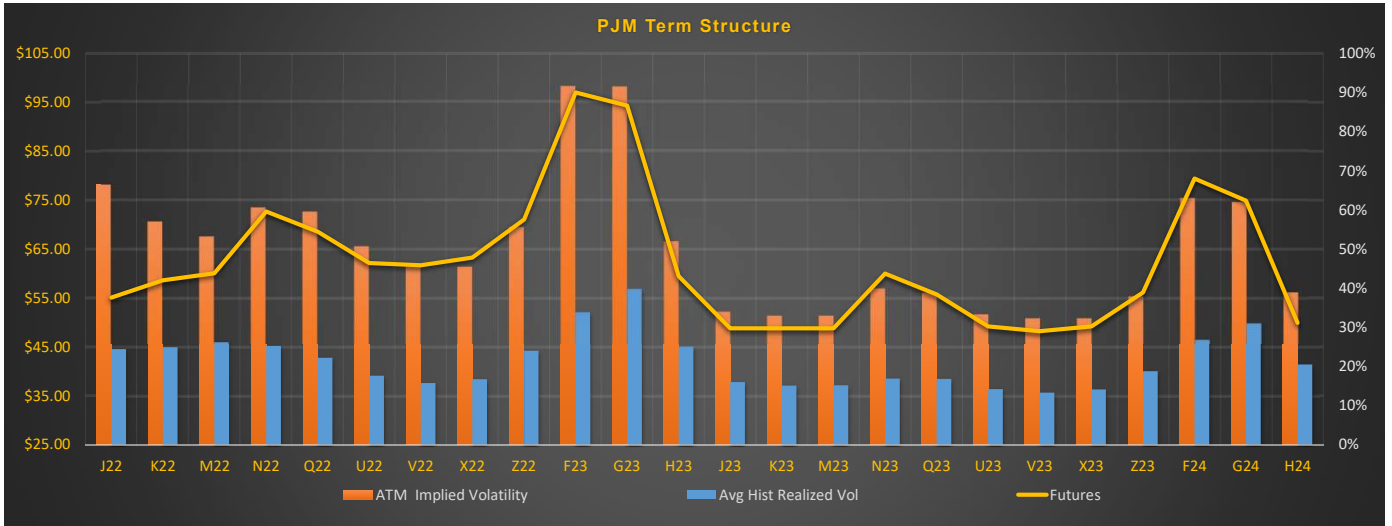


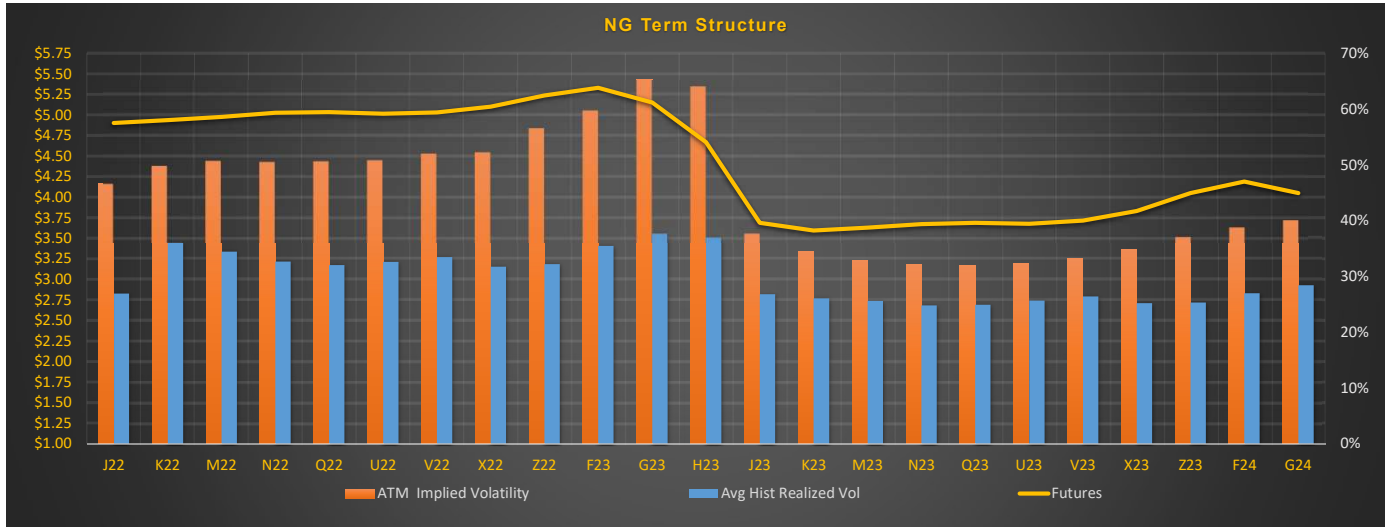
Date: 3/22/2022



PJM Term Structure																
Contract	Option Expiry	Trade Days to Expiry	Futures Price	ATM Straddle	Break-even	ATM Implied Volatility				Realized Volatility		Implied Volatility and Skew				
						Vol	1D Chg	1Wk Chg	1Mo Chg	Avg Hist	30 day	10d Put	25d Put	ATM	25d Call	10d Call
J22	3/30/22	7	\$ 55.05	\$ 4.57	\$ 2.30	66.4%	3.7%	-1.4%	9.4%	24.4%	38.3%	-5.9%	-3.4%	66.4%	4.4%	10.4%
K22	4/28/22	27	\$ 58.60	\$ 8.58	\$ 2.10	57.0%	1.0%	0.0%	9.6%	24.9%	35.5%	-5.1%	-2.7%	57.0%	5.2%	11.3%
M22	5/27/22	48	\$ 60.05	\$ 10.89	\$ 2.01	53.2%	0.2%	1.2%	6.8%	26.3%	35.3%	-6.6%	-2.8%	53.2%	5.5%	12.1%
N22	6/29/22	70	\$ 72.70	\$ 18.30	\$ 2.78	60.6%	2.7%	3.0%	15.1%	25.3%	35.0%	-11.7%	-7.0%	60.6%	7.7%	9.2%
Q22	7/28/22	90	\$ 68.55	\$ 19.25	\$ 2.57	59.5%	2.5%	3.1%	16.0%	22.3%	33.8%	-10.5%	-5.8%	59.5%	9.7%	24.2%
U22	8/30/22	113	\$ 62.10	\$ 16.64	\$ 1.98	50.7%	2.7%	2.7%	11.1%	17.7%	33.6%	-8.3%	-3.0%	50.7%	5.7%	14.8%
V22	9/29/22	134	\$ 61.65	\$ 16.17	\$ 1.77	45.6%	0.6%	-0.4%	6.4%	15.8%	30.7%	-6.6%	-2.5%	45.6%	5.0%	13.2%
X22	10/28/22	155	\$ 63.25	\$ 17.75	\$ 1.81	45.5%	0.5%	0.5%	6.5%	16.7%	31.2%	-2.0%	-1.3%	45.5%	3.8%	13.4%
Z22	11/29/22	176	\$ 71.00	\$ 26.00	\$ 2.49	55.6%	2.7%	4.6%	10.7%	24.0%	36.6%	-2.8%	-1.7%	55.6%	7.7%	21.2%
F23	12/29/22	197	\$ 97.00	\$ 60.68	\$ 5.58	91.4%	0.4%	3.9%	20.3%	34.0%	47.1%	-9.3%	-5.7%	91.4%	23.2%	34.4%
G23	1/30/23	217	\$ 94.35	\$ 62.05	\$ 5.43	91.3%	1.3%	4.8%	20.3%	39.9%	47.1%	-9.2%	-5.6%	91.3%	24.1%	35.7%
