Indiana Energy Status and SUFG Electricity Projections

presented to

Indiana Chamber of Commerce
Energy Roundtable
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presented by

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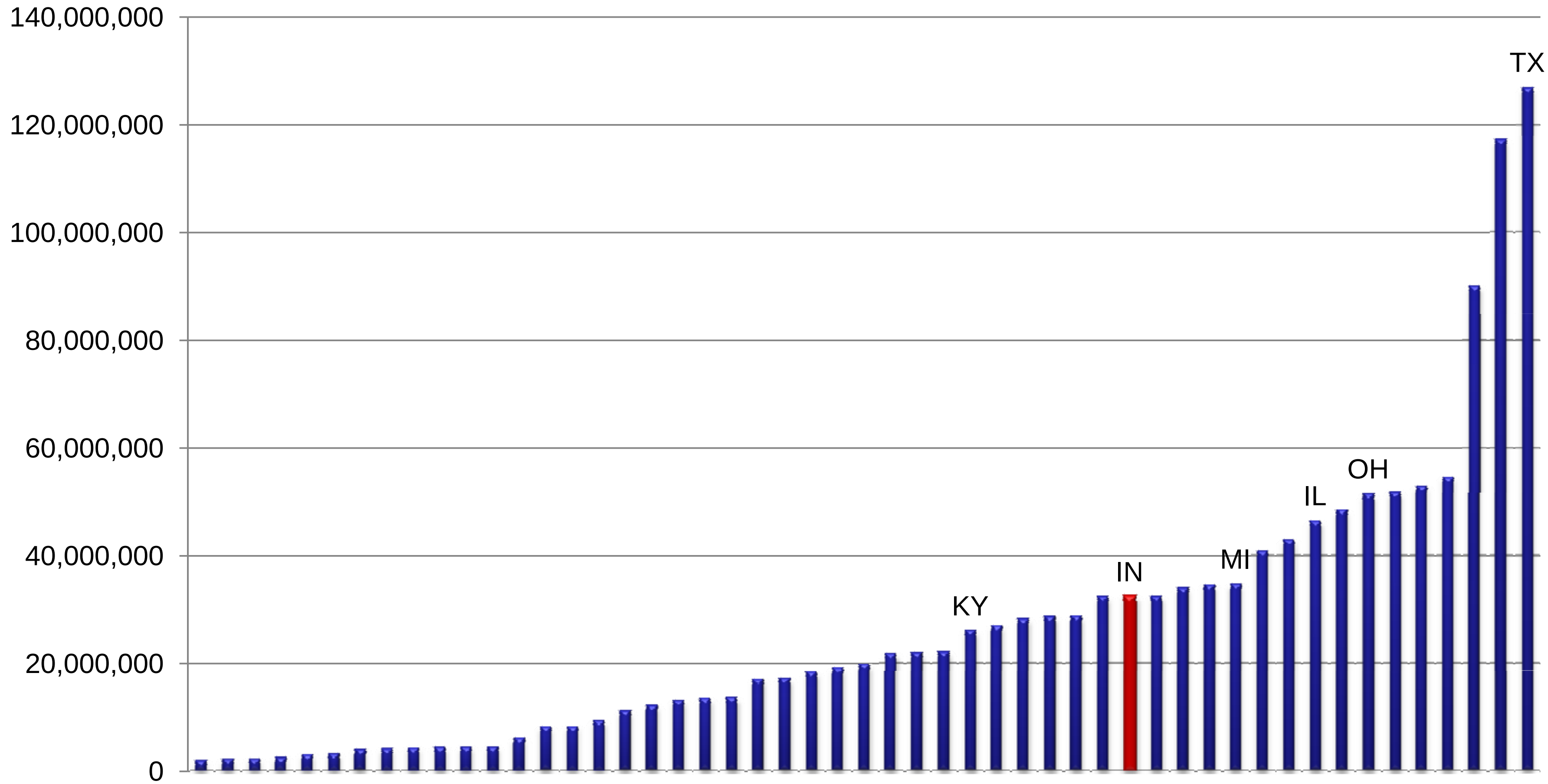
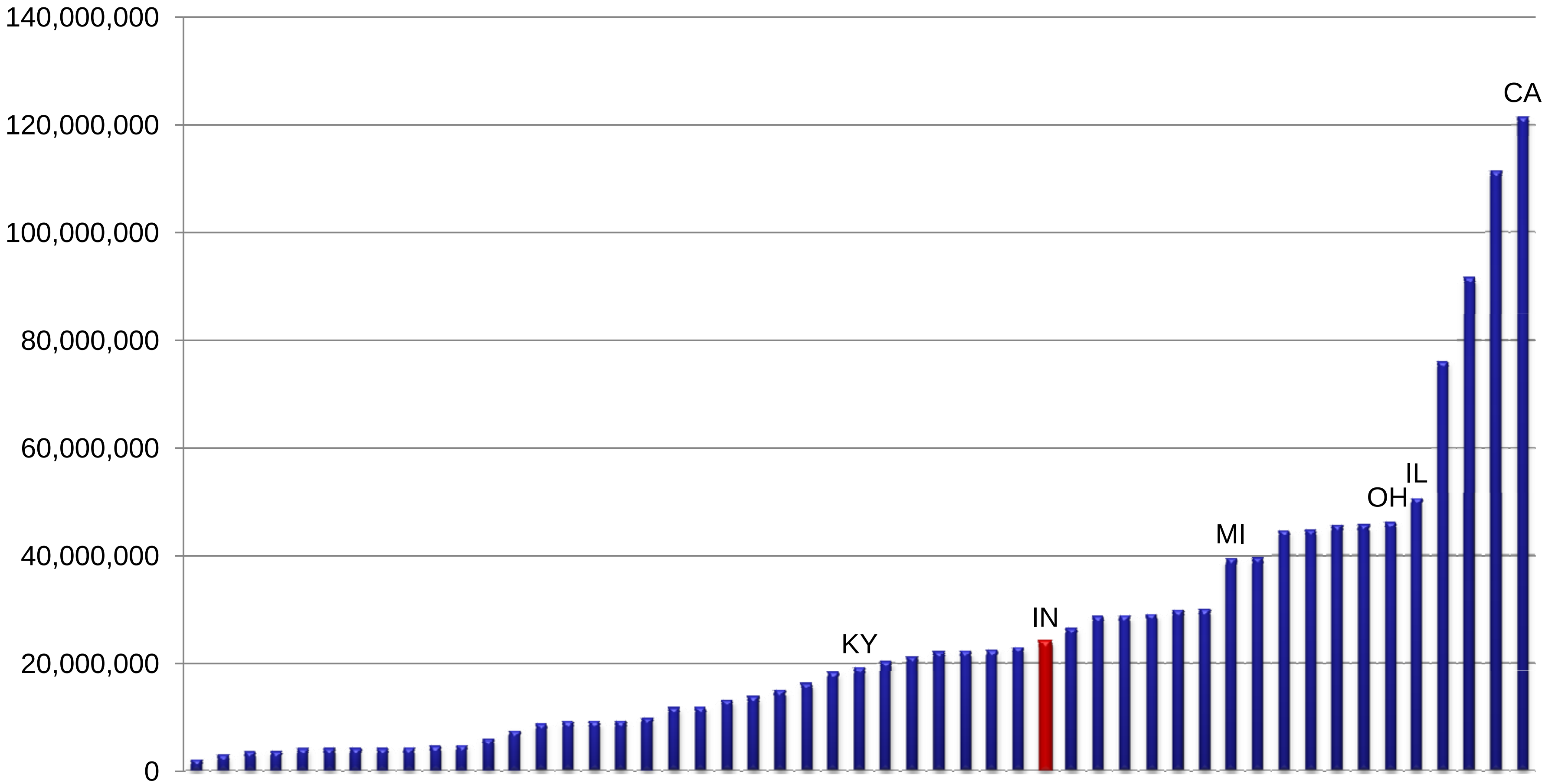
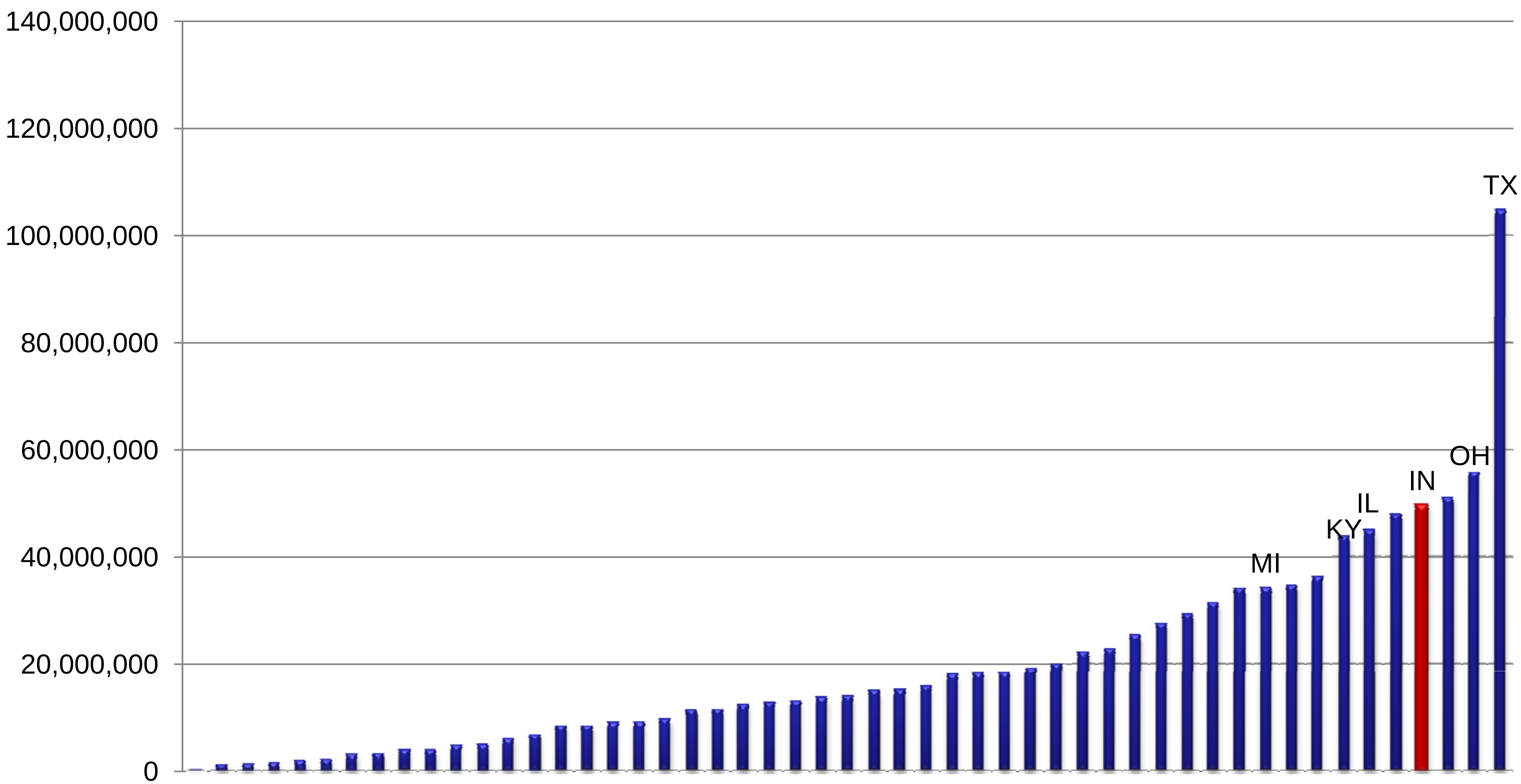
2006 Residential Electricity Sales (MWh)



