2023 Preliminary Weather Normalized Peak for the 2024 ICAP Forecast

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Agenda

- Summary of updates since IRM forecast

- Proportional Loss Reallocation

- 2023 Preliminary Weather Normalized Peak Load

- Regional Load Growth Factor (RLGF) Updates

- 2023 Economic Data

- Next Steps

New York ISO

Summary of Updates since IRM Forecast

- Updated DSS NYCA peak hour load values (July 28, 2023, Hour Beginning 17)

- The majority of actual values for municipal load and self generation have been added

- Updated demand response impacts

- Updated weather adjustments from Transmission Owners

- Resulting changes to Transmission District 2023 weather normalized coincident peak values relative to the IRM forecast:

  - Increases: 27 MW in LIPA
  - Decreases: 237 MW in Con Ed, 1 MW in Central Hudson, 8 MW in National Grid, 2 MW in NYPA, 2 MW in NYSEG, 1 MW in O&R, 20 MW in RG&E
  - NYCA Aggregate: decrease of 243 MW

- Preliminary Transmission Owner 2024 Regional Load Growth Factor (RLGF) updates relative to the IRM forecast:

  - Increased RLGFs in Con Ed and O&R
  - Decreased RLGFs in Central Hudson and NYPA

New York ISO

Proportional Loss Reallocation

- For the statewide ICAP Market peak load forecast, bulk power system losses are reallocated among the Transmission Districts proportional to their weather normalized peak loads (less losses). Under this approach, bulk power system losses are shared equitably among Transmission Owners according to their share of the total statewide peak load.

  - Reallocation of losses is shown in the preliminary 2023 weather normalized peak load presented today

- For the ICAP Locality peak forecasts (Zone J, Zone K, and Zones G-to-J), there is no reallocation of bulk power system losses. These forecasts include local (i.e., Transmission District) bulk power system losses as found. This approach provides that the Locality peak forecasts accurately estimate the total load expected in the Locality during the Locality peak hour.

  - Locality forecasts will be presented during future LFTF meetings

New York ISO

2023 Preliminary Weather Normalized Peak Load

New York ISO

2023 Load Reconciliation	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	NYISO DSS Actual MW Data					Transmission District Load Data					
7/28/2023, Hour Beginning 5 PM	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
V3 - 11/14/23											
Consolidated Edison											
Con-Ed LSE Load						10,910.7	143.7	11,054.4	1,052.4	183.7	12,290.5
Transmission District Load Served						10,910.7	143.7	11,054.4	1,052.4	183.7	12,290.5
Deduction for BTM:NG						0.0	0.0	0.0			
Transmission District Total Load	10,910.7	143.7		11,054.4	1.3%	10,910.7	143.7	11,054.4			
Central Hudson											
Central Hudson LSE Load						955.0	31.0	986.0	61.4	0.0	1,047.4
Transmission District Load Served						955.0	31.0	986.0	61.4	0.0	1,047.4
Deduction for BTM:NG						0.0	0.0	0.0			
Transmission District Total Load	957.2	31.0		988.2	3.1%	955.0	31.0	986.0			
Long Island Power Authority											
LIPA LSE Load						4,687.8	51.1	4,738.9	101.8	40.0	4,880.7
NYPA Load & Greenport Load						113.3	1.2	114.5	2.5	0.0	117.0
Freeport & Rockville Centre Load			4.5			103.4	1.1	104.5	2.2	0.0	106.7
Transmission District Load Served						4,904.5	53.4	4,957.9	106.5	40.0	5,104.4
Deduction for BTM:NG						0.0	0.0	0.0			
Transmission District Total Load	4,902.2	53.4	4.5	4,960.1	1.1%	4,904.5	53.4	4,957.9			
National Grid											
National Grid LSE						5,379.7	309.9	5,689.6	376.4	165.9	6,231.9
NYPA Load						36.0	2.1	38.1	2.5	0.0	40.6
NYMPA Load						271.0	15.6	286.6	19.0	0.0	305.6
Jamestown Load			51.3			58.2	3.4	61.6	4.1	0.0	65.7
Green Island Load						5.6	0.3	5.9	0.4	0.0	6.3
Transmission District Load Served						5,750.5	331.3	6,081.8	402.4	165.9	6,650.1
Deduction for BTM:NG						0.0	0.0	0.0			
Transmission District Total Load	5,699.0	331.3	51.3	6,081.6	5.4%	5,750.5	331.3	6,081.8			
Totals	**28,086.2**	**631.4**	**55.8**	**28,773.4**	**2.2%**	**28,139.2**	**631.4**	**28,770.6**	**1,914.4**	**469.2**	**31,154.2**

