



Energy in the South – Fueling the Nation's Economy

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Energy Resource Highlights of the South



- South produces over ½ U.S. energy supply, serves 40% of population
 - 7 of top 10 southern states lead manufacturing jobs per capita
 - Robust, innovative energy supply: traditional fuels, renewables and energy efficiency
 - \$5 Trillion economy
- Key energy production
 - 3 of top 5 coal, oil, and natural gas producing states in South
 - 66% of natural gas supply from South
 - 4 states produce >50% of U.S. domestic crude oil
 - WV, KY & TX produce 25% of nation's coal (among top 6 coal states)
- South leads nuclear and renewable fuels output
 - 26 nuclear plants operating, 5 units under construction
 - TX, OK and WV have 16 GW of wind capacity
- States adopting energy efficiency measures
 - WV and MS -'Most Improved' energy efficiency programs (2014 ACEEE Scorecard)
 - AR prioritizing energy efficiency

Trending ... in the Energy World

- Electricity growth flat
 - Pre-Recession growth has not returned
 - Continued energy efficiency improvements drive down growth
- Natural gas prices low (v. coal)
 - Natural gas combined cycle plants being built
 - Gas units dispatch ahead of coal in some cases
- Utility IRPs: Coal retirements best option
 - Coal capacity aging
 - Environmental regulations increasing risk & cost of coal
- Price of renewable energy dramatically dropped in 2-3 years
- Nuclear energy in the South to increase (6 GW at 5 new units)

EPA Proposed Standards for CO₂ Emissions for the Coal Fleet



- **Standards for existing coal fired power plants – June 2015 Final Rule**
 - Clean Air Act 111(d) requires EPA to establish standards for existing stationary sources
 - Standards will become a part of State Implementation Plans to be completed by June 2016

- **Standards for new coal fired power plants – June 2014 Final Rule**
 - Clean Air Act 111(b) requires EPA to establish standards for new and modified stationary sources
 - Standard reflects degree of emissions limitation achievable through the application of best system of emission reduction that has been adequately demonstrated

Energy Facts in the South (2013)

- **Electricity consumption** 47% of national consumption
 - 50% of residential consumption
 - 48% of commercial/ industrial consumption
- **Electricity production** 42% of national electricity generated
 - 52% of natural gas generation nationwide generated in the southern region
 - 43% of coal fired generation
 - 41% of nuclear power generation
 - 30% of wind generation
- **Electricity Prices (South v nationwide)**
 - Residential: 10.96 cents/KWh v 12.12
 - Commercial: 8.97 cents/KWh v 10.29
 - Industrial: 6.09 cents/KWh v 6.82
 - Average: 9.08 cents/KWh v 10.08

Electrical Generating Resources Vary in SSEB Region - 2013



Predominantly Coal

- WV, Kentucky >93%
- Missouri 83%
- Arkansas 52%
- Maryland, Tennessee, OK 40-45%
- NC, TX, AL, GA 30-39%
- MS, LA, FL, SC, VA <30%

Predominantly Natural Gas

- Mississippi, Florida >60%
- Louisiana 51%
- Texas 47%
- Oklahoma 41%
- Missouri, WV, TN, KY ~5%+/-

Predominantly Nuclear

- South Carolina 57%
- TN, VA, MD, North Carolina 30-41%
- Georgia, Alabama 27%
- Oklahoma, Kentucky, West Virginia 0%

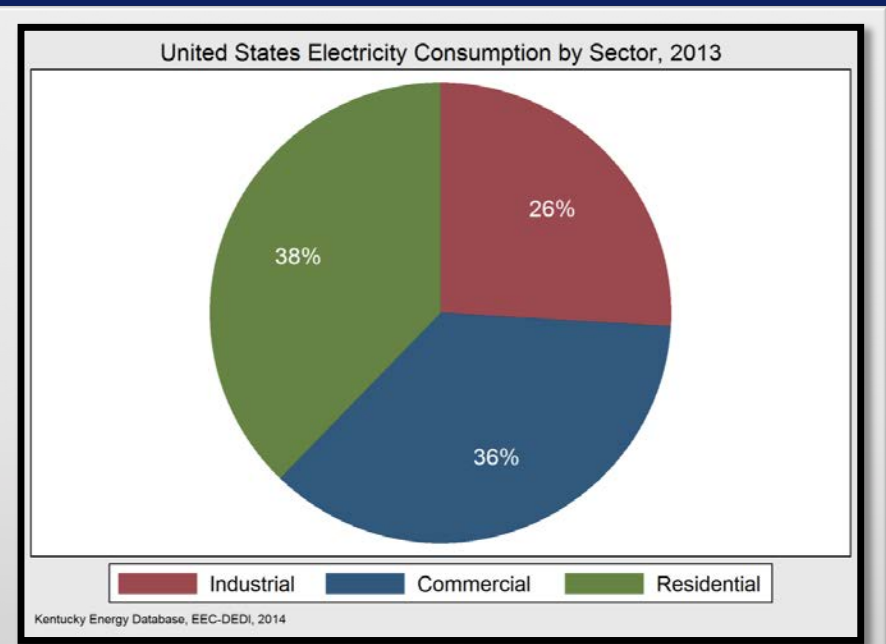
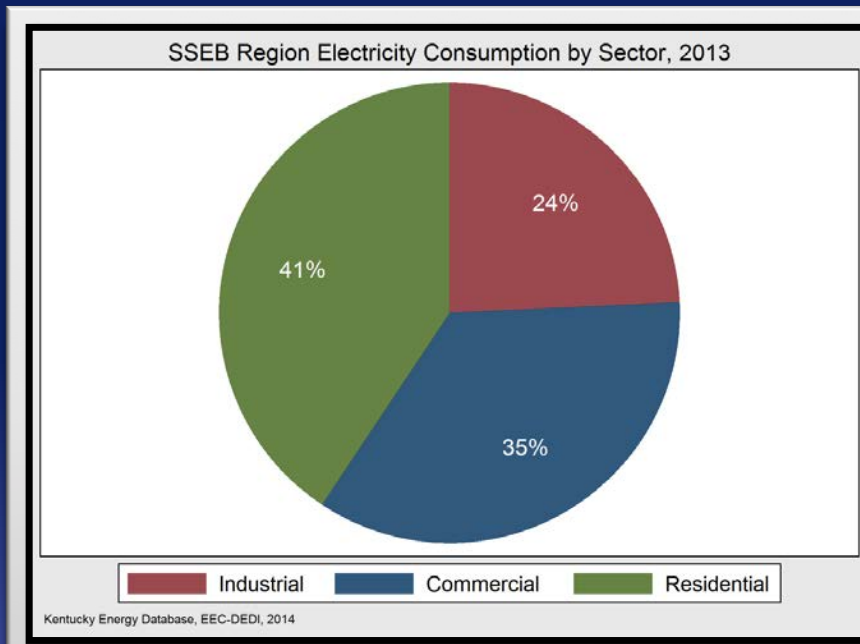
Electricity Consumption 2013 – SSEB & U.S.



