



# RENEWABLE ENERGY AGENCY, PUDUCHERRY (REAP)

(Government of Puducherry)

State Nodal Agency for Ministry of New & Renewable Energy, Government of India  
State Designated Agency under EC Act, 2001  
State Agency for JERC (UTS)

No. 5-44 /REAP/HRD-RE/12<sup>th</sup> plan/2013-14 | 346

Dt. 16.12.2013

To

**The Registrar (i/c)**  
Pondicherry University  
R.V. Nagar  
Kalapet  
Puducherry

VO 10192  
PU/Regr/No. 10192  
Dt. 21 / 12 / 2013

Sir,

**Sub:-** REAP – HRD Programme – 12<sup>th</sup> Five year plan – Reg.  
**Ref:-** No 10/11/2011-P&C dated 7<sup>th</sup> October 2013

\*\*\*

Ministry of New and Renewable Energy is implementing a Human Resource Development Programme for the 12<sup>th</sup> Five year plan period.

2. The objective of the Ministries Human Resource Development program is to institutionalize the renewable energy education and training in the country to cater the requirement of qualified and trained manpower.

3. In this connection, I herewith enclose the copy of the letter under reference for various programme components under the scheme and request you to submit proposals for applicable components for availing funds under the scheme.

Yours faithfully

  
**PANKAJ KUMAR JHA**  
Managing Director

Encl: As above

**No.10/11/2011-P&C**  
**Government of India**  
**Ministry of New and Renewable Energy**  
**(Human Resources Development Division)**

\*\*\*\*\*

**Block No.14, CGO Complex,**  
**Lodhi Road, New Delhi-110003**

**Dated: 7<sup>th</sup> October, 2013**

To  
The Pay and Accounts Officer,  
Ministry of New and Renewable Energy,  
New Delhi-110003.

**Subject: Administrative Approval for the Human Resources Development Programme in New and Renewable Energy for 12<sup>th</sup> Five-year Plan period.**

Sir,

I am directed to convey sanction of the President for the implementation of the Human Resources Development Programme of the Ministry for the 12<sup>th</sup> Five Year Plan period, i.e. upto 31<sup>st</sup> March 2017 as follows:

1. **Objectives:** - The overall objective of the Ministry's human resource development programme is to institutionalize the renewable energy education and training in the country to cater the requirement of qualified and trained manpower.

2. **Programme components**

2.1 **Short-term training programme**

- a) Training of professionals working in the Ministry and its attached and autonomous bodies at specialized institutions in India and abroad;
- b) Training of professionals working with State Nodal Agencies/Governments/utilities on different aspects of technology, its development and project management;
- c) Training of manpower on social, economic, trade, legal, trade, IPR, administration, managerial and environmental aspects as also the manpower working on various aspect of renewable energy in research & development institutions, NGOs, community based organizations, banking and financial institutions etc;

The Ministry will continue with the skill development program of professionals and their own staff as well as the staff of the State Nodal Agencies. For this Ministry will be deputing officers and staff of the Ministry, State Nodal Agencies and related organizations to various training

programmes, workshops and seminars organized by specialized institutions, both on scientific/technical and administrative nature, in India and Abroad. The support from the HRD Budget Ministry will be to the extent of meeting the course fee and related expenditure. The TA/DA for such deputation of officials of SNAs and other related departments will be borne by their departments/organisations.

## 2.2 Development of training modules including pedagogy through expert(s)/expert institution(s)

Ministry will engage the services of experts/expert institutions in developing the course modules/ syllabus/study materials from time-to time both for short-term and regular certificate/degree courses related to renewable energy. The proposal for the same would be called on open advertisement basis/ specific search committee mode.

## 2.3 National Renewable Energy Fellowship Scheme

- a) To encourage students to choose renewable energy as their career option, Ministry will provide 400 new fellowships/scholarships in the field of renewable energy every year in addition to existing fellowships awarded since 2009-10 and before (which will continue to their entire tenure). The break-up of these 400 fellowships is as follows:

Course	Duration of course/ fellowship/scholarship	Intake every year	Fellowship 1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year onward (stablised no. for subsequent years)
M.Tech	2 year	200	200	400	400
M.Sc	2 year	100	100	200	200
JRF	2 year	40	40	80	280*
SRF	3 year	40	40	80	120
RA/PD F	3 year	20	20	40	60
<b>TOTAL</b>		<b>400</b>	<b>400</b>	<b>800</b>	<b>1060</b>

\*This includes 200 integrated M.Sc students joining JRF.

- b) M.Tech / M.Sc fellowships would be allotted to the institutions being supported for the lab and library upgradation provision of the HRD Programme. Fellowships under JRF/ SRF/PDF category would also be allotted to these institutions, however, more institutions having necessary infrastructure

for research in renewable energy area may be considered on their specific requests. These institutions may be from CSIR labs or other research / educational institutions such as IISc, IISER as also the MNRE institutions (SEC, NIRE, C-WET). The Ministry would be following the CSIR funding pattern for fellowship for JRF/SRF/PDF and AICTE for M.Tech/MS and DBT for M.Sc. These fellowship rates would automatically get revised as and when the CSIR/AICTE/DBT revises the rates. The present rates are as follows:

Category	Fellowship (Rs/month)	HRA	Contingency (Rs/annum)	Duration
JRF	16000/- to M.Sc 18000/-to M.Tech	As per central govt norms	Rs. 20000/- PM	2 years
SRF	18000/- to M.Sc 20000/- to M.Tech	-do-	-do-	3 years
Extended SRF*	20000/-	-do-	-do-	Till the date of viva-voce or one year from the date of submission of thesis
PDF/RA	I year-22000/- II year-23000/- Iii year-24000/-	-do-	-do-	3 years
M.Tech/ MS	8000/-	-	-	20-24 months (as per institutes norm)
MSc	4000/-	-	-	22 months

\*on submission of thesis, provided he/she continues with the research work in the institution.

#### 2.4 National Solar Science Fellow Programme:-

- a) Ministry will continue to implement National Solar Science fellowship Programme under which fellowship@ Rs one lakh per fellow (net of tax) / per month would be provided to 10 fellows for a period of three years. In addition they would be eligible for a research grant upto Rs. 15 lakh / annum and contingent grant of Rs. 5 lakh / annum to undertake research work in cutting edge areas of solar energy. The guidelines for this fellowship is given at Annexure-I

#### 2.5 Enhancement /Establishment of Renewable Energy Based Infrastructure Facilities:

Considering the new challenges of Renewable Energy in the National Economy, there is either a need of upgrading the existing lab and library facilities for RE

3



education in the National Institutes or establish new laboratories. Total Twenty five (25) institutions and five IREP training centres are planned to be developed by providing such an infrastructure with a minimum grant of Rs. 0.50 crore. Against this 11 institutions have already been provided the grant and therefore 19 more institutions (including IREP institutions) will be covered during the 12<sup>th</sup> Plan period. The guidelines for this are given in Annexure II.

