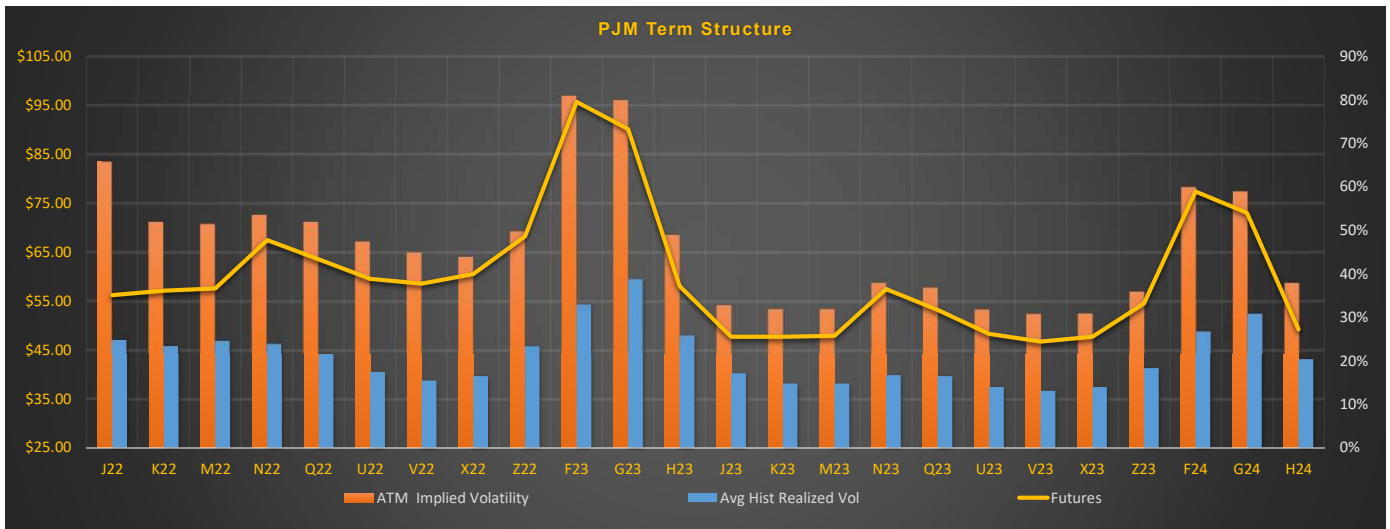


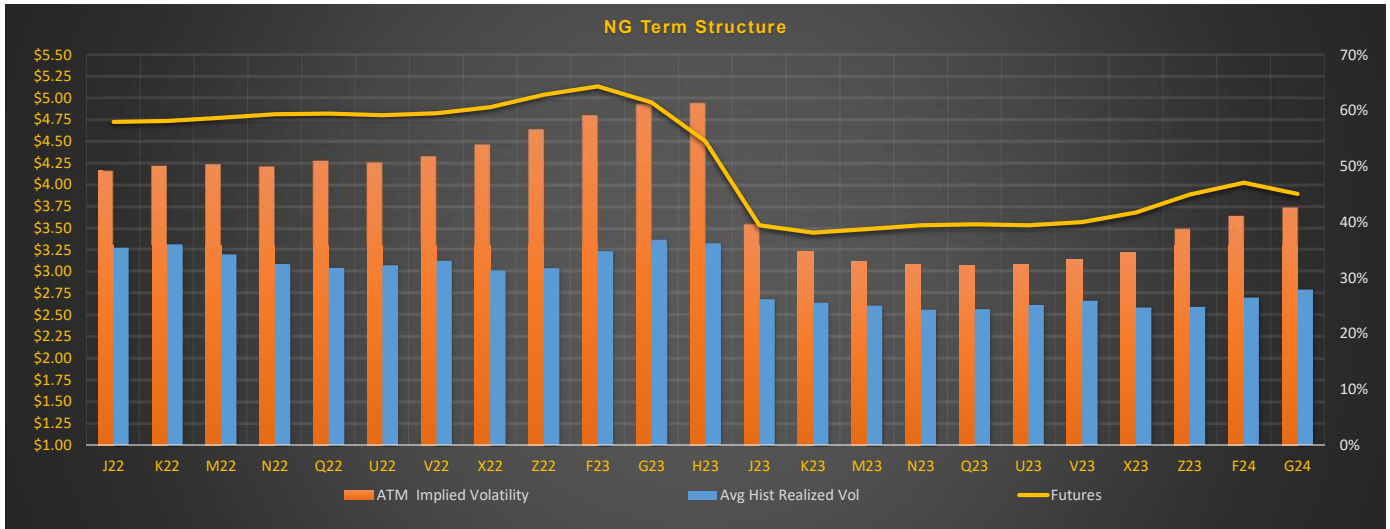
Date: 3/4/2022



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	19	\$ 56.20	\$ 8.00	\$ 2.33	65.8%	2.7%	4.2%	11.6%	24.9%	44.8%	-4.5%	-2.5%	65.8%	4.0%	9.1%
K22	4/28/22	39	\$ 57.10	\$ 9.26	\$ 1.87	52.0%	0.0%	0.0%	3.8%	23.5%	42.1%	-2.9%	-1.6%	52.0%	2.9%	7.3%
M22	5/27/22	60	\$ 57.55	\$ 11.37	\$ 1.87	51.5%	0.1%	3.8%	4.6%	24.7%	40.8%	-3.6%	-2.6%	51.5%	5.4%	8.6%
N22	6/29/22	82	\$ 67.40	\$ 16.32	\$ 2.28	53.6%	0.1%	1.8%	6.7%	24.0%	43.8%	-6.9%	-4.7%	53.6%	7.9%	21.8%
Q22	7/28/22	102	\$ 63.50	\$ 16.64	\$ 2.08	52.0%	0.1%	2.6%	6.8%	21.5%	41.7%	-4.5%	-2.4%	52.0%	7.9%	19.5%
U22	8/30/22	125	\$ 59.50	\$ 15.76	\$ 1.78	47.5%	0.0%	4.0%	9.3%	17.4%	40.4%	-4.6%	-2.5%	47.5%	6.3%	19.4%
V22	9/29/22	146	\$ 58.50	\$ 15.86	\$ 1.66	45.0%	0.1%	6.8%	6.9%	15.4%	37.2%	-3.4%	-2.0%	45.0%	6.7%	16.2%
X22	10/28/22	167	\$ 60.50	\$ 17.10	\$ 1.68	44.0%	0.0%	6.0%	6.0%	16.5%	37.8%	-2.0%	-1.3%	44.0%	3.7%	9.8%
Z22	11/29/22	188	\$ 68.20	\$ 23.12	\$ 2.14	49.8%	0.0%	6.3%	6.9%	23.5%	42.8%	-2.3%	-1.8%	49.8%	7.4%	20.7%
F23	12/29/22	209	\$ 95.70	\$ 54.80	\$ 4.88	80.9%	-0.2%	7.0%	10.3%	33.1%	51.6%	-13.9%	-10.0%	80.9%	45.9%	49.5%
G23	1/30/23	229	\$ 90.15	\$ 53.57	\$ 4.54	79.9%	-0.2%	5.9%	9.3%	38.9%	51.4%	-13.8%	-9.8%	79.9%	46.1%	49.5%
H23	2/27/23	248	\$ 58.05	\$ 22.33	\$ 1.79	49.0%	-0.1%	4.0%	6.0%	25.9%	31.4%	-4.6%	-2.7%	49.0%	9.6%	24.5%
