

No. 11/01/2014-15/ST
Government of India
Ministry of New and Renewable Energy
Solar Thermal Division

Block No. 14, CGO Complex,
Lodhi Road, New Delhi-110003
Dated: 26th June, 2014

To
The Pay and Accounts Officer,
Ministry of New and Renewable Energy,
New Delhi.

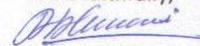
Subject: Implementation of "Off-Grid & Decentralized Solar Applications" Scheme in the 2nd Phase of the Jawaharlal Nehru National Solar Mission during 12th Plan Period including 2014-15, Policy Guidelines for "Off-Grid & Decentralized Solar Cooker Programme".

Sir,

In continuation to the Administrative Approval for continuation of "Off-Grid & Decentralized Solar Applications" Scheme in the 2nd Phase of the Jawaharlal Nehru National Solar Mission during 12th Plan Period" issued vide No. 30/11/2012-13/NSM dated 26th May, 2014, I am directed to convey the Policy Guidelines for implementation the "Off-Grid & Decentralized Solar Cooker Programme". The Ministry would issue separately the operational guidelines for implementation of this sub-scheme in due course.

2. This issues in exercise of powers delegated to this Ministry and with the concurrence of IFD dated 28/05/2014 vide their Dy. No. 410/D (F).

Yours faithfully,



(Dr. R.P. Goswami)

Director / Scientist 'E'

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Copy for information and appropriate action to:-

1. All Central Ministries and Departments;
2. Department of Public Enterprises(DPE), Block 14, CGO complex, New Delhi.
3. Principal Director of Audit, Scientific Audit-II , DGACR Building, I.P. Estate, Delhi-110002.
4. Principal Secretaries/Secretaries(Energy Departments) all States /UTs.
5. All State/UT Nodal Agencies (by name).
6. All Municipal Commissioners.

7. CMD IREDA, 1st floor , East Court ,Indian Habitat Centre , Lodhi Road, New Delhi.
8. Director General, Bureau of Indian Standards, Manak Bhawan, 9, Bahadur Shah Zafar Marg, New Delhi.
9. D.G. National Institute of Solar Energy Gwal Pahari, Gurgaon, Haryana.
10. M.D., Solar Energy Corporation Of India, D-3, A Wing,1st Floor , Religare Building , District Centre , Saket, New Delhi-110017.

Copy also to:

1. PS to Hon'ble Minister NRE
2. PSO to Secretary, MNRE
3. PS to JS&FA, MNRE
4. PPS to JS (TK) / JS (AS)
5. All Advisers & Group Heads
6. All Directors, PSOs
7. All Under Secretaries in MNRE
8. Director (NIC) to upload this on the Ministry's website
9. CA , MNRE/Cash Section
10. Hindi section for Hindi version
11. Sanction folder



(Dr. R.P.Goswami)
Director/ Scientist 'E'

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Scheme For Off-Grid and Decentralized Solar Cooker Programme

Background:

The Government India had launched the Jawaharlal Nehru National Solar Mission in March 2010, which is a major initiative of the Central and State Governments to promote ecologically sustainable growth while addressing India's energy security challenge. It will also constitute a major contribution by India to the global effort to meet the challenges of climate change. Aim of the mission is to focus on setting up an enabling environment for solar technology penetration in the country both at a centralized and decentralized level. The first phase (up to March 2013) has already achieved the required target and momentum.

As per Census 2011 in India, out of 121 crores, 72.5% of the people are living in villages. These rural people, and more than 50 % of the urban population belonging to lower middle class are using wood fuel and coal for cooking/baking/frying applications. Other fuels like LPG and kerosene, which are highly subsidised by GOI, are also being used for cooking/baking/frying applications. To reduce the dependence on conventional fuels, thereby to promote the use of clean energy GOI is implementing this scheme under JNNSM.