## **2.6 Renewable Energy Chairs**

In educational institutions Ministry has been providing one time grant of Rs. 1.5 crore only to each of the selected institutions for instituting RE Chair to act as focal point for renewable energy education in the institutions since 11<sup>th</sup> Plan. As 4 Chairs have already been awarded (one each in IIT Roorkee, IIT Kharagpur, Anna University, NLIU Bhopal), 11 more chairs would be awarded during remaining period of 12<sup>th</sup> Plan. A MoU between Ministry and Institution will be signed for this purpose. The guidelines for this are given in Annexure-III.

## **2.7 Training of personnel to develop Technicians for system design, installation, operation, maintenance and repair of renewable energy systems at grass root level:**

Ministry is supporting SNAs and other organizations to impart training on system design, installation, operation, maintenance and repair of renewable energy systems at grass root level. Such programmes are intended to create trained manpower in such areas where intensive renewable energy programmes are being implemented. Ministry has also started roping in the local ITIs for such activities. Ministry will expand this activity in the 12<sup>th</sup> Plan Period by creating a strong institutional network through ITIs and State and District level Rural Development Institutes. This activity will help in improving not only the functionality of the decentralized renewable energy systems but also will help in delivery mechanism at grass root level. In addition Ministry will also support running the training programmes by Skill Development Centers being created/set-up on public-private partnership mode. Ministry would call the proposals from educational institutions/training institutions/reputed NGOs having necessary infrastructure and expertise to undertake training activities in different dimensions such as technical, economic, financial, legal and management aspects. Proposals specifically by NGOs will be submitted in prescribed proforma given in Annexure IV and will be considered by the Division for support in consultation with the IFD. For Technicians' training the financial norms contained in Ministry's order no 10/9/2011 dated 06.09.2011 would continue to be followed, wherein Rs.1.50 lakh assistance for 30 trainees for one week duration is provided. For courses of other target groups assistance upto Rs. 10 lakh per course for 50 trainees for one week duration would be the norms.



In addition Ministry will be supporting creation of skill development centres under PPP mode under CSR obligation, wherein Ministry would provide financial support for initial 10 courses in gradually reducing the support from 80%-40% of Rs. 5000/- per trainee basis. The idea is that the Skill Development Centre becomes self-dependent in due course. The course contents and Centre and course content should have to get accredited with Sector Skill Development Council or National Council of Vocational Training.

## **2.8 Administrative Expenses and other miscellaneous activities**

A temporary cell comprising of Manager, Executive Assistant, Multipurpose Assistant and Helper to cater the day-to-day work of HRD Division ~~will be~~ created to be filled through outsourcing on contract basis. In addition, for monitoring and review purposes, meetings and workshops would be organized, which include Annual Convention of National Renewable Energy Fellows, National convention of RE Chairs Professor and National Solar Science Fellows, consultation meetings of the Institutes being supported under HRD Programme etc. besides convening the meetings of empowered committee on HRD and Fellowship Management Committee of National Solar Science Fellows.

## **2.9 Supporting Incubation Activities**

Ministry has already been supporting the CIIE Initiatives, IIM Ahmedabad in developing as Centre of Excellence in Innovation, Incubation and Entrepreneurship development in Renewable Energy area under R&D programme as part of JNNSM. A grant-in-aid support of Rs. 24 crore has been sanctioned in February 2011 for this purpose and Rs.7.2 crore only has already been released. Ministry will continue to support this activity during the 12<sup>th</sup> Plan Period by providing the balance grant-in-aid support of Rs. 16.80 crore only. A Monitoring Committee under the chairmanship of Secretary, MNRE with Heads of all the Groups of the Ministry will be monitoring the progress of the project at-least once in six months.

## **2.10 Support to States**

Ministry would be providing support to States by way of providing them the services of consultants for project identification, design and development and monitoring. About 175 consultants will be engaged from time-to-time for this purpose for which a separate budgetary provision of Rs.50 crore has been made in the Budget Head for Support to States in 12<sup>th</sup> Plan. Ministry will be providing financial support to State Nodal agencies for hiring services of consultants to work in SNAs to develop various renewable energy projects based on the provisions of different programmes of the Ministry. The experts/consultants would be responsible for undertaking in-depth survey and resource mapping of targeted areas and develop project proposals as also



5

supervise their implementation. The services of these experts/consultants would also be taken by the SNAs for undertaking periodic monitoring of the implemented projects and suggests mean to rectify the shortcoming of the projects, if any. These experts/consultants would be hired on contract basis by the SNAs/MNRE.

The SNAs will assess the requirement of the consultants and submit their requirement to the Ministry. Based on specific requirement of the SNAs, the proposal will be considered by the Ministry and sanctioned. The financial assistance will be limited to rupees three lakh per consultant per annum to be paid on pro-rata basis.

## **2.11 Augmenting the infrastructure and training facilities in ITIs**

To focus on Skill Development at the grass root level i.e. ITI/Technician level in New & Renewable Energy, following actions have already been taken during 11<sup>th</sup> Plan Period:-

- Incorporation of NRE related skills in the existing curricula of Craftsmen Training Scheme (CTS)
- Development of course material to be used for such training in area where such courses are not available such as biomass, bio-fuel, energy storage etc.
- Creating necessary facilities by way of providing tools and equipments at Advanced Training Institutes.
- Training of Master Trainers

Above efforts will be augmented by following activities during the 12<sup>th</sup> Plan Period:-

- Training of Instructors
- Creating necessary facilities by way of providing tools and equipments at 625 District Level Industrial Training Institutes (ITIs) (Trainees of other ITIs/ITCs in the District will be trained by utilizing this infrastructure till the same is created in their institutions).
- Training of Technicians under CTS and MES.

The above steps will help in orienting about 40 lakh students of ITIs towards renewable energy and the infrastructure so developed will help to continue to train technicians and instructors in future. Thus an institutionalized mechanism will be created for training in the country at the end of 12<sup>th</sup> Five Year Plan. A grant upto Rs 5 lakh per District level ITI would be provided for this purpose in consultation with Directorate General of Employment and Training.



6

## **2.12 Networking of Renewable Energy Project output and Education/ Research Institutions**

R&D and demonstration programme of RE technologies is more than three decades old. There have been important developments, discoveries and performance analyses. There are more than 50 National institutions involved in RE education and research. However, this information and synergic integration of all these institutions needs to be coordinated. The Ministry will therefore institute a virtual network of RE education and research by facilitating compilation of all these important data and circulate it through a dedicated website with regular updates.

