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Ministry of New & Renewable Energy  
Government of India



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नीति आयोग  
National Institution for Transforming India

# India Clean Cooking Forum

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## Key Messages



# India Clean Cooking Forum 2017

*This note summarises key messages from the fifth edition of the India Clean Cooking Forum (ICCF) organized by the Clean Energy Access Network (CLEAN), in partnership with the Ministry of New and Renewable Energy (MNRE) and NITI Aayog at New Delhi on October 24-25, 2017. The event was supported by GIZ, Tata Trusts, World Bank and Global Alliance for Clean Cookstoves (GACC). Participants include clean cooking energy practitioners involved in solid biomass stoves, biogas, LPG, solar cooking; representatives of MNRE, Ministry of Petroleum and Natural Gas (MoPNG) and NITI Aayog as well as numerous financial and research institutions.*

## Tapping the strengths of renewable energy

Even as LPG expansion is the focus of clean cooking energy provision in the country, the enormous potential offered by renewable energy options (like improved biomass stoves, biogas, solar cooking) needs to be re-emphasised. Obvious advantages of adopting these options are that they are renewable, locally available and low-carbon (or no-carbon); they can reduce dependence on imported fossil fuels (LPG and natural gas). An important feature of RE-based cooking solutions is their potential to change not just household air quality, but entire households by empowering women. Working with locally available fuels makes it possible to garner women's participation as producers and managers (not just users) of cooking energy. In areas where women build improved stoves or help run solar-powered kitchens, the gender equation is changing. The aim will have to be to make not just women, but entire households to aspire for CCE options.

## Strengthening RE-based CCE

LPG expansion over the last three years has shown that scale and speed is possible provided devices and fuels are standardised and there is adequate policy push. For RE-based options to be adopted widely and readily, a practical approach is to ensure a shift to progressively “cleaner” stoves that are oriented to user needs. In this regard, we must recognise some gaps and opportunities:

## In Brief

LPG expansion over the last three years has shown that scale and speed is possible with standardised devices and fuels, provided there is an adequate policy push

LPG experience and prior experience with RE-based solutions including improved biomass stoves has shown that the focus has to go beyond providing connections to sustained usage. This calls for an emphasis on (a) usage monitoring; (b) user-centric solution design; (c) reliable and affordable fuel supply, device maintenance and (d) awareness creation on health benefits of usage

In monitoring impacts of cooking energy on household air pollution, consistent usage has to be viewed along with other related aspects like fuel type and quality, cooking vessels, kitchen ventilation, cooking time etc.

For improved solid biomass cookstoves, the potential is huge but research and development efforts need to be clearly focused on specific challenges that remain: stoves that can cook rotlas (thick millet breads), reliable supply chain for processed biomass fuels, preferably based on agri-waste and residues.

Convincing users to switch from free biomass to paid fuel will be a major hurdle, which will require user financing and awareness creation / persuasion efforts. User financing issues can be addressed in various ways, e.g. inclusion of cooking devices and fuels as eligible for purchase through the kisan credit cards

MNRE has a key role to play in facilitating the adoption of a technology-agnostic policy framework for CCE, a National Mission on Cooking Energy could help promote co-ordinated CCE policies and programmes

As a network of clean energy practitioners, CLEAN is committed to support RE-based CCE practitioners by showcasing success stories and engaging with financiers and government on their behalf.

- Research has not yet delivered an advanced and affordable RE-based stove that can cook roti (thick millet breads).
- Supply chains for processed bio-fuels (including simple cut fuel or pellets, dung for biogas plants etc.) need to be established. Several models of improved cook stoves need pellets of certain standards for optimal performance.
- Improved cook stoves that can work flexibly with various fuels is another area for research.
- There are a few successful business models of biogas but generalisation is difficult, various models will need to be explored and developed for different contexts.
- Large-scale cooking (mid-day meal kitchens, commercial and community kitchens) can use various types of clean cooking energy solutions based on renewable energy. There are several successful examples of large-scale cooking based on solar, biogas and solid biomass.

## Focus on usage: look beyond connections for sustained impacts

An important lesson from both the experience with RE devices and with LPG is that the focus has to shift from connections to adoption or usage. However, sustained usage can still be a challenge if issues around fuel refills and stove maintenance are not addressed adequately and if stove designs are not in line with cooking / dietary needs. The steps required for strengthening usage of CCE options are as follows:

- Fuel and refills are a challenge in terms of availability and affordability. A major barrier is that of catalysing transition from free biomass to paid fuel, especially for very poor households
- User-oriented design, distribution and costing is key to sustained usage. Assessment / testing (and eventually rating) of CCE options will have to move away from exclusive focus on emissions and efficiency performance to multi-faceted assessment based on field performance and user acceptance.
- For ensuring health benefits from adoption of CCE, the elimination of the traditional chulha is imperative. Linking the provision of new CCE options with demonstrated dis-use of the old chulha will be important, but will happen only if there is enough confidence in the new option.

## Financing dichotomy: high upfront cost for the end-users; small ticket size resulting in high transaction costs for the financier

A major hurdle to CCE adoption is their high upfront cost. In the case of LPG, free connections with subsidy support on fuel have helped widen the reach speedily. Other CCE suppliers and users continue to grapple with high upfront cost and lack of structured financing. Financiers will benefit from engaging with distributors or manufacturers to avoid dealing with a large number of end-users. Certain issues and possible solutions were discussed.

