

2020 Preliminary Weather Normalized Peak MW Update for the 2021 ICAP Forecast

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November 23, 2020

Agenda

- **Summary of updates since the November 9 LFTF Meeting**
- **2020 Preliminary Weather Normalized Peak Load**
- **Locality Non-Coincident Peak (NCP) to Coincident Peak (CP) ratios**
- **2020 Economic Data**

Updates since November 9 LFTF Meeting

- Demand response impacts for the coincident peak hour (7/27/2020, Hour Beginning 17) have been updated. There are updated impacts for Con Ed, LIPA, National Grid, NYSEG, O&R, and RG&E. The change in demand response impacts for the NYCA coincident peak hour totals -27 MW.
- There have been minor updates to the coincident peak weather adjustments for LIPA and NYPA.
- There are resulting changes to the weather normalized coincident peaks for LIPA, National Grid, NYPA, and NYSEG.
- Municipal load and self-generation values have been updated.
- BTM:NG 1+WNF ratios are placeholders and will be updated for the next LFTF.
- There have been no updates to the NCP to CP ratios or to the economic data.

2020 Preliminary Weather Normalized Peak Load

2020 Load Reconciliation		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
7/27/2020, Hour Beginning 5 PM		NYISO DSS Actual MW Data					Transmission District Load Data					
V3 - 11/17/20		Actual Load	BPS Losses	Muni Gen	Load + Losses	Percent Losses	Actual Load Less Losses	Actual Losses	Actual Load With Losses	*Weather Adjustments	Demand Response	TOs' W/N MW With DR
Consolidated Edison												
Con-Ed LSE Load							11,250.2	147.2	11,397.4	597.5	115.2	12,110.1
Transmission District Load Served							11,250.2	147.2	11,397.4	597.5	115.2	12,110.1
Deduction for BTM:NG							0.0	0.0	0.0			
Transmission District Total Load		11,250.2	147.2		11,397.4	1.3%	11,250.2	147.2	11,397.4			
Central Hudson												
Central Hudson LSE Load							1,066.9	26.0	1,092.9	15.0	0.0	1,107.9
Transmission District Load Served							1,066.9	26.0	1,092.9	15.0	0.0	1,107.9
Deduction for BTM:NG							0.0	0.0	0.0			
Transmission District Total Load		1,066.9	26.0		1,092.9	2.4%	1,066.9	26.0	1,092.9			
Long Island Power Authority												
LIPA LSE Load							5,076.0	63.0	5,139.0	-136.7	12.5	5,014.8
NYPA Load & Greenport Load							106.4	1.3	107.7	-2.9	0.0	104.8
Freeport & Rockville Centre Load							108.9	1.4	110.3	-2.9	0.0	107.4
Transmission District Load Served		5.6					5,291.3	65.7	5,357.0	-142.5	12.5	5,227.0
Deduction for BTM:NG							0.0	0.0	0.0			
Transmission District Total Load		5,278.1	65.7	5.6	5,349.4	1.2%	5,291.3	65.7	5,357.0			
National Grid												
National Grid LSE							6,054.4	322.1	6,376.5	34.3	214.6	6,625.4
NYPA Load							35.8	1.9	37.7	0.2	0.0	37.9
NYMPA Load							268.0	14.3	282.3	1.5	0.0	283.8
Jamestown Load							61.7	3.3	65.0	0.3	0.0	65.3
Green Island Load							4.6	0.2	4.8	0.0	0.0	4.8
Transmission District Load Served		38.4					6,424.5	341.8	6,766.3	36.3	214.6	7,017.2
Deduction for BTM:NG							0.0	0.0	0.0			
Transmission District Total Load		6,386.1	341.8	38.40	6,766.3	5.1%	6,386.1	341.8	6,766.3			
Totals		29,940.8	657.0	44.0	30,641.8	2.1%	29,992.4	657.0	30,649.4	662.6	428.8	31,740.8