## **2.13 Utilizing High End Facilities**

The Government is supporting several projects creating high end infrastructure in the universities, IITs, IISc and other higher education and research institutions including CSIR laboratories. To facilitate researchers across the country to have access to these facilities for their research work, all National facilities and large equipment will be listed on the MNRE website and mechanism for providing access to researchers will be created. A fund for National facility access will be created in the 12<sup>th</sup> Plan. Each facility would get additional support based on the number of outside researchers accessing the facility in a year. Support for travel and Seed support for the researchers will be part of the budget @ Rs. one lakh per researcher per visit per year. 50 such visits per year are expected in the identified facilities.

## **2.14 HRD Advisory and Monitoring Committee Activities**

In addition to the empowered committee, an HRD Advisory and Monitoring Committee comprising of experts from academia and industry will be constituted to guide and monitor the HRD activities by way of visits to various institutions being supported by the Ministry under its HRD Programme. This will enable interactions with the institutions engaged in renewable energy education and training on regular basis and to take mid-term corrective measures as and when required. Following specific activities (but not limited to) would be undertaken every year under this activity:

- i) National convention of National Renewable Energy follows
- ii) National convention of National Solar Science Fellows and RE chair Professors
- iii) Industry academia interaction meeting
- iv) Meeting of institutions being supported under lab & library upgradation

## **3.0 Institutional Arrangements**

Apart from the Universities and other Technical Education Institutions and Ministry's specialized technical institutions, reputed training institutes such as Indian Institutes of Management; Indian Institute of Public Administration, New Delhi; National Institute





of Rural Development, Hyderabad; Administrative Staff College of India, Hyderabad; National Institute of Advanced Studies, Bangalore; IISc, Bangalore; Indian Institutes of Technology; National Power Training Institute, Faridabad; Banking Staff Training Institute, Pune; Public Sector Undertakings/organizations; Autonomous Organizations under Central/ State Governments; NGOs such as Social Work Research Institute, Tilonia, The Energy & Research Institute, New Delhi, World Institute for Sustainable Energy, Pune, Development Alternative, New Delhi etc and premier institutes working on different aspects of renewable energy abroad, will be associated for imparting training to the professionals and conducting above mentioned other HRD activities.

#### **4. Criteria/ Parameter for Identification of Institutions/ organizations for implementation of HRD Scheme**

The provisions incorporated in the HRD Scheme are aimed to institutionalize the Renewable Energy Education in the country by roping in Universities and other Institutions of repute to undertake Renewable Energy Education as a subject/stream. To facilitate this the Scheme envisages sponsoring M.Tech and Integrated M.Sc. & Ph.D courses by providing fellowships @ Rs. 8000/- p.m. per student for M.Tech and Rs. 4000/- p.m. for M.Sc student during their M.Sc study followed by providing him JRF for Ph.D. While doing so, it is also envisaged to upgrade the teaching facilities by providing one time grant of Rs. 50.00 lakhs for lab upgradation, library upgradation and introducing other teaching aids like cut models/working models, simulation techniques etc. The provision of support for upgradation of facilities is aimed to enable the institutions to give regular hands on experience by practicals to the students. This provision is however not for undertaking any new construction, but can be utilized for modifying lab for installations of any new equipment/teaching aid.

To facilitate that the institutions take a serious view to RE Education, ministry will be instituting a Renewable energy Chair professor in selected institutions to act as focal point and to steer the RE Programme.

The selection for these provisions will be based preferably on open advertisement method, wherein Universities/Institutions (having status of deemed universities such as IITs, NITs, NLIs, IIMs, BITS, etc.) will submit their application in prescribed proforma elaborating their capability and willingness to undertake Renewable Energy courses at M.Sc. & M.Tech levels, besides pursuing research in Renewable Energy areas. Some of the key criteria will be:

- a) If any existing course at M.Tech/M.Sc. level is already being run.
- b) If yes, what are the course contents, faculty and lab and library facilities available?
- c) What is the annual intake of the course?
- d) What is the placement record?
- e) Whether the course is on energy studies with focus on RE or dedicated to RE with specialization in one of the segment of NRE.



- f) What is the plan of action if the one time grant is sanctioned?
- g) Whether University/Institutions willing to institute the RE Chair, if so how much time it will take to get the institution of chair after it is sanctioned by the Ministry?
- h) What will be the function of chair professor?
- i) If University is willing to put its own funding/stake in the research proposals and other mechanism in the chair other than the one time grant provided by the Ministry?
- j) Whether institution has linkages with the industry and foreign Universities/Institutions?

The proposals will be preliminarily evaluated based on above criteria by the HRD Division. HRD Division would submit its comments to an empowered committee comprising of Group Head dealing with HRD as chairperson, all the Group heads, four experts of the rank of professors and above from institutions of repute. Scientist-in-charge, HRD will act as convener. This committee will recommend the institutions for one-time grant for lab and library upgradation, RE Chair, as well as sponsoring the M.Tech & Integrated M.Sc courses. While in some of the institutions only Chair will be sanctioned as lab facility and other teaching aid may already exist/or may not be needed in view of course nature (specifically in courses dealing with legal, economic and management aspects only), in some institutions only one-time grant for lab upgradation will be sanctioned.

In addition, the Ministry will accredit the institutions for organizing short term training courses on various aspects of RE. The accreditation will be done based on the specific requirement of the Ministry for the short term courses being offered by the institutions, their preparedness for such courses such as course contents and material, lab facility for practical training, qualified faculty, selection process of trainees etc. This will also be done by open advertisement basis and the above committee will look after this aspect also.

**5.0 Budget Provision:** The allocation for above activities during 12<sup>th</sup> Plan Period is as follows:

- |                      |              |
|----------------------|--------------|
| a) HRD               | Rs.120 crore |
| b) Support to States | Rs. 50 crore |

### 6.0 Funding Pattern

The financial assistance for organizing trainings would be upto 100%. However, the following normative norms would be followed:

No.	Activity	Indicative Support
1.	State Level Training Programmes*	Rs.10.0 lakh/programme (50 trainees for one week)
2.	National Level Training Programmes*	Rs.20.0 lakh/programme

3.	International Level Training Programmes*	Rs.30.0 lakh/programme	
4.	Short-term programme for technicians (30 technicians for one week)	Rs. 1.50 lakh/programme	
5.	National Renewable Energy Fellowship (NREF)	Based on UGC/CSIR/DST/DBT guidelines for JRF/SRF/PDF	
6.	National Solar Science Fellow	Fellowship	Rupees one lakh per month net of tax
		Contingency	Upto Rupees five lakh per annum
		Research grant	Upto Rupees fifteen lakh per annum
7.	Infrastructure support to educational institutions (one time grant-in-aid)	Rs. 50 lakh per institution	
8.	Institution of Renewable Energy Chair in educational institutions to steer renewable energy education (one time grant-in-aid)	Rs. 1.5 crore per institution	
9.	Assistance for developing training modules etc.**	Rs. Five lakh only	
10.	Providing services of consultants to States	Rs. 3 lakh/per annum/consultant	

\*Each proposal for seeking financial support for training would be examined for the appropriateness of the assistance and in exceptional cases, higher quantum of financial assistance would also be provided on merits with the approval of competent authority.

