

2009

South Carolina Energy Statistical Profile



South Carolina Energy Office
SC Budget and Control Board



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<http://www.energy.sc.gov/index.aspx?m=1&t=6>**

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Forward

During the past year, more emphasis has been placed on energy than any other time in history. Policymakers and citizens alike have begun to realize energy's critical role in our daily lives; energy demand and supply can be a driver for economic, environmental and energy security development.

South Carolina Statistical Profile is the South Carolina Energy Office's (SCEO) primary report of historical energy statistics and trends. This report is designed not only to serve as a basis to analyze South Carolina-specific energy trends and activities, but also as a valuable tool for resource planning.

The data in this document are collected and reported by energy source and include information on energy supply, fuel prices, and total energy expenditures. Where applicable, this information is compared to the United States as a whole.

All efforts have been made to ensure that the information provided in this report is compiled from the best available sources in the public domain. A significant portion of the data in this profile comes from the U.S. Department of Energy's Energy Information Administration. Other data sources include the South Carolina Department of Revenue and the Federal Highway Administration. The data presented in this report span various years in order to provide the most comprehensive and up-to-date information available. These data are also updated as new data are released and can be found as a digital copy at www.energy.sc.gov.

South Carolina benefits from the 15th lowest energy prices in the country. However, even South Carolina has faced record-high energy costs, coupled with record unemployment rates and rising environmental concerns. The SCEO, a part of the South Carolina Budget and Control Board, provides a broad range of resources designed to help citizens, businesses and public entities save energy and money. For information, see www.energy.sc.gov.

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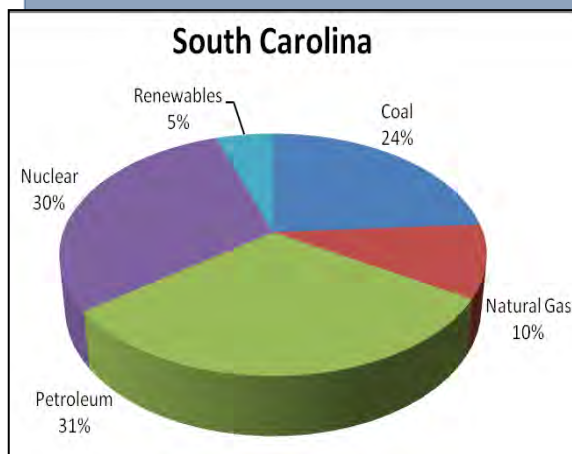
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South Carolina Energy Highlights

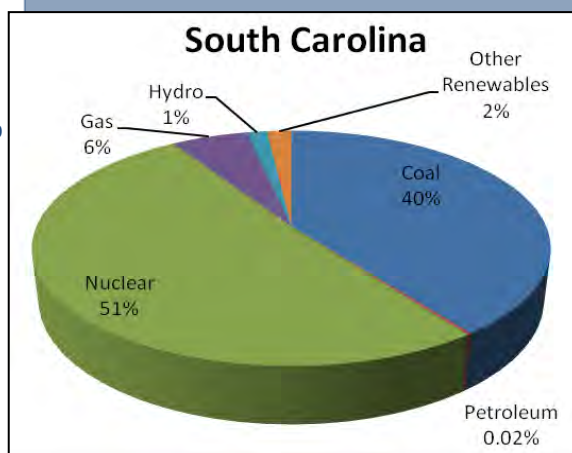
Energy Consumption by Source: (EIA, 2007)

Petroleum – 31%
Nuclear – 30%
Coal – 24%
Natural Gas – 10%
Renewables – 5%

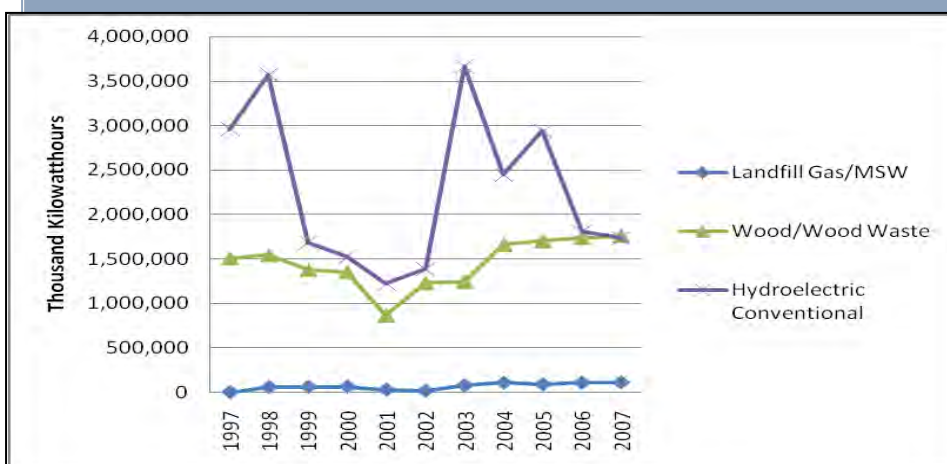


Electricity Generation by Energy Source: (EIA, 2007)

Nuclear – 51%
Coal – 40%
Natural Gas – 6%
Renewable – 3%
Petroleum – 0.02%



Renewable Energy Generation: (EIA, 1997-2007)



State Rankings*

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*Note: Ranked among all 50 states and the District of Columbia; 1 is highest. All rankings are for 2007 unless otherwise noted. Source: EIA

S.C. Rankings*

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*Note: Ranked among all 50 states and the District of Columbia; 1 is highest. All rankings are for 2007 unless otherwise noted. Source: EIA

South Carolina Energy Highlights

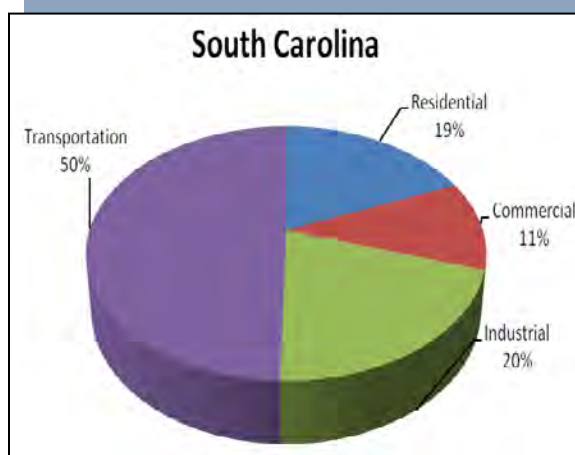
Energy Expenditures by Economic Sector: (EIA, 2007)

Transportation – 50%

Industrial – 20%

Residential – 19%

Commercial – 11%



Primary Energy Expenditures by Source: (EIA, 2007)

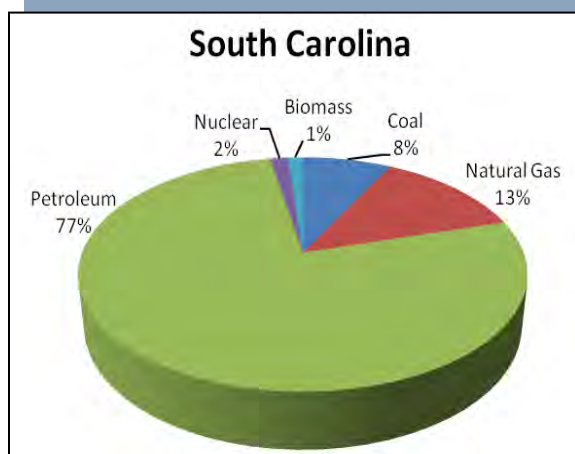
Petroleum – 77%

Natural Gas – 13%

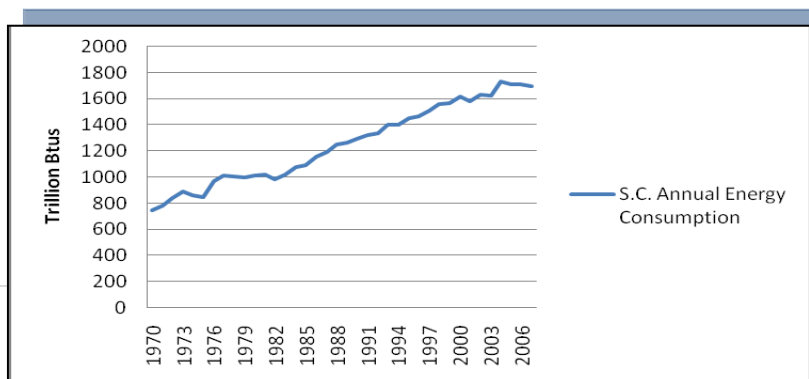
Coal – 8%

Nuclear – 2%

Biomass – 1%



South Carolina Energy Consumption: (EIA, 1970-2007)



Section 1: Total Energy

Total Energy Consumption by Type of Fuel

South Carolina's total energy consumption has increased approximately 126 percent from 1970 to 2007. South Carolina ranks 22nd highest in total energy consumption, having consumed 1,692.3 trillion Btus in 2007. On a per capita basis, however, South Carolina ranks 17th in total consumption—consuming 384 million BTUs per capita. South Carolina ranks 13th for energy consumption per real dollar of the state's gross domestic product (GDP). Of South Carolina's total energy consumption in 2007, 31.1 percent was derived from petroleum products; 30.1 percent from nuclear; 23.9 percent from coal; 9.7 percent from natural gas; and 5.2 percent from renewables.

South Carolina 1970-2007

(Trillion Btu and Percent of Net Energy Use)

Year	Coal		Natural Gas		Petroleum		Nuclear		Renewables ²		Net Energy Use	Total Resource ¹
1970	140.1	20.9%	164.3	24.5%	302.2	45.0%	0.1	0.0%	65.1	9.7%	671.8	747.6
1975	140.2	15.4%	125.9	13.9%	340.5	37.5%	214.3	23.6%	87.8	9.7%	908.6	844.6
1980	245.8	24.1%	146.8	14.4%	365.8	35.9%	189.8	18.6%	71.2	7.0%	1,019.4	1,013.4
1985	262.7	23.4%	100.1	8.9%	357.5	31.8%	338.1	30.1%	66.6	5.9%	1,124.9	1,089.8
1990	289.2	20.8%	134.1	9.7%	404.3	29.1%	453.8	32.7%	106	7.6%	1,388.1	1,290.1
1995	314.5	20.4%	156.0	10.1%	427.7	27.8%	516.7	33.6%	125	8.1%	1,539.5	1,446.2
2000	432.2	25.5%	165.0	9.7%	475.1	28.0%	530.7	31.3%	92.6	5.5%	1,695.7	1,614.5
2001	414.5	24.9%	147.2	8.8%	513.5	30.8%	521.0	31.3%	70.6	4.2%	1,666.8	1,581.9
2002	404.5	23.3%	184.8	10.6%	511.7	29.4%	556.7	32.0%	80.6	4.6%	1,738.3	1,630.8
2003	419.7	24.4%	146.6	8.5%	527.0	30.6%	525.4	30.5%	104	6.0%	1,722.9	1,617.9
2004	433.9	23.6%	163.8	8.9%	612.3	33.3%	533.9	29.0%	97.5	5.3%	1,841.2	1,728.8
2005	431.1	23.2%	178.5	9.6%	588.3	31.7%	554.5	29.8%	106	5.7%	1,858.7	1,707.7
2006	432.2	23.5%	181.4	9.9%	594.0	32.3%	530.0	28.9%	99	5.4%	1,836.7	1,707.7
2007	444.0	23.9%	180.3	9.7%	576.5	31.1%	558.0	30.1%	96.4	5.2%	1,855.1	1,692.3

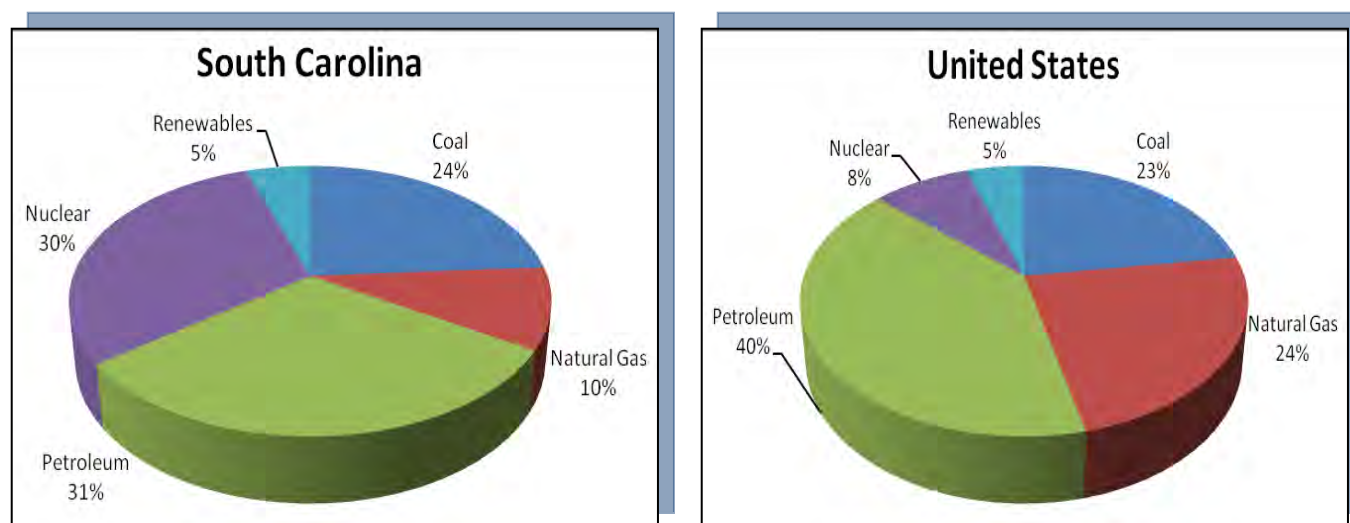
¹Includes energy resources (and losses) accountable to electricity generation, transmission and distribution

²Renewables includes solar, wind, wood, biogas, bio solid waste and hydroelectric

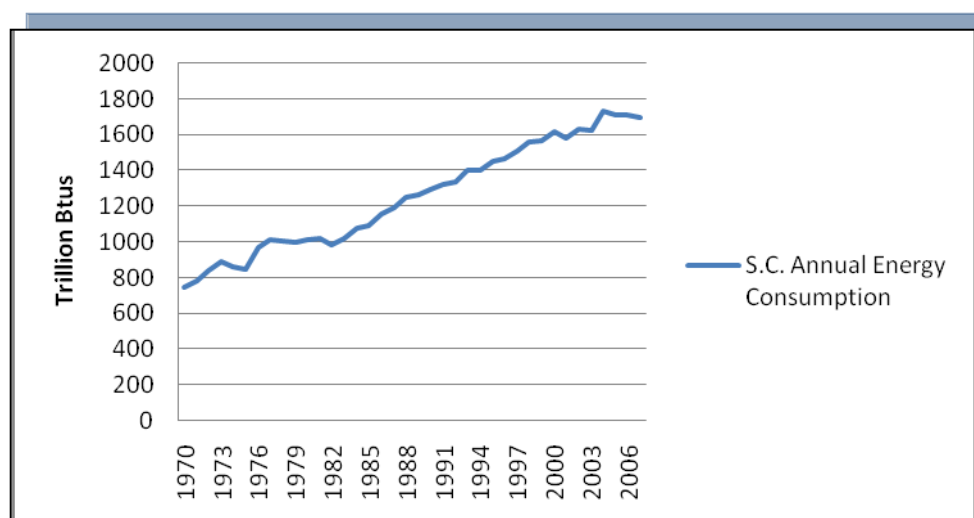
Source: Energy Information Administration, *State Energy Data*.

http://www.eia.doe.gov/emeu/states/hf.jsp?incfile=sep_use/total/use_tot_sc.html&mstate=SOUTH%20CAROLINA

South Carolina and U.S. Total Energy Consumption by Type of Fuel, 2007



South Carolina Annual Total Energy Consumption, 1970-2007



Source: Energy Information Administration, *State Energy Data*.
http://www.eia.doe.gov/emeu/states/hf.jsp?incfile=sep_use/total/use_tot_sc.html&mstate=SOUTH%20CAROLINA

Total Energy Data

Energy Consumption by Economic Sector

South Carolina's economic sectors' energy consumption greatly mirrors those of the U.S. as a whole. For example, South Carolina's commercial sector represented approximately 16 percent of total energy consumption, ranking 25th for energy consumption in the commercial sector in 2007. Historically, these proportions have not changed significantly. The only noteworthy change in consumption patterns are an increase in the share of the commercial sector energy consumption, with an equivalent decrease in industrial consumption.

South Carolina 1970-2007

(Trillion Btu and Percent of Total)

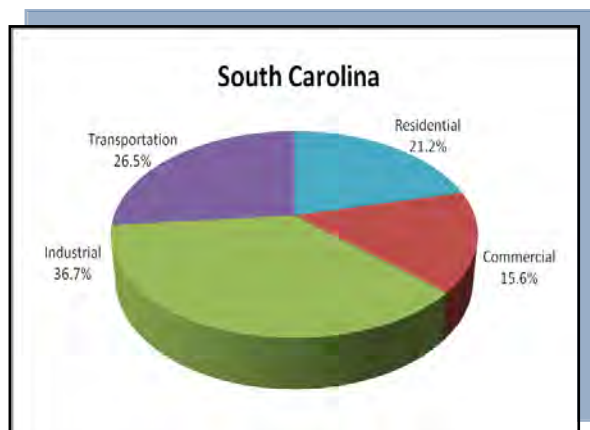
Year	Residential		Commercial		Industrial		Transportation		Total
1970	150.4	20.1%	73.7	9.9%	325.0	43.5%	198.6	26.6%	747.6
1975	165.7	19.6%	110.9	13.1%	338.6	40.1%	229.4	27.2%	844.6
1980	200.2	19.8%	134.4	13.3%	430.7	42.5%	248.1	24.5%	1,013.4
1985	218.1	20.0%	136.1	12.5%	470.0	43.1%	265.5	24.4%	1,089.8
1990	247.5	19.2%	169.1	13.1%	564.9	43.8%	308.6	23.9%	1,290.1
1995	288.0	19.9%	197.0	13.6%	642.3	44.4%	318.9	22.1%	1,446.2
2000	333.6	20.7%	238.8	14.8%	662.7	41.0%	379.3	23.5%	1,614.5
2001	318.2	20.1%	233.2	14.7%	647.8	41.0%	382.7	24.2%	1,581.9
2002	338.5	20.8%	237.8	14.6%	664.0	40.7%	390.5	23.9%	1,630.8
2003	335.2	20.7%	241.1	14.9%	650.1	40.2%	391.6	24.2%	1,617.9
2004	352.9	20.4%	249.8	14.4%	677.1	39.2%	449.0	26.0%	1,728.9
2005	359.0	21.0%	253.7	14.9%	666.7	39.0%	428.3	25.1%	1,707.6
2006	349.1	20.4%	256.8	15.0%	653.8	38.3%	448.0	26.2%	1,708.5
2007	359.0	21.2%	263.5	15.6%	620.9	36.7%	448.9	26.5%	1,692.3

Source: Energy Information Administration, State Energy Data

http://www.eia.doe.gov/emeu/states/state.html?q_state_a=sc&q_state=SOUTH%20CAROLINA

US Data: <http://www.eia.doe.gov/emeu/states/seds.html>

2007



Total Energy Data

Residential Energy Consumption by Fuel Type

South Carolina's total residential energy consumption increased approximately 142 percent from 1970 to 2007. The greatest percentage of South Carolina's residential energy use is derived from electricity (71.7 percent) followed by natural gas (18.6 percent), petroleum (4.9 percent), and renewables (4.9 percent). The most significant change in the state's residential energy consumption by fuel type has occurred with an increase in electricity consumption, as consumption of petroleum has declined.

