



# *Energy Efficiency Program Status Report – 2011 Q1*

**Arthur Maniaci**

*Supervisor, Load Forecasting & Energy Efficiency  
New York Independent System Operator*

**ESPWG**

*February 10, 2011*

**Draft – for discussion only**

# Summary

## ◆ EEPS

- *2009-2010 cumulative net impacts are about 935 GWh, 57% of PSC's 2010 goal of 1,644 GWh.*
- *In December, NY PSC combined all prior EEPS goals into a 2011 goal of about 3,100 GWh.*
- *EEPS funding expires December 31, 2011. Expectation is for a multi-year extension before year end.*

## ◆ NYSERDA

- *Revisions to historic data; SBC reports now include EEPS and Energy Smart programs; fluctuations in Energy Smart.*

## ◆ Monthly & quarterly details of EE impacts

## ◆ Review of 2010 Gold Book Forecast

## ◆ 'Strawman' 2011 Energy Efficiency Forecast for Discussion Purposes.

Draft – for discussion only

# Energy Efficiency Portfolio Standard (EEPS) 2015 Goals

## EEPS 2015 Goals by Administration or Jurisdictional Unit

State Organization	EEPS Goals			Estimated MW
	Sales Goal - MWh	Sendout Goal - MWh	Percent	
LIPA <sup>1</sup>	2,167,035	2,337,305	8.7%	500
NYPA	1,756,426	1,894,434	7.0%	395
Other State Agencies	790,718	852,847	3.2%	175
NYSERDA -Energy Smart	3,499,995	3,775,001	14.0%	785
Utilities	353,806	381,606	1.4%	80
Codes & Standards	7,947,588	8,572,055	31.9%	1,780
Utility T&D	724,379	781,296	2.9%	165
PSC's EEPS Goals for NYSERDA and Utilities	7,687,095	8,291,094	30.8%	1,720
<b>Total</b>	<b>24,927,042</b>	<b>26,885,638</b>	<b>100.0%</b>	<b>5,600</b>

1. LIPA's expressed goal is 500 MW and has an average load factor of 49%.

The EEPS order specified energy goals as listed above. The NYISO estimated an approximate MW impact for each element of the order.

