

# INDIANA ELECTRICITY PROJECTIONS: THE 2013 FORECAST

*Presented to:  
Indiana Utility Regulatory Commission*

*Presented by:  
Douglas Gotham*

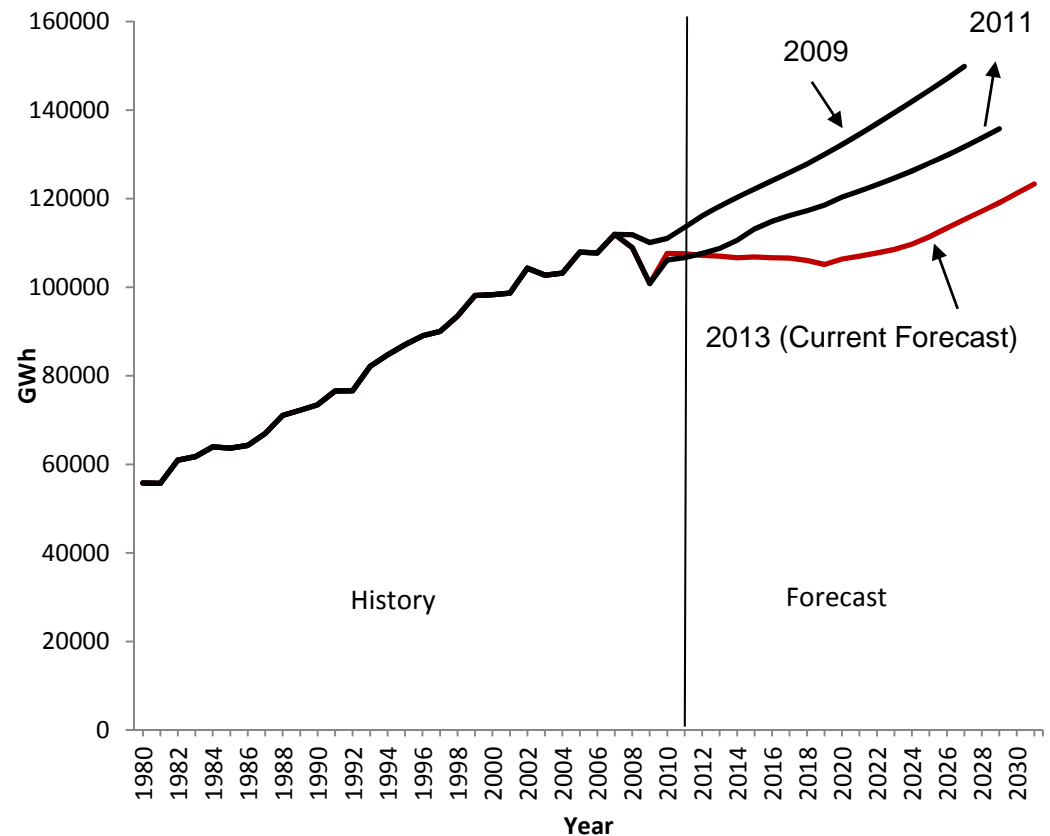
December 20, 2013

# Forecast Highlights

- 2013 forecast growth is lower than in previous forecasts due to increases in efficiency
  - Higher prices reduce customer usage
  - Utility DSM
  - Efficiency standards
- Resource requirements are lower than in previous forecasts
  - Additional resources needed by 2016

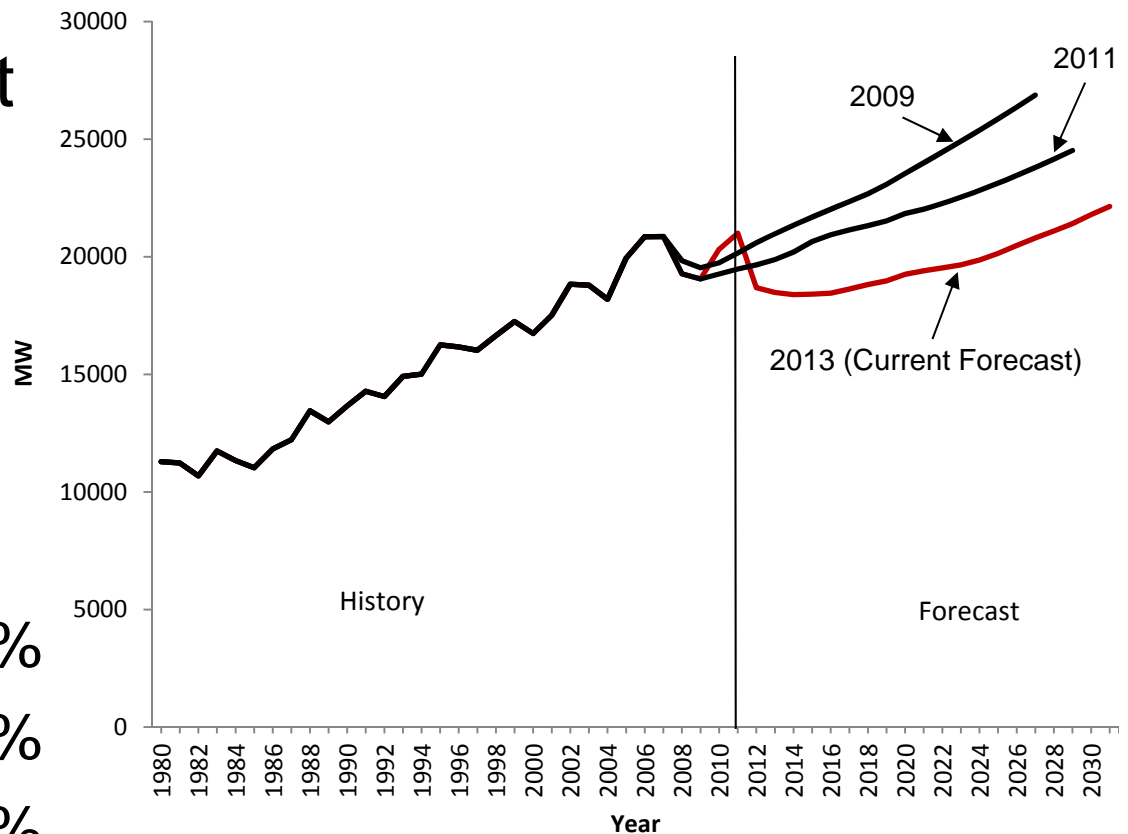
# Indiana Electricity Requirements

- Retail sales by investor owned and not-for-profit utilities
- Includes estimated transmission and distribution losses
- Growth rates
  - 2013 forecast: 0.74%
  - 2011 forecast: 1.30%
  - 2009 forecast: 1.55%



