

2017 Long Term Forecast

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Electric System Planning Workshop:

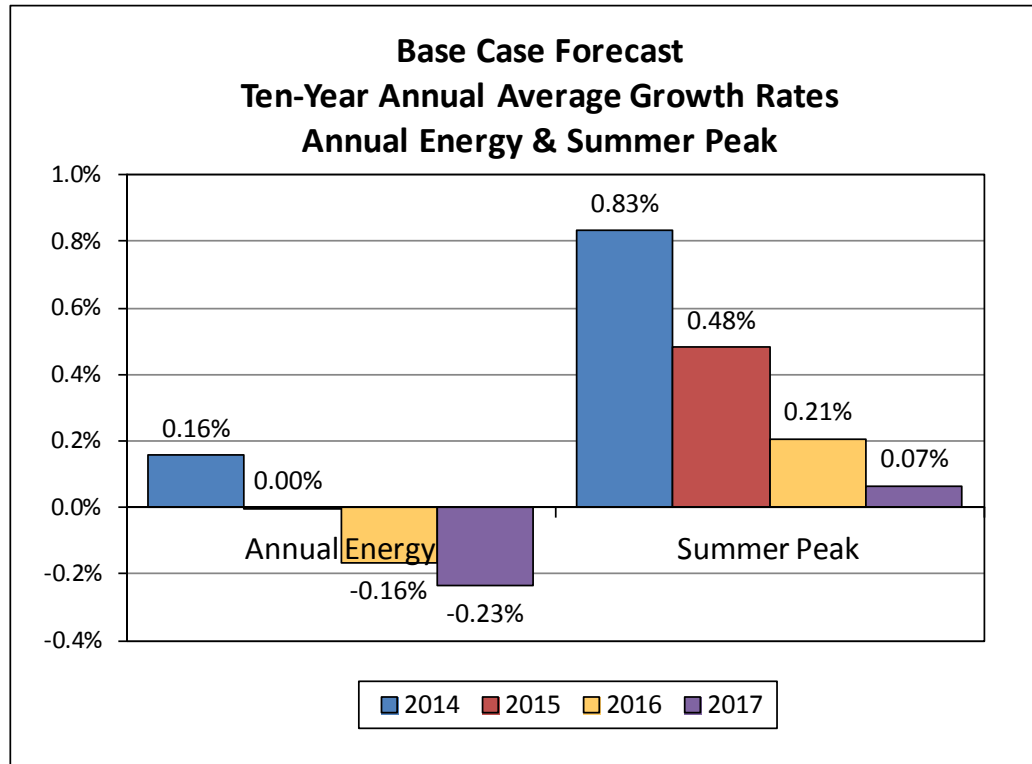
April 3, 2017, Rensselaer, NY



Principal Factors Affecting the 2017 Base Case Peak Forecast

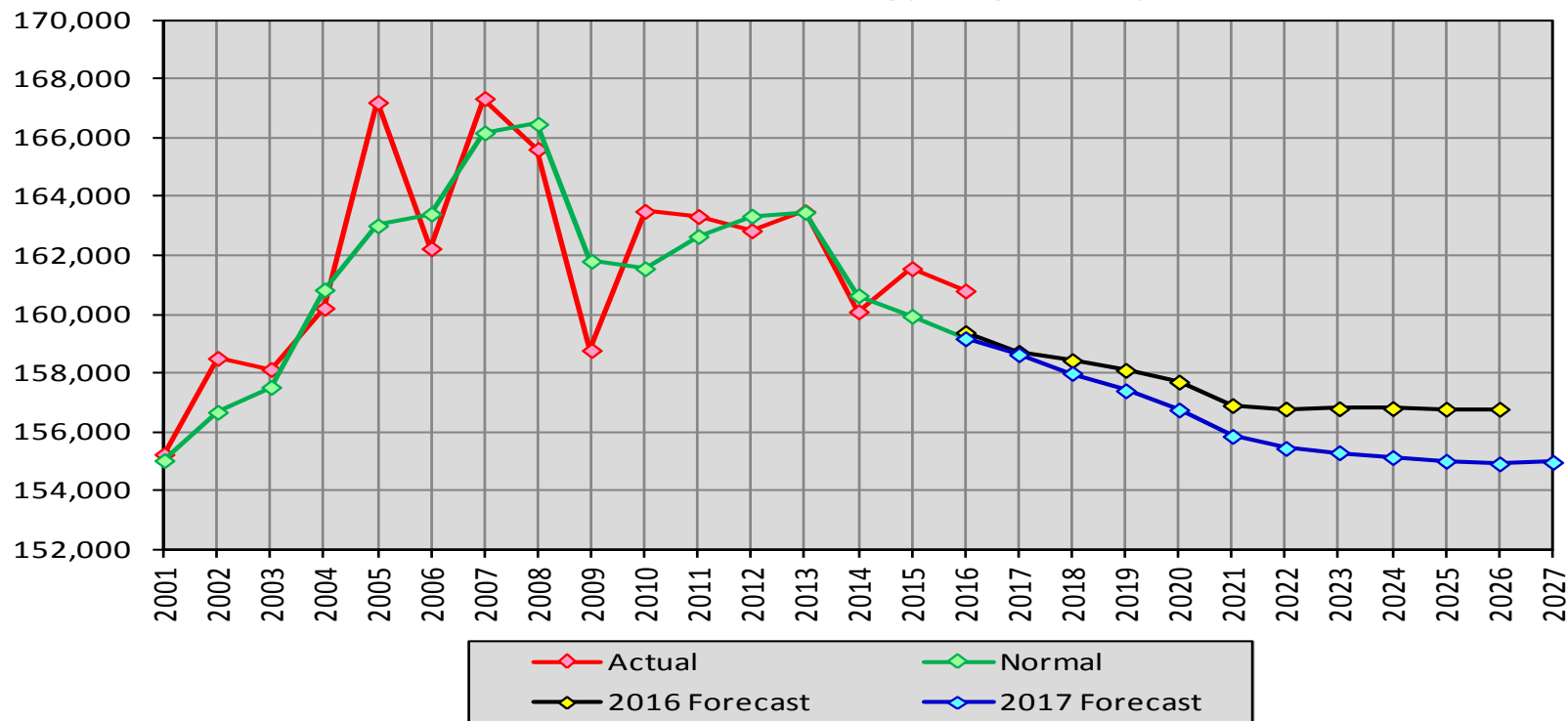
- Slower peak growth in Zone G and Zone K in 2017 compared to 2016.
- Higher peak impacts due to the New York Sun Initiative.

Base Case Growth Rates



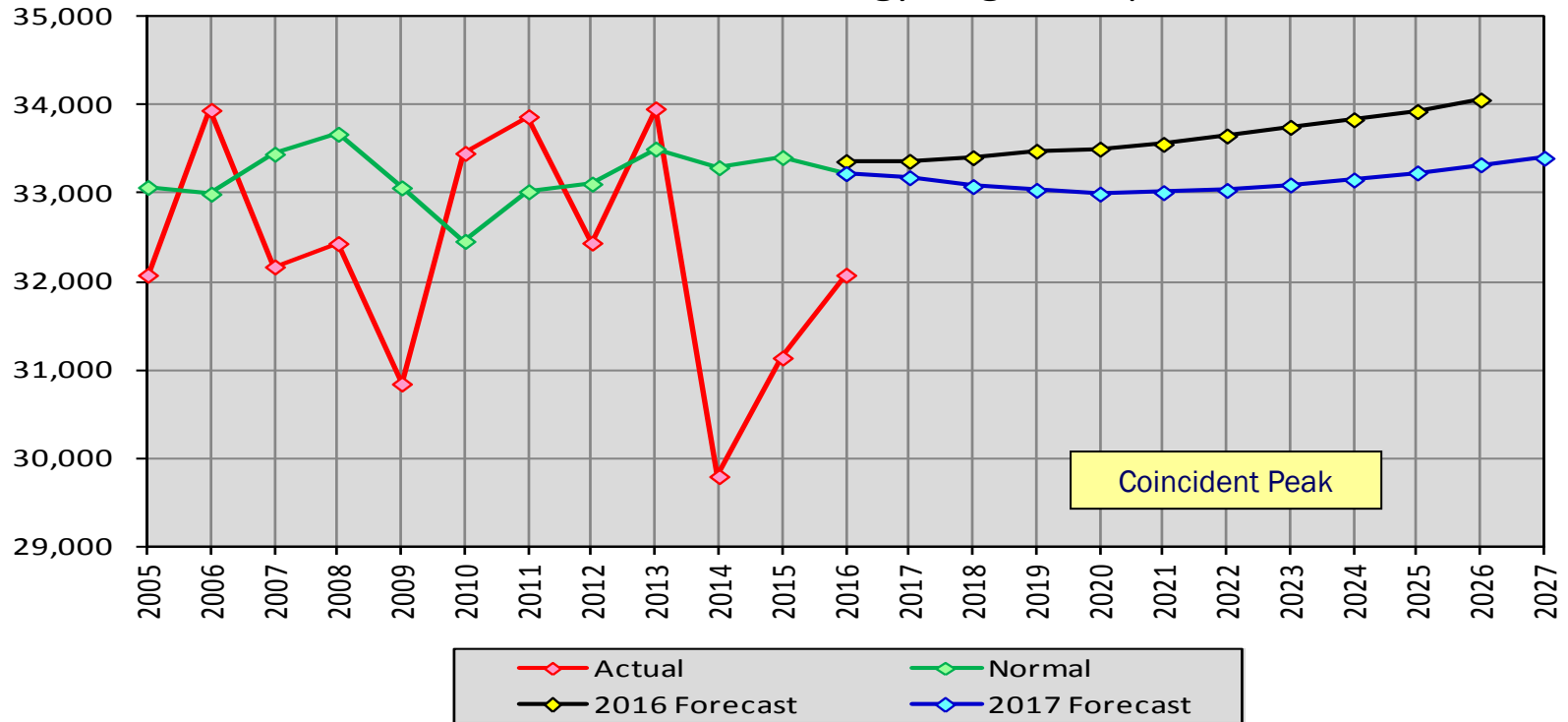
Actual, Normal and Forecast - Annual Energy (GWh)

