

# 2015 - 2017 RS-1 Budget: Energy Forecast

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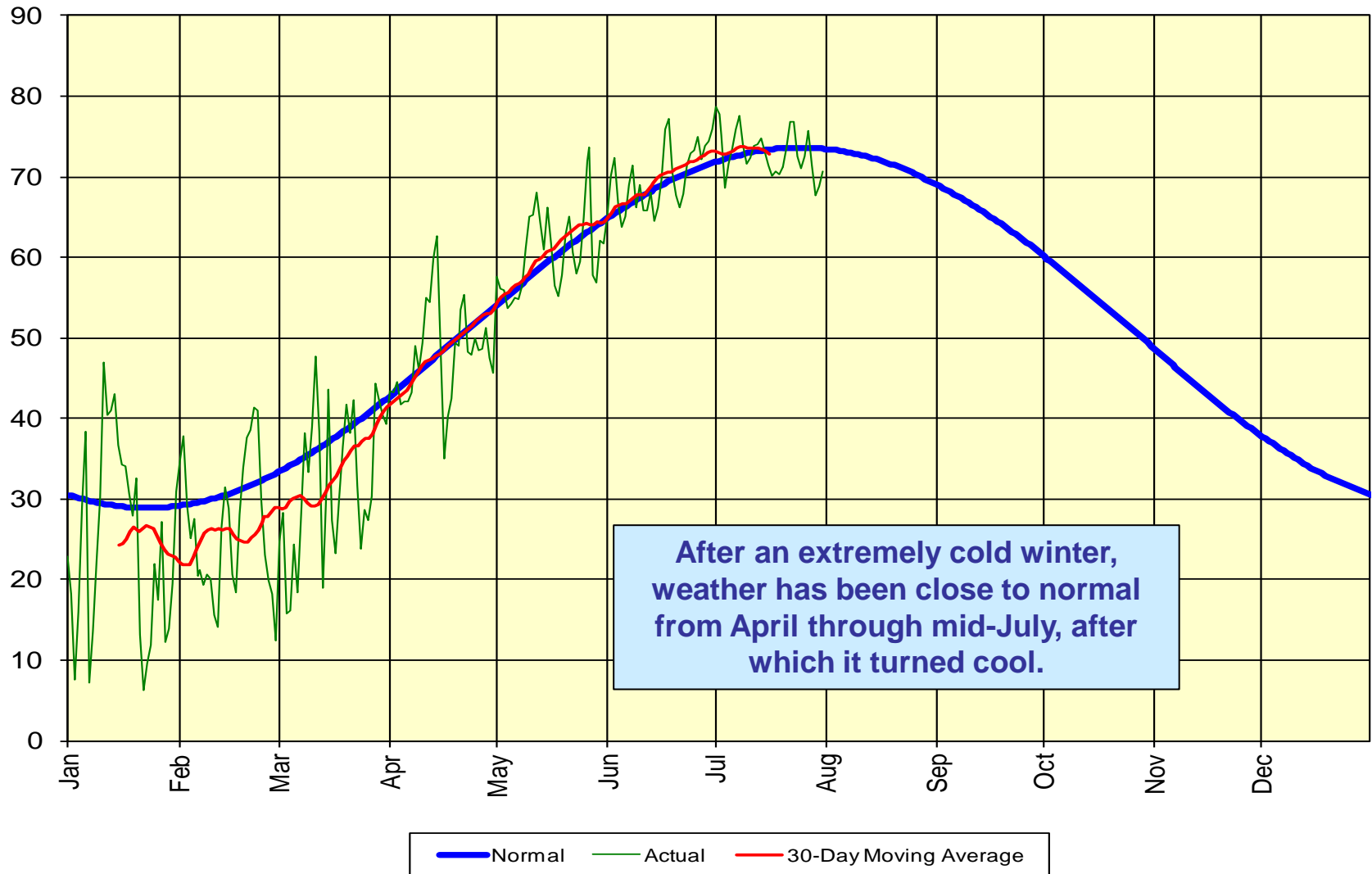
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**Budget & Priorities Working Group**

