

## MPUVN - Right to Information

ENGLISH

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## Chapter-2 (Manual-1)

### *Particulars of Organization Functions and Duties*

#### **2.1 Objective Purpose of the public authority**

- As per the Memorandum of Articles & Association of M.P. Urja Vikas Nigam Ltd.

#### **2.2 Mission / vision Statement of the public authority**

- Installation of devices related to non-conventional energy sources in the public interest.

#### **2.3 Brief history of the public authority and context of its formation**

- M.P. Urja Vikas Nigam Ltd., was incorporated as a company under the company act of 1956 on 25th August, 1982 with the main objective of promotion of non conventional energy sources and energy conservation. Work in the field of non-conventional energy sources was started since the inception of the Nigam and the Govt. of India has awarded from time to time Nigam for major achievements in this field. The working areas of this Nigam in the State of Madhya Pradesh.
- The Board of the Directors has minimum two and maximum nine members. Who are nominated by the Govt. of M.P. At present the members of the Boards are as under:

1.	Shri Sanjay Dubey IAS	Chairman
2.	Shri Karmveer Sharam IAS	Managing Director
3.	Shri Sanjay Dubey IAS	Director
4.	Shri Vivek Kumar Porwal IAS	Director
5.	Shri Ajay Choubey	Director

Nigam has 19 District Offices headed by District Renewable Energy Officers. Financial and Administrative controlled by the Head office at Bhopal.

#### **2.4 Duties of the public authority**

- To promote install advertise various devices of non-conventional energy sources in the public interest.

#### **2.5 Main activities of the public authority**

- To work in the field of non-conventional energy sources.

#### **2.6 List of services being provided by the public authority with a brief write up on their activities.**

- The main objectives of the Nigam are as under; -  
To work in the field of non conventional energy like Solar, Wind, Biomass, Biogas, to generate electricity as per the norms given by MNRE.

- Works related to Energy Audit.
- Works related to Energy Conservation.

**2.7 Organizational structure Diagram at various levels namely; State, directorate, region, district block etc. (whichever is applicable)**

- Nigam has 19 District Offices headed by District Renewable Energy Officers. Financial and Administrative controlled by the Head office at Bhopal.(Please refer Manual 9 )

**2.8 Expectation of the public authority from the public for enhancing its effectiveness and efficiency.**

- In the interest of public it is expected that they may use more and more devices related to non conventional energy sources.

**2.9 Arrangements and methods made for seeking public participation / contribution.**

- As per the norms fixed by the Govt. of Madhya Pradesh

**2.10 Mechanism available for monitoring the service delivery and public grievance resolution.**

**2.11 Addresses of the main office and other offices at different levels.**

- M.P. Urja Vikas Nigam Ltd., Urja Bhawan, Shivaji Nagar, Link Road No.2, Bhopal-462016
- For other offices please refer manual No. 9

**2.12 Morning hour sof the office:10AM**

Closing hours of the office 6 PM  
(Except Govt. Holidays)

## **MMPUVN - Right to Information**

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### **Chapter-2 (Manual-1)**

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The Board of the Directors has minimum two and maximum nine members. Who are nominated by the Govt. of M.P. At present members of the Boards are as under:

- |                                |                   |
|--------------------------------|-------------------|
| 1. Shri Sanjay Dubey IAS       | Chairman          |
| 2. Shri Karmveer Sharma IAS    | Managing Director |
| 3. Shri Sanjay Dubey IAS       | Director          |
| 4. Shri Vivek Kumar Porwal IAS | Director          |
| 5. Shri Ajay Choubey           | Director          |

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  - For other offices please refer manual No. 9

##### **2.12 Morning hours of the office: 10AM**

Closing hours of the office : 6 PM  
(Except Govt. Holidays)

## Chapter – 3 (Manual –2)

### Powers and Duties of Officers and Employees

**1 Please provide details of the powers and duties of officers and employees of the organization.**

**Administrative Powers**                      **ANNEXURE “X”**

		DESIGNATION					
		AT HEAD OFFICE					D1
							OI
S.No	Powers/Items	CE	SE	EE/DE CC PPD/S ection Inchar ge	CFA	AO/ PRO /Sec tion In char ge	DR EO

								<b>RE O A A O /J A O)</b>	
1	2	3	4	5	6	7	8	9	
1	To approve Tour Programme, TA Bills, Tour Diaries etc. while on tour, as per rules	Full power for staff under him within state.	Full power for staff under him within state.	Full power for staff under him within state for DECC and PD.	Full power for staff under him within state	Full power for staff under him within state for Admn. Office r.	Full power for staff under him within state.	For class I & II officers MD will sanction - ---	--
2	To approve tour/Temp. Advance to staff as per rules.	Full powers for staff under him.	Full powers for staff under him.	Full power for staff under him within state for DECC and PD.	Full powers for staff under him for Admn. Office r.	Full powers for staff under him and rest of class III & class IV staff at H.O. with A.O.	Full powers for staff under him.	In absence of DR EO	----

3.	<b>To approve</b>  1. Medical Advance to staff upto 3 months salary as per rule  2. Grain & festival advances as per rule	—  —	—  —	—  —	Full powers  —	—  —	Full powers for staff under him.  Full powers for staff under him.	— — — —	—  —
1	2	3	4	5	6	7	8	9	10
4	Granting annual increments as per rules	—	—	—	FULL POWERS	—	full powers (Admn Officer) class III & IV	— —	For Class _1 and 11 officer M.D. will sanction
5	Fixation of Pay as per rule	—	—	—	FULL POWERS	—	—	— —	—
6	Approval of HRA to staff as per rules against declaration under copy to (Admn. Officer)	—	—	—	FULL POWERS	—	Full powers for staff under him	— —	—



7	Approval of HR to staff as per	—	—	—	—	full powers (Admn Office r)clas s III & IV	Full powers for staff under him	— —	—
8	rules Sanction of PF with drawl etc.as per rules	—	—	—	FULL POWERS	—	—	— —	—
9	Sanction of various allowances as per rules like CA/CCA/WA etc.	—	—	—	FULL POWERS	— -	full powers (Admn Office r)cl ass III & IV --	Full powers Admn .Of fice r ---	For Class _1 and 11 officer M.D. will senction
10	Sanction of leave to subordinate staff 1.Casual Leave  2.EL/HPL/ Com.leave	Full powers for staff under him  —	Full powers for staff under him  —	Full powers for staff under him  —	Full powers for staff under him  —	Full powers for staff under him  full powers (Admn Office r)clas s III & IV	Full powers for staff under him.  Full powers for staff under him.	— —	Chairman wil senction staff & M.D will senction of all effiser and his personal staff  With M.D for the rest.

11	To represent the Nigam, sign contracts, boards etc. as per rule.	Full powers with the approval of MD in respect of technical matters	---	Full powers DECC/PD/EE with the approval of MD in respect of technical matters	Full powers with the approval of MD in respect of financial matters	Full powers AO(Admn)with the approval of MD in respect of Administrative & other matters	Full Powers with approval of MD as per all matters		
12	To approve conferences, seminars, exhibitions, meets, workshop etc. & to approve participation, training etc. hosted by others as per rules.	Upto Rs.5000/- per programme at a time for subject to budgetary provisions and work allocation.	Upto Rs.5000/- per programme at a time for subject to budgetary provisions and work allocation.	Upto Rs.5000/-per programme at a time for subject to budgetary provisions and work allocation.	---	---	Upto Rs. 2000/- at a time per programme subject to budgetary provision	---	Post facio sanction to be obtained from MD within one month

13	To sanction telephone posted & telegram electricity and water expenses as per rules.	—	—	—	Full powers subject to prescribed ceiling and budgetary provision.	—	Full powers subject to prescribed ceiling and budgetary provision.	Full powers absence of DR EO subject to prescribed ceiling and budgetary provision.	—
14	(A) Repairs & servicing of vehicles as per rules.	Upto Rs. 3000/- per annum for the vehicle allotted to him & subject to sanction budgetary limit.	Upto Rs. 3000/- per annum for the vehicle allotted to him & subject to sanction budgetary limit.	Upto Rs. 3000/- per annum for the vehicle allotted to him & subject to sanction budgetary limit.	Upto Rs. 3000/- per annum for the vehicle allotted to him & subject to sanction budgetary limit.	Upto Rs. 3000/- per annum for the vehicle allotted to him & subject to sanction budgetary limit.	Upto Rs. 1000/- per annum for the vehicle allotted to him & subject to sanction budgetary limit.	—	—

			geta ry limit .				geta ry limit .		
	(B) To sanction advances for the maintenance repairs and servicing of vehicles as per rules subject to budgetary provisions and prescribed ceiling.	—	—	Full powers vehicle section incharge	—	—	—	—	In absence of vehicle incharge CFA will sanction
15	To grant technical sanction for all works/supply relating to each projects/programme including deposit works as per rules	Full power	Upto Rs. 5.00 lacs at a time for SE's IC of projects / programme subject to an annual ceiling of Rs. 30.00	Upto Rs. 5.00 lacs at a time for DECC/E E/PD/in charge of each project / programme subject to an annual ceiling of Rs. 20.00 lacs.	—	—	Upto Rs. 3.00 lacs at a time subject to an annual ceiling of Rs. 20.00 lacs	—	—

			lacs.						
16	<p>(A) To grant administrative sanction for all works/supply relating to each projects/programme including deposit works as per approved rates.</p> <p>(B) To issue work order/supply order on approved rate including deposit works subject to AS/TS as per rules.</p>	Upto Rs. 05.00 lacs at a time subject to an annual ceiling of Rs. 50 lacs	Upto Rs. 3.00 lacs at a time subject to an annual ceiling of Rs. 30.00 lacs for in charge SE.	Upto Rs. 03.00 lacs at a time subject to an annual ceiling of Rs. 20 lacs for EE/CEC C/PD/s I/C	—	—	Upto Rs. 2.00 lacs at a time subject to an annual ceiling of Rs. 20.00 lacs	—	For MD upto One crores at a time and above this BOD will provide A/S. All the rates will be approved for all purchases/works as per rules and will be communicated to all concern
		___d0___	___d0___	___d0___	—	—	___d0___	—	___d0___
17	Repair and O&M of projects maintained by the	Upto Rs. 00.2	Upto Rs.	Upto Rs. 00.10	—	—	Upto Rs.		For MD upto Rs. 5.00 lacs at a time beyond this



[illegible]

Powers			DESIGNATION					
	AT HEAD OFFICE					AT DISTRICT OFFICE		
ns	CE	SE	EE/DECC PPD/Secti on Incharge	CFA	AO/PRO/S ection In charge	DREO	Accts. I/cof DREO AAO/JAO)	
	3	4	5	6	7	8	9	
payment salary bills/ page telegram conveyance medical, etc. and all y and project after approval.	-	-	-	Full Power	-	Full powers	In absence of DREO.	
advances to es.	-	-	-	Full Powers	—	Full Powers for his staff	In absnce of DREO	In absence of CFA, Sr. most AAO will sanction
payments sanctioned	-	-	-	Full Powers	—	Full Powers	- Full Powers	In absnc of CFA Sr. Most Aao will sanction
ounts, issuing ehalf of the	-	-	-	Full Powers	—	- Full Powers	—	In absnc of CFA Sr. Most Aao will sanction
statutory and other nade from	-	-	-	Full Power	—	- Full Powers	In absenc of DREO	In absnc of CFA Sr. Most Aao will sanction
<b>POWERS (ADMINISTRATIV &amp;</b>								



printing & per rules budgetary	upto Rs. 2,000/- p.a.	Upto Rs. 2,000/- p.a.	upto Rs. 2,000/- p.a.	upto Rs. 2,000/- p.a.	Upto Rs. 2,000/- p.a.	Upto Rs. 5,000/- p.a.	Upto Rs.1,000/- p.a.	—
Books &	—	—	—	—	—	Upto Rs.1,000/- p.a.	-	-
entertainment	Upto Rs. 2,000/- p.a.	Upto Rs. 1,000/- p.a.	Upto Rs. 1,000/- p.a.	Upto Rs. 1,000/- p.a.	Upto Rs. 1,000/- p.a.	Upto Rs. 1,000/- p.a.	Upto Rs.500/- p.a. A	-
on local subordinate to budgetary	Upto Rs. 100/- in each case limited to Rs.2000/- p.a.	Upto Rs. 100/- in each case limited to Rs.2000/- p.a -	Upto Rs. 100/- in each case limited to Rs.2000/- p.a -	Upto Rs. 100/- in each case limited to Rs.2000/- p.a -	Upto Rs. 100/- in each case limited to Rs.2000/- p.a -	Upto Rs. 100/- in each case limited to Rs.500/- p.a -	-	-
advertisement budgetary	-	-	-	-	-	Upto Rs.2000/- p.m.	-	
p. from staff ts subject to sions.	-	-	-	-	-	Upto Rs. 750/- p.m.	-	
on recurring exp. not mentioned y to day all expenditure (ingent bills)	-	-	-	-	-	Not exceed to Rs.500/- in each case and subject to aggregate amount or Rs.2000/- p.a.	—.	At HO to whom MD way authorise with a prescribad

es: 1. As per M.P. State Govt. Employees/Officers.

2. To work in interest of Publicity of Nigam.

Note: No power is delegated to employees below than J.O.A.

Note:

1. The above powers are subject to and within the budget allocation.
2. The technical approvals technical /sanctions and administrative approvals/ sanctions including deposit works shall be granted as per above duly in prescribed formats and concerning officers will maintain the record.
3. All the cases of seeking administrative sanctions beyond powers of DREO shall in variable be routed through H.O.
4. The authorities exercising the integrated power shall also maintain records of sanctions issued.
5. Under all projects technical as well as administrative sanctions of competent authority shall be essential before placement of orders.
6. All purchase rules shall be strictly adhered to in all the cases.
7. For all the deposit works the supervision charges will be taken as per applicable rates.
8. The works / supply up to the amount of Rs. 25,000/- shall be executed on quotation basis and beyond this limit tenders will be called. The amendment in purchase rules will be applicable with immediate effect.

**The rest of powers are with MD MP UVN**



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## **Chapter – 4 (Manual – 3)**

***Rules, Regulations, Instructions, Manual and Records for  
Discharging Functions***

**4.1 Please Provide list of rules, regulations, instructions, Manual and records held by public authority or its control or used by its employees for discharging functions as per the following format. This format has to be filled for each type of document.**

**Name /title of**

**Type of document :**

1. M.P. Urja *Vikas* Nigam Ltd., Karamchari / Adhikariyon ke seva Bharti, Seva Shartein Vargikaran aur Apeal Niyam 1989
2. M.P. Urja Vikas Nigam Ltd., Store & Purchase rule 1998.
3. M.P. Urja Vikas Nigam Ltd., employees TA/DA rules.
4. Policy of State Govt. related to generate energy/electricity by Non conventional sources of energy.
5. For the execution of civil work in Corporation Works department manual is followed.
6. As per the guidance of directions issued by M.P. Urja Vikas Nigam Ltd /MNRE from time to time.

**Brief Write up on the Document**

As above.

**From where, one can get a copy of rules, regulations Instructions, manual and records**

Address Managing Director, M.P. Urja Vikas Nigam Ltd., Bhopal

Telephone No: 0755-2553595 / 2556566

Fax : 0755- 2553122

Email: cmpuvn@bsnl.in

Others NIL

**Fee charged by the department for a copy of rules, Regulations, instructions, manual and records (If any) As per Government rule**

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## Chapter – 5 (Manual – 4)

### ***Particulars of any arrangement that exists for consultation with or representation by, the members of the public in relation to the formulation of its policy or implementation thereof***

#### **Formulation of Policy**

Whether there is any provision to seek consultation/ participation of public or its representatives for formulation of policy, if there is, please provide details of such policy in following format.

Formulation of policy of all subjects/works is done by MNES, Govt. of India and Energy Deptt., Govt. of M.P. Execution of all the policies decided by MNBS/Govt.of M.P. BOD decides the procedure. Board consists of members in which few are from outside.

#### **Implementation of Policy**

Whether there is any provision to seek consultation participation of public or its representatives for implementation of policy, if there is, please provide details of provisions in following format.

Subject/Topic	Is it mandatory to ensure public participation Yes/No.	Arrangements for seeking public participation
Remote Village Electrification	Yes	1. Proposal approved from Gram Sabha 2. A committee formed for Implementation & Maintenance. 3. Two persons selected by Gram Sabha/ Gram Panchayat/ Gram Urja Samiti are trained for operation & maintenance of the systems.
Solar Photovoltaic System	Yes	Proposals received from beneficiary / institution
Energy Park	No	
Integrated Rural Energy Planning Programme	No	Programme is discontinued by MNRE since 2007-08.
Biomass Gasification	No	-
Solar Thermal	No	-
1. Solar Cooker	No	-
2. Solar Water Heating System	No	-
3. Solar Photovoltaic System	No	-
Wind Energy Programme	No	-
Energy Audit Programme	No	-

Go Samwardhan Se Swawlamban Project	No	-
National Biogas & Food Management Programme	No	-
Energy from Idustrial & Urban Waste	No	-
Aditya Solar Shop	No	No
Administration & Establishment	No	-
Finanace & Accounts	No	-
Confidential section	No	-
Vidhan Sabha Section	No	No
Satarkta Section	No	No
Mahila Utpidan Setion	No	No
Library	No	No

## MPUVN - Right to Information

### Chapter – 6 (Manual – 5)

#### *A statement of the categories of documents that are held by or under its control*

given below to give the information about the official documents. Also mention the place where the secretariat level, directorate level, others (Please mention the level in place of writing “Others”).

