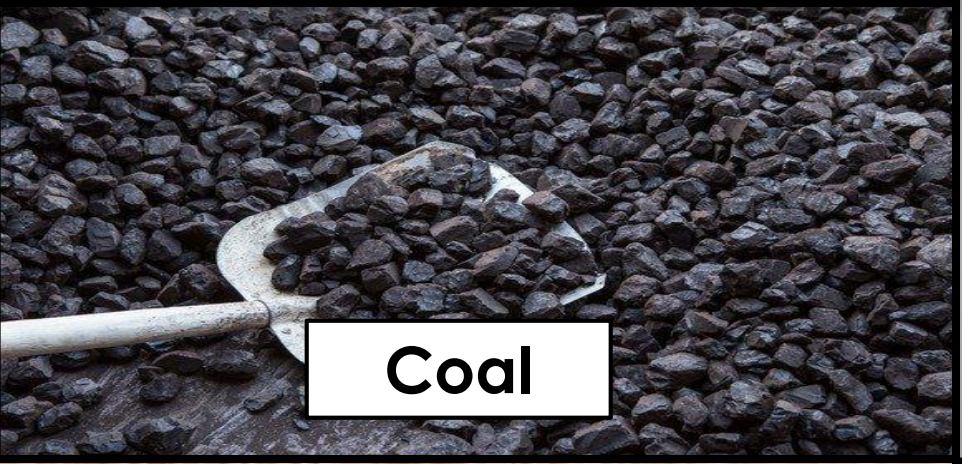
Processing of Coke, Coal, Lignin, Lignocellulosic-Plastic Composites from Recycled Materials, Hemicellulose, Cotton, Wood-Polymer Composites, Rosin and Rosin Derivatives, Wood and Wood Fiber



Introduction

Coal has been recognized as the most important source of energy for electricity generation in India. About 75% of the coal in the country is consumed in the power sector. In addition, other industries like steel, cement, fertilizers, chemicals, paper and thousands of medium and small-scale industries are also dependent on coal for meeting their process and energy requirements.

Coal is a fossil fuel and is the altered remains of prehistoric vegetation that originally accumulated in swamps and peat bogs. India's domestic coal industry is primarily government owned and coordinated. The central government plays a key role in India's coal policy development and also owns the public companies that account for most of India's coal production.

Coal is a key commodity in ensuring India's energy security because it is the most abundant non-renewable energy source in India. It has the world's fifth largest proved recoverable reserves of coal (60.6 billion tonnes) after the United States (237.3 billion tonnes), Russia (157.0 billion tonnes), China (114.5 billion tonnes) and Australia (76.4 billion tonnes).

It has been estimated that there are over 861 billion tonnes of proven coal reserves worldwide which means that there is enough coal to last us around 112 years at current rates of production. In contrast, proven oil and gas reserves are equivalent to around 46 and 54 years at current production levels.

Coal reserves are available in almost every country worldwide, with recoverable reserves in around 70 countries. The biggest reserves are in the USA, Russia, China and India.