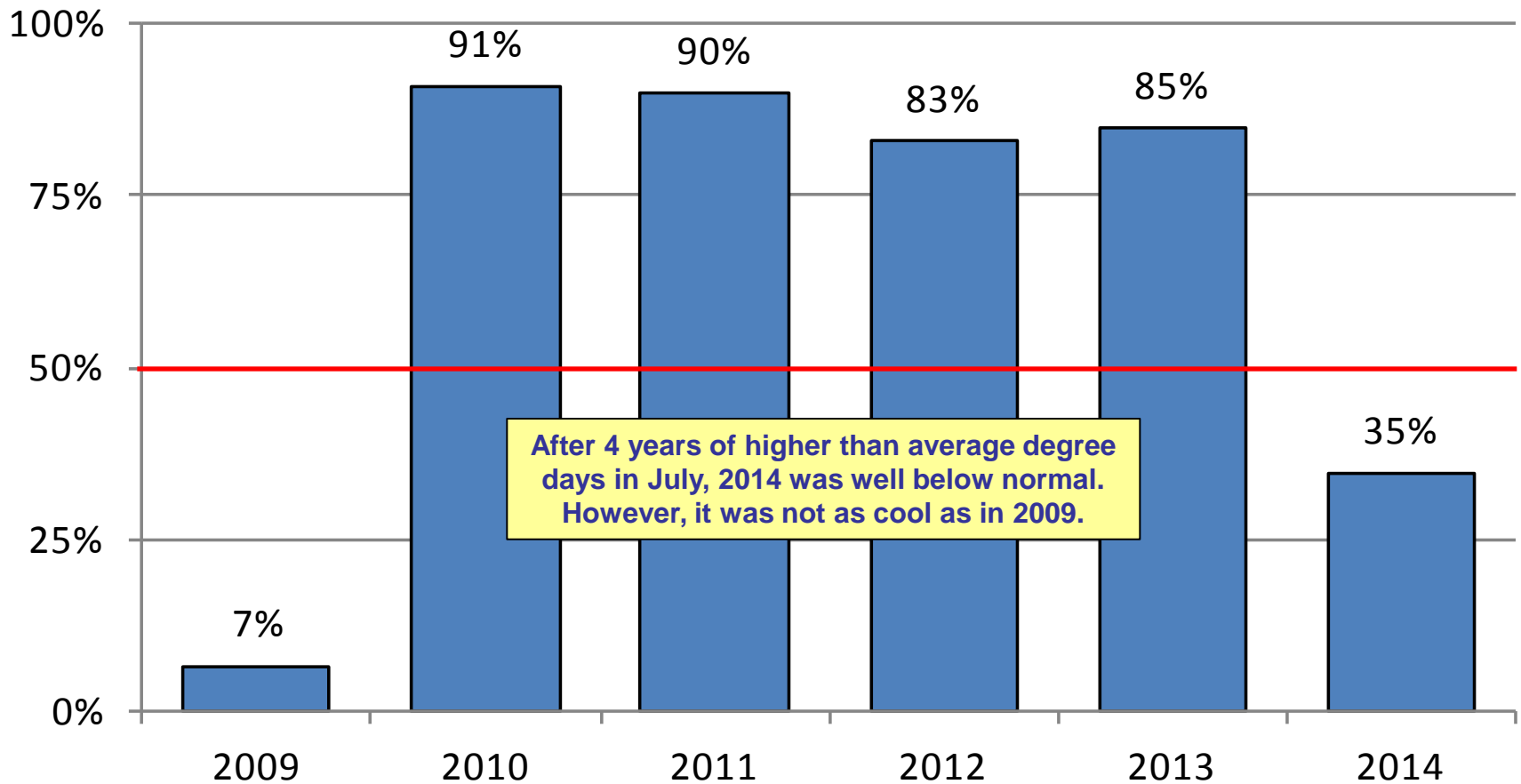
*September 5, 2014*

*Rensselaer, NY*

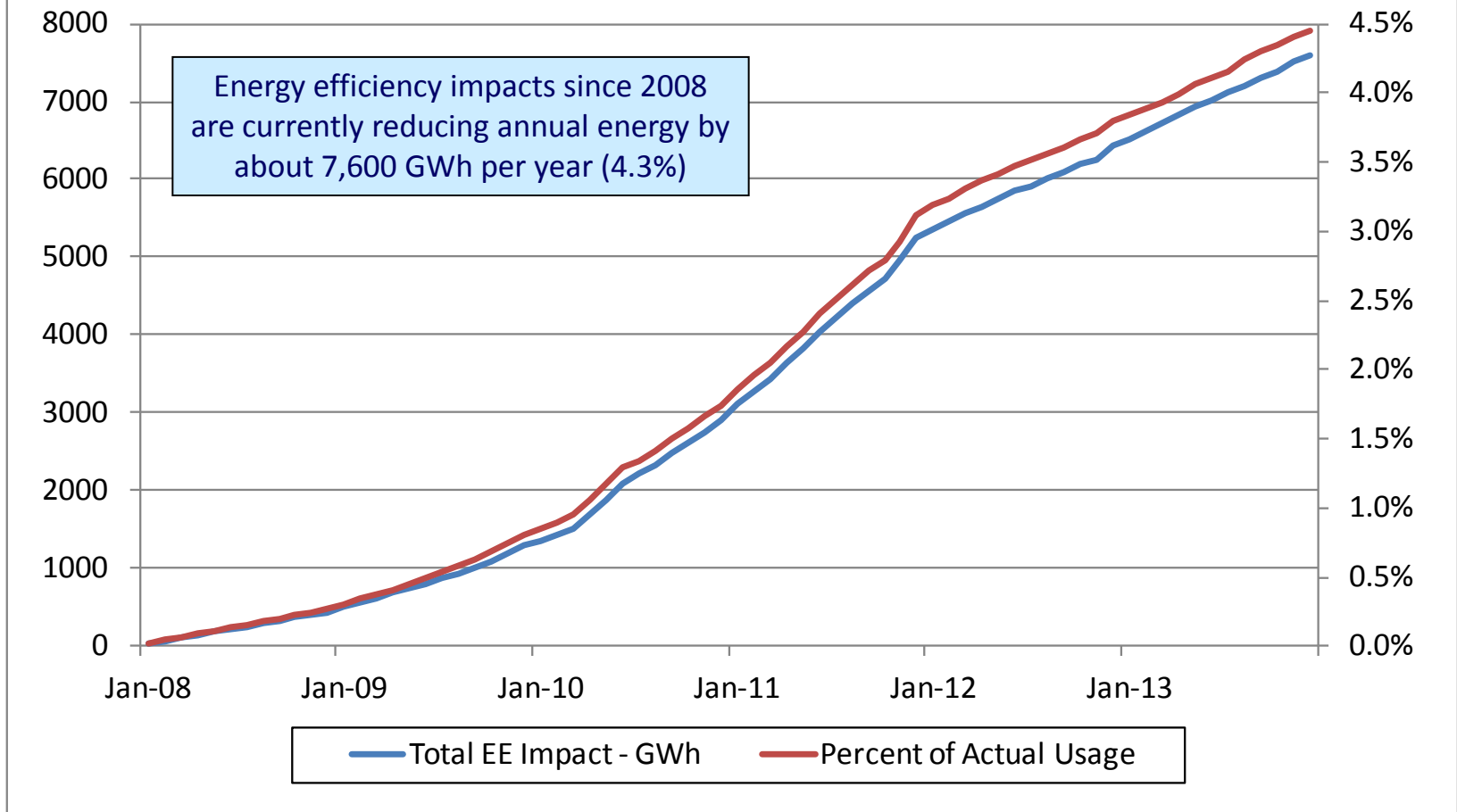
### Average Daily Temperature - Normal vs 2014 NYCA System-Wide Temperature



