New York ISO
Independent System Operator

2023 Preliminary Baseline Forecast

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Demand Forecasting & Analysis

LFTF/ESPWG

April 5, 2023

Agenda

- Final 10-Year Peak Forecasts
- Baseline Forecast Assumptions
- Forecast Tables
- Baseline Annual Energy Forecast
- Baseline Coincident Peak Forecasts
- Additional Tables and Scenario Forecast Assumptions

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Final 10-Year Peak Forecasts

- Peak forecasts for the 2023 through 2033-34 time period were reviewed during the 3/14 LFTF/ESPWG

- These peak forecasts are reflective of the 2023 Final Gold Book Forecast, and are posted in Excel format under today's meeting materials

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Baseline Forecast Assumptions

- Forecast models utilize Moody's Analytics January 2023 forecast. Population and households decline over the forecast horizon
- Forecast models include annual temperature trends from the NYISO Climate Change Impact Study Phase I, with an average increase of 0.7 degrees F per decade
- Energy efficiency and codes & standards impacts projections consider information from DPS and EIA, and forecasts from Transmission Owners
- Behind-the-Meter (BTM) solar installed capacity forecast reaches 10 GW DC by 2030, with slower growth afterward
  - The hour of the NYCA summer peak is projected to shift later into the evening over the forecast horizon, lessening BTM solar coincidence with peak demand
  - The impact on the winter peak hour is zero as the system is expected to peak after sunset
- BTM non-solar Distributed Generation (DG) forecast is based on information from the Standardized Interconnection Requirements (SIR) database and information from Transmission Owners. Over 600 MW installed capacity in 2040

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Baseline Forecast Assumptions

- BTM Storage capacity forecast considers pipeline storage resources listed in the SIR database and projections from Transmission Owners
  - A portion of BTM storage resources are expected to reduce load during peak demand hours
  - Slight increase in net annual total energy due to the impact of cycling losses (both wholesale and BTM storage resources)
- 85% Electric Vehicle light duty vehicle (LDV) sales share in 2035, reaching 90% soon thereafter. Over 6 million total EVs (LDVs, trucks, and buses) on the road in 2040
  - Slower medium & heavy-duty vehicle (MHDV) EV sales adoption
- 60% of residential homes converted to primary electric heating by 2050, with similar large-scale adoption in the commercial sector. Significant electrification of non-weather sensitive appliances including electric water heaters and cooking appliances
- Baseline forecast includes projected load increases for specific large load projects currently in the NYISO Interconnection Queue, and considers other significant potential load projects
- Additional forecast assumptions were presented during prior stakeholder meetings (including the 2/23, 3/3, and 3/14 LFTF/ESWPWG meetings)

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Forecast Tables

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Table I-2: Baseline Annual Energy by Zone - GWh

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2023	14,960	9,800	15,310	5,950	7,440	11,740	9,150	2,830	5,610	49,230	19,760	151,780
2024	14,950	10,730	15,300	5,940	7,340	11,650	9,030	2,820	5,590	48,980	19,810	152,140
2025	14,800	10,740	16,490	5,880	7,220	11,560	8,960	2,820	5,540	48,480	19,900	152,390
2026	14,740	10,860	17,780	5,860	7,080	11,530	8,890	2,800	5,550	48,190	19,970	153,250
2027	14,800	10,770	18,040	6,070	6,980	11,610	8,830	2,820	5,570	48,250	20,040	153,780
2028	14,890	10,720	17,920	6,320	6,930	11,700	8,830	2,860	5,640	48,410	20,170	154,390
2029	14,950	10,730	17,920	6,540	6,940	11,900	8,920	2,900	5,710	48,600	20,420	155,530
2030	15,070	10,800	18,430	6,630	7,000	12,160	9,060	2,960	5,830	48,950	20,770	157,660
2031	15,260	10,950	18,620	6,660	7,150	12,470	9,250	3,030	5,960	49,490	21,260	160,100
2032	15,580	11,150	18,870	6,690	7,310	12,840	9,550	3,120	6,120	50,180	21,850	163,260
2033	15,960	11,400	19,200	6,710	7,510	13,240	9,880	3,220	6,350	51,230	22,520	167,220
2034	16,400	11,680	19,570	6,750	7,750	13,680	10,260	3,340	6,590	52,550	23,270	171,840
2035	16,930	12,030	20,050	6,810	8,040	14,200	10,700	3,470	6,830	53,710	24,140	176,910
2036	17,480	12,400	20,550	6,860	8,340	14,720	11,150	3,590	7,090	54,960	25,060	182,200
2037	18,030	12,770	21,060	6,910	8,660	15,270	11,610	3,720	7,340	56,240	25,970	187,580
2038	18,550	13,140	21,570	6,960	8,970	15,780	12,050	3,840	7,600	57,730	26,870	193,060
2039	19,080	13,510	22,100	7,000	9,280	16,330	12,500	3,960	7,890	59,260	27,760	198,670
2040	19,590	13,860	22,590	7,050	9,580	16,830	12,920	4,070	8,160	60,790	28,590	204,030
2041	20,040	14,180	23,030	7,090	9,850	17,290	13,300	4,160	8,410	62,230	29,330	208,910
2042	20,450	14,460	23,420	7,130	10,090	17,710	13,650	4,240	8,650	63,590	29,990	213,380
2043	20,840	14,730	23,810	7,170	10,330	18,120	14,000	4,320	8,860	64,700	30,620	217,500
2044	21,190	14,960	24,140	7,200	10,540	18,500	14,320	4,380	9,030	65,650	31,180	221,090
2045	21,490	15,160	24,420	7,230	10,720	18,840	14,610	4,440	9,190	66,450	31,650	224,200
2046	21,720	15,320	24,650	7,250	10,870	19,130	14,860	4,490	9,310	67,130	32,020	226,750
2047	21,940	15,460	24,860	7,270	11,000	19,410	15,090	4,530	9,420	67,730	32,360	229,070
2048	22,110	15,580	25,020	7,290	11,110	19,640	15,300	4,550	9,520	68,240	32,630	230,990
2049	22,230	15,660	25,150	7,300	11,180	19,840	15,460	4,580	9,580	68,570	32,820	232,370
2050	22,310	15,720	25,220	7,310	11,240	20,000	15,580	4,590	9,640	68,810	32,930	233,350
2051	22,360	15,760	25,280	7,320	11,270	20,150	15,690	4,600	9,690	69,090	33,010	234,220
2052	22,380	15,780	25,300	7,320	11,280	20,260	15,760	4,610	9,720	69,290	33,040	234,740
2053	22,370	15,780	25,300	7,320	11,280	20,350	15,800	4,600	9,740	69,420	33,060	235,020

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Table I-3a: Baseline Coincident Summer Peak Demand by Zone - MW

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2023	2,687	1,993	2,694	690	1,386	2,408	2,150	621	1,397	11,023	4,999	32,048
2024	2,701	2,137	2,731	692	1,426	2,412	2,137	620	1,397	11,060	4,967	32,280
2025	2,688	2,140	2,881	690	1,420	2,415	2,114	616	1,396	11,080	4,950	32,390
2026	2,678	2,140	3,026	686	1,406	2,422	2,103	613	1,384	11,040	4,942	32,440
2027	2,669	2,139	3,051	724	1,386	2,429	2,105	612	1,377	10,980	4,938	32,410
2028	2,660	2,138	3,040	751	1,366	2,434	2,110	611	1,370	10,880	4,950	32,310
2029	2,651	2,144	3,022	779	1,364	2,448	2,125	613	1,363	10,830	4,961	32,300
2030	2,652	2,156	3,087	780	1,370	2,465	2,152	619	1,367	10,860	4,982	32,490
2031	2,657	2,174	3,110	781	1,381	2,485	2,183	626	1,381	10,970	5,002	32,750
2032	2,688	2,198	3,133	782	1,395	2,508	2,220	638	1,400	11,120	5,028	33,110
2033	2,718	2,220	3,157	783	1,407	2,530	2,258	650	1,424	11,310	5,063	33,520
2034	2,763	2,251	3,199	785	1,436	2,564	2,307	659	1,448	11,490	5,108	34,010
2035	2,808	2,282	3,243	789	1,466	2,606	2,354	665	1,479	11,670	5,178	34,540
2036	2,863	2,315	3,290	794	1,502	2,656	2,402	672	1,506	11,800	5,240	35,040
2037	2,916	2,347	3,342	800	1,537	2,698	2,448	680	1,533	11,910	5,299	35,510
2038	2,963	2,379	3,392	805	1,567	2,755	2,494	688	1,552	12,070	5,365	36,030
2039	3,004	2,407	3,431	808	1,594	2,797	2,533	696	1,579	12,220	5,431	36,500
2040	3,057	2,438	3,479	813	1,627	2,838	2,574	704	1,601	12,320	5,479	36,930
2041	3,095	2,465	3,505	816	1,652	2,887	2,609	710	1,626	12,450	5,535	37,350
2042	3,129	2,489	3,538	819	1,674	2,923	2,641	716	1,648	12,580	5,583	37,740
2043	3,170	2,512	3,580	823	1,700	2,963	2,673	721	1,668	12,660	5,620	38,090
2044	3,211	2,535	3,621	827	1,726	3,004	2,706	726	1,687	12,730	5,647	38,420
2045	3,241	2,556	3,647	829	1,745	3,036	2,739	730	1,700	12,830	5,687	38,740
2046	3,269	2,575	3,675	832	1,762	3,066	2,772	733	1,712	12,910	5,714	39,020
2047	3,296	2,593	3,701	834	1,778	3,095	2,804	737	1,724	12,980	5,748	39,290
2048	3,322	2,611	3,721	836	1,794	3,123	2,837	741	1,735	13,060	5,780	39,560
2049	3,345	2,628	3,741	837	1,807	3,149	2,866	744	1,746	13,130	5,807	39,800
2050	3,365	2,642	3,752	838	1,817	3,171	2,893	747	1,756	13,200	5,829	40,010
2051	3,383	2,655	3,769	839	1,826	3,191	2,917	750	1,764	13,270	5,846	40,210
2052	3,392	2,662	3,779	839	1,831	3,201	2,930	751	1,769	13,310	5,856	40,320
2053	3,400	2,668	3,789	840	1,834	3,210	2,941	752	1,773	13,340	5,863	40,410

