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STANDING COMMITTEE ON ENERGY
(2014-15)
SIXTEENTH LOK SABHA

MINISTRY OF NEW AND RENEWABLE ENERGY

DEMANDS FOR GRANTS
2015-16

SIXTH REPORT



LOK SABHA SECRETARIAT
NEW DELHI

April, 2015/Vaisakha, 1937 (Saka)

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Presented to Lok Sabha on 27.04.2015

Laid in Rajya Sabha on 27.04.2015



**LOK SABHA SECRETARIAT
NEW DELHI**

April, 2015/Vaisakha, 1937 (Saka)

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CONTENTS

	Page
Composition of the Committee (2014-15)	iii
Introduction	v

REPORT PART –I NARRATION ANALYSIS

Chapter I	Introductory	1
Chapter II	Mid Term Appraisal of 12th Five Year Plan	4
Chapter III	Analysis of the Demands for Grants of the Ministry of New and Renewable Energy for 2015-16	9
Chapter IV	Grid Interactive and Off-Grid Renewable Power	16
	(A) Solar Energy	18
	(B) Wind Energy	21
	(C) Small Hydro Power	24
Chapter V	Renewable Energy for Rural Applications	29
Chapter VI	Renewable Energy for Urban, Industrial and Commercial Applications	31
Chapter VII	Research, Design and Development in New and Renewable Energy	34

PART II

Recommendations/Observations of the Committee

ANNEXURES

I	12 th Plan – Programme-wise physical targets and financial allocation	47
II	Budget Estimates for the year 2015-16 vis-à-vis BE/RE of 2014-15 and Actuals of 2013-14	49
III	Minutes of the sittings of the Committee held on 07.04.2015 and 24.04.2015	55

TABLES

Table No.	Subject	Page No.
2.2	Physical achievements of first three years of 12th Plan	4
2.3	Financial allocation and actual expenditure during first three years of 12th Plan	5
2.10	Capacity addition target from renewable energy	8
3.1	Plan and Non-Plan Provisions for 2015-16	9
3.2	BE/RE and Actuals of Plan and Non-Plan Provisions	9
3.4	Central plan outlay for 2015-16	10
3.6	Proposal and Actual Allocation for 2015-16	11
3.7	BE/RE and Actual during last three years	12
3.9	Expenditure during 2014-15	13
3.10	Quarter-wise expenditure during last three years	14
4.1	Physical & financial details under grid interactive and off-grid renewable power during 2015-16	16
4.2	Physical achievements under grid and off-grid power during last three years	17
4.3	Financial utilisation under grid and off-grid power during last three years	17
4.5	State-wise estimated solar energy potential and installed grid connected solar power capacity	18
4.7	Phase I & II achievements of the JNNSM	19
4.8	Actual expenditure under JNNSM	20
4.12	Potential and installed capacity of wind power (State-wise)	21
4.13	Achievements during last three years under wind energy	22
4.14	Fund utilization for the last three years under wind energy	22
4.21	State-wise numbers and aggregate capacity of SHP Projects	24
4.22	Physical achievement during last three years under small hydro power	25
4.23	Expenditure during last three years under small hydro power	26
5.2	BE/RE & Actual Utilization for last three years under renewable energy for rural applications	29
5.3	Physical achievement during last three years under renewable energy for rural applications	30
6.2(a)	Physical and financial achievements for last three years under Waste to Energy	31
6.2(b)	Physical and financial achievements during last three years under Biomass (Non-bagasse) co-generation in Industries	31
6.3	Budgetary allocation under renewable energy for urban industrial and commercial application for 2015-16.	32
7.2	Expenditure during last three years under RDD&D	34

**COMPOSITION OF THE STANDING COMMITTEE ON ENERGY
(2014-15)**

LOK SABHA

***Dr. Kirit Somaiya - Chairman**

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RAJYA SABHA

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1	Shri Devender Singh	Addl. Secretary
2	Shri N.K. Pandey	Director
3	Shri Arun K. Kaushik	Additional Director
4	Smt. L.Nemjalhing Haokip	Under Secretary

* Appointed as Chairman of the Committee w.e.f. 12th November, 2014 *vice* Shri Rajiv Pratap Rudy

Nominated as member of the Committee w.e.f. 14th November, 2014

^Nominated as member of the Committee w.e.f. 9th December, 2014 *vice* Shri Rajiv Shukla

@Nominated as member of the Committee w.e.f. 29.01.2015 *vice* Shri Mohammad Shafi resigned w.e.f 12.01.2015

(iv)

INTRODUCTION

I, the Chairman, Standing Committee on Energy having been authorized by the Committee to present the Report on their behalf, present this Sixth Report on Demands for Grants of the Ministry of New and Renewable Energy for the year 2015-16.

2. The Committee took evidence of the representatives of the Ministry of New and Renewable Energy on 7th April, 2015. The Committee wish to express their thanks to the representatives of the Ministry for appearing before the Committee for evidence and furnishing the information, desired by the Committee in connection with examination of Demands for Grants (2015-16).

3. The Report was considered and adopted by the Committee at their sitting held on 24th April, 2015.

4. The Committee place on record their appreciation for the valuable assistance rendered to them by the officials of the Lok Sabha Secretariat attached to the Committee.

5. For facility of reference and convenience, the recommendations of the Committee have been printed in bold letters in Part-II of the Report.

NEW DELHI
24th April, 2015
Vaisakha 04, 1937 (Saka)

DR. KIRIT SOMAIYA
Chairman,
Standing Committee on Energy

REPORT
PART I
NARRATION ANALYSIS

CHAPTER I

INTRODUCTORY

1.1 Energy requirement is vital component and directly related to the economic growth of a country. Over the years, renewable energy sector has emerged as a significant player in the grid connected power generation capacity. There has been a visible impact of renewable energy in the Indian energy scenerio during the last five years. Currently, India has an installed capacity of 263660 MW (as on 28.02.2015), out of which 34350 MW accounts for new and renewable source of energy mainly from wind, solar, bio power and small hydro units. It is expected that India's peak demand will rise to 335000 MW by 2017. Keeping in view the increased demand , inability to meet the capacity addition targets, need for access of electricity to all and to reduce dependence on conventional sources of energy, there is a growing need to look forward, in a definite way towards the renewable energy sources., When the issue is viewed holistically from the perspective of energy security, energy access, climate change, immense potential of the renewal resources in India, it becomes crucial to develop the renewable sources of energy. Development of renewable energy should be central to any Plan for economic growth.

1.2 The Ministry of New and Renewable Energy (MNRE) is the nodal Ministry of the Government of India for all matters relating to new and renewable energy. The broad aim of the Ministry is to develop and deploy new and renewable energy for supplementing the energy requirements of the country. The Ministry has been

facilitating the implementation of broad-spectrum programmes covering more or less the entire range of new and renewable energy. These programmes broadly seek to supplement conventional fossil-fuel –based power through harnessing wind, solar, small hydro and bio power; take renewable energy systems to remote rural areas for lighting, cooking and motive power; use renewable energy in urban, industrial and commercial applications; and develop alternate fuels and applications for stationary, portable and transport uses apart from supporting research, design and development of new and renewable energy technologies, products and services.

1.3 Role of the MNRE includes facilitating research, design, development, manufacture and deployment of new and renewable energy systems/devices for power generation, portable and stationary applications in rural, urban, industrial and commercial sectors and transportation, through:

- i) Resource assessment, Technology Mapping, Benchmarking, and related activities;
- ii) Identify Research, Design and Development thrust areas and facilitate work on the same;
- iii) To develop Standards, specifications and performance parameters at par with international levels, and facilitate industry in attaining the same;
- iv) Align costs of new and renewable products and services with international levels, and facilitate industry in attaining the same;
- v) appropriate international level quality assurance accreditation, and facilitate industry in obtaining the same;
- vi) Provide sustained feed-back to manufacturers on performance parameters of new and renewable energy products and service with the aim of effecting continuous up-gradation so as to attain State of the art in the shortest possible time span;
- vii) Facilitate industry in becoming internationally competitive;
- viii) Identify areas in which new and renewable energy products and services need to be deployed in keeping with the goal of national energy security and energy independence; and
- ix) Deployment strategy for various indigenously developed and manufactured new and renewable energy products and services;

1.4 The MNRE has been allocated the following subjects/business under the

Allocation of Business Rules:

- Research and development of biogas and programmes relating to biogas units;
- Commission for Additional Sources of Energy (CASE) (non-functional since beginning of 11th Plan);
- Solar Energy - including solar photovoltaic (SPV) devices and their development, production and application;
- All matters relating to small/mini/micro hydel projects of and below 25 MW capacity;
- Programmes relating to improved chulhas and research and development thereof (transferred to States at the end of 9th Plan);
- Indian Renewable Energy Development Agency (IREDA);
- Research and development of other non-conventional/renewable sources of energy and programmes relating thereto;
- Tidal energy;
- Integrated Rural Energy Programme (IREP) (transferred to States w.e.f.11th Plan);
- Geothermal Energy
- Bio-fuels: (i) National Policy; (ii) Research, development and demonstration on transport, stationary and other applications; (iii) setting up of a National Bio-fuels Development Board and strengthening the existing institutional mechanism; and (iv) overall coordination concerning bio-fuels.