## July Degree-Day Percentiles 2009 - 2014

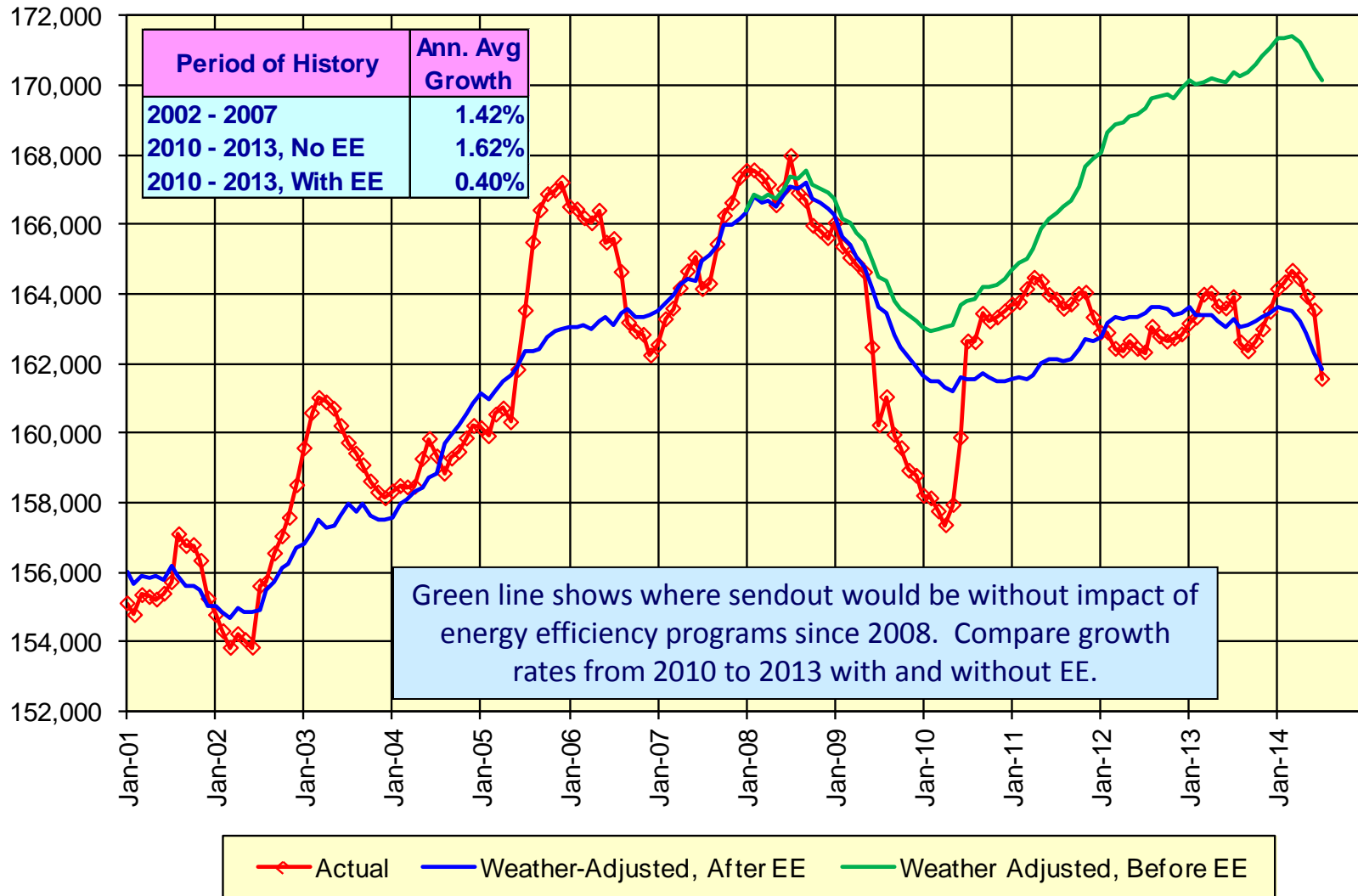


## Statewide Energy Efficiency Impacts - GWh 2008 to 2013



Includes annualized energy impacts for NYSERDA, NYPA, LIPA and all NY IOUs. NYSERDA and IOU data from DPS 'scorecard' reports; NYPA and LIPA data as reported to the NYISO. Energy impact results are based on EEPS Technical Manual or other program impact estimates.