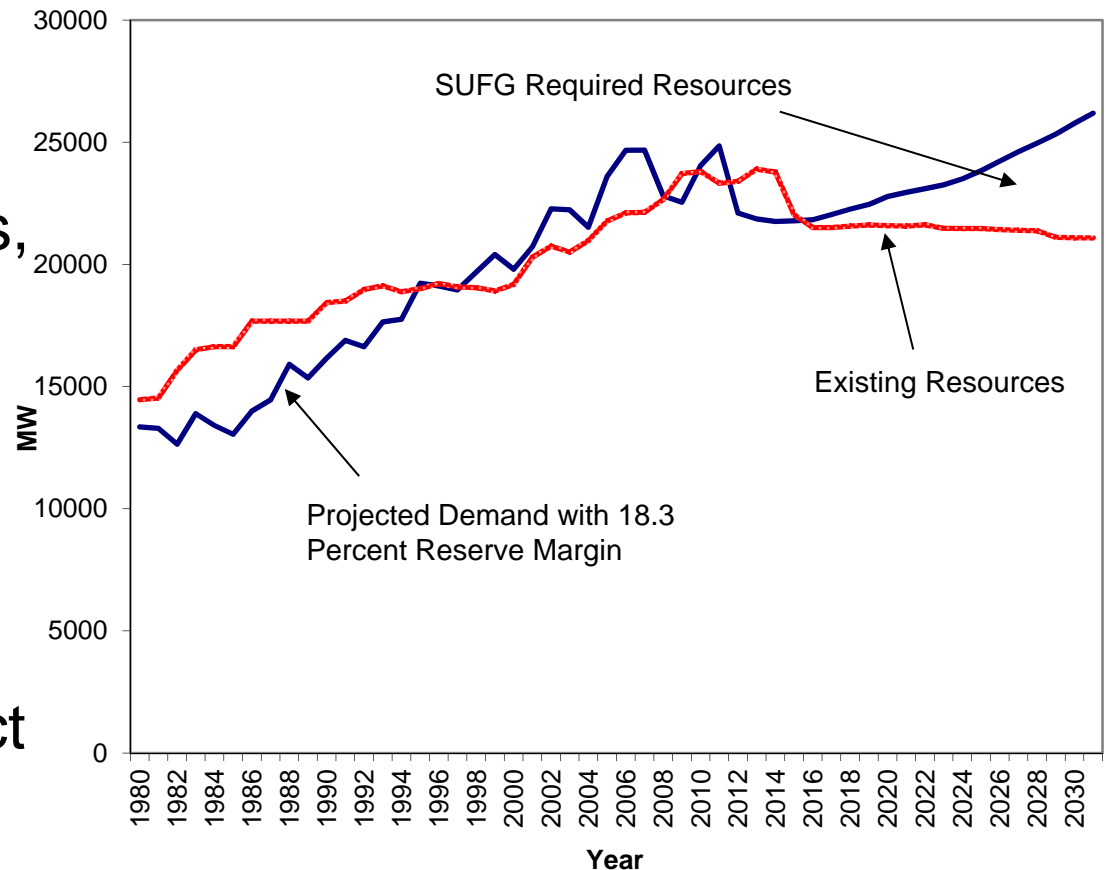
# Indiana Peak Demand Requirements

- Peak demand is net of DSM (Energy Efficiency and Demand Response loads)
- Growth rates
  - 2013 forecast: 0.90%
  - 2011 forecast: 1.28%
  - 2009 forecast: 1.61%



# Indiana Resource Requirements

- Resources may be provided by conservation measures, contractual purchases, purchases of existing assets, or new construction
- Existing resources are adjusted into the future for retirements, contract expirations, and IURC approved new resources