\*\*The financial assistance for developing training modules etc would also be provided upto 100% with a maximum of Rs.5.0 lakh. However, in exceptional cases, higher quantum of financial assistance would also be provided on merits with the approval of competent authority.

The National Renewable Energy Fellowships would be provided on the UGC/DST/CSIR/DBT norms and would be revised as and when revised by them.

7.0 Each proposal for seeking financial support will be examined in consultation with the Integrated Finance Division of the Ministry.

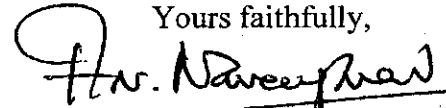
9.0 The expenditure to the scheme during 2013-14 will be met from the Budget provision as follows:



Demand No.	Major Head	Minor Head	Sub Head	Object Head	Budget Estimate (Rs. in crore)
69- Ministry of New and Renewable Energy	2810- Ministry of New and Renewable Energy	105- Supporting Programmes (Minor Head)	05-Human Resource Development and Training	05.00.20-Other Administrative Expenses	00.25
				05.00.31-Grants-in- aid General	06.25
				05.00.34- Scholarship/stipend	03.50
				05.00.50-Other charges	00.00
			<b>Total</b>	<b>10.00</b>	
			06-Support to States	06.00.31-Grants-in- aid General	<b>01.00</b>

10.0 This issues in exercise of delegated powers of this Ministry and with the concurrence of IFD vide Dy No IFD/1269/2013-14 dated 10.09.2013.

Yours faithfully,



(A.N. Narayanan)

Under Secretary to the Government of India

Copy for information and necessary action to:

1. PS to Minister (NRE)
2. PSO to Secretary (MNRE)
3. All Group Heads, MNRE
4. All State Nodal Agencies
5. Director (HRD)
6. DS(IFD)
7. Shri Neehar Ranjan Pandey, Deputy Secretary (PF-II), Ministry of Finance, Department of Expenditure, North Block, New Delhi -110001
8. Director General of Employment & Training and Additional Secretary, Ministry of Labour and Employment, Shram Shakti Bhawan, Rafi Marg, New Delhi- 110001
9. Sanction folder.
10. NIC cell, - for uploading in the website.

### Guidelines for National Solar Science Fellowship Programme

The National Solar Science Fellowship Programme of the Ministry of New & Renewable Energy was launched in February 2011. The details of the fellowship programme are as follows:-

2. Aims & Objectives:- The programme is meant for an Indian Scientist desirous of working in the forefront areas of solar energy science, engineering and technology with focus on science, technology and product development in collaboration with selected prestigious institutions in India. The aim of the National Solar Science Fellowship Programme is to provide a platform to top quality scientists and engineers in the area of solar energy research, to use and expand the resources available at the identified schools/ institutions in the country and abroad to address the complex problems of solar energy utilization for various end use including power generation. The Solar Science Fellows will work for a period of three years at their chosen host institution to undertake research in the thrust areas identified by the Fellowship Management Committee while also strengthening connections across the participating schools/institutions.

3. The indicative list of institutions which will act as host institutions to begin with, is given below:

- a) IISc, Bangalore
- b) Tata Institute of Fundamental Research, Mumbai
- c) Indian Association for Cultivation of Science, Jadhavpur, Kolkata
- d) Solar Energy Centre, Gwalpahari, Gurgaon
- e) National Physical Laboratory, New Delhi
- f) I.I.T, Delhi
- g) I.I.T, Bombay
- h) I.I.T., Madras
- i) I.I.T, Kanpur
- j) I.I.T, Kharagpur
- k) I.I.T, Roorkee
- l) I.I.T. Jodhpur
- m) National Institute of Technology, Bhopal
- n) National Institute of Technology, Jaipur
- o) National Institute of Technology, Hamirpur
- p) School of Energy, Jawaharlal Nehru Technology University, Hyderabad
- q) Centre of Energy Studies and Research, Devi Ahilya University, Indore
- r) TERI University, Delhi
- s) School of Energy Studies, Jadhavpur University
- t) School of Energy Studies, Anna University, Chennai
- u) Department of Energy, Tezpur University
- v) Department of physics, Lucknow University
- w) University of Petroleum & Engineering, Dehradun
- x) Energy Research Centre, Punjab University



- y) CR University of Science & Technology
- z) Guru Govind Singh Indraprastha University, Delhi
- aa) H.N. Bahuguna University, Srinagar, Uttarakhand
- bb) Mata Vaishno Devi University, Katra, Jammu
- cc) Birla Institute of Technology and Science, Pilani

The list of institutions may be amended by the Fellowship Management Committee, constituted for the implementation of the programme, from time to time. These institutions will sign a MOU with the MNRE. The areas of research to be undertaken under this fellowship programme shall also be decided by the Fellowship Management Committee constituted by the Ministry for this purpose.

4. Fellowship Management Committee: - An eight member Fellowship Management Committee will be constituted comprising of six eminent scientists by the Ministry under the Chairmanship of one of the eminent scientists, Secretary, MNRE and Group Head dealing with the HRD activities as members. Scientist-in-charge (HRD) will be the convener. The Fellowship Management Committee will decide the areas of research to be undertaken under this programme. The Committee will also be recommending the institutions for taking part in the Fellowship Programme. The expert members of the Committee will have duration of three years.

5. Number of Fellowships:- The total number of Fellowships at any point of time will be limited to 10 only. Since two fellows are already working, 8 new fellows will be awarded the fellowship during current Plan period.

6. Duration of Fellowship:- Duration of the Fellowship will be initially for two years which may be extended for another three more years on year to year basis depending upon the progress of the work done by the Fellow.

7. The National Solar Science Fellows will form a community of researchers engaged in frontal areas of solar energy by intellectual curiosity, top quality scholarship and drive to understand and find solutions to application of solar energy and find solutions to the energy security challenges facing the country today. By this program they will be benefiting from all that the Government has to offer, and in turn benefit the Government in finding solutions to the technological problems of solar energy and their application on to the field leading to visible impact of solar energy in the energy sector of the country.