NYCA Base Case - With Energy Program Impacts

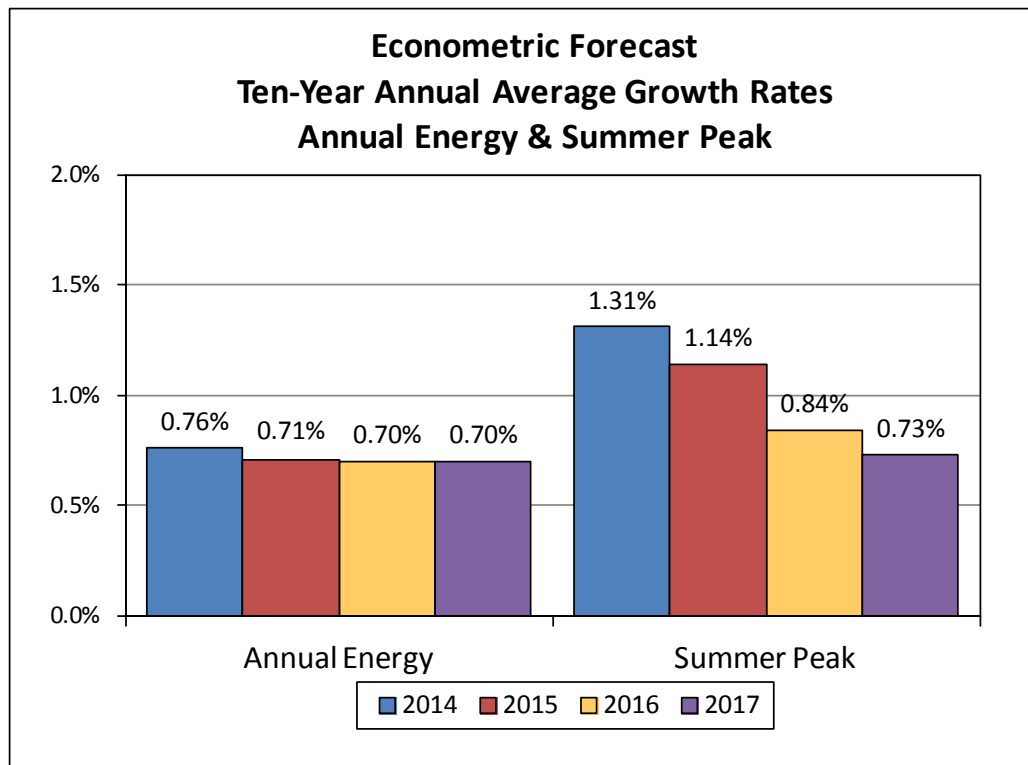


Actual, Normal and Forecast - Summer Peak (MW)

NYCA Base Case - With Energy Program Impacts

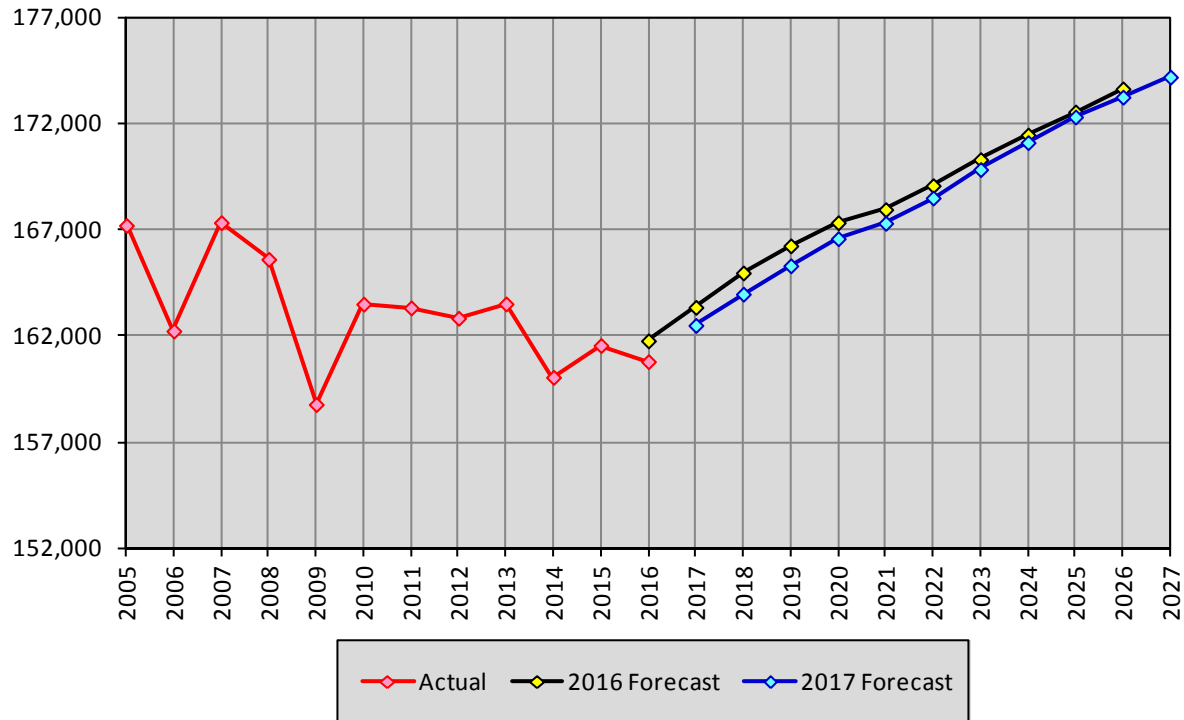


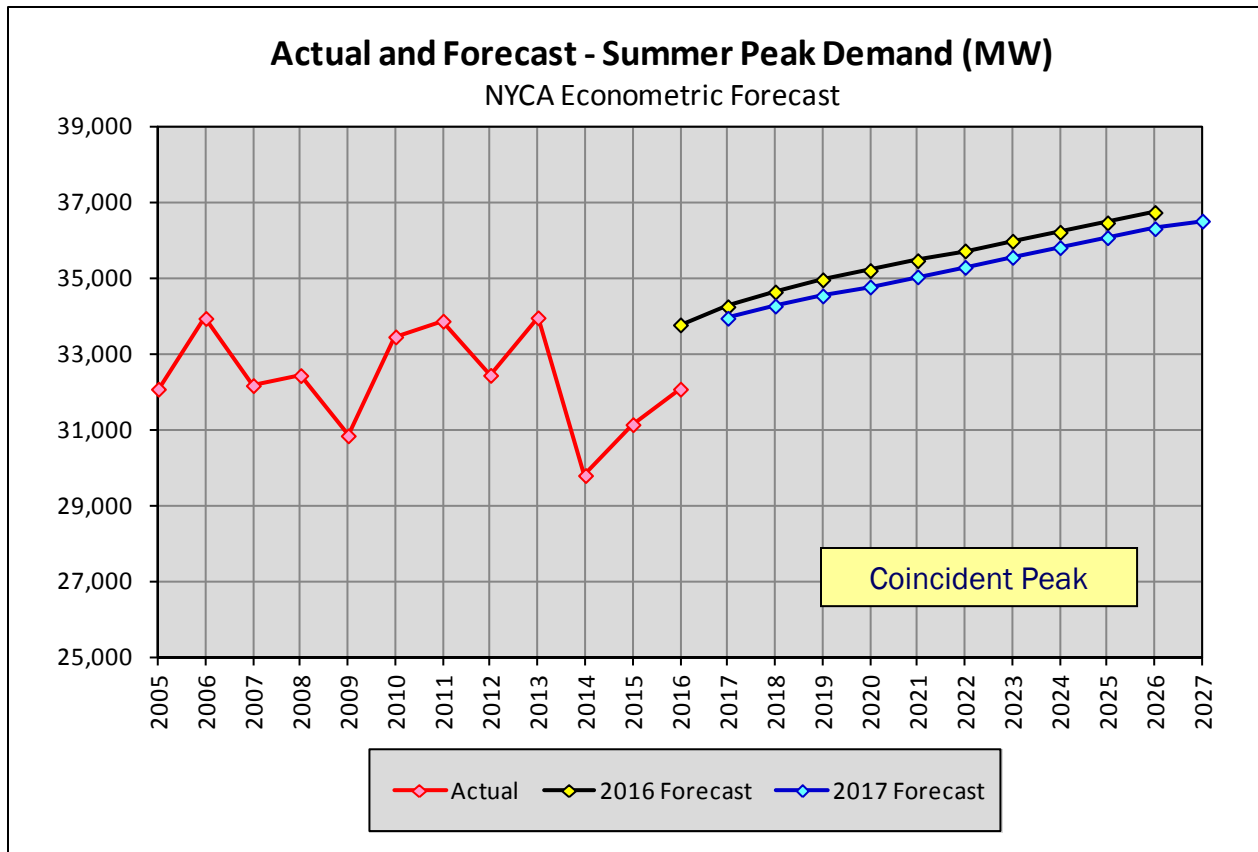
Econometric Growth Rates



Actual, Normal and Forecast - Annual Energy (GWh)