Solar Thermal component of JNNSM in the next two phases (up to march 2022) will now, inter alia, would require focus on promoting off-grid systems including hybrid systems to meet / supplement heating requirements. This requires interventions to bring down system costs, and the key challenge is to provide an enabling framework and support for manufacturers/entrepreneurs to develop markets. This scheme, in particular, will support the implementation of off grid and decentralized solar cooker program in the country. Therefore, the primary objective of this scheme would be to promote the use of solar energy for cooking/baking/frying applications by extending monetary support in the form of capital subsidy.

Solar cookers are a device which converts the solar energy into useful thermal energy which can be used for cooking and baking applications. With regard to solar cookers, the initial investment being the major cost component and operating cost being zero, the capital subsidy will be considered throughout this scheme implementation.

2. Objectives:

- 2.1 To promote off-grid cooking applications like cooking/baking/frying using Solar Device (Box and Dish Type solar), thereby supporting the targets set in the Jawaharlal Nehru National Solar Mission .
- 2.2 To create awareness and demonstrate effective use of solar cooking systems for individual/community/beneficiary.
- 2.3 To encourage innovation in addressing market needs and promoting sustainable business models.

- 2.4 To provide support to channel partners and potential beneficiaries, within the framework of boundary conditions and in a flexible demand driven mode.
- 2.5 To support consultancy services, seminars, symposia, capacity building, awareness campaigns, human resource development, etc.

3. Scope of the Scheme:

- 3.1 The programme would be applicable in all parts of India and would, to begin with, be co-terminus with the Jawaharlal Nehru National Solar Mission and will, *inter-alia*, focus on promoting off-grid and decentralized systems as defined in para 1 above. The targets will be implemented in the high potential and demand of the states.
- 3.2 The off grid and decentralized cooking system of any size/ number would be eligible under the Programme. The programme may be implemented in Urban and Rural Area as well.
- 3.3 The programme will also cover R&D work related to development of new material solar cookers for solar online monitoring, software development, establishment of testing facilities, state specific studies on potential assessment, system package development, policy development, engagement of consultants, seminars/workshops, capacity building & trainings, awareness campaigns preparation of literature/guidelines, innovative projects, IT enabled monitoring mechanisms, evaluation and other studies etc.

4. Mode of Implementation:

The programme would be implemented through multiple agencies for rapid up-scaling in an inclusive mode. These agencies would be State Nodal Agencies/Depts. implementing the renewable energy programmes, Solar Energy Corporation of India, Channel Partners and other Govt. organizations i.e., PSUs/ Institutions/ State Departments/ Local Governments/ Municipal Corporations/NHB/NABARD/IREDA etc.

4.1 Implementing Agencies:

Engineering Procurement and Contracting (EPC) – end users may tie up with DCPs/SNAs/SECI/FIS for installations/operation and maintenance of RE system. Following will be the broad categories of implementing agencies

(a) State Nodal Agencies(SNAs)

State Nodal Agencies / Depts. for implementing various renewable energy programmes have been established under the control of respective State Governments. The yearly target will be allocated to the States/ SNAs depending upon their interest, demand and the capability in the beginning of the Financial Year (FY) or even in February for the preceding year. About 30 % of eligible CFA can be released in advance at the time of target allocation. The SNAs will keep/maintain all applications and records with them and will submit the requisite brief about the beneficiaries/projects duly certified by them. These records will be made available for the audit purpose or to the inspecting team/MNRE officials.

(b) Solar Energy Corporation of India (SECI)

The Solar Energy Corporation of India is a section 25 company established under the JNNSM by the Ministry. The SECI will submit the plan for implementation, as and when necessary and depending upon the feasibility and availability of funds. The projects will be setup on open tender basis by SECI. Upto 30% of CFA may be released as advance.

(c) System integrators/ Channel Partners

These channel partners would help the individuals and small groups of clients to access the provisions of the programme. They would enable significant reduction in transaction cost and time. The Channel Partners will be empanelled by MNRE based on certificate from a rating agency in the country for technical and financial strength. Guidelines for accrediting/empanelling these entities by MNRE will be put in place. The rating agencies check the net worth/ turnover of the participating entity, its technical capability of supplying, installing and providing after sales service, track record and tie-ups with the equipment suppliers. The reputed Govt. technical Institutions/reputed NGOs of National level with relevant experience and track record could be exempted from the accreditation by rating agency.

