## EIA: State Energy Info 101

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Shirley Neff | Barbara Fichman
Michael Leahy | Chris Noonan Sturm
September 12, 2011
NASEO Energy Data & Security Committee Meeting

## How we can help you

- State-specific data, analysis & maps
- Brief energy analysis every weekday
- Energy education in plain language



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#### What's New

Short Term Energy Outlook ( September 7

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September 1

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Natural Gas Year-In-Review )

International Energy Outlook 2011

Annual Energy Review 2010 +

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#### Today in Energy

Posted September 8, 2011

### EPA rule requires SO<sub>2</sub> emissions reduction from Texas coal power plants in 2012 >

Starting in 2012, power plants in 23 states must meet new sulfur dioxide (SO<sub>2</sub>) emissions caps in order to comply with the Cross State Air Pollution Rule (CSAPR), Including Texas in CSAPR was a key difference between the final rule and the draft version released last year. The rule requires power plants in Texas to reduce SO<sub>2</sub> emissions 53% below 2010 levels by 2012. More

## Electricity generation by fuel in Texas, 2009 (398 GWh total generation) Renewables Nuclear 5% Other 10% No so; 50; Controls Controls Controls Gas 47%

Source: EtA, Form EtA-923 "Annual Power Plant Operations Report".

#### Data Highlights

#### Crude oil futures price

9/7/2011: \$89.34/bbl

† \$0.53 from week earlier

† \$15.25 from year earlier

#### Natural gas futures price

9/7/2011: \$3.940/mmBtu

\$50.114 from week earlier

† \$0.090 from year earlier

#### Natural gas inventories

9/2/2011: 3,025 Bcf

† 64 Bcf from week earlier

131 Bcf from year earlier

#### Crude oil inventories

9/2/2011: 353.1 mmbbl

1 4.0 mmbbl from week earlier

1 6.6 mmbbl from year earlier

#### Weekly coal production

8/27/2011: 21.153 million tons

\* 0.365 million tons from week earlier

↓ 0.251 million tons from year earlier





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#### Petroleum & Other Liquids

Crude oil, gasoline, heating oil, diesel. propane, and other liquids including biofuels and natural gas liquids.

#### Natural Gas

Exploration and reserves, storage, imports and exports, production, prices, sales.

#### Electricity

Sales, revenue and prices, power plants, fuel use, stocks, generation, trade, demand & emissions.

#### Consumption & Efficiency

Energy use in homes, commercial buildings, manufacturing, and transportation.

2010, More

thousand barrels perday

#### Coal

Reserves, production, prices, employment and productivity, distribution, stocks, imports and exports.

#### Renewable & Alternative Fuels

Includes hydropower, solar, wind, geothermal, biomass and ethanol.

#### Nuclear & Uranium

Uranium fuel, nuclear reactors. generation, spent fuel

#### Total Energy

increasingly exported to Latin America, Annual U.S. exports of gasoline and

distillate fuel oil increased by 133% and 144%, respectively, from 2007 to

Comprehensive data summaries, comparisons, analysis, and projections integrated across all energy sources.

#### Highlights

This Week in Petroleum >

Weekly Petroleum Status Report >

Weekly Natural Gas Storage Report >

Natural Gas Weekly Update >

Electric Power Monthly >

Quarterly Coal Report >

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lights

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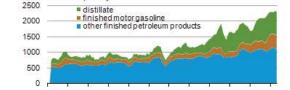
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U.S. petroleum product exports, rolling three-month average

Source: U.S. Energy Information Administration, Petroleum Supply Monthly.





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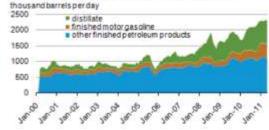
#### Today in Energy

Posted September 7, 2011

#### U.S. exports of petroleum products increase as markets become more globally integrated >

Total U.S. exports of finished petroleum products have increased more than 80% since 2007 as markets have become more globally integrated. This trend is driven primarily by finished motor gasoline and distillate, which are increasingly exported to Latin America. Annual U.S. exports of gasoline and distillate fuel oil increased by 133% and 144%, respectively, from 2007 to 2010.

#### U.S. petroleum product exports, rolling three-month average



Source: U.S. Energy Information Administration, Peticleum Supply Monthly.