2020 Load Reconciliation		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
7/27/2020, Hour Beginning 5 PM		NYISO DSS Actual MW Data					Transmission District Load Data					
V3 - 11/17/20		Actual Load	BPS Losses	Muni Gen	Load + Losses	Percent Losses	Actual Load Less Losses	Actual Losses	Actual Load With Losses	*Weather Adjustments	Demand Response	TO's W/N MW With DR
New York Power Authority												
NYPA LSE Load							347.9	3.9	351.8	-1.3	0.0	350.5
NYMPA Load							51.6	0.6	52.2	0.0	0.0	52.2
Transmission District Load Served												
Deduction for BTM:NG							0.0	0.0	0.0			
Transmission District Total Load		399.5	4.5		404.0	1.1%	399.5	4.5	404.0	-1.3	0.0	402.7
New York State Electric & Gas												
NYSEGLSE Load							3,010.8	47.6	3,058.4	-20.2	65.5	3,103.7
NYPA Load							48.5	0.8	49.3	-0.3	0.0	49.0
NYMPA Load							67.5	1.1	68.6	-0.5	0.0	68.1
Transmission District Load Served												
Deduction for BTM:NG							0.0	0.0	0.0			
Transmission District Total Load		3,126.8	49.5		3,176.3	1.6%	3,126.8	49.5	3,176.3	-21.0	65.5	3,220.8
Orange & Rockland Utilities												
O&R LSE Load							1,030.4	7.8	1,038.2	35.2	12.0	1,085.4
Transmission District Load Served												
Deduction for BTM:NG							0.0	0.0	0.0			
Transmission District Total Load		1,030.4	7.8		1,038.2	0.8%	1,030.4	7.8	1,038.2	35.2	12.0	1,085.4
Rochester Gas & Electric												
RG&E LSE Load							1,392.5	14.4	1,406.9	142.3	9.0	1,558.2
NYMPA Load							10.3	0.1	10.4	1.1	0.0	11.5
Transmission District Load Served												
Deduction for BTM:NG							0.0	0.0	0.0			
Transmission District Total Load		1,402.8	14.5		1,417.3	1.0%	1,402.8	14.5	1,417.3	143.4	9.0	1,569.7
Totals		29,940.8	657.0	44.0	30,641.8	2.1%	29,992.4	657.0	30,649.4	662.6	428.8	31,740.8

2020 Load Reconciliation	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
	7/27/2020, Hour Beginning 5 PM V3 - 11/17/20	TOs' W/N MW With DR	Reallocation of Losses			Proportional Allocation of Losses	Adj. W/N Load Less Losses	2020 Adjusted Actual Load (MW)	2020 BTM:NG (1 + WNF)	2020 Adj Load Prior to Loss Adjustment
			W/N Losses	Station Power	Adj. W/N Load Less Losses					
Consolidated Edison										
Con-Ed LSE Load	12,110.1	156.4		11,953.7	38.50%	261.8	11,953.7	12,215.5		
Transmission District Load Served	12,110.1	156.4		11,953.7	38.50%	261.8	11,953.7	12,215.5	1.0219	12,110.1
Deduction for BTM:NG										
Transmission District Total Load										
Central Hudson										
Central Hudson LSE Load	1,107.9	26.4		1,081.5	3.48%	23.7	1,081.5	1,105.2		
Transmission District Load Served	1,107.9	26.4		1,081.5	3.48%	23.7	1,081.5	1,105.2	1.0219	1,107.9
Deduction for BTM:NG										
Transmission District Total Load										
Long Island Power Authority										
LIPA LSE Load	5,014.8	61.5		4,953.3	15.95%	108.50	4,953.30	5,061.8		
NYPA Load & Greenport Load	104.8	1.3		103.5	0.33%	2.20	103.50	105.7		
Freeport & Rockville Centre Load	107.4	1.3		106.1	0.34%	2.30	106.10	108.4		
Transmission District Load Served	5,227.0	64.1		5,162.9	16.63%	113.0	5,162.9	5,275.9	1.0219	5,227.0
Deduction for BTM:NG										
Transmission District Total Load										
National Grid										
National Grid LSE	6,625.4	334.0	13.7	6,277.7	20.22%	137.6	6,277.7	6,415.3		
NYPA Load	37.9	2.0		35.9	0.12%	0.8	35.9	36.7		
NYMPA Load	283.8	14.8		269.0	0.87%	5.9	269.0	274.9		
Jamestown Load	65.3	3.4		61.9	0.20%	1.4	61.9	63.3		
Green Island Load	4.8	0.3		4.5	0.01%	0.1	4.5	4.6		
Transmission District Load Served	7,017.2	354.5	13.7	6,649.0	21.42%	145.8	6,649.0	6,794.8	1.0219	7,003.5
Deduction for BTM:NG										
Transmission District Total Load										
Totals	31,740.8	680.40	13.7	31,046.70	100.00%	680.40	31,046.70	31,727.1	1.0219	31,727.1

