



Webinar Series Summary

# Facilitating Implementation of ICAP

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November 5 & 11, 2020

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## About India Cooling Coalition

India Cooling Coalition is a multi-stakeholder group organization led by representation from non-profits, academic and research institutions, and industry associations engaged extensively in sustainable cooling research and application. It provides a national non-governmental platform for dialogue with various national and international stakeholders and jointly recommends policy initiatives to ensure the success of government programs on smart cities, smart grid, housing, buildings, universal access to power, cold-chain, transport sector, refrigeration servicing sector while ensuring affordable and sustainable cooling for all.

To discuss the trends, limiting factors, and recommendations on appliances' efficiency, India Cooling Coalition organised a two-part webinar series on '**Accelerating the uptake of energy efficient space cooling appliances in India**' in November. The discussions revolved around ongoing research and development on accelerating the uptake of energy efficient space cooling appliances from three broad perspectives:



## Part 1: Consumer understanding of space cooling appliances' energy efficiency

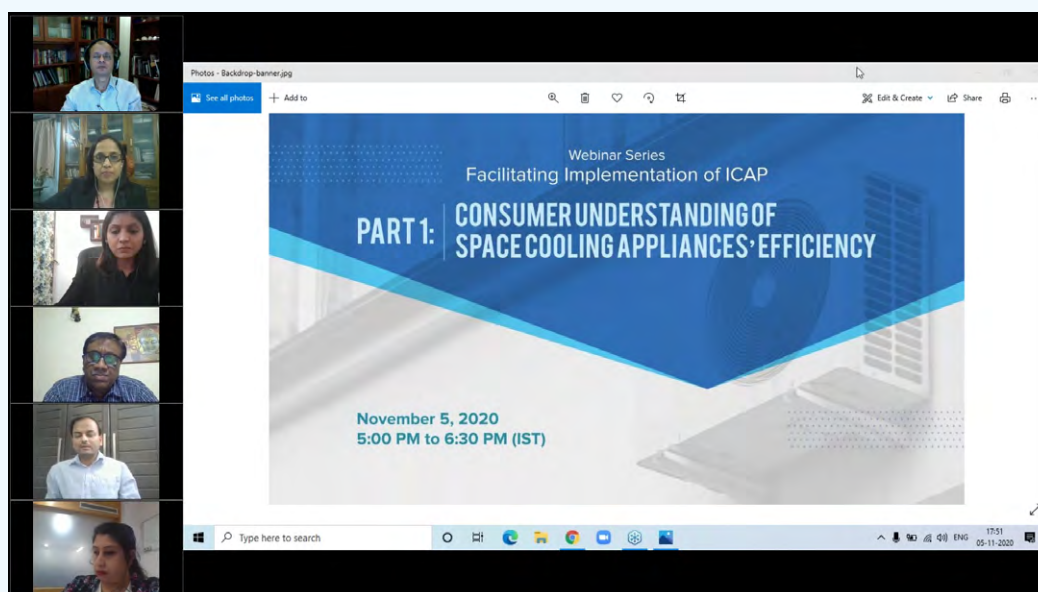
### Speakers:

- *Satish Kumar, President & Executive Director, Alliance for an Energy Efficient Economy (AEEE)*
- *Anna Agarwal, Fellow, Centre for Policy Research (CPR)*
- *Shalu Agrawal, Programme Lead, Council on Energy, Environment and Water (CEEW)*
- *Abhishek Ranjan, AVP, System Operation, BSES Rajdhani Power Ltd.*
- *Jitendra Nalwaya, VP Heading Power System Operation, and Power Forecasting/ Scheduling, BSES Yamuna Power Ltd.*
- *Dipanwita Ray, Senior Manager, Tata Power Delhi Distribution Ltd.*

### November 5, 2020

The commercialization of efficient space cooling technologies requires a demand-pull from the consumers. In this endeavor, Bureau of Energy Efficiency's (BEE) flagship Standards and Labelling (S&L) programme aims to inform the consumer about the energy savings and, thereby, the cost-saving potential of appliances. However, the higher cost of the star rated appliances is one of the key factors deterring the increase in its penetration. In light of this, an assessment and understanding of consumer patterns, attitudes, and tendencies become an essential measure. With representatives from research fields and utilities, the webinar discussed the following:

- What are the consumer purchasing patterns related to cooling appliances in India: What influences their purchase? What are the key attributes considered while making a purchase?
- What are the consumer behavioural tendencies related to the use of cooling appliances in India? How does the usage vary by income groups, climatic zones, demographics, cooling technologies (fans, desert coolers, ACs)?
- What can be some of the recommendations for steering consumer behaviour and ramping up the demand for energy efficient cooling appliances
- Cooling appliance penetration stock and impact on electricity demand



Economic viability still stands as the most important criteria for appliance selection and purchase on the demand side. However, the decisions for appliance selection and purchase go beyond economic viability. During the discussion, it was highlighted that beyond cost, consumer preferences such as brand, aesthetics, and features supersede the energy efficiency parameters while selecting a product, and the level of awareness regarding S&L programmeme continues to remain relatively low. There is a need to understand consumer behaviour and base assumptions on evidence-based research. The panellists also highlighted that a rise in the peak demand was witnessed in recent years, especially in residential areas, as people are shifting from evaporative air coolers to ACs.

A solution proposed was around home automation and smart metering, which could provide appliance usage in different households to develop co-relations on multiple criteria such as household income, education level etc. The role of gender in purchasing decisions should be explored as women's empowerment can lead to energy conservation. It was also pointed out that there is inertia in changing equipment, and people don't wish to modify existing equipment significantly. Nudging consumer behaviour and behavioural demand response can be effective strategies for breaking this inertia. Creating awareness at the end-user level can play a crucial role in Indian households and deemed necessary to strengthen the uptake of energy-efficient appliances in Indian homes.

