

# Indiana Energy Status

*presented to*

Indiana Chamber of Commerce  
Conference on Energy Management  
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*presented by*

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State Utility Forecasting Group

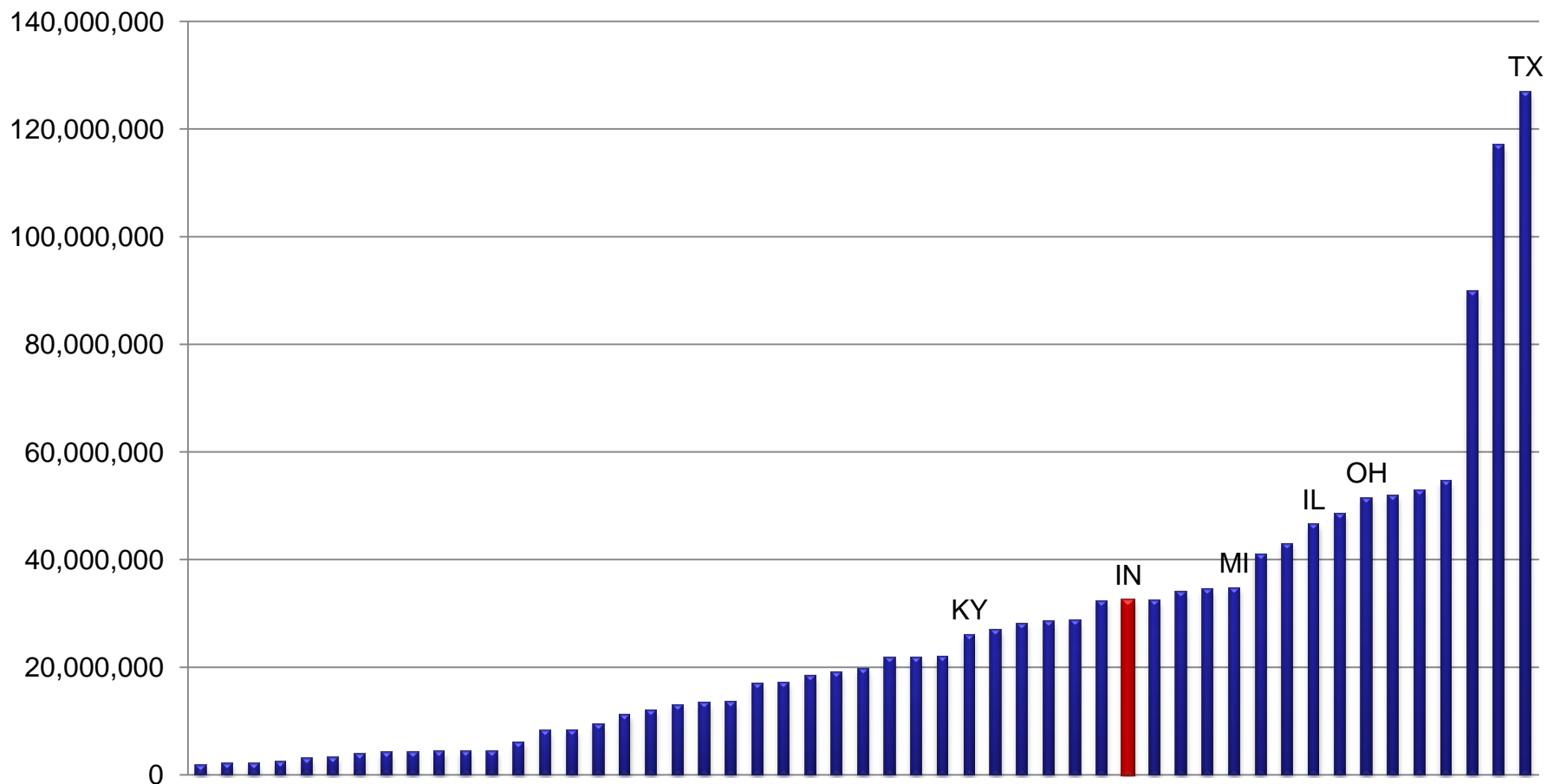
# Which sector uses the most electricity in Indiana?

