

Coal in Indiana



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Quality of Indiana Coal

All coal produced in Indiana is ranked a high-volatile bituminous coal, as designated by the American Society for Testing and Materials. Coal is a heterogeneous rock and has considerable variation in chemical and physical properties within a particular seam and also between seams.

Indiana coal has a natural moisture content of about 5 to 15 percent; heating value of 10,500 to 12,000 BTU per pound ash content of about 5 to 20 percent; and sulphur content of about 0.5 to 6 percent.

Indiana Mining History

Bituminous coal was first discovered in Indiana along the Wabash River in 1736. In 1804 coal was first reported in land surveys and its locations marked on maps. By 1832 coal was first being advertised for sale in many southern Indiana newspapers. The first coal company to be officially incorporated and granted a charter by the State of Indiana was the American Cannel Coal Company of Cannelton in Perry County, which was incorporated in 1837.

By 1840, coal was being shipped in small quantities by flat boat from locations along the White, Wabash and Ohio Rivers. Indiana was producing almost 9,700 tons of coal per year, primarily from Perry and Warrick Counties. Small scale surface mining along outcropping seams was done at first by pick and shovel and later by horse and scraper. The first underground mine shaft in Indiana was developed in 1850 at Newburgh, Indiana. By 1852 block coal had been discovered in Clay County and both shaft and slope mines became common.

From 1840, when production was almost 9,700 tons, to 1897, coal production increased rapidly and by 1918 at the close of World War I, production in Indiana had reached over 30,000,000 tons per year. With the advent of steam powered equipment, surface mining began on a large scale and has steadily increased ever since.

The depth of a coal seam dictates the types of equipment needed to remove the overburden above the seam. As technology has advanced from steam powered to diesel and finally to electric power, the size of the equipment used and its capabilities have also advanced. Twenty-five years ago it was unusual to surface mine coal at depths greater than sixty feet, while today, with equipment capable of removing 200 cubic yards of overburden at a time, coal seams that approach 200 feet in depth are considered mineable.

Indiana Coal Transportation System

For the 34.9 million tons of bituminous coal produced in Indiana in 1999 a transportation system consisting of rail, motor and waterborne carriers was available. Single-line or two-line rail service to practically all parts of the United States and all export regions likely to be practical for Indiana coal were available to Hoosier coal shippers. Most of the major rail routes are reported to be in serviceable condition. Track rehabilitation and improvements were undertaken during the last few years by several carriers with large unit-train coal traffic.

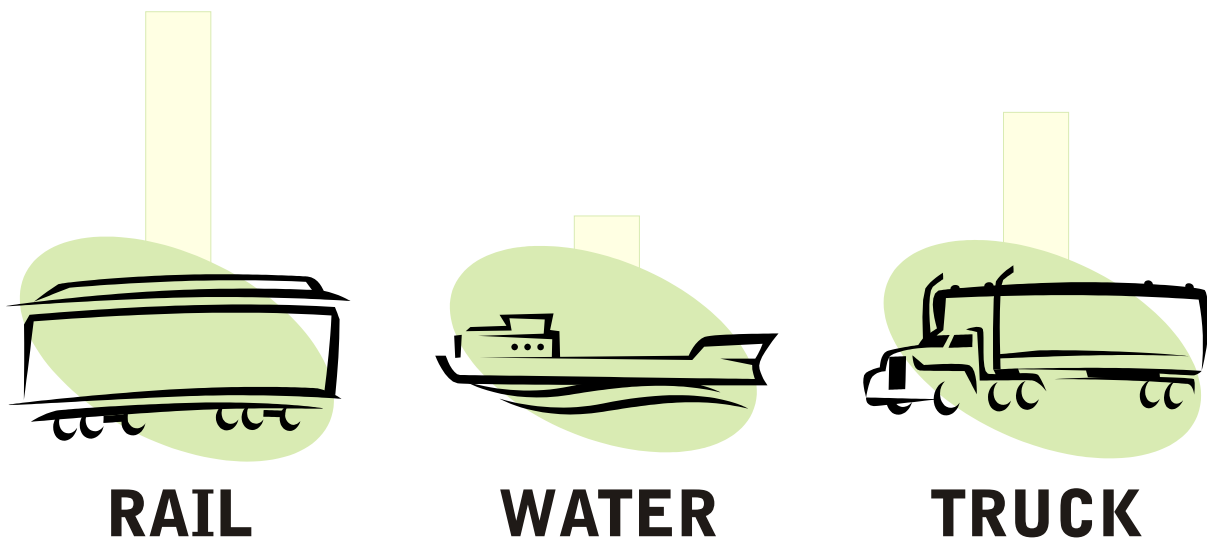
Recognizing the growing interest in and opportunities for coal exports, attention is drawn to the readily available access to export terminal areas including the all-rail route to Gulf Coast ports. Other economical access is provided to Ohio River and Lake Michigan waterway transfer points. The railroad hauling capacity is more than adequate. All major lines are equipped to handle high speed unit-trains with trailing-weights of up to 20,000 gross tons.

An elaborate highway system, representing the "right-of-way" for numerous motor carriers, criss-crosses the state. Inevitably, both state and county level highways are the principal arteries for trucked coal as these types of roads are most likely to be near or at points of production, whether these are mines or preparation plants. Nevertheless, the interstate system represents a conduit over which truck transportation of coal over somewhat extended distances becomes economically feasible.

Axle and gross vehicle weight limitations imposed by the state are more restrictive than in other coal producing states. Neither special motor carriers hauling substantial quantities of coal nor their coal producing customers have reported any particular problems in achieving their respective aims. Both highway and motor carrier equipment capacity are reported to be adequate.