2020 Load Reconciliation	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
	7/27/2020, Hour Beginning 5 PM	TOs' W/N MW With DR	Reallocation of Losses			Proportional Allocation of Losses	Adj. W/N Load Less Losses	2020 Adjusted Actual Load (MW)	2020 BTM:NG (1 + WNF)	2020 Adj Load Prior to Loss Adjustment
			W/N Losses	Station Power	Adj. W/N Load Less Losses					
New York Power Authority										
NYPA LSE Load	350.5	3.9		346.6	1.12%	7.6	346.6	354.2		
NYMPA Load	52.2	0.6		51.6	0.17%	1.2	51.6	52.8		
Transmission District Load Served	402.7	4.5		398.2	1.29%	8.8	398.2	407.0	1.0219	402.7
Deduction for BTM:NG										
Transmission District Total Load										
New York State Electric & Gas										
NYSEG LSE Load	3,103.7	48.3		3,055.4	9.84%	67.0	3,055.4	3,122.4		
NYPA Load	49.0	0.8		48.2	0.16%	1.1	48.2	49.3		
NYMPA Load	68.1	1.1		67.0	0.22%	1.5	67.0	68.5		
Transmission District Load Served	3,220.8	50.2		3,170.6	10.21%	69.6	3,170.6	3,240.2	1.0219	3,220.8
Deduction for BTM:NG										
Transmission District Total Load										
Orange & Rockland Utilities										
O&R LSE Load	1,085.4	8.2		1,077.2	3.47%	23.6	1,077.2	1,100.8		
Transmission District Load Served	1,085.4	8.2		1,077.2	3.47%	23.6	1,077.2	1,100.8	1.0219	1,085.4
Deduction for BTM:NG										
Transmission District Total Load										
Rochester Gas & Electric										
RG&E LSE Load	1,558.2	16.0		1,542.2	4.97%	33.8	1,542.2	1,576.0		
NYMPA Load	11.5	0.1		11.4	0.04%	0.3	11.4	11.7		
Transmission District Load Served	1,569.7	16.1		1,553.6	5.00%	34.1	1,553.6	1,587.7	1.0219	1,569.7
Deduction for BTM:NG										
Transmission District Total Load										
Totals	31,740.8	680.40	13.7	31,046.70	100.00%	680.40	31,046.70	31,727.1	1.0219	31,727.1

