



In the Community to Serve®

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December 22, 2020

Oregon Public Utility Commission
Attn: Filing Center
P.O. Box 1088
Salem, OR 97308-1088

RE: LC 76 Cascade Natural Gas Corporation's Response Comments Addendum

Attention: Filing Center

Enclosed for filing is an Addendum to Cascade Natural Gas Corporation's (Cascade or Company) Response Comments filed on December 18 regarding LC 76. The filing includes a confidential spreadsheet that is compressed, encrypted, and password protected.

If there are any questions regarding this request, please contact me at (509) 734-4589 or via email at mark.sellers-vaughn@cngc.com or Brian Robertson at (509) 734-4546 or via email at Brian.Robertson@cngc.com.

Sincerely,
CASCADA NATURAL GAS CORPORATION

A handwritten signature in black ink that reads "Mark Sellers-Vaughn". The signature is written in a cursive, flowing style.

Mark Sellers-Vaughn
Manager, Supply Resource Planning

LC 76 CNGC Enclosed

CONFIDENTIAL LC 76 IRP LT Price Forecast 2019-11-20 USED IN 2020 OR IRP New Weights and ADM.zip
New Age Dampening Scratchpad.xlsx
New Weights Workbook 11-17-2020 Updated Smoothed.xlsx

	Source 1	Source 2	Source 3
Age	4	8	12
Undampened Weight	20	30	50
Decrementd Weights	16.66667	20	25
Scaled Final Weights	27.02703	32.43243	40.54054

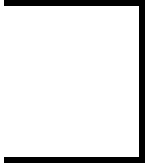
Step 1 - Age:	This represents how outdated each of the three sources is.
Step 2 - Undampened Weight:	This represents the calculated weights of the three sources based on their age.
Step 3 - Decrementd Weights:	This reduces the weight of each source proportionally to its age.
Step 4 - Scaled Final Weights:	The removed weight would be added back by scaling the decremented weights.

ee sources are. In this theoretical example, because Source 3 is 12 months old, the Age Dampening Mec
three sources based on their historical SMAPE.

rtional to how much older the data is relative to the other sources. In this theoretical example, Source 1
scaling the decremented values up to 100%. In the above example, each of these would be multiplied b

hanism is triggered.

. only loses 16.67% of its value (4/24) while Source 3 loses 50% of its value (12/24)
y 100/61.67 to scale it back to a total of 100% weight.