CHAPTER II

MID TERM APPRAISAL OF 12TH FIVE YEAR PLAN

2.1 The financial allocation of the Ministry for the entire 12th Plan Period was Rs.19113 crore. The details of the physical targets and financial allocation under various Programme is given at *Annexure -I*

2.2 When queried about the physical achievements vis-a-vis target during the first three years of the 12th Plan, the Ministry furnished:

Table 2.2 Physical achievements of first three years of 12th Plan

S. No.	Programme / system	2012-13		2013-14		2014-15 (as on 31.02.2015)		
		Target	Ach.	Target	Ach.	Target	Ach.	
GRID POWER (Capacities in MW)								
1	Wind Power	2500	1698.8	2500	2083.3	2000	1512.8	
2	Small Hydro	350	236.9	300	171.4	250	221.6	
3	Bio Power	105	114.7	105	101.6	100	0	
4	Bagasse Cogeneration	350	352.2	300	310.92	300	170	
5	Waste to Power (Indstl./Urban)	20	6.4	20	10.5	20	8.5	
6	Solar Power	800	754.1	1100	962.1	1100	750.77	
	Total	4125	3163	4325	3640	3770	2663.67	
OFF – GRID (Capacities in MWeq)								
7	Waste to Power	20	13.8	10	17.1	10	10.54	
8	Biomass (Non-bag Cogen)	60	88.6	80	60.7	80	46.47	
9	Biomass Gasifiers	1.5	0.6	1	0.6	0.8	0.75	
		Rural	10	7.5	9	7.1	8	6.20
10	Aero-Gens/ Hybrid systems	0.5	0.4	1	0.1	0.5	0.22	
11	SPV Systems	30	34.4	40	49.6	60	52.77	
12	Water Mills (WMs) / Micro/mini-hydel plants	2	2.08	2	1.6	4	2.00	
	Total	124	147.38	143	136.8	163.3	118.95	
DECENTRALISED RENEWABLE ENERGY SYSTEMS AND OTHER PROGRAMMES								
13	Remote Village Electrification (Nos. of Villages+ Hamlets)	-	975	-	860	-	313	
14	Family type Biogas Plants (No. in Lakh)	1.3	1.2	1.1	0.84	1.1	0.45	
15	Solar Water Heating – collector area (Million sq. meter)	0.6	1.4	0.5	1.1	0.5	0.66	

2.3 The financial allocation (BE/ RE) and actual expenditure during first three years of the 12th Plan as furnished by the Ministry is given below:

Table 2.3 Financial allocation and Actual Expenditure during first three years of 12th Plan

(Rs. in crore)

Resource/ Sector	12 th Plan Outlay	FY 2012-13			FY 2013-14			FY 2014-15		
		BE	RE	Actual Exp.	BE	RE	Actual Exp.	BE	RE	Exp. as on 28.02.2015
Grid- Interactive & Distributed Renewable Power	13,690.00	825.00	759.00	748.73 (98.64%)	1,030.00	1218.66	1132.65 (92.94%)	2018.00	1845.00	1826.93 (99.02%)
RE for Rural Applications	2,115.00	175.00	124.00	116.31 (93.79%)	150.00	113.29	109.21 (96.39%)	157.50	153.50	125.03 (81.45%)
RE for Urban, Industrial and Commercial Applications	800.00	22.00	15.50	15.17 (97.87%)	21.00	10.10	10.00 (99%)	14.00	14.00	10.35 (73.92%)
RD&D in RE	910.00	194.00	126.00	108.90 (86.42%)	160.00	148.50	136.97 (92.23%)	149.50	128.00	113.52 (88.68%)
Supporting Programmes	1,598.00	169.00	125.50	117.68 (93.76%)	160.00	248.13	230.20 (92.77%)	180.00	378.50	184.33 (48.70%)
Total Gross Budgetary Support (GBS)	19,113.00	1,385.00	1150.00	1,106.79 (96.24%)	1,521.00	1738.68	1619.03 (93.11%)	2519.00	2519.00	2260.16 (89.72%)

2.4 When asked about the shortfall in utilization of funds earmarked for the year, the Ministry stated :

"The minor shortfall during 2012-13 largely on account of inadequate proposals from states under some programmes specially North Eastern Projects, and non receipt of utilization certificates due from some of the states. The shortfall during 2013-14 vis-à-vis RE was on account of non utilization of funds amounting to about Rs.183 crore provided during the last quarter of the year in the third batch of supplementary demands for grants for IMG approved projects."

2.5 Regarding shortfall in achievement of physical target under wind, small hydro power, solar power and bio gas programme, the Ministry stated:

"Wind Power: The major reason for low achievements in wind sector in 2012-13 and 2013-14 was discontinuation of accelerated depreciation benefit and generation based incentive in the sector. Both these benefits have now been reinstated.

Small Hydro Power: Delay in obtaining statutory clearances (Forest area clearance, local area difficulties etc. and court cases in some of the states)

Solar Power: Minor shortfall was due to delay in allocation of unallocated thermal power by the Ministry of Power.

Biogas: High cost of installation of biogas plants and improved supply of LPG of Rural areas."

2.6 When queried about the action plan and strategy adopted by the Ministry to achieve the shortfall in the targets set for the 12th Plan, the Ministry in a note stated:

"The Ministry's Action Plan/Strategy is prepared keeping in view the revised targets set for renewable energy beyond the 12th Plan period viz. The Ministry has proposed renewable power capacity to 1,75,000 MW till 2022, comprising 100,000 MW Solar, 60,000 MW Wind, 10,000 MW Biomass and 5000 MW Small Hydro. To achieve these capacities the action plan of the Ministry includes the initiatives both on policy aspects as well as on programmes side."

2.7 Regarding action plan on Policy aspects, the Ministry stated:

"On policy aspects, actions of Ministry include amendments in Electricity Act, 2003, formulating Renewable Energy Policy as well as sectoral policies for solar, wind, biomass and small hydro, formulating new policies for sunrise Sectors (offshore wind, geothermal etc)., setting up Small Hydro Power Mission and National Wind Energy Mission including revision in the JNNSM to make it comprehend to the revised targets."

2.8 With regard to initiatives on the programmes side, the Ministry stated:

"Major programme initiatives include development of Solar Parks and Ultra Mega Solar Power Projects, Implementation of Solar Projects along international border to use the available land to light our borders by solar energy replacing the diesel gen-sets being used presently, operationalization of 300 MW Solar PV Projects by defense establishment and para military

forces, setting up the grid-connected solar projects on canal tops and banks to utilize the potential already available, setting up solar based pumps for irrigation and drinking water supply, motivating CPSUs such as CIL, NTPC etc., setting up small solar projects through un-employed graduates and village panchayats etc., setting up rooftop solar projects through IPDS and MNRE scheme, strengthening SECI and IREDA by enhancing their capacities."

2.9 The Ministry further stated that they have been mobilizing support from various Ministries/Departments for the promotion of renewable energy, e.g. fiscal and financial incentives from Ministry of Finance; relevant amendments in Electricity Act and Tariff Policy from Ministry of Power, making provision of roof top solar a condition precedent/mandatory reform under its Smart City scheme through Ministry of Urban Development.

2.10 Regarding budgetary allocation of the 12th Plan and requirement of more allocation for the remaining period, the Secretary, MNRE, during evidence, deposed before the Committee :

"Against the proposed outlay of about Rs.41,000 crore an amount of Rs.19,113 crore have been approved for various programmes of MNRE during the 12th Five Year Plan. During the first three years of the 12th Five Year Plan, an amount of Rs. 5400 crore have been provided. In the year 2015-16, an amount of Rs. 2787.67 crore has been provided at the BE stage. Our point is that the Planning Commission which is now Niti Ayog had proposed Rs.19000 crore for them and physical targets were given to us. Only due to this reasons, we have not received that much amount. It is an important point. There is a need to increase the Budget allocation during the year 2015-16 and 2016-17 to make up the approved budget outlay for Rs. 19000 crore approved under the 12th Five Year Plan. Inter-Ministerial group has approved proposals over Rs. 10000 crore from National Clean Energy Fund. However, the Budget is not released proportionately. In view of that there are a lot of pending works and subsidies are also pending. To meet the committed liabilities as well as to meet the physical targets including enhanced targets for solar and wind power, there is a need to enhance the budget allocation substantially.