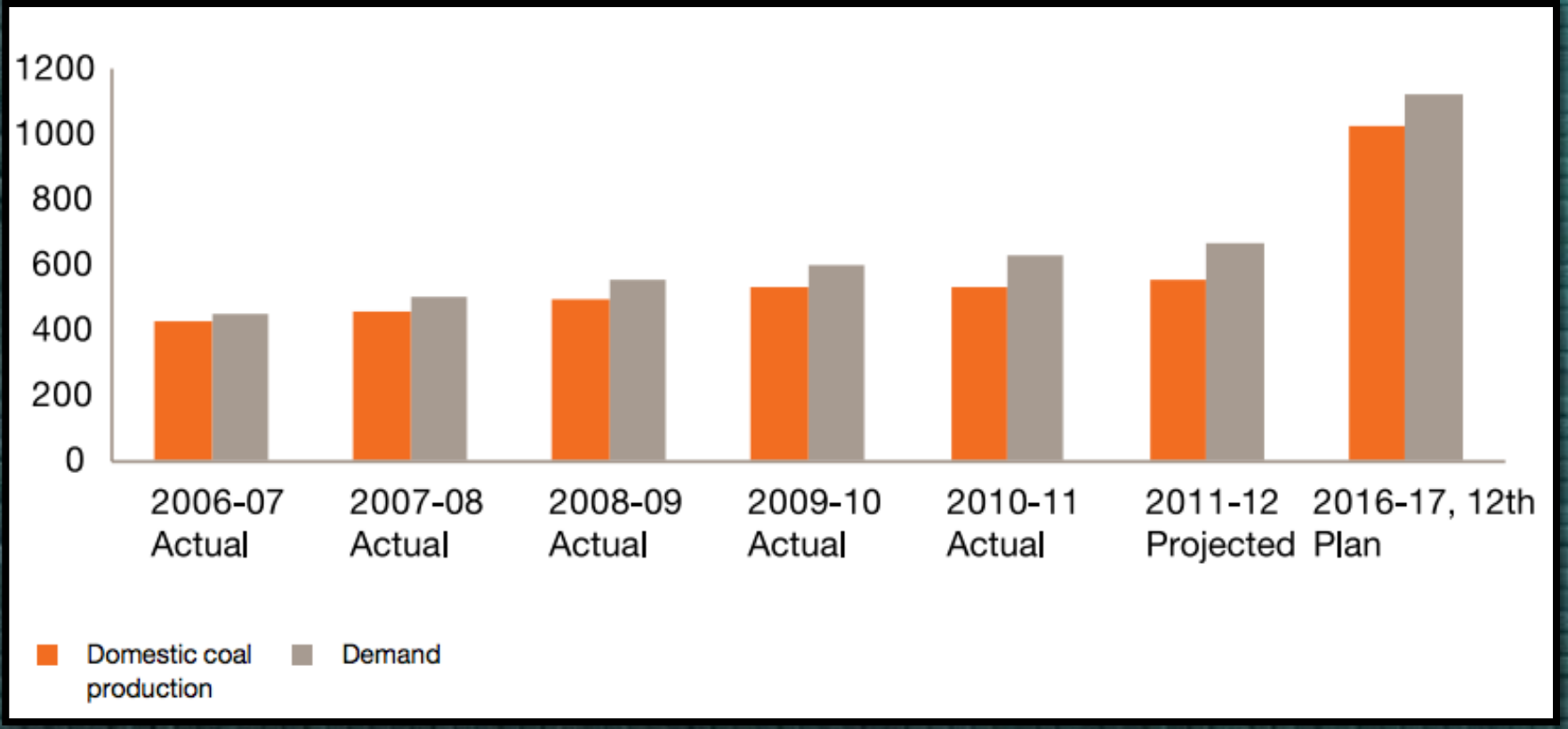
In India, the gap between demand and availability of coal is expected to rise every year. As per the 12th plan, the estimated demand of coal will rise to 980 MT by 2016-17 and 1373 MT by 2021-22 while the supply of domestic coal is expected to be 795 MT by 2016-17 and 1102 MT by 2021-22. Today nearly 60 % of the country's total installed power capacity of 209276 MW is generated using coal. India rank fourth largest in coal reserves (286 BT) and the third largest coal producing country in the world.

Though the coal demand has risen by around 9% over the last four years, coal production has not been able to keep up with the requirements. Organizations are acquiring mines abroad to augment the capacity and meet the growing demand. Besides, there is also an urgent need to adopt some possible measures like rationalization of coal linkage, dedicated freight corridors to improve the situation, need to develop skill sets of mining professionals, promoting underground mining, and cleaner coal technologies for sustainable development.

Coal has been recognized as the most important source of energy for electricity generation and industries such as steel, cement, fertilizers and chemicals are major sectors of coal consumption. In order to satisfy the coal demand, the Indian coal industry needs more investment and private players to raise its production level.