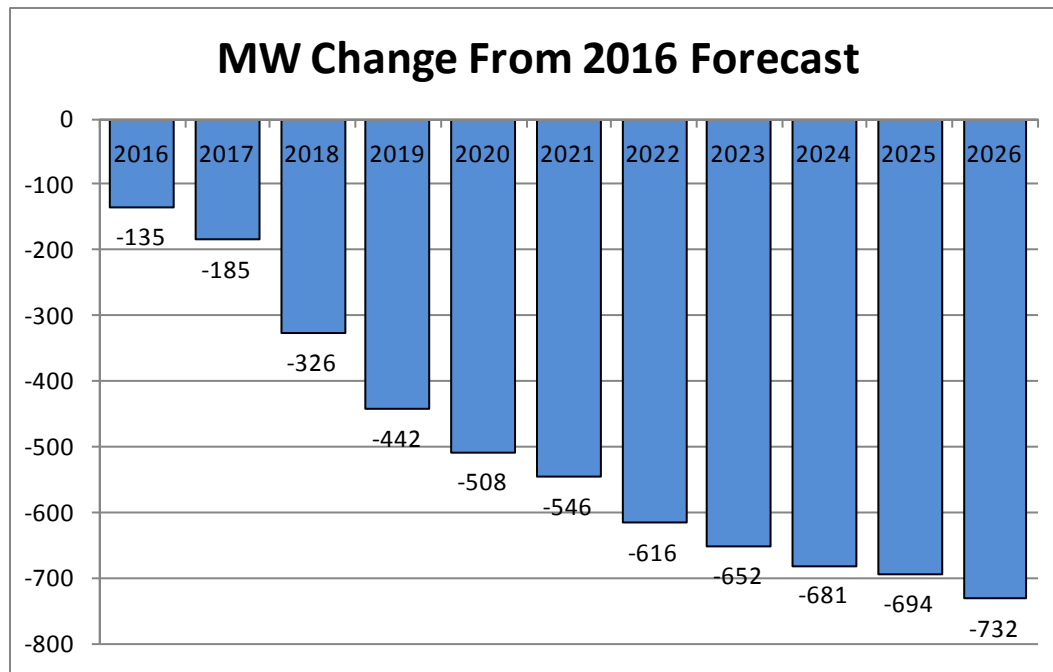
NYCA Econometric Forecast





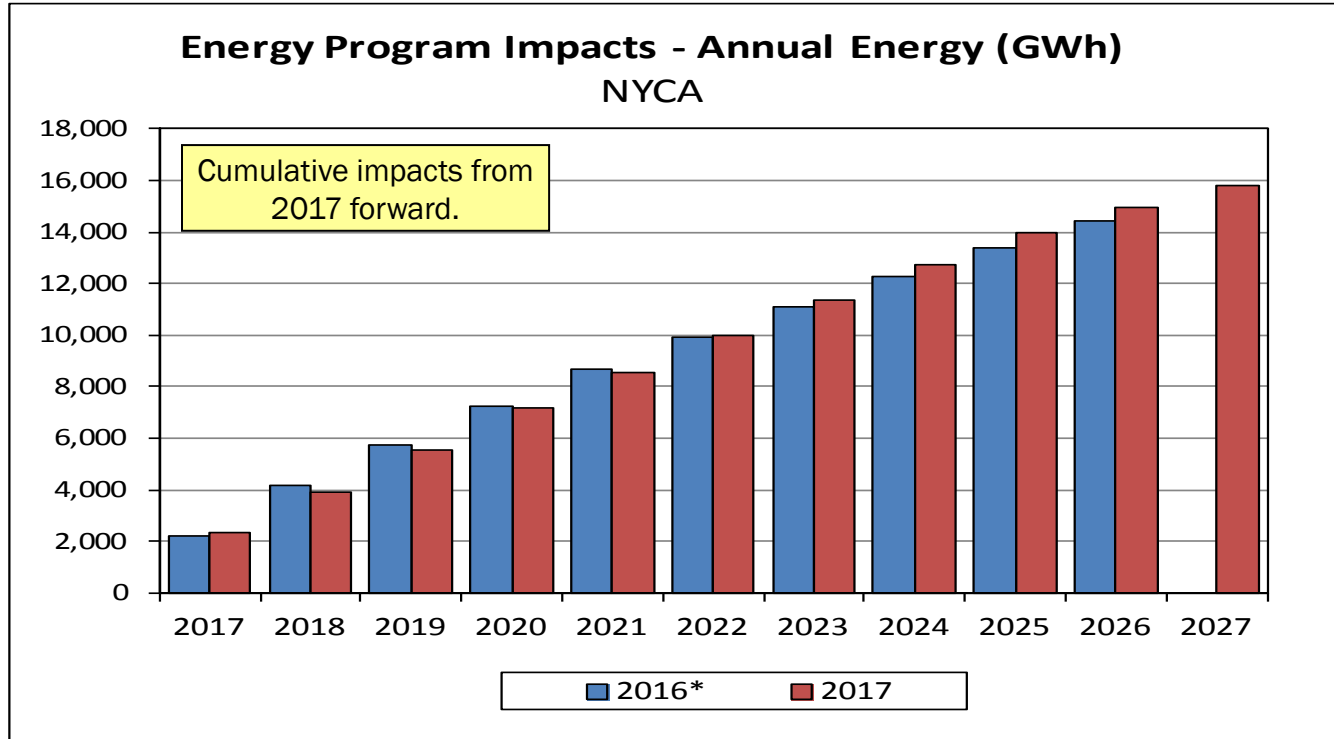
Note: The Zone J peak design criteria is 1-in-3, which is why it's normal values are all greater than actual. The typical design criteria is 1-in-2.

Change in 2017 Base Case Summer Coincident Peak From 2016 Forecast



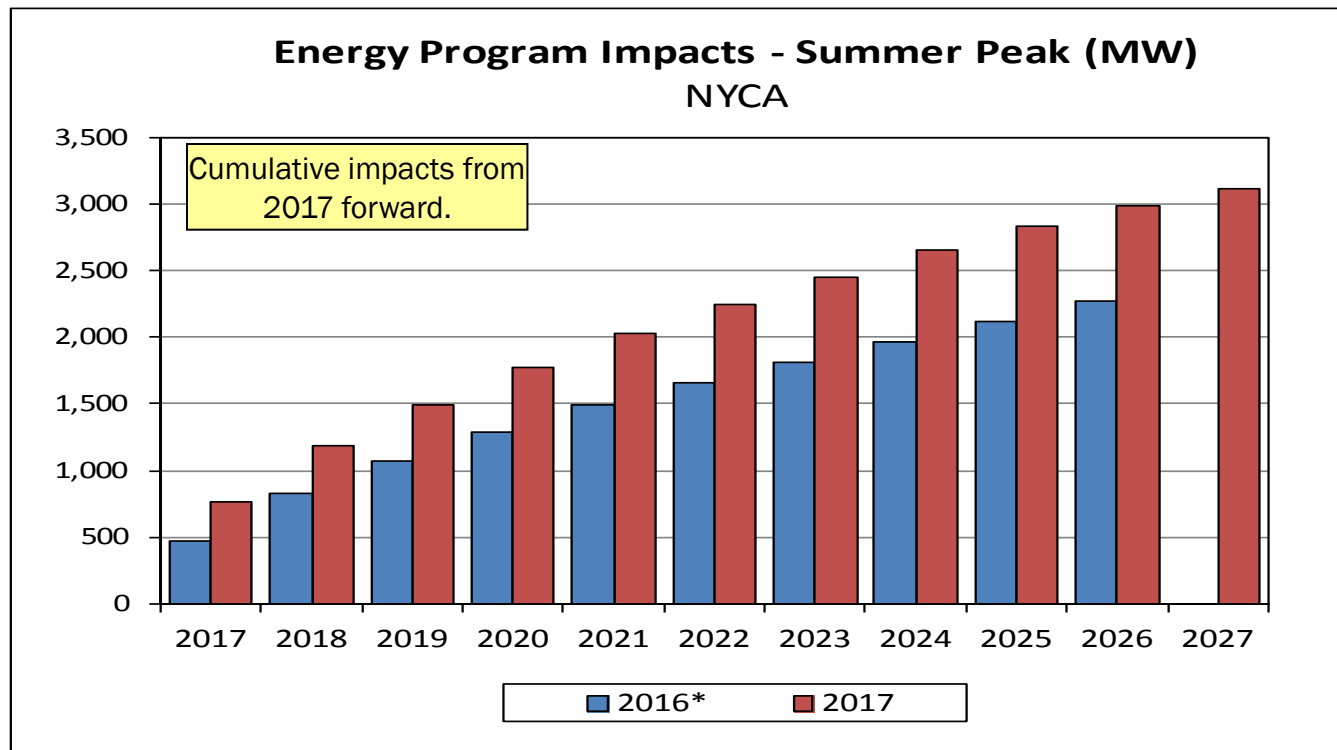
Summary of Demand-Side Program Impacts

Energy Impact of All State Programs 2016 & 2017



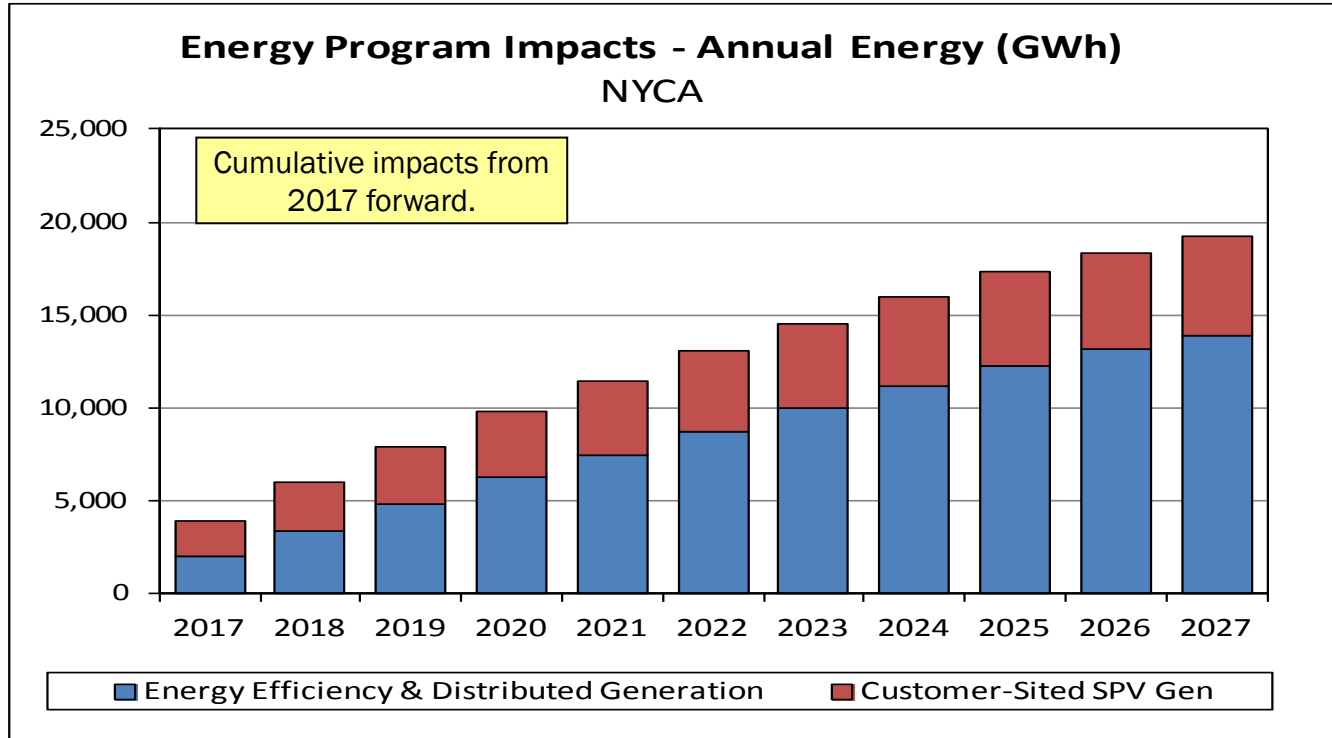
* Cumulative impacts for 2016 begin in 2017 for comparison.

Peak Impact of All State Programs 2016 & 2017

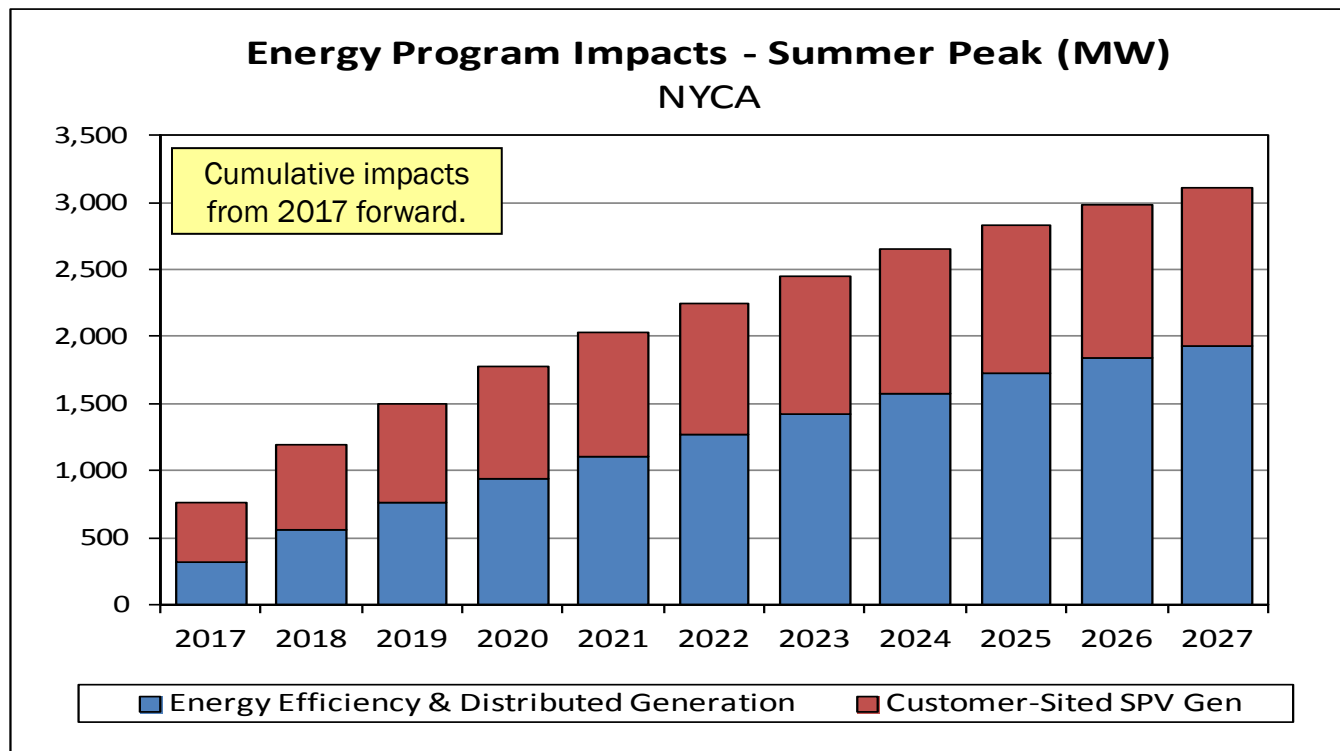


* Cumulative impacts for 2016 begin in 2017 for comparison.