Residential

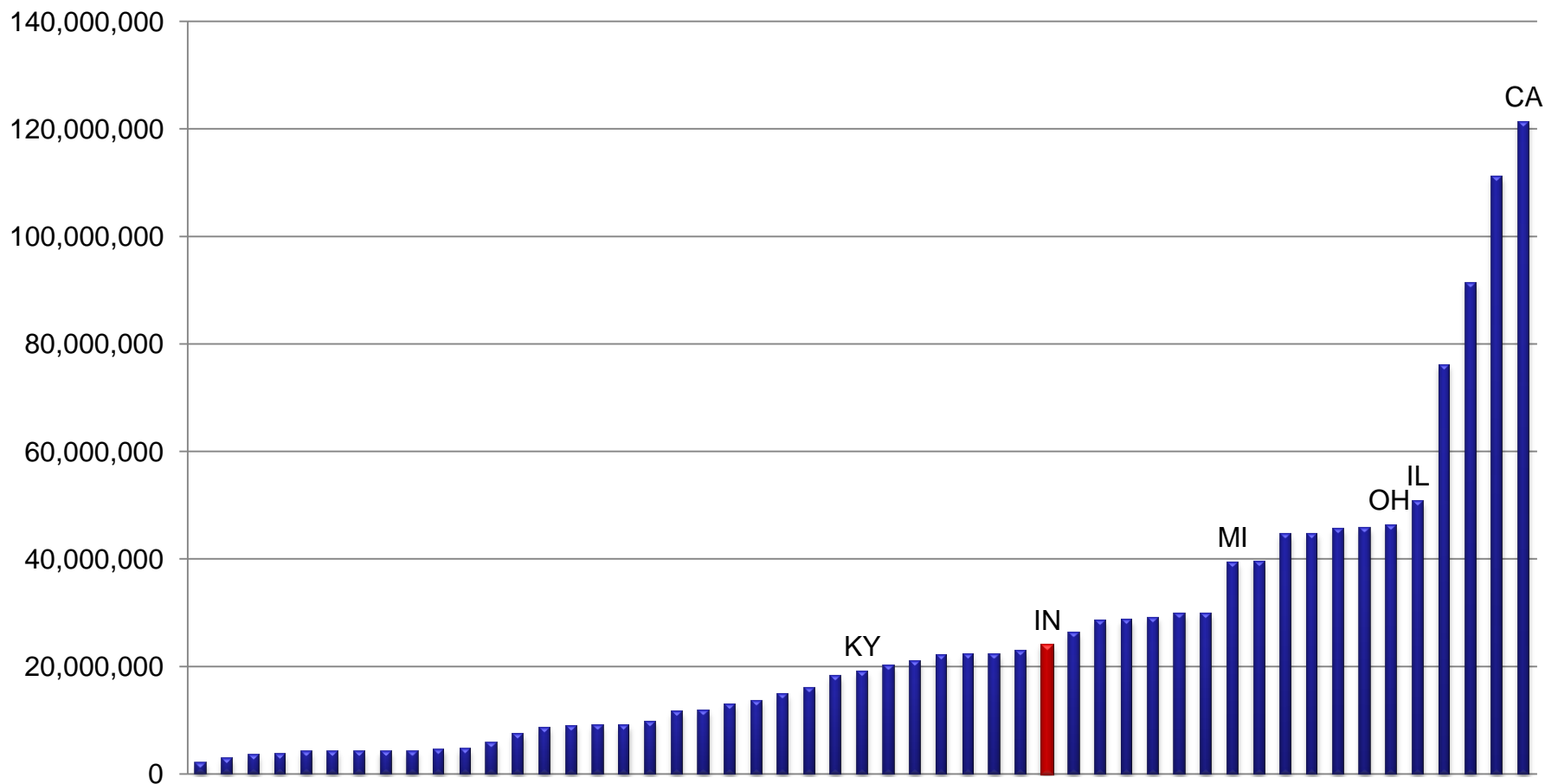
Commercial

Industrial

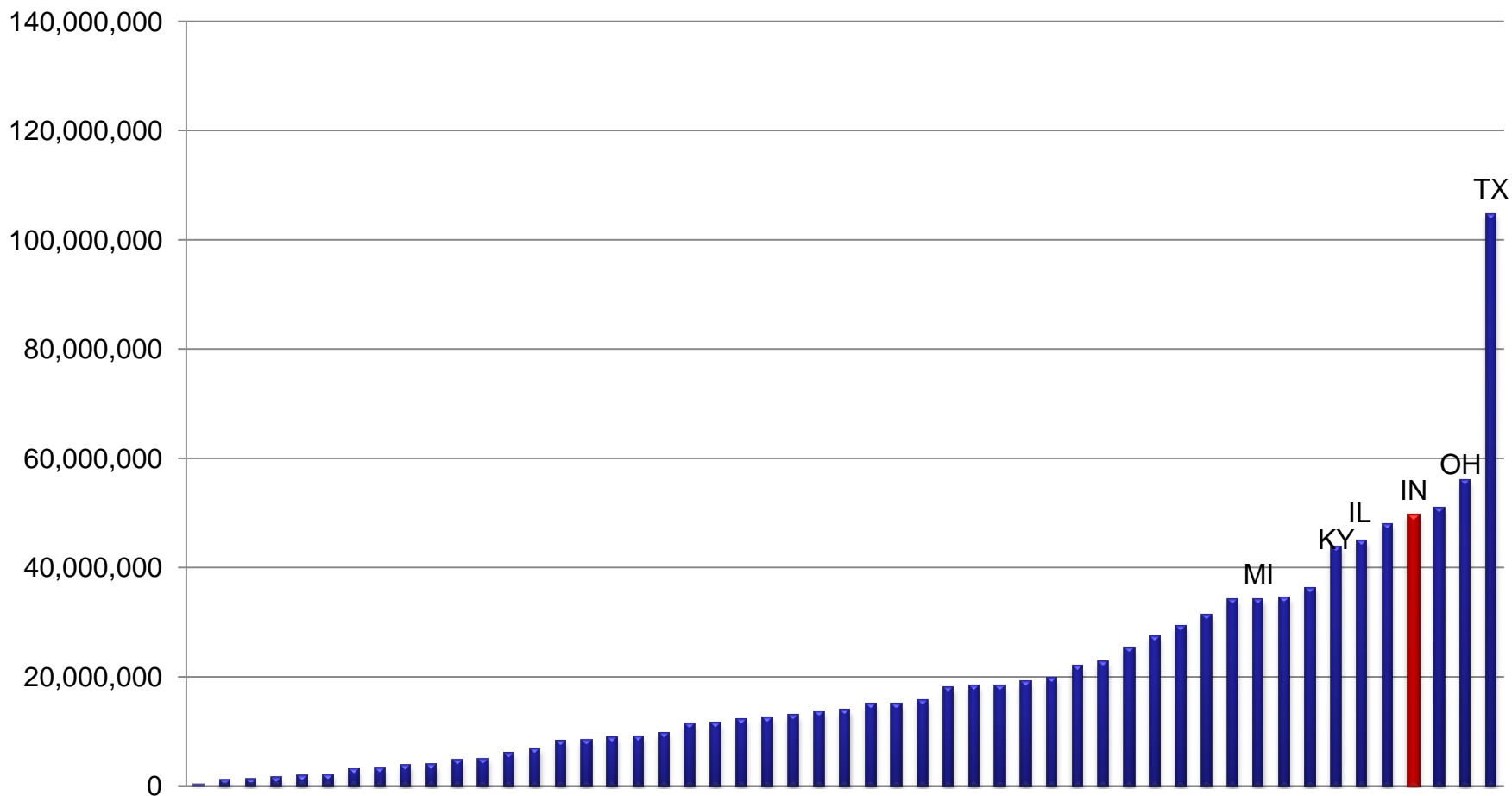
# 2006 Residential Electricity Sales (MWh)



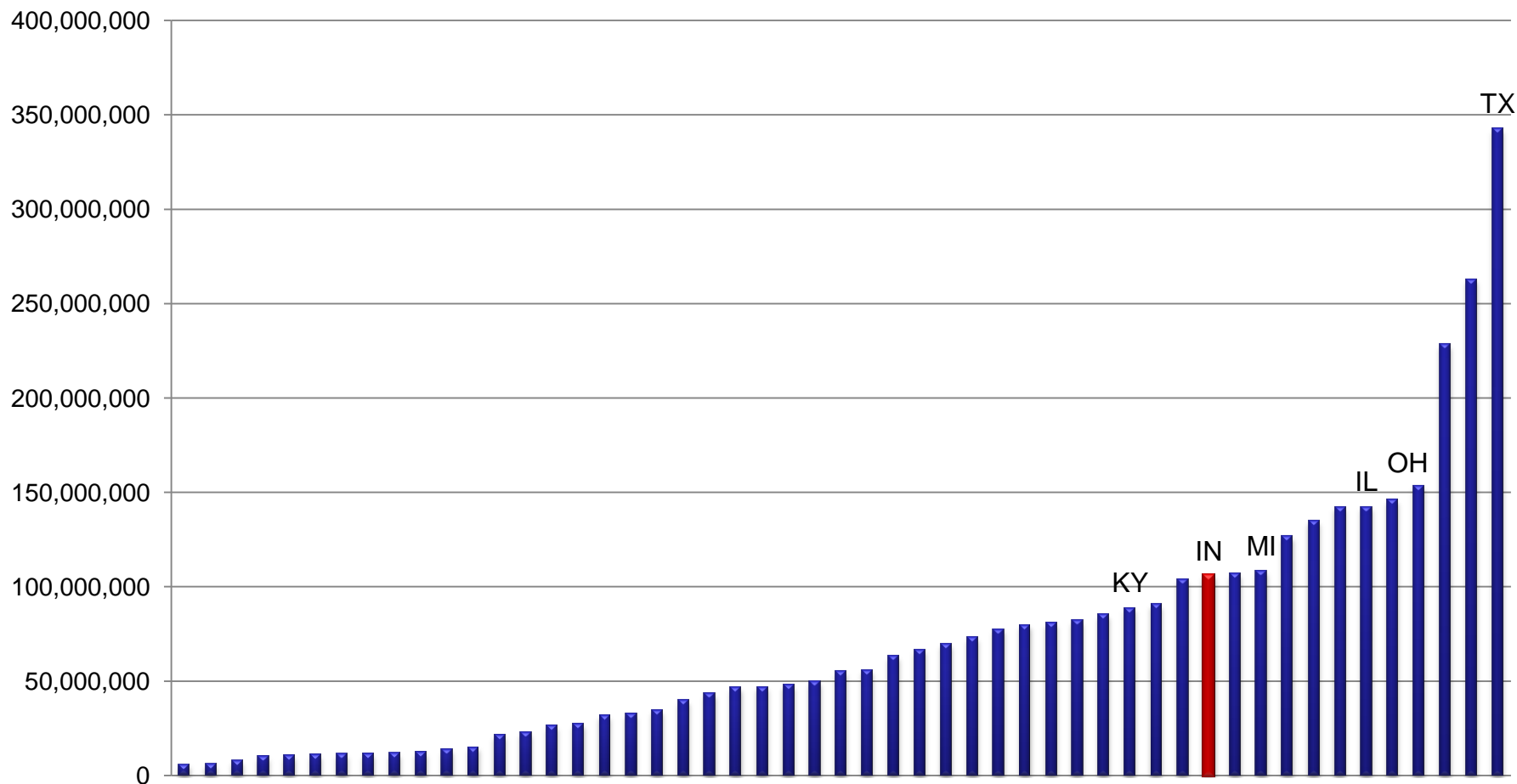
# 2006 Commercial Electricity Sales (MWh)