South Carolina 1970-2007

(Trillion Btu and Percent of Net Energy Use)

Year	Coal		Natural Gas		Petroleum		Renewables ²		Electricity		Net Energy Use	Total ¹
1970	3.3	3.7%	19.5	21.7%	30.7	34.2%	9.8	10.9%	25.1	28.0%	89.7	150.4
1975	1.7	2.0%	18.6	21.9%	19.8	23.3%	9.8	11.5%	33.6	39.5%	85.0	165.7
1980	1.0	1.0%	19.5	20.2%	20.4	21.1%	11.7	12.1%	42.9	44.4%	96.7	200.2
1985	0.4	0.4%	16.9	16.4%	19.7	19.1%	14.6	14.2%	50.0	48.6%	102.9	218.1
1990	*	NA	18.9	18.3%	14.9	14.4%	6.0	5.8%	62.3	60.3%	103.4	247.5
1995	0.1	0.1%	25.8	21.1%	12.7	10.4%	9.0	7.4%	73.0	59.7%	122.2	288
2000	0.0	0.0%	29.9	21.7%	12.2	8.9%	7.4	5.4%	86.2	62.7%	137.5	333.6
2001	0.0	0.0%	28.5	22.1%	9.5	7.4%	5.0	3.9%	84.9	65.8%	129.1	318.2
2002	*	NA	28.5	21.2%	9.4	7.0%	5.1	3.8%	91.4	67.9%	134.7	338.5
2003	0.0	0.0%	30.2	22.2%	10.4	7.6%	5.3	3.9%	90.2	66.2%	136.2	335.2
2004	0.0	0.0%	30.3	21.3%	10.8	7.6%	5.5	3.9%	95.2	66.9%	142.2	352.9
2005	0.0	0.0%	29.6	20.3%	10.1	6.9%	7.0	4.8%	97.8	67.1%	145.7	359
2006	0.2	0.1%	25.9	18.6%	8.1	5.8%	6.2	4.5%	97.4	70.0%	139.1	349.1
2007	*	0.0%	26.1	18.6%	6.9	4.9%	6.9	4.9%	100.9	71.7%	140.7	359.0

¹Includes energy resources (and losses) accountable to electricity generation, transmission and distribution

²Renewables includes solar, wind, wood, biogas, bio solid waste and hydroelectric

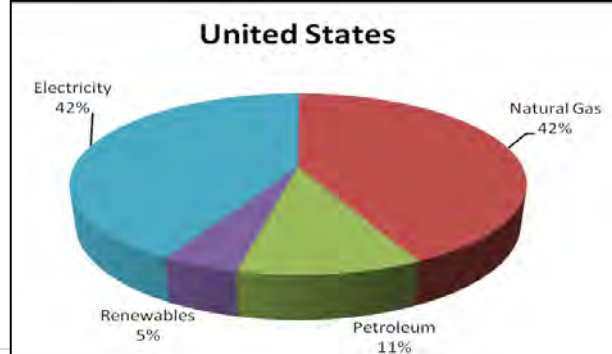
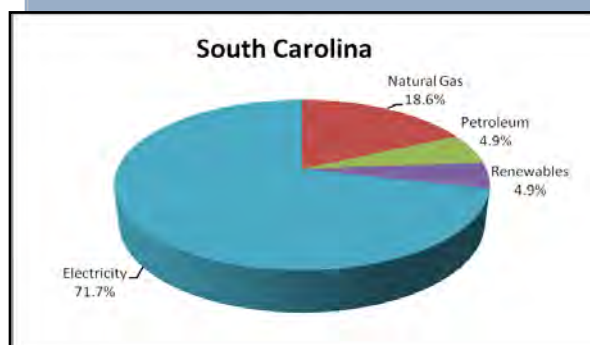
*Btu value less than 0.5.

Source: Energy Information Administration, State Energy Data

http://www.eia.doe.gov/emeu/states/hf.jsp?incfile=sep_use/res/use_res_sc.html&mstate=SOUTH%20CAROLINA

<http://www.eia.doe.gov/emeu/aer/consump.html>

2007



Total Energy Data

Commercial Energy Consumption by Fuel Type

South Carolina's total commercial energy consumption has increased 257.5 percent from 1970 to 2007, representing the largest increase in total energy consumption over all of the economic sectors. In 2007, South Carolina's commercial energy consumption was derived from electricity, 71.8 percent; natural gas, 20.8 percent; petroleum, 5.3 percent; and renewables, 2.1 percent.

South Carolina 1970-2007

(Trillion Btu and Percent of Net Energy Use)

1995	0.4	0.5%	19.4	23.7%	7.7	9.4%	3.6	4.4%	50.7	62.0%	81.8	197.0
2000	0.0	0.0%	22.7	23.7%	6.7	7.0%	3.5	3.7%	62.9	65.7%	95.8	238.8
2001	0.0	0.0%	21.5	23.1%	6.6	7.1%	2.1	2.3%	62.9	67.6%	93.1	233.2
2002	*	NA	20.9	22.6%	5.6	6.1%	0.9	1.0%	65.2	70.5%	92.5	237.8
2003	0.0	0.0%	22.3	23.4%	5.1	5.3%	2.2	2.3%	66.0	69.1%	95.5	241.1
2004	0.0	0.0%	22.1	22.6%	5.2	5.3%	2.1	2.1%	68.6	70.0%	98.0	249.8
2005	0.0	0.0%	22.9	22.7%	5.7	5.7%	2.1	2.1%	69.9	69.4%	100.7	253.7
2006	2.0	2.0%	21.4	20.9%	5.6	5.5%	2.2	2.1%	71.4	69.7%	102.4	256.8
2007	*	0.0%	21.5	20.8%	5.5	5.3%	2.2	2.1%	74.2	71.8%	103.4	263.5

¹Includes energy resources (and losses) accountable to electricity generation, transmission and distribution

²Renewables includes solar, wind, wood, biogas, bio solid waste and hydroelectric

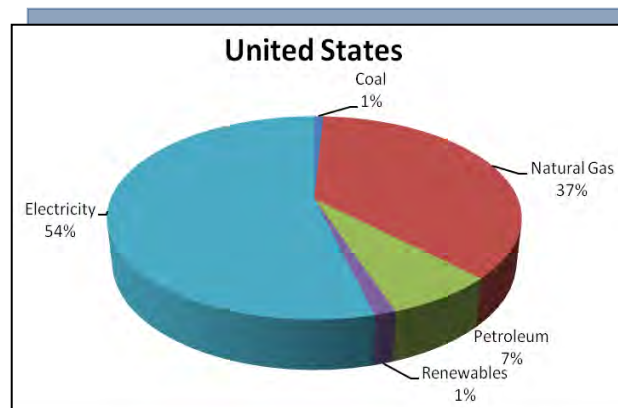
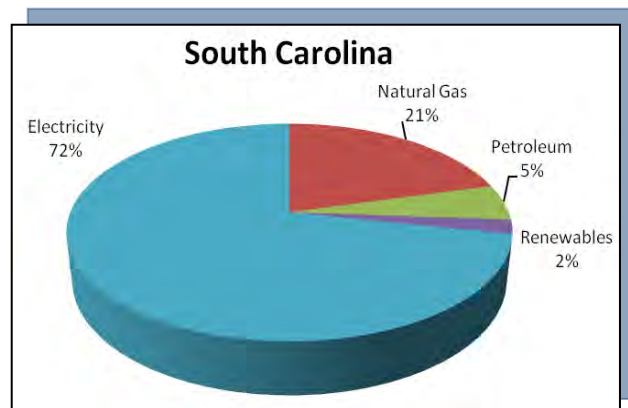
*Btu value less than 0.5.

Source: Energy Information Administration, State Energy Data

http://www.eia.doe.gov/emeu/states/hf.jsp?incfile=sep_use/com/use_com_sc.html&mstate=SOUTH%20CAROLINA

http://www.eia.doe.gov/emeu/aer/pdf/pages/sec2_8.pdf

2007



Total Energy Data

Industrial Energy Consumption by Fuel Type

South Carolina's total industrial energy consumption has increased approximately 91 percent from 1970 to 2007. This has been the slowest increase in consumption among all economic sectors. In 2007, South Carolina's industrial energy consumption was derived from petroleum, 29 percent; electricity, 26.4 percent; natural gas, 19.8 percent; renewables, 16.5 percent; and coal, 8.3 percent. It is important to note that the Industrial sector used less electricity and more renewables than any other sector in South Carolina in 2007.

South Carolina 1970-2007

(Trillion Btu and Percent of Net Energy Use)

Year	Coal		Natural Gas		Petroleum		Renewables ²		Electricity		Net Energy Use	Total ¹
1970	44.2	18.3%	80.9	33.5%	50.5	20.9%	31.4	13.0%	34.5	14.3%	241.5	325.0
1975	28.2	12.1%	72.0	30.8%	57.8	24.7%	32.4	13.9%	43.6	18.6%	233.8	338.6
1980	44.0	14.7%	95.0	31.8%	77.4	25.9%	28.2	9.4%	54.5	18.2%	299.2	430.7
1985	62.8	21.0%	64.7	21.7%	63.5	21.3%	33.0	11.1%	74.5	25.0%	298.5	470.0
1990	58.0	15.7%	89.3	24.1%	75.5	20.4%	63.0	17.0%	84.3	22.8%	370.0	564.9
1995	55.1	13.2%	101.0	24.1%	88.1	21.0%	76.5	18.3%	98.3	23.5%	419.0	642.3
2000	50.2	12.4%	100.0	24.7%	74.3	18.4%	66.1	16.4%	113.6	28.1%	404.2	662.7
2001	53.1	13.0%	82.7	20.3%	113.8	27.9%	50.9	12.5%	107.6	26.4%	408.1	647.8
2002	50.6	12.0%	95.6	22.7%	105.6	25.1%	60.4	14.3%	108.9	25.9%	421.2	664.0
2003	51.9	12.5%	78.6	19.0%	118.2	28.5%	58.9	14.2%	106.8	25.8%	414.4	650.1
2004	46.6	10.7%	77.8	17.8%	141.0	32.3%	62.3	14.3%	108.8	24.9%	436.4	677.1
2005	38.8	9.1%	76.9	18.0%	140.2	32.8%	61.9	14.5%	109.5	25.6%	427.3	666.7
2006	37.0	8.8%	79.7	18.9%	131.4	31.1%	66.6	15.8%	107.2	25.4%	422.0	653.8
2007	32.8	8.3%	78.1	19.8%	114.5	29.0%	65.4	16.5%	104.5	26.4%	395.4	620.9

¹Includes energy resources (and losses) accountable to electricity generation, transmission and distribution

²Renewables includes solar, wind, wood, biogas, bio solid waste and hydroelectric

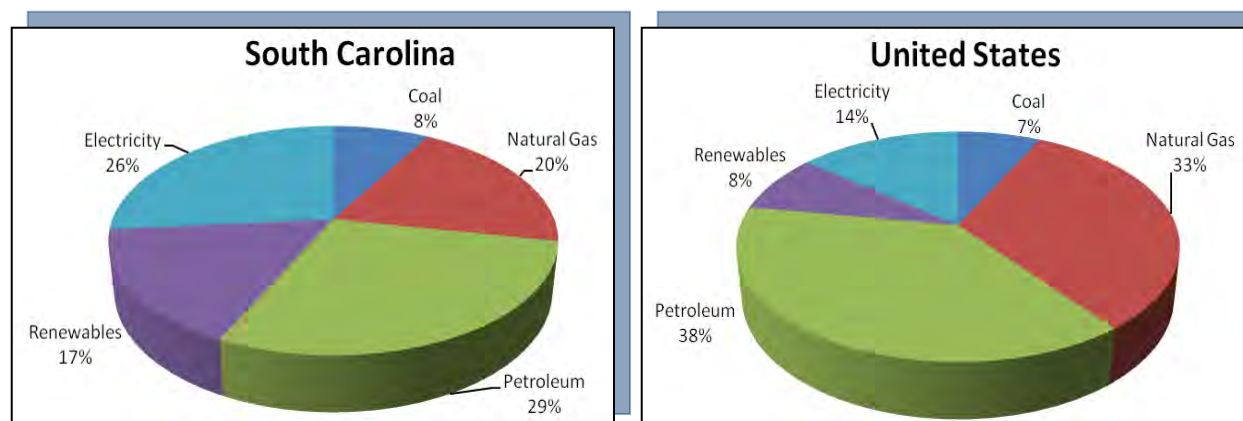
*Btu value less than 0.5.

Source: Energy Information Administration, State Energy Data

http://www.eia.doe.gov/emeu/states/hf.jsp?incfile=sep_use/ind/use_ind_sc.html&mstate=SOUTH%20CAROLINA

http://www.eia.doe.gov/emeu/aer/pdf/pages/sec2_9.pdf

2007



Total Energy Data

Transportation Energy Consumption by Fuel Type

South Carolina's transportation energy consumption increased 126.0 percent from 1970 to 2007. Motor gasoline continues to represent the largest share of transportation energy—approximately three times larger than the next greatest source, distillate fuel. In 2007, South Carolina's transportation energy consumption was derived from motor gasoline, 70.4 percent; distillate fuel, 23.9 percent; jet fuel, 2.4 percent; residual fuel, 2.2 percent; natural gas, 0.6 percent; renewables, 0.6 percent; lubricants, 0.3 percent; aviation gasoline, 0.1 percent; and propane (LPG), 0.1 percent.

South Carolina 1970-2007 (Trillion Btu)

Year	Natural Gas	Aviation Gasoline	Distillate Fuel	Jet Fuel	LPG	Lubricants	Motor Gasoline	Residual Fuel	Renewables ²	Net Energy Use	Total ¹
1970	3.4	1.2	16.9	17.1	0.2	1.4	148.2	10.1	0.0	198.6	198.6
1975	2.7	0.7	23.4	14.5	0.3	1.3	183.8	2.6	0.0	229.4	229.4
1980	3.1	0.8	35.9	16.6	0.1	1.6	184.8	5.3	0.0	248.1	248.1
1985	2.3	0.7	46.3	17.2	0.5	1.4	193.2	3.8	*	265.5	265.5
1990	2.9	0.5	61.2	16	0.3	1.6	222.2	3.2	0.5	308.6	308.6
1995	3.0	0.6	62.3	5.8	0.3	1.5	242.6	2.7	0.0	318.9	318.9
2000	3.6	0.4	86.2	10.6	0.2	1.7	274.4	2.3	0.0	379.3	379.3
2001	3.1	0.4	89.4	10.5	0.1	1.5	276.0	1.8	0.0	382.7	382.7
2002	3.2	0.4	90.4	8.8	0.1	1.5	282.9	3.2	0.0	390.5	390.5
2003	2.8	0.5	88.4	8.3	0.2	1.4	286.3	3.7	0.0	391.6	391.6
2004	2.5	0.4	106.4	9.4	0.3	1.4	316.0	12.5	0.0	449.0	449
2005	2.5	0.5	100.7	9.1	0.4	1.4	303.9	9.8	0.5	428.3	428.3
2006	2.4	0.6	105.7	10.2	0.4	1.4	316.5	10.8	0.7	448.0	448
2007	2.7	0.5	107.2	10.7	0.3	1.4	316.2	9.8	2.7	448.9	448.9

¹Includes energy resources (and losses) accountable to electricity generation, transmission and distribution

²Renewables refers to Ethanol Fuel.

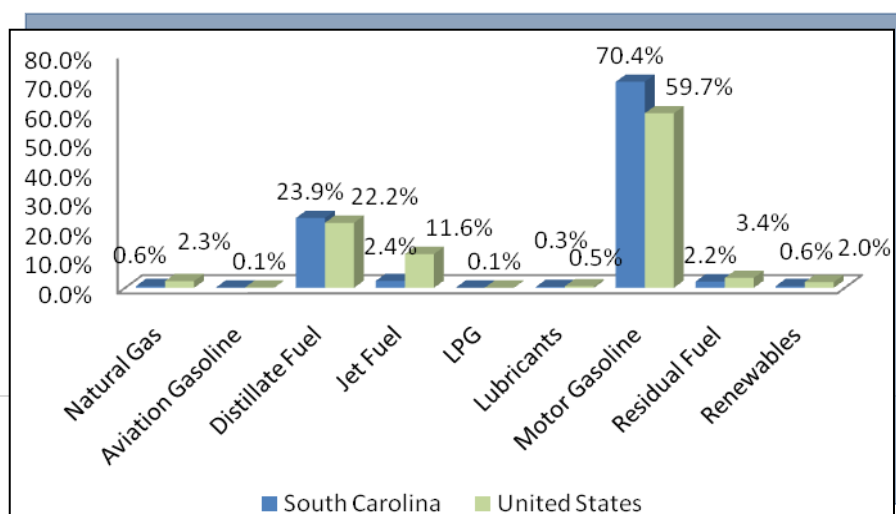
*Btu value less than 0.5.

Source: Energy Information Administration, State Energy Data

http://www.eia.doe.gov/emeu/states/hf.jsp?incfile=sep_use/tra/use_tra_sc.html&mstate=SOUTH%20CAROLINA

http://www.eia.doe.gov/emeu/states/sep_sum/html/pdf/sum_btu_tra.pdf

South Carolina and United States, 2007



Total Energy Data

Energy Expenditures by Economic Sector

South Carolina ranks 15th lowest in the nation in energy prices, but ranks 25th in total energy expenditures and 28th in per capita energy expenditures, having spent over \$18 billion dollars on energy in 2007. South Carolina's energy expenditures increased approximately 1,764.1 percent from 1970 to 2007 in terms of nominal dollars. Energy expenditures by economic sector in South Carolina closely track the national averages, with the transportation sector responsible for almost half of all energy expenditures in the state.

South Carolina 1970-2007 (Million Nominal Dollars)

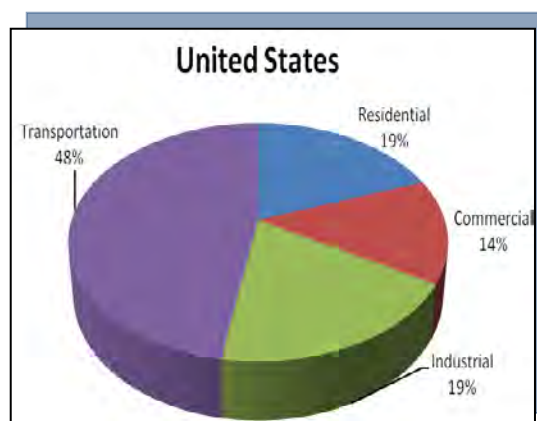
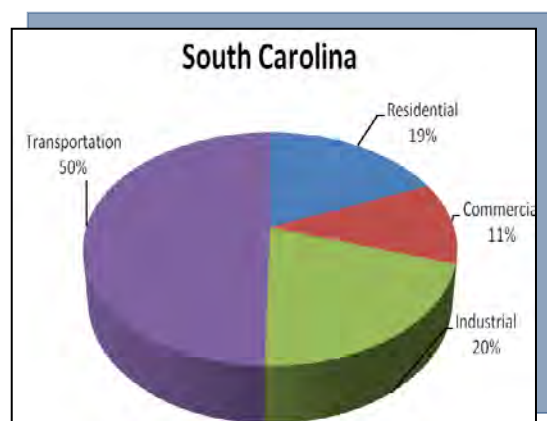
Year	Residential		Commercial		Industrial		Transportation		Total*	Percent Change
1970	225.6	23.2%	93.0	9.6%	197.0	20.3%	457.0	47.0%	972.6	N/A
1975	439.3	20.7%	252.0	11.9%	512.7	24.2%	916.4	43.2%	2,120.5	118.0%
1980	844.4	17.5%	474.8	9.9%	1,193.6	24.8%	2,307.1	47.9%	4,820.0	127.3%
1985	1,328.9	22.2%	753.0	12.6%	1,697.9	28.4%	2,207.8	36.9%	5,987.6	24.2%
1990	1,589.4	22.9%	916.0	13.2%	1,834.6	26.4%	2,597.6	37.4%	6,937.6	15.9%
1995	1,950.9	25.6%	1,098.4	14.4%	2,002.0	26.3%	2,559.9	33.6%	7,611.3	9.7%
2000	2,385.0	23.5%	1,400.5	13.8%	2,328.9	22.9%	4,035.0	39.8%	10,149.4	33.3%
2001	2,396.7	23.8%	1,446.7	14.4%	2,419.2	24.1%	3,795.6	37.7%	10,058.3	-0.9%
2002	2,481.8	24.7%	1,446.4	14.4%	2,410.6	24.0%	3,725.1	37.0%	10,063.9	0.1%
2003	2,618.9	23.5%	1,580.2	14.2%	2,664.2	23.9%	4,270.7	38.4%	11,134.1	10.6%
2004	2,830.5	21.1%	1,690.0	12.6%	3,024.9	22.5%	5,887.0	43.8%	13,432.3	20.6%
2005	3,153.6	19.8%	1,901.7	11.9%	3,704.0	23.2%	7,175.9	45.0%	15,935.2	18.6%
2006	3,245.7	18.7%	1,983.3	11.4%	3,821.4	22.0%	8,314.0	47.9%	17,364.4	9.0%
2007	3,371.3	18.6%	2,067.6	11.4%	3,696.3	20.4%	8,995.1	49.6%	18,130.4	4.4%

*Total includes energy input estimates at electric utilities.

Source: Energy Information Administration, State Energy Data

<http://www.eia.doe.gov/emeu/states/seds.html>

2007



Total Energy Data

Primary Energy Expenditure Estimates by Fuel Source

South Carolina's energy expenditures have increased approximately 1,764 percent from 1970 to 2007 in terms of nominal dollars. Since the transportation sector accounts for approximately 50 percent of all energy expenditures and the bulk of transportation expenditures are from petroleum products, it is no surprise that petroleum accounts for well over 50 percent of end-use energy expenditures, followed by natural gas, coal, nuclear and biomass in that order.