2023 Load Reconciliation	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	NYISO DSS Actual MW Data					Transmission District Load Data					
7/28/2023, Hour Beginning 5 PM	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
V3 - 11/14/23											
New York Power Authority											
NYPA LSE Load						423.1	5.6	428.7	1.5	0.0	430.2
NYMPA Load						54.6	0.7	55.3	0.4	0.0	55.7
Transmission District Load Served						477.7	6.3	484.0	1.9	0.0	485.9
Deduction for BTM:NG						0.0	0.0	0.0			
Transmission District Total Load	476.2	6.3		482.5	1.3%	477.7	6.3	484.0			
New York State Electric & Gas											
NYSEG LSE Load						2,723.7	41.5	2,765.2	86.4	74.4	2,926.0
NYPA Load						56.1	0.9	57.0	1.8	0.0	58.8
NYMPA Load						56.5	0.9	57.4	1.8	0.0	59.2
Transmission District Load Served						2,836.3	43.3	2,879.6	90.0	74.4	3,044.0
Deduction for BTM:NG						0.0	0.0	0.0			
Transmission District Total Load	2,836.4	43.3		2,879.7	1.5%	2,836.3	43.3	2,879.6			
Orange & Rockland Utilities											
O&R LSE Load						965.4	9.0	974.4	99.0	5.2	1,078.6
Transmission District Load Served						965.4	9.0	974.4	99.0	5.2	1,078.6
Deduction for BTM:NG						0.0	0.0	0.0			
Transmission District Total Load	965.4	9.0		974.4	0.9%	965.4	9.0	974.4			
Rochester Gas & Electric											
RG&E LSE Load						1,328.3	13.3	1,341.6	100.0	0.0	1,441.6
NYMPA Load						10.8	0.1	10.9	0.8	0.0	11.7
Transmission District Load Served						1,339.1	13.4	1,352.5	100.8	0.0	1,453.3
Deduction for BTM:NG						0.0	0.0	0.0			
Transmission District Total Load	1,339.1	13.4		1,352.5	1.0%	1,339.1	13.4	1,352.5			
Totals	**28,086.2**	**631.4**	**55.8**	**28,773.4**	**2.2%**	**28,139.2**	**631.4**	**28,770.6**	**1,914.4**	**469.2**	**31,154.2**

