



2016 Long Term Forecast

Arthur Maniaci

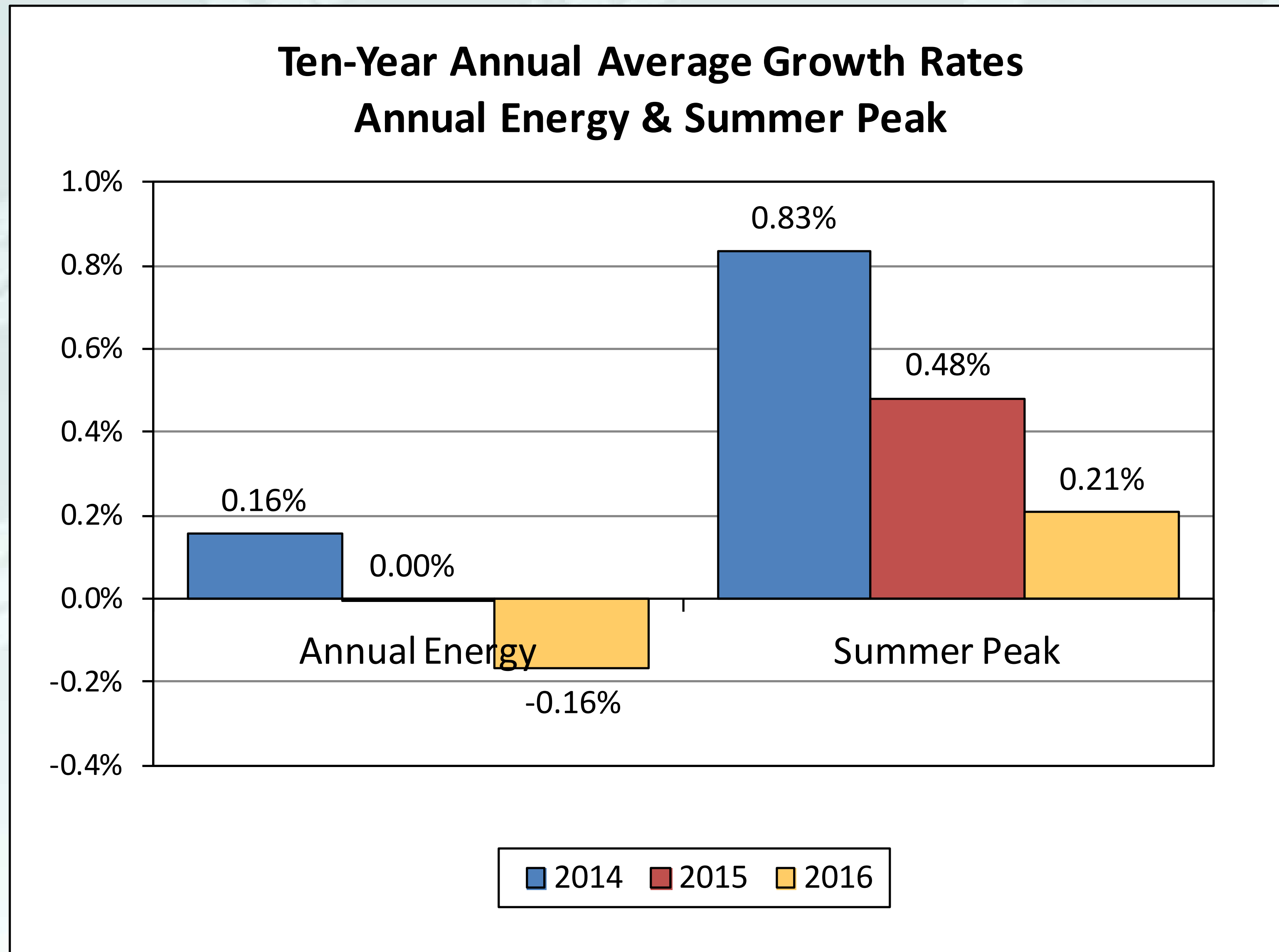
System & Resource Planning

Load Forecasting Task Force

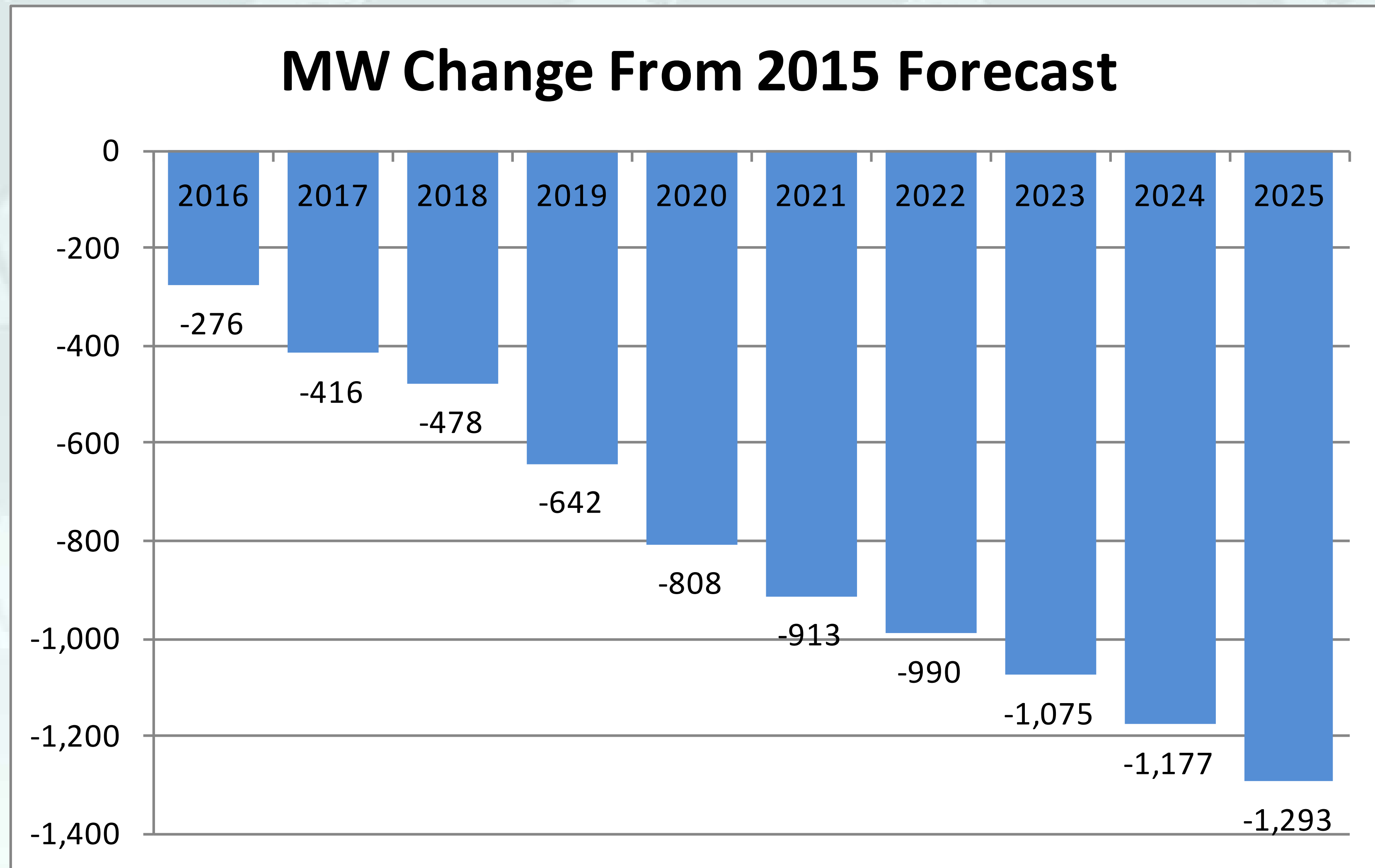
May 11

KCC

Growth Rates Continue to Decline



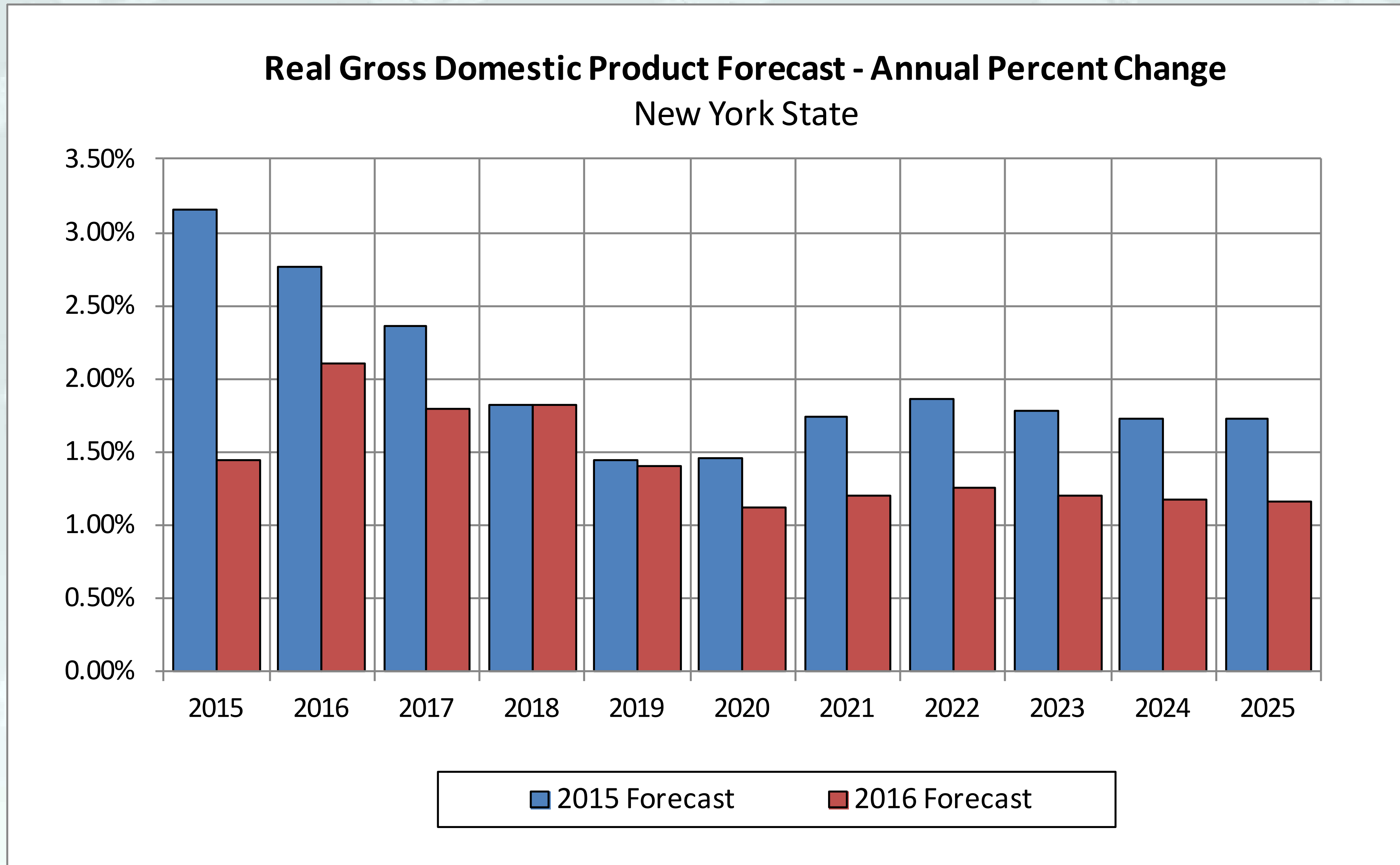
Change in Summer Coincident Peak From 2015 Forecast



Principal Factors Affecting the 2016 Forecast

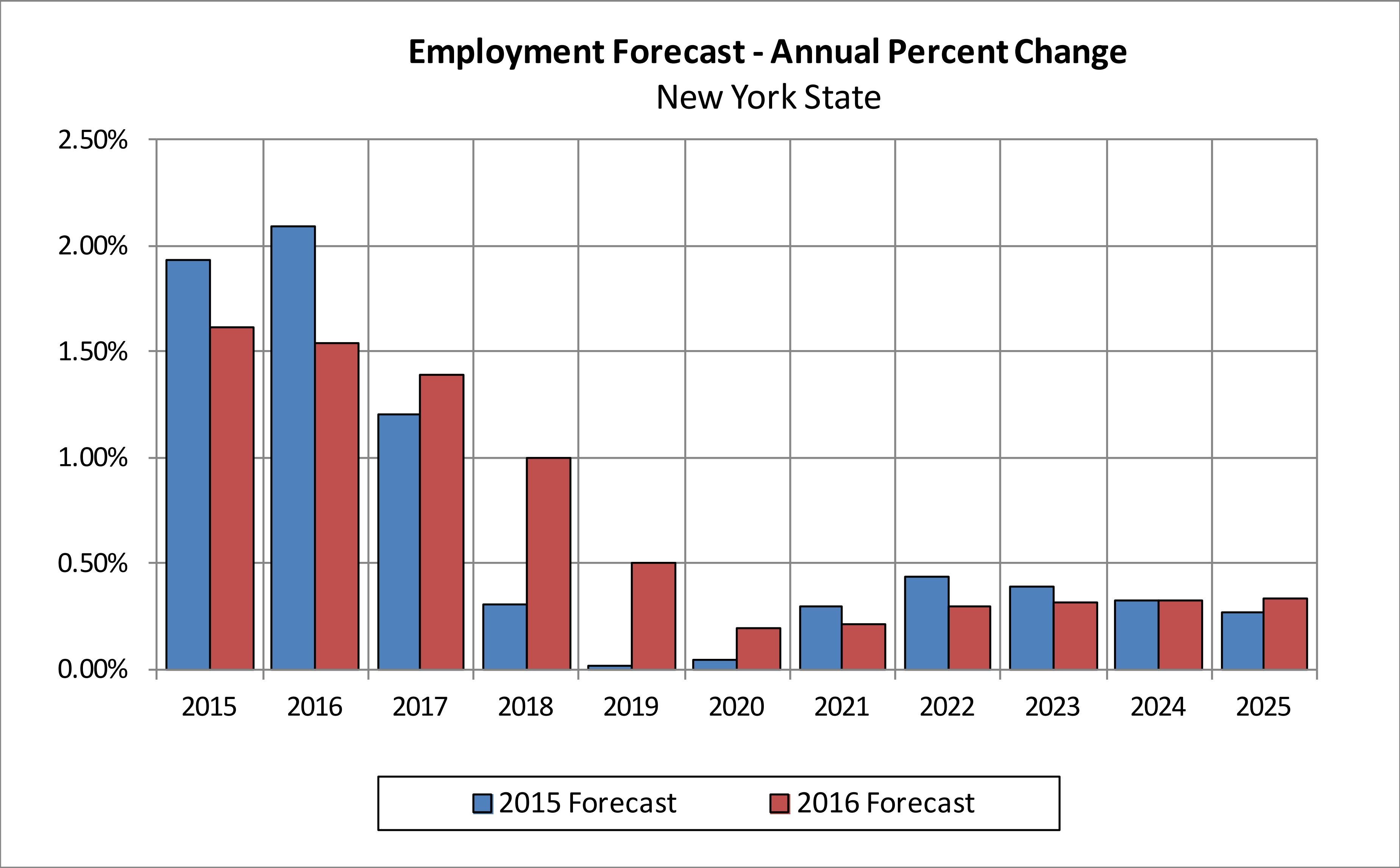