H23	2/27/23	236	\$ 59.45	\$ 23.67	\$ 1.95	52.0%	1.0%	1.9%	8.0%	25.0%	25.3%	-4.6%	-2.7%	52.0%	9.8%	24.7%
J23	3/30/23	259	\$ 48.80	\$ 13.40	\$ 1.05	34.1%	0.1%	0.7%	4.6%	16.0%	22.9%	-5.2%	-3.3%	34.1%	4.6%	8.9%
K23	4/27/23	278	\$ 48.80	\$ 13.46	\$ 1.02	33.1%	0.1%	0.7%	5.1%	15.1%	33.8%	-3.9%	-2.5%	33.1%	4.1%	9.4%
M23	5/30/23	300	\$ 48.80	\$ 14.00	\$ 1.02	33.1%	0.1%	0.5%	5.1%	15.1%	34.3%	-4.1%	-2.7%	33.1%	4.8%	9.9%
N23	6/29/23	322	\$ 59.95	\$ 21.43	\$ 1.51	40.0%	0.0%	1.0%	9.0%	16.9%	19.9%	-5.6%	-3.9%	40.0%	6.8%	25.3%
Q23	7/28/23	342	\$ 55.70	\$ 19.92	\$ 1.36	38.9%	0.0%	0.8%	8.4%	16.8%	19.9%	-5.4%	-3.8%	38.9%	6.9%	25.7%
U23	8/30/23	365	\$ 49.20	\$ 15.62	\$ 1.04	33.4%	-0.1%	1.0%	5.4%	14.2%	34.2%	-5.2%	-3.7%	33.4%	7.0%	11.7%
V23	9/28/23	385	\$ 48.20	\$ 15.26	\$ 0.98	32.4%	0.0%	0.9%	5.4%	13.3%	22.0%	-4.9%	-3.4%	32.4%	6.3%	11.0%
X23	10/30/23	407	\$ 49.15	\$ 16.01	\$ 1.00	32.4%	0.0%	0.9%	6.4%	14.1%	22.5%	-4.0%	-2.9%	32.4%	6.5%	10.5%
Z23	11/29/23	428	\$ 56.10	\$ 21.88	\$ 1.34	38.0%	0.0%	1.2%	7.4%	18.8%	23.2%	-1.2%	-0.5%	38.0%	8.3%	15.6%
F24	12/28/23	448	\$ 79.40	\$ 51.66	\$ 3.15	63.0%	0.0%	2.0%	8.0%	27.0%	#N/A	-2.4%	-1.4%	63.0%	17.3%	21.2%
G24	1/30/24	469	\$ 74.90	\$ 49.14	\$ 2.93	62.0%	0.0%	2.0%	8.0%	31.1%	#N/A	-2.4%	-1.4%	62.0%	17.3%	21.3%
H24	2/28/24	489	\$ 49.85	\$ 21.39	\$ 1.22	39.0%	0.0%	1.0%	3.0%	20.5%	#N/A	-1.7%	-0.8%	39.0%	5.1%	8.3%

PJM Cal 1x Term Structure																
Contract	Option Expiry	Trade Days to Expiry	Futures Price	ATM Straddle	Break-even	ATM Implied Volatility				Realized Volatility		Implied Volatility and Skew				
