1. Government Plans to Regulate AC Temperatures

Introduction

The Union Ministry of Power is considering fixing the temperature range of new air conditioners (ACs) in India between 20°C and 28°C for households, hotels, and cars. This proposal aims to improve energy efficiency and promote public health.

Previous Efforts and Energy-Saving Potential

The idea isn't new. In 2018 and 2021, the Ministry had encouraged setting ACs at a default temperature of 24°C. According to a study by the Bureau of Energy Efficiency (BEE):

• Each 1°C increase in AC temperature saves 6% electricity

• Setting all ACs to 24°C could save 20 billion units of power annually

• ACs could account for 200 GW of electricity demand by 2030

Why Low Temperatures Can Be Harmful

Health studies show that temperatures below 18°C may be:

• Uncomfortable

• Unhealthy, leading to:
  - Higher blood pressure
  - Greater risk of hypertension
  - Increased respiratory problems like asthma
  - Lack of Vitamin D

Children in trials in Japan, New Zealand, and the UK showed improved breathing when sleeping in rooms above 18°C.

How an Air Conditioner (AC) Works

An air conditioner doesn't actually produce cold air — it removes heat from a room and throws it outside.

Why It Needs Power

Heat naturally moves from a hot place to a cooler one. But an AC does the opposite — for example, it pushes heat from a 30°C room into the hotter 35°C air outside. Doing this takes effort, and that's where electricity is used.

Step-by-Step: The Cooling Process

ACs use a special liquid called a refrigerant to carry heat. Here's how it works:

1. Evaporator (Inside Your Room):
   o   The refrigerant is kept just below its boiling point.
   o   A fan blows room air over it.
   o   The refrigerant absorbs heat and boils, turning into a gas.
   o   This also removes moisture from the air (so the room feels less humid).

2. Compressor (Outside Unit):
   o   The warm gas is sent to the compressor.
   o   It squeezes the gas, making it 3–4 times more pressurized and heating it to ~90°C.
   o   This is the step that uses the most electricity.

3. Condenser (Outside Unit):
   o   The hot gas moves to the condenser, where it releases heat into the outside air.
   o   As it cools, the refrigerant turns back into a liquid.

4. Expansion Valve:
   o   The high-pressure liquid is passed through this device.
   o   It becomes a low-pressure mix, ready to absorb heat again in the evaporator.
   o   The cycle repeats.

Relevance: GS Prelims & Mains Paper III; Science & Technology
Source: Indian Express

2. Fixing IRCTC's Ticketing Woes

Introduction
The Indian Railway Catering and Tourism Corporation (IRCTC) runs one of India's most heavily used e-commerce platforms — its online ticket booking system. With crores of users, smooth operation is essential.
• On May 22, 2025, IRCTC set a record by processing 31,814 tickets in just 60 seconds.
• However, Tatkal bookings, which are last-minute bookings, face major issues — especially during peak hours.

31,814 tickets in 60 seconds: Indian Railways hits booking record, cracks down on bots

The Problem: Bots and Unfair Bookings
A big concern is that ticketing agents use bots (automated programs) to book tickets faster than regular users can.
• This makes it difficult for genuine passengers to get tickets.
• During the Tatkal booking window, the system slows down or crashes due to high demand and bot usage.

New Measures to Curb Abuse

To solve these issues, IRCTC has introduced two key reforms:

1. Anti-Bot Upgrades:
  - o Major digital overhaul of the system.
  - o Use of anti-bot technology.
  - o 2.5 crore fake or suspicious user IDs deactivated.
  - o Content delivery network (CDN) introduced to speed up the website.

2. Stricter Aadhaar-Based Verification:
  - o Aadhaar verification is now mandatory after booking any ticket.
  - o From July 1, all Tatkal bookings require:
    - ✓ Aadhaar authentication
    - ✓ OTP verification
  - o Agents are banned from booking Tatkal tickets during the first 30 minutes of the booking window.

Why This Matters

The purpose of Tatkal booking is to give all passengers an equal opportunity to travel, especially when regular tickets are unavailable. When agents misuse the system with bots, it defeats this purpose.

These new steps by IRCTC aim to:

• Restore fairness

• Reduce misuse

• Improve performance

Need for Broader Reforms

While these tech upgrades are welcome, deeper issues remain:

• Train demand still exceeds supply, despite more services being introduced.

• Ticketing fixes alone won't be enough.

The real solution lies in:

• Expanding train and track capacity

• Improving passenger safety and facilities

• Making travel more accessible and comfortable

Conclusion: A Step Forward, But Not the Destination

IRCTC's new rules will help passengers, but the bigger challenge is for Indian Railways to fundamentally expand its services.

That would reduce pressure on the booking system and eliminate the need for constant tech fixes in the future.

Relevance: GS Prelims & Mains Paper III; Economics
Source: The Hindu

3. Why the Government Capped MGNREGS Spending—and What's Wrong With It

What Is the New Rule?

• The Union Finance Ministry has capped spending on MGNREGS at 60% of its annual budget for the first half of the 2025–26 financial year.
• This is the first time such a cap has been introduced.
• MGNREGS has now been brought under the Monthly/Quarterly Expenditure Plan (MEP/QEP), a spending control system introduced in 2017.

What Is MGNREGS?

• The Mahatma Gandhi National Rural Employment Guarantee Scheme promises up to 100 days of employment annually to any rural household that demands it.
• It is a demand-driven law-backed programme and has been exempt from budget caps in the past.

Why the Government Introduced the Cap

• Spending has been front-loaded in recent years:
  o Over 70% of the budget often gets used up by September.
  o This leads to large unpaid dues by year-end (Rs 15,000–25,000 crore in past years).
  o On average, 20% of the next year's budget goes to clearing old dues.

• The Finance Ministry wants to:
  o Control overspending
  o Avoid the need for extra funds mid-year
  o Ensure money is available for the second half of the year

But There's a Problem: Demand Is Not Fixed

• MGNREGS work demand changes throughout the year:
  o It's highest between April–June and again after kharif sowing in September.
  o Unpredictable weather can suddenly increase demand (e.g. droughts).
• Example: In 2023, poor rainfall caused a 20% increase in work demand in July and August.
States like Karnataka used up over 70% of their budget early due to drought.
The cap does not allow flexibility to handle such situations.

Legal Concerns: Can the Government Limit a Legal Right?

• MGNREGS is not just a scheme—it's a legal right under the 2005 Act.
• Citizens have a right to work on demand, and to be paid within 15 days.
• The Finance Ministry's cap could block access to this right once the budget ceiling is reached.
• Courts have ruled (e.g., Swaraj Abhiyan v Union of India, 2016) that financial constraints cannot justify violating statutory or constitutional rights.

Unclear Outcomes: What Happens When Funds Run Out?

• No clarity on:
  o Will workers be denied work even if they ask for it?
  o Will they be unpaid for work done?
• Both would violate their legal rights under the Act:

  o Section 3: Employment must be provided within 15 days of demand.

  o Schedule II, Para 29: Wages must be paid within 15 days of completing work.

Delays in wage payments and non-payment of unemployment allowance are already common.

Conclusion: Fixing Finances but Breaking the Law?

• The cap may help control spending, but it goes against the core purpose of MGNREGS: guaranteed rural employment.

• Instead of restricting funds, the government needs a better long-term financial plan to support this crucial safety net.