The Heat List: Nifty 500 Cos Emit 1B tonnes CO_{2e} in FY23

Top 10 Scope 1 emitters responsible for 70% gases; thermal capacity addition seen as major reason

Kiran Kabtta Somvanshi & Kalpana Pathak

Mumbai: Direct emissions of greenhouse gases (GHG) disclosed by Nifty 500 companies stood at 1.03 billion tonnes of CO2e (carbon dioxide equivalent) in FY23, according to data sourced from Prime Database. This was 5% higher than the previous year and close to the 1.2 billion tonnes emitted by Japan in 2022.

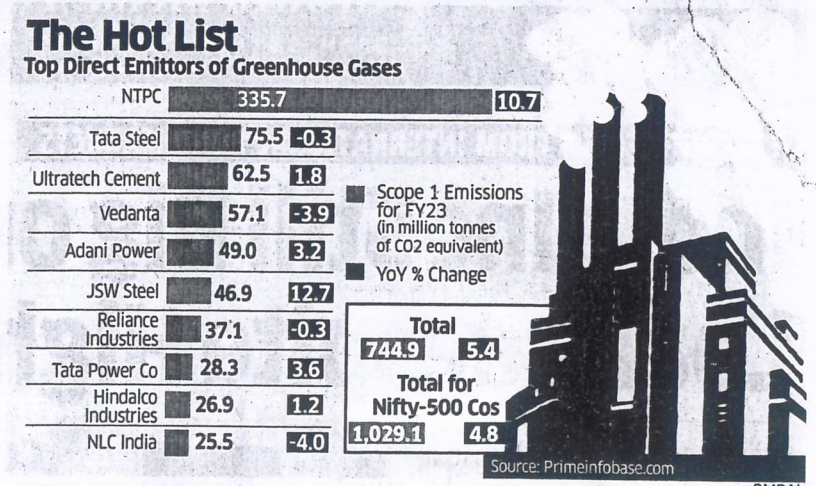
Direct emissions of greenhouse gases are also called Scope 1 emissions.

The top 10 emitters contributed 70% of the Nifty 500 total.

NTPC, which meets a fourth of India's electricity requirements, accounted for a third of the Nifty 500 total. NTPC's Scope 1 emissions are on the rise due to thermal capacity addition.

However, specific Scope 1 emissions – that is, emissions per unit of electricity generated — as well as energy intensity have dropped over the years, according to NTPC's annual report. Energy intensity is the unit of energy required to produce a unit of output.

Increase in Nifty 500 firms' emissions is in line with the 5% annual increase in India's overall emissions to 3.9 billion tonnes of CO2e in calendar year 2022, constituting 7.3% of the world's total emissions of 53.8 billion tonnes.



OMPAL

CLIMATE ENVOY KERRY SAYS EMISSIONS-FREE TECH HOLDS KEY TO ENERGY FUTURE

US Launches Global Nuclear Fusion Plan

US special climate envoy John Kerry launched an international engagement plan on nuclear fusion on Tuesday, saying the emissions-free technology could form a critical piece of the world's energy future. ▸▸ 10

"The increase in emissions is likely because of high fossil fuel consumption," said Pradeep Panigrahi, head, corporate sustainability, Larsen & Toubro.

"Coal's emission factor is high compared to other energy sources we use. While at the Glasgow convention (COP26), they initially talked about phasing out coal and finally agreed on phasing down, in India, it is very difficult to phase out coal," he said.

Some experts attributed India not joining the Global Renewables and Energy Efficiency Pledge at the recent COP28 to language that made reference to coal.

Coal production from NTPC's captive mines rose 65% to 23.2 million tonnes in FY23. Further, in the first quarter of FY24, NTPC doubled its coal production over the year-ago level.

Net Zero by 2070 ▸▸ 16

Net Zero by 2070

▸▸ From Page 1

In its FY23 annual report, NTPC acknowledged the importance of coal power plants for grid reliability, employment and social inclusion, despite the drive towards renewables. "In response, we are transitioning to more efficient thermal technologies while exploring innovative energy solutions like biomass co-firing, green hydrogen production, and waste recycling based on circular economy principles," the report said.

NTPC has said it's an early adopter of supercritical and ultra-supercritical boilers in India, saving ~2% fuel per unit of power and reducing emission intensity by 8% compared with conventional subcritical plants. This increases efficiency by around 8%.

India has committed to reduce the emissions intensity of its GDP by 45% by 2030, against 2005 levels, and subsequently reach net zero by 2070.

"We can look at how to improve energy efficiency," Panigrahi said. "This will bring down energy consumption. Instead of using different types of materials, it is better to focus on improving overall efficiency. Pivoting to green energy and improving efficiency is a board-level agenda at L&T, personally being reviewed by the CMD."