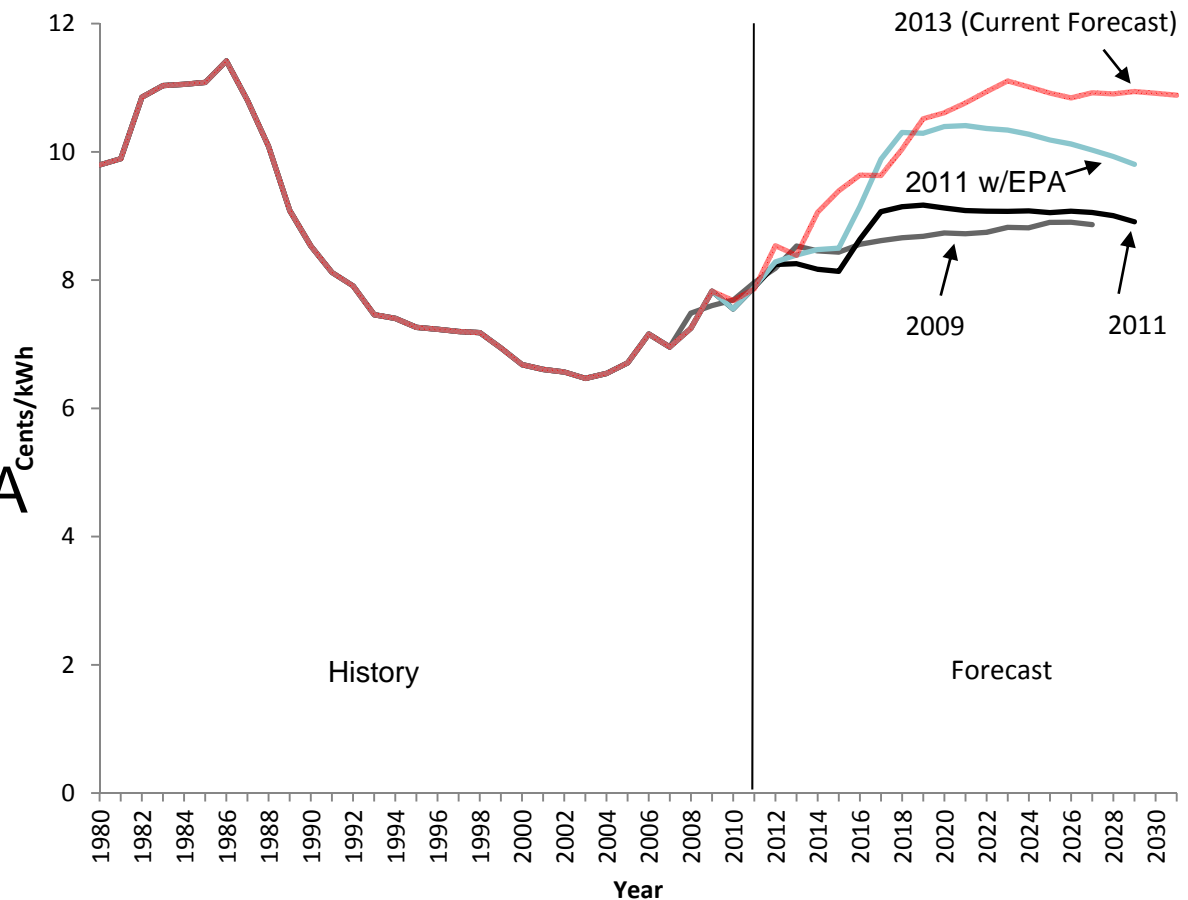


	Uncontrolled Peak Demand <sup>1</sup>	Demand Response <sup>2</sup>	Net Peak Demand <sup>3</sup>	Existing/Approved Capacity <sup>4</sup>	Incremental Change in Capacity <sup>5</sup>	Projected Additional Resource Requirements <sup>6</sup>				Total Resources <sup>7</sup>	Reserve Margin <sup>8</sup> (percent)
						Peaking	Cycling	Baseload	Total		
2011				23,326							
2012	19,888	1,205	18,683	23,406	80	20	80	20	120	23,526	26
2013	19,777	1,296	18,481	23,899	493	10	30	-	40	23,939	30
2014	19,718	1,329	18,389	23,781	-119	10	30	-	40	23,821	30
2015	19,769	1,357	18,412	22,034	-1747	20	50	-	70	22,104	20
2016	19,823	1,371	18,452	21,512	-523	130	160	120	410	21,922	19
2017	20,011	1,381	18,631	21,512	0	200	220	210	630	22,142	19
2018	20,208	1,390	18,818	21,568	56	190	240	460	890	22,458	19
2019	20,375	1,400	18,975	21,615	47	230	260	570	1,060	22,675	19
2020	20,663	1,407	19,256	21,590	-25	320	310	650	1,280	22,870	19
2021	20,814	1,414	19,401	21,569	-21	370	340	740	1,450	23,019	19
2022	20,944	1,416	19,528	21,619	50	390	360	790	1,540	23,159	19
2023	21,076	1,418	19,658	21,476	-143	480	420	920	1,820	23,296	19
2024	21,281	1,419	19,861	21,469	-7	510	480	1,060	2,050	23,519	18
2025	21,567	1,420	20,147	21,469	0	590	590	1,190	2,370	23,839	18
2026	21,896	1,420	20,476	21,428	-41	690	680	1,420	2,790	24,218	18
2027	22,222	1,420	20,801	21,400	-28	930	750	1,530	3,210	24,610	18
2028	22,520	1,421	21,099	21,381	-19	1,040	860	1,670	3,570	24,951	18
2029	22,833	1,421	21,413	21,108	-273	1,160	970	2,090	4,220	25,328	18
2030	23,210	1,421	21,790	21,093	-16	1,280	1,100	2,300	4,680	25,773	18
2031	23,558	1,421	22,138	21,085	-7	1,360	1,200	2,520	5,080	26,165	18