2017 Energy Impacts From Energy Efficiency, Distributed Generation & Solar PV Behind the Meter



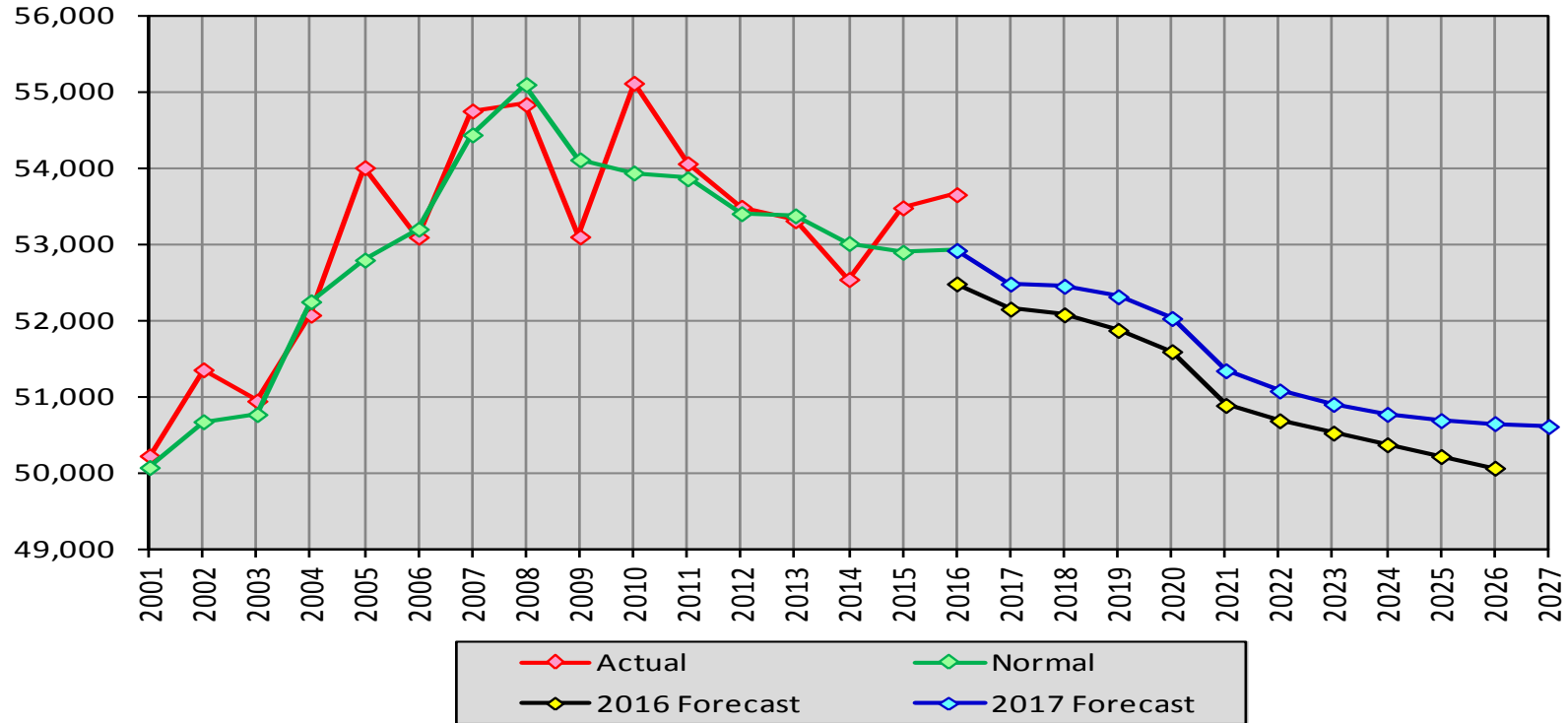
2017 Summer Peak Impacts From Energy Efficiency, Distributed Generation & Solar PV Behind the Meter



2017 Regional Base Case Forecasts

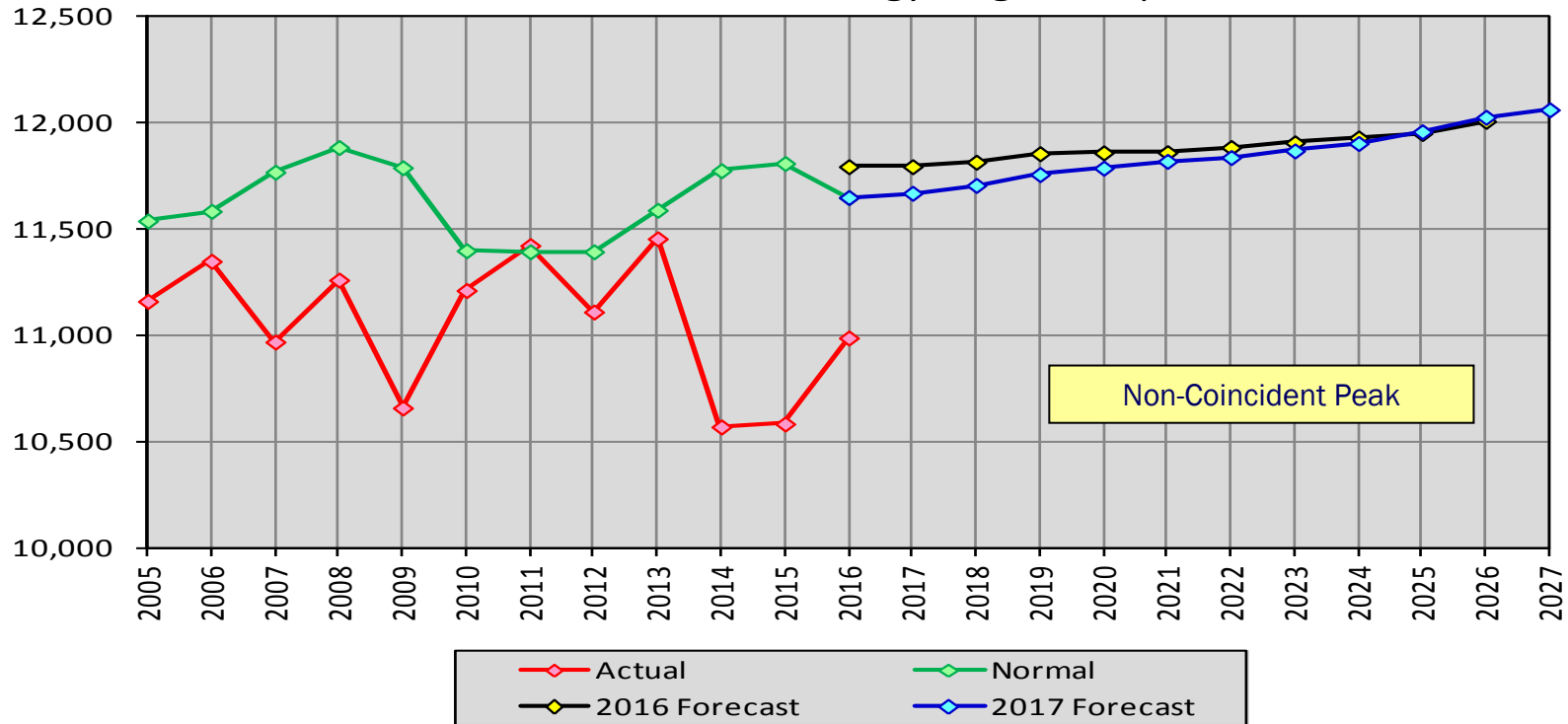
Actual, Normal and Forecast - Annual Energy (GWh)

Zone J Base Case - With Energy Program Impacts



Actual, Normal and Forecast - Summer Peak (MW)

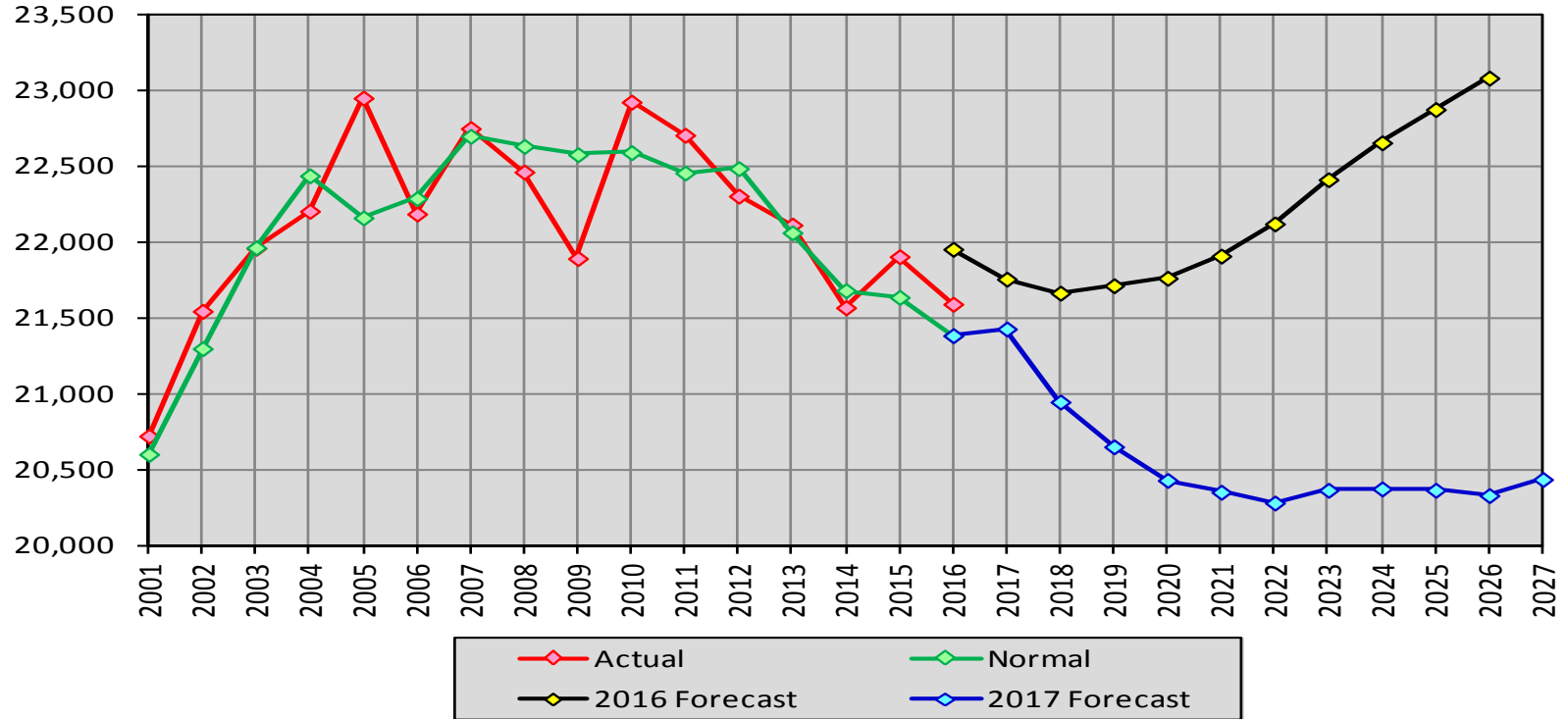
Zone J Base Case - With Energy Program Impacts



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.