MONTH	YEAR	NYMEX Actual FOM
January	2007	\$ 5.8400
February	2007	\$ 6.9200
March	2007	\$ 7.5500
April	2007	\$ 7.5600
May	2007	\$ 7.5100
June	2007	\$ 7.5900
July	2007	\$ 6.9300
August	2007	\$ 6.1100
September	2007	\$ 5.4300
October	2007	\$ 6.4200
November	2007	\$ 7.2700
December	2007	\$ 7.2000
January	2008	\$ 7.1720
February	2008	\$ 7.9960
March	2008	\$ 8.9300
April	2008	\$ 9.5780
May	2008	\$ 11.2800
June	2008	\$ 11.9160
July	2008	\$ 13.1050
August	2008	\$ 9.2170
September	2008	\$ 8.3940
October	2008	\$ 7.4720
November	2008	\$ 6.4690
December	2008	\$ 6.8880
January	2009	\$ 6.1360
February	2009	\$ 4.4760
March	2009	\$ 4.0560
April	2009	\$ 3.6310
May	2009	\$ 3.3210
June	2009	\$ 3.5380
July	2009	\$ 3.9490
August	2009	\$ 3.3790
September	2009	\$ 2.8430
October	2009	\$ 3.7300
November	2009	\$ 4.4530
December	2009	\$ 4.4860
January	2010	\$ 5.8140
February	2010	\$ 5.2740
March	2010	\$ 4.8290
April	2010	\$ 3.8420
May	2010	\$ 4.2710
June	2010	\$ 4.1600
July	2010	\$ 4.7300
August	2010	\$ 4.7740
September	2010	\$ 3.8170
October	2010	\$ 3.8370
November	2010	\$ 3.2920
December	2010	\$ 4.2670
January	2011	\$ 4.2160
February	2011	\$ 4.3160
March	2011	\$ 3.7930
April	2011	\$ 4.2400
May	2011	\$ 4.3770
June	2011	\$ 4.3260
July	2011	\$ 4.3570
August	2011	\$ 4.3700
September	2011	\$ 3.8570
October	2011	\$ 3.7590
November	2011	\$ 3.5240
December	2011	\$ 3.3640
January	2012	\$ 3.0840
February	2012	\$ 2.6780
March	2012	\$ 2.4460
April	2012	\$ 2.1910
May	2012	\$ 2.0360
June	2012	\$ 2.4290
July	2012	\$ 2.7740
August	2012	\$ 3.0100
September	2012	\$ 2.6340
October	2012	\$ 3.0230
November	2012	\$ 3.4710
December	2012	\$ 3.6960
January	2013	\$ 3.3540
February	2013	\$ 3.2260
March	2013	\$ 3.4270
April	2013	\$ 3.9760
May	2013	\$ 4.1520
June	2013	\$ 4.1480
July	2013	\$ 3.7070
August	2013	\$ 3.4590
September	2013	\$ 3.6570
October	2013	\$ 3.4980
November	2013	\$ 3.4970
December	2013	\$ 3.8180
January	2014	\$ 4.4070
February	2014	\$ 5.5570
March	2014	\$ 4.8550
April	2014	\$ 4.5840
May	2014	\$ 4.7950
June	2014	\$ 4.6190
July	2014	\$ 4.4000
August	2014	\$ 3.8080
September	2014	\$ 3.9570
October	2014	\$ 3.9840
November	2014	\$ 3.7280
December	2014	\$ 4.2820

MONTH	YEAR	NYMEX Actual FOM
January	2008	\$ 7,1720
February	2008	\$ 7,9960
March	2008	\$ 8,9300
April	2008	\$ 9,5780
May	2008	\$ 11,2800
June	2008	\$ 11,9160
July	2008	\$ 13,1050
August	2008	\$ 9,2170
September	2008	\$ 8,3940
October	2008	\$ 7,4720
November	2008	\$ 6,4690
December	2008	\$ 6,8880
January	2009	\$ 6,1360
February	2009	\$ 4,4760
March	2009	\$ 4,0560
April	2009	\$ 3,6310
May	2009	\$ 3,3210
June	2009	\$ 3,5380
July	2009	\$ 3,9490
August	2009	\$ 3,3790
September	2009	\$ 2,8430
October	2009	\$ 3,7300
November	2009	\$ 4,4530
December	2009	\$ 4,4860
January	2010	\$ 5,8140
February	2010	\$ 5,2740
March	2010	\$ 4,8290
April	2010	\$ 3,8420
May	2010	\$ 4,2710
June	2010	\$ 4,1600
July	2010	\$ 4,7300
August	2010	\$ 4,7740
September	2010	\$ 3,8170
October	2010	\$ 3,8370
November	2010	\$ 3,2920
December	2010	\$ 4,2670
January	2011	\$ 4,2160
February	2011	\$ 4,3160
March	2011	\$ 3,7930
April	2011	\$ 4,2400
May	2011	\$ 4,3770
June	2011	\$ 4,3260
July	2011	\$ 4,3570
August	2011	\$ 4,3700
September	2011	\$ 3,8570
October	2011	\$ 3,7590
November	2011	\$ 3,5240
December	2011	\$ 3,3640
January	2012	\$ 3,0840
February	2012	\$ 2,6780
March	2012	\$ 2,4460
April	2012	\$ 2,1910
May	2012	\$ 2,0360
June	2012	\$ 2,4290
July	2012	\$ 2,7740
August	2012	\$ 3,0100
September	2012	\$ 2,6340
October	2012	\$ 3,0230
November	2012	\$ 3,4710
December	2012	\$ 3,6960
January	2013	\$ 3,3540
February	2013	\$ 3,2260
March	2013	\$ 3,4270
April	2013	\$ 3,9760
May	2013	\$ 4,1520
June	2013	\$ 4,1480
July	2013	\$ 3,7070
August	2013	\$ 3,4590
September	2013	\$ 3,6570
October	2013	\$ 3,4980
November	2013	\$ 3,4970
December	2013	\$ 3,8180
January	2014	\$ 4,4070
February	2014	\$ 5,5570
March	2014	\$ 4,8550
April	2014	\$ 4,5840
May	2014	\$ 4,7950
June	2014	\$ 4,6190
July	2014	\$ 4,4000
August	2014	\$ 3,8080
September	2014	\$ 3,9570
October	2014	\$ 3,9840
November	2014	\$ 3,7280
December	2014	\$ 4,2820