# 2006 Industrial Electricity Sales (MWh)



# 2006 Total Electricity Sales (MWh)



# Which sector uses the most electricity in the U.S.?

Residential

Commercial

Industrial

Approximately what percentage of electricity used in Indiana comes from coal?

85%

90%

95%



# 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....

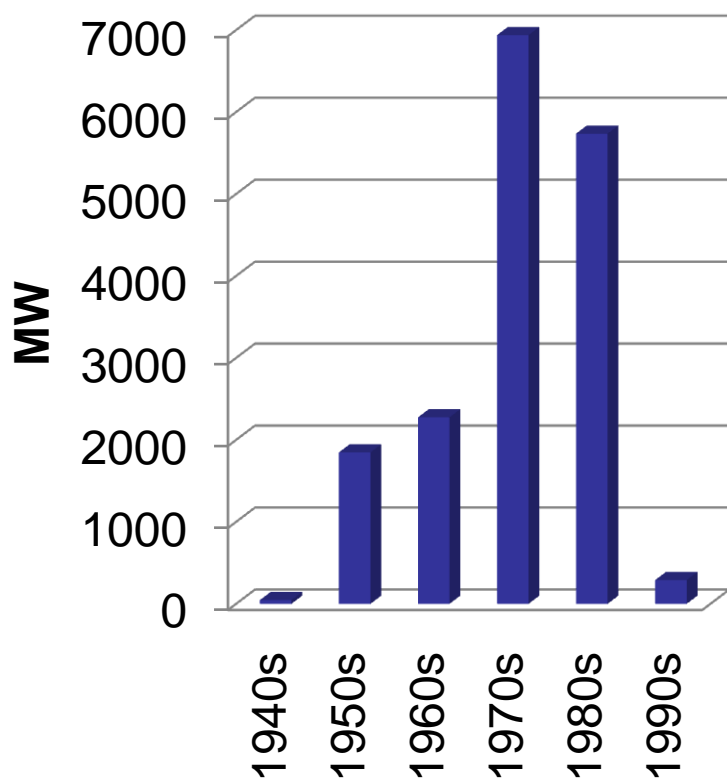
- Indiana produced 3.2 % of the electricity generated in the U.S.
- Indiana produced 6.2 % of the electricity generated from coal in the U.S.
- Indiana produced 0.3 % of the electricity generated from natural gas in the U.S.

What percentage of Indiana's coal-fired generating capacity is at least 30 years old?

Less than 50%

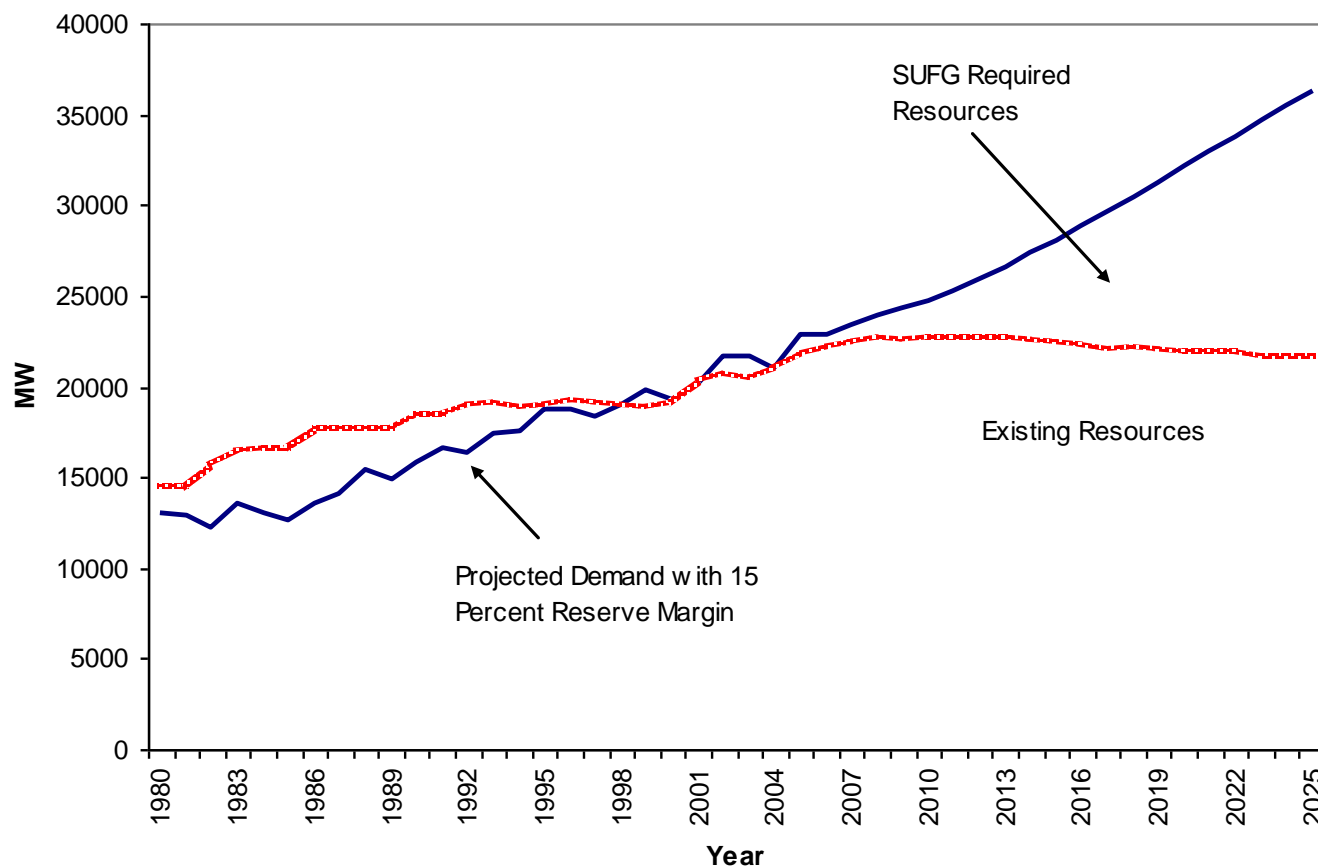
More than 50%

# 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

# Projected Resource Requirements



Approximately what fraction of coal burned in Indiana is mined in Indiana?