Indiana coal moves to domestic and foreign markets via the inland waterway system through private terminals along the Ohio River.

Practical capacity for waterborne transportation of Indiana's bituminous coal is limited, by terminal capacities first, and by the inland waterway system second. Available towing and barge capacities are substantially greater than either of the former constraining factors.



Transporting Indiana Coal

(Thousand Tons)

| YEAR | RAIL | WATER | TRUCK |
|------|--------|-------|--------|
| 1981 | 12,615 | 5,755 | 8,359 |
| 1982 | 14,383 | 6,522 | 8,655 |
| 1983 | 15,093 | 6,826 | 9,497 |
| 1984 | 17,324 | 7,607 | 11,900 |
| 1985 | 17,336 | 6,206 | 8,735 |
| 1986 | 18,210 | 7,227 | 7,055 |
| 1987 | 18,504 | 6,459 | 8,642 |
| 1988 | 17,814 | 5,865 | 7,154 |
| 1989 | 17,563 | 7,442 | 7,814 |
| 1990 | 18,455 | 8,464 | 8,113 |
| 1991 | 17,268 | 6,474 | 6,670 |
| 1992 | 17,110 | 4,943 | 8,333 |
| 1993 | 14,087 | 5,176 | 9,534 |
| 1994 | 16,101 | 4,014 | 9,703 |
| 1995 | 13,804 | 2,716 | 8,228 |
| 1996 | 16,570 | 3,203 | 9,378 |
| 1997 | 18,819 | 2,587 | 13,399 |
| 1998 | 24,711 | 1,358 | 9,929 |
| 1999 | 23,405 | 1,043 | 8,548 |
| 2000 | 17,026 | 1,236 | 9,262 |
| 2001 | 18,802 | 3,337 | 13,793 |
| 2002 | n/a | n/a | n/a |

Source: U.S. Department of Energy

Coal Distribution in Indiana by Consumer Category

(Thousand Tons)

| Year | Electric Utilities | Coke Plants | Other Industrial | Residential Commercial | Total |
|------|--------------------|-------------|------------------|------------------------|--------|
| 1984 | 41,960 | 10,096 | 4,225 | 657 | 56,938 |
| 1985 | 35,927 | 8,854 | 4,613 | 523 | 49,917 |
| 1986 | 37,511 | 8,300 | 4,065 | 546 | 50,422 |
| 1987 | 37,829 | 8,407 | 4,220 | 541 | 50,997 |
| 1988 | 35,785 | 8,387 | 3,922 | 631 | 48,725 |
| 1989 | 40,844 | 7,052 | 4,398 | 518 | 52,812 |
| 1990 | 48,282 | 7,631 | 4,592 | 550 | 61,055 |
| 1991 | 45,799 | 6,884 | 3,988 | 433 | 57,105 |
| 1992 | 49,330 | 7,110 | 4,090 | 411 | 60,970 |
| 1993 | 43,872 | 6,026 | 4,215 | 339 | 54,452 |
| 1994 | 53,679 | 5,584 | 3,970 | 356 | 63,589 |
| 1995 | 48,768 | 6,660 | 3,762 | 287 | 59,476 |
| 1996 | 51,444 | 6,750 | 4,185 | 356 | 62,471 |
| 1997 | 51,739 | 5,381 | 5,114 | 395 | 62,630 |
| 1998 | 54,832 | 6,662 | 4,149 | 371 | 66,013 |
| 1999 | 54,357 | 7,662 | 3,095 | 343 | 65,457 |
| 2000 | 48,795 | 7,606 | 4,811 | 275 | 61,487 |
| 2001 | 54,761 | 6,425 | 6,839 | 251 | 68,275 |
| 2002 | n/a | n/a | n/a | n/a | n/a |

Indiana Produced Coal Used in Indiana by Consumer Category

(Thousand Tons)

| Year | Electric Utilities | Coke Plants | Other Industrial | Residential Commercial | Total |
|------|--------------------|-------------|------------------|------------------------|--------|
| 1987 | 20,471 | 0 | 3,575 | 399 | 24,445 |
| 1988 | 18,468 | 0 | 3,386 | 497 | 22,352 |
| 1989 | 19,993 | 0 | 3,661 | 492 | 24,146 |
| 1990 | 21,274 | 3 | 3,559 | 465 | 25,301 |
| 1991 | 19,445 | 0 | 2,827 | 376 | 22,619 |
| 1992 | 19,005 | * | * | * | * |
| 1993 | 18,356 | 35 | 3,216 | 304 | 23,913 |
| 1994 | 21,279 | 0 | 3,140 | 314 | 24,733 |
| 1995 | 18,404 | 0 | 2,502 | 279 | 21,185 |
| 1996 | 20,840 | 0 | 3,120 | 350 | 24,310 |
| 1997 | 26,443 | * | 3,089 | 384 | 29,916 |
| 1998 | 30,414 | 0 | 2,246 | 332 | 32,992 |
| 1999 | 24,908 | 0 | 1,551 | 283 | 30,742 |
| 2000 | 23,927 | 0 | 2,463 | 270 | 26,660 |
| 2001 | 27,193 | 0 | 3,575 | 240 | 31,007 |
| 2002 | n/a | n/a | n/a | n/a | n/a |

*Unavailable

Where Is Coal Mined in Indiana?

Counties

- Clay
- Daviess
- Dubois
- Fountain-Warren
- Gibson
- Greene
- Knox
- Martin
- Owen
- Parke
- Perry
- Pike
- Posey
- Spencer
- Sullivan
- Vanderburgh
- Vermillion
- Vigo
- Warrick