**Draft – for discussion only**

# NYSERDA Summary – 2008 to 2010

## Cumulative Net Annualized GWh Impacts

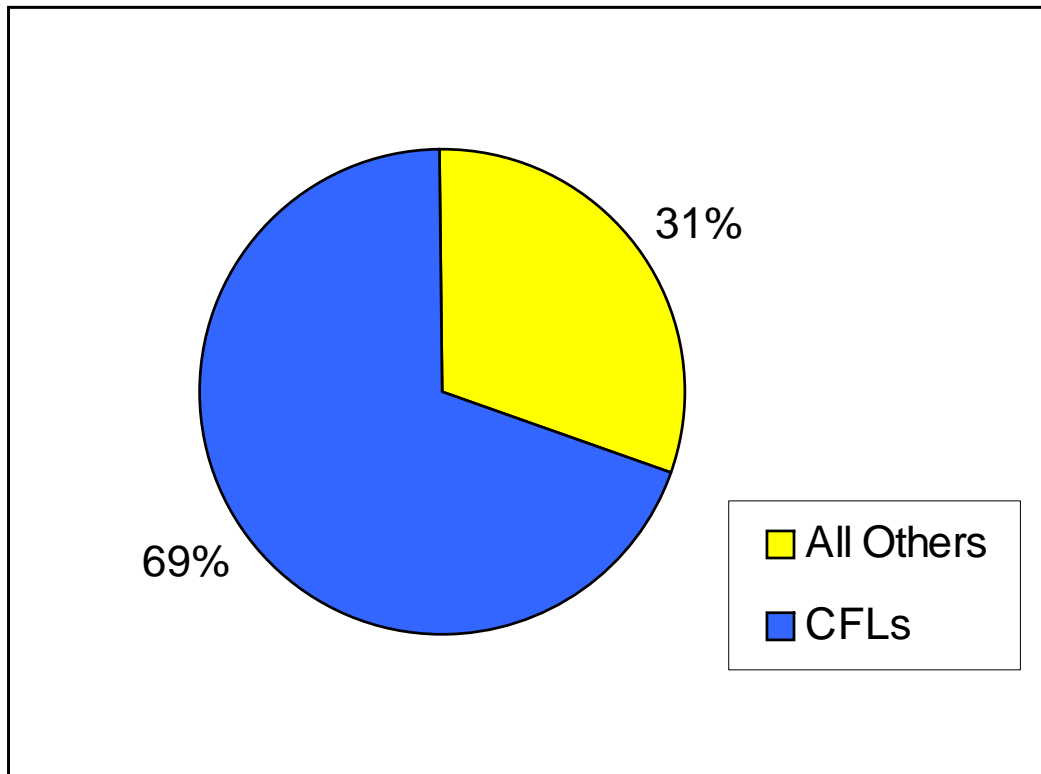
## Chg in Cum Net Ann. Impacts

		All NYSERDA	EEPS Only	Energy Smart			All NYSERDA	EEPS Only	Energy Smart
2008	Q4	3,220	0	3,220					
2009	Q1	3,320	0	3,320		100	0	100	
	Q2	3,365	1	3,364		45	1	44	
	Q3	3,454	29	3,425		89	28	61	
	Q4*	3,871	127	3,744		417	98	319	
2010	Q1	3,987	205	3,782		116	78	38	
	Q2	4,230	349	3,881		243	144	99	
	Q3	4,358	487	3,871		127	138	-11	
	Q4^	4,673	702	3,971		315	215	100	

**2010 Q4 Impact is based on NYSERDA's December 2010 EEPS report to DPS and a NYISO estimate of Energy Smart impacts. All figures are best available estimates but may not be final.**

**Draft – for discussion only**

# NYSERDA's EEPS Impacts are Dominated by CFL Program



Programs	GWh
All Others	215
CFLs	487
<b>Total EEPS</b>	<b>702</b>

*CFLs' summer peak impact is much smaller than during evening hours.*

**Draft – for discussion only**

# NYPA Summary – 2008 to 2010

## Net Annualized Impacts

Year	Quarter	Quarterly Impacts - GWh	Cumulative Impacts - GWh
2008	1	2	2
	2	26	29
	3	12	40
	4	7	47
2009	1	12	59
	2	4	63
	3	13	76
	4	21	97
2010	1	7	104
	2	11	115
	3	4	119
	4	28	147
2011	1	5	152
	2	7	159
	3	27	185
	4	16	201

**NYPA books partial impacts of 2010 projects still underway. NYISO booked 100% of the impacts based on the projects' scheduled completion dates in 2011. Results based on NYPA's 2010 Q3 report.**

**Draft – for discussion only**

# LIPA Summary – 2008 to 2010

## Net Annualized Impacts

Year	Qtr	Energy Long Island	Other Programs	Total, Qtrly GWh	Total, Cum GWh
2008	1		36	36	36
	2		36	36	71
	3		36	36	107
	4		36	36	142
2009	1	31	3	35	177
	2	31		31	208
	3	31		31	240
	4	31		31	271
2010	1	35	18	53	324
	2	42	18	60	384