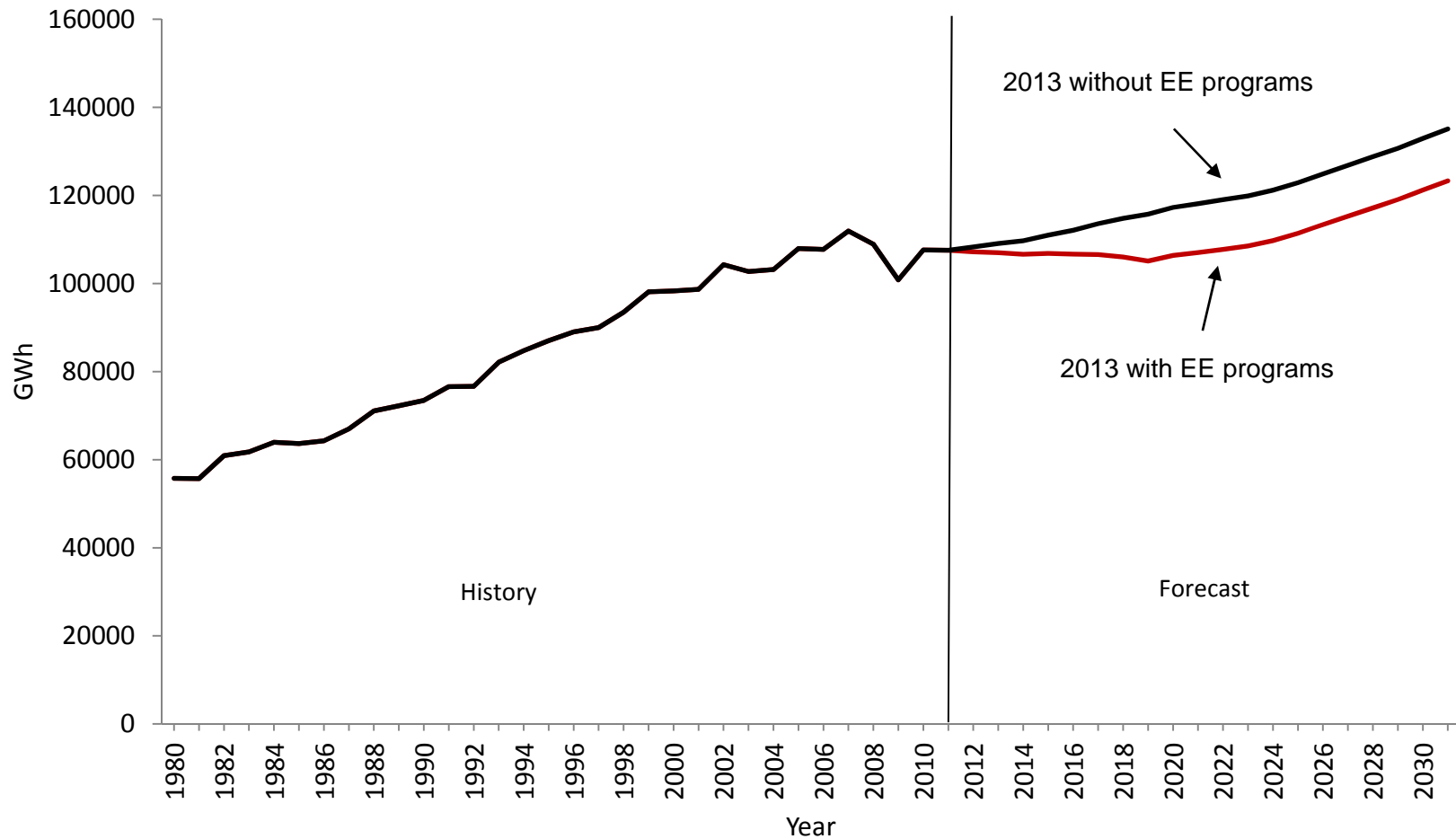
- 1 Uncontrolled peak demand is the peak demand prior any load reduction from demand response programs being called upon.
- 2 Demand response is all the measures designed to shift load away from peak demand periods. These include interruptible and direct load control programs affecting peak demand.
- 3 Net peak demand is the peak demand after load reductions from demand response programs are taken into account.
- 4 Existing/approved capacity includes installed capacity plus approved new capacity plus firm purchases minus firm sales.
- 5 Incremental change in capacity is the change in existing/approved capacity from the previous year. The change is due to new, approved capacity becoming operational, retirements of existing capacity, and changes in firm purchases and sales.
- 6 Projected additional resource requirements is the cumulative amount of additional resources needed to meet future requirements.
- 7 Total resource requirements are the total statewide resources required including existing/approved capacity and projected additional resource requirements.
- 8 Resources may be required by individual utilities even if the state as a whole meets or exceeds the statewide reserve margin. Individual utility reserve margins are not allowed to fall below 6 percent.

# Indiana Real Price Projections (2011 \$)

- Effect of inflation removed
- Includes the cost of new resources
- Includes expected cost of finalized EPA rules
  - MATS
- Non-finalized rules are not included