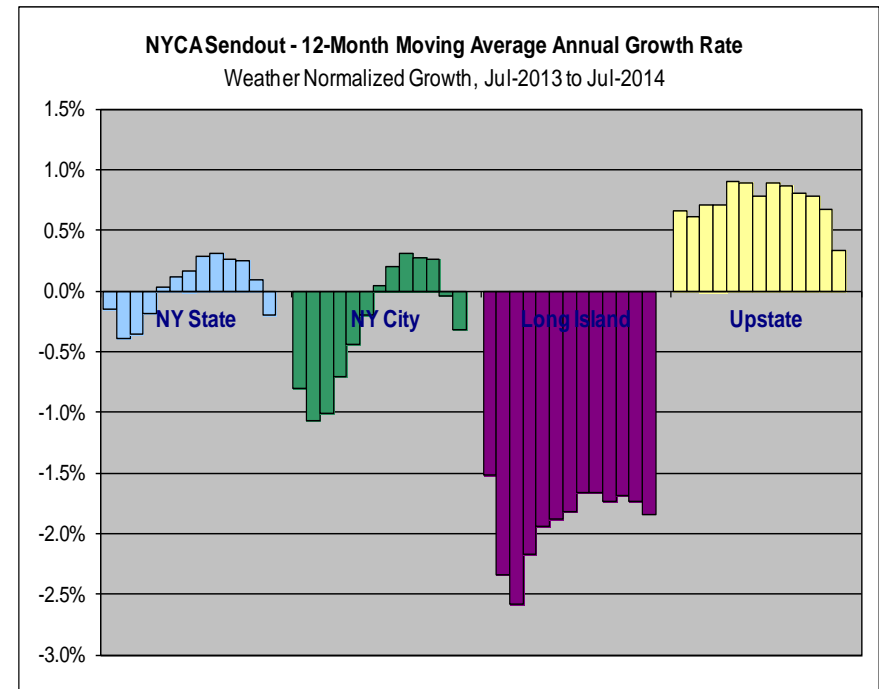
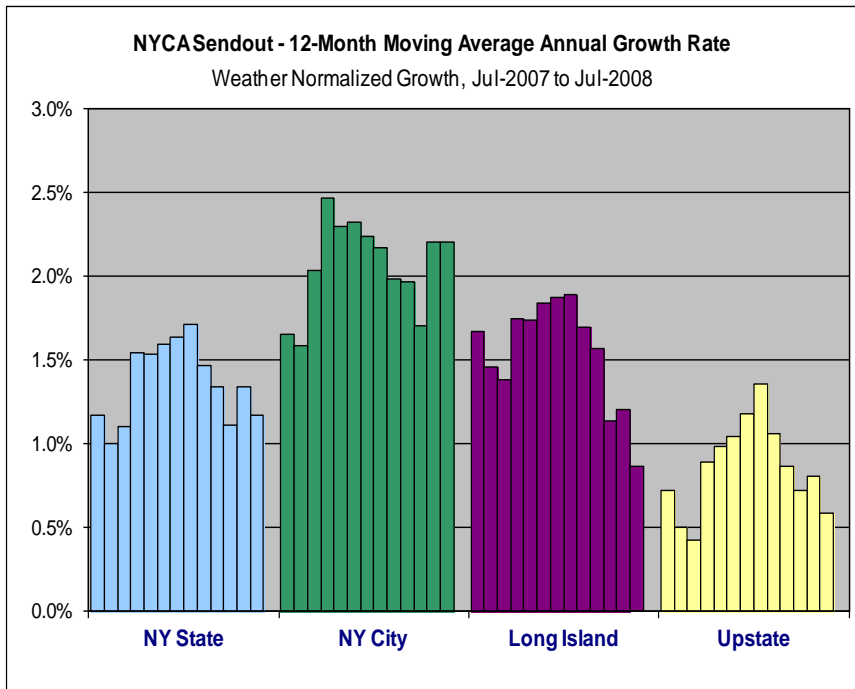
## NYCA Actual and Weather-Adjusted Sendout - 2001 to Present 12 Month Moving Sum - GWh



