

Indiana Energy Report 1999 Summary

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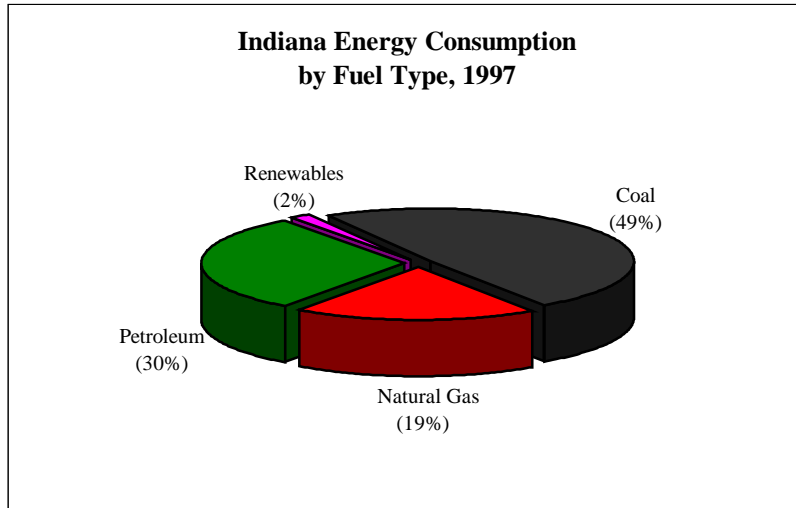
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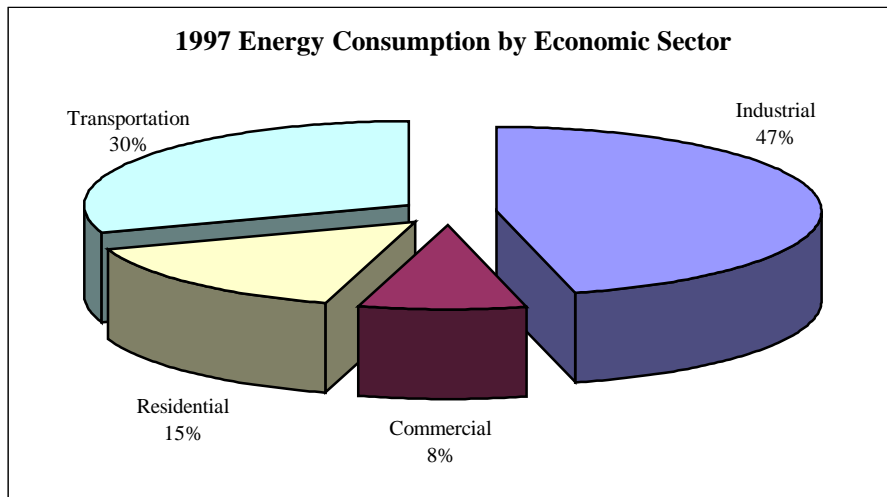
Executive Summary

Indiana utilizes three primary energy sources, coal, petroleum, and natural gas. Coal represents 49 percent of the state's 1997 energy consumption. Petroleum follows at 30 percent, natural gas at 19 percent, and renewable energy sources at 2 percent.



The primary use of coal, 83 percent in 1997, is electricity generation. Fifty-one percent of the coal used to generate electricity in 1997 was mined in Indiana. The five largest electricity generation plants in Indiana are coal-fired. Indiana ranks second in the nation for raw coal consumption and fifth in the nation for per capita coal consumption.

Indiana has four primary economic sectors consuming energy: industrial, transportation, residential, and commercial. Of these, the industrial sector consumed 47 percent of the 1997 total Indiana energy consumption. The transportation sector followed at 30 percent, the residential sector at 15 percent, and the commercial sector at 8 percent.

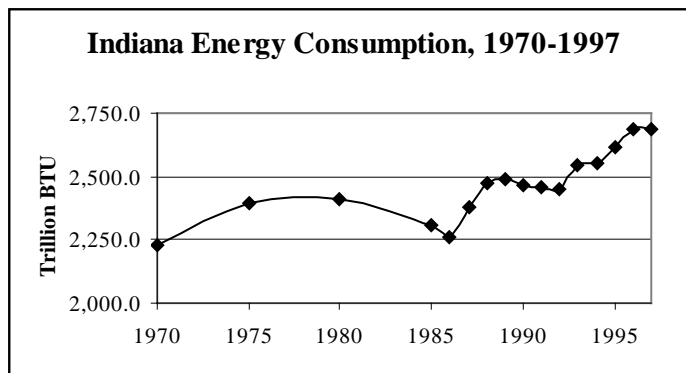


The primary energy source for the 1997 residential sector was natural gas at 58 percent followed by electricity at 30 percent, petroleum at 9 percent, and biomass at 2 percent. The primary energy source for the 1997 commercial sector was natural gas at 50 percent, followed by electricity at 40 percent, petroleum at 7 percent, and coal at 3 percent. The primary energy source for the 1997 industrial sector was natural gas at 31 percent, coal followed at 28 percent, petroleum at 23 percent, electricity at 16 percent and biomass at 3 percent. Petroleum was almost the sole energy source for the 1997 transportation sector. Petroleum accounted for 97 percent of the sector's energy consumption, natural gas at 2 percent, and ethanol at 1 percent.

	Percentage of Energy Consumption by Sector, 1997			
	Residential	Commercial	Industrial	Transportation
Coal	1	3	28	--
Natural Gas	58	50	31	2
Petroleum	9	7	23	97
Electricity	30	40	16	--
Other	2	--	3	1

Indiana's electric utilities pay less than the national average for coal, but slightly more than the national average for natural gas and petroleum. Indiana's commercial sector pays slightly less than the average natural gas price. Electric utilities and the industrial sector pay slightly more than the national average. Indiana's retail gasoline prices, excluding State and Federal taxes, are less than the national average. Prior to 1990, Indiana's tax rate for both gasoline and diesel were higher than the national average. Since 1990, tax rates on both fuels have been lower than the national averages. In 1997, Indiana's gasoline tax rate was 4.1 cents per gallon lower than the national average. The diesel tax rate was 3.5 cents per gallon lower than the national average.

Between 1970 and 1997, Indiana energy consumption increased from 2,228 trillion BTU to 2,684 trillion BTU, an increase of 20 percent (0.8 percent annual growth). Population increased from 5,195,392 in 1970 to 5,828,090 in 1996, an increase of 12 percent (0.5 percent annual growth). The Gross State Product increased from \$122,097,000 in 1989 to \$148,801,000 in 1996, an increase of 22 percent.

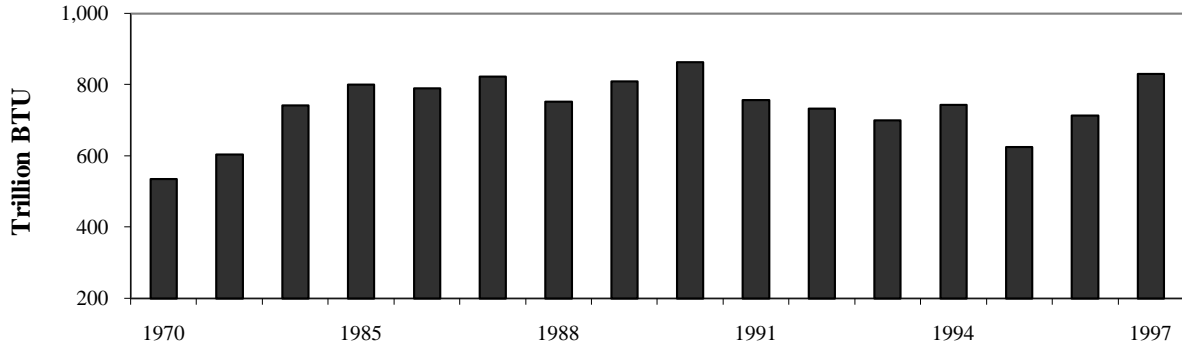


Indiana Coal, Oil and Natural Gas Production

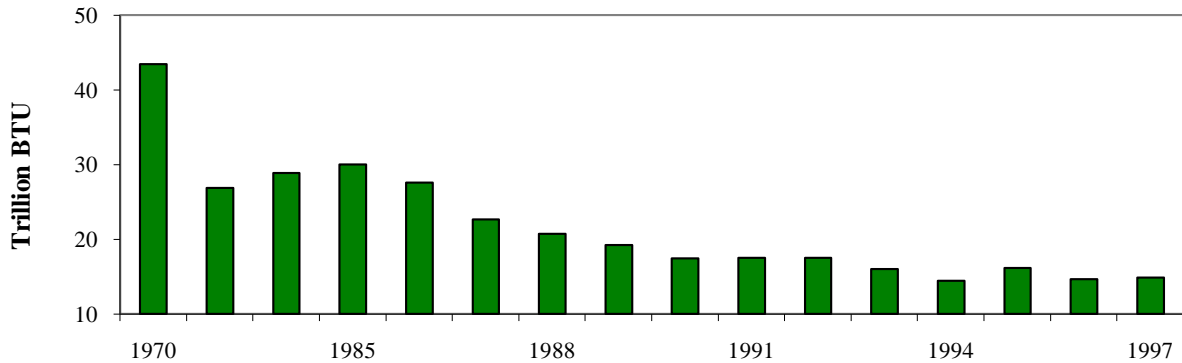
(Trillion BTU)

While oil production in Indiana has declined since 1970, coal and natural gas production increased in 1997. The 1997 coal production was the third-highest since 1965 nearing 35 million tons. This is a 16 percent increase from 1996 coal production. Natural gas production was the highest showing a 166 thousand cubic feet, or 46 percent, increase in 1997.

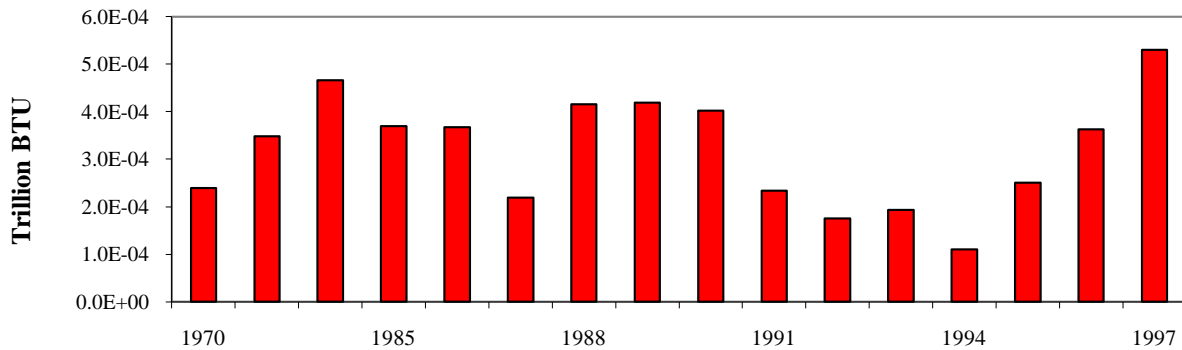
Coal Production, 1970-1997



Oil Production, 1970-1997



Natural Gas Production, 1970-1997



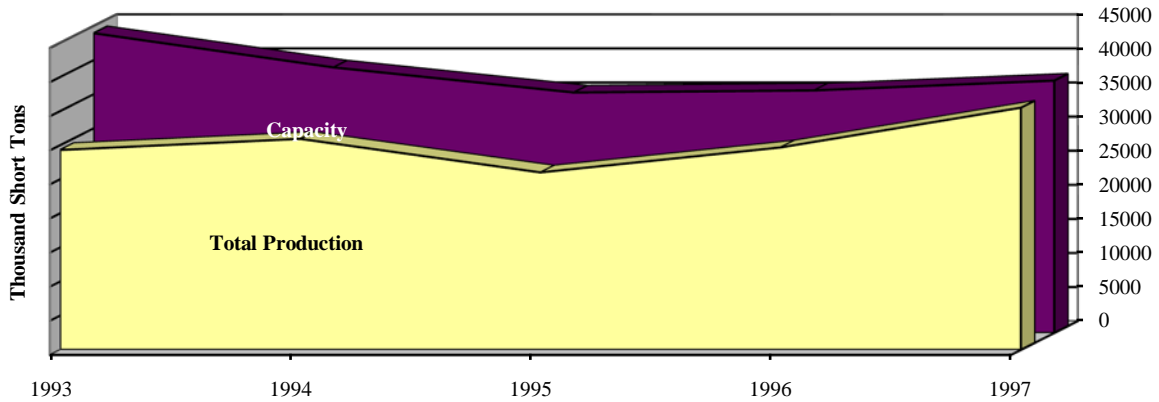
Source: EIA <http://www.eia.doe.gov>

Productive Capacity of Indiana Coal

(Thousand Short Tons)