- **Slower peak growth downstate in 2016 compared to 2015.**
- **Slower economic growth after 2020, based on Moody's current outlook.**
- **Higher impacts of Clean Energy Fund & New York Sun Initiative after 2020, based on most recent information on each program and 50x30 plan.**

GDP Growth Projections, 2015 & 2016



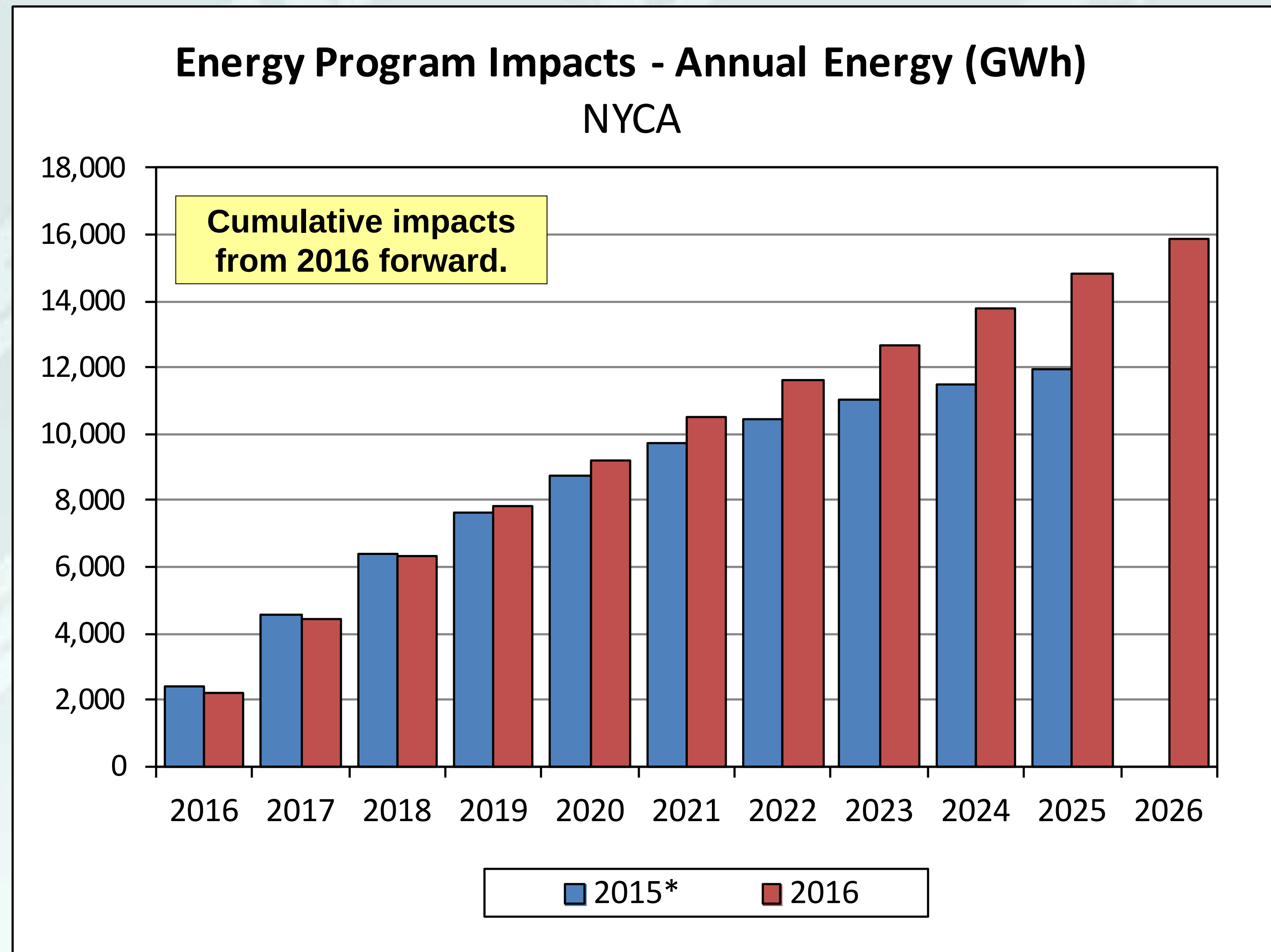
Economic projections from Moodys Analytics

