Anthracite Market Survey

A Research Proposal by Resource-Net (Draft Version)

Introduction

Anthracite is a high-rank coal, with low volatile matter, typically less than 10% and fixed carbon more than 80% ***(see Appendix 1)***. From a historical perspective, much of the production was used for combustion in specially equipped power stations, but this application is clearly in sharp decline. Opportunities also exist as "coke replacement" in some process industries, mineral-ore agglomeration (fines) and other higher value applications.

Resource-Net is well qualified to undertake a detailed anthracite report being one of the few research organizations to follow this market on a continuous basis. A monthly report on the coke and anthracite markets has been produced since 2007 and has gained acceptance as the key reference source for information on these markets. The "Anthracite Market Survey" has been produced every three years since 2011.

Over the last decade, Russia emerged in recent years as the key anthracite supplier to Europe and other markets around the world. But Russia's invasion of Ukraine in 2021 and the subsequent sanctions have blocked the world's primary source from Europe and other markets. Vietnam's position as an exporter is rapidly diminishing due to its cost profile and government policies. Other sources such as South Africa and the United States focus primarily on their domestic markets, with limited exports. Supply is emerging from Peru and has become quite significant in some countries.

Outline Coverage

The Survey will include the following:

Anthracite Supply

- Leading producers worldwide with approximate "run of mine" capacity;
- Ownership and development of the main anthracite producers;
- Historical production by country (2001-25);
- Grades by major mine and/or country;
- Logistical issues (port, rail etc) as they impact anthracite availability;
- Developments in world mine capacity, new projects;
- Future anthracite availability – China, Peru, Russia, South Africa, Ukraine, Vietnam plus available export statistics.

Demand for Anthracite

- Historical anthracite consumption (all grades combined) by country (2001-25);
- Forecast anthracite requirements by country to 2030.

Outline Coverage (cont'd)

Consuming Sector Outlook

Unsized Markets:
- Power stations
- Ore sintering & pelletizing
- Pulverized coal injection in the blast furnace

Sized Fines Markets:
- Ilmenite smelting
- Filtration

Sized (lumps) Markets:
- Submerged-arc furnaces (ferroalloys, calcium carbide)
- Electrodes (aluminium smelting, electrode paste, pre-baked electrodes)
- Additive in electric-arc furnace steelmaking
- Lime kilns (soda ash, sugar-beet refining, dolomite, lime)
- Domestic heating

To include the following:

- Specifications required for each application;
- Discussion of alternatives to anthracite in above applications;
- Approximate historical demand by world region and application.

Price Analysis & Forecasts

- Price forecasts to 2030: lumps and fines, $/tonne cfr Asia;
- Analysis of long-term anthracite price development versus coke and coking coal.

The report will be around 150-170 pages in length.

Methodology

The approach to sourcing information for the **"Anthracite Market Survey"** is primarily by communications and interviews with participants in the market, i.e. consumers, traders and producers in all parts of the world.

Sources of information will include:
- Statistical data on production and demand from industry associations and producers;
- Conference papers and company information;
- Trade data;
- Interviews with key industry participants.

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Costs, Conditions & Timing

The cost for the report is €2100 or US$2400. Companies wishing to subscribe should confirm by contacting Resource-Net via email without delay. Full payment will be required in all cases before dispatch of the report.

The "Anthracite Market Survey" will be completed by the end of April 2026. Companies subscribing would be required to restrict access to the research to their own personnel, as according to Resource-Net's standard conditions of supply.

Background

Andrew Jones has more than twenty years' experience of analysing the global commodities sector as well as an extensive technical knowledge of the carbon, steelmaking and non-ferrous metals industries. Prior to establishing "Resource-Net" in 1999, he was employed in commodities research and equity analysis in several countries.

He has an Honours Degree in Metallurgy from the University of Sheffield (UK) and an MSc in Multinational Commerce from Boston University Brussels. He is based in South Africa.

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Appendix 1

Definition of Anthracite

<u>Anthracite:</u> Highest rank of coal, with low volatile matter, typically less than 10% (dry basis); fixed carbon is normally >80%; and high hardness / good "grindability" (HGI <40).

However, there is some variation in the definition with some countries seemingly also reporting so-called "semi-anthracite" - having volatiles 10-12% (or even up to 15%) and fixed carbon <80% - as "full anthracite". These grades are typically sold into low-volatile PCI and power-generation markets.

CF:
Medium-rank coals: bituminous (steam, PCI/soft coking, hard coking, low-volatile PCI).
Low-rank coals: lignite, sub-bituminous.

Areas of use for anthracite can be categorized as follows:

- **Power generation:** high calorific value (CV) required, low sulphur;
- **Domestic (smokeless) fuel:** high CV, low sulphur, ease of ignition (determined by volatile content);
- **Reductant in various processes:** carbon content, sulphur and phosphorus contents all important. Size is normally dependent on the process and precise plant configuration.