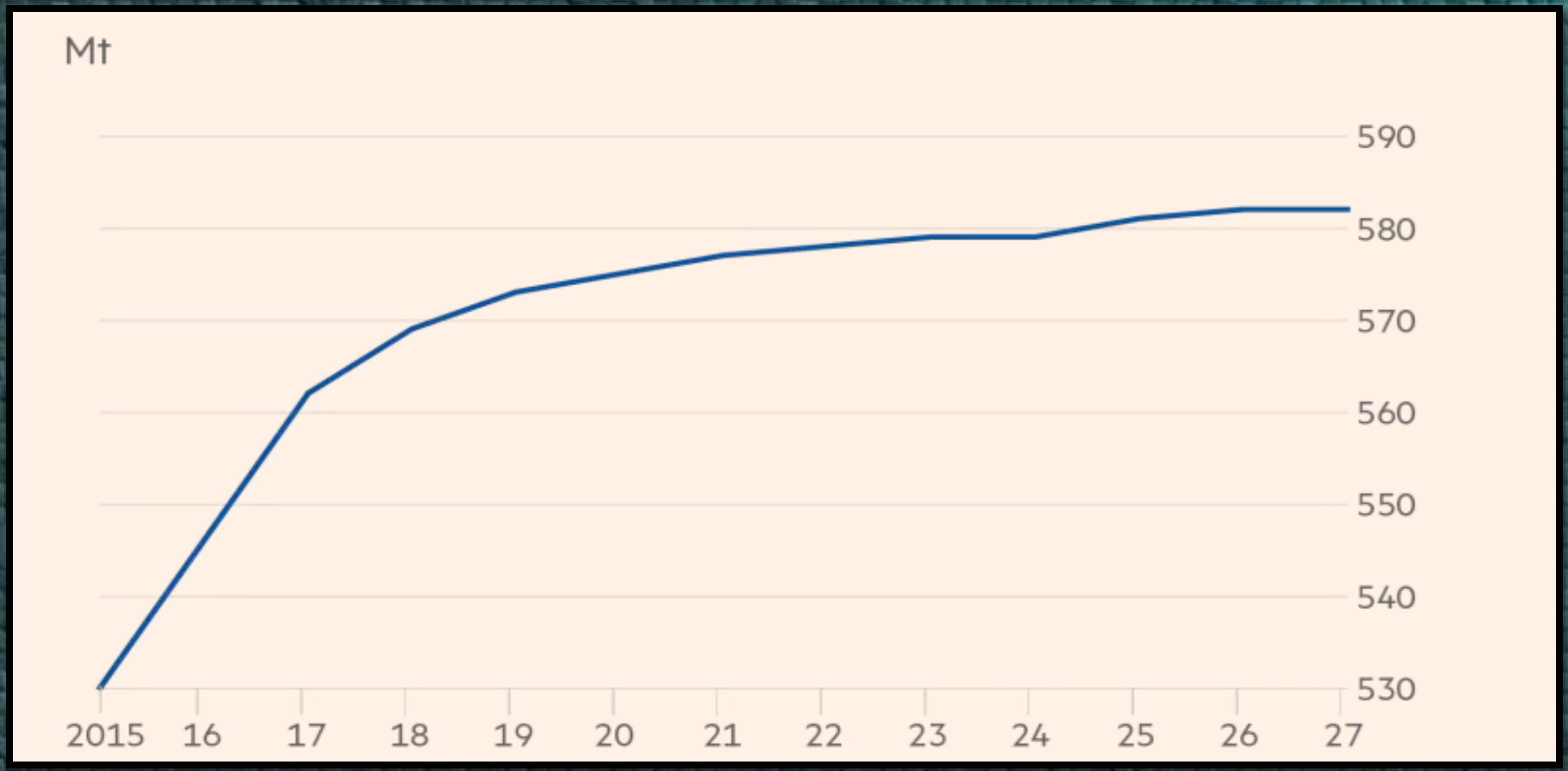
India is currently the world's third largest coal consumer, and demand for the fuel is set to grow in coming decades.

Demand-Supply Scenario



India uses about 800 million tonnes of coal. The current coal production in the country is 650 million tonnes, while the balance is imported. The additional demand for coal to fire up power plants would contribute a substantial 12,000 crore annually to the Clean Environment Fund at the rate of 400 per tonne.