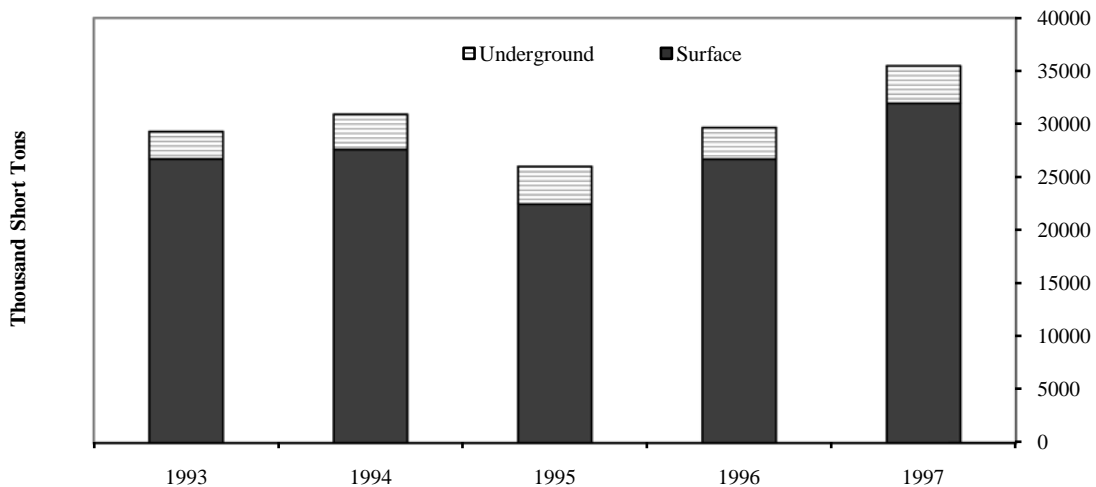
The productive capacity, which is the daily productive capacity multiplied by the number of days worked during the year, increased 4 percent in 1997. The capacity utilization, the ratio of total production to annual productive capacity, increased from 83 percent in 1996 to 95 percent in 1997.

Productive Capacity vs. Actual Production, 1993-1997



Underground mining was once the dominant method of coal extraction in the state, however, in recent years surface mining has dominated. In 1997, underground methods accounted for only 10 percent of the total coal production. Indiana has approximately 34 billion tons of unmined coal, about 18 billion tons is recoverable using current technology. Of the 18 billion, about 16 billion tons is recoverable by underground mining and 2 billion tons is recoverable by surface mining.

Indiana Surface and Underground Coal Production, 1993-1997



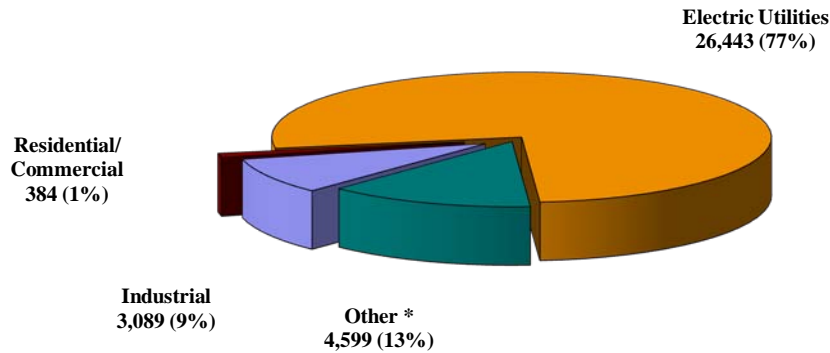
Source: EIA, <http://www.eia.doe.gov> and 1998-99 Indiana Coal Facts

Distribution of Coal Produced in Indiana

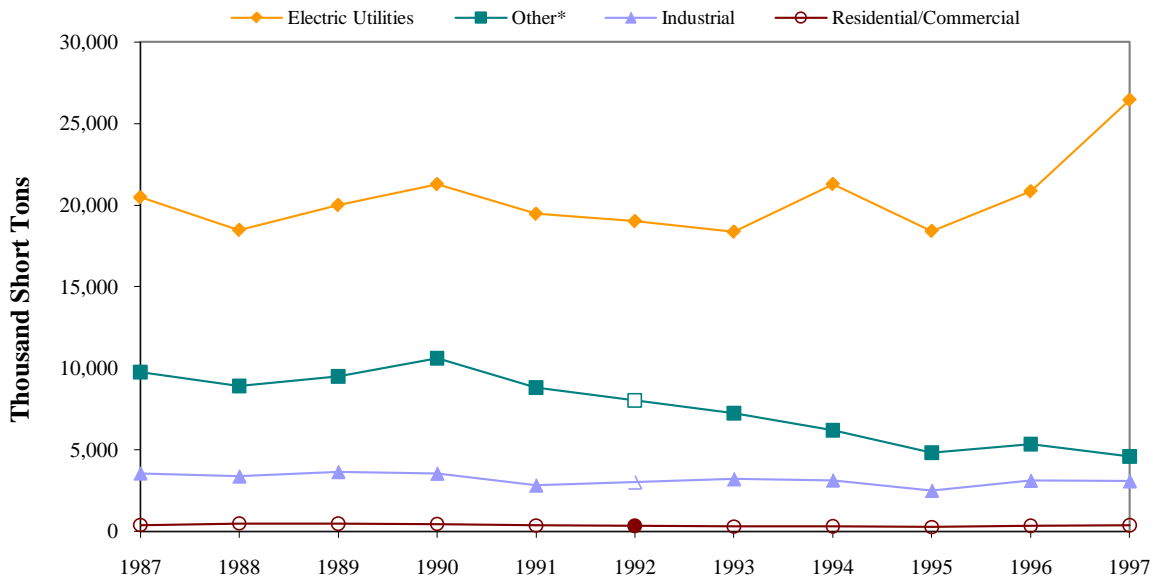
(Thousand Short Tons and Percent of Total)

Indiana ranks ninth nationally in coal production. Nearing 35 million tons, 1997 production was the third-highest annual production for Indiana mines. All of the coal produced in Indiana is high-volatile bituminous, a soft coal which can be used to generate electricity or to make coke for the steel industry. The predominant use of Indiana's bituminous coal is electric generation.

1997



1987-1997



1992 value for industrial, residential/commercial, and other is the average of the data from 1991 and 1993.

*Other includes distribution to other states and foreign distribution.

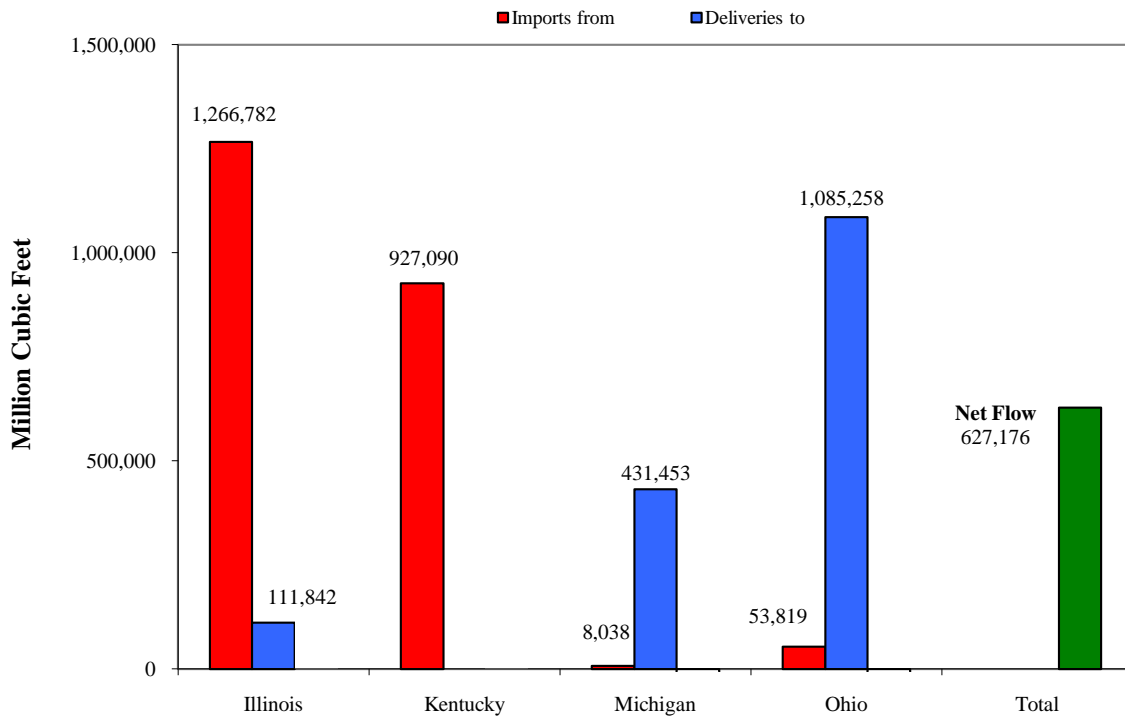
Sources: EIA, <http://www.eia.doe.gov> and 1998-99 Indiana Coal Facts

Natural Gas Flow Through Indiana

(Million Cubic Feet)

The net flow of natural gas through Indiana increased 2,433 million cubic feet or 0.4 percent from 1996 to 1997. Indiana's net imports from Illinois and Kentucky were 1,154,940 and 927,090 million cubic feet respectively. The net deliveries to Ohio and Michigan from Indiana were 1,031,439 and 423,415 million cubic feet respectively.

1997



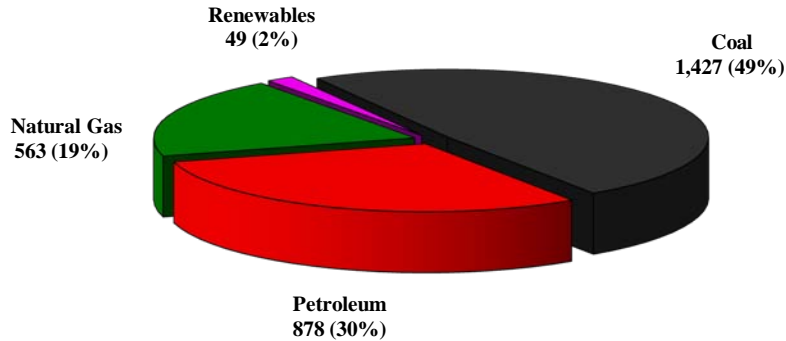
Source: Energy Information Administration (EIA), Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition."