Employment Growth Projections, 2015 & 2016



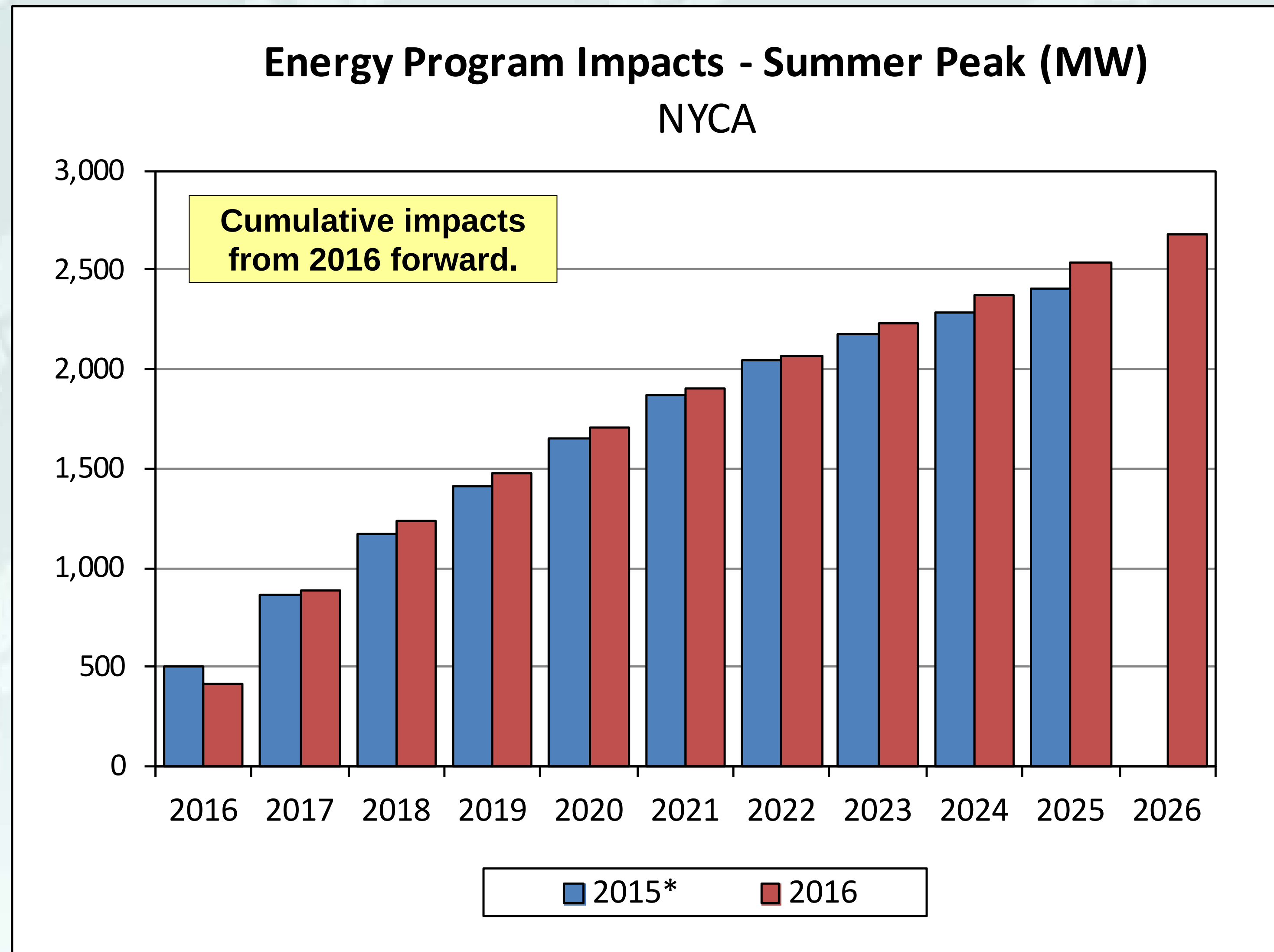
Economic projections from Moodys Analytics

Increased Energy Impact of State Programs



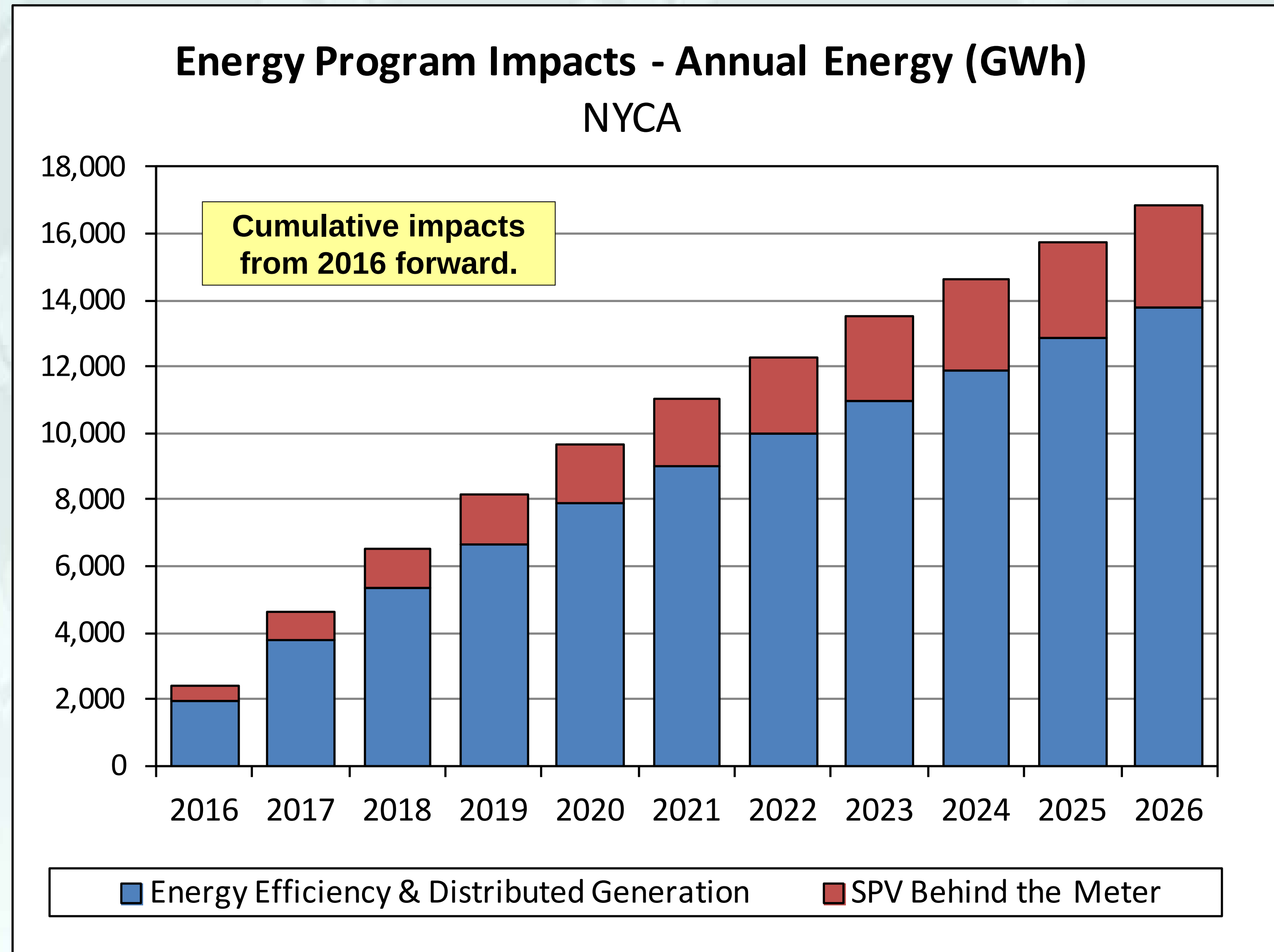
* Cumulative impacts for 2015 begin in 2016 for comparison.