	3	40	10	50	434
	4	40	10	50	484

**LIPA updates for 2010 Q3 & Q4 are unavailable. NYISO made estimates for 2010 Q3 & Q4.**

**Draft – for discussion only**

# EEPS Summary – 2008 to 2010

## Net Annualized Impacts

Year	QTR	Quarterly Incremental GWh			Quarterly Cumulative GWh		
		IOUs	NYSERDA	EEPS	IOUs	NYSERDA	EEPS
2008	1	0	0	0	0	0	0
	2	0	0	0	0	0	0
	3	0	0	0	0	0	0
	4	0	0	0	0	0	0
2009	1	0	0	0	0	0	0
	2	0	1	1	0	1	1
	3	0	28	28	0	29	29
	4	8	98	106	8	127	135
2010	1	25	78	103	33	205	238
	2	45	144	189	78	349	427
	3	63	138	201	141	487	628
	4	92	215	307	233	702	935

Figures are best available estimates compiled from monthly reports to DPS, plus reconciliation with other reports.

Draft – for discussion only



# Monthly Impacts of All Programs – 2009 to 2010

## Cumulative Monthly Net Annualized Impacts - GWh

Date	NYPA	LIPA	NYSERDA Energy Smart	NYSERDA - EEPS	NYSEG	RG&E	NG	CH	O&R	Con Edison	Total Cum Gwh
Jan-09	51	154	183	0							388
Feb-09	55	165	217	0							437
Mar-09	59	177	250	0							486
Apr-09	61	187	265	0							513
May-09	62	198	279	1							540
Jun-09	63	208	294	1							566
Jul-09	67	219	317	10							614
Aug-09	72	229	341	20							661
Sep-09	76	240	364	29							709
Oct-09	83	250	467	62			1				863
Nov-09	90	261	570	94			3				1018
Dec-09	97	271	673	127	0	0	6	0	0	1	1175
Jan-10	99	289	707	153	0	0	9	0	0	1	1259
Feb-10	102	306	741	179	0	0	15	1	0	4	1348
Mar-10	104	324	775	205	0	0	24	1	0	7	1441
Apr-10	108	344	786	253	0	0	31	1	1	11	1535
May-10	112	364	798	301	0	0	39	2	2	16	1633
Jun-10	115	384	809	349	0	0	48	2	2	26	1735
Jul-10	116	400	805	395	0	0	58	3	3	31	1814
Aug-10	118	417	802	441	1	1	69	4	4	39	1895
Sep-10	119	434	798	487	1	1	80	5	6	48	1978
Oct-10	128	450	832	559	2	2	92	7	7	59	2137
Nov-10	138	467	865	630	3	3	104	8	9	72	2299
Dec-10	147	484	899	702	4	4	120	10	10	86	2465