10. **Targeted Scientists:-** The programme is open to all Scientists working in the field of solar energy sciences, engineering and technology including those currently employed in Government of India/ State Government/Public Institutions and those who are not currently associated with any public institution but are working in the area and eager to pursue a specific research that is beneficial to the Government of India.



## 11. Eligibility Criteria for Selection

- i) The applicant should be Indian or of Indian origin and should possess a doctorate or equivalent in the field of solar sciences/solar engineering, with outstanding track record and proven leadership qualities in the area of solar energy research with experience of at least ten years including the period spent while undertaking research work for Ph.D. However M.Tech or M.S degree holder with good published work and lab/industry experience will also be considered as a special case provided Fellowship Management Committee feels that the proposals submitted by such candidates are worth considering. A comprehensive proposal should be submitted by all the candidates for the National Solar Science Fellowship for the consideration of the Fellowship Management Committee.
- ii) The applicant should have an appropriate background in academics and experience in R&D in the area of solar energy and other related areas that are directly or indirectly involved in solar sciences, engineering and technology.
- iii) Although there will be no age bar for the Programme, the applicants in the age-group 35-50 will be preferred.
- iv) The Fellowship Management Committee will have the right to suitably amend the eligibility criteria.

## 12. Selection Procedure

- i) Applications from talented scientists having proven record in any field of solar science, engineering will be invited through open advertisement. The applicants shall submit their applications in the prescribed proforma (Annexure-I-A).
- ii) The applicant will attach a R&D proposal with his/her application in the R&D thrust areas identified by the Fellowship Management Committee of the MNRE with emphasis on potential impact of proposed research project on solving problems encountered in solar energy technology and systems. The application should be as per the instructions for filling up the proforma given in the Guidelines.
- iii) The Fellowship Management Committee headed by Secretary, MNRE/Eminent Scientist with other eminent scientists as members will scrutinize the applications including Eminent Scientist the research project and select up to ten National Solar Science Fellows taking into account the Guidelines and as per prescribed procedure. The Committee will be approved by the MNRE and have tenure of three years.
- iv) Every selected Fellow will be attached to one of the selected schools/institutions and will have a tenure ranging from 1-3 years depending upon the project chosen and can be extended for further two years based upon the progress of the project.



### **13. Fellowship Details**

i) Each selected Fellow will receive a total annual grant of up to 32.00 lakhs comprising of:

- a) emolument of up to Rs. 12.00 lakhs
- b) contingencies of upto Rs. 5.00 lakhs and
- c) a research grant of upto Rs15.00 lakhs.

ii) This grant will be released to the host institution and the host institution will be responsible for payment of fellowship to the fellow and utilisation of contingent and research grant by the fellow. The host institution will also be responsible for submission of utilisation certificate and audited Statement of Expenditure.

iii) The Fellow may also raise additional resources from other sources such as the host Institution, grant providers, grant-in-aid Institutions etc. for the purpose of carrying out his/her research.

### **14. Other Conditions**

i) On selection, the Fellow will be attached to one of the selected schools/institutions in consultation with the Fellow as well as the host institution.

ii) Selected Fellows shall commit to work at the host institution for the full tenure of the fellowship and shall submit a bond to the host institution in this regard to the host institution.

iii) The host institution will enter into a MOU (Annexure I-B) with MNRE especially with regard to provision of office space, laboratory facilities, access to publications, basic administrative support etc. In this regard all the guidelines prescribed by the Government of India for release of grants to Government/Non-Governmental institutions including furnishing of Utilization Certificates, Expenditure Statement, periodic progress reports etc. would also be applicable, over and above the provisions of the MOU given in these Guidelines.

iv) The Fellow must submit quarterly progress reports and a final technical report to the Fellowship Management Committee. The Fellowship Management Committee may from time to time, seek updates from the Fellow and provide inputs and guidance to the project of the Fellows so that the project remains relevant to the Government of India agenda and can be successfully completed on time.

v) An annual conference of the Fellows will be held, where the Fellows will be expected to present their findings to the Fellowship Management Committee and other invitees and share knowledge and learning and discuss areas for further collaboration and practical application of their research.





### **15. Deliverables/Outcomes of the Programme**

- i) A pool of top quality and motivated Scientists would be available to undertake need based research in emerging fields of Solar Energy
- ii) There would be a visible improvement in the quality of the solar technology through application of innovative solutions/technologies on the field arising out of the research under the programme.
- iii) The resources in terms of manpower and infrastructural facilities available at various schools/institutions of the country would be enhanced/ strengthened
- iv) Interaction among the Scientists working in different institutions of the country would be promoted and enhanced. This would enable multi and inter disciplinary approach to address complex problems of solar energy.



**Memorandum of Understanding** between the Host Institution and MNRE in respect of the National Solar Science Fellows Programme.

A MOU has been reached this \_\_\_\_\_ day of \_\_\_\_\_ two thousand \_\_\_\_\_ between the Ministry of New & Renewable Energy, Government of India (hereinafter referred to as MNRE) and \_\_\_\_\_ (Name of Institution/Organization), (hereinafter referred to as the Host Institution) with respect to hosting \_\_\_\_\_ (the name of the Fellow), selected as the National Solar Sciences Fellow vide Ministry's letter \_\_\_\_\_ dated \_\_\_\_\_.

It is clarified that all the terms & conditions contained in Administrative Approval of the National Solar Science Fellowship Programme as also the R&D Policy of the Ministry shall apply to the National Solar Science Fellows Programme and the Research Project to be implemented by the selected National Solar Science Fellow at the Host Institution.

This MOU is over and above the terms and conditions mentioned above and deals mainly with delineating the responsibilities of MNRE, the Host Institution and the selected National Solar Sciences Fellow, the fulfilment of which is essential for achieving the objectives of the Programme.

**II The objectives of the National Solar Sciences Fellows Programme.**

1. To provide a platform to top quality scientists & engineers of India or of Indian origin desirous of working at the forefront of Solar Energy sciences, engineering and technology with a focus on thrust areas identified by the Ministry in its R&D Policy.
2. To develop a community of researchers with diverse backgrounds, united by intellectual curiosity, top quality scholarship and drive to undertake research on important challenges facing the country today in all round development of Solar Energy utilization in the country.
3. To find solutions, through scientific research, to the practical problems of Solar Energy and their application in field, leading to visible improvement in the energy security of the country.
4. To utilize and expand the resources available in the universities/R&D institutions/and other educational institutions of the country, to address complex energy security aspects of the country.
5. To undertake research in the thrust area(s) identified by the Management Committee in the host institution, while also strengthening connections across the other participating universities/R&D institutions/educational institutions.
6. To motivate, enthuse and nurture scientists with potential and proven talents to work in emerging fields of Solar Energy.
7. To utilize the knowledge/data emerging from such research work to devise strategies/solutions for large scale utilization of Solar resource in the country.

