

**Government of India
Ministry of Non-conventional Energy Sources
(Urban, Industrial and Commercial Group)**

**Block NO. 14, CGO Complex,
Lodi Road, New Delhi-110 003**

Dated: January, 2009

To

Heads of State Nodal Agencies and
Municipal Commissioners

Modified Scheme

Sub.: Scheme on “**Energy Efficient Solar/ Green Buildings**” – Modification of the Building component of the ongoing Scheme on “Promotion of Solar Thermal Systems for air heating/ steam generating applications, Solar Buildings and Akshay Urja Shops” for implementation during 2008-09 & rest of 11th Plan period

Sir/ Madam,

In continuation of this Ministry’s sanction of even no. dated 26th June, 2008 issued for continuation of the above mentioned scheme during 2008-09, I am directed to convey the sanction of the Government of India for modifying the Building component of the Scheme on “Promotion of Solar Thermal Systems for air heating/ steam generating applications, Solar Buildings and Akshay Urja Shops” for implementation during 2008-09 & rest of 11th Plan period as per the details given below:

1.0 Objective

The main objective of the modified component of the scheme is to promote the widespread construction of energy efficient solar/ green buildings in the country through a combination of financial and promotional incentives, and other support measures so as to save a substantial amount of electricity and other fossil fuels apart from having peak load shavings in cities and towns.

The objective will be achieved by providing incentives to buildings rated for their performance under National Rating System being promoted by the Ministry and financial support for organizing workshops and seminars for engineers, planners, builders, architects, consultants, housing financing organizations and potential users and for compilation and publishing of documents related to solar/ green buildings.

2.0 Physical Targets

Indicative targets as per the following has been set for 2008-09 and rest of the 11th period:

Activity	2008-09		Rest of 11 th Plan	
	Physical	Financial	Physical	Financial
Solar/ Green Buildings rated under NRS	5 lakh sq. m. of covered area	Rs. 0.50 crore	35.00 lakhs sq. m. of covered area	Rs. 40.00 crore
Promotional & other activities including GRIHA Secretariat	-	Rs. 0.50 crore	-	Rs. 9.00 crore
Total	-	Rs.1.00 crore	-	Rs.49.00 crore

3.0 Implementation Arrangement

The scheme will be implemented through State Nodal Agencies/ Municipal Corporations/ Govt. Bodies / reputed NGOs etc. The Guidelines for implementation of the scheme and financial provisions for various activities are given in the Annexure. The scheme will be reviewed after two years or before as felt necessary.

4.0 Monitoring Mechanism

The Implementing Agencies will set up arrangements to closely monitor the implementation of their projects covered under the scheme. The agencies will furnish progress reports and other information to MNRE on a regular basis. In addition, Regional Offices of MNRE will be involved in monitoring the implementation and performance of the systems. The progress of the scheme will also be monitored by the Ministry independently, including third party inspection and reporting

5.0 Expenditure

An expenditure of Rs.49.00 Crore is expected to be incurred under the activity on “Energy efficient solar/ green buildings” during 2008-09 and rest of the 11th Plan period. Rs. 1.00 Crore will be spent during 2008-09, and the rest during the remaining period of the Plan. The budget will be met from the allocated budget for Solar Thermal Energy Programme under Demands-for-Grants of the Ministry.

6.0 This issues in exercise of delegated powers to this Ministry and with concurrence of IFD vide their sanction no. IFD/SAN/..... /..... /2008-09 dated

Yours faithfully,

Copy for information and necessary action to:

1. Director of Audit, Scientific Audit-II, DACR Building. I.P. Estate, N.D -110002
2. PPS to Secretary, MNRE
3. Ps to MOS
4. Adviser(UICA) / Dir (AKS) / Dir(DN)
5. All Group Heads / Solar Energy Centre
6. AS & FA / Dir (F) / US (F) /AO(F) / SO(F)
7. Cash Section & PAO,MNRE
8. Sanction folder
9. Director(TIFAD), MNRE
10. MD, IREDA

11. Director General, Bureau of Indian Standards, Manak Bhawan, 9, Bahadur Shah
Zafar Marg, New Delhi-11002

Guidelines for Implementation of Energy efficient solar/ green building Programme

Background

Energy efficient solar buildings are constructed based on the techniques of solar passive design with a view to provide comfortable living and working conditions, both in winter and in summer. These buildings can be integrated with renewable energy and energy conservation devices and systems and can save over 30 to 40 % of conventional energy that is used for lighting, cooling or heating. Such buildings have been tried out in a few States as a result of the initiatives taken by the Ministry. Finding the concept of solar buildings useful, the state governments of Himachal Pradesh, Punjab, Haryana and Nagaland have already made it mandatory to construct all new buildings in government & public sectors on this concept. Necessary G.O.s have been issued and the development authorities have been asked to approve building plans for construction only if the designs incorporating solar passive features are certified by approved architects or the experts. Over 40 experts/architects are presently involved in the country in practicing energy efficient solar buildings. Bureau of Energy Efficiency (BEE) have recently introduced Energy Conservation Building Code (ECBC) which includes energy efficient design features. National Building Codes have also been developed by the Bureau of Indian Standards (BIS) which incorporates some of the concepts of energy efficient solar buildings. Sufficient literature/ publications are also available for design of such buildings.