- CCE enterprises are viewed as start-ups associated with high risks around repayment of loans, quality of products and after sales service. Credit risk misperceptions of bankers need to be cleared.
- A credit guarantee fund for clean cooking to reduce the risks involved in financing. MNRE may facilitate the setting up of such a fund for RE-based CCE sector.
- Transaction costs are very high for banks to lend to users for purchasing individual cookstoves worth INR 2500- INR 3000. It is suggested that all CCE options be made eligible for purchase using the Kisan Credit Cards. Combination loans for CCE (in combination with farm loans or cattle loans) may be considered.
- Clean energy financing has bypassed rural banks. There is need to shift to NABARD and rural banks to help disseminate products and give innovative financing schemes to increase uptake. NABARD works with 8 million women SHGs and has conducted exposure visits for more than 1 lakh farmers' clubs. CCE options should be pushed through this route for wide reach across rural India.

- Financing for CCE has to be technology-agnostic, no particular technology, stove or fuel should be given preference over another.

## CCE policy framework to focus on expanding CCE access in a technology-agnostic way

A facilitative policy framework will require that equal emphasis be laid on all CCE options in a co-ordinated manner. While some of the key actions are to be taken by MNRE, other agencies like MoPNG and NITI Aayog as well as agencies involved in financing, skills development, health, women and child development, rural development etc. have a role to play.

### Actions by MNRE

As part of a larger engagement plan, MNRE is to hold a meeting with RE-based CCE practitioners by end of November. Issues that can be immediately taken up by MNRE include

- GST exemption to be extended for improved cook stoves
- Classification of improved cook stoves and processed biomass fuel (pellets / briquettes / sized, dry biomass) as renewable energy will enable them to avail the associated policy and financial benefits
- Explicit inclusion of RE based cooking options under CSR funding and MP LAD funding will help channelize funding support for the sector.
- Engagement with Reserve Bank of India and with NABARD will be needed to modify the Kisan Credit Card Circular so that clean cooking energy options can be explicitly made eligible for purchase with Kisan Credit Cards.
- There are presently only five testing centres in the country - more testing centres to be notified; testing procedures be made shorter and more transparent; detailed results of testing to be made available to applicants; lab test results to be corroborated with field tests.
- Training and academic programmes on CCE should be developed and included in existing courses around energy and rural development; MNRE to engage with the Skills Development Council for Green Jobs and the Ministry of Human Resource Development on this matter.
- There is need to develop a supply chain for processed biomass fuel (briquettes, pellets, sized dry biomass). Good quality pellets production may be developed and standardised for production in decentralised units. Stoves that can work optimally on multiple types of standard fuels must also be developed. This will help in developing and raising standards for solid biomass fuels and stoves.

## Cross-ministerial and strategic action

The establishment of a National Mission on Clean Cooking Energy would help bring a policy focus to CCE access. This would also facilitate development of co-ordinated and complementing CCE policies and programmes (including biogas, clean cooking, solar cooking, LPG and PNG). This would also catalyse the creation of hybrid models (e.g. forced draft cook stoves powered by solar; bio CNG etc.)

The large network of ASHA (health) workers across rural India can be roped in to reach out to women on the health benefits of adoption of clean cooking energy options. As mentioned earlier, distribution networks of the PDS (fair price shops), fertilizer retailers etc. can be tapped to distribute CCE options to rural households across the country. These are examples of opportunities for inter-ministerial engagement for effective CCE expansion, which must be woven into the National Mission.

Awareness creation activities around promotion of clean cooking energy (such as multi-media campaigns, LPG Panchayats) as well as financing and distribution channels should be technology-agnostic so that the focus is not just on LPG but on all clean cooking energy options.

## Action plan for CLEAN acting as a go-to for practitioners and as an inter-linker with financiers and government

At ICCF 2017, practitioners and government representatives laid out the following work plan for CLEAN, a network of over 106 clean energy practitioners:

- A compendium of manufacturers, practitioners, entrepreneurs and village enterprises / entrepreneurs to be co-created by CLEAN and MNRE; the same to be available online and frequently updated. This list would provide a target audience for both CLEAN and MNRE to engage with for capacity-building and business facilitation
- Prepare a compendium of success stories in RE-based cooking for NITI Aayog as a demonstration of alternatives or supplements for LPG
- Mapping of RE-based CCE possibilities is also to be done – so that it is clear which option can work best in what geographical or situational context. This could be part of the above-mentioned compendium.
- Develop a list of issues and challenges prevalent in the sector. Specific challenges would have to be identified and pursued for product R&D e.g. design an improved biomass cookstove that can make rotlas (thick millet breads); develop a reliable supply chain for biomass pellets.

### About ICCF and CLEAN

The India Clean Cooking Forum (ICCF) was pioneered by GIZ in partnership with the Ministry of New and Renewable Energy in 2013 with the objective of convening a national platform to highlight the developmental imperative of achieving universal access and adoption of clean cooking energy for and by every Indian. Over the course of five editions, it has successfully mainstreamed the issue of clean cooking access within the national discourse on energy access. Since 2016, the Forum is being organized by Clean Energy Access Network (CLEAN) in partnership with the Ministry of New and Renewable Energy and NITI Aayog, with the continued support of previous Forum partners that include GIZ, Global Alliance for Clean Cookstoves (GACC), Tata Trusts and World Bank.

CLEAN is an all India representative organization launched in 2014 with a clear mandate to support, unify and grow the decentralized clean energy sector in India. It particularly aims to bring together diverse stakeholders across India working to improve energy access for the rural and urban poor and create an inspiring model for countries around the world to follow. CLEAN is technology agnostic. Technologies include solar, wind, bioenergy, pico hydro. The scale of its members' operation ranges from pico solutions to larger, decentralized solutions and they are mostly small and medium enterprises. CLEAN currently has over 106 members, with over 16 members who have an active interest in the clean cooking energy space.

To know more about CLEAN and the ICCF:

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