Indiana Energy Consumption by Fuel Type

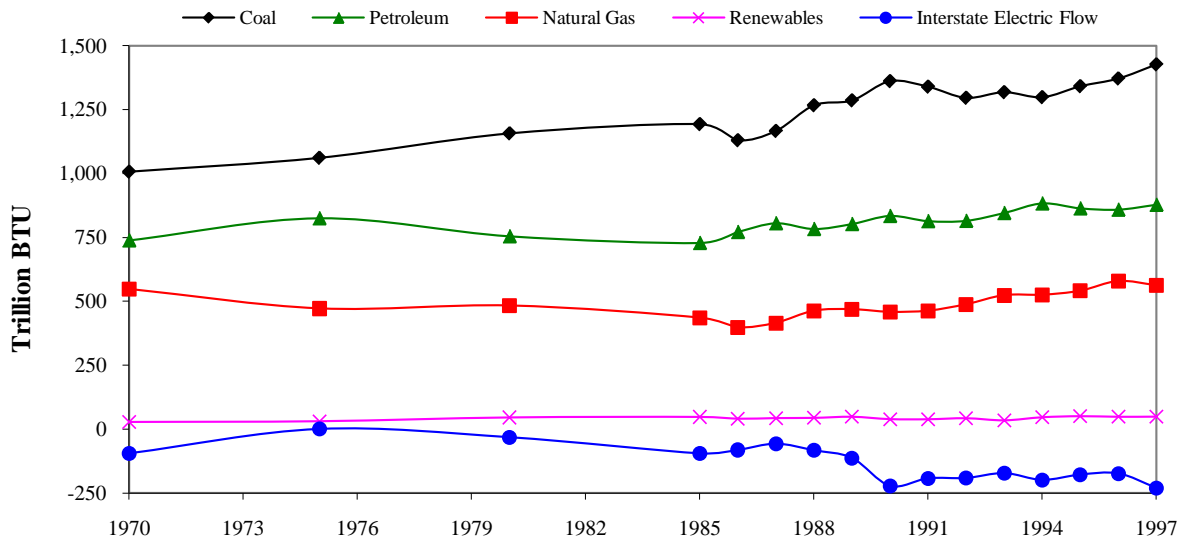
(Trillion BTU and Percent of Total)

Indiana's three primary fuels are coal, natural gas, and petroleum. Since 1985, coal has represented nearly 50 percent of Indiana's energy consumption. 1997 coal consumption increased 4.0 percent from 1996 while petroleum use increased 2.2 percent. Natural gas use decreased 2.8 percent. Overall resource consumption increased 0.02 percent from 1996 to 1997 after a 2.6 percent increase in 1996.

1997



1970-1997



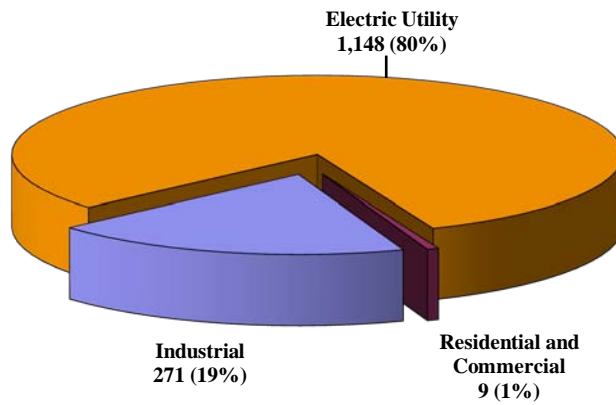
Renewable resource consumption is the sum of biomass, hydroelectric, and other energy sources that may include photovoltaic, solar thermal, wind, and geothermal energy.
 Interstate electric flow is the resource energy used in Indiana to produce the electricity exported for use in other states. This value is subtracted from the sum of all the resources used in Indiana.
 Source: EIA, <http://www.eia.doe.gov>

Indiana Coal Consumption by Economic Sector

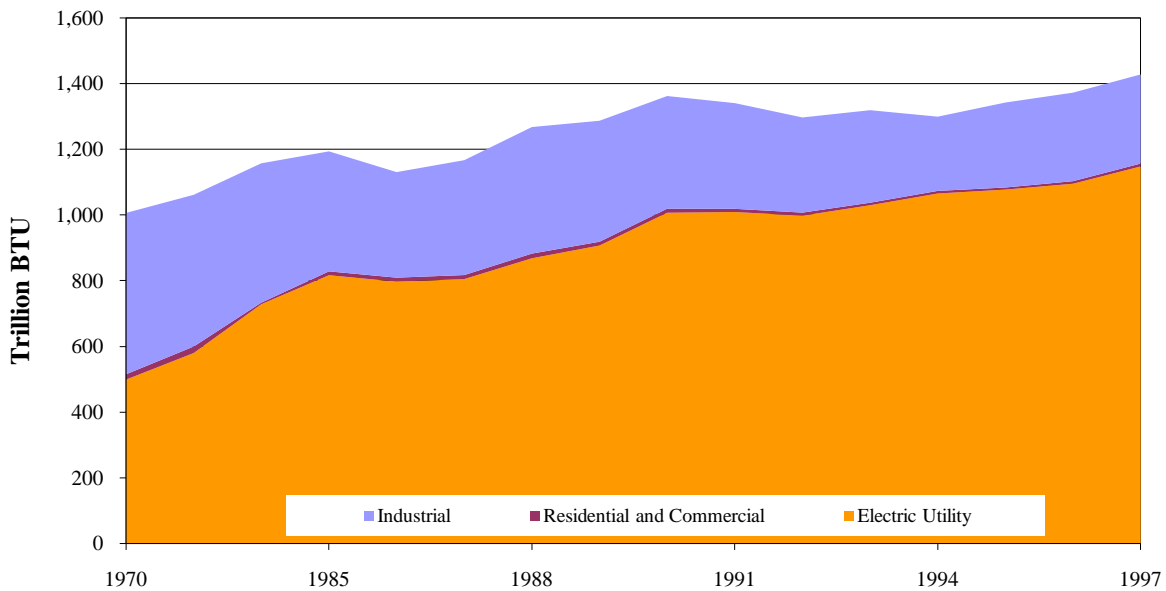
(Trillion BTU and Percent of Total)

The primary use of the coal produced in Indiana is electricity generation. Approximately 86 percent of the 1997 coal production was used in Indiana. Electric generation consumed over 88 percent of that amount. Coal use in Indiana increased 4 percent from 1996 to 1997, primarily due to increases in coal consumption at electric utilities.

1997



1970-1997



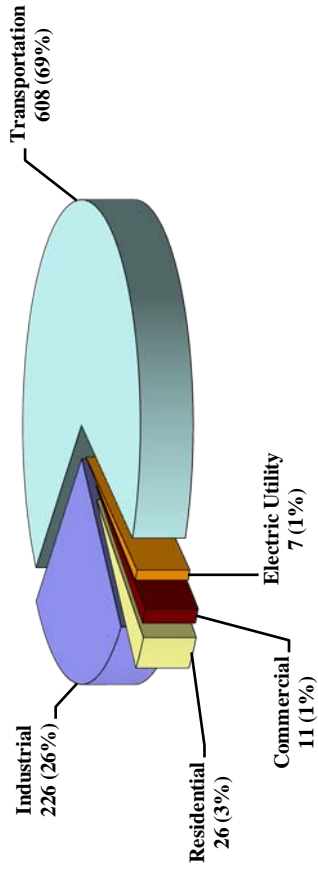
Source: EIA, <http://eia.doe.gov>

Indiana Petroleum Consumption by Economic Sector

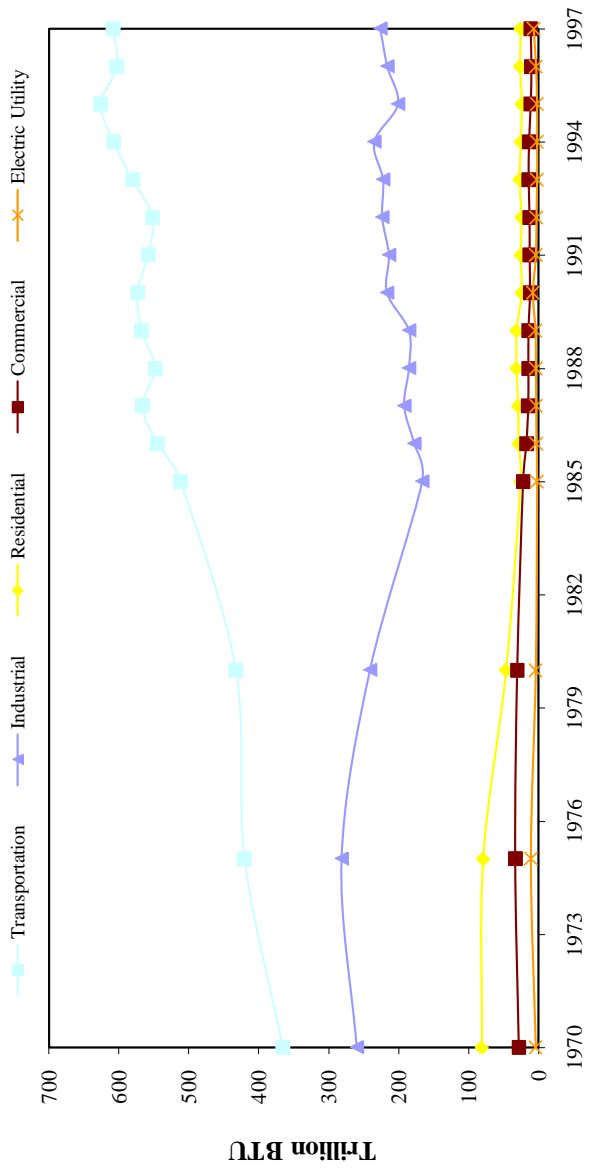
(Trillion BTU and Percent of Total)

The transportation sector is Indiana's primary consumer of petroleum. In 1997, petroleum use rose 2.2 percent due to increased consumption in all sectors except the residential in which consumption of petroleum decreased 2.7 percent.

1997



1970-1997

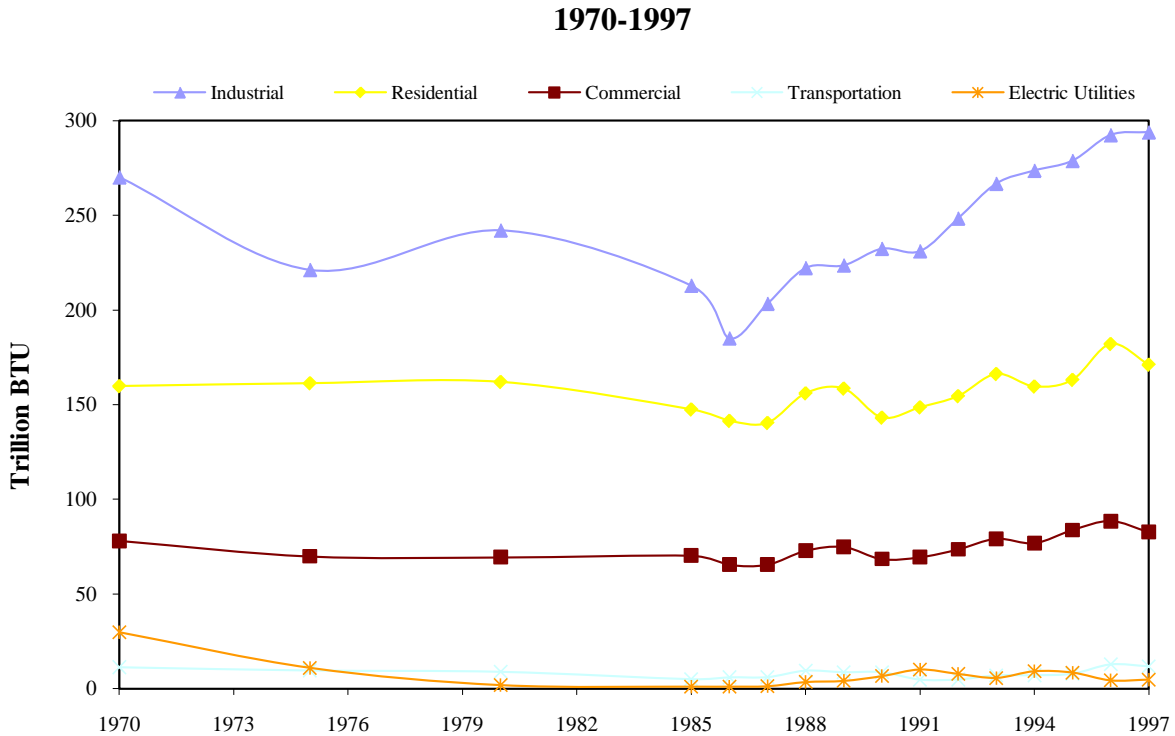
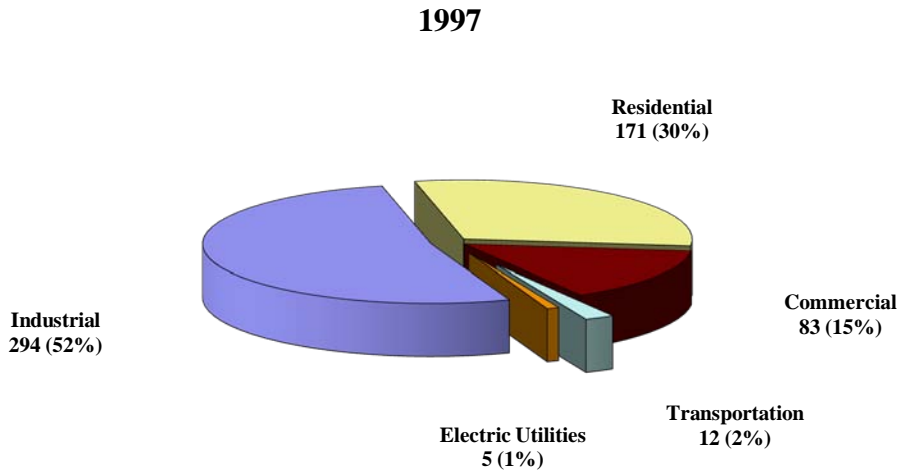


