Slowing the pace of building solar capacity

What is the issue?

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- Solar power tariffs dropped to Rs 3.15 per unit in recent power auctions.
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- In this level, solar energy seems roughly competitive with thermal power.
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What is the present scenario?

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- Lower solar power costs are now a global phenomenon. e.g California derives about 40% of its grid power from solar energy.
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- This has led to **wholesale electricity rates dropping to zero at noon,** when solar power generation actually exceeds grid demand.
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- India’s current solar power capacity is about 12 Gigawatt (GW) and if the Jawaharlal Nehru National Solar Mission targets are fulfilled, it will hit 100 GW by 2022.
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- As solar power capacity increases and it becomes cheaper to boot and it could replace thermal power, which uses coal and gas.
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What are the problems?

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- Though solar energy much cleaner and does not involve dependence on imported fossil fuel building huge solar capacities at rapid speed also has its consequences.
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- **Subsidies -** The industry still receives large subsidies thus make this form of energy deceptively cheap.
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- Without the subsidies and generous tax holidays, solar power is still substantially more expensive than thermal power.
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- **Storage -** Solar power is **discontinuous,** therefore expensive and hard to store.
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- Hence, when solar power is available, it receives preference on grids, forcing thermal power plants to reduce production at such times.
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- This affects the plant load factor and hence, profitability, of thermal power plants.
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- Without alternate arrangements fast growth in the highly subsidised solar power industry could lead to economic distortions.
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- **Import dependence -** Solar energy equipment **needs rare earth metals** and China is pretty much the only source of these at the moment.
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- Hence in strategic terms, solar power could also lead to a critical **import dependency on China.**
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- **Research -** With growing research, it is very likely that current state-of-the-art solar energy technology will be outmoded in a few years.
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- A phased adoption will ensure that India’s solar energy industry is not locked into obsolete technology.
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- It will also provide the thermal power industry a chance to review future investments, and grid managers breathing space to develop smarter grids that manage the energy mix better.
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Source: Business Standard

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