Category of the document	Name of the document & its introduction In one line	Procedure to obtain the document	Hel
2	3	4	5
Village	1.General Information of the Programme. 2. Information regarding Project.	On application in prescribed format.	Concer Project
Photovoltaic System	1.General Information of the Programme. 2. Information regarding Project.	On application in prescribed format.	Concer Project
ark	1.General Information of the Programme. 2. Information regarding Project.	On application in prescribed format.	Concer Project
and Rural Energy Programme	Programme is discontinued by MNRE since 2007-08.	On application in prescribed format.	Concer Project
Gasification	Information regarding Project.	On application in prescribed format.	Concer Project
Thermal 1.Solar 2.Solar Water System 3. Solar Photovoltaic System	Information regarding Project.	On application in prescribed format.	Concer Project
ergy Programme	Information regarding Project.	On application in prescribed format.	Concer Project
udit Programme	Information regarding Project.	On application in prescribed format.	Concer Project
ardhan Se ban Project	Information regarding Project.	On application in prescribed format.	Concer Project
Biogas & Food ient Programme	Information regarding Project.	On application in prescribed format.	Concer Project
om Industrial & aste	Information regarding Project.	On application in prescribed format.	Concer Project
olar Shop	Information regarding Project.	On application in prescribed format.	Concer Project
& Accounts	All the available documents of Finance & Accounts at H.O.	On application in prescribed format	Concer CFA
ial section	1.Confidential files regarding enquiry against employees/ officers. 2.Annual confidential report files of all employees/officers	As per Govt. rules	MD
abha Section	1. Files regarding Vidhan Sabha Questions 2. Files regarding Lok Sabha Rajya Sabha Question. 3 To provide information/files to Vidhan Sabha.	As per Govt. rules	MD
Section	Files regarding enquires of All the employees/ Officers From difference agencies.	As per Govt. rules	MD

mila Utpidan Setion	Disposal of complaints of women employees	As per Govt. rules	MD
ary	Literature based on Non conventional energy sources	As per Govt. rules	MD



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## Chapter –7 (Manual –6)

### *A Statement of Boards, council, committees and other bodies Constituted as its part*

#### **7.1 Please provide information on Boards, Councils, Committees, and other Bodies related to the public authority in the following form.**

Name and address of the Affiliated Body

Madhya Pradesh Urja Vikas Nigam Ltd.

Type of Affiliated Body (Board, Council, Committees, Other Bodies)

Board (A company registered under Company's Act 1956). Brief introduction of the Affiliated Body

#### **Establishment Year, Objective (Main activities)]**

Madhya Pradesh Urja Vikas Nigam is a Govt. Company registered under Company's Act 1956 and established on 25th August 1982. The main objects and functions of the Company is to execute the work of Non conventional, Energy Conservation and Audit in whole M.P. As per provision, there are minimum two nos. of directors and maximum nine numbers of directors. Govt. is empowered to nominate them. (for details please refer Memorandum of Understanding of the Company). Role of Affiliated Body (Advisory / Managing Executive / Others)Executive. Structure and Member Composition  
Presently company has five members (Directors)

- |    |                             |                   |
|----|-----------------------------|-------------------|
| 1. | Shri Sanjay Dubey IAS       | Chairman          |
| 2. | Shri Karmveer Sharma IAS    | Managing Director |
| 3. | Shri Sanjay Dubey IAS       | Director          |
| 4. | Shri Vivek Kumar Porwal IAS | Director          |
| 5. | Shri Ajay Choubey           | Director          |

Managing Director

Address of Main Office and its Branches

Madhya Pradesh Urja Vikas Nigam Ltd.,

" Urja Bhawan", Main Road No.2,

Near Durga Petrol Pump, Shivaji Nagar,

Bhopal.

For branch officer (DREO offices) please see manual – 7.Frequency of Meetings

At least in every three months.

Can public participate in the meeting?

No.

Are minutes of the Meetings prepared?

Yes

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### **Chapter – 8 (Manual –7)**

*The names, designations and other particulars of the Public Information Officers  
Please provide contact information about the public Information Officers,  
Assistant Public Information Officers and Department Appellate - Authority of the  
Public Authority in the following format*

**Name of Public Authority :**

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#### Assistant Public Information Officers:

Department Appellate Authority:

Name	Designati on	STD Cod e	Phone No.		Fax	Ema il	Address
			Office	Hom e			
Karmveer Sharma IAS	Managing Director	075 5	25535 95		25584 17	—	Urja Bhawan, Main Road No.2, Shivaji Nagar, Bhopal

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## **Chapter – 9 (Manual –8)**

### ***Procedure followed in Decision Making Process***

9.1 What is the procedure, followed to take a decision for various matters? (A reference to Secretariat Manual and Rule of Business Manual, and other rules/regulations etc. can be made).

- Govt. has authorized Managing Director/B.O.D. to take decision for various matters.

9.2 What are the documented procedure/ laid down procedures/Defined Criteria/Rules to arrive at a particular decision for important matters? What are different levels through which a decision process moves?

- Board of Directors is competent to take decision on such matters.

9.3 What are the arrangements to communicate the decision to the public?

- Public Relation Officer has been appointed to communicate the decision to the public.

9.4 Who are the officers various levels whose opinions are sought for the process of decision-making?

- Related Project In charge/ controlling Officer/ Managing Director/BOD or the Officers at various levels whose opinions are sought for the process of decision-making.

9.5 Who is the final authority that wets the decision?

- MD/BOD is final authority.

9.6 Please provide information separately in the following format for the important matters on which the decision is taken by the public authority.

he decision is to be taken	<ol style="list-style-type: none"> <li>1. Technical (for implementation of projects)</li> <li>2. Related to Admn./Establishment</li> <li>3. Related to Finance &amp; Accounts</li> </ol>
n, if any	<ol style="list-style-type: none"> <li>1. Technical – Guidelines/ directions issued by MNES, Govt. of India</li> <li>2. Admn./Establishment - As per Service Rules/ Rules Regulation of Govt</li> <li>3. Finance &amp; Accounts – As per Company's Act 1956/ As per Govt. rules.</li> </ol>
on	Policies regarding implementation of projects are prepared as per MNES/ Govt. of directions.
ie officers involved in decision	Concerned Section Officer/ DREOs/ MD/ BOD
n of above mentioned officers	MPUVN, Main Road No.2, Shivaji Nagar, Bhopal.
the decision, where and how to	MD/BOD, MPUVN, Main Road No.2, Shivaji Nagar, Bhopal & Principal Secreta (Administrative Deptt.), Mantralaya, Bhopal.

## Assistant Assistant Public Information Officers:

Designation	STD Code	Phone No.	
3	4	5	6
DREO Indore/ Dhar/ Badwani	0731	2402003	9826068801
DREO Bhopal/ Sehore	0755	2572804	-9425068439
<b>DREO Raisen/ Vidisha/ Rajgarh</b>	<b>07379</b>	<b>255797</b>	<b>0755-2749606</b>
DREO Hoshangabad/ Harda/ Betul	07574	252658	9893845962
DREO Ujjain/ Shajapur/ Dewas	0734	2402003	9827222217
DREO Mandsaur/ Neemuch/ Ratlam	07422	255873	
DREO Khandwa/ Khargone/ Burhanpur	0733	2233061	9826068801
DREO Jhabua /SHAJAPUR	07392	245839	9425312087
<b>DREO Gwalior/Dati/ Bhind/Morena/Sheopur</b>		<b>2341608</b>	<b>9302100137</b>
<b>Murena(H.O. Gwalior)</b>		<b>2341608</b>	
<b>DREO Guna / Shivpuri/ Ashoknagar</b>	<b>07542</b>	<b>252822</b>	<b>254317</b>
<b>DREO Jabalpur/ Narsinghpur / Mandla/ Dindori/Katni</b>	<b>0761</b>	<b>2451481</b>	<b>9425165435</b>
DREO Chhindwara/ Seoni/ Balaghat	07162	243959	9425165663
DREO Chhattarpur/ Panna/ Tikamgarh	07682	221204	9893247968
DREO Sagar/ Damoh	07582	232529	9893247968

**DeDepartment Appellate Authority:**

	Designation	STD Code	Phone No.		Fax	Email	Address
			Office	Home			
S.R.S.	Managing Director	0755	2553595		2558417	—	Urja Bhawan, Main Road No.: Bhopal

**Chapter – 10 (Manual –9)****Directory of Officers and Employee**


<b>3</b>						
<b>7</b>	Mrs.Vandhina Chatterji	A.E.E.	0755	2553595		25
<b>8</b>	Shri T.K.Ratnawat	A.E.E.	0755	2553595	982707445 2	25531
<b>9</b>	Shri Ajay Shukla	A.E.E.	0755	2553595	2422919	25531



<b>110</b>	Shri B.K.Vyas	A.E.E.	0755	2553595	940653441 4	2553122	ae66.mpuv1982@gmail.com	-Do-
<b>211</b>	Shri Ajit Kumar Jain	Addl.Asst.Eng.			942535931 2		--	
<b>12</b>	Shri Ashok jain	Addl.Account Officer	0755	2553595	2770932	2553122	aao4.mpuv1982@gmail.com	-Do-
<b>13</b>	Smt.Jyoti Shrivastava	Addl.P.S.	0755	2553595	--	2553122	aps3.mpuv1982@gmail.com	-Do-
<b>14</b>	Smt.Neeta Pulsule	Addl.P.S.	0755	2553595	--	2553122	nppalsule@gmail.com	-Do-
<b>15</b>	Shri O.P.Sharma	Addl.Asst.Account Officer	0755	2553595	942537730 2	2553122	prompuv1982@gmail.com	-Do-
<b>16</b>	Shri K.K.Pandey	Addl.Asst.Account Officer	0755	2553595	--	2553122	Kishore222@gmail.com	-Do-

<b>17</b>	Shri K.C.Parmar	Account Asst.	0755	2553595	--	2553122
<b>18</b>	Shri Akhilesh Tripathi	Addl.Asst.Progra mer	0755	2553595	--	2553122
<b>19</b>	Shri Arvind Shrivastava	Steno Grapher	0755	2553595	--	2553122
<b>20</b>	Smt.Archana Shukla	Junior Assistant	0755	2553595	--	2553122
<b>21</b>	Ku.Sharmila Wane	Junior Assistant	0755	2553595	--	2553122
<b>22</b>	Shri D.S.Rajwar	Junior Assistant	0755	2553595	--	2553122
<b>23</b>	Ku.Khemwati Raikwar	Junior Assistant	0755	2553595	--	2553122
<b>24</b>	Smt.Trapti Purania	Junior Assistant	0755	2553595	--	2553122
<b>25</b>	Smt.Madhu Tamrkar	Junior Assistant	0755	2553595	--	2553122

<b>526</b>	Shri Shivakant Tripathi	Junior Assistant	0755	2553595	--
<b>527</b>	Shri B.S.Negi	Junior Assistant	0755	2553595	--
<b>28</b>	Shri Gambhir Singh	Junior Assistant	0755	2553595	
<b>29</b>	Shri C.P.Joshi	Junior Assistant	0755	2553595	cpjoshi65@redif
<b>30</b>	Smt.Sharda Rawat	Junior Assistant	0755	2553595	--
<b>531</b>	Shri Laxman Das Sahni	Mechanic	0755	2553595	--
<b>532</b>	Shri B.L.Malviya	Carpenter	0755	2553595	--
<b>633</b>	Shri Suresh Malviya	Driver	0755	2553595	--

<b>34</b>	Shri Gul Khan	Driver	0755	2553595	--	2553122	--	-Do-
<b>635</b>	Shri Shafiq Ahmed	Driver	0755	2553595	--	2553122	--	-Do-
<b>636</b>	Shri javed Ali	Driver	0755	2553595	--	2553122	--	-Do-
<b>637</b>	Shri Sabir Ali	Driver	0755	2553595	--	2553122	--	-Do-
<b>638</b>	Shri Arif Ali	Driver	0755	2553595	--	2553122	--	-Do-
<b>739</b>	Shri Aman Khan	Driver	0755	2553595	amankuvn@gmail.com	2553122	--	-Do-
<b>740</b>	Shri Bheem Sen Nai	Peon/Helper	0755	2553595	--	2553122	--	-Do-
<b>41</b>	Shri Mohd Haneef	Peon/Helper	0755	2553595	--	2553122	--	-Do-
<b>742</b>	Shri Jagdish Malviya	Peon/Helper	0755	2553595	--	2553122	--	-Do-
<b>743</b>	Jagannath Malviya	Peon/Helper	0755	2553595	--	2553122	--	-Do-
<b>744</b>	Shri P.Sen	Peon/Helper	0755	2553595	--	2553122	--	-Do-
<b>745</b>	Shri javed Khan	Peon/Helper	0755	2553595	--	2553122	--	-Do-
<b>746</b>	Shri Durga Bahadur	Peon/Helper	0755	2553595	--	2553122	--	-Do-

<b>847</b>	Shri Manik Rao Gaghbaiya	Peon/Helper	0755	2553595	--
<b>848</b>	Shri Prahalad Jhaba	Peon/Helper	0755	2553595	--
<b>849</b>	Shri Haridas Arya	Peon/Helper	0755	2553595	--
<b>850</b>	Shri Ramadhin nai	Peon/Helper	0755	2553595	ramadheen22@q
<b>851</b>	Shri Chabilal Sharma	Peon/Helper	0755	2553595	--
<b>852</b>	Shri Uma Shankar Sharma	Peon/Helper	0755	2553595	--
<b>853</b>	Shri Premdhar napit	Peon/Helper	0755	2553595	--
<b>854</b>	Shri narayan Bahadur	Peon/Helper	0755	2553595	--
<b>855</b>	Shri Mohar Singh	Peon/Helper	0755	2553595	--
<b>856</b>	Shri Salakram Narware	Peon/Helper	0755	2553595	--
<b>957</b>	Shri Vishram Dohre	Peon/Helper	0755	2553595	--
<b>958</b>	Smt.Prabha Dubey	Peon/Helper	0755	2556526	--
<b>959</b>	Smt.Saroj Kushwah	Peon/Helper	0755	2556526	--

**म.प्र.ऊर्जा विकास निगम लि०, के जिला अक्षय ऊर्जा अधिकारी कार्यालयों की जानकारी**

क.	अधिकारी का नाम	मोबाईल नं.	संबद्ध जिले	म.प्र.ऊर्जा विकास निगम लि०, के जिला कार्यालयों का पता
1		9893292928	भोपाल (शहरी)	“गोमती विला” 273, जोन-2 महाराणा नगर भोपाल (शहरी)
3	श्री पी.के. शांडिल्या	9425365774	उज्जैन	विशाल काम्पलेक्स खण्ड ‘अ’ प्रथम तल टी.ओ. आफिस के पास, भरतपुरी, देवार उज्जैन.
4			ग्वालियर	राम कृष्ण आश्रम के पास, थाटीपुर चौर ग्वालियर
5	श्री एस.एल. बजाज	9827222217	मंदसौर/रतलाम/नीमच	एल.आइ.जी., ए-22, जनता कालोनी में (म.प्र.)
6			खण्डवा/बुरहानपुर	भवन क्रमांक 01, लोकमान्य तिलक वा 30, रमा कालोनी, खण्डवा म.प्र.
7	श्री सुनील गहुखेडकर	9425871982	छिंदवाड़ा	श्री रमा कॉलोनी ‘दीपरेखा भवन’ छिंदवा
8	श्री राजकुमार पाराशर	9827239152	झाबुआ/अलीराजपुर	174, चैतन्य मार्ग, कल्याणपुरा बिल्डिंग, झाबुआ.
9	श्री ए.के. गुप्ता	9407136260	इंदौर/धार	प्लॉट नं.-11, अग्रवाल नगर, नई भूमि,
10				उप संचालक कृषी के पास, विश्वनाथ कॉलोनी, महोबा रोड,छतरपुर
11			होशंगाबाद/हरदा	बैंक ऑफ बड़ोदा के सामने, मीनाक्षी चैं होशंगाबाद.
12	श्री पी.के. तिवारी	9425165435	जबलपुर/कटनी/डिंडौरी	ब्लाक नं.-10, जे.डी. काम्पलेक्स, सिवि सेंटर, जबलपुर.
13	श्री संजय थौराट	9300607671	गुना	एन-51, हाउसिंग बोर्ड कॉलोनी, नाना गुना.
14			सागर/टीकमगढ़/दमोह	एच.आई.जी.-27, नारायण हास्पिटल के में पदमाकर नगर, मकरोनिया, सागर.
15			रीवा/अनूपपुर/उमरिया	चौरसिया धर्मकांटा के बगल में, आजाद गेट के सामने, रीवा.
16	श्री दीपक बुलानी	9229924836	शाजापुर/आगर	आनन्द नगर, जिला कलेक्टर कार्यालय सामने, जोशी भोजनालय के पीछे, लाल शाजापुर.
17			विदिशा	हलाली कॉलोनी के सामने, अहमदपुर चौराहा,सागर रोड विदिशा.
18			मुरैना/श्योपुर	भवन कं.-एम-430,न्यू हाउसिंग बोर्ड कॉलोनी, मुरैना.
19	श्री टी.के. श्रीवास्तव	9826999049	दतिया	रानी लक्ष्मी बाई स्कूल के सामने वाली