Notes

2023 values match the 2023 ICAP forecast

2023 through 2033 values reflect the 2023 Gold Book Final Forecast

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Table I-3b: Baseline Coincident Winter Peak Demand by Zone - MW

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2023-24	2,129	1,676	2,663	887	1,308	1,885	1,539	500	881	7,510	3,242	24,220
2024-25	2,148	1,695	2,755	891	1,326	1,914	1,534	500	886	7,580	3,301	24,530
2025-26	2,187	1,765	2,958	893	1,349	1,964	1,531	501	894	7,670	3,388	25,100
2026-27	2,236	1,803	3,101	896	1,366	2,024	1,575	506	908	7,790	3,495	25,700
2027-28	2,281	1,852	3,164	941	1,390	2,094	1,612	514	923	7,920	3,609	26,300
2028-29	2,341	1,910	3,213	976	1,418	2,168	1,674	524	942	8,080	3,744	26,990
2029-30	2,408	1,983	3,309	1,015	1,460	2,269	1,748	541	969	8,310	3,908	27,920
2030-31	2,485	2,068	3,419	1,024	1,511	2,384	1,831	562	1,003	8,590	4,093	28,970
2031-32	2,573	2,166	3,520	1,036	1,571	2,511	1,926	585	1,042	8,930	4,300	30,160
2032-33	2,691	2,277	3,633	1,048	1,638	2,652	2,035	612	1,088	9,320	4,536	31,530
2033-34	2,820	2,395	3,749	1,063	1,709	2,802	2,150	642	1,137	9,730	4,783	32,980
2034-35	3,001	2,548	3,914	1,079	1,807	2,965	2,294	668	1,202	10,220	5,062	34,760
2035-36	3,191	2,703	4,083	1,095	1,911	3,134	2,444	696	1,270	10,730	5,343	36,600
2036-37	3,354	2,852	4,222	1,108	1,999	3,285	2,578	720	1,337	11,240	5,615	38,310
2037-38	3,536	3,005	4,381	1,123	2,099	3,450	2,723	747	1,405	11,760	5,891	40,120
2038-39	3,711	3,153	4,534	1,137	2,191	3,609	2,863	773	1,470	12,250	6,159	41,850
2039-40	3,868	3,284	4,675	1,150	2,276	3,750	2,987	795	1,525	12,680	6,390	43,380
2040-41	4,011	3,407	4,808	1,161	2,353	3,883	3,101	814	1,577	13,080	6,605	44,800
2041-42	4,138	3,515	4,917	1,169	2,421	3,998	3,201	830	1,622	13,430	6,789	46,030
2042-43	4,219	3,594	4,978	1,176	2,465	4,078	3,275	842	1,659	13,720	6,924	46,930
2043-44	4,313	3,674	5,067	1,182	2,515	4,165	3,356	855	1,693	13,990	7,060	47,870
2044-45	4,400	3,748	5,137	1,189	2,561	4,247	3,432	865	1,725	14,240	7,186	48,730
2045-46	4,473	3,808	5,200	1,194	2,601	4,317	3,503	874	1,751	14,430	7,289	49,440
2046-47	4,532	3,857	5,256	1,199	2,634	4,376	3,560	882	1,773	14,590	7,371	50,030
2047-48	4,569	3,888	5,282	1,202	2,656	4,414	3,606	887	1,787	14,680	7,419	50,390
2048-49	4,591	3,914	5,301	1,203	2,667	4,443	3,640	889	1,803	14,790	7,459	50,700
2049-50	4,625	3,944	5,324	1,205	2,686	4,478	3,682	894	1,817	14,900	7,505	51,060
2050-51	4,645	3,960	5,339	1,204	2,695	4,500	3,711	896	1,825	14,960	7,525	51,260
2051-52	4,645	3,961	5,339	1,206	2,694	4,505	3,723	894	1,824	14,950	7,509	51,250
2052-53	4,659	3,975	5,353	1,205	2,699	4,522	3,744	896	1,831	15,010	7,516	51,410
2053-54	4,628	3,958	5,315	1,203	2,683	4,499	3,734	890	1,827	14,980	7,473	51,190

Note

2023-24 through 2033-34 values reflect the 2023 Gold Book Final Forecast

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Baseline Annual Energy Forecast

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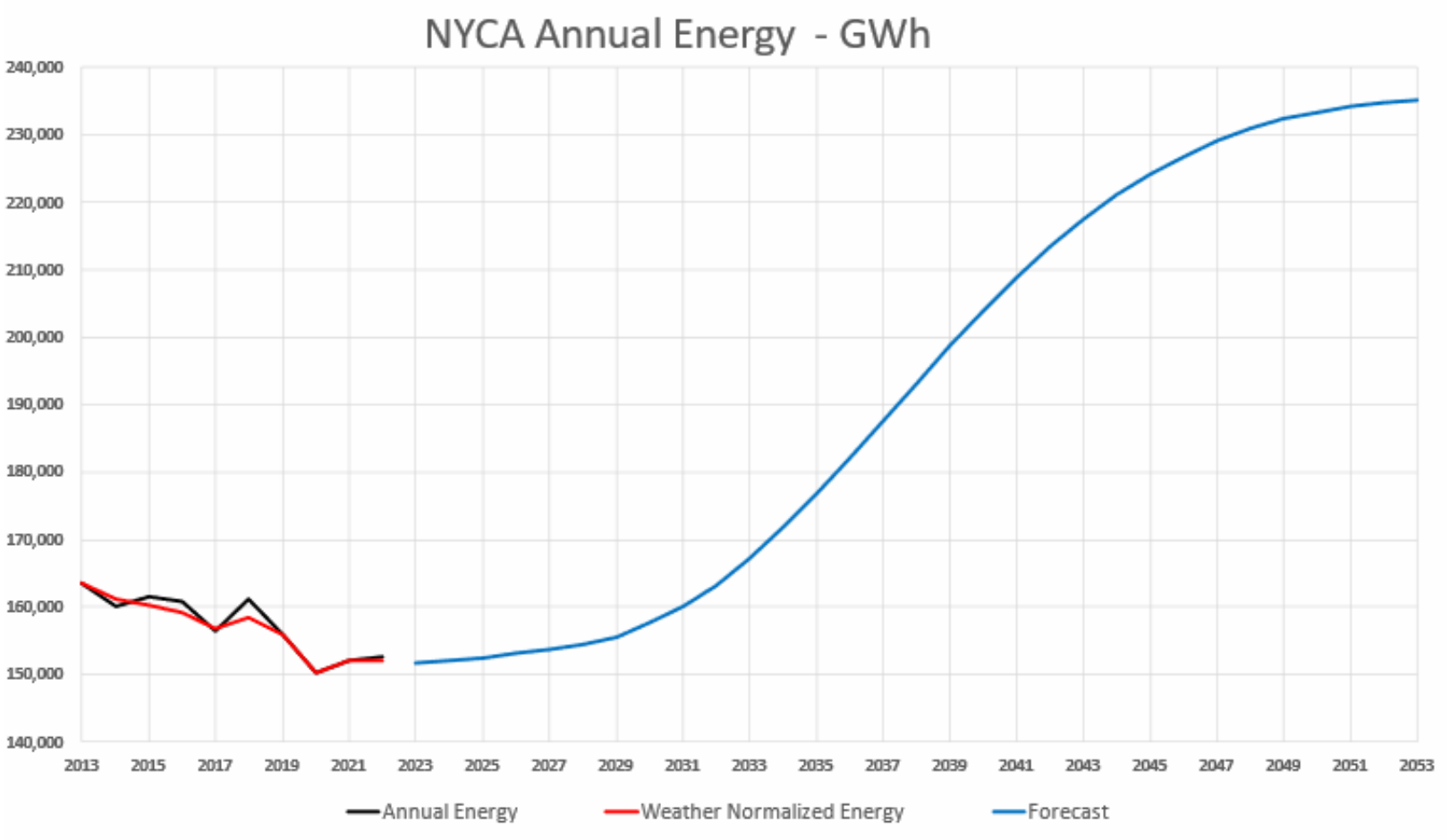

