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Renewable Power Crosses A Milestone

There is a welcome paradigm shift underway in the domain of energy. The International Energy Agency reports that, last year, renewables overtook coal as the world's largest source of new power capacity. Yet effective power generation from renewable sources like wind and solar remain relatively low, and this must rise fast, as we transition to a more green and environment-friendly energy future.

The IEA estimates that addition to generation capacity in renewable energy--wind, solar photovoltaics and hydroelectric--added up to 153 gigawatt of generation capacity globally in 2015, which was more than that for conventional fossil-fueled thermal power in the like period. Yet the fact is that the



plant load factor or capacity utilisation from, for instance, wind turbines can be quite low, often no more than in the single digits in India. There are technical constraints on solar PV as well, such as limited operating hours, but we need to leverage the fast improving economics of renewable energy to stem carbon emissions

from fossil fuels. Storage will play a crucial role in making renewable energy affordable. If energy from renewables cannot be stored for use when renewables stop producing power, the system needs to keep conventional generation available on a large enough scale and tariffs will have to factor in the capacity charge of such availability even when it is not being tapped. This, along with grid integration requirements, pushes up overall power costs when more and more renewables are added to the grid.

In parallel, there's the pressing need to raise thermal efficiency in India's stodgy thermal power sector. About 70% of India's power capacity is coal-based, whose emissions can be brought down with modern echnology.