South Carolina 1970-2007

(Million Nominal Dollars)

Year	Coal		Natural Gas		Petroleum		Nuclear		Biomass		Total Energy ¹
1970	66.2	8.9%	91.4	12.3%	569.7	76.7%	*	*	15.6	2.1%	742.9
1975	174.4	11.3%	143.3	9.3%	1,166.8	75.6%	40.6	2.6%	18.0	1.2%	1,543.2
1980	391.2	10.1%	441.0	11.4%	2,937.1	75.8%	83.4	2.2%	22.3	0.6%	3,875.3
1985	493.2	12.1%	494.8	12.2%	2,833.4	69.8%	210.7	5.2%	29.2	0.7%	4,061.3
1990	498.9	11.2%	525.7	11.7%	3,162.8	70.7%	240.6	5.4%	46.3	1.0%	4,474.3
1995	486.8	10.6%	621.0	13.6%	3,122.6	68.2%	264.0	5.8%	86.2	1.9%	4,580.6
2000	613.1	9.2%	965.0	14.5%	4,766.2	71.7%	222.8	3.4%	81.4	1.2%	6,648.5
2001	665.3	10.1%	1,011.8	15.4%	4,598.9	70.0%	213.9	3.3%	75.3	1.1%	6,565.2
2002	660.7	10.3%	961.3	15.0%	4,457.8	69.4%	228.5	3.6%	114.0	1.8%	6,422.3
2003	690.9	9.4%	1,152.8	15.7%	5,207.7	70.8%	216.3	2.9%	90.2	1.2%	7,357.9
2004	842.8	8.7%	1,405.0	14.6%	7,095.4	73.5%	214.5	2.2%	89.6	0.9%	9,647.3
2005	960.3	8.0%	1,945.5	16.1%	8,765.6	72.7%	223.0	1.8%	163.1	1.4%	12,057.5
2006	1,037.2	7.8%	1,838.5	13.8%	10,012.3	75.4%	206.9	1.6%	184.1	1.4%	13,279.0
2007	1,057.2	7.6%	1,781.6	12.8%	10,653.1	76.7%	213.2	1.5%	176.6	1.3%	13,881.7

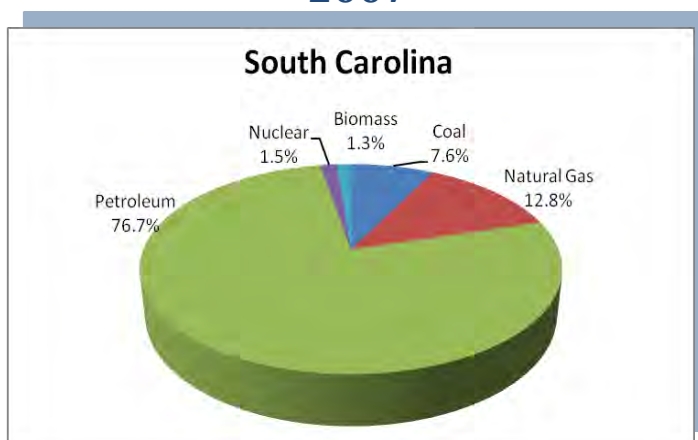
¹Total energy includes electric utility fuel losses

*Denotes value is less than 0.05 million dollars

Source: Energy Information Administration, State Energy Data

http://www.eia.doe.gov/emeu/states/hf.jsp?incfile=sep_prices/total/pr_tot_sc.html&mstate=SOUTH%20CAROLINA

2007



Section 2: Electricity

Number of Ultimate Electric Consumers by Sector

In 2007, the number of retail electricity customers in South Carolina was 2,377,956, with about 86 percent of those customers in the residential sector. While collectively the cooperatives account for 29.6 percent of South Carolina electricity customers, SCE&G is the single utility that has historically had the largest electric power customer base, accounting for 26.8 percent of the total number of customers in 2007. Data show an annualized customer growth rate of about two percent over the five years preceding 2007.

South Carolina 1990-2007 (Number)

Year	Residential	Commercial	Industrial	Other*	Total	Percent Change
1990	1,421,991	204,997	4,418	14,901	1,646,307	NA
1991	1,449,397	209,639	4,254	16,601	1,679,891	2.0%
1992	1,476,086	213,229	4,221	18,683	1,712,219	1.9%
1993	1,505,304	217,696	4,379	11,974	1,739,353	1.6%
1994	1,536,458	222,395	4,342	12,497	1,775,692	2.1%
1995	1,567,196	228,523	4,498	12,490	1,812,707	2.1%
1996	1,608,129	239,495	4,681	14,841	1,867,146	3.0%
1997	1,641,416	248,801	6,091	13,790	1,910,098	2.3%
1998	1,683,858	262,630	4,751	18,428	1,969,667	3.1%
1999	1,724,911	266,724	4,900	1,550	1,998,085	1.4%
2000	1,764,298	274,003	5,077	16,118	2,059,496	3.1%
2001	1,791,625	285,701	4,941	16,450	2,098,717	1.9%
2002	1,836,612	286,840	5,136	16,232	2,144,820	2.2%
2003	1,867,922	304,528	5,024	NA	2,177,474	1.5%
2004	1,892,678	310,804	5,001	NA	2,208,483	1.4%
2005	1,944,546	320,291	4,786	NA	2,269,623	2.8%
2006	1,989,801	329,528	4,462	NA	2,323,791	2.4%
2007	2,035,713	337,586	4,657	NA	2,377,956	2.3%

*Beginning in 2003, the "Other" sector which includes sales for public street and highway lighting, other sales to public authorities, sales to railroads and railways, and interdepartmental sales is included in the "Commercial" sector sales.

Source: Energy Information Administration, *Electric Power and Annual Data Tables*

http://www.eia.doe.gov/cneaf/electricity/epa/epa_sprdshts.html

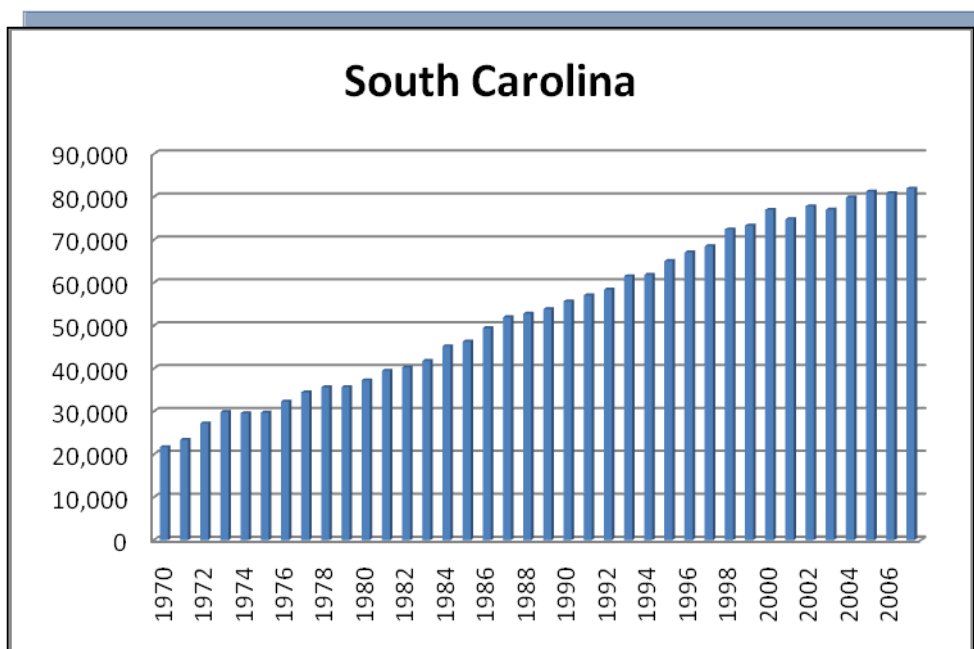
SC Energy Office, 2008 Demand Side Management Report

Total Electricity Consumption

South Carolina ranks 18th in total electricity consumption and 6th in electricity consumption per capita, having consumed 2.2 percent of the total U.S. electricity consumption during 2007. Annual peak demand for electricity in South Carolina reached 17,154 MW in 2007, while total demand was more than 82,544,000 MWh of electricity for reporting utilities.* The average annual increase in electricity consumption for South Carolina is growing faster than that of the U.S. as a whole, 3.0 percent and 2.2 percent respectively. South Carolina ranks 10th in highest annual increase in electricity consumption.

South Carolina 1970-2007 (Million kWh)

Year	Consumption	Percent Change
1970	21,693.5	NA
1975	29,724.0	37.0%
1980	37,264.0	25.4%
1985	46,268.6	24.2%
1990	55,651.8	20.3%
1995	65,074.4	16.9%
2000	77,012.0	18.3%
2001	74,832.4	-2.8%
2002	77,819.4	4.0%
2003	77,054.1	-1.0%
2004	79,908.3	3.7%
2005	81,254.1	1.7%
2006	80,877.3	-0.5%
2007	81,948.2	1.3%



Source: EERE

<http://apps1.eere.energy.gov/states/electricity.cfm/state=SC>

EIA, State Energy Data System "Total Consumption of Electric Sales"

* SC Energy Office, 2008 Demand Side Management Report

Net Power Generation by Energy Source

The bulk of power generation in South Carolina comes from nuclear power—51 percent. Generation numbers should not be confused with consumption numbers. South Carolina is a net generator state, meaning that it sells a portion of the energy produced in the state to other states, namely North Carolina. It is also noteworthy to mention that South Carolina is the 19th highest in per capita consumption of coal and 18th highest in consumption of retail electricity.

South Carolina 1990-2007

(Million Kilowatt hours and Percent of Total)

Year	Coal		Petroleum		Nuclear		Gas		Hydro		Other Renewables*		Total	Percent Change
1990	23,412	32.8%	173	0.2%	42,881	60.1%	788	1.1%	3,298	4.6%	1,319	1.8%	71,363	6.5%
1991	23,821	33.0%	181	0.3%	43,108	59.7%	1,087	1.5%	3,111	4.3%	1,437	2.0%	72,180	1.1%
1992	23,678	31.9%	158	0.2%	45,537	61.4%	289	0.4%	3,310	4.5%	1,728	2.3%	74,171	2.8%
1993	27,240	34.8%	202	0.3%	46,189	59.1%	232	0.3%	2,950	3.8%	1,593	2.0%	78,175	5.4%
1994	27,741	36.1%	241	0.3%	44,466	57.8%	381	0.5%	3,035	3.9%	1,695	2.2%	76,943	-1.6%
1995	26,337	32.5%	257	0.3%	49,173	60.8%	699	0.9%	3,457	4.3%	1,647	2.0%	80,914	5.2%
1996	30,863	39.2%	279	0.4%	43,571	55.3%	215	0.3%	3,041	3.9%	1,550	2.0%	78,769	105.2%
1997	31,574	39.1%	364	0.5%	44,916	55.6%	292	0.4%	2,958	3.7%	1,574	1.9%	80,828	205.2%
1998	32,970	37.8%	452	0.5%	48,759	55.9%	877	1.0%	3,569	4.1%	1,604	1.8%	87,247	305.2%
1999	35,805	39.7%	387	0.4%	50,814	56.3%	1,101	1.2%	1,687	1.9%	1,437	1.6%	90,235	405.2%
2000	39,209	42.0%	445	0.5%	50,889	54.5%	933	1.0%	1,533	1.6%	1,420	1.5%	93,346	3.4%
2001	36,699	41.2%	308	0.3%	49,870	55.9%	1,176	1.3%	1,225	1.4%	894	1.0%	89,159	-4.5%
2002	36,948	38.3%	300	0.3%	53,326	55.2%	4,499	4.7%	1,329	1.4%	1,244	1.3%	96,563	8.3%
2003	37,432	39.9%	457	0.5%	50,418	53.8%	1,663	1.8%	3,665	3.9%	1,296	1.4%	93,773	-2.9%
2004	38,920	39.7%	910	0.9%	51,201	52.3%	3,795	3.9%	2,447	2.5%	1,728	1.8%	97,940	4.4%
2005	39,677	38.7%	673	0.7%	53,138	51.8%	5,413	5.3%	2,938	2.9%	1,785	1.7%	102,515	4.7%
2006	39,473	39.8%	237	0.2%	50,797	51.2%	6,068	6.1%	1,807	1.8%	1,910	1.9%	99,268	-3.2%
2007	41,523	40.2%	217	0.2%	53,200	51.4%	5,965	5.8%	1,556	1.5%	1,896	1.8%	103,402	4.2%

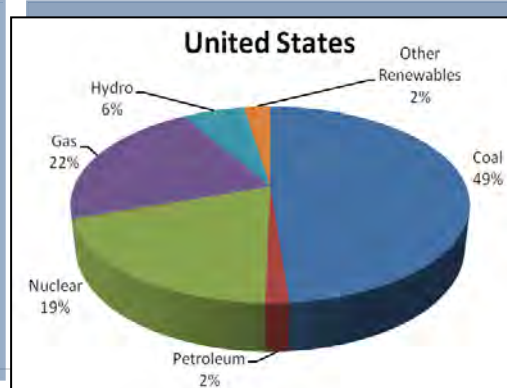
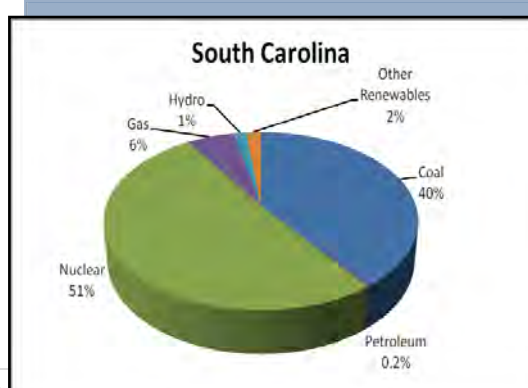
*Renewables include wood, black liquor, other wood waste, municipal solid waste, landfill gas, sludge waste, tires, agriculture byproducts, other biomass, geothermal, solar thermal, photovoltaic energy, and wind

Source: Energy Information Administration, State Data for Reserves and Supply

Table 5. Electric Power Industry Generation by Primary Energy Source, 1990 Through 2008 (MWh)

2007

Totals do not equal 100 due to rounding



Electric Retail Sales to Consumers by Sector

Total consumption of electricity has nearly quadrupled since 1970, from just over 21,000 million kWh to just over 80,000 million kWh in 2007. While the number of residential consumers is over 350 times larger than the number of industrial customers, the industrial sector still accounts for slightly more electricity consumption than the residential sector, 37.4 percent and 36.1 percent respectively.

1970-2007

(Million Kilowatthours and Percent of Total)

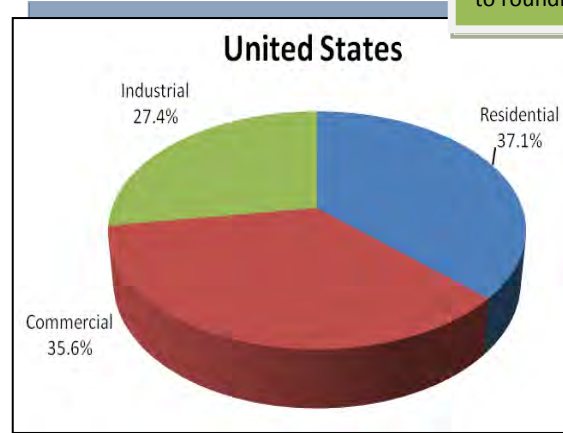
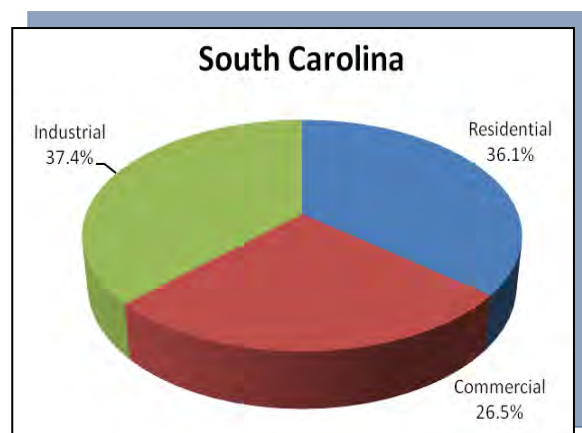
Year	Residential		Commercial		Industrial		Other*		TOTAL	Percent Change
1970	7,347	33.9%	4,237	19.5%	10,110	46.6%	0	0.0%	21,694	NA
1975	9,837	33.1%	7,121	24.0%	12,766	42.9%	0	0.0%	29,724	37.0%
1980	12,580	33.8%	8,705	23.4%	15,979	42.9%	0	0.0%	37,264	25.4%
1985	13,654	32.1%	8,715	20.5%	19,000	44.7%	1,138	2.7%	42,507	14.1%
1990	18,257	32.8%	11,927	21.4%	24,701	44.4%	766	1.4%	55,652	30.9%
1995	21,392	32.9%	14,020	21.5%	28,819	44.3%	843	1.3%	65,074	16.9%
2000	25,270	32.8%	17,483	22.7%	33,308	43.3%	951	1.2%	77,012	18.3%
2001	24,875	33.2%	17,485	23.4%	31,528	42.1%	946	1.3%	74,832	-2.8%
2002	26,787	34.4%	18,157	23.3%	31,926	41.0%	950	1.2%	77,819	4.0%
2003	26,422	34.3%	19,336	25.1%	31,296	40.6%	NA	NA	77,054	-1.0%
2004	27,910	34.9%	20,113	25.2%	31,886	39.9%	NA	NA	79,908	3.7%
2005	28,676	35.3%	20,498	25.2%	32,080	39.5%	NA	NA	81,254	1.7%
2006	28,539	35.3%	20,923	25.9%	31,416	38.8%	NA	NA	80,877	-0.5%
2007	29,569	36.1%	21,746	26.5%	30,632	37.4%	NA	NA	81,948	1.3%

*Beginning in 2003 the Other Sector has been eliminated. Data previously assigned to the Other Sector have been reclassified as follows: Lighting for public buildings, streets, and highways, interdepartmental sales, and other sales to public authorities are now included in the Commercial Sector; agricultural and irrigation sales where separately identified are now included in the Industrial Sector; and a new sector, Transportation, now includes electrified rail and various urban transit systems. South Carolina had no sales in this category.

Source: Energy Information Administration, *Electric Power and Annual Data Tables*
http://www.eia.doe.gov/cneaf/electricity/epa/epa_sprdshts.html

2007

Totals do not equal 100 due to rounding



Section 3: Petroleum

Petroleum Use by Economic Sector

South Carolina's petroleum consumption has increased 61.5 percent since 1985. Petroleum accounts for 32 percent of the total energy consumption in the state (2007). The transportation sector accounts for the bulk of petroleum consumption (78.1 percent) in South Carolina. The state receives its petroleum products shipments at the Port of Charleston and via the Colonial and Plantation pipelines from the Gulf Coast.

South Carolina 1970-2007

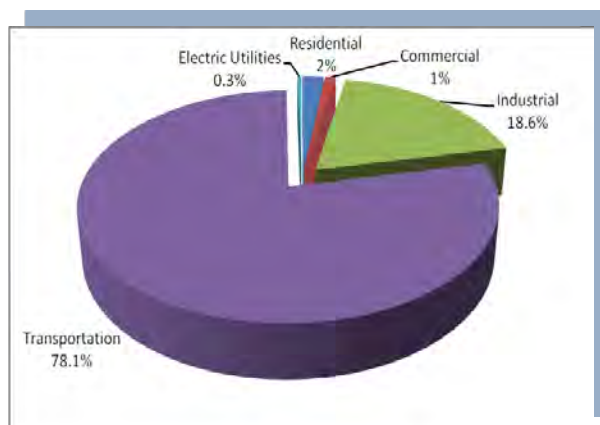
(Thousand Barrels and Percent of Total)

Year	Residential		Commercial		Industrial		Transportation		Electric Utilities		TOTAL
1970	6,188	4.7%	1,366	1.0%	85,864	64.7%	36,420	27.5%	2,798	2.1%	132,636
1975	4,304	8.1%	1,221	2.3%	9,813	18.4%	42,560	79.7%	4,517	8.5%	53,415
1980	4,290	6.4%	1,047	1.6%	13,412	20.0%	45,686	68.1%	2,647	3.9%	67,082
1985	4,223	6.4%	1,527	2.3%	10,870	16.5%	48,936	74.4%	184	0.3%	65,740
1990	4,556	6.2%	1,608	2.2%	13,123	17.9%	53,622	73.3%	285	0.4%	73,194
1995	3,241	4.3%	1,189	1.6%	13,230	17.7%	57,063	76.2%	125	0.2%	74,848
2000	3,246	4.0%	1,438	1.8%	16,033	19.9%	59,655	74.0%	268	0.3%	80,640
2001	3,262	3.6%	1,277	1.4%	13,451	15.0%	70,763	79.1%	716	0.8%	89,469
2002	2,418	2.8%	1,223	1.4%	12,220	14.0%	70,806	81.2%	483	0.6%	87,150
2003	2,741	2.8%	1,004	1.0%	20,472	21.0%	72,590	74.5%	566	0.6%	97,373
2004	2,939	2.6%	1,031	0.9%	24,174	21.5%	82,904	73.8%	1,223	1.1%	112,271
2005	2,758	2.6%	1,120	1.0%	24,205	22.4%	79,125	73.2%	846	0.8%	108,054
2006	2,352	2.2%	1,087	1.0%	22,711	20.8%	82,783	75.8%	276	0.3%	109,209
2007	2,075	2.0%	1,062	1.0%	19,794	18.6%	82,863	78.1%	364	0.3%	106,158

Source: Energy Information Administration

http://www.eia.doe.gov/emeu/states/sep_fuel/html/fuel_use_pa.html

2007



Petroleum Consumption by Type of Product

The transportation sector accounts for the bulk of petroleum consumption (78.1 percent) in South Carolina. Not surprisingly, motor gasoline accounts for approximately 58 percent of petroleum consumption. South Carolina's motor gasoline consumption has increased steadily since 1985, having increased 61.5 percent by 2007. Other petroleum uses include distillate fuel (20 percent), residual fuel (3 percent), and other uses such as asphalt and road oil, aviation gasoline, and lubricants (14 percent).