Locality NCP to CP Ratios

G-to-J Locality Peak Ratio

Year	G-to-J Date	G-to-J Hr Beg	NCP MW	NYCA Date	NYCA Hr Beg	CP MW	Delta	Ratio	Outlier
2006	8/2/2006	16	15,953	8/2/2006	13	15,790	163	1.0103	
2007	8/8/2007	16	15,253	8/8/2007	16	15,253	-	1.0000	
2008	6/10/2008	16	15,567	6/9/2008	16	15,242	325	1.0213	
2009	8/21/2009	14	14,585	8/17/2009	15	14,388	197	1.0137	
2010	7/6/2010	16	15,809	7/6/2010	16	15,809	-	1.0000	
2011	7/22/2011	15	15,972	7/22/2011	15	15,972	-	1.0000	
2012	7/18/2012	13	15,420	7/17/2012	16	14,993	427	1.0285	
2013	7/19/2013	16	15,981	7/19/2013	16	15,981	-	1.0000	
2014	9/2/2014	16	14,464	9/2/2014	15	14,432	32	1.0022	
2015	7/20/2015	16	14,708	7/29/2015	16	14,440	268	1.0186	
2016	8/11/2016	16	15,067	8/11/2016	16	15,067	-	1.0000	
2017	7/20/2017	16	14,678	7/19/2017	17	14,163	515	1.0364	Yes
2018	9/6/2018	15	15,038	8/29/2018	16	15,033	5	1.0003	
2019	7/17/2019	15	14,602	7/20/2019	16	14,113	489	1.0346	Yes
2020	7/28/2020	14	14,077	7/27/2020	17	13,911	166	1.0119	
Average			15,145			14,972		1.0116	
Std Dev								0.0128	
Average (Excluding Outliers)			15,223			15,101			Median
Ratio of G-to-J Locality Peak to G-to-J Coincident Peak (Excluding Outliers):								1.0081	1.0103

Zone J Locality Peak Ratio

Year	Zone J Date	Zone J Hr Beg	NCP MW	NYCA Date	NYCA Hr Beg	CP MW	Delta	Ratio	Outlier
2006	8/1/2006	16	11,244	8/2/2006	13	11,195	49	1.0044	
2007	8/8/2007	16	10,919	8/8/2007	16	10,919	-	1.0000	
2008	6/10/2008	16	11,048	6/9/2008	16	10,861	187	1.0172	
2009	8/21/2009	15	10,656	8/17/2009	15	10,387	269	1.0259	
2010	7/6/2010	16	11,213	7/6/2010	16	11,213	-	1.0000	
2011	7/22/2011	11	11,399	7/22/2011	15	11,319	80	1.0071	
2012	7/18/2012	12	11,138	7/17/2012	16	10,721	417	1.0389	
2013	7/19/2013	16	11,411	7/19/2013	16	11,411	-	1.0000	
2014	9/2/2014	15	10,504	9/2/2014	15	10,504	-	1.0000	
2015	7/20/2015	16	10,598	7/29/2015	16	10,386	212	1.0204	
2016	8/11/2016	16	10,966	8/11/2016	16	10,966	-	1.0000	
2017	7/20/2017	16	10,642	7/19/2017	17	10,224	418	1.0409	
2018	9/6/2018	16	10,996	8/29/2018	16	10,878	118	1.0108	
2019	7/17/2019	17	10,756	7/20/2019	16	9,980	776	1.0778	Yes
2020	7/28/2020	14	10,106	7/27/2020	17	9,786	320	1.0327	
Average			10,906			10,717		1.0176	
Std Dev								0.0213	
Average (Excluding Outliers)			10,917			10,769			Median
Ratio of Zone J Locality Peak to Zone J Coincident Peak (Excluding Outliers):								1.0137	1.0108

Zone K Locality Peak Ratio

Year	Zone K Date	Zone K Hr Beg	NCP MW	NYCA Date	NYCA Hr Beg	CP MW	Delta	Ratio	Outlier
2006	8/3/2006	16	5,729	8/2/2006	13	5,576	153	1.0274	
2007	8/8/2007	17	5,384	8/8/2007	16	5,363	21	1.0039	
2008	6/10/2008	16	5,276	6/9/2008	16	5,227	49	1.0094	
2009	8/21/2009	15	5,191	8/17/2009	15	5,060	131	1.0259	
2010	7/6/2010	16	5,822	7/6/2010	16	5,822	-	1.0000	
2011	7/22/2011	15	5,914	7/22/2011	15	5,914	-	1.0000	
2012	6/21/2012	16	5,510	7/17/2012	16	5,111	399	1.0781	Yes
2013	7/18/2013	16	5,764	7/19/2013	16	5,673	91	1.0160	
2014	9/2/2014	16	5,054	9/2/2014	15	5,035	19	1.0038	
2015	7/20/2015	16	5,247	7/29/2015	16	5,136	111	1.0216	
2016	8/13/2016	16	5,414	8/11/2016	16	5,190	224	1.0432	
2017	7/20/2017	16	5,137	7/19/2017	17	4,989	148	1.0297	
2018	8/29/2018	16	5,411	8/29/2018	16	5,411	-	1.0000	
2019	7/21/2019	17	5,452	7/20/2019	16	5,323	129	1.0242	
2020	7/20/2020	17	5,433	7/27/2020	17	5,344	89	1.0167	
Average			5,449			5,345		1.0195	
Std Dev								0.0200	
Average (Excluding Outliers)			5,445			5,362			Median
Ratio of Zone K Locality Peak to Zone K Coincident Peak (Excluding Outliers):								1.0155	1.0167

