



Government of Mizoram

R F D

(Results-Framework Document)
for

Department of Power & Electricity

(2014-2015)

Section 1: Vision, Mission, Objectives and Functions

Vision

Availability of reliable 24x7 quality power at competitive rates for all.

Mission

To deliver dependable, reliable and quality power supply and services at affordable and competitive price for every section of the society: To set standards of performance and to continuously improve the quality and reliability of services towards the consumers: To offer goods and services and find solutions for the major stakeholders across the entire state.

Objectives

- 1 Transmission Capacity expansion for improvement in transmission and transformation
- 2 Electrification to all un-electrified village and provision for free connection to BPL household.
- 3 Increasing Generation as well as Central Allocation and harnessing of power from non-conventional sources.
- 4 Distribution Capacity expansion to improve distribution system.
- 5 Reduction of AT&C losses
- 6 Energy Conservation through campaign/workshop and installation of energy efficient system.
- 7 Development of Human Resources by imparting skills within and outside the state

Functions

- 1 Power and Electricity
- 2 Generation, transmission and distribution of Electric Power
- 3 Non-conventional energy.
- 4 Integrated Rural Energy Programme
- 5 All other matter relating to energy
- 6 Indian Electricity Act, 1910
- 7 Indian Electricity Act, 2003

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] Transmission Capacity expansion for improvement in transmission and transformation	15.00	[1.1] Improvement of Transmission and Transformation	[1.1.1] Tender and Award of Work for Construction of 132kV Transmission line between Melriat and Lunglei	Date	3.00	30/06/2014	31/07/2014	31/08/2014	30/09/2014	31/10/2014
			[1.1.2] Tender & Award of Work for repair of Transformers	Date	3.00	30/06/2014	31/07/2014	31/08/2014	30/09/2014	31/10/2014
			[1.1.3] Shifting of 132kv s/s Zuangtui	% of work completed	3.00	80	70	60	50	40
			[1.1.4] Construction of 132kV S/C line on DC tower from Kolasib to Aizawl (Melriat) with LILO of one circuit at 132kV SS, Zuangtui	% of work	1.50	20	18	16	14	12
			[1.1.5] Construction of 132kV D/C line from 132kV S/S Luangmual to 132kV S/S Sihhmui	% of work	1.50	20	18	16	14	12
			[1.1.6] Construction of 132kV S/C line from Melriat S/S to Luangmual S/S including 132kV bay at 132kV S/S Luangmual	% of work	1.50	20	18	16	14	12

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%
			[1.1.7] Construction of additional 132kV bus bar with additional Tuivai evacuation bay at Sihmui S/S	% of work	1.50	10	9	8	7	6
[2] Electrification to all un-electrified village and provision for free connection to BPL household.	10.00	[2.1] Implementation of RGGVY scheme	[2.1.1] Intensification of Electrification of 526 Villages	No	3.50	190	180	170	160	150
			[2.1.2] Electrification of 179 Unelectrified Villages	No	3.50	73	68	63	58	53
			[2.1.3] Free Electric Connection to 26210 BPL households	No	3.00	10880	10000	9500	9000	8500
[3] Increasing Generation as well as Central Allocation and harnessing of power from non-conventional sources.	15.00	[3.1] Increase of power allocation from National grid.	[3.1.1] Increased power allocation	MW	2.25	11	10	9	8	7
		[3.2] Construction of Hydro Power Projects	[3.2.1] Award of Work for Kawlbem SHP	Date	1.50	31/08/2014	30/09/2014	31/10/2014	30/11/2014	31/12/2014
			[3.2.2] Construction of Tlawva (5MW) SHP	% of work completed	3.00	55	52	49	46	43
			[3.2.3] Survey of land to be acquired for Tuivai HEP (210MW)	% of survey	1.50	100	90	80	70	60
		[3.3] S&I / Preparation of DPR for Hydro Power Projects	[3.3.1] Completion of S&I and DPR for Tut HEP (24 MW)	Date	1.50	30/11/2014	31/12/2014	31/01/2015	28/02/2015	31/03/2015

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%
		[3.4] Operation of Hydro Power Projects	[3.4.1] Award for R&M of the 3MW Teirei (3 MW), Tuipanglui (3 MW) and Maicham (2MW) SHPs	Date	0.75	30/11/2014	31/12/2014	31/01/2015	28/02/2015	31/03/2015
		[3.5] Harnessing Energy from non conventional sources	[3.5.1] Installation of Solar Water Heating system 100 Lpd	Nos	1.50	500	400	300	200	100
			[3.5.2] Installation & commissioning of Wind-Solar Hybrid System	Nos.	1.12	8	7	6	5	4
			[3.5.3] Installation of Solar Power Pack 200Wp	Nos.	1.12	1500	1400	1300	1200	1000
			[3.5.4] Installation of Solar Lantern Model-II (CFL)	Nos	0.75	2000	1800	1600	1400	1200
[4] Distribution Capacity expansion to improve distribution system.	15.00	[4.1] Improvement of Distribution system	[4.1.1] Obtaining financial sanction for Rural Electricity Distribution Backbone (REDB)	Date	2.25	30/11/2014	31/12/2014	31/01/2015	28/02/2015	31/03/2015
			[4.1.2] Construction of 33kV DC line from Mualpui S/S to Tlangnuam S/S	% of work done	3.75	30	25	20	15	10
			[4.1.3] Extension of 11kV/LT lines with replacement of rusted poles and improvement of	% of work completed	4.50	60	50	40	30	20