Increased Peak Impact of State Programs

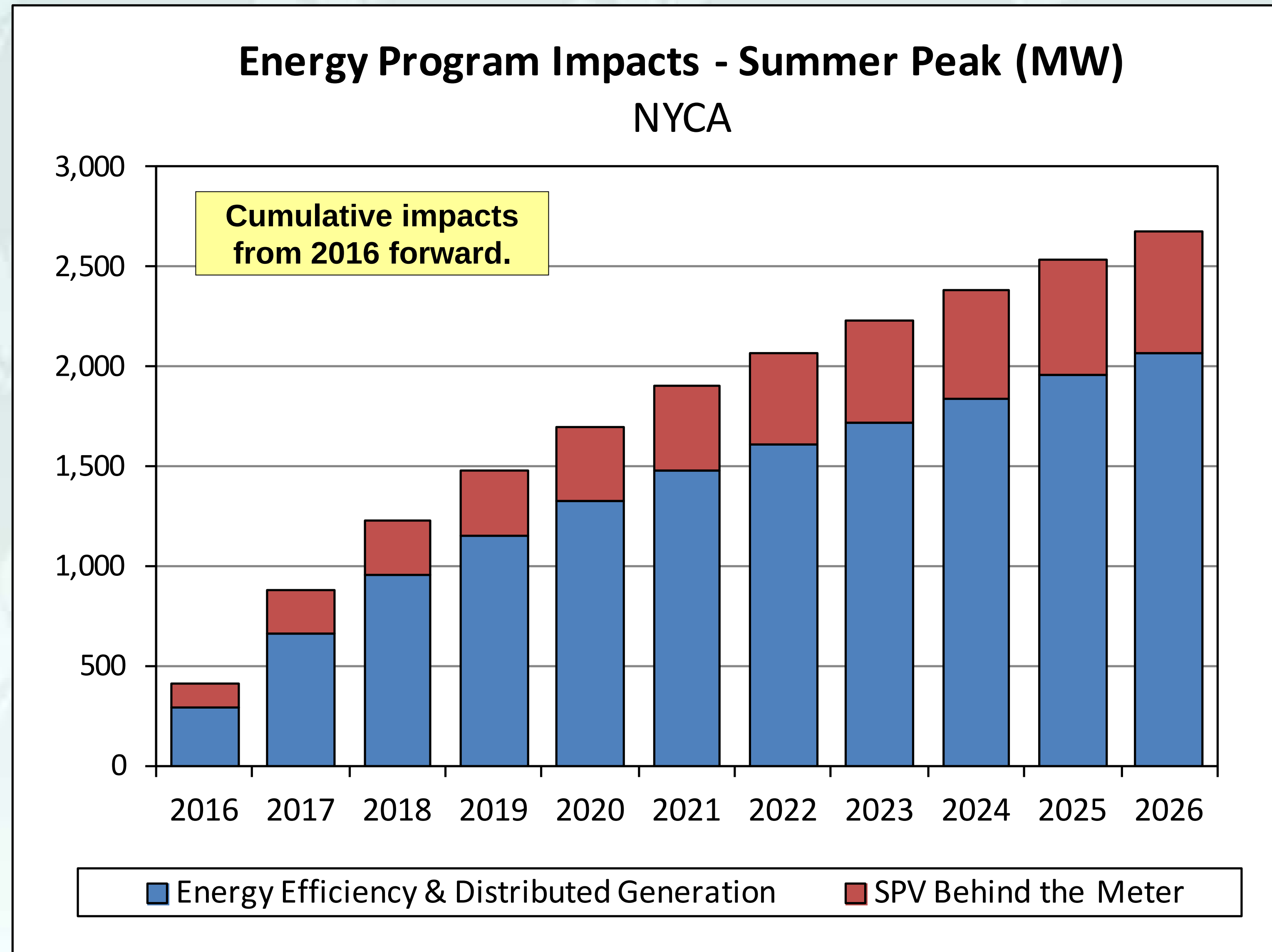


* Cumulative impacts for 2015 begin in 2016 for comparison.

Energy Impacts From Energy Efficiency, Distributed Generation & Solar PV Behind the Meter

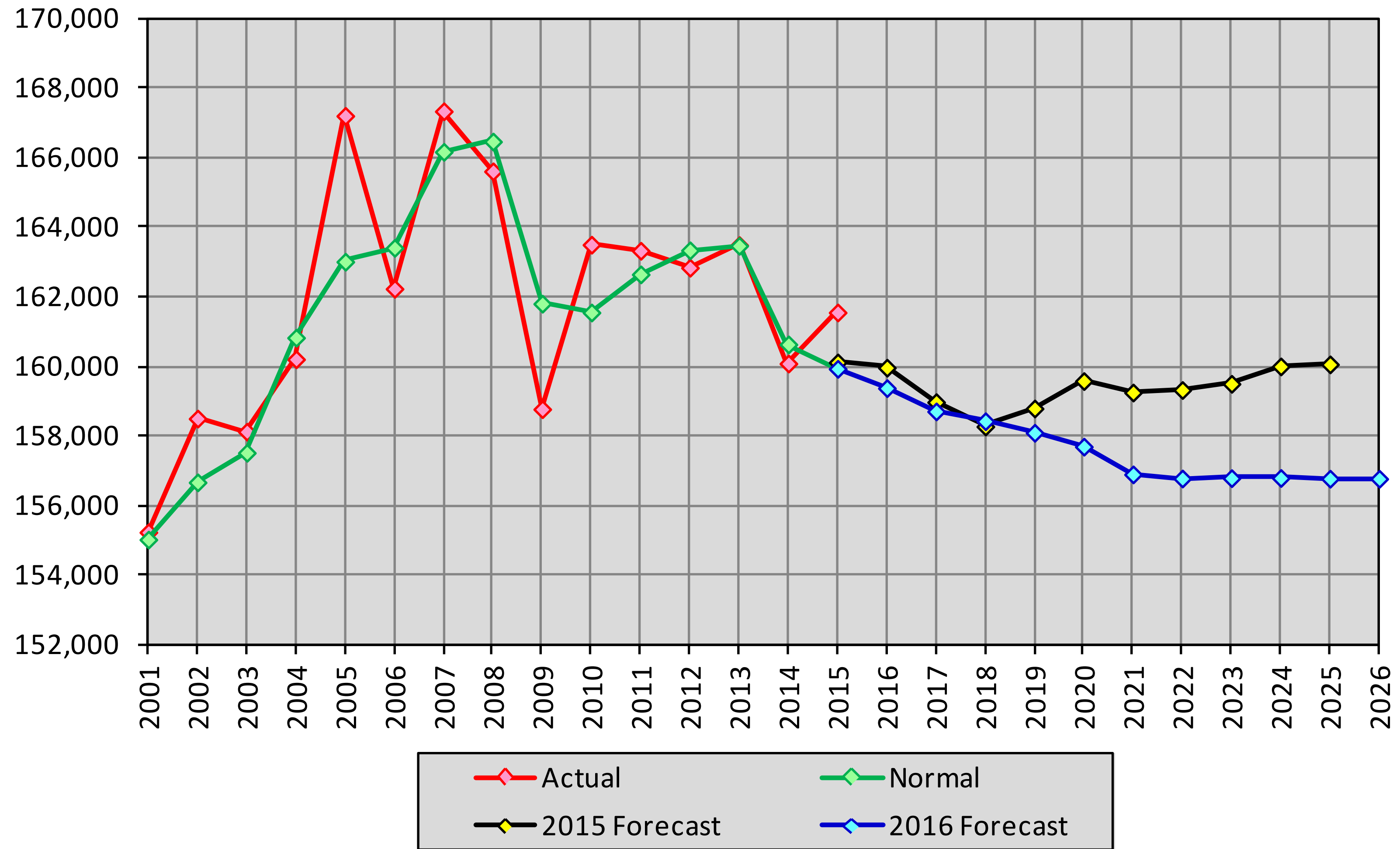


Summer Peak Impacts From Energy Efficiency, Distributed Generation & Solar PV Behind the Meter



