

## **GOVERNMENT OF INDIA**

RFD

(Results-Framework Document)

For

Ministry of New and Renewable Energy (2014-2015)

Results-Framework Document (RFD) for Ministry of New and Renewable Energy- (2014-2015)

# Ministry of New and Renewable Energy

## Results-Framework Document (RFD) for 2014-2015

#### Section 1

### Vision, Mission, Objectives and Functions

#### Vision:

New and Renewable Energy to be a significant source in furtherance of the national aim of energy security and independence.

#### Mission:

- ➤ Develop, demonstrate and commercialize **cost-effective** technologies for harnessing new and renewable energy sources in close concert with corporate, scientific and technical institutions.
- ➤ Replace use of different fossil fuels wherever possible, and increase access to electricity/ lighting in remote and rural areas, through Renewable Energy Systems
- ➤ Increase the contribution of Renewable Energy in the total energy mix of the country to 9 per cent with about 17 per cent contribution to total installed capacity of electricity by the end of 12<sup>th</sup> plan (2016-17).

## **Objectives:**

- 1. To promote deployment of grid-interactive renewable power generation projects to augment contribution of renewables in total electricity mix.
- 2. To promote renewable energy initiatives for meeting energy needs in rural areas
- 3. To promote renewable energy initiatives to supplement energy needs in urban areas
- 4. To promote renewable energy initiatives to supplement energy needs in industry and commercial establishments
- 5. To promote research, design and development activities at premier national institutions and industries on different aspects of new and renewable energy (NRE) technologies.
- 6. To promote new initiatives and management actions for the increasing deployment of Renewable Energy Sources.
- 7. To develop resource base for enhancing the potential of Renewable Energy Sources.
- 8. To promote funding of Innovative Clean Energy Projects from National Clean Energy Fund (NCEF).
- 9. To promote effective Systems for monitoring the programme/performance of installed projects, Programme/Schemes of MNRE.
- 10. Promotion of indigenous Industry in manufacturing of renewable energy systems/ appliances.

#### **Functions:**

- ➤ Putting in place suitable policy and regulatory framework at the national and State levels for growth of new and renewable energy sector.
- 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
  - o RE systems and services for urban, industrial & commercial applications
- Promoting Human Resource Development in the new and renewable energy sector.
- > Fostering international cooperation in new and renewable energy sector
- ➤ Information, Publicity, Public Awareness creation in the Renewable Energy (RE) sector.
- Supporting related Research & Development activities / projects taken up by institutions and industry.
- ➤ Undertaking resource assessment and potential estimation studies for all new and renewable sources of energy.

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

Objectives	Weight	Action	Success Indicator	Unit	Weight		Targe	t/ Criteria Va	lue	
•						Excellent	Very Good	Good	Fair	Poor
						100%	90%	80%	70%	60%
To promote deployment of grid-interactive	30	(1.1)Solar Power plants commissioned in the country	(1.1.1)Capacity addition in FY 2014-15	MW	4	1100	990	880	770	660
renewable power generation projects to augment contribution of		(1.2)Solar Power Projects sanctioned/auctioned by Central Govt.	(1.2.1)Capacity to be sanctioned/auctioned in FY 2014-15	MW	2.5	1000	900	800	700	600
renewables in total electricity mix.			(1.2.2)To obtain the IMG recommendation for VGF and Government's approval for two solar projects of 5 MW each in Gujarat and Rajasthan along with international border.	Date	2.5	31.12.2014	15.01.2015	31.01.2015	28.02.2015	31.03.2015
		(1.3)Solar Power Plants commissioned by Central Govt.	(1.3.1)Capacity addition in FY 2014-15	MW	5	400	360	320	280	240
		(1.4)Bio power (Biomass and Cogeneration) projects commissioned	(1.4.1)Capacity addition in FY 2014-15	MW	5	400	360	320	280	240
		(1.5)Small Hydro Power (SHP) projects commissioned	(1.5.1)Capacity addition in FY 2014-15	MW	5	250	225	200	175	150
		(1.6)Wind power projects commissioned	(1.6.1)Capacity addition in FY 2014-15	MW	4	2000	1800	1600	1400	1200
		(1.7)Urban Waste to Energy projects commissioned	(1.7.1)Capacity addition in FY 2014-15	MW	2	20	18	16	14	12
To promote renewable energy initiatives for	20	(2.1)Installation of Family typeBiogas Plants	(2.1.1)No. of plants installed	No. in lakh	4	1.10	1.08	0.96	0.84	0.72
meeting energy needs in rural areas		(2.2)Installation of Biomass Gasifiers for Village energy supply	(2.2.1)Coverage of villages	No. of villages	2	25	22	20	17	15
		(2.3)Installations of Decentralized SPV systems/ Devices	(2.3.1)Distribution of Lighting Systems	No.	4	50,000	45,000	40,000	35,000	30,000
			(2.3.2)Circulation of target of 1,00,000 pumps amongst the stake holders i.e. States, NABARD and Ministry of	Date	1.5	31.12.2014	15.01.2015	31.01.2015	28.02.2015	31.03.2015