www.sseb.org

SSEB Region Electricity Consumption by Sector, 2013

United States Electricity Consumption by Sector, 2013

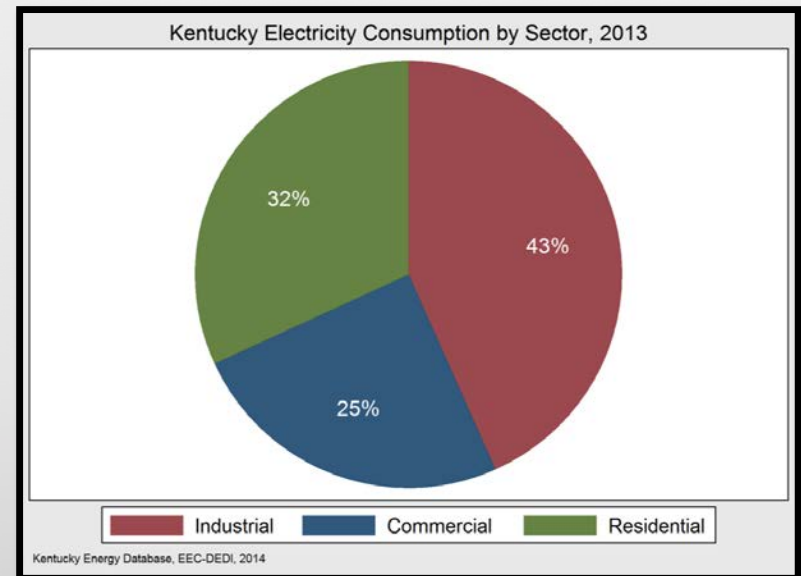
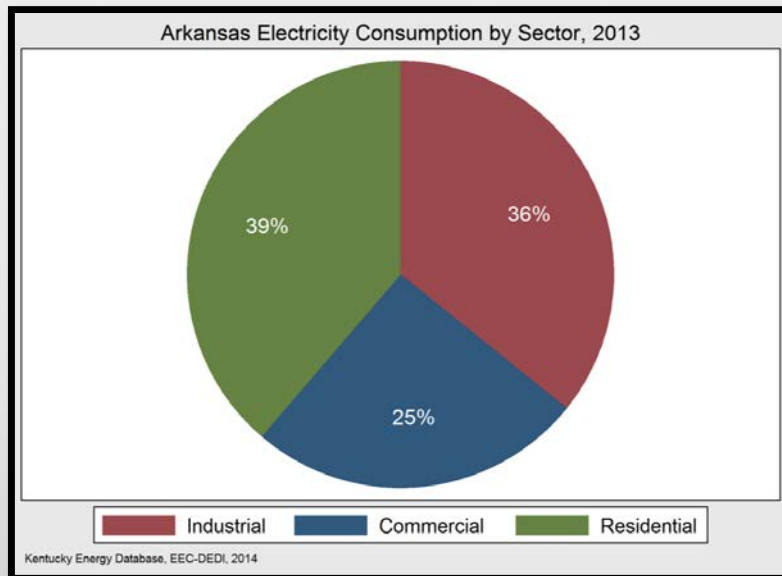


Electricity Consumption – Arkansas & Kentucky



Arkansas Electricity Consumption by Sector, 2013

Kentucky Electricity Consumption by Sector, 2013

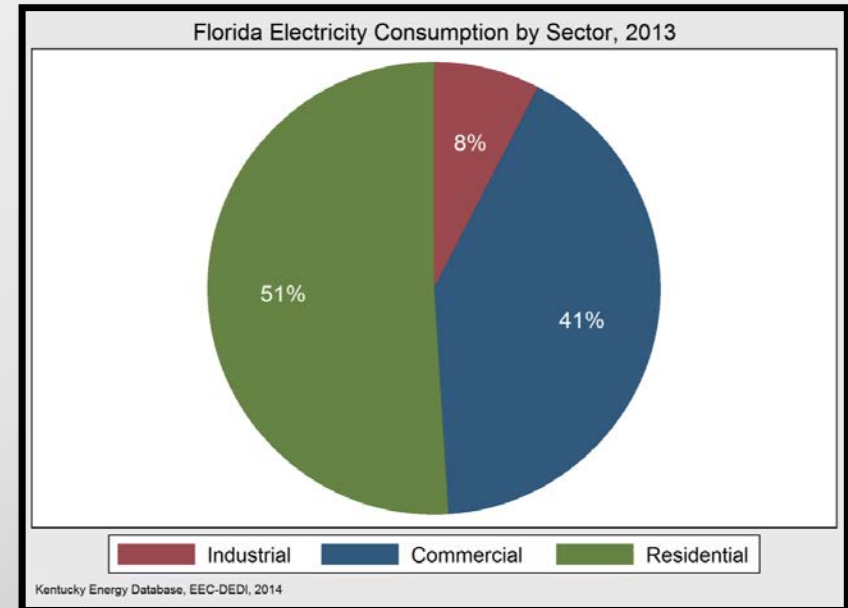
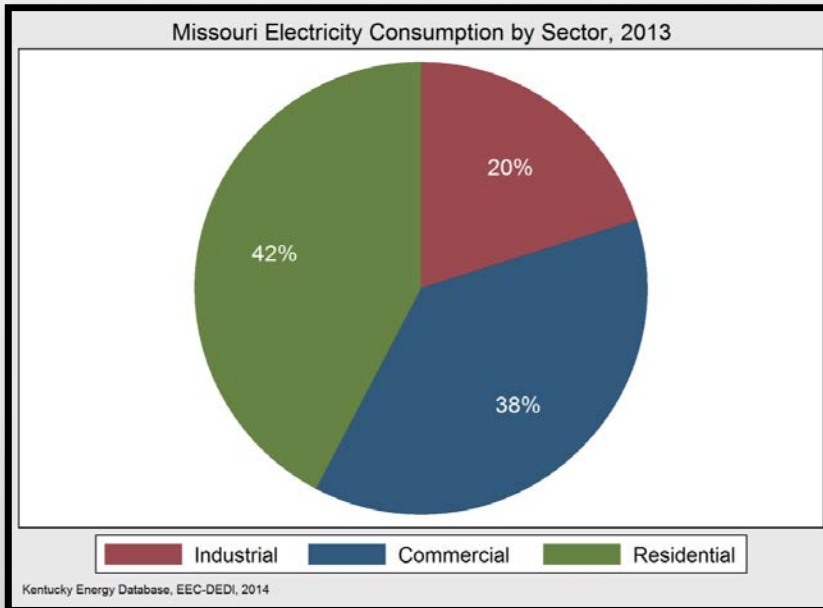