2.11 Detailing the initiatives of the Ministry for promotion and development of renewable energy, the Secretary, MNRE, during evidence stated:

"The Ministry has organised the first Renewable Energy Global Investors Meet Expo for the first time during February 15 to 17, 2015 at New Delhi to attract investments. It was a success and the private developers both from India and abroad has committed green energy certificates of 265000 megawatt. What it means is that the industry is prepared to put renewable energy to the extent of 265000 megawatt in the Indian market provided we create an enabling atmosphere. It is also a matter of pleasure to inform that financial institutions like banks, private banks and also public sector banks, have also committed for financing renewable energy projects of 75000 megawatts in the next five years.

2.12 During the evidence, when the Committee desired to know about the capacity addition target from renewable energy, the Ministry stated as under:

Table 2.12 Capacity addition target from renewable energy

Source	Capacity addition target for 2012-17	Expected capacity by 2017 (cumulative)
Wind power	15,000	32,500
Small Hydro	2,100	5,500
Biomass Power	500	1,700
Bagasse Cogeneration	1,500	3,500
Waste to Power	700	800
Solar Power	10,000	10,900
TOTAL	29,800	54,900

CHAPTER III

ANALYSIS OF DEMANDS FOR GRANTS OF MNRE FOR 2015-16

3.1 The MNRE presented Demand No. 69 to Parliament for the financial year 2015-16 on 19th March, 2015. The Plan and Non-plan provisions made in the Revenue and the Capital Sections of the Budget are as under:

Demand No. 69

Table 3.1 Plan and Non-Plan Provisions for 2015-16
(Rs. in crore)

	Plan	Non-Plan	Total
Revenue Section	192.67	15.54	208.21
Capital	95.00	-	95.00
Grand Total			
(Revenue + Capital)	287.67	15.54	303.21

3.2 Budget Estimates for the year 2015-16 vis-à-vis that of Budget Estimates/Revised Estimates (BE/RE) of 2014-15 and Actuals of 2013-14 of Plan and Non-plan provisions made in the Revenue and the Capital Sections of the Budget are as under:

Table 3.2 BE/RE and Actuals of Plan and Non-Plan Provisions

	Actual 2013-2014			Budget 2014-2015			Revised 2014-2015			Budget 2015-2016		
	Plan	Non-Plan	Total	Plan	Non-Plan	Total	Plan	Non-Plan	Total	Plan	Non-Plan	Total
Revenue	282.89	12.96	295.85	846.00	15.39	861.39	446.00	13.89	459.89	192.67	15.54	208.21
Capital	99.34	0.00	99.34	95.00	0.00	95.00	95.00	0.00	95.00	95.00	0.00	95.00
Total	382.23	12.96	395.19	941.00	15.39	956.39	541.00	13.89	554.89	287.67	15.54	303.21

3.3 A statement showing the details of the Budget Estimates for the year 2015-16 vis-à-vis that of Budget Estimates/Revised Estimates (BE/RE) of 2014-15 and Actuals of 2013-14 is given at *Annexure-II*.

3.4 The Central Plan Outlay of the Ministry of New and Renewable Energy during the year 2014-15 and for the year 2015-16 are given under :

Table 3.4 Central Plan Outlay for 2015-16

Rs. in crore

	2014-15		2015-16
	BE	RE	BE
Gross Budgetary Support	2519.00	2519.00	2787.67
Support from NCEF	541.00	1978.00	2500.00
IEBR	3000.00	3346.58	3373.06
Total	5519.00	5865.58	6160.73

3.5 The total outlay of the Ministry for the financial year 2015-16 is Rs.6160.73. Out of this, support from National Clean Energy Fund (NCEF) includes Rs.2500.00 crore, the Internal and Extra Budgetary Resources (IEBR) constitutes Rs. 3373.06 crore and Gross Budgetary Support (GBS) accounts for Rs. 2787.67 crore.

3.6 The Committee were also informed that Plan outlay of Rs.6500 crore was sought by the Ministry from the Ministry of Power. However, an amount of Rs.2787.67 crore was allocated as BE for the year 2015-16. A detailed statement in this regard as provided by MNRE is given below:

Table 3.6 Proposal and Actual Allocation for 2015-16

Sr. No.	Programme	Rs. in Crore	
		Proposed B.E 2015-16	Allocated
I-GRID-INTERACTIVE AND DISTRIBUTED RENEWABLE POWER			
(A)	Grid-interactive (MW)		
1	Wind Power	760.00	480.00
2	Small Hydro Power	160.00	100.00
3	Solar Power	1500.00	900.00
4	Biomass Power (Combustion)	7.00	2.5
	Biomass Power (Gasification)	3.00	2.5
	Bagasse Cogeneration	50.00	30.00
5	Urban & Industrial Waste to Energy	20.00	10.00
	Sub-total (A)	2500.00	1525.00
(B)	Off-Grid/DRPS (MW)		
1	Solar applications including ST systems & Roof Top	2000.00	847.00
2	Energy from Urban/Municipal/Industrial Wastes	12.50	15.00
3	Non Bagasse Cogeneration in Industry	15.00	10.00
4	Biomass Gasifiers-Rural electrification	2.00	2.00
5	Biomass gasifiers for Industry	10.00	3.00
6	Micro hydel & Watermills	10.00	5.00
7	Aero-generators/Hybrid systems	5.00	3.00
	Sub-Total (B)	2054.50	885.00
	I-Total (A) + (B)	4554.50	2410.00
II-RENEWABLE ENERGY FOR RURAL APPLICATIONS			
1	RVE Programme / Energy Access	100.00	5.00
2	Family type biogas plants	150.00	130.00
3	Other Biogas applications	5.00	3.00
4	Cook Stove	90.00	20.00
5	Solar Cookers	1.50	1.00
6	Solar Cookers for Schools Large	1.50	1.00
	Sub total (2-6)	248.00	155.00
	II-Total	348.00	160.00
III-RENEWABLE ENERGY FOR URBAN, INDUSTRIAL & COMMERCIAL APPLICATIONS			
1	Green buildings	5.00	2.00
2	Solar Cities/Akshay Urjashope/pilot/related activities	15.00	2.00
3	Alternate fuel vehicles	4.00	0.62
	III-Total	24.00	4.62
IV-RESEARCH, DESIGN & DEVELOPMENT IN RENEWABLE ENERGY			
1	Bio-Energy		
	Bio-fuel	10.00	5.00
	Biogas	10.00	4.00
	Biomass Gasification	0.50	0.00
	Waste-to-Energy		0.00
	Cookstoves	2.00	0.50
	Sub total	22.50	9.50

2	Solar Energy	75.00	34.00
3	Wind Energy	5.00	1.00
4	Small Hydro Power	6.00	2.00
5	New Technology		
	Hydrogen Energy & HEFC	15.00	9.00
	Fuel Cells	5.00	1.00
	Tidal Energy	1.00	0.00
	Geo Thermal	5.00	0.50
	Battery Operated Vehicles	1.00	0.25
	Sub total	27.00	10.75
6	Solar Energy Centre (SEC)/NISE	100.00	19.75
7	C-WET	100.00	5.00
8	NIRE	100.00	8.00
	IV-Total	435.50	90.00
V-SUPPORT PROGRAMMES			
1	Information and Publicity programmes (incl.SADP)	30.00	6.25
2	International Relations	5.00	1.00
3	HRD & Training including setting up RE University	25.00	4.00
4	Monitoring & Evaluation	11.00	0.30
5	Plan Secretariat (Administration)	30.00	10.47
6	IREDA Equity	500.00	3.00
7	e-governance	2.00	0.10
8	Support to SNA	25.00	3.06
9	Solar Energy Corporation of India (Equity)	500.00	92.00
	V-Total	1128.00	120.18
	Grand Total	6490.00	2784.80
	Externally Aided Projects (EAP)	10.00	2.87
		6500.00	2787.67

3.7 On being asked the plan outlay including Budgetary Support and Internal and Extra Budgetary Resources (IEBR) for the last three years both BE/RE and actual break-up, the Ministry in a note furnished:

Table 3.7 BE/RE and Actual during last three years

(Rs. in Crore)

	2012-13			2013-14			2014-15		
	BE	RE	Actual Exp	BE	RE	Actual Exp	BE	RE	Actual Exp (as on 28.2.2015)
GBS+ NCEF*	1385.00	1150.00	1106.79	1519.00	1738.68	1619.03	2519.00	2519.00	2260.16
IEBR	1970.00	3080.36	1894.36	2394.00	2966.23	2955.56	3000.00	3346.58	2181.92
Total	3355.00	4230.36	3001.15	3913.00	4704.91	4574.59	5519.00	5865.58	4442.08

*Support from NCEF for regular schemes of the Ministry has been introduced from FY 2013-14

3.8 When asked about the variations in the BE/RE and actual expenditure during the last three years, the Ministry in a note explained:

- a) " The variation in BE, RE and AE of IEER mobilized by IREDA during 2012-13 was mainly on account of the fact that (a) tax free bonds envisaged at RE stage could not be realized up to the target and (b) similarly the bank loan expected to be raised was also less than the targeted amount due to inadequate demands for loans as well as the high cost of loans.
- b) During 2013-14, RE was enhanced on account of allocation of funds amounting to about Rs 183 crore from NCEF for Inter Ministerial Group (IMG) approved projects. Besides a new procedure to meet the part of the funding requirement of MNRE was introduced whereby the funding for ongoing programmes under Grid connected and Distributed Renewable energy and RD&D were met from NCEF and other programmes from the regular GBS to Plan Outlay. Under this new system RE was kept almost at the BE level and additional funds were provided from NCEF for IMG approved projects.
- c) During 2014-15, the enhancement in BE over BE 2013-14 was mainly on account of three new schemes/programmes announced in the Finance Minister's Budget Speech viz. Solar Park Scheme (Rs. 500 crore), Installing one lakh solar pumps for irrigation and drinking water (400 crore) and grid connected solar projects on canal tops and banks (Rs.100 crore)."

3.9 On being asked about the major heads which showed shortfall in utilization of funds earmarked for expenditure during the year 2014-15, the Ministry stated that there will be no shortfall in utilization of funds during 2014-15. The detail statement of actual expenditure vis-a-vis B/E/RE furnished by the Ministry is as below :

Table 3.9 Expenditure during 2014-15

(Rs. in crore)

S. No.	Scheme/ Programme	BE	RE	RE minus BE	AE (As on 28.2.2015)	Exp as per cent to RE
		A	B	C	D	E
1	Grid Interactive Renewables	1170.00	1082.50	-87.50	1078.63	99.64
2	Off Grid/ Distributed RE	848.00	762.50	-85.50	734.04	96.26

3	RE for Rural Applications	157.50	153.50	-4.00	125.03	81.45
4	RE for Urban, Industrial. & Commercial Applications	14.00	14.00	0.0	10.35	73.93
5	RD&D in RE	149.50	128.00	-21.50	113.52	88.68
6	Information., Publicity & Extension	25.00	15.00	-10.00	11.07	73.80
7	International Relations	1.00	24.50	+23.50	24.04	98.12
8	EAPs	8.00	8.00	0.0	6.75	84.37
9	Support to States	12.00	5.00	-7.00	3.96	79.20
10	Investment in PSUs	95.00	295.00	+200.0	123.89	41.99
11	Administration & Monitoring (Inc. Plan Secretariat, e Gov., HRD, M&E)	39.00	31.00	-8.00	28.88	93.16
Total		2519.00	2519.00	0.00	2260.16	89.72

3.10 The Committee further asked about quarter-wise expenditure made during last three years. The Ministry furnished the following information:

Table 3.10 Quarter-wise expenditure during last three years

Year	BE	RE	1 st Quarter	2 nd Quarter	3 rd Quarter	4 th Quarter	Total
2012-13	1385.00	1150.00	153.52	501.15	172.35	279.77	1106.79
2013-14	1519.00	1738.68	519.59	274.32	285.88	539.24	1619.03
2014-15	2519.00	2519.00	354.04	752.44	635.93	517.75 (Jan & Feb, 2015)	2260.16 (as on 28.02.2015)

3.11. When asked about the heads which could not get the required amount leading to less or non-achievement of the targets, the Ministry stated :

"During 2014-15, in the First Supplementary Demands for Grants, Rs.523 crore were provided for IMG approved projects from NCEF viz. wind GBI scheme (Rs.299 crore), support to IREDA (Rs.200 crore) and funds for India's matching contribution towards PACE Setter Fund (Rs.24 crore). However, as no additional funds were provided to the Ministry for these supplementary demands, requirements of funds for these demands were to be accommodated within the RE (which was kept equal to BE) resulting reduction in plan outlay in some of the programmes vis grid and off-grid programmes at RE stage. The reductions were effected under new schemes which got the Government's approval only during December, 2014 therefore only part of the funds allocated for them could be released during the year. However, physical progress under these programmes was not adversely affected due to shortage of funds. The actual expenditure of the Ministry, as on 28.2.2015, at Rs. 2260.16 crore was 89.7% of the RE and is expected to be over 99% by the close of the financial year. Therefore, no major surrenders are envisaged during the current financial year. "

3.12 When enquired whether the expenditure during the last three years was as per the plan and norms, the Ministry replied:

"As per the circulars of Ministry of Finance, the general norms prescribed for phasing of expenditure include (i) not more than 1/6th of BE could be spent during April and May, (ii) during the last quarter (Jan – March) and during the last month of March, ceiling of expenditure prescribed are 33% and 15% of the BE respectively, (iii) by end December, minimum expenditure, therefore, should reach to 67%, to avoid any surrender of plan funds at the end of financial year. Therefore, first quarter normally does not exceed 20% of the BE, as a result of which, bulk of the expenditure is required to be done during 2nd and 3rd quarters to reach the minimum level of 67% by the end of December, i.e. 3rd quarter. Keeping these norms in view, quarterly phasing of expenditure of the Ministry during last two year and the current year has been quite as per these norms. A periodical monitoring mechanism is already in place to ensure that phasing of expenditure is as per the norms prescribed by the Ministry of Finance."

CHAPTER IV

POWER FROM RENEWABLES : GRID INTERACTIVE AND OFF-GRID RENEWABLE POWER

4.1 An allocation of Rs.1525 crore with a physical targets of 4460 MW grid power and Rs.885 crore for 130.30 MWp off-grid has been made under Grid Interactive and off-Grid renewable power for the year 2015-16. The physical and financial details of the programmes to be covered under the head as furnished by the Ministry is as follows :

*Table 4.1
Physical & financial details under grid interactive and off-grid renewable power during 2015-16*

S. No.	Programme / system	Financial Rs in Crore	Physical (in MW)
GRID POWER			
1	Wind Power	314.00	2400
2	Small Hydro	100.00	250
3	Bio Power & Bagasse Cogeneration	35.00	400
4	Waste to Power (Indstl./Urban)	10.00	10
5	Solar Power	1066.00	1400
	Total	1525.00	4460
OFF – GRID			
6	Waste to Power	15.00	10.00
7	Biomass (Non-bag Cogen)	10.00	60.00
8	Biomass Gasifiers	5.00	8.00
9	Aero-Gens/ Hybrid systems	3.00	0.30
10	SPV Systems	847.00	50.00
11	Water Mills (WMs) / Micro/mini-hydel plants	5.00	2.00
	Total	885.00	130.30

4.2 When asked the physical achievements vis-a-vis targets during the last three years under grid and off-grid power, the Ministry furnished:

Table 4.2 *physical achievements under grid and off-grid power during last three years*
Rs. in crore

S. No.	Programme / system	2012-13		2013-14		2014-15 (as on 31.02.2015)		
		Target	Ach.	Target	Ach.	Target	Ach.	
GRID POWER (Capacities in MW)								
1	Wind Power	2500	1698.8	2500	2083.3	2000	1512.8	
2	Small Hydro	350	236.9	300	171.4	250	221.6	
3	Bio Power	105	114.7	105	101.6	100	0	
4	Bagasse Cogeneration	350	352.2	300	310.92	300	170	
5	Waste to Power (Indstl./Urban)	20	6.4	20	10.5	20	8.5	
6	Solar Power	800	754.1	1100	962.1	1100	750.77	
	Total	4125	3163	4325	3640	3770	2663.67	
OFF – GRID (Capacities in MWeq)								
7	Waste to Power	20	13.8	10	17.1	10	10.54	
8	Biomass (Non-bag Cogen)	60	88.6	80	60.7	80	46.47	
9	Biomass Gasifiers							
		Rural	1.5	0.6	1	0.6	0.8	0.75
		Indstl	10	7.5	9	7.1	8	6.20
10	Aero-Gens/ Hybrid systems	0.5	0.4	1	0.1	0.5	0.22	
11	SPV Systems	30	34.4	40	49.6	60	52.77	
12	Water Mills (WMs) / Micro/mini-hydel plants	2	2.08	2	1.6	4	2.00	
	Total	124	147.38	143	136.8	163.3	118.95	