			Drinking Water & Sanitation and as well as finalization of Statewise targets.							
			(2.3.3)Sanctioning of 20,000 solar pumps for irrigation purpose to States during the year.	No.	1.5	20,000	18,000	16,000	14,000	12,000
		(2.4)Installation of Micro Hydel	(2.4.1)No. of Projects Completed	Nos.	2	500	450	400	350	300
		Projects/Watermills	(2.4.2)Capacity addition	MW	<u>-</u> 1	4	3.6	3.2	2.8	2.4
		(2.5)Installation of Aero generators and Wind + SPV	(2.5.1)No. of Projects Completed	No.	1	20	18	16	14	12
		hybrid systems	(2.5.2)Capacity addition	kW	1	500	450	400	350	300
		(2.6)Improved cook stoves	(2.6.1)Distribution of Cook stoves	No.in Lakh	2	7.50	6.75	6.00	5.25	4.50
To promote renewable energy initiatives to supplement energy needs	6	(3.1)Installation of Solar Thermal systems in urbanhouseholds/buildings	(3.1.1) Collector area installed	Lakh Sq m	3	5.00	4.50	4.00	3.50	3.00
in urban areas		(3.2)Roof Top SPV Grid connected systems	(3.2.1)Capacity installed through Rooftop systems	MW	1	50.00	45.00	40.00	35.00	30.00
			(3.2.2)No. of Smart micro-grid projects sanctioned	No.	1	2	2	2	1	1
		(3.3)Solar cookers	(3.3.1)Solar Cookers distributed	No.	1	25,000	22,500	20000	17500	15000
4) To promote renewable energy initiatives to	6	(4.1)Generation of Energy from Industrial Waste	(4.1.1)Capacity installed	MWeq	2	10.00	9.00	8.00	7.00	6.00
supplement energy needs in industry and commercial establishments		(4.2)Decentralized Power Generation through Gasifier in Rice Mills and other industries	(4.2.1)Projects installed	Nos	2	50	45	40	35	30
		(4.3)Biomass based cogeneration in other industries excluding Bagasse	(4.3.1)Capacity added	MWeq	2	80.00	72.00	64.00	56.00	48.00
5) To promote research,	9	(5.1) New R&D projects	(5.1.1)R&D Projects sanctioned	No	1.5	20	18	16	14	12
design anddevelopment activities at premier		sanctioned in solarphotovoltaic, solar thermal,	(5.1.2)To prepare a draft Cabinet Note in consultation with MEA as	Date	1.5	31.12.2014	15.01.2015	31.01.2015	28.02.2015	31.03.2015
nationalinstitutions and industries on differentiaspects of new and renewable energy(NRE) technologies.		Bio energy, New Technologies	well as after consultations with IRENA (if deemed necessary) for forming an alliance with high sun shine countries in the field of R&D in solar energy.							
		(5.2) Percentage of ongoing R&D	(5.2.1)Projects meeting	%	2	100	90	80	70	60