Further, it was consensually mentioned that innovative financial mechanisms such as tax rebate, energy consumption-based credit history and performance incentives beyond energy

savings need to be incorporated within the policy framework enhance consumer support and transition towards EE appliances. Smart metering and smart user interface can help get customers interested. DR programme can help reduce the peak load and home automation and information display for appliance level consumption can motivate people to take steps in the desired direction. It is also essential to overcome the cost barrier using innovative business models, such as consumer financing or Discoms based credit extension or financial guarantee. People could also leverage the possibilities of appliance energy consumption analytics and IoT solutions.

## Part 2: Policy landscape and industry initiatives for efficient space cooling appliances

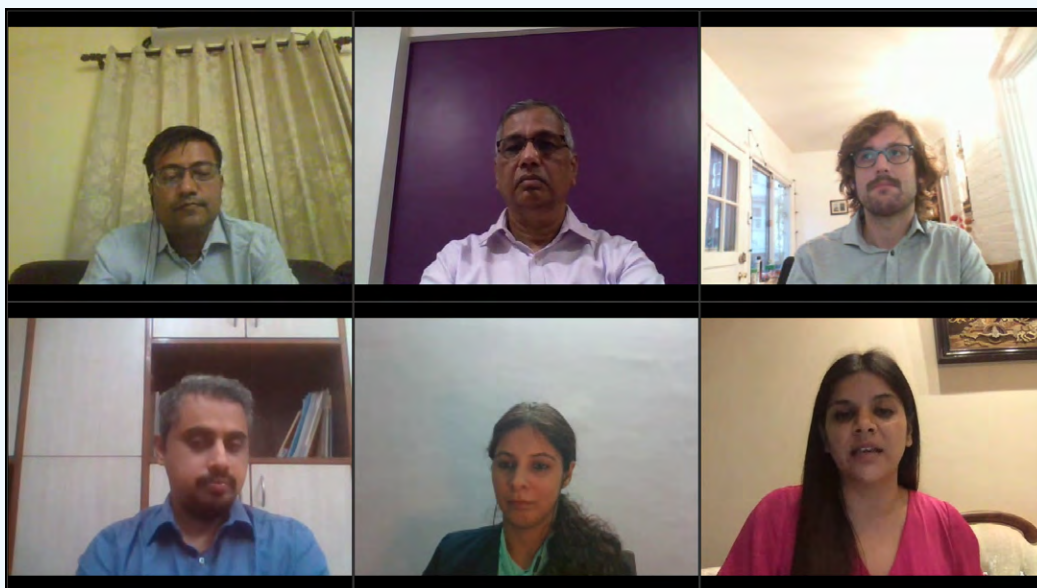
### Speakers

- *S P Garnaik, Executive Director, Energy Efficiency Services Limited (EESL)*
- *Shubhashis Dey, Associate Director, Shakti Sustainable Energy Foundation (SSEF)*
- *Alex Hillbrand, HFC Expert, Climate and Clean Energy and International Program, Natural Resources Defense Council (NRDC)*
- *Neha Dhingra, Manager India Program, CLASP*
- *Aditya Chunekar, Fellow, PRAYAS Energy Group*
- *J M Bhambure, Indian Society of Heating, Refrigerating and Air Conditioning Engineers (ISHRAE)*

### November 11, 2020

A strong regulatory framework and effective implementation of policies is the underpinning for accelerating uptake of energy efficient cooling appliances. Increasing efficiency of cooling appliances cannot be discussed in isolation from government initiatives including S&L Programme, Make in India campaign. The industry too has an important role to play in the transition towards an energy efficient appliance market where technology innovation is only one piece of the puzzle. In addition to innovation, market structure and trends are important to consider for industry players to ensure economic feasibility. With representatives from research fields and industry associations, the webinar discussed the following:

- How can the S&L programme be further strengthened to accelerate the norm of energy efficiency?
- What can be some of the financial and fiscal incentives offered to promote the sales of energy efficient cooling technologies?
- What are some of the ongoing initiatives taken internationally on space cooling appliance efficiency



Speaking about the ramping up the uptake of efficient cooling appliances, the importance of market initiatives such as Energy Efficiency Services Limited's (EESL) super-efficient AC programme was underscored. It was also highlighted that the super energy efficient ACs replaced by EESL are of a higher ISEER value (5.4), making them 25% more efficient than the average 5-star ACs available in the market. Challenges in upscaling of online platforms such as EESL Mart which provides the retail customers with an online platform to purchase super energy efficient ACs were also highlighted, including limited consumer awareness and the price difference when compared to the ACs available in the market.

Panellists stressed that good governance of the S&L programme is key to increase the credibility of the programme amongst various key stakeholders (consumers, manufacturers and test labs). It was suggested that development of a publicly available decision/rulemaking manual can help bring in greater transparency and increased credibility. The critical importance of check testing and verification under the S&L programme was also discussed which hinges upon adequate funding, capacities and resources for spot check testing, good lab infrastructure, industry cooperation.

From the consumer perspective, market transformation mechanisms require a holistic approach and no one business model suits all. It was suggested that it is essential to tailor communication and outreach programmes informing the masses about benefits, payback, monetary savings from EE products and the bulk procurement programmes have worked well in the past and can be scaled up for other appliances. A point also made to ensure that changes in the MEPS and S&L programme should not be too frequent as it would be difficult to stabilise the supply chain and as a result, lower-cost will not be achieved. The need for proper research to understand the consumer behaviour and programmes and initiatives tailor-made to cater to the demand of the end-user was emphasized along with the role of innovative business models, robust implementation modalities and committed investors and manufacturers to support and carry the agenda of super energy efficient appliances forward.