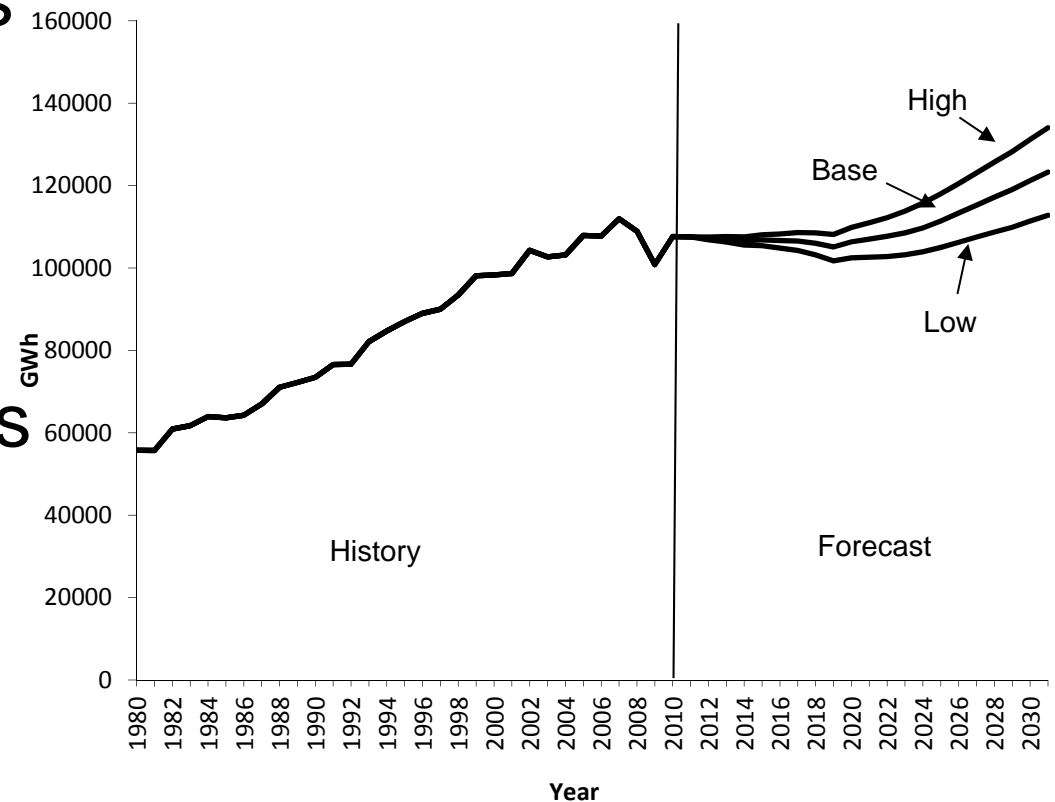
# Energy Efficiency Programs



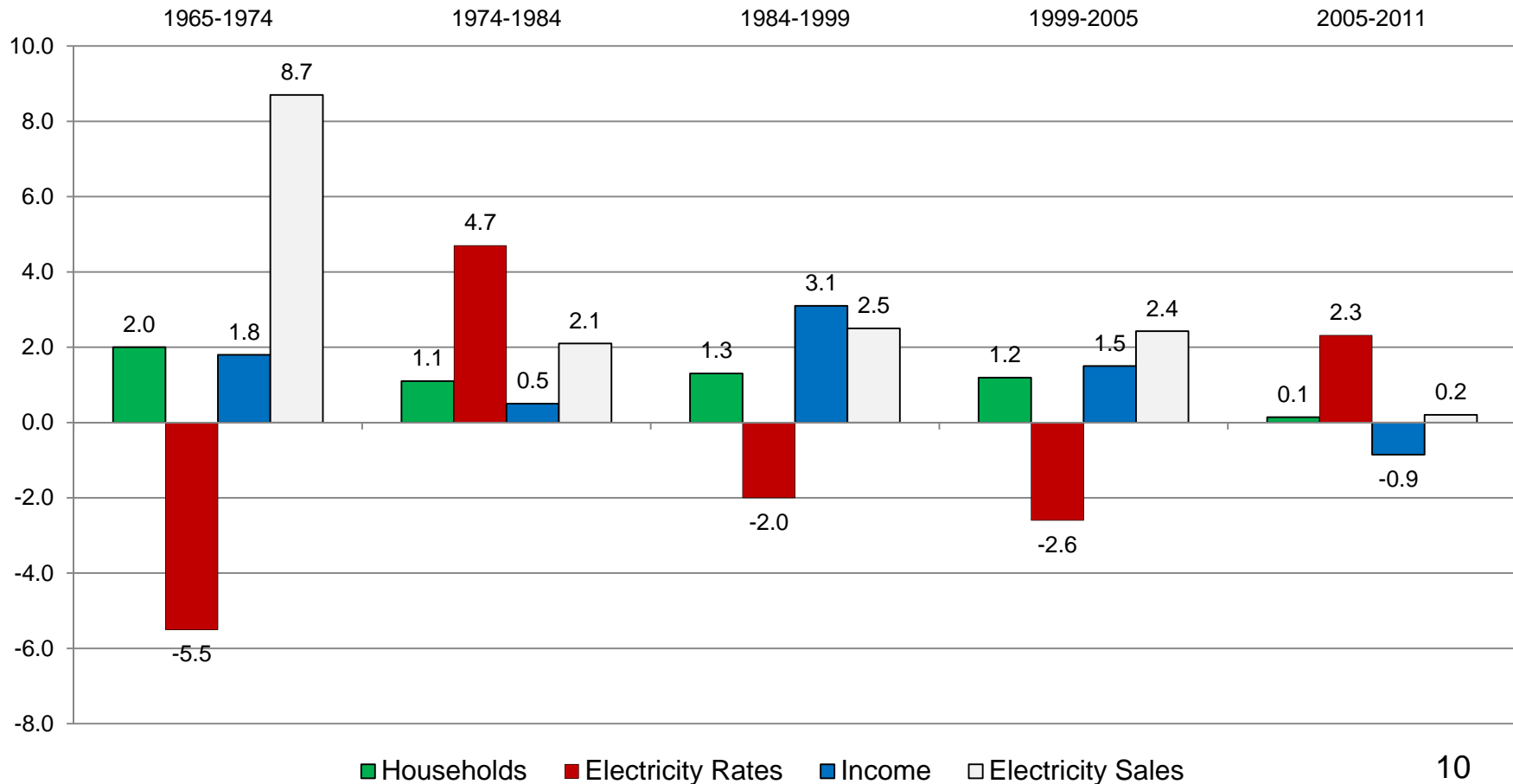


# Alternative Scenarios

- Any forecast contains uncertainty
- CEMR provides alternative low and high growth econometric forecasts
- Low and high growth scenarios are intended to give a plausible bound to uncertainty