MONTH	YEAR	NYMEX Actual FOM
January	2009	\$ 6.1360
February	2009	\$ 4.4760
March	2009	\$ 4.0560
April	2009	\$ 3.6310
May	2009	\$ 3.3210
June	2009	\$ 3.5380
July	2009	\$ 3.9490
August	2009	\$ 3.3790
September	2009	\$ 2.8430
October	2009	\$ 3.7300
November	2009	\$ 4.4530
December	2009	\$ 4.4860
January	2010	\$ 5.8140
February	2010	\$ 5.2740
March	2010	\$ 4.8290
April	2010	\$ 3.8420
May	2010	\$ 4.2710
June	2010	\$ 4.1600
July	2010	\$ 4.7300
August	2010	\$ 4.7740
September	2010	\$ 3.8170
October	2010	\$ 3.8370
November	2010	\$ 3.2920
December	2010	\$ 4.2670
January	2011	\$ 4.2160
February	2011	\$ 4.3160
March	2011	\$ 3.7930
April	2011	\$ 4.2400
May	2011	\$ 4.3770
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December	2011	\$ 3.3640
January	2012	\$ 3.0840
February	2012	\$ 2.6780
March	2012	\$ 2.4460
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October	2014	\$ 3.9840
November	2014	\$ 3.7280
December	2014	\$ 4.2820

MONTH	YEAR	NYMEX Actual FOM
January	2010	\$ 5.8140
February	2010	\$ 5.2740
March	2010	\$ 4.8290
April	2010	\$ 3.8420
May	2010	\$ 4.2710
June	2010	\$ 4.1600
July	2010	\$ 4.7300
August	2010	\$ 4.7740
September	2010	\$ 3.8170
October	2010	\$ 3.8370
November	2010	\$ 3.2920
December	2010	\$ 4.2670
January	2011	\$ 4.2160
February	2011	\$ 4.3160
March	2011	\$ 3.7930
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MONTH	YEAR	NYMEX Actual FOM
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MONTH	YEAR	NYMEX Actual FOM
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MONTH	YEAR	NYMEX Actual FOM
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MONTH	YEAR	NYMEX Actual FOM
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MONTH	YEAR	NYMEX Actual FOM
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MONTH	YEAR	NYMEX Actual FOM
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	NYMEX Futures	NWPCC	Wood Mac
T+1	0.125262391	0.248765063	0.113900372
T+2	0.189920691	0.282678254	0.218818697
T+3	0.219352753	0.25519351	0.228304096
T+4	0.21213785	0.317768995	0.153314917
T+5	0.226148666	0.260686441	0.142185294
T+6	0.208054063	0.268428435	0.142546061
T+7	0.210758045	0.175938545	0.140129326
T+8	0.187596308	0.198651195	0.140261184
T+9	0.226714843	0.183277452	0.080893433
T+10	0.191251214	0.224368638	0.098218197
T+11	0.241309229	0.179077665	0.151206892
T+12	0.270339153	0.068157167	0.156628515
T+13	0.319256692	0.167949065	0.192219872
T+14	0.35754573	0.066528721	0.197989716
T+15	0.376552705	0.160544523	0.245595952
T+16	0.356045361	0.099869064	0.20688594
T+17	0.357444681	0.144736293	0.191172325
T+18	0.346828271	0.160903417	0.174916634
T+19	0.328381294	0.397803863	0.196001571
T+20	0.299130787	0.300616292	0.177519544
T+21	0.304656111	0.22555078	0.155542636
T+22	0.303223857	0.187420718	0.147008299
T+23	0.344255043	0.260326141	0.204927092
T+24	0.363144325	0.232457192	0.252826424
T+25	0.37476111	0.269527268	0.239307098
T+26	0.4509578	0.470440765	0.246330992
T+27	0.489982287	0.57150822	0.304955883
T+28	0.42478713	0.633742018	0.281438748
T+29	0.418455432	0.834709245	0.281440567
T+30	0.399903865	0.696907376	0.274684873
T+31	0.393214562	0.540868753	0.275203967
T+32	0.476571397	0.589321764	0.378938566
T+33	0.477445352	0.772311913	0.300032984
T+34	0.457371113	0.716402261	0.297848244
T+35	0.437332649	0.425864299	0.237137103
T+36	0.511439033	0.474570173	0.385153688
T+37	0.55830599	0.333680616	0.425401415
T+38	0.601500983	0.328224904	0.521044851
T+39	0.624111585	0.268306125	0.497815826
T+40	0.60608955	0.349724768	0.54606501
T+41	0.566175115	0.35052004	0.477082783
T+42	0.569909039	0.430280567	0.515713411
T+43	0.628224691	0.337001363	0.627410871