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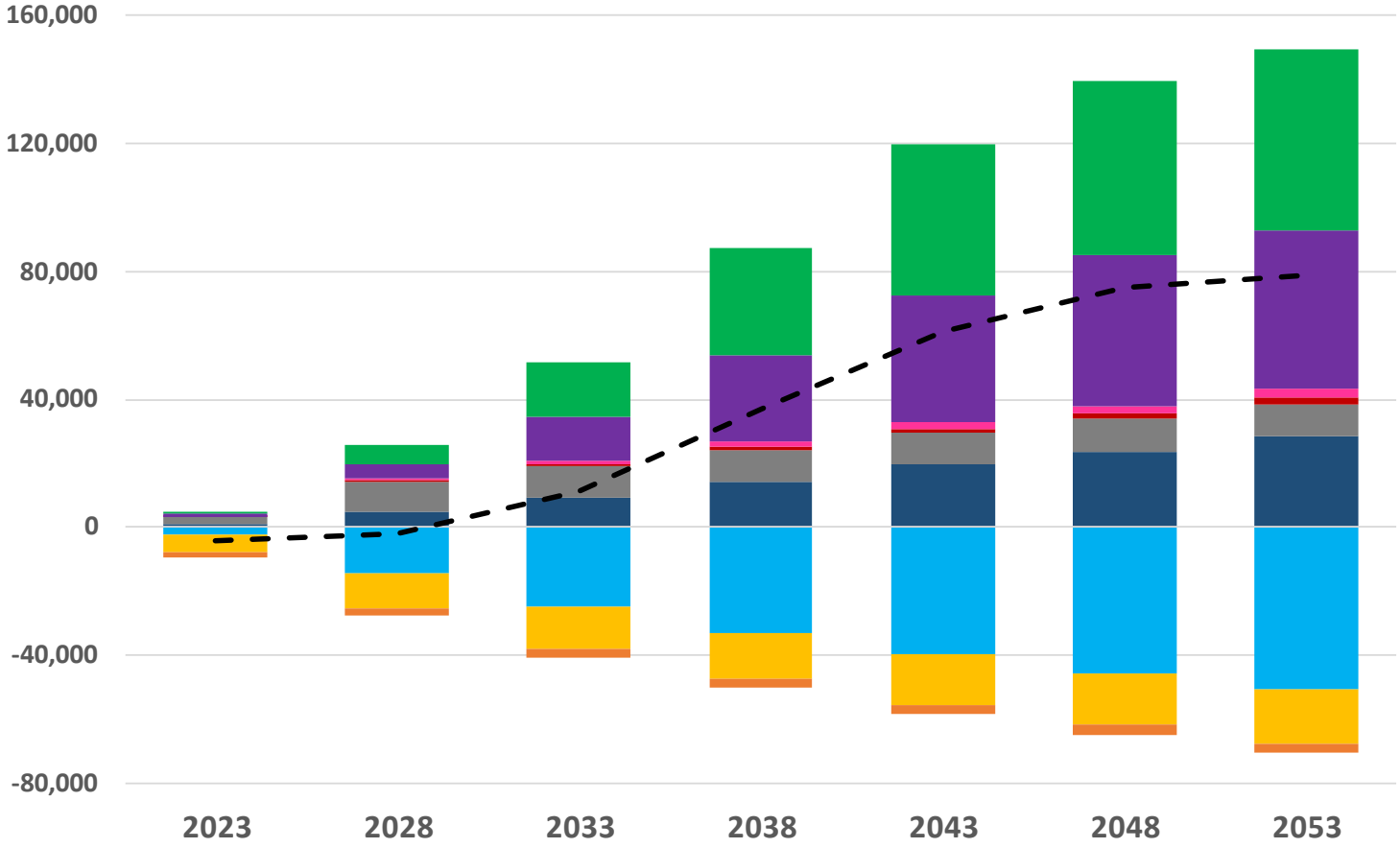
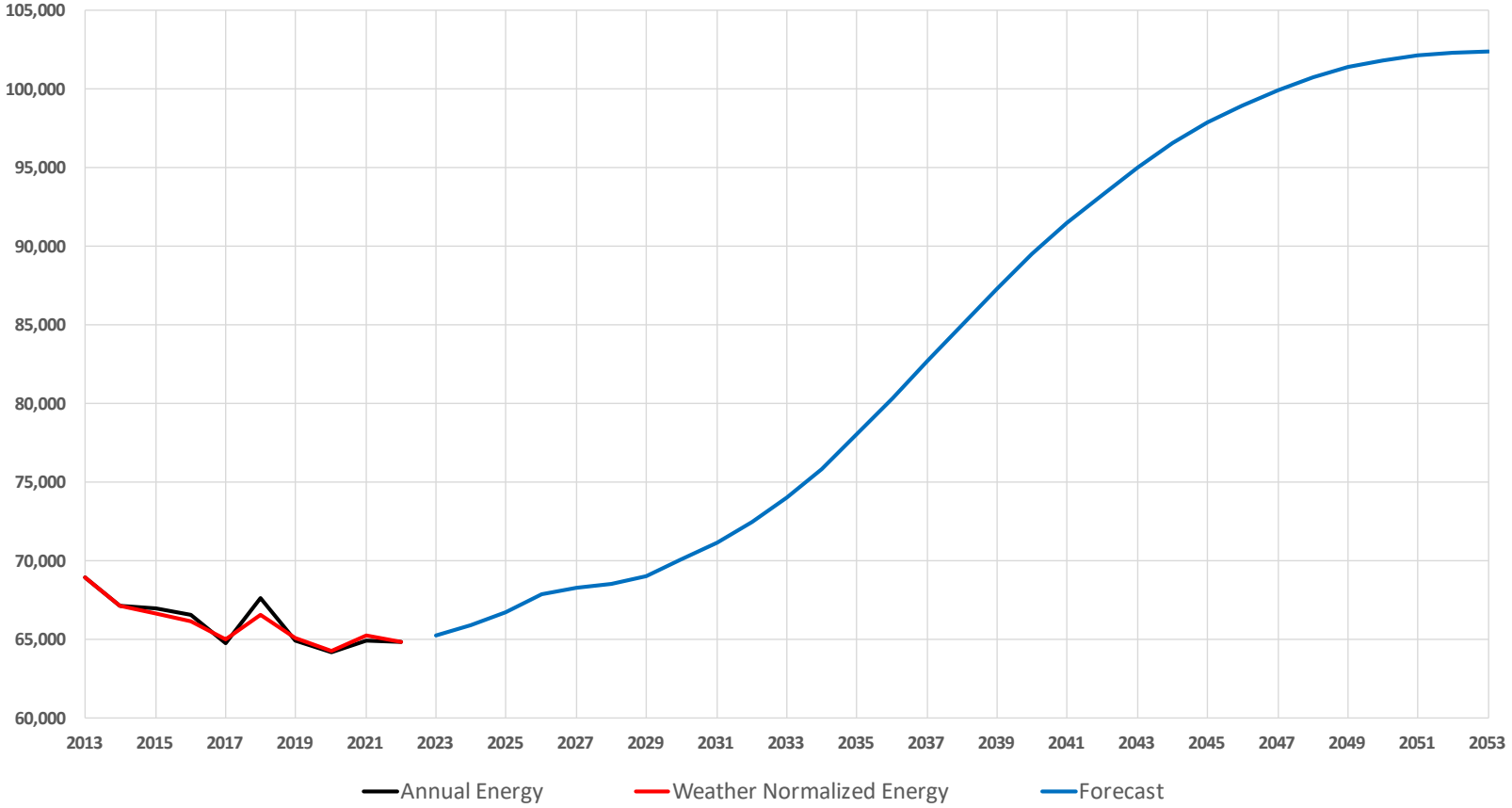
NYCA Annual Energy Estimated Forecast Impacts, GWh



- Energy efficiency and economic growth impacts are generally endogenous to the end-use models, and reflect impacts relative to 2022

A to F Annual Energy - GWh



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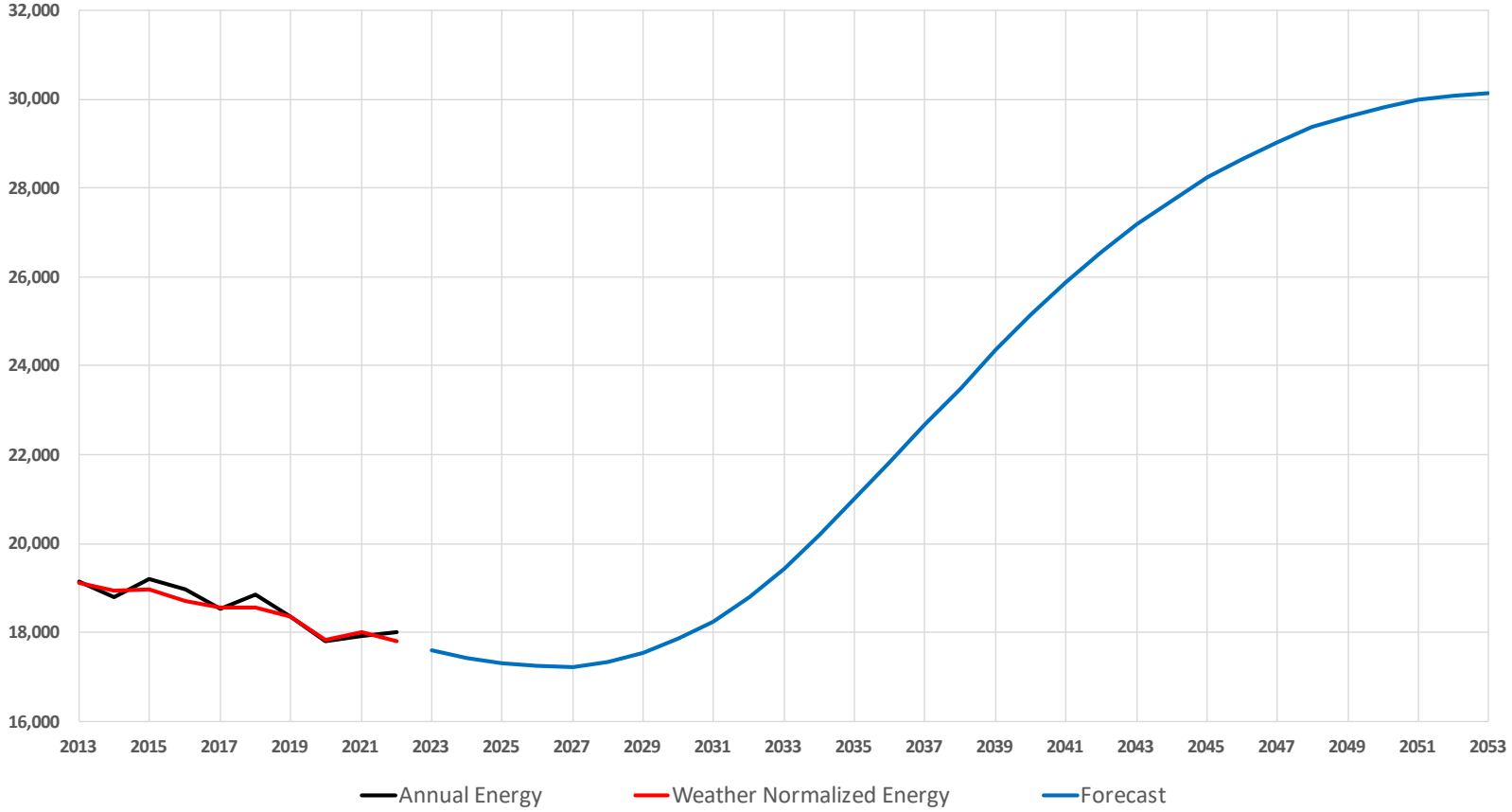
Zones GHI Annual Energy - GWh



