

No.10/19/2007-P&C  
Government of India  
Ministry of New and Renewable Energy  
(Human Resources Development Division)  
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Block No.14, CGO Complex,  
Lodhi Road, New Delhi-110003  
Dated 11<sup>th</sup> October, 2010

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

**Subject: Human Resources Development Programme in New and Renewable Energy for the remaining period of 11<sup>th</sup> Five-year Plan period.**

Sir,

I am directed to convey sanction of the President of India for implementation of the Human Resources Development Programme of the Ministry for the remaining period of the 11<sup>th</sup> Five Year Plan i.e. upto 31<sup>st</sup> March 2012 to cater the requirement of renewable energy education in the country. The objectives of the programme, and its implementation methodology are as follows:

## **2.0 Objectives**

The overall **objective** of the Ministry's human resource development programme is to institutionalize the renewable energy education and training in the country with the following overall goals:

- i) To update the professionals working in the field of renewable energy on technological, economical and social issues and management of the science and technology and public administration through infusion of scientific temper and accountability;
- ii) To infuse commitment towards building of partnership and participatory decision-making;
- iii) To be responsive to the challenge of changing framework needs in policy, institutional, legal, trade, IPR, knowledge management, organizational and technological development;
- iv) To strive for improving performance and efficiency of renewable energy systems and devices to make them cost competitive;

- v) To provide adequate knowledge of the technical issues that are essential to help executives in Government, banking and financial sector with non-technical background about renewable energy;
- vi) To bring about attitudinal changes among the renewable energy professionals and those working in the mainstream power sector to enhance the use of renewable energy for energy security of the country;
- vii) To act as a facilitator for improving the skill sets of professionals and executives in the renewable energy industry and also in research and development institutions.

### 3.0 Strategy

The strategies would be as under:

- i) The training approach would include:
  - a) Training of professionals working in the Ministry and its attached and autonomous bodies, etc 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;
  - d) Training of the manpower working on various aspect of renewable energy with research & development institutions, NGOs, community based organizations, banking and financial institutions etc;
  - e) Organization of training-cum-study tours;
- ii) Development of training modules including pedagogy through expert(s)/expert institution(s);
- iii) **Addressing long-term HRD needs:** In order to gravitate students and professional in the field of renewable energy and also to prepare manpower through universities/technical institutions ready to work on various aspect of renewable energy, the following are proposed:
  - a) Enlarge coverage of renewable energy fellowship scheme by covering more universities/institutions and also R&D institutions, to conduct research on all aspects of renewable energy. This way the renewable energy education and R&D will not be limited only to a few technology institutions but will have larger spread across the country. For this Ministry will provide 400 fellowships/scholarships in the field of renewable energy every year in addition to existing fellowships awarded during 2009-10 and before (which will continue to their entire tenure), 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 (stabilised no. for subsequent years)
M.Tech	2 year (20 months)	200	200	400	400
M.Sc	2 year (20 months)	100	100	200	200
JRF	2 year	40	40	80	180*
SRF	3 year	40	40	80	120
RA/PDF	3 year	20	20	40	60
<b>TOTAL</b>		<b>400</b>	<b>400</b>	<b>800</b>	<b>960</b>

\*This includes 100 integrated M.Sc students joining JRF.

- a) In addition, Ministry will institute 10 special fellowships on solar energy research (the modalities for this will be worked out separately).
- b) In order to address the curriculum needs of technical institutions to cover renewable energy, there is urgent need to develop model curricula for inclusion in the ITIs, diploma and degree courses. The curricula and the course material so developed would be circulated to all such institutions through State Technical Education Boards and AICTE.
- c) Provide financial assistance to educational and research institutions to set-up infrastructural facilities such as laboratory library and other teaching aids.
- d) Institute Renewable Energy Chairs in at least five educational institutions every year by providing one time grant of Rs. 1.5 crore only to each of the selected institutions. Such Chairs will act as focal point for renewable energy education in the institutions. Such Chairs will be instituted in maximum 15 educational institutions. While most of the Chairs will cover RE into the larger Energy and environmental framework, one or two Chairs specifically may be set-up in National Law Schools to cater the need of looking into the legal framework of renewable energy such as RPO in Electricity Act, Tariff guidelines, REC mechanism, developing independent RE Law etc. Scientist-in-charge, HRD, will be in the reviewing committee of the institution to see the functioning of the Chair. An MoU between Ministry and Institution will be signed for this purpose.