Electricity Consumption – Missouri & Florida



Missouri Electricity Consumption by Sector, 2013

Florida Electricity Consumption by Sector, 2013



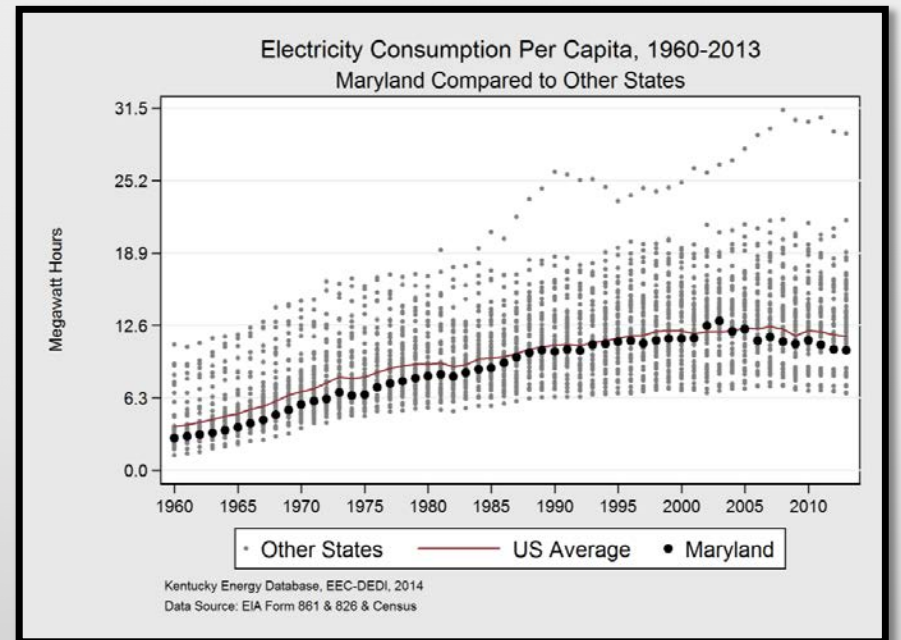
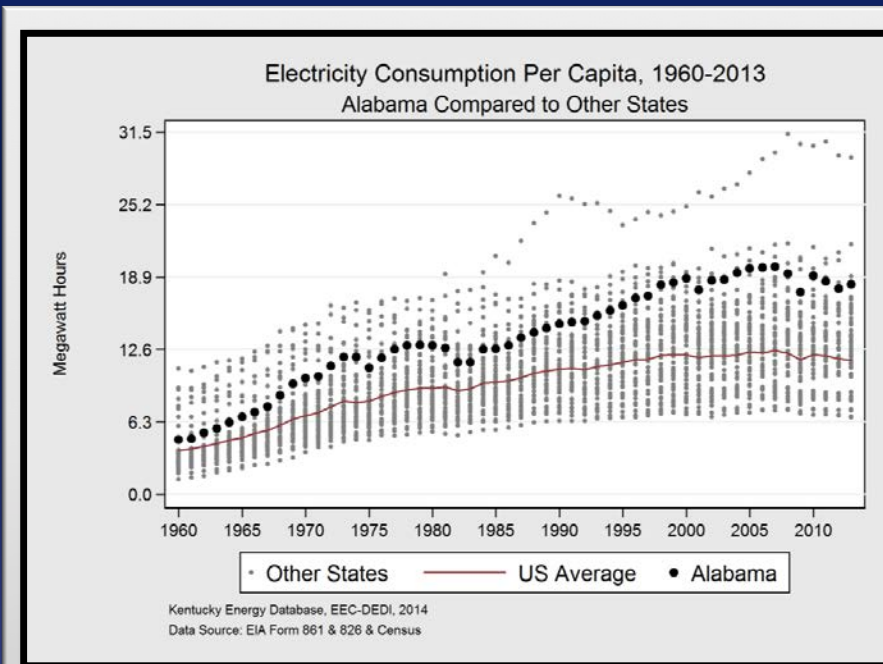
Electricity Consumption Per Capita 1960 – 2013