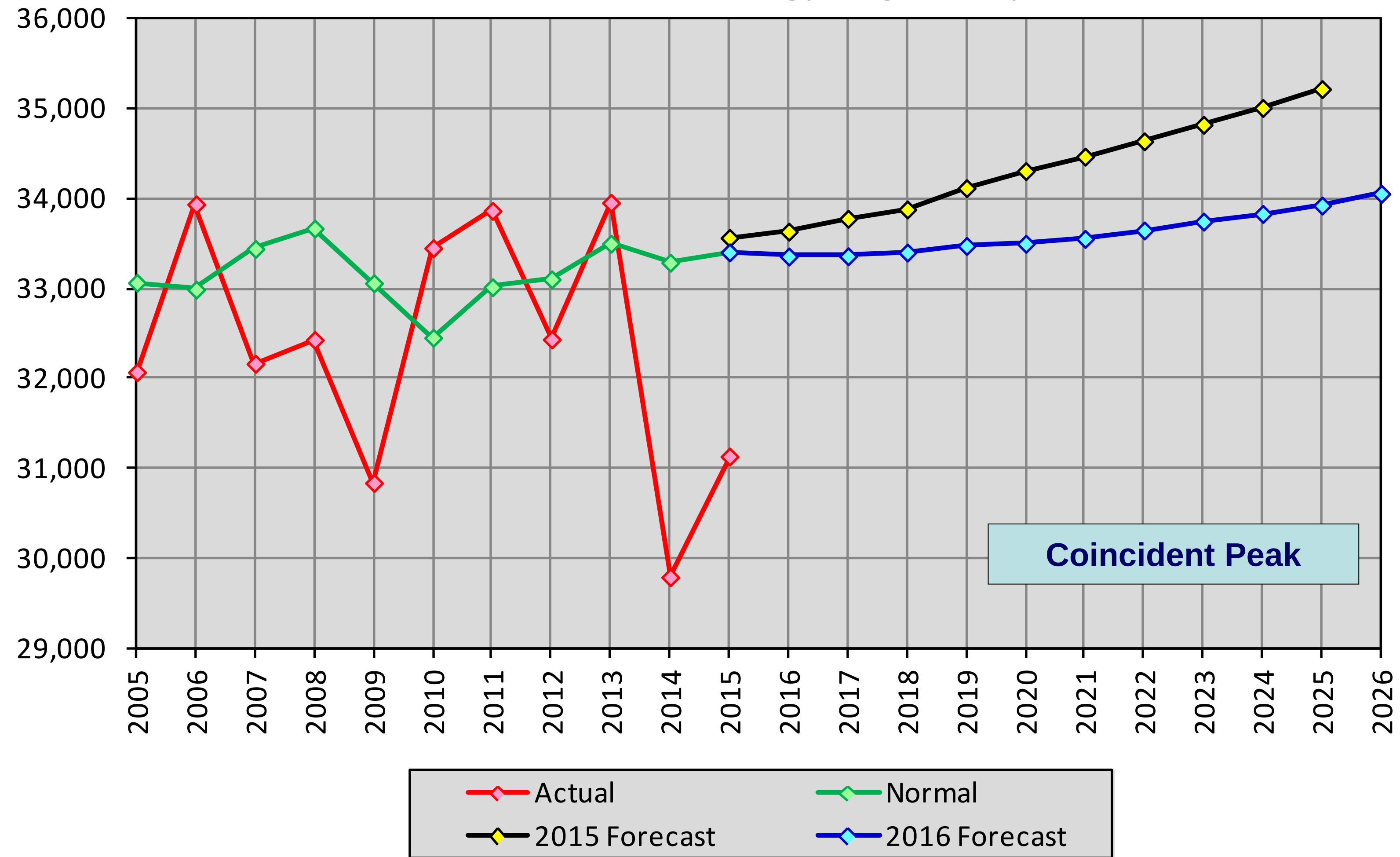
Actual, Normal and Forecast - Annual Energy (GWh)

NYCA Base Case - With Energy Program Impacts



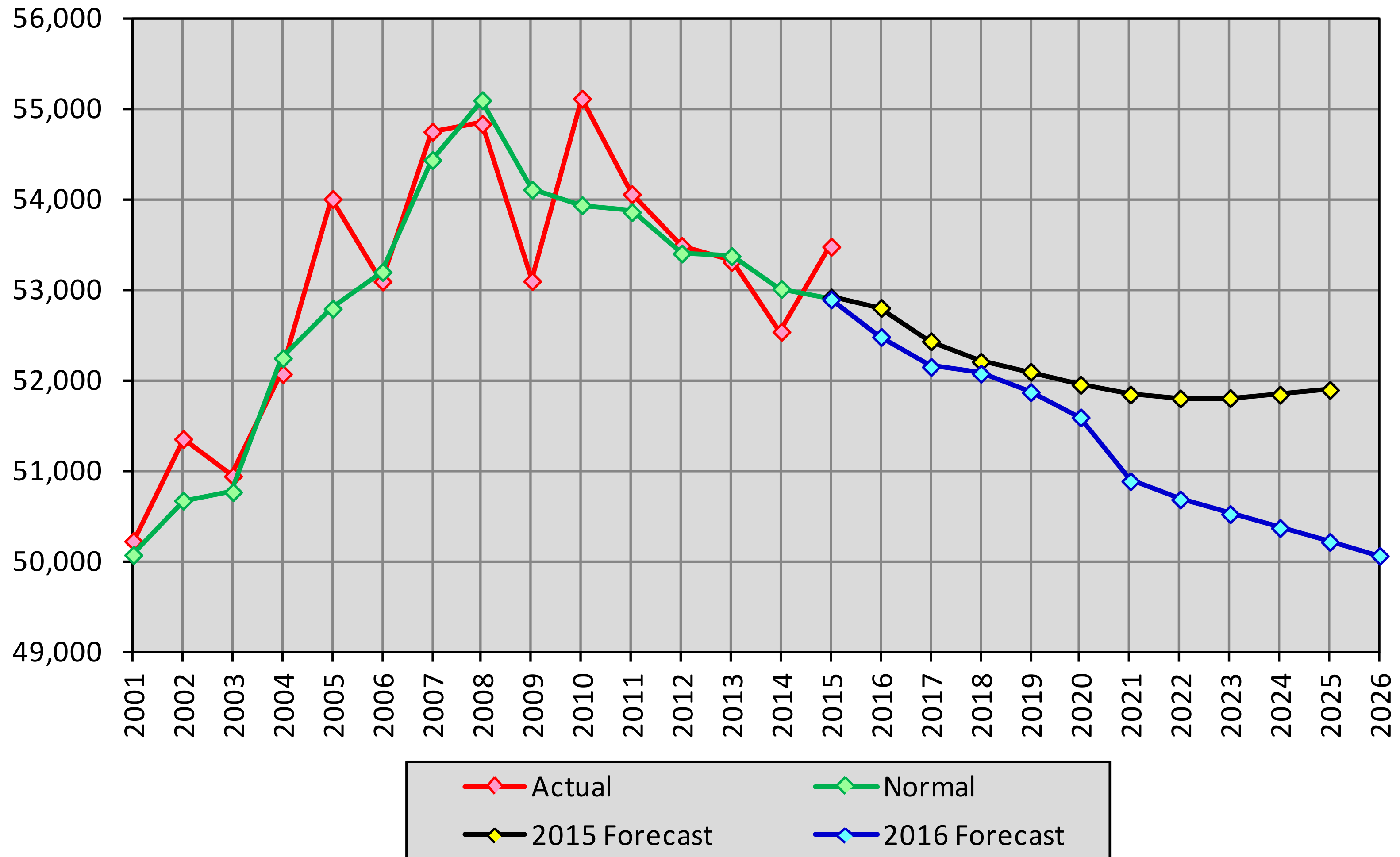
Actual, Normal and Forecast - Summer Peak (MW)

NYCA Base Case - With Energy Program Impacts



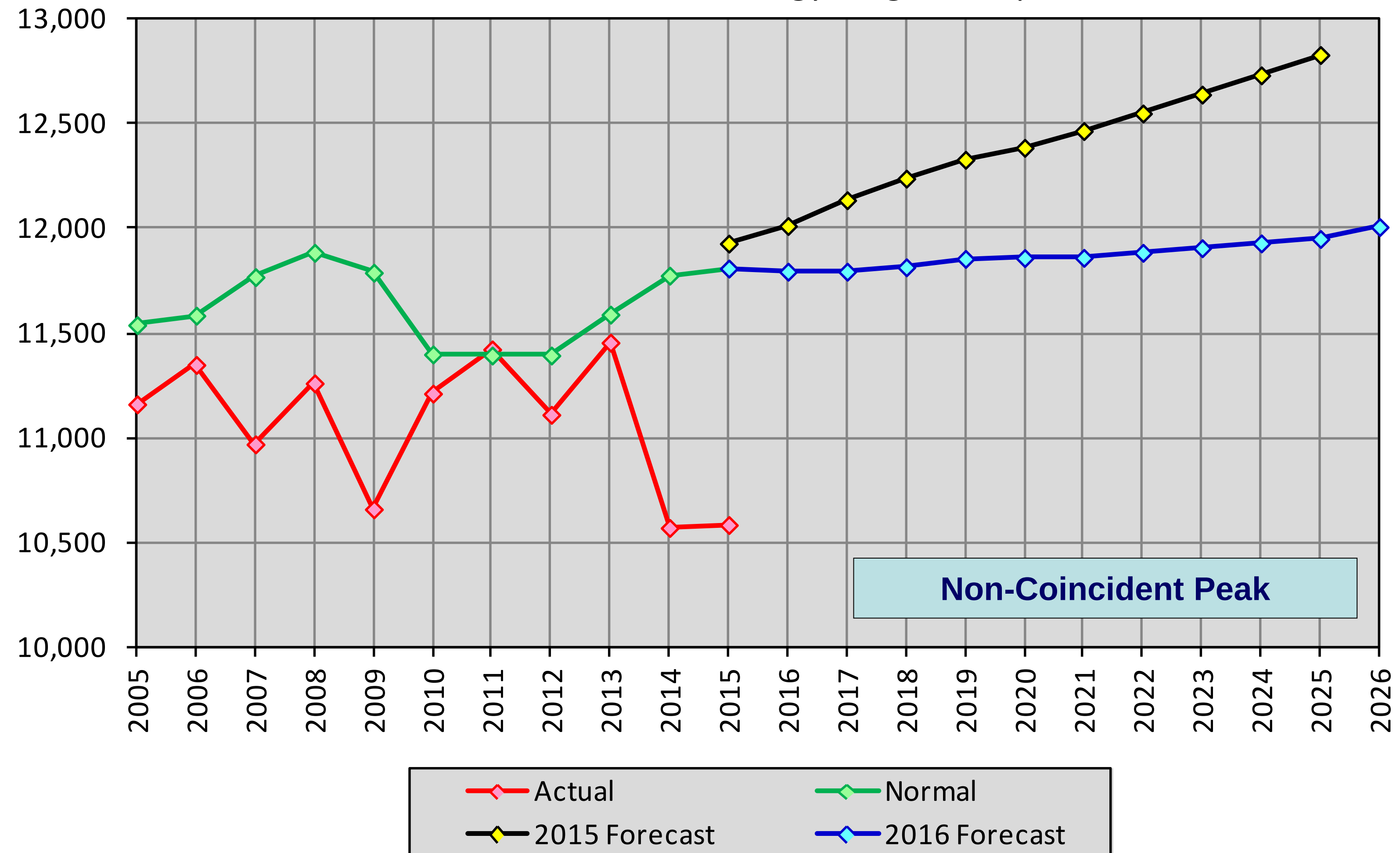
Actual, Normal and Forecast - Annual Energy (GWh)