1/3

1/2

2/3

Generation from which fuel source is being (or is proposed to be) added to the Indiana mix?

Coal

Natural gas

Wind

# 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

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

# Wind Developments

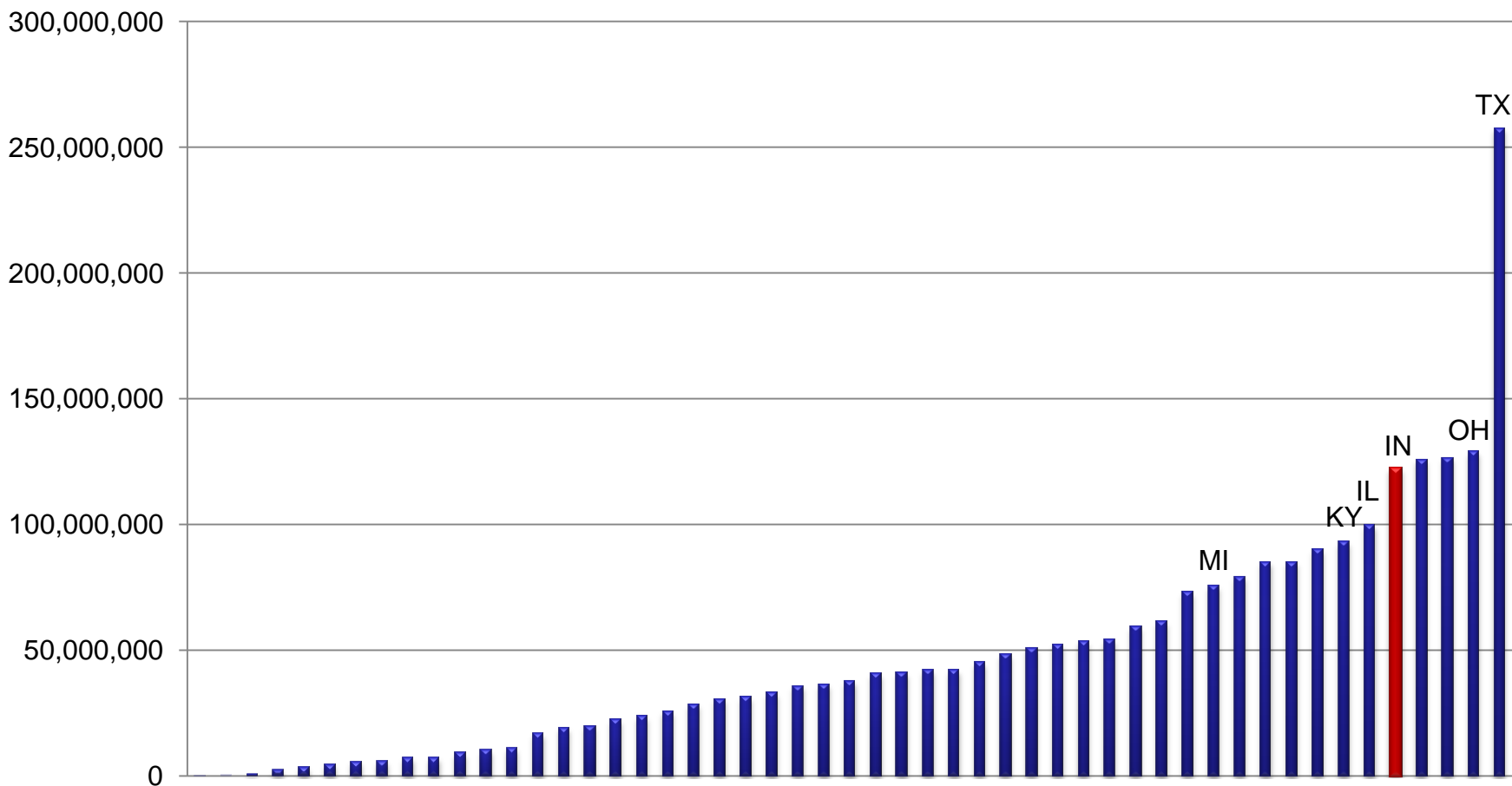
- Benton County Wind Farm
  - Duke Energy and Vectren
- Fowler Ridge Wind Farm
  - Indiana Michigan
- Hoosier Wind Farm
  - Indianapolis Power & Light
- NIPSCO pending purchases (IA and MN)

Indiana ranks in the top 5 in terms of emissions of CO<sub>2</sub>, SO<sub>2</sub>, and NO<sub>x</sub>