2023 Load Reconciliation

7/28/2023, Hour Beginning 5 PM

V3 - 11/14/23

	(11) TOs' W/N MW With DR	(12) W/N Losses	(13) Station Power	(14) Adj. W/N Load Less Losses	(15) Percent Loss Allocation	(16) Proportional Allocation of Losses	(17) Adj. W/N Load Less Losses	(18) 2023 Adjusted Actual Load (MW)	(19) 2023 BTM:NG (1 + WNF)	(20) 2023 Adj Load Prior to Loss Adjustment	(21) 2023 Adj Load Prior to Large Loads
Reallocation of Losses											
Consolidated Edison											
Con-Ed LSE Load	12,290.5	159.8		12,130.7	39.83%	273.6	12,130.7	12,404.3			
Transmission District Load Served	12,290.5	159.8		12,130.7	39.83%	273.6	12,130.7	12,404.3	1.0225	12,290.5	12,404.3
Deduction for BTM:NG											
Transmission District Total Load											
Central Hudson											
Central Hudson LSE Load	1,047.4	32.9		1,014.5	3.33%	22.9	1,014.5	1,037.4			
Transmission District Load Served	1,047.4	32.9		1,014.5	3.33%	22.9	1,014.5	1,037.4	1.0225	1,047.4	1,037.4
Deduction for BTM:NG											
Transmission District Total Load											
Long Island Power Authority											
LIPA LSE Load	4,880.7	52.5		4,828.2	15.85%	108.8	4,828.2	4,937.0			
NYPA Load & Greenport Load	117.0	1.3		115.7	0.38%	2.6	115.7	118.3			
Freeport & Rockville Centre Load	106.7	1.2		105.5	0.35%	2.4	105.5	107.9			
Transmission District Load Served	5,104.4	55.0		5,049.4	16.58%	113.8	5,049.4	5,163.2	1.0225	5,104.4	5,163.2
Deduction for BTM:NG											
Transmission District Total Load											
National Grid											
National Grid LSE	6,231.9	338.8	15.4	5,877.7	19.30%	132.5	5,877.7	6,010.2			
NYPA Load	40.6	2.3		38.3	0.13%	0.9	38.3	39.2			
NYMPA Load	305.6	17.1		288.5	0.95%	6.5	288.5	295.0			
Jamestown Load	65.7	3.7		62.0	0.20%	1.4	62.0	63.4			
Green Island Load	6.3	0.4		5.9	0.02%	0.1	5.9	6.0			
Transmission District Load Served	6,650.1	362.3	15.4	6,272.4	20.60%	141.4	6,272.4	6,413.8	1.0225	6,634.7	6,411.4
Deduction for BTM:NG											
Transmission District Total Load											
Totals	31,154.2	686.5	15.4	30,452.3	100.00%	686.5	30,452.3	31,138.8	1.0225	31,138.8	30,984.3

2023 Load Reconciliation 7/28/2023, Hour Beginning 5 PM V3 - 11/14/23	(11) TOs' W/N MW With DR	(12) W/N Losses	(13) Station Power	(14) Adj. W/N Load Less Losses	(15) Percent Loss Allocation	(16) Proportional Allocation of Losses	(17) Adj. W/N Load Less Losses	(18) 2023 Adjusted Actual Load (MW)	(19) 2023 BTM:NG (1 + WNF)	(20) 2023 Adj Load Prior to Loss Adjustment	(21) 2023 Adj Load Prior to Large Loads
New York Power Authority											
NYPA LSE Load	430.2	5.6		424.6	1.39%	9.5	424.6	434.1			
NYMPA Load	55.7	0.7		55.0	0.18%	1.2	55.0	56.2			
Transmission District Load Served	485.9	6.3		479.6	1.57%	10.7	479.6	**490.3**	**1.0225**	**485.9**	**338.2**
Deduction for BTM:NG											
Transmission District Total Load											
New York State Electric & Gas											
NYSEG LSE Load	2,926.0	44.0		2,882.0	9.46%	64.9	2,882.0	2,946.9			
NYPA Load	58.8	0.9		57.9	0.19%	1.3	57.9	59.2			
NYMPA Load	59.2	0.9		58.3	0.19%	1.3	58.3	59.6			
Transmission District Load Served	3,044.0	45.8		2,998.2	9.85%	67.5	2,998.2	**3,065.7**	**1.0225**	**3,044.0**	**3,065.7**
Deduction for BTM:NG											
Transmission District Total Load											
Orange & Rockland Utilities											
O&R LSE Load	1,078.6	10.0		1,068.6	3.51%	24.1	1,068.6	1,092.7			
Transmission District Load Served	1,078.6	10.0		1,068.6	3.51%	24.1	1,068.6	**1,092.7**	**1.0225**	**1,078.6**	**1,092.7**
Deduction for BTM:NG											
Transmission District Total Load											
Rochester Gas & Electric											
RG&E LSE Load	1,441.6	14.3		1,427.3	4.69%	32.2	1,427.3	1,459.5			
NYMPA Load	11.7	0.1		11.6	0.04%	0.3	11.6	11.9			
Transmission District Load Served	1,453.3	14.4		1,438.9	4.73%	32.5	1,438.9	**1,471.4**	**1.0225**	**1,453.3**	**1,471.4**
Deduction for BTM:NG											
Transmission District Total Load											
Totals	**31,154.2**	**686.5**	**15.4**	**30,452.3**	**100.00%**	**686.5**	**30,452.3**	**31,138.8**	**1.0225**	**31,138.8**	**30,984.3**