Source: EIA, <http://www.eia.doe.gov>

Indiana Natural Gas Consumption by Economic Sector

(Trillion BTU and Percent of Total)

Natural gas use in Indiana decreased 2.7 percent from 1996 to 1997. However, natural gas use has risen over 35 percent since 1987.



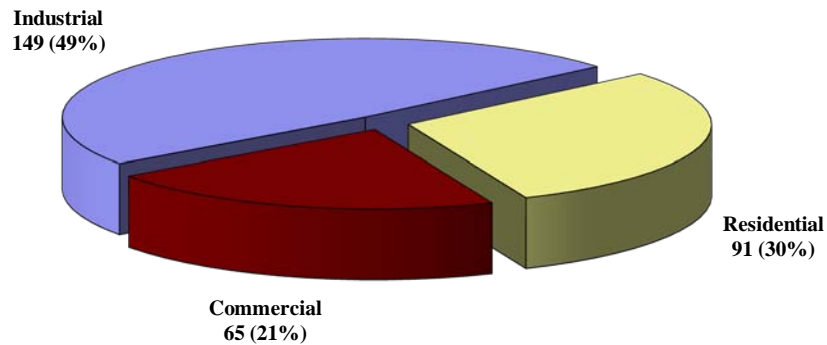
Source: EIA, <http://www.eia.doe.gov>

Indiana Electric Consumption by Economic Sector

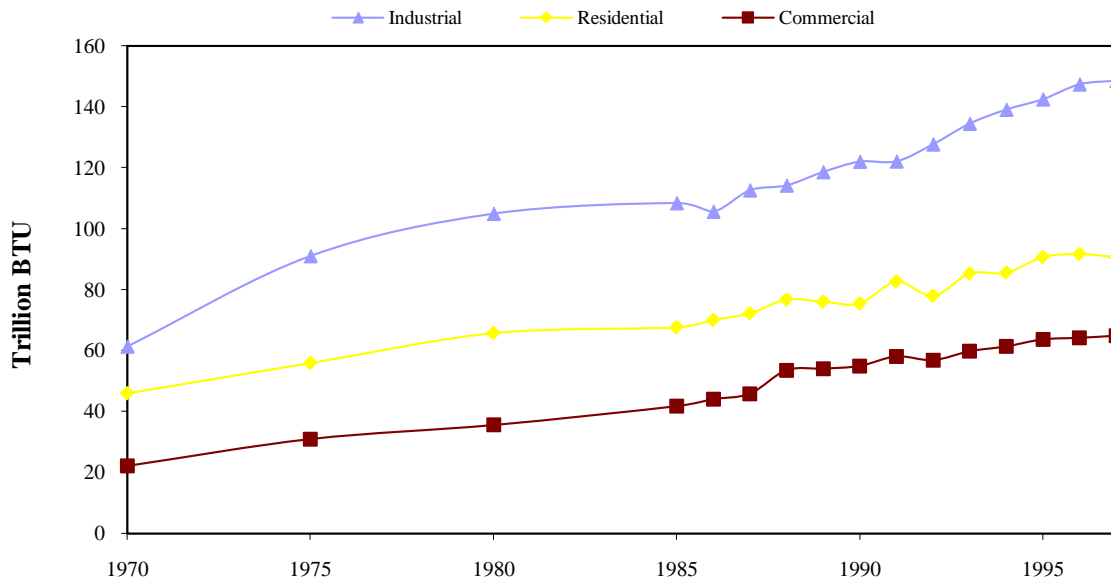
(Trillion BTU and Percent of Total)

The industrial sector is Indiana's primary consumer of electricity. In 1997, electric consumption rose 0.9 trillion BTU or 0.3 percent from 1996. The commercial and industrial sectors use of electricity increased by 1.1 percent and 0.8 percent respectively while residential consumption fell 1.1 percent from 1996 to 1997.

1997



1970-1997



Transportation sector not shown because values are zero or too low to measure.

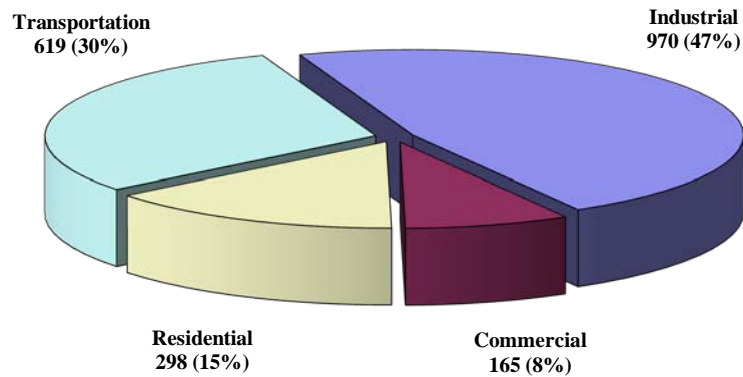
Source: EIA, <http://eia.doe.gov>

Indiana Energy Consumption by Economic Sector

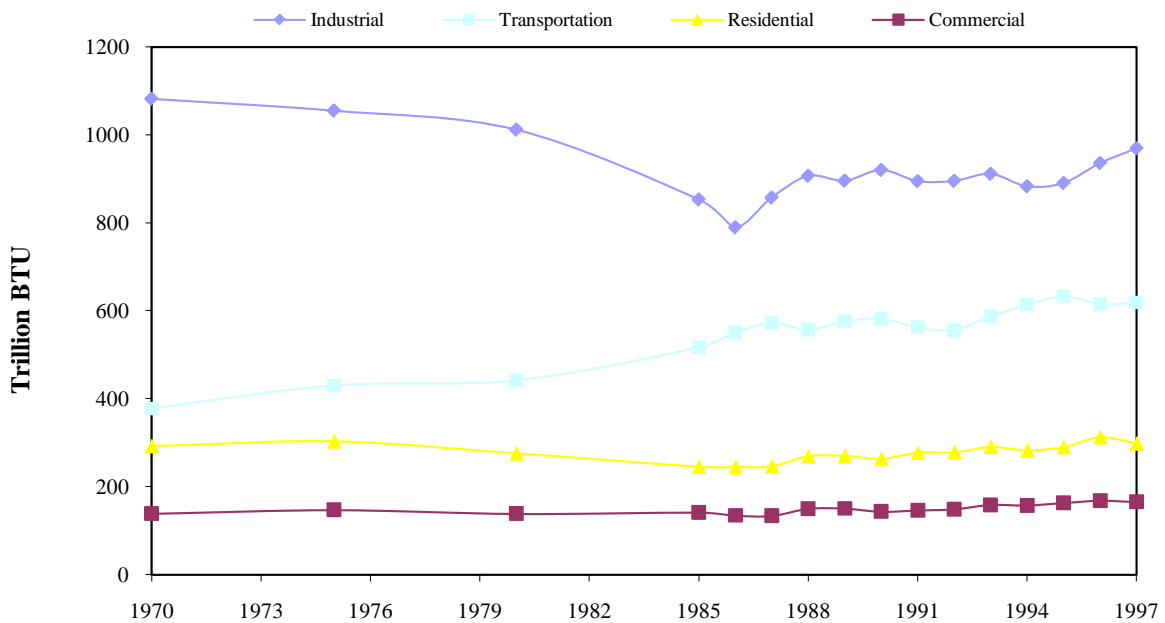
(Trillion BTU and Percent of Total)

The industrial sector has historically been Indiana's primary energy consumer. Through the 1970s, industry accounted for over half of Indiana's energy consumption. It still accounts for over 45 percent. Industrial energy consumption rose 3.6 percent between 1996 and 1997. Transportation is the next highest energy-consuming economic sector whose consumption rose 0.5 percent between 1996 and 1997. Residential and commercial sector energy consumption fell 4.6 percent and 1.8 percent respectively between 1996 and 1997.

1997



1970-1997



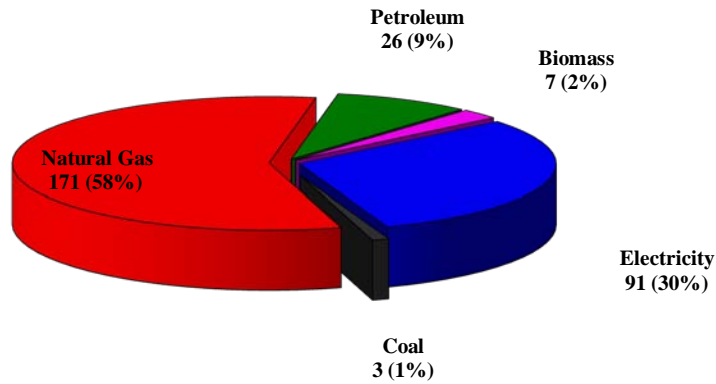
Source: EIA, <http://www.eia.doe.gov>

Indiana Residential Sector Energy Consumption by Fuel Type

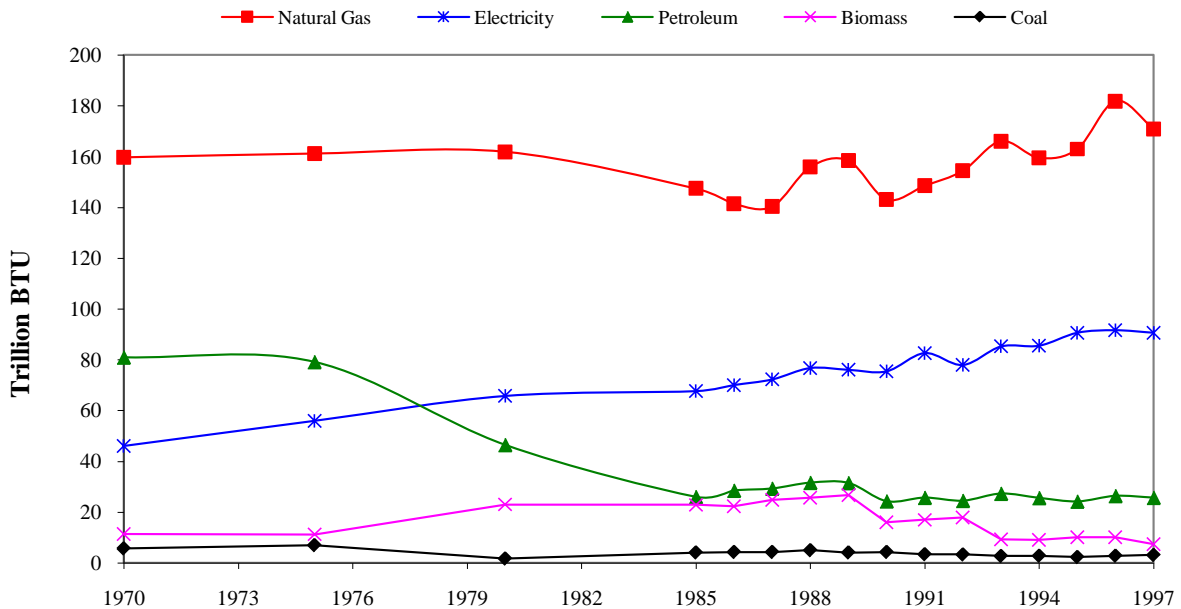
(Trillion BTU and Percent of Total)

Natural gas is the primary energy source for the residential sector. Electricity follows by a factor of approximately one-half. Together they have represented over 75 percent of the residential sector energy consumption since 1980. Natural gas use decreased 6 percent from 1996 to 1997 after an increase of 11.6 percent from 1995 to 1996. Electricity, petroleum, and biomass use decreased 1.1, 2.7, and 27 percent respectively between 1996 and 1997. Coal use increased 7.1 percent.