# Monthly Impacts of All Programs – 2009 to 2010

## Incremental Monthly Net Annualized Impacts – GWh

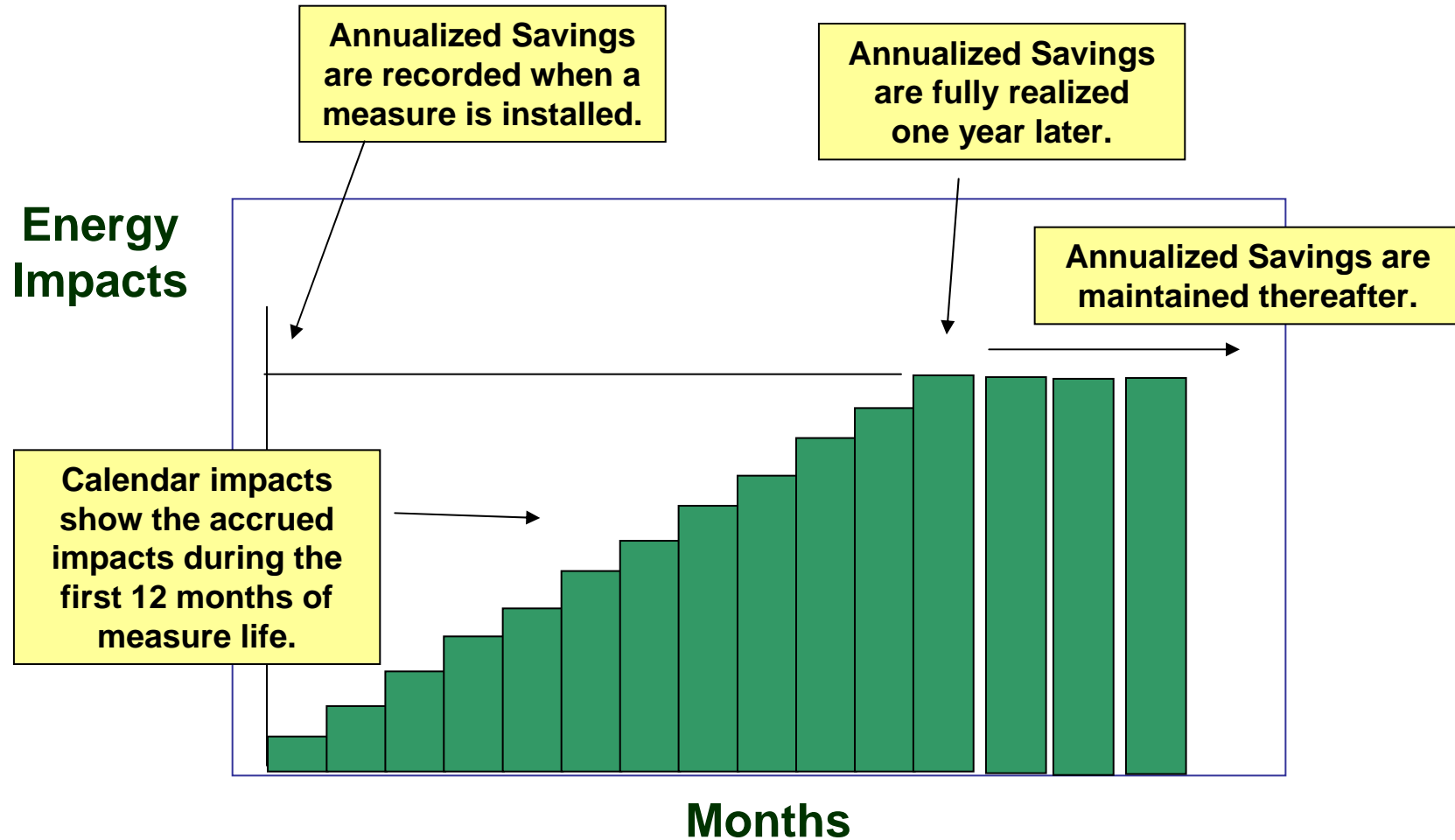
Date	NYPA	LIPA @ 50%	Energy Smart @ 50%	NYSERDA-EEPS	NYSEG	RG&E	NG	CH	O&R	Con Edison	Total
Jan-09	4	6	17	0	0	0	0	0	0	0	26
Feb-09	4	6	17	0	0	0	0	0	0	0	26
Mar-09	4	6	17	0	0	0	0	0	0	0	26
Apr-09	1	5	7	0	0	0	0	0	0	0	14
May-09	1	5	7	0	0	0	0	0	0	0	14
Jun-09	1	5	7	0	0	0	0	0	0	0	14
Jul-09	4	5	12	9	0	0	0	0	0	0	31
Aug-09	4	5	12	9	0	0	0	0	0	0	31
Sep-09	4	5	12	9	0	0	0	0	0	0	31
Oct-09	7	5	51	33	0	0	1	0	0	0	97
Nov-09	7	5	51	33	0	0	2	0	0	0	98
Dec-09	7	5	51	33	0	0	3	0	0	1	101
Jan-10	2	9	17	26	0	0	3	0	0	0	58
Feb-10	2	9	17	26	0	0	6	0	0	3	63
Mar-10	2	9	17	26	0	0	9	0	0	3	68
Apr-10	4	10	6	48	0	0	7	0	1	4	78
May-10	4	10	6	48	0	0	8	1	1	5	82
Jun-10	4	10	6	48	0	0	8	0	1	10	86
Jul-10	1	8	-2	46	0	0	10	1	1	6	72
Aug-10	1	8	-2	46	0	0	11	1	1	8	75
Sep-10	1	8	-2	46	0	0	12	1	1	8	77
Oct-10	9	8	17	72	1	1	12	2	1	11	133
Nov-10	9	8	17	72	1	1	12	1	2	13	137
Dec-10	9	8	17	72	1	1	16	2	1	14	141