# Residential Trends (Annual Percent Change)

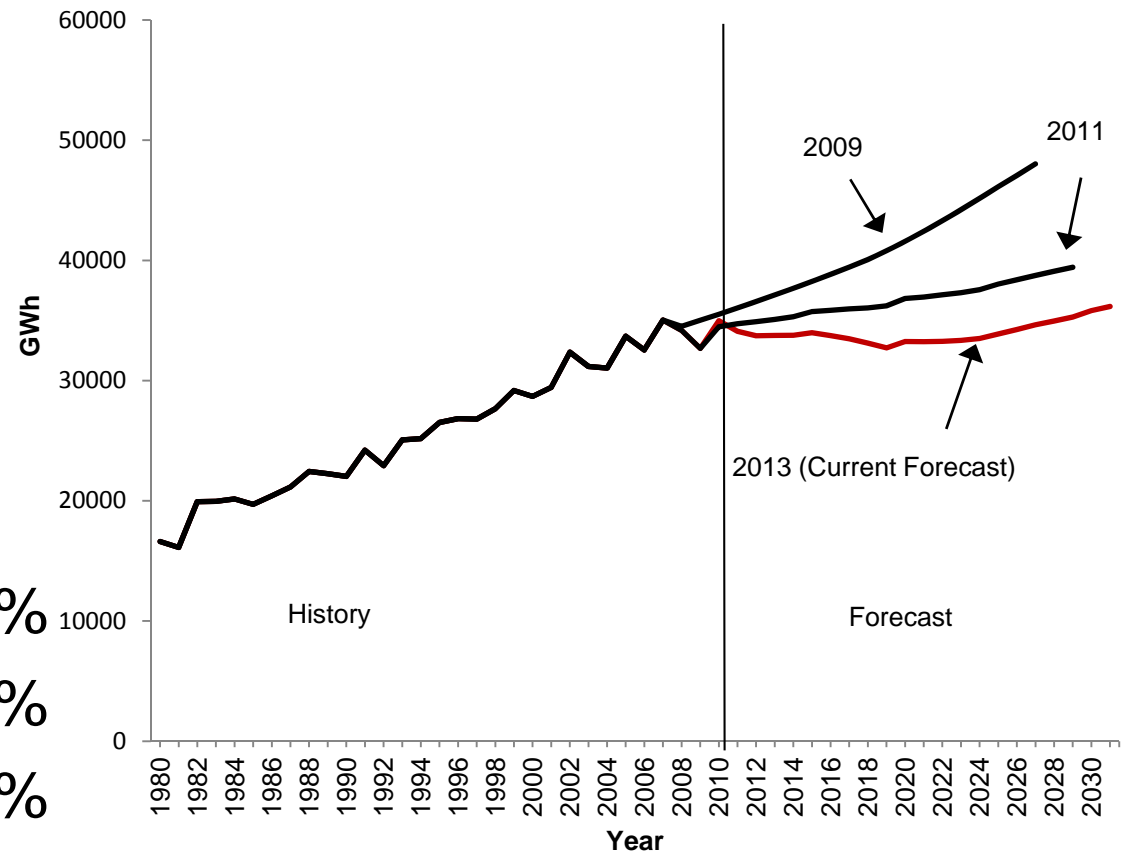


# Residential Drivers

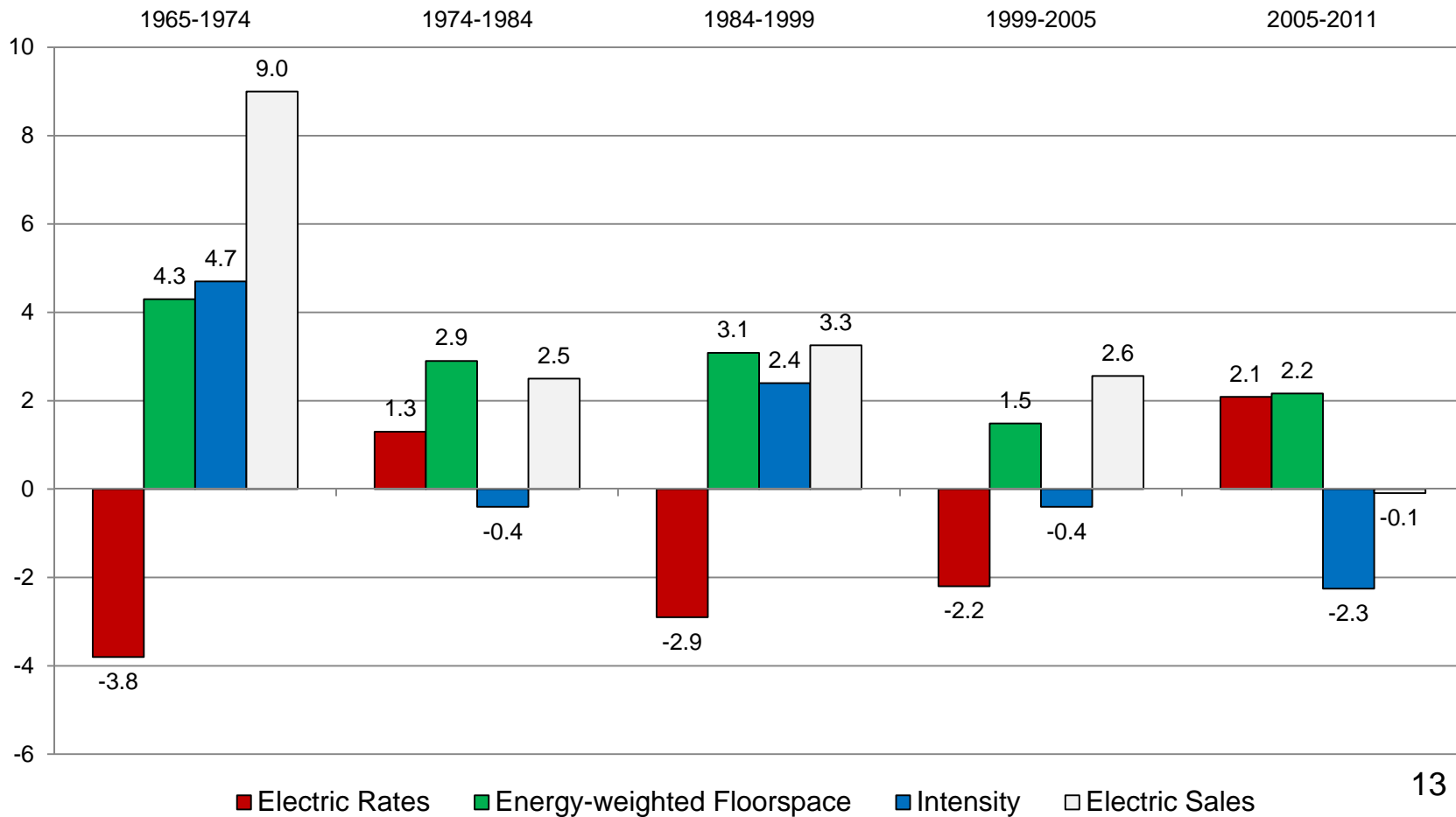
- Households grow at an average of 1.17 percent per year (was 1.00 percent in 2011 forecast)
- Real personal income grows at an average rate of 2.73 percent per year (was 2.80 percent in 2011 forecast)
- Real electric rates increase at an average of 1.34 percent per year (increase occurs in first ten years)

# Residential Electricity Sales

- Estimated from:
  - demographics
  - households
  - energy prices
- Growth rates
  - 2013 forecast: 0.37%
  - 2011 forecast: 0.71%
  - 2009 forecast: 1.75%



