

Burning Coal, Burning Cash

EXECUTIVE SUMMARY

Ranking the States That Import the Most Coal



THE COST OF IMPORTED COAL IS A MAJOR drain on the economies of many states that rely heavily on coal to produce electricity. In 2008, 38 states were net importers of coal—from other states and, increasingly, other nations. Eleven of those states spent more than \$1 billion on net coal imports (the cost of coal brought into the state, minus revenue from the coal that in-state mines exported).

Most of the nation's coal comes from just three states: Wyoming, West Virginia, and Kentucky. However, one state, Wyoming, increasingly dominates the market. That state provided 40 percent of U.S. coal production in 2008 (up from just 18 percent in 1990). In 2008, mines in Wyoming's Powder River Basin shipped coal to power plants in 34 states (up from 27 states in 2002)—some located as far away as New York and Georgia.

Many eastern states also import coal from other regions of the world, including South America and even Southeast Asia. Those trends—combined with rising coal prices over the last several years—mean that many states spent dramatically more on imported coal in 2008 than they did just six years earlier.

Burning Coal, Burning Cash analyzes this annual drain on state economies. The report also provides individual profiles of

the 24 most coal-dependent states, showing, among other things, where they send the funds now used to pay for imported coal. These profiles also suggest ways individual states can boost their economies by investing those funds in energy efficiency and homegrown renewable energy instead.¹

The cost of importing coal is a major drain on the economies of many states that rely heavily on coal-fired power. But these states can reap economic and environmental benefits by reducing their use of imported coal and investing in energy efficiency and local, renewable energy sources.

Such investments yield well-documented economic benefits for all states, including new jobs, higher local tax revenues, and more income for farmers, ranchers, and rural landowners. However, these benefits are even greater for states now dependent on imported coal. That's because those states can channel funds that would otherwise leave the state (to pay for coal) into measures that spur local development and a clean energy economy.

The States Most Dependent on Imported Coal

In our report, we ranked states' dependence on imported coal in each of six categories, and created a list of the top 10 states on each measure. The six measures include net spending on imported coal, net weight of imported coal, per capita spending on imported coal, spending relative to the size of the state economy, reliance on net imports relative to total power use, and spending on international coal imports.²

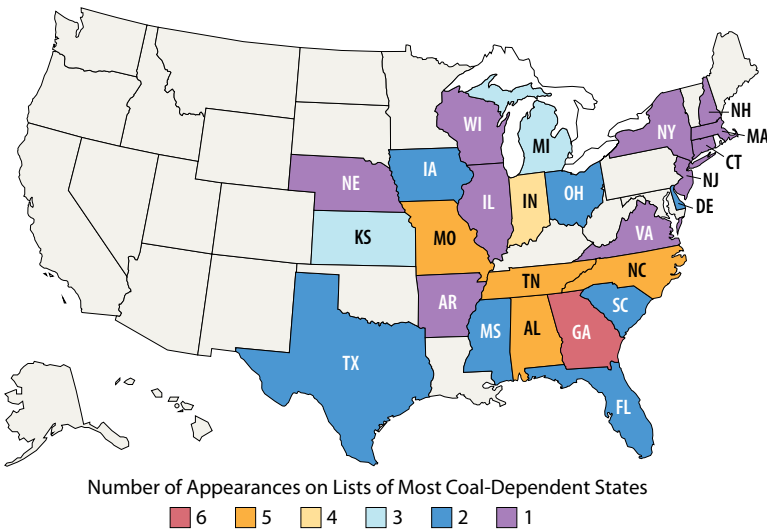
Twenty-five states appear on at least one of our six lists. Georgia ranks in the top 10 in all categories—the only state to do so (Figure 1, p. 2).

States in the Southeast and Midwest dominate our lists of the most-dependent states. That is because states in these two regions use considerable amounts of coal despite having limited—or in most cases no—local coal production. Several Northeast states, most of which are less dependent on coal, also appear on our lists because they import a surprisingly large share of their coal from other countries.



Coal-fired power plants—like this one in North Carolina—account for about half of the United States' electricity supply. Like most others, the plant burns coal to generate the steam that turns the turbines to create electricity. The plant uses large quantities of water from a nearby source and also releases large quantities of heat-trapping carbon dioxide (CO₂) into the atmosphere. In this photo, a stockpile of imported coal sits between the facility and a 50-acre slurry pond, which can store 450 million gallons of toxic coal ash waste.