1997



1970-1997



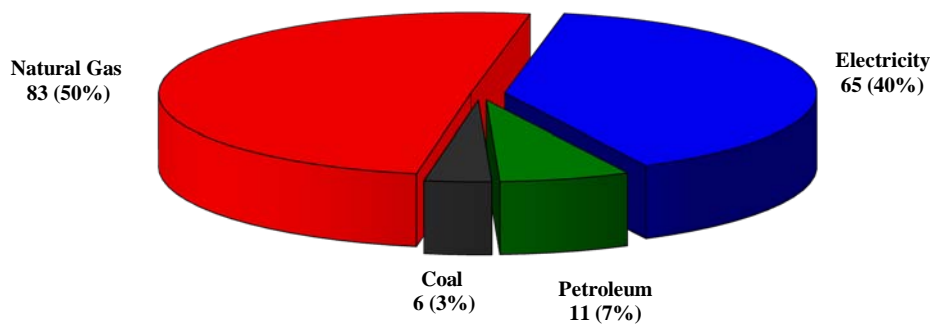
Source: EIA, <http://www.eia.doe.gov>

Indiana Commercial Sector Energy Consumption by Fuel Type

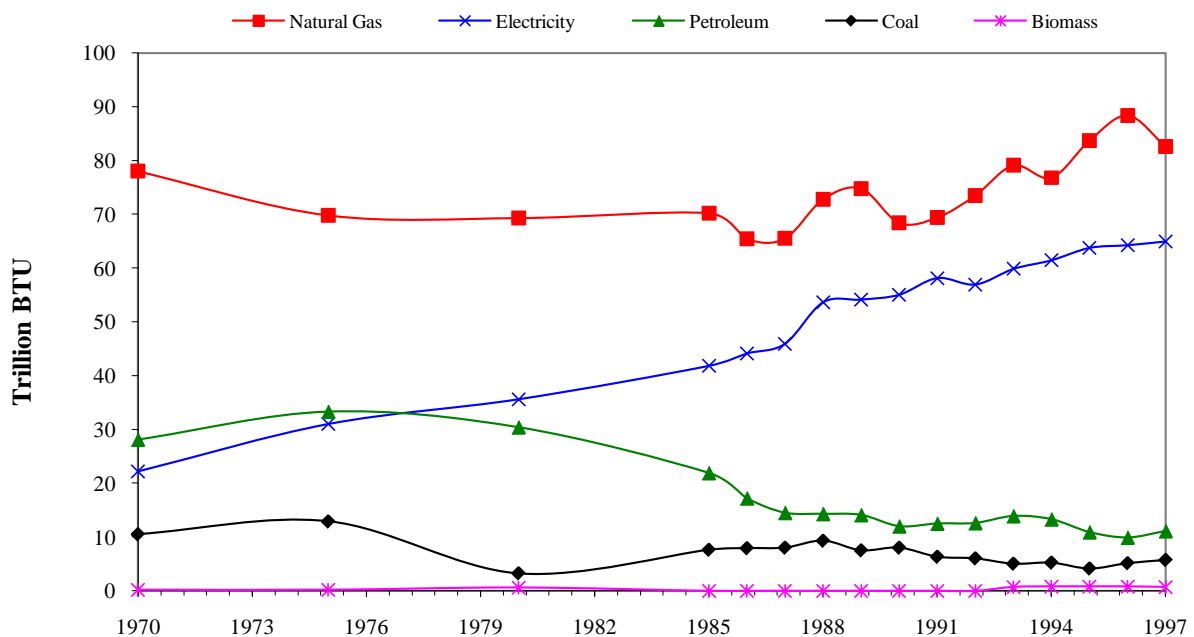
(Trillion BTU and Percent of Total)

Natural gas and electricity are the two primary energy sources for the commercial sector. Together they represent 90 percent of this sectors energy use. 1997 Natural gas consumption decreased 5.8 trillion BTU for a 6.6 percent decrease over 1996. Petroleum, coal, and electricity consumption increased 12, 11.8, and 1.1 percent respectively from 1996 to 1997. Since 1980, commercial energy consumption has increased 19 percent.

1997



1970-1997



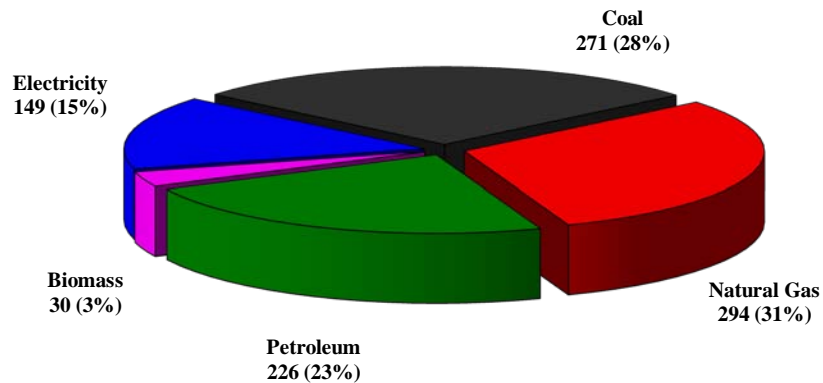
Source EIA, <http://www.eia.doe.gov>

Indiana Industrial Sector Energy Consumption by Fuel Type

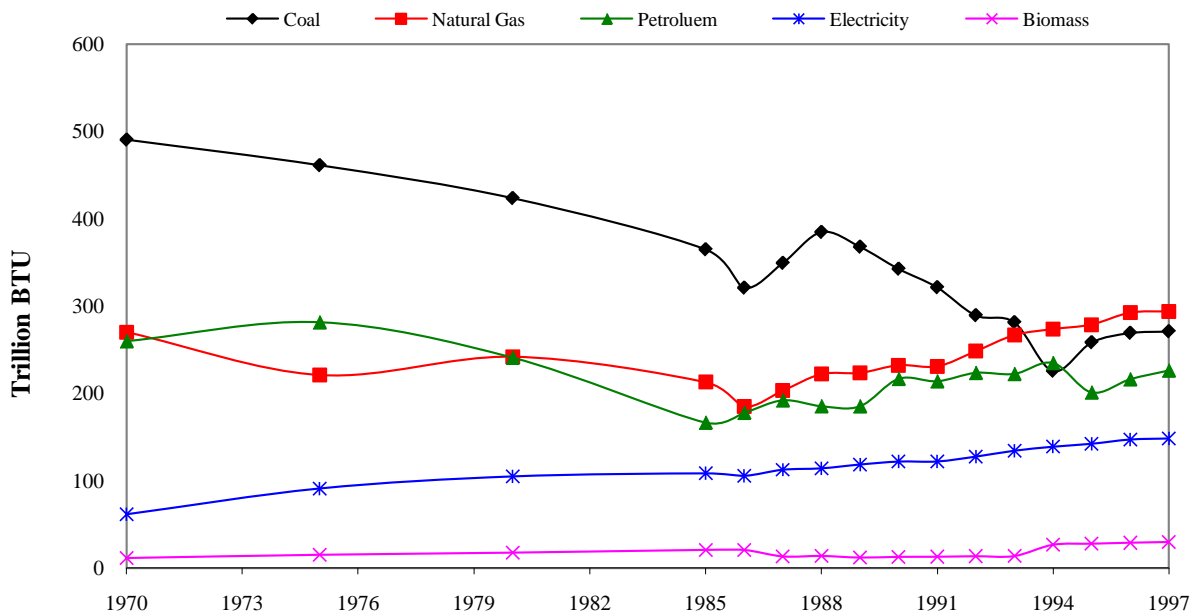
(Trillion BTU and Percent of Total)

Natural gas and coal are the two primary energy sources for Indiana's industrial sector. Since 1970, natural gas and coal have accounted for approximately 60 percent of industrial sector consumption. Between 1996 and 1997, natural gas, coal, and electricity consumption increased 0.5, 0.7, and 0.8 percent respectively. The use of biomass increased 2.7 percent while petroleum use increased 4.6 percent from 1996 to 1997.

1997



1970-1997



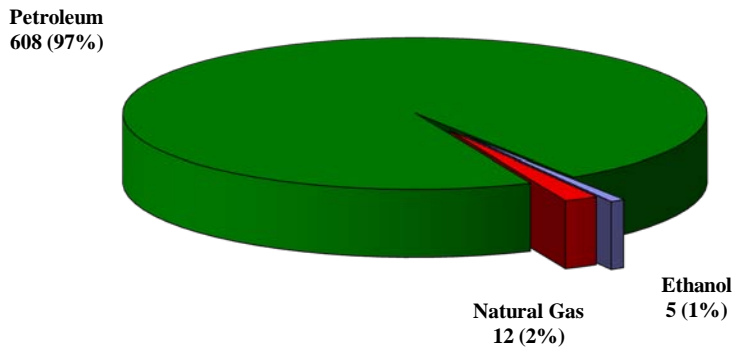
Source: EIA, <http://www.eia.doe.gov>

Indiana Transportation Sector Energy Consumption by Fuel Type

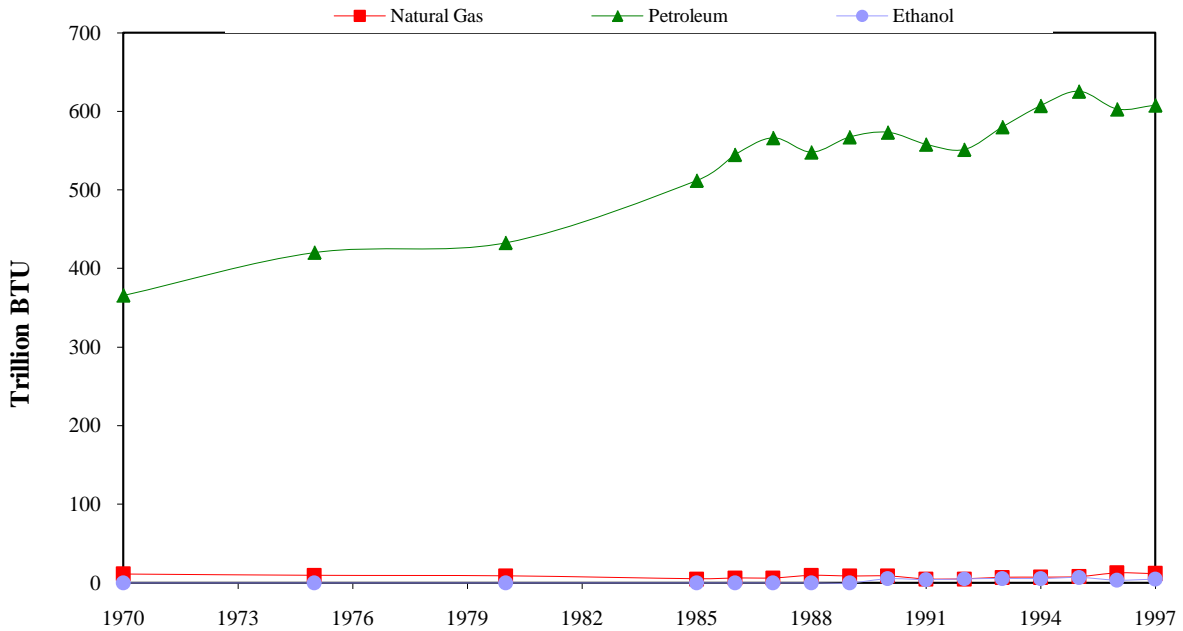
(Trillion BTU and Percent of Total)

Since the 1970s, petroleum has accounted for, on the average, 98 percent of Indiana's transportation sector energy consumption. Natural gas accounts for approximately 2 percent and ethanol accounts for 1 percent. Indiana's petroleum consumption rose 0.8 percent between 1996 and 1997 after a 3.6 percent drop from 1995 to 1996. Ethanol use increased 1.3 trillion BTU, or 36 percent, while natural gas use decreased 1 trillion BTU, or 7.8 percent, during the same time period.