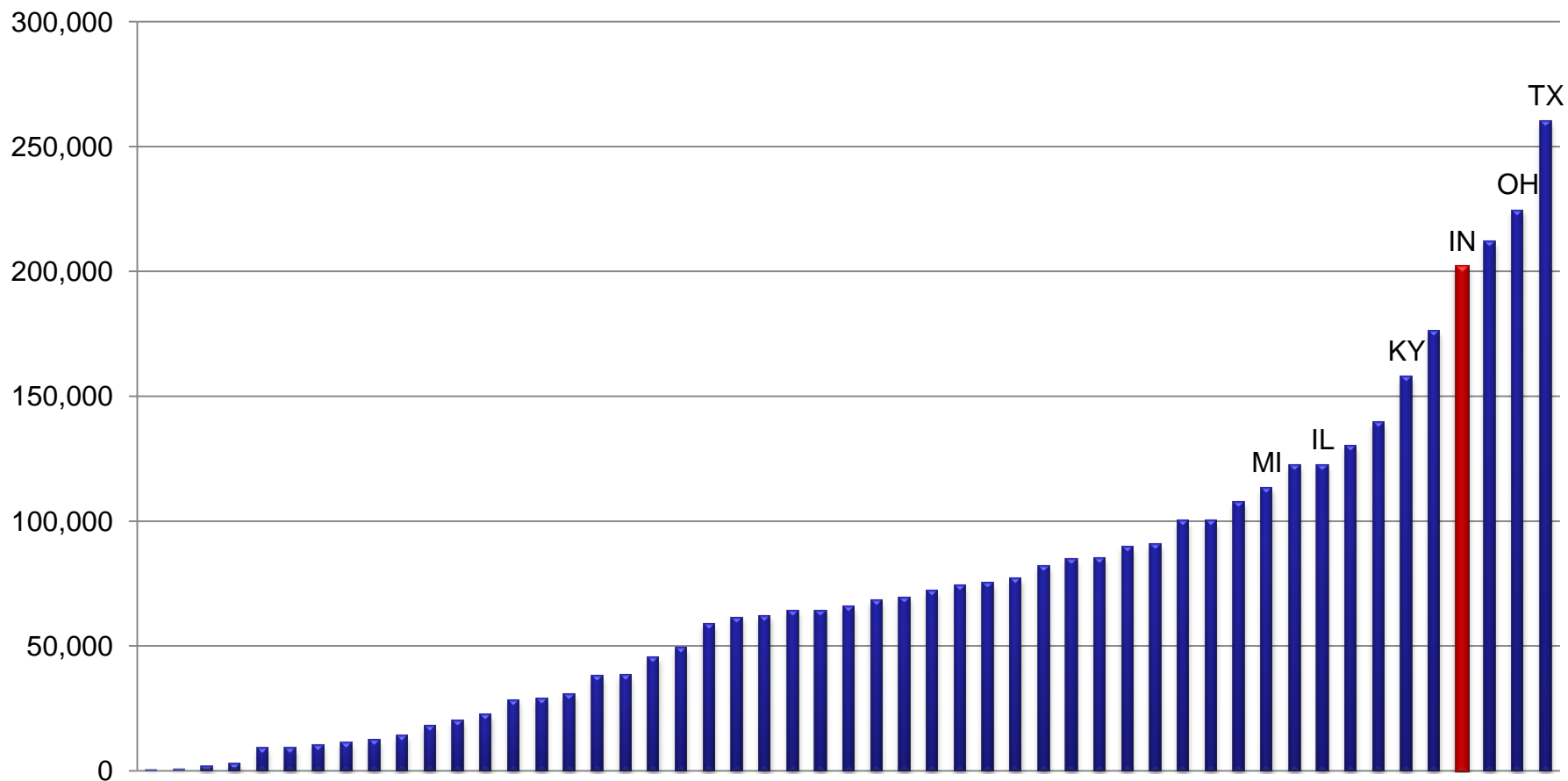
True

False

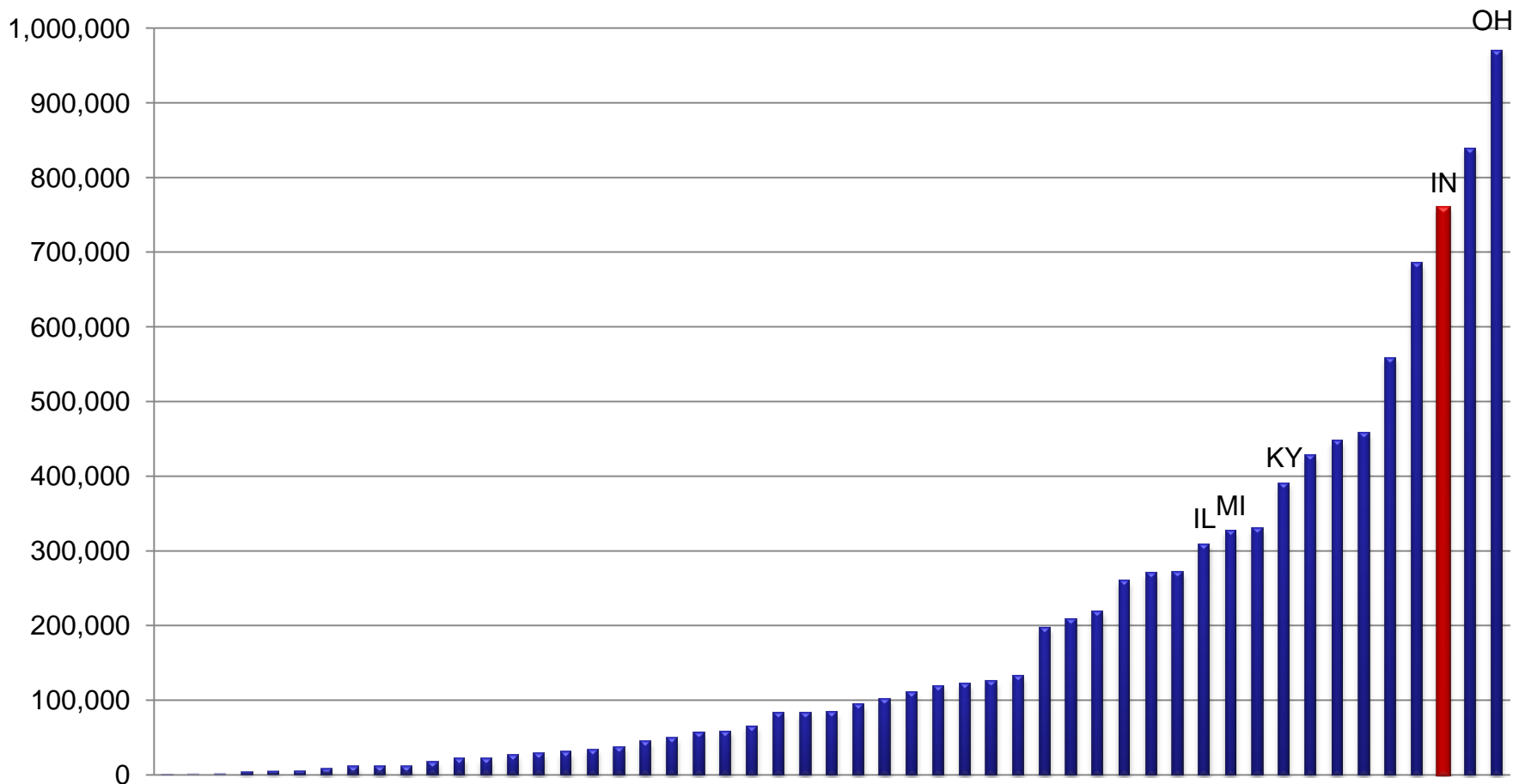
# 2006 CO<sub>2</sub> Emissions (metric tons)



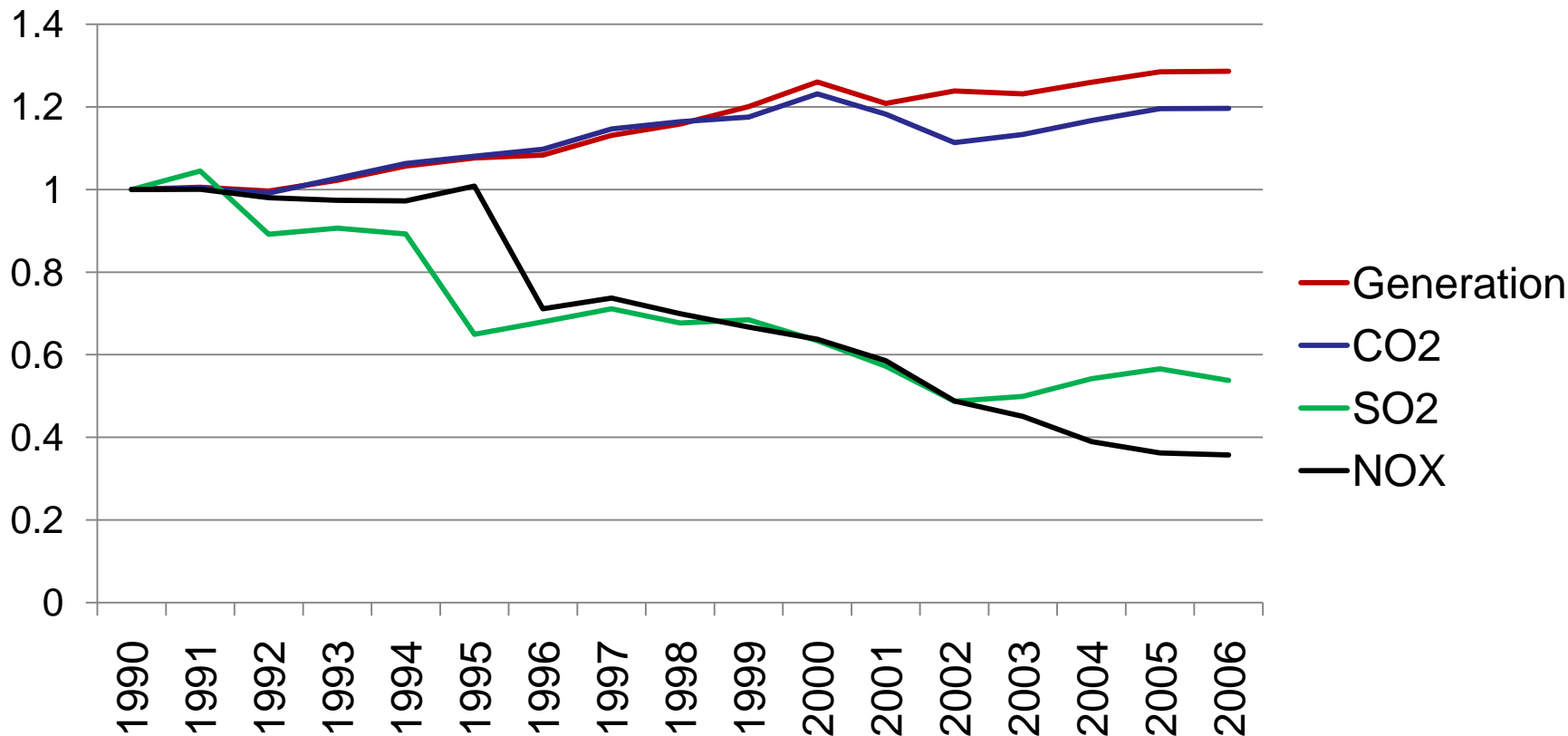
# 2006 NO<sub>x</sub> emissions (metric tons)