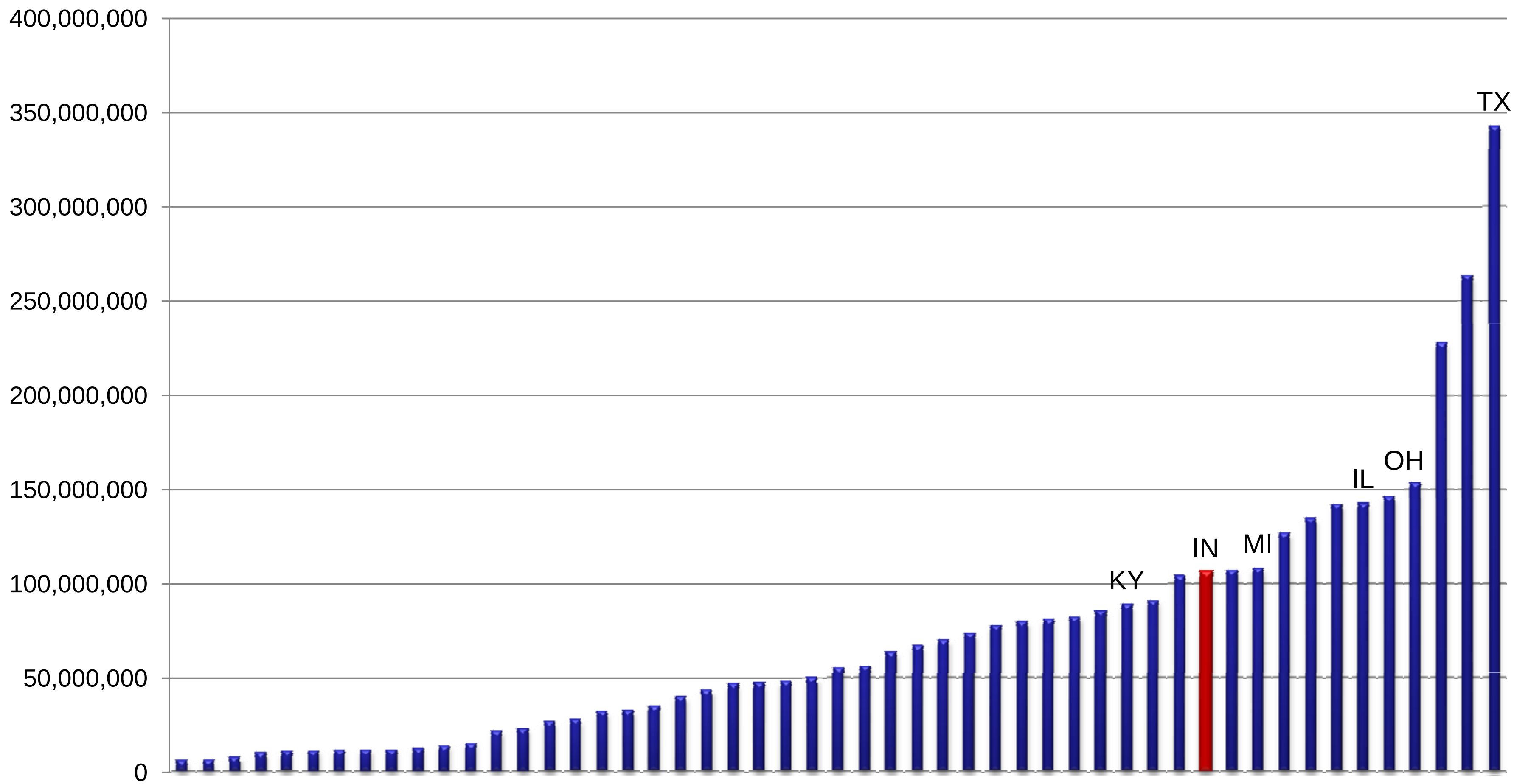
2006 Commercial Electricity Sales (MWh)



2006 Industrial Electricity Sales (MWh)



2006 Total Electricity Sales (MWh)



Fuel Sources for Electric Power in 2005

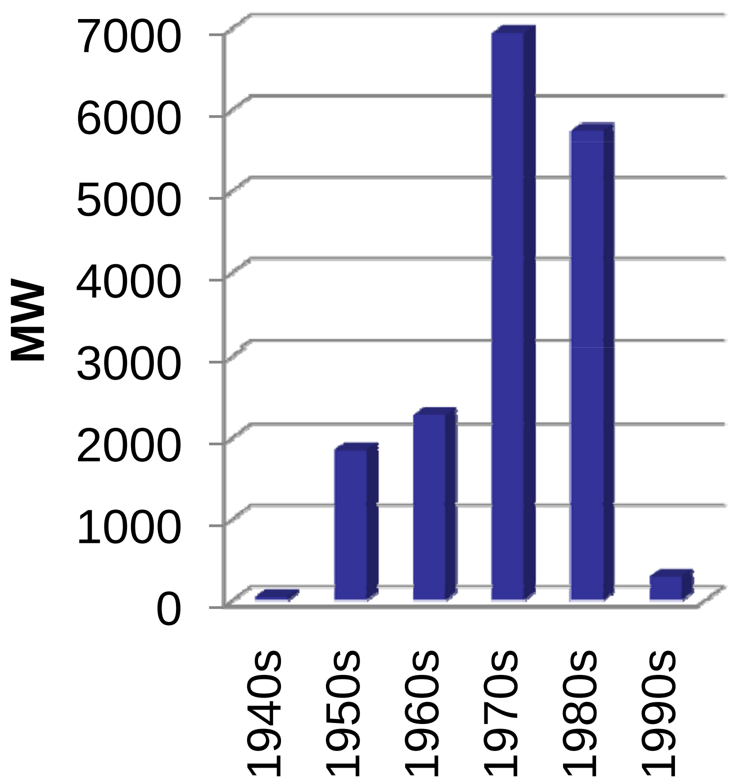
	United States	Indiana
Coal	50 %	96 %
Nuclear	20 %	0 %
Natural Gas	15 %	3 %
Petroleum	6 %	0 %
Renewables	8 %	0.4 %

- Indiana numbers do not include out-of-state generators that serve Indiana customers
  - Cook (nuclear) in Michigan
  - Madison (natural gas) in Ohio
  - Trimble County (coal) in Kentucky

In 2006….

- Indiana produced 3.2 percent of the electricity generated in the U.S.
- Indiana produced 6.2 percent of the electricity generated from coal in the U.S.
- Indiana produced 0.3 percent of the electricity generated from natural gas in the U.S.

Coal-fired Generating Capacity by Decade Installed



	# of units	MW
1940s	1	45
1950s	20	1847
1960s	12	2275
1970s	17	6938
1980s	9	5736
1990s	2	289

Coal Developments

- IMPA share of Prairie State (IL), Trimble County (KY), and Thoroughbred (KY)
- Duke Energy integrated coal gasification unit at Edwardsport
- Proposed syngas facility

Natural Gas Developments

- NIPSCO purchase of Sugar Creek combined cycle facility (IN)

- Hoosier Energy – Wabash Valley Power proposed purchase of Holland combined cycle facility (IL)

