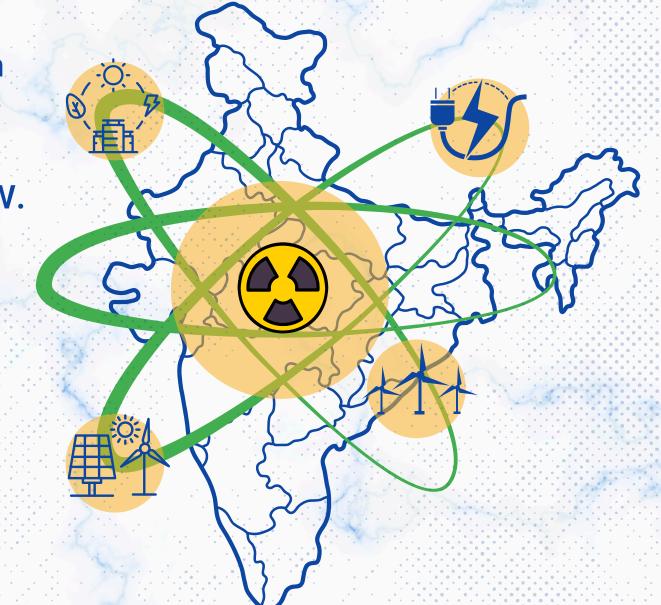


# Towards 100 GW: The Future of Nuclear Energy in India

Can nuclear energy power India's clean future?

Our new blog breaks down the challenges, breakthroughs, and road ahead from 8.88 to 100 GW.





# Why Nuclear Energy Is Back in the Spotlight

India is targeting 500 GW of non-fossil fuel capacity by 2030.

Solar and wind are growing, but nuclear offers a unique advantage: consistent, base-load power with near-zero emissions.



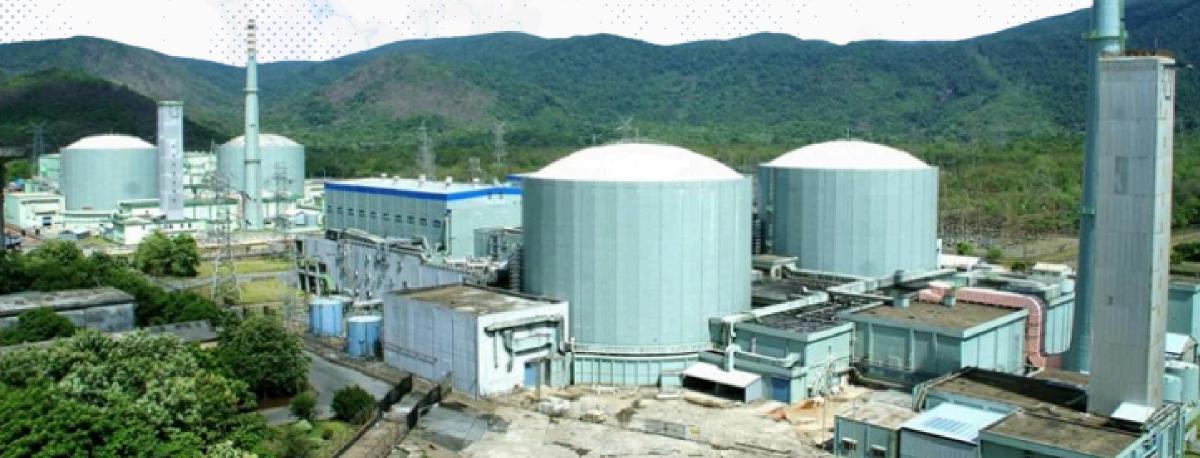


#### **Where India Stands Today**

India currently operates 22 nuclear reactors with a total capacity of 8.8 GW(as of April 2025)

But the ambitions are bigger: 100 GW of nuclear energy by 2047. That's **over 11x growth** in just two decades.

How feasible is this leap?





## **Policy Moves & Global Collaborations**

India plans to deploy:

- Indigenous Small Modular Reactors (16–300 MW each)
- 10 reactors under construction (~8 GW)
- Public-Private Partnerships like Bharat Small Reactors (220 MW)





### What's Holding Us Back

- Average construction time: 10–11 years (vs global 6–8 years)
- Strict liability laws deter private investment
- India imports uranium and lacks enrichment capacity
- Public concerns about nuclear safety persist

The challenges are legal, financial, and social.





#### **What Comes Next**

To reach 100 GW, India needs:

- Pass amendments to open the sector to private and foreign players
- Ensure long-term power purchase agreements and incentives
- Operationalise 15–20 GW by 2030 to build momentum
- Invest ₹20,000 crore in SMRs by 2033

The future of nuclear in India depends on how well we align policy, public interest, and innovation.





As India moves toward decarbonisation, can nuclear power rise to meet the moment.

This blog explores the evolving role of nuclear energy in India's climate and energy strategy.

Read the full blog at-www.csiglobal.co

