No. 3/10/2012-13 (BC)
Government of India
Ministry of New and Renewable Energy
(Biomass Cookstove Division)

Block No.14, C.G.O. Complex
Lodi Road, New Delhi - 110003

Dated : 27th June, 2014

To,

Ministry of Rural Development,
Department of School Education & Literacy, Ministry of Human Resource Development
Ministry of Women and Child Development
Ministry of Panchyati Raj
Heads of All State Nodal Agencies (SNAs)/Departments

Sub : Implementation of Unnat Chulha Abhiyan (UCA) Programme during the year 2013-2014 and balance period of the 12th Plan - Administrative Approval - reg.

Sir,

I am directed to convey the sanction of the President of India for implementation of Unnat Chulah Abhiyan (UCA) Programme during 2013-2014 and balance period of the 12th Plan as per the details given below :-

2. Objectives

i. To develop and deploy improved biomass cook-stoves for providing cleaner cooking energy solutions in rural, semi-urban and urban areas using biomass as fuel for cooking.
ii. To mitigate drudgery of women and children using traditional chulha for cooking.
iii. To mitigate climate change by reducing the black carbon and other emissions resulting from burning biomass for cooking.

3. Activities

i. To support R&D activities on development of efficient and cost effective designs of biomass cook-stoves with reduced emissions.
ii. To provide support for Test Centres for carrying out performance testing of biomass cook-stoves as per BIS.
iii. Development of revised test protocols and standards.
iv. To take up a series of projects using existing commercially available and better chulhas and different grades of process biomass fuel with ultimate aim exploring a range of technologies deployment biomass processing and delivery models leveraging public-private partnerships.
v. To support awareness and marketing campaigns and creating enabling environment
vi. for mass production of processed biomass fuel, network of dealers, entrepreneurs training and supply chain mechanism.
vii. Supporting training to manpower facilitating operation and maintenance networks at local level thus generating opportunities for employment.
viii. Taking up dissemination programme on family type and large size Unnat Chulhas / cook-stoves for cooking applications.
ix. Awareness for use of biomass cookstove in target groups.
x. The field and market experience of the above projects will be analyzed for developing a business model for commercialization including availing CDM benefit for biomass cookstove. The possibility of establishing a Section 25 company will be explored for carrying out the business of promotion of Unnat Chulhas in the country in future(possibly during 12th Five Year Plan).

4. Target Users

- Kitchens of Mid-day Meal (MDM) scheme, Aangwadis, Forest Rest Houses, Tribal Hostels and small business establishments (road side dhabas, small hotels and restaurants and a variety of cottage industries like textile dyeing, drying of spices etc.) to be supplied with improved biomass cook-stovesunnat chulhas complying with improved standards.
- Individual households in rural areas who use biomass for cooking purposes.

5. Physical Target

A target of 2.75 million improved cookstoves/chulhas will be disseminated/installed in the remaining period of the 12th Plan Period as given below :-

Physical Target for the Unnat Chulha Abhiyan (UCA) Programme for 12th Five Year Plan Period

Sl. No.	Year	Physical Targets		
		Family Type or Household cook-stoves#	Community Size Cook-stove	
			Dhabas/Canteen, Industry	Anganwadis/ ICDS/ MDM/Tribal Hostels/Forest Rest Houses, etc
1	2012-13	Nil	Nil	Nil
2	2013-14	100,000	5,000	5,000
3	2014-15	750,000	25,000	75,000
4	2015-16	750,000	40,000	75,000
5	2016-17	8,00,000	50,000	75,000
Total		**24,00,000**	**1,20,000**	**2,30,000**

The total numbers include earthen cook-stoves also. The breakup of target between earthen and family type portable cook-stove will be done by MNRE on the basis of demand for each type and the availability.

6. Implementation Arrangements

The programme will be implemented through R&D/academic institutions, State Nodal/Implementing Agencies, State Departments of Education through District Coordinators of Mid Day Meal Scheme, District Level Officer of Anganwadis, District Coordinators/Officers of Tribal/SC/Backward Class Hostels and similar departmental agencies where cook-stoves could be employed, NGOs/CSOs, manufacturers, business development organizations, etc. engaged in implementation of renewable energy projects at grassroot level. The detailed Guidelines for implementation of the Programme and financial provisions for various activities are given in the Annexure enclosed

7. Monitoring and Evaluation

Field monitoring of cookstoveswill be carried through "Third Party Monitoring System"' which could be a R&D institution or a consortia of R&D/ academic institutions, professionals and monitors to be identified by MNRE.. Eventually web-based monitoring system will be developed where mobile camera based photos of chulhas in use will be uploaded. The overall progress will be reviewed by the Core Group on Biomass Cookstove of MNRE.

8. Expenditure

An expenditure of Rs. 294.00 crore is expected to be incurred under the Unnat Chulla Abhiyan (UCA) Programme during 2013-14 and rest of the 12th Five Year Plan. Funds to the tune of Rs 4.50 crore have been earmarked for expenditure during 2013-14.