**III Responsibilities of MNRE**

1. To select appropriate National Solar Sciences Fellows after following the prescribed procedure.



2. To facilitate in the identification and designation of a suitable Host Institution in respect of each selected Fellow, in consultation with the Host Institution and the Fellow. It shall be ensured that the Host Institution/Fellow is mutually acceptable to each other, before commencing the research project.
3. To issue the sanction order and release the fellowship grant earmarked to the Fellow, to the Host Institution for further transmission to the Fellow. It shall be ensured that the money is released to the Host Institution well in time, so that the Host Institution and the Fellow are not inconvenienced due to lack of funds.
4. To help, assist and support the Host Institution and the Fellow in every way to ensure that the objectives of the National Solar Sciences Fellows Programme are achieved.

#### **IV Responsibilities of the Host Institution**

1. To accept and allow the selected National Solar Sciences Fellow to work for the full tenure of the Fellowship at their Institution.
2. To provide adequate and suitable office space and support staff, if any, in the premises of the Institute, required laboratory facilities, access to the library, other publications and computerized data base of the Institution relevant to the project etc. to the Fellow to carry out the research work.
3. While it is not mandatory, the host institution may, if so desired by the Fellow, assist him/her in the work and evaluate/assess the progress of the project as per mutually agreed terms.
4. To help, assist and support the Fellow in every way to ensure that the objectives of the National Solar Sciences Fellows Programme are achieved.

#### **V Responsibilities of the National Solar Sciences Fellow**

1. To give a commitment to work at the selected Host Institution for the full tenure of the Fellowship and submit a Bond in this regard to the Host Institution.
2. To abide by the Rules/Regulations of the Host Institution, as well as the terms & conditions of the National Solar Sciences Fellows programme, this agreement and other relevant documents referred to in this MOU.
3. To conduct/carry out the Research Project – duly approved by the Management Committee, sincerely, with dedication and to the best of his/her abilities.
4. To share with MNRE all the outcomes of the Research Project including, but not limited to, information/data/findings/new technology/publications etc.
5. To be willing to modify or restructure the project during the course of its implementation if so advised by the MNRE based on the mandatory periodic assessment /evaluation of the work by the Management Committee.
6. To ensure that the research project is completed within the prescribed tenure and that the expenditure in connection with the project is kept within the approved outlay.

#### **VI Other Terms & Conditions**

1. The grant amount shall be released in instalments. While the first instalment shall be released immediately after joining of the fellow in the host institution, subsequent releases will depend on the submission of the requisite Utilization Certificate, Expenditure Statement & Progress Reports etc. by the Fellow/Host Institution, and their acceptance by MNRE.



2. In the event of the Management Committee recommending closure of the Project, this MOU shall be terminated, after giving a clear notice of one month-both to the Host Institution and to the Fellow.
3. In case of termination of the MOU, all unutilized funds up to the date of termination of the agreement will have to be returned to MNRE by the Host Institution.
4. Due caution would be exercised – both by the Host Institution and the National Solar Sciences Fellow – in dissemination/publication of any information/data/findings of a sensitive/classified nature, emanating out of the project. Responsibility of ensuring discretion and secrecy of data/findings in such cases, will rest entirely with the Fellow and the Host Institution.
5. All disputes, disagreements etc. if any, arising out of the National Solar Sciences Fellows Programme, shall be resolved by the Fellowship Management Committee.
6. MNRE reserves the right to add, delete or modify from time to time, any part of this MOU. However, the decision to add, delete or modify the provisions of the MOU shall invariably be approved by the Competent Authority of MNRE.
7. On all aspects, where this MOU is silent, or for special cases of deviation from the provisions of this MOU or the National Solar Sciences Fellows Programme, the decision of MNRE based on the recommendation of the Management Committee shall be final.

The above MOU has been entered into and signed on behalf of MNRE and the Host Institution on the day, month and year first above written.

Head of the Host Institution

(Seal of office)

Witness

1. \_\_\_\_\_
2. \_\_\_\_\_

Joint Secretary to the Government of

India, MNRE

(Seal of office)

1. \_\_\_\_\_
2. \_\_\_\_\_



**Proforma** For submission of application under the **National Solar Science Fellows Programme**

1. Name of applicant:
2. Date of Birth:
3. If employed in GOI/State Govt./Public Institution, name and address of the current employer and salary drawn:
4. In case not employed at present, address for communication:
5. Academic Background: (details from undergraduate level onwards may be provided including name of Institutions/Universities, special achievements/distinctions obtained etc.)
6. Area(s) of specialization: (Please link it up with the R&D thrust areas identified by the Management Committee)
7. Details of Scientific/technical papers published in the relevant subject area: (only list to be provided. Abstracts/full copies of papers need not be enclosed at this stage)
8. Details of books published, if any: (only list to be provided)
9. Details of films/audio-visuals produced, if any:
10. Details of original, innovative and pioneering research work carried out in the area mentioned at S. No. 6 (up to one page):
11. Details of research scholars successfully guided and those currently pursuing M.Phil/Ph.D under your supervision:
12. Details of any awards/recognition received in the subject area at the national/international level:
13. Please describe in your own words why you should be selected as a National Solar Science Fellow and how the proposed research project will benefit the GOI in finding solutions to the practical problems of solar energy science, engineering and technology and their application at the field level: (up to one page)
14. Are you willing to give a commitment to work at the selected host institution(s) for the full tenure of the fellowship granted and submit a bond in this regard to the host institution?
15. References: Please provide up to three (3) references with complete contact details.
16. Please indicate the proposed institution, group, professor with whom the project is to be undertaken along with proposed time line, methodology and outputs



**Guidelines for providing grant-in-aid support for lab and library upgradation:**

**1. Objective:**

The objective to provide a one-time grant-in-aid support to educational institutions for upgrading their lab and library facilities is empowering the educational institution to provide quality education in renewable energy area with adequate practical exposure to students.

**2. Level of assistance:**

A one-time grant-in-aid support to the tune of Rs. 50.00 lakhs will be provided to selected educational institutions for upgrading lab and library facilities. The grant-in-aid support will be provided mainly for:-

- (i) Procuring the lab equipments to cater the requirement of practicals at under graduate and post graduate level.
- (ii) Procurement of books, softwares for system design, impact assessment and simulation, other teaching aids such as cut models/ working models
- (iii) Remodelling/refurnishing the existing laboratory to facilitate installation and commissioning of new equipment in the laboratory.