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%
			DT Substation							
			[4.1.4] Installation of new DT Sub-Station with associated lines in various places of Mizoram	No	4.50	20	18	16	14	12
[5] Reduction of AT&C losses	20.00	[5.1] Implementation of RAPDRP	[5.1.1] Part A of R-APDRP Project Go Live (8 towns)	No. of towns go live	4.00	8	7	6	5	4
			[5.1.2] Execution of Part B project	% of work done	5.00	40	35	30	25	20
		[5.2] Detection of theft of power by consumers	[5.2.1] Nos. of case detected	Nos	3.00	500	400	300	200	100
		[5.3] Revision of tariff through JERC	[5.3.1] Submission of Tariff Petition to JERC	Date	2.00	30/11/2014	31/12/2014	31/01/2015	28/02/2015	31/03/2015
		[5.4] Installation of Energy meters	[5.4.1] Replacement of defective Meters	Nos	2.00	4000	3000	2000	1000	500
		[5.5] Improve revenue receipts from consumers	[5.5.1] Increase in Revenue over the Last Year's collection	Rs. (Crore)	2.00	8	6	4	2	1
		[5.6] Improve revenue receipts due to Billing & Collection efficiency	[5.6.1] Billing Efficiency	%	1.00	90	80	70	60	50
			[5.6.2] Collection Efficiency	%	1.00	95	90	85	80	75
[6] Energy Conservation through campaign/workshop and installation of energy efficient	10.00	[6.1] Energy Conservation Campaign	[6.1.1] Energy Conservation Awareness	No	2.00	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%
system.			Campaign among School Children							
			[6.1.2] Energy Conservation Awareness through Media-Print, TV, Cable	No	2.00	12	10	8	6	4
			[6.1.3] No. of Workshop/sensitization programs convened in every district	No	2.00	5	4	3	2	1
		[6.2] Introduction of Energy efficient lighting	[6.2.1] Establishment of one LED Village covering 200 households	No of village	4.00	5	4	3	2	1
[7] Development of Human Resources by imparting skills within and outside the state	5.00	[7.1] Training of officials	[7.1.1] Training for Non-Engineers	No of Employees	1.50	50	45	40	35	30
			[7.1.2] Training for Engineers within the state	No of Engineers	1.50	30	25	20	15	10
			[7.1.3] Training for Engineers outside the state	No of Engineers	2.00	8	6	4	3	2
* Efficient Functioning of the RFD System	5.00	Timely submission of Mid Term Achievement	On-time submission	Date	1.0	10/10/2014	11/10/2014	15/10/2014	25/10/2014	15/03/2014
		Timely submission of Results for 2013-2014	On-time submission	Date	2.0	01/05/2014	02/05/2014	05/05/2014	06/05/2014	07/05/2014
		Timely submission of Draft RFD for 2014-2015 for	On-time submission	Date	2.0	05/03/2014	06/03/2014	07/03/2014	10/03/2014	07/05/2014

* 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%
		approval.								
* Effective redressal of citizens' grievances	5.00	Timely disposal of citizens' grievances lodged through FAKSELNA BOX	Citizens' grievances disposed off from FAKSELNA BOX within 30 days	%	2.0	100	90	80	70	60
		Timely disposal of citizens' grievances lodged through www.mipuiaw.nic.in	Citizens' grievances disposed off through www.mipuiaw.nic.in within 30 days	%	3.0	100	90	80	70	60

* Mandatory Objective(s)

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	Target Value for FY 14/15	Projected Value for FY 15/16	Projected Value for FY 16/17
[1] Transmission Capacity expansion for improvement in transmission and transformation	[1.1] Improvement of Transmission and Transformation	[1.1.1] Tender and Award of Work for Construction of 132kV Transmission line between Melriat and Lunglei	Date	--	--	30/06/2014	--	--
		[1.1.2] Tender & Award of Work for repair of Transformers	Date	--	--	30/06/2014	--	--
		[1.1.3] Shifting of 132kv s/s Zuangtui	% of work completed	0	22	80	100	--
		[1.1.4] Construction of 132kV S/C line on DC tower from Kolasib to Aizawl (Melriat) with LILO of one circuit at 132kV SS, Zuangtui	% of work	0	0	20	60	100
		[1.1.5] Construction of 132kV D/C line from 132kV S/S Luangmual to 132kV S/S Sihhmui	% of work	0	0	20	70	100
		[1.1.6] Construction of 132kV S/C line from Melriat S/S to Luangmual S/S including 132kV bay at 132kV S/S Luangmual	% of work	0	0	20	60	100