The expenditure will be debited from budget head: Demand No. 69, Major Head '2810 New and Renewable Energy, 00.102 (Minor Head) Renewable Energy for Applications, 02 (Sub Head) Renewable Energy for all villages, 02 (others), 02.02.31-Grant-in-aid-General(PLAN).

9. This sanction issues under the powers delegated to this Ministry and with the concurrence of IFD vide their sanction no IFD/2759/13-14 dated 18.03.2014.

Yours faithfully

(Dr. (Mrs.) Parveen Dhamija)
Director (Biomass Cookstoves)

Copy for information and necessary action to :

1. Secretary, Planning Commission, Yojana Bhawan, Sansad Marg, New Delhi-110001
2. Secretary, Deptt. of Expenditure, Ministry of Finance, North Block, New Delhi-110001
3. Secretary, Deptt. of Revenue, Ministry of Finance, North Block, New Delhi-110001
4. Secretary, Department of Scientific & Industrial Research, Ministry of Science &Technology, Technology Bhawan, Mehrauli Road, New Delhi-110016
5. The Principal Director of Audit, CW&M-II (Scientific Deptt.), DGACR Building, New Delhi.
6. Principal Director (Local Bodies Accounts), Office of the Comptroller and Auditor General of India, 9, Deen Dayal Upadhyaya Marg, New Delhi - 110002.
7. Accountant General of All State Governments/UTs.
8. PS to Minister of State (I/Charge) NRE
9. PSO to Secretary, MNRE.
10. JS (AS)/JS (TK)
11. .AS & FA, MNRE, New Delhi.
12. Adviser (NPS)/Adviser (AKD)/Adviser (PS)/EA (JCS), MNRE.
13. Dir (F)/SO (IFD), MNRE, New Delhi.
14. Dir (P&C), MNRE.
15. PAO, MNRE, New Delhi
16. Sanction Folder/Guard File

(Dr. (Mrs.) Parveen Dhamija)
Director (Biomass Cookstoves)

Annexure

Guidelines for Implementation of the Unnat Chulha Abhiyan (UCA) Programme

1. Background

The importance of clean and efficient cook stoves for meeting the challenges of clean energy supply, particularly to the poor, assumes great significance in times of global effort to reduce carbon emissions and reducing health hazards associated with the emissions. Further, unsustainable collection and use of fuel wood puts pressure on natural/forest resources and can hasten land degradation and other environmental problems linked to deforestation. Similar problems are also faced by cooks and related persons at the operational level in several government schemes and programmes like Mid-Day Meal (MDM) schemes in schools and Supplementary Nutrition Programme (SNP) implemented through *the Anganwadis* in ICDS where cooked meal being provided to pre-school children, pregnant women and lactating mothers using traditional biomass based cook-stoves. Improved Chulhas (Biomass Cook-stoves) that burn biomass more cleanly and efficiently can help mitigate the above problems. Thus, there is a strong justification to promote the use of improved biomass cook-stoves for households and institutional cooking applications.

The Ministry of New and Renewable Energy (MNRE) implemented a National Programme on Improved Chulhas (NPIC) during the period 1983-84 to 2002-03, under which about 35.0 million numbers of improved chulhas were installed before the scheme was transferred to State Governments in 2003-04. A variety of models were developed and deployed under the NPIC. However, the efforts were not sufficient for commercialization and sustenance of improved chulhas in the country after the discontinuance of NPIC.

The MNRE launched the National Biomass Cook-stoves Initiative (NBCI) on 2nd December 2009 so as to enhance the availability of clean and efficient energy and improved technical capacity in this sector in the country by setting up state-of-the-art testing, certification and monitoring facilities which also provided R&D support to the improved cook-stove manufacturers, strengthening R&D programmes in key technical institutions and taking up demonstration and dissemination of improved cook-stoves in the country. The initiative envisaged taking up a series of pilot scale projects using several existing commercially–available, improved cook-stoves using different grades of processed biomass fuel, exploring a range of technology deployment, biomass processing and delivery models.

In line with the objectives of the NBCI, three test facilities have been developed and strengthened in R&D/academic institutions for performance testing of cook- stoves to assure quality. In view of new and advanced designs of cook-stoves that were developed by some R&D institutions and manufacturers in recent years, the standards of thermal efficiency and emissions for portable domestic cook-stove that was notified by the Bureau of Indian Standards (BIS) in 1991 has also been revised. The revised standard shave been published by BIS in August 2013. These revised standards are being followed in test centres for performance testing of new models of cook-stoves.

As the revised standards and test protocols have been developed and are being followed for performance testing of cook-stoves and so far 15 numbers of improved biomass cook-stoves have qualified the stipulated performance tests and hence have been approved by MNRE. Further, R&D in biomass cook-stoves is required for optimizing the designs for efficient combustion and heat recovery section of the cook-stoves leading to increased thermal efficiency with cost effectiveness. In addition, R&D in pelletization of biomass waste is also of considerable importance as it helps increase the calorific value of the input while reducing ash and moisture content.