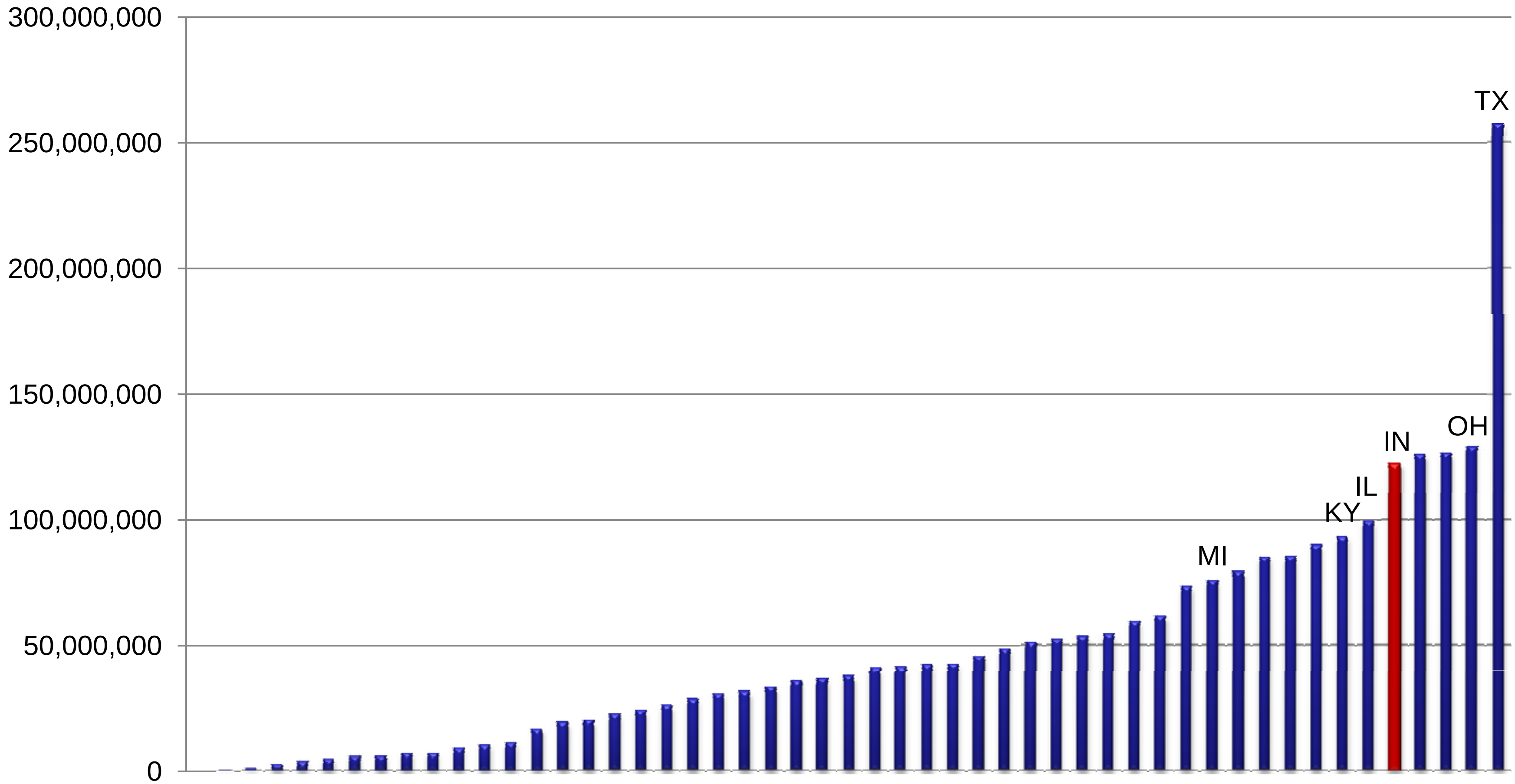
Wind Developments

Project Name	Counties	Developer	Rated Capacity (MW)	Construction Schedule	Status
Benton County Wind Farm	Benton	Orion Energy	130	Completed Spring 2008	Completed
Fowler Ridge Phase 1	Benton	BP Alternative Energy & Dominion	400	To be completed by end of 2008	Under construction
Hoosier Wind Project	Benton	enXco	100	2009	Pending w/ PPA
Fowler Ridge Phase 2	Benton	BP Alternative Energy & Dominion	350	Begin early 2009	Approved
Tri-County Wind Energy Center	Tippecanoe, Montgomery, Fountain	Invenergy	300-500	Begin 2010	Proposed
Meadow Lake Wind Farm	Benton, White	Horizon Energy	600-1000	Begin 2010	Proposed
	Randolph	Horizon Energy	100-200		Proposed
	Howard	Horizon Energy	200		Proposed

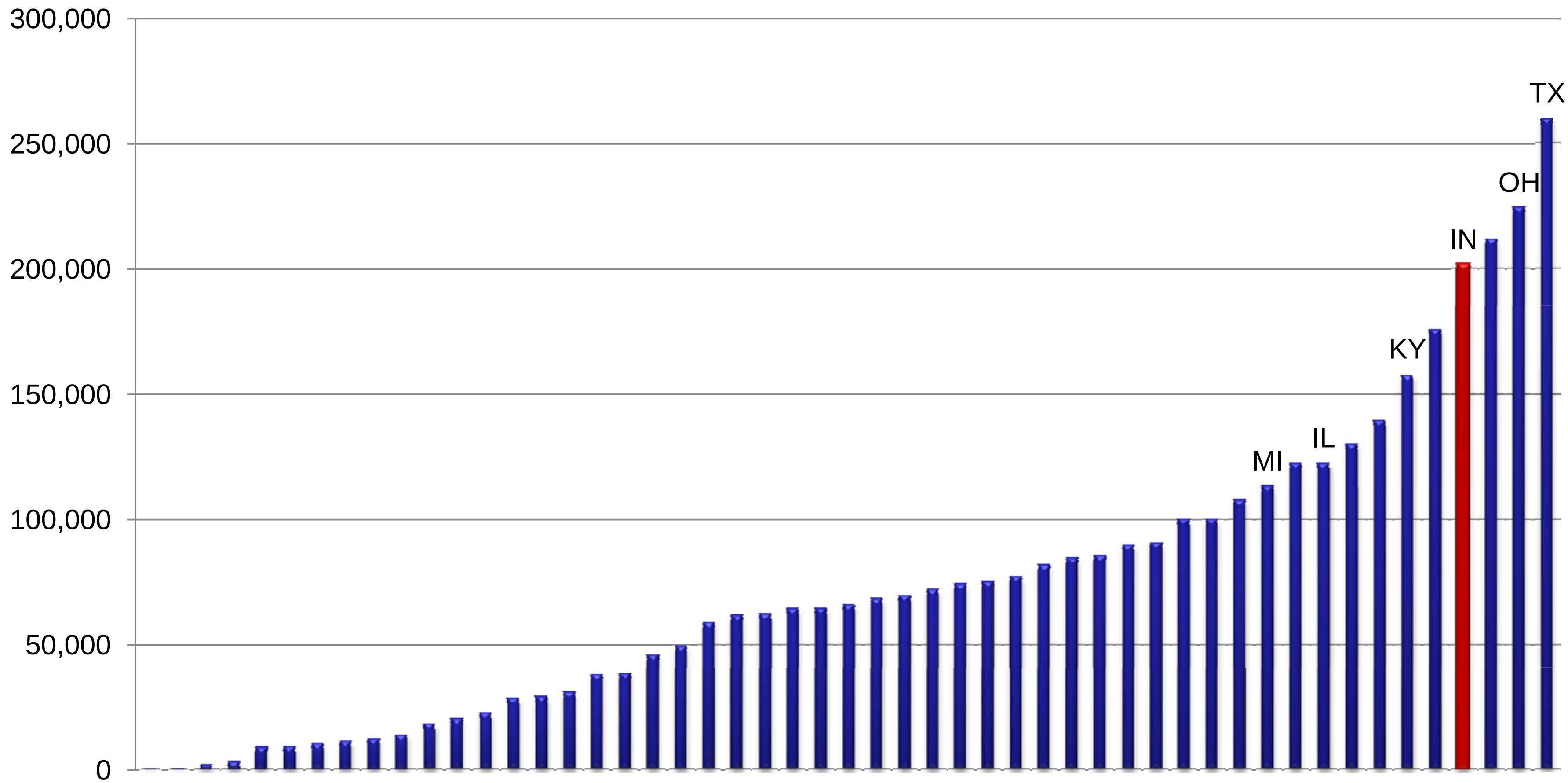
Indiana Utility Wind PPAs

Utility	Project	State	MW	Status
Duke Energy	Benton County Wind Farm	IN	100	Operational
SIGECO	Benton County Wind Farm	IN	30	Operational
WVPA	AgriWind	IL	8	Operational
Indiana Michigan	Fowler Ridge	IN	100	Approved
NIPSCO	Buffalo Ridge	SD	50	Approved
NIPSCO	Barton Windpower	IA	50	Approved
IPALCO	Hoosier Wind	IN	100	Pending

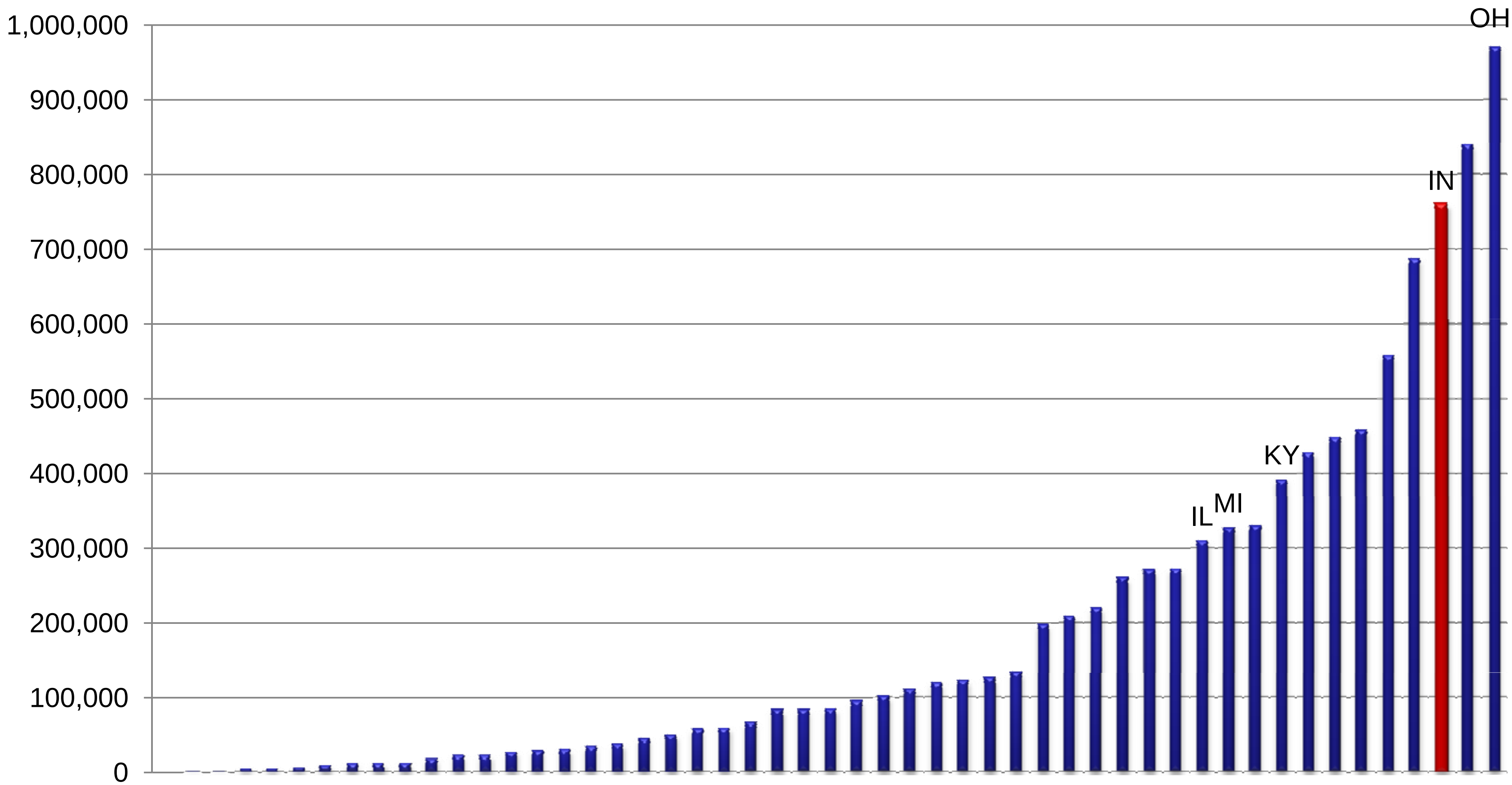
2006 CO_2 Emissions (metric tons)



