Second Geothermal Well in Ladakh

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Why in News?

Recently, the state-run Oil and Natural Gas Corporation (ONGC) drills a second geothermal well in Ladakh.

- It is ***India's 1st pilot geothermal power plant*** with ***1-Megawatt (MW)*** under development in the Puga Valley of eastern Ladakh.
- **Aim -** To tap into underground steam and hot water to provide reliable, round-the-clock clean energy.
- **Execution Agency -** The project is being executed by the ONGC Energy Centre, the research and development arm of ONGC.
- **Drilling Depth -** The well was successfully drilled to a depth of 1,000 metres.
- **Extreme Altitude -** Operations were conducted at an elevation of over 14,000 feet above sea level, making it one of the highest geothermal drilling projects in the world.
- **Efficiency Gains -** The drilling was completed in approximately 1 month, demonstrating a vast improvement in both timeline and cost-efficiency compared to the first exploratory well campaign.

Puga Valley

- Puga Valley is geologically active and widely recognised as India's most promising geothermal field.
- It is characterised by abundant hot springs, high underground thermal gradients, and shallow geothermal reservoirs.
- The first exploratory well drilled by ONGC in Puga successfully discharged steam at temperatures above the boiling point of water, confirming a high-enthalpy geothermal system.

Reference

Economic Times | India's first pilot geothermal power plant

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