J23	3/30/23	271	\$ 47.70	\$ 12.90	\$ 0.99	32.9%	-0.2%	2.8%	6.9%	17.1%	27.0%	-5.0%	-3.2%	32.9%	4.8%	9.1%
K23	4/27/23	290	\$ 47.65	\$ 12.95	\$ 0.96	32.0%	-0.1%	2.9%	8.0%	14.7%	35.5%	-3.8%	-2.4%	32.0%	4.3%	9.5%
M23	5/30/23	312	\$ 47.85	\$ 13.59	\$ 0.96	32.0%	0.0%	2.9%	6.0%	14.8%	35.8%	-4.0%	-2.6%	32.0%	4.9%	10.0%
N23	6/29/23	334	\$ 57.40	\$ 19.90	\$ 1.37	38.0%	0.1%	3.0%	9.0%	16.6%	24.1%	-6.9%	-4.4%	38.0%	6.7%	25.3%
Q23	7/28/23	354	\$ 53.20	\$ 18.38	\$ 1.24	36.9%	-0.1%	3.9%	8.4%	16.5%	24.1%	-7.3%	-5.6%	36.9%	6.5%	12.9%
U23	8/30/23	377	\$ 48.25	\$ 14.87	\$ 0.97	31.9%	-0.1%	2.9%	5.9%	14.0%	35.0%	-5.5%	-3.8%	31.9%	6.7%	12.0%
V23	9/28/23	397	\$ 46.70	\$ 14.32	\$ 0.91	30.9%	-0.2%	3.0%	6.9%	13.1%	24.1%	-4.9%	-3.4%	30.9%	6.2%	11.0%
X23	10/30/23	419	\$ 47.65	\$ 15.05	\$ 0.93	31.0%	0.0%	3.0%	8.0%	14.0%	25.2%	-0.7%	-0.5%	31.0%	6.7%	10.4%
Z23	11/29/23	440	\$ 54.45	\$ 20.47	\$ 1.23	36.0%	0.0%	5.5%	8.0%	18.3%	26.7%	-0.9%	-0.6%	36.0%	7.9%	15.5%
F24	12/28/23	460	\$ 77.35	\$ 48.71	\$ 2.92	60.0%	0.0%	3.0%	28.1%	26.8%	#N/A	-0.8%	-0.9%	60.0%	17.1%	40.0%
G24	1/30/24	481	\$ 73.00	\$ 46.24	\$ 2.71	59.0%	0.0%	3.0%	29.1%	30.9%	#N/A	-0.8%	-0.9%	59.0%	17.2%	40.0%
H24	2/28/24	501	\$ 49.15	\$ 20.75	\$ 1.18	38.0%	0.0%	2.0%	15.1%	20.4%	#N/A	-0.7%	-0.6%	38.0%	5.0%	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	206	\$ 57.70	\$ 15.85	\$ 1.41	38.9%	0.5%	2.5%	5.1%	12.6%	27.7%	-3.3%	-2.7%	38.9%	4.8%	7.8%