2006 NO_x emissions (metric tons)

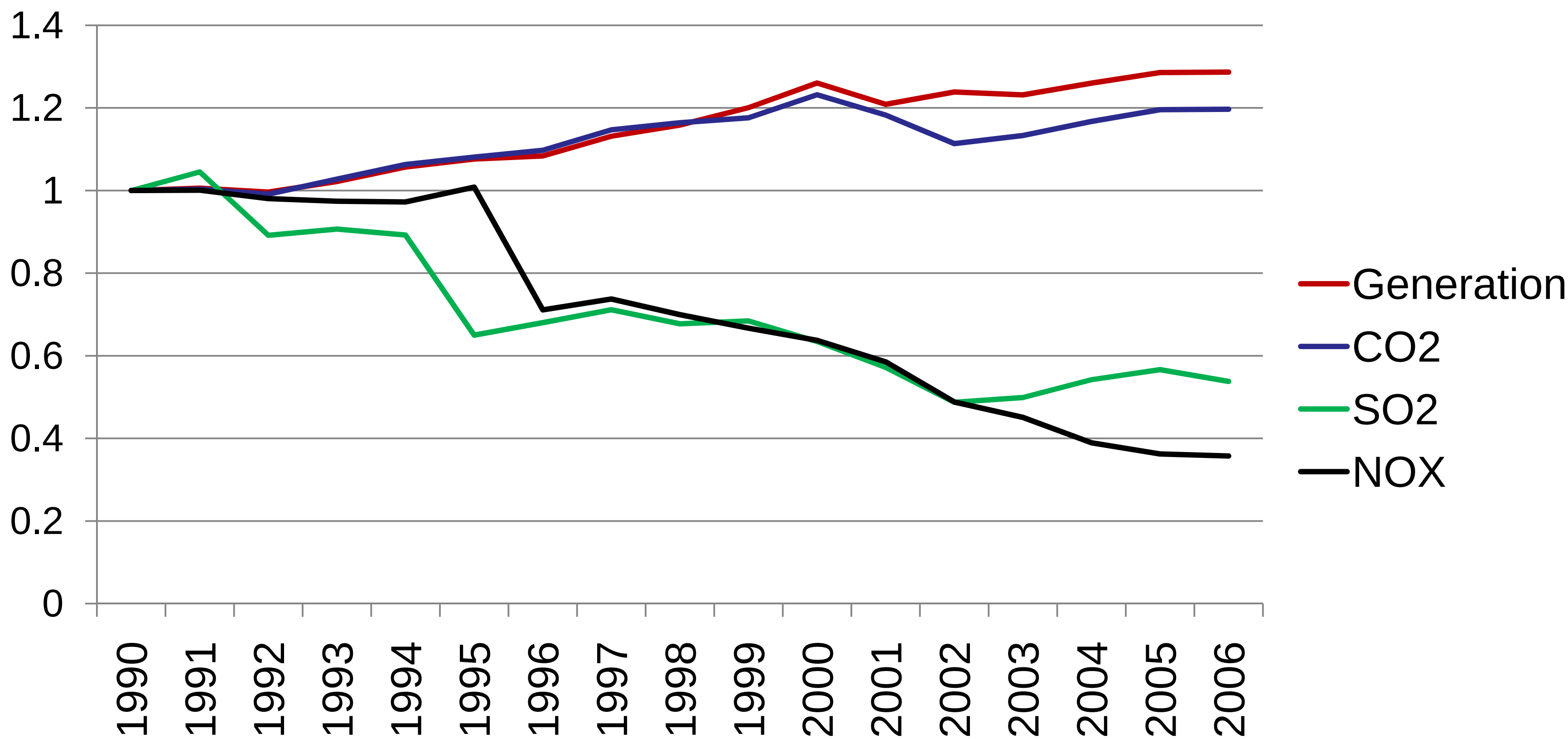


2006 SO_2 emissions (metric tons)

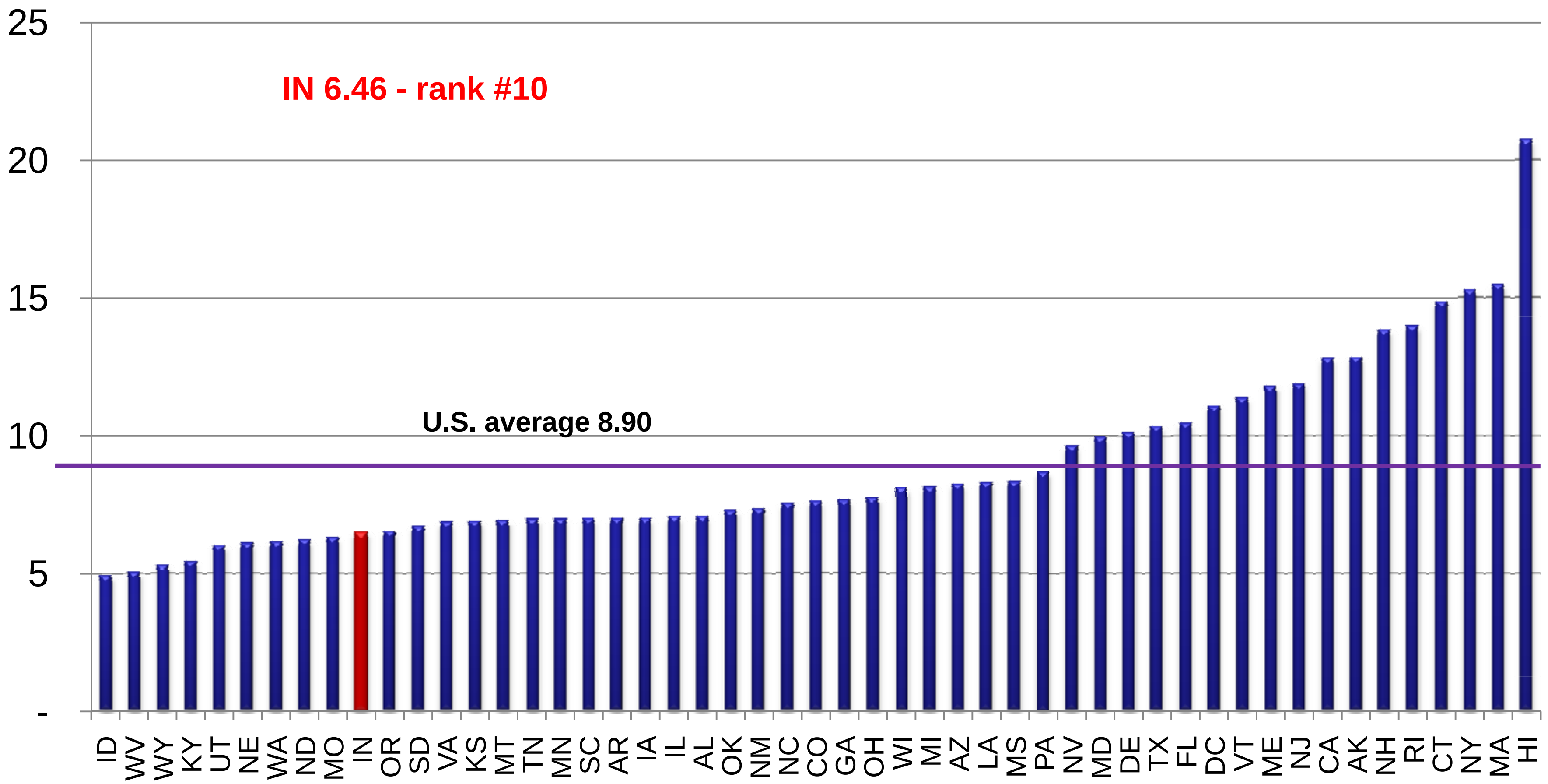


Emissions Trends for Indiana Electricity Industry

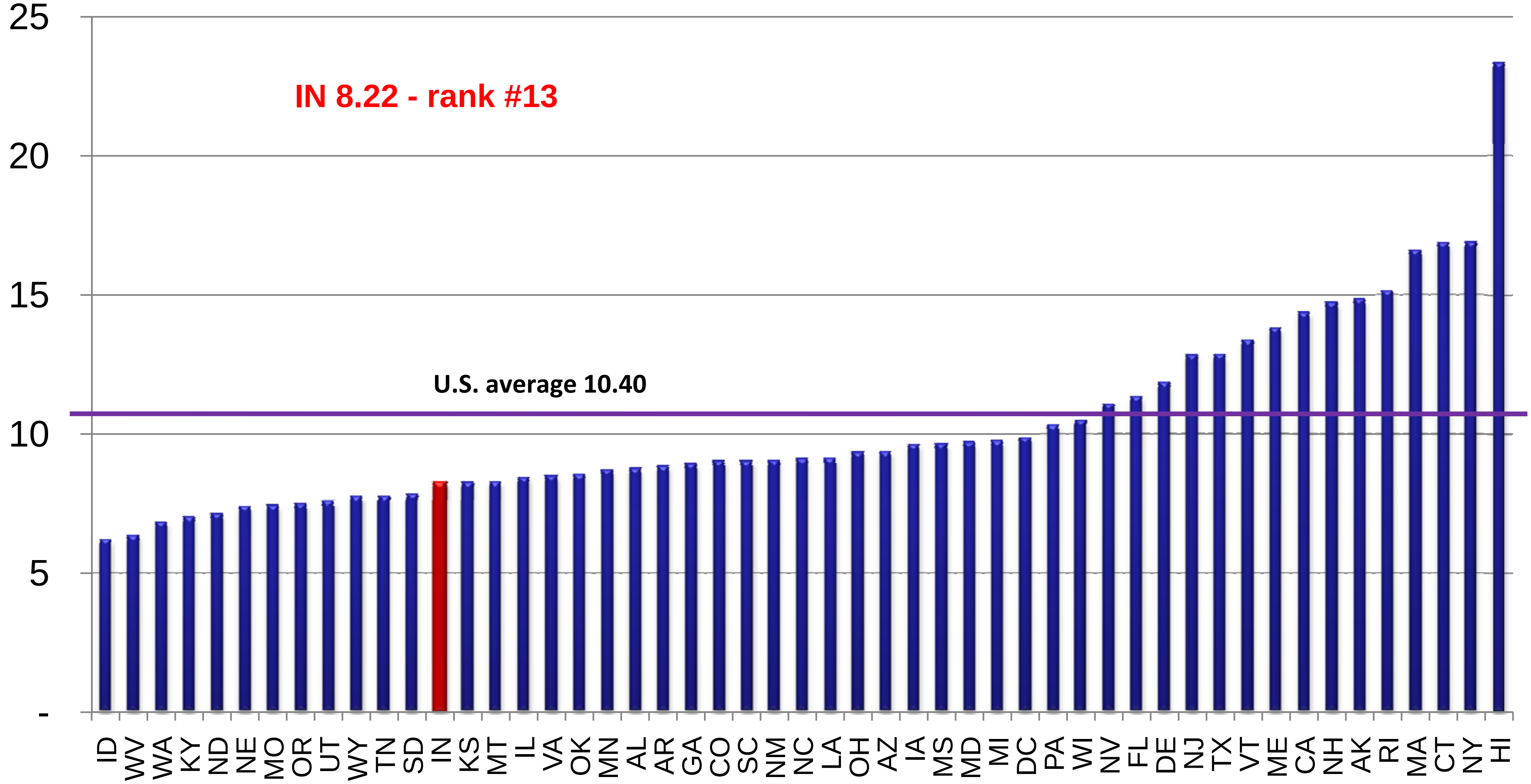
(normalized to 1990 values)