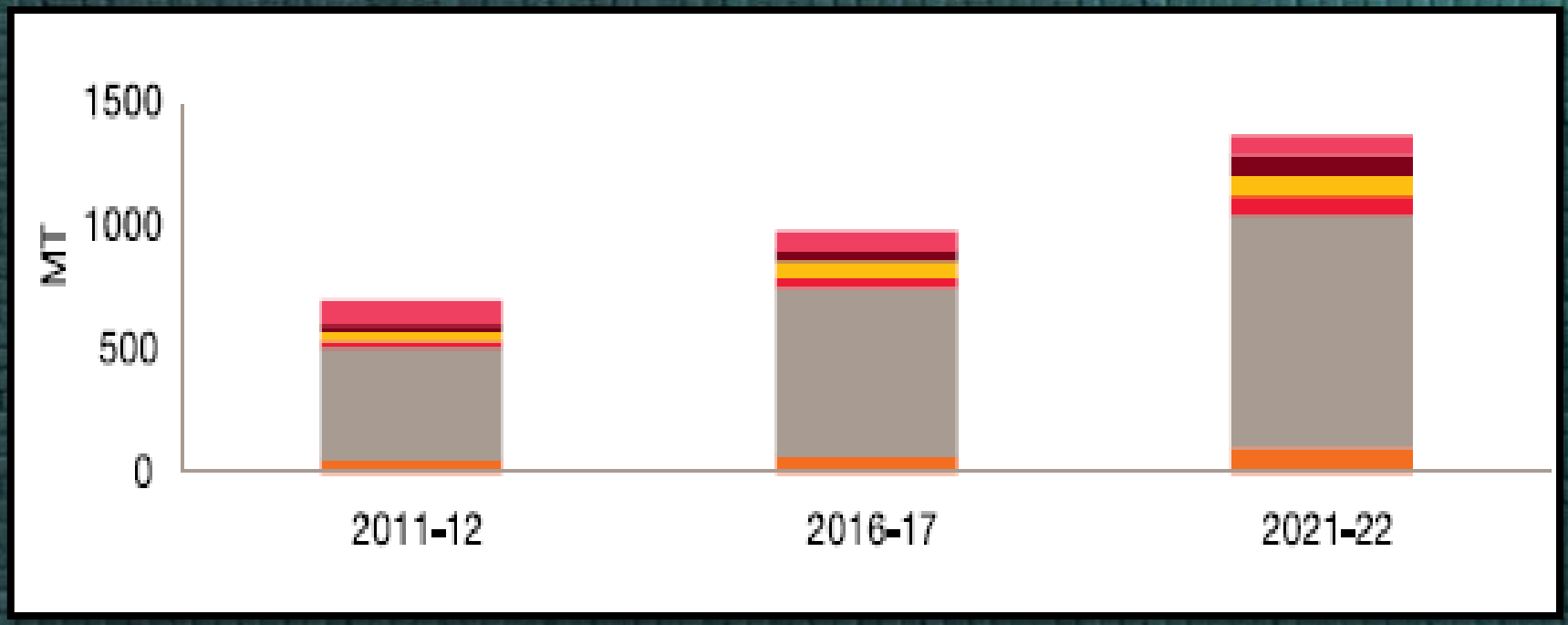
India's Thermal Coal Demand- for Power



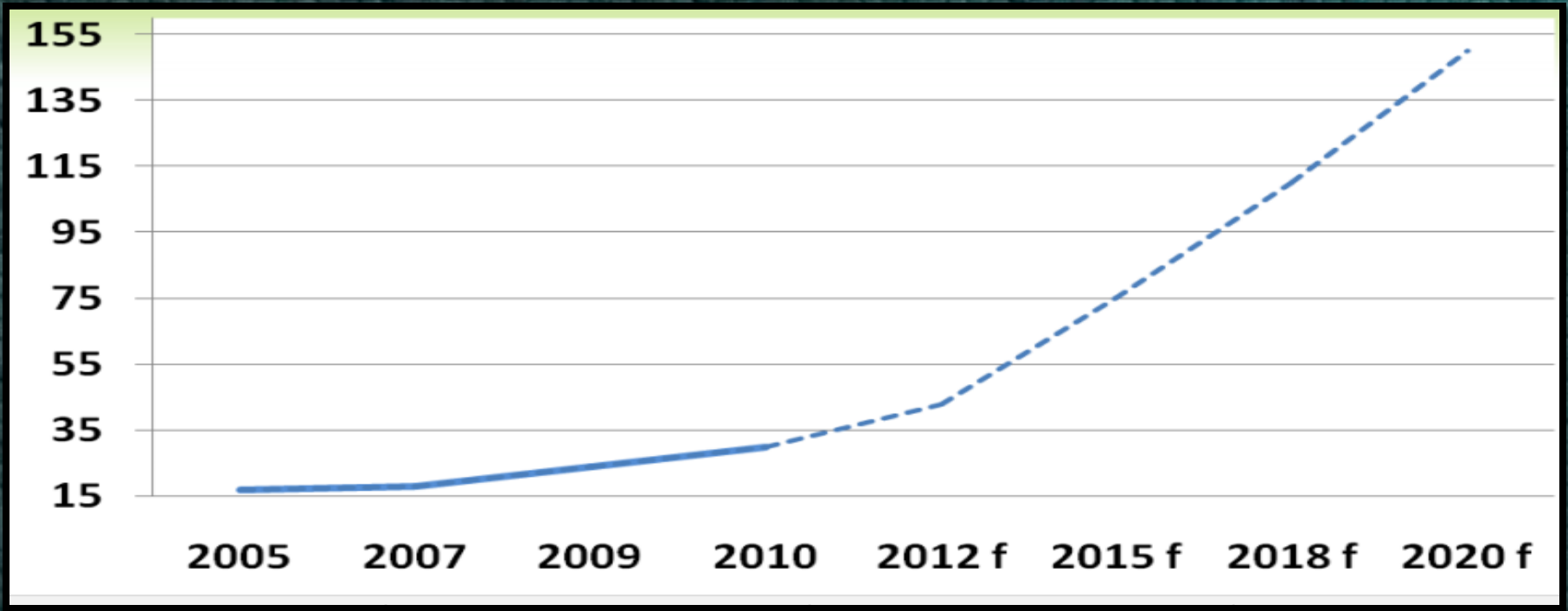
India is the world's third largest energy consumer, and its energy use is projected to grow at a rapid pace supported by economic development, urbanisation, improved electricity access and an expanding manufacturing base.

India is the world's third largest producer of thermal coal. While production has increased over the past few decades, the pace of growth has been insufficient to meet demand. Consequently, India has become more reliant on imported coal (thermal coal imports increased from 10 million tonnes in 2000 to 142 million tonnes in 2013). Most of India's thermal coal imports have been sourced from Indonesia because of its relatively low-cost compared with other internationally traded coal; its specifications more closely match India's domestic coal; and several Indian companies own Indonesian mines.

Coal Demand in India



Forecast of Indian Coking Coal Import (in MT)



Coking coal import in India is slated to rise in the ongoing fiscal on the back of higher demand.

Lignin

Lignin is a natural and renewable raw material and is available at an affordable price. As a result, its applications are consistently increasing, owing to its organic nature. Lignin is an attractive raw material for value-added product development. Lignin is predominately burnt in a chemical recovery process where it is an integral part of the paper and board manufacturing industries. As a result, less than 2% of the available lignin is isolated and sold, primarily in the formulation of dispersants, adhesives and surfactants.

However, lignin-based product development is essential under the bio-refinery concept, aging pulp and paper mills need to diversify their products portfolio to maintain existence and emerging biofuel/bioenergy technologies need to develop value-added co-products from lignin and bio-oil as a means of making the processes more cost effective.