						Vol	1D Chg	1Wk Chg	1Mo Chg	Avg Hist	30 day	10d Put	25d Put	ATM	25d Call	10d Call
Cal23	12/23/22	194	\$ 59.42	\$ 16.03	\$ 1.47	39.4%	0.2%	0.4%	5.9%	12.9%	24.4%	-4.2%	-3.2%	39.4%	4.3%	7.7%
Cal24	12/22/23	445	\$ 52.66	\$ 15.49	\$ 0.96	28.8%	0.2%	0.3%	5.0%	10.7%	21.9%	-2.5%	-1.7%	28.8%	4.3%	6.8%
Cal25	12/20/24	696	\$ 50.86	\$ 15.82	\$ 0.79	24.6%	0.1%	0.3%	2.7%	9.6%	17.5%	-1.6%	-1.1%	24.6%	4.0%	5.9%

Option Trade Recap																



NG Term Structure																
Contract	Option Expiry	Trade Days to Expiry	Futures Price	ATM Straddle	Break-even	ATM Implied Volatility				Realized Volatility		Implied Volatility and Skew				
						Vol	1D Chg	1Wk Chg	1Mo Chg	Avg Hist	30 day	10d Put	25d Put	ATM	25d Call	10d Call
J22	3/28/22	5	\$ 4.900	\$ 0.31	\$ 0.144	46.6%	1.1%	-2.2%	-8.5%	26.9%	51.4%	-1.0%	-2.0%	46.6%	3.7%	7.4%
K22	4/26/22	25	\$ 4.934	\$ 0.66	\$ 0.155	49.8%	-1.4%	-1.7%	0.5%	36.1%	49.3%	-2.7%	-2.4%	49.8%	4.5%	9.1%
M22	5/25/22	46	\$ 4.975	\$ 0.88	\$ 0.159	50.7%	-0.6%	-1.1%	3.4%	34.4%	48.0%	-2.7%	-2.6%	50.7%	4.8%	10.1%
N22	6/27/22	68	\$ 5.025	\$ 1.08	\$ 0.160	50.5%	-0.9%	0.1%	5.0%	32.7%	46.5%	-3.5%	-2.7%	50.5%	5.2%	10.1%
Q22	7/26/22	88	\$ 5.033	\$ 1.23	\$ 0.160	50.6%	-1.0%	0.3%	5.7%	32.0%	46.3%	-3.8%	-3.0%	50.6%	5.5%	10.4%
U22	8/26/22	111	\$ 5.014	\$ 1.37	\$ 0.160	50.8%	-1.1%	0.6%	5.8%	32.6%	46.3%	-3.4%	-2.9%	50.8%	5.8%	11.3%
V22	9/27/22	132	\$ 5.028	\$ 1.49	\$ 0.165	52.0%	0.3%	1.4%	7.2%	33.5%	46.1%	-3.2%	-2.7%	52.0%	6.1%	12.0%
X22	10/26/22	153	\$ 5.099	\$ 1.63	\$ 0.168	52.2%	0.5%	0.5%	5.8%	31.7%	44.6%	-4.3%	-3.4%	52.2%	7.2%	14.7%