Zone J Base Case - With Energy Program Impacts



Actual, Normal and Forecast - Summer Peak (MW)

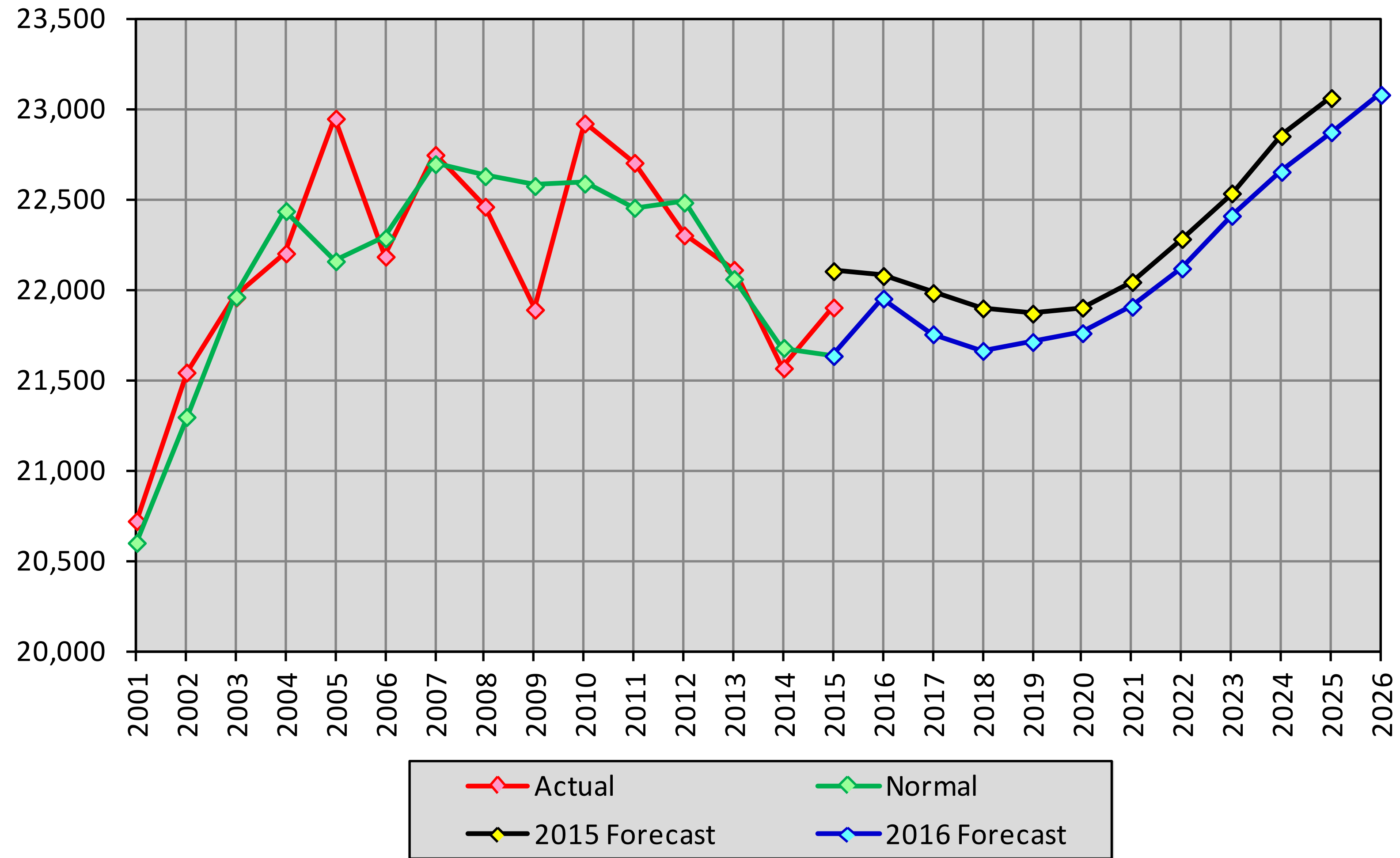
Zone J Base Case - With Energy Program Impacts



Note: The Zone J peak design criteria is 1-in-3, which is why it's normal values are all greater than actual. The typical design criteria is 1-in-2.

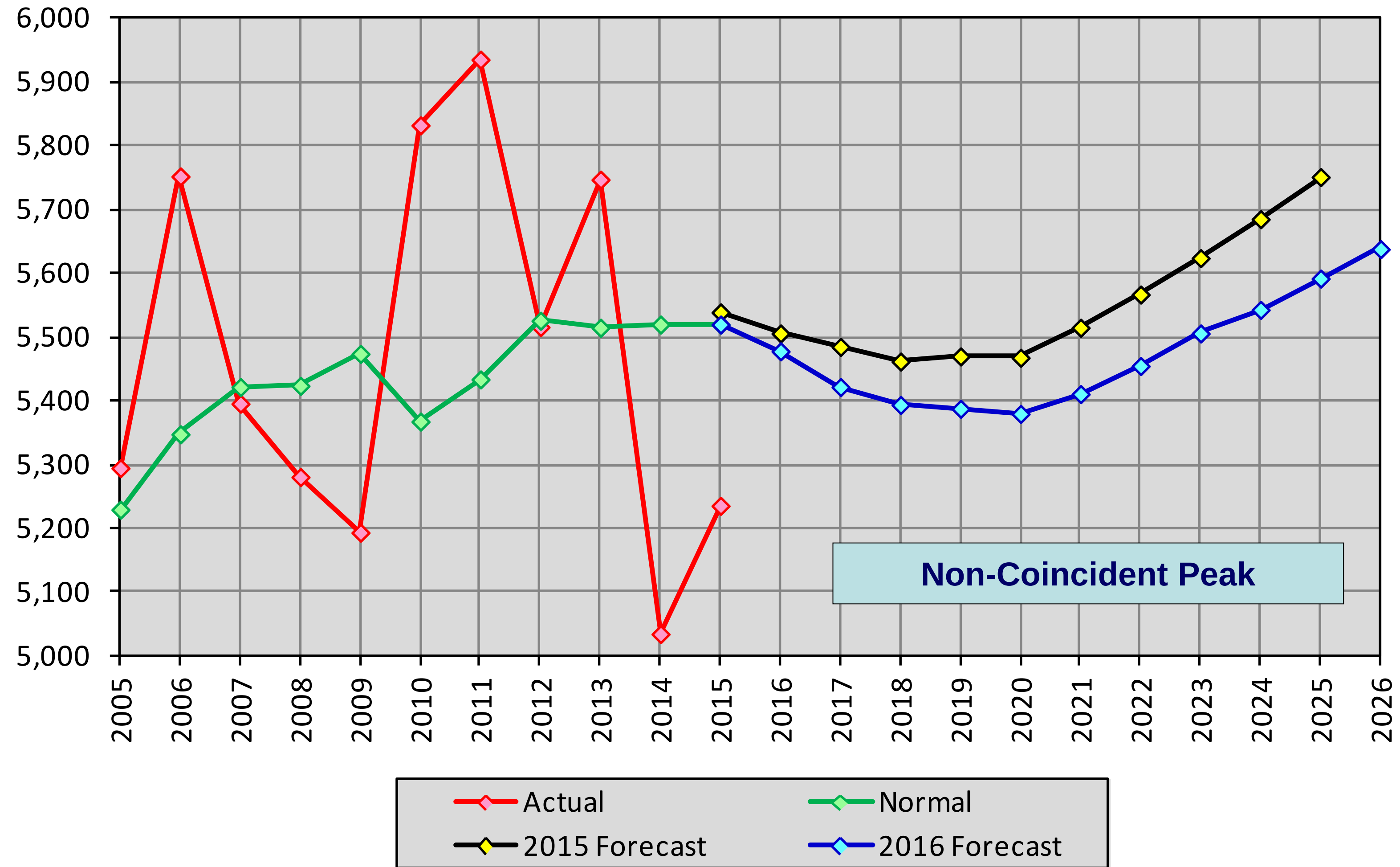
Actual, Normal and Forecast - Annual Energy (GWh)