Alabama & Maryland



Electricity Consumption Per Capita –
1960-2013: Alabama

Electricity Consumption Per Capita –
1960-2013: Maryland



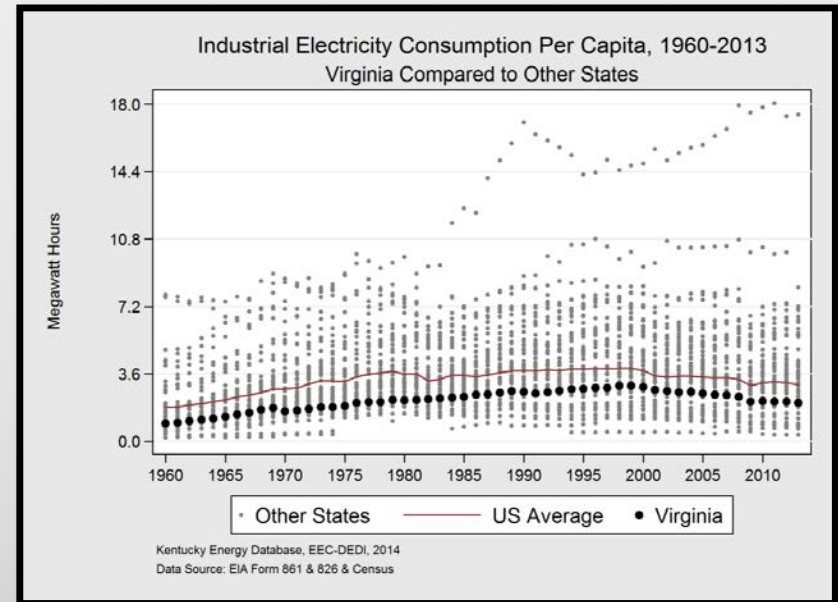
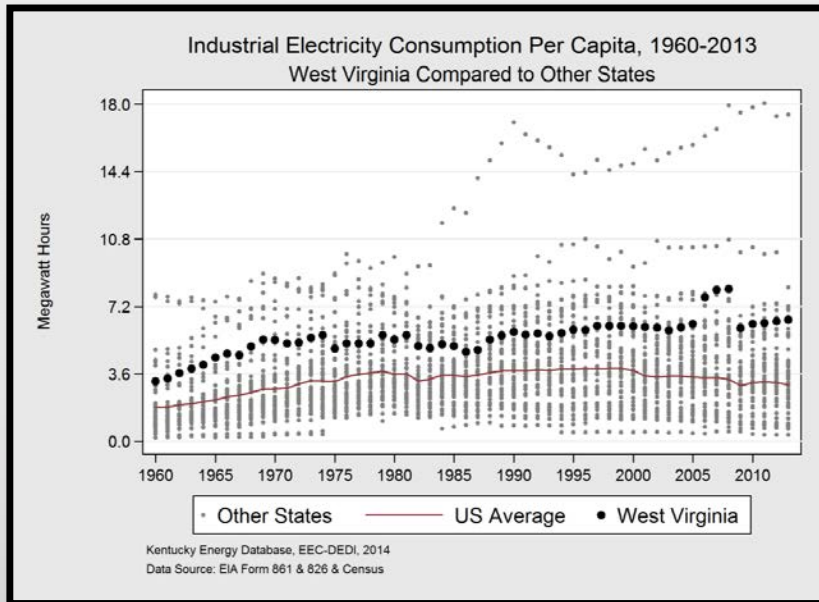
Industrial Electricity Use Per Capita 1960 – 2013



West Virginia & Virginia

Electricity Consumption Per Capita –
1960-2013: West Virginia

Electricity Consumption Per Capita –
1960-2013: Virginia



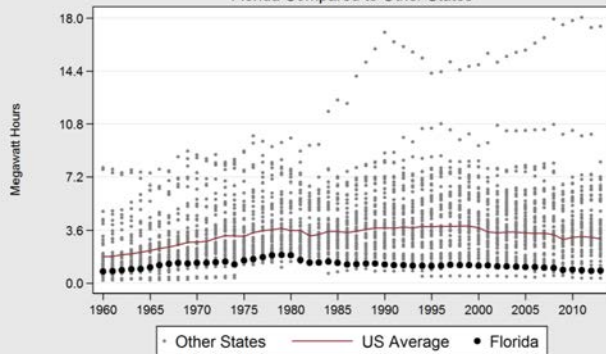
Florida Consumption Per Capita (1960-2013)



Industrial, Commercial, Residential

Industrial

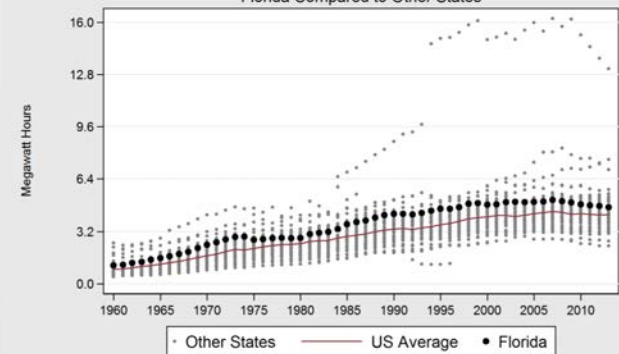
Industrial Electricity Consumption Per Capita, 1960-2013
Florida Compared to Other States



Kentucky Energy Database, EEC-DEDI, 2014
Data Source: EIA Form 861 & 826 & Census

Commercial

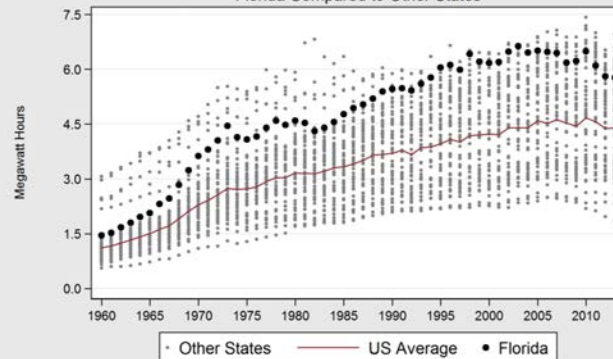
Commercial Electricity Consumption Per Capita, 1960-2013
Florida Compared to Other States



Kentucky Energy Database, EEC-DEDI, 2014
Data Source: EIA Form 861 & 826 & Census

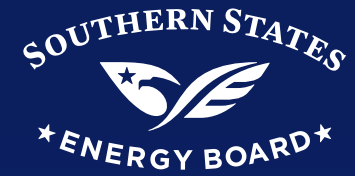
Residential

Residential Electricity Consumption Per Capita, 1960-2013
Florida Compared to Other States