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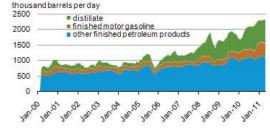
#### Today in Energy

Posted September 7, 2011

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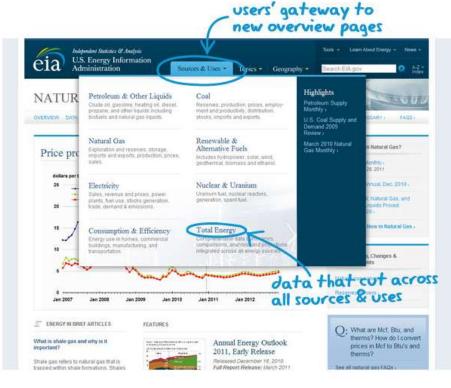
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Energy in Briefs explain important energy topics in plain language. Each Brief answers a question relevant to the public and recommends resources for further reading. Please use the tools to the right to give us feedback, share with others, or sign up for notices as new Briefs are released.



#### August 30, 2011

#### How much of the world's electricity supply is generated from wind and who are the leading generators?

Worldwide wind power generation exceeded 250 billion kilowatthours in 2009, which is equivalent to the annual electricity consumption of over 22 million average households in the United States. Wind generation increased by about 20% from 2008 to 2009, and has more than tripled since 2004. This growth is mostly due to capacity increases in the United States, China, India, and Western Europe. Despite this growth, the world still generated only 1% of its total electricity from wind power in 2009.



#### August 8, 2011

#### How old are U.S. power plants?

The current fleet of electric power generators has a wide range of ages. About 530 gigawatts, or 51% of all generating capacity, were at least 30 years old at the end of 2010. Trends in generating capacity additions vary by fuel type, for coal, hydropower, natural gas, nuclear, petroleum, and wind.



#### August 4, 2011

#### What is shale gas and why is it important?

Shale gas refers to natural gas that is trapped within shale formations. Shales are fine-grained sedimentary rocks that can be rich sources of petroleum and natural gas. Over the past decade, the combination of horizontal drilling and hydraulic fracturing has allowed access to large volumes of shale gas that were previously uneconomical to produce. The production of natural gas from shale formations has rejuvenated the natural gas industry in the United States.



June 24, 2011

#### How dependent are we on foreign oil?

The United States imported about 49% of the petroleum, which includes crude oil and refined petroleum products, that we consumed during 2010. About half of these imports came from the Western Hemisphere. Our dependence on foreign petroleum has declined since peaking in 2005.



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Archive September 2011 August 2011 July 2011 June 2011 May 2011 April 2011 March 2011 February 2011

About Our Charts





Sparses: U.S. Energy Information Administration, Form EIA-880 Annual Electric Generator Report, and Form EIA-880N (see Table £83 in the Warch 2011 Electric Power Monthly)

Note: Data for 2010 are preliminary. Generators with online dates earlier than 1930 are predominantly hydroelectric. Data include nonretired plants existing as of year-end 2010. This chart shows the most recent (summer) capacity data for each generator. However, This number may change over time, if a generator undergoes an uprate or derate.

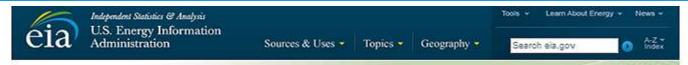
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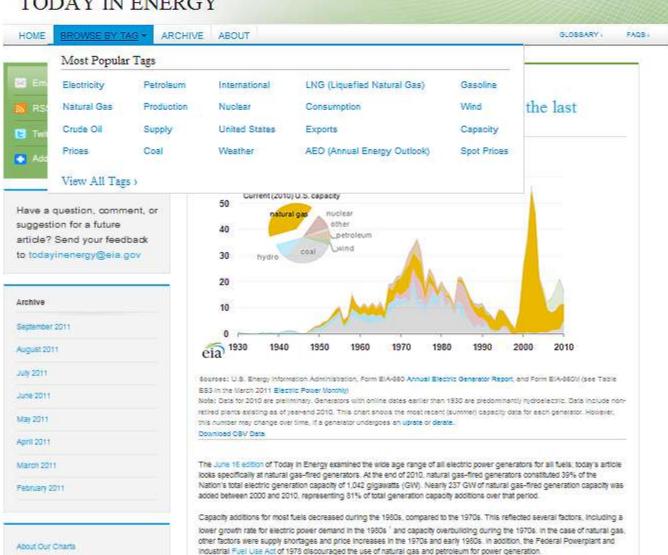
The June 16 edition of Today in Energy examined the wide age range of all electric power generators for all fuels; today's article looks specifically at natural gas-fired generators. At the end of 2010, natural gas-fired generators constituted 39% of the Nation's total electric generation capacity of 1,042 gigawatts (GW). Nearly 237 GW of natural gas-fired generation capacity was added between 2000 and 2010, representing 81% of total generation capacity additions over that period.