As part of on-going efforts to promote the use of cook-stoves in the country, the MNRE, in collaboration with GIZ, Germany has taken up a project on developing a Programme of Activity (PoA) for carbon credits on cook-stove through CDM of the UNFCCC as an attempt to make cook-

stoves affordable particularly to low income households. The Sardar Swaran Singh National Institute of Renewable Energy (SSS-NIRE), an autonomous institute of MNRE, located at Jalandhar, Punjab has been designated as Coordinating and Managing Entity (CME) for the same activity. The PoA, which was submitted to the UNFCCC on 28th December 2012 for registration, has been registered and projects taken up under the proposed Unnat Chulha Abhiyan are now eligible for Carbon Credits under the CDM mechanism.

Thus in keeping with the commitments made under the NBCI, the Unnat Chulha Abhiyan envisages developing and promoting deployment of efficient and cost effective improved biomass cook-stoves in the country. The programme involves demonstration of the various models of biomass cook-stoves both natural and forced draft types for domestic and large scale community cooking on cost sharing basis. Other innovative models such as earthen chulhas with pre-fabricated combustion chambers which do not strictly comply with the newly notified BIS standards for the portable manufactured chulhas, will also be taken up under the new programme to enable the poor sections get the benefit of the improved designs. Development of suitable standards for these Chulhas will be concurrently taken up.

2. Major Activities under the programme

i. Establishing two new test centres and running the three old and two new test centres for supporting research, development, demonstration and testing for development of efficient and cost effective improved biomass cookstoves/unnat chulhas including related technology for processed biomass fuel and development of standards and test protocols. These Test Centres will continue to carry out performance testing of biomass cook-stoves/unnat chulhas as per BIS standards, and to strengthen/upgrade them for accreditation by the NABL and or ISO certification, development of Standards and test protocols, conducting training to implementing organizations/ industries, etc. engaged in implementation/ promotion of biomass cook-stoves projects in the country. Sardar Swaran Singh National Institute of Renewable Energy – (SSSIRE) under MNRE has been directed to include Biomass cook-stoves testing as an activity of the Institute. One Test centre will be established in the southern part of India to cater to the requirements of that region.

ii. To distribute improved biomass cookstoves/unnat chulhas for providing cleaner cooking energy solutions on large scale, including providing after sales service. This would be done through SHGs, Cluster Federation of SHGs working under the National Rural Livelihood Mission (NRLM)/State Rural Livelihood Mission (SRLM), District Coordinators of Mid day Meal scheme (under the State Education Departments and the Ministry of HRD in Government of India), District Coordinators of Anganwadi centres (under the Ministry of Women and Child development, Government of India and of State Governments), State Nodal Agencies of RE, NGOs and CSOs and other organisations working in rural areas in the field of rural development and renewable energy.

Earthen Chulhas: Many people in rural areas would like chulhas that are less expensive and they do not want to avail of any financing to purchase the chulhas. Hence earthen (or mud) chulhas have to be included in the programme for such users which are affordable, durable and useful. Such chulhas could be made by local *mistries* (masons) using pre-fabricated combustion chambers that comply with efficiency, emission and durability standards that are reasonable to achieve. These masons would be trained by trainers from CSOs/NGOs and they would get a success fee @10% of the cost of each chulha.

iii. Monitoring and evaluation of the programme to ensure the programme is implemented in accordance with pre-defined objectives. This would be done through specially selected organisations and individual monitors (who will be empanelled by the MNRE) and who will work under pre-specified guidelines.Eventually we will move towards web based monitoring system where mobile camera based photos of chulhas in use will be uploaded.

iv. Carrying out studies regarding socio-economic impact of improved cookstoves/unnat chulhas, its effect on fuel saving, emissions and resulting indoor air quality at the place of cooking and on climate change mitigation by reducing the carbon and other emissions resulting from

burning biomass for cooking, including ensuring CDM benefits to suppliers/programme implementers to improve the affordability of biomass cookstoves/chulhas for the user.

v. Awareness and publicity programme for generating demand and user and service staff's training and orientation programme.

vi. To take up a series of projects using existing commercially available improved cook-stoves/unnat chulhas and processed biomass fuelwith the aim of validating a range of technologies deployment biomass processing and delivery models leveraging public-private partnerships.

vii. To create enabling environment for large scale production of cookstoves/ chulhas processed biomass fuel, network of dealers, entrepreneurs and supply chain.

viii. **Training and User Orientation:** Supporting training to users and manpower facilitating operation and maintenance networks at local level thus generating opportunities for employment. This will be the responsibility of the Nodal Agency that is responsible for dissemination of unnat chulhas. The Nodal Agency will be paid Training charges for this job. Trainers could be trained at a central level to train local trainers who would in turn train users. The Nodal Agency could either run the entire training programme or could tie up with the manufacturer/sellers to undertake the training/orientation of users.

