



Government of Jammu and Kashmir

**R F D**

(Results-Framework Document)  
for

Department of Science & Technology

(2013-2014)

## Section 1: Vision, Mission, Objectives and Functions

### Vision

Optimum use of new and renewable energy sources and develop scientific temper among people of the state.

### Mission

Develop, demonstrate and commercialize technologies for harnessing new and renewable energy sources. Shift from non renewable and depleting sources of energy to renewable source of energy to harness the potential of Science and technology as instrument of socio economic change. Replace use of different fossil fuels wherever possible, and increase access to electricity/ lighting in remote and rural areas, through Renewable Energy Systems. Creating necessary infrastructure for advanced studies, research and application of science and technology in a substantial way. Providing necessary infrastructure and incentives for identification, enhancement and promotion of innovations.

### Objectives

- 1 To promote development and deployment of grid-interactive and off-grid/ distributed renewable power generation projects for augmenting contribution of renewables in total electricity mix
- 2 To promote renewable energy initiatives for meeting energy/ lighting needs in un-electrified areas
- 3 To promote renewable energy initiatives to supplement energy needs in rural/ urban areas
- 4 New initiatives and Management actions
- 5 Development of manpower the help of talent promotion, entrepreneurship development and scholarship programmes.
- 6 Scientific and Technology Development.
- 7 Development of Scientific temper in the state.
- 8 Providing of S&T facilities
- 9 New Ideas/ Innovations.
- 10 Promoting awareness of science and transfer of new technologies to the society.

### Functions

- 1 Putting in place suitable policy and regulatory framework at State/District level for growth of new and renewable energy sector.
- 2 Making available necessary fiscal and financial incentives to domestic industry, developers/ investors and users for development/ deployment of: - Grid interactive / Off-grid renewable power systems to supplement fossil fuels based electricity generation – Standalone RE systems/ devices and services to supplement energy needs of cooking, lighting & motive power in rural areas - RE systems and services for urban, industrial & commercial applications.

## Section 1: Vision, Mission, Objectives and Functions

- 3 Human Resource Development in the new and renewable energy sector.
- 4 Fostering national cooperation in new and renewable energy sector
- 5 Information, Publicity, Public Awareness creation in the Renewable Energy (RE) sector.
- 6 Undertaking resource assessment and potential estimation studies for all new and renewable sources of energy.
- 7 Organization of training programmes, seminars and workshops. Sponsoring of research projects. Technology Transfer. Scholarships to meritorious students etc.

## Section 2: Inter se Priorities among Key Objectives, Success indicators and Targets

Objective	Weight	Action	Success Indicator	Unit	Weight	Target / Criteria Value				
						Excellent	Very Good	Good	Fair	Poor
						100%	90%	80%	70%	60%
[1] To promote development and deployment of grid-interactive and off-grid/ distributed renewable power generation projects for augmenting contribution of renewables in total electricity mix	25.00	[1.1] Commissioning solar power plants off-grid JNNSM Mission of MNRE & BADP (2 MW)	[1.1.1] Total capacity of solar power plants commissioned	MW	10.00	2.0	1.8	1.6	1.4	1.2
			[1.1.2] Number of solar power plants	Number	10.00	25	22	20	17	15
		[1.2] Commissioning aero generators/ Wind + SPV hybrid systems	[1.2.1] Number of wind mast commissioned	Number	3.00	2	2	2	1	1
		[1.3] To conduct sample survey of off grid system	[1.3.1] Number of third party sample surveys conducted	Number	2.00	25	22.5	20	17.5	15
[2] To promote renewable energy initiatives for meeting energy/ lighting needs in un-electrified areas	15.00	[2.1] Coverage of Remote Villages - No. of villages provided with RE systems	[2.1.1] Number of villages covered	Number	7.50	40	36	32	28	24
		[2.2] Micro-hydel plants (below 2 MW). These power project are being developed without making any change in flow of river and thus will not effect surrounding eco-system.	[2.2.1] total capacity of Micro-hydel plants	MW	2.50	20	18	16	14	12
			[2.2.2] Number of Micro-hydel plants	Number	2.50	20	18	16	14	12
		[2.3] Decentralised SPV systems Solar Home Lantern/Solar Street Lighting	[2.3.1] Number of Solar Home Lantern/Solar Street Lights	Number	2.50	3500	3150	2800	2450	2100