Those channel partners who are already empanelled by MNRE under 'Off-grid and Decentralized Solar Applications' Scheme would be preferred based on their performance. The channel partners already selected may also be notified under the programme. There would be a provision for up gradation and down gradation commensurate with their performance in implementing projects under this Scheme.

(d) Large PSUs/Government department

Depending upon their interest and on case to case basis projects will be sanctioned. About 30 % of eligible CFA can be released in advance at the time of sanction of their project. They will keep/maintain all applications and records with them and will submit the requisite brief about the beneficiaries/projects duly certified by them. These records will be made available for the audit purpose or to the inspecting team/MNRE officials on need basis etc.

5. Funding Pattern.

- 5.1 Funding under this scheme would be operated on reimbursement basis only, in accordance with the benchmark cost and subsidy levels fixed by MNRE every year for implementation through channel partners. Advance upto 30% of CFA may be released to SNAs and other government organizations. The beneficiary /user need to pay only the cost net of subsidy, while the subsidy will be released to the respective implementing agencies. Implementing agency need to submit the relevant documents to the MNRE in the prescribed format for the disbursement of subsidy.

5.2 Eligible Subsidy

Capital subsidy would be computed either based on the effective aperture area of the solar cooker or an equivalent of energy or power.

- 5.2.1 MNRE would provide financial support in accordance with the benchmark cost and subsidy levels, which will be fixed on yearly basis. A committee would be set up for this purpose which will fix the benchmark cost based on the tenders in the preceding 12 months. A system would be devised for this to take into account the rates arrived at through tenders and cost break up analysis. This would be done separately for various types and size ranges. A correction factor for North East and far flung areas may be given. Capital subsidy of 30% of the benchmark cost would be available for general category states and 60% of the benchmark cost for special category states, viz. NE, Sikkim, J&K, Himachal Pradesh and Uttarakhand. In addition, it would also be extended for remote and difficult areas of Lakshadweep, Andaman & Nicobar Islands and districts on India's International borders, with 60% subsidy. The funds would be released on reimbursement basis on completion and verification/inspection by SNA or third party thereof.
- 5.2.2 Normally, the CFA of 30% would be given for the projects/systems set up on open tender basis by SNA/SECI/PSUs/FI/Government organizations or 30% of benchmark cost, whichever is lower.
- 5.3 MNRE would also fund for meeting the expenditure towards development of software and hardware, based on an estimate provided, for implementing and monitoring the scheme effectively. It would present an audited annual statement of accounts.
- 5.4 Upto 3 % of CFA would be admissible as service charges to State Nodal Agencies, SECI/NHB/IREDA or other govt. agencies etc. This would be provided by MNRE, in addition to the CFA. The amount of CFA to be given to the State Nodal Agencies/ SECI etc. as service charges would be determined as follows:-
- (a) Efforts made in preparing innovative cases by deploying staff in the field preparing DPRs etc.
 - (b) Providing technical assistance / help in implementation of the schemes.
 - (c) Having an IT based monitoring mechanism in place to reflect not only the progress during implementation but also performance after installation.
- 5.5 For organizing seminars/workshops, prize distribution ceremony, trainings, awareness campaigns, preparation of literature/guidelines, innovative projects or other miscellaneous work etc. depending on merit, a total fund of up to 1 % of total budget would be earmarked. A project management cell in MNRE, engagement of consultancy organization will be done. A total additional fund of upto 1.0 % of total budget is proposed to be utilized for project management cell and capacity building.
- 5.6 The benchmark may be revised every year or half yearly and based on the benchmark subsidy will be calculated at 30 % and fixed in absolute values for various categories.

- 5.7 The CFA from MNRE would not preclude the channel partners from availing other fiscal and financial benefits being provided by State, Central Governments and any other agency so long as the same is clearly disclosed in the project report. This is to avoid multiple financing.
- 5.8 A one-time additional support of Rs. 15,000/ year will be provided to those manufactures/suppliers/channel partners who are BIS certified, to meet the cost involved in the BIS certification/renewal process, and must have achieved a minimum target of 500 solar cookers in a year.