Training of *mistries* (masons) has to be done by the NGO/CSO or organisation working as Nodal Agency. The Nodal Agency will be provided Technical Fees to undertake such training programme.

ix. **Publicity and awareness for use of biomass cook-stove/chulhas in target groups:** The State Nodal Agency (SNA)/Nodal Agency will be responsible for awareness generation and publicity. The material will either be produced at the central level by MNRE or at state level through selected organisations having experience in the field of awareness generation and publicity. Funds will be provided by MNRE for the purpose in accordance with set guidelines and under the approved budget for this activity.

x. **Quality Control/Assurance:** The quality of natural draft and forced draft biomass cook-stoves has to assured. They should have life span of three years or more with two years warranty. There will be Technical Committee comprising of experts, NGO/CSO personnel, officials which will monitor observance of quality standards to ensure that cook-stoves complying with approved standards of efficiency and emission control are disseminated through the programme through random checks of cook-stoves. This committee will also get emission and efficiency checks/tests done to assure quality.
The quality of earthen chulhas will be checked on a random basis from a list of beneficiaries. Technical experts and selected monitors will be employed for quality checking and assurance.

xi. **Maintenance and After Sales Service:** Maintenance and After Sales Service are important aspects of chulha programme. The dissemination of chulhas will be done in an intensive manner in a geographical area (tehsil/block/district/revenue division) or through a government system such a Mid Day Meal (MDM), Anganwadi Centres (of the Women and Child Development Department), Hostels and Ashrams of Tribal/Scheduled Caste/Backward Classes/Minorities Welfare Department This will ensure a good volume of chulhas in a given geographical area making it economical for the seller to maintain service centre/personnel. The seller will have to take responsibility of maintaining service arrangement for at least three years at a small cost of servicing. The service agent will be required to maintain a mobile number through which he/she can be contacted.

xii. **Monitoring and Evaluation:** Field performance monitoring and evaluation to study the impact and further steps required for promotion of use of cook-stoves. A scheme of Third Party Monitoring will be put in operation that will do concurrent as well as after-sales monitoring to ensure quality and integrity in the programme Evaluation will be done for various modes of implementation by selected evaluators to judge the efficacy of the programme and to get users response and feedback on the chulhas.

3. Financial Provisions

Central Financial Assistance for Unnat Chulha Abhiyan (UCA) Programme for 12th Five Year Plan

Sl. No.	Item	Funds requirement (in crore)
1.	Test centers (3 old + 2 new) (Test Centres will also get testing fees for revenue generation)	7.0
2.	R&D on cook-stoves and technology development for processed biomass fuel, - Professional Services including consultancy charges for personnel of a proposed Cell in MNRE for activities such as training/capacity building of nodal agency personnel, users, after sales service personnel orientation camps, workshops in a centralised manner	5.0
3.	Deployment of family sized /domestic cook-stoves/earthen cookstoves **(24,00,000 nos.)** **Central Financial Assistance:** **For Natural Draft Cookstoves (including earthen chulhas with metal combustion chambers)** (i) upto 50% of cost of cook-stoves with maximum ceiling of Rs.400 for natural draft (including earthen chulhas with metal combustion chambers) and Rs.800 for forced draft - average support taken at Rs.600/- per cookstove for the years 2013-14 and 2014-15, (ii) upto 40% of cost of cookstoves with maximum ceiling of Rs.300 for natural draft cookstoves(including earthen chulhas with metal combustion chambers) and Rs.600 for forced draft cookstoves, average support taken Rs.450for the years 2015-16 and 2016-17. (ii) the masons doing the construction of earthen chulhas will be provided construction fee @10% per chulha which will added the overall cost of the earthen chulha. The NGO/CSO doing the construction will pass on this charge to the mason and keep accounts.	120.75
4.	Deployment of Community Cook-stoves for MDM Kitchens, Anganwadis, Tribal/SC/Backward hostels, government and forest resthouses etc**., (2,30,000nos).** **Central Financial Assistance:** (i) upto 50% of cost of cook-stoves with maximum ceiling of Rs.2500 for natural draft and Rs.5000 for forced draft type cook-stoves - average support taken at Rs.3750 per cook-stove for the years 2013-14 and 2014-15. (ii) up to 40% of cost of cookstoves with maximum ceiling on support Rs.2000 for natural draft cookstove and Rs.4000 for forced draft cookstove, the average support taken is Rs.3000per cookstove for the years 2015-16 and 2016-17.	75.07
5.	Deployment of community cook-stoves**(1,20,000 nos.)** for commercial outlets and industry.(The entire cost will be borne by the users). -the implementing agency/manufacturer/nodal agency doing extension work including dissemination will be paid success fee @15%, 10% and 5% for the years 2013-15, 2015-16 and 2016-17 respectively.	3.64
6.	Technical Assistance for Implementing Agencies @10% of support of MNRE on each cookstove, including for commercial outlets.	23.41
6.	Administrative/overhead charges for implementing organizations @10% of support of MNRE on each cookstove ,including for commercial outlets.	23.41
7.	Monitoring and Evaluation	20.00
8.	Publicity and Awareness generation	16.0
Total		**294.28 say 294**