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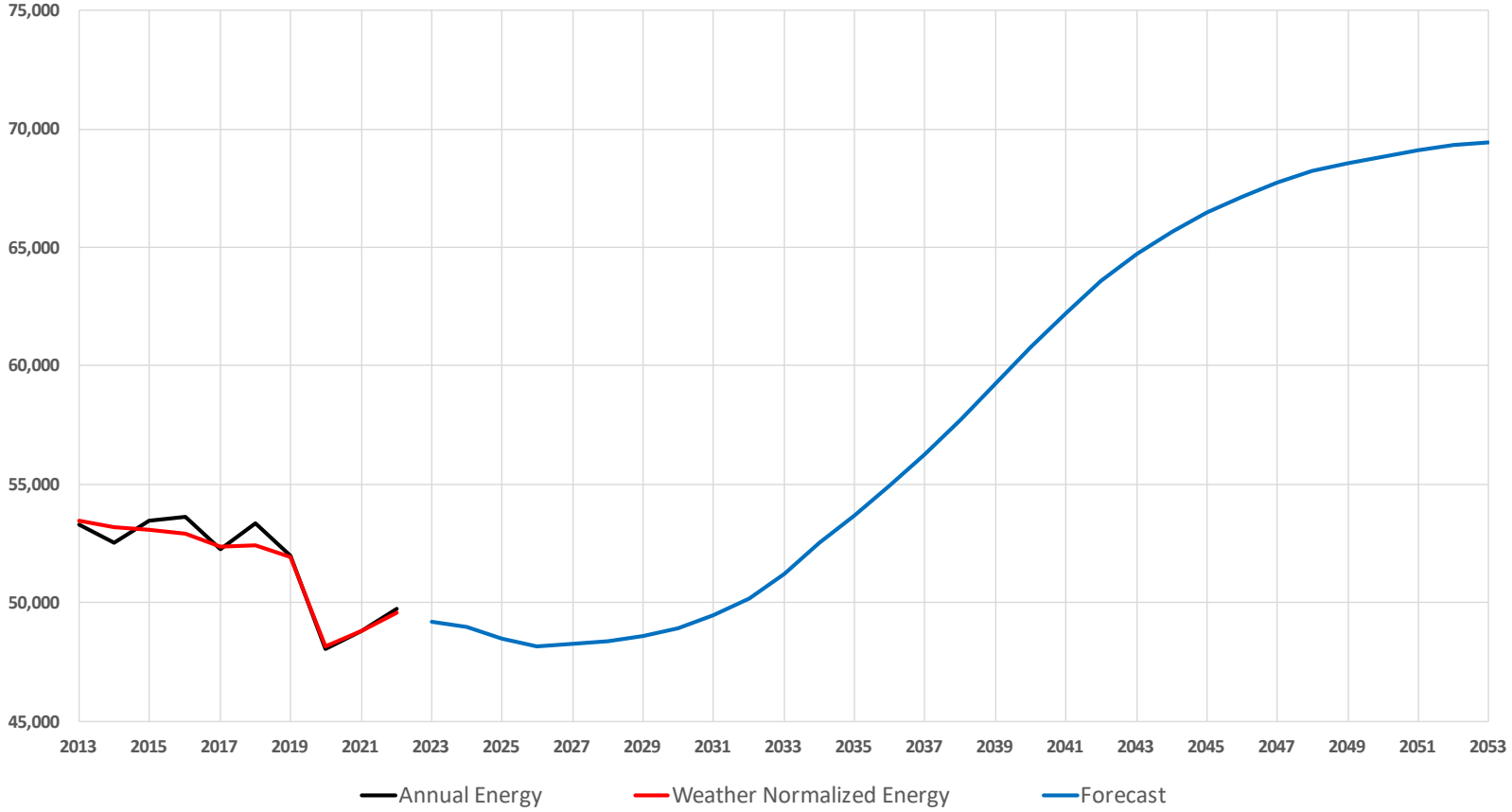
Zone J Annual Energy - GWh



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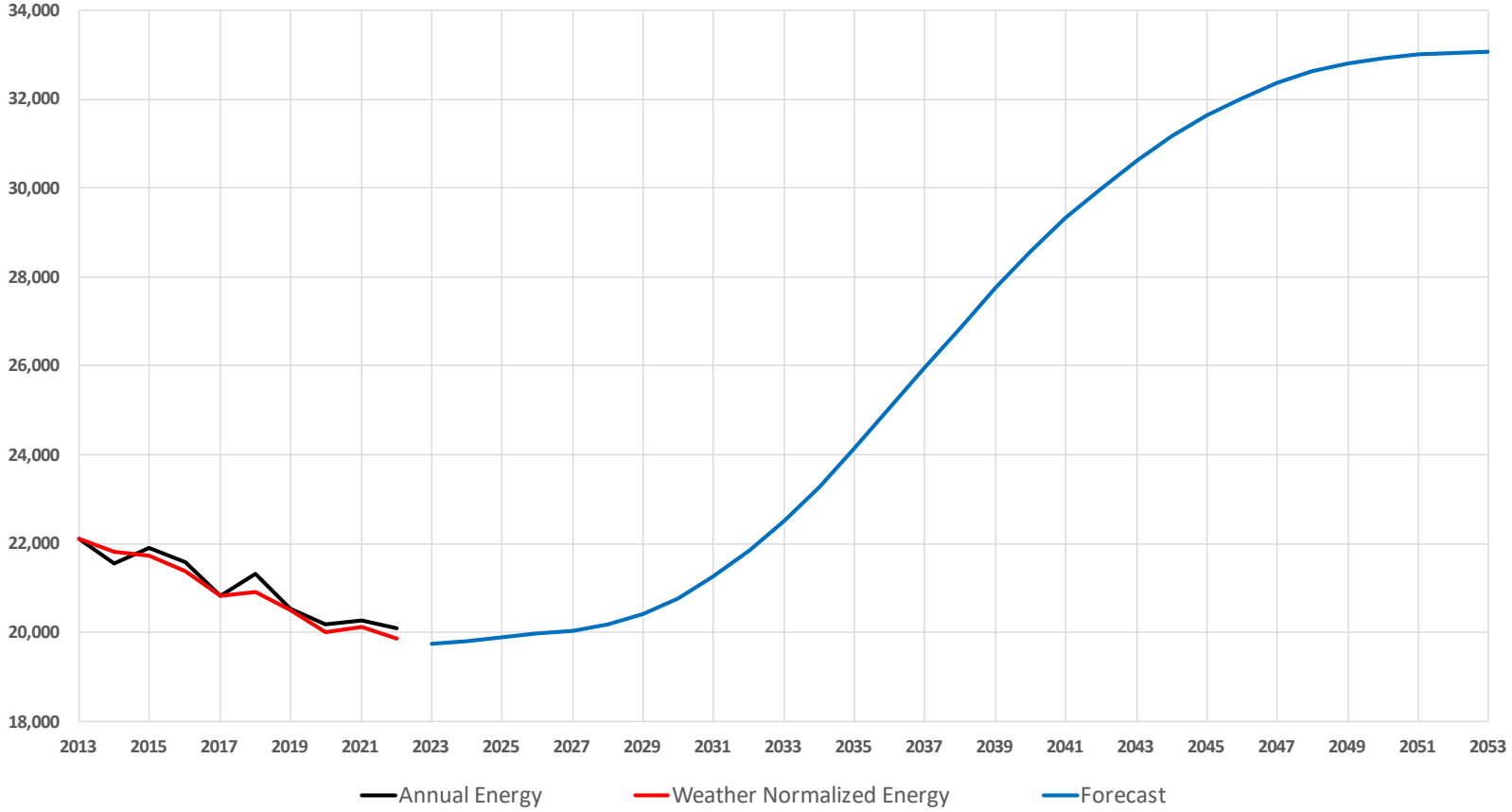
Zone K Annual Energy - GWh



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Baseline Coincident Peak Forecasts

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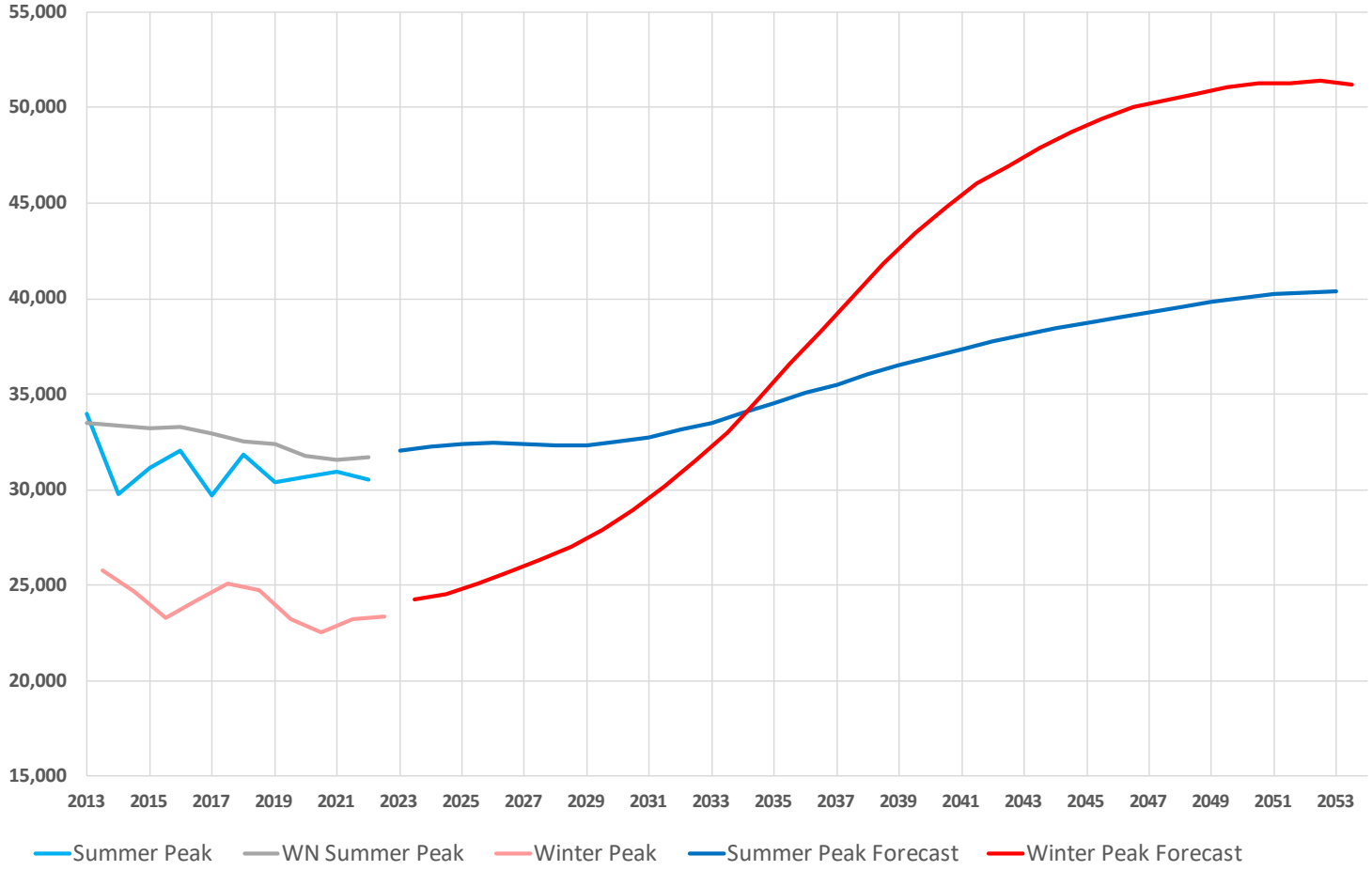
NYCA Coincident Peak - MW



- Actual historical values reflect metered load.
- Weather normalized summer peak values from ICAP forecast process include demand response added back onto the load and reflect the adjusted load at design weather conditions. The NYCA aggregate design condition is the 57th percentile.
- Forecast values assume no reductions due to demand response and assume trended weather.