**3. Number of Institutions to be supported:** Maximum 5-6 institutions per annum.

**4. Selection criteria:**

4.1 The applications will be invited through an advertisement uploaded in the Ministry's website from time to time from universities/higher educational institutions (preferably government institutions having status of deemed universities such as IITs, NITs, BITS etc.) in prescribed proforma (Annexure-I), elaborating the course content, practicals being taught at B.Tech, M.Sc and M.Tech levels, elaborating their capability and willingness to improve/undertake renewable energy courses at B.Tech, M.Sc and M.Tech levels. In addition all the five IREP Training Centres located at Lucknow, Shillong, Anand, Delhi and Bangalore will be supported.

4.2 **Eligibility Criteria:-** Government Institutions other than IREP Training Centres fulfilling the following criteria would be eligible for applying for grant:

- i. The University/Institute should have a regular under- graduate /post-graduate programme on Renewable Energy.
- ii. The course contents of the programme should inter alia have components of the model course curriculum developed by the Ministry.



- iii. The minimum students' intake in the M.Sc/M.Tech courses on Renewable Energy should be 15
- iv. There should be a minimum three core faculty members to undertake courses on Renewable Energy in the University/Institute.
- v. The University/Institute should have active placement cell and should have active interaction with the Renewable Energy industry.
- vi. The University/Institute should have a clear plan of action/vision for upgrading their existing courses.
- vii. The University/Institute should be willing to put it's on funding/stake in the departments being supported by the Ministry for lab and library upgradation and should be provided all necessary support as may be needed for smooth functioning of the department.

4.3 The proposals fulfilling the above criteria will be submitted to an Empowered Committee under the Chairmanship of Group Head dealing with the HRD activities. All the Group Heads of the Ministry and four experts of the rank of Professors and above from institutions of repute will be the other members. Scientist-in-charge HRD will act as convener/member secretary. The four experts at present serving the committee are:-

- i. Prof. N.K. Bansal, Former Vice Chancellor, Mata Vaishno Devi University.
- ii. Prof. T.C. Kandpal, Centre for Energy Studies, IIT, Delhi
- iii. Prof. R.P. Tandon, HOD, Department of Physics, Delhi University
- iv. Shri S.K. Sangal, Former Executive Director, CEL, Sahibabad, Ghaziabad (presently consultant in Ministry).

4.4 The Committee will examine the proposals received vis-a-vis to the criteria listed above and the comments of HRD Division and will recommend/shortlist the institutions for providing one-time grant-in-aid support. The emphasis will be given to such institutions who have been undertaking courses on renewable energy at B.Tech, M.Tech and MSc level.

4.5 It will also be seen that the institution is ready to incorporate some the components of the model syllabus developed by the Ministry.

4.6 The proposal will be submitted for approval of sanctioning the one-time grant-in-aid support to the institute and 60% of the sanctioned amount to be released along-with the sanction.

4.7 The University and institute will have to upgrade the facility within six months of receipt the sanction and balance 40% will be released after receipt of UC of the released amount and the Statement of Expenditure clearly showing the committed liability towards balance fund by way of placing the orders/identifying the equipment.



### Guidelines for creation of RE Chairs

**Objective:** The overall objective of instituting a Renewable Energy Chair in selected higher education institutions/universities is to mainstreaming the renewable energy education in that institute/university so as the Chair can act as focal point for renewable energy education in the institution.

2. **Level of assistance:** A one-time grant of Rs.1.50 crore only to be used by the university/institute as seed money, the proceeds of which will be used to pay the remuneration of the Chair. This Chair will be over and above the regular strength of the professors in the coordinating department of the Institute.

3. **Total Number of Chairs:** 15 including one or two Chairs may be instituted to cater the need of looking into the legal framework of renewable energy such as RPO, tariff guidelines, REC mechanism, developing independent RE law etc.

#### 4. Guidelines/criteria of selection:

4.1 **Eligibility Criteria:** Only the institutes/universities meeting the following criteria will be considered for providing RE Chair (applicable for chairs dealing with RE technology):

- a) The University/Institute should have run a regular under-graduate /postgraduate programme on Renewable Energy for five years prior to applying for the RE chair.
- b) The course contents of the programme should be by and large on the line of the model course curriculum developed by the Ministry in their existing syllabus.
- c) The minimum students' intake in the M.Sc/M.Tech courses on Renewable Energy should be 15.
- d) There should be a minimum five core faculty members to undertake courses on Renewable Energy in the University/Institute.
- e) The University/Institute should have active placement cell and should have active interaction with the Renewable Energy industry.
- f) The University/Institute should have a clear plan of action/vision for the RE Chair to be instituted.
- g) The University/Institute should be willing to put its own funding/stake in the research proposals and other mechanism which will be evolved by the Chair Professor and the Chair Professor should be provided all necessary support as may be needed for smooth functioning of the Chair.
- h) Since the RE Chair is intended to act as focal point for Renewable Energy education in the University/Institute, the University/Institute should have a mechanism for regular interaction with the user groups/industries to enable modifying its syllabus from time to time to cater manpower requirement of industry/user groups.

4.2 Applications in prescribed Performa will be invited from universities/higher educational institutions (having status of deemed universities such as IITs, NITs, NLIs, IIMs, BITS etc.) for institution of a Renewable Energy Chair through an advertisement uploaded in the Ministry's website from time to time, elaborating their



capability and strength in running renewable energy courses at M.Sc and M.Tech levels, besides pursuing research in renewable energy sector.

4.3 The proposals so received will be preliminarily assessed by the Ministry on 100 point basis distributed as follows:

- i) Duration since the RE course started in the institute/university Marks
  - a) For last 15 years 35
  - b) For last 10 years 30
  - c) For last 5 years 20
  - d) Less than 5 years 10
- ii) Availability of Laboratory in the institute covering the following weitage:
  - a) Solar PV and Solar Thermal labs 5
  - b) Wind, Biomass, Biofuel, hydrogen and other RET labs 10
- iii). Availability of regular faculty in the institutions involved in RE courses with Ph.D. and 5-7 years' experience as well as quality research as evident from publications in international journals of repute:
  - a) 3 professors and 2 Associate Professors 20
  - b) 2 professors and 3 associated professors 10
  - c) 1 professors and 4 associated professors 10
- iv The institution/coordinating department should have executed R&D projects at national/international level:
  - a) 5 projects 15
  - b) 3 projects 9
  - c) 2 projects 6
- v The faculty must have undertaken industrial consultancy projects:
  - a) 5 consultancy projects 15
  - b) 3 consultancy projects 9
  - c) 2 consultancy projects 6
- vi. Willingness of the university to put it's on funding/stake in the research proposals and other mechanism which will be evolved by the Chair Professor and the Chair Professor should be provided all necessary support as may be needed for smooth functioning of the Chair. 10

Total Marks 100

Minimum required 60

4.4 The proposals fulfilling the above criteria will be submitted to an Empowered Committee under the Chairmanship of Group Head dealing with the HRD activities. All the Group Heads of the Ministry and four experts of the rank of Professors and above from institutions of repute will be the other members. Scientist-in-charge HRD will act as convener/member secretary.