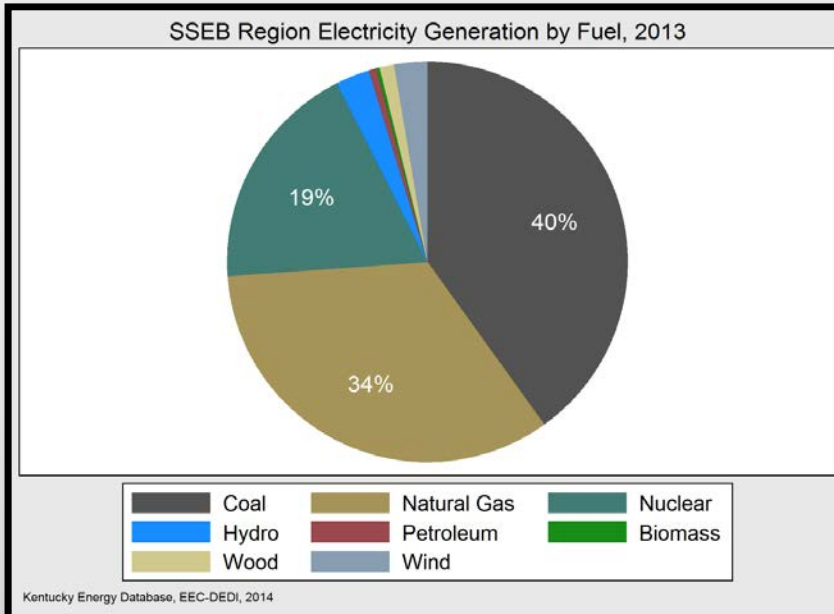


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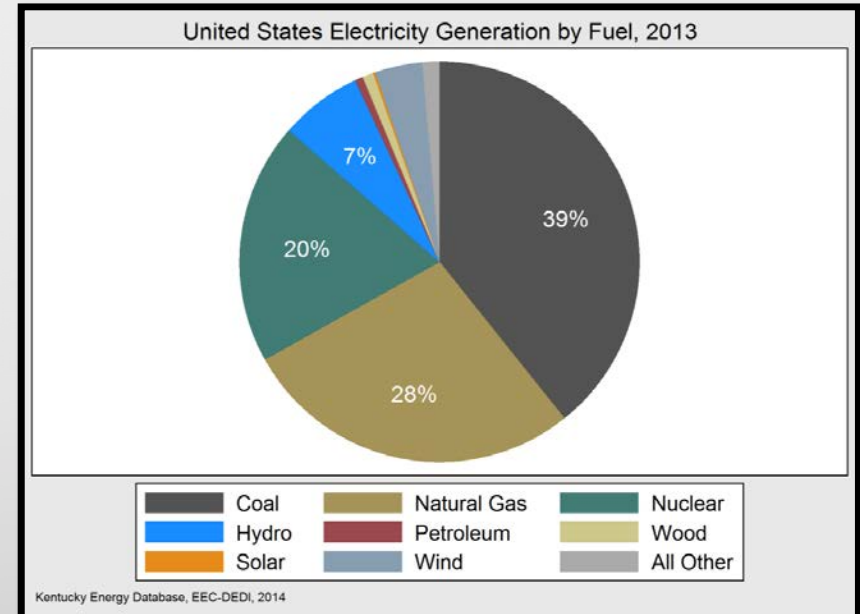
Electricity Generation – SSEB & U.S.



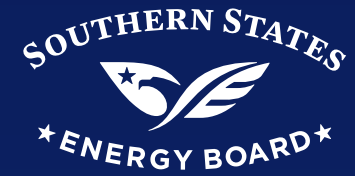
SSEB Region Electricity Generation by Fuel, 2013



United States Electricity Generation by Fuel, 2013

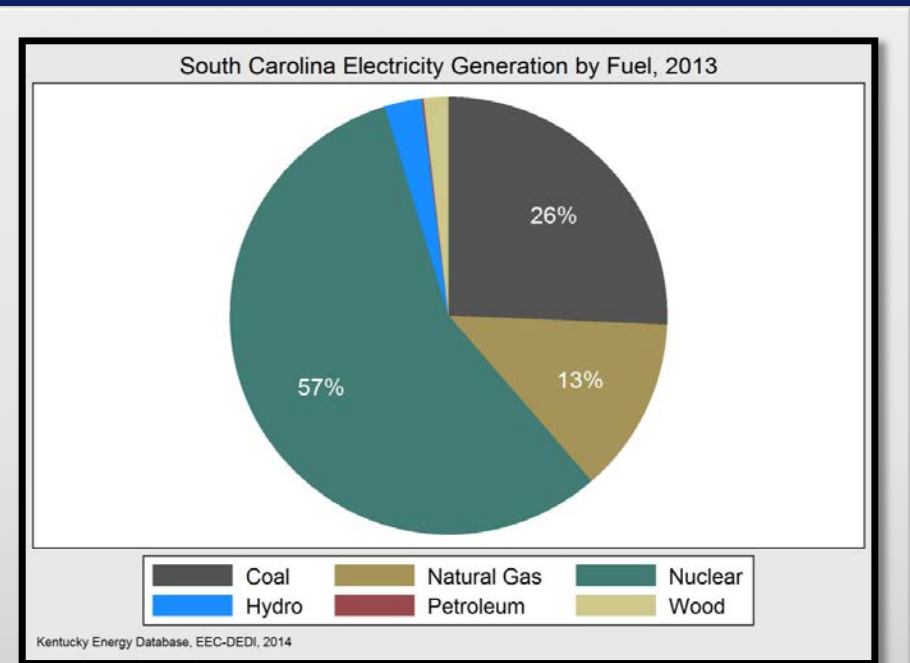
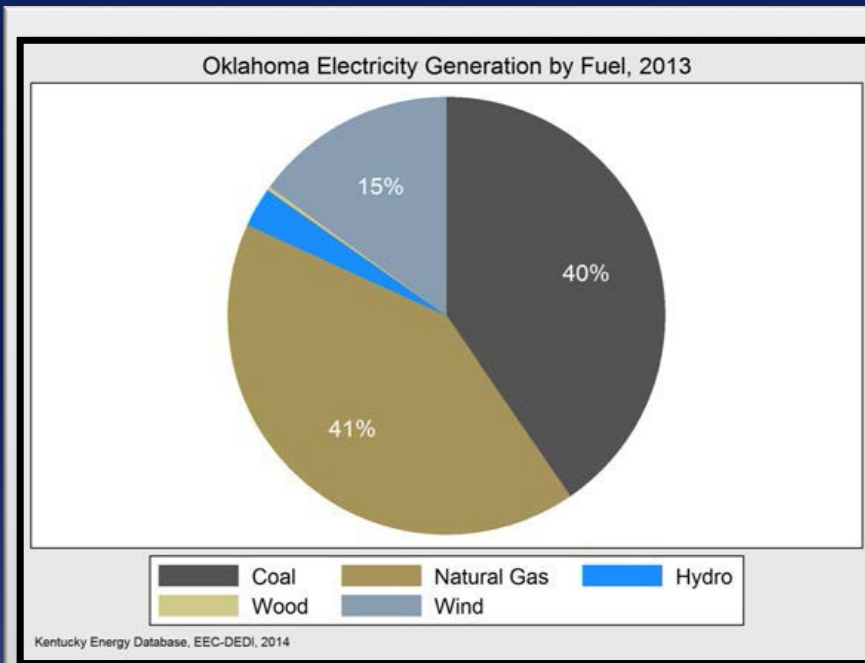