Regional Load Growth Factor Updates

New York ISO

2024 Regional Load Growth Factor Updates

Transmission District	IRM 1+RLGF	Preliminary 1+RLGF Update
Con Edison	1.0029	1.0185
Central Hudson	0.9940	0.9869
LIPA	0.9770	--
National Grid	1.0000	--
NYPA	1.0030	1.0000
NYSEG	0.9979	--
O&R	0.9940	1.0172
RG&E	0.9965	--

Note: RLGFs do not include large load growth

Final Transmission Owner RLGFs to be considered for the ICAP forecast are due by 11/22.

2023 Economic Data

New York ISO

Summary of Economic Data (1 of 2)

Variable & TD	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Con-Ed_Employment	4,597	4,734	4,823	4,918	4,996	5,182	4,466	4,667	4,965	5,082	5,106	5,119
Con-Ed_GDP	780,575	788,415	813,704	823,576	853,285	892,608	835,638	898,779	934,645	957,811	964,292	981,012
Con-Ed_Households	3,682	3,734	3,784	3,807	3,837	3,828	3,730	3,576	3,658	3,634	3,639	3,640
Con-Ed_Income-Real	578,492	603,502	623,079	666,090	669,549	676,202	705,807	718,418	671,752	680,474	694,838	703,537
Con-Ed_Population	9,572	9,670	9,751	9,792	9,819	9,846	9,769	9,442	9,405	9,410	9,407	9,402
Cen-Hud_Employment	191	193	195	196	198	200	176	184	189	189	190	191
Cen-Hud_GDP	22,697	22,883	23,078	23,109	23,917	24,402	22,189	24,044	23,961	24,227	24,576	25,156
Cen-Hud_Households	201	201	202	204	206	205	205	207	210	209	209	209
Cen-Hud_Income-Real	23,203	24,197	24,517	25,346	25,319	27,124	28,498	29,382	27,492	27,816	28,382	28,745
Cen-Hud_Population	519	517	516	517	518	517	524	530	525	525	524	523
LIPA_Employment	1,297	1,313	1,333	1,347	1,349	1,367	1,190	1,284	1,329	1,343	1,351	1,355
LIPA_GDP	174,482	177,940	179,278	180,257	181,653	185,403	171,398	188,597	189,883	193,412	194,808	198,349
LIPA_Households	974	980	987	994	1,002	998	993	990	1,021	1,013	1,014	1,014
LIPA_Income-Real	184,785	192,893	196,854	203,153	205,374	214,585	222,822	228,210	215,451	217,490	220,857	222,810
LIPA_Population	2,853	2,858	2,864	2,873	2,882	2,884	2,914	2,923	2,900	2,900	2,895	2,889
N-Grid_Employment	1,821	1,830	1,850	1,859	1,865	1,885	1,672	1,751	1,807	1,840	1,848	1,854
N-Grid_GDP	229,742	233,250	237,034	238,086	242,245	250,597	234,192	251,687	252,373	257,342	259,508	264,911
N-Grid_Households	1,652	1,659	1,669	1,680	1,693	1,684	1,673	1,669	1,705	1,693	1,694	1,692
N-Grid_Income-Real	166,228	173,297	172,984	180,280	179,243	185,244	200,178	202,373	187,493	189,388	191,496	192,986
N-Grid_Population	3,993	3,987	3,983	3,991	3,996	3,987	4,021	4,027	3,988	3,989	3,981	3,971

Variable	Unit
Employment	1,000
GDP-Real	$ Million (2012)
Households	1,000
Income-Real	$ Million (2012)
Population	1,000