FIGURE 1. The States Most Dependent on Coal Imports



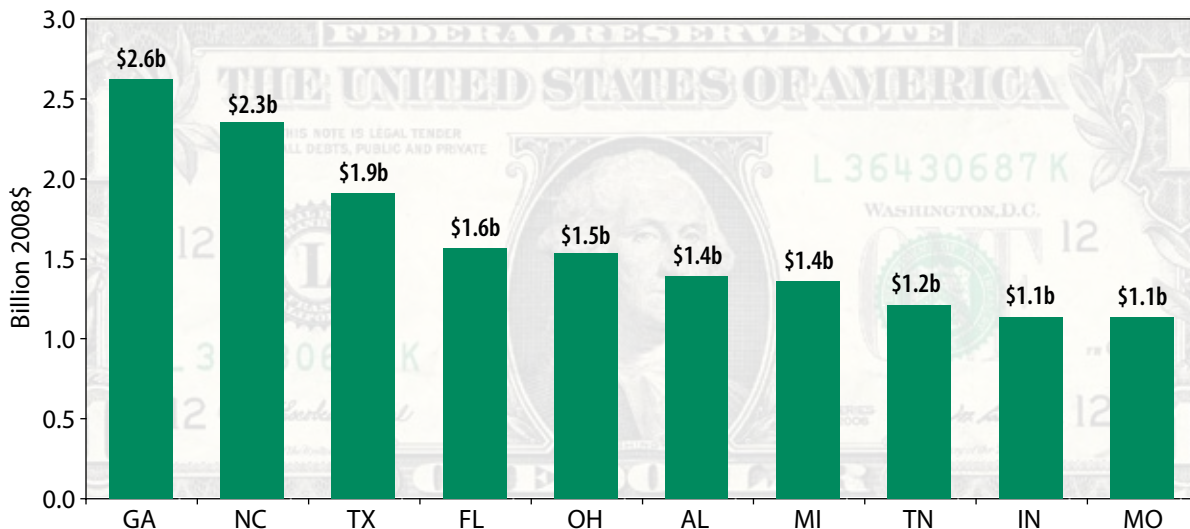
These 25 states appear on at least one of our six lists of the 10 most-dependent states, based on different measures. The colors show how often each state appears on the lists.

In this summary, we identify the 10 states that are most dependent on coal imports according to three of the six measures: spending on net coal imports, per capita spending on net coal imports, and spending on international imports. These categories measure states' absolute and relative dependence on imported coal, and reveal the broad geographic range of the most-dependent states.

The Billion-Dollar Club: 10 States That Spend the Most on Net Coal Imports

Each of the 10 states on this list—along with South Carolina, which ranks eleventh—spent more than \$1 billion in 2008 on imported coal (Figure 2). Georgia, the biggest spender, shelled out more than \$2.6 billion on coal imports.

FIGURE 2. The 10 Most Coal-Dependent States: Spending on Net Coal Imports (2008)



Source: Based on data from Energy Information Administration. 2010. Form EIA-923 (Schedule 2). Online at <http://www.eia.doe.gov/cneaf/electricity/page/eia423.html>.

Many states on this list saw their expenditures on coal imports rise steeply from 2002 to 2008.³ For example, Georgia's expenditures over those six years rose 87 percent (up by \$1.2 billion), North Carolina's climbed 88 percent (up by \$1.1 billion), and Alabama's jumped 170 percent (up by \$875 million). Those increases largely reflect the rising price of coal—but also the fact that many of these states imported more coal in 2008 than in 2002.⁴

Ten States That Spend the Most on Imported Coal per Person

All 10 states making this list spent more than \$165 per resident on imported coal in 2008 (Figure 3).⁵ Alabama tops this list: it spent nearly \$300 per resident to pay for imported coal burned in in-state power plants.