2020 Economic Data

Summary of Economic Data (1 of 2)

Variable & TD	Unit	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Con-Ed_Employment	1,000	4,268	4,358	4,453	4,600	4,733	4,825	4,903	4,976	5,131	4,530	4,704	4,864
Con-Ed_GDP	\$ Millions	708,563	763,142	753,109	777,005	788,554	802,776	827,001	835,274	871,920	770,746	786,363	852,337
Con-Ed_Households	1,000	3,517	3,550	3,583	3,611	3,636	3,656	3,649	3,645	3,631	3,643	3,610	3,605
Con-Ed_Income-Real	\$ Millions	544,112	566,871	566,749	589,386	613,411	632,668	681,953	693,534	712,778	737,776	703,802	733,791
Con-Ed_Population	1,000	9,234	9,311	9,364	9,403	9,434	9,443	9,407	9,357	9,299	9,281	9,274	9,288
Cen-Hud_Employment	1,000	190	190	191	191	193	195	196	198	200	182	189	194
Cen-Hud_GDP	\$ Millions	22,301	22,790	22,830	22,801	23,048	22,974	23,529	23,758	24,266	22,225	22,730	24,315
Cen-Hud_Households	1,000	201	200	201	202	202	203	204	206	206	207	205	204
Cen-Hud_Income-Real	\$ Millions	22,455	23,049	22,690	23,094	24,038	24,404	25,257	25,765	25,849	26,988	25,339	26,052
Cen-Hud_Population	1,000	530	527	525	523	521	519	520	520	519	517	516	516
LIPA_Employment	1,000	1,247	1,265	1,285	1,296	1,312	1,331	1,347	1,347	1,366	1,210	1,258	1,292
LIPA_GDP	\$ Millions	164,396	171,122	168,984	173,773	177,528	176,774	180,018	178,598	179,822	161,854	165,391	177,443
LIPA_Households	1,000	958	960	966	970	973	976	978	982	982	985	977	974
LIPA_Income-Real	\$ Millions	173,317	184,067	177,537	182,901	190,792	194,364	201,258	207,406	209,036	212,323	202,812	209,084
LIPA_Population	1,000	2,846	2,846	2,850	2,851	2,847	2,842	2,841	2,838	2,833	2,827	2,825	2,823
N-Grid_Employment	1,000	1,792	1,804	1,816	1,821	1,832	1,850	1,861	1,869	1,894	1,706	1,765	1,805
N-Grid_GDP	\$ Millions	220,442	226,638	222,414	229,355	232,981	233,829	237,600	238,483	243,225	221,784	227,195	241,073
N-Grid_Households	1,000	1,633	1,638	1,648	1,655	1,659	1,665	1,671	1,679	1,677	1,680	1,665	1,661
N-Grid_Income-Real	\$ Millions	163,366	166,624	165,348	167,466	174,105	173,821	181,909	182,552	184,499	193,467	181,477	185,193
N-Grid_Population	1,000	4,012	4,011	4,007	4,001	3,987	3,970	3,966	3,960	3,946	3,929	3,926	3,925

Data is from Moody's Analytics, August 2020. This is the same data presented during the 9/16 and 11/9 LFTF calls.

