Need for Nuclear power

Why in news?

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Nuclear power is in need as the renewable power is subject to weather.

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What are the issues with renewable power sources?

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- Solar power is available only when the sun is shining unless it is stored in some way.
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- In a year, a solar PV plant of one KW capacity generates no more than 2,000 KWh of electricity,
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- A coal-based or nuclear plant can generate around 7,000 KWh/year per KW of capacity
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- The hydro power is unevenly distributed across months.
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- There is a need of balancing Power source even there is a fully developed renewable power source.
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What are the problems with coal power?

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- There is a threat of climate change and the concern for environmental pollution.
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- The plants to reduce air pollution will increase the cost of coal power.
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- The cost of carbon capture and storage (CCS) is quite high and requires

more energy.
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- The cost of coal power would be some 30 to 50 per cent higher in coming days.
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What is the need for Nuclear Power in India?

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- To provide power when the sun is not shining, this balancing power is needed.
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- In India, more than 70 per cent of petroleum products are based on imports.
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- India’s known extractable coal reserves will run out in about 40 years.
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- For India, renewable energy is inevitable and nuclear option should be retained as an insurance.
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- Nuclear power helps diversify the system and adds to energy security.
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How Nuclear Power can be generated effectively?

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- India announced an agreement with international companies to set up 7,000 MW of nuclear plants based on our domestic technology.
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- Nuclear plants have been run in the past with more or less constant load.
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- Design change will assure to run the power plants in a required load.
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- The cost of nuclear electricity will depend on how it is financed and cheap storage systems should be developed.
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- India can install the nuclear plants without delay and within budget, they are economically attractive.
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Source: The Hindu

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