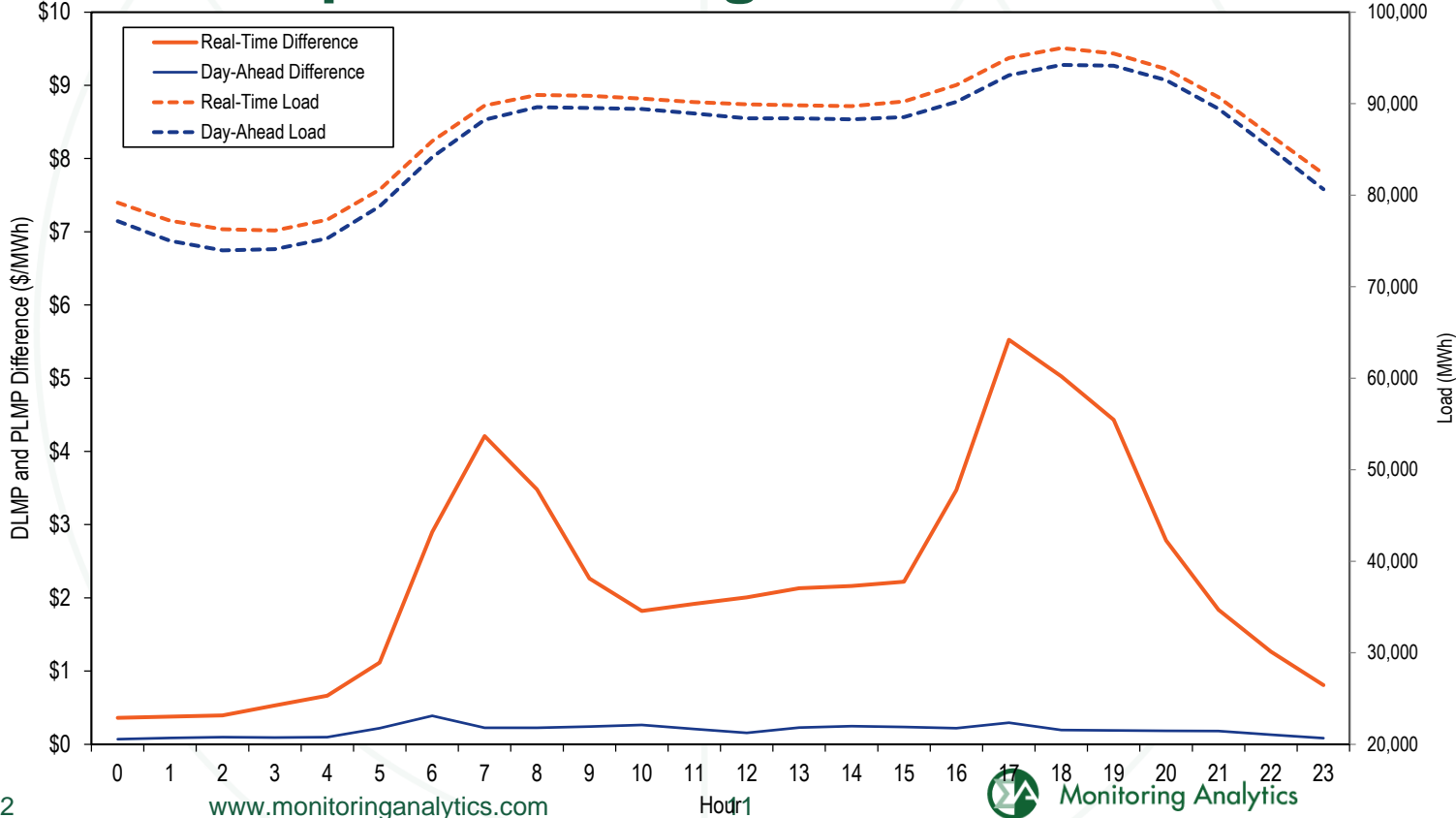


# Zonal PLMP-DLMP Difference Frequency

Sep 2021 - Feb 2022

Zone	< (\$50)	(\$50) to (\$10)	(\$10) to \$0	\$0	\$0 to \$10	\$10 to \$20	\$20 to \$50	\$50 to \$100	\$100 to \$200	>= \$200
PJM-RTO	0.0%	1.1%	0.0%	0.8%	49.8%	43.6%	2.9%	1.4%	0.3%	0.1%
ACEC	0.0%	1.2%	0.4%	6.6%	50.3%	37.8%	2.1%	1.1%	0.4%	0.2%
AEP	0.0%	1.1%	0.0%	1.2%	49.9%	43.5%	2.9%	1.1%	0.2%	0.1%
APS	0.0%	1.1%	0.0%	1.1%	50.0%	43.0%	3.0%	1.4%	0.3%	0.1%
ATSI	0.0%	1.1%	0.0%	1.6%	49.9%	43.4%	2.6%	1.0%	0.2%	0.1%
BGE	0.0%	1.1%	0.1%	2.6%	49.9%	40.0%	3.7%	1.9%	0.6%	0.1%
COMED	0.0%	1.1%	0.0%	2.3%	50.3%	42.0%	2.8%	1.2%	0.3%	0.1%
DAY	0.0%	1.1%	0.0%	1.3%	50.0%	43.1%	2.9%	1.1%	0.2%	0.1%
DUKE	0.0%	1.1%	0.0%	1.3%	50.0%	43.3%	2.8%	1.1%	0.2%	0.1%
DOM	0.0%	1.1%	0.1%	2.0%	50.1%	41.0%	3.4%	1.7%	0.4%	0.1%
DPL	0.0%	1.1%	0.1%	8.9%	50.3%	33.3%	2.4%	2.5%	0.8%	0.5%
DUQ	0.0%	1.1%	0.0%	1.7%	50.0%	43.3%	2.6%	1.0%	0.2%	0.1%
EKPC	0.0%	1.1%	0.0%	1.4%	50.0%	43.1%	2.9%	1.1%	0.2%	0.1%
JCPLC	0.0%	1.1%	0.1%	3.8%	50.4%	40.7%	2.2%	1.2%	0.4%	0.2%
MEC	0.0%	1.1%	0.2%	3.4%	50.1%	39.8%	3.1%	1.6%	0.6%	0.2%
OVEC	0.0%	1.1%	0.0%	1.4%	50.1%	43.3%	2.7%	1.1%	0.2%	0.1%
PECO	0.0%	1.1%	0.1%	7.9%	50.3%	36.7%	2.2%	1.1%	0.4%	0.2%
PE	0.0%	1.1%	0.1%	1.4%	49.9%	43.1%	3.0%	1.1%	0.3%	0.1%
PEPCO	0.0%	1.1%	0.1%	2.6%	50.0%	40.0%	3.6%	1.9%	0.5%	0.1%