Electricity Generation – Oklahoma & South Carolina



Oklahoma Electricity Generation by Fuel, 2013

South Carolina Electricity Generation by Fuel, 2013



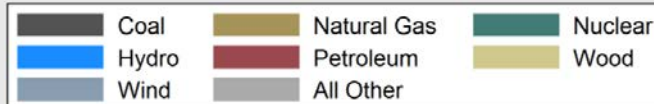
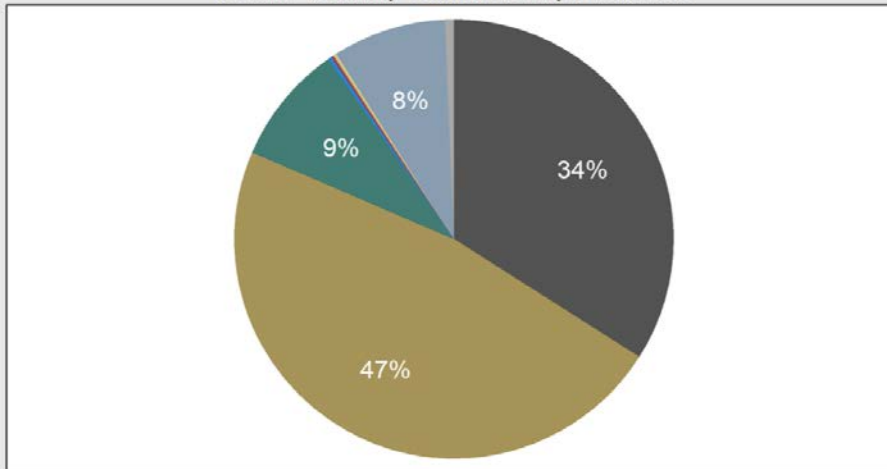
Electricity Generation – Texas & Arkansas



Texas Electricity Generation by Fuel, 2013

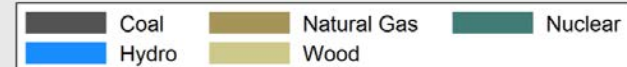
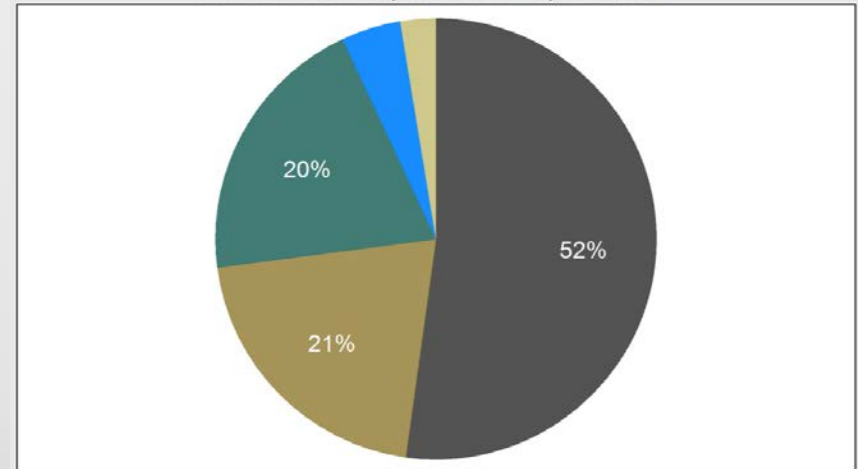
Arkansas Electricity Generation by Fuel, 2013

Texas Electricity Generation by Fuel, 2013



Kentucky Energy Database, EEC-DEDI, 2014

Arkansas Electricity Generation by Fuel, 2013



Kentucky Energy Database, EEC-DEDI, 2014

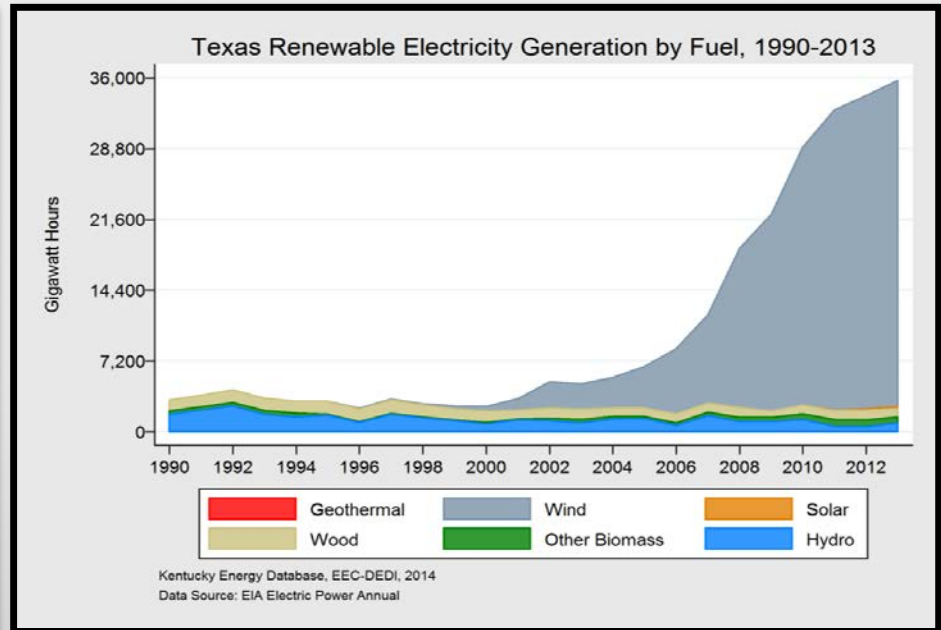
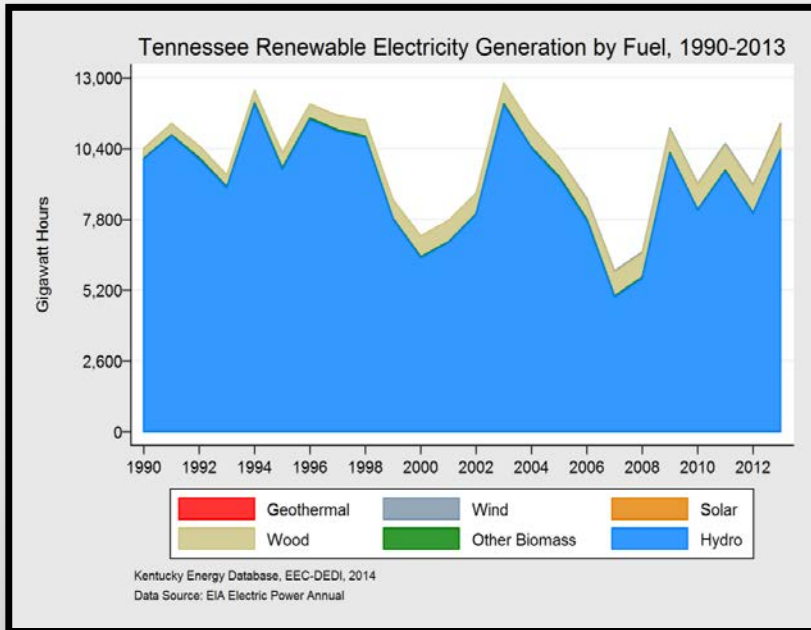
Renewable Electricity Generation 1990 – 2013