#### **4.0 Monitoring**

Concurrent monitoring & feedback of training events and programmes will be a component in-built of the sanctioned HRD activity to progressively improve upon the deliverables. In addition various committees will be formed comprising of officers from various Divisions of the Ministry and some external experts to review the progress made in the implementation of the HRD Scheme.

#### **5.0 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 other HRD activities.

#### **6.0 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. & PhD 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 related to Renewable Energy 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 of 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 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.

HRD Division will first scrutinize the proposal and submit its comments to an empowered committee comprising of Group Head dealing with HRD as chairperson, all the other Group heads of the Ministry, four experts of the rank of professors and above from institutions of repute. Scientist-in-charge, HRD will act as convener. This committee will shortlist the institutions.

A sub-committee comprising of two experts and scientist in charge dealing with the HRD will visit the shortlisted institutions and will assess their preparedness for undertaking the courses, and research activities and will then submit its report to the empowered committee, who in turn will recommend the institutions for one-time grant and 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.

## 7.0 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
2.	National Level Training Programmes*	Rs.20.0 lakh/programme
3.	International Level Training Programmes*	Rs.30.0 lakh/programme
4.	National Renewable Energy Fellowship (NREF)	Based on CSIR/DST/DBT guidelines

		from time to time. DST has issued the revision of emoluments and revised guidelines and other service conditions for research personnel employed in R&D Programme of the Central Government Departments/Agencies vide O.M. No. A.20020/11/97-IFD dated 31.03.2010
5.	Infrastructure support to educational institutions (one time grant-in-aid)	Rs. 50 lakh per institution
6.	Institution of Renewable Energy Chair in educational institutions to steer renewable energy education (one time grant-in-aid)	Rs. 1.5 crore per institution
7	Assistance for developing training modules etc.**	Rs. Five lakh only

\*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.

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

9.0 Release of Funds

I National Renewable Energy Fellowship Scheme will continue to be coordinated by TERI University, Delhi, who will be released 75% of the annual fellowship amount at the beginning of the financial year, TERI University in turn will release the fellowship amount for first nine months to the institutions where the national renewable energy fellows

are working/studying. TERI University will submit the utilization certificate and audited statement of expenditure after releasing the money to the institutions and will submit a comprehensive report summarizing the work being done by the research fellows for seeking second installment of 25% of the fellowship amount. TERI University will be entitled administrative charges of 20% of the funds actually handled or Rs. 20,00,000.00 whichever is less per annum. TERI University will also convene the meeting of the coordination committee on quarterly basis and of national advisory committee twice in a year.

II For short term training programme, funds will be released to the selected organization in two installments as follows:-

- a) 60% of the total fund sanctioned alongwith the sanction letter.
- b) Balance on receipt of audited statement of accounts (clearly showing the income and expenditure including committed amount) on actual basis.
- c) One-time grant-in-aid for upgradation of facilities will also be released in two installments of 60% and balance amount as per actual on receipt of audited statement of expenditure (clearly showing the expenditure including committed amount).
- d) For Renewable Energy chairs, money will be released in one go after a formal agreement/MOU is signed between universities/educational institutions and the Ministry for this purpose.

10.0 The expenditure to the scheme will be met from the Budget provision as follows:

Demand No.	Major Head	Minor Head	Sub Head	Object Head	Budget Estimate (Rs. in crore)
67- Ministry of New and Renewable Energy	2810- New and Renewable Energy	105- Supporting Programmes (Minor Head)	05-Human Resource Development and Training	05.00.20-Other Administrative Expenses	0.45
				05.00.31-Grants-in-aid General	4.50
				05.00.50-Other charges	0.05
				Total	5.00

11.0 This issues in exercise of delegated powers of this Ministry and with the concurrence of IFD vide Dy. No IFD/1082/10-11 dated 10.09.2010

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. IFD
7. Sanction folder.

(A.N.Narayanan)  
Under Secretary to the Government of India