1997



1970-1997



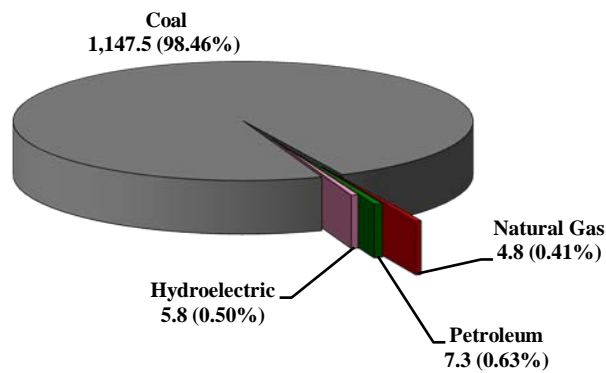
Source: EIA, <http://www.eia.doe.gov>

Indiana Electric Utility Energy Consumption by Fuel Type

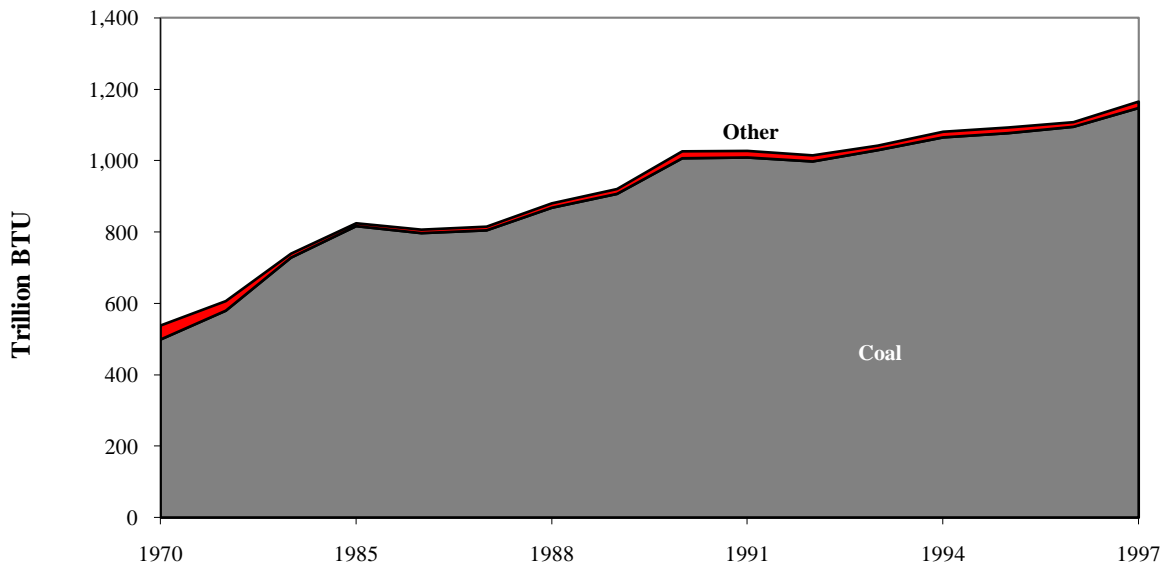
(Trillion BTU and Percent of Total)

Coal has historically been the electric utilities primary source of energy. In 1997, coal consumption increased 4.8 percent. Natural gas consumption also increased by 0.4 trillion BTU or 9.1 percent. Hydroelectric use increased 1.2 trillion BTU or 26 percent and petroleum use increased 3.4 trillion BTU or 87 percent. Overall electric utility consumption increased 5.2 percent from 1996 to 1997.

1997



1970-1997



"Other" in this table represents the sum of natural gas, petroleum and hydroelectric.

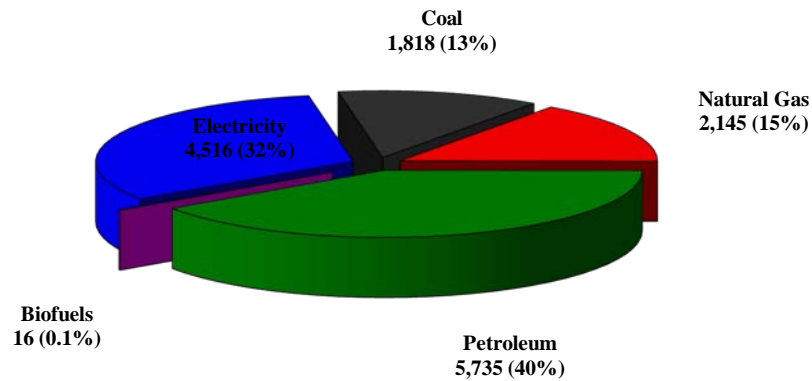
Source: EIA <http://www.eia.doe.gov>

Indiana Energy Expenditures by Fuel Type

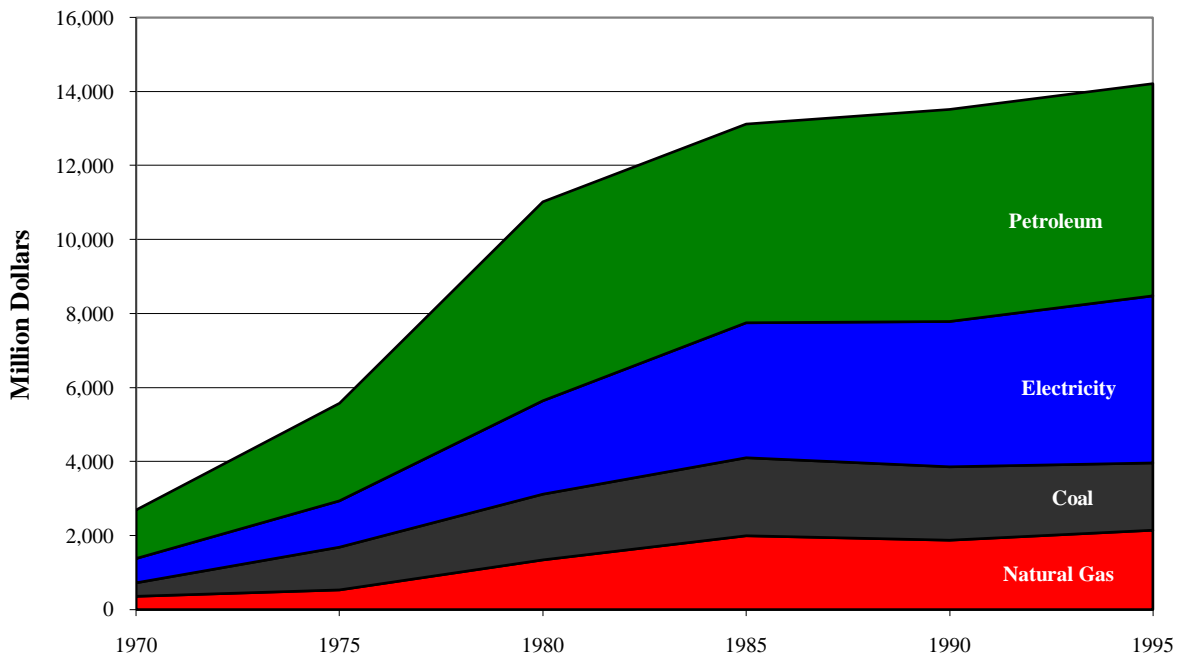
(Million Nominal Dollars and Percent of Total)

In 1995, Indiana's energy expenditures increased 13.4 million or 0.1 percent. Compared to the 524.4 million dollar increase from 1993 to 1994, the 1995 increase was minimal. Expenditures on natural gas decreased 17 percent in 1995. Expenditures on coal, petroleum and electricity increased 4 percent each.

1995



1970-1995



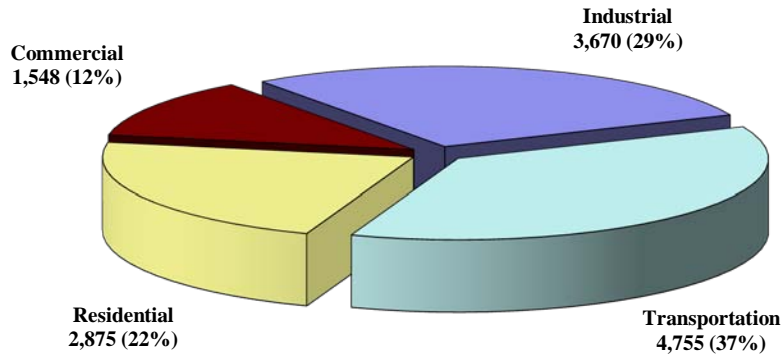
1996-1997 data not yet available.
 Source: EIA, <http://www.eia.doe.gov>

Indiana Energy Expenditures by Economic Sector

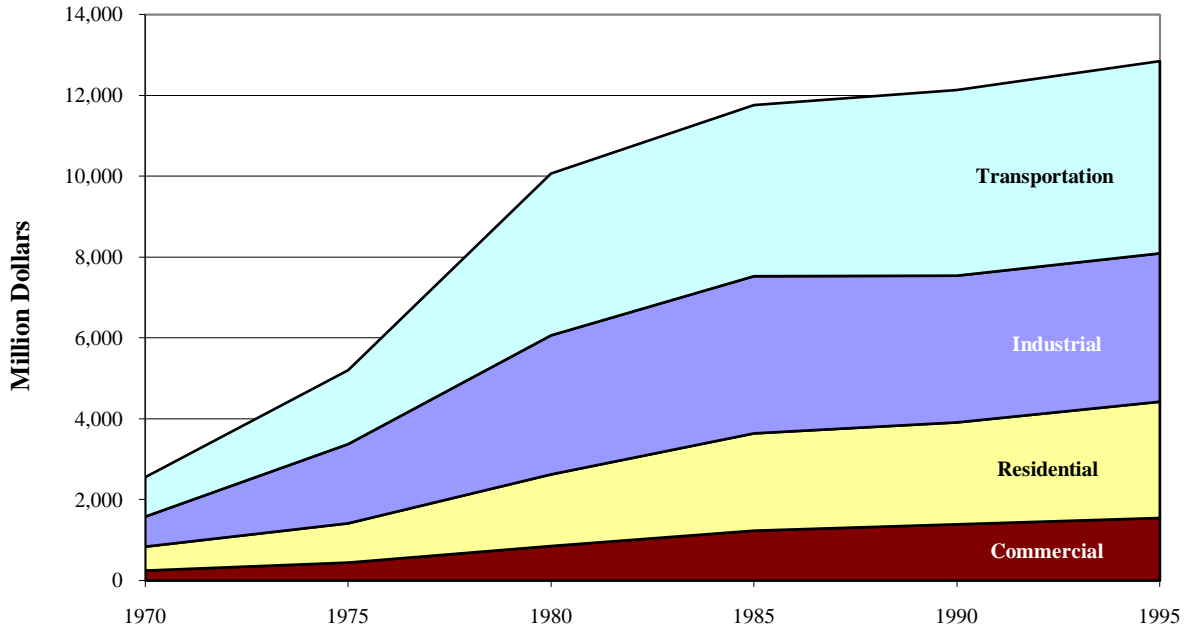
(Million Nominal Dollars and Percent of Total)

In 1995, Indiana's energy expenditures decreased in the industrial, residential, and commercial sectors, 6 percent, 1 percent, and 0.9 percent respectively. A 6.9 percent increase in the transportation sector accounts for the 0.1 percent overall increase in energy expenditures for 1995.

