



## Gas can accelerate Renewable Energy Shift

### What is the issue?

Gas power can partner and integrate more renewables into the national grid.

### What are the problems in moving towards renewable energy?

- India's target of reaching net-zero emission by 2070, as well as 500 GW of non-fossil fuel capacity and fulfilling 50% of energy requirement from renewable energy sources by 2030 requires development of robust infrastructure.
- However, increasing penetration of wind and solar energy will make the Indian grid susceptible to frequency and voltage fluctuations.
- This is due to unanticipated sudden loss of power generation, leading to reduced system inertia.
- These natural and anthropogenic events may also lead to grid instability and blackouts.
- Additionally, according to IEA, India has a higher requirement for flexibility in its power system than almost any other country in the world.
- Therefore it is prudent for grid operators to identify the correct technology that will help manage the grid and support their long-term needs.
- Hence, Gas-based hybrid power plants may just be an apt technological solution to aid and accelerate India's renewable energy transition.
- They can partner and integrate more renewable into the national grid.
- It can also meet seasonal and peak power demand

### Why coal is unsuitable?

- The governments around the world are deciding against any big investments in building new coal-based power plants, while marching towards meeting their respective emission reduction commitments.
- However some of India's policy actions continue to promote high carbon emitting fuel types for power generation.

- This is because they consider only the weighted average tariff as the criteria.
- The environmental and systemic attributes of technology are not considered.
- To ensure a successful renewable transition, wind and solar need a right partner which can offset their disadvantages and help in the smooth operation of the grid.
- Gas-based power generation is perfectly suitable in this situation.

### Is gas power the right alternative?

- It has been a lost decade for gas power, mainly due to questions on availability and affordability of gas.
- However, the value proposition that gas power is able to offer owing to flexibility, quick start-up, deeper turn down levels and faster ramp rates is a key enabler to integrate more renewables into the national grid and meet seasonal and peak power demand.
- Gas turbine technology-based power generation can balance grid and supply power at competitive prices both in standalone generation as well as when bundled with RE power.
- Green hydrogen is attracting a lot of interest lately and there is a strong push to bring down its cost of generation and make it affordable.

### How to make gas power a viable alternative?

- **Infrastructure** - Investments in building gas pipeline network and new gas import facilities to link all States with the currently operational six gas terminals will address the availability concerns.
- **Shorter PPA** - Gas contracts today are not available for a 25-year horizon, and going for long-term contracts risks the build-up of more uncertainty in the pricing which impacts the final cost of electricity.
- Shorter power purchase agreement (PPA) term aligning gas a contract is needed to enable gas power plant developers to procure gas at reasonable prices.
- It would be reasonable to link CERC escalation index, to reflect market and benchmark, with least volatile sources like Henry Hub.
- **Regulation** - Gas infrastructure is available and underutilised. It would be encouraging if regulatory and policy interventions can help incentivise utilisation of this infrastructure.

## Reference

1. <https://www.thehindubusinessline.com/opinion/gas-can-accelerate-renewable-energy-shift/article37775465.ece>



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