				सीता सागर दतिया
20			रायसेन	प्रथम तल घाटम पुरा, वार्ड नं. 17 रायसेन भोपाल हाईवे,रायसेन
21			बालाघाट	भवन क्रमांक 271 (प्रथम तल), वार्ड क्र-22, शहीद भगत सिंह मार्ग, मार्टीकर गली, प्रेमनगर बालाघाट म.प्र.
22	श्री राजेन्द्र गोयल	9827502858	खरगोन/बड़वानी	भवन क्र.-एच.बी.-38,नई हाउसिंग बोर्ड कॉलोनी, खरगोन (म0प्र0)
23			सिवनी	नवनीत कॉलोनी,जबलपुर रोड, लुधड़वाड़ा ,सिवनी (म0प्र0)

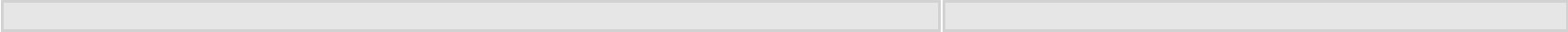
24			बैतुल	मोती वार्ड,न्यू बैतुल स्कूल के सामने, थ चौक, कोठी बाजार, बैतुल (म0प्र0)
25	श्री श्री उदय फडनीस	9926920193	राजगढ़	वार्ड क्र.-13 में प्लॉट न.-03 सर्वे 758, पी.टी. कंपनी के पास मानकामनेश्वर रो राजगढ़ (म0प्र0)
26			सीहोर	क्र. 91 हाउसिंग बोर्ड कॉलोनी, पंडित दीनदयाल नगर, सीहोर (म0प्र0)
27	श्री शिवकुमार बादल	9826408464	भिण्ड	पुराना पंचासा लाईन कस्बा, भिण्ड (म0
28	श्री पी.के. कनोजे	9424704394	नरसिंहपुर	भवन क्र.-एम.आई.जी.-प्-19, त्रिमूर्ति हाउसिंग बोर्ड कॉलोनी, रोटरी पार्क के शंकराचार्य वार्ड नरसिंहपुर म.प्र.
29	श्री दीपक बुलानी	9229924836	देवास	ब्लाक न.-5, पैकी प्लॉट न.-12,लक्ष्मी पार्क रोड, देवास (म.प्र.)
30			शिवपुरी	फतेहपुर टोगरा,ए.बी.रोड के पास, शिव प्र.)
31			सीधी/सिंगरौली	प्रभा सदन,गौतम निवास,बेलहा हाउस,रू नगर, वार्ड न.-2, सीधी (म.प्र.)
32			सतना	पौराणिक टोला, सिविल लाइन, आयुक्त निगम बंगले के सामने, सतना. (म.प्र.)
33	श्री बी.के. शर्मा	9425196019	अशोक नगर	मकान नं. 397,वार्ड क्रमांक 3 दुबे काल अशोक नगर
34			शहडोल	पालीटेक्नीक के सामने वार्ड क्र. 06, भ 127/06, पाण्डव नगर शहडोल
35	श्री पी.के. तिवारी	9425165435	मण्डला	सरदार पटेल वार्ड, शिवपुरी कालोनी ल मण्डला (म.प्र.)



2.13



**MPUVN - Right to Information**



## Chapter- 11 (Manual – 10)

The Monthly Remuneration Received By Each of its Officers

And Employees, Including the System of Compensation as

Provided in Regulations

### 11.1 Please provide information in following format.

S.No.	Name	Designation	Pay	Compensation/compensatory Allowance	The Procedure to determine the remuneration as given in the regulation
1	Karmveer Sharma	M D			As per Govt.
2	A.B.GUPTA	Addl EE	61020		As per Govt. of M.P. Rules
3	A.K. JAIN	Addl AO	56143		As per Govt. of M.P. Rules
4	AJAY KUMAR SHUKLA	Addl EE	61020		As per Govt. of M.P. Rules
5	AJIT JAIN	Addl AE	51318		As per Govt. of M.P. Rules
6	AKHILESH TRIPATHI	Addl Ast. Pr.	45794		As per Govt. of M.P. Rules
7	AMAN KHAN	Driver	17592		As per Govt. of M.P. Rules
8	ARCHANA SHUKLA	JR Asstt	28461		As per Govt. of M.P. Rules
9	ARVIND SHRIVASTAVA	Steno	27391		As per Govt. of M.P. Rules
10	B.K.VYAS	Addl EE	59850		As per Govt. of M.P. Rules
11	B.L.MALVIYA	Carpentar	23633		As per Govt. of M.P. Rules
12	BACHAN SINGH NEGI	JR Asstt	26818		As per Govt. of M.P. Rules
13	BHIM SEN NAI	Peon	20392		As per Govt. of M.P. Rules

14	CHANDRA PRAKASH JOSHI	JR Asstt	25733		As per Govt. of M.P. Rules
15	CHHAVILAL SHARMA	Peon	20392		As per Govt. of M.P. Rules
16	D.S. RAJWAR	JR Asstt	27892		As per Govt. of M.P. Rules
17	DEEPAK BULANI	AE	36087		As per Govt. of M.P. Rules
18	DURGA BAHADUR	Peon	20382		As per Govt. of M.P. Rules
19	GAMBHIR SINGH	JR Asstt	24638		As per Govt. of M.P. Rules
20	GULKHAN	Driver	23854		As per Govt. of M.P. Rules
21	HARIDAS ARYA	Helper	20392		As per Govt. of M.P. Rules
22	JAGANNATH MALVIYA	Peon	20392		As per Govt. of M.P. Rules
23	JAGDISH MALVIYA	Helper	20392		As per Govt. of M.P. Rules
24	JAGDISH PRASAD MALVIYA	Addl AAO	40666		As per Govt. of M.P. Rules
25	JAVED ALI	Driver	22760		As per Govt. of M.P. Rules
26	JAVED KAHN	Helper	20382		As per Govt. of M.P. Rules
27	JYOTI SHRIVASTAVA	Addl PS	45768		As per Govt. of M.P. Rules
28	K.K. PANDE	Addl AAO	40666		As per Govt. of M.P. Rules
29	KAILASH CHAND PARMAR	A Asst	31523		As per Govt. of M.P. Rules
30	KALYAN SINGH	Peon	20382		As per Govt. of M.P. Rules
31	KHEMVANTI RAIRKUAR	JR Asstt	26782		As per Govt. of M.P. Rules
32	KISHAN LAL GUPTA	Addl AO	61050		As per Govt. of M.P. Rules
33	LAXMANDAS SAHINI	Mechanic	38129		As per Govt. of M.P. Rules

34	MADHU TAMRAKAR	JR Asstt	25743		As per Govt. of M.P. Rules
35	MAHESH K PARASHAR	Asstt	32598		As per Govt. of M.P. Rules
36	MANIK RAO GAJBHIYE	Mali	20392		As per Govt. of M.P. Rules
37	MOHAR SINGH	Helper	14995		As per Govt. of M.P. Rules
38	MOHD. SAYEED	Driver	32746		As per Govt. of M.P. Rules
39	MOHD.HANEEF	Helper	20392		As per Govt. of M.P. Rules
40	NARAYAN BAHADUR	Peon	19219		As per Govt. of M.P. Rules
41	NITA PALSULE	Addl PS	44890		As per Govt. of M.P. Rules
42	OM PRAKASH RAI	Helper	20392		As per Govt. of M.P. Rules
43	OM PRAKASH SHARMA	Addl AAO	43151		As per Govt. of M.P. Rules
44	PRABHA DUBEY	Peon	14699		As per Govt. of M.P. Rules
45	PRAHLAD JHABA	Helper	20382		As per Govt. of M.P. Rules
46	PREMADHAR NAPIT	Peon	19219		As per Govt. of M.P. Rules
47	PURUSHOTTAM SEN	Helper	20392		As per Govt. of M.P. Rules
48	RAMADIN NAI	Peon	20392		As per Govt. of M.P. Rules
49	SALAK RAM NARVARE	Helper	14995		As per Govt. of M.P. Rules
50	SANDEEP SARAN	Addl ATO	50328		As per Govt. of M.P. Rules
51	SAROJ K USHWAHA	Helper	18646		As per Govt. of M.P. Rules
52	SHAFIQUE AHMED	Driver	24230		As per Govt. of M.P. Rules
53	SHARDA RAWAT	JR Asstt	25175		As per Govt. of M.P. Rules



54	SHARMILA WANE	Operator	26276		As per Govt. of M.P. Rules
55	SHIVA KANT TRIPATHI	JR Asstt	25743		As per Govt. of M.P. Rules
56	SHRIKANT DESHMUKH	SE	45165		As per Govt. of M.P. Rules
57	SUNIL SAXENA	Addl EE	49935		As per Govt. of M.P. Rules
58	SURENDRA BAJPAYEE	Addl EE	61050		As per Govt. of M.P. Rules
59	SYED SABIR ALI	Driver	23854		As per Govt. of M.P. Rules
60	TARUN KUMAR RATNAWAT	Addl EE	61020		As per Govt. of M.P. Rules
61	TRAPTI PURANIYA	JR Asstt	25743		As per Govt. of M.P. Rules
62	U.S. ARORA	AE	30580	[Sus. Allow.]	As per Govt. of M.P. Rules
63	UDAY PHADNIS	EE	26752	[Sus. Allow.]	As per Govt. of M.P. Rules
64	UMASHANKER SHARMA	Peon	20392		As per Govt. of M.P. Rules
65	VANDANA CHATTERJI	Addl EE	59850		As per Govt. of M.P. Rules
66	VIJAY SINGH CHAUHAN	Addl EE	62250		As per Govt. of M.P. Rules
67	VISHRAM DOHARE	Peon	20392		As per Govt. of M.P. Rules

## **MPUVN - Right to Information**

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**Chapter – 12 (Manual – 11)**

**The Budget Allocated to each Agency**

## **MPUVN - Right to Information**

**Chapter – 13 (Manual – 12)**

**The Manner of Execution of Subsidy Programmes**

As per govt. policy.

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## **MPUVN - Right to Information**

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### **Chapter – 14 (Manual – 13)**

#### **Particulars of Recipients of Concessions, permits or Authorization granted by it**

14.1 Please provide the information as per the following format:

- Name of Programme scheme

Remote Village Electrification Programme, Solar Photovoltaic Programme.

- Type (Concession/Permits/Authorization)

Subsidy will be available as per administrative approval of MNES, New Delhi.

- Objective

To promote Non-conventional Energy Sources and to create awareness among the people

- Eligibility

All SC/ST/OBC and general.

- Criteria for the eligibility

As per guidelines of MNES and on producing of caste certificate from SC/ST category.

- Pre-requisite

- Procedure to avail the benefits of the programme

1. On application of concerned beneficiary/institution : Under Solar Photovoltaic off Grid Programme.

2. On received of list of un electrified villages through DISCOM's with the recommendations of villages proposed to be electrified by non conventional energy sources.

- Time limit for the concession /Permits/ Authorizations  
As per the guidelines of the MNES for the year.

- Application Fee (where applicable)  
To be decided by Nigam.

- Application format (where applicable)  
To be decided by Nigam.

- List of attachments (certificates/documents)  
To be decided by Nigam.

- Format of Attachments  
To be decided by Nigam.

- Detail of the benefit given  
Administrative sanction/guidelines of RVE & SPV programme not received.

- Distribution of benefits  
Through DREO & Head Office, Bhopal.

Details of applicable Central/State Financial Assistance /Incentive for  
Installation of Off Grid Solar Photovoltaic Power Plant for the year 2011-12

<b>Category of Beneficiary</b>	<b>Central Financial Assistance</b>	<b>State Financial Incentive</b>
For Private Beneficiary	@ 30% of Project Cost or Rs. 81/- per Watt which ever is less.	Nil
Selected Institutional Beneficiaries of Private sector	@ 30% of Project Cost or Rs. 81/- per Watt which ever is less.	@ 20% of Project Cost or Rs. 54/- per Watt which ever is less.(Only for 5 Kw to 25 Kw Capacity)
All Institutional Beneficiaries of Government sector	@ 30% of Project Cost or Rs. 81/- per Watt which ever is less.	@ 20% of Project Cost or Rs. 54/- per Watt which ever is less.(Only for 1 Kw to 25 Kw Capacity)

Note- Quantity of Central/State Financial Assistance /Incentive is subjected to availability of funds from Central/State Government

## Energy Conservation:-

### EMPANELLEMENT STATUS OF CONSULTANTS FOR ENERGY AUDIT ACTIVITIES IN MP

#### CATEGORY

CATEGORY-I	Firms/ companies those registered or will be registered with BEE shall be considered by default under this category; however they have to send their consent /confirmation for working with MPUVN Ltd, Bhopal
CATEGORY-II	Firms/ companies {in case of individuals -must be Certified Energy Auditor - BEE} having Certified Energy auditors with other eligibility will be considered for this category
CATEGORY-III	Firms/ companies having Certified Energy managers & one graduate Engineer in their group with other eligibility will be considered for this category

#### Terms & Conditions of Registration / Empanelment

- The registration shall be valid for operations in Madhya Pradesh
  - The registration shall be valid for a period of 2 years from the date of issuance of registration Certificate. However Managing Director, MPUVN may consider extension of validity for a period of up to 2 years based on the performance of the consultant. Granting extension is the sole right / discretion of the Managing Director, MPUVN.
  - The registration is subjected to yearly review by MPUVN and shall be liable for cancellation in case of non-performance, found indulging in unprofessional / unethical practices or violation of any of the terms & conditions of the registration by the consultant, specified herein.
  - The Consultant shall be obliged to submit yearly work report pertaining to their overall activity, including relevant work done by them privately or under MPUVN/BEE etc.
  - The Empanelled Consultant shall be required to conduct some work in a financial year.
-

- Motivation and identification of prospective clients/industries will be the sole responsibility of the consultants.
- The Empanelled Consultant shall be required to monitor & report post-audit implementation work in the industry audited by them.
- The Empanelled Consultant shall abide by the scope of work and the terms & conditions of the Energy Audit / management program.
- The Empanelled Consultant shall be required to participate in major meetings/ workshops convened by MPUVN Ltd.
- MPUVN will allot / award the work through a transparent method to selected consultants, which will be notified separately.

## Payment Terms

The payment will be made after the completion of the Energy Audit work subject to:

- Presentation is made before the client department
- Report is duly accepted by the client department

Payment will be made as per terms and conditions described

- The Client department will pay
  1. 90% of the contract value to the Energy Auditor
  2. Remaining 10% to MPUVN for the technical assistance rendered
- TDS etc. will be deducted at source as applicable.
- In case the Consultant fails to execute the work (study) as per the time frame given in the work order a penalty of 1% of the total contract Value per week or part thereof & subject to maximum up to 10% of the total contract Value.

The Energy auditor shall submit the bills in triplicate. (Bills should clearly indicate the component of service tax in the billing amount & an undertaking that they have deposited or will deposit the service tax as per government norms)

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## Energy Audit Fee

A fixed non-negotiable lump sum fee of Rs 25000 /- shall be paid for Energy Audit work in establishments having annual electricity bill of less than or equal to Rs 25.0 lakh.

For establishments having annual electricity bill of more than Rs 25.0 lakh, Energy Audit fee shall be 1% of the actual annual electricity bill.

### **SCOPE OF INVESTMENT GRADE ENERGY AUDIT**

The scope of the work includes a detail study for energy conservation options of various energy sources like Electricity, gas, Fuel oil etc. in the building and recommends actions for reducing the same and promotion of renewable energy sources in the buildings subject to requirement and suitability constraint.

The broad scope of the study will be as per the following.

1. View of present electricity, gas fuel oil etc. & estimation of energy consumption in various load centers like lighting, Air-Conditioning,

Water Pumping etc.

- a) Electrical Distribution System
- b) Lighting System
- c) Heating, Ventilation & Air-Conditioning System (HVAC system)
- d) Diesel Generator (DG) Sets (if any)
- e) Water Pumping System
- f) Thermic Fluid Heaters / Boilers (if any)
- g) Motor Load Survey
- h) Energy Monitoring & Accounting System

#### **a) Electrical Distribution System**

i. Review of present electrical distribution like Single Line Diagram (SLD), transformer loading, cable loading, normal & emergency loads, electricity distribution in various areas / floors etc. (please give consumption history in



tabular form)

- ii. Study of Reactive Power Management and option for power factor improvement.
- iii. Study of power quality issues like Harmonics, current unbalance, voltage unbalance etc,
- iv. Exploring the Energy Conservation options in electrical distribution system.

## **b) Lighting System**

- i. Review of present lighting system, lighting inventories etc.
- ii. Estimation of lighting load at various locations like different floors, outside (campus) light, pump house and other important locations.
- iii. Detail lux level survey at various locations and comparison with acceptable standards.
- iv. Study of present lighting control system and recommendation for improvement.
- v. Analysis of lighting performance indices like Lux/m, lux/watt, lux/watt/m and comparison with norms of high rise buildings.
- vi. Exploring the Energy Conservation Options in lighting system.

## **c) Heating, Ventilation & Air-Conditioning System (HVAC system)**

- i. Review of present HVAC system like central AC, window AC, split AC; package AC, Water Coolers, and Air Heaters etc.
  - ii. Performance assessment of window AC, Split AC and Package AC system.
  - ii. Performance Assessment of Chillers, Cooling Towers, Air Handling Units (AHUs) and cold insulation system of central AC.
  - iv. Analysis of HVAC Performance like estimation of Energy Efficiency Ratio (EER i.e. KW/TR), Specific Energy Consumption (SEC) of Chilled Water Pumps, Condenser Water Pumps, AHUs etc and comparison of The operating data with the design data.
  - v. Exploring the Energy Conservation Options in HVAC system.
-

## **d) Diesel Generator (DG) Sets (if any)**

- i. Review of DG set operation
- ii. Performance Assessment of DG sets in terms of Specific Fuel Consumption (SFC i.e. KWH/Liter),
- iii. Exploring the Energy Conservation Options (ENCON) in DG Sets.
- iv. details of the running of the DG sets.