# 2006 SO<sub>2</sub> emissions (metric tons)



# Emissions Trends for Indiana Electricity Industry (normalized to 1990 values)



According to EIA, a state has 11.56 MWh of generation and 10.57 MWh of sales: is this state an exporter or an importer?

Exporter

Importer

Neither

Both



According to EIA, Indiana has 130 MWh of generation and 106 MWh of sales: is Indiana an exporter or an importer?

Exporter

Importer

Neither

Both

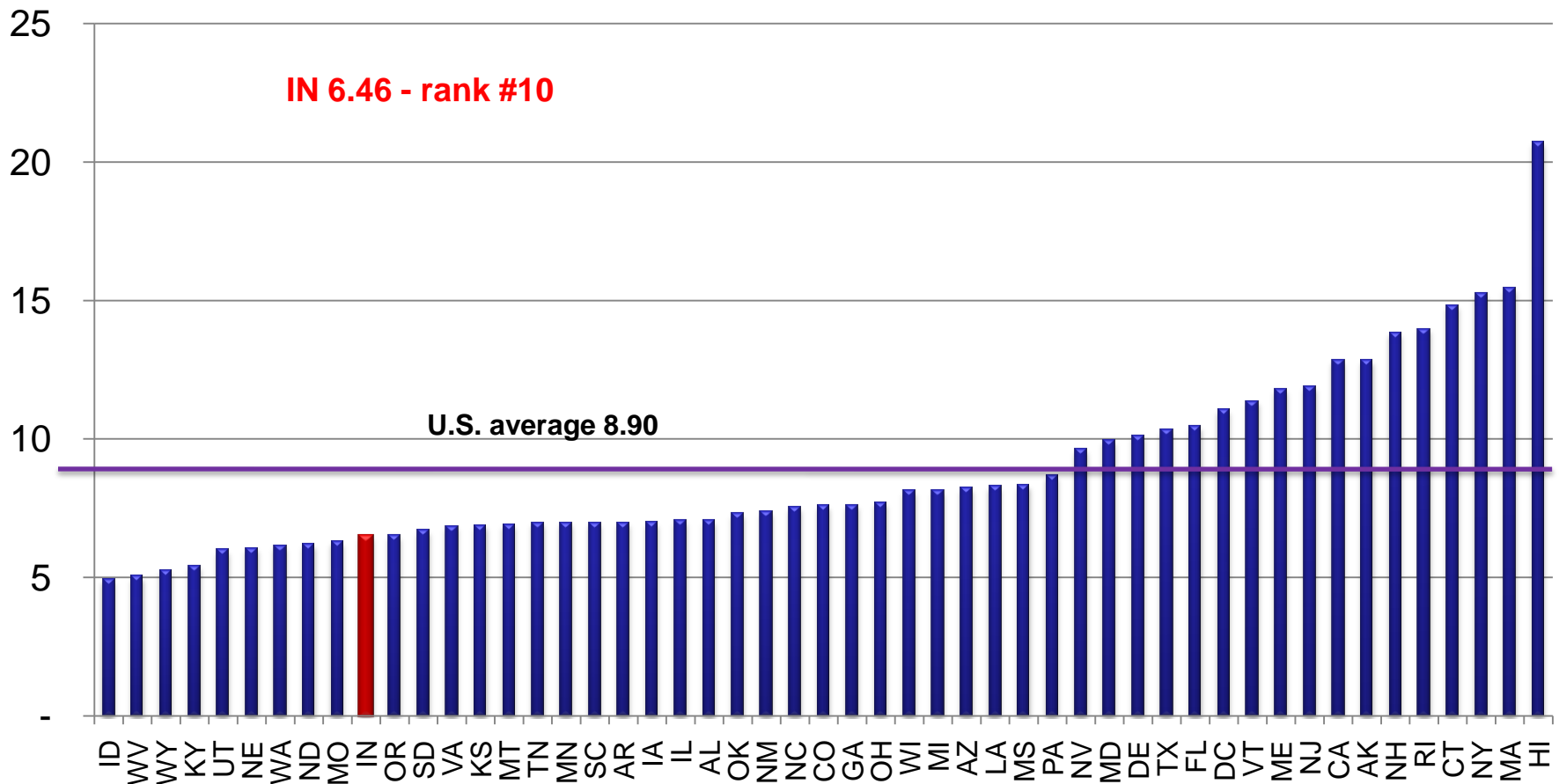
# Indiana ranks where in terms of lowest retail electricity rates?