		projects meeting the pre agreed milestones	milestones								
		(5.3) New / ongoing collaborations finalized with leading international institutions	(5.3.1) Collaborations finalized	No.	1	2	2	1	1	1	
		(5.4) New / ongoing collaborations finalized with private sector	(5.4.1) Collaborations finalized	No.	1	4	3	2	1	1	
		(5.5) Number of new products developed for demonstration	(5.5.1)Products developed	No.	1	10	9	8	7	6	
		(5.6) Two promising projects of the Ministry	(5.6.1) Installation of Solar Thermal Power Plants of 500 kw capacity at NISE	Date	0.5	31.12.2014	15.01.2015	31.01.2015	28.02.2015	31.03.2015	
			(5.6.2) Installation of Wind-Solar Hybrid Systems	No.	0.5	5	4	3	2	1	
6)To promote new initiatives and management	7	(6.1)To setup National Wind Energy Mission	(6.1.1)Launching the Mission	Date	1	31.12.2014		31.01.2015	28.02.2015	31.03.2015	
actions for the increasing deployment of Renewable Energy Sources.			(6.2)To bring out Coffee Table Book and RE statistics	(6.2.1)Preparation of Coffee- Table Book and Booklet of RE statistics	Date	1	31.12.2014	15.01.2015	31.01.2015	28.02.2015	31.03.2015
		(6.3)Initiative towards Universal Energy Access	(6.3.1)Assessing Energy Access position based on Census-2011 and NSSO Date	Date	1	31.12.2014		31.01.2015		31.03.2015	
		(6.4)Initiative for setting up Ultra Mega Solar Power Projects and Solar Projects on the banks of canals/canal tops.	(6.4.1)To obtain in principle approval of the Planning Commission to the Scheme of UMSSP/Solar Parks, appraisal of EFC and the Cabinet's approval.	Date	0.5	31.01.2015	15.02.2015		15.03.2015		
				(6.4.2) To obtain in principle approval of the Planning Commission to the Scheme of grid-connected Solar Projects on the banks of canals/canal tops.as well as Cabinet's approval after EFC's appraisal.	Date	0.5	31.01.2015	15.02.2015	28.02.2015		31.03.2015
		(6.5)Developing Smart City Concept and its integration with Solar City programme	(6.5.1)Preparation of a Concept Paper	Date	1	31.12.2014	15.01.2015	31.01.2015	28.02.2015	31.03.2015	

			(6.6.1) Sanction of funds from NCEF	Rs in	1	500	450	400	350	300
		Energy Corridor Scheme (6.7)Setting up of National Bio energy Mission	(6.7.1)Preparation of a Concept Paper	crore Date	1	31.12.2014	15.01.2015	31.01.2015	28.02.2015	31.03.2015
7) To Develop resource base for enhancing the	3	(7.1)Reassessment of wind potentialat 100 m height	(7.1.1)Installation of Masts	No. of Masts	1	20	18	16	14	12
potential of Renewable Energy Sources.		(7.2)Assessment of Solar potential	(7.2.1)Setting up of stations	No.ofStatio ns	1	10	9	8	7	6
		(7.3)Prepare a Policy on Off-shore Wind Power	(7.3.1)Announcement of Policy	Date	1	31.12.2014	15.01.2015	31.01.2015	28.02.2015	31.03.2015
8) To promote funding of Innovative Clean Energy Projects from National Clean Energy Fund (NCEF).	2	(8.1)RE Projects posed to MoF for funding from NCEF	(8.1.1) Amount of Funds involved in projects posed for funding from NCEF	Rs.in crores	2	800	720	640	560	480
9) To promote effective Systems for monitoring the programme/performance of installed projects, Programme/Schemes of MNRE	1	(9.1)Monitoring of Programmes / Projects of MNRE	(9.1.1)Developing a system for online monitoring	Date	1	31.12.2014	15.01.2015	31.01.2015	28.02.2015	31.03.2015
10) To promote indigenous industry in manufacturing of renewable energy (solar energy systems)/appliances	1	(10.1) Strengthening indigenous manufacturers of RE (Solar) appliances (New activity)	(10.1.1)Preparation of a Strategy Paper	Date	1	31.12.2014	15.01.2015	31.01.2015	28.02.2015	31.03.2015
Revised Mandatory Suc	cess Inc	dicators for 2014-15								
Efficient Functioning of the RFD System	3	Timely submission of Draft RFD for 2015-16 for Approval	On-time submission	Date	2	05.03.2015	06.03.2015	09.03.2015	10.03.2015	11.03.2015
·		Timely submission of Results for 2013-14	On-time submission	Date	1	01.05.2014	02.05.2014	03.05.2014	06.05.2014	07.05.2014
Enhanced Transparency/Improved Service delivery	3	Rating from Independent Audit of implementation of Citizens'/Clients' Charter (CCC)	Degree of implementation of commitments in CCC		2	100	95	90	85	80
Ministry/Department		Independent Audit of implementation of Grievance Redress Management (GRM) system	Degree of success in implementing GRM	%	1	100	95	90	85	80
Reforming Administrative	6	Update departmental strategy to align with revised priorities	Date	Date	2	01.11.2014	02.11.2014	03.11.2014	04.11.2014	05.11.2014