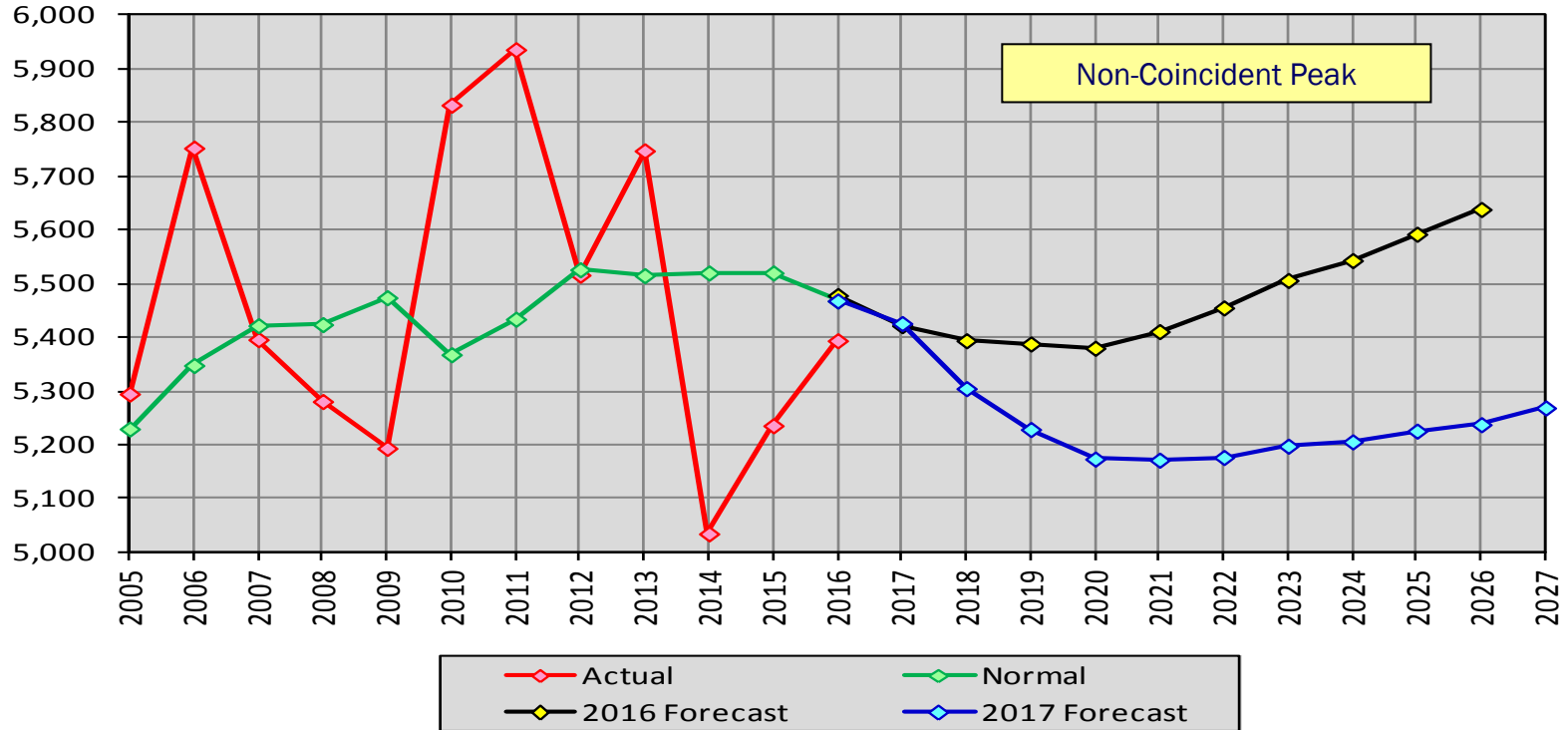
Actual, Normal and Forecast - Annual Energy (GWh)

Zone K Base Case - With Energy Program Impacts



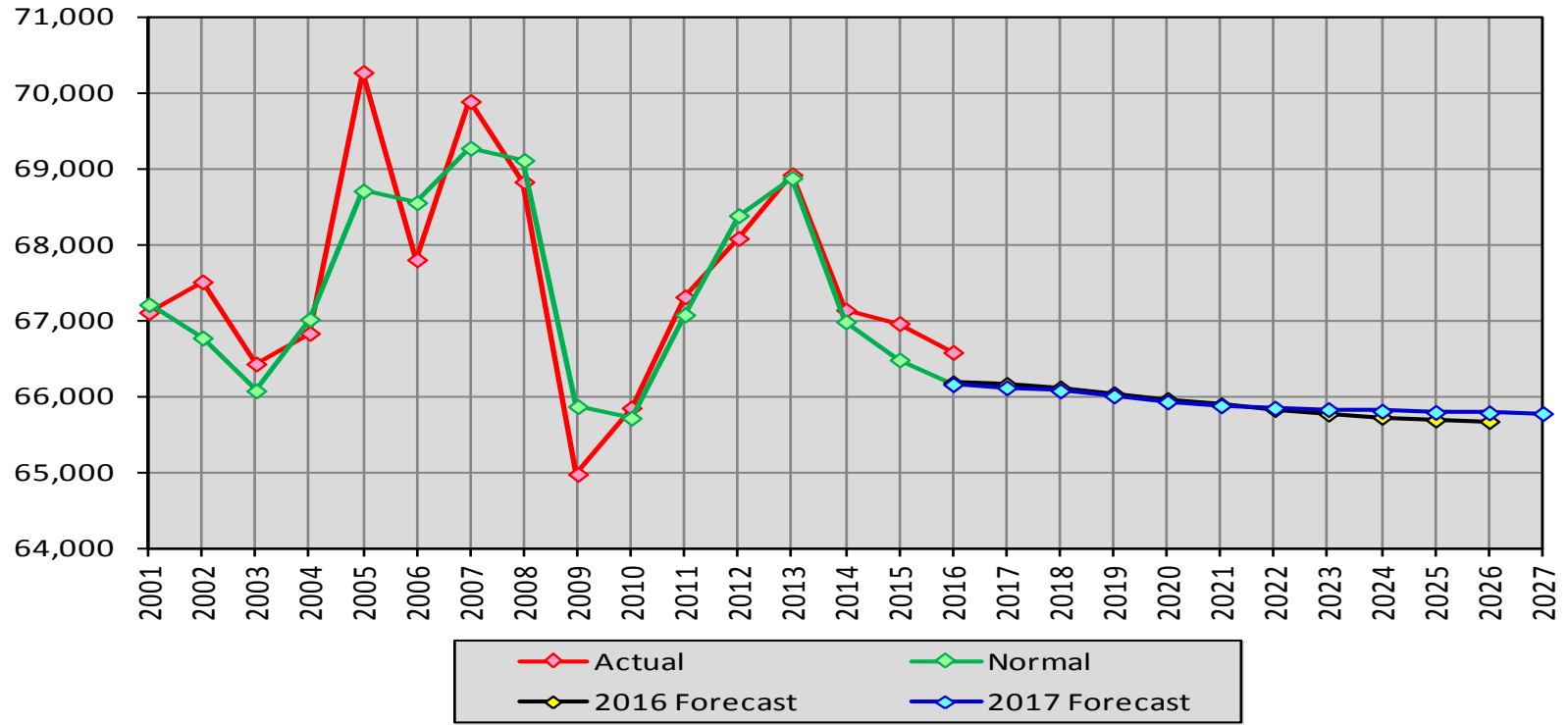
Actual, Normal and Forecast - Summer Peak (MW)

Zone K Base Case - With Energy Program Impacts



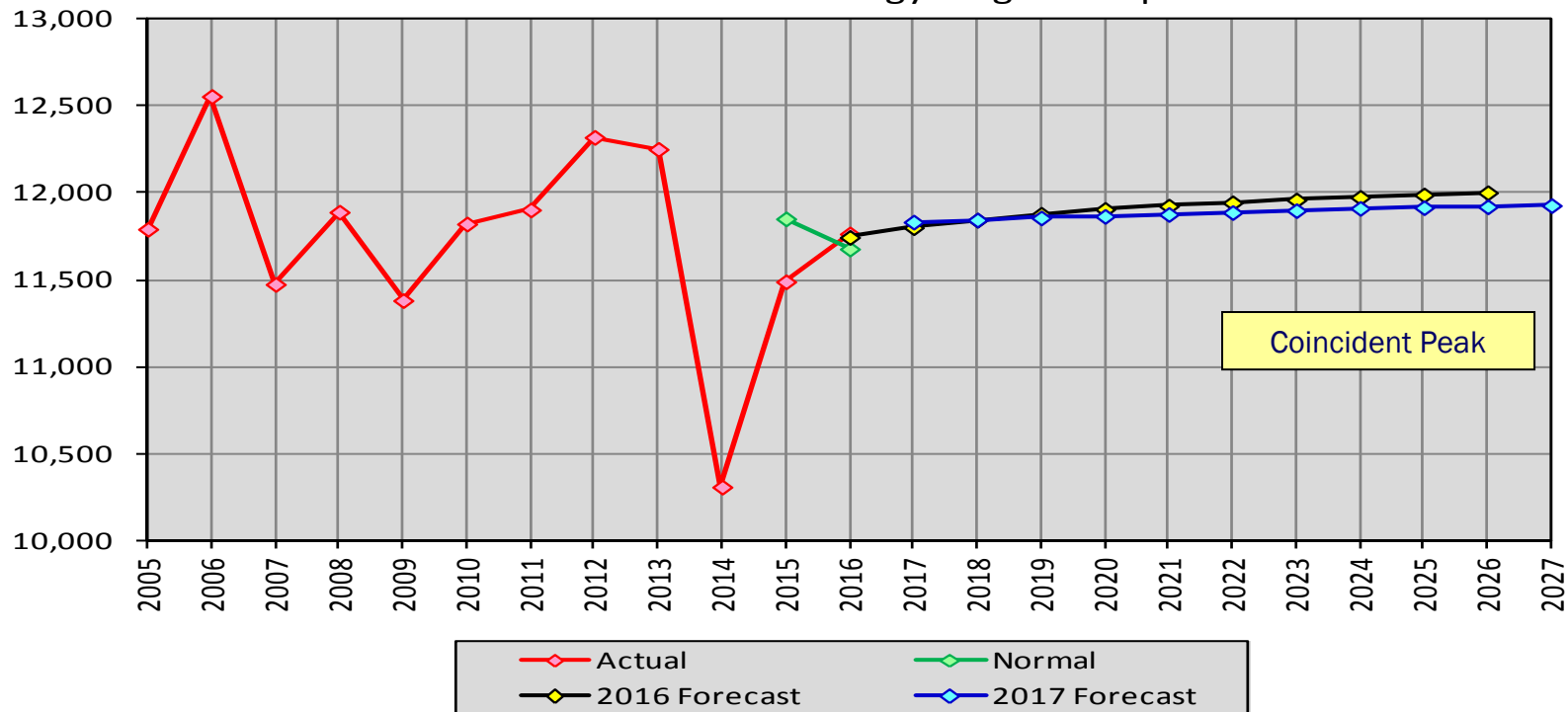
Actual, Normal and Forecast - Annual Energy (GWh)