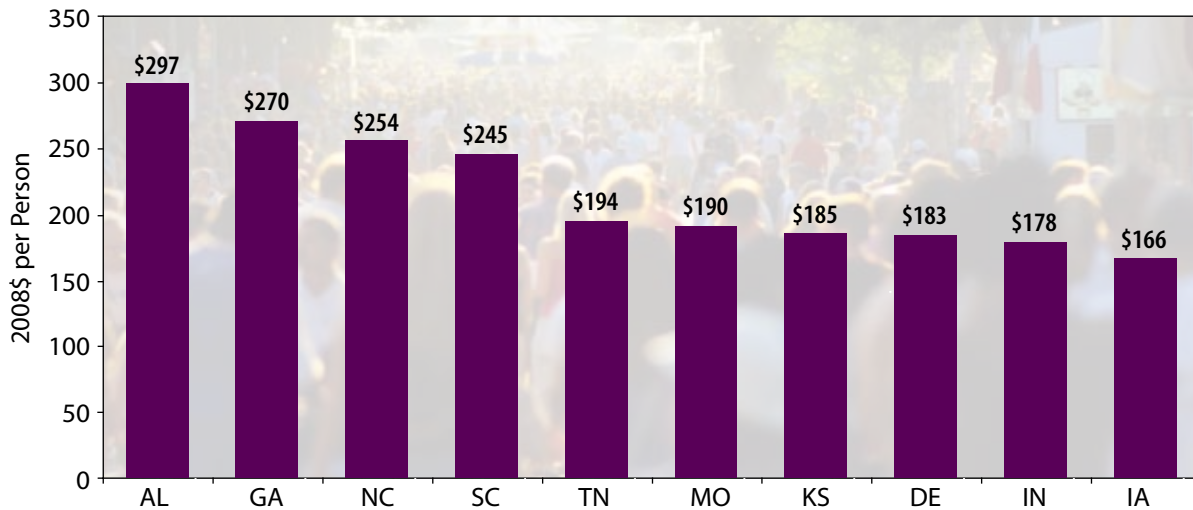
Georgia—the nation's ninth most-populous state—ranks as the second most coal-dependent according to this measure, spending \$270 per person. Delaware ranks forty-fifth in population but still spends \$183 per person annually on coal imports—eighth highest among all states.

To put this amount in context, six of the states on this list—Alabama, Delaware, Georgia, Indiana, Missouri, and North Carolina—spent less than one dollar per person on ratepayer-funded electricity efficiency programs. Yet such programs are a proven way to reduce electricity demand while saving ratepayers money.

Ten States That Spend the Most on International Coal Imports

Despite the abundance of coal and other clean energy resources in the United States, 16 states together spent more than \$1.8 billion to import 25.4 million tons of coal from abroad in 2008 (Figure 4). That is equivalent to the cargo of nearly 1,700 oceangoing barges—or more than four arriving in U.S. ports every day. Alabama spent the most on international imports

FIGURE 3. The 10 Most Coal-Dependent States: Spending on Net Coal Imports per Person (2008)



Source: Based on data from Energy Information Administration. 2010. Form EIA-923 (Schedule 2). Online at <http://www.eia.doe.gov/cneaf/electricity/page/eia423.html>.

(\$489 million), while Massachusetts obtained the highest share of its coal from foreign sources (82 percent).

More than 80 percent of U.S. coal imports from other nations came from Colombia in 2008, but imports also arrived from Venezuela and as far away as Indonesia. Foreign imports still account for a small share of U.S. coal use, and the nation continues to export more coal than it imports. However, international imports more than tripled from 1999 to 2008 (before dropping during the recession in 2009) because of growing demand for low-sulfur coal and the high cost of rail transport from Wyoming’s Powder River Basin.

Clean Energy Can Curb Dependence on Imported Coal

Energy efficiency is a clean, fast, and low-cost way to meet consumers’ energy needs while redirecting funds now spent on imported coal into the local economy. The United States has a tremendous reservoir of untapped potential to boost energy

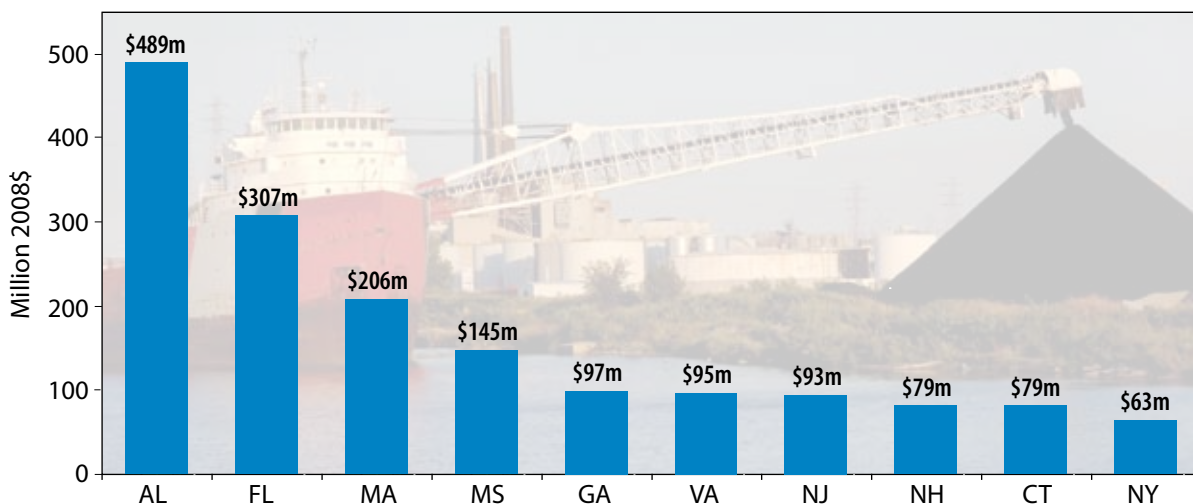
efficiency. Making buildings and industry more efficient, for example, could reduce electricity demand 24 percent by 2030. Southern states account for nearly half of that potential.

