



## 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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