4.3 On being enquired about the financial utilisation vis-à-vis allocation during the last three years, the Ministry furnished:

Table 4.3 *Financial utilisation under grid and off-grid power during last three years*
(Rs.in crore)

Resource/ Sector	2012-13			2013-14			2014-15		
	BE	RE	Actual Exp.	BE	RE	Actual Exp.	BE	RE	Exp. as on 28.02.2015
Grid- Interactive & Off-Grid Renewable Power	825.00	759.00	748.73 (98.64%)	1,030.00	1218.66	1132.65 (92.94%)	2018.00	1845.00	1826.93 (99.02%)

A. Solar Energy

4.4 India is endowed with a very vast solar energy potential. Most parts of the country have about 300 sunny days. Average solar radiation incident over the land is in the range of 4-7kWh per day. The solar energy can be utilized through solar photovoltaic technology which enables direct conversion of sunlight into energy and solar thermal technologies which utilizes heat content of solar energy into useful applications.

4.5 When asked the estimated potential vis-à-vis utilization of solar energy in the country, the Ministry furnished:

Table 4.5 State-wise estimated solar energy potential and installed grid connected solar power capacity

Sr. No.	State/UT	Solar Potential (MW)	Total commissioned capacity (MW)
1	Andhra Pradesh	38000	237.86
2	Arunachal Pradesh	9000	0.025
3	Assam	14000	-
4	Bihar	11000	-
5	Chhattisgarh	18000	7.6
6	Goa	1000	-
7	Gujarat	36000	949.05
8	Haryana	5000	12.8
9	Himachal Pradesh	34000	-
10	Jammu & Kashmir	111000	-
11	Jharkhand	18000	16
12	Karnataka	25000	77
13	Kerala	6000	0.025
14	Madhya Pradesh	62000	499.58
15	Maharashtra	64000	334.4
16	Manipur	11000	-
17	Meghalaya	6000	-
18	Mizoram	9000	-
19	Nagaland	7000	-
20	Odisha	26000	31.76
21	Punjab	3000	119.77
22	Rajasthan	142000	902.1

23	Sikkim	5000	-
24	Tamil Nadu	18000	122.48
25	Telangana	20000	25
26	Tripura	2000	5
27	Uttar Pradesh	23000	49.71
28	Uttarakhand	17000	5
29	West Bengal	6000	7.21
30	Delhi	2000	5.465
31	UT	1000	10.375
32	Others	-	0.79
TOTAL		750000	3419

4.6 Jawaharlal Nehru National Solar Mission (JNNSM) was launched on 11th January, 2010 which targets include (i) deployment of 20,000 MW of grid connected solar power by 2022, (ii) 2,000 MW of off-grid solar applications including 20 million solar lights by 2022, (iii) 20 million sq. m. solar thermal collector area, (iv) to create favourable conditions for developing solar manufacturing capability in the country; and (v) support R&D and capacity building activities to achieve grid parity by 2022. The Mission is to be implemented in three phases:

4.7 When asked about the physical achievement vis-à-vis targets of the Phase I & II of the JNNSM, the Ministry furnished:

Table 4.7 Phase I & II achievements of the JNNSM

Application Segment	Target for Phase I (2010-13)	Achievement for Phase-I (Till 31 st March 2013)	Cumulative Target for Phase II (2013-17)	Cumulative Achievement so far till Feb 2015
Grid solar power (large plants, roof top & distribution grid plants)	1100 MW	1,684.43 MW (including those under state initiative)	10000 MW	3382.78 MW
Off-grid solar applications allotment	200 MW	252.5 MW	1000 MW	357.18 MW
Solar Thermal Collectors (SWHs, solar cooking, solar cooling, Industrial process heat applications, etc.)	7 million sq. meters	7.001 million sq. meters	15 million sq. meters	8.729 million sq. meters

4.8 On being asked the actual financial expenditure vis-à-vis allocation of the Solar Mission, the Ministry furnished:

Table 4.8 Actual expenditure under JNNSM

Year	RE	Actual Expenditure
2011-12	710.00	707.35
2012-13	705.00	655.54
2013-14	887.00	792.37
2014-15 (upto 31/1/2015)	1322.93	1130.72

4.9 When the Committee desired to know the detailed action plan of the Ministry to achieve the target set under JNNSM, the Ministry in a reply stated:

- *ramp up capacity of grid-connected solar power generation to 1000 MW within three years – by 2013; an additional 3000 MW by 2017 through the mandatory use of the renewable purchase obligation by utilities backed with a preferential tariff. This capacity can be more than doubled – reaching 10,000MW installed power by 2017 or more, based on the enhanced and enabled international finance and technology transfer.*
- *promote programmes for off grid applications, reaching 1000 MW by 2017 and 2000 MW by 2022.*
- *achieve 15 million sq. meters solar thermal collector area by 2017 and 20 million by 2022.*

4.10 The Committee were also informed that the Government has desired to scale up Grid connected Solar Power Projects from 20 GW (20000 MW) to 100 GW (100000 MW) under JNNSM by 2022 subject to availability of finance, demand from States to buy renewable energy and upgradation of grid capacity. Action plan proposed consists of 40,000 MW in rooftops and 20,000 MW through unemployed youth and another 40,000 MW through solar parks and other projects.

4.11 On being asked the R&D efforts on different aspects of solar technologies with regard to solar photovoltaic system and solar thermal to make them competitive and cost effective, the Ministry in a note stated:

"The Ministry has been supporting Research, Design & Development (RD&D) in solar energy through various institutions/manufacturers for cost effective technology. Ministry provides upto 100% financial support to Government/non-profit research organizations/NGOs and 50% to industry/civil society organizations. The Ministry has endeavoured to accelerate ongoing R&D efforts on different aspects of Solar Photovoltaic and Solar thermal technologies, including multi-disciplinary research, with the objective of improving the efficiency, systems performance and reducing the cost. A comprehensive policy for research & development has been put in place to achieve the objectives of cost reduction and efficiency enhancement."

B. Wind Energy

4.11 According to Ministry's Report, Wind Energy is the most successful renewable energy option in India and is the fastest growing renewable energy technology for generating grid connected power amongst various renewable energy sources. The Ministry's wind power programme covers survey and assessment of wind resources, facilitation of implementation of demonstration and private sector projects through various fiscal and promotional policies. A total capacity of 22,645 MW has been established up to February, 2015 in the country. India is the fifth largest wind power producer in the world, after China, USA, Germany, and Spain.

4.12 On a query regarding State-wise potential and installed capacity of wind energy, the Ministry furnished:

Table 4.12 Potential and installed capacity of wind power (State-wise)

State	Potential available at 80 m (MW)	Achievements (up to Feb. 2015) (MW)
AndhraPradesh/Telangana	14497	929
Gujarat	35071	3591

Karnataka	13593	2574
Kerala	887	35
Madhya Pradesh	2931	607
Maharashtra	5961	4399
Rajasthan	5050	3095
Tamilnadu	14152	7411
Others	10646	4
Total	102788	22645

4.13 When asked about the achievements vis-à-vis targets during the last three years, the Ministry furnished:

Table 4.13 achievements during last three years under wind energy

Year	Target (MW)	Achievement (MW)
2011-12	2400	3197
2012-13	2500	1700
2013-14	2500	2079
2014-15	2000	1513 (up to February,2015)

4.14 On being asked fund utilization vis-à-vis allocation for the last three years, the Ministry furnished:

Table 4.14 Fund utilization for the last three years under wind energy
Rs. in crore

Year	Budgetary allocation	Expenditure
2011-12	28.00	27.51
2012-13	64.75	64.51
2013-14	314.50	314.39
2014-15	578.00	578.00

4.15 Regarding physical target and financial allocation for the year 2015-16, the Committee are informed that a physical target of 2400 MW has been set with an outlay of Rs. 314 crore.