South Carolina 1970-2007

(Thousand Barrels)

Year	Distillate Fuel	Jet Fuel	Kerosene	LPG	Motor Gasoline	Residual Fuel	Other*	Total	Percent Change
1970	9,423	3,170	2,377	2,927	28,756	5,335	3,346	55,334	7.4%
1975	8,376	2,692	1,024	3,204	35,429	7,666	4,025	62,416	12.8%
1980	10,660	3,062	1,352	3,178	35,517	7,205	6,110	67,084	7.5%
1985	11,731	3,184	1,484	3,161	37,719	2,921	5,550	65,750	-2.0%
1990	14,866	2,939	659	2,914	43,264	2,416	7,615	74,673	13.6%
1995	14,501	1,027	574	3,826	46,973	2,649	10,075	79,625	6.6%
2000	18,879	1,861	682	5,038	53,040	2,324	6,672	88,496	11.1%
2001	19,389	1,851	662	3,563	53,822	2,178	13,617	95,082	7.4%
2002	19,240	1,548	395	3,362	55,222	2,079	13,070	94,916	-0.2%
2003	18,968	1,459	473	3,152	55,935	3,816	13,570	97,373	2.6%
2004	22,074	1,656	673	3,117	61,691	5,540	17,520	112,271	15.3%
2005	21,547	1,609	608	3,607	59,302	5,039	16,343	108,055	-3.8%
2006	21,812	1,805	485	3,243	61,779	3,589	16,495	109,208	1.1%
2007	21,880	1,881	NA	2,858	61,328	3,226	14,985	106,157	-2.8%

*Other includes asphalt and road oil, aviation gasoline, lubricants, and other.

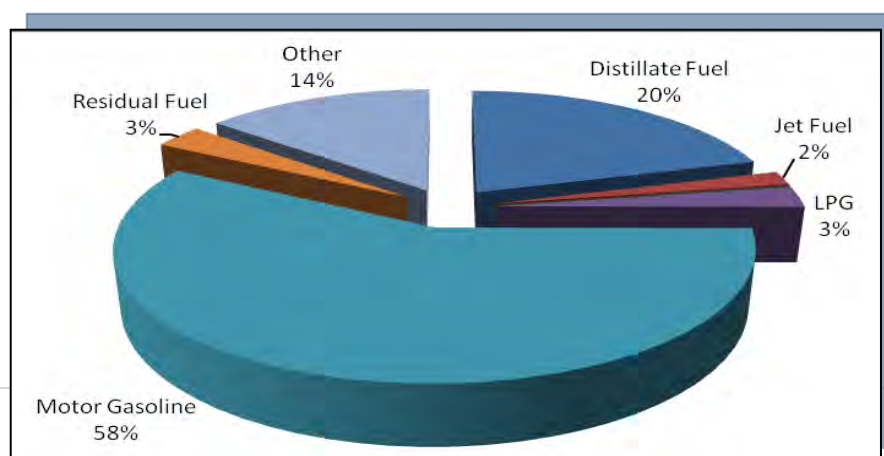
Distillate Fuels includes fuel oils No. 1, No. 2, and No. 4, and diesel fuels No. 1, No. 2, and No. 4; these products are used primarily for space heating, on-and-off highway diesel engine fuel, and electric power generation.

Residual fuel includes products known as No. 5 and No. 6 fuel oil and heavy diesel oil; mostly used for industrial purposes.

Source: Energy Information Administration, *State Energy Data Systems*

http://www.eia.doe.gov/emeu/states/hf.jsp?incfile=sep_use/total/use_tot_sc.html&mstate=SOUTH%20CAROLINA

2007



Gasoline Consumption and Average Retail Price

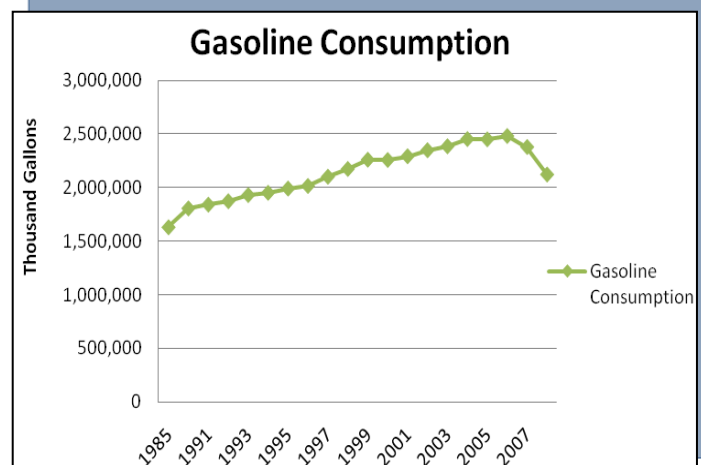
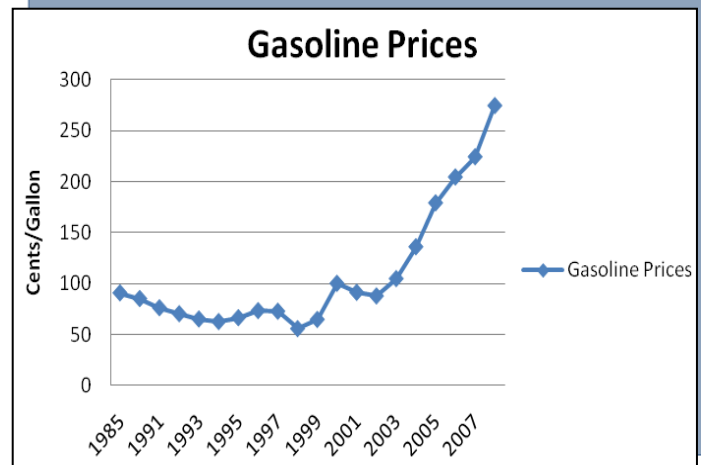
(excluding taxes)

In 2007, South Carolina benefited from the 2nd lowest gasoline prices and 8th lowest petroleum prices in the United States. However, South Carolina ranked 23rd in total gasoline expenditures and 25th in total petroleum expenditures, having spent \$6,651 million nominal dollars in 2007. South Carolina gasoline prices have increased nominally by 221.6 percent in 2008 over 1990 prices. During the same period, consumption of gasoline has steadily increased for a total of 17.5 percent. In fact, South Carolina ranks 2nd in per capita consumption of motor gasoline, with per capita consumption of 585 gallons per person (2005) and 7th in per capita expenditures on motor gasoline (2007). The national average during the same period for per capita consumption of motor gasoline was only 475 gallons. South Carolina is also one of a few states allowing statewide use of conventional or non-blended gasoline.

South Carolina 1990-2008

Year	Consumption (Thousand Gallons)	Percent Change	Price (Cents per Gallon)	Percent Change
1990	1,805,128	9.7%	85.2	-6.2%
1991	1,840,515	1.9%	76.2	-10.6%
1992	1,872,326	1.7%	70.4	-7.6%
1993	1,929,294	3.0%	65.2	-7.4%
1994	1,950,440	1.1%	62.7	-3.8%
1995	1,989,943	2.0%	66.5	6.1%
1996	2,014,159	1.2%	73.4	10.4%
1997	2,100,203	4.1%	72.8	-0.8%
1998	2,172,260	3.3%	55.8	-23.4%
1999	2,257,696	3.8%	64.8	16.1%
2000	2,255,223	-0.1%	100.1	54.5%
2001	2,289,942	1.5%	91.3	-8.8%
2002	2,345,696	2.4%	87.8	-3.8%
2003	2,382,315	1.5%	104.7	19.2%
2004	2,587,938	7.9%	135.9	29.8%
2005	2,485,282	-4.1%	178.9	31.6%
2006	2,558,816	2.9%	204.2	14.1%
2007	2,375,948	-7.7%	224.0	9.7%
2008	2,120,126	-12.1%	274.0	22.3%

Sources: SCEO Database/SC Department of Revenue
Energy Information Administration
<http://tonto.eia.doe.gov/dnav/pet/hist/d120613452a.htm>



Gasoline Average Retail Price by Grade

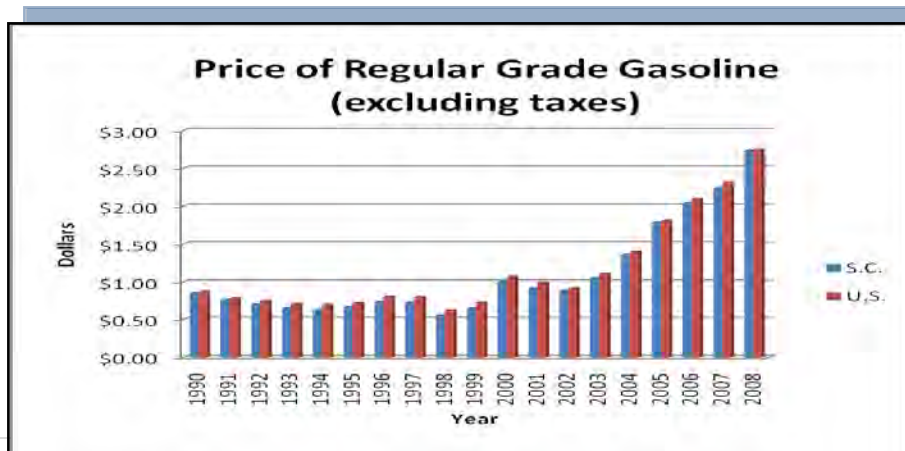
In 2007, South Carolina had the 8th lowest petroleum prices and the 2nd lowest motor gasoline prices, evidenced below—South Carolina gasoline prices generally trail the national average for all grades of gasoline. However, South Carolina ranked 7th highest in gasoline expenditures per capita during the same year. South Carolina gasoline prices have increased 221.6 percent nominally by 2008 over 1990 prices (regular grade).

South Carolina and United States 1990-2008

(Nominal Dollars per Gallon, Excluding Taxes)

Year	Regular		Midgrade		Premium	
	S.C.	U.S.	S.C.	U.S.	S.C.	U.S.
1990	0.85	0.87	0.93	0.93	1.02	1.00
1991	0.76	0.78	0.85	0.85	0.95	0.92
1992	0.70	0.75	0.80	0.82	0.90	0.91
1993	0.65	0.71	0.77	0.79	0.86	0.88
1994	0.63	0.69	0.74	0.77	0.84	0.85
1995	0.67	0.72	0.77	0.80	0.87	0.88
1996	0.73	0.81	0.84	0.89	0.93	0.96
1997	0.73	0.80	0.83	0.88	0.91	0.96
1998	0.56	0.62	0.66	0.71	0.74	0.79
1999	0.65	0.73	0.75	0.81	0.83	0.88
2000	1.00	1.06	1.10	1.15	1.18	1.22
2001	0.91	0.99	1.01	1.09	1.09	1.15
2002	0.88	0.92	0.98	1.00	1.07	1.08
2003	1.05	1.11	1.15	1.20	1.24	1.28
2004	1.36	1.40	1.46	1.48	1.55	1.58
2005	1.79	1.81	1.86	1.88	1.97	1.99
2006	2.04	2.10	2.15	2.18	2.24	2.30
2007	2.24	2.31	2.34	2.41	2.46	2.53
2008	2.74	2.75	2.86	2.85	2.94	2.96

Source: Energy Information Administration, *Petroleum Marketing Annual*
http://tonto.eia.doe.gov/dnav/pet/pet_pri_allmg_d_nus_PTA_cpgal_a.htm



Monthly Gasoline Consumption

South Carolina's consumption of gasoline has increased by 17.6 percent since 1990, remaining nearly constant over the past several years. The slight decline in 2007 coincided with much higher than normal prices at the pump. As prices normalized at the end of 2007, consumption increased to even higher than normal levels.

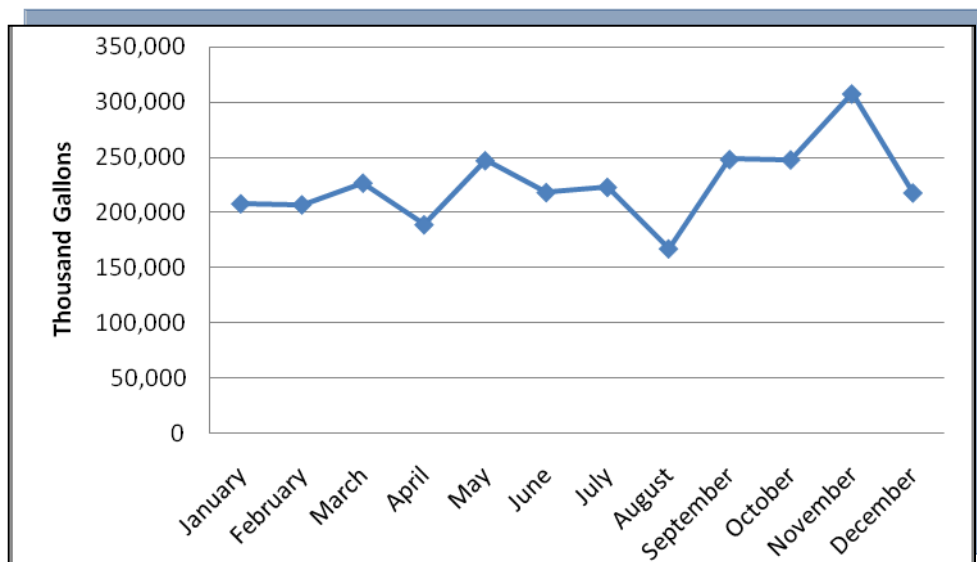
South Carolina 2004-2008

(Thousand Gallons)

Month	2004	2005	2006	2007	2008
January	185,044	159,646	193,715	181,956	208,316
February	184,130	215,362	158,479	169,088	207,333
March	211,315	215,925	251,072	178,303	227,036
April	216,956	202,081	212,013	284,770	189,239
May	214,753	223,709	178,039	244,147	247,337
June	213,582	190,171	88,889	178,377	218,406
July	239,098	230,495	321,677	222,692	223,153
August	213,033	243,415	96,079	217,961	167,426
September	233,296	192,992	419,600	221,296	248,349
October	248,540	202,850	198,313	222,354	248,099
November	230,157	167,590	151,004	173,786	307,741
December	198,034	241,045	289,938	241,095	218,038
Total	2,587,938	2,485,281	2,558,815	2,535,825	2,710,473
Percent Change	8.6%	-4.0%	3.0%	-0.9%	6.9%

Source: SCEO Database/Department of Revenue

2008



Motor Fuel Consumption per Registered Vehicle

South Carolina has historically consumed more motor fuel per registered motor vehicle than the nation's average. In 2005, South Carolina ranked 2nd in per capita consumption of gasoline and in 2007, 23rd in total gasoline consumption. In 2007, South Carolinians used approximately 993 gallons of motor fuel per registered vehicle, while the national average was only 836 gallons per registered vehicle or approximately 16 percent lower than that consumed per registered vehicle in South Carolina. Consumption varies significantly with the season.

South Carolina 1990-2007

(Gallons/Registered Vehicle and Percent Change)

Year	South Carolina		United States	
1990	988	NA	835	NA
1991	980	-0.8%	821	-1.6%
1992	928	-5.3%	827	0.7%
1993	918	-1.1%	831	0.4%
1994	927	1.0%	833	0.3%
1995	911	-1.7%	836	0.4%
1996	942	3.4%	839	0.3%
1997	954	1.3%	845	0.8%
1998	1,002	4.9%	848	0.4%
1999	981	-2.1%	851	0.3%
2000	971	-1.0%	846	-0.5%
2001	967	-0.4%	829	-2.1%
2002	965	-0.2%	843	1.7%
2003	982	1.8%	852	1.1%
2004	1,066	8.5%	853	0.1%
2005	1,003	-5.9%	844	-1.1%
2006	1,003	-0.1%	843	-0.1%
2007	993	-1.0%	836	-0.8%

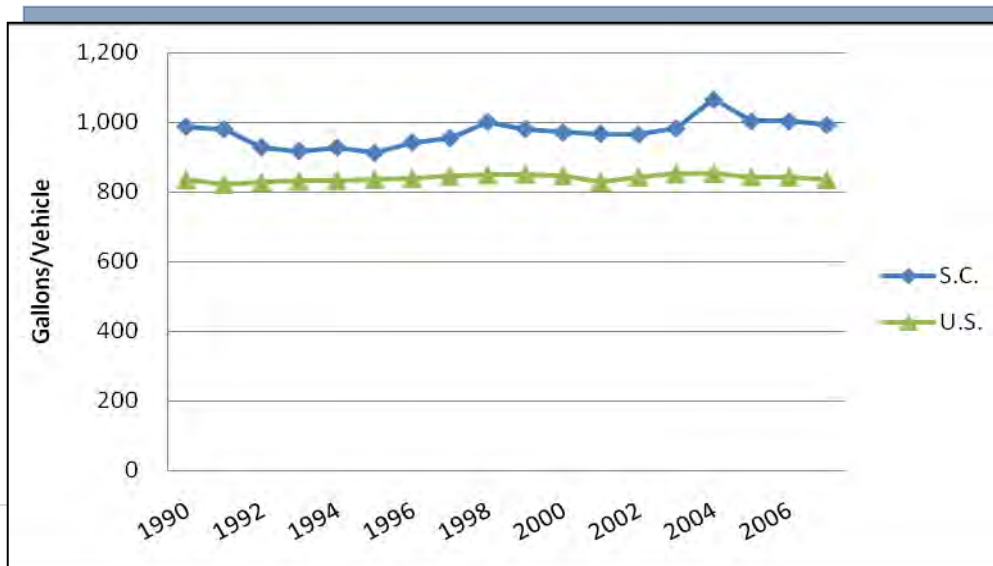
Note: Motor Fuel includes both gasoline and diesel fuel

Source: Federal Highway Administration, Office of Highway Management

<http://www.fhwa.dot.gov/policy/ohpi/hss/hsspubs.cfm>

Energy Information Administration:

http://www.eia.doe.gov/emeu/states/state.html?q_state=a=us&q_state=UNITED%20STATES



Highway Diesel Fuel Consumption

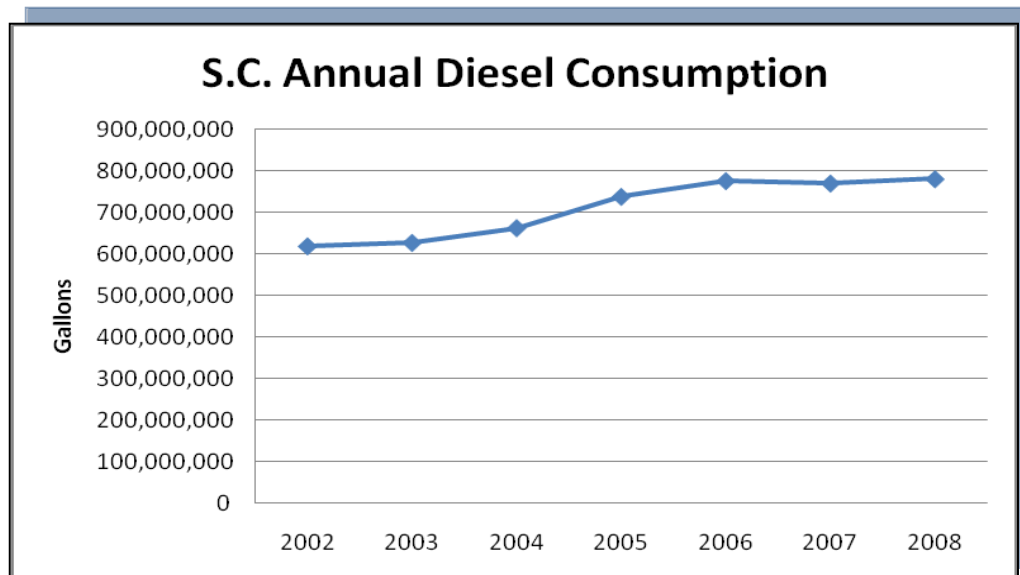
South Carolina's consumption of diesel fuel has steadily increased over time, increasing 17.9 percent between 2004 and 2008. Consumption of diesel remains fairly constant with regard to time of year; there do not seem to be major seasonal increases or decreases in consumption, unlike gasoline consumption.

South Carolina Monthly Consumption, 2004-2008

(Thousand Gallons)

Month	2004	2005	2006	2007	2008
January	54,041	54,448	61,957	61,330	65,856
February	50,149	58,638	56,217	58,935	65,202
March	55,473	66,305	74,813	42,141	55,256
April	58,347	62,209	63,927	89,373	63,309
May	59,681	63,256	54,571	73,240	74,324
June	55,738	57,388	37,548	59,566	66,211
July	55,388	60,007	90,848	68,784	64,678
August	54,567	70,709	31,737	59,727	43,053
September	55,274	65,988	113,686	59,965	76,172
October	58,341	60,731	63,012	70,753	75,894
November	51,415	56,523	56,222	54,241	77,292
December	53,912	62,031	71,867	72,416	53,576
Total	662,326	738,233	776,405	770,471	780,823
Percent Change	-	11.5%	5.2%	-0.8%	1.3%

Source: SC Energy Office Database/Department of Revenue



Distillate Fuel Oil Consumption by End-Use Sector

South Carolina's distillate fuel oil consumption has increased 39 percent since 1990, with record high usage and percent increase in usage in 2004. The transportation sector is the largest consumer of distillate fuel oil, using approximately 82.4 percent. This is followed by the commercial sector, 3.2 percent; the industrial sector, 2.4 percent; and the residential sector, 0.8 percent.