6.0 Release of Funds:

- 6.1 For setting up of the projects the release of funds for various Implementing Agencies would be as follows:

Sl.No.	Implementing Agency	Pattern for Release of Funds
1.	State Nodal Agencies (SNAs)/ State Nodal Departments	Upto 30% of the eligible CFA and services charges at the time of sanction of the proposal in the project/programme mode. However, 10% advance may be given at the time of allocation of targets on programme mode. 70% after successful completion of the projects after sample verification on submission of requisite claims along with utilization certificate of advanced released.
2.	Other Government Agencies for the Govt. Projects, and SECI	Upto 30% of the eligible CFA and services charges at the time of sanction of the proposal in the project/programme mode. 70 % after successful commissioning of the projects after sample verification on submission of requisite claims.
3.	Channel Partners and Akshay Urja Shop	On reimbursement basis after successful distribution / sale, completion of the target / project and thereafter sample, verification by SNAs /third party inspection thereof on submission of requisite claims.

- 6.2 The subsidy will be disbursed directly by MNRE to the channel partners. MNRE may specify an accounting system, monitoring mechanism for the transparent implementation of the scheme.

7.0 Approval Mechanism

- 7.1 All the Channel Partners shall submit proposals/ targets in the prescribed formats along with a commitment for meeting the balance cost of the project other than the CFA to MNRE directly. Guidelines for fixation/sanction of yearly target/projects will be brought out by MNRE on yearly basis preferably conceding with the circulation of benchmark cost.

Targets will be approved and communicated and the channel partners can start implementation at their own risk and investment. They will be responsible for following the scheme guidelines and MNRE specifications.

- 7.2 Proposals of State Nodal Agencies, SECI and other Govt. Agencies, NHB, PSUs and IREDA will be directly processed by the division.
- 7.3 The entire process of proposal submission, processing and approval mechanism would be preferably IT enabled. The PAC/Division would also

frame rules and prescribe formats etc., for project approval, within the overall framework of this scheme, so as to make the process transparent.

7.4 The in-principle approval of the targets/ proposals may be granted by the programme division in- advance to the States Departments/SNAs/Channel Partners and other implementing agencies to enable them for planning their strategies identify the beneficiaries.

8. Project Management Consultant / Cell (PMC):

The government would engage a reputed agency as Project Management Consultant/ Cell (PMC). This agency would handle all the processes such as assistance for formulation, appraisal and screening of proposals preceding the formal approval which would be a sovereign function of MNRE. It would also assist in the Ministry in formulating the detailed implementation guidelines / formats, if any.

9. Monitoring and Evaluation:

It is proposed to have three tier monitoring and evaluation system involving implementing agency as first tier, third party inspecting agency as second tier (Inspection proposed on stratified sampling basis) , and random checking by ministry in the third tier. Further at the end of plan period evaluation of scheme by independent evaluator will be carried out for continuation in next plan period. In case of Govt. organization/Large PSUs/ SNAs second tier monitoring may be waived off on production of self-certification by them. IT enabled monitoring and verification protocols will be putted in place for monitoring on pan India basis.

10. Technical Requirements

The scheme would require the project proponents to strictly adhere to the national/international standards specified by the Ministry from time to time. However, the manufacturers / supplier of solar cookers are debating to adopt BIS Certification because of the volumes do not justify the cost involved. The existing National Standards/ MNRE Specifications in respect of Box type solar cookers/Systems are given in **Annexure-1.**

11. Appointment of channel partners

Any company desirous to become a channel partner need to have a well-established manufacturing facility and must be registered under Companies Act. The company must be manufacturing the solar cookers as per the technical specifications laid down by the MNRE, and has got its solar cooker tested by one of the Regional Test Centre (RTC) of MNRE. Manufacturers should also obtain a grading from the credit rating agency selected by MNRE.