## Section 2: Inter se Priorities among Key Objectives, Success indicators and Targets

Objective	Weight	Action	Success Indicator	Unit	Weight	Target / Criteria Value				
						Excellent	Very Good	Good	Fair	Poor
						100%	90%	80%	70%	60%
			distributed/installed							
[3] To promote renewable energy initiatives to supplement energy needs in rural/ urban areas	10.00	[3.1] Decentralised SPV systems SHLs	[3.1.1] Number of SPV systems distributed	Number	5.00	20000	18000	16000	14000	12000
		[3.2] Installation of Family type Biogas Plants [Mostly Family type plants of 2 cum. digester capacity.	[3.2.1] Number of biogas plants installed	Number	3.00	150	135	120	105	90
		[3.3] Installation of Solar Thermal systems in rural/urban households/buildings-total Collectors Area to be installed [Includes deployment in Industry also].	[3.3.1] Total collector area covered under solar thermal systems in rural/urban households/buildings	Sq. Mtrs.	2.00	5000	4500	4000	3500	3000
[4] New initiatives and Management actions	5.00	[4.1] Distribution of solar cookers.	[4.1.1] Number of solar cookers distributed	Number	1.50	6000	5400	4800	4200	3600
		[4.2] Distribution of Bio-mass Chulhas	[4.2.1] Number of Bio-mass Chulhas distributed	Number	1.50	10000	9000	8000	7000	6000
		[4.3] Wind Monitoring Stations.	[4.3.1] No. of wind monitoring stations created.(Sites are finalized by the C-WET)	Number	1.00	2	2	2	1	1
		[4.4] Information and Public Awareness(I&PA)	[4.4.1] Number of Information and public awareness activities	Number	0.50	10	9	8	7	6

## Section 2: Inter se Priorities among Key Objectives, Success indicators and Targets

Objective	Weight	Action	Success Indicator	Unit	Weight	Target / Criteria Value				
						Excellent	Very Good	Good	Fair	Poor
						100%	90%	80%	70%	60%
		[4.5] Management Action - Stakeholders consultations.	[4.5.1] Number of stakeholder consultation meets	Number	0.50	2	2	2	1	1
[5] Development of manpower the help of talent promotion, entrepreneurship development and scholarship programmes.	7.00	[5.1] To invite application through wide publicity.	[5.1.1] Number of Scientists	Number	7.00	3	2	1	1	0
[6] Scientific and Technology Development.	7.00	[6.1] Young Scientist Awards/Fellowships.	[6.1.1] Public	Number	7.00	7	6	5	4	3
[7] Development of Scientific temper in the state.	7.00	[7.1] To conduct awareness programmes.	[7.1.1] Programmes	Number	7.00	7	6	5	4	3
[8] Providing of S&T facilities	7.00	[8.1] Upgrading of research laboratories	[8.1.1] Laboratories	Number	7.00	7	6	5	4	3
[9] New Ideas/ Innovations.	7.00	[9.1] Proposal for creation of innovation council has been initiated	[9.1.1] Innovators	Number	7.00	7	6	5	4	3
* Efficient Functioning of the RFD System	5.00	Timely Submission of Draft Approval	On time Submission	Date	2.0	20/03/2013	21/03/2013	22/03/2013	25/03/2013	26/03/2013
		Timely Submission of Results	On time Submission	Date	1.0	01/05/2014	02/05/2014	03/05/2014	06/05/2014	07/05/2014
		Finalize Strategic Plan (After meeting all intermediate deadline)	Finalize the Strategic Plan for next 5 years	Date	2.0	10/06/2013	14/06/2013	18/06/2013	24/06/2013	28/06/2013
* Improving Internal Efficiency / Responsiveness Service Delivery of Department	5.00	Development RFDs for all Responsibility centers (Subordinate officers,Attached Officers and Autonomous Bodies)	Percentage of RCs covered	%	2.0	100	95	90	85	80

\* Mandatory Objective(s)