T+44	0.582465926	0.343731132	0.507574754
T+45	0.507721939	0.426020256	0.265457069
T+46	0.576506872	0.449557151	0.40381725
T+47	0.479593537	0.618479534	0.179307543
T+48	0.466181512	0.432842794	0.345274368
T+49	0.528649013	0.347807349	0.278681263
T+50	0.542611256	0.130040265	0.279997947
T+51	0.633046546	0.301968301	0.368192113
T+52	0.534368591	0.379490493	0.330232044
T+53	0.50626765	0.315864638	0.298291344
T+54	0.512385878	0.352340765	0.312271152
T+55	0.523864897	0.269823926	0.369493946
T+56	0.542114154	0.215838451	0.344097761
T+57	0.489358868	0.390579442	0.214863183
T+58	0.513855292	0.390555101	0.252706998



EIA	Inverse NYMEX Futures	Inverse NWPCC
0.176259552	7.983242128	4.019857079
0.204011383	5.26535573	3.537590839
0.218358718	4.558866879	3.918594945
0.23924097	4.713915977	3.146940125
0.254097458	4.421869987	3.836026126
0.246556126	4.806443029	3.725387736
0.228510348	4.744777355	5.683802836
0.201293834	5.330595312	5.033949082
0.226246065	4.41082722	5.456208552
0.19534133	5.228724987	4.456950889
0.184751518	4.144060315	5.584169303
0.213222293	3.699057234	14.67197128
0.270628966	3.132275772	5.954186159
0.322973793	2.796845039	15.03110204
0.352203268	2.65567074	6.228801733
0.362228604	2.808630896	10.01311073
0.414537247	2.797635699	6.909117121
0.414219036	2.883271298	6.214908417
0.372775341	3.045240449	2.513801633
0.336561413	3.343019321	3.326499682
0.34359956	3.282389436	4.433591408
0.325866599	3.29789354	5.335589426
0.308371989	2.904823097	3.841335315
0.321146782	2.753726081	4.301867339
0.275548806	2.668366522	3.710199742
0.399948402	2.217502389	2.125666131
0.42069375	2.040890103	1.749756111
0.396566655	2.354120285	1.577929145
0.433758024	2.389740752	1.198021953
0.404884121	2.500600986	1.434910915
0.392902446	2.543140813	1.848877375
0.466566752	2.098321481	1.69686589
0.467267299	2.094480544	1.294813641
0.444046209	2.186408305	1.395863825
0.406587255	2.286588941	2.348165843
0.436225441	1.955267266	2.107169932
0.493793764	1.791132493	2.996877707
0.550606173	1.662507674	3.046691425
0.555976165	1.602277579	3.727085993
0.554689469	1.649921205	2.859391421
0.552983927	1.766237994	2.852903928
0.53901267	1.754665975	2.324064984
0.57459621	1.591787165	2.967347046