Capacity additions for most fuels decreased during the 1980s, compared to the 1970s. This reflected several factors, including a lower growth rate for electric power demand in the 1980s 1 and capacity overbuilding during the 1970s. In the case of natural gas, other factors were supply shortages and price increases in the 1970s and early 1980s. In addition, the Federal Powerplant and industrial Fuel Use Act of 1978 discouraged the use of natural gas and petroleum for power generation.

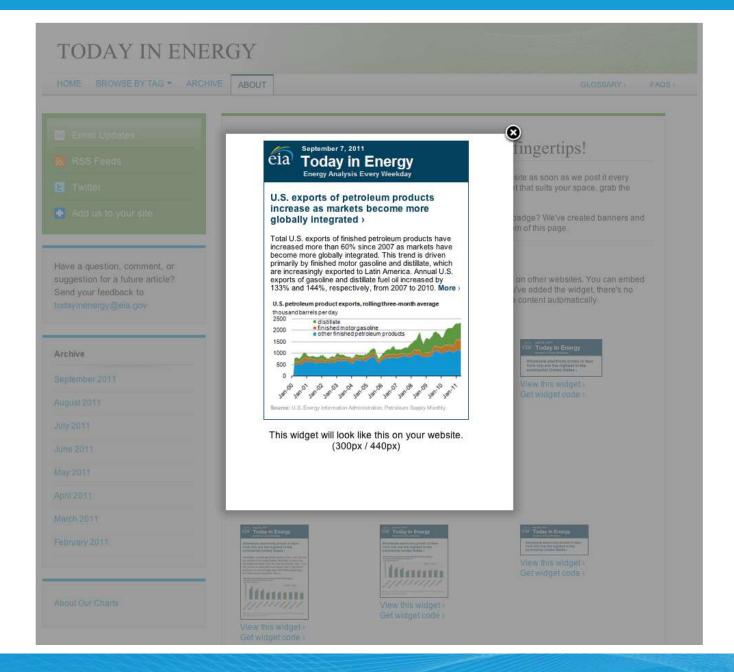




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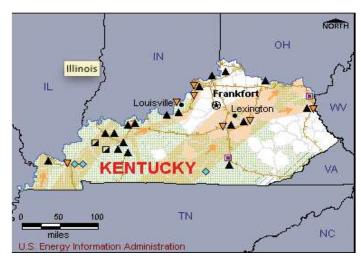
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Alaska	Idaho	Minnesota	North Dakota	Vermont
Arizona	Illinois	Mississippi	Ohio	Virginia
Arkansas	Indiana	Missouri	Oklahoma	Washington
California	Iowa	Montana	Oregon	West Virginia
Colorado	Kansas	Nebraska	Pennsylvania	Wisconsin
Connecticut	Kentucky	Nevada	Rhode Island	Wyoming
Delaware	Louisiana	New Hampshire	South Carolina	
District of Columbia	Maine	New Jersey	South Dakota	
Florida	Maryland	New Mexico	Tennessee	
Georgia	Massachusetts	New York	Texas	

U.S. Territories: American Samoa | Guam | Northern Mariana Islands | Puerto Rico | U.S. Virgin Islands

#### State Ranking 1. Total Energy Production, 2009 (trillion Btu) Total Energy Production (trillion Btu)

1 Texas	11,915
2 Wyoming	10,337
3 Louisiana	7,302
4 West Virginia	3,727
5 Kentucky	2,819
6 Pennsylvania	2,674
7 California	2,605
8 Oklahoma	2,571
9 Colorado	2,483
10 New Mexico	2,412

See Complete List »