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	Target Value for FY 14/15	Projected Value for FY 15/16	Projected Value for FY 16/17
		[1.1.7] Construction of additional 132kV bus bar with additional Tuivai evacuation bay at Sihhmui S/S	% of work	0	0	10	50	70
[2] Electrification to all un-electrified village and provision for free connection to BPL household.	[2.1] Implementation of RGGVY scheme	[2.1.1] Intensification of Electrification of 526 Villages	No	335	1	190	0	0
		[2.1.2] Electrification of 179 Unelectrified Villages	No	103	3	73	0	0
		[2.1.3] Free Electric Connection to 26210 BPL households	No	14790	540	10880	0	0
[3] Increasing Generation as well as Central Allocation and harnessing of power from non-conventional sources.	[3.1] Increase of power allocation from National grid.	[3.1.1] Increased power allocation	MW	0	11	11	15	20
	[3.2] Construction of Hydro Power Projects	[3.2.1] Award of Work for Kawlbem SHP	Date	--	--	31/08/2014	--	--
		[3.2.2] Construction of Tlawva (5MW) SHP	% of work completed	0	35	55	75	100
		[3.2.3] Survey of land to be acquired for Tuivai HEP (210MW)	% of survey	0	0	100	0	0
	[3.3] S&I / Preparation of DPR for Hydro Power	[3.3.1] Completion of S&I and DPR for Tut HEP	Date	--	--	30/11/2014	--	--

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	Target Value for FY 14/15	Projected Value for FY 15/16	Projected Value for FY 16/17
	Projects	(24 MW)						
	[3.4] Operation of Hydro Power Projects	[3.4.1] Award for R&M of the 3MW Teirei (3 MW), Tuipanglui (3 MW) and Maicham (2MW) SHPs	Date	--	--	30/11/2014	--	--
	[3.5] Harnessing Energy from non conventional sources	[3.5.1] Installation of Solar Water Heating system 100 Lpd	Nos	0	0	500	600	700
		[3.5.2] Installation & commissioning of Wind-Solar Hybrid System	Nos.	0	0	8	9	10
		[3.5.3] Installation of Solar Power Pack 200Wp	Nos.	0	0	1500	1600	1700
		[3.5.4] Installation of Solar Lantern Model-II (CFL)	Nos	0	0	2000	2200	2500
[4] Distribution Capacity expansion to improve distribution system.	[4.1] Improvement of Distribution system	[4.1.1] Obtaining financial sanction for Rural Electricity Distribution Backbone (REDB)	Date	--	--	31/12/2014	--	--
		[4.1.2] Construction of 33kV DC line from Mualpui S/S to Tlangnuam S/S	% of work done	0	0	30	60	100
		[4.1.3] Extension of 11kV/LT lines with replacement of rusted poles and	% of work completed	0	0	60	100	--

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	Target Value for FY 14/15	Projected Value for FY 15/16	Projected Value for FY 16/17
		improvement of DT Substation						
		[4.1.4] Installation of new DT Sub-Station with associated lines in various places of Mizoram	No	--	0	20	25	30
[5] Reduction of AT&C losses	[5.1] Implementation of RAPDRP	[5.1.1] Part A of R-APDRP Project Go Live (8 towns)	No. of towns go live	0	1	8	0	0
		[5.1.2] Execution of Part B project	% of work done	0	0	40	80	100
	[5.2] Detection of theft of power by consumers	[5.2.1] Nos. of case detected	Nos	--	209	500	--	--
	[5.3] Revision of tariff through JERC	[5.3.1] Submission of Tariff Petition to JERC	Date	--	30/11/2013	30/11/2014	30/11/2015	30/11/2016
	[5.4] Installation of Energy meters	[5.4.1] Replacement of defective Meters	Nos	--	6646	4000	5000	6000
	[5.5] Improve revenue receipts from consumers	[5.5.1] Increase in Revenue over the Last Year's collection	Rs. (Crore)	--	--	8	10	12
	[5.6] Improve revenue receipts due to Billing & Collection efficiency	[5.6.1] Billing Efficiency	%	--	--	90	--	--
		[5.6.2] Collection Efficiency	%	--	--	95	--	--
[6] Energy Conservation through campaign/workshop and installation of energy efficient system.	[6.1] Energy Conservation Campaign	[6.1.1] Energy Conservation Awareness Campaign among	No	--	0	10	12	15

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	Target Value for FY 14/15	Projected Value for FY 15/16	Projected Value for FY 16/17
		School Children						
		[6.1.2] Energy Conservation Awareness through Media-Print, TV, Cable	No	--	7	12	15	20
		[6.1.3] No. of Workshop/sensitization programs convened in every district	No	--	0	5	6	7
	[6.2] Introduction of Energy efficient lighting	[6.2.1] Establishment of one LED Village covering 200 households	No of village	0	0	5	7	10
[7] Development of Human Resources by imparting skills within and outside the state	[7.1] Training of officials	[7.1.1] Training for Non-Engineers	No of Employees	90	118	50	80	100
		[7.1.2] Training for Engineers within the state	No of Engineers	4	34	30	40	50
		[7.1.3] Training for Engineers outside the state	No of Engineers	0	12	8	10	112
* Efficient Functioning of the RFD System	Timely submission of Mid Term Achievement	On-time submission	Date	--	--	10/10/2014	--	--
	Timely submission of Results for 2013-2014	On-time submission	Date	--	--	01/05/2014	--	--