South Carolina

1990-2007

(Million Gallons)

Year	Residential		Commercial		Industrial		Transportation**		TOTAL*	Percent Change
1990	52.0	8.0%	31.2	4.8%	31.1	4.8%	446.2	68.9%	647.4	17.5%
1991	49.0	7.1%	25.7	3.7%	32.4	4.7%	385.9	55.9%	689.8	6.5%
1992	34.8	5.7%	33.8	5.6%	39.1	6.4%	431.9	71.0%	608.2	-11.8%
1993	38.7	6.5%	39.5	6.7%	25.7	4.3%	413.8	70.0%	591.4	-2.8%
1994	32.6	4.9%	31.8	4.7%	19.4	2.9%	526.0	78.3%	672.1	13.6%
1995	30.5	4.7%	44.2	6.9%	27.0	4.2%	467.4	72.5%	644.3	-4.1%
1996	30.9	4.7%	41.9	6.4%	27.7	4.2%	469.7	71.6%	656.3	1.9%
1997	23.3	3.4%	45.6	6.6%	21.1	3.0%	498.9	72.1%	692.4	5.5%
1998	20.9	2.6%	66	8.2%	23.9	3.0%	580.2	72.4%	800.9	15.7%
1999	22.3	2.8%	46.3	5.8%	33.4	4.2%	604.5	75.5%	800.2	-0.1%
2000	21.2	2.6%	33.4	4.1%	26.0	3.2%	634.8	77.0%	824.3	3.0%
2001	17.9	2.1%	32.8	3.9%	32.1	3.8%	635.8	75.8%	839.1	1.8%
2002	16.7	2.0%	28.9	3.5%	15.5	1.9%	647.2	77.8%	831.7	-0.9%
2003	19.2	2.3%	26.1	3.1%	27.9	3.3%	635.0	75.0%	846.5	1.8%
2004	12.1	1.3%	23.2	2.5%	26.6	2.9%	722.7	78.3%	923.4	9.1%
2005	10.1	1.1%	26.1	2.9%	33.2	3.7%	688.2	76.1%	904.2	-2.1%
2006	8.6	1.0%	28.3	3.2%	25.4	2.8%	705.6	79.0%	893.5	-1.2%
2007	7.1	0.8%	28.6	3.2%	21.8	2.4%	741.6	82.4%	900.3	0.8%

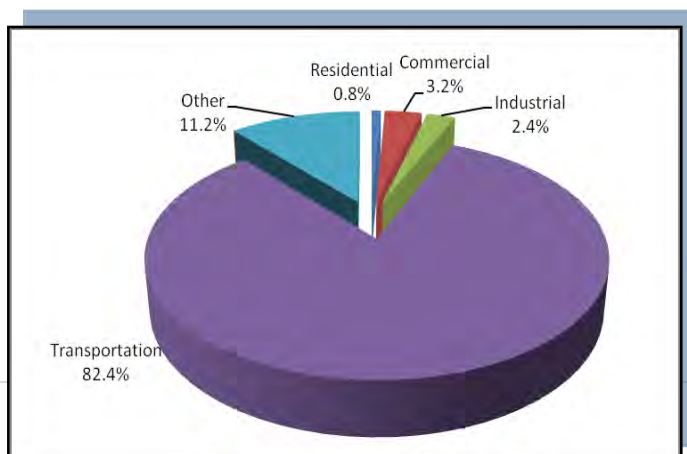
Note: The term distillate fuel includes products known as No. 1, No. 2, and No. 4 fuel oils and No. 1, No. 2, and No. 4 diesel fuels.

*Total reflects other categories. **Transportation column includes "On Highway" consumers and "Railroad" consumers.

Source: Energy Information Administration, *Fuel Oil and Kerosene Sales*

http://tonto.eia.doe.gov/dnav/pet/pet_cons_821dst_dcu_SSC_a.htm

2007



Distillate Fuel Oil Prices by End-Use Sector

From 1990 to 2007, South Carolina prices for distillate fuel oil have increased substantially from 84.9 cents/gallon on average to 226.4 cents/gallon on average, representing an increase of approximately 166.8 percent.

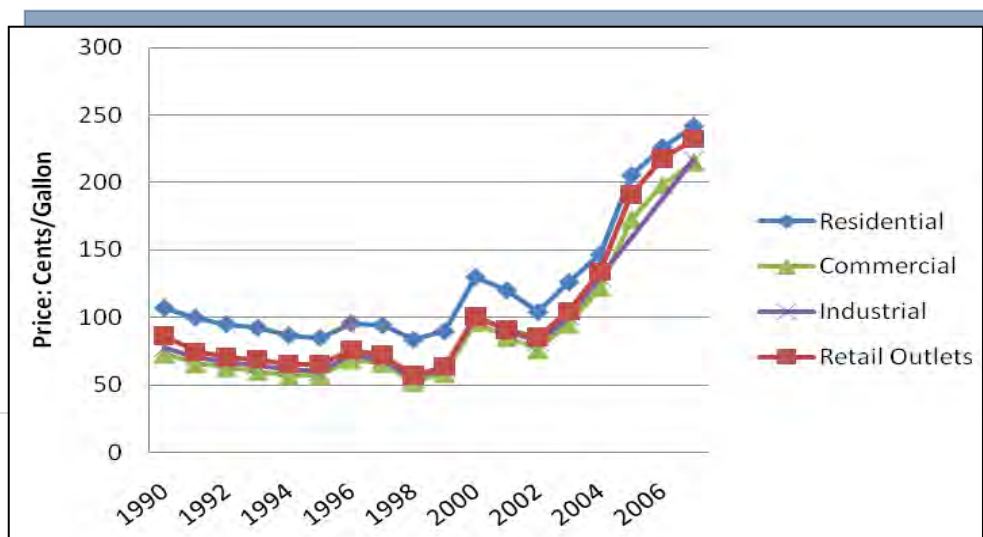
South Carolina 1990-2007

(Cents per Gallon, Excluding Taxes)

Year	Residential	Commercial	Industrial	Retail Outlets	Other	Average	Percent Change
1990	106.8	72.9	77.7	86.2	81.0	84.9	N/A
1991	99.6	65.7	70.1	74.5	71.6	76.3	-10.2%
1992	94.8	62.9	66.5	70.3	68.6	72.6	-4.8%
1993	92.2	60.1	64.2	69.0	65.8	70.3	-3.2%
1994	86.6	57.0	61.9	65.4	63.7	66.9	-4.8%
1995	84.8	57.0	60.0	65.4	62.8	66.0	-1.4%
1996	95.5	68.5	72.0	75.7	73.6	77.1	16.8%
1997	94.1	66.3	68.5	72.2	71.3	74.5	-3.3%
1998	83.4	52.0	54.6	57.3	56.2	60.7	-18.5%
1999	89.5	58.8	62.1	63.7	61.1	67.0	10.4%
2000	129.7	96.5	100.5	100.5	99.4	105.3	57.1%
2001	120.0	85.3	90.7	90.9	91.3	95.6	-9.2%
2002	103.9	76.2	82.2	85.3	84.5	86.4	-9.6%
2003	126.0	94.9	100.0	104.7	97.3	104.6	21.0%
2004	146.3	122.1	129.6	134.0	125.9	131.6	25.8%
2005	205.1	172.5	NA	190.9	187.3	189.0	43.6%
2006	225.9	197.8	NA	217.7	207.4	212.2	12.3%
2007	241.5	214.8	216.9	232.2	226.5	226.4	6.7%

*These are the average annual prices for No. 2 Distillate for PAD District I, Subdistrict C, which includes South Carolina (Southeast Region).

Source: Energy Information Administration, *Distillate Prices by Sales Type*
http://tonto.eia.doe.gov/dnav/pet/pet_pri_dist_dcu_R1Z_a.htm



Kerosene Consumption by End-Use Sector

South Carolina's kerosene consumption has decreased significantly over the past two decades, across all economic sectors. From 2006-2007, kerosene usage decline dramatically; while the industrial sector accounted for approximately 19 percent of kerosene consumption in 2006, by 2007 that number decreased to less than 2 percent. These declines in consumption coincide with a decline in overall economic activity. In 2007, South Carolina used 85.3 percent fewer gallons of kerosene than in 1985.

South Carolina 1990-2007 (Thousand Gallons)

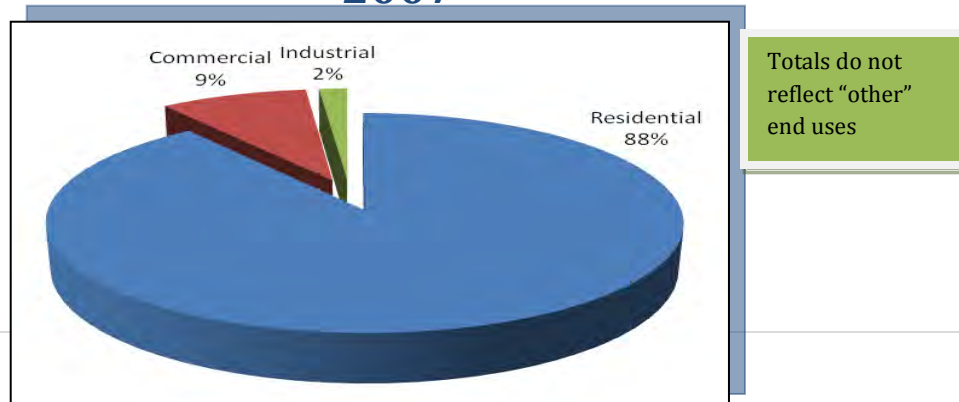
Year	Residential		Commercial		Industrial		TOTAL *	Percent Change
1990	23,091	83.5%	515	1.9%	3,299	11.9%	27,662	-53.8%
1991	30,684	85.8%	488	1.4%	3,472	9.7%	35,751	29.2%
1992	18,528	84.2%	572	2.6%	2,508	11.4%	22,009	-38.4%
1993	27,104	84.9%	845	2.6%	3,236	10.1%	31,913	45.0%
1994	15,604	78.5%	1,100	5.5%	2,786	14.0%	19,890	-37.7%
1995	19,751	82.0%	1,094	4.5%	2,849	11.8%	24,094	21.1%
1996	23,570	83.4%	977	3.5%	3,417	12.1%	28,254	17.3%
1997	25,640	87.9%	677	2.3%	2,629	9.0%	29,168	3.2%
1998	28,548	81.2%	1,984	5.6%	4,202	12.0%	35,152	20.5%
1999	23,207	82.9%	1,277	4.6%	3,021	10.8%	28,010	-20.3%
2000	21,573	75.4%	2,280	8.0%	4,008	14.0%	28,626	2.2%
2001	20,896	75.2%	1,680	6.0%	3,929	14.1%	27,792	-2.9%
2002	12,221	73.6%	1,022	6.2%	2,458	14.8%	16,604	-40.3%
2003	15,817	79.6%	920	4.6%	3,039	15.3%	19,862	19.6%
2004	22,841	80.8%	1,095	3.9%	4,212	14.9%	28,259	42.3%
2005	19,995	78.4%	1,148	4.5%	4,261	16.7%	25,518	-9.7%
2006	15,189	74.6%	1,136	5.6%	3,802	18.7%	20,368	-20.2%
2007	8,055	88.2%	774	8.5%	148	1.6%	9,136	-55.1%

*Total includes amounts sold to "farm" consumers and "all other."

Source: Energy Information Administration, *Fuel Oil and Kerosene Sales*

http://tonto.eia.doe.gov/dnav/pet/pet_cons_821ker_dcu_SSC_a.htm

2007



Section 4: Natural Gas and Propane

Natural Gas Consumption by Sector

South Carolina ranked 45th in natural gas consumption per capita, having consumed only 181.4 trillion BTUs in 2007. Residential customers account for over 90 percent of natural gas consumers and 20 percent of natural gas consumption. In contrast, the industrial sector accounted for 0.2 percent of customers and approximately 65 percent of consumption. These figures do not include natural gas used to generate electricity, which represents slightly less than 30% of volumes delivered to consumers in 2007.

South Carolina 1990-2007

(Thousands of Cubic Feet)

Year	Residential			Commercial			Industrial		
	Number of Consumers	Consumption	Consumption per Consumer	Number of Consumers	Consumption	Consumption per Consumer	Number of Consumers	Consumption	Consumption per Consumer
1990	339,486	18,396,000	54	39,904	15,394,000	386	1,384	87,000,000	62,861
1991	344,763	19,612,000	57	39,999	15,796,000	395	1,400	86,000,000	61,429
1992	357,818	22,392,000	63	40,968	16,644,000	406	1,568	94,000,000	59,949
1993	370,411	24,345,000	66	42,191	17,014,000	403	1,625	96,000,000	59,077
1994	416,773	23,486,000	56	45,487	17,870,000	393	1,928	97,000,000	50,311
1995	412,259	25,164,000	61	47,293	18,868,000	399	1,802	98,000,000	54,384
1996	426,088	29,406,000	69	48,650	20,328,000	418	1,759	95,000,000	54,008
1997	443,093	25,741,000	58	50,817	19,560,000	385	1,764	102,929,000	58,350
1998	460,141	25,430,000	55	52,237	19,828,000	380	1,728	102,324,000	59,215
1999	473,799	25,669,000	54	53,436	20,566,000	385	1,768	102,635,000	58,051
2000	489,340	29,057,000	59	54,794	22,105,000	403	1,715	97,295,000	56,732
2001	501,161	27,485,000	55	55,257	20,743,000	375	1,702	79,674,000	46,812
2002	508,686	27,621,000	54	55,608	21,029,000	378	1,563	96,268,000	61,592
2003	516,362	29,154,000	56	55,909	22,365,000	400	1,574	78,807,000	50,068
2004	527,008	29,314,000	56	56,049	22,255,000	397	1,528	78,421,000	51,323
2005	541,523	28,537,000	53	56,974	22,048,000	387	1,535	74,002,000	48,210
2006	554,953	24,928,000	45	57,452	20,691,000	360	1,528	77,171,000	50,505
2007	553,179	24,466,000	44	55,770	20,714,000	371	1,452	75,341,000	51,888

Source: Energy Information Administration

http://www.eia.doe.gov/oil_gas/natural_gas/data_publications/natural_gas_annual/nga.html

2007



Natural Gas Average Prices by Sector

In 2007, South Carolina ranked 45th in natural gas expenditures per capita. However, average natural gas prices in South Carolina were higher than the national average for every sector, with South Carolina ranking 22nd in natural gas prices.

South Carolina

1990-2007

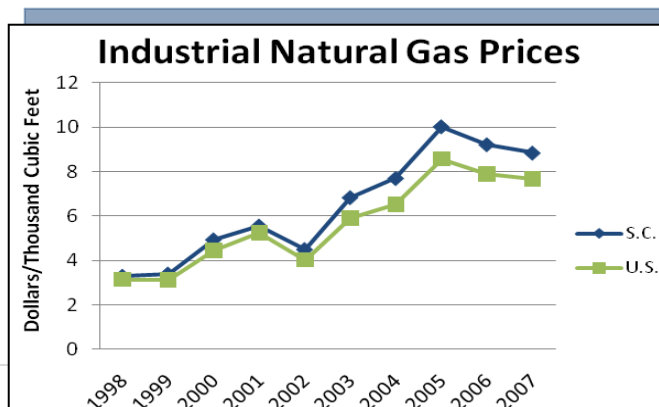
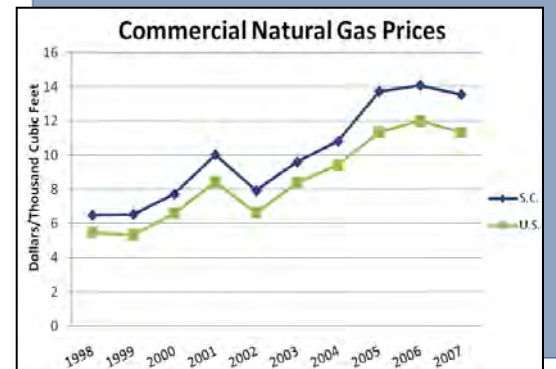
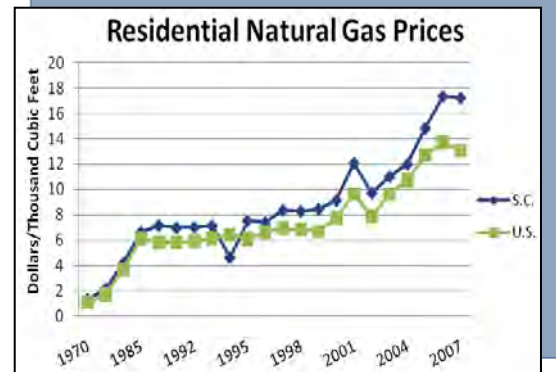
(Dollars per Thousand Cubic Feet)

Year	Residential		Commercial		Industrial	
	S.C.	U.S.	S.C.	U.S.	S.C.	U.S.
1990	7.17	5.8	5.9	4.83	NA	NA
1991	6.98	5.82	5.56	4.81	NA	NA
1992	7.03	5.89	5.65	4.88	NA	NA
1993	7.14	6.16	5.82	5.22	NA	NA
1994	4.65	6.41	6.11	5.44	NA	NA
1995	7.54	6.06	6.09	5.05	NA	NA
1996	7.41	6.64	6.26	5.4	NA	NA
1997	8.37	6.94	6.74	5.8	3.72	3.59
1998	8.3	6.82	6.48	5.48	3.29	3.14
1999	8.46	6.69	6.54	5.33	3.39	3.12
2000	9.15	7.76	7.72	6.59	4.93	4.45
2001	12.09	9.63	10.03	8.43	5.55	5.24
2002	9.73	7.89	7.92	6.63	4.49	4.02
2003	11.02	9.63	9.6	8.4	6.83	5.89
2004	12	10.75	10.81	9.43	7.69	6.53
2005	14.84	12.7	13.74	11.34	10.02	8.56
2006	17.359	13.734	14.094	11.998	9.213	7.874
2007	17.239	13.062	13.545	11.324	8.835	7.676

Note, "Industrial" sector prices were not collected prior to 1997.

Source: Energy Information Administration, *Natural Gas Annual*

http://www.eia.doe.gov/oil_gas/natural_gas/data_publications/natural_gas_annual/nga.html



Propane Prices by End-Use Sector

In 2007, average propane prices in South Carolina were higher than the national average for the residential and commercial sectors, but were lower than the national average for the industrial sector. From 2006 to 2007, average South Carolina propane prices increased by 8.8 percent for residential customers, 9.7 percent for commercial customers, and 11.6 percent for industrial customers. From 1995-2008, average propane prices increased by 173.2 percent throughout the state.

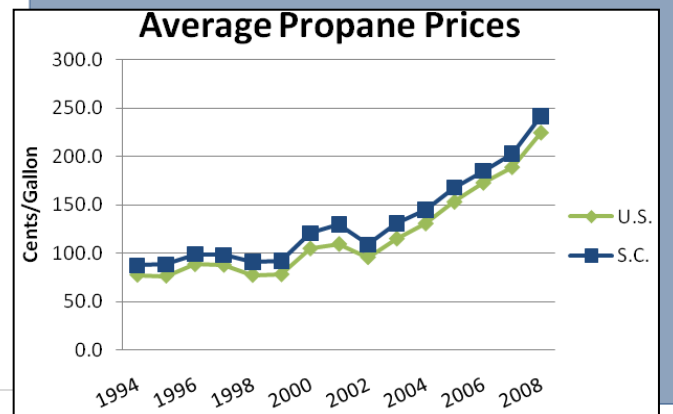
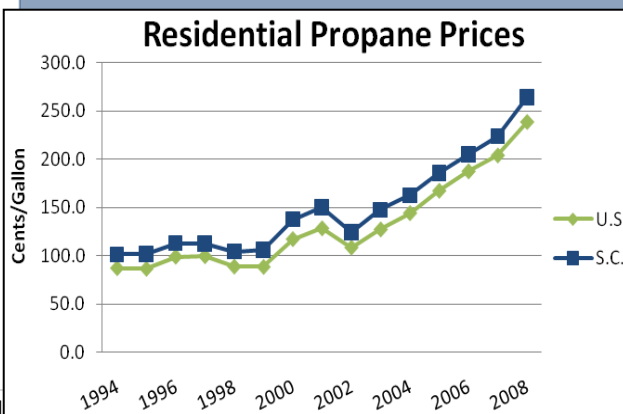
South Carolina* and United States 1995-2008

(Cents per Gallon, Excluding Taxes)

Year	Residential		Commercial		Industrial		Average	
	S.C.	U.S.	S.C.	U.S.	S.C.	U.S.	S.C.	U.S.
1995	102.1	86.5	78.7	77.7	69.1	64.6	88.5	76.6
1996	113.1	99.1	88.7	88.4	78.4	73.3	99.1	88.6
1997	112.4	99.6	90.7	90.5	75.2	77.8	98.2	87.8
1998	104.5	88.8	84.6	81.6	67.2	69.2	91.2	77.4
1999	106.3	88.5	82.5	80.8	70.1	73.4	92.1	78.1
2000	137.7	117.3	106.9	104.8	98.8	99.0	120.9	104.8
2001	150.1	128.5	114.6	113.5	107.2	107.4	130.0	109.4
2002	124.7	108.6	94.6	92.9	91.4	92.4	109.1	95.8
2003	147.6	127.4	114.6	109.8	108.2	108.1	131.2	115.0
2004	162.7	144.3	128.5	126.2	119.2	122.4	145.2	130.7
2005	185.8	167.5	148.1	147.5	143.6	146.1	167.8	153.0
2006	205.3	187.7	164.3	165.4	162.2	164.3	185.0	172.7
2007	223.8	204.2	183.2	181.4	179.9	183.7	203.1	188.8
2008	264.4	238.9	220.1	215	215.4	22.3	241.8	224.5

*Note that prices listed for South Carolina reflect average prices for the Lower Atlantic region, PAD District 1, Subdistrict C which includes South Carolina.