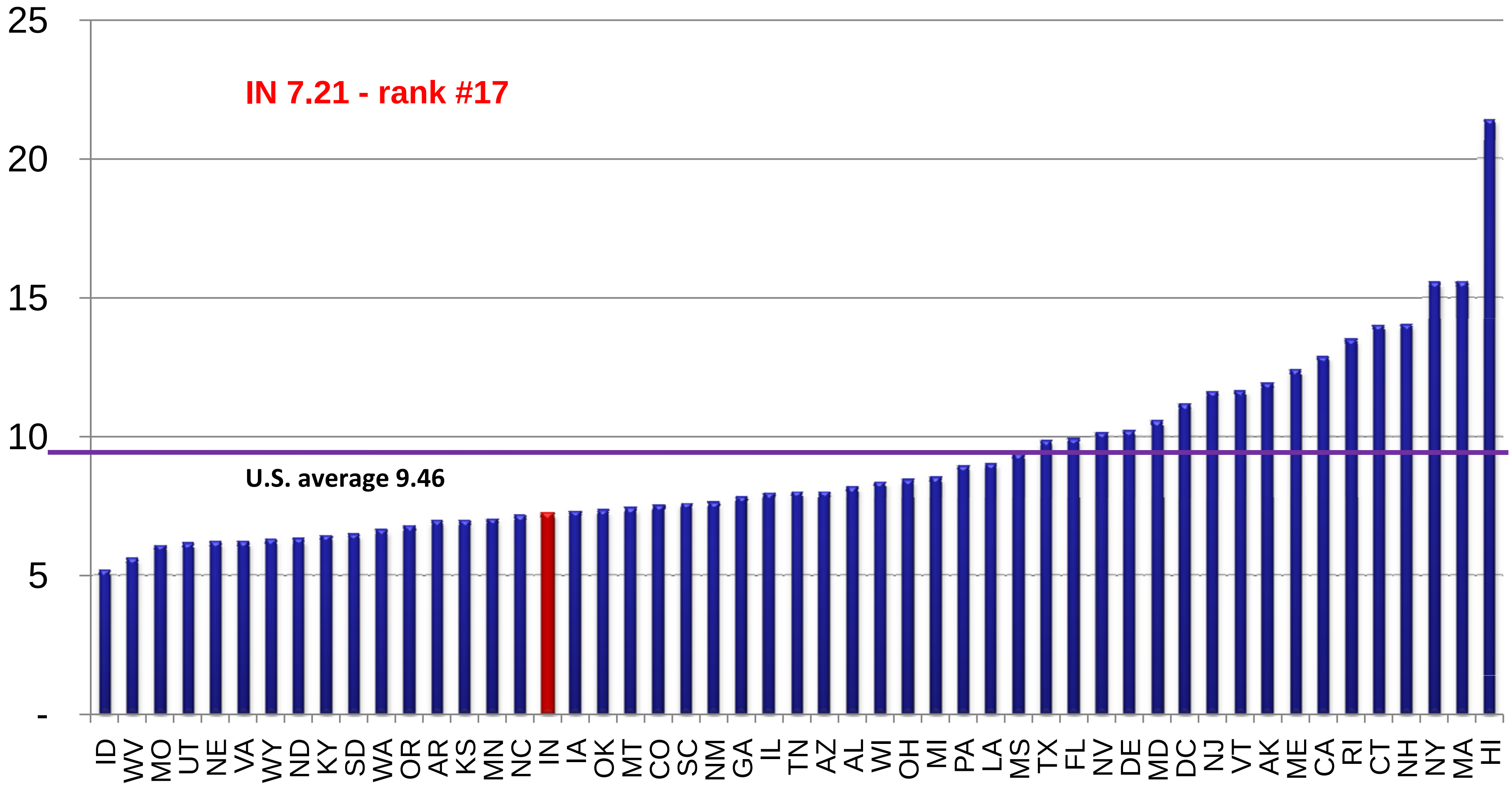
2006 All Sector Electricity Retail Price (cents/kWh)



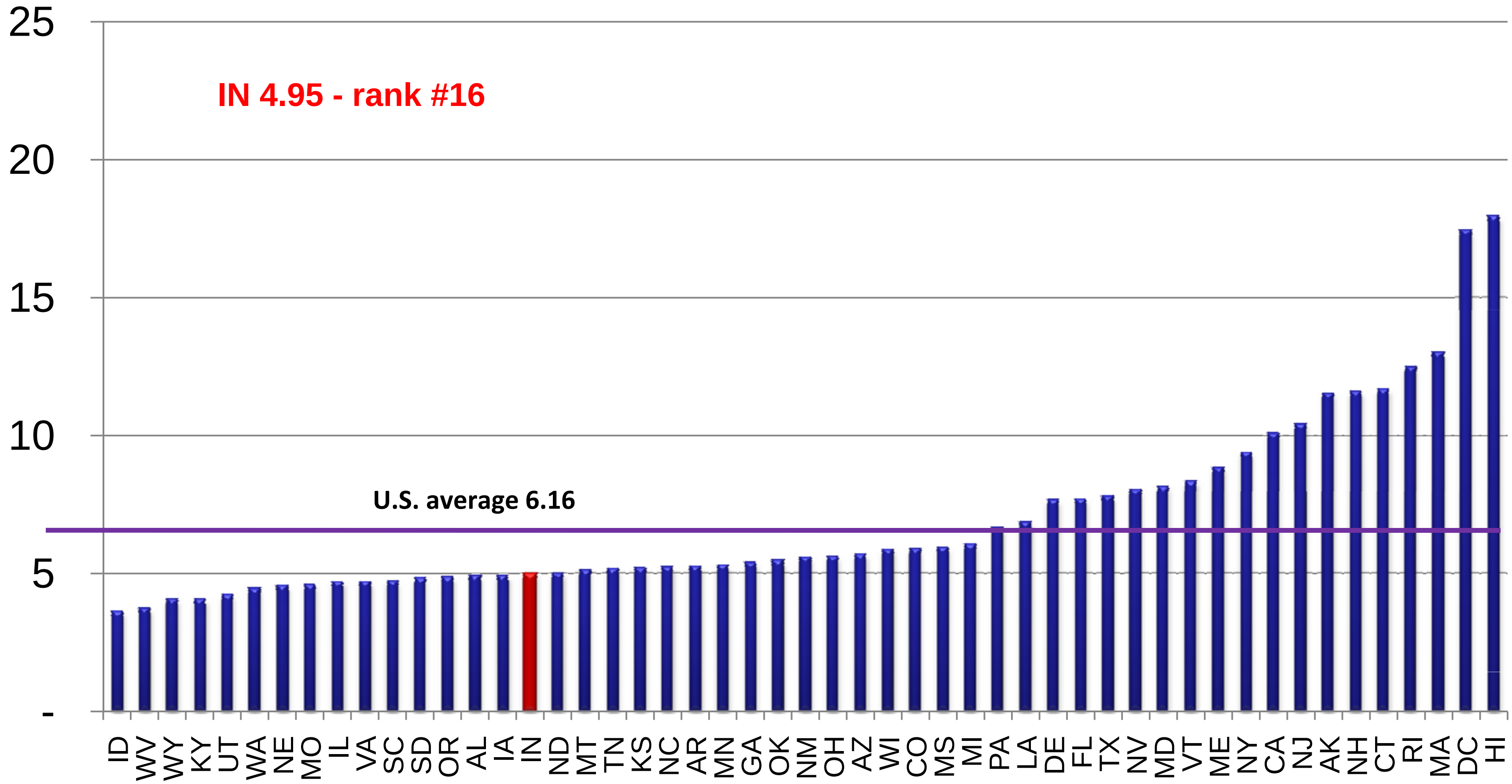
2006 Residential Electricity Retail Price (cents/kWh)



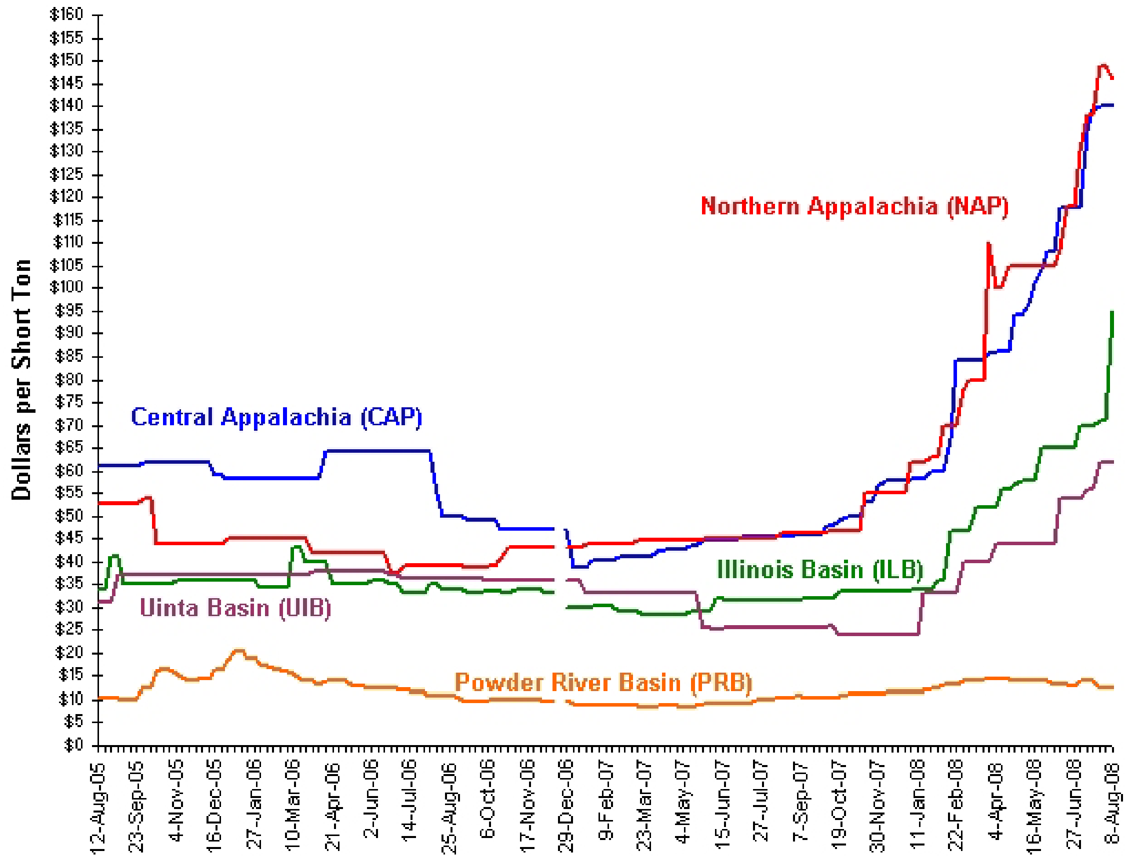
2006 Commercial Electricity Retail Price (cents/kWh)



