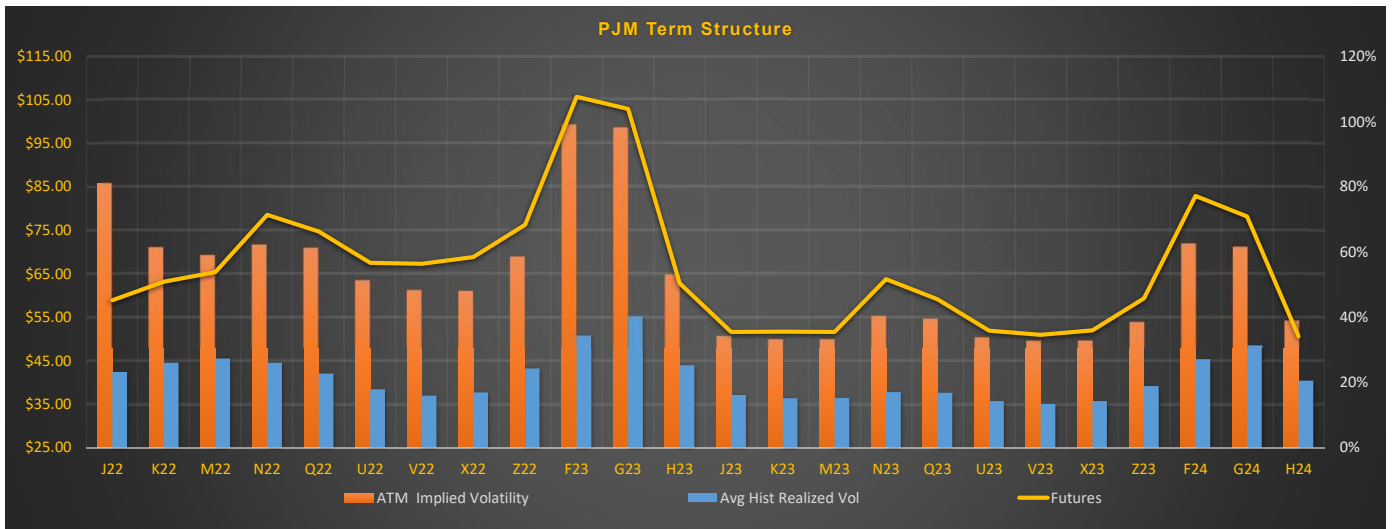


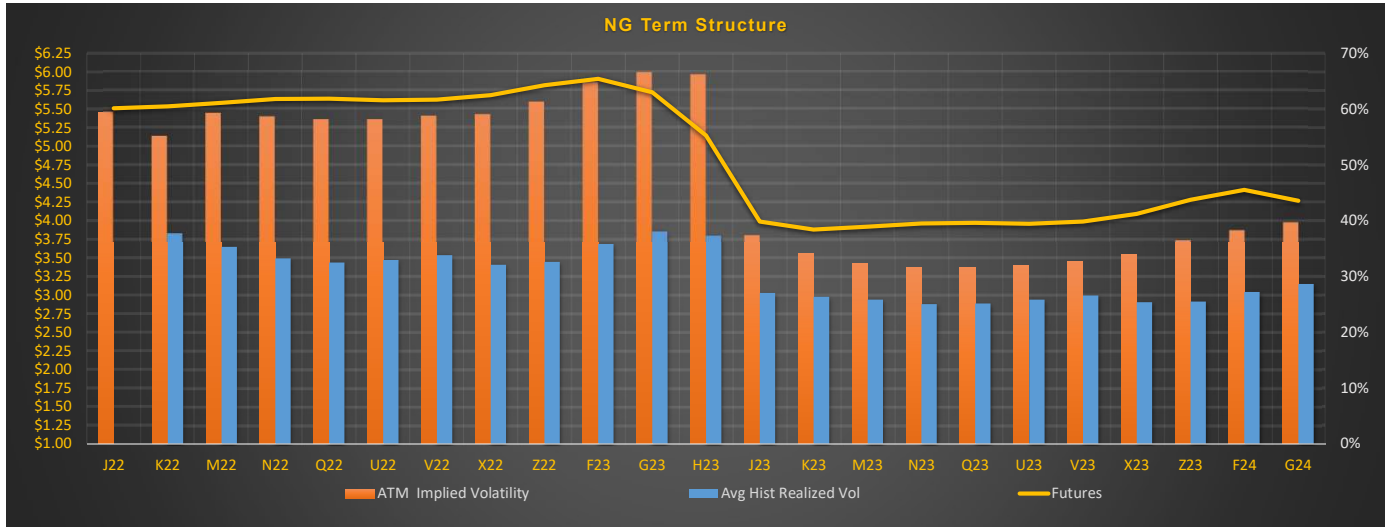
Date: 3/29/2022



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	2	\$ 58.85	\$ 2.81	\$ 3.00	81.0%	0.0%	14.6%	25.1%	23.2%	39.6%	-0.5%	-0.1%	81.0%	0.3%	0.7%
K22	4/28/22	22	\$ 63.15	\$ 8.99	\$ 2.44	61.4%	-0.1%	0.0%	12.8%	26.1%	37.3%	-4.2%	-2.2%	61.4%	6.6%	10.6%
M22	5/27/22	43	\$ 65.40	\$ 12.48	\$ 2.43	59.0%	0.0%	5.8%	11.3%	27.4%	36.8%	-4.1%	-2.1%	59.0%	8.0%	16.0%
N22	6/29/22	65	\$ 78.55	\$ 19.59	\$ 3.08	62.2%	-0.1%	1.6%	10.6%	26.0%	35.4%	-10.8%	-6.1%	62.2%	9.8%	25.5%
Q22	7/28/22	85	\$ 74.70	\$ 20.94	\$ 2.88	61.2%	-0.1%	1.7%	11.8%	22.7%	35.6%	-9.9%	-5.5%	61.2%	9.4%	20.1%
U22	8/30/22	108	\$ 67.50	\$ 17.90	\$ 2.18	51.3%	0.1%	0.6%	7.7%	18.0%	34.1%	-9.5%	-4.9%	51.3%	6.2%	20.1%
V22	9/29/22	129	\$ 67.30	\$ 18.42	\$ 2.05	48.3%	0.1%	2.7%	10.1%	15.9%	32.4%	-7.8%	-3.9%	48.3%	8.8%	17.2%
X22	10/28/22	150	\$ 68.80	\$ 20.10	\$ 2.08	48.0%	0.0%	2.5%	10.0%	16.9%	33.1%	-5.3%	-2.9%	48.0%	3.5%	9.0%
Z22	11/29/22	171	\$ 76.25	\$ 28.89	\$ 2.81	58.5%	0.0%	2.9%	15.0%	24.3%	38.9%	-10.2%	-4.0%	58.5%	5.1%	11.2%
F23	12/29/22	192	\$ 105.75	\$ 70.33	\$ 6.59	98.9%	-0.1%	7.5%	27.4%	34.4%	48.0%	-11.2%	-7.0%	98.9%	20.6%	35.0%
G23	1/30/23	212	\$ 102.90	\$ 71.54	\$ 6.35	98.0%	0.0%	6.7%	26.5%	40.3%	50.2%	-11.1%	-6.9%	98.0%	21.2%	35.0%