		Implement agreed milestones of approved Mitigating Strategies for Reduction of potential risk of corruption	% of Implementation	%	1	100	90	80	70	60
		Implement agreed milestones for implementation of ISO 9001	% of Implementation	%	2	100	95	90	85	80
		% of Responsibility Centers with RFD in RFMS	Responsibility Centers covered	%	1	100	95	90	85	80
		Implement agreed milestones of approved Innovation Action Plans	% of implementation	%	2	100	90	80	70	60
Improve compliance with the Financial Accountability Framework	1	Timely submission of ATNs on Audit paras of C&AG	Percentage of ATNs submitted within due date (4 months) from date of presentation of Report to Parliament by CAG .during the year.	%	25	100	90	80	70	60
		Timely submission of ATRs to the PAC Sectt. On PAC Reports.	Percentage of ATRs submitted within due date (6 months) from date of presentation of Report to Parliament by PAC .during the year.	%	25	100	90	80	70	60
		Early disposal of pending ATNs on Audit Paras of C&AG Reports presented to Parliament before 31.3.2014.	Percentage of outstanding ATNs disposed off during the year.	%	25	100	90	80	70	60
		Early disposal of pending ATRs on PAC Reports presented to Parliament before 31.3.2014	Percentage of outstanding ATRs disposed off during the year.	%	25	100	90	80	70	60

Section 3:
Trend Values of the Success Indicators

Objective	Action	Success Indicator	Unit	Actual Value for FY 12/13	Actual Value for FY 13/14 (upto 31.1.14)	Target Value for FY 14/15	Projected Value for FY 15/16	Projected Value for FY 16/17
1)To promote deployment of grid-interactive renewable	(1.1)Solar Power plants commissioned in the country	(1.1.1) Capacity addition in FY 2014-15	MW	754	522	1100	2200	4500
power generation projects to augment contribution of renewable in totalelectricity	(1.2)Solar Power Projects sanctioned/auctioned by Central Govt.	(1.2.1) Capacity to be sanctioned/auctioned in FY 2014-15	MW	0.00	750	1000	800	1000
mix.		(1.2.2)To obtain the IMG recommendation for VGF and Government's approval for two solar projects of 5 MW each in Gujarat and Rajasthan along with international border.	Date	-	-	31.12.2014	-	-
	(1.3)Solar Power Plants commissioned by Central Govt.	(1.3.1) Capacity addition in FY 2014-15	MW	316	92	400	700	1500
	(1.4)Bio Power (Biomass and Cogeneration) projects commissioned	(1.4.1) Capacity addition in FY 2014-15	MW	460	160	400	400	400
	(1.5)Small Hydro Power (SHP) projects commissioned	(1.5.1) Capacity addition in FY 2014-15	MW	237	142	250	300	350
	(1.6)Wind power projects commissioned	(1.6.1) Capacity addition in FY 2014-15	MW	1700	1096	2000	2500	2500
	(1.7)Urban Waste to Energy projects commissioned	(1.7.1) Capacity addition in FY 2014-15	MW	6.40	3.00	20	20	20
2)To promote renewable energy initiatives for meeting	(2.1) Installation of Family typeBiogas Plants	(2.1.1) No. of plants installed	No. in lakh	1.24	1.20	1.10	1.25	1.25
energy needs in rural areas	(2.2) Installation of Biomass Gasifiers for Village energy supply	(2.2.1) Coverage of villages	No. of villages	25	12	25	30	40
	(2.3) Installation of Decentralized SPV systems/	(2.3.1) Distribution of Lighting Systems	No.	1,52,682	1,75,630	50,000	60,000	70,000
	Devices	(2.3.2)Circulation of target of 1,00,000 pumps amongst the stake holders i.e. States, NABARD and Ministry of Drinking Water &	Date	-	-	31.12.2014	-	-