* Mandatory Objective(s)

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	Target Value for FY 14/15	Projected Value for FY 15/16	Projected Value for FY 16/17
	Timely submission of Draft RFD for 2014-2015 for approval.	On-time submission	Date	--	09/05/2014	05/03/2014	--	--
* Effective redressal of citizens' grievances	Timely disposal of citizens' grievances lodged through FAKSELNA BOX	Citizens' grievances disposed off from FAKSELNA BOX within 30 days	%	--	--	90	--	--
	Timely disposal of citizens' grievances lodged through www.mipuiaw.nic.in	Citizens' grievances disposed off through www.mipuiaw.nic.in within 30 days	%	--	--	90	--	--

* Mandatory Objective(s)

Section 4: Acronym

Sl.No	Acronym	Description
1	Capex	Capacity Expansion
2	Ckms	Circuit Kilometers (Length of Transmission Line)
3	DoNER	Ministry of the Development of North Eastern Region, Govt. of India
4	GoI	Government of India
5	GoM	Government of Mizoram
6	JERC	Joint Electricity Regulatory Commission for Mizoram and Manipur

Section 4: Acronym

Sl.No	Acronym	Description
7	kV	Kilo Volt = 1000 Volts
8	kWp	Kilowatt peak
9	MNRE	Ministry of New & Renewable Energy, Govt. of India
10	MW	Mega Watt
11	NEC	North Eastern Council
12	NEEPCO	North Eastern Electric Power Corporation Ltd.

Section 4: Acronym

Sl.No	Acronym	Description
13	NHPC	National Hydroelectric Power Corporation
14	NLCPR	Non-Lapseable Central Pool of Resources
15	NTPC	National Thermal Power Corporation
16	PFC	Power Finance Corporation Limited
17	PGCIL	Power Grid Corporation of India Limited
18	R-APDRP	Restructured Accelerated Power Development and Reform Programme

Section 4: Acronym

Sl.No	Acronym	Description
19	REC	Rural Electrification Corporation Limited
20	RGGVY	Rajiv Gandhi Grameen Vidhyutikaran Yojana
21	SHP	Small Hydro Plant
22	SPV	Solar PhotoVoltaic
23	SWHS	Solar Water Heating System

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] Tender and Award of Work for Construction of 132kV Transmission line between Melriat and Lunglei	It is proposed to construct 132kV line from Aizawl (Melriat) to Lunglei	Power supply to southern part of Mizoram is given by 132kV single line via Bukpui S/S and the proposed work will strengthen the transmission line.	Date	The work is to be executed on turnkey basis
2	[1.1.2] Tender & Award of Work for repair of Transformers	In order to improve the transformation capacity, it is required to repair every defective transformer without delay.	The work is proposed to be outsourced.	Date	Target date fixed for finalisation of award of contract.
3	[1.1.3] Shifting of 132kv s/s Zuangtui	Shifting is required as the existing S/S lies in the landslide area.	It is proposed to shift in a safer place near the existing location.	% of works completed	Works under construction and in progress
4	[1.1.4] Construction of 132kV S/C line on DC tower from Kolasib to Aizawl (Melriat) with LILO of one circuit at 132kV SS, Zuangtui	To improve transmission line from Grid, 132 kV line must be strengthened	132 kv line to feed new sub station at Melriat and Zuangtui	Percentage	Works not yet started
5	[1.1.5] Construction of 132kV D/C line from 132kV S/S Luangmual to 132kV S/S Sihmui	132kV S/S constructed at Sihmui and requires power line from the nearest S/S i.e. Luangmual		Percentage	Works not yet started.

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

Sl.No	Success indicator	Description	Definition	Measurement	General Comments
6	[1.1.6] Construction of 132kV S/C line from Melriat S/S to Luangmual S/S including 132kV bay at 132kV S/S Luangmual	Additional transmission line for Melriat S/S	132kV S/S constructed at Melriat and requires power line from nearest S/S i.e. Luangmual	Percentage	Not yet started
7	[1.1.7] Construction of additional 132kV bus bar with additional Tuivai evacuation bay at Sihhmui S/S	Receiving bay for drawing power from the recently approved Tuivai HEP	To strengthen transmission line and to draw power from Tuivai HEP	Percentage	Not yet started
8	[2.1.1] Intensification of Electrification of 526 Villages	Already electrified 526 villages needs expansion and strengthening	The work is to be carried out under RGGVY scheme	No	The work is to be carried out under RGGVY scheme
9	[2.1.2] Electrification of 179 Unelectrified Villages	All unelectrified villages are to be electrified under RGGVY scheme	There are 179 unelectrified villages in Mizoram	No	same as above
10	[2.1.3] Free Electric Connection to 26210 BPL households	Under RGGVY scheme, BPL families may be provided free electric connection	Target under the scheme is 26210 families	No of families	same as above