Efforts are now being made to construct Green Buildings all over the country which not only take care of energy conservation but also look into water and waste management, environmental impact, minimum destruction of natural resources and various other aspects in an integrated way. Building Rating Systems have been quite effective in raising awareness and popularizing energy efficient and green building design. Most of the internationally devised rating systems have been tailored to suit the building sector of the country where they were developed. In India, a US based LEED (Leadership in Energy and Environmental Design) Rating System is under promotion by CII-Godrej Green Business Center (GBC) which is more on energy efficiency measures in AC Buildings. A couple of other Rating systems suitable for Indian conditions e.g. TERI-GRIHA and Eco-Housing System have also been developed by TERI and Pune Municipal Corporation respectively and are under promotion in the country.

Keeping in view our climatic conditions, and in particular the construction of non-AC buildings, a National Rating System – GRIHA (Details available at MNRE website: www.mnre.gov.in) has been developed which is suitable for all types of buildings in different climatic zones of the country. The Rating System was initially conceived and developed by The Energy & Resources Institute, TERI. It has been modified as a National Rating System after incorporating various suggestions by a group of architects and experts. It takes into account the provisions of the National Building Code 2005, the Energy Conservation Building Code 2007 and other IS codes, local bye-laws, etc. Through various qualitative and quantitative assessment criteria, GRIHA would be able to 'rate' a building on the degree of its 'greenness'. It will operate on a 100 point marking system with 70 to 80 points to be obtained for 3 star rated buildings and 81-90 points for 4 star rated buildings. The rating would be applied to different types of new and existing buildings, whether commercial, institutional or residential.

A Memorandum of Understanding has been entered into between the Ministry and TERI towards development and operationalisation of the National Rating System ‘GRIHA’ for Green Buildings. A National Advisory Council (NAC) has been constituted to provide advice and directions to the National Rating System. A Technical Advisory Committee (TAC) has also been constituted to provide technical oversight towards modifications and constant up-gradation of the GRIHA framework. GRIHA will be operated through GRIHA secretariat which will be hosted by TERI. It is understood that large scale promotion of GRIHA will help in getting the new buildings constructed on the concepts of Green Building design suitable for Indian conditions.

Financial Provisions

A GRIHA Secretariat

GRIHA Secretariat will act as an independent autonomous body. It will be registered by TERI under Society’s Act. A seed funding of upto Rs, 1.00 crore will be made available to the Society for its establishment and infrastructure facility as non recurring grant based on the proposal received from TERI with details of the budget required. However, till the society is formed by TERI the Secretariat will function from the office of TERI at Delhi.

B. Buildings rated under National Rating System -GRIHA

The scheme is presently confined to commercial and institutional building including housing complexes with minimum built area of around 2500 sq.m. All the houses in a complex will be considered as single project individual houses are not covered in the Scheme.

➤ Registration –cum-Rating Fee

90% of the fee as given below for projects rated 3 star having built area up to 5000 sq. m. and for projects rated 4 star having built area above 5000 sq. m. will be reimbursed by MNRE

Owners of buildings under design and construction, interested to be rated under GRIHA will get their buildings registered with GRIHA Secretariat as per the procedure given at GRIHA/ MNRE Website. Registration-Cum-Rating Fee for the projects registered under GRIHA will be as per below which will be paid to GRIHA Secretariat by the owners at the time of registration.

Project size (total built up area)	Rating cum registration fee
<= 5000 sqm	Rs 3,14,000 (Rs 2,50,000 fixed cost for registration and secretariat fees + Rs 64,000 for evaluation)
>5000 sq m	Rs 3,14,000 (fixed cost for projects up to 5000 sq. m.) + Rs 3.75/sq m over and above 5000 sq m of built area

Release of Registration-cum-Rating Fee to the owners will be made by MNRE on reimbursement basis through GRIHA Secretariat after validation of Star Rating Post - Construction by the National Advisory Council.

➤ **Incentive to Architects/ Design Consultants**

To encourage Architects and consultants to design buildings on Green Architectural concepts and get them rated under GRIHA, and incentive as per below will be available from MNRE.

- Rs. 2.50 lakhs for projects upto 5000 sq.m. built-up area with minimum 3 star rating
- Rs. 5.0 lakhs for projects > 5000 sq.m. built-up area with minimum 4 star rating

Procedure for release of the incentives to architects/ design consultants and settlement of account with MNRE will remain same as given in para A above.

➤ **Capital subsidy for SPV installations**

One of the criteria under GRIHA is to meet 1% of total connected load for interior lighting and space conditioning through solar photovoltaics. It has been decided to support such photovoltaic system through capital subsidy which will be made available under Ministry's scheme on Solar Photovoltaic Systems/Devices for Urban Areas.