## Section 2: Inter se Priorities among Key Objectives, Success indicators and Targets

Objective	Weight	Action	Success Indicator	Unit	Weight	Target / Criteria Value				
						Excellent	Very Good	Good	Fair	Poor
						100%	90%	80%	70%	60%
		Implementation of Sevottam	Create a compliant System to implement,monitor and review Citizen's/Client's Charter	Date	2.0	15/09/2013	20/09/2013	25/09/2013	30/09/2013	01/10/2013
			Create a compliant system to redress and monitor to public Grievances	Date	1.0	15/09/2013	20/09/2013	25/09/2013	30/09/2013	01/09/2013

\* Mandatory Objective(s)

### Section 3: Trend Values of the Success Indicators

Objective	Action	Success Indicator	Unit	Actual Value for FY 11/12	Actual Value for FY 12/13	Target Value for FY 13/14	Projected Value for FY 14/15	Projected Value for FY 15/16
[1] To promote development and deployment of grid-interactive and off-grid/ distributed renewable power generation projects for augmenting contribution of renewables in total electricity mix	[1.1] Commissioning solar power plants off-grid JNNSM Mission of MNRE & BADP (2 MW)	[1.1.1] Total capacity of solar power plants commissioned	MW	--	2.0	1.8	2.0	2.2
		[1.1.2] Number of solar power plants	Number	--	180	200	150	100
	[1.2] Commissioning aero generators/ Wind + SPV hybrid systems	[1.2.1] Number of wind mast commissioned	Number	--	0	2	2	3
	[1.3] To conduct sample survey of off grid system	[1.3.1] Number of third party sample surveys conducted	Number	--	0	22	26	30
[2] To promote renewable energy initiatives for meeting energy/ lighting needs in un-electrified areas	[2.1] Coverage of Remote Villages - No. of villages provided with RE systems	[2.1.1] Number of villages covered	Number	--	156	36	0	0
	[2.2] Micro-hydel plants (below 2 MW). These power project are being developed without making any change in flow of river and thus will not effect surrounding eco-system.	[2.2.1] total capacity of Micro-hydel plants	MW	--	9.95	18	22	25
		[2.2.2] Number of Micro-hydel plants	Number	--	6	18	22	24
	[2.3] Decentralised SPV systems Solar Home	[2.3.1] Number of Solar Home Lantern/Solar	Number	--	15150	3150	500	0



### Section 3: Trend Values of the Success Indicators

Objective	Action	Success Indicator	Unit	Actual Value for FY 11/12	Actual Value for FY 12/13	Target Value for FY 13/14	Projected Value for FY 14/15	Projected Value for FY 15/16
	Lantern/Solar Street Lighting	Street Lights distributed/installed						
[3] To promote renewable energy initiatives to supplement energy needs in rural/ urban areas	[3.1] Decentralised SPV systems SHLs	[3.1.1] Number of SPV systems distributed	Number	--	20000	18000	20000	20000
	[3.2] Installation of Family type Biogas Plants [Mostly Family type plants of 2 cum. digester capacity.	[3.2.1] Number of biogas plants installed	Number	--	206	135	200	200
	[3.3] Installation of Solar Thermal systems in rural/urban households/buildings-total Collectors Area to be installed [Includes deployment in Industry also].	[3.3.1] Total collector area covered under solar thermal systems in rural/urban households/buildings	Sq. Mtrs.	--	3000	4500	5000	5000
[4] New initiatives and Management actions	[4.1] Distribution of solar cookers.	[4.1.1] Number of solar cookers distributed	Number	--	--	5400	--	--
	[4.2] Distribution of Bio-mass Chulhas	[4.2.1] Number of Bio-mass Chulhas distributed	Number	--	0	9000	10000	10000
	[4.3] Wind Monitoring Stations.	[4.3.1] No. of wind monitoring stations created.(Sites are finalized by the C-WET)	Number	--	4	2	2	2
	[4.4] Information and Public Awareness(I&PA)	[4.4.1] Number of Information and public awareness activities	Number	--	10	9	10	10