Cal24	12/22/23	457	\$ 51.90	\$ 15.37	\$ 0.93	28.3%	0.2%	2.5%	4.8%	10.6%	24.9%	-3.0%	-2.6%	28.3%	3.1%	5.6%
Cal25	12/20/24	708	\$ 49.96	\$ 15.25	\$ 0.75	23.8%	1.0%	1.5%	2.2%	9.5%	19.9%	-0.6%	-0.6%	23.8%	1.7%	3.4%

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	17	\$ 4.722	\$ 0.50	\$ 0.146	49.2%	0.7%	-9.7%	-8.0%	35.4%	42.8%	-0.8%	-2.1%	49.2%	3.9%	10.5%
K22	4/26/22	37	\$ 4.736	\$ 0.74	\$ 0.149	50.1%	0.0%	-3.2%	-2.3%	36.1%	42.2%	-3.9%	-3.6%	50.1%	5.0%	10.2%
M22	5/25/22	58	\$ 4.771	\$ 0.92	\$ 0.151	50.4%	-0.1%	-0.7%	-0.4%	34.2%	41.6%	-4.7%	-4.1%	50.4%	6.3%	11.3%
N22	6/27/22	80	\$ 4.814	\$ 1.09	\$ 0.152	50.0%	-1.2%	1.2%	1.6%	32.5%	40.9%	-5.3%	-3.9%	50.0%	6.4%	12.1%
Q22	7/26/22	100	\$ 4.821	\$ 1.25	\$ 0.155	51.0%	-0.5%	1.6%	3.7%	31.8%	40.6%	-5.6%	-4.5%	51.0%	6.2%	12.3%
U22	8/26/22	123	\$ 4.803	\$ 1.35	\$ 0.153	50.7%	-0.8%	1.4%	2.8%	32.3%	40.4%	-4.4%	-3.5%	50.7%	6.8%	12.9%
V22	9/27/22	144	\$ 4.823	\$ 1.52	\$ 0.157	51.8%	-0.9%	2.3%	4.4%	33.0%	39.9%	-4.2%	-3.5%	51.8%	6.9%	13.4%
X22	10/26/22	165	\$ 4.894	\$ 1.69	\$ 0.166	53.9%	1.5%	3.5%	5.6%	31.3%	38.7%	-5.1%	-4.0%	53.9%	9.4%	18.6%
Z22	11/25/22	186	\$ 5.039	\$ 1.95	\$ 0.180	56.6%	1.1%	4.6%	6.7%	31.7%	37.1%	-6.6%	-5.3%	56.6%	11.6%	24.0%
F23	12/27/22	207	\$ 5.132	\$ 2.19	\$ 0.191	59.1%	-3.4%	3.0%	3.2%	34.8%	36.1%	-7.9%	-6.3%	59.1%	14.1%	30.5%