4. Implementation of the programme

The proposed UNNAT CHULHA ABHIYAN and various activities under the Abhiyan will be implemented through R&D/academic institutions, nodal/implementing agencies namely SNAs, state departments of education through the District Coordinators of Mid Day Meal Scheme, District Level Officer of Anganwadis, District Coordinators/Officers of Tribal/SC/Backward Class Hostels and similar departmental agencies where cook-stoves could be employed, NGOs/CSOs, manufacturers, business development organizations, etc. engaged in implementation of renewable energy projects at grassroot level..

The implementation of the main programme will be done as follows:

a) For Family size cookstoves/chulhas–Two types of implementation mechanism will be employed:

(i) In areas covered by Cluster Federation of SHGs:-

In a separate track of implementation to utilise the SRLM/ Cluster Federation of SHGs for dissemination, the agencies involved will be SHGs, Cluster Federation of SHGs, State Rural Livelihood Mission (SRLM) and National Rural Livelihood Mission (NRLM) in identification of beneficiaries, organising demonstration and training for beneficiaries (who will be members of SHGs). For members of SHGs, the subsidy to individual households will be put in a Community Investment Support Fund for Cook-stove Programme (CISF-CP). Thus, the individual households will not be paid any subsidy but the subsidy amount admissible to each household will be added up and placed in CISF-CP which will be at the disposal of Cluster Federation of SHGs. The Cluster Federation will use the amount in CISF-CP to advance loans to SHGs who will in turn provide loans to their individual members for purchasing cook-stoves (to be decided through a transparent process of Expression of Interest). It is proposed to target about 30% of the households who will be members of SHGs in an intensive block over the remaining period of 12th Five Year Plan i.e. from December 2013 to March 2017. The money recovered from the individual loans will be utilised by the cluster federation to on lend, for coverage of additional members and thus the CISF-CP will become a fund in perpetuity enabling coverage of more and more households in that block every year. Thus the money received in CISF-CP out of subsidy amounts will not be used up but will be recycled to cover more and more members under the cookstove programme. It is estimated that by providing Rs. 30 crores in this manner, about 9 lakh SHG members can be eventually covered, thereby covering 50% more beneficiaries as against those covered through the individual subsidy route. The cluster level federation will conduct social audits to monitor the usage of stoves by their members. They will also provide feedback on the performance of cook stove to the Ministry and manufacturers.

The technical assistance will be provided as proposed by MoRD, to State Rural Livelihood Mission (SRLM) at the rate of 10% (of total subsidy amount) to provide necessary technical support to the Cluster level Federation for implementation of the programme. The administrative overhead charges will be provided to Cluster level Federations at the rate of 10% (of the total subsidy amount) on the recommendation of the State Level Livelihood Missions.

(ii) In areas that are not covered by SHGs where the implementing/ nodal organisations would pass on subsidy received from MNRE to beneficiaries:-

The programme will be implemented in such areas with the assistance of departmental bodies/ State Nodal Agencies working in the field where cook-stoves could be employed in their units. For instance, the Ministry of HRD has agreed to implement the programme in its Mid-day Meal (MDM) centres through the state level coordinators. In the case of Mid-Day Meal scheme (being implemented by Ministry of HRD) and Anganwadi centres (being implemented under a Ministry of Women and Child Development scheme), the CFA would be provided district-wise to state level coordinators on the recommendations of MHRD and state level coordinators. The amount of 10% (of subsidy amount) as technical assistance and 10%

(subsidy amount) as administrative overhead charges will be made available to a cluster group of mid-day meal and anganwadi centres on the recommendation of state level/ district level coordinators.

These cook-stoves/chulhas will use single fuel. For cook-stoves using multiple or processed fuel, the process of implementation will be through the market.

Earthen Chulhas:- Natural draft chulhas will also be disseminated through this programme. Local masons will be identified through SNAs and they would be provided training + service charges @ 10% of the cost of each chulhas. The total amount will be transferred directly in their bank accounts.

(b) **For Institutional Community Size Chulhas:**

(i) In public institutions: The nodal agencies would be the government department/agency (such as District Coordinator of Mid-day Meal Programme or Anganwadi Centres). The approach would be Cluster based and the subsidy, administrative charges and training/technical charges would be givento the District Coordinator. Where such tie-ups are not available, SNAs would be involved in implementing the programme.