Zone K Base Case - With Energy Program Impacts



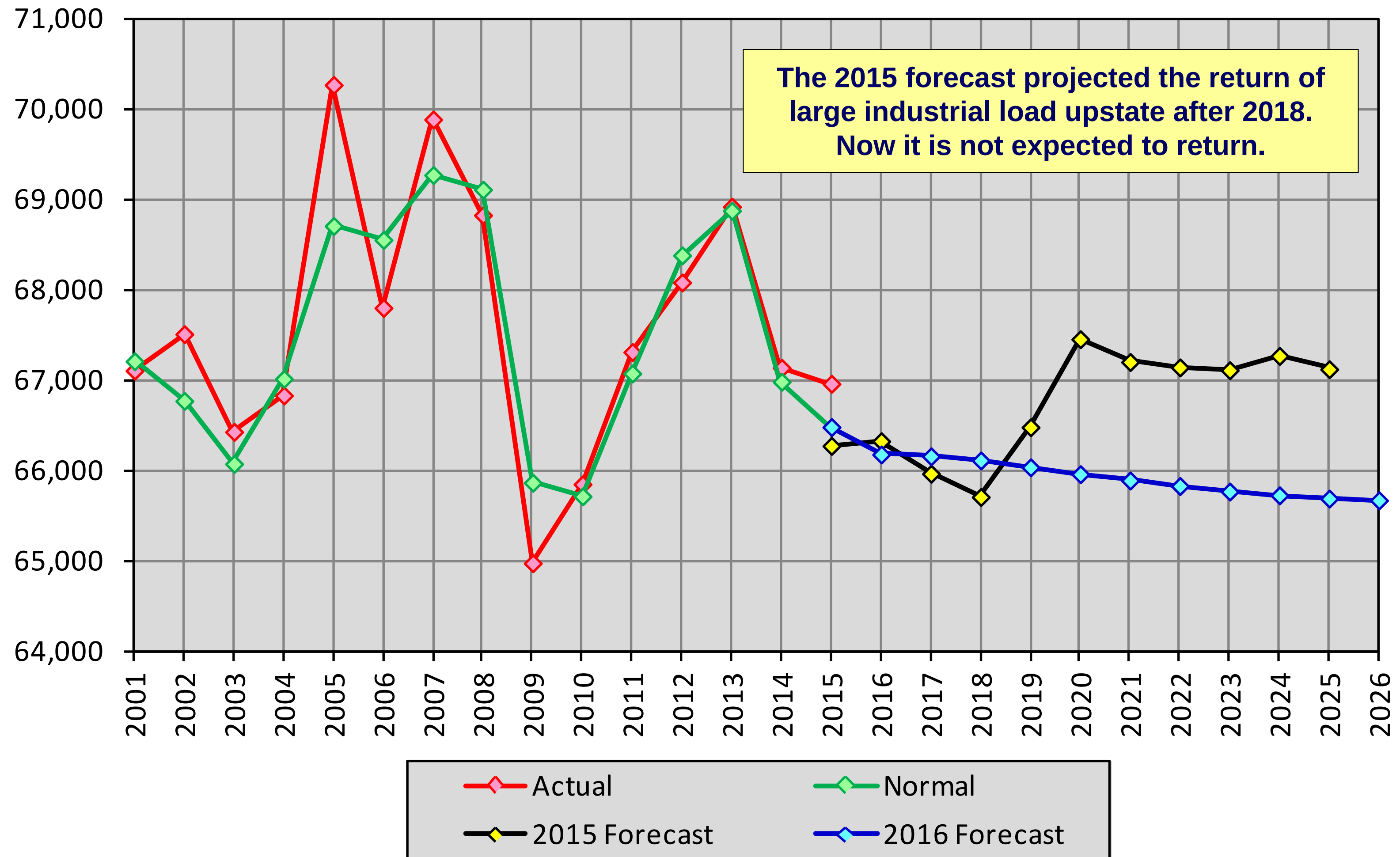
Actual, Normal and Forecast - Summer Peak (MW)

Zone K Base Case - With Energy Program Impacts



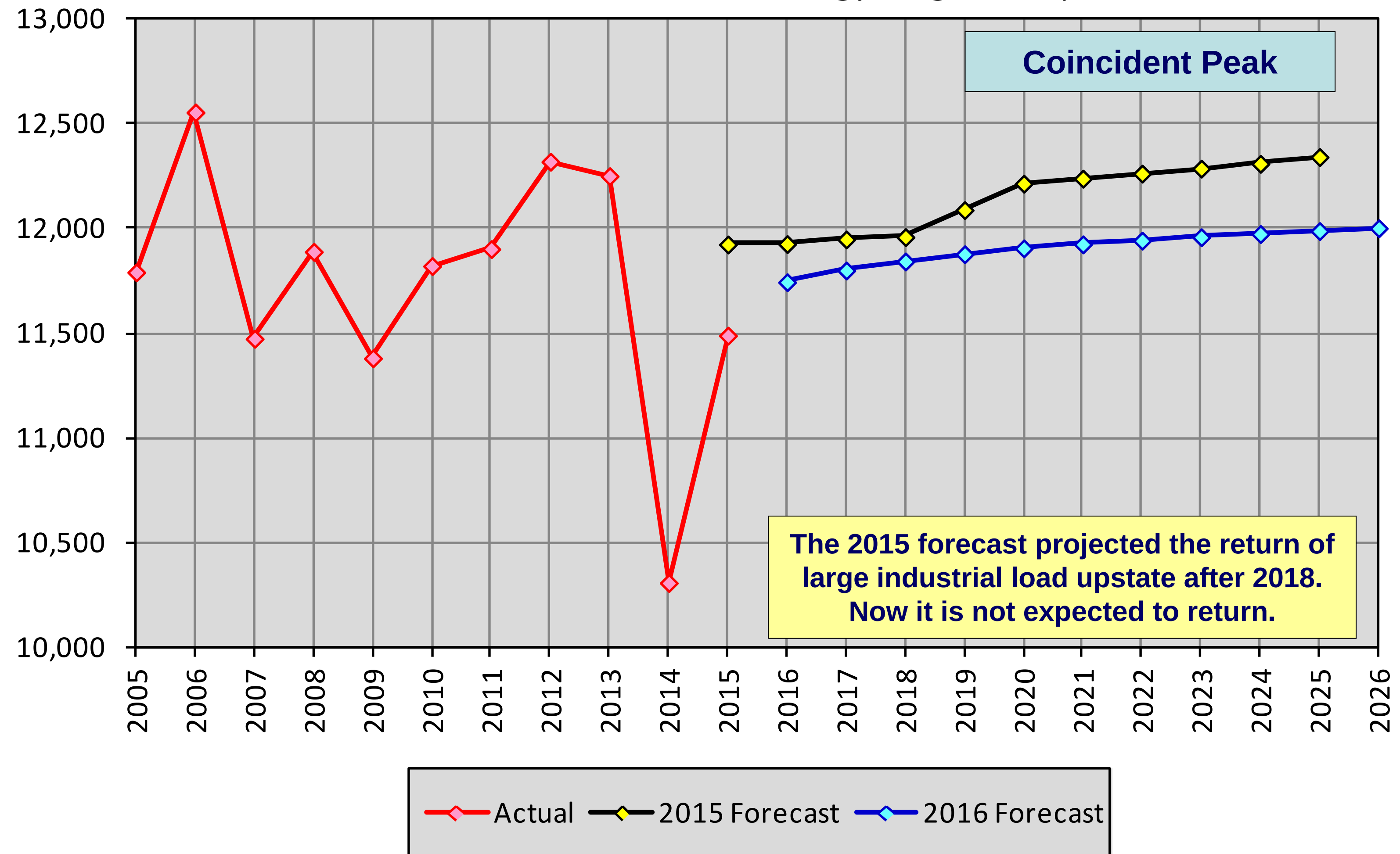
Actual, Normal and Forecast - Annual Energy (GWh)