H23	2/27/23	231	\$ 62.80	\$ 25.28	\$ 2.10	53.1%	0.1%	1.1%	8.1%	25.3%	24.9%	-4.6%	-2.8%	53.1%	9.8%	24.6%
J23	3/30/23	254	\$ 51.60	\$ 14.04	\$ 1.11	34.2%	-0.1%	0.1%	4.1%	16.2%	24.2%	-5.1%	-3.2%	34.2%	4.7%	9.0%
K23	4/27/23	273	\$ 51.70	\$ 14.14	\$ 1.08	33.2%	-0.1%	0.1%	4.2%	15.2%	34.0%	-3.7%	-2.3%	33.2%	4.4%	9.5%
M23	5/30/23	295	\$ 51.60	\$ 14.72	\$ 1.08	33.2%	0.0%	0.1%	4.3%	15.3%	33.9%	-3.9%	-2.6%	33.2%	5.1%	10.0%
N23	6/29/23	317	\$ 63.75	\$ 22.79	\$ 1.62	40.4%	-0.1%	0.4%	5.5%	17.0%	21.6%	-5.4%	-3.7%	40.4%	6.9%	25.3%
Q23	7/28/23	337	\$ 59.10	\$ 21.30	\$ 1.47	39.5%	0.0%	0.6%	6.6%	16.8%	21.8%	-5.5%	-3.8%	39.5%	6.9%	25.6%
U23	8/30/23	360	\$ 51.90	\$ 16.60	\$ 1.11	33.8%	0.0%	0.4%	4.8%	14.3%	34.7%	-5.4%	-3.8%	33.8%	6.8%	11.6%
V23	9/28/23	380	\$ 50.90	\$ 16.24	\$ 1.05	32.8%	0.0%	0.4%	4.9%	13.4%	23.5%	-5.0%	-3.6%	32.8%	6.2%	10.9%
X23	10/30/23	402	\$ 51.95	\$ 17.03	\$ 1.07	32.8%	0.0%	0.4%	4.8%	14.3%	24.0%	-4.2%	-3.0%	32.8%	6.4%	10.4%
Z23	11/29/23	423	\$ 59.35	\$ 23.39	\$ 1.44	38.5%	0.0%	0.5%	8.0%	18.9%	24.2%	-1.2%	-0.5%	38.5%	8.5%	15.6%
F24	12/28/23	443	\$ 82.90	\$ 53.26	\$ 3.26	62.5%	0.0%	-0.5%	5.5%	27.1%	#N/A	-2.4%	-1.4%	62.5%	17.2%	21.1%
G24	1/30/24	464	\$ 78.20	\$ 50.54	\$ 3.03	61.5%	0.0%	-0.5%	5.5%	31.4%	#N/A	-2.5%	-1.4%	61.5%	17.3%	21.2%
H24	2/28/24	484	\$ 50.60	\$ 21.54	\$ 1.24	39.0%	0.0%	0.0%	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	189	\$ 63.38	\$ 18.54	\$ 1.71	42.8%	-0.1%	3.4%	8.4%	13.0%	25.9%	-5.6%	-4.7%	42.8%	3.4%	5.9%