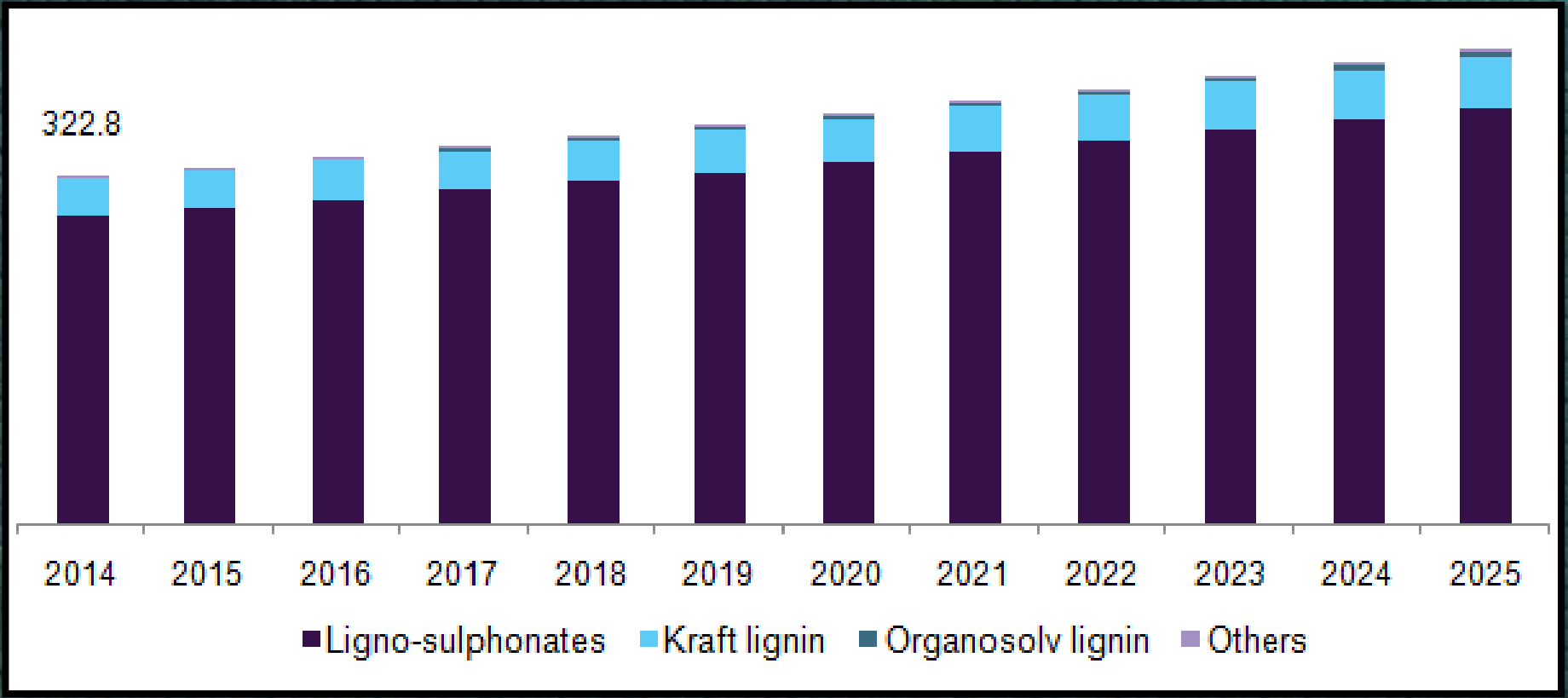
The global lignin market size was estimated at USD 732.7 million in 2015. Increasing demand of lignin for use in binders, adhesives, and concrete admixtures is expected to drive the market growth over the forecast period. In addition, growing demand for dust control systems driven by the growth in air pollution is likely to emerge as the major growth driver over the next nine years.

Global Lignin Market, 2014-2020, (Kilo Tons) (USD Million)

The growing demand for lignin as an additive in concrete due to superior properties such as water reduction is expected to drive the growth over the forecast period. In addition, the market is expected to register growth on account growing awareness regarding superior benefits of lignin in animal feed is likely to benefit growth.