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

SI.No	Success indicator	Description	Definition	Measurement	General Comments
11	[3.1.1] Increased power allocation	Grid power share is allocated all the states as per availability of power and state requirement. Non-payment of energy bill may also affect the allocation of power to Mizoram	Power allocated under aegis of the central government from central generating station or generating station jointly owned by Mizoram	MW	Allocation cannot be increased unless there is increased in generation. The expected share of Mizoram during the last financial year is 22MW from Palatana Thermal Plant. As the Plant is not operated in full swing, only 11 MW was allocated and another 11MW is expected from Palatana
12	[3.2.1] Award of Work for Kawlbem SHP	Date of approval for award of work from SHP	Capacity of Kawlbem SHP is 4000KW	Date	for Generation of power
13	[3.2.2] Construction of Tlawva (5MW) SHP	Percentage Completion of Tlawva SHP construction works.	Work executed departmentally	Percentage	Works in progress
14	[3.2.3] Survey of land to be acquired for Tuivai HEP (210MW)	Initial requirement for construction of HEP is to acquire land within the catchment area as per Survey report.	Target date for completion of survey is fixed.	Date	Tuivai HEP is approved to be constructed by the central government using Viability Gap Funding

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

Sl.No	Success indicator	Description	Definition	Measurement	General Comments
15	[3.3.1] Completion of S&I and DPR for Tut HEP (24 MW)	Target date fixed for completion of S&I and DPR	In order to generate Power from Tut River, Survey & Investigation will be required and DPR as per the investigation.	Date	Initial work for SHP
16	[3.4.1] Award for R&M of the 3MW Teirei (3 MW), Tuipanglui (3 MW) and Maicham (2MW) SHPs	Renovation & Maintenance for the existing SHP.	Target date for finalisation and award of work to contractors	Date	Proposed to be outsourced
17	[3.5.1] Installation of Solar Water Heating system 100 Lpd	Solar Water Heating System is used to for utilising solar energy	No. of installation of SWHS of 100 LPD capacity.	Nos.	LPD means Litre per Day & the project is proposed to be funded by MNRE
18	[3.5.2] Installation & commissioning of Wind-Solar Hybrid System	Wind Solar Hybrid System utilised wind energy and solar energy.	It is proposed to be installed at 8 places with total capacity of 43kW	No. of places.	To be funded by MNRE
19	[3.5.3] Installation of Solar Power Pack 200Wp	Installation of 200Wp capacity of Solar Power Pack	It is a device used to convert solar energy into electrical energy.	Nos.	Wp means Watt peak & project is to be funded by MNRE

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

Sl.No	Success indicator	Description	Definition	Measurement	General Comments
20	[3.5.4] Installation of Solar Lantern Model-II (CFL)	It is proposed to install 2000 nos. of Compact Fluorescent Light (CFL) using Solar energy	for generation of power from non conventional source	Nos.	To be funded by MNRE
21	[4.1.1] Obtaining financial sanction for Rural Electricity Distribution Backbone (REDB)	The project for improvement of Distribution system through REDB is already approved and is awaited for financial sanction from REC.	The project is to be executed on turnkey basis	Date	awaited sanction from REC
22	[4.1.2] Construction of 33kV DC line from Mualpui S/S to Tlangnuam S/S	Interlinking line of 33kV sub station for distribution improvement	for Distribution improvement	Percentage	not yet started
23	[4.1.3] Extension of 11kV/LT lines with replacement of rusted poles and improvement of DT Substation	for maintenance of lines to improve distribution system and loss reduction	For improvement of Distribution, 11Kv Line & LT line extension, DT Substation improvement and replacement of rusted poles are required	Percentage	
24	[4.1.4] Installation of new DT Sub-Station with associated lines in various places of Mizoram	In order to reduce loss and improve in distribution, new DT Substation installation is required	More no. of DT sub station improves distribution system	Nos	not yet started

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

Sl.No	Success indicator	Description	Definition	Measurement	General Comments
25	[5.1.1] Part A of R-APDRP Project Go Live (8 towns)	Nine towns covered under RAPDRP project for improvement of Distribution system and reduction of AT&C loss. Pilot town (Kolasib) already Go-Live and work progress in the remaining towns	Part A covers IT implementation in electrical power system.	No. of towns go-live	Under progress
26	[5.1.2] Execution of Part B project	RAPDRP Part B project also covers 9 towns viz. Aizawl, Lunglei, Kolasib, Saiha, Lawngtlai, Serchhip, Saitual, Khawzawl & Champhai.	Part B project is distribution infrastructure setup to reduce AT&C loss.	Percentage of works completed.	Under progress
27	[5.2.1] Nos. of case detected	Detection of electrical energy theft by a consumer is very important in AT&C loss reduction.	Huge amounts of theft of power is done by tapping from line or bypassing the energy meter. The most common electrical power theft are : Direct Hooking, Bypassing the Energy Meter.	Nos.	May be detected by Inspection and checking of lines and consumer meters.
28	[5.3.1] Submission of Tariff Petition to JERC	AT&C loss can be reduced by improving the revenue receipt. Tariff petition is to be filed to JERC for fixation of tariff.		Date	Tariff petition is to be filed before 30th November every year