12. Supporting Innovation

In very special and rare cases, the Ministry could consider higher CFA for undertaking pilot and demonstration projects either for demonstrating new and innovative applications or for demonstrating new technologies. Ministry may also consider sanctioning to SECI or other government institutions demonstrative projects with higher CFA with a proviso for recovery of the CFA on savings in fuel usage. Detailed guidelines for such schemes would be separately drawn up if required.

13. Natural Calamities and Disasters

Ministry could consider providing 100% funding in case of officially declared natural calamity/disasters for installation / distribution of solar cookers on humanitarian ground.

14. Interpretation of the Guidelines

In case of any ambiguity in interpretation of any of the provisions of these guidelines, the decision of the Ministry shall be final.

15. Review

The scheme would be reviewed by an Internal Review Committee at yearly interval and modifications therein would be incorporated by the Ministry. In addition, a platform for experts to discuss best practices, debate over issues to overcome bottle necks and provide effective policy suggestions for ensuring wide spread off grid solar thermal solutions deployment would also be established at the national level.

16. Fixing of CFA and Benchmark cost

16.1 All CFA values will be based on bench mark cost and fixed in absolute value i.e. in Rs./sq. ft. collector area or in thermal energy output basis. There could also be other parameters like efficiency of system. For fixing CFA and bench mark cost, MNRE will set up a committee which will take inputs from rates received in various tenders by SNAs, SECI and other agencies. The CFA may be fixed annually or biannually. .

16.2 Component wise cost breakup to arrive at an estimated price of each of the products for which benchmark cost is determined. The committee will collect data about all the tenders floated with MNRE subsidy. These would then be clubbed into different categories depending on the product, technology etc. Thereafter the committee may develop criteria for arriving at a rate out the price or by calculating median. The benchmark so determined through tendered price will then be compared with values arrived at through costing by clubbing the price of various components. In case of wide difference, the committee may go into the reasons and if need be, apply correction factor.

17. Guidelines for Channel Partners

The Channel Partners are an important implementing agency. It is essential to ensure that guidelines for selection, rating and appraisal of channel partners are transparent and simple. It shall also be ensured that there are no restrictions on the number of channel partners and all otherwise eligible agencies are empanelled subject to their rating and appraisal. In case of overcapacity of applications, the projects shall be allocated among channel partners in a transparent manner. MNRE shall issue detailed guidelines for channel partners covering all these aspects.

18. Validity of the scheme

The scheme will be valid till 31.3.2017 or such extended period as may be allowed by the Government of India.

NATIONAL STANDARDS/ MNRE SPECIFICATIONS ON SOLAR THERMAL COMPONENTS/ SYSTEMS (Solar Cookers)

A) Indian Standards

National Standards are brought out by Bureau of Indian Standards. The details of these Standards which contain minimum performance requirements along with test methods are as follows:

Box-Type Solar Cookers

- a) IS 13429 (Part 1):2000, Solar cooker-Box type - Specification, Part 1 - Requirements.
- b) IS 13429 (Part 2):2000, Solar cooker- Box type - Specification, Part 2 - Components.
- c) IS 13429 (Part 3):2000, Solar cooker- Box type - Specification, Part 3 -Test methods.

B) Test Procedures & MNRE Specifications

MNRE Specifications

- a) Box type Solar cookers
- b) Dish Solar Cookers

MNRE has laid down the standards for solar devices and minimum technical specifications for Box and Dish type solar cookers, which are available at its website www.mnre.gov.in. These are required to be followed for claiming subsidy from MNRE.

Test Procedures for Solar Box/Dish cookers

Testing Laboratories/ Centers

- a) In order to make available quality product in the market, the Ministry works with Bureau of Indian Standards (BIS) and Quality Council of India. Presently, Indian Standards are available for box-type solar cookers and BIS implements a testing and certification programme which forms the basis of certification of these products by BIS. List of test laboratories and centers are available on MNRE website.
- b) There is a network of test centers in the country which is recognized by BIS for carrying out certification testing as per Indian Standards. The details of these test centers are available on MNRE website and is updated from time to time.
- c) The solar devices/ systems must be tested at one of these test centers.