Tennessee & Texas

Tennessee Renewable Electricity Generation by Fuel, 1990-2013

Texas Renewable Electricity Generation by Fuel, 1990-2013



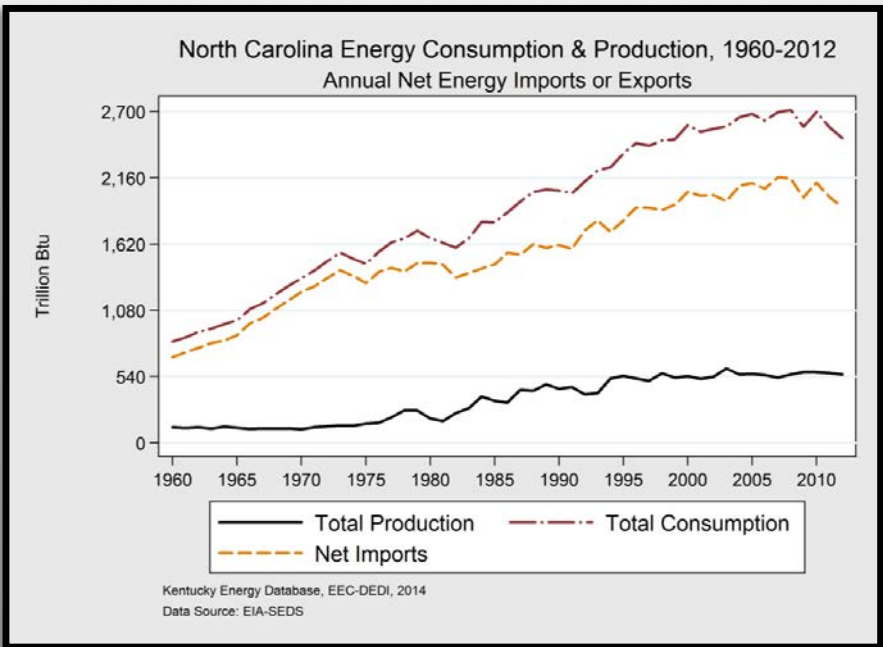
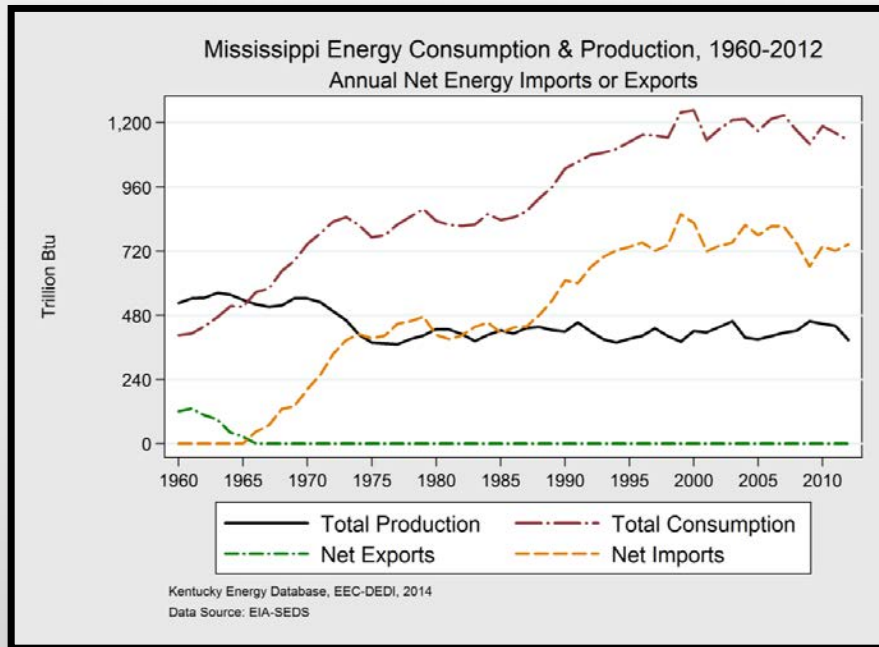
Historical Net Energy Imports or Exports (1960 – 2012)

