

Interview with Mr. Sameer Pandita, Director, Bureau of Energy Efficiency



SHEETAL's project manager Mr. Ashish Saraswat interviewed Mr. Sameer Pandita, Director – Standards & Labeling, Bureau of Energy Efficiency to grab his views on future of sustainable cooling in India. Please read below the full interview:

Q. Energy Efficiency is being considered as a potential viable resource to ensure energy security in developing countries. What is your view on India's cooling demand and the role of cooling efficiency to ensure access to cooling for citizens? Also how do you see it contributing to India's fight against climate change?

SP: In terms of India Cooling Action Plan, the aggregated nationwide cooling requirement, in tonnes of refrigeration, is projected to grow around 8 times by 2037-38 as compared to the 2017-18 baseline. The building sector cooling demand estimates indicate the most significant growth, at nearly 11 times as compared to the current baseline; the cold-chain and refrigeration sectors are estimated to grow at around 4 times while the transport air-conditioning is expected to grow at around 5 times the 2017-18 levels. These growth estimates are dependent on variables such as economic growth, leading to continued growth in building construction, rate of urbanisation, and improved lifestyle and aspirations.

The Total Primary Energy Supply (TPES) required for cooling across all demand sectors is expected to grow nearly 4.5 times in 2037-38 over the 2017-18 baselines. Therefore it is imperative to provide access to sustainable cooling and thermal comfort for all citizens while securing environmental and socio-economic benefits for the society. A large part of the country's cooling requirements across sectors is met using active refrigeration and air-conditioning (RAC) technologies, which are based on the use of either refrigerants and are energy intensive. Therefore, access of sustainable cooling to all citizens has an implication on the energy demand and energy security of the country making optimization of the energy performance of cooling appliances an important aspect both from resource efficiency and climate perspective.

In this direction, BEE under its Standards and labelling program for appliances and equipment has taken several measures to enhance the energy performance of cooling appliances like Ceiling fans, Room Air conditioners, Chillers etc. commercially sold in the country. Since its inception in the year 2006, the Standards and labelling program for cooling appliances like room Air conditioners has saved 73 Billion units of electricity equivalent to avoided CO₂ emissions of 60 Million tonnes till 2018. The program has also succeeded in transitioning 57% of the RAC production volumes from fixed speed room to inverter based energy efficient room air conditioners. Moreover, through the "Global Cooling Prize" an initiative under Mission Innovation Challenge IC# 7 on Heating and Cooling of buildings, efforts are underway to design a cooling solution for a typical housing unit in a highly populous city in India with the (a) at least five times more efficient per unit of cooling; (b) Can operate within predefined limitations on refrigerants, water, full-load power consumption, and maintenance requirements; and (c) Can be sold at no more than twice the first cost of today's standard solutions.

Q. BEE is one of the key policymakers in the cooling sector. Could you talk about BEE's various policies working to bring enhanced energy efficiency and better technology options in cooling sectors across to achieve India's sustainable cooling objectives vis-à-vis ICAP?

SP: With an objective of optimizing the energy consumption in cooling sectors to meet India's sustainable cooling objectives, Bureau of Energy Efficiency has taken following measures:

- (i) Launched a Voluntary Star Labelling program for Chillers in the year 2018.
- (ii) Launched a Voluntary Star Labelling program for Deep Freezers and Light Commercial Air Conditioners in March, 2020.
- (iii) Introducing mandatory Star labelling program for ceiling fans w.e.f. 1st January, 2022.

Q. How has COVID impacted the cooling sector? What can be the next steps towards recovery?

SP: COVID -19 pandemic has engulfed the entire world and India is no exception. Air conditioning industry has also been affected. According to RAMA, COVID-19 had decimated the summer AC sales and the whole supply chain has got affected. Manufacturers are struggling with unused raw material, unsold finished goods inventory and liquidity crunch. The existing stock of AC is expected to continue till next year i.e. 2020 due to lean summer sales in the current year. With COVID-19 and the ensuing lockdown, more than 50% of the summer AC sales. To combat the prevailing situation and to support the Air-conditioning Industry, BEE has deferred the implementation of revised energy consumption standards by a period of 1 year i.e. The Revised energy consumption standards which were to be made effective from 1st January, 2021 would now be applicable from 1st January, 2022. This has been done to allow the Industry come over the losses due to poor sales and to provide some space for the Indian Industry to reduce its dependence on the imports by investing in developing indigenous component manufacturing capacities over next two to three years. The idea is mainly to build local capacities and supply chains to manufacture air-conditioning components like compressors and heat exchangers and motors in the country thereby scaling down the costs of refrigerant based cooling appliances and dependence on imports.

Q. Over the years, CSOs have played one of the key roles to support the objectives of global and climate policy initiatives. Do you believe that synergized actions of CSOs would play an important role in the implementation of ICAP?

SP: CSOs play a vital role in supplementing the policies framed by the government. Moreover, synergistic actions are always more effective than the actions taken in isolation. BEE ensures adequate CSO participation while designing policies.

Q. What message would you like to give to cooling stakeholders regarding India's cooling scenario in the near future?

SP: In the future, it is expected that by harnessing the power of innovation, India and the world will be able to provide access to sustainable cooling to all without warming the planet. For Indian cooling Industry in particular, I must emphasize that the time is opportune to take a lead in indigenizing various Cooling technologies and invest focussed resources in Research and Development and indigenization of cutting edge cooling technologies. To make this happen the Industry has to come forward and support MSMEs to develop sustainable local supply chains. Efforts should be made to identify and commercialize novel designs and technologies related to cooling appliance which have

potential of commercialization. Indian Air-conditioning Industry under the “Atmanirbhar Bharat” vision of the Hon’ble Prime Minister of India must capitalize on economy of scales through indigenous demand for cost effective energy efficient cooling appliances to turn India into a global manufacturing hub for world class energy efficient cooling appliances which can be exported globally.