4.5 The Committee will examine the proposals received vis-a-vis to marks obtained and the other criteria such as

- a) Course contents of the programme and willingness of the institute to incorporate the model course curriculum developed by the Ministry in the existing curriculum.
- b) The minimum students' intake in the M.Sc/M.Tech courses on Renewable Energy
- c) Availability of active placement cell and its interaction with the Renewable Energy industry.
- d) A clear plan of action/vision for the RE Chair to be instituted.
- e) Since the RE Chair is intended to act as focal point for Renewable Energy education in the University/Institute, the University/Institute should have a mechanism for regular interaction



with the user groups/industries to enable modifying its syllabus from time to time to cater manpower requirement of industry/user groups.

4.6. The Committee may also decide, if necessary, to call upon the institutions shortlisted for making a presentation before the Committee about their vision for the RE Chair before recommending the proposal.

4.7 The recommendations of the Committee will be put up to the Secretary for approval, followed by the concurrence of IFD.

4.8 After receiving the approval of Secretary and concurrence of IFD, the selected institutions will be informed to enter into an agreement/MOU with the Ministry (Annexure-II). After receiving their consent to enter into an agreement/MOU with the Ministry, file will be submitted to the Secretary for his approval of providing a one-time grant-in-aid of Rs. 1.5 crore only to the institution for creation of the Renewable Energy Chair in the selected institutions.

4.9 After receipt of approval of the Secretary, the agreement will be signed by the Joint Secretary, MNRE and the Registrar of the University/Institution and the grant-in-aid will be released to the institution.

4.10 The institution will initiate the selection process for the Chair Professor through open advertisement. A provision of high level selection committee may be made by the university to ensure that only person of eminence are selected as a Chair Professor. The selection committee will inter alia have a member from the Ministry.

#### **5. Monitoring Mechanism:**

5.1 The university/Institute will continuously monitor the performance of the Renewable Energy Chair for which a high level committee may be constituted under the Chairmanship of Vice Chancellor/ Director of the university/ institute with a representative from the Ministry.

5.2 As the Renewable Energy Chair is aimed to act as focal point for renewable energy education in the institution, the incumbent is expected to look after various aspects of technology development, legal and policy framework of renewable energy. He is also expected to submit his opinion on various projects/policy related aspects from time to time, whenever requested for or suo-moto. Such reports will be periodically submitted by him to the HRD Division of the Ministry.



**Ministry of New and Renewable Energy  
HRD Division**

**Subject: Guidelines for support to NGOs/private organizations for organizing short-term training programmes**

A Study done by CII for Ministry to assess the job potential in renewable energy sector estimated that more than one million jobs may be created in renewable energy sector by 2020. Majority of these jobs were estimated to be in system integration, installation, operation and maintenance and repair of renewable energy systems and devices. To meet the massive requirement of skilled workers in this segment, Ministry has been supporting State Nodal Agencies to organize such programmes. Ministry also supports reputed NGOs with Pan-India jurisdiction, active in renewable energy areas for significant time and have necessary infrastructure and core capacity to organize such training programmes. Ministry is being approached by number of NGOs, industry organizations, private companies, educational institutions for support for organizing such programmes.

In view of bringing clarity to support proposals of NGOs, industry organizations and private companies, following guidelines have been evolved:

1. The organization should submit the proposal in prescribed proforma annexed herewith (Annexure IV-A).
2. The organization should have in-house capacity/core competence to conduct such training programme and that should be supported by documentary evidence. Engaging the guest faculty should be avoided to the extent possible and in-case it is necessary to engage guest faculty for specific topic/area within the overall training programme, the same should be clearly mentioned. The consent letter of the guest faculty should be taken and their involvement should be tied up before proposing the programme.
3. The organization should have carried out necessary survey/assessment of the area for their requirement of training need so that the trainee may be benefitted with the possible employment in that area after attaining necessary skill.
4. The organization should have developed the pedagogy, course contents including practicals for the course and should be shared with the Ministry along-with the proposal. This is necessary for training to be effective.
5. A clear vision of the organization to continue with the training activity for a longer duration (without support in due course) should be reflected in the proposal and therefore a programmatic approach rather than a project approach would be preferred.

The proposals so received will be preliminarily scrutinized by the HRD Division to assess if all the information sought have been provided. This would



then be submitted to a three member committee. The Committee may call the proposer to make a presentation on the proposal.

Based on the recommendation of the Committee, the proposal will be processed by the HRD Division for necessary approvals.

A handwritten signature in black ink, consisting of a stylized letter 'A' followed by a horizontal line extending to the right.

**Forma for submission of proposal for short-term training programme**

- a) Background/history of the organization, its activities in RE development, especially capacity building (to be supported by necessary documents)
- b) Technology area for the proposed training programmes
- c) Objective of the programme
- d) Target group to be addressed in proposed training programmes
- e) Geographical Area of operation
- f) Assessment of skilled manpower requirement in the area of operation based on projects implemented/systems installed as also the potential growth of penetration of renewable energy systems in the area of operation.
- g) Number of trainees proposed to be trained in one year (this should be based on assessment done in the area of operation)
- h) Selection criteria of trainees
- i) Core competence of the organization in conducting the training programme-
  - i) faculty
  - ii) Infrastructure (training tools particularly to cover practical training and other aspects)
  - iii) course material
  - iv) methodology of imparting training (both theory and practical) including pedagogy
- j) In case guest faculty is to be engaged to cover specific aspects, in which the organization lacks core competence, then the detail of the guest faculty to be given along with the consent letter from the guest faculty
- k) Percentage of time devoted by core faculty and guest faculty in a particular training programme
- l) In case of off-campus programmes, tie-up with local organization for venue and other infrastructure to be clearly spelt out.
- m) If the organization has tied up with some industry, system integrators, installers, EPC etc. for engaging the trained manpower, the same may be spelt out.
- n) If any fee is being charged from the trainees, that may also be indicated.
- o) Anticipated impact of the training programme on life of trainees as well as in quality improvement of RE programme
- p) Financial proposal with detailed break-up and the support expected from the Ministry