Years of experience show that state and utility energy efficiency programs can reduce electricity demand at average costs well below the retail cost of electricity in the states most dependent on imported coal. Some of those states already have strong ratepayer-funded electricity efficiency programs, and standards requiring utilities to save specific amounts of electricity. However, many states that are most dependent on imported coal lag far behind in adopting such policies.

States can also reduce their dependence on imported coal by boosting their investments in local renewable energy. While the potential and costs of such clean energy resources vary by region, all states could more fully exploit these readily available resources.

The Midwest has some of the best wind and bioenergy resources in the country. Several midwestern states dependent on

FIGURE 4. The 10 Most Coal-Dependent States: Spending on International Coal Imports (2008)



Source: Based on data from Energy Information Administration. 2010. Form EIA-923 (Schedule 2). Online at <http://www.eia.doe.gov/cneaf/electricity/page/eia423.html>.



imported coal have begun to develop significant renewable energy resources, spurred by aggressive state policies. For example, Illinois, Iowa, and Minnesota have a combined total of more than 7,000 megawatts of installed wind capacity—about 20 percent of the U.S. total. However, the region still has the potential to make much greater use of wind and other renewable resources.

The Southeast could also greatly expand its use of in-state renewable resources. States heavily dependent on coal imports could, for example, burn abundant bioenergy resources from the forest products industry and other sustainable sources directly in coal plants, displacing up to 15 percent of the coal. Yet the region now exports biomass pellets for use in European power plants while importing coal from Colombia. The Southeast also has untapped solar, wind (land-based and offshore), and small-scale hydropower.

Twenty-nine states have already adopted renewable electricity standards requiring utilities to gradually increase their use

of renewable energy. The states most dependent on imported coal can redirect the funds that now leave their economies by adopting or strengthening such standards. A strong federal renewable electricity standard would also help by setting a national floor for renewable energy across all states, including those in the Southeast.

Of course, state reliance on imported coal creates more than economic problems. Burning coal also causes serious harm to public health, the global climate, and the overall environment. Indeed, coal plants are the nation's largest source of carbon dioxide, the main cause of global warming.

State and federal policies that promote energy efficiency and renewable energy, and cap carbon emissions, are essential to protecting our health, climate, and environment. Fortunately, such policies can also boost each state's economy while spurring the move to a national clean energy economy.

Endnotes

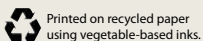
- 1 The full report—with profiles of the 24 states most dependent on imported coal—is available at www.ucsusa.org/burningcoalburningcash.
- 2 We created these rankings using data collected by the Energy Information Administration and the Federal Energy Regulatory Commission. We based the lists on 2008 imports—the latest year for which data are available. Some coal-producing states both import and export coal. We account for this by reporting the net imports for all our rankings, except the final one on international imports. Appendix B of the full report provides a detailed description of our methodology.
- 3 We compare 2008 data to 2002, where appropriate, because 2002 is the first year for which comprehensive information on both utility-owned and independent power plants are available.
- 4 The amount of coal burned in power plants nationwide dropped significantly in 2009, as did the price of coal, because of the recession (and, no doubt, because of clean energy policies in some states). Spending on net coal imports therefore also likely dropped in most states from 2008 to 2009, though complete state-specific data were not yet available. However, absent comprehensive federal climate and energy legislation, states that lack policies for advancing clean energy technologies will likely see a rebound in spending on imported coal as the economy recovers.
- 5 This result is the average spent per person per year indirectly through electricity rates. The actual amount will vary according to each person's electricity use. Figures do not reflect sales of coal power generated in one state and sold in another.

The full text of this report is available on the UCS website at www.ucsusa.org/burningcoalburningcash.



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National Headquarters

Two Brattle Square
Cambridge, MA 02238-9105
Phone: (617) 547-5552
Fax: (617) 864-9405

Washington, DC, Office

1825 K St. NW, Suite 800
Washington, DC 20006-1232
Phone: (202) 223-6133
Fax: (202) 223-6162

West Coast Office

2397 Shattuck Ave., Suite 203
Berkeley, CA 94704-1567
Phone: (510) 843-1872
Fax: (510) 843-3785

Midwest Office

One N. LaSalle St., Suite 1904
Chicago, IL 60602-4064
Phone: (312) 578-1750
Fax: (312) 578-1751