### Section 3: Trend Values of the Success Indicators

Objective	Action	Success Indicator	Unit	Actual Value for FY 11/12	Actual Value for FY 12/13	Target Value for FY 13/14	Projected Value for FY 14/15	Projected Value for FY 15/16
	[4.5] Management Action - Stakeholders consultations.	[4.5.1] Number of stakeholder consultation meets	Number	--	1	2	2	2
[5] Development of manpower the help of talent promotion, entrepreneurship development and scholarship programmes.	[5.1] To invite application through wide publicity.	[5.1.1] Number of Scientists	Number	--	0	2	2	2
[6] Scientific and Technology Development.	[6.1] Young Scientist Awards/Fellowships.	[6.1.1] Public	Number	--	0	6	6	6
[7] Development of Scientific temper in the state.	[7.1] To conduct awareness programmes.	[7.1.1] Programmes	Number	--	0	6	6	6
[8] Providing of S&T facilities	[8.1] Upgrading of research laboratories	[8.1.1] Labortries	Number	--	0	6	6	6
[9] New Ideas/ Innovations.	[9.1] Proposal for creation of innovation council has been initiated	[9.1.1] Innovators	Number	--	0	6	6	6
* Efficient Functioning of the RFD System	Timely Submission of Draft Approval	On time Submission	Date	--	22/03/2012	21/03/2013	22/03/2014	25/03/2015
	Timely Submission of Results	On time Submission	Date	--	21/03/2012	02/05/2014	12/05/2014	15/05/2015
	Finalize Strategic Plan (After meeting all intermediate deadline)	Finalize the Strategic Plan for next 5 years	Date	--	24/03/2012	14/06/2013	16/06/2014	20/06/2015
* Improving Internal Efficiency / Responsiveness Service Delivery of Department	Development RFDs for all Responsibility centers (Subordinate officers,Attached Officers and Autonomous Bodies)	Percentage of RCs covered	%	--	93	95	96	97

\* Mandatory Objective(s)

### Section 3: Trend Values of the Success Indicators

Objective	Action	Success Indicator	Unit	Actual Value for FY 11/12	Actual Value for FY 12/13	Target Value for FY 13/14	Projected Value for FY 14/15	Projected Value for FY 15/16
	Implementation of Sevottam	Create a compliant System to implement,monitor and review Citizen's/Client's Charter	Date	--	23/03/2012	20/09/2013	22/09/2014	25/09/2015
		Create a compliant system to redress and monitor to public Grievances	Date	--	23/03/2012	20/09/2013	24/09/2015	28/09/2015

\* Mandatory Objective(s)

## Section 4: Acronym

Sl.No	Acronym	Description
1	BADP	Border Area Development Programme
2	JAKEDA	Jammu And Kashmir Energy Development Agency
3	JNNSM	Jawaharlal Nehru National Solar Mission
4	MNRE	Ministry of New and Renewable Energy
5	NVVN	NTPC Vidyut Vyapan Nigam Ltd.
6	RVE	Remote Village Electrification Programme

## Section 4: Acronym

Sl.No	Acronym	Description
7	SHLs	Solar Home Lightning Systems
8	SSLs	Solar Street Lighting Systems

## Section 4: Description and Definition of Success Indicators and Proposed Measurement Methodology

Sl.No	Success indicator	Description	Definition	Measurement	General Comments
1	[1.1.1] Total capacity of solar power plants commissioned	About 2000 no. off-grid power plants to be installed	Solar Power Plants off-grid	Total capacity of the equipment installed	
2	[2.1.1] Number of villages covered	Number of villages provided with Renewable Energy Systems	coverage of remote villages	number of villages covered	
3	[2.2.1] total capacity of Micro-hydel plants	Micro-hydel plants of bout 20.0 MW capacity to be installed	Micro Hydel Plants	total capacity of installed plants	

## Section 5 : Specific Performance Requirements from other Departments

Location Type	State	Organisation Type	Organisation Name	Relevant Success Indicator	What is your requirement from this organisation	Justification for this requirement	Please quantify your requirement from this Organisation	What happens if your requirement is not met.
Central Government		Ministry	Other Union Ministries	[1.1.1] Total capacity of solar power plants commissioned  [1.1.2] Number of solar power plants  [1.2.1] Number of wind mast commissioned  [2.1.1] Number of villages covered  [2.2.1] total capacity of Micro-hydel plants  [2.2.2] Number of Micro-hydel plants  [2.3.1] Number of Solar Home Lantern/Solar Street Lights distributed/installed  [3.1.1] Number of SPV systems distributed  [3.2.1] Number of biogas plants installed  [3.3.1] Total collector area covered under solar thermal systems in	MNRE for cntral financial assistance and timeley sanction of projects	Powers vest with the ministry	100%	Project could not be implemented