# Weather-Normalized Energy Growth Rates -- 2008 & 2014

**2008: Pre-Recession, Pre-EEPS Energy Efficiency Order: Robust Growth in Entire State**

**2014: Post-Recession. Modest Growth Upstate, Loss of Load Downstate**



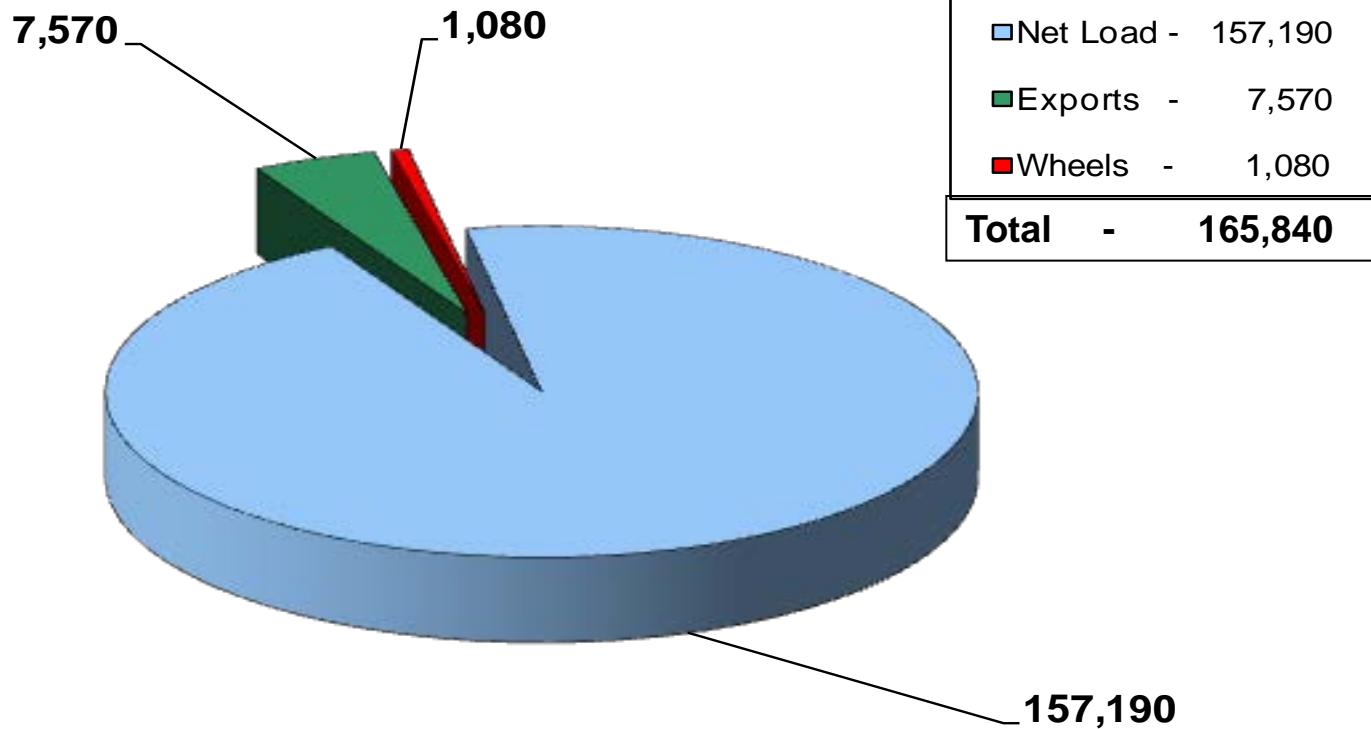
**New York State and Upstate growth rates exclude Zone D**

# RS-1 Forecast Methodology

- ◆ **Net Energy** – Based on zonal econometric models, net of transmission losses.
  - **Energy Models:** Examined Moody's Analytics forecasts & reviewed current energy usage patterns. Budget forecast is lower than the 2014 Gold Book due to lower Zone D load and a reduced Zone K forecast. This year Con-Ed projected year-over-year decreases in its annual energy forecast.
  - **EEPS & Solar PV Impact:** The budget forecast includes the same energy efficiency impacts and Solar PV as the Gold Book forecast. Solar PV impacts have been increasing at a high rate since 2012.
- ◆ **Exports**
  - Annual levels determined by judgment & statistical analysis of recent history. Through July 2014, actual is well ahead of budget, due to cold January resulting in large exports to ISO-NE.
- ◆ **Wheels**
  - Annual levels determined by judgment & statistical analysis of recent history. Through July 2014, actual is running just ahead of budget.

