

(9) (17) The impending cooling demand transition in the country provides the huge demand potential & so energy efficiency is crucial to adapt to climate change. Discuss. [200 words].

➤ Introduction

Due to the average rising in the global temperatures & due to the effect of global warming, most frequent & intense heat waves are expected to hit in hot summer in Indian subcontinent become very high. Therefore, for maintaining the continuous flow of the indoor work activities in different sectors (industries, banking-financial sectors, public-private official sectors etc), GOI has approached for "Cooling India Cooling Action Plan" (2017-18 to 2037-38), therefore, impending cooling demand is increasing nowadays which make India, world's largest energy for cooling.

Development of India cooling action plan

20 years of Cooling India action plan has been decided through IEAP (India cooling action plan) by Ministry of Environment, forest & climate change - GOI by following the sustainable cooling initiative through the multilateral international agreement: Kigali amendment, Montreal protocol, Paris climate agreement as well as the sustainable development goal framework (SDG) by 2030.

Aim & objective of the initiative plan

① The development action plan for cooling India initiative not only working of Refrigerants or AC based cooling plan, but also working under R+D based alternative technologies for purpose of reduction of emission of HFCs by Kigali amendment protocol.

o Aiming for multi-stakeholders based planning approach in developing new strategies like, building of the habitable design by innovation-technologies, so that, it can ~~serve~~ serve the people under it as efficient-costness in hot summers - it can be an energy saving approach as well as without AC based cooling approach.

GoI initiative in energy saving approach as well as reduction of climate risk approach

- (i) Ministry of Power ^(MoP) and Bureau of Energy Efficiency (BEE) has ~~set up~~ set-up a database for production volume & energy efficiency level for room temperature maintaining by AC's, ceiling fans & domestic refrigerators.
- (ii) BEE has set up the campaign for setting the air conditioning at 24°C, which will result in sustainable energy saving as well as reduce the GHG emissions in the form of ~~the~~ HFCs.
- (iii) The estimated report/prediction says that - (from BEE), through 24°C temperature setting campaign, India will save 20 billion units of electricity - which could be set-up as the energy efficient India approach.
- (iv) Under NITI Aayog's energy model, Indian Energy Security Scenarios ^(IESS) have been set-up, which is available in public domain for GDP, population, per-capita income, urbanization & percentage penetration of cooling appliances - which set up the limitations of using cooling appliances at a particular range by the industries & urban sectors - aiming for achieving the goals of energy saving & climate change.

Conclusion

Development, modernization, growth, continuity of urbanization is mandatory but, climate change-risk assessment - energy efficiency should be an key focused area before these.