Top 5

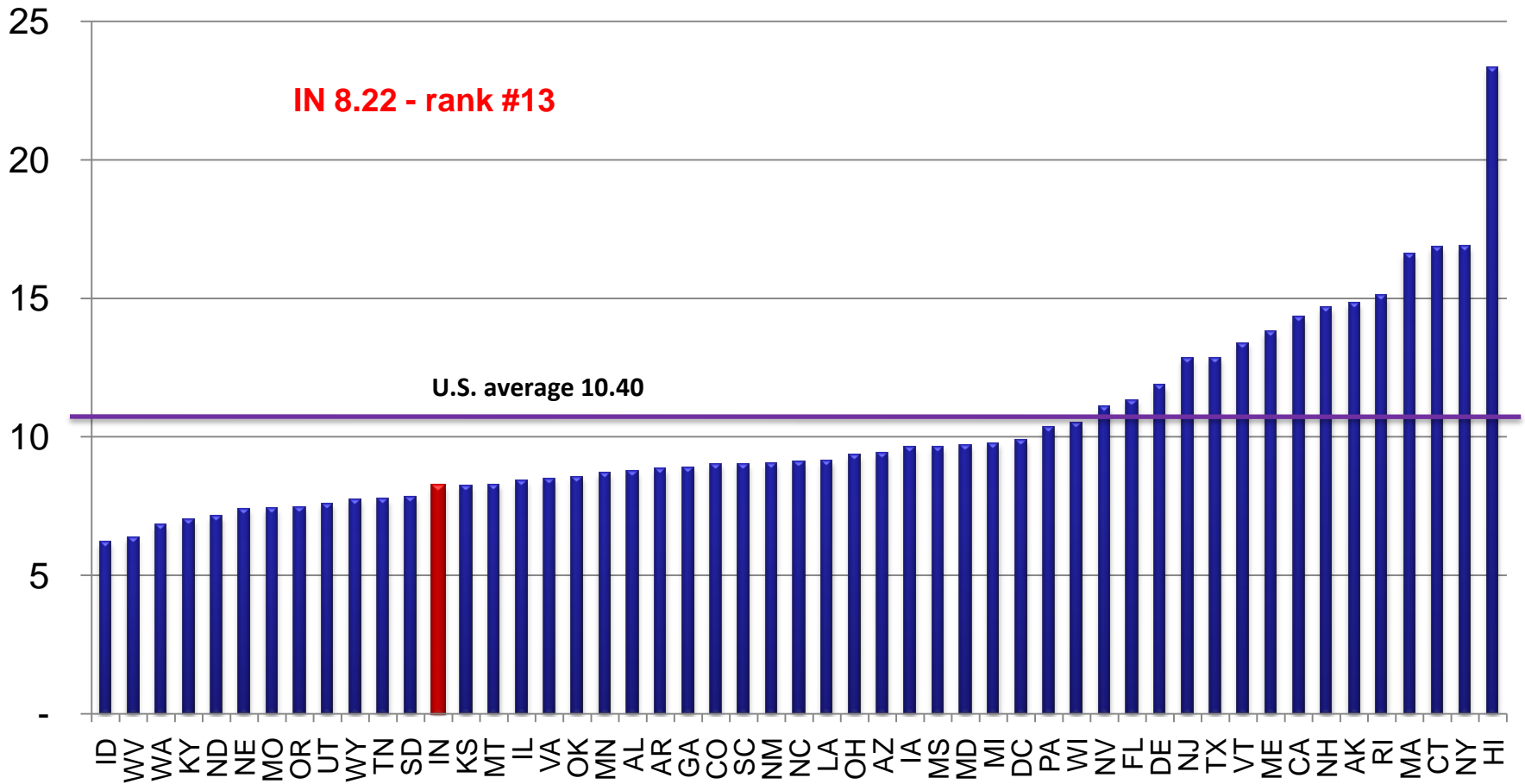
6 – 10

11<sup>th</sup> or higher

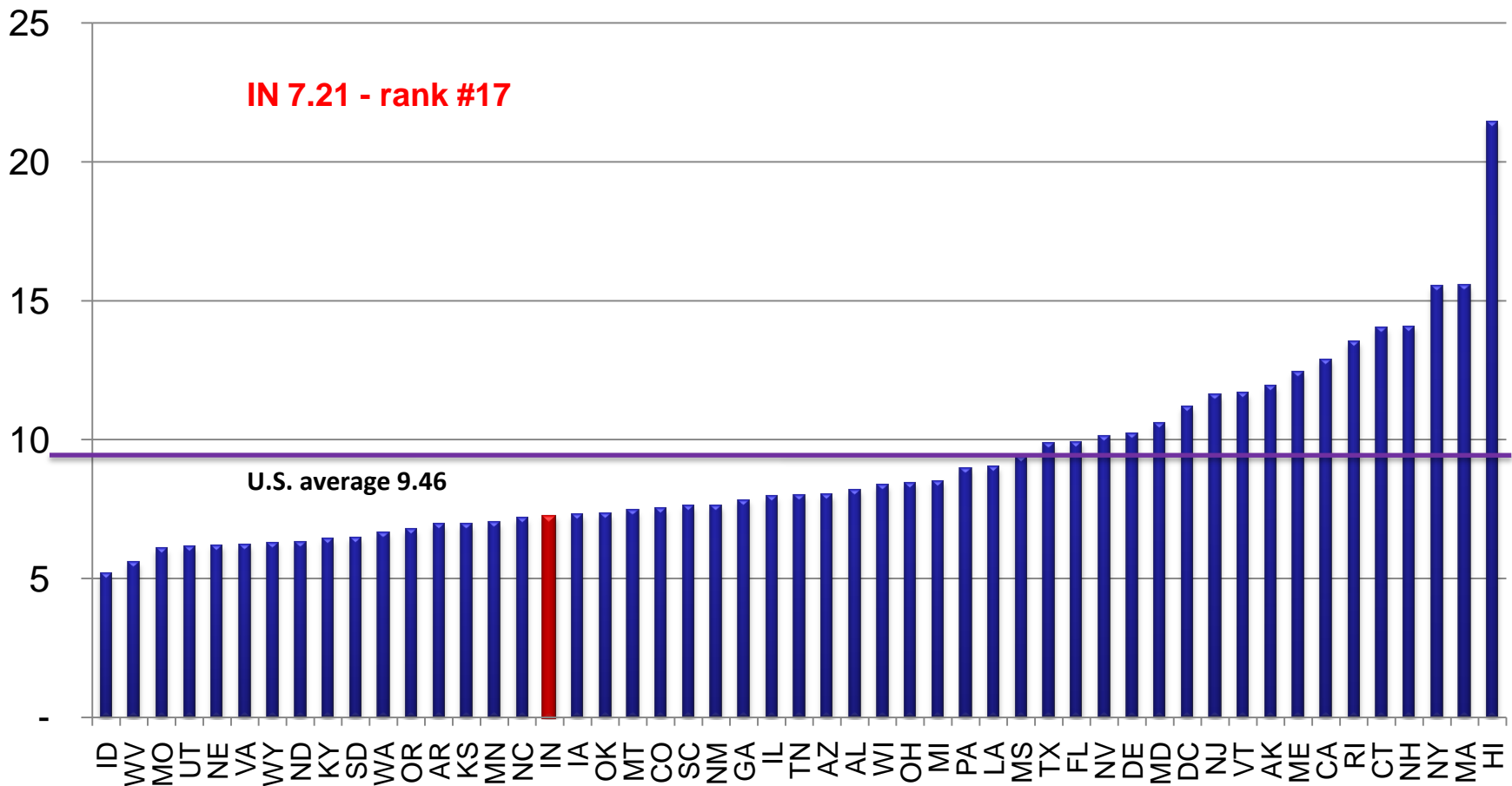
# 2006 All Sector Electricity Retail Price (cents/kWh)