0.520266795	1.716838625	2.909250598
0.448699799	1.969582016	2.347306228
0.526163039	1.734584702	2.224411286
0.436192684	2.085098991	1.616868375
0.326583387	2.145087212	2.310307611
0.372137283	1.891614238	2.875154889
0.358495932	1.842940021	7.68992588
0.482774636	1.579662674	3.311605872
0.380931029	1.871367472	2.635112123
0.391457931	1.975239775	3.165913119
0.386082726	1.951654102	2.838161515
0.412866424	1.908889116	3.706120567
0.441319446	1.84462994	4.633094768
0.423652162	2.043490097	2.560298605
0.404689183	1.946073175	2.560458173

Inverse Wood Mac	Inverse EIA	Sum of Inverse Errors	Nymex Futures Weight
8.779602566	5.6734514	26.45615317	0.301753701
4.569993404	4.901687274	18.27462725	0.288123837
4.380122908	4.579620223	17.43720495	0.261444818
6.522522537	4.179886072	18.56326471	0.253937874
7.03307613	3.93549785	19.22647009	0.229988654
7.015276257	4.055871636	19.60297866	0.245189423
7.136264992	4.376169432	21.94101462	0.216251502
7.129556247	4.967862046	22.46196269	0.237316542
12.36194292	4.419966385	26.64894507	0.165516016
10.18141267	5.119244354	24.9863329	0.2092634
6.613455143	5.412675405	21.75436017	0.190493321
6.384533504	4.689941113	29.44550313	0.125623842
5.202375756	3.695095963	17.98393365	0.174170781
5.050767373	3.09622645	25.97494091	0.107674741
4.071728356	2.839269511	15.79547034	0.168128627
4.833581239	2.760687557	20.41601043	0.137570017
5.230882655	2.412328462	17.34996394	0.16124735
5.717009158	2.414181658	17.22937053	0.167346294
5.101999934	2.682580871	13.34362289	0.228216915
5.633182564	2.971225933	15.2739275	0.21887097
6.42910538	2.910364614	17.05545084	0.192453982
6.802337078	3.06874041	18.50456045	0.178220582
4.879784268	3.242836687	14.86877937	0.195363925
3.955282771	3.113840947	14.12471714	0.194957963
4.178731054	3.629121151	14.18641847	0.188093036
4.05957851	2.500322529	10.90306956	0.203383311
3.279162842	2.377026041	9.446835097	0.216039561
3.553171005	2.521644188	10.00686462	0.235250538
3.553148039	2.305432857	9.446343601	0.252980503
3.640535391	2.469842474	10.04588977	0.24891782
3.633668553	2.545161043	10.57084778	0.240580592
2.638950186	2.143316032	8.577453588	0.244632216
3.332966884	2.140102682	8.862363752	0.236334301
3.35741446	2.252017877	9.191704467	0.237867559
4.216969794	2.459496672	11.31122125	0.20215226
2.596366154	2.29239266	8.951196012	0.218436426
2.350720906	2.025136958	9.163868064	0.195455945
1.919220577	1.816180148	8.444599824	0.196872286
2.00877503	1.798638256	9.136776858	0.175365734
1.831283786	1.802810501	8.143406913	0.202608223
2.096072286	1.808370824	8.523585032	0.207217736
1.939061461	1.85524396	7.87303638	0.222870299
1.593851885	1.740352585	7.893338681	0.201662089