4.16 When queried about the major activities/Projects proposed to be undertaken by the Ministry during 2015-16, the Ministry in a note stated:

- Efforts will be made to achieve the target of 2400 MW
- Wind Mission document is under preparation. Efforts will be made to finalise and announce the Wind Mission
- In view of anticipated changes in Electricity Act, efforts will be made to develop wind power on the concept of Wind Parks with sale of electricity to other states as well (to Utilities under obligated purchase of RE and through Open Access).

4.17 When asked about the provisions of fiscal and financial incentives provided by the Government in wind energy sector, the Ministry in a note stated that the following incentives are available in wind energy sector:

- Accelerated Depreciation benefit @ 80% in first year
- 10 years tax holiday on income generated from wind power projects.
- Concessional custom duty on certain components of wind electric generators
- Exemption of Special Additional Duty (SAD) on import of certain components of wind turbines
- Excise duty exemption to manufacturers
- A Generation Based Incentive (GBI) is available for the projects not availing Accelerated Depreciation benefit, under which Rs. 0.50/unit generated is provided with a ceiling of Rs. 1.00 crore per MW.

4.18 On being asked the provisions under Generation Based Incentive (GBI) and reinstatement of Accelerated Depreciation (AD) benefit to wind energy developers/investors, the Ministry stated that the Accelerated Depreciation (AD) benefit has been re-instated w.e.f. 01.04.2014 and the following are the provisions of GBI furnished by the Ministry:

- GBI and AD available on mutually exclusive manner i.e. one can either claim AD or GBI and not both

- GBI is availed @ Rs.0.50/kWh subject to max Rs. 1.00 crore/MW
- Maximum GBI benefit has to be availed in a period > 4 years and < 10 years
- Maximum benefit allowed in first 4 years : Rs. 25 lakh per MW
- GBI allowed for captive producers for the electricity sold to utilities. The Govt bodies which can not avail AD benefit, can take GBI which they use for captive purposes. Open access (merchant power) not allowed.

4.19 When asked about the progress with the National Wind Energy Mission (NWEM), the Ministry in a note stated:

"A National Wind Energy Mission has been planned. After preparation of a Mission Document, an EFC note was sent for comments of concerned Ministries /departments. The comments were received. However, in view of modified targets set by new Government and additional activities to be taken up, the mission document is under modification".

(C) Small Hydro Power

4.20 According to Ministry's report, hydro Power Projects up to capacity of 25 MW capacity are classified as Small Hydro. Ministry of New and Renewable Energy has been vested with the responsibility of developing Small Hydro Power (SHP) projects. The estimated potential for power generation in the country for small/mini hydel projects is around 19,749 MW from 6474 identified sites all over the country.

4.21 On being asked the State-wise estimated potential and installed capacity of power from small hydro projects in the country, the Ministry furnished:

Table 4.21 State-wise numbers and aggregate capacity of SHP Projects

Sl. No.	State	Potential Projects	(MW) Nos.	Installed Nos.	Capacity (MW)
1	Andhra Pradesh	387	978.4	68	221.03
2	Arunachal Pradesh	677	1341.38	152	104.605
3	Assam	119	238.69	6	34.11
4	Bihar	93	223.05	29	70.7
5	Chattisgarh	200	1107.15	9	52

6	Goa	6	6.5	1	0.05
7	Gujarat	292	201.97	6	16.6
8	Haryana	33	110.05	8	71.5
9	Himachal Pradesh	531	2397.91	165	696.105
10	J&K	245	1430.67	39	156.53
11	Jharkhand	103	208.95	6	4.05
12	Karnataka	834	4141.12	155	1129.73
13	Kerala	245	704.1	27	168.92
14	Madhya Pradesh	299	820.44	11	86.16
15	Maharashtra	274	794.33	59	335.425
16	Manipur	114	109.13	8	5.45
17	Meghalaya	97	230.05	4	31.03
18	Mizoram	72	168.9	18	36.47
19	Nagaland	99	196.98	11	29.67
20	Orissa	222	295.47	10	64.625
21	Punjab	259	441.38	48	157.4
22	Rajasthan	66	57.17	10	23.85
23	Sikkim	88	266.64	17	52.11
24	Tamil Nadu	197	659.51	21	123.05
25	Tripura	13	46.86	3	16.01
26	Uttar Pradesh	251	460.75	9	25.1
27	Uttarakhand	448	1707.87	101	209.32
28	West Bengal	203	396.11	24	98.5
29	A&N Islands	7	7.91	1	5.25
Total		6474	19749.44	1026	4025.35

4.22 When asked the achievement vis-à-vis targets during the last three years, the Ministry furnished:

Table 4.22 Physical achievement during last three years under small hydro power

SL. No.	Year	Physical Target (MW)	Achievement (MW)
1	2012-13	300	237.00
2	2013-14	300	171.40
3	2014-15	250	221.60 (as on 28.02.2015)

4.23 On being enquired about the fund utilization vis-à-vis allocation for the last three years, the Ministry furnished:

Table 4.23 Expenditure during last three years under small hydro power

Sl. No.	Year	Budgetary allocation (Rs. in crore)	Expenditure (Rs. in crore)
1	2012-13	155.10	158.92
2	2013-14	123.18	122.02
3	2014-15	108.00	104.03 (as on 28.02.2015)

4.24 Regarding the physical targets and budgetary allocation for the year 2015-16 the Ministry stated that an allocation of Rs. 100 crore with physical target of 250 MW under the SHP Programme.

4.25 On a query about the major activities/projects proposed by the Government during 2015-16, the Ministry in a note furnished as under :

- a. *Finalization and approval of National Mission on Small Hydro*
- b. *Monitoring and interaction with States to achieve targets*
- c. *Major portion of execution in implementation of “Ladakh Renewable Energy Initiative”.*
- d. *Setting of two water mill centres*
- e. *Setting up of Laboratory for the study of “Sediment Monitoring and impact analysis in Hydro Power Plants.”*
- f. *Man power development by organising training / seminars*

4.26 When queried about the progress with the National Mission on Small Hydro, the Ministry in a note replied:

" The Ministry has prepared draft National Mission on Small Hydro after due consultation with states and other stake holders. The Mission is proposed to be a joint initiative of the Government of India and State Governments to enrich remote and rural areas in power generation. The objective of the National Mission on Small Hydro is to address issues responsible for decline of SHP sector in the country and to regenerate interest of private sector to make investment in this renewable energy sector. The proposed targets of the Mission are:

- To create an enabling policy framework along with the state governments for the deployment of 5,000 MW of small hydro projects by 2019 and a platform for long term sustainable growth in small hydro sector.
- Encourage and enable all the States to participate in the National Mission of Small Hydro for setting up new SHP projects, provide conducive policy and institutional support for SHP projects by private sector.
- Evaluation of all existing Government sector small hydro projects with a view to Renovate, Modernize and uprate (RMU) them, if required, to improve efficiency and add capacity where ever possible.
- Develop new technologies and engineering solutions to set up low and ultra low head (below 3m) small hydro projects on canals, dam outlets and water outfall structures. Projects of 1000 MW on canals and existing water structures by 2019.
- Develop a network of water mills, individual household systems and micro hydro projects in remote and rural areas and set up 5000 water mills/micro hydro projects and establishing local mini grids.
- Undertake systematic study to identify new small hydro potential sites

4.27 On being enquired the provisions of fiscal and financial incentives provided by the Government in SHP Sector, the Ministry in a note furnished the following:

(a) Resource Assessment and Support for Identification of new sites:

Areas	Up to 1MW	Above 1 MW & upto 25 MW
All States & UTs	Rs.6,00,000 per Project	Rs.10,00,000 per Project

(b) Scheme for Financial support to set up New SHP Project up to 25MW capacity in the Private, Co-operative, joint Sector etc. The quantum of financial support will be independent of the term loan and will be limited to the amount indicated below.

Category	Above 0.1MW-25MW
N E Region, J&K, H.P & Uttarakhand (special Category States)	Rs.1.5crore/MW limited to Rs.5.00crore per project
Other States	Rs.1.0crore/MW limited to Rs.5.00crore per project

(c) Scheme for Financial support to set up New SHP Project up to 25MW station capacity in the Government/ State Sector.

Category	Above 100KW Upto 1000KW	Above 0.1MW-25MW
N E Region, J&K, H.P & Uttarakhand (special Category)	Rs.75,000 per KW.	Rs7.5crore/MW limited to Rs.20.00crore per project.

States)		
Other States	Rs.35,000 per KW.	Rs.3.5crore/MW limited to Rs.20.00crore per project.

- (d) Scheme to support for Renovation and Modernisation of existing SHP projects in the Government sector.

