

Advanced Journal of Environmental Science and Technology ISSN 7675-1686 Vol. 13 (1), p. 001, March, 2022. Available online at www.internationalscholarsjournals.com © International Scholars Journals

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Commentary

Brief note on types of coal

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Received: 02-Mar-2022, Manuscript No. AJES-22-57511; Editor assigned: 04-Mar-2022, PreQC No. AJES-22-57511 (PQ); Reviewed: 18-Mar-2022, QC No. AJES-22-57511; Revised: 23-Mar-2022, Manuscript No. AJES-22-57511 (R); Published: 30-Mar-2022.

DESCRIPTION

Coal is a hot black or dark brown rock with a high amount of carbon and hydrocarbons. Coal is classified as a renewable energy source because it takes millions of years to build. Coal contains the energy stored by plants that lived hundreds of millions of years ago in swamp forests. Layers of dirt and rocks covered the plants for millions of years. The resulting pressure and heat converted plants into something we called coal.

Formation of coal

- Coal construction takes millions of years, which is why it is a renewable and non-renewable natural resource.
- Built 300 million years ago when the earth was covered with wetlands.
- When plants in these forests especially trees, mosses, ferns, and reeds die, they fall into swamps.
- Thus, there was a large layer of dead plants in the swamp built.
- Over the years, many plants died and many layers were formed, one above the other.
- The upper layers press down the lower layers. Heat and pressure caused some physical and chemical changes and eventually, some carbon-rich deposits formed.

Types of coal

Coal is divided into four main types:

Anthracite: Anthracite contains 86% –97% of carbon and usually has the highest heat value of any coal. Anthracite accounted for less than 1% of coal mined in the United States by 2020. All anthracite mines in the United States are located

in north-eastern Pennsylvania. In the United States, anthracite is widely used in the steel industry.

Bituminous: Bituminous coal contains 45% –86% carbon. Bituminous coal in the United States is between 100 and 300 million years old. Bituminous coal is the most abundant level of coal found in the United States, and accounts for about 44% of total US coal production by 2020. Bituminous coal is used to generate electricity and is an essential oil as well as raw material for making charcoal for cooking or use in the steel and metal industry. Bituminous coal is produced in at least 18 states by 2020, but five states account for 74% of bituminous production: West Virginia (28%), Pennsylvania (14%), Illinois (13%), Kentucky (10%), and Indiana (8%).

Subbituminous: Subbituminous coal usually contains 35% –45% of carbon, and has a lower heat value than bituminous coal. The majority of subbituminous coal in the United States is at least 100 million years old. About 46% of all US coal production by 2020 was small and about 88% were produced in Wyoming and 8% in Montana. The rest was produced in Alaska, Colorado and New Mexico.

Lignite: Lignite contains 25%–35% of carbon and has the lowest energy content of all coal. Lignite coals are usually smaller and have never been under extreme heat or pressure. Lignite is crumbly and has a high humidity, which contributes to its low temperature. Lignite accounts for about 9% of total coal production in the U.S. in 2020. About 54% were mined in North Dakota and about 39% were mined in Texas. Another 7% was produced in Louisiana, Mississippi, and Montana. Lignite is widely used to produce electricity. The facility in North Dakota also converts lignite into synthetic natural gas delivered by natural gas pipelines to consumers in the eastern United States.

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