PPL	0.0%	1.1%	0.1%	3.3%	50.2%	41.0%	2.5%	1.3%	0.4%	0.1%
PSEG	0.0%	1.1%	0.1%	3.3%	50.3%	40.9%	2.4%	1.3%	0.4%	0.2%
REC	0.0%	1.1%	0.1%	2.5%	50.0%	41.7%	2.4%	1.5%	0.5%	0.1%

# Hourly Average Load and LMP Difference: Sep 2021 through Feb 2022



# On Peak and Off Peak LMP

- In January 2022, average off peak LMP greater than average on peak LMP.
- This pattern has not occurred since January 2018.
- **Causes**
  - High LMPs on Sunday, January 16, 2022
  - High LMPs in the HE 7:00 AM, which is classified as off peak, especially on a few January days
  - Fast start pricing effects on LMP in the HE 7:00 AM, both day ahead and real time

# Real-Time Monthly On Peak and Off Peak LMP

	2021				2022			
	Off Peak	On Peak	Difference	Percent Difference	Off Peak	On Peak	Difference	Percent Difference
Jan	\$23.28	\$27.27	\$3.99	17.1%	\$71.11	\$61.68	(\$9.43)	-13.3%
Feb	\$34.53	\$45.20	\$10.67	30.9%	\$44.66	\$47.05	\$2.39	5.4%
Mar	\$23.24	\$28.16	\$4.92	21.2%				
Apr	\$22.40	\$30.19	\$7.79	34.8%				
May	\$22.08	\$35.35	\$13.28	60.1%				
Jun	\$25.82	\$37.95	\$12.13	47.0%				
Jul	\$29.94	\$41.81	\$11.87	39.6%				
Aug	\$34.89	\$54.24	\$19.35	55.5%				
Sep	\$37.86	\$56.97	\$19.11	50.5%				
Oct	\$48.70	\$66.77	\$18.07	37.1%				
Nov	\$54.93	\$69.88	\$14.95	27.2%				
Dec	\$33.92	\$41.76	\$7.85	23.1%				

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