# Commercial Trends (Annual Percent Change)

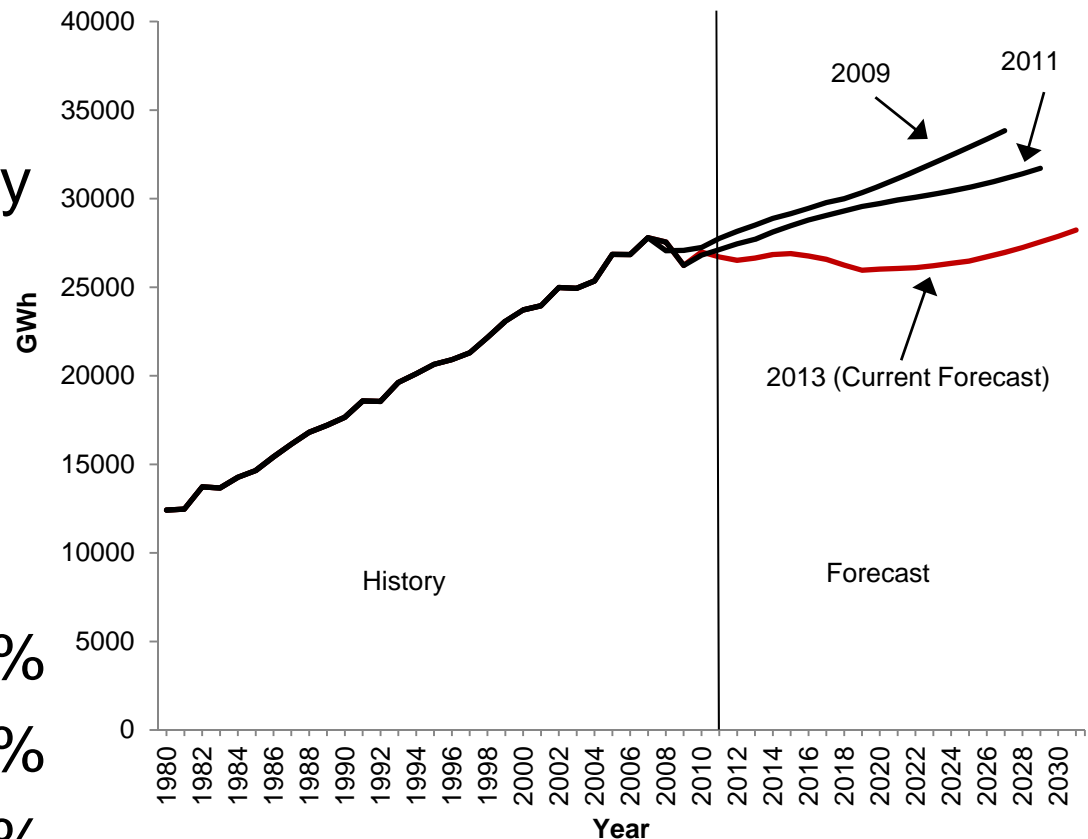


# Commercial Drivers

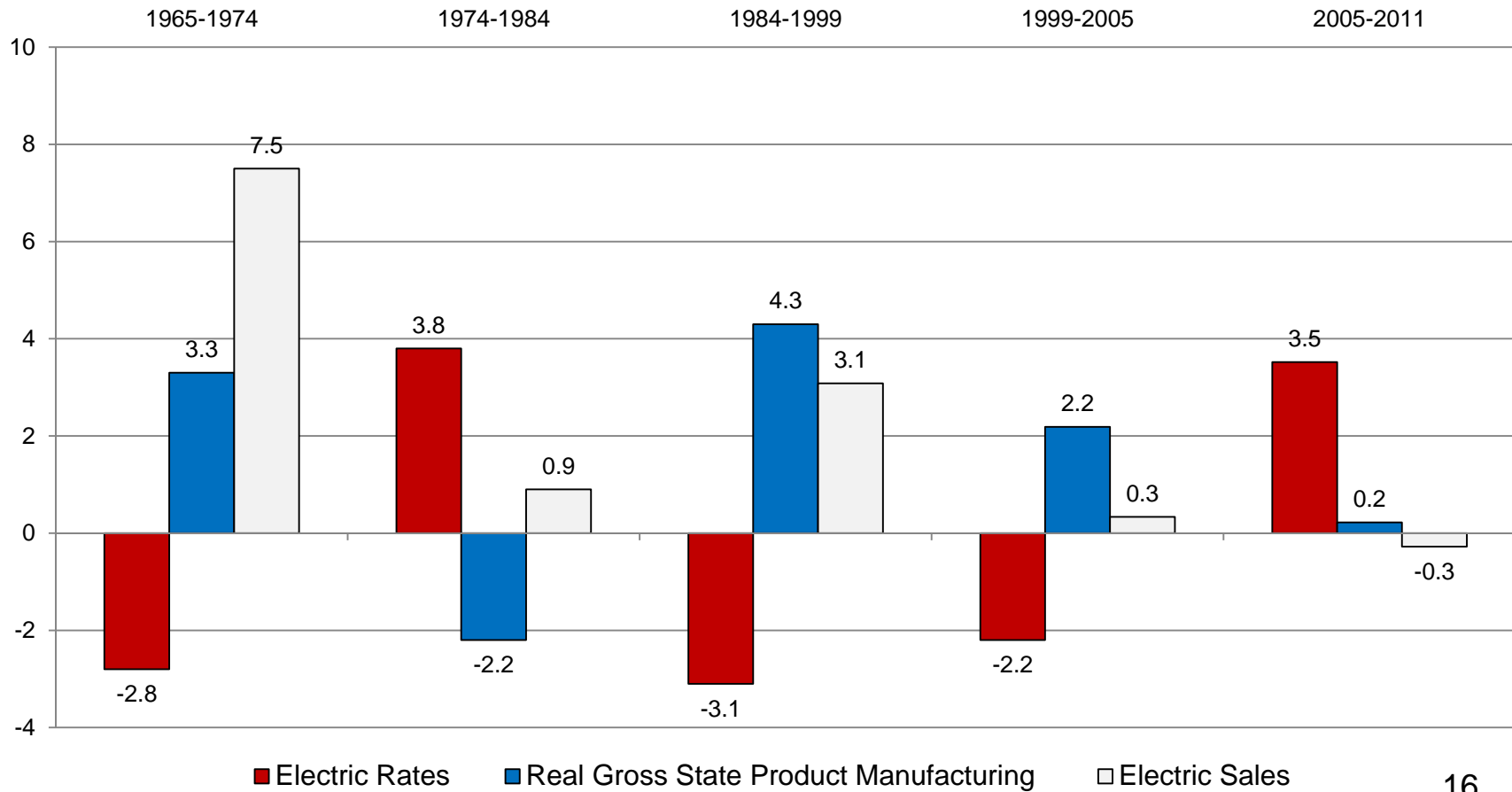
- Energy-weighted floor space grows at an average rate of 0.90 percent per year (was 1.18 percent in 2011 forecast)
- Non-manufacturing employment grows at an average rate of 0.97 percent per year (was 1.31 percent in 2011 forecast)
- Real electric rates increase at an average of 1.43 percent per year (increase occurs in first ten years)