Areas	Upto 1000 KW	Above 1 MW & up to 25 MW
All States & UTs	Rs.10,000 per KW	Rs.1.00 crore/MW limited to `10.00 crores per project

- (e) Scheme to support for development/ up gradation of Water Mills (mechanical/ electrical output) and setting up Micro Hydel projects (up to 100 KW capacity).

S. No.	Category of Watermill	Amount of CFA
1.	Mechanical output only	Rs.50,000/- per Watermill
2.	Electrical output (up to 5 kW) or, Both mechanical and electrical output (up to 5 kW)	Rs.1,50,000/- per Watermill

Micro Hydel Projects up to 100 kW Capacity:

Areas	Amount of CFA
All states	Rs.1,25,000/- per KW

CHAPTER V

RENEWABLE ENERGY FOR RURAL APPLICATIONS

5.1 The Ministry of New and Renewable Energy has been supporting Programmes for the deployment of renewable energy systems and devices such as biogas plants, photovoltaic systems, biomass gasifiers, solar cookers and solar thermal systems etc. for rural and semi-rural applications. The Ministry has also been implementing remote village electrification programme and village energy security test projects.

5.2 On being asked the budgetary allocation (BE/RE) and actual utilization under Renewable Energy for Rural Applications for the last three years, the Ministry furnished:

Table 5.2 BE/RE & Actual Utilization for last three years under renewable energy for rural applications

(Rs.in crore)

S. No.	Programme / system	2012-13			2013-14			2014-15			2015-16
		B.E	R.E	Actual	B.E	R.E	Actual	B.E.	R.E	Actual (as on 28.02.2015)	B.E
1	Remote Village Electrification Programme (RVE)	0.00	0.00	0.00	15.00	15.00	15.00	14.00	10.00	9.96	5.00
2	Cooking devices (Biogas, Improved Cookstoves & Solar Cookers)	175.00	124.00	116.51	135.00	98.29	94.21	143.50	143.50	115.07	155.00
	Total	175.00	124.00	116.51	150.00	113.29	109.21	157.50	153.50	125.03	160.00

5.3 When asked about the physical achievements vis-à-vis targets during the last three years, the Ministry furnished:

Table 5.3 Physical achievement during last three years under renewable energy for rural applications

S. No.	Programme / system	2012-13		2013-14		2014-15		Target 2015-16
		Target	Ach.	Target	Ach.	Target	Ach.	
1	RVE (No. of Villages & Hemlets)	-	975	-	860	250 (Sanctioned)	313	NIL
2	Biogas (No. of Biogas Plants in Lakh)	1.3	1.20	1.1	0.85	1.10	0.65 (upto December)	1.10
3	Improved Cookstoves (No. in lakh)	New Programmes				7.50	Ach. Awaited from state	3.50
4	Solar Cookers (No.)	10,000	5,776	10,000	9,337	10,000	25151	25000

5.4 On a query about the achievements vis-a-vis targets under Remote Village Electrification Programme Phase-II, the Ministry stated a total of 313 villages and hamlets are covered against the target of 250 villages and hamlets during 2014-15.

5.5 When asked the physical target and financial allocation for the year 2015-16, the Ministry stated that as the scheme is discontinued, no physical targets were proposed.

CHAPTER VI

RENEWABLE ENERGY FOR URBAN, INDUSTRIAL AND COMMERCIAL APPLICATIONS

6.1 The MNRE has reported that they have been promoting the use of technologies for energy recovery from municipal, industrial and commercial wastes and solar energy, for meeting certain niche energy demands for urban, industrial and commercial sectors in the country. The programmes being implemented during the year include: i) Energy Efficient Solar/Green Building Programme; ii) energy Recovery from Urrban, Industrial and Agricultural Wastes; and iii) Bioenergy and Cogeneration in Industry.

6.2 On being asked the physical achievements and financial utilization for the last three years, the Ministry furnished:

Table 6.2(a) Physical and financial achievements for last three years under Waste to Energy

(Rs.in crore)

Year	Physical (in MW)		Financial Progress (in Rs. crore)	
	Target	Achievement	BE/RE	Expenditure
2012-13	40	20.23	32.05/12.71	12.45
2013-14	30	27.65	33.00/10.00	9.99
2014-15	30	20.13(up to 23 rd March)	20.50/9.07	9.07

Table 6.2(b) Physical and financial achievements during last three years under Biomass (Non-bagasse) co-generation in Industries

Year	Physical (in MW)		Financial Progress (in Rs. crore)	
	Target	Achievement	BE/RE	Achievement
2012-13	60	88.65	7.50/5.27	5.27
2013-14	60	60.67	5.50/12.88	12.88
2014-15	60	56.26(up to 23 rd March)	8.00/6.24	6.24

6.3 When asked about the budgetary allocation and Physical target and details of the different schemes and projects under renewable energy for urban industrial and commercial application for the year 2015-16, the Ministry furnished:

Table 6.3 Budgetary allocation under renewable energy for urban industrial and commercial application for 2015-16.

(Rs. in crore)

SI.No.	Programme/system	B.E
1	Green Buildings	2.00
2	Solar Cities and related issues	2.00
3	Alternate Fuel for Surface Transport	0.62
Total		4.62

6.4. Regarding physical target for the year 2015-16, the Ministry stated :

"It is proposed to take up 5 new solar cities. Further under Solar Cities/Green Buildings, capacity building, awards focus will be on awareness creation/promotional activities, National level Workshops/Regional Seminars, Training and capacity building activities, etc. The outlay in case of Alternate Fuel for Surface Transport programme is mainly to meet past liabilities."

6.5 On being queried about the fiscal and financial incentives provided by the Government under Renewable Energy for Urban, Industrial and Commercial Applications, the Ministry in a note furnished:

Wastes/Processes/Technologies	Central Financial Assistance
1. Power generation from Municipal Solid Waste	Rs. 2.00 crore/MW (Max. Rs.10crore/project)
2. Power generation from biogas at Sewage Treatment Plant or through biomethanation of Urban and Agricultural Waste/residues including cattle dung or production of bio-CNG.	Rs. 2.00 crore/MW or bio-CNG from 12000 m ³ biogas/day (Max. Rs. 5 crore/project)
3. Biogas generation from Urban, Industrial and Agricultural Wastes/residues	Rs. 0.50 crore /MWeq. (12000 m ³ biogas /day with maximum of Rs. 5 cr./ project)
4. Power Generation from Biogas (engine / gas turbine route) and production of bio-CNG for filling into gas cylinders	Rs. 1.00 crore/MW Or bio-CNG from 12000 m ³ biogas

5. Power Generation from Biogas, Solid Industrial, Agricultural Waste/residues excluding bagasse through Boiler + Steam Turbine Configuration	(Max. Rs.5 crore/project Rs. 0.20 crore/MW (Max. Rs. 1 crore/project)
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6.6 The Ministry also furnished the following incentives and support measures provided by them:

- i. Incentives to State Nodal Agencies: service charge @ Rs. 1% of the subsidy restricted to Rs. 5.00 lakh per project,
- ii. Financial Assistance for promotional activities: for organizing training courses, business meets, seminars/workshops and publicity/awareness, subject to a maximum of Rs. 3.0 lakh per activity.
- iii. In addition, concessional customs duty and excise duty exemption are also provided for initial setting up of grid connected projects for power generation and generation of bio-CNG from waste from waste.

CHAPTER VII

RESEARCH, DESIGN AND DEVELOPMENT IN RENEWABLE ENERGY

7.1 According to the MNRE, their Research & Development activities aim at resource assessment, technology development, demonstration and commercialization. The Ministry supports Research, Design, Development and Demonstration (RDD&D) to develop new and renewable energy technologies, processes, materials, components, sub-systems, products & services, standards and resource assessment so as to indigenously manufacture renewable energy devices and systems. The underlying purpose of RDD&D efforts is to make industry competitive and renewable energy generation supply self-sustainable/profitable and thereby contribute to increase share in total energy mix in the country.