1.970153148	1.922090759	8.518333131	0.201546312
3.767087478	2.228661573	10.3126373	0.190987229
2.476367715	1.900551588	8.335915291	0.208085692
5.577010219	2.292564817	11.5715424	0.180191967
2.89624743	3.062005113	10.41364737	0.205988079
3.588328786	2.687180365	11.04227828	0.171306518
3.571454757	2.789431933	15.89375259	0.115953738
2.715973438	2.071359855	9.678601839	0.163211867
3.02817373	2.625147138	10.15980046	0.184193329
3.352427146	2.554552919	11.04813296	0.178784939
3.202345118	2.590118474	10.58227921	0.184426631
2.706404287	2.422090882	10.74350485	0.177678434
2.906150849	2.265932327	11.64980788	0.158339945
4.654124482	2.360426994	11.61834018	0.175884857
3.957151991	2.471032194	10.93471553	0.177971998

NWPC Weight	Wood Mac Weight	EIA Weight
0.151944126	0.331854843	0.21444733
0.193579371	0.250073139	0.26822365
0.224726093	0.251194094	0.26263499
0.169525144	0.35136721	0.22516977
0.199517962	0.365801736	0.20469165
0.190041922	0.357867872	0.20690078
0.259049225	0.325247721	0.19945155
0.224109939	0.317405756	0.22116776
0.204743885	0.463881136	0.16585896
0.178375551	0.407479269	0.20488178
0.256691958	0.30400596	0.24880876
0.498275448	0.216825417	0.15927529
0.331083637	0.289279079	0.2054665
0.578677045	0.194447694	0.11920052
0.39434101	0.257778228	0.17975213
0.490453841	0.236754446	0.1352217
0.398220835	0.301492422	0.13903939
0.36071593	0.331817645	0.14012013
0.188389739	0.382354925	0.20103842
0.217789412	0.368810351	0.19452927
0.259951581	0.376953118	0.17064132
0.28833916	0.367603278	0.16583698
0.25834907	0.328189971	0.21809703
0.304563079	0.280025627	0.22045333
0.261531813	0.294558564	0.25581659
0.194960338	0.372333542	0.22932281
0.185221409	0.347117612	0.25162142
0.15768467	0.355073356	0.25199144
0.126823881	0.376140038	0.24405558
0.142835622	0.362390537	0.24585602
0.174903415	0.343744289	0.2407717
0.19782863	0.307661261	0.24987789
0.146102516	0.37608103	0.24148215
0.15186126	0.36526571	0.24500547
0.207596138	0.372812953	0.21743865
0.235406523	0.290058016	0.25609903
0.327031957	0.256520597	0.2209915
0.360785767	0.227271939	0.21507001
0.407921311	0.21985598	0.19685698
0.351129626	0.224879317	0.22138283
0.334707041	0.245914398	0.21216082
0.295192969	0.246291439	0.23564529
0.375930537	0.201923666	0.22048371

0.341528155	0.231283881	0.22564165
0.227614543	0.365288468	0.21610976
0.266846676	0.297072082	0.22799555
0.139727991	0.481959105	0.19812094
0.221853836	0.278120367	0.29403772
0.260376964	0.32496272	0.2433538
0.483833244	0.224708088	0.17550493
0.342157465	0.2806163	0.21401437
0.259366523	0.298054449	0.2583857
0.286556392	0.303438342	0.23122033
0.268199455	0.302613932	0.24475998
0.344963829	0.251910743	0.22544699
0.397697096	0.249459122	0.19450384
0.220366986	0.400584284	0.20316387
0.234158645	0.361888883	0.22598047