Objective	Action	Success Indicator	Unit	Actual Value for FY 12/13	Actual Value for FY 13/14 (upto 31.1.14)	Target Value for FY 14/15	Projected Value for FY 15/16	Projected Value for FY 16/17
		Sanitation and obtaining targets as well as finalization of State-wise targets.						
		(2.3.3)Sanctioning of 20,000 solar pumps for irrigation purpose to States during the year.	No.	-	-	20,000	-	-
	(2.4) Installation of Micro Hydel	(2.4.1) No. of Projects Completed	Nos.	405	435	500	650	750
	Projects/Watermills	(2.4.2) Capacity addition	MW	3.10	3.4	4.0	5.00	5.5
	(2.5) Installation of Aero	(2.5.1) No. of Projects Completed	No.	20	10	20	30	40
	generators and Wind + SPV hybrid systems	(2.5.2) Capacity addition	KW	460	70	500	800	1000
	(2.6) Improved cook stoves (New scheme to be sanctioned in 2014-15)	(2.6.1) Distribution of Cook stoves	No.in Lakh	0.00	0.00	7.50	7.50	10.00
3)To promote renewable energy initiatives tosupplement energy needs	(3.1) Installation of Solar- Thermal systems in urban	(3.1.1) Collector area installed	Lakh square meter	1.41	5.10	5.00	5.50	6.00
in urban areas	(3.2) Roof Top SPV Grid connected systems	(3.2.1) Capacity installed through Rooftop systems (New activity)	MW	0.00	0.00	50.00	100.00	100.00
		(3.2.2) No. of Smart micro-grid projects sanctioned (New activity)	No.	0.00	0.00	2	5	10
	(3.3) Solar cookers	(3.3.1) Solar Cookers distributed	No.	5000	6000	25,000	25,000	25,000
4) To promote renewable energy initiatives	(4.1) Generation of Energy from Industrial Waste	(4.1.1) Capacity installed	MWeq	13.82	4.06	10.00	15.00	20.00
tosupplement energy needs in industry andcommercial establishments	(4.2) Decentralized Power Generation through Gasifier in Rice Mills and other industries	(4.2.1) Projects installed	Nos	42	27.00	50.00	60.00	80.00
	(4.3) Biomass based cogeneration in other industries excluding Bagasse	(4.3.1) Capacity added	MWeq	88.65	46.10	80.00	100.00	120.00
5) To promote research,	(5.1) New R&D projects	(5.1.1) R&D Projects sanctioned	No	11	8	20	20	20
design anddevelopment activities at premier national institutions and industries on differentaspects of new and renewable energy	sanctioned in solarphotovoltaic, solar thermal, Bio energy, New Technologies	(5.1.2)To prepare a draft Cabinet Note in consultation with MEA as well as after consultations with IRENA (if deemed necessary) for forming an alliance with high sun	Date	-	-	31.03.2015	-	-