View State Energy Data System (SEDS) >

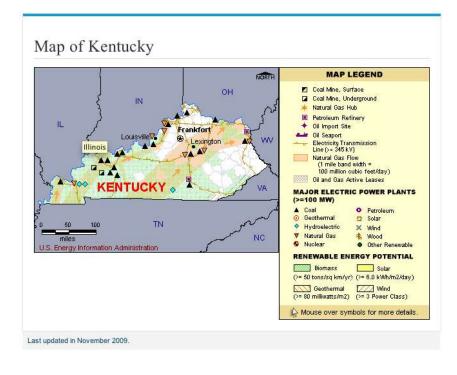
#### Updates

as of August 25, 2011

#### New statistics for May 2011:

- Price of coal delivered to the electric power sector
- Prices of electricity sold to the residential, commercial, and industrial





#### Kentucky Quick Facts

- Kentucky ranks third in the Nation in coal production. It accounts for about one-tenth of U.S. coal
  production and nearly one-fourth of U.S. production east of the Mississippi River.
- · Nearly one-third of all the coal mines in the Nation are found in Kentucky.
- · Coal-fired plants typically generate more than nine-tenths of the electricity produced in Kentucky.
- . The majority of Kentucky's natural gas is supplied by pipeline from the Gulf Coast.

Last updated in October 2009.



Related Information

Kentucky State Energy Data System





#### Analysis

#### Resources and Consumption

Kentucky has major coal deposits in the eastern Central Appalachian Basin and in the western Illinois Basin. Those basins also hold minor reserves of oil and gas. The Tennessee and Cumberland Rivers in the Chio River Basin provide hydroelectric power potential. Kentucky's per capital energy consumption is among the highest in the Nation, and the industrial sector leads State energy demand. The State is a leader in the energy-intensive aluminum industry.

#### Petroleum

Kentucky has minor crude oil production but is host to two refineries, located in Cadettsburg and Somerset. The Cadettsburg refinery in the larger of the two and receives crude oil supply from the Gulf Coast via the Captine Pipeline. The much smaller Somerset refinery processes crude oil produced regionally in Kentucky. Tennessee, and West Virginia. In addition to deliveries from these refineries, Kentucky size receives petroleum product shipments by pipeline and river barge. Kentucky's total petroleum consumption is high relative to its population. The Louisville metropolitan area and the Kentucky suburbs of Cincinnati require reformulated motor gasoline blended with ethanol. Kentucky has two ethanol plants that help supply those areas.

#### Natural Gas

Kentucky's natural gas production, much of which comes from the Big Sandy field in the eastern part of the State, typically accounts for less than 1 percent of total U.S. natural gas production. The majority of Kentucky's natural gas is supplied by pipeline from the Gulf Coast. Industry is Kentucky's largest natural gas-consuming sector, accounting for about one-half of total natural gas consumption in the State. More than two-fifths of Kentucky households use natural gas as their primary fuel for bome heating.

#### Coal, Electricity, and Renewables

Kentucky is the third largest cosi-producing State, after Wyoming and West Virginia. It accounts for roughly one-tenth of total U.S. coal production and meanly one-tenth of total U.S. coal production east of the Mississippi River. Although all Kentucky coal is bituminous, its suffur content varies across the State. Coal produced in the Central Appalachian Basin is low in suffur, while coal produced in the Illinois Basin is high in suffur. Nearly one-third of all the coal mines in the Nation are found in Kentucky, more than in any other State. Kentucky has both surface and underground coal mines. Large volumes of coal move into and out of Kentucky by railcar and river barge. Kentucky delivers approximately three fourths of State coal production to more than two dozen States, most of which are on the East Coast and in the Milowest. Nearly 95 percent of the coal used in Kentucky is burned for electricity generation, and most of the remainder is used in industrial and coke plants.

Coal-fired power plants typically account for more than nine-tenths of the electricity produced in Kentucky, making it one of the most coal-dependent States in the Nation. The remaining electricity generation within the State is mostly provided by petroleum-fired and hydroelectric power plants.

Kentucky's per capita consumption of residential electricity is among the highest in the United States. More than twofifths of Kentucky households use electricity as their primary energy source for home heating.