Source: Energy Information Administration, *Petroleum Navigator*
http://tonto.eia.doe.gov/dnav/pet/pet_pri_prop_dcus.htm



Section 5: Coal

Coal Consumption by Sector

South Carolina has the 19th highest coal consumption in the nation, having consumed 181.4 trillion BTUS in 2007. This indicates a 2.8 percent increase in total coal consumption in South Carolina over 2006 and a 219.5 percent increase over 1970.

South Carolina 1970-2007

(Thousand Short Tons and Percent of Total)

Year	Residential		Commercial		Industrial		Electric Utility		Total	Percent Change
1970	138	2.5%	108.0	1.9%	1,861	33.4%	3,708	66.6%	5,569	NA
1975	72	1.3%	169.0	3.0%	1,200	21.4%	4,401	78.6%	5,601	0.57%
1980	41	0.4%	156.0	1.6%	1,805	18.5%	7,927	81.5%	9,732	73.75%
1985	14	0.1%	51.0	0.5%	2,525	24.2%	7,888	75.7%	10,413	7.00%
1990	1	0.0%	5.0	0.0%	2,310	20.2%	9,131	79.8%	11,441	9.87%
1995	2	0.0%	15.0	0.1%	2,188	17.8%	10,074	82.2%	12,262	7.18%
2000	0	0.0%	0.0	0.0%	1,912	11.3%	15,034	88.7%	16,946	38.20%
2001	0	0.0%	0.0	0.0%	2,038	12.4%	14,382	87.6%	16,421	-3.10%
2002	s	0.0%	s	0.0%	1,923	11.8%	14,347	88.2%	16,269	-0.93%
2003	0	0.0%	0.0	0.0%	1,983	11.8%	14,798	88.2%	16,781	3.15%
2004	0	0.0%	0.0	0.0%	1,794	10.3%	15,557	89.7%	17,351	3.40%
2005	0	0.0%	0.0	0.0%	1,504	8.7%	15,793	91.3%	17,296	-0.32%
2006	8	0.0%	80.0	0.5%	1,439	8.3%	15,761	91.2%	17,288	-0.05%
2007	s	0.0%	s	0.0%	1,270	7.1%	16,524	92.9%	17,794	2.93%

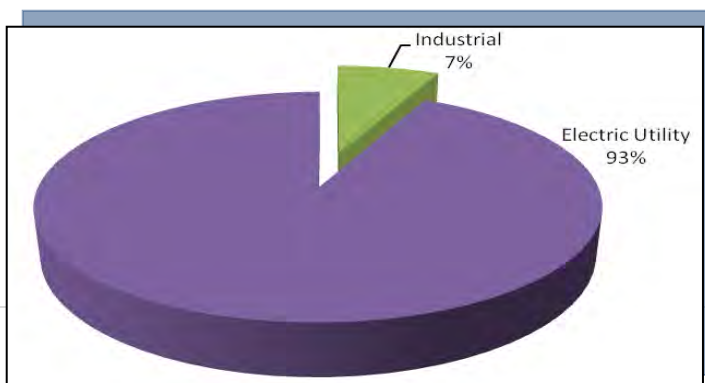
s Value is less than 0.05 of the table metric, but value is included in any associated total.

Source: Energy Information Administration, Coal Annual Report

http://www.eia.doe.gov/cneaf/coal/page/acr/acr_sum.html

<http://www.eia.doe.gov/cneaf/coal/page/acr/backissues.html>

2007



Electric Utility Coal Prices and Expenditures

Average 2007 South Carolina coal prices in nominal dollars per million BTU were \$4.55 for residential customers, \$3.07 for commercial customers, \$3.07 for industrial customers, and \$2.33 for electric utilities. Total state expenditures on coal increased from \$919.4 to \$1,057.2 million nominal dollars from 2006 to 2007, representing an increase of 15.0 percent. From 1970 to 2007, coal prices increased nominally approximately 441.8 percent and total state coal expenditures increased 67 percent.

South Carolina 1970-2007

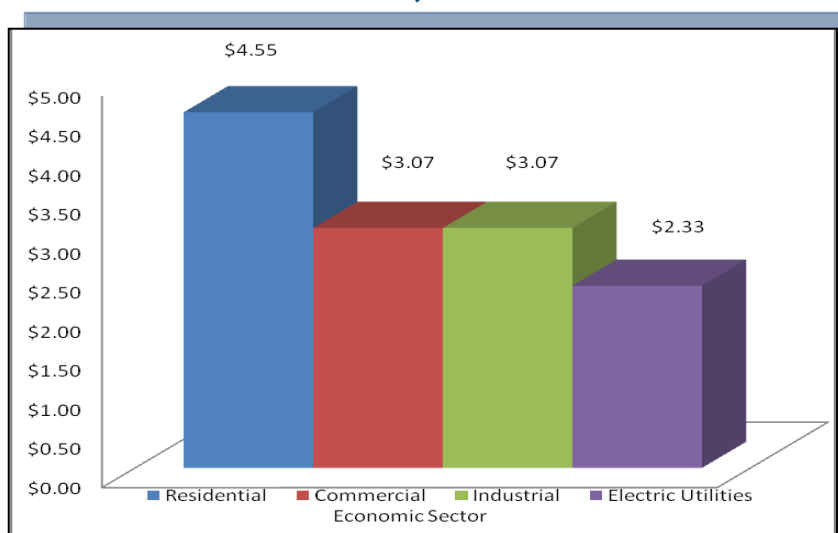
(Nominal Dollars per Million BTU and Million Nominal Dollars)

Year	Price	Expend.	Total State Expenditures	Percent Change
1970	\$ 0.43	\$39.0	\$66.2	NA
1975	\$ 1.14	\$120.9	\$174.4	163.4%
1980	\$ 1.56	\$306.6	\$391.2	124.3%
1985	\$ 1.91	\$378.4	\$493.2	26.1%
1990	\$ 1.72	\$397.4	\$498.9	1.2%
1995	\$ 1.51	\$391.5	\$486.8	-2.4%
2000	\$ 1.39	\$530.8	\$613.1	25.9%
2001	\$ 1.57	\$565.5	\$665.3	8.5%
2002	\$ 1.59	\$560.9	\$660.7	-0.7%
2003	\$ 1.62	\$593.9	\$690.9	4.6%
2004	\$ 1.91	\$739.9	\$842.8	22.0%
2005	\$ 2.16	\$846.4	\$960.3	13.9%
2006	\$ 2.32	\$912.3	\$1,037.2	8.0%
2007	\$ 2.33	\$956.5	\$1,057.2	1.9%

Source: Energy Information Administration

http://www.eia.doe.gov/emeu/states/hf.jsp?incfile=sep_prices/eu/pr_eu_sc.html&mstate=SOUTH%20CAROLINA

Prices, 2007



Section 6: Nuclear

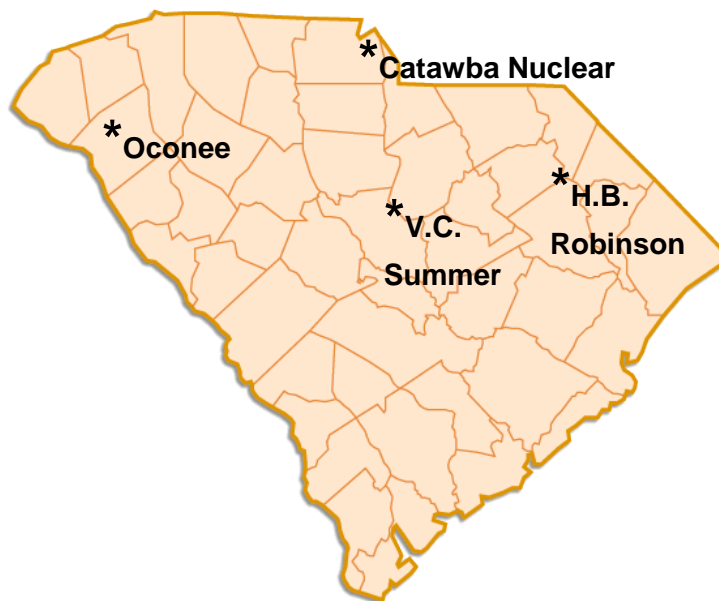
South Carolina's Nuclear Energy

With seven nuclear power reactors, South Carolina is the 3rd largest generator of nuclear electricity in the U.S., behind Illinois and Pennsylvania and the 2nd largest generator in terms of percent energy generated by nuclear. South Carolina is the only state in the southeastern region in which nuclear power is the leading source of electricity generation.

Consistent with the national trend toward relicensing of existing nuclear power plants, each of South Carolina's nuclear power plants has been granted an extension of its original 40-year license, permitting continuing operation for an additional 20 years.

The two light-water reactors at the Catawba Nuclear Station are the largest in the state, while the three reactors at the Oconee plant have the greatest nuclear capacity in the southeastern United States.

Location of Nuclear Power Plants in South Carolina



Nuclear Power Plants in South Carolina

Catawba

The Catawba Nuclear Station is a two unit station located in North-Central South Carolina, 6 miles north of Rock Hill and 19 miles southwest of Charlotte. It is sited on a 391-acre peninsula bounded by Beaver Dam Creek, Big Allison Creek and Lake Wylie. In 2008, the two units accounted for 21.4 percent of South Carolina's nuclear generation total.

Catawba Unit 1	
<i>Operator</i>	Duke Power Company (subsidiary of Duke Energy)
<i>Owners</i>	North Carolina Electric Membership Corp. (56.3%), Duke Power (25%), Saluda River Electric Cooperative (18.8%)
<i>Reactor Supplier</i>	Westinghouse Corporation
<i>Capacity</i>	1129 net MWe
<i>Reactor Type</i>	Pressurized water reactor
<i>Date of Operation</i>	January 1985
<i>License Expiration Date</i>	12/05/2043
<i>Electricity Generated in 2008</i>	8.77 billion kWh
<i>2006-2008 Capacity Factor</i>	90.8%
Catawba Unit 2	
<i>Operator</i>	Duke Power Company (subsidiary of Duke Energy)
<i>Owners</i>	North Carolina Eastern Municipal Power Agency (75%), Piedmont Municipal Power Agency (25%)
<i>Reactor Supplier</i>	Westinghouse Corporation
<i>Capacity</i>	1129 net MWe
<i>Reactor Type</i>	Pressurized water reactor
<i>Date of Operation</i>	May 1986
<i>License Expiration Date</i>	12/5/2043
<i>Electricity Generated in 2003</i>	10.20 billion kWh
<i>2006-2008 Capacity Factor</i>	92.0%

H.B. Robinson

The H.B. Robinson Plant is sited on over 5,000 acres of land near Hartsville and 56 miles east of Columbia, South Carolina. The site includes Lake Robinson, its source of cooling water and a coal-fired unit, H.B. Robinson 1. Unit 2 provides for 13 percent of South Carolina's total nuclear generation.

H.B. Robinson	
<i>Operator</i>	Carolina Power & Light Co. (subsidiary of Progress Energy)
<i>Owner</i>	Progress Energy (100%)
<i>Reactor Supplier</i>	Westinghouse Corporation
<i>Capacity</i>	714 net MWe
<i>Reactor Type</i>	Pressurized water reactor
<i>Date of Operation</i>	September 1970
<i>License Expiration Date</i>	7/31/2030
<i>Electricity Generated in 2008</i>	5.43 billion kWh
<i>2006-2008 Capacity Factor</i>	94.4%



H.R. Robinson Plant, Hartsville, South Carolina

Oconee

The Oconee Nuclear Station is located on the shore of Lake Keowee, approximately 26 miles west of Greenville, South Carolina. Unit 2 accounts for 38 percent of South Carolina's total nuclear generation.

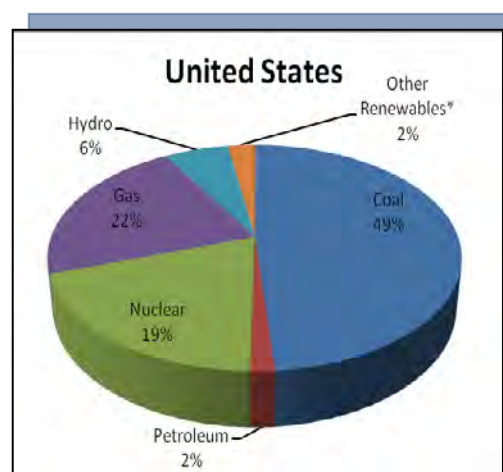
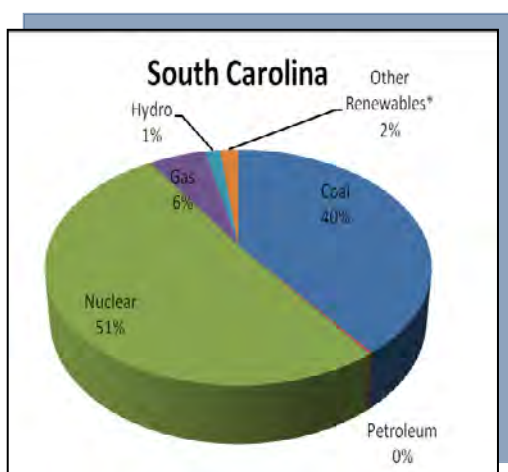
Oconee Unit 1	
Operator	Duke Power Co.
Owner	Duke Energy Corp. (100%)
Reactor Supplier	Babcock and Wilcox
Capacity	846 net MWe
Reactor Type	Pressurized water reactor
Date of Operation	February 1973
License Expiration Date	2/6/2033
Electricity Generated in 2008	6.22 billion kWh
2006-2008 Capacity Factor	87.0%
Oconee Unit 2	
Operator	Duke Power Co.
Owner	Duke Energy Corp. (100%)
Reactor Supplier	Babcock and Wilcox
Capacity	846 net MWe
Reactor Type	Pressurized water reactor
Date of Operation	October 1973
License Expiration Date	10/6/2033
Electricity Generated in 2008	6.39 billion kWh
2006-2008 Capacity Factor	92.4%
Oconee Unit 3	
Operator	Duke Power Co.
Owner	Duke Energy Corp. (100%)
Reactor Supplier	Babcock and Wilcox
Capacity	846 net MWe
Reactor Type	Pressurized water reactor
Date of Operation	July 1974
License Expiration Date	7/19/2034
Electricity Generated in 2008	7.58 billion kWh
2006-2008 Capacity Factor	93.2%

Virgil C. Summer

The Virgil C. Summer nuclear station occupies a site in Fairfield County near Jenkinsville, South Carolina, about 26 miles southwest of Columbia. The site includes the decommissioned experimental CVTR unit. Water from the Monticello reservoir provides cooling water and feeds a pumped storage unit. The Summer station provides 15 percent of the total nuclear generation in South Carolina.

Virgil C. Summer	
Operator	South Carolina Electric & Gas Co.
Owners	South Carolina Electric & Gas Co. (66.7%), South Carolina Public Service Authority (33.3%)
Reactor Supplier	Westinghouse Corporation
Capacity	952 net MWe
Reactor Type	Pressurized water reactor
Date of Operation	November 1982
License Expiration Date	8/6/2022
Electricity Produced in 2008	7.18 billion kWh
2006-2008 Capacity Factor	91.2%

Percent Electricity Generation by Nuclear 2007



Source: Energy Information Administration, *Electric Power Annual 2007 State Data Tables*
http://www.eia.doe.gov/cneaf/electricity/epa/epa_sprdshts.html

South Carolina Radioactive Waste Disposal Program

The Radioactive Waste Disposal Program in the South Carolina Energy Office administers the SC Budget and Control Board's responsibilities for the Barnwell radioactive waste disposal site. The Barnwell site was one of six disposal sites developed in the 1960s and 1970s for commercially-generated, low-level radioactive waste, most of which is generated by nuclear power plants. Consistent with federal guidelines, the Barnwell facility is owned by the State of South Carolina and leased to a private company for disposal operations.

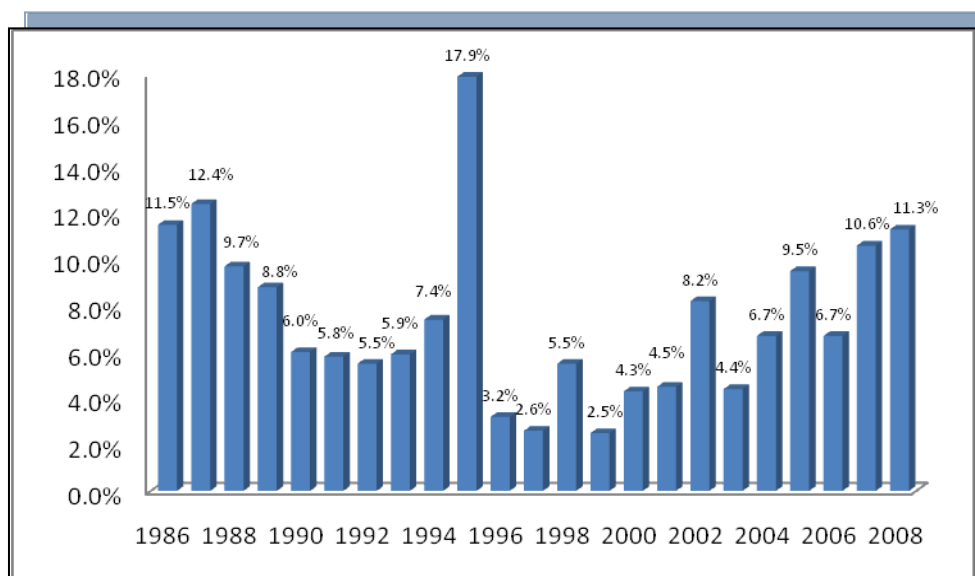
The Barnwell site was originally intended to serve the Southeast region of the nation, but closure of the other disposal sites left Barnwell as the only site east of the Mississippi River, resulting in the disposal of large volumes of waste from across the nation. State law enacted in 2000, decreased the volume of waste accepted at the Barnwell site each year through June 30, 2008. Since that date, the Barnwell facility is allowed to accept waste only from the three-state Atlantic Compact region, which includes South Carolina, New Jersey and Connecticut.

There are two other facilities operating today in the U.S. for disposal of waste from sources other than atomic weapons production. A disposal site in Richland, Washington accepts only waste generated within the 11-state Northwest and Rocky Mountain compact regions. A relatively new disposal facility in Utah accepts waste from across the nation, but can only receive wastes classified as "Class A." These wastes are relatively low in radioactivity and high in volume, compared to other, higher activity "low-level" waste, classified as "Class B" and "Class C."

The Radioactive Waste Disposal Program works with the Barnwell disposal site operator and the six nuclear utilities in the Atlantic Compact region to ensure that revenues received from disposal customers are sufficient to cover all costs of operating the disposal site. The SC Energy Office also assesses the adequacy of a state fund that will be used to monitor and maintain the disposal site for at least 100 years after final closure of the facility. At the end of Fiscal Year 2009, the balance of the fund was \$125 million.