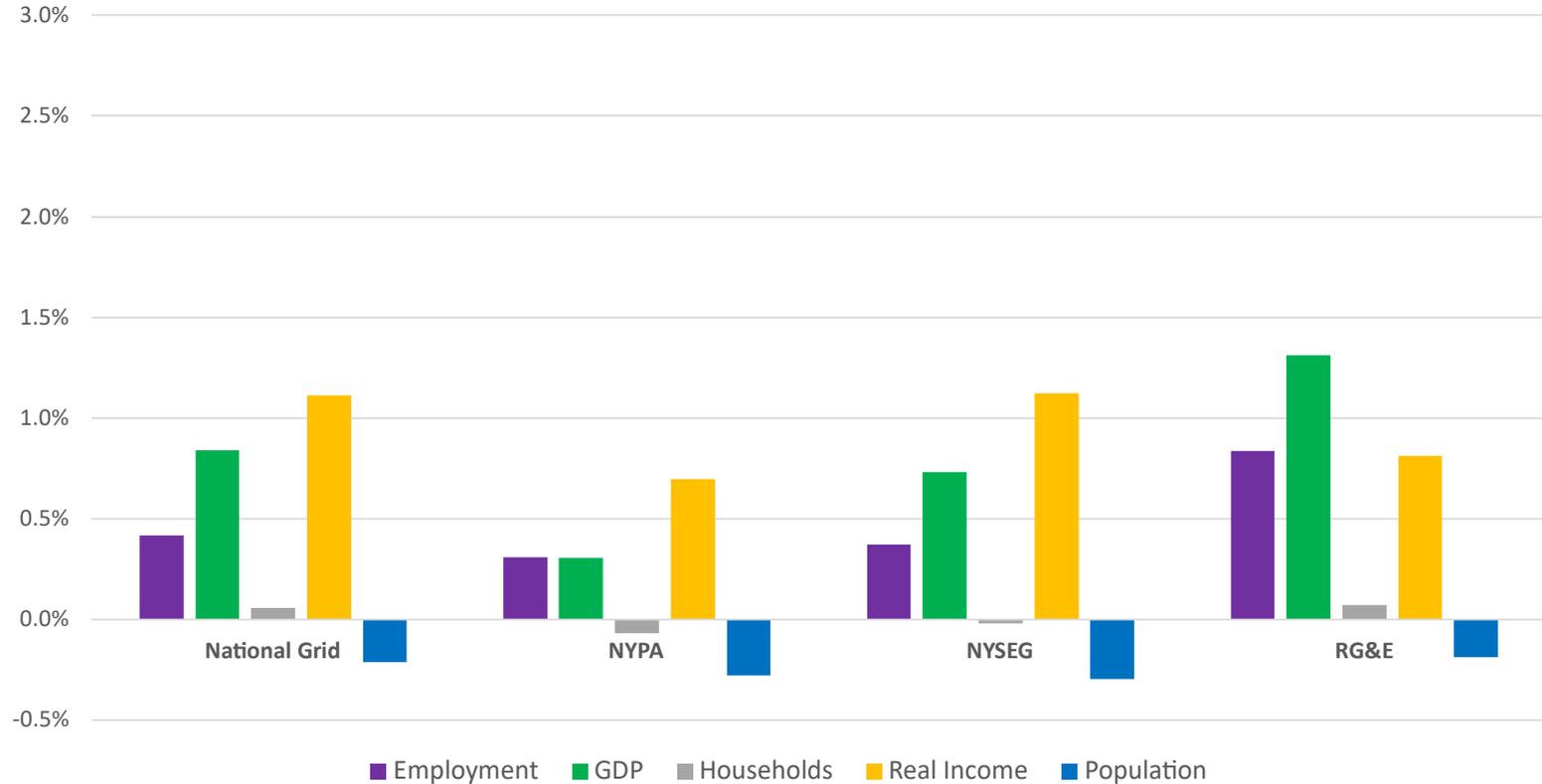Data is from Moody's Analytics, August 2023. Values listed are for July of a given year.