2006 Industrial Electricity Retail Price (cents/kWh)



Coal Spot Price

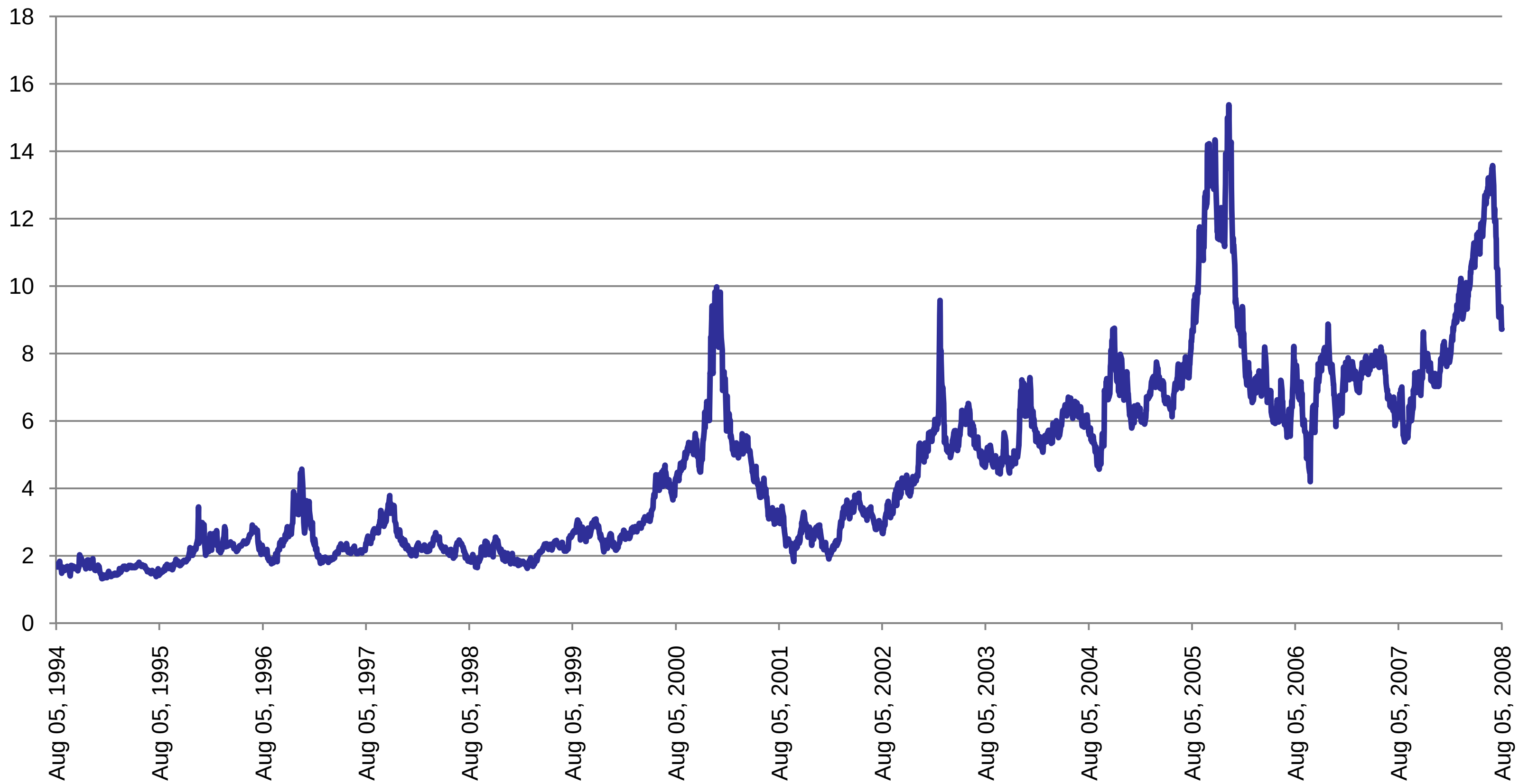


Key to Coal Commodities by Region[1]

Central Appalachia:	Big Sandy/Kanawha 12,500 Btu, 1.2 lbSO2/mmBtu	Powder River Basin:	8,800 Btu, 0.8 lb SO2/mmBtu
Northern Appalachia:	Pittsburgh Seam 13,000 Btu, <3.0 lbSO2/mmBtu	Uinta Basin in Colo.:	11,700 Btu, 0.8 lb SO2/mmBtu
Illinois Basin:	11,800 Btu, 5.0 lb SO2/mmBtu		

Source: Energy Information Administration

Natural Gas Futures ($/mmBtu)

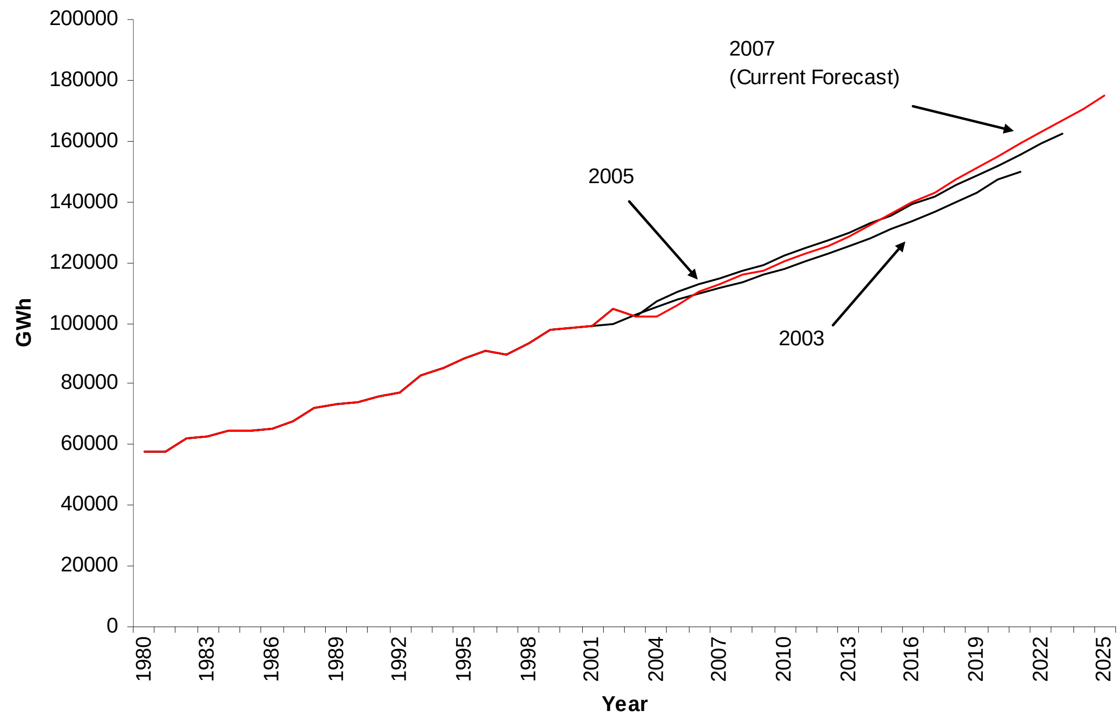


SUFG Forecast Highlights

- Significant real electricity price increase through 2012, then leveling off
- Electricity requirements and peak demand projections are similar to the previous forecast in the first half of the forecast
- Electricity requirements and peak demand projections are higher than the previous forecast in the later years of the forecast
- Industrial electricity consumption is projected to grow faster than previously projected
- Resource requirements are down in the early years primarily due to new purchase contracts

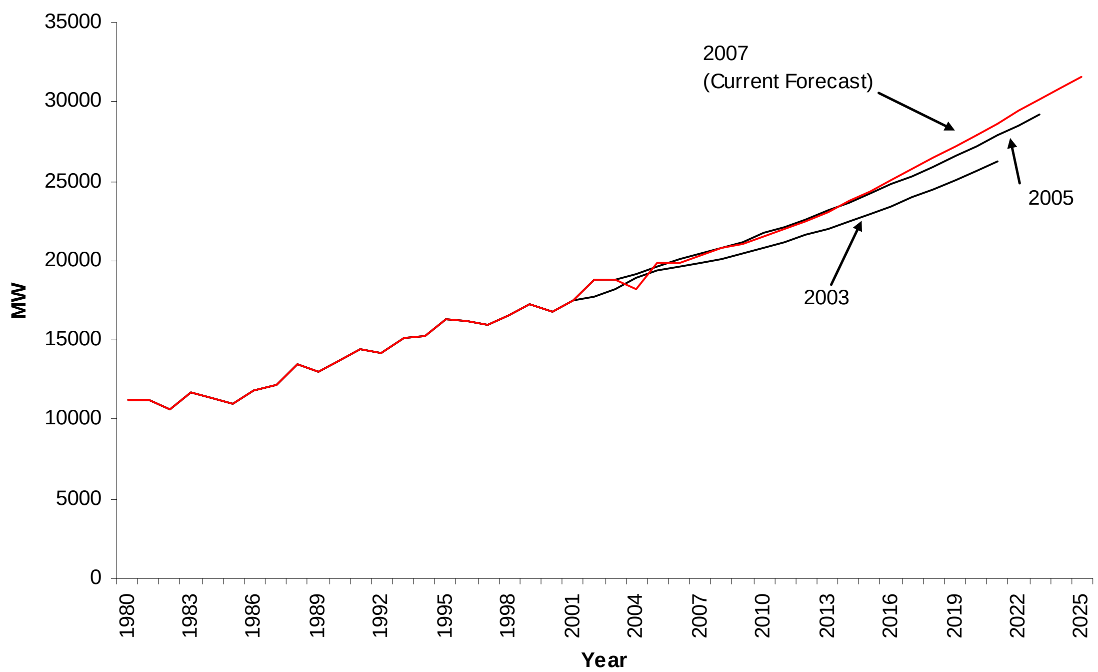
Indiana Electricity Requirements

- Retail sales by investor owned and not-for-profit utilities
- Includes estimated transmission and distribution losses
- Growth rates
  - 2007 forecast: 2.46%
  - 2005 forecast: 2.22%
  - 2003 forecast: 2.16%