	Nymex Futures Weight	NWPCC Weight	Wood Mac Weight
T+1	0.301753701	0.151944126	0.331854843
T+2	0.288123837	0.193579371	0.250073139
T+3	0.261444818	0.224726093	0.251194094
T+4	0.253937874	0.169525144	0.35136721
T+5	0.229988654	0.199517962	0.365801736
T+6	0.245189423	0.190041922	0.357867872
T+7	0.216251502	0.259049225	0.325247721
T+8	0.237316542	0.224109939	0.317405756
T+9	0.165516016	0.204743885	0.463881136
T+10	0.2092634	0.178375551	0.407479269
T+11	0.190493321	0.256691958	0.30400596
T+12	0.125623842	0.498275448	0.216825417
T+13	0.174170781	0.331083637	0.289279079
T+14	0.107674741	0.578677045	0.194447694
T+15	0.168128627	0.39434101	0.257778228
T+16	0.137570017	0.490453841	0.236754446
T+17	0.16124735	0.398220835	0.301492422
T+18	0.167346294	0.36071593	0.331817645
T+19	0.228216915	0.188389739	0.382354925
T+20	0.21887097	0.217789412	0.368810351
T+21	0.192453982	0.259951581	0.376953118
T+22	0.178220582	0.28833916	0.367603278
T+23	0.195363925	0.25834907	0.328189971
T+24	0.194957963	0.304563079	0.280025627
T+25	0.188093036	0.261531813	0.294558564
T+26	0.203383311	0.194960338	0.372333542
T+27	0.216039561	0.185221409	0.347117612
T+28	0.235250538	0.15768467	0.355073356
T+29	0.252980503	0.126823881	0.376140038
T+30	0.24891782	0.142835622	0.362390537
T+31	0.240580592	0.174903415	0.343744289
T+32	0.244632216	0.19782863	0.307661261
T+33	0.236334301	0.146102516	0.37608103
T+34	0.237867559	0.15186126	0.36526571
T+35	0.20215226	0.207596138	0.372812953
T+36	0.218436426	0.235406523	0.290058016
T+37	0.195455945	0.327031957	0.256520597
T+38	0.196872286	0.360785767	0.227271939
T+39	0.175365734	0.407921311	0.21985598
T+40	0.202608223	0.351129626	0.224879317
T+41	0.207217736	0.334707041	0.245914398
T+42	0.222870299	0.295192969	0.246291439
T+43	0.201662089	0.375930537	0.201923666

T+44	0.201546312	0.341528155	0.231283881
T+45	0.190987229	0.227614543	0.365288468
T+46	0.208085692	0.266846676	0.297072082
T+47	0.180191967	0.139727991	0.481959105
T+48	0.205988079	0.221853836	0.278120367
T+49	0.171306518	0.260376964	0.32496272
T+50	0.115953738	0.483833244	0.224708088
T+51	0.163211867	0.342157465	0.2806163
T+52	0.184193329	0.259366523	0.298054449
T+53	0.178784939	0.286556392	0.303438342
T+54	0.184426631	0.268199455	0.302613932
T+55	0.177678434	0.344963829	0.251910743
T+56	0.158339945	0.397697096	0.249459122
T+57	0.175884857	0.220366986	0.400584284
T+58	0.177971998	0.234158645	0.361888883

EIA Weight

0.21444733
0.268223653
0.262634994
0.225169771
0.204691648
0.206900783
0.199451553
0.221167763
0.165858963
0.20488178
0.248808761
0.159275292
0.205466503
0.11920052
0.179752135
0.135221696
0.139039393
0.140120131
0.201038421
0.194529268
0.170641318
0.165836979
0.218097035
0.220453331
0.255816587
0.229322808
0.251621418
0.251991436
0.244055579
0.24585602
0.240771705
0.249877893
0.241482153
0.24500547
0.217438649
0.256099035
0.220991501
0.215070008
0.196856975
0.221382834
0.212160824
0.235645292
0.220483709

0.225641652
0.21610976
0.22799555
0.198120936
0.294037719
0.243353799
0.17550493
0.214014368
0.258385698
0.231220327
0.244759983
0.225446995
0.194503836
0.203163873
0.225980474