## **e) Water Pumping System**

- i. Review of water pumping, storage and distribution systems.
- ii. Performance assessment of all major water pumps i.e. power consumption vs. flow delivered, estimation of pump efficiency etc.
- iii. Exploring the Energy Conservation Options (ENCON) in Water Pumping System.

## **f) Thermic Fluid Heaters / Boilers (if any)**

- i. Performance assessment of hot water generators or Thermic fluid heaters like estimation of efficiency etc.
- ii. Exploring the Energy Conservation ENCON options in this systems

## **g) Motor Load Survey**

- i. Conducting the motor load survey of all drives to estimate the % loading.
- ii. Exploring the Energy Conservation ENCON options in electric drive system.

## **h) Energy Monitoring & Accounting System**

- a. Detail review of present energy monitoring & accounting system in terms of metering, record keeping, data logging, periodic performance analysis etc.
  - b. Recommend for effective energy monitoring & accounting system.
-

## i) Others

- Review of present maintenance practice, data recording practices, general awareness practices, replacement policies and building safety practices as applicable to high rising buildings and recommend for improvements.
  - Consider Promotion of renewable energy based systems subject to requirement and suitability constraint.
  - Any other systems/ gadgets etc. that is to be analysed for energy conservation point of view.
  - Etc.
- Cost-Benefit Analysis of each ENERGY CONSERVATION (ENCON) options indicating simple pay back period, return on investment (ROI), internal rate of return (IRR).
- Preparation of Project Report and submission of the same to SDA/Building owner.

## 2. Recommendations

- (a) List of options in terms of No cost
- (b) List of options in terms of Low Cost, Annual Energy & Cost savings, and payback with all relevant details.
- (c) List of options in terms of Medium cost and high Investment Cost, Annual Energy & Cost savings, and payback with all relevant details.

Recommendations shall also include Implementation plan for energy saving measures/Projects; General House keeping tips and Performa for monthly reporting of energy savings / action taken for energy conservation by the beneficiary to MPUVN.

## 3. MAJOR DELIVERABLES IN THE PROJECT REPORT

The Report should essentially contain the following information:

- Methodology adopted for the study.
  - Executive Summary with brief details of the recommendations & payback period
-

- Introduction (shall comprises of the contact person and building details etc. )
- Present energy scenario of the building.
- Detail analysis of the data obtained through field survey, trial measurements by portable gadgets, discussion with concerned personnel etc. for part 1(a) to (i)
- Recommendations for energy saving options in all possible areas with cost-benefit analysis for part 1(a) to (i).
- Technical Specifications for any retrofit options,
- List of suppliers / manufacturers of energy efficient technologies
- Ready to use bidding document for implementation of Energy efficiency measures in the building for recommendation part 2 (b) & (c)

#### 4. Complétion certificate

Ref: order vide no: -----dated:-----

It is certified that the Investment grade Energy Audits of -----  
 -----(name of the building with address) has been completed during (date) -----to  
 -----

and we are satisfied with the contents of the report.

Name of the CEA

(on behalf of M/s -----)

<p>Sign. of CEA:</p> <p>Registration Number of CEA:</p> <p>We acknowledge the facts given above and have received a copy of the Investment grade Energy Audits report for further action. We will implement the energy conservation measures as suggested in the report.</p> <p>Name of the concerned officer of the Building:</p> <p>with seal</p> <p>tel no:</p> <p>Signature :</p> <p>Date:</p>

## 5. SUMMARY OF THE REPORT

**Name of the Building:**

**City:**

**Table 1: Building Information and Energy Data (to be kept Confidential)**

	Primary Data	Year: 2008-09 / 2009-10
No.	Item	Details
1	Connected load(kW) or Contract Demand(kVA)	

2	Installed capacity;DG/ GG Sets(kVA or KW)		
3	a)Annual Electricity Consumption, purchased from Utilities (kWh)		
	b)Annual Electricity Consumption, through Diesel Generating(DG)/ Gas Generating(GG)Set(s)(kWh)		
	c)Total Annual Electricity Consumption, Utilities+DG/ GG Sets(kWh)		
4	a)Annual cost of Electricity, purchased from Utilities(Rs.)		
	b)Annual cost of Electricity generated through DG/ GG Sets(Rs.)		
	c)Total Annual Electricity Cost, Utilities+DG/ GG Sets(Rs.)		
5	Area of the Building (exclude Parking, lawn, Roads, etc.)	a)Built Up Area (sq.ft.or sq.m.)	
		b)Total Carpet Area(sq.ft.or sq.m.)	
		• Conditioned Area	
		• Non Conditioned Area	
		c)Non-active Carpet Area*(sq.ft.or sq.m.)	
6	No. of Floors in the building		
7	Working hours (e.g. day working/ 24 hour working)		
8	Working days/ week(e.g.5/6/7 days per week)		
9	a) Office	Total No. of Employees	
		Average no.of persons at any time in office	
	b) Hotel	No. of Guest Rooms	
		Guest Overnights in the year(% Occupancy)	
	c) Hospital	No. of Patient Beds	
		Patients Overnights in the year (% occupancy)	
10	Installed capacity of Air Conditioning System	a)Centralized AC Plant (TR)	
		b)Window AC's (TR)	
		c)Split ACs (TR)	
		d)Total AC Load (TR)	
11	Installed lighting load (kW)		
12	Water consumption	Water consumption in the year (exclude	

	In the building	consumption for garden, lawn, etc.)(kilo liters)	
		Estimated Hot water consumption in the year (kilo liters)	
13	No. of operating computers in the building	a) Desktop b) Laptop	
14	Whether sub-metering of electricity consumption for Air Conditioning, Lighting, Plug Loads, etc. done: Yes/No		
15	HSD (or any other fuel oil used, specify)/Gas Consumption in DG/GG Sets (liters/cu.meters) in the year		
16	Fuel (e.g. FO, LDO, LPG, NG) used for generating steam/water heating in the year (in appropriate units)		

\*Portion of Total Carpet Area (e.g. auditorium, seminar halls, large conference rooms, etc.) which is not used actively on daily/regular basis and normally AC systems/lights are kept switched off.

### सौर गर्म जल संयंत्र की स्थापना हेतु दिशा निर्देश

वर्ष-2011-12 के अंतर्गत मध्य प्रदेश के लिए 15 लाख लीटर प्रतिदिन सौर गर्म जल संयंत्रों का लक्ष्य निर्धारित किया गया है। निर्धारित लक्ष्यों की पूर्ति हेतु समस्त जिला अक्षय ऊर्जा अधिकारी अपने-अपने कार्य क्षेत्र में अधिक से अधिक प्रयास करें। सौर गर्म जल संयंत्रों की स्थापना घरेलू, निजी संस्थागत क्षेत्रों, शासकीय एवं अर्द्धशासकीय संस्थानों में किए जाने हेतु निम्नानुसार कार्यवाही सुनिश्चित करें-

**1. स्थल का चयन :-** सौर गर्म जल संयंत्रों की स्थापना के पूर्व यह सुनिश्चित करें कि स्थल पूर्णतः छाव रहित होना चाहिए। स्थल के आस-पास वृक्ष या अन्य कोई ऐसी वस्तु न हो, जो संयंत्र पर पड़ने वाली धूप को रोके। संयंत्र का स्थल इस प्रकार का होना चाहिए कि पूरे दिन संयंत्र पर धूप आती रहे।

**2. क्रियान्वयन व्यवस्था :-** (अ) कोई भी हितग्राही/संस्था एम.एन.आर.ई. नई दिल्ली भारत सरकार की पंजीकृत इकाईयां जिनकी सूची वेबसाइट <http://www.वर्ष-2011-12 में.mnre.gov.in> पर उपलब्ध है, में से किसी का भी चयन कर सौर गर्म जल संयंत्र की स्थापना सीधे करवा सकती है, तब म.प्र. ऊर्जा विकास निगम केवल राज्य एवं केन्द्र अनुदान के लिए नोडल एजेंसी के रूप में कार्य करे। इस हेतु हितग्राही/संस्था संयंत्र स्थापना के पूर्व जिला अक्षय ऊर्जा अधिकारी को सूचित करेगा एवं जिला अक्षय ऊर्जा अधिकारी द्वारा समय-समय पर संयंत्र का निरीक्षण करेगा एवं यह सुनिश्चित करेगा कि संयंत्र की स्थापना एम.एन.आर.ई. नई दिल्ली के निर्धारित मापदण्डों के अनुरूप हुई है।

(ब) कोई हितग्राही/शासकीय/अर्द्धशासकीय/निजी संस्था यदि संयंत्र की स्थापना ऊर्जा निगम के माध्यम से

कराना चाहती है, तो वे ऊर्जा विकास निगम को संयंत्र स्थापना हेतु सूचित करेगी, जिससे जिला अक्षय ऊर्जा अधिकारी स्थल का निरीक्षण कर विस्तृत प्रस्ताव अनुमोदित दरों के आधार पर अपेक्षित राशि सहित संस्था को प्रेषित करेंगे। संस्था से राशि प्राप्त होने के पश्चात जिला अक्षय ऊर्जा अधिकारी संयंत्र की स्थापना निगम द्वारा निर्धारित तकनीकी मापदण्डों के आधार पर करना सुनिश्चित करेंगे। इस हेतु म.प्र. ऊर्जा विकास निगम द्वारा कार्य आदेश की कुल लागत का 7 प्रतिशत प्रशासनिक शुल्क लिया जावेगा।

**3. भारत सरकार का अनुदान :-** सौर गर्म जल संयंत्रों पर एम.एन.आर.ई. नई दिल्ली की प्रशासनिक स्वीकृति क्रमांक-5/23/2009P&C दिनांक-08.07.2010 जो, 16.06.2010 से Effective है, [For First Phase of Jawaharlal Nehru Solar Mission (JNNSM) till 31<sup>st</sup> March, 2013, during 2010-11], के अनुसार अनुदान निम्नानुसार है-

क्र.	सौर गर्म जल संयंत्र का प्रकार	एम.एन.आर.ई. नई दिल्ली का अनुदान
1.	फ्लैट प्लेट कलेक्टर टाईप (FPC Type)	रु. 3300 प्रतिवर्ग मीटर कलेक्टर एरिया
2.	ईवाक्यूटेड टाईप कलेक्टर (ETC Type)	रु. 3000 प्रतिवर्ग मीटर कलेक्टर एरिया

यह अनुदान हितग्राही (Individual beneficiary), निजी एवं शासकीय, शैक्षणिक, व्यवसायिक एवं औद्योगिक संस्थाओं के लिए उपलब्ध होगा।

**4. नवीन एवं नवीकरणीय ऊर्जा विभाग म.प्र. शासन द्वारा प्रोत्साहन राशि :-** सौर गर्म जल संयंत्रों पर नवीन एवं नवीकरणीय ऊर्जा विभाग म.प्र. शासन द्वारा रु. 750/- प्रतिवर्ग मीटर कलेक्टर एरिया के हिसाब से प्रोत्साहन राशि का प्रावधान दिया गया है। इसके अंतर्गत सभी शासकीय एवं अर्द्धशासकीय संस्थानों को शामिल किया गया है, जबकि निजी संस्थागत क्षेत्र में न्यूनतम 2000 लीटर प्रतिदिन से अधिकतम 10,000 लीटर प्रतिदिन की क्षमताओं की श्रेणी के संयंत्रों को निजी संस्थागत क्षेत्र के हितग्राहियों को एक संयंत्र एक वित्तीय वर्ष में एक बार ही राज्य शासन का अनुदान दिया जाना प्रावधानित है।

**5. सौर गर्म जल संयंत्रों पर अनुदान हेतु प्रस्ताव तैयार करना :-** सौर गर्म जल संयंत्रों की स्थापना के उपरांत जिला अक्षय ऊर्जा अधिकारी संयंत्रों पर अनुदान संबंधी निम्नानुसार प्रस्ताव तैयार करेंगे-

सौर गर्म जल संयंत्रों की स्थापना उपरांत केपीटल अनुदान की स्वीकृति हेतु निम्न अनुसार अपौचारिकताएँ पर्याप्त होगी।

I संयंत्र की स्थापना एम.एन.आर.ई. नई दिल्ली में पंजीकृत ईकाई द्वारा ही की जावेगी। पंजीकृत ईकाई के डीलर द्वारा संयंत्र की स्थापना की जाती है तो पंजीकृत ईकाई द्वारा डीलर को जारी अधिकृत प्रमाण पत्र संलग्न



करना पर्याप्त होगा।

- II संयंत्र की स्थापना एम.एन.आर.ई. नई दिल्ली द्वारा निर्धारित मापदण्डों के अनुसार ही हो, का निरीक्षण डी.आर.ई.ओ. स्वयं करेंगे।
- III एम.एन.आर.ई. नई दिल्ली के दिशा निर्देशों में संलग्न निर्धारित प्रारूप प्रपत्र—I (submitted by beneficiary to SNAs separately for each system- Appendix-I) हितग्राही/संस्था द्वारा भरा जावेगा एवं प्रपत्र—II डी.आर.ई.ओ. द्वारा भरा जावेगा।
- IV (i) संस्थाओं में स्थापित सौर गर्म जल संयंत्रों के लिए संस्था द्वारा स्टेटमेंट आफ एक्सपेंडचर (एस.ओ.ई.) चार्टर्ड एकाउंटेंट से प्रमाणित हो।
- (ii) घरेलू सौर गर्म जल संयंत्रों के लिए हितग्राही द्वारा स्थापित कर्ता ईकाई को भुगतान की राशि का चेक नम्बर व दिनांक एवं एक अडरटेकिंग जिसमें यह अंकित होगा की हितग्राही द्वारा स्थापितकर्ता ईकाई को चेक (चेक नम्बर, राशि एवं दिनांक इत्यादि) द्वारा भुगतान किया गया। संयंत्र जिस वर्ष में स्थापित किया गया उसका उल्लेख भी हो।
- V संयंत्र स्थापना उपरांत संयंत्र के फोटो ग्राफ संलग्न करें।
- VI संस्था का वैद्य पंजीकरण प्रमाण पत्र संलग्न करें।
- VII संयंत्र के निरीक्षण हेतु निरीक्षण प्रपत्र—III संलग्न है, जिसे डी.आर.ई.ओ. द्वारा भरकर प्रस्तुत करना अनिवार्य होगा।

केपीटल अनुदान की स्वीकृति हेतु सौर गर्म जल संयंत्रों के प्रस्ताव मुख्यालय भेजने के पूर्व डी.आर.ई.ओ. प्रस्तावों का अवलोकन कर ले कि उपरोक्त बिन्दु क्रमांक 1 से 7 तक का समावेश पूर्ण रूप से कर लिया गया है। उपरोक्त सभी दस्तावेज डी.आर.ई.ओ. सत्यापित करेंगे।

## चेकलिस्ट (दस्तावेजों की सूची)

1. जवाहर लाल नेहरू सोलर मिशन के अंतर्गत केन्द्रीय सरकार के अनुदान हेतु आवेदन प्रपत्र।  
(पासपोर्ट साईज के फोटो सहित)
2. सौर गर्म जल संयंत्र पर अनुदान हेतु हितग्राही का अभिवचन पत्र।

परिशिष्ट—1

- परिशिष्ट-2
3. निर्माता इकाईयों द्वारा संलग्न किये जाने वाले प्रपत्र।
- परिशिष्ट-3
4. निर्माता ईकाई/अधिकृत डीलर द्वारा जारी बिल की सत्यापित प्रतिलिपि।
- परिशिष्ट-4
5. हितग्राही द्वारा भुगतान की रसीद की सत्यापित प्रतिलिपि।
- परिशिष्ट-5
6. हितग्राही के पते के प्रमाण स्वरूप बिजली का बिल (नवीनतम)/टेलीफोन बिल (नवीनतम)/राशन कार्ड/पास पोर्ट/मतदाता कार्ड/ड्राइविंग लायसेन्स/ एल.पी.जी. कार्ड की प्रति संलग्न करें।
- परिशिष्ट-6
7. हितग्राही का पहचान के प्रमाण स्वरूप राशनकार्ड/मतदाता पहचान पत्र/पासपोर्ट/संस्था का नवीनतम पहचान पत्र/बैंक की पास बुक (जिसमें फोटो लगी हो)/ड्राइविंग लाइसेंस आदि।
- परिशिष्ट-7
8. हितग्राही की दशा में संस्था का वैद्य पंजीकरण प्रमाण पत्र।
- परिशिष्ट-8
9. संस्थाओं में स्थापित सौर गर्म जल संयंत्र के लिए संस्था द्वारा Statement of Expenditure चार्टर्ड एकाउण्टेंट से प्रमाणित हो।
- परिशिष्ट-9
10. संयंत्र स्थापना उपरान्त संयंत्र का हितग्राही के साथ फोटोग्राफ, जिसमें संयंत्र के विभिन्न कम्पोनेंट स्पष्ट प्रदर्शित हों।
- परिशिष्ट-10
11. जिला अक्षय ऊर्जा अधिकारी द्वारा संयंत्र का निरीक्षण प्रपत्र।
- परिशिष्ट-11

**परिशिष्ट-1**

**Application for reimbursement of capital subsidy on installation of  
Solar Water Heating Systems under Jawaharlal Nehru National Solar  
Mission (JNNSM) program**

Photograph of Beneficiary

To be submitted by beneficiary to SNAs separately for each system

1.	Name of Beneficiary / Institutions and Commercial establishment/ Builders & Developers/ Development Authorities/ Housing Boards etc with complete postal address, telephone, fax no & E mail address etc. Whether Domestic/Institutional/Commercial	:		
2.	Details of registration in case of Institutions/ Organization/ Commercial establishment (Registration no, Where registered etc.) In case of domestic Latest Light bill or Telephone bill (Land Line only) etc. Please attach the Document proof.	:		
3.	Place of installation of the system.	:		
4.	System capacity in LPD and Sq. m. of collector area.	:		
5.	Type of system installed (FPC/ ETC based: natural/ forced circulation).	:		
6.	Date of commissioning of the system.	:		
7.	Name of BIS/ MNRE approved manufacturer/ supplier with complete address, Ph no. etc.	:		
8.	Present utility of hot water.	:		
9.	Expected amount of fuel saving per year.	:		
10.	Total expenditure incurred of the system including installation cost, 5 years AMC and eligible subsidy) (Audited statement of expenditure to be enclosed)	:		
11.	Amount of the capital subsidy sought from MNRE (Rs.3300 per M <sup>2</sup> of collector area for Solar Water Heating System using BIS approved Flat Plat Collector and	:		

	Rs.3000 per M <sup>2</sup> of collector area for Solar Water Heating System using MNRE approved Evacuated Tube Collector).		
12.	Certified that, we have not availed any capital subsidy on this system earlier from MNRE and State till date. Further certified that we have not proposed / submitted in full or part to any other agency for financial assistant.	:	

Date:

**Signature with name and Seal of  
Head of beneficiary organization**

**Format for reimbursement of capital subsidy on installation of solar water heating systems**

**Central Subsidy (MNRE Subsidy) for individual beneficiary/Institutions/commercial establishment  
Builders & Developers/ Development Authorities/ Housing Boards etc.**

**(A)- for FPC Type Solar Water Heating Systems**

Sr. No.	Name of Institution with address	Place of installation	Date of Commissioning of system	Collector area installed (sq .m.)	Amount of subsidy sought @ Rs.3300 per sq., m for FPC Type S.W.H.S.	Service Charges @Rs.100 per sq. m.
1.						
2.						