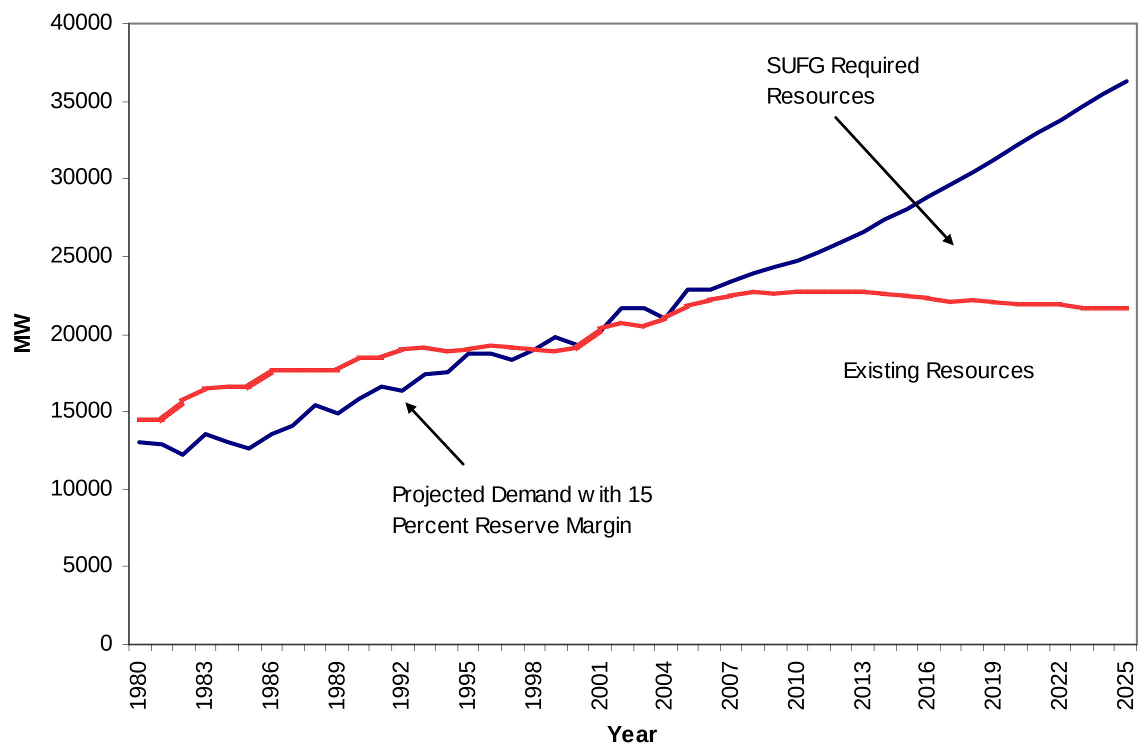
Indiana Peak Demand Requirements

- Peak demand is net of DSM and interruptible loads
- Growth rates
  - 2007 forecast: 2.46%
  - 2005 forecast: 2.24%
  - 2003 forecast: 2.07%



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
  - Does not include Duke IGCC, NIPSCO purchase of Sugar Creek, and most wind purchases



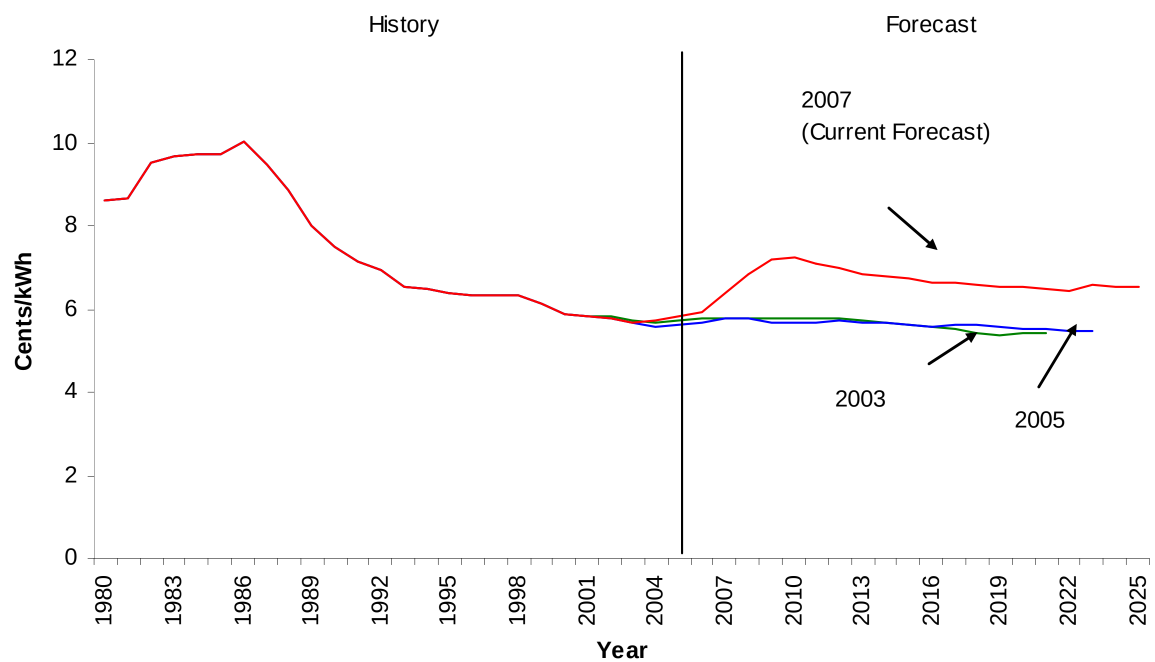
Indiana Resource Requirements

	Uncontrolled Peak Demand 1	Interruptible	Net Peak Demand 2	Existing/ Approved Capacity 3	Incremental Change in Capacity 4	Projected Additional Resource Requirements 5				Total Resources 6	Reserve Margin
						Peaking	Cycling	Baseload	Total		
2005				21,777							
2006	20,933	1,059	19,874	22,166	389	90	530	120	740	22,906	15
2007	21,393	1,062	20,331	22,519	353	140	620	90	850	23,369	15
2008	21,865	1,063	20,803	22,779	260	230	730	170	1,130	23,909	15
2009	22,163	1,065	21,099	22,554	-225	310	1,020	390	1,720	24,274	15
2010	22,608	1,067	21,541	22,719	165	330	1,100	620	2,050	24,769	15
2011	23,077	1,068	22,010	22,738	19	480	1,230	880	2,590	25,328	15
2012	23,590	1,071	22,520	22,685	-53	600	1,330	1,290	3,220	25,905	15
2013	24,177	1,073	23,104	22,685	0	770	1,430	1,710	3,910	26,595	15
2014	24,831	1,076	23,756	22,635	-50	1,000	1,510	2,180	4,690	27,325	15
2015	25,464	1,078	24,387	22,511	-125	1,240	1,620	2,710	5,570	28,081	15
2016	26,143	1,081	25,062	22,384	-126	1,440	1,710	3,300	6,450	28,834	15
2017	26,819	1,084	25,736	22,043	-341	1,700	2,090	3,760	7,550	29,593	15
2018	27,562	1,088	26,474	22,149	106	1,940	2,210	4,160	8,310	30,459	15
2019	28,277	1,092	27,185	22,072	-77	2,180	2,310	4,700	9,190	31,262	15
2020	29,016	1,096	27,921	21,909	-163	2,530	2,430	5,220	10,180	32,089	15
2021	29,746	1,100	28,647	21,909	0	2,700	2,520	5,820	11,040	32,949	15
2022	30,504	1,104	29,400	21,869	-41	2,940	2,600	6,400	11,940	33,809	15
2023	31,219	1,108	30,112	21,709	-160	3,100	2,700	7,120	12,920	34,629	15
2024	31,954	1,112	30,843	21,709	0	3,290	2,820	7,640	13,750	35,459	15
2025	32,678	1,116	31,562	21,628	-81	3,470	2,930	8,290	14,690	36,318	15

1 Uncontrolled peak demand is the peak demand with DSM in place butwithout any interruptible loads being called upon.
2 Net peak demand is the peak demand after interruptible loads are taken into account.
3 Existing/approved capacity includes installed capacity plus approved new capacity plus firm purchases minus firm sales.
4 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.
5 Projected additional resource requirements is the cumulative amount of additional resources needed to meet future requirements.
6 Total resource requirements are the total statewide resources required including existing/approved capacity and projected additional resource requirements.