	Nymex Futures Weight	NWPCC Weight	Wood Mac Weight
T+1	0.287048643	0.142926812	0.320240332
T+2	0.273616288	0.166429355	0.319336796
T+3	0.260989526	0.188418149	0.318530665
T+4	0.249197097	0.208827029	0.317839243
T+5	0.23826774	0.227589828	0.317279833
T+6	0.228230198	0.244640378	0.316869742
T+7	0.219113209	0.259912514	0.316626272
T+8	0.210945514	0.273340067	0.316566729
T+9	0.203808917	0.284713928	0.316745954
T+10	0.197699412	0.294028366	0.317166229
T+11	0.192517021	0.301522286	0.317766021
T+12	0.188161769	0.307434596	0.318483797
T+13	0.184533679	0.312004199	0.319258024
T+14	0.181532775	0.315470003	0.320027169
T+15	0.179059082	0.318070912	0.320729698
T+16	0.177871605	0.318363025	0.321577606
T+17	0.178493366	0.315293759	0.322759839
T+18	0.18047041	0.309688996	0.324180298
T+19	0.183348782	0.302374619	0.325742882
T+20	0.186674527	0.29417651	0.327351492
T+21	0.189993691	0.285920554	0.328910027
T+22	0.192852317	0.278432632	0.330322386
T+23	0.196220364	0.268899639	0.332433723
T+24	0.200961666	0.25525908	0.335709741
T+25	0.206463087	0.239462753	0.339485162
T+26	0.212111488	0.223462457	0.343094709
T+27	0.21729373	0.209209991	0.345873105
T+28	0.221396677	0.198657154	0.347155072
T+29	0.223807191	0.193755745	0.346275334
T+30	0.224779966	0.194844521	0.342627521
T+31	0.225050005	0.200191691	0.336565578
T+32	0.224724627	0.208643229	0.3288647
T+33	0.223911151	0.219045107	0.320300084
T+34	0.222716899	0.2302433	0.311646925
T+35	0.22124919	0.241083781	0.303680419
T+36	0.219615344	0.250412524	0.297175761
T+37	0.217922681	0.257075503	0.292908148
T+38	0.215836357	0.26245952	0.290064339
T+39	0.213100782	0.268463917	0.287387962
T+40	0.209942156	0.274703479	0.284989509
T+41	0.206586678	0.280792989	0.282979473
T+42	0.20326055	0.286347233	0.281468347
T+43	0.20018997	0.290980995	0.280566625

T+44	0.19760114	0.294309059	0.280384799
T+45	0.195251356	0.29677749	0.280788087
T+46	0.192775045	0.299010869	0.281605097
T+47	0.1902141	0.300891756	0.282891409
T+48	0.187610416	0.302302708	0.284702602
T+49	0.185005886	0.303126286	0.287094257
T+50	0.182442403	0.303245047	0.290121951
T+51	0.179961861	0.302541551	0.293841264
T+52	0.177563561	0.301048996	0.29822699
T+53	0.175211124	0.298898042	0.303208481
T+54	0.172892923	0.296117441	0.308773156
T+55	0.17059733	0.292735946	0.314908435
T+56	0.168312719	0.288782308	0.321601736
T+57	0.166027462	0.28428528	0.328840478
T+58	0.163729934	0.279273613	0.336612081

EIA Weight

0.249784212
0.24061756
0.23206166
0.224136631
0.216862598
0.210259682
0.204348005
0.199147689
0.194731201
0.191105994
0.188194672
0.185919839
0.184204098
0.182970053
0.182140308
0.182187764
0.183453036
0.185660296
0.188533717
0.19179747
0.195175728
0.198392665
0.202446273
0.208069512
0.214588998
0.221331346
0.227623174
0.232791096
0.23616173
0.237747991
0.238192726
0.237767445
0.236743658
0.235392876
0.23398661
0.232796371
0.232093668
0.231639784
0.231047339
0.230364857
0.229640859
0.228923869
0.22826241

0.227705002
0.227183067
0.226608989
0.226002735
0.225384273
0.224773572
0.224190599
0.223655324
0.223160453
0.222682353
0.222216479
0.221758289
0.221303237
0.220846779
0.220384372