# Commercial Electricity Sales

- Estimated from:
  - floor space inventory
  - end use intensity
  - employment
  - energy prices
- Growth rates
  - 2013 forecast: 0.33%
  - 2011 forecast: 0.89%
  - 2009 forecast: 1.18%



# Industrial Trends (Annual Percent Change)





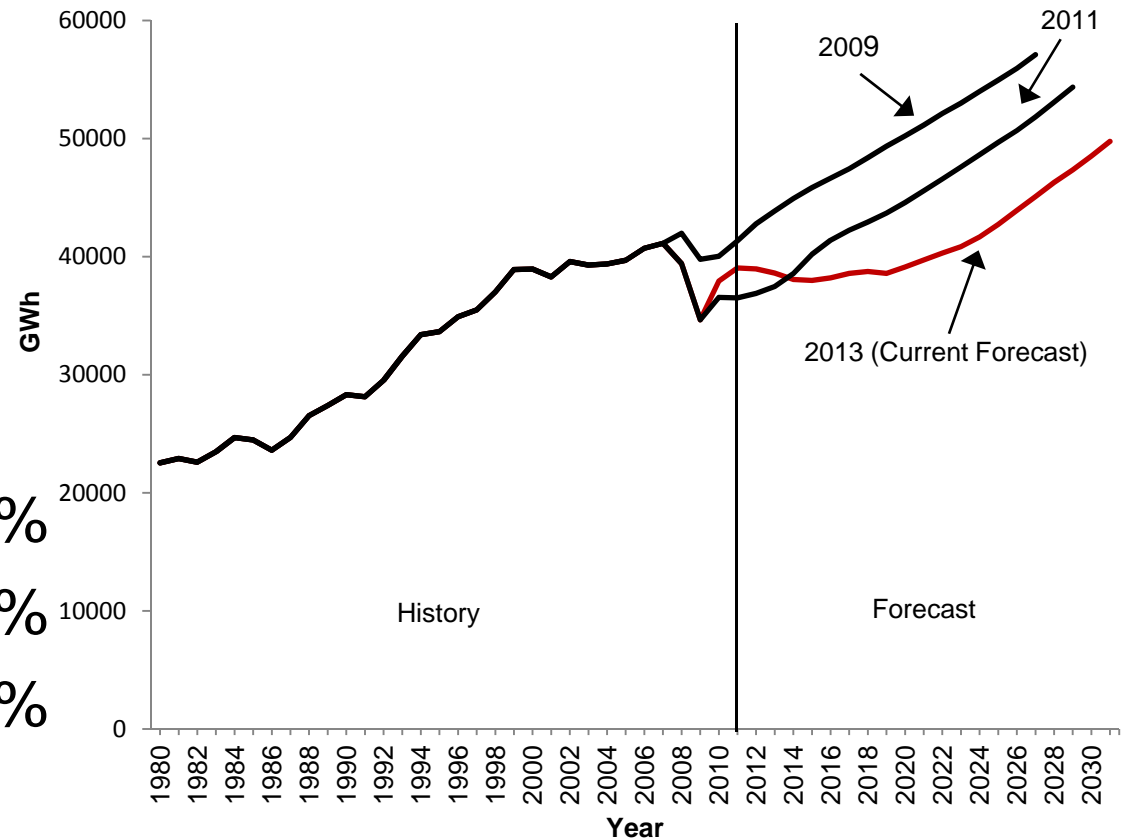
# Industrial Drivers

- Manufacturing GSP grows at an average rate of 2.86 percent per year (was 3.95 percent in 2011 forecast)
- Real electric rates increase at an average of 1.56 percent per year (increase occurs in first ten years)

SIC	Name	Current Share of GSP	Current Share of Electricity Sales	Current Intensity	Forecast Growth in GSP Originating by Sector	Forecast Growth in Electricity by Intensity by Sector	Forecast Growth in Electricity Sales by Sector
20	Food & Kindred Products	4.73	5.83	0.58	3.40	-1.16	2.24
24	Lumber & Wood Products	2.63	0.66	0.12	3.40	-0.94	2.45
25	Furniture & Fixtures	3.09	0.47	0.07	1.57	-1.09	0.49
26	Paper & Allied Products	1.83	2.94	0.76	3.40	-0.88	2.52
27	Printing & Publishing	3.44	1.24	0.17	3.40	-2.19	1.21
28	Chemicals & Allied Products	16.41	19.98	0.58	3.40	-1.59	1.81
30	Rubber & Plastic Products	3.66	5.76	0.74	2.85	-1.03	1.82
32	Stone, Clay, & Glass Products	3.13	5.08	0.77	1.57	-0.77	0.80
33	Primary Metal Products	7.59	27.01	1.68	0.76	0.59	1.35
34	Fabricated Metal Products	5.95	6.39	0.51	3.20	-1.27	1.92
35	Industrial Machinery & Equip.	10.42	4.62	0.21	2.74	-1.20	1.54
36	Electronic/Electric Equipment	5.18	5.87	0.54	0.71	-0.62	0.09
37	Transportation Equipment	20.01	8.97	0.21	3.61	-1.07	2.54
38	Instruments/Related Products	4.20	1.01	0.11	1.57	-1.86	-0.29
39	Miscellaneous Manufacturing	2.27	1.20	0.25	1.57	-3.32	-1.75
Total	Manufacturing	100.00	100.00	0.47	2.86	-1.20	1.66

# Industrial Electricity Sales

- Estimated from:
  - GSP by industry
  - energy prices
- Growth rates
  - 2013 forecast: 1.29%
  - 2011 forecast: 2.11%
  - 2009 forecast: 1.63%



# Further Information

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