Cal24	12/22/23	440	\$ 54.09	\$ 16.25	\$ 1.01	29.7%	0.0%	0.9%	3.9%	10.7%	23.3%	-2.5%	-1.8%	29.7%	4.3%	6.7%
Cal25	12/20/24	691	\$ 52.34	\$ 16.61	\$ 0.84	25.4%	0.1%	0.7%	3.9%	9.7%	18.7%	-1.7%	-1.1%	25.4%	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		\$ 5.508	\$ 0.14	\$ 0.206	59.4%	7.0%	12.8%	6.9%	#DIV/0!	51.4%	-1.5%	-2.6%	59.4%	5.8%	15.3%
K22	4/26/22	20	\$ 5.538	\$ 0.70	\$ 0.192	55.1%	-5.1%	5.3%	4.5%	37.7%	50.3%	-1.1%	-1.7%	55.1%	4.1%	7.6%
M22	5/25/22	41	\$ 5.582	\$ 1.06	\$ 0.208	59.2%	-3.2%	8.5%	9.1%	35.3%	49.2%	-5.7%	-4.4%	59.2%	4.2%	6.8%
N22	6/27/22	63	\$ 5.636	\$ 1.31	\$ 0.208	58.6%	-2.7%	8.1%	9.0%	33.2%	48.2%	-6.6%	-4.4%	58.6%	4.0%	7.2%
Q22	7/26/22	83	\$ 5.639	\$ 1.49	\$ 0.206	58.1%	-2.2%	7.5%	8.7%	32.5%	47.9%	-6.3%	-4.1%	58.1%	4.1%	7.8%
U22	8/26/22	106	\$ 5.616	\$ 1.67	\$ 0.206	58.1%	-1.9%	7.3%	8.5%	33.0%	47.9%	-5.9%	-4.0%	58.1%	4.4%	8.8%
V22	9/27/22	127	\$ 5.626	\$ 1.85	\$ 0.208	58.7%	-0.4%	6.7%	8.7%	33.8%	47.5%	-6.2%	-3.9%	58.7%	6.1%	12.2%
X22	10/26/22	148	\$ 5.686	\$ 2.03	\$ 0.211	59.0%	0.3%	6.8%	9.4%	32.1%	45.8%	-4.1%	-3.6%	59.0%	9.7%	18.2%
Z22	11/25/22	169	\$ 5.820	\$ 2.29	\$ 0.224	61.2%	1.3%	4.7%	10.7%	32.6%	43.8%	-7.4%	-6.0%	61.2%	14.1%	15.5%
F23	12/27/22	190	\$ 5.908	\$ 2.61	\$ 0.241	64.7%	0.8%	5.0%	7.0%	35.8%	42.8%	-10.4%	-7.9%	64.7%	16.4%	27.8%