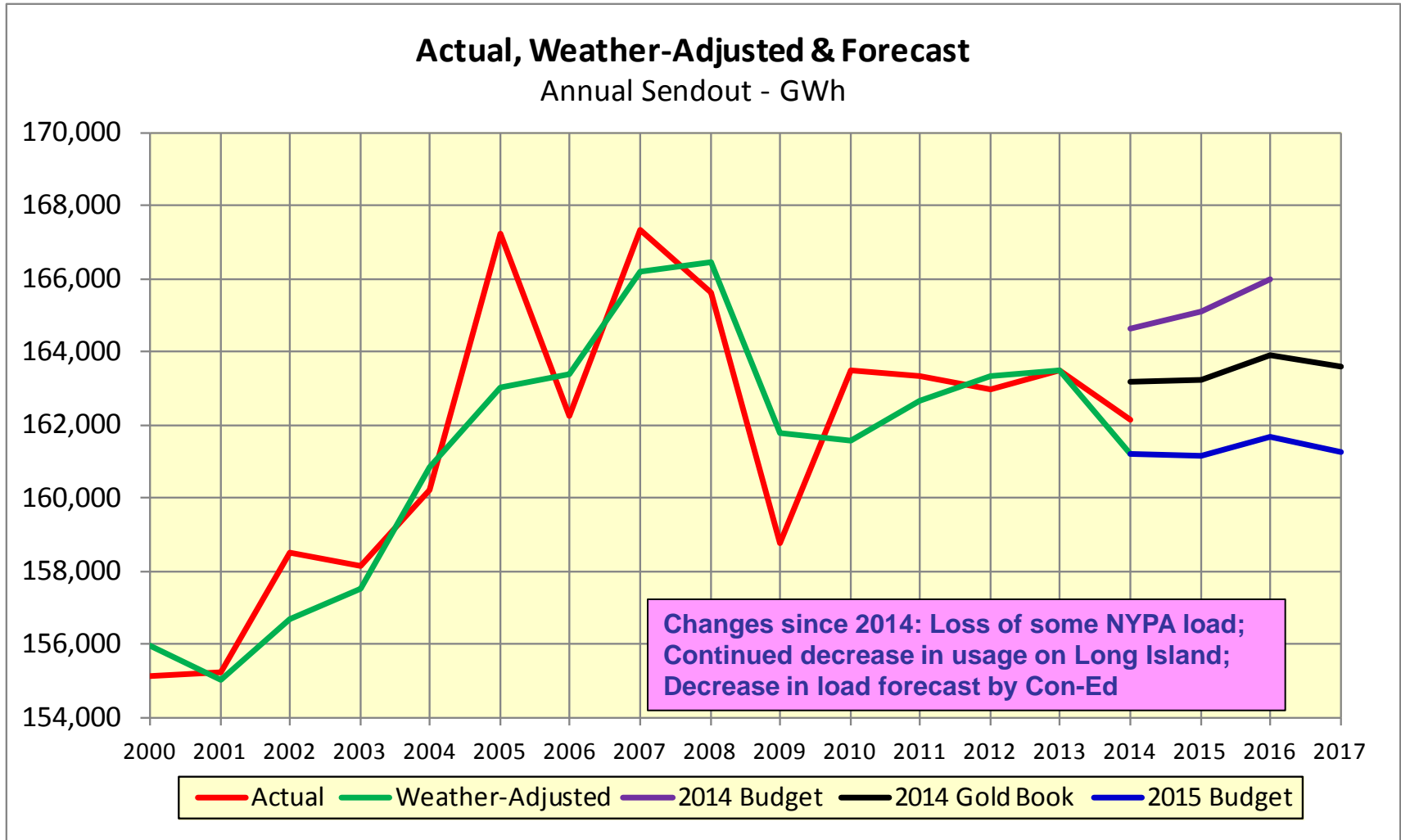
# Three Components of Forecast

## 2015 RS-1 Forecast (GWh)



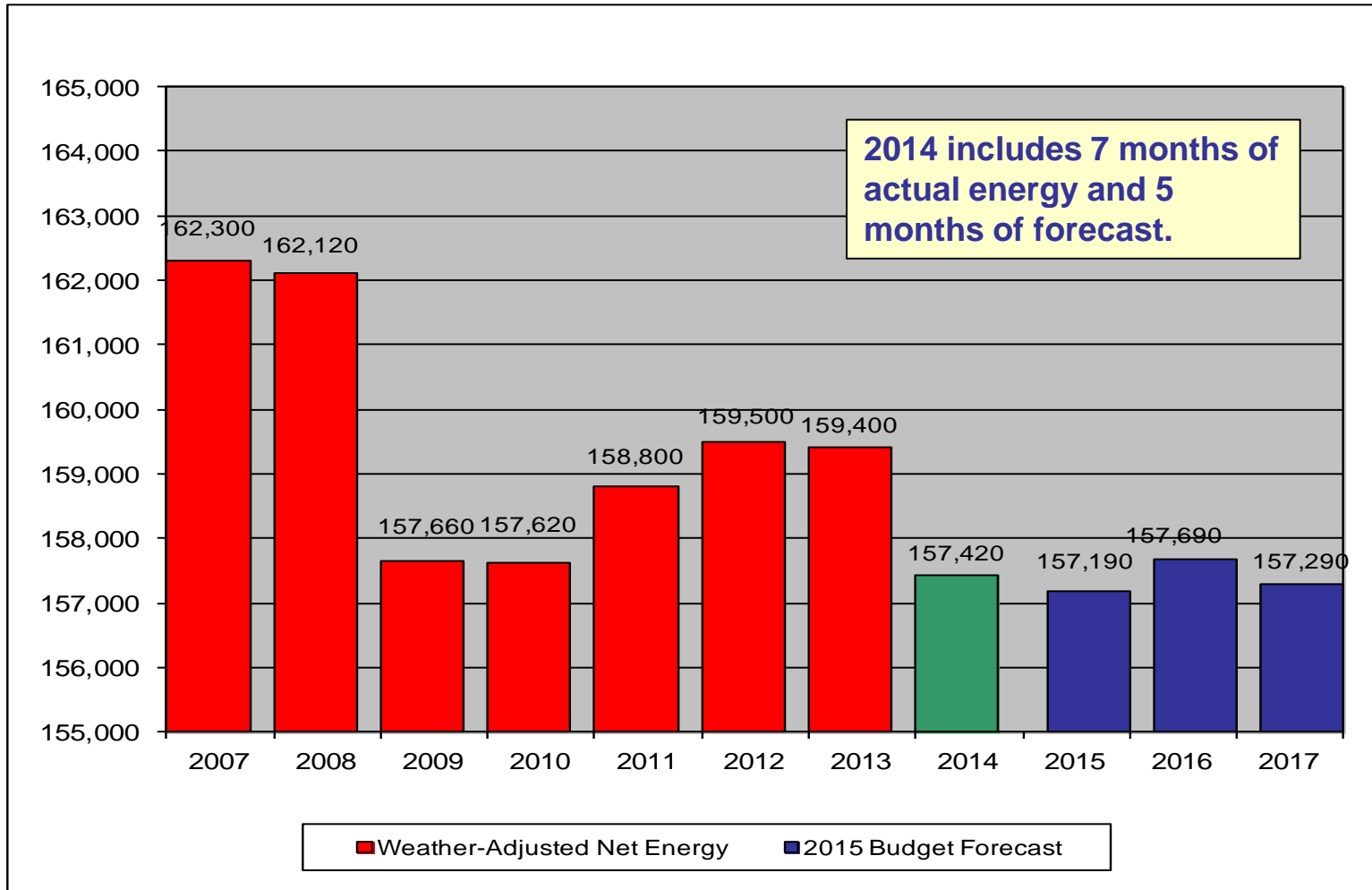


# Changed Budget Outlook Since 