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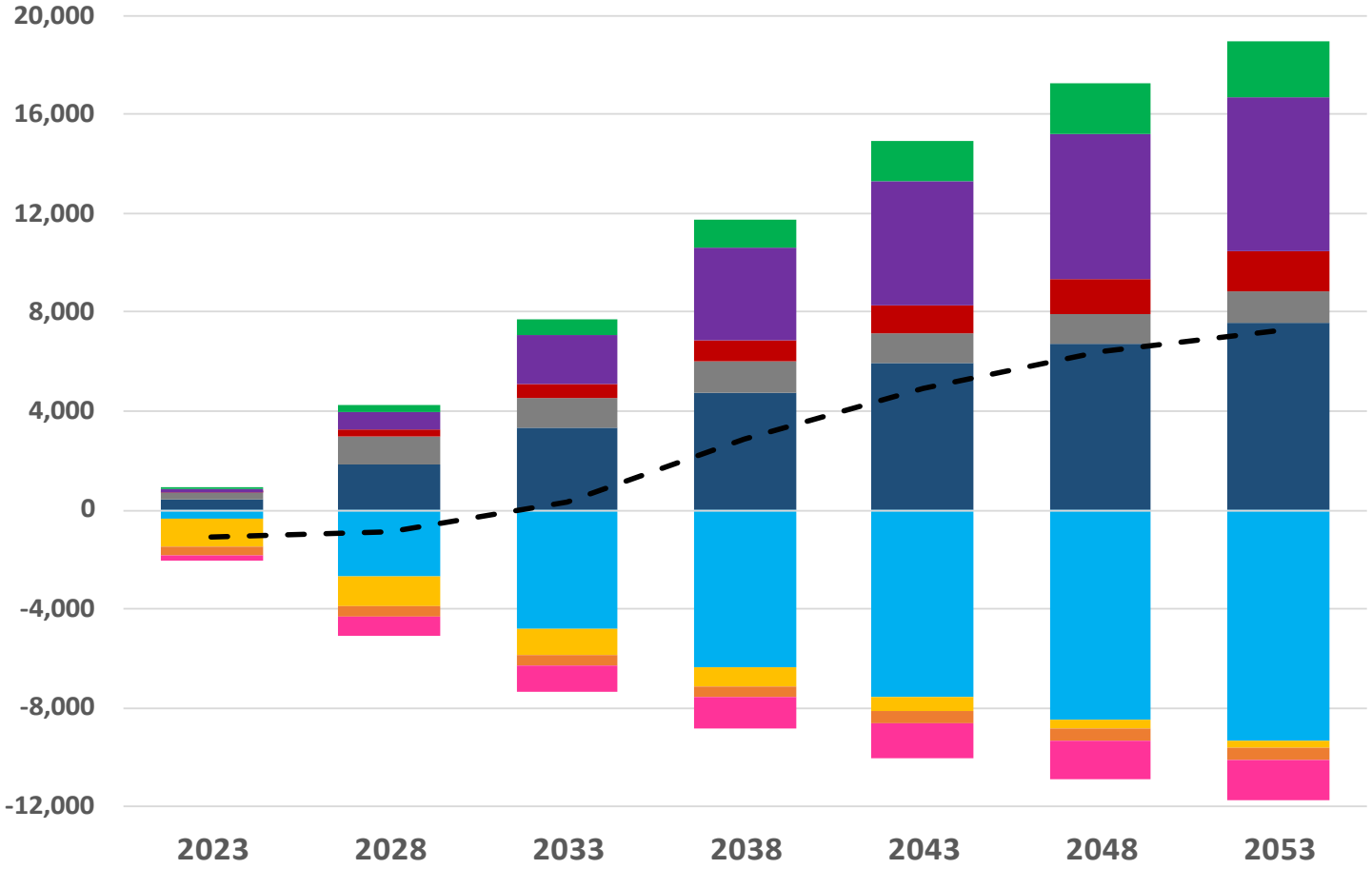
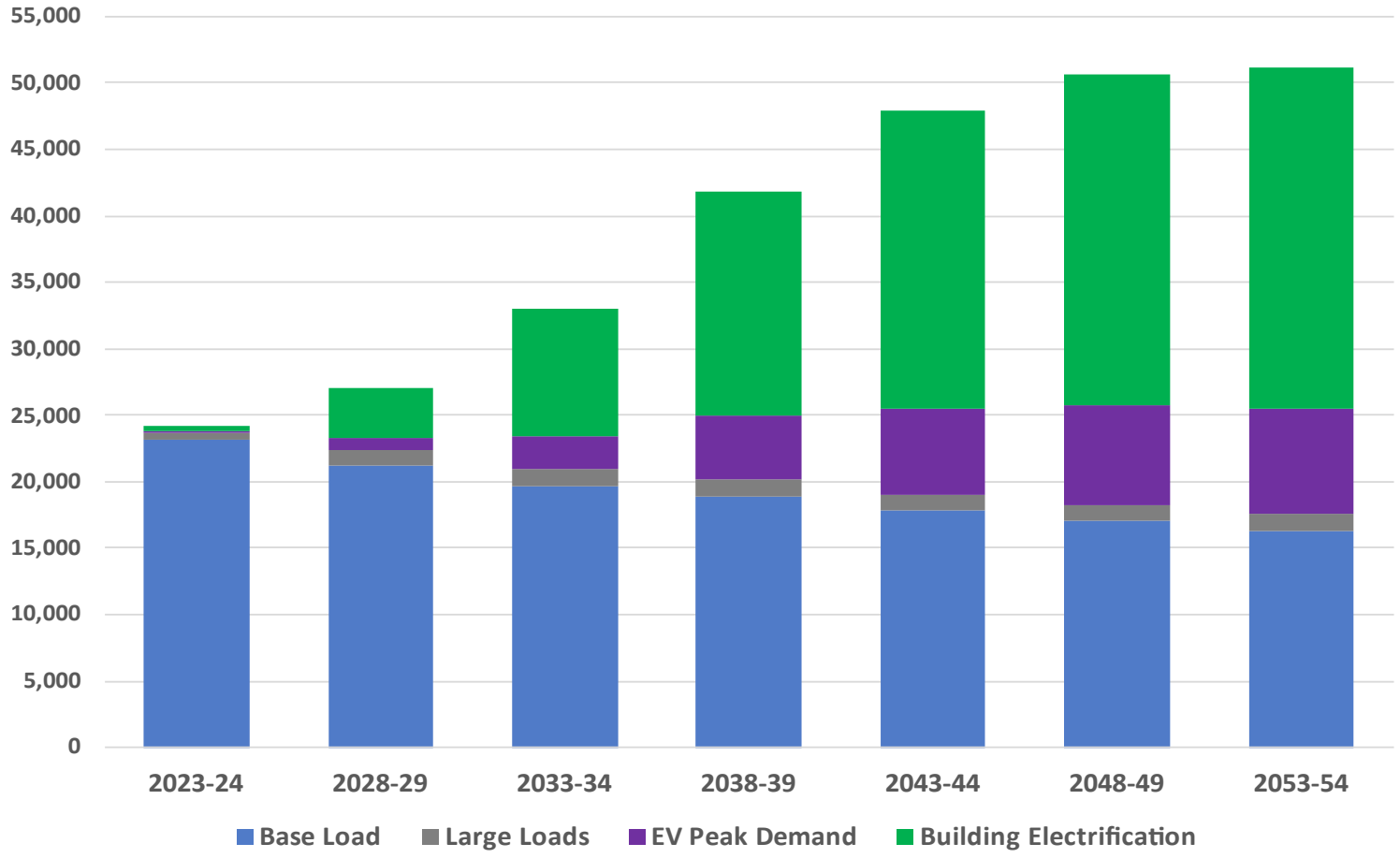
NYCA Summer Peak Estimated Forecast Impacts, MW



- Energy efficiency and economic growth impacts are generally endogenous to the end-use models, and reflect impacts relative to 2022

NYCA Winter Peak Demand Estimated Forecast Components (MW)



- Base load growth includes reductions due to BTM distributed generation, BTM energy storage, energy efficiency, and temperature trends.