Summary of Economic Data (2 of 2)

Variable & TD	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
NYPA_Employment	34	33	34	35	35	35	30	32	33	34	34	34
NYPA_GDP	3,640	3,682	3,789	3,913	3,993	4,078	3,606	3,887	3,927	3,921	3,933	3,997
NYPA_Households	32	32	32	32	33	32	32	32	32	32	32	32
NYPA_Income-Real	3,040	3,212	3,163	3,285	3,201	3,265	3,489	3,507	3,155	3,166	3,188	3,198
NYPA_Population	81	80	80	80	80	79	80	80	78	79	78	78
NYSEG_Employment	419	416	419	421	424	427	375	393	406	411	412	413
NYSEG_GDP	48,445	48,738	49,029	49,049	50,488	52,001	47,180	51,135	51,240	51,756	52,135	53,160
NYSEG_Households	419	419	420	421	423	420	417	415	421	419	419	418
NYSEG_Income-Real	40,768	41,983	41,586	43,193	43,123	44,517	47,669	48,591	44,504	44,901	45,405	45,765
NYSEG_Population	1,039	1,034	1,029	1,027	1,025	1,020	1,028	1,029	1,015	1,015	1,012	1,009
OR_Employment	266	272	276	282	286	297	263	286	307	318	324	329
OR_GDP	32,835	33,745	34,393	34,634	35,757	37,965	35,196	38,987	40,630	41,789	42,431	43,640
OR_Households	230	232	234	236	238	238	237	236	244	246	249	252
OR_Income-Real	33,189	34,741	34,749	35,849	36,011	37,535	39,792	41,156	38,515	39,073	40,004	40,614
OR_Population	698	703	708	715	721	727	739	745	746	756	765	774
RGE_Employment	504	507	512	513	517	522	464	485	501	507	511	513
RGE_GDP	63,239	64,373	65,969	64,930	66,569	68,601	62,943	67,791	67,921	68,912	69,817	71,494
RGE_Households	428	430	433	435	439	438	435	433	439	437	437	437
RGE_Income-Real	44,297	46,632	46,290	48,156	47,869	49,115	52,788	52,908	48,868	49,366	49,767	50,090
RGE_Population	1,049	1,048	1,047	1,048	1,050	1,049	1,058	1,057	1,048	1,048	1,046	1,044
Employment_NYCA	9,130	9,298	9,441	9,570	9,671	9,915	8,636	9,082	9,538	9,723	9,775	9,807
GDP_NYCA	1,355,654	1,373,026	1,406,275	1,417,554	1,457,909	1,515,655	1,412,342	1,524,909	1,564,580	1,599,171	1,611,498	1,641,719
Households_NYCA	7,617	7,686	7,762	7,809	7,872	7,842	7,721	7,560	7,731	7,681	7,693	7,693
Income_NYCA	1,074,002	1,120,458	1,143,223	1,205,351	1,209,690	1,237,588	1,301,042	1,324,545	1,237,229	1,251,674	1,273,937	1,287,746
Population_NYCA	19,805	19,897	19,978	20,043	20,090	20,109	20,133	19,834	19,705	19,723	19,710	19,690

Data is from Moody's Analytics, August 2023. Values listed are for July of a given year.