2014

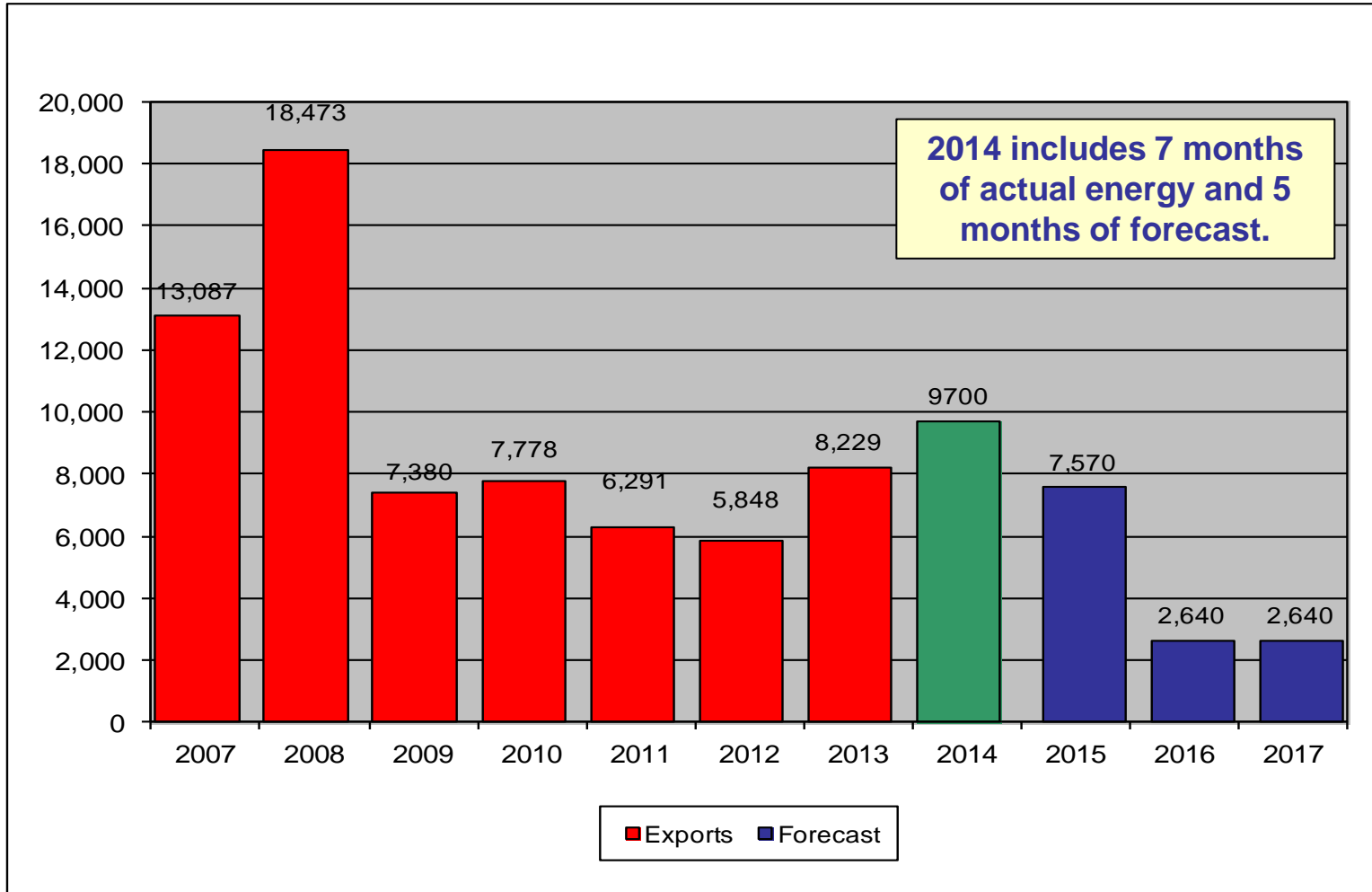


Note: Sendout includes bulk power system transmission losses; these are excluded from the net energy used in the RS-1 budget.