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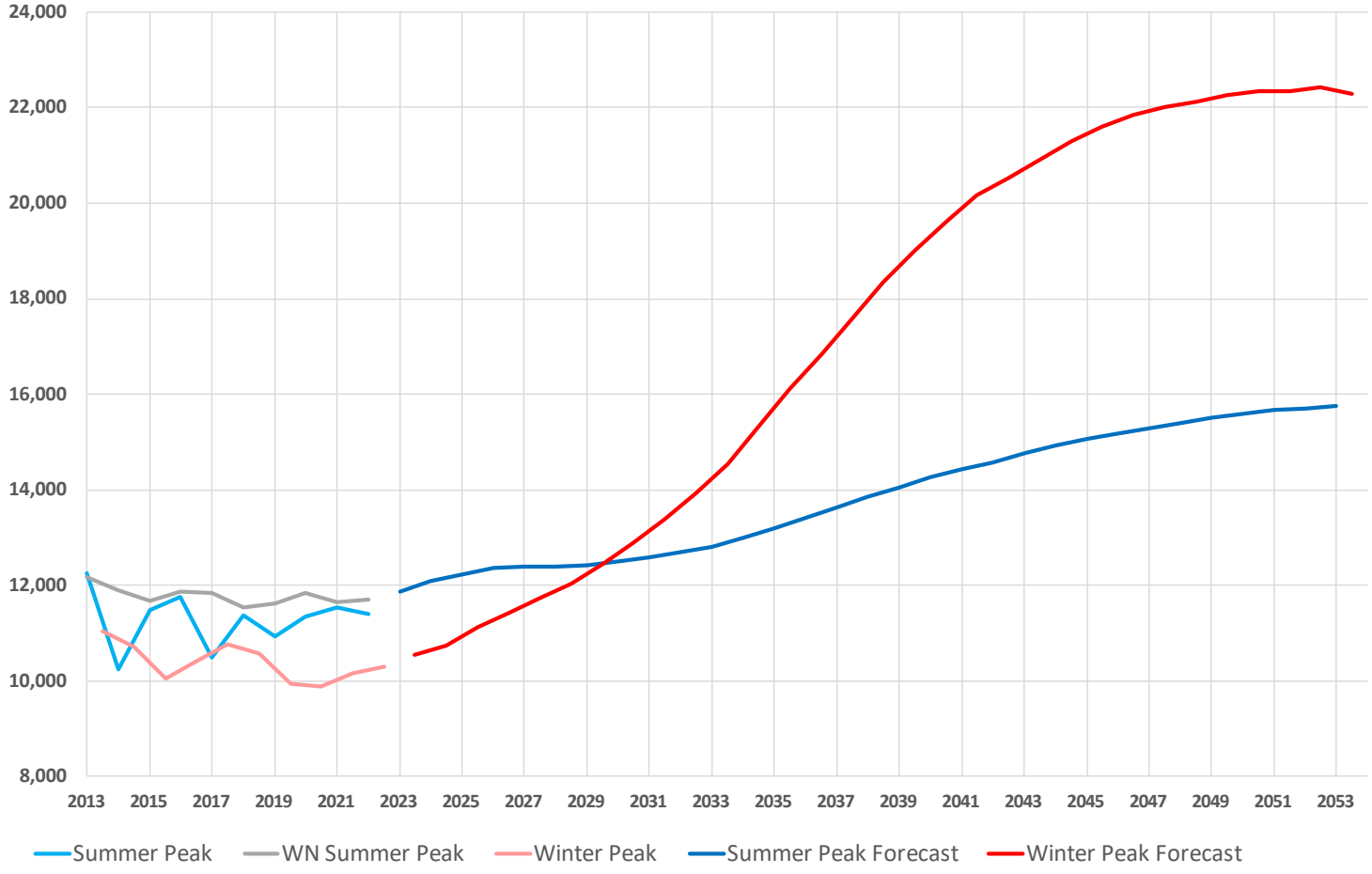
A to F Coincident Peak - MW



- Actual historical values reflect metered load.
- Weather normalized summer peak values from ICAP forecast process include demand response added back onto the load and reflect the adjusted load at design weather conditions. The Zones A to F design condition is the 50th percentile.
- Forecast values assume no reductions due to demand response and assume trended weather.

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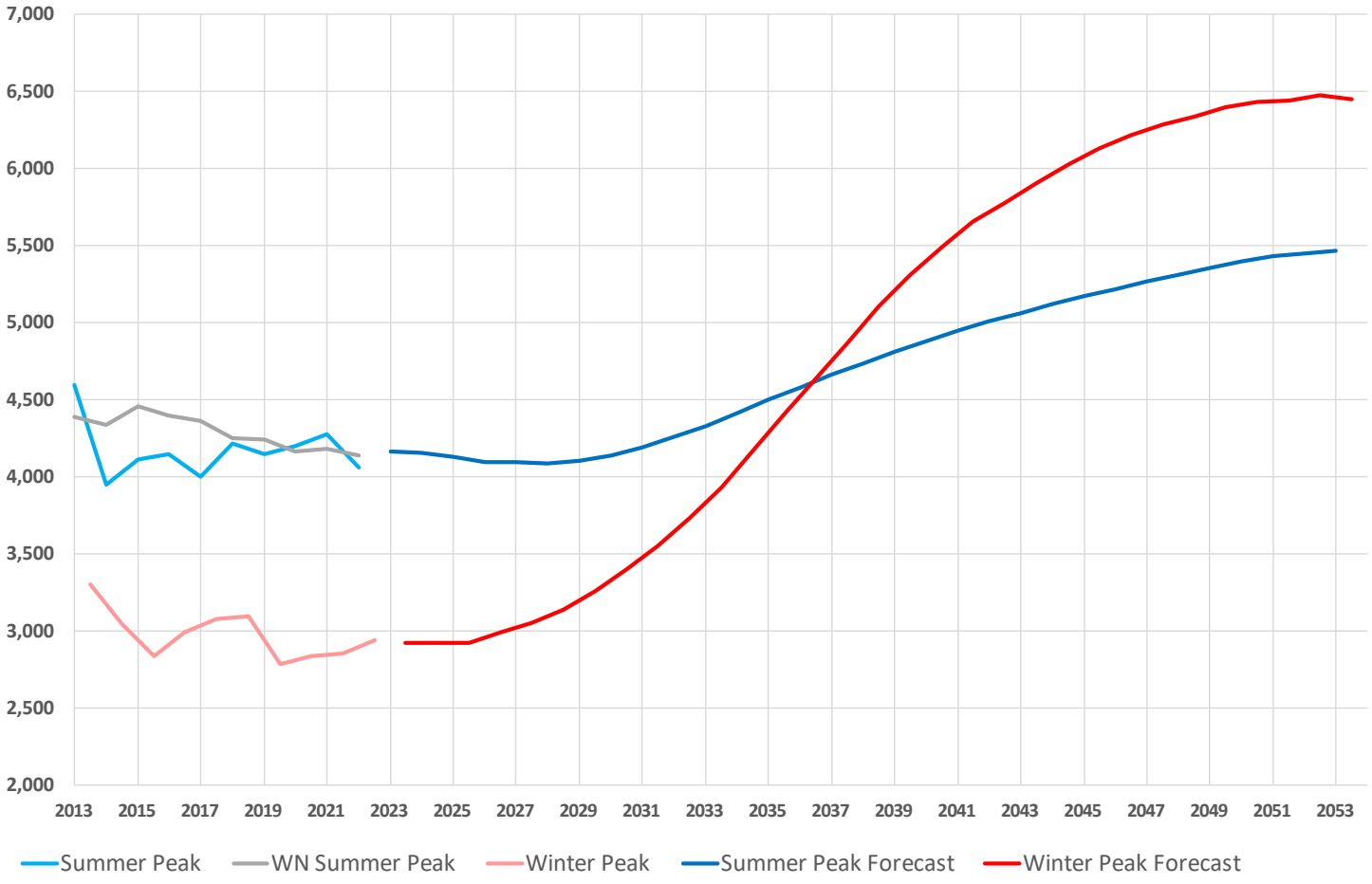
Zones GHI Coincident Peak - MW



- Actual historical values reflect metered load.
- Weather normalized summer peak values from ICAP forecast process include demand response added back onto the load and reflect the adjusted load at design weather conditions. The Zones G to I design conditions range from the 50th to 67th percentiles.
- Forecast values assume no reductions due to demand response and assume trended weather.

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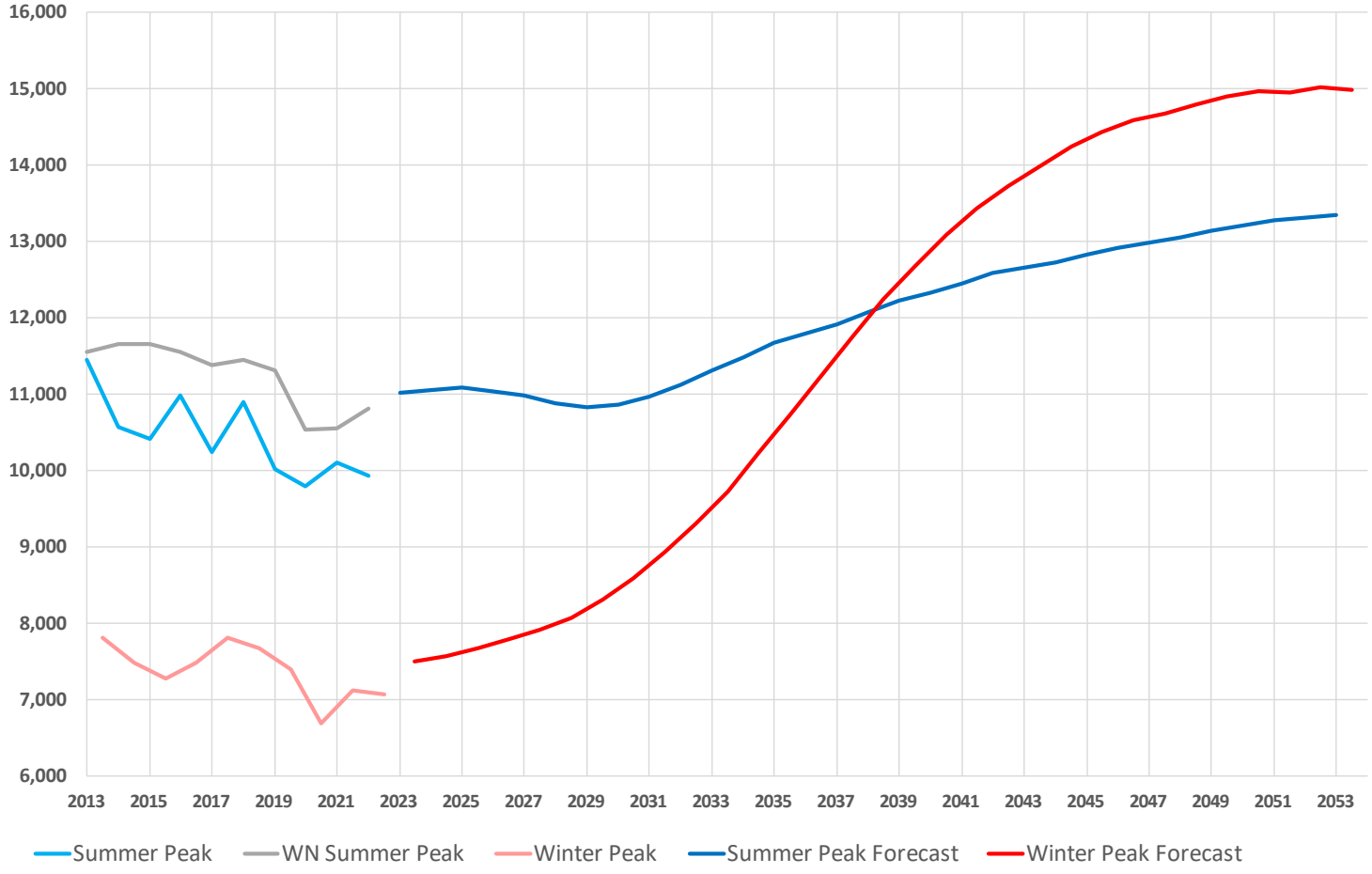
Zone J Coincident Peak - MW



- Actual historical values reflect metered load.
- Weather normalized summer peak values from ICAP forecast process include demand response added back onto the load and reflect the adjusted load at design weather conditions. The Zone J (Con Edison) design condition is the 67th percentile.
- Forecast values assume no reductions due to demand response and assume trended weather.