(includes overview, data, & analysis)

#### Updates

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- Consumption for electricity generation by fuel

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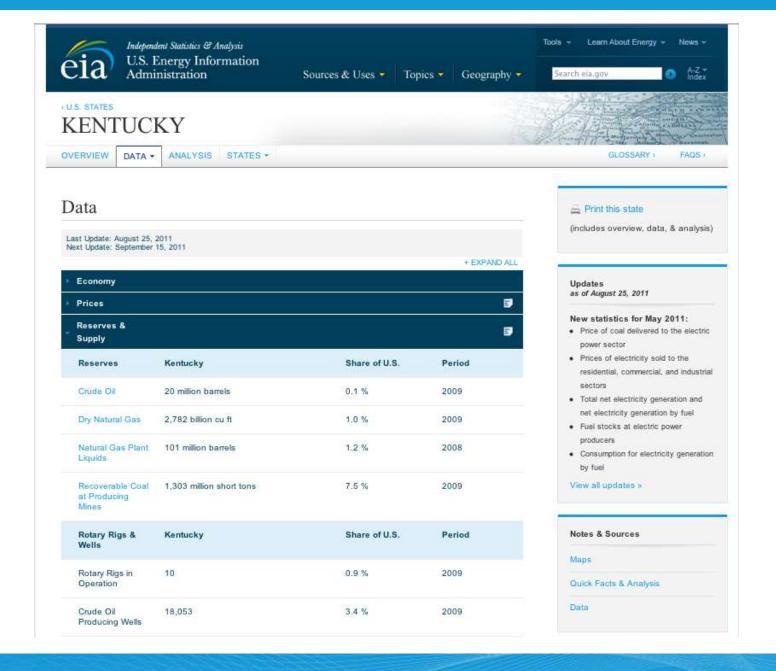
#### Related Information

Kentucky State Energy Data System >

State Dectricity Profiles I

Som Nuclear Problems









#### State Data for Prices

Total Energy	Period
State Energy Data System (SEDS), Price and Expenditure Estimates	Annual
Primary Energy, Electricity, and Total Energy Price Estimates	Annual
Total End-Use Energy Price Estimates	Annuai
Residential Sector Energy Price Estimates	Annual
Commercial Sector Energy Price Estimates	Annual
Industrial Sector Energy Price Estimates	Annual
Transportation Sector Energy Price Estimates	Annual
Electric Power Sector Energy Price Estimates	Annual
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Petroleum and Natural Gas Prices and Expenditures, Ranked by State	Annuai
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Petroleum	Period	
Weekly Retail Gasoline & Diesel Prices	Weekly, Monthly, Annual	
Weekly Heating Oil and Propane Prices	Weekly, Monthly	
Refiner Petroleum Product Prices by Sales Type	Monthly, Annual	
Refiner Gasoline Prices by Grade and Sales Type	Monthly, Annual	
Gasoline Prices by Formulation, Grade, Sales Type	Monthly, Annual	
No. 2 Distillate Prices by Sales Type	Monthly, Annual	
Propane (Consumer Grade) Prices by Sales Type	Monthly, Annual	
Residual Fuel Oil Prices by Sales Type	Monthly, Annual	
Domestic Crude Oil First Purchase Prices by Area	Monthly, Annual	

