



Prayas (Energy Group)

Initiatives in Health, Energy, Learning and Parenthood

Prayas

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To,

7th October 2018

Shri. Dr. Amit Love
Scientist 'D' / Joint Director , Ozone Cell
Ministry of Environment, Forest & Climate Change
Government of India
Core 4B, 2nd Floor, India Habitat Center
Lodhi Road, New Delhi-110003

Subject: Comments on the Draft India Cooling Action Plan.

Dear Sir,

At the outset we would like to commend and appreciate the effort of MOEFCC in drafting an action plan that address a very pertinent and pressing problem that India is facing, in meeting the increasing cooling demand. It is indeed a much awaited plan and addresses most of the issues that can meet sustainable cooling and thermal comfort for all while securing environmental and socio-economic benefits for the society. However, we find that the plan has not given enough attention to certain key concerns including monitoring, verification and enforcement mechanisms, data collection, financial incentives for different players, operational framework for achieving recommendations and targets, and more importantly the aspect of human behaviour as a crucial dimension.

Our comments and suggestions regarding these concerns are:

Monitoring, verification and enforcement mechanisms

On a strategic level, the Plan rightly sets specific targets with timelines, for reduction of refrigerant demand by 20-25% until 2037-38, reduction of cooling energy requirements by 25-40% by 2037-38 and so on. However, the Plan has underplayed the need for setting monitoring and verification mechanisms to track the progress on these targets. These mechanisms could prescribe methods which can help calculate the reduction in the future cooling, energy, and refrigerant demand.

The recommendations of the plan mention several policy and regulatory interventions without actually mentioning the need for enforcement mechanisms to ensure the interventions are executed. Without a stringent enforcement mechanism in place we may not get the expected results of certain interventions. For instance, one of the recommendations of the plan is a mandatory standards and labelling programme (S&L) for ceiling fans and high efficiency standards under S&L for air-conditioners and refrigerators. This programme requires appliances to have labels from 1-star rating (least efficient) to 5 star-rating (most-efficient). The programme has had success in creating awareness about energy efficiency but is not without limitations. In the case of ceiling fans, less than 10% of the total fans produced annually are star-labelled. Most manufacturers have resisted upgrading the efficiency standards since 2010. Although these standards are updated every 2 to 3 years.

Data collection environment and use

The plan fails to provide list of assumptions that were used to arrive at the growth trajectories that have been further used to make recommendations. For example, the projections which state India's cooling demand will increase 8 times in next 20 years or buildings demand will increase 11 times cannot be effectively tracked unless there is strong data that is collected to measure the same. In this same regards the Plan also fails to specify data that needs to be periodically collected from various sources to verify the results achieved from interventions. We would like to strongly suggest that the Plan should include a target to establish effective channels for data collection from different sources.

Financial incentives for different players

The recommendations of the plan mention several policy and regulatory interventions without actually quantifying the resources required to implement the same. Identifying the financing gap and planning for its provision is necessary for the success of the Plan. It is also imperative that the Plan includes targeted financial incentives for certain identified sectors, actors and players which can help them make the required investments in setting up systems and pilot projects which can help achieve the set goals.

Operational framework and timelines for achieving recommendations and targets

The Plan has set ambitious targets and provided recommendations to achieve the same, but it has not provided an operational framework to execute the same. The Plan has provided an institutional framework which enlists list of organizations and stakeholders who will institutionalise the Plan. It is hence most essential that an operational framework is developed which could then provide the necessary framework within which each stakeholder and institution can operate.

At the same time, although the Plan has detailed several recommendations and also categorised them as short, medium and long term there are no target years defined to achieve them. Having a well-defined timeline for the recommendations sets a stronger agenda towards achieving the goal.

Human behaviour playing a key role in energy efficiency measures

The Plan mostly focuses on technology, regulations, and incentive schemes to achieve its goal. Human behaviour is a crucial dimension of the cooling challenge that the Plan has overlooked. The Plan mentions 'The Intervention scenario projects that around 30% reduction in cooling energy can be achieved just through improvements in cooling equipment efficiency and operation and maintenance (O&M) practices. Over and above this, further energy savings can be accrued due to reduced cooling load: a TR reduction potential of around 20% could be achieved by 2037-38, through climate-appropriate building envelopes driven by a higher adoption of ECBC in the upcoming commercial buildings, and through adoption of adaptive thermal practices.' Since data used for the projections is not specified, it is unclear if the interventions have taken into account the role of rebound affect, a phenomenon resulting from changed human behaviour.

It is also proven through studies that, understanding human behaviour can help determine a higher default temperature setting for air-conditioned spaces at which people feel comfortable leading to significant savings in electricity use. The recent [guidelines](#) issued by Bureau of Energy Efficiency ratify the same. The Plan has also failed to lay emphasis on making small but appropriate changes in policies and programmes that impacts different biases inherent to the buyer's behaviour. For instance, people tend to compromise and settle for a middle option when presented with menu of options. Consumers settling for 3-star appliances and can it be overcome by offering only 4 and 5 star rated appliances.

Overall

Last but not the least, the distinction between providing thermal comfort and cooling is not clearly enunciated in the document. Although the document mentions the need to have a 'holistic' approach

to cooling, it does not include interventions to ensure cooling for poor or disadvantaged. Priority areas identified by ICAP is an extensive list but why the areas are included is not clearly fleshed out.

Finally, the recommendations are also an exhaustive list of broad suggestions which need to be developed in much more detail if we need to build an action plan. The barriers and challenges to implementing these have not been documented. Who and how these recommendations will be operationalised is also unclear. Technology suggestions have been made without really underscoring how they interact with each other.

We hope that you would be able to consider our suggestions and would be glad to have an opportunity for more discussion.

Kind Regards,

Aditya Chunekar and Shweta Kulkarni

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