Mississippi & North Carolina



Mississippi Energy Consumption & Production, 1960-2012

North Carolina Energy Consumption & Production, 1960-2012



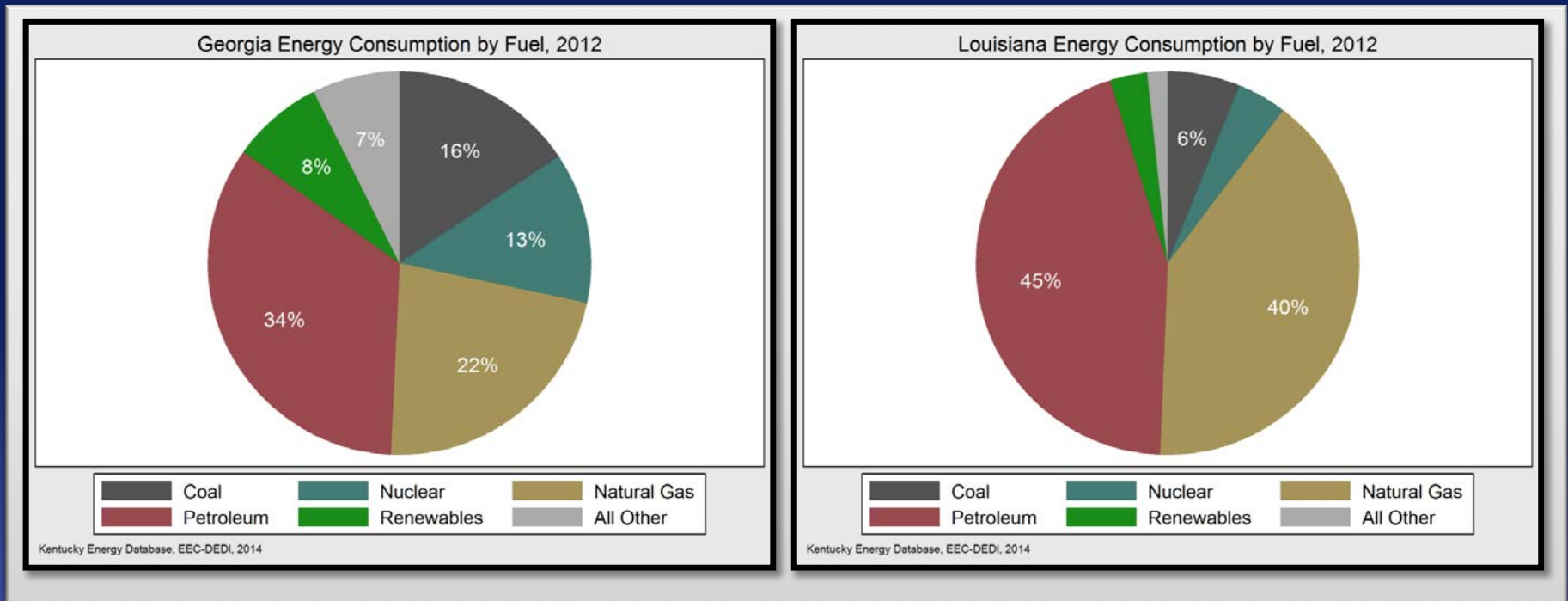
Energy Consumption 2012

Georgia & Louisiana



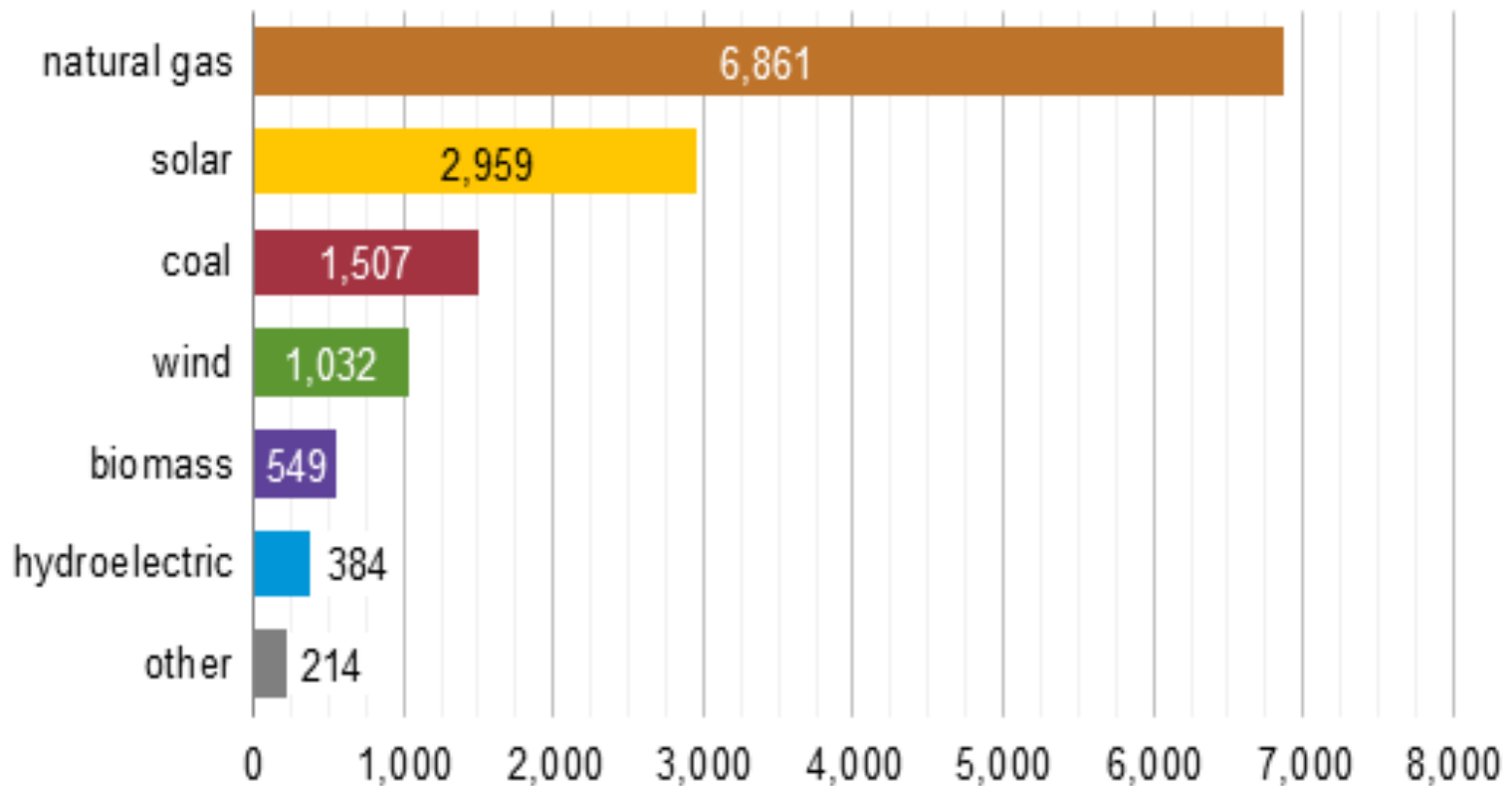
Georgia Energy Consumption by Fuel, 2012

Louisiana Energy Consumption by Fuel, 2012



U.S. Power Plant Additions 2013

U.S. power plant capacity additions in 2013
megawatts (MW)





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