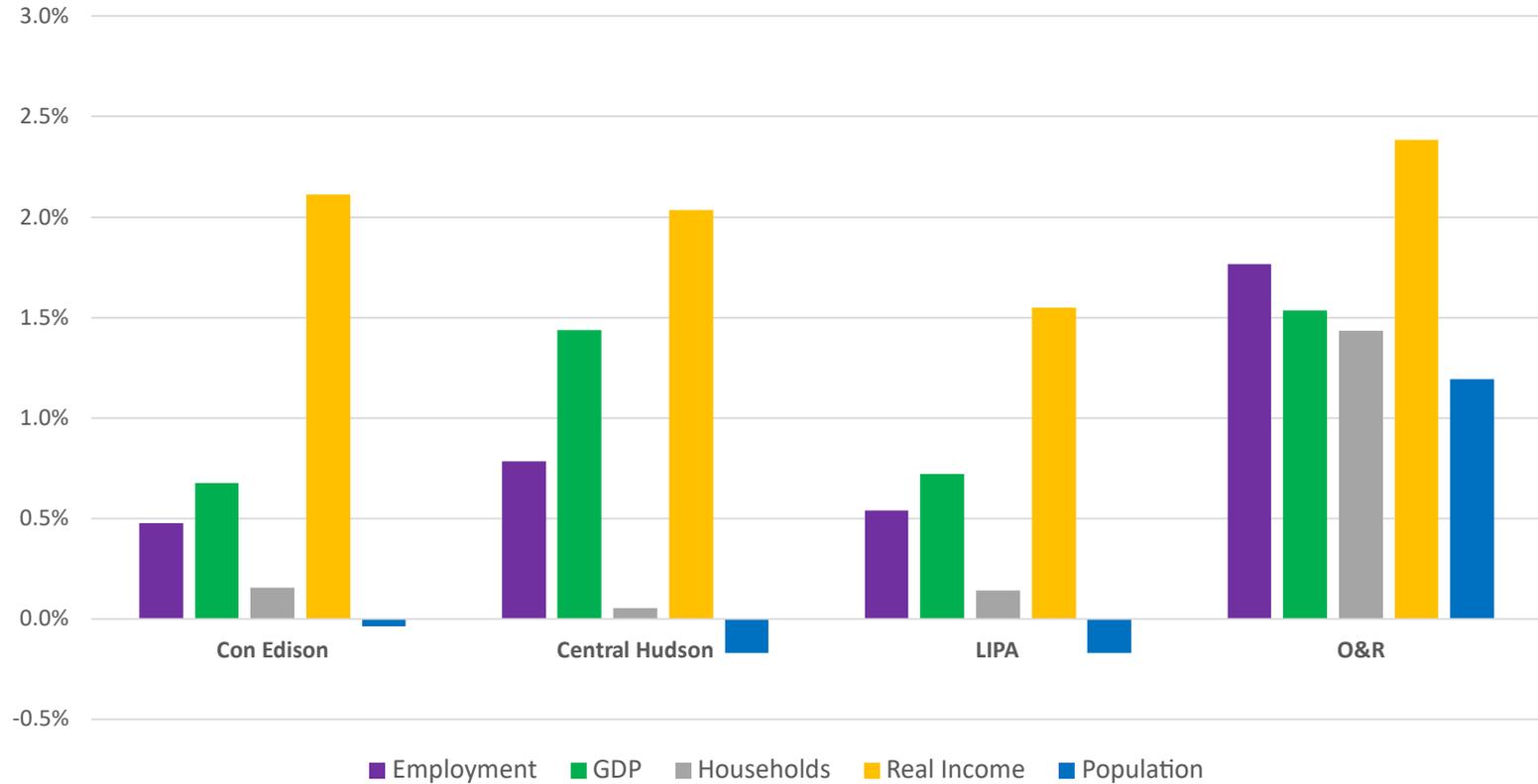# Transmission District Economic Indicators (1 of 2)

Forecasted percent growth – July 2023 to July 2024

Data is from Moody's Analytics, August 2023.

Transmission District Economic Indicators (2 of 2)

Forecasted percent growth – July 2023 to July 2024

Legend: ■ Employment ■ GDP ■ Households ■ Real Income ■ Population

Data is from Moody's Analytics, August 2023.

Next Steps

- Transmission Owner updates to actual load, demand response, weather adjustments, and station power values will be reviewed and incorporated as appropriate

- Transmission Owners are to provide final large load facility forecasts and any updates to final Regional Load Growth Factors (RLGFs) by 11/22; and model documentation by 11/27

- Results from the NYISO Criteria evaluation of Transmission District RLGFs will be reviewed during the 12/5 LFTF

- 2024 NYCA, Locality, and Zonal forecasts will be reviewed during the 12/5 and 12/19 LFTF meetings

New York ISO

Questions?

New York ISO

Our Mission & Vision

✓

Mission

Ensure power system reliability and competitive markets for New York in a clean energy future

🔍

Vision

Working together with stakeholders to build the cleanest, most reliable electric system in the nation

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