

# CAG Performance Audit Summary

## Renewable energy sector in India

- The Comptroller and Auditor General of India (CAG) released a performance audit report on the renewable energy sector in India on December 8, 2015. The report examined the progress made in the following: (i) increasing the contribution of renewable energy to the energy mix of the country, and (ii) increasing access to electricity in rural areas, and (iii) promoting research, design, and development. Key observations and recommendations include:
  - **Renewable purchase obligation (RPO):** The National Action Plan for Climate Change (NAPCC) sets the target for RPO. RPOs are purchase obligations on electricity distribution companies to purchase certain amount of their energy requirements from renewable energy sources. It was observed that while the RPO target for 2012-13 and 2014-15 was 8% and 9% respectively, the achievement was only 4.28% and 4.51% respectively. RPOs can also be met through Renewable Energy Certificates (RECs). RECs are environmental attributes associated with the generation of renewable energy (RE) such as reduction of green house gases, that can be sold by RE generators. It was observed that an uncertain policy environment and poor RPO enforcement, led to about 93.6 lakh RECs, each valued at Rs 1,500, lying unredeemed.
  - CAG recommended that the Ministry of New and Renewable Energy must pursue the State Electricity Regulatory Commissions to align their RPO targets with the NAPCC. Further, these targets should be monitored and penalties should be collected for non-compliance. The Ministry should also develop clear guidelines on the life of RECs and management of unused certificates.
  - **Wind power:** CAG observed that an insufficient transmission network and non-synchronised generation has led to problems related to the transport of the generated wind power. In addition, the absence of scientific techniques to predict wind power has also created problem with maintenance of the grid (the network of transmission lines). It was recommended that the Ministry must develop adequate transmission and distribution infrastructure, for the transport of wind power by using scientific forecasting techniques.
  - **Solar power:** It was observed that Gujarat and Rajasthan had only exploited about 2.56% and 0.51% of their solar potential. Further, some states like Jammu and Kashmir and Himachal Pradesh had not set up any solar projects connected to the grid. CAG recommended that the Ministry should focus on the development of solar energy in states that have a higher solar energy potential.
  - The Ministry had not provided any flexibility to review tariffs when designing schemes. It was recommended that long term schemes should be kept flexible to match changes in tariff and costing structure to avoid any financial burden either on the companies or on public. Metering guidelines should be developed to enable better solar penetration of solar technology.
  - **Biomass power:** With regard to biomass power plants, CAG observed instances of non traceable and inoperative plants, and plants working at lower or unapproved specifications. CAG recommended that the Ministry must ensure that central financial assistance is given to the plants only after ensuring compliance with the required conditions. Further, it also recommended that the approved biomass projects must be reviewed to ensure that they are operating as per specifications and use the approved fuel.
  - **Solar photovoltaic systems:** CAG noted that in case of off-grid (standalone) solar photovoltaic systems (such as solar home lighting systems) the targets of the Ministry were not aligned with those of the Jawaharlal Nehru National Solar Mission (JNNSM). Further, only 31% percent of the JNNSM target had been achieved. It was also observed that 47% of the off-grid systems were not functional. CAG recommended that the Ministry should ensure that Ministry targets are aligned with JNNSM. The Ministry should also set up a mechanism, in coordination with state agencies, to ensure maintenance of the off-grid systems.
  - **Remote village electrification:** It was observed that in some states there was a mismatch between the list of villages sanctioned by the Ministry and the villages that were actually reported under the Remote Village Electrification programme. It recommended that the Ministry must ensure that only eligible villages are covered under the programme.

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