Draft – for discussion only

## *Net Annualized vs Calendar Year Impacts*

- ◆ **Net annualized impacts are savings that will be achieved one year after installation date. They accrue monthly. Once the year is complete, savings are maintained for the life of the measure.**
- ◆ **Calendar year impacts represent how much has actually accrued, at a given point in time. After 1 year, accrued savings equal the initial net annualized impact of 1 year ago.**
- ◆ **Since measures are installed every month, an accounting step is needed to determine how much energy impacts are actually realized in any given month.**

# Monthly Accrual of Realized Impacts



# 2010 Calendar Year Impacts: Contributions of All Programs, 2009 - 2010

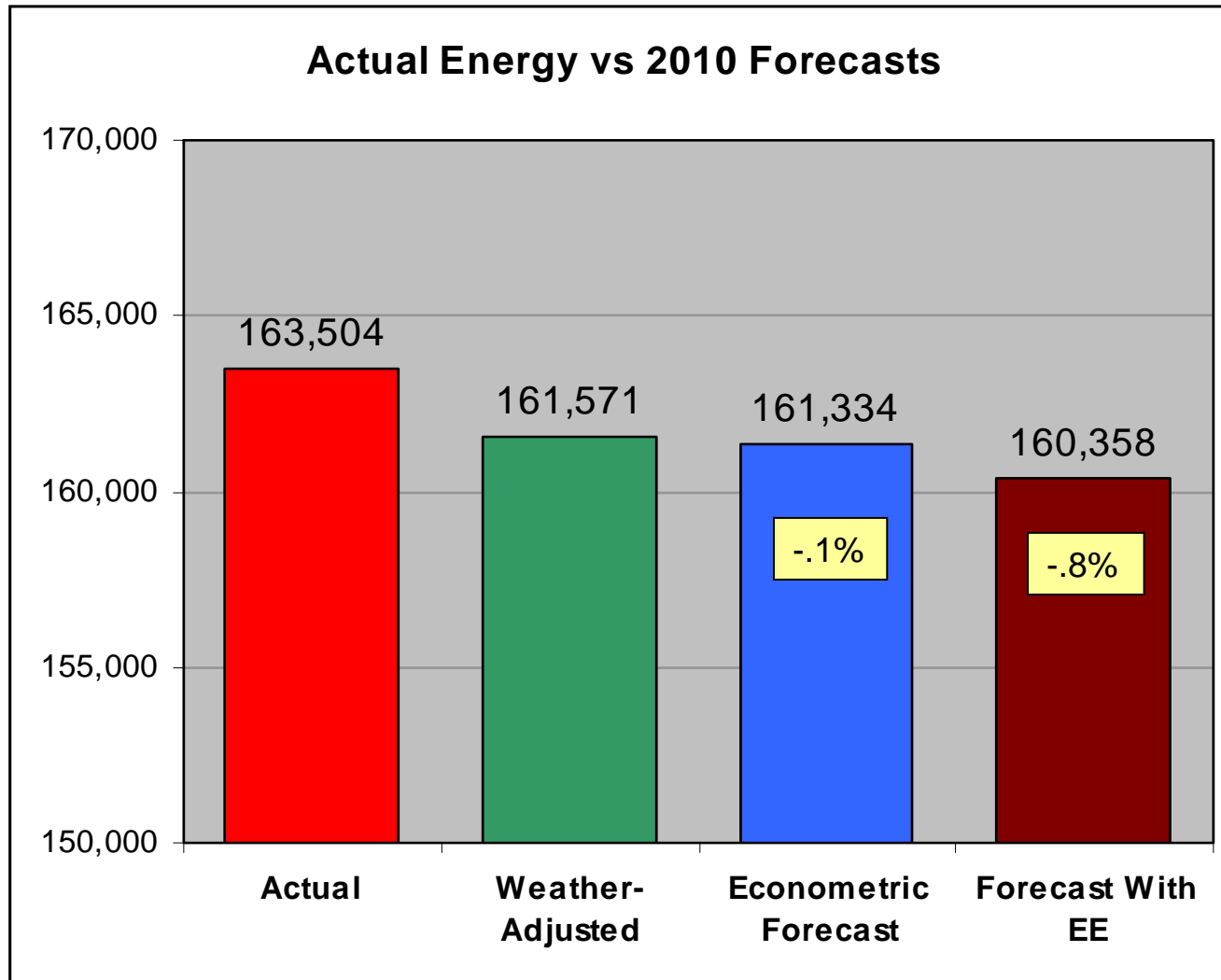
	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10
Calendar Impacts	188	234	282	333	390	453	521	593	669	749	832	<b>917</b>

Month-Year	Incremental Net Annualized Impacts (GWH)	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10
Jan-09	26	1.00	1	1	1	1	1	1	1	1	1	1	1
Feb-09	26	0.92	1.00	1	1	1	1	1	1	1	1	1	1
Mar-09	26	0.83	0.92	1.00	1	1	1	1	1	1	1	1	1
Apr-09	14	0.75	0.83	0.92	1.00	1	1	1	1	1	1	1	1
May-09	14	0.67	0.75	0.83	0.92	1.00	1	1	1	1	1	1	1
Jun-09	14	0.58	0.67	0.75	0.83	0.92	1.00	1	1	1	1	1	1
Jul-09	31	0.50	0.58	0.67	0.75	0.83	0.92	1.00	1	1	1	1	1
Aug-09	31	0.42	0.50	0.58	0.67	0.75	0.83	0.92	1.00	1	1	1	1
Sep-09	31	0.33	0.42	0.50	0.58	0.67	0.75	0.83	0.92	1.00	1	1	1
Oct-09	97	0.25	0.33	0.42	0.50	0.58	0.67	0.75	0.83	0.92	1.00	1	1
Nov-09	98	0.17	0.25	0.33	0.42	0.50	0.58	0.67	0.75	0.83	0.92	1.00	1
Dec-09	101	0.08	0.17	0.25	0.33	0.42	0.50	0.58	0.67	0.75	0.83	0.92	1.00
Jan-10	58		0.08	0.17	0.25	0.33	0.42	0.50	0.58	0.67	0.75	0.83	0.92
Feb-10	63			0.08	0.17	0.25	0.33	0.42	0.50	0.58	0.67	0.75	0.83
Mar-10	68				0.08	0.17	0.25	0.33	0.42	0.50	0.58	0.67	0.75
Apr-10	78					0.08	0.17	0.25	0.33	0.42	0.50	0.58	0.67
May-10	82						0.08	0.17	0.25	0.33	0.42	0.50	0.58
Jun-10	86							0.08	0.17	0.25	0.33	0.42	0.50
Jul-10	72								0.08	0.17	0.25	0.33	0.42
Aug-10	75									0.08	0.17	0.25	0.33
Sep-10	77										0.08	0.17	0.25
Oct-10	133											0.08	0.17
Nov-10	137												0.08
Dec-10	141												

Includes 50% reductions in Energy Smart impacts & LIPA impacts, which are believed to be accounted for in Econometric forecasts.  
Also excludes Building Codes & Standards.