(ii) In private institutions: The nodal agencies would be the Vendors or Civil Society Organisaton/NGOs. There will be no subsidy and the entire cost will be borne by the user. The vendor or distributor responsible for selling the community size cookstove shall get a Success Fee @ success fee @15%, 10% and 5% for the years 2013-15, 2015-16 and 2016-17 respectively

As Cluster based approach will be generally adopted with the implementing/ nodal agency calling for tenders on bulk volume basis, for supply from among MNRE approved chulhas. The vendor will have to provide user training on trouble shooting and repair system in the local area through trained personnel.

5. Release of Funds

The funds for the demonstration of biomass cookstoves will be released directly to the implementing organizations which will be the State Nodal Agencies, NGOs, SHGs, concerned State Government Agencies dealing with NRLM of Ministry of Rural Development, industries, companies, project developers etc., who will pass on the benefit to the beneficiaries'. Effectively, the implementing agencies will charge the total cost minus the MNRE subsidy/support from the beneficiaries, excluding in the case of NRLM. The following fund flow mechanism will be followed for projects;

(i) In the case of implementing agencies from the state governments, SNAs, etc. 40% of the cost of the project with technical assistance and overhead charges will be released with the sanction letter of the project.

(ii) For private organizations, such as industry, NGOs, SHGs, etc. the 30% of the cost of the project will be provided with the sanction letter subject to the condition that the organization will furnish bank guarantee.

(iii) On successful dissemination and use of cookstoves/chulhas by beneficiaries, the implementing agencies will be required to get the beneficiaries including the details of identity verified by the Gram Pradhan/Gram Panchayat followed by endorsement by the concerned State Nodal Agency. The details of beneficiaries including the cost shared by them will be maintained by the implementing agencies in the format as given in Annexure-B

(iv) The balance funds in both the cases will be released after successful field performance monitoring and evaluation done by third party and followed by submitting the final completion report of the project with utilization certificate and audited statement of expenditure incurred as per the sanction of the project.

(v) In the case of the approach to be adopted for Community Investment Support Fund for Unnat Chulha Abhiyan (CISF-UCA), the funds will be released to the concerned state government agencies in-line with the policy framework being followed by Ministry of Rural Development in their State Rural Livelihood Mission (SRLM) and National Rural Livelihood Mission (NRLM). The funds will be released on receipt of the work-plan/proposals from the concerned State Government Agency dealing with the NRLM of Ministry of Rural Development..

(vi) In all cases, the list with details of beneficiaries will be hosted in the websites of the implementing agencies linked with the website of the concerned SNA and the report submitted to MNRE.

(vii) In the case of R&D and test centres projects the funds will be released as per the R&D policy dated 18th October, 2010.

(viii) Funds for publicity and field performance monitoring activities will be released directly to the implementing agencies following the method given above.

(ix) Success fee to the implementing orgainsation will be released at the end of the year.

6. Monitoring and Evaluation

The overall monitoring and evaluation of the programme and R&D and Test Centres will be supervised by the Core Group on Biomass Cookstoves. The field performance monitoring and evaluation of the projects will be carried out through "Third Party", which will be a specialised R&D/academic institution or consortia of R&D/Academic, professional institutions,suitable monitors. A separate project will be taken up for field performance monitoring and evaluation for monitoring projects sanctioned every year. The purpose of the monitoring would be to make an assessment on field performance and socio-economic benefits accrued from the dissemination of cookstoves. The monitoring and evaluation will involve monitoring the performance of cookstoves/chulhas in field conditions and evaluation of the same to study the impact on fuel saving, emissions reduction in cooking space, users response to O&M services available at local level, biomass fuel available, acceptance of cookstoves/chulhas etc. A practical method will be used to randomly select villages for field performance monitoring and evaluation. While the socio-economic benefits will be drawn from a larger survey, technical evaluation such as checking the quality of cookstoves will be done by randomly taking a sample of each model of cookstove/chulhas from field to Test Centre for performance testing. In addition, functional tests will also be conducted randomly on each model of cookstove/chulhas in field (at village level or cluster of villages) to ascertain the cooking performance against the power output rating.It will be the responsibility of the cookstove/ chulha manufacturer to maintain the quality of cookstove/chulha as per the performance tested in MNRE supported Test Centres. The field and market experience of the above project will be analyzed for developing a business model for commercialization including availing CDM benefit for biomass cook-stoves through the Programme of Activities (POA) developed by MNRE, which will be useful for developing business of promotion ofimproved biomass cook-stoves/unnat chulhas in the country in future

The findings of the field performance monitoring and evaluation project will be presented and discussed in the "National Level Workshop" at the concluding of the project to be organized by the implementing organization. The field performance monitoring will be used for taking steps for further development and scaling up of deployment including selecting cookstoves. This will also be useful for star-rating of cookstoves/chulhas in future and also for preparing a strategy for developing a business model for marketing of biomass cookstoves/chulhas in the country. The progress of test centres and R&D projects willbemonitored by theCore Group on Biomass Cookstove and the R&D Project Appraisal Committees of MNRE.