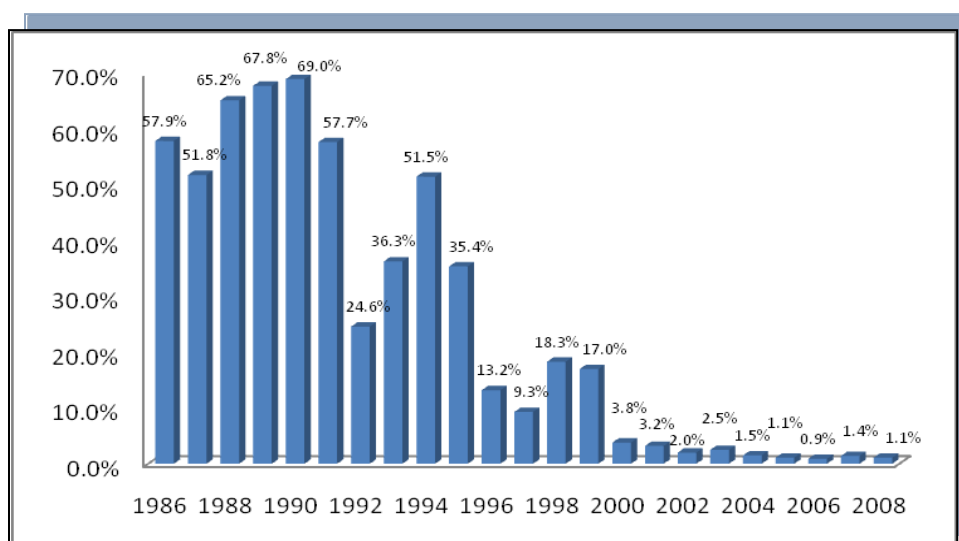
South Carolina Radioactive Waste Disposal Program

Percent of Radioactive Waste Received at Barnwell Site from South Carolina, 1986-2008



Source: South Carolina Radioactive Waste Disposal Program

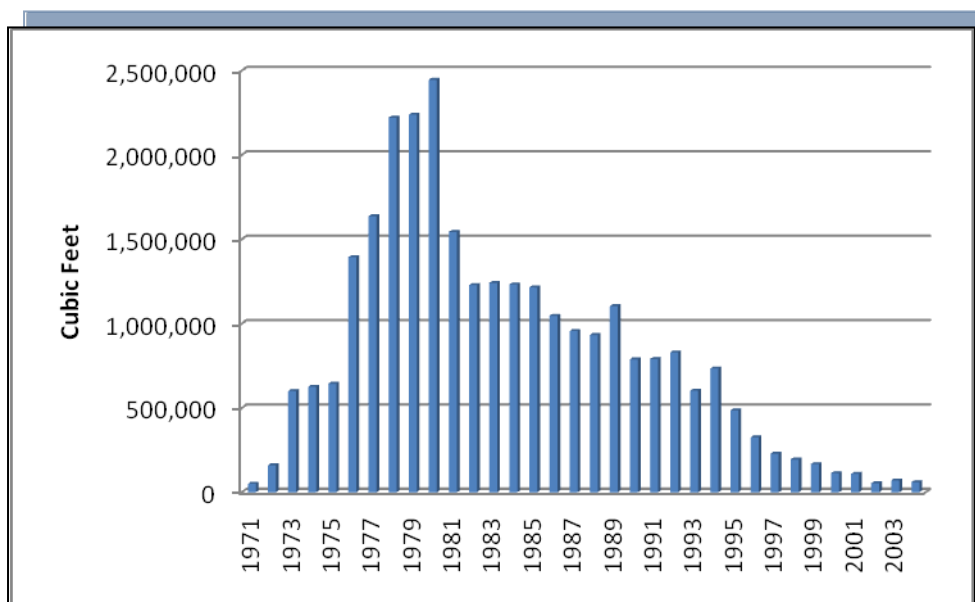
Nationwide Percentage of Radioactive Waste Volume Received at Barnwell Site, 1986-2008



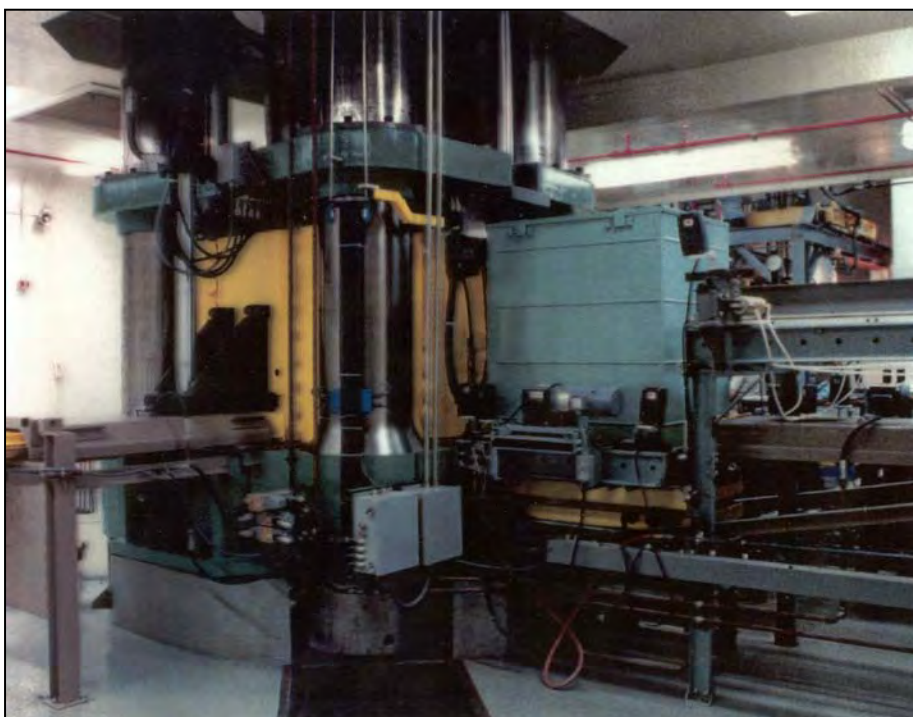
Source: South Carolina Radioactive Waste Disposal Program

South Carolina Radioactive Waste Disposal Program

Volume of Radioactive Waste Received at Barnwell County Site, 1971-2008



Source: South Carolina Radioactive Waste Disposal Program



Reduced waste volumes at Barnwell are the result of a combination of a new disposal site in Utah for low-activity waste, higher prices at Barnwell, legislatively-imposed volume limits and the development of new waste processing facilities, such as the EnergySolutions incinerator in Tennessee (shown left).

Savannah River Site

The federal Savannah River Site in South Carolina, which is owned and operated by the U.S. Department of Energy (DOE), produces and consumes substantial amounts of electricity in support of its missions.

SRS was constructed during the early 1950s to produce the basic materials used in the fabrication of nuclear weapons, primarily tritium and plutonium-239, in support of our nation's defense programs. For the past 20 years, SRS activities have focused on waste management and environmental remediation.

In 2009, SRS announced construction of an \$800 million biomass electric cogeneration facility and two smaller biomass heating facilities, which will replace coal burning facilities that have supplied the site with electricity. The power plants will be primarily fueled with forestry residues that are currently left in the forest to rot when the timber is harvested.

Contractor Ameresco will finance, design, construct, operate, maintain and fuel the new biomass facilities for the DOE. Under the contract, the DOE will not have to provide any up-front money to fund the energy-efficiency and renewable-energy project. Ameresco will be reimbursed from the guaranteed energy and operational cost savings generated by the project over the span of the contract.

When completed, the new facilities will result in an annual reduction of 400 tons of per year of particulate matter, 3,500 tons of sulfur dioxide emissions, and 100,000 tons of carbon emissions. It will also reduce annual water consumption by 1.4 billion gallons and eliminate the burning of coal by 161,000 tons per year.

The current SRS D-area power plant provides half of SRS's electricity needs. It was built in 1953 and costs \$300 million annually to maintain and operate.



Section 7: Renewable Energy

Renewable Net Power Generation

South Carolina renewable energy generation increased 27.9 percent from 1997 to 2007. Total state generation of renewable energy decreased by 1.2 percent from 2006 to 2007, as hydroelectric conventional generation decreased from 1,806,948 to 1,735,280 thousand kWh. Worsened draught conditions correlate to this decline in hydroelectric generation. In 2007, 3.5 percent of the 103,402,000 thousand kWh of electricity produced in South Carolina was renewable.

South Carolina 1990-2007

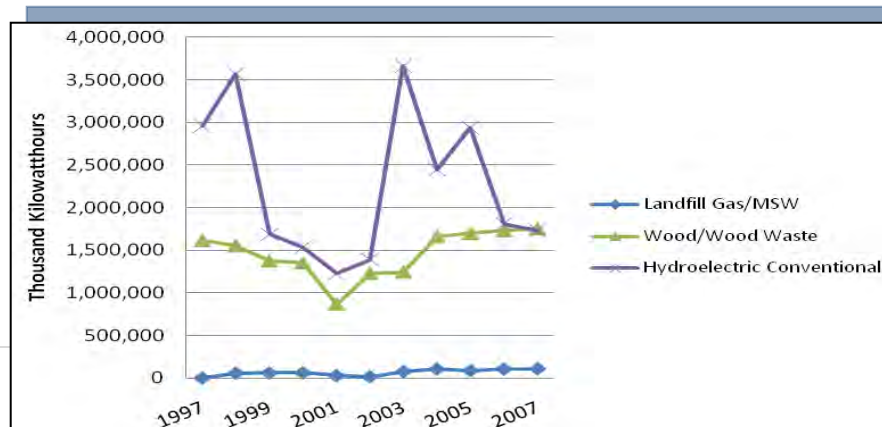
(Thousand Kilowatthours)

Year	Biomass			Hydroelectric Conventional	Totals	Total State Generation	Percent Renewable
	Landfill Gas/MSW	Other Biomass*	Wood/Wood Waste				
1990	NA	NA	1,321,764	3,298,700	4,620,464	71,363,000	6.5%
1991	NA	NA	1,451,793	3,136,505	4,588,298	72,180,000	6.4%
1992	NA	NA	1,739,965	3,311,102	5,051,067	74,171,000	6.8%
1993	NA	NA	1,602,209	2,950,745	4,552,954	78,175,000	5.8%
1994	NA	NA	1,609,169	3,038,238	4,647,407	76,943,000	6.0%
1995	NA	NA	1,662,833	3,457,798	5,120,631	80,914,000	6.3%
1996	NA	NA	1,573,995	3,041,618	4,615,613	78,769,000	5.9%
1997	NA	67,500	1,506,659	2,958,153	4,532,312	80,828,059	5.6%
1998	57,349	4,983	1,541,870	3,569,416	5,173,618	87,246,560	5.9%
1999	60,577	NA	1,376,131	1,687,351	3,124,059	90,233,509	3.5%
2000	62,534	6,147	1,351,052	1,533,490	2,953,223	93,346,237	3.2%
2001	28,045	537	866,107	1,225,443	2,120,132	89,158,988	2.4%
2002	15,522	NA	1,228,895	1,389,751	2,634,168	96,563,498	2.7%
2003	75,901	24,463	1,244,262	3,665,426	5,010,052	93,772,677	5.3%
2004	106,244	51,175	1,658,951	2,446,909	4,263,279	97,939,929	4.4%
2005	87,751	NA	1,697,465	2,938,147	4,723,363	102,514,665	4.6%
2006	106,093	NA	1,730,781	1,806,948	3,643,822	99,267,606	3.7%
2007	108,960	NA	1,754,399	1,735,280	3,598,639	103,402,000	3.5%

* Agricultural by-products/crops, sludge, waste, tires and other solids, liquids and gases.

Source: Energy Information Administration, *Renewable Energy Annual*

http://www.eia.doe.gov/cneaf/alternate/page/renew_energy_consump/rea_prereport.html



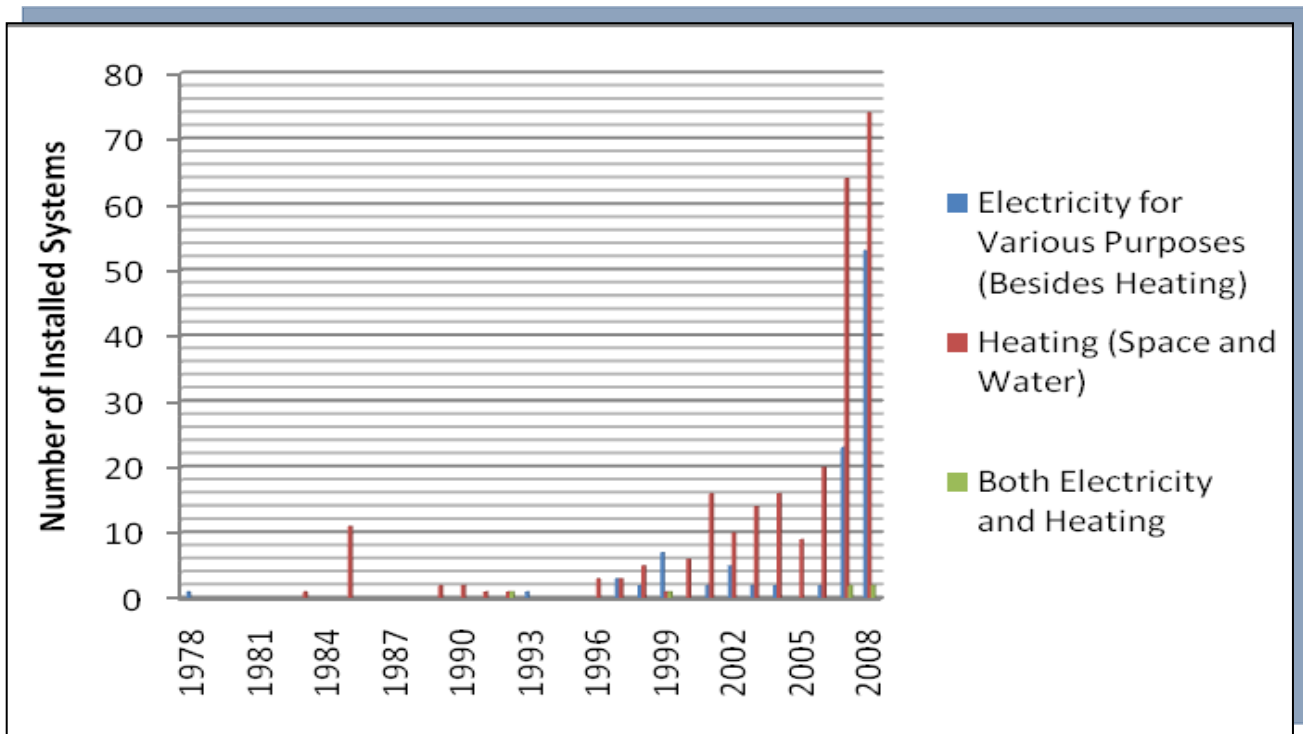
Solar Power Systems Installed

The first solar power system installed in South Carolina consisted of 60, 4x10 photovoltaic (PV) collectors that were installed in 1978 and later removed in 2004. By 2008, 368 individual solar power systems had been reported* across the state, the majority of which were installed in 2007 and 2008 alone. This exponential increase in installations coincides with the implementation of a state tax credit for solar installations. The solar industry is seeing exponential growth each year as the state and nation become more focused on renewable energy. Of the 386 solar power systems reported, 259 were installed for heating (hot water, pool heat, space heat), 103 were installed for electricity (to power the building, attic fans, water pumps, irrigation systems, gates or other electronics) and six were installed for both heating and electricity.

South Carolina

1978-2008

(Number of Installations and Year)



Source: SC Energy Office Database of Solar Installations

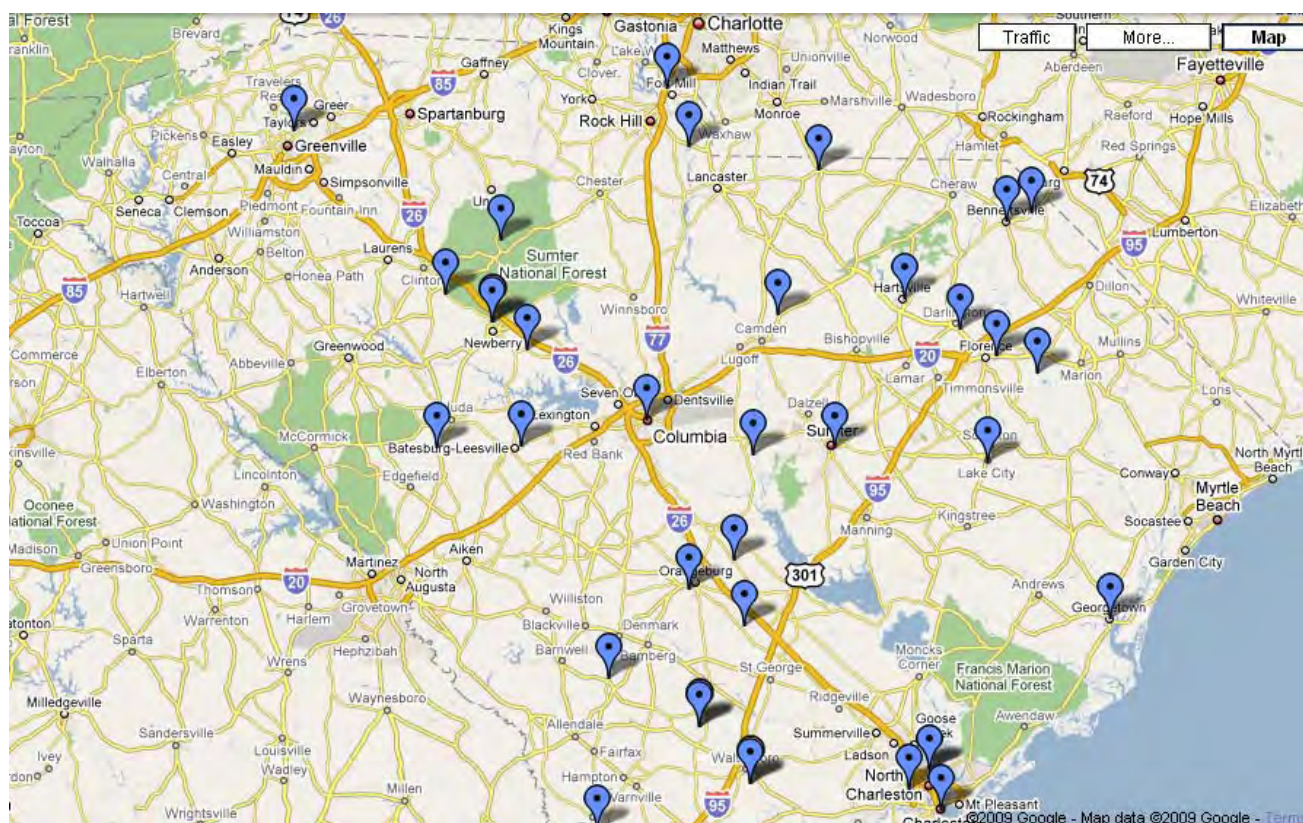
* These numbers are part of a database of solar installations in South Carolina, with information submitted voluntarily by solar installers. Please contact the SCEO (energyys@energy.sc.gov) if you are an installer and would like to report your installations.

Renewable Energy Combustion Facilities

As of August 2009, 71,255 MWh of electricity were reported* to be generated annually in South Carolina from the combustion of wood feedstock, including bark, sawdust, chips, ground pallets, residential wood waste, dry wood shavings, veneer waste, sludge and softwood from various species of tree. The biggest producer of energy from wood feedstock is Elliott Sawmilling Co. Inc. with 12,966,638 kWh of generation.

In addition, 3,719,865 gallons of used motor oil, 18,368 tons of waste tires and 220,000 tons of municipal solid waste were reported to be burned annually in the state to generate renewable energy. Santee Cooper burned the most used motor oil at 1,824,754 gallons. International Paper's Eastover Mill was the only site to burn waste tires and Montenay Charleston Resource Recovery was the only company to burn municipal solid waste.

Map of South Carolina Wood Combustion Facilities 2009



Source: SC Energy Office Database of Renewable Energy Combustion Installations

* These numbers are not necessarily complete and are estimates reported voluntarily from combustion facilities. Please contact the SCEO (energycs@energy.sc.gov) if you are a renewable energy combustion facility and would like to report your activities.

Section 8: Alternative Transportation Fuels

Alternative Transportation Fuels Consumption

Biodiesel consumption increased a significant 181.7 percent from FY2006 to FY2007 and then decreased equally significantly in FY2008 and again in FY2009. During FY08, gasoline and diesel prices reached record highs of around \$4.00/gallon. This increase made many alternative fuels very cost-effective. Ethanol consumption also increased significantly, by 188 percent, from FY2007 to FY2008. Almost 52 million gallons of alternative fuels were consumed in FY2008. Unlike biodiesel, ethanol consumption continued to increase from FY2008 to FY2009 by 72 percent. South Carolina is one of a few states still allowing statewide use of conventional or non-blended gasoline.