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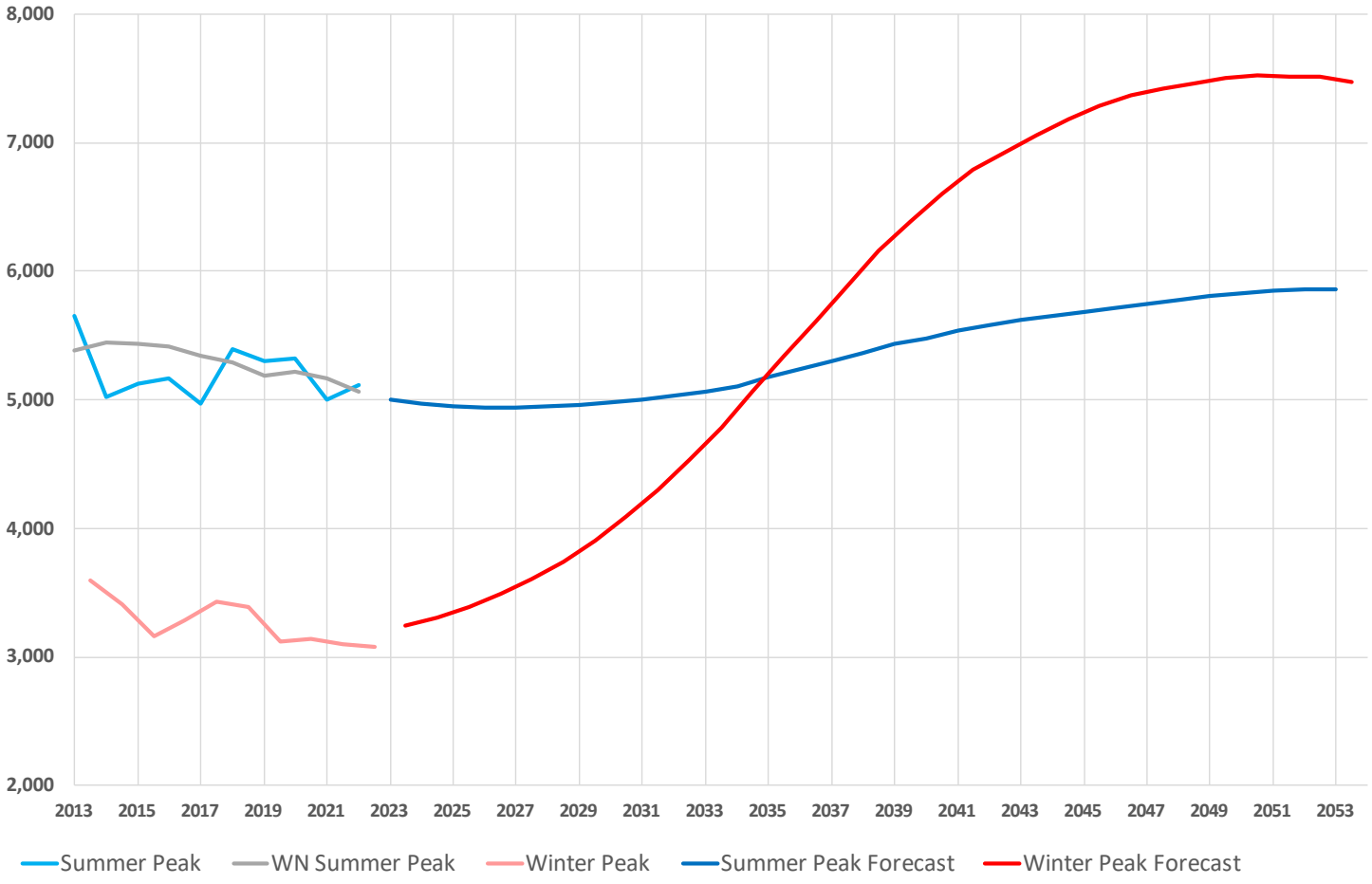
Zone K Coincident Peak - MW



- Actual historical values reflect metered load.
- Weather normalized summer peak values from ICAP forecast process include demand response added back onto the load and reflect the adjusted load at design weather conditions. The Zone K (LIPA) design condition is the 50th percentile.
- Forecast values assume no reductions due to demand response and assume trended weather.

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Additional Tables and Scenario Forecast Assumptions

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Table I-4a: Baseline Non-Coincident Summer Peak Demand by Zone - MW

Year	A	B	C	D	E	F	G	H	I	J	K
2023	2,774	2,037	2,762	709	1,425	2,449	2,193	633	1,424	11,239	5,082
2024	2,791	2,184	2,799	712	1,466	2,453	2,180	632	1,424	11,280	5,049
2025	2,778	2,187	2,953	710	1,460	2,456	2,156	628	1,423	11,300	5,032
2026	2,768	2,187	3,101	706	1,445	2,463	2,145	625	1,411	11,260	5,024
2027	2,758	2,186	3,127	745	1,425	2,470	2,147	624	1,404	11,200	5,020
2028	2,749	2,185	3,116	773	1,404	2,475	2,152	623	1,397	11,090	5,032
2029	2,740	2,191	3,097	802	1,402	2,490	2,168	625	1,390	11,040	5,043
2030	2,741	2,203	3,164	803	1,408	2,507	2,195	631	1,394	11,070	5,065
2031	2,746	2,222	3,187	804	1,420	2,527	2,227	638	1,408	11,190	5,085
2032	2,778	2,246	3,211	805	1,434	2,551	2,265	651	1,427	11,340	5,111
2033	2,809	2,269	3,236	806	1,446	2,573	2,303	663	1,452	11,530	5,147
2034	2,856	2,301	3,279	808	1,476	2,608	2,353	672	1,476	11,720	5,193
2035	2,902	2,332	3,324	812	1,507	2,650	2,401	678	1,508	11,900	5,264
2036	2,959	2,366	3,372	817	1,544	2,701	2,450	685	1,536	12,030	5,327
2037	3,014	2,399	3,425	823	1,580	2,744	2,497	693	1,563	12,140	5,387
2038	3,062	2,431	3,476	829	1,611	2,802	2,544	701	1,582	12,310	5,454
2039	3,105	2,460	3,516	832	1,639	2,845	2,584	710	1,610	12,460	5,521
2040	3,159	2,492	3,566	837	1,673	2,886	2,626	718	1,632	12,560	5,570
2041	3,199	2,519	3,592	840	1,698	2,936	2,661	724	1,658	12,690	5,627
2042	3,234	2,544	3,626	843	1,721	2,973	2,694	730	1,680	12,830	5,676
2043	3,276	2,567	3,669	847	1,748	3,013	2,727	735	1,701	12,910	5,713
2044	3,319	2,591	3,711	851	1,774	3,055	2,760	740	1,720	12,980	5,741
2045	3,350	2,612	3,738	853	1,794	3,088	2,794	744	1,733	13,080	5,781
2046	3,379	2,632	3,767	856	1,811	3,118	2,828	747	1,746	13,160	5,809
2047	3,406	2,650	3,793	858	1,828	3,148	2,860	751	1,758	13,230	5,843
2048	3,433	2,668	3,814	860	1,844	3,176	2,894	756	1,769	13,320	5,876
2049	3,457	2,686	3,834	862	1,858	3,203	2,924	759	1,780	13,390	5,903
2050	3,478	2,700	3,845	863	1,868	3,225	2,951	762	1,790	13,460	5,926
2051	3,496	2,713	3,863	864	1,877	3,245	2,976	765	1,799	13,530	5,943
2052	3,506	2,721	3,873	864	1,882	3,255	2,989	766	1,804	13,570	5,953
2053	3,514	2,727	3,883	865	1,885	3,265	3,000	767	1,808	13,600	5,960