C. Other Items

- **Promotional Activities:** A financial support of upto Rs. 2.00 lakh for each activity could be provided for organizing workshops/ seminars/ training programmes/ meetings of NAC/ publications/ awareness campaigns etc. to implementing agencies including GRIHA Secretariat.

Submission of proposals & Release of funds: The proposals on promotional activities could be generated by SNAs/ Municipal Corporations/ Govt. bodies/ Reputed NGOs/GRIHA Secretariat etc. and submitted to MNRE in the prescribed format (**Appendix 1**). 80% of the CFA sanctioned will be released in advance on merit and rest on progressive achievements/ completion of the activities with detailed reports and utilization certificates/SOE received in the Ministry (**Appendix II & III**). To private bodies, the funds will be released on re-imburement based or on the basis of the bond submitted to the Ministry.

- **Incentives to Urban Local bodies :** A one-time incentive of Rs. 50 lakhs to Municipal Corporations and Rs. 25.00 lakhs to other Urban Local Bodies will be available to those who i) announce rebate in property tax for energy efficient solar/green buildings rated under GRIHA, ii) make it compulsory to get the new buildings under Govt. & Public Sector rated under GRIHA and iii) sign an MOU with GRIHA Secretariat in presence of MNRE for large scale promotion of Green Buildings in their area.

Submission of proposals & release of funds : To avail the incentive, Municipal corporations/ Municipalities/ Urban Local Bodies will submit an application to the Ministry with a copy marked to SNA giving details of notifications / orders announcing rebate in property tax for energy efficient solar buildings and mandatory provisions of new Government/ Public Sector Buildings rated under GRIHA. Release will be made directly to them in two parts, one immediate

after receiving the application complete in all respect and other after receiving the progress report of Green Buildings after a period of one year.

- **Institution of Awards/ Incentive:** Annual awards to green buildings rated 5 Star under GRIHA will be given away by the Ministry in the form of Shields/ Certificates. Cash incentive of Rs. 50 lacs to Municipal corporations and Rs.25 lakh to municipalities/other Urban Local Bodies (one each to them) will also be given away that perform the best in promoting Green Buildings in their areas from 2011-12 onwards.
- **Other Activities:** Funds for other activities as felt necessary by GRIHA Secretariat to promote GRIHA as large scale in the country may also be considered by MNRE with the approval of NAC subject to availability.

Appendix-I

Format for submission of proposals for organizing seminars/ symposia/ workshops/ training programmes etc.

1. Name of Institution organizing the event :
2. Type of event to be organized :
3. Date(s)/ venue of the event :
4. Category of participants :
5. Tentative programme with topics to be covered (copy to be enclosed) :
6. Budget break up (item-wise) :
7. Expected outcome :

Signature with name & seal of Head of Implementing organization

Format for submission of proposals for organizing publicity and awareness campaign/ publication of documents

1. Name of Institution organizing the activity :
2. Type of activity to be organized :
3. Details of activities to be organized :
4. Budget break up (item-wise; supporting documents for arriving at the figures to be provided) :
5. Expected outcome :

Signature with name & and seal of Head of Implementing organization

Statement of Expenditure

1. Name of implementing organization :
2. Type of activity/ event sanctioned :
3. MNES sanction No. & Date :
4. Amount released by MNES :
5. Item-wise Statement of Expenditure :

(In Rupees)

Sr. No.	Item	Amount sanctioned	Expenditure incurred
1.			
2.			
3.			
	Total		

6. Balance to be released/returned :
7. Report on the activity/event :
(to be enclosed)

**(Signature of
Account Officer**

**(Signature of Head of
Implementing organization
with seal)**

**(Signature and seal
of the Auditor)**

Utilization Certificate

(To be sent in duplicate to the Ministry of Non-conventional Energy Sources)
for the financial year (from _____ to _____)

1. Title of the Project/Scheme :
2. Name of the organization :
3. Ministry of Non-Conventional energy Sources letter
No. and date of sanctioning the project :
4. Amount brought forward from the previous financial year
quoting Ministry of Non-Conventional Energy Sources
letter No. and date on which the authority to carry forward
the said amount was given :
5. Amount received from Ministry of Non-Conventional Energy
Sources during the financial year
(please give letter No. & date of sanctions showing the amount paid) :
6. Total amount that was available for expenditure
(including commitment incurred during the Financial year
(Sr. No. 5 + 6):
7. Actual expenditure (Excluding commitments) incurred during :
the financial year
8. Unspent balance refunded, if any.
(please give details of cheque no. etc.)
9. Balance amount available at the end of the financial year :
10. Amount allowed to be carried forward to the next
financial year vide letter no. and date :

Certified that the expenditure of Rs. _____ (Rupees _____
mentioned against Column 8 was actually incurred on the Project / Scheme for the
purpose for which it was sanctioned and balance amount of Rs. _____ is available
on _____.

**(Signature of project
Principal Investigator)**

**(Signature of
Registrar/Accounts Officer)**

**(Signature of Head
of the organization)**

ACCEPTED AND COUNTERSIGNED

**COMPETENT AUTHORITY
MINISTRY OF NON-CONVENTIONAL ENERGY SOURCES**