U.S. Lignin Market Revenue, By Product, 2014 - 2025

(USD Million)



Rising demand from applications such as construction industry, animal feed, binding and adhesives products is anticipated to drive the lignin market growth. Shift in trends towards agricultural use of lignin along with government approval for manufacturing pesticides, insecticides, heavy metal sequestrate and emulsifier will boost lignin market demand. It is widely used in manufacturing products like vanillin, phenol, BTX and dispersants are likely to augment industry growth.

India lignin market size is forecast to grow by 6% owing to rise in demand of automobile and electronics goods. Availability of cheap labor coupled with favorable foreign investment policies in manufacturing sector will fuel the market growth.

Aromatics market segment growth rate will exceed 4% CAGR estimation by 2022. It is used as a substitute to phenol in wide range of applications like chemical manufacturing. Phenol derivatives produced from lignin, find applications in skin care and cosmetic industry for manufacturing sun screen, hair colors, skin lightening and other cosmetic products. Increase in demand for skin care products will fuel demand.

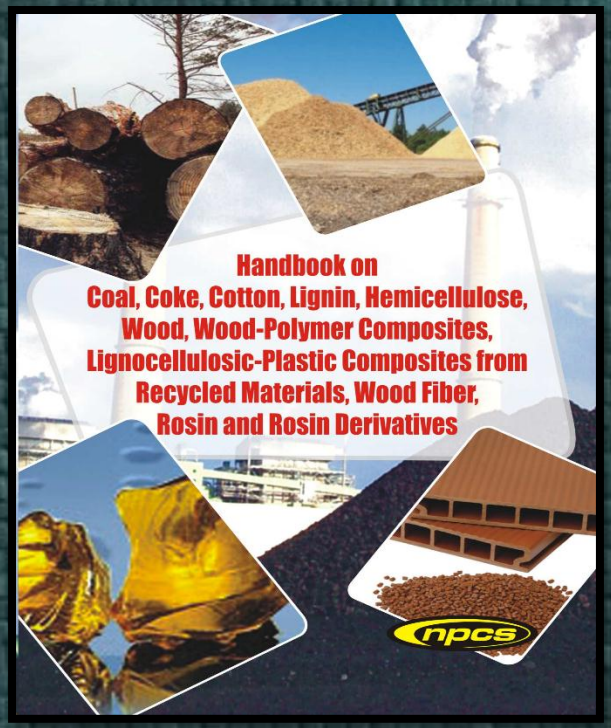
Coal as Input for Steel Industry: Due to its heat-producing nature, hard coal (metallurgical or coking coal) forms a key ingredient in the production of steel. Nearly 70% of global steel production depends on coal. Since "met coal" is an essential ingredient for the production of steel, U.S. met-coal producers are likely to benefit from the increase in steel consumption.

Coal Tar

Coal tar, a by-product of coke production. Main consumption markets of coal tar in China are deep-processed products (including phenol, anthracene, industrial naphthalene, coal tar pitch, etc.) and carbon black, with the former accounting for roughly 75% of coal tar consumption in 2014, the year in which China's deep-processing amount of coal tar touched 11.40 million tons or so, registering a CAGR of 13.3% over the last decade.

The Global Coal Tar Market size on the basis of product type spans birch tar, coal tar, pine tar and pitch among others. One of the prominent factors that is contributing significantly in raising the coal tar market share include augmented demand for tar in the industrial, medical sectors and sealing of roads. The production of tar is generally done with the help of a wide range of natural materials via the process of destructive distillation. The mining of tar can be done from petroleum, coal, peat and wood. It is generally a combination of free carbons as well as hydrocarbons. Products that resemble the tar can be extracted from hydrocarbons.

Handbook on Coal, Coke, Cotton, Lignin, Hemicellulose, Wood, Wood-Polymer Composites, Lignocellulosic-Plastic Composites from Recycled Materials, Wood Fiber, Rosin and Rosin Derivatives



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Coal is the product of plants, mainly trees that died tens or hundreds of millions of years ago. Coal is a fossil fuel and is the altered remains of prehistoric vegetation that originally accumulated in swamps and peat bogs. The energy we get from coal today comes from the energy that plants absorbed from the sun millions of years ago. Coal is used primarily as an energy source, either for heat or electricity. It was once heavily used to heat homes and power locomotives and factories. Bituminous coal is also used to produce coke for making steel and other industrial process heating. Lignin is a constituent of the cell walls of almost all dry land plant cell walls.