Objective	Action	Success Indicator	Unit	Actual Value for FY 12/13	Actual Value for FY 13/14 (upto 31.1.14)	Target Value for FY 14/15	Projected Value for FY 15/16	Projected Value for FY 16/17
(NRE) technologies.		shine countries in the field of R&D in solar energy.						
	(5.2) Percentage of ongoing R&D projects meeting the pre agreed milestones	(5.2.1) Projects meeting milestones	%	100	80	100	100	100
	(5.3) New / ongoing collaborations finalized with leading international institutions	(5.3.1) Collaborations finalized	No.	3	2	2	3	4
	(5.4) New / ongoing collaborations finalized with private sector	(5.4.1) Collaborations finalized	No.	4	2	4	4	5
	(5.5) Number of new products\(\text{1}\)developed for demonstration	(5.5.1) Products developed	No.	7	1	10	12	
	(5.6) Two promising projects of the Ministry	(5.6.1) Installation of Solar Thermal Power Plants of 500 kw capacity at NISE	Date	One time single activity	One time single activity	31.12.2014	One time single activity	One time single activity
		(5.6.2) Installation of Wind – Solar Hybrid Systems (New activity)	No.	0.0	0.0	5	8	15
6) To promote new initiatives and management actions for	(6.1) To setup National Wind Energy Mission	(6.1.1) Launching the Mission	Date	One time action	One time action	31.12.2014	One time action	One time action
the increasing deployment of Renewable Energy Sources.	(6.2) To bring out Coffee Table Book and RE statistics	(6.2.1) Preparation of Coffee-Table Book and Booklet of RE statistics	Date	One time action	One time action	31.12.2014	One time action	One time action
	(6.3) Initiative towards Universal Energy Access	(6.3.1) Assessing Energy Access position based on Census-2011 and NSSO Date	Date	One time action	One time action	31.12.2014	One time action	One time action
	(6.4) Initiative for setting up Ultra Mega Solar Power Projects (new activity)	(6.4.1)To obtain in principle approval of the Planning Commission to the Scheme, appraisal of EFC and the Cabinet's approval.	Date	-	-	31.01.2015	-	-
		(6.4.2) To obtain in principle approval of the Planning Commission to the Scheme as well as Cabinet's approval after EFC's appraisal.	Date	-	-	31.01.2015	-	-

Objective	Action	Success Indicator	Unit	Actual Value for FY 12/13	Actual Value for FY 13/14 (upto 31.1.14)	Target Value for FY 14/15	Projected Value for FY 15/16	Projected Value for FY 16/17
	(6.5) Developing Smart City Concept and its integration with Solar City programme	(6.5.1) Preparation of a Concept Paper	Date	One time activity	One time activity	31.12.2014	One time activity	One time activity
	(6.6) Mobilizing funds for Green Energy Corridor Scheme (New activity)	(6.6.1) Sanction of funds from NCEF	Rs in crore	0.0	0.0	500	500	500
	(6.7) Setting up of National Bio energy Mission (New activity)	(6.7.1) Preparation of a Concept Paper	Date	0.0	0.0	31.12.2014	-	-
7) To Develop resource base for enhancing the potential of	(7.1) Reassessment of wind potentialat 100 m height	(7.1.1) Installation of Masts	No. of Masts	10	15	20	30	20
Renewable Energy Sources.	(7.2) Assessment of Solar potential	(7.2.1) Setting up of Solar Radiation stations	No. of stations	0.00	40	10	15	
	(7.3) Prepare a Policy on Off- shore Wind Power (New activity)	(7.3.1) Announcement of Policy	Date	One time activity	One time activity	31.12.2014	One time activity	One time activity
8) To promote funding of Innovative Clean Energy Projects from National Clean Energy Fund (NCEF).	(8.1) RE Projects posed to MoF for funding from NCEF	(8.1.1) Amount of Funds involved in projects posed for funding from NCEF	Rs.in crores	1179	1159	800	1000	1200
9)To promote effective Systems for monitoring the performance of Programmes/Schemes/Proje cts of MNRE	(9.1) Monitoring of Programmes /Schemes/Projects of MNRE (New activity)	(9.1.1) Developing a system for online monitoring	Date	One time activity	One time activity	31.01.2014	One time activity	One time activity
10) To promote indigenous industry in manufacturing of renewable energy (solar energy systems) /appliances	(10.1) Strengthening indigenous manufacturers of RE (Solar) appliances (New activity)	(10.1.1) Preparation of a Strategy Paper	Date	One time activity	One time activity	31.01.2014	-	-