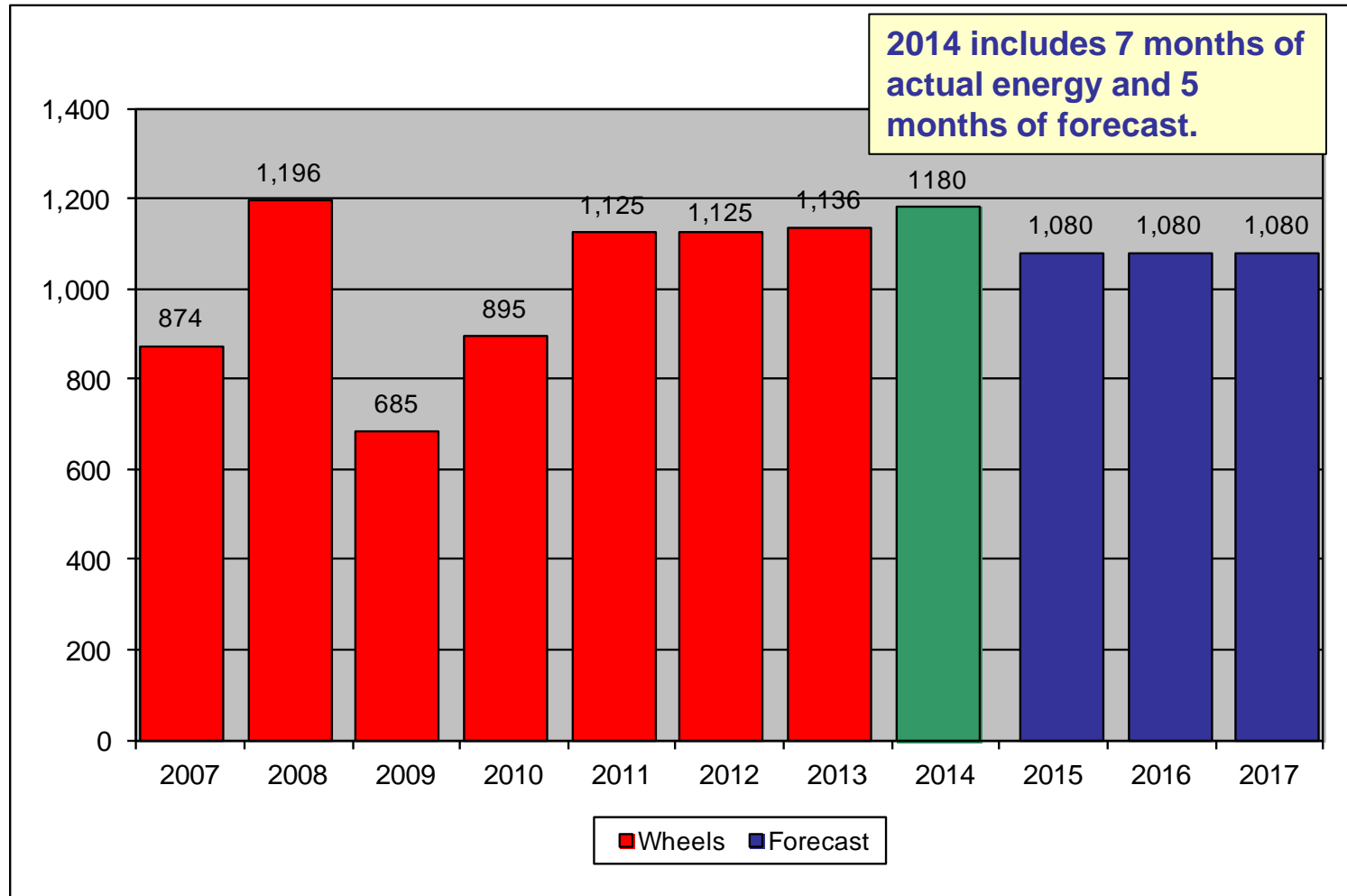
## 2015 NYCA Net Energy Forecast - GWh



## 2015 Exports Forecast - GWh



## 2015 Wheels Forecast - GWh



# RS-1 Budget Summary 2015-2017 (GWh)

Year	Net Energy	Exports	Wheels	RS-1 Total	Forecast
2006	158,219	10,459	596	169,274	
2007	163,371	13,087	874	177,332	
2008	161,271	18,473	1,196	180,940	
2009	154,450	7,380	685	162,515	
2010	159,496	5,630	701	165,827	
2011	159,454	6,291	1,125	166,870	
2012	159,170	5,848	1,125	166,143	
2013	159,132	8,229	1,136	168,497	
2014 (1)	157,420	9,700	1,180	168,300	167,400
2015	157,190	7,570	1,080		165,840
2016 (2)	157,690	2,640	1,080		161,410
2017	157,290	2,640	1,080		161,010

(1) 2014 includes 7 months actual & 5 months projection.

(2) 2016 is a leap year; as a result the extra day in the year adds about 430 GWh to the forecast.

# RS-1 Budget - By Month

## Actual and Forecast (GWh)

Month	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
1	14,630	15,930	15,290	14,430	14,460	14,020	14,680	15,800	14,310	13,870	13,870
2	14,430	14,560	12,800	12,880	12,730	12,670	13,470	14,130	12,980	12,970	12,540
3	14,340	14,800	13,250	12,970	13,430	12,710	13,750	14,530	13,370	12,980	12,980
4	13,380	13,440	12,290	11,800	12,240	12,110	12,450	12,180	12,220	11,820	11,830
5	14,100	14,260	12,600	13,160	13,020	13,310	12,970	12,510	12,900	12,510	12,510
6	15,150	16,500	13,040	15,020	14,590	14,360	14,220	14,180	14,510	14,120	14,120
7	16,580	18,630	14,700	17,800	17,540	17,350	17,710	15,740	16,320	15,930	15,930
8	17,220	16,390	16,150	16,460	15,850	16,630	15,190	16,120	16,120	15,720	15,720
9	14,670	14,610	12,950	13,120	13,850	13,550	13,280	13,720	13,720	13,320	13,320
10	14,050	13,500	12,650	12,920	13,070	12,590	12,740	12,790	12,790	12,390	12,400
11	13,600	13,730	12,290	12,110	12,440	12,850	13,130	12,640	12,640	12,250	12,250
12	15,190	14,590	14,500	13,990	13,630	13,990	14,900	13,960	13,960	13,530	13,540
<b>Annual</b>	<b>177,340</b>	<b>180,940</b>	<b>162,510</b>	<b>166,660</b>	<b>166,850</b>	<b>166,140</b>	<b>168,490</b>	<b>168,300</b>	<b>165,840</b>	<b>161,410</b>	<b>161,010</b>

Actual values in 2014 through July.

*Values are rounded to the nearest 10 GWh*

The New York Independent System Operator (NYISO) is a not-for-profit corporation responsible for operating the state's bulk electricity grid, administering New York's competitive wholesale electricity markets, conducting comprehensive long-term planning for the state's electric power system, and advancing the technological infrastructure of the electric system serving the Empire State.



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