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

Sl.No	Success indicator	Description	Definition	Measurement	General Comments
29	[5.4.1] Replacement of defective Meters	Accurate billing may be achieved by replacing every defective meters.	Unmetered bills should be reduced to reduce AT&C loss.	Nos.	To be replaced as per requirements
30	[5.5.1] Increase in Revenue over the Last Year's collection	Increase in revenue from the consumer may result in AT&C loss reduction		Rs. in Crores	Revenue collect from consumer
31	[5.6.1] Billing Efficiency	Improve in Billing efficiency may improve the AT&C loss.	Billing efficiency means the ratio of energy sold to energy input.	Percentage	Higher billing efficiency improves AT&C loss reduction
32	[5.6.2] Collection Efficiency	Bill collected from the consumer	Collection efficiency means the ratio of collection amount to billed amount	Percentage	Higher collection efficiency improves AT&C loss reduction
33	[6.1.1] Energy Conservation Awareness Campaign among School Children	Awareness campaign to school children		No.	Awareness should be given to every one.

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

Sl.No	Success indicator	Description	Definition	Measurement	General Comments
34	[6.1.2] Energy Conservation Awareness through Media-Print, TV, Cable	Awareness to public through Media	Awareness campaign through Electronics and print media	No.	Conservation of energy is also generation of energy
35	[6.1.3] No. of Workshop/sensitization programs convened in every district	District level No. of workshop for energy conservation	In order to aware the needs of energy conservation, district level programme may be organised	No	same as above
36	[6.2.1] Establishment of one LED Village covering 200 households	LEDs, or light-emitting diodes, are a form of solid-state lighting that is extremely efficient and long-lasting. While incandescent and fluorescent lights consist of filaments in glass bulbs or bulbs that contain gases, LEDs consist of small capsules or lenses in which tiny chips are placed on heat-conducting material.	LED village means replacement of all incandescent lamp, street light & tube light by using energy efficient LED light. The selected village will have approx. 200 household	No.	Efforts may be given to increase LED village
37	[7.1.1] Training for Non-Engineers	Includes training for Lineman, Electrician and Electrical workers		No	includes refresher course, skill development, etc.

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

Sl.No	Success indicator	Description	Definition	Measurement	General Comments
38	[7.1.2] Training for Engineers within the state	Training for skill development	Training in a specific subject also included	No	includes refresher course, skill development, etc.
39	[7.1.3] Training for Engineers outside the state	Training facilities within the state is not sufficient to cope with new technology, so training outside the state is very much important.	Training to impart skills from training centre outside the state	No	same as above

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.
State Government	Mizoram	Departments	Department of Planning & Programme Implementation	[1.1.3] Shifting of 132kv s/s Zuangtui	Fund Allocation			The listed programme cannot be executed without fund allocation
				[1.1.4] Construction of 132kV S/C line on DC tower from Kolasib to Aizawl (Melriat) with LILO of one circuit at 132kV SS, Zuangtui	Fund Allocation			The listed programme cannot be executed without fund allocation
				[1.1.5] Construction of 132kV D/C line from 132kV S/S Luangmual to 132kV S/S Sihhmui	Fund Allocation			The listed programme cannot be executed without fund allocation
				[1.1.6] Construction of 132kV S/C line from Melriat S/S to Luangmual S/S including 132kV bay at 132kV S/S Luangmual	Fund Allocation			The listed programme cannot be executed without fund allocation
				[1.1.7] Construction of additional 132kV bus bar with additional Tuivai evacuation bay at Sihhmui S/S	Fund Allocation			The listed programme cannot be executed without fund allocation
				[2.1.1] Intensification of Electrification of 526 Villages	Fund Allocation			The listed programme cannot be executed without fund

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.
				[2.1.1] Intensification of Electrification of 526 Villages	Fund Allocation			allocation
				[2.1.2] Electrification of 179 Unelectrified Villages	Fund Allocation			The listed programme cannot be executed without fund allocation
				[2.1.3] Free Electric Connection to 26210 BPL households	Fund Allocation			The listed programme cannot be executed without fund allocation
				[3.1.1] Increased power allocation	Fund Allocation			The listed programme cannot be executed without fund allocation
				[3.2.2] Construction of Tlawva (5MW) SHP	Fund Allocation			The listed programme cannot be executed without fund allocation
				[3.2.3] Survey of land to be acquired for Tuivai HEP (210MW)	Fund Allocation			The listed programme cannot be executed without fund allocation
				[3.3.1] Completion of S&I and DPR for Tut HEP (24 MW)	Fund Allocation			The listed programme cannot be executed without fund allocation
				[3.4.1] Award for R&M of the 3MW Teirei (3 MW), Tuipanglui (3 MW)	Fund Allocation			The listed programme cannot be executed without fund allocation