**Sub Total (A)**

**(B)- for ETC Type Solar Water Heating Systems**

Sr. No.	Name of Institution with address	Place of installation	Date of Commissioning of system	Collector area installed (sq .m.)	Amount of subsidy sought @ Rs.3000 per sq., m for ETC Type S.W.H.S.	Service Charges @ 3% of CFA
1.						

2.						

**Sub Total (B)**

**(C)- State Subsidy (प्रोत्साहन राशि) for private (if applicable) & Govt. organizations**

Sr. No.	Name of individual/ organizations with address	Place of installation	Date of Commissioning of system	Collector area installed (sq .m.)	Amount of subsidy sought @ Rs.750 per sq., m collector area
1.					
2.					
	<b>Total (A+B+C)</b>				

Certified that the above facts in case of each beneficiary and the information given by them in Annexure-I have been verified by us and are found to be correct. Copies of Annexure-I furnished by each applicant are enclosed along with Audited statement of expenditure for all the installed systems indicating total expenditure incurred on each system.

Date- .....

**Signature with name and seal of  
Distt. Renewable Energy Officer**

**परिशिष्ट-2**

**सौर गर्म जल संयंत्र पर अनुदान हेतु हितग्राही का अभिवचन पत्र**

ऊर्जा निगम की वर्ष 2011-12 के लिए जारी मार्केट मोड योजना के अन्तर्गत मैं अपने निवास/कार्य स्थल पर मेसर्स .....द्वारा निर्मित ..... मॉडल तथा ..... क्षमता का सौर गर्म जल संयंत्र दिनांक- ..... को स्थापित/कमिशंड किया गया है।

मेरे द्वारा बैंक क्रमांक/नगद ..... दिनांक-..... राशि रुपये ..... का भुगतान उक्त संयंत्र हेतु किया गया है, जिसकी रसीद संलग्न है।

मेरे पते के प्रमाण स्वरूप बिजली का बिल(नवीनतम)/टेलीफोन बिल(नवीनतम)/राशन कार्ड/पास पोर्ट/ मतदाता कार्ड/ ड्राईविंग लायसेन्स/एल.पी.जी. कार्ड की प्रति संलग्न कर रहा/रही हूँ। कृपया मेरे पक्ष में राज्य

शासन का अनुदान नियमानुसार विमुक्त करने कि कृपा करें। उपरोक्त सौर गर्म जल संयंत्र/स्थापना मेरे निवास/कार्यस्थल पर स्थापित की जा चुकी है। स्वीकृत/विमुक्त अनुदान के हस्तांतरणीय नहीं होने की जानकारी मुझे है।

मैं जानता/जानती हूँ कि ऊर्जा निगम द्वारा प्रणाली की स्थापना उपरांत केवल अनुदान विमुक्त किया जायेगा तथा प्रणाली की स्थापना, कमीशनिंग, वारंटी, संचालन, रख रखाव तथा विक्रय उपरांत सेवा आदि के लिए ऊर्जा निगम का कोई उत्तदायित्व नहीं होगा। प्रणाली के प्रदायकर्ता तथा उनके उत्पादों की दर का चयन मेरे द्वारा किया गया है।

मैं घोषणा करता/करती हूँ कि उपरोक्त प्रणाली का संचालन मेरे द्वारा लगातार किया जायेगा तथा इस प्रणाली को मैं विस्थापित नहीं करूंगा/करूंगी।

मैं/हम घोषणा करता/करते हूँ/है कि इस संयंत्र/परियोजना से होने वाली CDM (क्लीन डेवेलपमेंट मैकेनिज्म) की आय पर संपूर्ण अधिकार ऊर्जा निगम का होगा।

केन्द्रीय वित्तीय सहायता हेतु निर्धारित प्रारूप में आवेदन संलग्न है केन्द्रीय वित्तीय सहायता उपलब्ध होने की स्थिति में उक्त राशि का भुगतान ऊर्जा निगम द्वारा मेरे नाम से चेक के माध्यम से मुझे दिया जायें।

धन्यवाद,

भवदीय

(हस्ताक्षर)

संलग्न:—उपरोक्तानुसार

नाम:—

पता:—

टेलीफोन नं./फैक्स नं./ईमेल:— **परिशिष्ट—11**

## सौर गर्म जल संयंत्र का निरीक्षण प्रपत्र

प्रमाणित किया जाता है कि हितग्राही/संस्था का नाम .....आत्मज.....

.....पता.....के यहां वर्ष.....में  
स्थापित सौर गर्म जल संयंत्र क्षमता.....लीटर प्रतिदिन एफ.पी.सी./ई.टी.सी  
टाइप का निरीक्षण मेरे द्वारा दिनांक.....को किया गया एवं उक्त संयंत्र एम.एन.आर.  
ई. नई दिल्ली के निर्धारित मापदण्ड के अनुरूप पाया गया।

1. स्थापना की तिथि : .....
2. (अ) सोलर कलेक्टर का मेक/मॉडल : .....  
(ब) कलेक्टरों की संख्या सरल क्रमांक : .....  
(स) फ्री वारंटी की अंतिम दिनांक : .....
3. ई.टी.सी. बेस्ड संयंत्र की दशा में  
(अ) ID ---- MM, OD ----MM---- : .....  
(ब) Length ----- MM, No.----- : .....  
(स) इंसुलेटेड टैंक नम्बर : .....
4. इलेक्ट्रिक बैक अप की क्षमता (यदि हो तो) : .....

जिला अक्षय ऊर्जा अधिकारी  
(सील एवं हस्ताक्षर)

**5/23/2009 – P&C Dated: 16.06.2010**

**Government of India**

**Ministry of New and Renewable Energy**

## **GUIDELINES FOR OFF-GRID AND DECENTRALISED SOLAR APPLICATION**

### **1. Background:**

The Government has recently launched the Jawaharlal Nehru National Solar Mission, which is a major initiative of the Government of India and State Governments to promote ecologically sustainable growth while addressing India's energy security challenge. It will also constitute a major contribution by India to the global effort to meet the challenges of climate change.

The immediate aim of the Mission is to focus on setting up an enabling environment for solar technology penetration in the country both at a centralized and decentralized level. The first phase (up to March 2013) will, inter alia, focus on promoting off-grid systems including hybrid systems to meet / supplement power, heating and cooling energy requirements. These systems still require interventions to bring down costs but the key challenge is to provide an enabling framework and support for entrepreneurs to develop markets.

In order to create a sustained interest within the investor community, it is proposed to support viable business models. Flexibility is an integral feature of this scheme. The scheme is completely demand driven as it offers a bouquet of incentive instruments from which eligible entities can tailor a package appropriate to their needs and circumstances within the boundary conditions of the scheme.

### **2. Objectives:**

2.1 To promote off-grid applications of solar energy (both SPV and Solar Thermal) for meeting the targets set in the Jawaharlal Nehru National Solar Mission for Phase-I.

2.2 To create awareness and demonstrate effective and innovative use of Solar systems for individual/ community/ institutional/ industrial applications.

2.3 To encourage innovation in addressing market needs and promoting sustainable business models.

2.4 To provide support to channel partners and potential beneficiaries, within the framework of boundary conditions and in a flexible demand driven mode.

2.5 To create a paradigm shift needed for commoditization of off-grid decentralized solar applications.

2.6 To support consultancy services, seminars, symposia, capacity building, awareness campaigns, human resource development, etc.

2.7 To encourage replacement of kerosene& diesel, wherever possible.

### **3. Scope of the Scheme:**

3.1 The scheme would be applicable to all parts of India and would, to begin with, be co-terminus

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with Phase-I of the Jawaharlal Nehru National Solar Mission and will, inter alia, focus on promoting off5/

**23/2009 – P&C Dated: 16.06.2010**

grid and decentralized systems, including hybrid systems to meet/ supplement lighting, electricity/power, heating and cooling energy requirements. In respect of hybrid systems for which there is a specific scheme (eg. wind solar), provisions thereof would apply. However, in respect of hybrids for which there is no specific scheme (i.e. with other renewable energy components), the scheme for the respective off grid renewable source, would be the basis for calculating the subsidy. Initially, only solar wind-solar hybrid and solar bioenergy hybrids would get considered under the scheme but the Project Appraisal Committee could also examine other feasible hybrid technologies for inclusion in the scheme.

3.2 Various off-grid solar photo voltaic systems / applications up to a maximum capacity of 100 kWp per site and off-grid and decentralized solar thermal applications, to meet / supplement lighting, electricity/power, heating and cooling energy requirements would be eligible for being covered under the Scheme. For mini-grids for rural electrification, applications up to a maximum capacity of 250 kW per site, would be supported.

3.3 Soft loans for projects, including a component for working capital, will be available to SME manufacturers of solar thermal systems and Balance of systems manufacturers for Solar PV (excluding battery manufacturers), in order to promote technology up-gradation, improvement in technology, expansion in production facilities, etc. through refinance facility implemented through IREDA.

3.4 Boundary conditions for the scheme are at Annexure IA and IB.

3.5 A provision of 3% of the annual budgeted outlay for scheme, shall be made for administrative expenditure, evaluation and other studies, seminars, information dissemination, IEC activities, capacity building and support for putting in IT enabled monitoring mechanisms, etc. An incentive scheme for banks has been detailed out in Annexure 2.

#### **4. Implementation Arrangements:**

4.1 The Scheme would be implemented through multiple channel partners for rapid up-scaling in an inclusive mode. It is envisaged that these channel partners would enable significant reduction in transaction cost and time, since without these arrangements, individuals and small groups of clients may not be in a position to access the provisions of the scheme. Channel partners which would be used for implementation could include the following:-

- a) Renewable Energy Service Providing Companies (RESCOs)
- b) Financial Institutions including microfinance institutions acting as Aggregators
- c) Financial Integrators
- d) System Integrators
- e) Programme Administrators

4.2 The details of the channel partners are as under:

##### **a) Renewable Energy Service Providing Companies (RESCOs):**

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These are companies which would install, own & operate RE systems and provide energy services to consumers. These entities may tie up with FIs for accessing the financial support under the scheme.

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**b) FIs including MFIs acting as Aggregators:**

These would be institutions which are involved in consumer finance and have established base of customers in rural/urban areas and outreach through self help groups, etc. These would typically access interest subsidy through refinance facility as also credit linked capital subsidy on behalf of their borrowers from IREDA.

**c) Financial Integrators:**

These are entities which would integrate different sources of finance including carbon finance, government assistance and other sources of funds to design financial products/instruments and make these available to their clients at an affordable cost. These entities would tie up with manufacturers and service providers.

**d) System Integrators:**

These are companies/ entities which would provide RE systems & services to clients including design, supply, integration and installation, O&M and other services. These entities may tie up with FIs for accessing the financial support under the scheme.

**e) Programme Administrators:**

These would include, inter alia, Central and State Government Ministries and Departments and their organizations, State Nodal Agencies, Utilities, Local bodies, PSUs and reputed Non-Governmental Organizations (NGOs). These entities would directly implement the scheme and access capital subsidy (non credit linked) from MNRE.

4.3 The various channel partners who can participate in this Scheme have been described above and a transparent methodology for accrediting these entities by MNRE would be put in place. The parameters for accrediting an entity could comprise of:

- a) Net worth / turnover of the participating entity
- b) Technical capability for carrying out services which would, inter alia, include site selection, feasibility study, design, value engineering, cost optimization, time scheduling, procurement, installation/commissioning and O&M functions
- c) Credit rating, if any
- d) Track record
- e) Tie-ups with equipment providers.

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4.4 The accreditation process would categorize the various entities into grades which would determine the quantum of work in terms of financial limits that they could undertake under the Scheme. This accreditation process would also enable inclusion of start ups with the requisite technical and installation skills. There would be a provision for up gradation and down gradation commensurate with their performance in implementing projects under this Scheme. Reputed rating agencies would be involved by the Ministry.

4.5 An opportunity would be provided for young entrepreneurs to participate as channel partners in order to tap their creative potential as innovators. Separate templates on eligibility of different channel partners would be evolved.

**5. Funding Pattern.**

5.1 Funding under the scheme would be in Project mode, i.e. there must be a project report which

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would, inter alia, include client details, technical & financial details, O&M and monitoring arrangements. The total project cost shall be funded through a mix of debt and incentives where the promoters' equity contribution would be at least 20% (unless otherwise specified). Techno-economic specifications for a minimum cut-off level for the requirement of the project mode would be specified by MNRE.

5.2 MNRE would provide financial support through a combination of 30 % subsidy and/or 5% interest bearing loans. The bench mark project cost for 2010-11 have been worked out for these systems and the CFA of 30% thereof has been defined in the boundary conditions detailed in Annexure 1A and 1 B.

5.3 For the year 2010-11, the benchmark price for photovoltaic systems with battery back-up support is considered as Rs.300/- per Wp. In case of the systems, which do not use storage battery such as water pumping systems, the installed PV system cost is considered as a maximum of Rs.210 per Wp.

5.4 Capital subsidy of 90% of the benchmark cost, would be available for special category states, viz. NE, Sikkim, J&K, Himachal Pradesh and Uttarakhand. In addition, it would be extended for setting up only stand alone rural solar power plants / packs (both PV and thermal) in remote and difficult areas such as Lakshadweep, Andaman & Nicobar Islands, and districts on India's international borders. However, for funding solar thermal systems in these areas, the subsidy would be limited to 60% for all categories of beneficiaries. The subsidy pattern detailed above can be accessed by only Central and State Government Ministries, Departments and their organizations, State Nodal Agencies and Local bodies.

5.5 There would be a provision for channel partners, operating in the market mode to access a combination of capital subsidy and a low cost interest for the end consumer, provided they can tie up with a lending institution. These lending institutions could then enter into an agreement for refinance/ interest subvention with IREDA. MNRE would provide IREDA fund handling charges at the rate of 2% for the capital subsidy/interest subvention portion.

5.6 Funds received by IREDA from MNRE without cost may be made available by it for PAC approved projects directly at interest rate not exceeding 5% p.a as also by way of refinance to the primary lending institutions at a rate of interest not exceeding 2% p.a, subject to the condition that the rate of interest charged by the lending institution to the borrower in respect of the loan does not exceed 5% p.a.

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5.7 The Interest Subsidy under the Scheme would be made available to Non-Banking Financial Companies (NBFCs) and Scheduled Commercial Banks (excluding Regional Rural Banks) by way of refinance from IREDA.

5.8 IREDA would also make available funds received from MNRE under this Scheme, to NABARD, NHB, SIDBI and any other institution as may be specified by the MNRE in this behalf, for providing refinance on the same terms, to Regional Rural Banks, Housing Finance Companies, or any other primary lending institutions included by them, in their respective refinance schemes. MNRE would provide a service charge of 0.5% to IREDA for this.

5.9 MNRE would also fund IREDA for meeting the expenditure towards development of software and hardware, based on an estimate provided by IREDA, for implementing and monitoring the scheme effectively. IREDA would present an audited annual statement of accounts.

5.10 3% of CFA would be admissible as service charges to programme administrators. For projects

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which involve civil society organizations and are aimed at the poor strata of society, eg. projects for deploying solar lanterns / home-lighting systems with small wattage and solar cookers etc, upto 10% of the CFA would be admissible as institutional charges. These would be provided by MNRE, in addition to the CFA.

5.11 The CFA from MNRE would not preclude the channel partners from availing other fiscal and financial benefits being provided by State, Central Governments and any other agency so long as the same is clearly disclosed in the project report. This is to avoid multiple financing.

