Nuclear Power in India

What is the issue?

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As a clean energy source, nuclear power is best suited to gradually replace coal for India’s core energy demand.

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Why is current scenario of nuclear energy in India?

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- The total installed capacity of the reactors operated by Nuclear Power Corporation of India Ltd (NPCIL) is just 6,780 MW—a little over 2% of power generated from all sources in the country.
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- In a bid to improve these numbers, the Union cabinet, approved the construction of 10 nuclear reactors that are expected to add 7,000 MW to India’s nuclear capacity.
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- This is the first time that 10 reactors have been approved in one go and also this initiative gives domestic suppliers sufficient scale to operate on, thus decreasing their costs.
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- The indigenous push will also eschew the problems related to nuclear liability law that the foreign reactor builders persistently complain about.
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- An additional 6,700 MW will be added by reactors already under construction.
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- There have also been reports indicating that India has been delaying the signing of the Memorandum of Understanding (MoU) with Russia on the construction of reactor units 5 and 6 at the Kudankulam Nuclear Power Plant.
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- New Delhi has reportedly made the signing contingent on Moscow being able to persuade Beijing on India’s entry into the Nuclear Suppliers Group (NSG).
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What are the issues involved in indigenization?

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- All the 10 reactors the cabinet has recently approved for construction are pressurized heavy water reactors (PHWRs).
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- Even though the PHWRs are expensive, the department of atomic energy persists with them because it lacks the expertise required to build and operate cheaper light-water reactors (LWRs).
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- The imported LWRs are more expensive than the domestically built PHWRs.
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- Another problem to indigenization is the concerns about safety of nuclear reactors.
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- Population against nuclear reactors cite falling costs and increasing capacities of solar and wind power as against the rising costs and safety concerns of nuclear power.
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- Unless cheaper storage options are discovered, neither solar nor wind energy can meet India’s base load demand.
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- As a clean energy source, nuclear is best suited to gradually replace coal, especially at a time when the government is simultaneously trying to reduce peak demand—the monumental programme to replace wasteful old lamps by 770 million LED bulbs is a case in point.
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- Hydropower is another option for base load but like nuclear power it too has met with resistance from activists around the world, including in India.
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- Becoming experts in building nuclear reactors will also help India export such reactors adding more Forex in exchange.
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Source: Live Mint

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