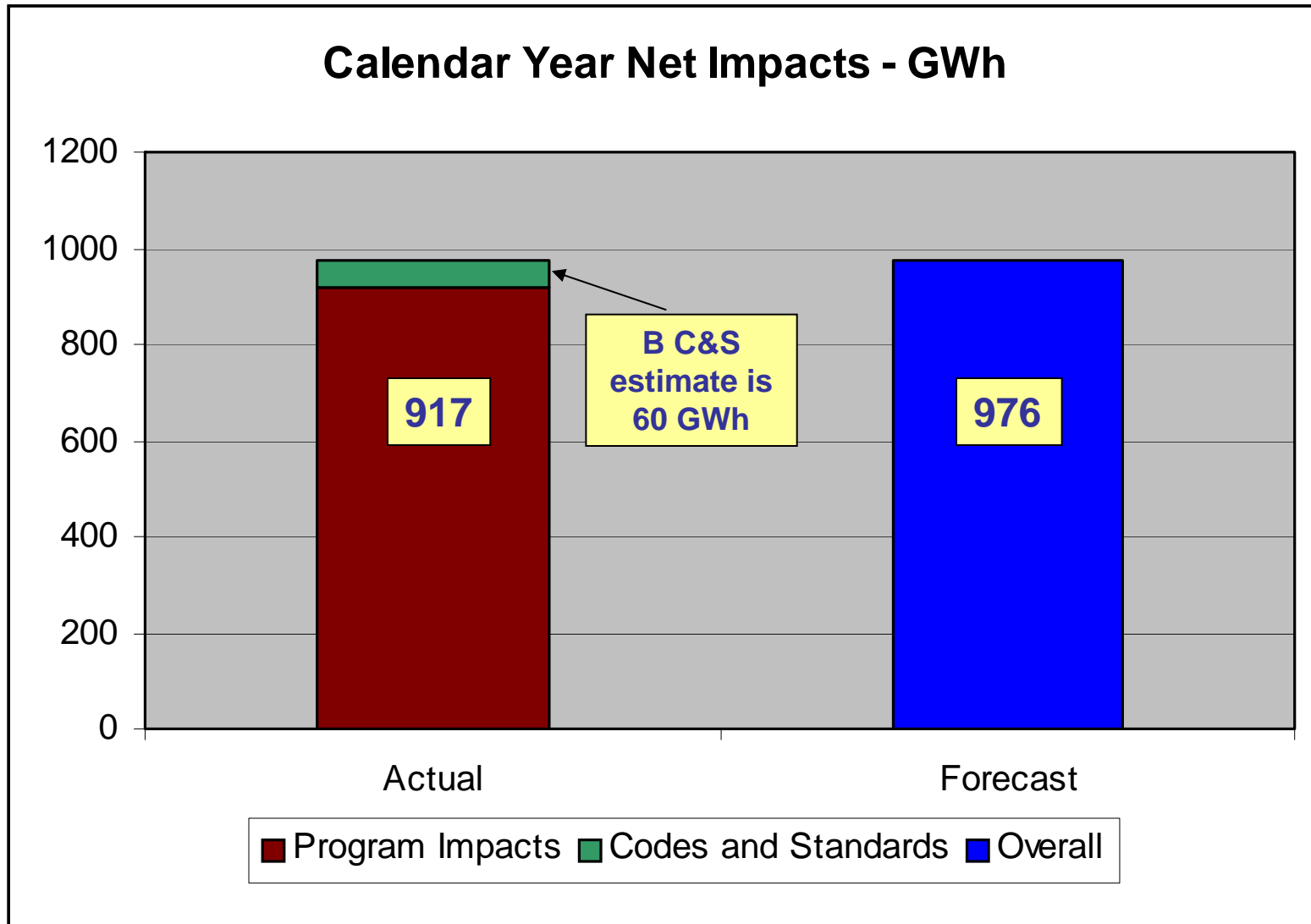
**Draft – for discussion only**

# 2010 Econometric Forecast Compared to Forecast with Energy Efficiency



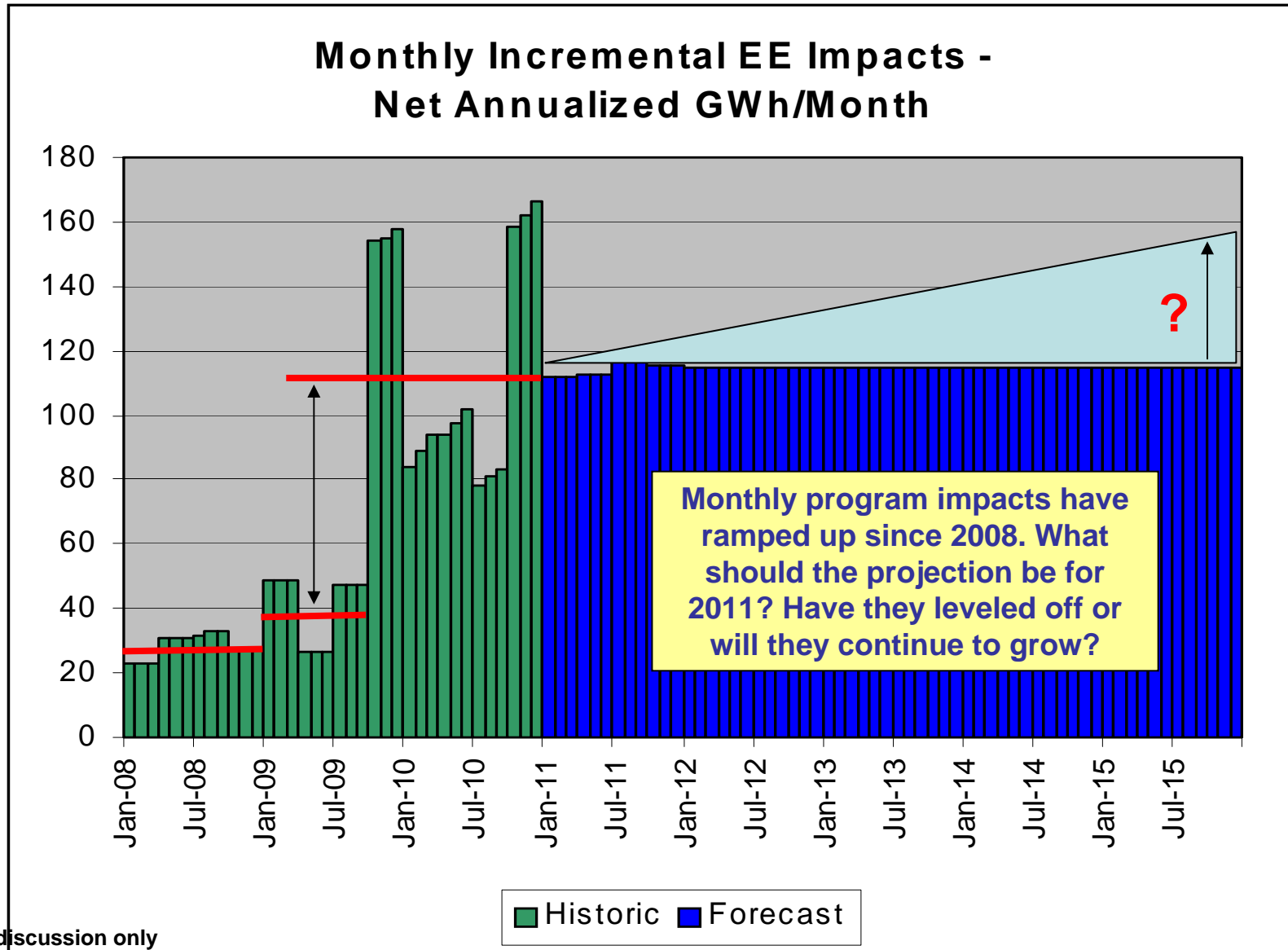
Draft – for discussion only