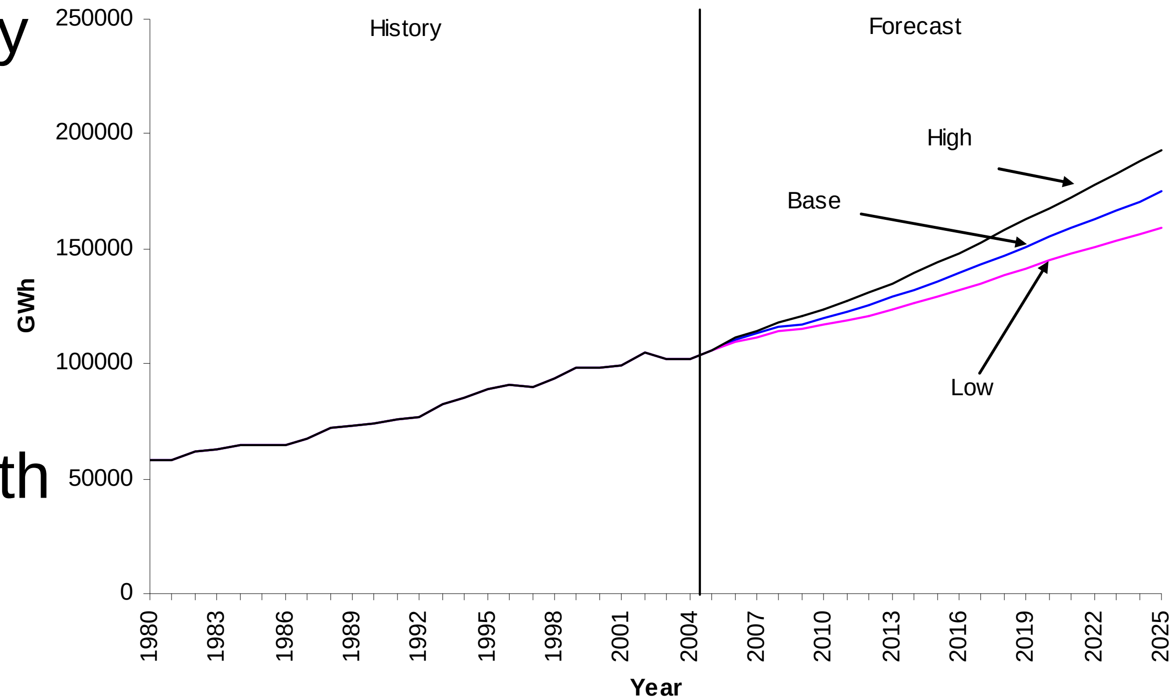
Indiana Real Price Projections (2005 $)

- Effect of inflation removed
- Includes the cost of meeting CAIR and CAMR
- Does not include costs associated with CO2 or RPS
- Includes the cost of new resources



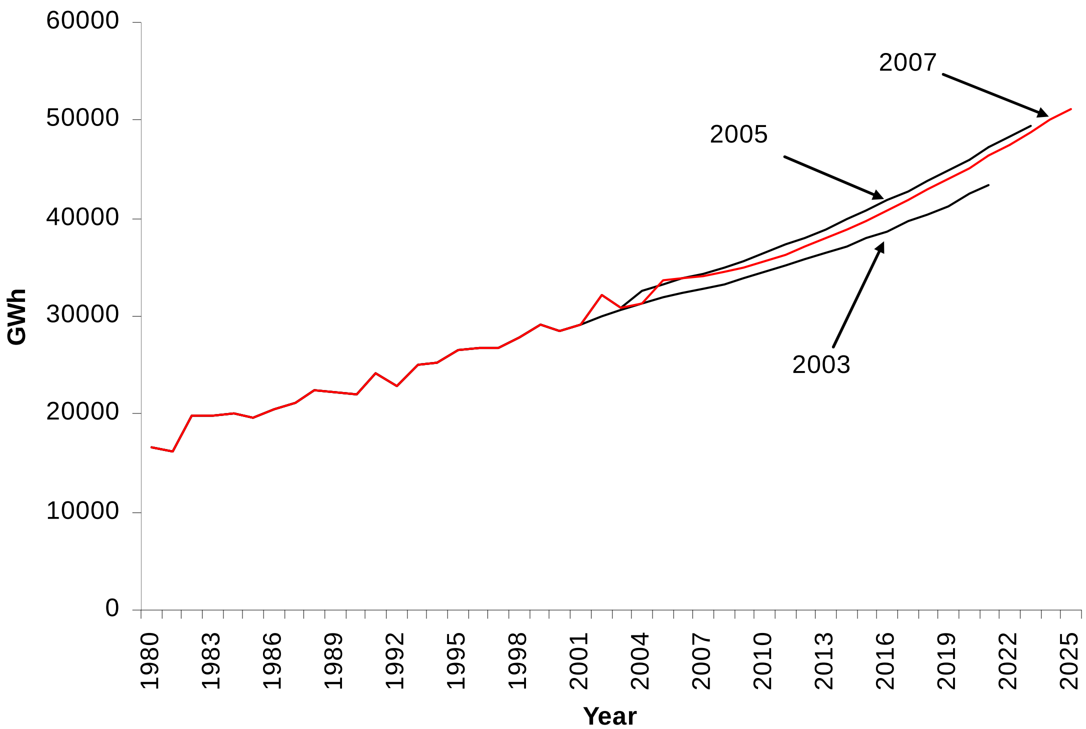
Alternative Scenarios

- 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



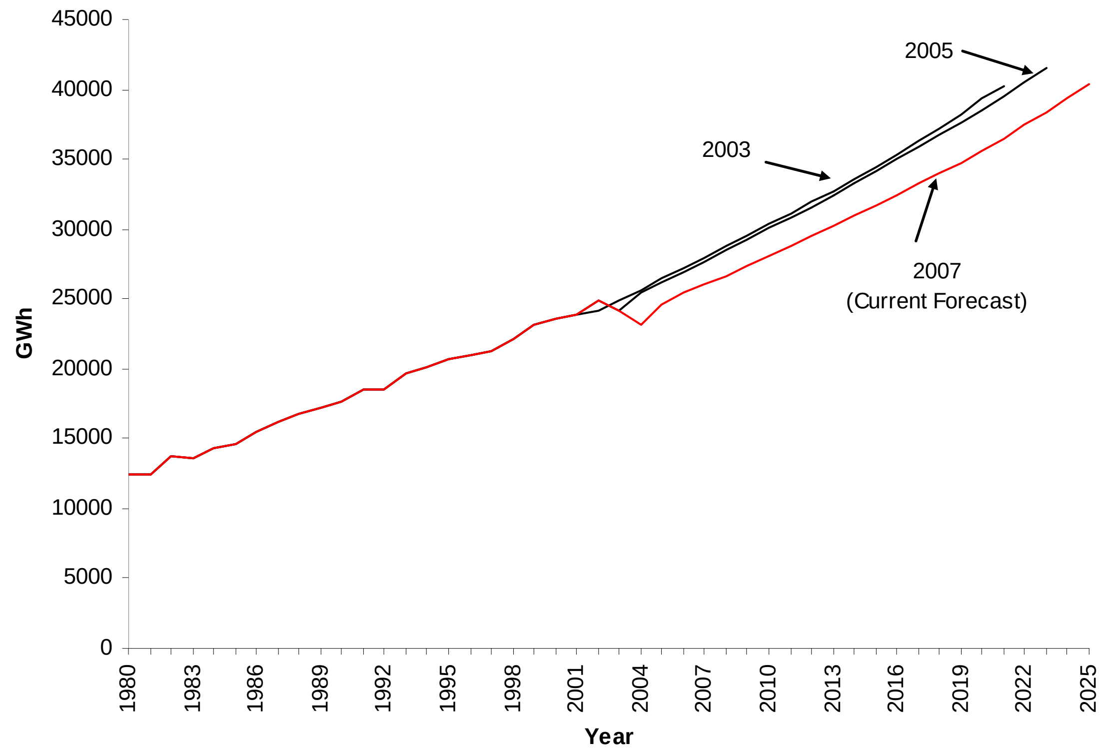
Residential Electricity Sales

- Estimated from:
  - demographics
  - households
  - household income
  - energy prices
- Growth rates
  - 2007 forecast: 2.21%
  - 2005 forecast: 2.22%
  - 2003 forecast: 1.95%



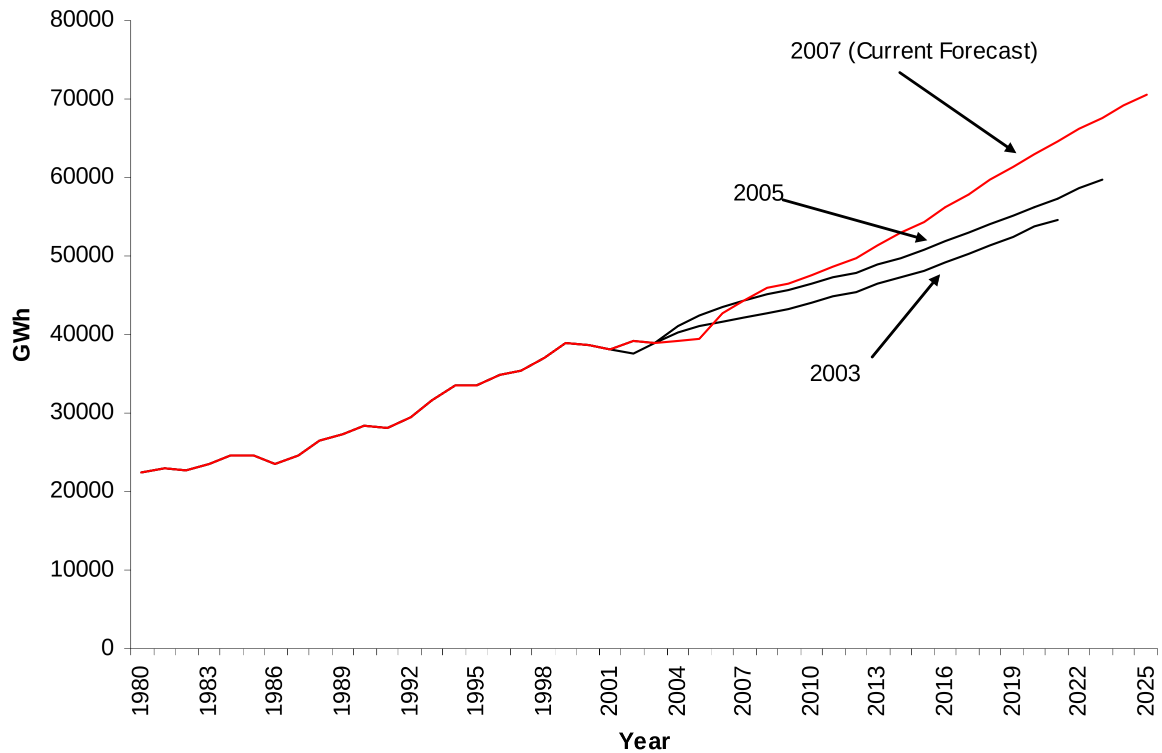
Commercial Electricity Sales

- Estimated from:
  - floor space inventory
  - end use intensity
  - employment
  - energy prices
- Growth rates
  - 2007 forecast: 2.46%
  - 2005 forecast: 2.61%
  - 2003 forecast: 2.71%



Industrial Electricity Sales

- Estimated from:
  - GSP by industry
  - energy prices
- Growth rates
  - 2007 forecast: 2.67%
  - 2005 forecast: 1.99%
  - 2003 forecast: 1.97%



Further Information

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