It is the second most abundant natural polymer in the world, surpassed only by cellulose. Lignin is found in all vascular plants, mostly between the cells, but also within the cells, and in the cell walls.

Wood is an aggregate of cells essentially cellulose in composition, which are cemented together by a substance called lignin. The cells are made of three substances called cellulose (about 50 percent), lignin (which makes up a fifth to a quarter of hardwoods but a quarter to a third of softwoods), and hemicellulose. Rosin refers to an extraction process that utilizes a combination of heat and pressure to nearly instantaneously squeeze resinous sap from your initial starting material.

In India's energy sector, coal accounts for the majority of primary commercial energy supply. With the economy poised to grow at the rate of 8-10% per annum, energy requirements will also rise at a reasonable level. The Indian coal industry aspires to reach the 1.5 billion tonne (BT) mark by FY 2020. In fore-coming years, the industry will naturally need to focus on building on the success, and be on track for reaching the FY 2020 goal. One of the primary goals of the Government of India is to ensure that it is able to meet the country's power generation needs. Another aim is to lower the country's reliance on coal imports by boosting the coal production quickly.

The Major contents of the book are Coal, Analysis of Coal and Coke, Cotton, Lignin and Hemicelluloses, Degradation of Wood, CCA-Treated Wood, Wood-Polymer Composites, Lignocellulosic-Plastic Composites from Recycled Materials, Chemical Modification of Wood Fiber, Delignification of Wood with Pernitric Acid, Rosin and Rosin Derivatives, Polymerizable Half Esters of Rosin and Photographs of Plant & Machinery with Supplier's Contact Details.

It will be a standard reference book for professionals, entrepreneurs, those studying and researching in this important area and others interested in the field of these industries.

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Tags

Coal Preparation Plant, Coal Processing, Processing of Coal, Coal Processing Plant, Coal Preparation Process, Lignin Processing, Processing of Lignin, Process for Producing Lignin, Wood Processing, Wood Processing Plant, Wood Processing Industry, Coal, Lignin, Wood and Rosin Processing, Business Plan for Coal and Lignin Processing, Business Idea for Wood and Rosin Processing, Chemical Composition of Rosin, Coal and Lignin Processing Projects, Coal Preparation Technology, How to Start Coal and Lignin Business?, How to Start Successful Coal and Lignin Business, How to Start Successful Wood and Rosin Business, How to Start Coal and Lignin Processing Industry in India, How to Start Coal And Lignin Production Business, Most Profitable Coal and Lignin Processing Business Ideas, Coal Industry in India, Projects on Coal and Coal By Products, Coal Sector in India, Processing of Lignin, Lignin Production, Production of Lignin, Industrial Lignin Production,

Lignin Extraction, Wood Processing Business, Manufacturing Process of Rosin, Coal Processing project ideas, Projects on Small Scale Industries, Small scale industries projects ideas, Coal Processing Based Small Scale Industries Projects, Project profile on small scale industries, How to Start Coal Processing Industry in India, Coal Processing Projects, New project profile on Coal Processing industries, Project Report on Wood and Rosin Processing Industry, Detailed Project Report on Wood and Rosin Processing, Project Report on Wood and Rosin Processing, Pre-Investment Feasibility Study on Wood and Rosin Processing, Techno-Economic feasibility study on Coal Processing, Feasibility report on Coal Processing, Free Project Profile on Coal and Lignin Processing, Project profile on Coal and Lignin Processing, Download free project profile on Coal and Lignin Processing, Industrial Project Report, Startup Project for Coal Processing Plant

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Mobile: +91-9811043595

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Thorough analysis of the project

Economic feasibility study of the Project

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Report Compilation

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106-E, Kamla Nagar, Opp. Spark Mall,

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Email: npcs.ei@gmail.com , info@entrepreneurindia.co

Tel: +91-11-23843955, 23845654, 23845886, 8800733955

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