Summary of Economic Data (2 of 2)

Variable & TD	Unit	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
NYPA_Employment	1,000	33	33	34	34	33	34	34	35	36	32	33	34
NYPA_GDP	\$ Millions	3,975	3,713	3,762	3,769	3,798	3,877	3,948	4,021	4,124	3,817	3,921	4,163
NYPA_Households	1,000	32	32	32	32	32	33	33	33	33	33	33	33
NYPA_Income-Real	\$ Millions	2,946	3,025	3,015	3,034	3,202	3,155	3,309	3,288	3,285	3,445	3,173	3,230
NYPA_Population	1,000	82	82	81	82	81	80	81	81	80	80	81	81
NYSEG_Employment	1,000	417	417	420	419	416	419	421	424	428	390	406	416
NYSEG_GDP	\$ Millions	48,985	49,567	49,115	49,309	49,443	49,289	49,844	50,297	51,211	46,629	47,695	50,633
NYSEG_Households	1,000	419	420	421	421	421	422	421	423	421	422	418	417
NYSEG_Income-Real	\$ Millions	39,904	41,625	40,197	40,796	41,942	41,619	43,366	43,750	44,152	46,079	42,918	43,809
NYSEG_Population	1,000	1,057	1,055	1,052	1,046	1,039	1,033	1,027	1,024	1,019	1,013	1,013	1,013
OR_Employment	1,000	256	257	261	266	271	275	282	289	300	266	277	288
OR_GDP	\$ Millions	32,021	32,150	32,226	32,829	33,828	34,079	35,148	35,945	37,534	33,534	34,605	37,628
OR_Households	1,000	228	228	229	231	232	233	235	236	238	240	239	239
OR_Income-Real	\$ Millions	32,070	32,956	32,505	33,164	34,587	34,541	35,771	36,614	36,840	39,246	37,135	38,349
OR_Population	1,000	690	691	694	696	699	701	705	708	711	712	715	720
RGE_Employment	1,000	496	499	501	504	507	512	514	518	524	470	488	500
RGE_GDP	\$ Millions	61,380	62,786	61,918	63,155	64,289	65,279	65,087	65,915	66,753	60,896	62,597	66,625
RGE_Households	1,000	424	425	427	429	431	432	433	436	436	437	433	432
RGE_Income-Real	\$ Millions	43,875	45,533	44,168	44,429	46,731	46,386	48,451	48,610	49,246	51,813	48,828	49,923
RGE_Population	1,000	1,056	1,055	1,055	1,053	1,049	1,046	1,043	1,043	1,041	1,036	1,035	1,035
Employment_NYCA	1,000	8,700	8,823	8,960	9,130	9,298	9,441	9,558	9,656	9,879	8,786	9,121	9,392
GDP_NYCA	\$ Millions	1,262,061	1,331,908	1,314,358	1,351,995	1,373,469	1,388,876	1,422,176	1,432,290	1,478,856	1,321,486	1,350,497	1,454,217
Households_NYCA	1,000	7,412	7,453	7,508	7,552	7,586	7,621	7,625	7,641	7,625	7,648	7,581	7,567
Income_NYCA	\$ Millions	1,022,047	1,063,750	1,052,207	1,084,269	1,128,809	1,150,957	1,221,275	1,241,520	1,265,685	1,311,137	1,245,483	1,289,433
Population_NYCA	1,000	19,505	19,577	19,628	19,653	19,656	19,634	19,589	19,530	19,449	19,395	19,384	19,400

Data is from Moody's Analytics, August 2020. This is the same data presented during the 9/16 and 11/9 LTF calls.

Questions?

Our mission, in collaboration with our stakeholders, is to serve the public interest and provide benefit to consumers by:

- Maintaining and enhancing regional reliability
- Operating open, fair and competitive wholesale electricity markets
- Planning the power system for the future
- Providing factual information to policymakers, stakeholders and investors in the power system

