



Global Energy Monitor's Global Coal Plant Tracker

For Prelims: [Global Energy Monitor](#), GEM's Global Coal Plant Tracker, Status of coal power projects worldwide.

For Mains: Global Energy Monitor, Distribution of key natural resources across the world (including South Asia and the Indian subcontinent).

[Source: DTE](#)

Why in News?

Recently, [Global Energy Monitor \(GEM\)](#), a not-for-profit cataloging coal projects worldwide, has released its quarterly update of **GEM's Global Coal Plant Tracker**, highlighting several key findings regarding the **status of coal power projects worldwide**.

What are the Key Findings of the GEM Report?

- **Global Trends in Coal Construction:**
 - More than 95% of coal plant capacity beginning construction in 2023 is in China, showcasing a dominance in new coal projects.
 - A decline is observed in new coal power capacity construction for the **second consecutive year**, signaling a shift away from coal in many regions.
- **Coal Capacity Under Consideration:**
 - 110 GW of coal power capacity is under consideration in 32 countries, indicating a significant amount of [Coal](#) projects are still being deliberated.
 - India, Bangladesh, and Indonesia lead, **comprising 83% of the proposed coal capacity outside China**.
- **Trends in Project Status:**
 - 18.3 GW of coal capacity **moved from proposed to shelved or canceled status** in the first nine months of 2023 across several countries.
 - Despite cancellations, 15.3 GW of entirely new **proposals emerged in India**, Indonesia, Kazakhstan, and Mongolia.
 - India, Indonesia, Bangladesh, and Vietnam represent 84% of the 67 GW of coal power capacity under construction outside China as of July 2023.
- **Indian Scenario:**
 - India plans to increase coal-fired power plant capacity significantly by 2032, aiming for **80 GW compared to the previously stated 27 GW in the National Electricity Plan 2022-32 (NEP)**.
 - Specific states in India have seen advancements in coal plant projects, with permits granted and progress reported in states like Chhattisgarh, Gujarat, Jharkhand, Madhya Pradesh, Odisha, and Uttar Pradesh.
- **Recommendations:**
 - Amidst global efforts to combat climate change, the report emphasizes the urgent need to cease the construction of new unabated coal power plants to limit global warming

effectively.

What is Global Energy Monitor (GEM)?

▪ About:

- GEM develops and shares **information in support of the worldwide movement for clean energy**.
- By studying the evolving international energy landscape and creating databases, reports, and interactive tools that enhance understanding, **GEM seeks to build an open guide to the world's energy system**.
- Users of GEM's data and reports include the [International Energy Agency](#), [United Nations Environment Programme](#), the [World Bank](#), and the Bloomberg Global Coal Countdown.

▪ Global Coal Plant Tracker:

- It is an online database that identifies and **maps every known coal-fired generating unit** and every new unit proposed since 2010 (30 megawatts and larger).
- Developed by GEM the tracker uses footnoted wiki pages to document each plant and is updated biannually, around January and July.

What is Coal?

▪ About:

- It is a type of fossil fuel found in a form of **sedimentary rocks and is often known as 'Black Gold'**.
- It is a conventional source of energy and is widely available. It is used as a **domestic fuel**, in industries such as iron and steel, steam engines and to generate electricity. Electricity from coal is called thermal power.
- The leading coal producers of the world include China, US, Australia, Indonesia, India.

▪ Distribution of Coal in India:

- **Gondwana Coal Fields (250 million years old):**
 - Gondwana coal makes **up to 98 % of the total reserves and 99 %** of the production of coal in India.
 - Gondwana coal forms India's metallurgical grade as well as superior quality coal.
 - It is found in Damodar (Jharkhand-West Bengal), Mahanadi (Chhattisgarh-Odisha), Godavari (Maharashtra), and Narmada valleys.
- **Tertiary Coal Fields (15 - 60 million years old):**
 - Carbon content is very low but is rich in moisture and sulphur.
 - Tertiary coalfields are **mainly confined to extra-peninsular regions**
 - Important areas include Assam, Meghalaya, Nagaland, Arunachal Pradesh, Jammu and Kashmir, Himalayan foothills of Darjeeling in West Bengal, Rajasthan, Uttar Pradesh, and Kerala.

▪ Classification:

- **Anthracite** (80 - 95% carbon content, found in small quantities in J&K).
- **Bituminous** (60 - 80% of carbon content and is found in Jharkhand, West Bengal, Odisha, Chhattisgarh and Madhya Pradesh).
- **Lignite** (40 to 55% carbon content, high moisture content and is found in Rajasthan, Lakhimpur (Assam) and Tamil Nadu).
- **Peat** (less than 40% carbon content and it is in the first stage of transformation from organic matter (wood) to coal).

UPSC Civil Services Examination Previous Year Question (PYQ)

Prelims

Q1. Consider the following statements: (2019)

1. Coal sector was nationalized by the Government of India under Indira Gandhi.
2. Now, coal blocks are allocated on lottery basis.
3. Till recently, India imported coal to meet the shortages of domestic supply, but now India is self-sufficient in coal production.

Which of the statements given above is/are correct?

- (a) 1 only
(b) 2 and 3 only
(c) 3 only
(d) 1, 2 and 3

Ans: (a)

Exp:

- Coal sector was nationalised in two phases under Indira Gandhi Government in 1972. Hence, statement 1 is correct.
- The coal blocks are allocated through auctions and not on a lottery basis. Hence, statement 2 is not correct.
- The coal sector is the monopolistic sector in India. India holds 5th biggest coal reserves in the world, but due to the incapacity of coal production by monopolistic firms, it imports coal to meet the shortages of domestic supply. Hence, statement 3 is not correct.
- Therefore, option (a) is the correct answer.

Q2. Which of the following is/are the characteristic/characteristics of Indian coal? (2013)

1. High ash content
2. Low sulphur content
3. Low ash fusion temperature

Select the correct answer using the codes given below:

- (a) 1 and 2 only
(b) 2 only
(c) 1 and 3 only
(d) 1, 2 and 3

Ans: (a)

Mains

Q. Despite India being one of the countries of Gondwanaland, its mining industry contributes much less to its Gross Domestic Product (GDP) in percentage. Discuss. **(2021)**

Q. "In spite of adverse environmental impact, coal mining is still inevitable for development". Discuss. **(2017)**