

PEAT



Harvesting the peat at Westhay,
Somerset Levels



Peat in [Lewis](#), Scotland

Also known as turf, is an accumulation of partially decayed vegetation or organic matter. It is unique to natural areas called peatlands, bogs, mires, moors, or muskegs. The peatland ecosystem is the most efficient carbon sink on the planet, because peatland plants capture CO₂ naturally released from the peat, maintaining an equilibrium. It takes thousands of years for peatlands to develop the deposits of 1.5 to 2.3 meters (4.9 to 7.5 feet) which is the average depth of the boreal (northern peatlands).

LIGNITE



A lignite stockpile (above) and a lignite [briquette](#)

Lignite, often referred to as brown coal, is a soft, brown combustible, sedimentary rock formed from naturally compressed peat. It is considered the lowest rank of coal due to its relatively low heat content. It has a carbon content around 60% to 70%. It is mined all around the world, and

is used almost exclusively as a fuel for steam-electric power generation, and is the coal which is most harmful to health.

SUB-BITUMINOUS COAL



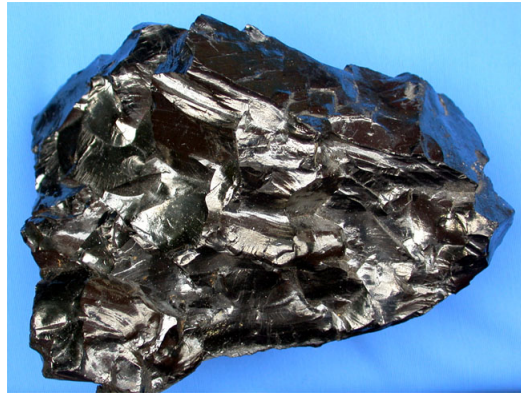
Sub-bituminous coal may be dull, dark brown to black, soft and crumbly at the lower end of the range, to bright jet-black, hard, and relatively strong at the upper end. Sub-bituminous coal contain 15% to 30% inherent moisture by weight and are non-coking (undergo little swelling upon heating). The heat content of sub-bituminous coals range from 8,300 to 11,500 BTU/lb or 19.3 – 26.7 MJ/kg. Their relatively low density and high water content renders some types of sub-bituminous coals susceptible to spontaneous combustion if not packed densely during storage in order to discourage free air flow.

BITUMINOUS COAL



Also known as black coal, is a relatively soft coal containing a tarlike substance called bitumen or asphalt. It is of higher quality than lignite coal but of poorer quality than anthracite. Formation is usually the result of high pressure being exerted on lignite. Its coloration can be black or sometimes dark brown; often there are well-defined bands of bright and dull material within the seams. The carbon content of bituminous coal is around 60% to 80%; the rest is composed of water, air, hydrogen, and sulfur, which have not been driven off from the macerals. This type of coal is known for releasing the largest amounts of firedamp, a dangerous mixture of gases that can cause underground explosions.

ANTHRACITE



Often referred to as hard coal, it is a hard, compact variety of coal that has a sub-metallic luster. It has the highest carbon content, the fewest impurities, and the highest energy density of all types of coal and is the highest ranking of coals. The carbon content is between 92% and 98%. Anthracite accounts for about 1% of global coal reserves and is mined in only a few countries around the world.

Table 7.9 Coal Prices, 1949-2011 (Dollars per Short Ton)

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