1995



1970-1995



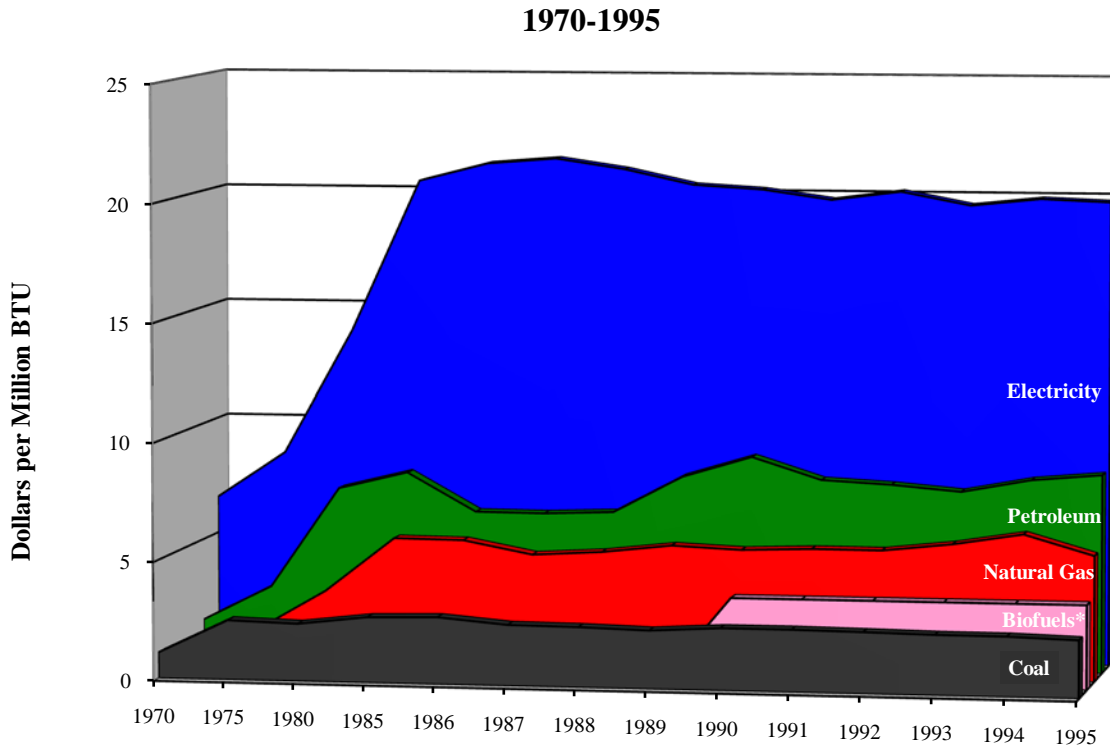
1996-1997 data not yet available

Source: EIA, <http://www.eia.doe.gov>

Indiana Residential Sector Price Estimates by Fuel Type

(Price in Nominal Dollars per Million BTU)

The nominal prices of natural gas, coal, and electricity decreased from 1994 to 1995 by 14 percent, 3.6 percent, and 0.6 percent respectively. Petroleum prices increased 3.1 percent while biofuel prices remained unchanged. In 1995, natural gas accounted for 56 percent of the total energy consumed in the residential sector.



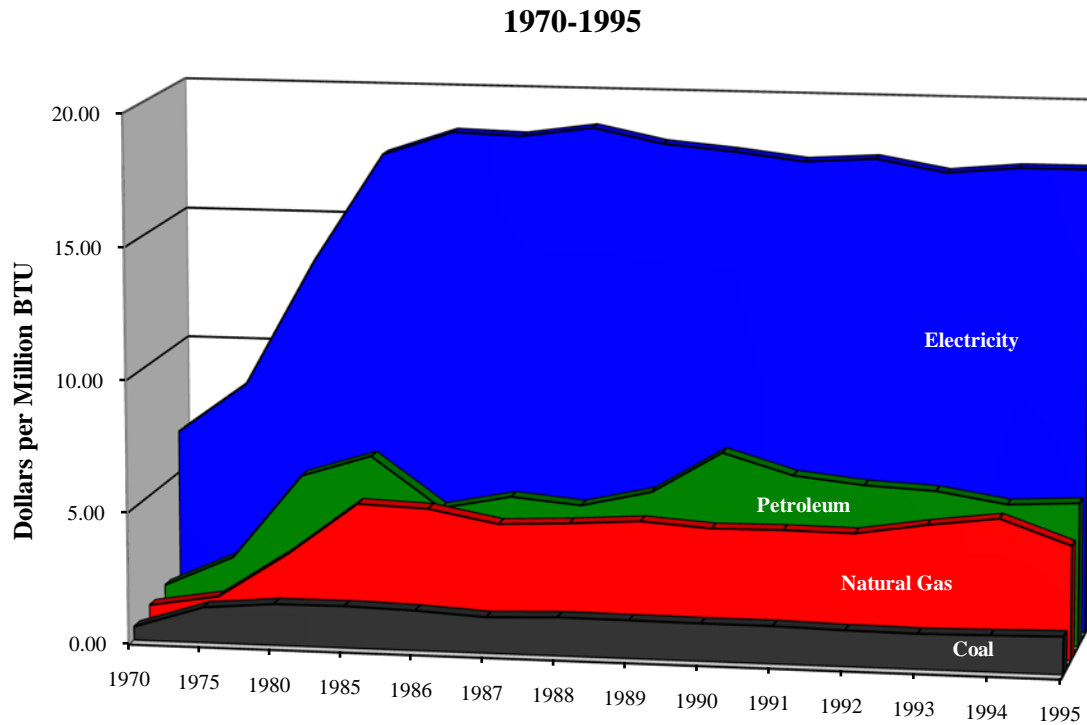
*Biofuels: no data for biofuels before 1990.

Source: EIA <http://www.eia.doe.gov>

Indiana Commercial Sector Price Estimates by Fuel Type

(Price in Nominal Dollars per Million BTU)

The price per million BTU of coal, petroleum, and electricity increased in 1995 by 3.6 percent, 2.6 percent, and less than 0.1 percent respectively. The price of natural gas fell from 5.26 dollars to 4.33 dollars, a 17.7 percent decrease. In 1995, natural gas accounted for 51 percent of the energy consumed in the commercial sector.



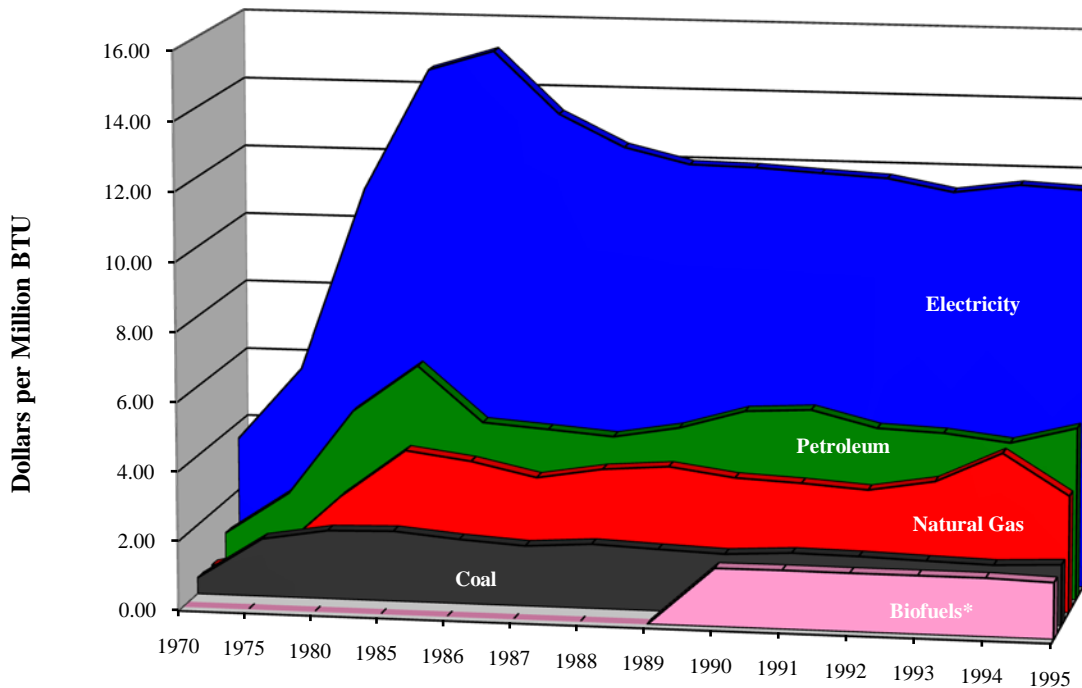
Source: EIA <http://www.eia.doe.gov>

Indiana Industrial Sector Price Estimates by Fuel Type

(Prices in Nominal Dollars per Million BTU)

In 1995, the prices of petroleum, coal, and electricity increased 11 percent, 4.8 percent, and 0.9 percent respectively. Natural gas prices fell from 4.54 dollars to 3.37 dollars for a 26 percent decrease. The price of biofuels decreased 3.6 percent. The industrial sector consumed 45 percent of the total energy used in 1995. Natural gas accounted for 31 percent of that amount.

1970-1995



*Biofuels: no data exists for biofuels before 1990

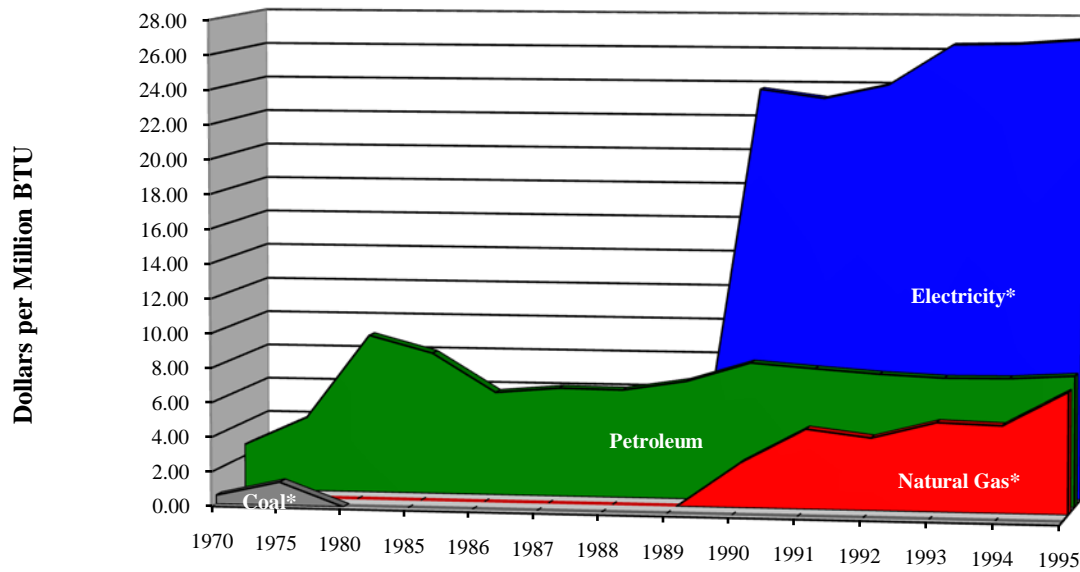
Source: EIA <http://www.eia.doe.gov>

Indiana Transportation Sector Price Estimates by Fuel Type

(Prices in Nominal Dollars per Million BTU)

Since 1975, petroleum has accounted for over 98 percent of the transportation sector energy consumption. The price of petroleum rose 2.8 percent from 1994 to 1995 while the price of natural gas rose over 40 percent. Natural gas accounts for about 1 percent of the total consumption in this sector.