Natural Gas	Period
Wellhead Price	Annual
Imports Price	Annual

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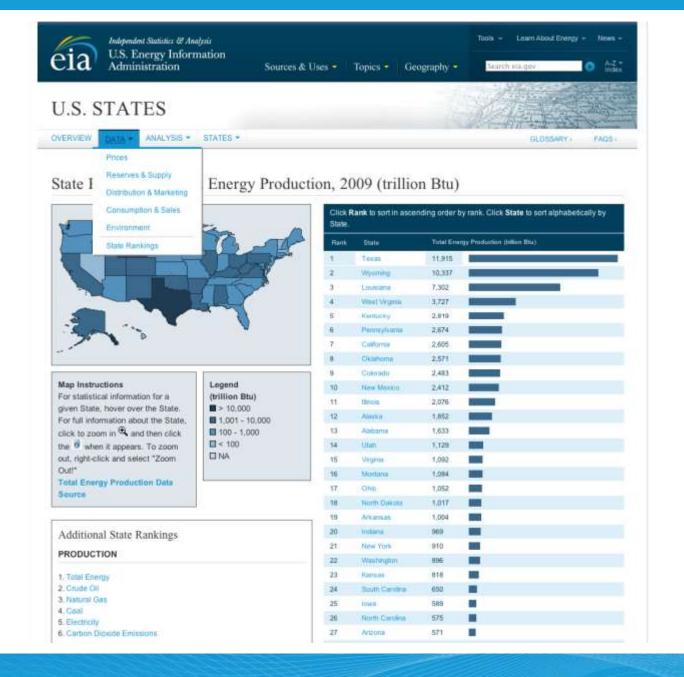
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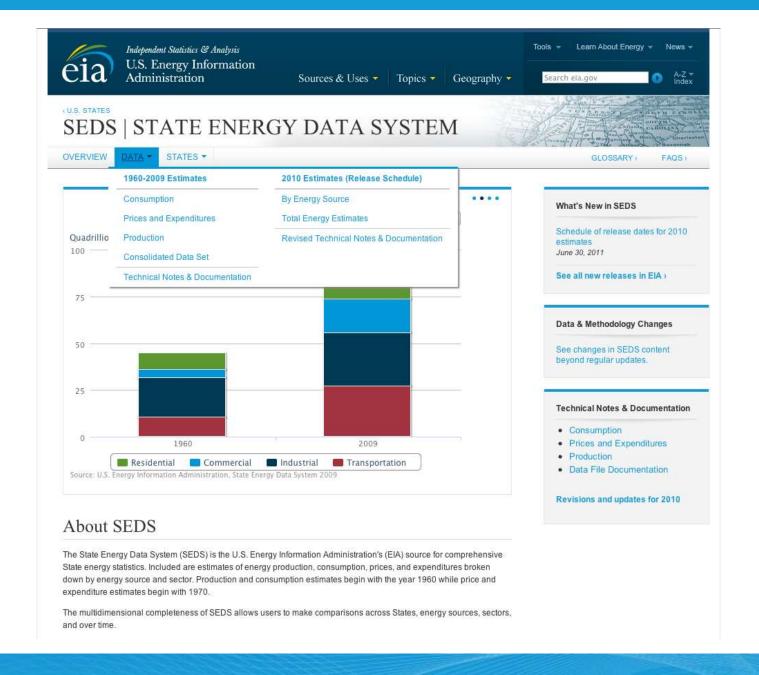
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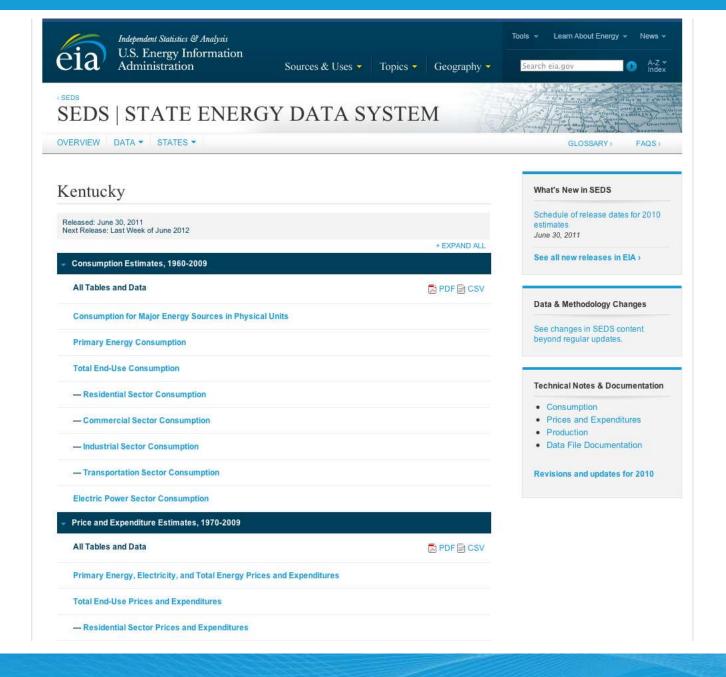














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- 2. Do you produce reports from EIA data?
- 3. What information do you use on the States section of the website? (data, analysis, maps) What is most useful?
- 4. How important is States content compared to other EIA web content?



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- 2. What data layers would you like to see in State maps?
- 3. What functionality would you like to see in State maps?



### Thank you! Contact us:

- Shirley Neff: <u>shirley.neff@eia.gov</u>
  202-586-7111
- Barbara Fichman:
   <u>barbara.fichman@eia.gov</u>,
   202-586-5737
- Michael Leahy: <u>michael.leahy@eia.gov</u>, 202-287-6329
- Chris Noonan Sturm: <a href="mailto:chris.sturm@eia.gov">chris.sturm@eia.gov</a>, 202-586-4972