Zones A to F Base Case - With Energy Program Impacts



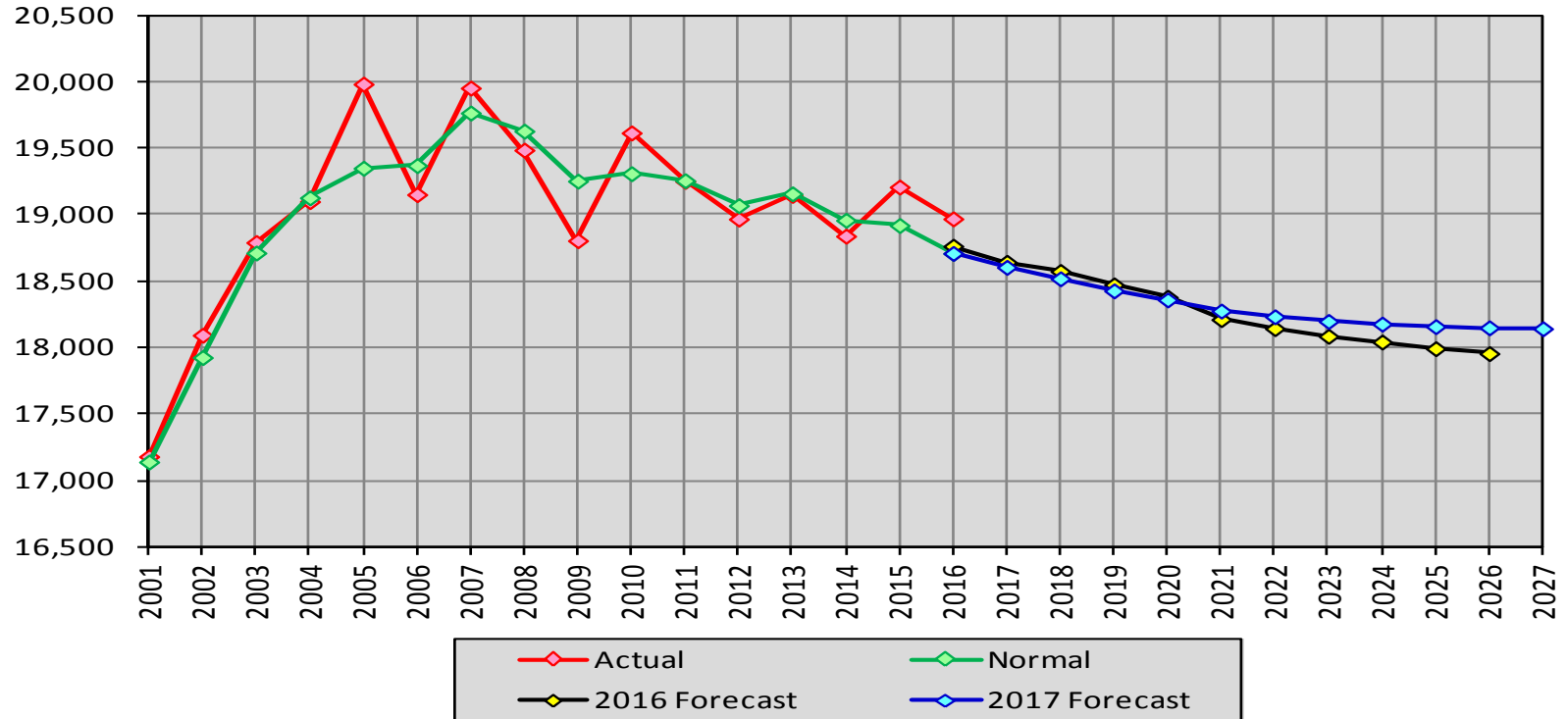
Actual, Normal and Forecast - Summer Peak (MW)

A to F Base Case - With Energy Program Impacts



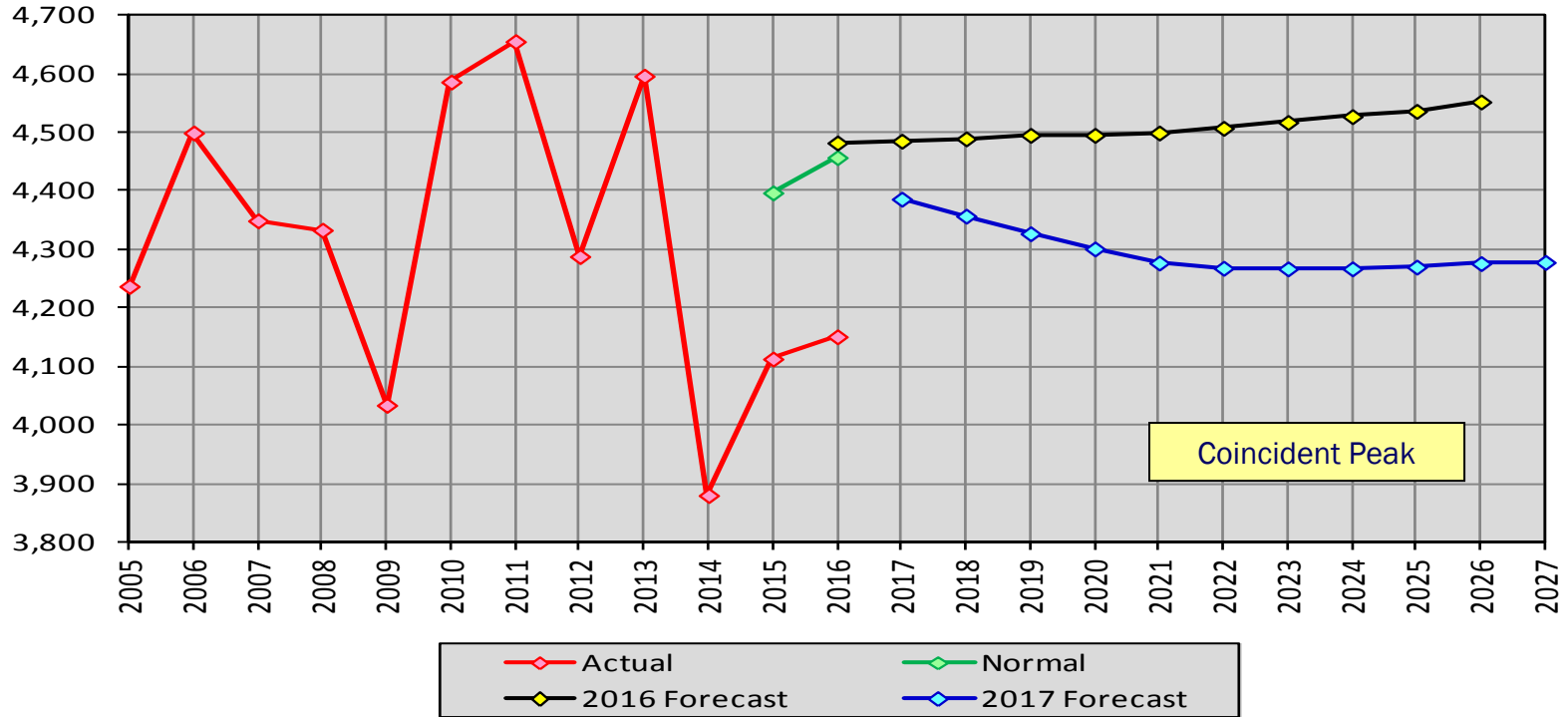
Actual, Normal and Forecast - Annual Energy (GWh)

Zones G to I Base Case - With Energy Program Impacts



Actual, Normal and Forecast - Summer Peak (MW)

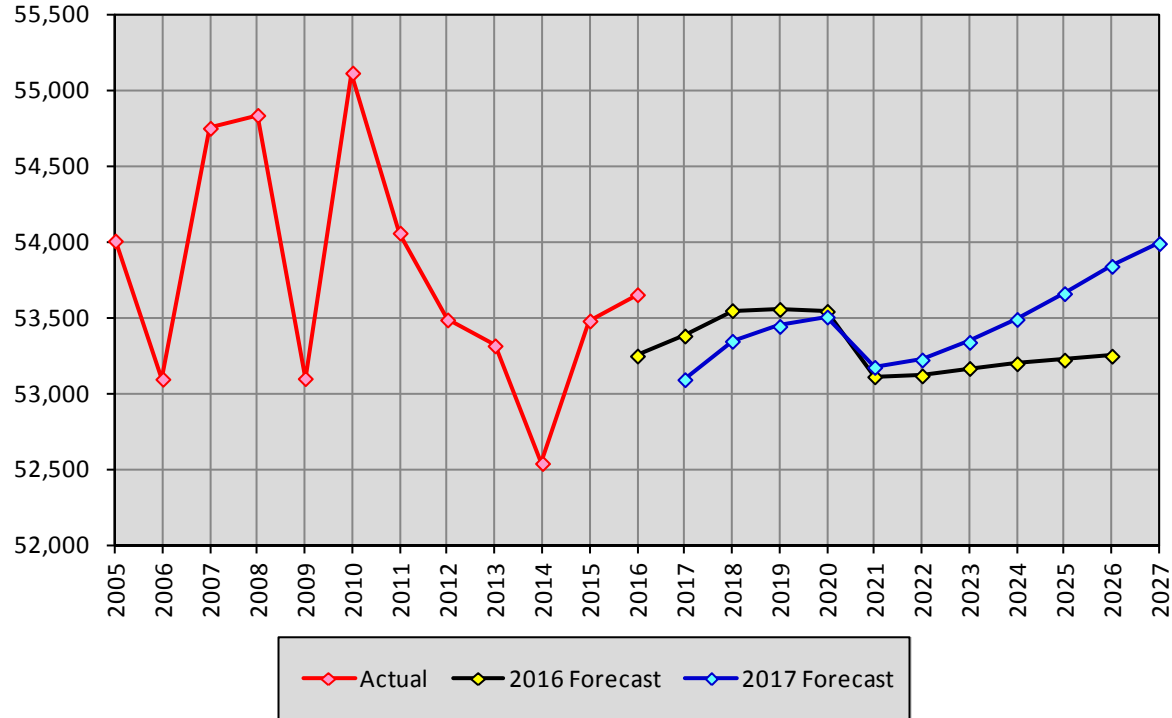
G to I Base Case - With Energy Program Impacts