## **6. Bouquet of Incentive Instruments:**

6.1 In the interest of sustaining of satisfactory performance and generation of output in the envisaged energy forms a flexible funding approach can be considered from the following bouquet of instruments:

### **a) RE Voucher/Stamp**

A Transaction-cost free redeemable financial instrument, denominated in physical or monetary units. Placed in the hands of ultimate beneficiary it empowers him by giving him enhanced degree of freedom to choose. Hence, it can be used as an effective instrument to gauge and enhance consumer satisfaction at the retail level.

### **b) Capital Subsidy (Credit Linked and non credit linked)**

An instrument which lightens the burden of financing the initial project cost to enable financial closure of viable business proposition.

### **c) Interest Subsidy**

An instrument aimed at neutralizing the high cost of capital given after due diligence of credit appraisal by FIs, NBFC, Micro finance institutions.

### **d) Viability Gap Funding**

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Financial support provided mostly in the form of initial grant in one or more installments to finance the project cost so as to create a viable business model. PPP Scheme of Ministry of Finance has this arrangement for physical infrastructure projects. It is supplemented by similar arrangement at the state level.

### **e) Green Energy Bonds**

A form of low interest bearing long-term redeemable security, which could be issued by IREDA/ MNRE for Renewable Energy Projects. Analogy: Infrastructure Bond/Gold Bonds.

6.2 These would adhere to the boundary conditions specified and would be available individually or in combination, (to the borrowers, in case of credit-linked subsidy) through all channel partners, in addition to any fiscal benefits available to the sector.

## **7. Release of Funds:**

7.1 The release of funds for the project shall be back ended as reimbursement on completion and verification thereof. However, for programme administrators, the release of funds could be front ended, with installments of 70% on sanction and 30% on completion. However, this could be extended to other entities on provision of appropriate sureties.

7.2 In respect of credit linked capital subsidy and interest subsidy the scheme would be implemented through IREDA, which will be the designated Nodal agency for disbursement of funds.

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7.3 MNRE would place 50% of the estimated annual requirement of funds with IREDA upfront at the beginning of the year. The balance 50% would be released as second and final tranche of the annual requirement to IREDA after receipt of Utilisation Certificate, of not less than 50% of the first tranche released to IREDA. While releasing the second tranche, MNRE would take into consideration, revision in initial annual estimate (if any) for appropriate funding. IREDA would present an audited annual statement of accounts.

## **8. Approval Mechanism**

The Committee constituted by MNRE, would approve the project within 45 days of receiving the project. Deficiency, if any, would be communicated in writing to the proposer/channel partner within 30 days and the Committee would then, on receipt of clear proposal approve the proposal. The project proposals shall be considered and sanctioned by a Project Approval Committee (PAC). This committee would provide approval as also review progress. The entire process of receiving proposals, processing them and giving approvals would be IT enabled. The committee would also frame rules and prescribe formats etc, for project approval, within the overall framework of this scheme, so as to make the process transparent.

## **9. Project Management Consultant (PMC)**

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

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## **10. Monitoring and Evaluation:**

10.1 Information and Communication Technology must form the backbone of monitoring system.

Since the scheme envisages IT enabled monitoring and verification protocols, 5% of the total project cost would be available to the various channels partners for compliance. It is proposed that the monitoring is done as under:

- i) At the primary level of monitoring, channel partners would be responsible for monitoring parameters such as end-use verification and KYC compliance and also compilation of statistical information as one time MIS for all credit linked cases.
- ii) As an additional level of monitoring, reputed Civil Society Groups, eminent persons, corporate houses (as an activity under Corporate Social Responsibility), SNAs and MNRE officials would be involved, for ground truthing on random sample basis.
- iii) For projects with applications above 10 kW, the system providers, would also make available generation data to MNRE at intervals specified.

10.2 It is envisaged that certified energy auditors , scheme monitors and others would be empanelled for certifying whether the outputs of the system correspond to the parameters laid down in the inprinciple approval for non credit linked projects.

## **11. Technical Requirements**

11.1 The scheme would require the project proponents to strictly adhere to the national/international standards specified by the Ministry from time to time.

11.2 The Use of imported complete PV systems will not be permitted under the scheme. However,

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use of imported components of a complete PV system would be permitted, subject to adequate disclosure and compliance to specified quality norms and standards.

11.3 The minimal technical requirements and Quality Standards in respect of the off-grid SPV power plants/ systems are given in Annexure-3. These will come into effect w.e.f. 1st September 2010 to allow sufficient time to the SPV industry to gear up for the same. Existing guidelines w.r.t. technical requirements/ Quality Standards under the Ministry's SPV programmes will be valid during the interim period.

11.4 The existing National Standards/ MNRE Specifications in respect of Solar Thermal Components/ Systems are given in Annexure-4.

## **12. Supporting Innovation**

The Ministry could provide 100% CFA for undertaking pilot and demonstration projects through manufacturers and other organizations for demonstrating new and innovative applications of solar systems.

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## **13. Interpretation of the Guidelines**

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

## **14. Review**

The scheme would be reviewed by an Internal Review Committee at 6 month/yearly interval and modifications therein would be incorporated by the Ministry. In addition, a platform for experts to discuss best practices, debate over issues to overcome bottle necks and provide effective policy suggestions for ensuring wide spread off grid solar solutions deployment would also be established at the national level.

## **Annexure -1A**

### **BOUNDARY CONDITIONS FOR SUPPORT TO OFF-GRID SOLAR PV APPLICATIONS**

#### **1. Individuals**

- A. All applications except 1B 1 kWp Capital Subsidy
- B. Pumps for irrigation and community drinking water 5 kWp & Interest Subsidy

#### **2. Non- Commercial entities**

- A. All applications except 2B 100 kWp per site Capital Subsidy
- B. Mini-grids for rural electrification 250 kWp per site & Interest Subsidy

#### **3. Industrial/Commercial entities**

- A. All applications except 3B 100 kWp per site Capital Subsidy
- B. Mini-grid for rural electrification 250 kWp per site Or Interest Subsidy

#### **Scale of Capital Subsidy:**

Based on benchmarking annually. Rs. 90/Wp With battery storage

Rs. 70/Wp Without battery storage

#### **Scale of Interest Subsidy:**

Soft loan @ 5% p.a. On the amount of project cost

Less promoter's contribution

Less capital subsidy amount

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Use of the best/competitive and innovative technologies available globally would be allowed, subject to standards and technical parameters, laid down by MNRE.

To meet unmet community demand for electricity or in unelectrified rural areas, standalone rural SPV power plants with battery storage in a micro grid mode/ local distribution network, would be provided Rs.150/Wp of capital subsidy AND soft loan at 5%.

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**Annexure –1B**

**BOUNDARY CONDITIONS FOR SUPPORT TO OFF-GRID SOLAR THERMAL APPLICATION**

**S. No. Solar Collector type Capital subsidy/Collector area (Rs./ sq.m.)**

1 Evacuated Tube Collectors (ETCs) 3000

2 Flat Plate Collectors (FPC) with liquid as the working fluid 3300

3 Flat Plate Collectors with air as the working fluid 2400

4 Solar collector system for direct heating applications 3600

5 Concentrator with manual tracking 2100

6 Non- imaging concentrators 3600

7 Concentrator with single axis tracking 5400

8 Concentrator with double axis tracking 6000

1. The capital subsidy/ unit collector area, as given above, is based on 30% of the benchmark costs, which would be reviewed annually. Capital subsidy would be computed based on the applicable type of solar collector multiplied by the collector area involved in a given solar thermal application/project.

2. Besides the capital subsidy as proposed above, the pattern of support could include a soft loan at 5%, as under:

a) Soft loan @ 5% interest would be available, inter alia, for balance cost which may comprise installation charges, cost of civil work for large systems and costs of accessories (viz. insulating pipeline, electric pump, controllers and valves, additional water tanks, blower for air heating systems, drying trays for solar dryers, steam system, etc.), etc.

b) To meet unmet demand for electricity and thermal energy or in un electrified rural areas, Solar thermal power plants and local distribution network, would be provided capital subsidy of 60% AND soft loan at 5% . These could be in either stand alone or co / poly generation mode

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**ANNEXURE-2**

**INCENTIVE FOR PROMOTIONAL ACTIVITIES BY BANKS/FIS FOR EXTENDING LOANS FOR PURCHASE OF SOLAR LIGHTS AND OTHER SMALL SOLAR OFF GRID SYSTEMS**

The range of no. Of systems to be financed by the banks in a year

3000-8000 8001-16000 16001-30000 Above 30000

**Minimum amount of lending to be eligible for seeking incentives**

Minimum lending amount per

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year for the system

Rs. 3 crores Rs. 8 crores Rs. 16 crores Rs. 30 crores

#### **Incentives for various activities**

Capacity building Rs. 3lakh Rs. 4 lakh Rs. 5 lakh Rs. 10 lakh

Awareness generation Rs. 15 lakh Rs. 20 lakh Rs. 25 lakh Rs. 40 lakh

Cash prizes for best 3 Branches Rs. 3 lakh Rs. 3.5 lakh Rs. 5 lakh Rs. 10 lakh

#### **One time incentives to Banks/FIs participating for the first time in scheme**

Documentation of best practices Rs. 2 lakh Rs. 2 lakh Rs. 3 lakh Rs. 5 lakh

Preparation of manuals for

procedures, Software, etc.,

Rs. 2 lakh Rs. 2 lakh Rs. 3 lakh Rs. 5 lakh

Monitoring & Learning Rs. 2 lakh Rs. 3 lakh Rs. 5 lakh Rs. 10 lakh

In addition to above, cash prize will be given @ Rs. 1.00 lakh to the village/village panchayat wherein village/villages have a coverage of 75% or more through solar lighting systems by the banks/FI.

The Panchayats will be encouraged to utilize this money to purchase solar street lights or other devices for use of the village community. The Prize money could be routed through bank/F.I. to the village/village panchayat.

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#### **ANNEXURE-3**

### **MINIMAL TECHNICAL REQUIREMENTS/ STANDARDS FOR OFF-GRID/ STAND-ALONE SOLAR PHOTOVOLTAIC (PV) POWER PLANTS/ SYSTEMS TO BE DEPLOYED UNDER THE NATIONAL SOLAR MISSION**

#### **1. PV MODULES:**

1.1 The PV modules must conform to the latest edition of any of the following IEC / equivalent BIS Standards for PV module design qualification and type approval:

Crystalline Silicon Terrestrial PV Modules IEC 61215 / IS14286

Thin Film Terrestrial PV Modules IEC 61646

Concentrator PV Modules & Assemblies IEC 62108

1.2 In addition, the modules must conform to IEC 61730 Part 1- requirements for construction & Part 2 - requirements for testing, for safety qualification.

1.3 PV modules to be used in a highly corrosive atmosphere (coastal areas, etc.) must qualify Salt Mist Corrosion Testing as per IEC 61701.

#### **2. BALANCE OF SYSTEM (BoS) ITEMS/ COMPONENTS:**

2.1 The BoS items / components of the SPV power plants/ systems deployed under the Mission must conform to the latest edition of IEC/ equivalent BIS Standards as specified below:\*\*

#### **BoS item/component Applicable IEC/equivalent BIS Standard**

##### **Standard Description Standard Number**

Power

Conditioners/Inverters\*

Efficiency Measurements

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Environmental Testing

IEC 61683

IEC 60068 2 (6,21,27,30,75,78)

Charge controller/MPPT

units\*

Design Qualification Environmental

Testing

IEC 62093

IEC 60068 2 (6,21,27,30,75,78)

Storage Batteries General Requirements & Methods of

Test Tubular Lead Acid

IEC 61427

IS 1651/IS 133369

Cables General Test and Measuring Methods

PVC insulated cables for working

Voltages up to and including 1100 VDo-,

UV resistant for outdoor

installation

IEC 60189

IS 694/ IS 1554

IS/IEC 69947

Switches/ Circuit

Breakers/Connectors

General Requirements Connectorssafety

IS/IEC 60947 part I,II,III

EN 50521

Junction Boxes/Enclosures General Requirements IP 65 (for outdoor)/IP 21 (for

indoor)

IEC 62208

SPV System Design PV Stand-alone System design

verification

IEC 62124

Installation Practices Electrical installation of buildings

Requirements for SPV power supply

systems

IEC 60364-7-712

\* Must additionally conform to the relevant national/international Electrical Safety Standards.

**\*\* Also refer Addendum No. 32/49/2010-11-PVSE dated 19.08.2010 appearing at the end of this document.**

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**3. AUTHORIZED TESTING LABORATORIES/ CENTERS**

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3.1 The PV modules must be tested and approved by one of the IEC authorized test centers. Test certificates can be from any of the NABL/ BIS Accredited Testing / Calibration Laboratories. Qualification test certificate as per IEC standard, issued by the Solar Energy Centre for small capacity modules upto 37Wp capacity will also be valid.

3.2 Test certificates for the BoS items/ components can be from any of the NABL/ BIS Accredited Testing-Calibration Laboratories/ MNRE approved test centers. The list of MNRE approved test centers will be reviewed and updated from time to time.

#### **4. WARRANTY**

4.1 The mechanical structures, electrical works including power conditioners/inverters/charge controllers/ maximum power point tracker units/ distribution boards/digital meters/ switchgear/ storage batteries, etc. and overall workmanship of the SPV power plants/ systems must be warranted against any manufacturing/ design/ installation defects for a minimum period of 5 years.

4.2 PV modules used in solar power plants/ systems must be warranted for their output peak watt capacity, which should not be less than 90% at the end of 10 years and 80% at the end of 25 years.

#### **5. IDENTIFICATION AND TRACEABILITY**

5.1 Each PV module used in any solar power project must use a RF identification tag (RFID), which must contain the following information. The RFID can be inside or outside the module laminate, but must be able to withstand harsh environmental conditions.

- (i) Name of the manufacturer of PV Module
- (ii) Name of the Manufacturer of Solar cells
- (iii) Month and year of the manufacture (separately for solar cells and module)
- (iv) Country of origin (separately for solar cells and module)
- (v) I-V curve for the module
- (vi) Peak Wattage,  $I_m$ ,  $V_m$  and FF for the module
- (vii) Unique Serial No and Model No of the module
- (viii) Date and year of obtaining IEC PV module qualification certificate
- (ix) Name of the test lab issuing IEC certificate
- (x) Other relevant information on traceability of solar cells and module as per ISO 9000 series.

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#### **ANNEXURE-4**

#### **PRESENTLY AVAILABLE NATIONAL STANDARDS/ MNRE SPECIFICATIONS ON SOLAR THERMAL COMPONENTS/ SYSTEMS**

##### **A) Indian Standards**

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

##### **1. Solar Flat Plate Collectors**

- a) IS 12933 (Part 1):2003, Solar flat plate collector -Specification, Part 1- Requirements.
  - b) IS 12933 (Part 2):2003, Solar flat plate collector -Specification, Part 2 -Components.
  - c) IS 12933 (Part 3):2003, Solar flat plate collector -Specification, Part 3 -Measuring instruments.
  - d) IS 12933 (Part 5):2003, Solar flat plate collector -Specification, Part 5 -Test methods.
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These Standards does not apply to concentrating & unglazed collectors and built-in-storage water heating systems.

## **2. Box-Type Solar Cookers**

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

## **B) MNRE Specifications**

(Available on MNRE website [www.mnre.gov.in](http://www.mnre.gov.in))

- 1. Test Procedure for solar dish cookers
- 2. Test procedure for Thermo-siphon-type domestic solar Hot Water Systems

## **C) Testing Laboratories/ Centers**

1 In order to make available quality product in the market, the Ministry works with Bureau of Indian Standards (BIS) and Quality Council of India. Presently, Indian Standards are available for solar flat plate collectors and box-type solar cookers and BIS implements a testing and certification programme which forms the basis of certification of these products by BIS.

2. For domestic size solar water heating systems based on thermo-siphon mode of operation, the Ministry has supported development of a test protocol with certain minimum performance requirements. For solar dish cookers, the Ministry has defined minimum specifications and has brought

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out a test procedure. In addition, the Ministry empanels manufacturers of solar water heating systems based on evacuated tube collectors.

3. There is a network of test centres in the country which is recognized by BIS for carrying out certification testing as per Indian Standards. The details of these test Centres are available are MNRE website and is updated from time to time.

4 The solar thermal devices/ systems must be tested at one of these test centres.

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**Government of India**

**Ministry of New and Renewable Energy**

**GUIDELINES FOR “ROOFTOP PV & SMALL SOLAR POWER GENERATION PROGRAMME (RPSSGP)**

### **1. About the Programme**

In order to give a thrust to rooftop PV and other small solar power plants connected at distribution network at voltage levels below 33 kV envisaged under Phase I of the Jawaharlal Nehru National Solar Mission (JNNSM), the Ministry of New and Renewable Energy (MNRE) proposes to launch a programme on generation based incentives. Hereinafter, the programme shall be referred to as 'Rooftop PV & Small Solar Power Generation Programme' (RPSSGP). The key features of the programme are as under:

- The Project Proponents would be selected as per these guidelines for development of solar power projects to be connected to distribution network at voltage levels below 33 kV.
  - The projects should be designed for completion before March 31, 2013.
  - The local distribution utility in whose area the plant is located, would sign a Power Purchase
-

Agreement (PPA) with the Project Proponent at a tariff determined by the appropriate State Electricity Regulatory Commission (SERC).