There will be a national/state-wide helpline number accessible to the users and other stakeholders to be operated by the MNRE through outsourcing to selected organisation.

7. Test Centres and Standards

Three Test Centres in R&D/academic institutions in R&D project mode are functioning at IIT Delhi, IMMT (CSIR), Bhubaneswar and MPUAT, Udaipur. for carrying out performance testing of improved biomass cookstoves produced by industry to maintain the quality of the product.

8. Revised Standards and Test Protocols

The Ministry in consultation with the Test Centers including experts from the CGPL, IISc Bangalore perused the earlier BIS on solid biomass cookstoves – portable brought out in 1991and to examine the applicability of the standard and test protocols in view of the newer designs of cookstoves that came to market in recent years. After extensive discussions and examinations, a draft revised standard and test protocols were prepared for the portable natural draft and forced draft types improved domestic and community biomass cookstoves and the revised standards have been published by BIS in August 2013.. The US EPA Guidelines (5G) for Hood Heaters have been followed for emission measurements from combustion of biomass fuel in cookstoves.

The standard performance parameters suggested in the revised standard are given below:-

Sl. No.	Type of Biomass Cookstove	Standard Performance Parameters		
		Thermal Efficiency (%)	CO (g/MJd)	PM(mg/MJd)
1	Natural Draft Type	Not less than 25	≤5	≤ 350
2.	Forced Draft Type	Not less than 35	≤ 5	≤ 150

9. Process of Cookstove Testing

The industries/manufacturers who may want to get their products tested may send the complete technical details of the cookstoves including the kind of biomass the cookstove can burn and the procedure for feeding the fuel to cookstove to MNRE. The Ministry in turn will direct the industry to send their product with details including testing charges to the respective test centres for performance testing. The cookstove models should have the industry's logo fixed on the outer surface of the cookstove with serial no. marked thereon. The cookstoves are being tested for three performance parameters, namely, thermal efficiency, COand Total Particulate Matter (TPM) as given above, apart from other basic design parameters. The cookstoves qualifying the stipulated tests as per the modified draft standard are granted Excise Duty Exemption. The test centre will complete the performance testing within two week time and will send the performance testing report to MNRE for consideration. The test reports of cookstoves qualifying the stipulated performance Tests are placed before the Technical Evaluation Committee of MNRE for examination of test results for consideration of approval. The industries whose cookstoves do not qualify are informed of the results with a suggestion to make appropriate improvement in cookstove designs.

10. Approved Models of Cook-stoves

At present, there are a total of 15 nos. of cookstoves approved by MNRE on the basis of their performance testing conducted by Improved Cook-stove Test Centres and satisfying stipulated performance parameters, which include 6 nos. natural draft domestic cookstoves, 6 nos. forced draft domestic cookstoves and 3 no. of forced draft community cookstsove. The approved cookstove models supplied by respective manufacturers are given below:

Sl.No.	Address of manufacturers	Models	Power Output
I.	**Natural Draft Cookstoves – Domestic Size**		
1	M/S UNICUS ENGINEERING PRIVATE LIMITED Regd. office ; 23, Madhusudan Nagar Unit - IV, Bhubaneswar, Pin :- 751001	Harsha(Fuel-Wood) (CSIR,IMMT	1.83kW

	Factory Office : 178/5535, Chakeisihani, Mancheswar, Bhubaneswar, PIN :- 751010	Design)	
2	Shri Vikram S. Kale,Proprietor Vikram Stoves & Fabricators, A-37, MIDC, P O Box No.25 Osmanabad-413501, Maharashtra	Bio-classic(Fuel-Wood)	1.49 kW
3	Ms. Neha Juneja, Co-founder, Greenway Grameen Infra Pvt Ltd, 301, Chawla Complex, Sector 15, CBD Belapur, Navi Mumbai 400614	Greenway Smart Cook Stove (Fuel-Wood)	0.8 kW
4	M/s Ravi Engineering &Chemical Works Sector -24, Pocket-28, Plot No.55, 3rd Floor, Rohini, New Delhi-110085.	Firenzel(Fuel-Wood)	0.74kW
5	Adarsh Plant Protect Ltd, 604, GIDC, Vitthal Udyognar, Anand, Gujarat. Contact Details: Mr Sreekanth, Director Pooja Horti & Herbal Farms (P) Ltd. A-102, Anee Circle, Ganesh Chowkdi, ANAND-388001, Gujarat	Adarsh (Nirmal) (Fuel-Wood)	0.89 kW
6.	Shri T. Pradeep, Chief Executive iSquare D Charitable Trust No. 15, 1st Main, 2nd Cross, RMV 2nd Stage, Dollar's Colony,Bangalore-560094	Chulika (Fuel-Wood)	0.74
II.	**Forced Draft Cookstoves – Domestic Size**		
1	Shri Mahesh Yagnaraman, Managing Director, First Energy Pvt. Ltd., B 101, Signet Corner Building, Baner Road, Baner,Pune – 411045	Oorja(Fuel-Pellets)-IISc -Design	0.7 kW
2	The Energy and Resources Institute (TERI), 6C, Darbari Seth Block India Habitat Place, Lodh iRoad New Delhi - 110 003 Manufacturer Address: Phoenix Udyog Pvt Ltd, Nahan Road, Moginand, Kala-Amb, District: Sirmour, Himachal Pradesh-173030	TERI SPT-0610(Fuel- Wood)	1.08kW
3	Shri Ashwin Patel, Director Alpha Renewable Energy Pvt. Ltd. At. & Po. Vasna (Borsad), Ta. Borsad, Dist. Anand, Gujarat, India-388 540	Ecochulha - XXL (Fuel-Wood)	1.10kW
4	Shri Saurabh Sagar Jaiswal M/S Navdurga Metal Industries (Bharat), registered office 8/8/158, Sagar Building, Fatehganj, Faizabad, Uttar Pradesh. Works: D-33 Mumtaz Nagar, UPSIDC Site -2, Industrial, Area, Faizabad-224001, UP.	Agni Star(Fuel-Rice Husk)	2.16 kW
5.	Shri Sashidhara B T, Proprietor Sacks Right Energy Innovations No.83/84, Kempegowda Circle 14th A Cross, Thigalarapalya Main Road, Peenya 2nd Stage, Bangalore -560 058	Ojas(Fuel-Pellets)	1.99 kW
6.	Shri Rajiv Dandekar	RAMTARA (Fuel-	1.0 kW