2017 Regional Econometric Forecasts

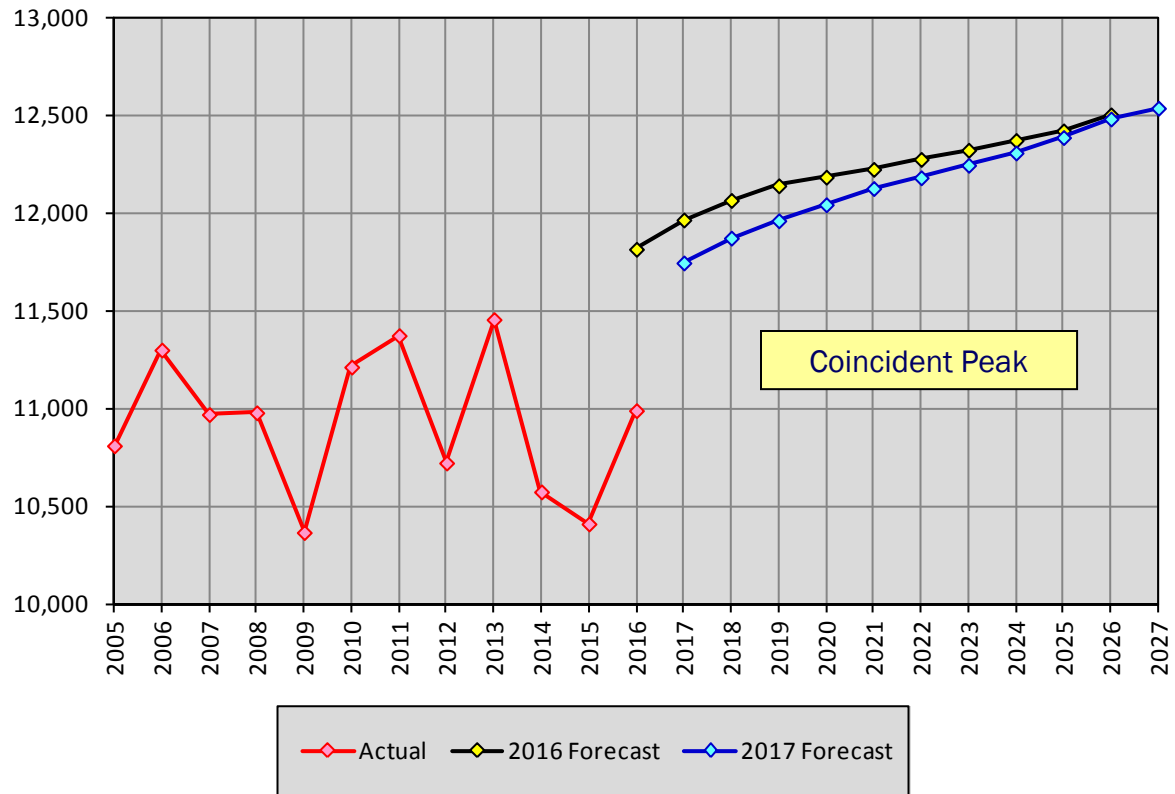
Actual, Normal and Forecast - Annual Energy (GWh)

Zone J - Econometric Forecast



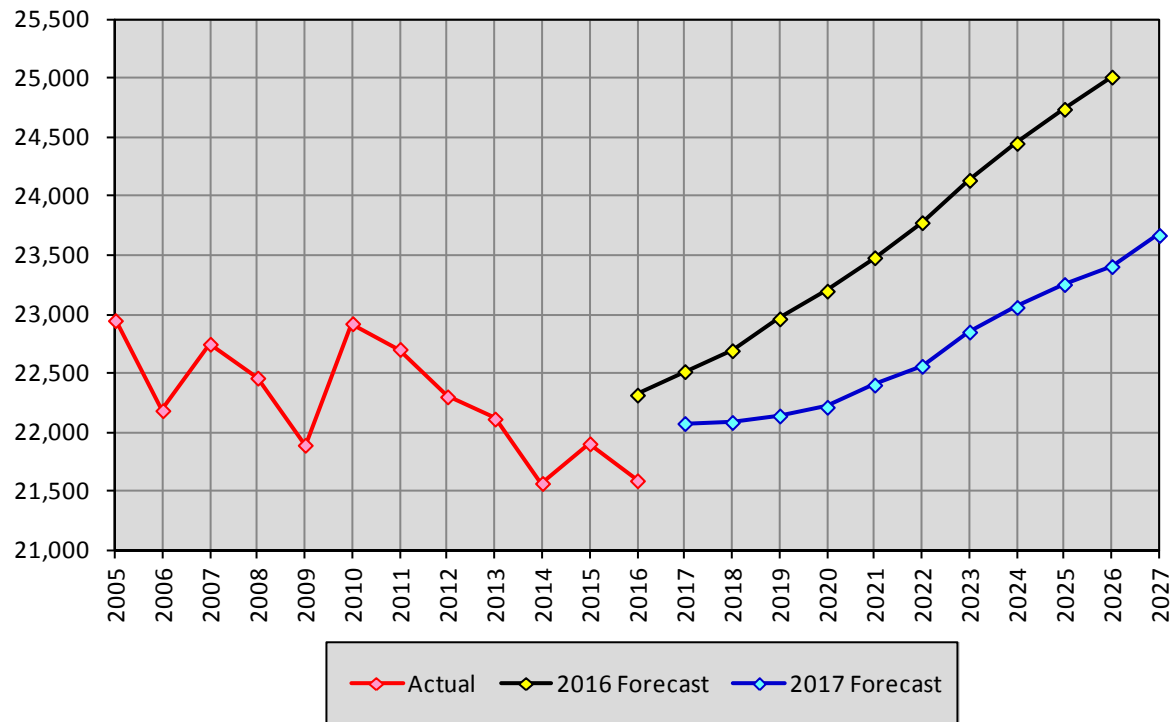
Actual and Forecast - Summer Peak Demand (MW)

Zone J - Econometric Forecast



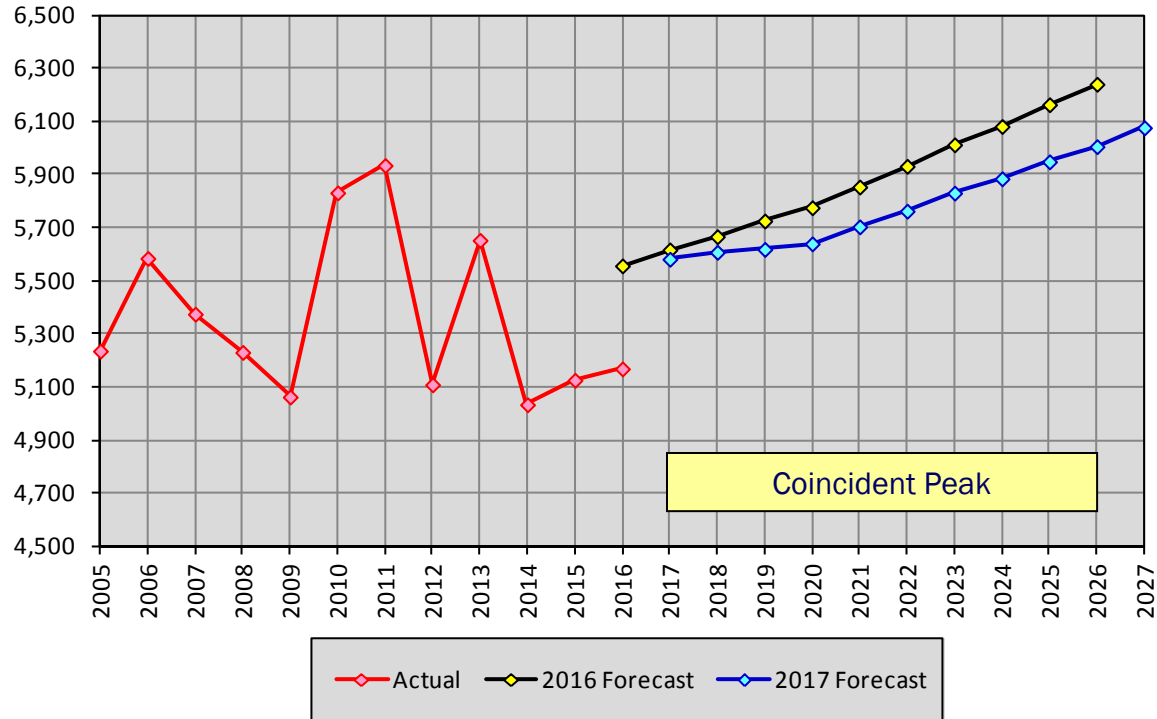
Actual, Normal and Forecast - Annual Energy (GWh)

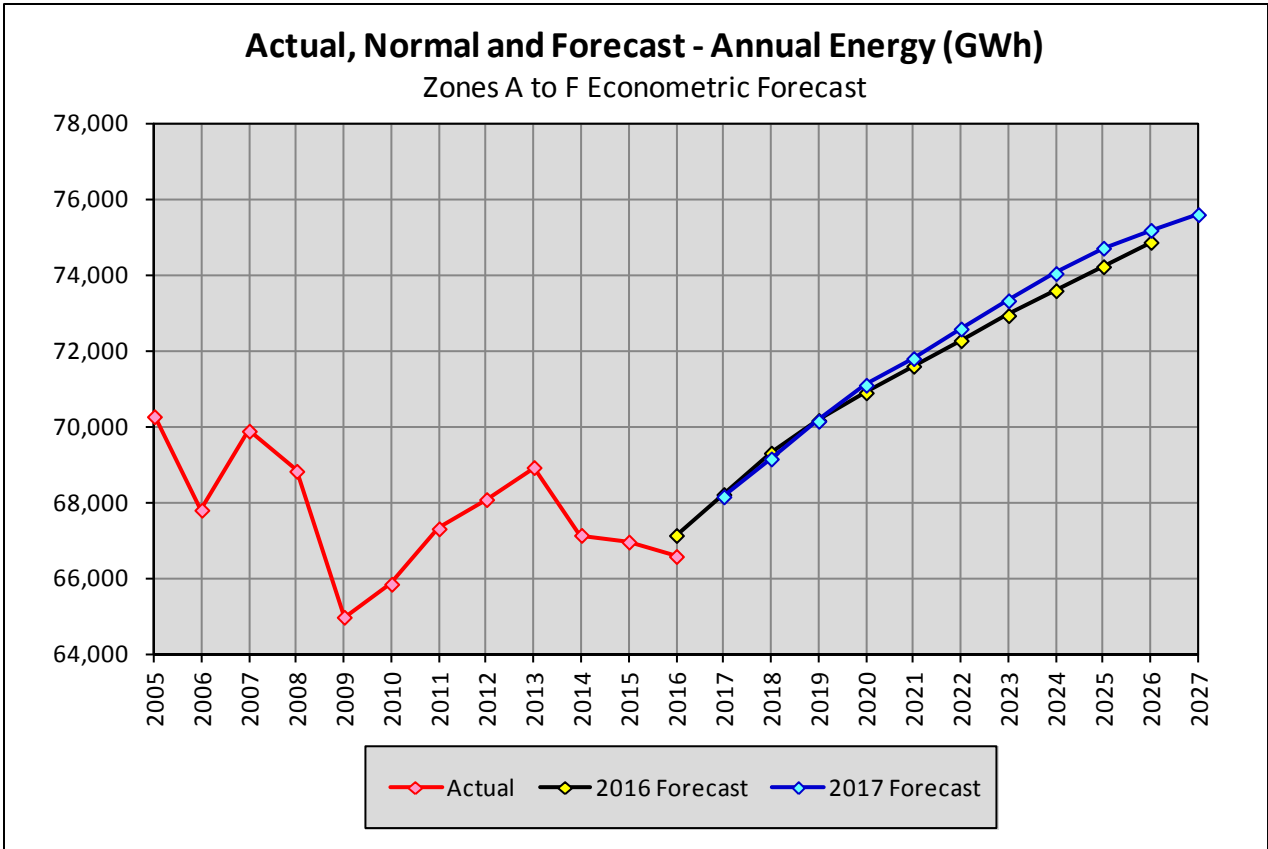
Zone K Econometric Forecast



Actual and Forecast - Summer Peak Demand (MW)