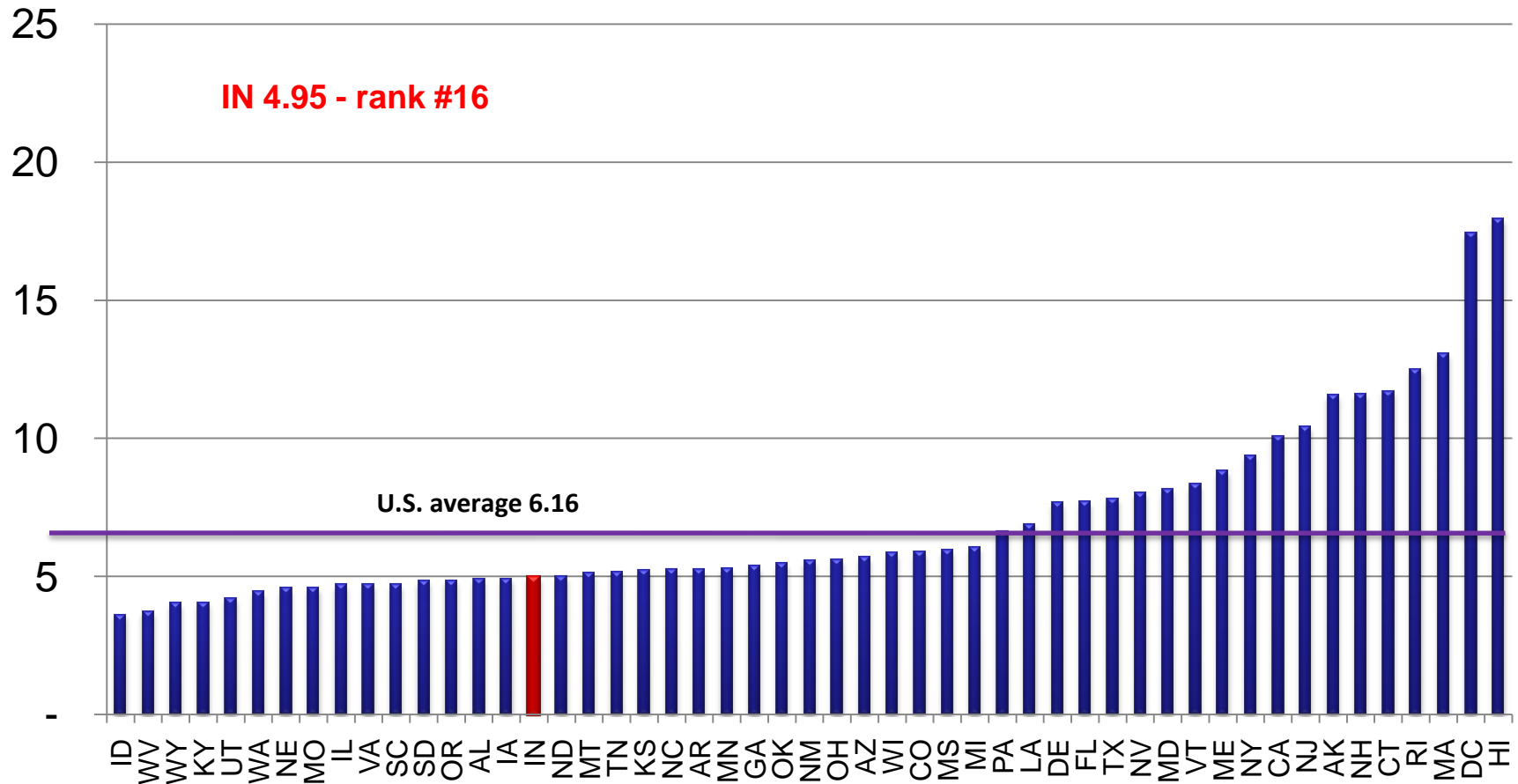
# 2006 Residential Electricity Retail Price (cents/kWh)



# 2006 Commercial Electricity Retail Price (cents/kWh)



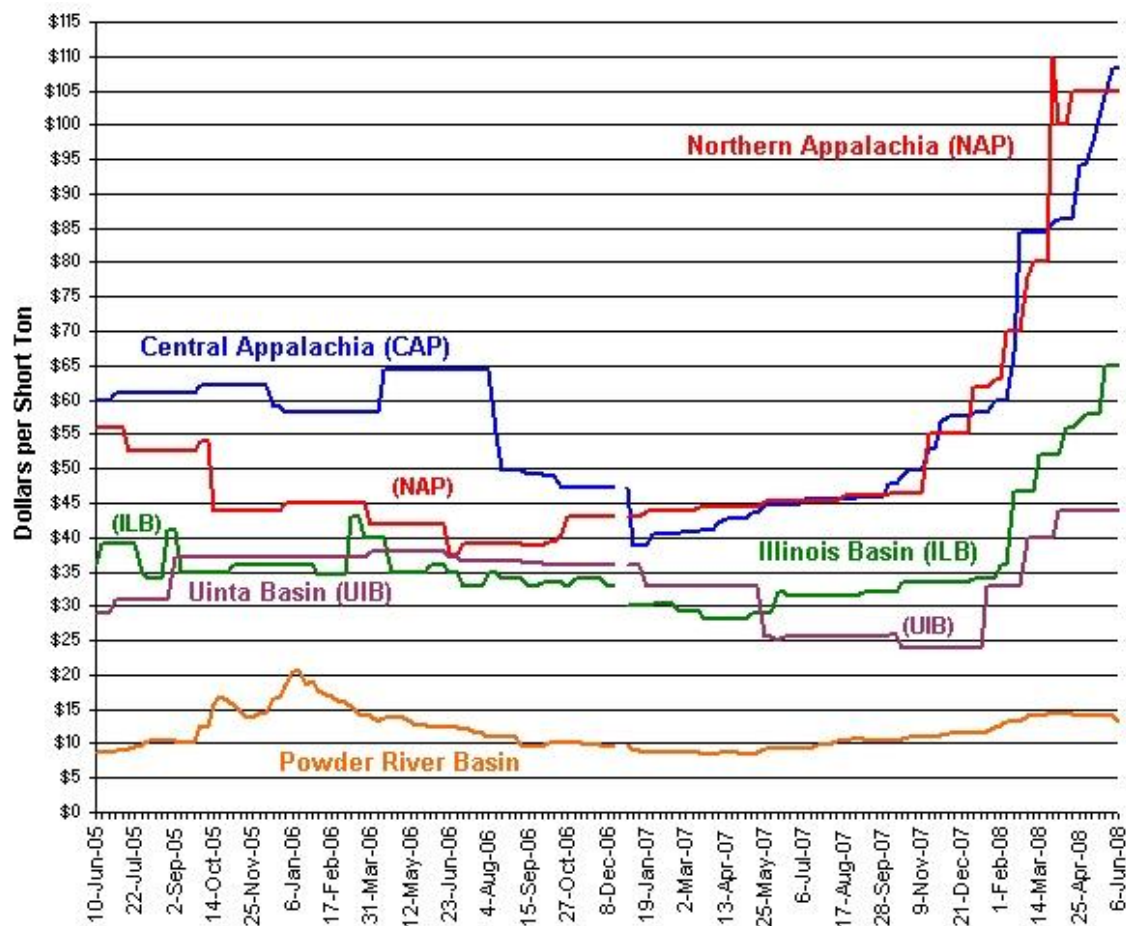
# 2006 Industrial Electricity Retail Price (cents/kWh)



# Extra Credit Take Home Essay Question

- What is happening to the price of coal and natural gas and why?

# Coal Spot Price (from EIA)



**Key to Coal Commodities by Region**

Central Appalachia:	Big Sandy/Kanawha 12,500 Btu, 1.2 lb SO <sub>2</sub> /mmBtu	Powder River Basin:	8,800 Btu, 0.8 lb
Northern Appalachia:	SO <sub>2</sub> /mmBtu		
Illinois Basin:	11,800 Btu, 5.0 lb SO <sub>2</sub> /mmBtu		



# Natural Gas Futures (\$/mmBtu)