1970-1995



*No data for coal after 1975 and no data for natural gas and electricity before 1990.

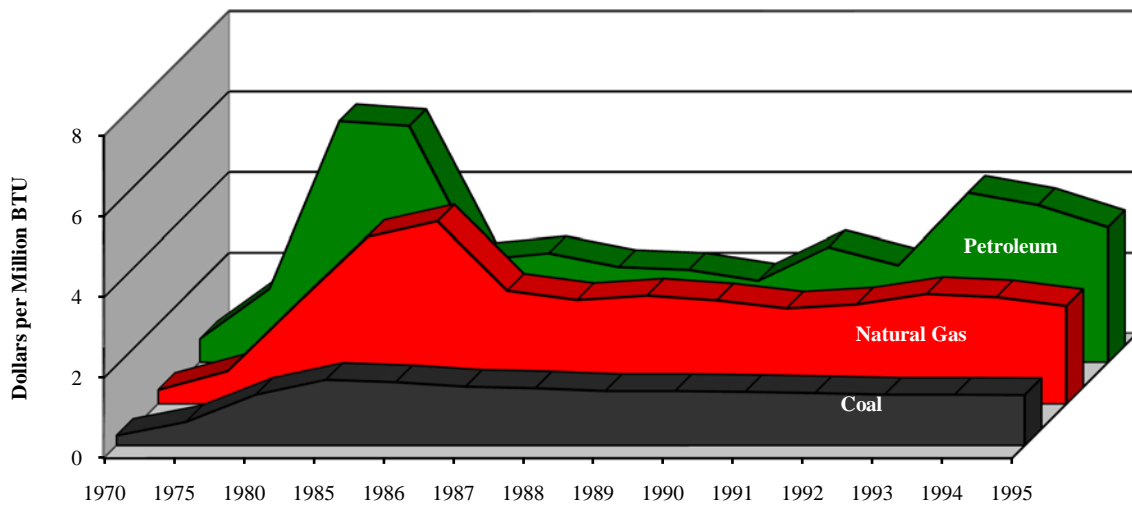
Source: EIA <http://www.eia.doe.gov>

Indiana Electric Utility Price Estimates by Fuel Type

(Prices in Nominal Dollars per Million BTU)

Since 1980, coal has accounted for nearly 99 percent of the electric utilities energy consumption. Electric utilities are Indiana's primary consumers of coal and in 1995 they accounted for over 80 percent of the total coal consumption. The price of coal fell 0.8 percent from 1994 to 1995 while the prices of natural gas and petroleum fell 8.3 percent and 14 percent respectively.

1970-1995

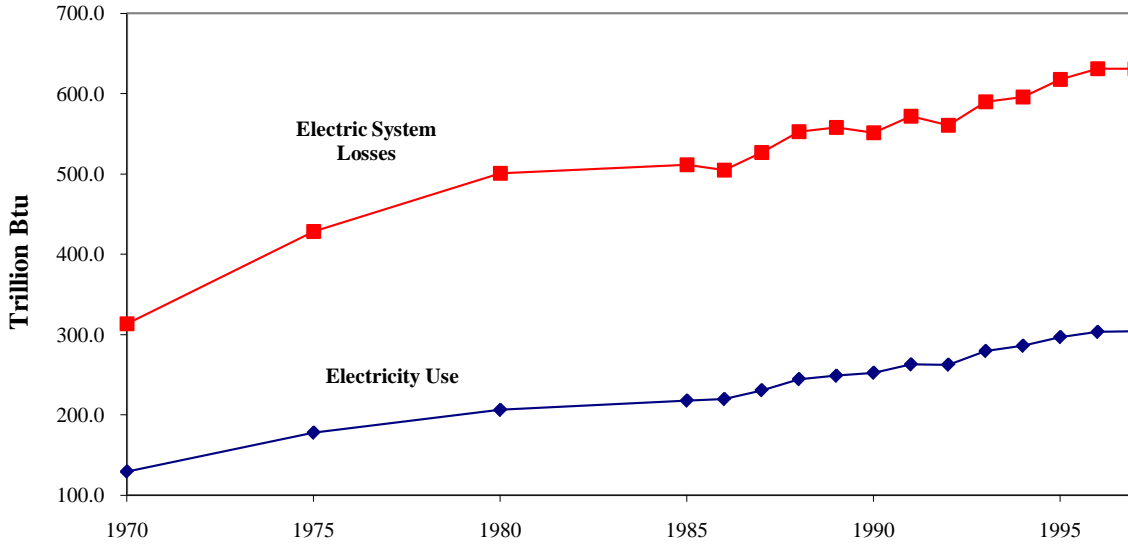


Source EIA <http://www.eia.gov>

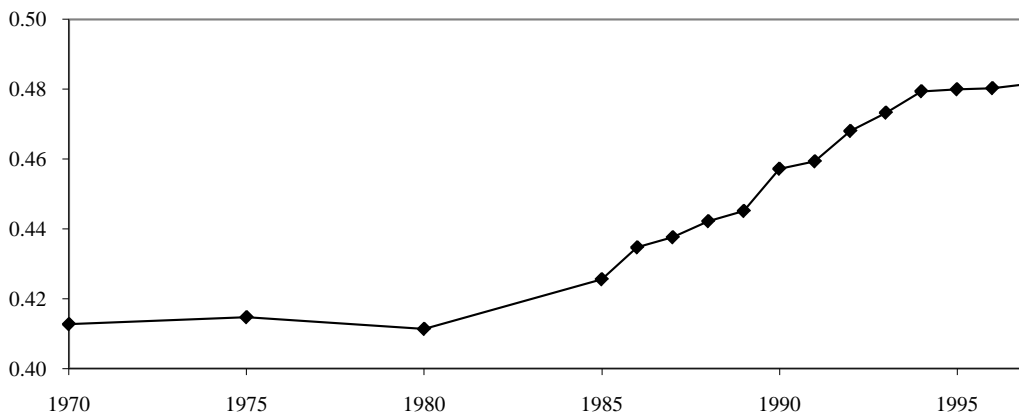
Indiana Electricity Use and System Losses (Trillion BTU)

The three major consumers of electric energy are the residential, commercial, and industrial sectors. Electricity use increased 0.3 percent between 1996 and 1997. System losses are those incurred in the generation and transmission of electric power. The ratio of electricity use and system losses has shown an increase from 0.41 to 0.48 between 1970 and 1997.

1970-1997



Ratio Use/ Losses



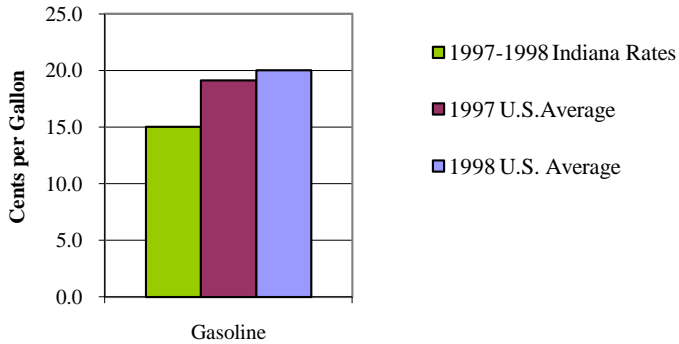
Source: EIA, <http://www.eia.doe.gov>

Indiana Motor Fuel Tax Rates and Consumption

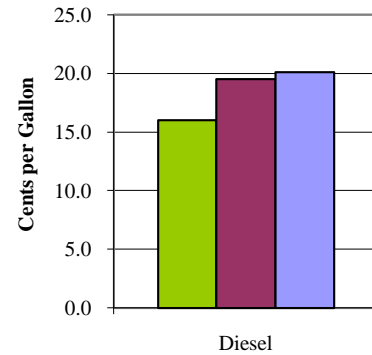
(Cents per Gallon and Thousand Gallons)

Indiana motor fuel tax rates did not change between 1997 and 1998 while the U.S. national average increased. The U.S. average for gasoline tax increased 4.7 percent and the diesel tax rates increased 3.1 percent. The Indiana tax rate for gasoline in 1998 was 5 cents lower than the national average and the Indiana tax rate for diesel fuel was 4.1 cents lower than the national average.

Gasoline Tax Rates

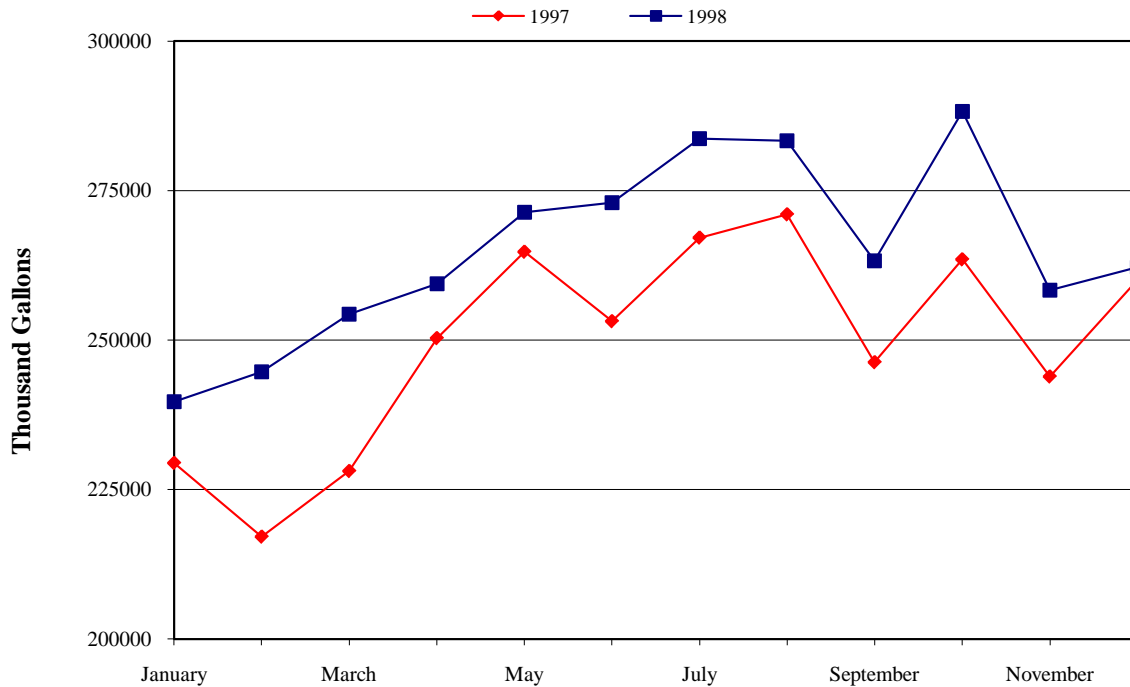


Diesel Tax Rates



The monthly gasoline consumption in 1998 increased every month compared to the same month of the prior year. There was a 6.2 percent increase in gasoline consumption in 1998.

Indiana Monthly Gasoline Consumption, 1997-1998



Source: Federal Highway Administration