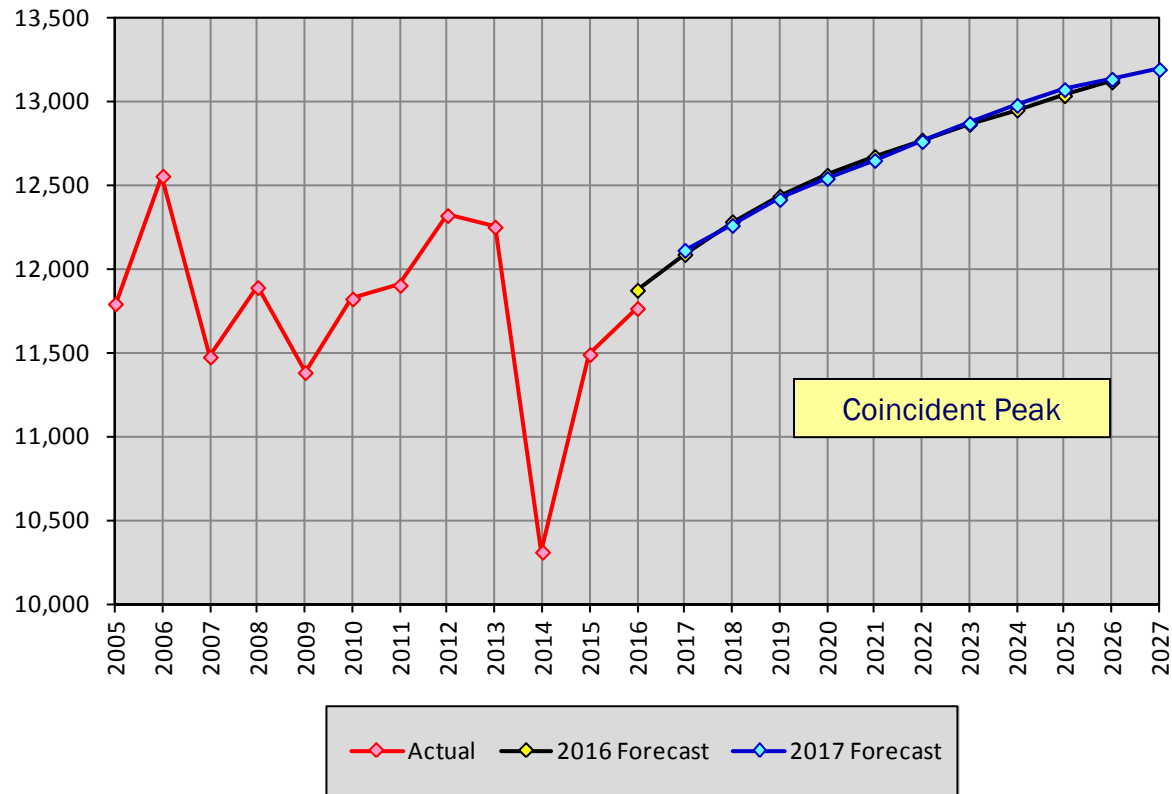
Zone K Econometric Forecast





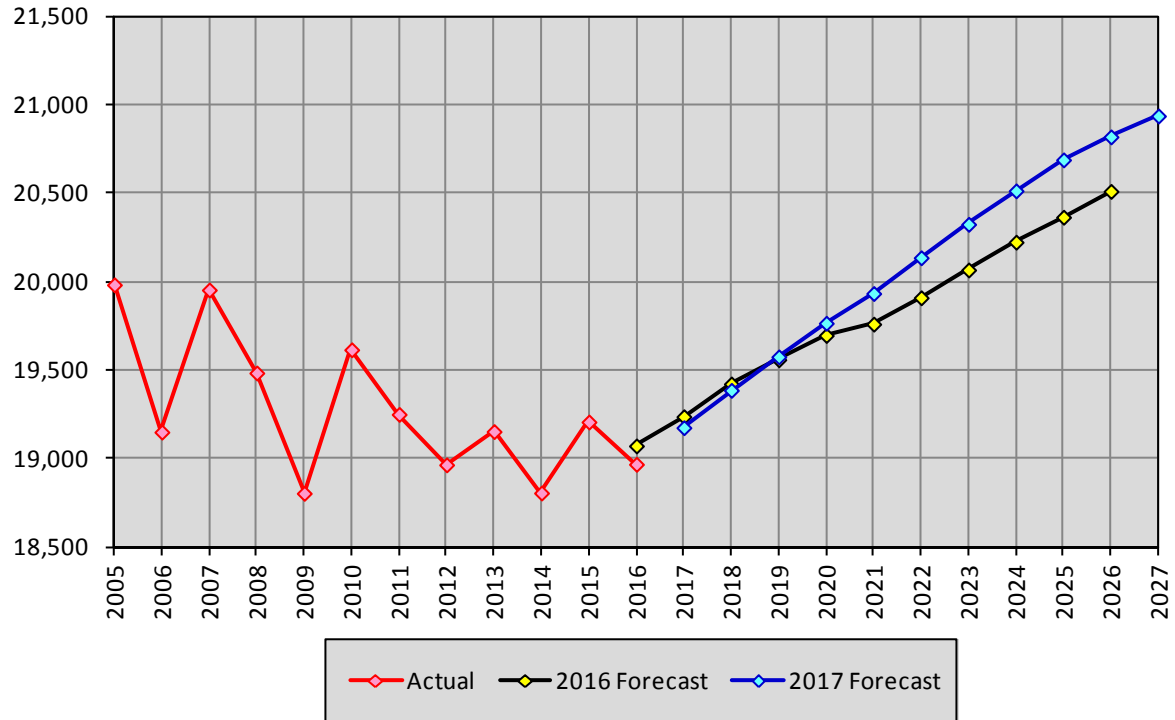
Actual and Forecast - Summer Peak Demand (MW)

Zones A to F Econometric Forecast



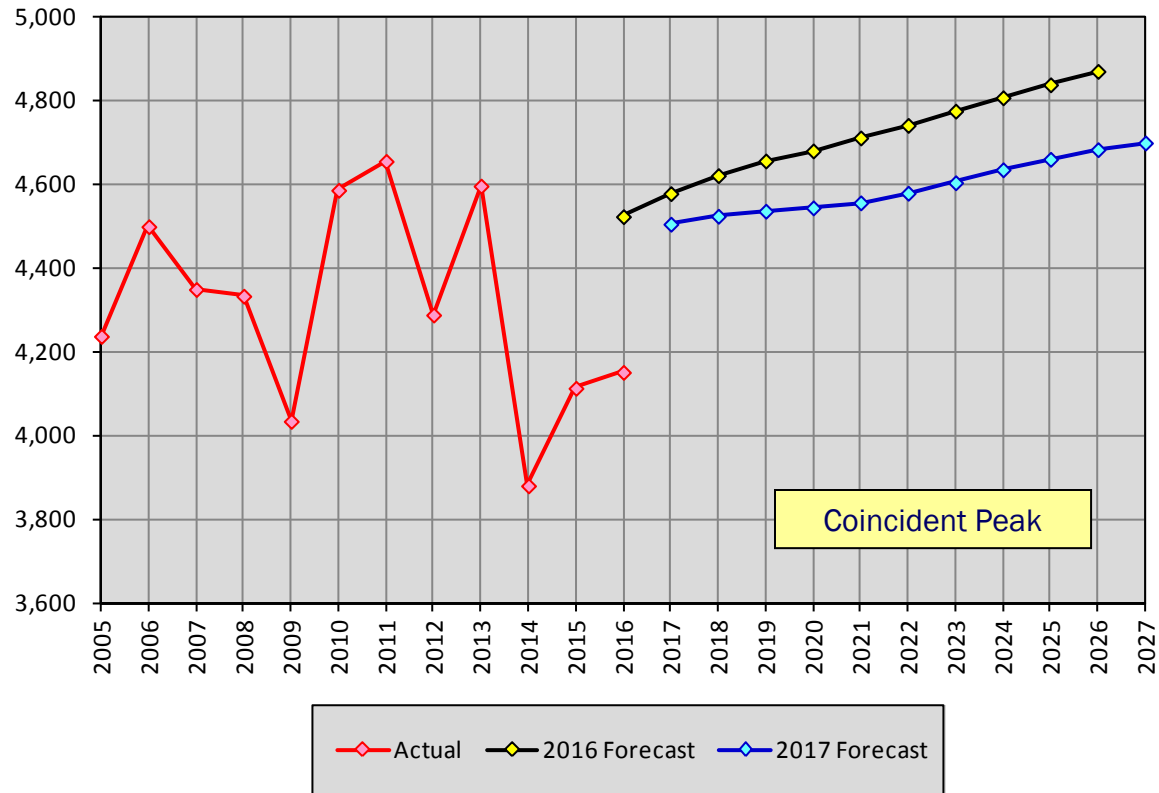
Actual, Normal and Forecast - Annual Energy (GWh)

Zones G to I Econometric Forecast



Actual and Forecast - Summer Peak Demand (MW)

Zones G to I Econometric Forecast



Preliminary 2017 Base Case Forecast

2017 Preliminary Base Case Forecast: Annual Energy

Includes Energy Program Impacts

Forecast of Annual Energy by Zone - GWh

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2017	15,608	9,807	16,116	4,439	7,867	12,281	9,767	2,811	6,027	52,481	21,428	158,632
2018	15,558	9,779	16,083	4,478	7,859	12,321	9,708	2,803	6,008	52,452	20,947	157,996
2019	15,509	9,746	16,052	4,494	7,851	12,359	9,648	2,793	5,987	52,314	20,652	157,405
2020	15,461	9,712	16,023	4,498	7,843	12,395	9,611	2,783	5,966	52,029	20,431	156,752
2021	15,432	9,687	16,006	4,497	7,833	12,427	9,575	2,768	5,933	51,344	20,353	155,855
2022	15,425	9,664	15,990	4,493	7,824	12,454	9,554	2,761	5,918	51,079	20,282	155,444
2023	15,419	9,643	15,979	4,488	7,824	12,478	9,537	2,755	5,906	50,903	20,366	155,298
2024	15,411	9,626	15,968	4,482	7,824	12,499	9,530	2,751	5,897	50,772	20,375	155,135
2025	15,406	9,614	15,961	4,474	7,824	12,515	9,521	2,748	5,890	50,690	20,366	155,009
2026	15,406	9,606	15,954	4,471	7,824	12,527	9,518	2,746	5,886	50,651	20,331	154,920
2027	15,406	9,601	15,946	4,467	7,824	12,535	9,517	2,744	5,882	50,612	20,437	154,971

2017 Preliminary Base Case Forecast: Summer Peak

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
2017	2,653	2,000	2,852	508	1,419	2,401	2,238	656	1,492	11,575	5,384	33,178
2018	2,655	2,003	2,855	509	1,420	2,403	2,218	653	1,486	11,613	5,263	33,078
2019	2,657	2,006	2,859	509	1,421	2,405	2,197	649	1,481	11,663	5,188	33,035
2020	2,659	2,009	2,862	509	1,421	2,406	2,180	648	1,473	11,693	5,133	32,993
2021	2,661	2,013	2,865	509	1,422	2,407	2,169	643	1,465	11,724	5,131	33,009
2022	2,663	2,017	2,868	509	1,423	2,408	2,157	643	1,468	11,742	5,136	33,034
2023	2,665	2,021	2,870	510	1,424	2,409	2,151	645	1,471	11,773	5,157	33,096
2024	2,666	2,026	2,874	510	1,426	2,410	2,145	646	1,476	11,808	5,165	33,152
2025	2,667	2,028	2,875	510	1,426	2,410	2,140	648	1,482	11,862	5,184	33,232
2026	2,668	2,029	2,877	510	1,427	2,410	2,136	649	1,491	11,930	5,197	33,324
2027	2,669	2,032	2,879	510	1,428	2,410	2,132	651	1,495	11,965	5,227	33,398

The mission of the New York Independent System Operator is to:

- Serve the public interest and
- Provide benefit to stakeholders 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

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