## Section 5 : Specific Performance Requirements from other Departments

Location Type	State	Organisation Type	Organisation Name	Relevant Success Indicator	What is your requirement from this organisation	Justification for this requirement	Please quantify your requirement from this Organisation	What happens if your requirement is not met.
				rural/urban households/buildings 6000  [4.2.1] Number of Bio-mass Chulhas distributed  [4.3.1] No. of wind monitoring stations created.(Sites are finalized by the C-WET)  [4.4.1] Number of Information and public awareness activities				
State Government	J & K	Departments	Department of Planning & Development	[1.1.1] Total capacity of solar power plants commissioned  [1.1.2] Number of solar power plants  [1.2.1] Number of wind mast commissioned  [2.1.1] Number of villages covered  [2.2.1] total capacity of Micro-hydel plants	timely sanction of projects/state shares and timely release of funds	powers vest with the department		delay in the implementation of projects



## Section 5 : Specific Performance Requirements from other Departments

Location Type	State	Organisation Type	Organisation Name	Relevant Success Indicator	What is your requirement from this organisation	Justification for this requirement	Please quantify your requirement from this Organisation	What happens if your requirement is not met.
				[2.2.2] Number of Micro-hydel plants  [2.3.1] Number of Solar Home Lantern/Solar Street Lights distributed/installed  [3.1.1] Number of SPV systems distributed  [3.2.1] Number of biogas plants installed  [3.3.1] Total collector area covered under solar thermal systems in rural/urban households/buildings  6000  [4.2.1] Number of Bio-mass Chulhas distributed  [4.3.1] No. of wind monitoring stations created.(Sites are finalized by the C-WET)				

## Section 5 : Specific Performance Requirements from other Departments

Location Type	State	Organisation Type	Organisation Name	Relevant Success Indicator	What is your requirement from this organisation	Justification for this requirement	Please quantify your requirement from this Organisation	What happens if your requirement is not met.
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## Section 6: Outcome/Impact of Department/Ministry

Outcome/Impact of Department/Ministry	Jointly responsible for influencing this outcome / impact with the following department (s) / ministry(ies)	Success Indicator	Unit	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16
1 By deployment of MHPs upto 2 MW capacity in the far flung areas supports the power development department for providing electricity facility in these remote areas which otherwise needs lot of investment for physical connectivity of the areas with the grid stations.This will also help to develop employment generation in remote areas.	MNRE and Planning and Development Department.	(2.1.1) Total capacity of Micro-hydel plants	MW	0	9.95	18	22	25
		(2.2.2) Number of micro-hydel plants	Number	0	6	18	22	24
2 By deployment of decentralized renewable energy devices in the remote areas brings socioeconomic change as students residing in these areas could study late in the evening which otherwise were not able to do in the absence of grid power.	MNRE and P&D Department	(2.1.1) Number of villages covered	Number		156	36	0	0

## Section 6: Outcome/Impact of Department/Ministry

Outcome/Impact of Department/Ministry	Jointly responsible for influencing this outcome / impact with the following department (s) / ministry(ies)	Success Indicator	Unit	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16
		(2.3.1) Number of solar home lantern/solar street lights distributed/installed	Number	0	15150	3150	500	0
		(3.1.1) Number of SPV systems distributed	Number		20000	18000	20000	20000
3 By deployment of cookers and smokeless chulhas the usage of forest wood gets reduced thus saves us from deforestation and in-turn benefits in climate change it also avoids inconvenience and health problems to rural population.	MNRE and P&D Department	(4.1.1) Number of solar cookers deployed/distributed	Number	0	0	10000	2000	2000
		(4.2.1) Number of Smokeless chulhas deployed/distributed	Number	0	0	9000	10000	10000
4 Deployment of off-grid solar power plants in the institutions of health and education not only saves the consumption of diesel being used in generators but also helps to keep the environment clean besides saving of huge expenditure incurred on consumption of diesel, which could be	MNRE and P&D Department	(1.1.1) Total capacity of solar power plants commissioned	MW	0	2.0	1.8	2.0	2.0

## Section 6: Outcome/Impact of Department/Ministry

Outcome/Impact of Department/Ministry	Jointly responsible for influencing this outcome / impact with the following department (s) / ministry(ies)	Success Indicator	Unit	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16
used for other activities of the institution.								
		(1.1.2) Number of solar power plants	Number	0	180	200	150	100