Notes

2023 values match the 2023 ICAP forecast

NCP to CP ratios from 2023 ICAP forecast

2023 through 2033 values reflect the 2023 Gold Book Final Forecast

New York ISO

Table I-4b: Baseline Non-Coincident Winter Peak Demand by Zone - MW

Year	A	B	C	D	E	F	G	H	I	J	K
2023-24	2,152	1,689	2,668	906	1,332	1,896	1,550	511	891	7,580	3,255
2024-25	2,172	1,709	2,761	910	1,350	1,925	1,545	511	896	7,650	3,314
2025-26	2,211	1,779	2,964	912	1,373	1,976	1,542	512	904	7,740	3,401
2026-27	2,261	1,817	3,108	915	1,391	2,036	1,586	517	918	7,860	3,509
2027-28	2,306	1,867	3,170	961	1,415	2,107	1,623	525	933	7,990	3,623
2028-29	2,367	1,925	3,220	996	1,444	2,181	1,686	535	952	8,150	3,759
2029-30	2,434	1,999	3,315	1,036	1,486	2,283	1,760	552	980	8,380	3,924
2030-31	2,512	2,085	3,426	1,046	1,538	2,398	1,844	574	1,014	8,670	4,110
2031-32	2,601	2,183	3,527	1,058	1,599	2,526	1,939	597	1,053	9,010	4,317
2032-33	2,721	2,295	3,641	1,070	1,667	2,668	2,049	625	1,100	9,400	4,554
2033-34	2,851	2,414	3,756	1,085	1,740	2,819	2,165	655	1,150	9,820	4,802
2034-35	3,034	2,568	3,922	1,102	1,840	2,983	2,310	682	1,215	10,310	5,082
2035-36	3,226	2,725	4,091	1,118	1,945	3,153	2,461	711	1,284	10,830	5,364
2036-37	3,391	2,875	4,230	1,131	2,035	3,305	2,596	735	1,352	11,340	5,637
2037-38	3,575	3,029	4,390	1,147	2,137	3,471	2,742	763	1,420	11,870	5,915
2038-39	3,752	3,178	4,543	1,161	2,230	3,631	2,883	789	1,486	12,360	6,184
2039-40	3,911	3,310	4,684	1,174	2,317	3,773	3,008	812	1,542	12,790	6,416
2040-41	4,055	3,434	4,818	1,185	2,395	3,906	3,123	831	1,594	13,200	6,631
2041-42	4,184	3,543	4,927	1,194	2,465	4,022	3,223	847	1,640	13,550	6,816
2042-43	4,265	3,623	4,988	1,201	2,509	4,102	3,298	860	1,677	13,840	6,952
2043-44	4,360	3,703	5,077	1,207	2,560	4,190	3,379	873	1,712	14,120	7,088
2044-45	4,448	3,778	5,147	1,214	2,607	4,272	3,456	883	1,744	14,370	7,215
2045-46	4,522	3,838	5,210	1,219	2,648	4,343	3,528	892	1,770	14,560	7,318
2046-47	4,582	3,888	5,267	1,224	2,681	4,402	3,585	901	1,793	14,720	7,400
2047-48	4,619	3,919	5,293	1,227	2,704	4,440	3,631	906	1,807	14,810	7,449
2048-49	4,642	3,945	5,312	1,228	2,715	4,470	3,665	908	1,823	14,920	7,489
2049-50	4,676	3,976	5,335	1,230	2,734	4,505	3,708	913	1,837	15,030	7,535
2050-51	4,696	3,992	5,350	1,229	2,744	4,527	3,737	915	1,845	15,090	7,555
2051-52	4,696	3,993	5,350	1,231	2,742	4,532	3,749	913	1,844	15,080	7,539
2052-53	4,710	4,007	5,364	1,230	2,748	4,549	3,770	915	1,851	15,150	7,546
2053-54	4,679	3,990	5,326	1,228	2,731	4,526	3,760	909	1,847	15,110	7,503

Note

2023-24 through 2033-34 values reflect the 2023 Gold Book Final Forecast

New York ISO

Table I-5: Baseline Peak Demand in G-to-J Locality

G-to-J Locality Summer Peak Demand by Zone - MW

Year	G	H	I	J	G-J
2023	2,178	629	1,416	11,170	15,393
2024	2,165	628	1,416	11,207	15,416
2025	2,142	624	1,415	11,227	15,408
2026	2,131	621	1,402	11,187	15,341
2027	2,133	620	1,395	11,126	15,274
2028	2,138	619	1,388	11,025	15,170
2029	2,153	621	1,381	10,974	15,129
2030	2,181	627	1,385	11,004	15,197
2031	2,212	634	1,399	11,116	15,361
2032	2,250	646	1,419	11,268	15,583
2033	2,288	659	1,443	11,460	15,850
2034	2,338	668	1,467	11,643	16,116
2035	2,385	674	1,499	11,825	16,383
2036	2,434	681	1,526	11,957	16,598
2037	2,481	689	1,553	12,068	16,791
2038	2,527	697	1,573	12,231	17,028
2039	2,567	705	1,600	12,383	17,255
2040	2,608	713	1,622	12,484	17,427
2041	2,644	719	1,648	12,616	17,627
2042	2,676	726	1,670	12,747	17,819
2043	2,709	731	1,690	12,828	17,958
2044	2,742	736	1,709	12,899	18,086
2045	2,775	740	1,723	13,001	18,239
2046	2,809	743	1,735	13,082	18,369
2047	2,841	747	1,747	13,153	18,488
2048	2,875	751	1,758	13,234	18,618
2049	2,904	754	1,769	13,305	18,732
2050	2,931	757	1,779	13,376	18,843
2051	2,956	760	1,787	13,446	18,949
2052	2,969	761	1,793	13,487	19,010
2053	2,980	762	1,797	13,517	19,056

G-to-J Locality Winter Peak Demand by Zone - MW

Year	G	H	I	J	G-J
2023-24	1,536	498	881	7,555	10,470
2024-25	1,531	498	886	7,625	10,540
2025-26	1,528	499	894	7,716	10,637
2026-27	1,572	504	908	7,837	10,821
2027-28	1,609	512	923	7,968	11,012
2028-29	1,671	522	942	8,128	11,263
2029-30	1,745	539	969	8,360	11,613
2030-31	1,827	560	1,003	8,642	12,032
2031-32	1,922	583	1,042	8,984	12,531
2032-33	2,031	610	1,088	9,376	13,105
2033-34	2,146	639	1,137	9,788	13,710
2034-35	2,289	665	1,202	10,281	14,437
2035-36	2,439	693	1,270	10,794	15,196
2036-37	2,573	717	1,337	11,307	15,934
2037-38	2,718	744	1,405	11,831	16,698
2038-39	2,857	770	1,470	12,324	17,421
2039-40	2,981	792	1,525	12,756	18,054
2040-41	3,095	811	1,577	13,158	18,641
2041-42	3,195	827	1,622	13,511	19,155
2042-43	3,268	839	1,659	13,802	19,568
2043-44	3,349	852	1,693	14,074	19,968
2044-45	3,425	862	1,725	14,325	20,337
2045-46	3,496	871	1,751	14,517	20,635
2046-47	3,553	878	1,773	14,678	20,882
2047-48	3,599	883	1,787	14,768	21,037
2048-49	3,633	885	1,803	14,879	21,200
2049-50	3,675	890	1,817	14,989	21,371
2050-51	3,704	892	1,825	15,050	21,471
2051-52	3,716	890	1,824	15,040	21,470
2052-53	3,737	892	1,831	15,100	21,560
2053-54	3,727	886	1,827	15,070	21,510

Notes

Summer 2023 values match the 2023 ICAP forecast

Summer NCP to CP ratios from 2023 ICAP forecast

2023 through 2033-34 values reflect the 2023 Gold Book Final Forecast

New York ISO

Load Scenario Summary

Forecast Component	Baseline Forecast	Lower Demand Policy Scenario	Higher Demand Policy Scenario
Weather Trends	Trended weather from NYISO Climate Change Impact Study - average NYCA temperature gain of approximately 0.7 degrees Fahrenheit per decade	Same as Baseline Forecast	Same as Baseline Forecast
Economic Assumptions	Baseline economic forecast - expected economic growth in the long run. Declining population and households in later forecast years - statewide population of under 18 million in 2050	Same as Baseline Forecast	Increase in population and households over the forecast horizon - statewide population of over 20 million in 2050
Energy Efficiency (Table I-8)	Significant energy savings and peak reductions due to energy efficiency programs, codes & standards improvements, and building shell upgrades	Very significant energy savings and peak reductions due to energy efficiency programs, codes & standards improvements, and building shell upgrades, reflecting full achievement of State policy targets	Very significant energy savings and peak reductions due to energy efficiency programs, codes & standards improvements, and building shell upgrades, reflecting full achievement of State policy targets

Forecast Component	Baseline Forecast	Lower Demand Policy Scenario	Higher Demand Policy Scenario
BTM Solar PV (Table I-9)	Baseline BTM solar - 6,000 MW DC installed nameplate capacity by 2024, and 10,000 MW DC installed by 2030, and over 13,000 MW DC installed in 2050	Increased solar growth relative to baseline after 2030. Over 15,000 MW DC installed in 2050	Same as Baseline Forecast
BTM Non-Solar DG (Table I-10)	Total of more than 600 MW installed non-solar BTM DG nameplate capacity in 2040. No assumption of future entry of resources into the wholesale DER market	Same as Baseline Forecast	Same as Baseline Forecast
Electric Vehicles (Table I-11)	85% LDV EV sales saturation in 2035, reaching 90% by 2040. Over 6 million EVs (passenger vehicles, trucks and buses) on the road in 2040. Increasing share of managed charging over time	90% LDV EV sales saturation by 2035. Over 6 million EVs on the road in 2040. Reduced peak load impact due to increased managed charging and improved battery efficiency trends	100% LDV EV sales saturation by 2035. Over 7 million EVs on the road in 2040. Decreased share of managed charging relative to the baseline forecast
BTM Energy Storage (Table I-12)	Over 1,000 MW installed BTM nameplate capacity by 2030, with over 2,000 MW installed by 2045. Does not include wholesale storage resources which are expected to contribute significantly to State policy targets	Same as Baseline Forecast	Same as Baseline Forecast

Forecast Component	Baseline Forecast	Lower Demand Policy Scenario	Higher Demand Policy Scenario
Building Electrification (Table I-13)	Significant electrification of space heating and other end uses. 60% saturation of primary residential electric heating by 2050, including air source and ground source heat pumps, and electric resistance heating: * 27% full capacity ASHP * 10% ASHP with supplemental electric heat * 10% ASHP with backup fossil heat * 8% primary electric resistance heat * 5% GSHP * 40% primary fossil fuel heating	Very high saturation of electrific space heating and other end uses. 90% saturation of residential electric heating by 2050. Increased share of air source heat pumps relative to the baseline forecast: * 50% full capacity ASHP * 20% ASHP with supplemental electric heat * 5% ASHP with backup fossil heat * 10% primary electric resistance heat * 5% GSHP * 10% primary fossil fuel heating	Very high saturation of electric space heating and other end uses. 90% saturation of residential electric heating by 2050: * 40% full capacity ASHP * 25% ASHP with supplemental electric heat * 5% ASHP with backup fossil heat * 15% primary electric resistance heat * 5% GSHP * 10% primary fossil fuel heating
Large Loads (Table I-14)	Expected load growth from large load projects in the NYISO IQ, along with impacts from significant projects not in the queue	Same as Baseline Forecast	Additional load growth from large load projects beyond that included in the baseline forecast
Electrolysis (Hydrogen Production)	No electrolysis	Sufficient hydrogen production to meet demand for non-EV Zero Emissions Vehicles (100% ZEV LDV by 2035). No peak load impact	Climate Action Council Intergration Analysis Scenario 2 electrolysis forecast. Over 40,000 GWh annual energy impact in 2050. No peak load impact

Questions?

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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