	Ram Tara Engineering Company PT Compound, Mondha Naka Signal, Jalna Road, Aurangabad-431001, Maharashtra	Pellets)	
III.	**Forced Draft - Community Size**		
1.	Shri Ashwin Patel, Director Alpha Renewable Energy Pvt. Ltd. At. & Po. Vasna (Borsad), Ta. Borsad, Dist. Anand, Gujarat, India-388 540	Ecochulha-XXXL (Fuel-Wood)	3.32 kW
2.	Shri Sashidhara B T, Proprietor Sacks Right Energy Innovations No.83/84, Kempegowda Circle 14th A Cross, Thigalarapalya Main Road, Peenya 2nd Stage, Bangalore -560 058	Ojas - M06 (Fuel-Pellets)	5.43kW
3.	Shri Sashidhara B T, Proprietor Sacks Right Energy Innovations No.83/84, Kempegowda Circle 14th A Cross, Thigalarapalya Main Road, Peenya 2nd Stage, Bangalore -560 058	Ojas – M09 (Fuel-Pellets)	6.39kW

Annexure –A

Format for Submitting Projects Proposals

Sl.No.	Items	Information to be supplied by project proponent
1	Name of the implementing organization with complete address with the contact details of the Chief and website.	
2	Profile of the organization with annual turnover and including experience of implementation of projects in renewable energy at grass root level(please give the details of the projects implemented with cost during the last two years including the status)	
3	Details of manpower available and network at grass root level to carry out the project(please give details of sites/blocks)	
4.	Details of Biomass Cook stoves Models to be deployed/installed. Earthen Cook stoves to be made by local mistries/masons with prefabricated metal combustion chambers should comply with reasonable standards of efficiency, emissions and durability to be tested by MNRE approved Test Centres.	
5.	Places where cook stoves to be deployed brief summary (in not more than 250 words) on biomass fuel and the method of cooking being done at present and whether the beneficiaries identified are ready to accept improved biomass cook stoves sharing the cost as per MNRE guidelines, on the basis of the survey conducted by the agency). Cluster approach may be adopted as far as possible.	
6.	Cost of the project with break up including cost of cook stove with item wise details of materials and budget for monitoring, publicity awareness and training.	
7	Duration of the project	
8	Brief description of work plan and project implementation(in not more than 500 words)	
9	Please indicate for each type of improved biomass cookstove the cost of alternative to it (in not more than 250 words.)	
10	Please specify how the project will help to address the clean cooking energy solutions, health hazards and socio-economic development and livelihood concerns(in not more than 250 words).	

Annexure-B

Unnat Chulha Abhiyaan
Verification of Beneficiaries of Biomass Cook Stove distributed under MNRE supported Projects

SL. No.	Name of beneficiaries	Complete Address	Details of Photo ID/ Adhar Card/ Any other Legal valid identity of beneficiaries	Name of Biomass Cook Stove	Cost as certified by the Cost Accountant as provided by manufacturers/ developers/ supplier to MNRE	MNRE Subsidy (Rs.)	Balance cost paid by bene fice-aries	Signature of beneficiaries
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

Certified that …….. Cook stove has been provided /distributed on cost sharing basis to the above mentioned beneficiaries.

Project Coordinator Implemented Agency Gram Pradhan PROJECT OFFICER OF STATE NODAL AGENCY