# Section 4: Acronyms

1.	GHG	Green House Gases
2.	ISO	International Standards Organisation
3.	C&AG	Comptroller and Auditor General
4.	ATN	Action Taken Note
5.	PAC	Public Accounts Committee
6.	ATR	Action Taken Report
7.	CCC	Citizen/Client Charter
8.	IREDA	Indian Renewable Energy Development Agency
9.	NTPC	National Thermal Power Corporation
10.	NABARD	National Bank for Agriculture and Rural Development
11.	M/o P&NG	Ministry of Petroleum and Natural Gases
12.	FY	Financial year
13.	NRE	New and Renewable Energy
14.	NCEF	National Clean Energy Fund
15.	MNRE	Ministry of New and Renewable Energy
16.	RE	Renewable Energy
17.	SPV	Solar Photo Voltaic
18.	SHP	Small Hydro Power
19.	R&D	Research & Development
20.	NISE	National Institute of Solar Energy
21.	kW	Kilo Watt
22.	MW	Mega Watt
23.	MWeq	Mega Watt Equivalent
24.	NSSO	National Sample Survey Organisation
25.	PSU	Public Sector Undertakings
26.	CERC	Central Electricity RegulatoryCommission
27.	SERC	State Electricity RegulatoryCommission
28.	MTOE	Million Tonnes of Oil Equivalent
29.	LPG	Liquefied Petroleum Gas
30.	IMG	Inter-ministerial Group
31.	EFC	Expenditure Finance Committee
32.	MEA	Ministry of External Affairs

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

The details of success indicators requiring description and clear definition for their understanding are listed below.

SI. No.	Success Indicator	Description	Definition	Measurement
1.	[1.1.1] to [1.7.1] [2.4.2] to [2.5.2]	Capacity addition in FY 2014-15	Total installed capacity of renewable power projects in Megawatt/ Kilowatt for generating grid-interactive power	Reports of State utilities/Central ElectricityAuthority / NTPC VidyutVyapar Nigam Limited / Indian Renewable Energy Development Agency
2.	[2.1.1] , [2.4.1] , [2.5.1] , [4.2.1] , [5.6.1] , [5.6.2]	Installation of Decentralized Biogas Plants / other RE projects:  • Family type biogas plants;  • Micro-hydel plants/projects/water mills;  • Aero-generators and Wind+SPV Hybrid Systems;  • Gasifiers  • Solar Thermal plants at NISE  • Wind+Solar Hybrid Systems	These are either standalone or off-grid systems to be installed through Channel partners and other implementing agencies including State Nodal agencies	Reports of Implementing Agencies / Channel Partners
3.	[2.3.1], [2.6.1], [5.3.1]	These success indicators involve distribution of lighting systems, cook stoves and solar cookers.	The targets for distribution have been fixed for the FY 2014-15 through Channel partners and other implementing agencies including State Nodal Agencies.	Reports of Implementing Agencies / Channel Partners
4.	[3.1.1]	Lakh square meter of Collector area installed	Installation of Solar Thermal systems in Residential and Industrial / Commercial buildings	Reports of State Implementing Agencies, IREDA
5.	[4.2.1] , [5.1.1] , [5.2.1]	Number of projects sanctioned	New R&D Projects sanctioned during FY 2014-15	Own records of the Ministry