South Carolina FY2005-2009 (Gallons)

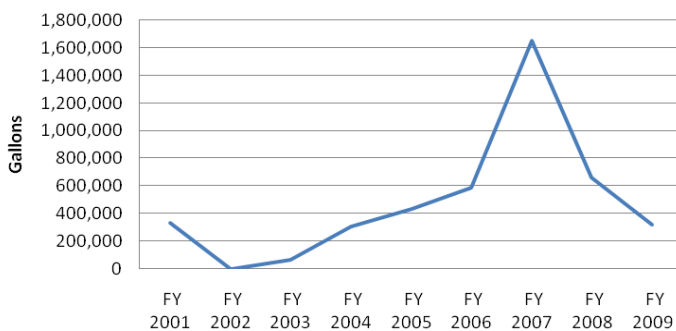
		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Biodiesel (B100)	Government	388,000	189,819	169,997	154,243	212,476
	Private	44,087	395,978	1,480,172	505,254	111,253
	Total	432,087	585,797	1,650,169	659,497	323,729
Ethanol (E100)	Government	117,000	29,200	29,802	39,831	55,664
	Private	1,085,498	9,771,396	17,804,690	51,283,811	88,226,042
	Total	1,202,498	9,800,596	17,834,492	51,323,642	88,281,706
CNG*	Government	-	798	635	862	487
	CMRTA	-	52,865	32,290	36,770	37,983
	Private	-	262	207	289	791
	Total	56,000	53,925	33,133	37,921	39,027
Total		1,690,585	10,440,318	19,517,794	52,021,060	88,644,462

*Amount Given in Gasoline Gallon Equivalents

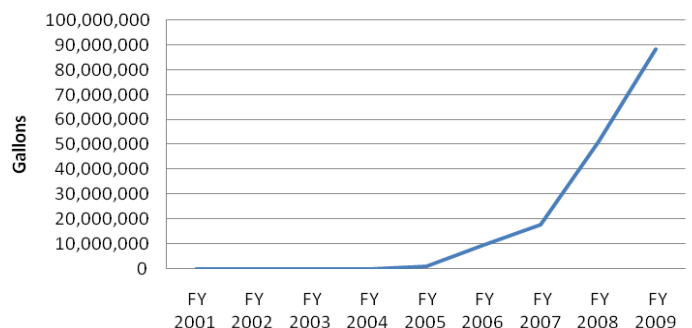
Please note that the South Carolina state fiscal year runs from July 1-June 31.

Source: SCEO Database/Department of Revenue

Biodiesel (B100)



Ethanol (E100)



Alternative Transportation Fuels

Estimated Alternative-Fueled Vehicles by Fuel Type

There were an estimated 12,877 alternative fuel vehicles in South Carolina in 2007—a 72.6 percent increase over 2002. Approximately 86 percent of those vehicles were ethanol-powered. While a very small part of the total, the number of electric vehicles more than tripled between 2006 and 2007. North Carolina, Georgia, Tennessee and Florida all had a greater number of alternative fuel vehicles than South Carolina in 2007.

South Carolina 1996-2007

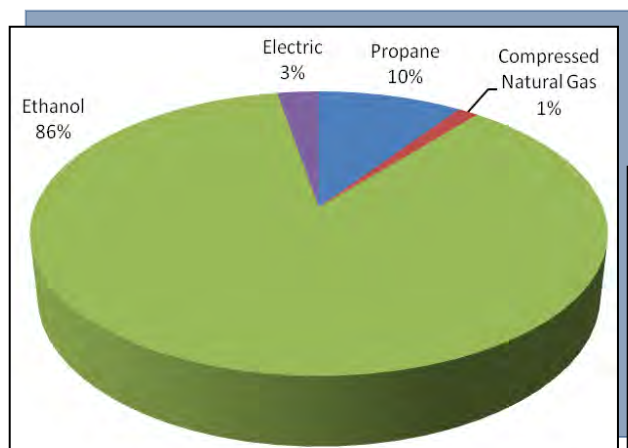
(Number Vehicles and Percent of Total)

Year	Propane (LPG)		Compressed Natural Gas		Ethanol		Electric		Total	Percent Change
1996	4,293	97.5%	93	2.1%	1	0.0%	18	0.4%	4,405	NA
1997	3,663	95.6%	141	3.7%	6	0.2%	21	0.5%	3,831	-13.0%
1998	3,686	93.3%	113	2.9%	125	3.2%	25	0.6%	3,949	3.1%
1999	3,700	90.0%	129	3.1%	258	6.3%	25	0.6%	4,112	4.1%
2000	3,771	77.8%	146	3.0%	907	18.7%	23	0.5%	4,847	17.9%
2001	NA	NA	NA	NA	NA	NA	NA	NA	6,018	24.2%
2002	3,047	40.8%	362	4.9%	4,051	54.3%	0	0.0%	7,460	24.0%
2003	2,680	28.3%	336	3.5%	6,015	63.5%	443	4.7%	9,474	27.0%
2004	1,771	17.9%	197	2.0%	7,372	74.4%	574	5.8%	9,914	4.6%
2005	2,792	70.2%	50	1.3%	1,107	27.8%	29	0.7%	3,978	-59.9%
2006	1,210	12.5%	206	2.1%	8,126	84.3%	100	1.0%	9,642	142.4%
2007	1,242	9.6%	177	1.4%	11,100	86.2%	358	2.8%	12,877	33.6%

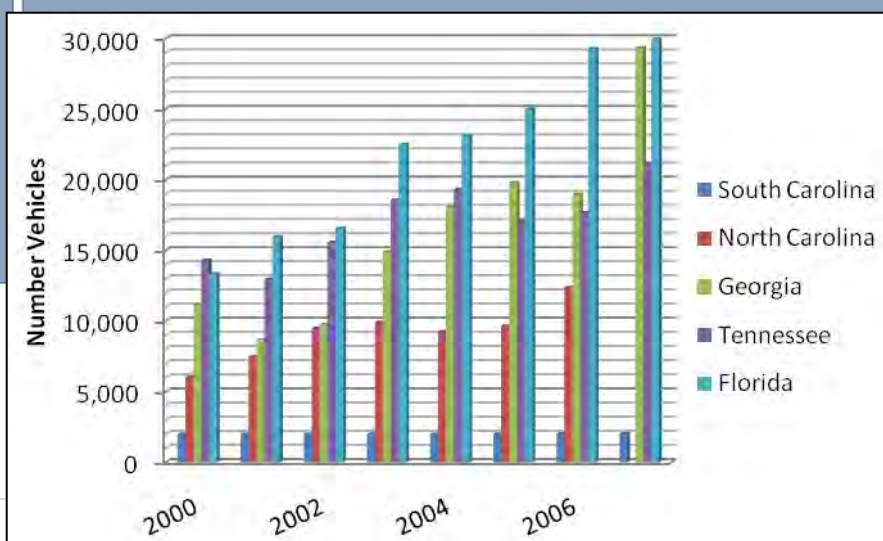
^a Excludes gasoline-electric and diesel-electric hybrids. ^b Excludes E85 vehicles used by private individuals (non-fleet users) because most of those are believed to be in use as traditional gasoline-powered vehicles. ^c May include P-Series fuel or any other fuel designated by the Secretary of Energy as an alternative fuel in accordance with the Energy Policy Act of 1995.

Source: Energy Information Administration, Office of Coal, Nuclear, Electric, and Alternate Fuels and the DOE/GSA Federal Automotive Statistical Tool (FAST). http://tonto.eia.doe.gov/state/state_energy_profiles.cfm?sid=SC

2007



Estimated Alternative-Fueled Vehicles by State 2000-2007



Alternative Transportation Fuels

Alternative Fueling Stations

In 2007, South Carolina ranked number one in percentage of national biodiesel stations; number nine in percentage of national E85 stations; and 25th in percentage of all state fueling stations that were alternative fueling stations. In 2007, South Carolina was home to almost 10 percent of the nation's biodiesel stations and 4.1 percent of the nation's E85 stations. Of all fueling stations in South Carolina, 2.8 percent were alternative fueling stations in 2007. (These rankings were based on 49 E85 stations and 71 biodiesel stations.) As of October 2009, South Carolina had 76 public E85 stations; 37 public biodiesel stations (B10-B99); 1 public CNG station; 2 public* hydrogen stations; and 27 propane stations.

Comparison across Southeastern States 2009

(Number of Public Stations)

<u>State</u>	<u>B20</u>	<u>B-Other²</u>	<u>E85</u>	<u>CNG</u>	<u>H₂</u>	<u>LPG</u>	<u>Total</u>
South Carolina	9	28	68	1	2*	27+	135
Alabama	33 ³	7 ³	14	3	0	159	216
Florida	15	0	20	17	2	49	103
Georgia	28	1	32	19	0	39	119
Kentucky	0	6	8	0	0	16	30
Mississippi	5	0	1	0	0	36	42
North Carolina	24	17	11	9	0	50	102
Tennessee	33	6	24	0	0	53	116
Virginia	21	19	3	4	1	21	69
Totals	168	84	182	53	5	450	933

2. "B-Other" is public stations for any blend other than B20

3. Uncertain of split between B20 and B-Other in Alabama. This is a best estimate.

4. NC has three stations that sell B20 and at least one other blend; they are counted in both columns.

*These hydrogen stations are public but prior arrangements must be made to refuel.

+These numbers are questionable, as it is difficult to determine the number of stations that will service vehicles.

Source: Southeast Fuels Fix, Summer 2009

www.sefuelfix.com

APPENDICES

Appendix A: Glossary

Anthracite: The highest rank of coal; used primarily for residential and commercial space heating. It is hard, brittle, and black lustrous coal, often referred to as hard coal, containing a high percentage of fixed carbon and a low percentage of volatile matter. The moisture content of fresh-mined anthracite is generally less than 15 percent. The heat content of anthracite ranges from 22 to 28 million Btu per ton on a moist, mineral-matter-free basis.

Barrel (bbl): A volumetric unit of measure for crude oil and petroleum products equivalent to 42 U.S. gallons.

Biomass (Biofuels): Energy sources from recent-term organic (plant and animal) matter. Nonfossil biomass energy sources are essentially unprocessed; they are burned or gassified, as received, to produce thermal energy or electricity. Examples are fuelwood, waste wood, garbage, and crop waste.

Bituminous Coal: A dense coal, usually black, sometimes dark brown, often with well-defined bands of bright and dull material, used primarily as fuel in steam-electric power generation, with substantial quantities also used for heat and power applications in manufacturing and to make coke. Bituminous coal is the most abundant coal in active U.S. mining regions. Its moisture content is usually less than 20 percent. The heat content of bituminous coal ranges from 21 to 30 million Btu per ton on a moist, mineral-matter-free basis.

British Thermal Unit (Btu): A standard unit for measuring the quantity of heat energy equal to the quantity of heat required to raise the temperature of 1 pound of water by 1 degree Fahrenheit. Because different energy types use different standards of measurement, they are often converted into Btu to enable comparison. One Btu is equal to 252 calories of heat.

Capability: The maximum load that a generating unit, generating station, or other electrical apparatus can carry under specified conditions for a given period of time without exceeding approved limits of temperature and stress.

Coal: A black or brownish-black solid combustible substance formed by the partial decomposition of vegetable matter without access to air. The rank of coal, which includes anthracite, bituminous coal, sub-bituminous coal, and lignite, is based on fixed carbon, volatile matter, and heating value.

Commercial Sector: The commercial sector is generally defined as non-manufacturing business establishments, including hotels, motels, restaurants, churches, wholesale businesses, retail stores, and health, social, and educational institutions.

Cooperative Electric Utility: An electric utility legally established to be owned by and operated for the benefit of those using its service. The utility company will generate, transmit, and/or distribute supplies of electric energy to a specified area not being serviced by another utility. Such ventures are generally exempt from Federal income tax laws. Most electric cooperatives have been initially financed by the Rural Electrification Administration, U.S. Department of Agriculture.

Demand-side-Management (DSM): Refers to the use of cost-effective conservation, efficiency, and load management in order to reduce the demand for and cost of energy services. DSM is a resource option that complements power supply. It not only saves the customer money, but also helps a utility achieve less pollution and avoid more costly supply-side investments.

Distillate Fuel Oil: Usually refers to “home heating oil.” Included are Fuel Oils No. 1, No. 2, and No. 4; and Diesel Fuels No. 1, No. 2, and No. 4. These products are used primarily for space heating, on-and-off highway diesel engine fuel (including railroad engine fuel and fuel for agriculture machinery), and electric power generation.

Electric Utility: A corporation, person, agency, authority, or other legal entity that owns and/or operates facilities within the U.S. for the generation, transmission, distribution, or sale of electric energy for use by both the public and private sectors.

Energy: The capacity for doing work as measured by the capability of doing work (potential energy) or the conversion of this capability to motion (kinetic energy). Energy has several forms, some of which are easily convertible and can be changed to another form useful for work. Most of the world’s convertible energy comes from fossil fuels that are burned to produce heat that is then used as a transfer medium to mechanical or other means in order to accomplish tasks. Electrical energy is usually measured in kilowatthours, while heat energy is usually measured in Btus.

End-Use: Any ultimate consumption of any type of fossil fuel (petroleum, coal, natural gas) or electricity whether generated by fossil fuel or other energy sources. End-users are often classified by economic sector, such as residential, commercial, industrial, and transportation.

Facility: An existing or planned location or site at which prime movers, electric generators, and/or equipment for converting mechanical, chemical, and/or nuclear energy into electric energy are situated, or will be situated. A facility may contain more than one generator of either the same or different prime mover type.

Fossil Fuel: Any naturally occurring organic fuel, such as petroleum, coal, and natural gas, which are derived from the remains of ancient plants and animals. Fossil fuels are sometimes referred to as conventional fuels or conventional energy sources (as compared with renewable energy sources: solar power, biomass, wind energy, etc.) because the bulk of today’s energy generation is derived from them and most of the industrial economy is based upon them.

Gallon: A unit of volume. A U.S. gallon contains 3.785 liters and it is 0.83 times the imperial gallon. One U.S. gallon of water weighs 8.3 pounds.

Gas Turbine Plant: A plant in which the prime mover is a gas turbine. It typically consists of an axial-flow air compressor and one or more combustion chambers, where liquid or gaseous fuel is burned and the hot gases are passed to the turbine and where the hot gases expand to drive the generator and are then used to run the compressor.

Generating Unit: Any combination of physically connected generator(s), reactor(s), boiler(s), combustion turbine(s), or other prime mover(s) operated together to produce electric power.

Hydroelectric Plant (Hydro): A plant in which the turbine generators are driven by falling water.

Industrial Sector: The industrial sector is that section of the economy generally defined as manufacturing, construction, mining, agriculture, fishing, and forestry establishments.

Interruptible Gas: Gas sold to customers with a provision that permits curtailment or cessation of service at the discretion of the distributing company under certain circumstances, as specified in the service contract.

Investor-Owned Utility: A class of utility whose stock is publicly traded and which is organized as a taxpaying business, usually financed by the sale of securities in the capital market. It is regulated and authorized to achieve an allowed rate of return.

Jet Fuel: Includes both naphtha-type and kerosene-type jet fuel meeting standards for use in aircraft turbine engines. Some jet fuel is used for generating electricity in gas turbines.

Kerosene: A petroleum middle distillate having burning properties suitable for use as an illuminant when burned in wick lamps. Kerosene is also used in space heaters, cooking stoves, and water heaters.

Kilowatt (kW): One thousand watts.

Kilowatthour (kWh): One thousand watt hours. The amount of electrical energy involved with a 1-kilowatt demand over a period of one hour. One kilowatthour is equivalent to 3,412 Btu of heat energy.

Liquified Petroleum Gases (LPG): Propane, propylene, butane, and propane-butane mixtures produced at a refinery or natural gas processing plant, including plants that fractionate raw natural gas processing plant liquids. These are derived by refining and processing natural gas, crude oil or unfinished oil.

Load (Electric): The amount of electricity delivered or required at any specific point or points on a system. The requirement originates at the energy-consuming equipment of the consumers.

Mcf: One thousand cubic feet.

Megawatt: 1,000 kilowatts; 1 million watts.

Motor Gasoline: A complex mixture of relatively volatile hydrocarbons, with or without small quantities of additives, that have been blended to form a fuel suitable for use in spark ignition engines. Included are leaded and unleaded products and refinery products.

Natural Gas: A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in porous geological formations beneath the earth's surface, often in association with petroleum. The principal constituent is methane, and is generally much higher in heat content than manufactured gas.

Net Generation: Gross generation minus plant use from all electric utility owned plants. The energy required for pumping at a pumped-storage plant is regarded as plant use and must be deducted from the gross generation.

No. 1 Diesel Fuel: A light distillate having ignition properties suitable for use in compression ignition engines. City buses use this product extensively.

No. 1 Fuel Oil: A distillate fuel oil intended for use in vaporizing pot-type burners.

No. 2 Diesel Fuel: A heavier distillate for use in compression ignition engines less sensitive than those requiring No. 1 Diesel Fuel. Highway transport trucks are large consumers of this product.

No. 2 Fuel Oil: A distillate fuel oil for general purpose domestic heating in burners not requiring No. 1 fuel oil.

No. 4 Fuel Oil: An oil for commercial burner installations with preheating facilities. It is used extensively in industrial plants. This grade is a blend of distillate fuel oil and residual fuel oil stocks.

No. 5 and No. 6 Fuel Oil: See residual fuel.

Nuclear Fuel: Fissionable materials that have been enriched to such a composition that, when placed in a nuclear reactor, will support a self-sustaining fission chain reaction, producing heat in a controlled manner for process use. Also listed as uranium.

Peak Demand: The maximum electric load during a specified period of time.

Petroleum: A mixture of hydrocarbons existing in the liquid state found in natural underground reservoirs, which includes fuel oil products, crude oil, kerosene, and jet fuel.

Primary Energy: Energy in its naturally occurring form (coal, oil, uranium, etc.) before conversion to end-use forms. The term is used in this report to indicate energy consumed by the major sectors (especially electric utilities) without regard to energy consumed by end-users.

Propane: Also known as liquefied petroleum gas (LPG). A colorless, highly volatile hydrocarbon that is readily recovered as a liquefied gas at natural gas processing plants and refineries. It is used primarily for residential and commercial heating and cooling, and also a fuel for transportation and industrial uses. Propane is the first product refined from crude petroleum.

Qualifying Facility: A cogeneration or small power production facility that meets certain ownership, operating, and efficiency criteria established by the Federal Energy Regulatory Commission (FERC) pursuant to the Public Utility Regulatory Policies Act (PURPA).

Refined Petroleum: Products obtained from the processing of crude oil, unfinished oils, natural gas liquids and other miscellaneous hydrocarbon compounds. Includes aviation gasoline, motor gasoline, naphtha-type jet fuel, kerosene-type jet fuel, kerosene, distillate fuel oil, residual fuel oil, ethane, liquefied petroleum gases, petrochemical feedstocks, special naphtha, lubricants, paraffin wax, petroleum coke, asphalt, road oil, still gas, and miscellaneous products.

Renewable Resources: Naturally, but flow-limited resources that can be replenished. They are virtually inexhaustible in duration, but limited in the amount of energy that is available per unit of time. Some (such as geothermal and biomass) may be stock-limited in that stocks are depleted by use, but on a time scale of decades, or perhaps centuries, they can probably be replenished. Renewable energy resources include: biomass, hydro, geothermal, solar and wind.

Residential Sector: The residential sector is defined as private household establishments which consume energy primarily for space heating, water heating, air conditioning, lighting, refrigeration, cooking and clothes drying.

Residual Fuel: The heavier oils that remain after the distillate fuel oils and lighter hydrocarbons are boiled off in refinery operations. Included are products known as No. 5 and No. 6 fuel oil, heavy diesel oil, Navy Special Fuel Oil, Bunker C oil, and acid sludge and pitch used as refinery fuels. Residual fuel oil is used for production of electric power, space heating, vessel bunkering, and various industrial purposes.

Sales for Resale: Energy supplied to other electric utilities, cooperatives, municipalities, and federal and state electric agencies for resale to ultimate consumers.

Short Ton (coal): A unit of weight equal to 2,000 pounds used for calculating the volume of coal.

Steam-Electric Plant: A plant in which the prime mover is a steam turbine. The steam used to drive the turbine is produced in a boiler where fossil fuels are burned.

Watt: The unit of measure for electric power or rate of doing work. The rate of energy transfer equivalent to 1 ampere flowing under a pressure of 1 volt at unity power factor.

Watthour (Wh): An electrical energy unit of measure equal to 1 watt of power supplied to, or taken from, an electric circuit steadily for one hour.

Appendix B: Conversion Factors

Fuel	Btu Equivalents:
1 Kilowatthour of Electricity	3,413 Btu
1 Cubic Foot of Natural Gas	1,008 to 1,034 Btu
1 Therm of Natural Gas	100,000 Btu
1 Gallon of Liquefied Petroleum Gas (LPG)	95,475 Btu
1 Barrel of Crude Oil	5,800,000 Btu
1 Gallon of Crude Oil	138,095 Btu
1 Gallon of Kerosene or Light Distillate Oil	135,000 Btu
1 Gallon of Middle Distillate or Diesel Fuel Oil	138,690 Btu
1 Gallon of Residual Fuel Oil	149,690 Btu
1 Gallon of Gasoline	125,000 Btu
1 Ton of Coal	16,200,000 to 26,000,000 Btu
1 Ton of Wood	9,000,000 to 17,000,000 Btu
1 Standard Cord of Wood	6,000,000 to 8,000,000 Btu

Measurement Equivalents:

1 Ton (short)	2,000 pounds; 6.65 barrels (crude oil)
1 Metric Ton	2,200 pounds
1 Barrel (bbl)	42 gallons; 5.615 cubic feet; 159.0 liters
1 Mcf	1,000 cubic feet
1 Therm	100,000 Btu
1 Thousand Btu (Mbtu)	1,000 Btu
1 Kilowatthour (kWh)	1,000 watt-hours
1 Megawatthour (MWh)	1,000 kWh or 1,000,000 watt-hours
1 Gallon	4.524 pounds of liquefied petroleum gas
1 Standard Cord of Wood	8 feet x 4 feet x 4 feet; 128 cubic feet; approx. 4,000 pounds