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.
				and Maicham (2MW) SHPs	Fund Allocation			The listed programme cannot be executed without fund allocation
				[3.5.1] Installation of Solar Water Heating system 100 Lpd	Fund Allocation			The listed programme cannot be executed without fund allocation
				[3.5.2] Installation & commissioning of Wind-Solar Hybrid System	Fund Allocation			The listed programme cannot be executed without fund allocation
				[3.5.3] Installation of Solar Power Pack 200Wp	Fund Allocation			The listed programme cannot be executed without fund allocation
				[3.5.4] Installation of Solar Lantern Model-II (CFL)	Fund Allocation			The listed programme cannot be executed without fund allocation
				[4.1.2] Construction of 33kV DC line from Mualpui S/S to Tianguam S/S	Fund Allocation			The listed programme cannot be executed without fund allocation
				[4.1.3] Extension of 11kV/LT lines with replacement of rusted poles and improvement of DT Substation	Fund Allocation			The listed programme cannot be executed without fund allocation

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.
				[4.1.4] Installation of new DT Sub-Station with associated lines in various places of Mizoram	Fund Allocation			The listed programme cannot be executed without fund allocation
				[5.1.1] Part A of R-APDRP Project Go Live (8 towns)	Fund Allocation			The listed programme cannot be executed without fund allocation
				[5.1.2] Execution of Part B project	Fund Allocation			The listed programme cannot be executed without fund allocation
				[5.4.1] Replacement of defective Meters	Fund Allocation			The listed programme cannot be executed without fund allocation
				[6.1.1] Energy Conservation Awareness Campaign among School Children	Fund Allocation			The listed programme cannot be executed without fund allocation
				[6.1.2] Energy Conservation Awareness through Media-Print, TV, Cable	Fund Allocation			The listed programme cannot be executed without fund allocation
				[6.1.3] No. of Workshop/sensitization programs convened in every district	Fund Allocation			The listed programme cannot be executed without fund allocation

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.
				[6.1.3] No. of Workshop/sensitization programs convened in every district	Fund Allocation			The listed programme cannot be executed without fund allocation
				[6.2.1] Establishment of one LED Village covering 200 households	Fund Allocation			The listed programme cannot be executed without fund allocation
				[7.1.1] Training for Non-Engineers	Fund Allocation			The listed programme cannot be executed without fund allocation
				[7.1.2] Training for Engineers within the state	Fund Allocation			The listed programme cannot be executed without fund allocation
				[7.1.3] Training for Engineers outside the state	Fund Allocation			The listed programme cannot be executed without fund allocation
			Department of Finance	[1.1.3] Shifting of 132kv s/s Zuangtui	Financial sanction	Expenditure sanction for the work	All the programmes cannot be executed without expenditure sanction.	Progress will be affected
				[1.1.4] Construction of 132kV S/C line on DC tower from Kolasib to Aizawl (Melriat) with LILO of one circuit at 132kV SS, Zuangtui	Financial sanction	Expenditure sanction for the work	All the programmes cannot be executed without expenditure sanction.	Progress will be affected

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.
				[1.1.4] Construction of 132kV S/C line on DC tower from Kolasib to Aizawl (Melriat) with LILO of one circuit at 132kV SS, Zuangtui	Financial sanction	Expenditure sanction for the work	All the programmes cannot be executed without expenditure sanction.	Progress will be affected
				[1.1.5] Construction of 132kV D/C line from 132kV S/S Luangmual to 132kV S/S Sihhmui	Financial sanction	Expenditure sanction for the work	All the programmes cannot be executed without expenditure sanction.	Progress will be affected
				[1.1.6] Construction of 132kV S/C line from Melriat S/S to Luangmual S/S including 132kV bay at 132kV S/S Luangmual	Financial sanction	Expenditure sanction for the work	All the programmes cannot be executed without expenditure sanction.	Progress will be affected
				[1.1.7] Construction of additional 132kV bus bar with additional Tuivai evacuation bay at Sihhmui S/S	Financial sanction	Expenditure sanction for the work	All the programmes cannot be executed without expenditure sanction.	Progress will be affected
				[2.1.1] Intensification of Electrification of 526 Villages	Financial sanction	Expenditure sanction for the work	All the programmes cannot be executed without expenditure sanction.	Progress will be affected
				[2.1.2] Electrification of 179 Unelectrified Villages	Financial sanction	Expenditure sanction for the work	All the programmes cannot be executed without expenditure sanction.	Progress will be affected

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.
				[2.1.2] Electrification of 179 Unelectrified Villages	Financial sanction	Expenditure sanction for the work	All the programmes cannot be executed without expenditure sanction.	Progress will be affected
				[2.1.3] Free Electric Connection to 26210 BPL households	Financial sanction	Expenditure sanction for the work	All the programmes cannot be executed without expenditure sanction.	Progress will be affected
				[3.1.1] Increased power allocation	Financial sanction	Expenditure sanction for the work	All the programmes cannot be executed without expenditure sanction.	Progress will be affected
				[3.2.1] Award of Work for Kawlbem SHP	Financial sanction	Expenditure sanction for the work	All the programmes cannot be executed without expenditure sanction.	Progress will be affected
				[3.2.2] Construction of Tlawva (5MW) SHP	Financial sanction	Expenditure sanction for the work	All the programmes cannot be executed without expenditure sanction.	Progress will be affected
				[3.2.3] Survey of land to be acquired for Tuivai HEP (210MW)	Financial sanction	Expenditure sanction for the work	All the programmes cannot be executed without expenditure sanction.	Progress will be affected
				[3.3.1] Completion of S&I and DPR for Tut HEP (24 MW)	Financial sanction	Expenditure sanction for the work	All the programmes cannot be executed without expenditure sanction.	Progress will be affected
				[3.4.1] Award for R&M of the 3MW Teirei (3 MW), Tuipanglui (3 MW)	Financial sanction	Expenditure sanction for the work	All the programmes cannot be executed without expenditure sanction.	Progress will be affected