Section 5:
Specific Performance Requirements from other Departments

Location Type	State	Organization Type	P Organization Relevant Success Indicator under Section 2		What is your requirement from this organization	Justification for this requirement	Please quantity your reqt from this Organization	What happens if your requirement is not met?
1.	2.	3.	4.	5.	6.	7.	8.	9.
Central	-	Autonomous	Planning Commission	Success indicators mentioned against objective No.1-5 & 7	To provide adequate Plan funds for implementation of programmes of MNRE	Programmes of MNRE are Plan schemes	Rs. 5449 crore as against Rs.1541 crores for 2014-15	May fail to achieve the laid down objectives/ targets
Ministry of Finance	-	Department	Department of Expenditure	Funds sanctioned/ released from NCEF under Objective 8	To sanction the projects for funding from NCEF and release the sanctioned funds	As per Govt policy Innovative RE projects may be proposed for funding from NCEF	To sanction and release about Rs.800 crore during 2014-15	May not be possible to commission the projects proposed under NCEF
Ministry of Power	-	Central PSU	Power Grid Corporation of India Ltd.	Success indicators mentioned against objective No.1	To provide adequate grid infrastructure to evacuate the power from the RE projects to the grid	PGIL is to provide adequate grid infrastructure for evacuation of power from the project	Not possible to quantify the requirement	Even if the project is ready to generate power but will not be possible to take the power generated to grid
State Govts	All States/ UTs implementing MNRE programmes	State Departments agencies / Urban Loc		Success indicators mentioned against objectives No. 2,3,4 and 9	To implement the programmes as per the prescribed guidelines	As per the guidelines programmes to be implemented through these agencies	To implement the programmes in later and spirit of the guidelines	Programmes will be delayed and hence failed to achieve the targets within stipulated time period.

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	FY12/13	FY13/14	FY14/15	FY15/16	FY16/17
Creating Additional	,	Capacity installed during the year	MW	33077	36902	40747	46217	54037
Generation Capacity (RE initiative) to supplement the conventional Energy initiatives of the country		Relative Share of RE in total power installed in the country	%	12.7	13.4	14	15	16
Increasing Share of	Ministry of Power/Central	Renewable Energy produced	Million units	54	61	69	79	94
Renewable in the Electricity Mix of the country	ElectricityAuthority/State Governments	Percentage of Renewable Energy in the Energy Mix	%	6.5	6.9	7.2	7.7	8.4
GHG Emission Reduction through RE Technologies/Applications	Ministry of Environment and Forests/Department of S&T/State Governments and Implementing Agencies	Reduction in CO <sub>2</sub> per year (wind,solar,hydro and biomass)	Million tonnes	96.68	108.97	121.34	137.34	160.67
160.67Meeting Increasing Energy Needs through off- grid renewable energy applications	State Governments/State Nodal Agencies/Channel Partners of MNRE	Biomass Gasifiers set up for village energy supply- Households covered	Numbers	25	25	25	30	40
		Fossil fuel - Kerosene - saved on account of power supplied to Households through Biomass Gasifiers	Kilo Litres	450	450	450	540	720
		Installation of decentralized SPV systems/devices	MW	17.59	40	60	70	80
		Solar pumps for irrigation purposes to states	No	-	-	20000	30000	40000
		No. of houses covered	Numbers	17500	40000	60000	70000	80000
		Electricity produced based on fossil sources saved	Million Units	13	30	45	52	60
		Solar Thermal System installed (Collector Area covered)	Lakh. Sqm	14	5	5	5	6
		Saving Million tones of oil equivalent (MTOE)	Million Units	0.0901	0.0322	0.0322	0.0322	0.0386
		Biomass Gasifiers set up for village energy supply	No.of villages	25	35	50	60	75
Meeting Energy/Cooking	State Governments/State Nodal	Family Type Biogas Plants installed	lakhs	1.24	1.20	1.10	1.25	1.35

Outcome/Impact of Department/Ministry	Jointly responsible for influencing this outcome / impact with the following Department (s)/Ministry(ies)	Succe	Unit	FY12/13	FY13/14	FY14/15	FY15/16	FY16/17	
needs especially in Rural	Agencies/Channel Partners of	No. of L.P.G cyline	lakhs	22.32	21.60	21.60	22.50	24.30	
Areas	MNRE	Cookstove to be d	lakhs	0	0	7.5	7.5	10	
		Fuel wood saved on account of use of		lakh tons	0	0	2.25	2.25	3.0
		cook stove							
No. of Research Papers	Universities/IITs/National	No.of Patents	Applied	Numbers	4	4	8	10	15
published, Products	institutions of repute/Autonomous		Obtained		0	1	5	5	8
commercialized and Patents applied / obtained out of	bodies	New Products commercialized		Numbers	2	2	4	4	5
Research, Design and Demonstration Projects		No.of research papers published in International/National Journals		Numbers	5	5	10	10	10