**Explanation:** Project schemes from States wherein Tariff tenure for duration of 25 years with Tariff structure on levelled basis has been determined by SERCs shall alone be considered to be eligible to participate in this Programme (RPSSGP).

- Generation Based Incentive (GBI) will be payable to the distribution utility for power purchased from solar power project selected under these guidelines, including captive consumption of Solar Power generated (to be measured on AC side of the inverter). The GBI shall be equal to the difference between the tariff determined by the Central Electricity Regulatory Commission (CERC) and the Base Rate, which will be Rs 5.50 per kWh (for Financial year 2010-11), which shall be escalated by 3% every year.

**Explanation:** Base Rate of Rs 5.50/unit to be considered for the purpose of computation of GBI, shall remain constant over duration of 25 years. Thus, GBI determined for a project (which is the difference of CERC determined tariff and Base Rate) shall remain constant for entire duration of 25 years.

Base Rate for projects to be commissioned during each subsequent year shall also be modified at escalation factor of 3% p.a. and such escalated Base Rate shall remain constant over duration of 25 years.

- GBI shall be payable to the distribution utility for period of 25 years from the date of commissioning of the project.

- IREDA has been designated as 'Programme Administrator' by the Ministry of New and Renewable Energy for administering the generation based incentive programme for rooftop PV and other small solar power plants.

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## **2. Classification of Project Scheme(s) and Eligibility Conditions:**

The Projects under these guidelines fall within two broad categories i.e. (a) the projects connected to HT voltage at distribution network (i.e. below 33 kV) (b) the projects connected to LT voltage i.e. 400 volts (3-phase) or 230 volts (1-phase) and. Accordingly, the projects have been divided into following two categories.

### **2.1. Category 1: Projects connected at HT level (below 33 kV) of distribution network**

The Projects with proposed installed capacity of minimum 100 kW and upto 2 MW and connected at below 33 kV shall fall within this category. The projects will have to follow appropriate technical connectivity standards in this regard.

### **2.2. Category 2: Projects connected at LT level (400 Volts-3ph or 230 Volts-1ph)**

The Projects with proposed installed capacity of less than 100 kW and connected to the grid at LT level (400 Volts for 3-phase or 230 V for 1-phase) shall fall within this category.

### **2.3. Capacity allocation to different project categories**

It is proposed to develop solar capacity of 100MW under these guidelines. This capacity addition shall be achieved by developing the projects in the above-mentioned two categories in the following manner:-

S. No. Project category Capacity Limit

1 Projects connected at HT level of distribution network with

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installed capacity of 100 kW and upto 2 MW

90 MW

2. Projects connected at LT level of distribution network with

installed capacity lower than 100 kW

10 MW

#### **2.4. Applicability of these guidelines**

The issues related to grid integration, metering, measurement and energy accounting for projects to be connected at LT level with installed capacity lower than 100 kW is complex. Detailed guidelines for such Project Schemes will have to be issued once the clarity on such grid integration standard emerges. As a result, the present Guidelines are applicable to Category 1 projects i.e. with installed capacity of 100 kW and upto 2 MW having grid connectivity at HT level (below 33 kV) of the distribution network.

### **3. Methodology for Registration and Ranking of Project(s):**

#### **3.1. Pre-Registration with the State Competent Authority**

3.1.1. The Project Proponent fulfilling the 'Eligibility Criteria' as outlined under Clause - 5 of these Guidelines shall submit Application for Pre-Registration to their respective State Competent Authority at

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the State level, along with requisite supporting documents to establish fulfillment of Eligibility Conditions. The State Competent Authority shall adopt the standard procedures for Pre-registration of Applicants.

3.1.2. The process of Pre-Registration at State level by Competent Authorities may remain open until Programme Administrator announces the closure of programme after receipt of applications aggregating to 110 MW capacity. The State Competent Authority shall issue 'Certificate of Pre-Registration' to projects aggregating to not more than 20 MW Capacity in their respective states.

2.1.3. Upon pre-registration with the State Competent Authority, the Project Proponent shall enter into MoU with the concerned distribution Utility for sale/deemed sale of power from the proposed project.

2.1.4. The date for commencement of Registration process for initial short listing by Programme Administrator shall be July 15, 2010 which provides sufficient time period to States to undertake preparatory activities at State level such as designation of the State Competent Authority, regulatory process for determination of Tariff for rooftop/small solar generation systems by the concerned SERC, etc.

#### **3.2. Registration with the Programme Administrator (IREDA)**

3.2.1. All applications fulfilling four conditions viz. (a) Issuance of relevant Tariff Order from concerned SERC (b) MOU with Utility, (c) Pre-Registration Certificate from State Competent Authority and (d) Commitment Guarantee of requisite amount shall be eligible for registration with the Programme Administrator.

3.2.2. The Project Proponents shall submit applications for registration with Programme Administrator under the 'RPSSGP'. Programme Administrator shall provide format for application. The Application for Registration shall be accompanied by a copy of MOU between the Project Proponent and the local Distribution Utility and Certificate of Pre-Registration issued by the State Competent Authority. The

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applications from the Project Proponents from any State shall be considered only if the concerned SERC has issued the order determining tariff for rooftop/small solar generating systems for purchase of electricity by the distribution utilities in that State.

3.2.3. The Project Proponent shall also provide the Commitment Guarantee for an amount of Rs 10 Lakh/MW on a pro-rata basis, in the form of an irrevocable Bank Guarantee from any scheduled commercial bank, valid for period of 24 months for solar PV and 30 months for solar thermal from date of filing application, along with the Application for consideration for registration to the Programme Administrator

3.2.4. In order to facilitate the process of application for registration, it is envisaged that a web based application portal shall be developed by Programme Administrator (details to be made available on the website of the MNRE/ Programme Administrator). Upon fulfillment of requisite conditions for preregistration, the Applicant shall submit an online application through an electronic form with details of pre-registration certificate, commitment guarantee, MoU with distribution utility, etc. The web portal system would generate unique acknowledgement number for each application confirming submission of application with system generated date and time of submission. The Applicant shall print the

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acknowledgement and submit the Application in physical form along with all necessary enclosures within 7 days from date of submission of online application.

3.2.5. The Initial list of Projects considered for Registration shall be prepared based on projects fulfilling above conditions considering principle of 'first-come-first-served'. This shortlist shall be subject to physical verification of the requisite documents received by Programme Administrator.

3.2.6. The process for Initial Short-listing of Applications for Registration with Programme Administrator under Category 1 shall be closed upon reaching shortlist of proposed installed capacity of 110 MW for projects on all India basis. The aggregate project capacity in the initial shortlist for a particular State shall be restricted up to 20 MW.

3.2.7. The Initial List (Shortlist-MO) of shortlisted projects shall be updated depending on accomplishment of following milestones by shortlisted Project Proponents:-

**Milestone-1:** Signing of PPA with the concerned Distribution Utility

**Milestone-2:** Project Commissioning

3.2.8. Only those projects, which are shortlisted, shall be considered during subsequent process for Registration. No new projects will be considered even if the project has achieved multiple milestones subsequently. This is being done to provide certainty to the Project Proponents already shortlisted. Upon accomplishment of Milestone-1, a Registration Certificate and letter confirming eligibility to avail GBI for the Project shall be issued by Programme Administrator to Project Proponent not later than one month from intimation by Project Proponent about accomplishment of Milestone-1 (i.e. execution of PPA), to facilitate accomplishment of Financial Closure, subject to the condition that Project Proponent submits Additional Commitment Guarantee for an amount of Rs 40 Lakh/MW on a pro-rata basis, in form of an irrevocable Bank Guarantee from any scheduled commercial bank to be submitted in the form of four BGs of equal value, with validity co-terminus with validity period of BG submitted at the time of Application for registration.

3.2.9. After fulfillment of requisite conditions for registration, the applicant shall submit an online

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application through a web-based portal maintained by the Programme Administrator. The online application shall include details of power purchase agreement with distribution licensee, additional commitment guarantee, etc. The web-based portal system would generate a unique project code for each application confirming submission of application for final registration with system generated date and time of submission. The Applicant shall print the project code details and submit the Application in physical form along with all necessary enclosures within 7 days from date of submission of online application. The inclusion in the final registration list shall be subject to physical verification of the requisite documents received by Programme Administrator. The issuance of Registration Certificate and letter confirming applicability of GBI for the Project shall be undertaken on a first-come-first-served basis until cumulative capacity of projects under Category-1 reaches 90 MW. The Programme Administrator shall ensure that final registration of Projects per State shall normally not exceed 20 MW.

3.2.10. The Commitment Guarantee for Projects not selected for inclusion within the 'Registered List' (90 MW) shall be returned after the date of announcement of selected projects, if so desired by the Project Proponent. Projects where Commitment Guarantees are not withdrawn would be considered for

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continued participation in the Programme, subject to availability of capacity arising due to removal/withdrawal of any project out of 'Registered List'.

3.2.11. The Project Proponent shall accomplish Milestone-2 (Project Commissioning) within twelve months in case of Solar PV projects and twenty-four months in case of Solar Thermal from date of issuance of Registration Certificate.

3.2.12. The project proponents of all registered projects shall submit the quarterly status update about the project progress including achievement of important milestones such as financial closure, placement of order for critical components, site development activities etc. to Programme Administrator. Upon accomplishment of the Milestone-2, the Project Proponent shall intimate the Programme Administrator with supporting documentary evidence for accomplishment of such milestone.

3.2.13. In case of delay in accomplishment of Milestone-2 (Project Commissioning) beyond stipulated time limit of 12 months for solar PV and 24 months for solar thermal from date of registration, 20% of BG (total Commitment Guarantee) shall be invoked by Programme Administrator. Delay in accomplishing Milestone-2 (Project Commissioning) beyond two months from stipulated time limit, another 20% of BG (total Commitment Guarantee) shall be invoked by Programme Administrator. Further, delay in accomplishing Milestone-2 (Project Commissioning) beyond four months from stipulated time limit, another 20% of BG (total Commitment Guarantee) shall be invoked by Programme Administrator. Failure to accomplish Milestone-2 (Project Commissioning) beyond six months beyond stipulated time limit shall disqualify the Project Proponent from further participating in the Programme and the Programme Administrator shall invoke all the BGs (total Commitment Guarantee) of such Project Proponent and as a consequence, the project shall be removed from the list of the registered projects and shall not be eligible for GBI under this scheme.

Provided that in case of part commissioning of the project (not lower than 100 kW capacity) at the end of 6 months beyond the stipulated period of 12 months for solar PV and 24 months for solar thermal from the date of registration, the partly commissioned capacity shall be considered to be eligible for GBI. The applicable tariff rate for such project and computation of GBI thereof shall be

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reckoned from the above date.

3.2.14 The Programme Administrator shall inform respective State Competent Authority and state distribution utility regarding continued eligibility of GBI for the Project Proponent corresponding to partly commissioned capacity. The un-commissioned part of the project shall however not be eligible for consideration for GBI.

3.2.15. Upon elimination of a project from final Registration List, the next Project in the queue of the initial shortlist shall be considered for inclusion in this List provided it meets the state-wise capacity limit of 20 MW. Further, the project should meet all other requirements including PPA, commitment guarantee etc., as outlined in Section 3.2.8 above.

#### **4. Roles and Responsibilities of various Entities:**

##### **4.1. Role of State Government**

The programme has been designed taking into account active participation by the State Governments in earlier GBI Programme of MNRE. As a first step, the State Government is required to

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designate a 'Competent Authority' under this programme, empowered to issue pre-registration certificate required for registering the projects with the Programme Administrator and subsequently reporting progress on implementation of these projects.

##### **4.2. Role of Distribution Utility**

The distribution utility shall enter into Memorandum of Understanding (MoU-1) with the Project Proponent (as defined in the subsequent paragraph) for purchase of power at rates to be determined by the concerned SERC. The MoU shall clearly specify the rate of purchase of power and tenure of the proposed PPA. Further, the distribution utility shall provide necessary approvals and infrastructure for evacuation of the power generated. The Power Purchase Agreement (PPA) would supersede MoU.

The distribution utility will have to enter into an Memorandum of Understanding (MoU-2) with IREDA for availing GBI. The distribution utility will make payments for the power purchased (including deemed purchase corresponding to captive consumption met from solar generation) directly to the Project Proponent as per the terms and conditions of the Power Purchase Agreement.

The distribution utility shall provide certificate of power purchased (including deemed purchase corresponding to captive consumption met from solar generation) from the Project to the Programme Administrator on a monthly basis. It may be noted that this scheme envisages purchase by the distribution utility of entire energy generated by the solar system. The certificate shall be based on the joint meter reading taken by the Project Proponent and the distribution utility.

##### **4.3. Role of Programme Administrator (IREDA)**

Under this programme, IREDA would act as a 'Programme Administrator'. IREDA shall enter into Memorandum of Understanding (MoU-2) with concerned state distribution utilities for disbursement of GBI as per conditions outlined for operationalising this programme. IREDA shall be responsible for following activities under this programme:-

1. Registration of the projects seeking GBI.
  2. Maintenance of a transparent system of the registered projects based on progress made by them against specified milestone events.
  3. Issuance of Certificates confirming GBI
-



4. Disbursement of GBI to the distribution utilities.

#### **4.4. Role of Project Proponent**

Project Proponent shall mean developer/owner of the rooftop PV or other small solar generation project who wishes to participate in the 'Rooftop PV & Small Solar Generation Programme' (RPSSGP).

The Project Proponent shall be responsible for the following activities:

1. Apply for pre-registration with their respective State Competent Authority

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2. Execute documents such as Memorandum of Understanding (MoU) and Power Purchase Agreement (PPA) with the concerned distribution utility where its solar power generation facility is situated.

3. Apply for registration with the Programme Administrator to participate in the RPSSGP.

4. Intimate the Programme Administrator about the achievement of milestones, along with supporting documents.

5. Comply with all its obligations and reporting requirements as desired by State Competent Authority and Programme Administrator from time to time.

6. Fulfill its financial obligations in terms of payment of processing fees, provisioning of security/bank guarantees, as necessary.

7. Operate the solar power plant as envisaged under PPA

8. Provide appropriate facility/ instrumentation/ metering arrangement to enable remote monitoring of generation

#### **5. Eligibility Conditions for Project Proponent:**

##### **5.1. Technical Criteria**

The project schemes proposing to deploy PV modules and Inverter systems shall be considered to be technically qualified and eligible for participation in the RPSSGP scheme only if they comply with relevant IEC/BIS standards and/or applicable standards as specified by Central Electricity Authority. For Solar PV Projects to be selected under this scheme, it will be mandatory for Projects based on crystalline silicon technology to use the modules manufactured in India while there will be no mandatory domestic content requirement for Projects based on other technologies. For solar thermal technology, it will be mandatory that the technology is demonstrated and such projects have been in operation for 1 year. Project Proponent should submit the documentary evidence and undertaking in this regard along with application to the State Competent Authority.

##### **Metering arrangements**

Metering arrangements shall be made by the Project Proponent in consultation with the distribution utility keeping in view guidelines/regulations notified by respective SERC's, if any. Meters shall comply with the requirements of CEA regulation on 'Installation and Operation of meters'.

##### **5.2. Financial Criteria**

The Project Proponent shall submit the letter of commitment along with Board Resolution for equity investments in the Project calculated on the basis of Rs 4 Crore/MW on a pro-rata basis.

##### **5.3. Infrastructure Criteria: Land Requirement**

The Project Proponent should have made arrangements for land required for the project as per

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conditions outlined by respective State Competent Authority.

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#### **5.4. Infrastructure Criteria: Grid Connectivity Requirement**

The plant should be designed for interconnection with the grid at distribution network at the voltage level depending on installed capacity of rooftop PV or small solar system generator

- Less than 100 kW : LT- single/ three phase
- 100 kW and upto 2 MW : HT level (below 33kV) at distribution network

Further, the interconnections should be at the nearest distribution transformer/substation. In this regard, the Project Proponent shall submit a letter from the concerned Distribution Utility confirming technical feasibility of connecting the plant to the distribution transformer/substation.

#### **6. Modalities of Disbursement of GBI by Programme Administrator:**

##### **6.1. Certification of Generation**

For claiming the Generation Based Incentive (GBI), the Distribution Utility shall submit the Certificate of Generation to the Programme Administrator. The basis for claim shall be in accordance with the Guidelines under the RPSSGP. The Certificate of Generation shall pertain to monthly meter readings.

##### **6.2. Processing and Disbursement of Claims for GBI**

The claim for GBI by state distribution utility may be submitted on a monthly basis (by 15th of each month) to the Programme Administrator. It shall be accompanied by documentary evidence of having made payment for the electricity generated by the Project for the corresponding month. The Programme Administrator shall disburse the claimed amount to the concerned state distribution utility after preliminary scrutiny, within a period not exceeding 15 days.

All payments made against Monthly Bills shall be subject to quarterly reconciliation (detailed scrutiny) at the beginning of following quarter and the monthly disbursement pertaining to the first month of that quarter shall take the same into account.

##### **6.3. Funding Support to Programme Administrator**

To ensure release of timely payment to the state distribution utilities, MNRE would place 50% of the estimated annual requirement of funds with IREDA upfront at the beginning of each financial year. The balance 50% would be released as second tranche of the annual requirement to IREDA within a reasonable period of time, after receipt of Utilization Certificate, of not less than 50% of the first tranche released to IREDA. While releasing the second tranche, MNRE would take into consideration, revision in initial annual estimate (if any) for appropriate funding. MNRE would also fund IREDA for meeting the expenditure towards development of software and associated hardware costs, based on an estimate provided by IREDA, for implementing and monitoring the scheme effectively. IREDA would present an audited annual statement of accounts.