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.
				and Maicham (2MW) SHPs	Financial sanction	Expenditure sanction for the work	All the programmes cannot be executed without expenditure sanction.	Progress will be affected
				[3.5.1] Installation of Solar Water Heating system 100 Lpd	Financial sanction	Expenditure sanction for the work	All the programmes cannot be executed without expenditure sanction.	Progress will be affected
				[3.5.2] Installation & commissioning of Wind-Solar Hybrid System	Financial sanction	Expenditure sanction for the work	All the programmes cannot be executed without expenditure sanction.	Progress will be affected
				[3.5.3] Installation of Solar Power Pack 200Wp	Financial sanction	Expenditure sanction for the work	All the programmes cannot be executed without expenditure sanction.	Progress will be affected
				[3.5.4] Installation of Solar Lantern Model-II (CFL)	Financial sanction	Expenditure sanction for the work	All the programmes cannot be executed without expenditure sanction.	Progress will be affected
				[4.1.2] Construction of 33kV DC line from Mualpui S/S to Tlangnuam S/S	Financial sanction	Expenditure sanction for the work	All the programmes cannot be executed without expenditure sanction.	Progress will be affected
				[4.1.3] Extension of 11kV/LT lines with replacement of rusted poles and improvement of DT Substation	Financial sanction	Expenditure sanction for the work	All the programmes cannot be executed without expenditure sanction.	Progress will be affected
				[4.1.4] Installation of new DT Sub-Station	Financial sanction	Expenditure sanction for the work	All the programmes cannot be executed	Progress will be affected

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.
				with associated lines in various places of Mizoram	Financial sanction	Expenditure sanction for the work	without expenditure sanction.	Progress will be affected
				[5.1.2] Execution of Part B project	Financial sanction	Expenditure sanction for the work	All the programmes cannot be executed without expenditure sanction.	Progress will be affected
				[5.4.1] Replacement of defective Meters	Financial sanction	Expenditure sanction for the work	All the programmes cannot be executed without expenditure sanction.	Progress will be affected
				[6.1.1] Energy Conservation Awareness Campaign among School Children	Financial sanction	Expenditure sanction for the work	All the programmes cannot be executed without expenditure sanction.	Progress will be affected
				[6.1.2] Energy Conservation Awareness through Media-Print, TV, Cable	Financial sanction	Expenditure sanction for the work	All the programmes cannot be executed without expenditure sanction.	Progress will be affected
				[6.1.3] No. of Workshop/sensitization programs convened in every district	Financial sanction	Expenditure sanction for the work	All the programmes cannot be executed without expenditure sanction.	Progress will be affected
				[6.2.1] Establishment of one LED Village covering 200 households	Financial sanction	Expenditure sanction for the work	All the programmes cannot be executed without expenditure sanction.	Progress will be affected

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 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17
1 Reduction of AT&C losses	AEGCL, APGCL, APDCL, PGCIL, REC, PFC, Govt of Mizoram (Finance Deptt., Planning Deptt)	Part A of R-APDRP Project Go Live (8 towns)	No	0	1	8	0	0
		Execution of R-APDRP Part B project	% of works	0	0	40	80	100
		Installation of Energy meters - Replacement of defective Meters	Nos		6646	4000	5000	6000
2 Improvement in quantity of power	Central Sector (NEEPCO, NTPC, PGCIL, NHPC, BHEL, MNRE, Ministry of Power, Ministry of Finance, State Department (Planning & Finance)	Increased power allocation	MW		11	11	15	20
		Award of Work for Kawlbem SHP	Date			31/08/2014		
		Construction of Tlawva (5MW) SHP	% of		35	55	75	100
		Survey of land to be acquired for Tuivai HEP (210MW)	% of survey	0	0	100	0	0
		Completion of S&I and DPR for Tut HEP (24 MW)	Date			30/11/2014		
		Award for R&M of the 3MW Teirei (3 MW), Tuipanglui (3 MW) and Maicham (2MW) SHPs	Date			30/11/2014		
		Installation of Solar Water Heating system 100 Lpd	Nos			500		
		Installation & commissioning of Wind-	Nos	0	0	8		

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 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17
		Solar Hybrid System						
		Installation of Solar Power Pack 200Wp	Nos	0	0	1500		
		Installation of Solar Lantern Model-II (CFL)	Nos			2000	2200	2500
3	Increased in no. of electrified village	REC						
		Electrification of 179 Unelectrified Villages	Nos	103	3	73	0	0
		Intensification of Electrification of 526 Villages	No	335	1	190	0	0
4	Additional No. of benefitted BPL families	REC						
		Free Electric Connection to 26210 BPL households	Nos	14790	540	10880	0	0