## 2010 EE Forecast was Accurate



Draft – for discussion only

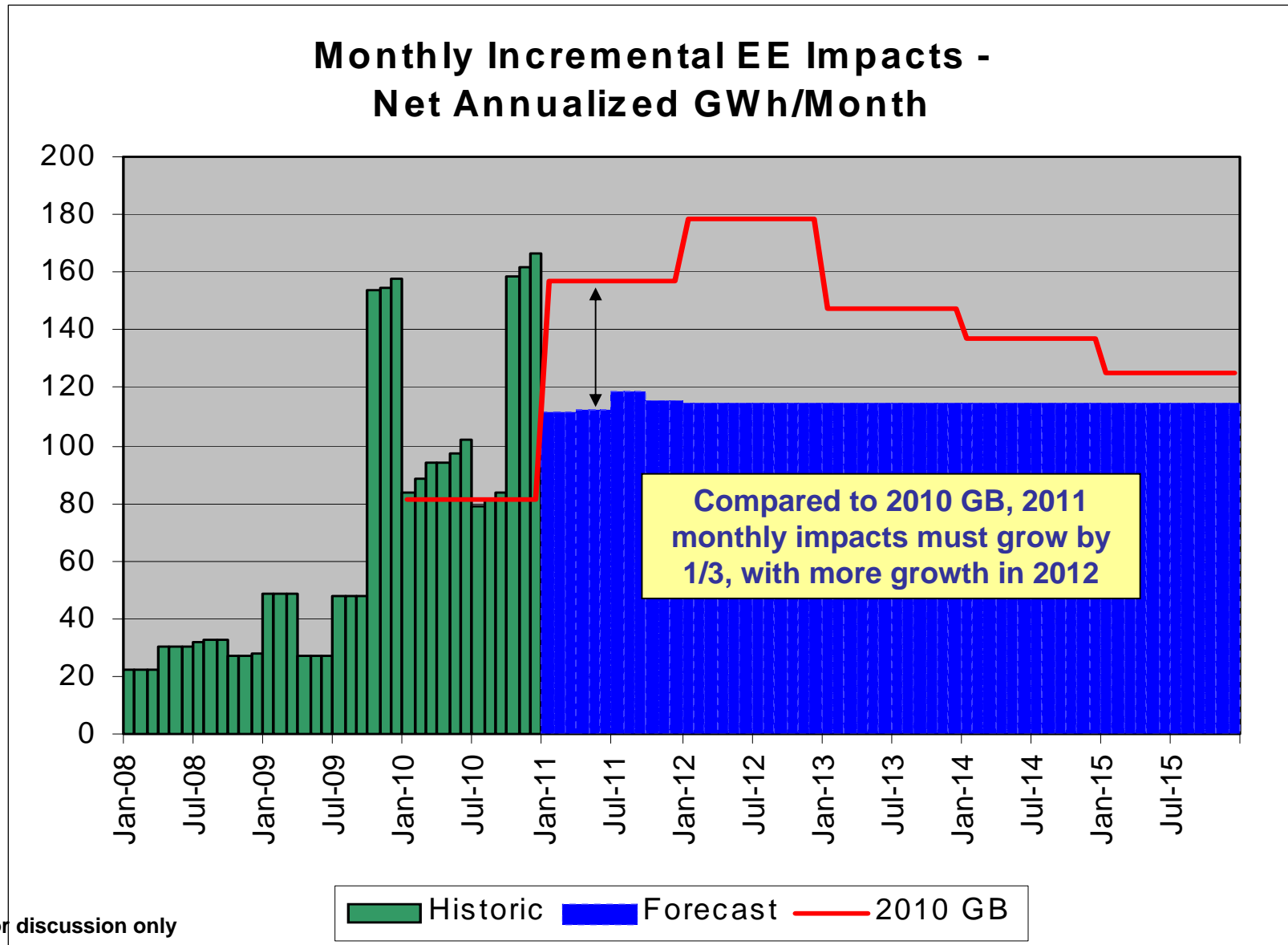
# EE Forecast - Trend of Monthly Impacts



Draft – for discussion only



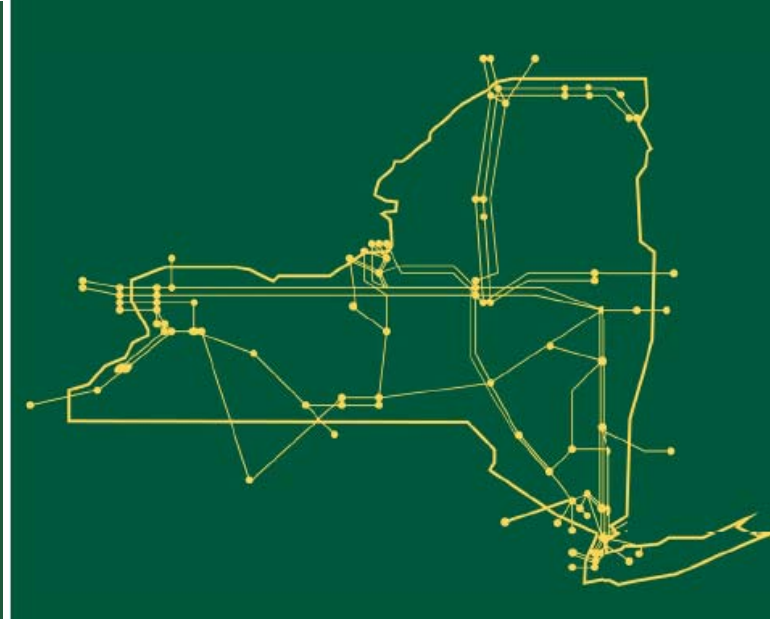
# EE Trend Forecast Compared to 2010 GB



Draft – for discussion only

# *Questions & Discussion*

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.



[www.nyiso.com](http://www.nyiso.com)