In the eventuality of delay in receipt of funds from the MNRE, the Programme Administrator shall ensure access to an alternative funding source such as a standby facility with a commercial bank so

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that payment of the GBI amount to the DISCOMs is disbursed within the specified timeframes. The mechanism of a standby facility would entail additional costs, which would be reimbursed to the Programme Administrator on actuals. This would facilitate timely release of funds by Programme Administrator to Utilities towards their GBI claim.

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The Programme Administrator shall be entitled to receive service charges/fund administration charges @ 2% of the funds handled under the programme. The interest earned on surplus funds, if any, shall be credited to the fund account by Programme Administrator.

## **7. Timelines for Programme Management**

Commencement of Registration by Programme

Administrator

15<sup>th</sup> July 2010

Announcement of Initial Shortlist 16<sup>th</sup> August 2010

## **8. Power to remove difficulties**

If any difficulty arises in giving effect to any provision of these guidelines or interpretation of the guidelines, the Committee to be constituted by Ministry of New and Renewable Energy shall meet and take decision, which will be binding on all parties.

## **9. Glossary**

(i) **CERC or Central Commission** shall mean Central Electricity Regulatory Commission;

(ii) **State Competent Authority** shall mean a 'Designated Agency' appointed by State Government for pre-registration of the Rooftop PV projects or Small Solar Power Projects at State level to be eligible to participate in this programme.

(iii) **GBI** shall mean Generation Based Incentive to be paid by Programme Administrator to local Distribution Utility under this Programme;

(iv) **Local Distribution Utility** shall mean distribution licensee within whose area the rooftop PV or Small Solar Power plant is located and interconnected with distribution network of such distribution licensee.

(v) **MoU-1** shall mean Memorandum of Understanding to be entered into between Project Proponent and local Distribution Utility for sale/purchase of electricity generated from proposed Rooftop PV or Small Solar power project subsequent to pre-registration of the Project with State Competent Authority but prior to Registration of Project with Programme Administrator;

(vi) **MoU-2** shall mean Memorandum of Understanding to be entered into between Programme Administrator and local Distribution Utility for disbursement of GBI under this programme;

(vii) **MNRE** shall mean Ministry of New and Renewable Energy, Government of India;

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(viii) **PPA** shall mean Power Purchase Agreement to be entered into between Project Proponent and local Distribution Utility for sale/purchase of electricity generated from proposed Rooftop PV or Small Solar power project;

(ix) **Project Proponent** shall mean developer of the rooftop PV and/or small solar power project, who shall own and operate such solar power generation project and wishes to participate in the Rooftop PV and Small Solar Generation Programme (RPSSGP) in accordance with these Guidelines;

(x) **Programme Administrator** shall mean Indian Renewable Energy Development Agency (IREDA) for administration of RPSSGP Programme in accordance with these Guidelines;

(xi) **RPSSGP** shall mean Rooftop PV and Small Solar Generation Programme as outlined under these Guidelines;

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(xii) **SERC or State Commission** shall mean State Electricity Regulatory Commission;

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### **Technical Requirements: Grid Solar Power Plants**

The following are some of the technical measures required to ensure quality of the PV modules and other components used in rooftop and small grid solar power projects.

#### **1. PV Module Qualification**

1.1 The PV modules used in the grid connected solar power projects must quality to the latest edition of any of the following IEC PV module qualification test or equivalent BIS standards.

Crystalline Silicon Solar Cell Modules IEC 61215 Edition II

Thin Film Modules IEC 61646

Concentrator PV modules IEC 62108

1.2 In addition, PV modules must qualify to IEC 61730 Part I & II, for safety qualification testing. For the PV modules to be used in a highly corrosive atmosphere throughout their lifetime, they must qualify to IEC 61701.

#### **2. Qualification of BoS items**

2.1 The solar PV power plants set up under the Mission must use PV modules and other balance of systems components, which must qualify to the latest edition of BIS or IEC standards issued in this regard. The project developers must provide a copy of the relevant test reports and certificates to IREDA..

#### **3. Authorized Test Centers**

3.1 The PV modules must be tested and approved by one of the IEC authorized test centers. Test certificates can be from any of the NABL/ BIS Accredited Testing / Calibration Laboratories.

3.2 Ministry will review the list of authorized testing laboratories/centers from time to time.

#### **4. Warranty**

4.1 The mechanical structures, electrical works including inverters/charge controllers/power conditioning unit/ maximum power point tracker, distribution board/digital meters and overall workmanship of the roof top and small grid solar power plants must be warranted for a minimum of 5 years.

4.2 PV modules used in solar power plants must be warranted for output wattage, which should not be less than 90% at the end of 10 years and 80% at the end of 25 years.

#### **5. Identification and Traceability**

Each PV module used in any solar power project must use a RF identification tag. The following information must be mentioned in the RFID used on each module. This can be inside or outside the laminate, but must be able to withstand harsh environmental conditions:-

(i) Name of the manufacturer of PV Module

(ii) Name of the Manufacturer of Solar cells

(iii) Month and year of the manufacture (separately for solar cells and module)

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(iv) Country of origin (separately for solar cells and module)

(v) I-V curve for the module

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- (vi) Wattage,  $I_m$ ,  $V_m$  and FF for the module
- (vii) Unique Serial No and Model No of the module
- (viii) Date and year of obtaining IEC PV module qualification certificate
- (ix) Name of the test lab issuing IEC certificate
- (x) Other relevant information on traceability of solar cells and module as per ISO 9000 series.

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## **MPUVN - Right to Information**

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### **Chapter – 15 (Manual – 14)**

Norms set by it for the discharge of its  
functions

**Information available in an electronic form**

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Office website address as follows :

[www.mprenewable.nic.in](http://www.mprenewable.nic.in)

## **MPUVN - Right to Information**

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### **Chapter – 17 (Manual – 16)**

Particulars of the facilities available to citizens for obtaining information

**17.1 Means methods are facilitation available to the –public which are adopted by the department for dissemination of information.**

Like

- Office Library

Nigam has its own office library situated at Head Office, Bhopal.

- As per sanction of MNRE and State Govt. Budget allocation various "Information & Publicity" activities for creating awareness about renewable energy in Madhya Pradesh as under :-

- Exhibition Organize from time to time

- Orientation and awareness camps
- Advertisement in newspapers and magazine
- Outdoor publicity - Hoardings, Bus Stop Shelters and Wall Paintings
- Publicity through TV/Radio Spots/Jingles
- Publicity through Katputli/ Nukkad Natak/ Road show etc.
- Publicity through handbill, Pumptlets, Posters, Brochures, Booklets, Essay and Painting Competitions etc.
- Notice Board  
Nigam has one Notice Board.
- Inspection of Records in the office  
Whenever required.
- System of issuing of copies of documents  
As per rules.
- Printed manual Available  
Under publication.
- Website of the Public Authority  
Under process.

## **MPUVN - Right to Information**

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### **Chapter – 18(Manual– 17)**

#### Other Useful Information

#### **18.1 Frequently Asked Questions and their Answers by Public**



- What is energy audit ?

To show the energy gap between the demand and supply of energy.

- Can we save electricity from energy audit ?

Yes.

- What is biomass ?

Agriculture Waste and forest residue which are useless are called Biomass.

- What is IREP ?

In this programme the villagers are given minimum energy need.

- What is solar cooker ?

It is device in which food is cooked from solar energy.

- What is the cost of solar cooker ?

The new rates are yet to be decided.

- What is Solar Water Heating System ?

It is a device in which water is heated through solar energy.

- What is Solar Photovoltaic System ?

It is device in which electricity is produced from Solar Energy.

## 18.2 Related to seeking Information

- Application form (a copy of filled application form for reference)

- Fee

- How to write a precise information request- Few Tips

- Right of the Citizen in case of denial of information and procedure to appeal

As per guidelines of Govt.

## 18.3 With relation to training imparted to public by Public Authority

No training programme is arranged for the public.

- Name of training programme with brief description ?

For O&M of systems under usha kiran urja programme.

- Time period for Training Programme/Scheme ?

As per the Programme.

- Objective of training ?

O&M of various systems.

· Physical and Financial Targets (Last Year)

As per Manual No. 12

· Eligibility for training

As per Manual No. 12

· Perquisite for training (if any)

To Promote non convention al energy sources in districts/villages/manjre tole.

· Financial and other form of help (if any)

As per Manual No. 12

· Description of help (Mention the amount of Financial help, if any)

As per Manual No. 12

· Procedure of giving help

As per Manual No. 12

· Contact information for applying

Managing Director, M.P. Urja Vikas Nigam Ltd., Shivaji Nagar, Bhopal

· Application Fee (Wherever applicable)

As per Govt. Rules.

· Other Fees (Wherever applicable)

As per Govt. Rules

· Application Form (In case the application is made on plain paper, please mention the details which the applicant has to provide)

As per Govt. Rules

· List of enclosures/ documents

-

- Format of enclosures/ documents

-

- Procedure of application

As per Govt. Rules

- Selection Procedure

As per Govt. Rules

- Time table of training programme (In case available)

Not applicable.

- Process to inform the trainee about the training schedule

News paper, advertisement and District Panchayat.

- Arrangement made by the Public Authority for creating public awareness about the training programmes.

Work shop, exhibition, News paper.

- List of Beneficiary of the training programme at various levels like district level, block level etc.

Contact DREO.

18.4 With relation to Certificate, No objection certificate etc issued by the Public Authority not included in Manual

– 13 - Not applicable -

- Name and description of the certificates and NOCs
- Eligibility for applying
- Contact Information for applying
- Application Fee (Wherever applicable)
- Other Fees (Wherever applicable)
- Application Form (In case the application is made on plain paper, please mention the details which the applicant has to provide)
- List of enclosures/ documents
- Format of enclosures/ documents
- Procedure of application
- Process followed in the Public Authority after the receipt of application
- Normal time taken for issuance of certificate
- Validity period of certificate (If applicable)

- Process of renewal (If any)

18.5 With relation to registration process - Not applicable -

- Objective
- Eligibility for registration
- Pre requisites (if any)
- Contact information for applying
- Application Fee (Wherever applicable)
- Other Fees (Wherever applicable)
- Application Form (In case the application is made on plain paper, please mention the details which the applicant has to provide)
- List of enclosures/ documents
- Format of enclosures/ documents
- Procedure of application
- Process followed in the Public Authority after the receipt of application
- Validity period of certificate (If applicable)
- Process of renewal (If any)

18.6 With relation to collection of tax by Public Authority (Municipal Corporation, Trade Tax, Entertainment Tax etc.) - Not applicable -

- Name and description of tax
- Purpose of tax collection
- Procedure and criteria for determination of tax rates
- List of major defaulters

18.7 With relation to issuing new connection electricity / water supply, temporary and permanent disconnection etc. (This will be applicable to local bodies like Municipal Corporation/ Municipalities/ UPCL) - Not applicable -

- Eligibility for connection
- Pre requisites (if any)
- Contact information for applying
- Application Fee (Wherever applicable)
- Other Fees/ Charges (Wherever applicable)
- Application Form (In case the application is made on plain paper, please mention the details which the applicant has to provide)
- List of enclosures/ documents
- Format of enclosures/ documents
- Procedure of application
- Process followed in the Public Authority after the receipt of application
- Brief description of terms used in the bills
- Contact information in case of problems regarding Bills or service
- Tariff and other charges

18.8 Details of any other public services provided by the Public Authority.

Non-Conventional Energy Sources.

Details of related Institutions?

Programme

Go Samwardhan Se Swawlambanj Priyojna

· Name and address of related institution ?

State level advisory committee/ Technical committee MP UVN H.O. Bhopal.

· Type of Institution ( Board/Parishad/Commitee/Others)

Committee.

· Short description of the Institution ( Year of establishment, purpose, main works)

Go Samwardhan Se Swawlambanj Priyojna is formed in the year 2004 by Govt. of M.P.

· Introduction of the Institution

· Name of Head officer - Managing Director, MP Urja Vikas Nigam Ltd., Bhopal

· Head Office Address - 'Urja Bhawan' Link Road, No.2, Shivaji Nagar, Bhopal.

· Duration of meeting - As an when required.

· Whether Public can

participate in the meeting - No

· Whether minuites of the - Yes

meeting are prepared

· Whether public can demand - As per Govt. rules

minutes of the meeting.

2.2 Name and address of concerned insitutions ?

· Study of Energy and Research Centre, Devi Ahilya Vishwavidhayala, Khandwa Road, Indore.

Type of Institution(Board/Parishad/Committee)

· Others

Introduction of Institution

- Advisory, Academic Research and Development Works.
- Shri C.S. Chadda, Chairman & Life time member
- Shri Sanjay Dubey , Vice President
- Shri S.M. Das Gupta, Member
- Shri M.S. Sodha, Member
- Shri Bamhoria, Member
- · Shri T.G.K. Menon, Member
- Shri S. P. Singh, Member
- Shri H.P. Garg, Member
- Name of Head officer - Director, CESR, Indore
- Head Office Address - Study of Energy and Research Centre, Devi Ahilya Vishwavidhayala, Khandwa Road, Indore.
- Duration of meeting - As and hen required.
- Whether Public can  
participate in the meeting - No
- Whether minuites of the - Yes  
meeting are prepared
- Whether public can demand - No  
minutes of the meeting.

2.3 Name and address of related institution ?

· M.P. Wind Farm Limited 102 Zone-II, M.P. Nagar, Bhopal

Type of Institution ( Board/Parishad/Committee/Others)

· Others.

Short description of the Institution ( Year of establishment, purpose, main works)

· In the field of Wind Energy it is established in the year 1994. Works for investors infrastructure facilities production, supply, connection with the grid.

Work on turn key basis for power generation.

· Installation/operation & maintenance of Wind Energy Systems.

Introduction of Institution

· Executive body.

Type & present member

As per the company Act 1956 jointly registered. In this organisation 25% shares are of MP Urja Vikas Nigam Ltd., 24% of the IREDA and rest 51% are of Energy Consultant.

1 Shri Karmveer Sharma - Managing Director

2. Shri Manan Kumar Deb - M.D.

3. Dr. J.R. Meshram - Director, MNRE

4. Shri K. Shridharan - Chief G.M. IREDA

5. Brig. Guru Bakhsh Singh -

6. Prof, M.S.M. Das Gupta

7. Shri Rajan Deb

8. Representative of MP UVN & MPSEB

· Name of Head officer - Shri Manan Kumar Dev

Head Office Address - M.P. Wind Farm Limited 102 Zone-II, M.P. Nagar, Bhopal

· Duration of meeting - 3 to 4 times in a year.

· Whether Public can

participate in the meeting - No

· Whether minutes of the - Yes

meeting are prepared

· Whether public can demand - Yes as per Govt. rules.

minutes of the meeting.

2.4 Name and address of concerned institutions ?

· State level Committee.

Type of Institution ( Board/Parishad/Committee/Others)

· Committee.

Introduction of Institution

· In the field of Wind Energy it is established in the year 1995. Works for investors infrastructure facilities production, supply, connection with the grid and to provide facilities as per gadget No. A-3-32-94(5) dated 28/2/96 and Gadget No. A-3-32-94(5) 69,70,71,72 dated 14/9/96.

· Role of concerned Institution (Advisory committee, Managerial / Executive / Others )

Others.

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Present Members

1. Principal Secretary - Chairman
2. Managing Director, MPUVN - Member
3. Secretary, Industries - Member
4. Commercial Tax Commissioner - Member
5. Chief Engineer, Electrical Safety- Member
6. Executive Director MPSEB - Member
7. Chief Engineer, MPUVN – Member

1. Name of Head officer - Shri Sanjay Dubey , PS Energy, Govt. of M.P.

2. Head Office Address - M.P. Secretariate, Vallabh Bhawan, Bhopal.

3. Duration of meeting - 3 months.

4. Whether Public can

participate in the meeting - No

· Whether minutes of the - Yes

meeting are prepared

· Whether public can demand - Yes as per Govt. rule.  
minutes of the meeting.

2.5 Name and address of concerned institutions ?

District Renewable Energy Advisory Committee ?

· This is functional in all district headed by the Collector.

Type of Institution ( Board/Parishad/Committee/Others)

· Committee.

Introduction of Institution

· This committee is formed by MNRE New Delhi and Govt. of M.P. in the year 2005 to implement and publicity for the programmes related to Non-Conventional Energy Sources.

· Role of concerned Institution (Advisory committee, Managerial / Executive / Others )

· Advisory.

Type and Present Members

· This committee is formed by MNRE New Delhi and Govt. of M.P. in the year 2005 to implement and publicity for the programmes related to Non-Conventional Energy Sources.

Present Members



1. District Collector - chairman
2. Project Director DRDA - Member
3. CEO, Jila Panchayat - Member
4. General manager, DIC - Member
5. DFO/Dy. Director (Social Forestry) Member
6. Civil Surgeon - Member
7. District Information Officer - Member
8. President, Bar Council - Member
9. Local Industries Association - Member
10. Representative of Hon'ble - Member  
Member of Parliament
11. Representative of NGO - Member
12. Representative of Rotary Club - Member
13. Representative of Lions Club - Member
14. Representative of Nehru Yuva - Member  
Kendra.
15. Bank Manager - Member
16. DREO, MP UV N - Member

- Name of Head officer - District Collector
- Head Office Address - Collectorate

- Duration of meeting - 3 months.
- Whether Public can  
participate in the meeting - No
- Whether minutes of the - Yes  
meeting are prepared
- Whether public can demand - Yes as per Govt. rule.  
minutes of the meeting.