Concerns with Jaitapur nuclear power plant

What is the issue?

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The Indian government has to be transparent on the project details of the Jaitapur nuclear power plant.

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What is the project about?

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- The EPR (European Pressurised Reactors) is a third-generation pressurised water reactor, capable of achieving around 1,650 MW of power output with a higher yield than previous models.
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- It can supply electricity to up to 1.5 million people, yet requires 17% less fuel and produces less long-term radioactive waste.
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- India has initiated the idea of importing 6 nuclear EPRs more than a decade ago but made little progress due to economics and safety concerns.
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- In March 2018, the French company Électricité de France (EDF) and the Nuclear Power Corporation of India (NPCIL) signed an “industrial way forward” agreement.
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- Recently, EDF submitted a proposal to the Indian government for the Jaitapur nuclear power project in Maharashtra using EPR design, along with a proposal to start the project ASAP.
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- It will become the largest nuclear power plant in the world on completion.
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What are the risks associated with the project?

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- **Cost** - Electricity from the Jaitapur project will be more expensive than many other sources of electricity, including solar and wind power.
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- It was estimated in 2013 that first-year tariffs from the Jaitapur project would be around Rs. 15 per kilowatt-hour.
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- This figure must be revised upwards to account for the construction experience with EPRs over the past five years.
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- While nuclear costs have been rising, other low-carbon sources of electricity, especially solar energy, have become cheaper.
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- In recent auctions for solar PV projects under the National Solar Mission, winning tariff bids in the range of Rs. 2 to Rs. 2.50 per unit have become routine.
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- **Delay** - Across the world, EPRs have experienced delays and cost increases and has also locked consumers into a risky and expensive project with uncertain strategic and economic benefits.
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- **Debt** - Power-generating capacity in India has grown faster than demand causing projects to run into financial difficulties.
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- The parliamentary standing committee on energy listed 34 “stressed” projects, including NPAs and “those which have the potential to become NPAs”, with a cumulative outstanding debt of Rs. 1.74 lakh crore. (2018)
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- Since the NPCIL’s debts would ultimately be underwritten by the Indian government, if the project encounters financial difficulties, the costs would fall on Indian taxpayers.
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What are the concerns about safety measures?

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- In addition to the high costs, safety problems with the reactor design and construction have emerged in several EPRs.
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- The most serious of these pertained to the pressure vessel, which is the key

barrier that prevents the spread of radioactive materials from the reactor.
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- There are cases of substandard welding in the reactor's pipes or high carbon in the reactors' steel in EPR design as reported the French nuclear safety regulator.
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- These safety concerns are further exacerbated by India's flawed nuclear liability law.
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- In the event of an accident, the nuclear liability law would require the public sector NPCIL to compensate victims and pay for clean-up, while largely absolving EDF of responsibility.
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- However, under the law, NPCIL can obtain compensation from EDF for the supply of equipment with defects or for sub-standard services.
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- But the joint statement issued by the two countries might limit the operator's (NPCIL) right to obtain compensation.
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- This is because the statement promises that the "enforcement of India's rules" would be in accordance with the International Convention on Supplementary Compensation for nuclear damage.
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- This might prevent the NPCIL from exercising its right to claim compensation from EDF as allowed by Indian law.
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- If that is the case, then EDF can escape with limited or no consequences even after a severe accident.
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- Thus, without any responsibility, EDF will look more towards lowering operational costs for the plant than maintaining the highest safety standards for it.
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What should be done?

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- Jaitapur
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- Both the countries emphasized the need for the project to generate cost-effective electricity.
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- To ensure that, the government should clarify on –
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1. The entire project cost
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2. Accountability for cost increases and delays
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3. Agreement on sharing liability
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- Unless it is transparent about these details, the implementation of the nuclear power plant will become difficult to materialise.
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Source: The Hindu

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