Zones A to F Base Case - With Energy Program Impacts



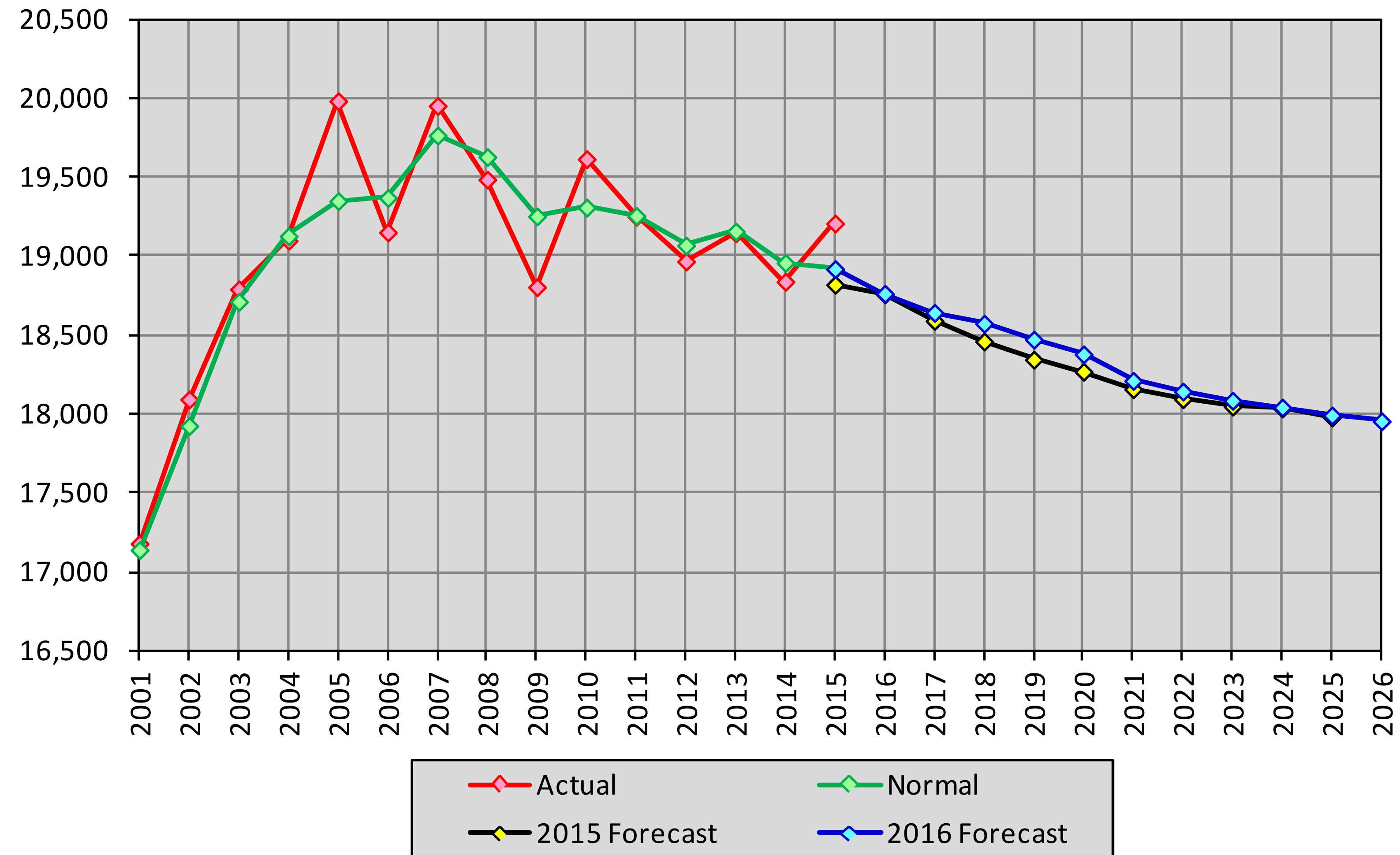
Actual, Normal and Forecast - Summer Peak (MW)

Zones A to F Base Case - With Energy Program Impacts



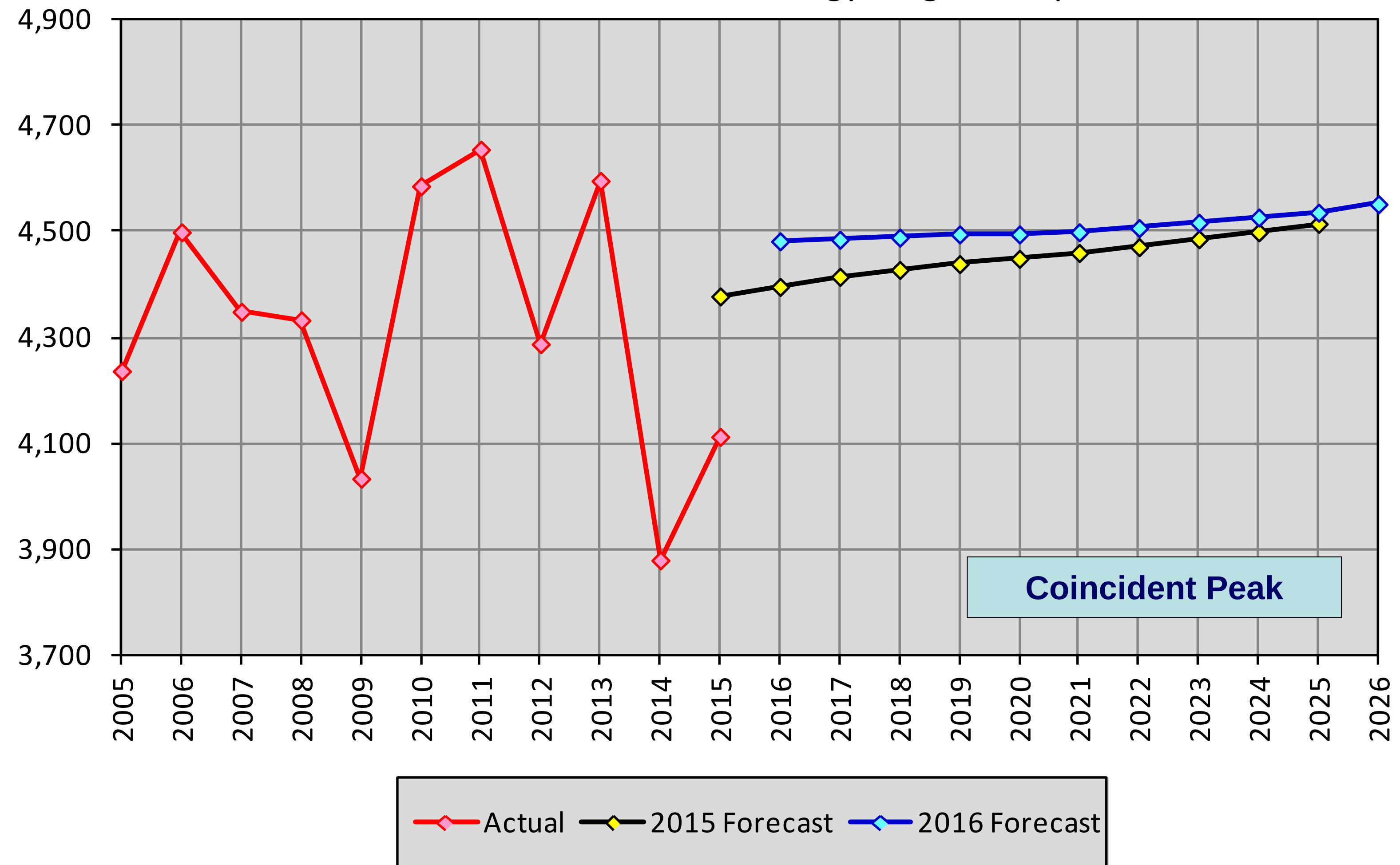
Actual, Normal and Forecast - Annual Energy (GWh)

Zones G to I Base Case - With Energy Program Impacts



Actual, Normal and Forecast - Summer Peak (MW)

Zones G to I Base Case - With Energy Program Impacts



2016 Preliminary Forecast Annual Energy - GWh

Includes Energy Program Impacts

Forecast of Annual Energy by Zone - GWh

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2016	15,651	9,858	16,027	4,458	8,063	12,125	9,812	2,769	6,183	52,483	21,953	159,382
2017	15,587	9,823	15,986	4,525	8,091	12,150	9,748	2,751	6,144	52,152	21,756	158,713
2018	15,525	9,790	15,942	4,594	8,105	12,160	9,690	2,749	6,135	52,077	21,664	158,431
2019	15,475	9,760	15,899	4,622	8,115	12,169	9,624	2,738	6,111	51,873	21,713	158,099
2020	15,442	9,726	15,860	4,629	8,128	12,179	9,580	2,722	6,078	51,594	21,762	157,700
2021	15,411	9,698	15,836	4,631	8,129	12,189	9,530	2,687	5,995	50,889	21,908	156,903
2022	15,384	9,665	15,814	4,633	8,139	12,198	9,497	2,676	5,971	50,688	22,120	156,785
2023	15,362	9,629	15,798	4,635	8,140	12,208	9,467	2,667	5,952	50,526	22,411	156,795
2024	15,343	9,594	15,783	4,637	8,152	12,221	9,451	2,658	5,934	50,373	22,654	156,800
2025	15,330	9,561	15,772	4,639	8,162	12,230	9,426	2,651	5,916	50,219	22,873	156,779
2026	15,322	9,538	15,761	4,641	8,172	12,241	9,416	2,642	5,898	50,066	23,080	156,777

2016 Preliminary Forecast Summer Peak – MW

Includes Energy Program Impacts

Forecast of Coincident Summer Peak Demand by Zone - MW

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2016	2,680	1,992	2,810	535	1,352	2,376	2,290	656	1,536	11,695	5,438	33,360
2017	2,684	1,997	2,828	543	1,358	2,391	2,293	656	1,536	11,696	5,381	33,363
2018	2,688	2,003	2,841	551	1,363	2,398	2,293	658	1,538	11,717	5,354	33,404
2019	2,692	2,006	2,855	554	1,367	2,404	2,291	660	1,544	11,756	5,348	33,477
2020	2,695	2,009	2,867	555	1,371	2,409	2,290	660	1,545	11,760	5,340	33,501
2021	2,697	2,011	2,874	555	1,374	2,414	2,294	660	1,545	11,761	5,370	33,556
2022	2,700	2,013	2,880	555	1,377	2,419	2,299	660	1,548	11,785	5,414	33,649
2023	2,702	2,015	2,886	555	1,379	2,423	2,304	662	1,551	11,807	5,464	33,748
2024	2,704	2,017	2,891	555	1,382	2,426	2,309	665	1,553	11,830	5,501	33,833
2025	2,706	2,018	2,896	555	1,384	2,430	2,314	665	1,557	11,851	5,550	33,926
2026	2,708	2,019	2,901	555	1,386	2,433	2,320	668	1,564	11,907	5,595	34,056

The Mission of the New York Independent System Operator, in collaboration with its 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 policy makers, stakeholders and investors in the power system*

www.nyiso.com