G23	1/26/23	210	\$ 5.726	\$ 2.73	\$ 0.240	66.5%	-0.8%	1.2%	5.8%	38.1%	42.7%	-11.1%	-8.8%	66.5%	17.9%	19.8%
H23	2/23/23	229	\$ 5.144	\$ 2.54	\$ 0.214	66.1%	-0.8%	2.1%	7.5%	37.3%	37.6%	-9.2%	-7.3%	66.1%	19.2%	34.4%
J23	3/28/23	252	\$ 3.988	\$ 1.19	\$ 0.094	37.4%	-1.9%	-0.3%	0.8%	27.0%	24.3%	1.0%	0.1%	37.4%	1.8%	5.4%
K23	4/25/23	271	\$ 3.881	\$ 1.10	\$ 0.083	34.1%	-1.8%	-0.4%	2.1%	26.3%	23.1%	1.1%	0.1%	34.1%	1.7%	5.1%
M23	5/25/23	293	\$ 3.918	\$ 1.08	\$ 0.080	32.3%	-1.8%	-0.6%	1.9%	25.8%	22.6%	1.1%	0.1%	32.3%	1.7%	5.0%
N23	6/27/23	315	\$ 3.962	\$ 1.12	\$ 0.079	31.7%	-1.7%	-0.5%	2.0%	25.0%	22.1%	1.1%	0.1%	31.7%	1.6%	4.9%
Q23	7/26/23	335	\$ 3.972	\$ 1.15	\$ 0.079	31.6%	-1.7%	-0.4%	2.0%	25.1%	21.4%	1.1%	0.1%	31.6%	1.8%	5.2%
U23	8/28/23	358	\$ 3.956	\$ 1.20	\$ 0.079	31.9%	-1.7%	-0.4%	2.1%	25.8%	21.1%	1.1%	0.1%	31.9%	1.8%	5.1%
V23	9/26/23	378	\$ 3.987	\$ 1.27	\$ 0.082	32.7%	-1.8%	-0.5%	2.3%	26.6%	20.7%	1.2%	0.2%	32.7%	1.9%	5.3%
X23	10/26/23	400	\$ 4.088	\$ 1.39	\$ 0.088	34.0%	-1.7%	-0.9%	2.1%	25.4%	19.5%	0.5%	-0.1%	34.0%	3.3%	8.5%
Z23	11/27/23	421	\$ 4.282	\$ 1.60	\$ 0.098	36.5%	-1.1%	-0.6%	0.8%	25.5%	17.8%	0.5%	-0.2%	36.5%	3.5%	8.5%
F24	12/26/23	441	\$ 4.415	\$ 1.77	\$ 0.107	38.3%	-1.4%	-0.5%	-2.6%	27.2%	17.4%	-3.0%	-2.7%	38.3%	10.1%	11.6%
G24	1/26/24	462	\$ 4.267	\$ 1.82	\$ 0.107	39.7%	-1.7%	-0.4%	-3.2%	28.6%	18.3%	-3.1%	-2.8%	39.7%	8.6%	9.6%