G23	1/26/23	227	\$ 4.947	\$ 2.28	\$ 0.190	61.1%	1.9%	0.9%	2.7%	37.0%	35.4%	-8.8%	-6.8%	61.1%	17.0%	37.5%
H23	2/23/23	246	\$ 4.505	\$ 2.16	\$ 0.174	61.3%	1.9%	3.5%	4.4%	36.3%	36.1%	-8.4%	-6.4%	61.3%	18.6%	35.3%
J23	3/28/23	269	\$ 3.534	\$ 1.17	\$ 0.088	39.7%	2.5%	1.3%	7.5%	26.2%	26.9%	0.4%	-0.1%	39.7%	1.6%	4.6%
K23	4/25/23	288	\$ 3.450	\$ 1.03	\$ 0.075	34.7%	2.0%	0.7%	6.1%	25.5%	25.4%	0.4%	0.0%	34.7%	1.5%	4.3%
M23	5/25/23	310	\$ 3.487	\$ 1.01	\$ 0.072	32.9%	2.0%	0.5%	5.3%	25.0%	24.3%	0.5%	0.0%	32.9%	1.5%	4.3%
N23	6/27/23	332	\$ 3.531	\$ 1.05	\$ 0.072	32.3%	2.1%	0.5%	5.1%	24.3%	23.3%	0.5%	0.0%	32.3%	1.6%	4.4%
Q23	7/26/23	352	\$ 3.544	\$ 1.08	\$ 0.072	32.2%	2.1%	0.5%	5.1%	24.4%	22.6%	0.6%	0.0%	32.2%	1.6%	4.5%
U23	8/28/23	375	\$ 3.534	\$ 1.12	\$ 0.072	32.4%	2.1%	0.4%	5.0%	25.1%	22.1%	0.6%	0.0%	32.4%	1.6%	4.6%
V23	9/26/23	395	\$ 3.569	\$ 1.18	\$ 0.075	33.2%	2.3%	0.6%	4.6%	25.8%	21.7%	0.5%	-0.1%	33.2%	1.6%	4.6%
X23	10/26/23	417	\$ 3.681	\$ 1.30	\$ 0.080	34.6%	2.4%	0.4%	3.3%	24.7%	20.3%	1.5%	0.5%	34.6%	1.8%	5.8%
Z23	11/27/23	438	\$ 3.887	\$ 1.58	\$ 0.095	38.9%	2.9%	0.8%	3.8%	24.8%	18.3%	1.5%	0.5%	38.9%	2.1%	6.0%
F24	12/26/23	458	\$ 4.025	\$ 1.76	\$ 0.104	41.2%	2.2%	-1.0%	3.7%	26.4%	17.4%	-2.6%	-2.2%	41.2%	-1.1%	-18.9%
G24	1/26/24	479	\$ 3.895	\$ 1.82	\$ 0.105	42.7%	2.3%	-1.5%	3.2%	27.9%	17.0%	-2.5%	-2.2%	42.7%	8.5%	16.6%