Z22	11/25/22	174	\$ 5.237	\$ 1.90	\$ 0.186	56.5%	1.0%	2.0%	6.6%	32.2%	42.7%	-6.0%	-4.7%	56.5%	11.9%	22.3%
F23	12/27/22	195	\$ 5.329	\$ 2.25	\$ 0.200	59.7%	-1.3%	-0.1%	6.2%	35.5%	41.6%	-9.3%	-7.1%	59.7%	14.4%	26.6%
G23	1/26/23	215	\$ 5.151	\$ 2.36	\$ 0.212	65.3%	2.1%	2.2%	9.5%	37.7%	39.9%	-10.7%	-8.4%	65.3%	16.5%	28.4%
H23	2/23/23	234	\$ 4.669	\$ 2.20	\$ 0.188	64.0%	1.6%	1.6%	9.4%	37.0%	36.5%	-9.3%	-7.4%	64.0%	19.5%	32.4%
J23	3/28/23	257	\$ 3.688	\$ 1.09	\$ 0.088	37.7%	0.5%	0.5%	3.5%	26.8%	14.1%	1.2%	0.4%	37.7%	0.8%	3.7%
K23	4/25/23	276	\$ 3.593	\$ 1.02	\$ 0.078	34.5%	0.3%	0.9%	4.7%	26.1%	12.1%	1.2%	0.5%	34.5%	0.8%	3.5%
M23	5/25/23	298	\$ 3.629	\$ 1.02	\$ 0.075	32.9%	0.2%	1.4%	4.6%	25.6%	11.5%	1.2%	0.3%	32.9%	0.7%	3.3%
N23	6/27/23	320	\$ 3.673	\$ 1.04	\$ 0.075	32.2%	0.2%	1.5%	4.5%	24.8%	11.1%	1.3%	0.4%	32.2%	0.8%	3.3%
Q23	7/26/23	340	\$ 3.689	\$ 1.08	\$ 0.074	32.0%	0.2%	1.4%	4.3%	24.9%	10.9%	1.3%	0.5%	32.0%	0.9%	3.6%
U23	8/28/23	363	\$ 3.678	\$ 1.11	\$ 0.075	32.3%	0.2%	1.5%	4.4%	25.6%	10.5%	1.3%	0.4%	32.3%	0.8%	3.6%
V23	9/26/23	383	\$ 3.714	\$ 1.19	\$ 0.078	33.2%	0.3%	1.6%	4.7%	26.4%	10.4%	1.2%	0.4%	33.2%	0.8%	3.7%
X23	10/26/23	405	\$ 3.829	\$ 1.32	\$ 0.084	34.9%	0.3%	0.4%	4.3%	25.2%	10.0%	1.0%	0.1%	34.9%	2.4%	8.3%
Z23	11/27/23	426	\$ 4.047	\$ 1.53	\$ 0.095	37.1%	0.1%	-0.5%	1.7%	25.3%	9.8%	1.0%	0.1%	37.1%	2.6%	8.4%
F24	12/26/23	446	\$ 4.190	\$ 1.71	\$ 0.102	38.8%	0.0%	-2.9%	-1.9%	27.0%	10.1%	-3.2%	-2.9%	38.8%	6.3%	6.7%
G24	1/26/24	467	\$ 4.047	\$ 1.72	\$ 0.102	40.1%	0.4%	-2.8%	-2.3%	28.4%	11.6%	-3.3%	-2.9%	40.1%	6.1%	6.5%