7.2 On being asked the budgetary allocation and the actual expenditure during the last three years, the Ministry furnished:

*Table 7.2 Expenditure during last three years under RDD&D
Rs. in Crore*

Year	BE	RE	Expenditure
2012-13	192.00	126.00	108.90
2013-14	158.00	148.00	136.97
2014-15	149.50	128.00	113.52 (as on 28.02.2015)

7.3 When asked the major Programme/Research undertaken and achievements made during the last three years, the Ministry in a note stated:

"The Research, Development and Demonstration (RD&D) is being supported in the field of Solar, biogas, biofuels, Hydrogen Energy and Fuel Cells and wind. R&D in solar is being pursued vigorously keeping in view the goals set under the Jawaharlal Nehru National Solar Mission (JNNSM). The RD&D projects taken up during the last three years facilitated strengthening R&D capacity of the R&D

institutions, industries, etc. to take up R&D projects for technology development and demonstration with commercial potential in long term. The projects taken up include higher efficiency solar cells, solar thermal power generation, advance research in biomass energy including development of specifications and standards of biomass energy system, biogas generation for power generation using different feedstock, biofuels, hydrogen energy storage and fuel cells development, etc. As follow up to the JNNSM, the Ministry funded a number of RD&D projects in solar thermal and solar photovoltaic with an aim to develop cost effective and efficient technologies. In solar thermal RD&D projects were taken up for development and demonstration of advanced solar concentrating technologies for power generation".

7.4 When queried about the R&D projects/activities of various renewable energy sources, the Ministry stated :

"In Solar Photovoltaic (SPV), R&D projects were taken for development of solar cells to achieve improved efficiency with cost reduction. Centre for Excellence were supported in various institutions for pursuing research for development and testing of materials for solar thermal power generation and development of high efficiency solar cells. In the area of biogas generation, demonstration projects on purification, bottling and utilization for various applications including biogas based refrigeration were completed. In biofuel, the focus of R&D is commercialization of the technologies for second generation of biofuels i.e. (i) Lignocellulosic ethanol/bio-butanol production; and (ii) green diesel & biomass to liquid(BTL). The Ministry in 2014 took up a "National Biomass Cookstove Programme(NBCP)" after setting up test facilities and bringing out a Standard for Improved Biomass Cookstove which was adopted by BIS in August in 2013. In hydrogen and fuel cells, the focus is on technology development and demonstration for hydrogen production, storage, applications in engines & fuel cells, and development of fuel cell technologies. In wind, the efforts were directed towards resource assessment, development of wind generators and hybrid systems, power systems, testing and monitoring of wind electric systems."

7.5 The Ministry further stated:

In August, 2014 MNRE organized a 'R&D Conclave on New & Renewable Energy', wherein were presented the progress of on-going R&D projects sanctioned by the Ministry by the Principal Investigators of the respective projects. Participants included researchers, experts, industry representatives and policy makers & senior officers from the respective Govt. Departments. The event was inaugurated by the Hon'ble Minister (NRE) and was addressed by dignitaries from the related Govt. Departments.

7.6 Regarding initiatives taken for faster development of technologies under R&D sector , the Ministry stated :

"MNRE renamed its institutions, namely Solar Energy Centre, Gwalpahari and Centre for Wind Energy Technology (CWET), Chennai as National Institute of Solar Energy(NISE) and National Institute of Wind Energy(NIWE), respectively, as an attempt to engage these institutions in R&D and Demonstration in addition to testing of solar and wind energy systems for faster development of technologies in these areas. A coordinated approach is being followed for collaboration among institutions and industries to achieve the goal of technology development".

7.7 When asked about the budgetary allocation for the year 2015-16, the Ministry stated:

"Total budget for Research Design & Development (RDD&D) during the current year 2015-16 is Rs 90.00 crore, which includes Rs. 32.75 crore for RDD&D, and the remaining budget is for MNRE Institutions, namely, National Institute of Solar Energy (NISE), Gurgaon, National Institute of Wind Energy, Chennai and National Institute of Renewable Energy, Kapurthala".

7.8 When the Committee desired to know the thrust area identified for R&D support under new and renewable energy sector for the year 2015-16, the Ministry informed:

"Funding of RD&D Programme is done following the MNRE's comprehensive policy and guidelines of MNRE for the same. However, in the case of JNNSM, thrust areas have been drawn keeping in view the objectives of JNNSM, which include development of materials and technologies for power generation to achieve grid parity by 2022. The focus of RD&D efforts continues on development of materials and technologies to achieve higher efficiency and cost effectiveness. In hydrogen and fuel cells, the focus is on technology development and demonstration of hydrogen production, storage, applications in engines & fuel cells, and development of fuel cell technologies. In biofuel, the focus of RD&D efforts is on development of technologies and processes for biofuel production. In wind, the efforts would continue on resource assessment, development of wind generators and wind-solar hybrid systems, control systems and monitoring."

7.9 On a query regarding the technological advancement to support the various renewable energy industry so as to make the installations economical and user friendly, the Ministry in a note stated:

"RD&D efforts in solar thermal power generated knowledge for design, development, testing and commissioning of projects. The efforts will continue for performance evaluation to improve the scalability and bankability of such projects. In solar cells, considerable achievements have been made in strengthening R&D capabilities of R& D institutions/industries in developing higher efficiency solar cells. These projects have encouraged industries for participation in technology development in the areas on cost sharing basis. The R&D efforts in biomass gasification and biomass cookstoves have resulted into development of draft standard for gasifiers and development of standards and test protocols for improved biomass cookstoves. Demonstration projects in biogas generation, purification and bottling were also taken up with complete technology package.

7.10 In the area of hydrogen energy, the Ministry stated that some RD&D projects have been supported where industry has also been participating either with academic institutions as industry partner or on its own. These projects are related to:

- (i) Modification of engines for operation with hydrogen blended CNG as fuel in 7 vehicles;
- (ii) Development and demonstration of dual fuel vehicle with hydrogen and diesel as fuels;
- (iii) Development of hydrogen fuelled engine for vehicle; and
- (iv) Setting up of hydrogen refueling facility. Industry has also developed fuel cell buses. These are the initial prototypes of hydrogen energy based vehicles.
- (v) In wind, 100 dedicated wind monitoring stations have been commissioned in the country at different heights ranging from 50m to 120m.

Part –II

Observations/Recommendations of the Committee

Mid Term Appraisal of Twelfth Five Year Plan

The Committee find that against the budgetary allocation of Rs.19113 crore for the entire 12th Plan, an amount of Rs.5407.68 crore has been actually allocated for the first three years of the Plan period, leaving Rs. 13705.32 crore for utilization in the remaining last two years. The total actual expenditure of the first three years of the plan period as on 29th February, 2015 was Rs. 4985.98 crore which accounts to 26 percent of the GBS allocation for the 12th Plan. As the first three years of the plan period is over, the Ministry were expected to utilize major part of the total budget allocated for the 12th Plan. Moreover, against the physical target of 29800 MW grid power capacity addition for 12th Plan, only 9466.67 MW power capacity have been achieved i.e 32 percent of the Plan target. As the utilization of funds and achievements of physical target are correlated, low utilization of budget has resulted in low achievement of Physical targets. **The Committee would like to emphasise maximum utilization of allocated funds for the 12th Plan period so that the stipulated physical targets can be achieved.**

Demands for Grants of MNRE for 2015-16

2. The Committee find that the Plan Outlay of Rs.5519 crore (BE) during the year 2014-15 was enhanced to Rs.5865.58 crore at RE stage. This include provisions of Rs.1978 crore from National Clean Energy Fund (NCEF) and Rs. 3346.58 crore from Internal and Extra Budgetary Resources (IEBR). The Committee appreciate the Ministry's effort to mobilize supplementary Demands for Grants at RE stage. However,

the actual expenditure is Rs.4442.08 crore (as on 28.02.2015) during the year 2014-15 which is only 75.73 percent of the enhanced budget. For the year 2015-16, the Committee note that the Ministry had sought a Gross Budgetary Support to the tune of Rs.6500 crore in their annual plan. However, an amount of Rs.2787.67 crore (BE) was allocated. The Committee note that there is an increase of only Rs.268.67 crore in the Budgetary Support (BE) for the year 2015-16 over the Revised Estimates of previous year's Gross Budgetary Support of Rs.2519 crore. The Committee are aware that the physical targets for 2015-16 were fixed keeping in view the budget provided in the BE stage. However, as the allocated amount (Rs.2787.67 crore) is much lower than the projected amount (Rs.6500 crore), the Committee are apprehensive that unless additional allocation is made, implementation of various programmes of the Ministry will be affected leading to low achievement. The Committee note that for the year 2015-16, the Ministry are availing fund under National Clean Energy Fund (NCEF) and mobilizing Internal and Extra Budgetary Resources (IEBR) to the tune of Rs. 2500 crore and Rs.3373.06 crore respectively. The Committee trust that the Ministry with all its effort would manage to mobilize additional funds from NCEF and IEBR to meet the physical targets. **The Committee, therefore recommend that the Ministry of New and Renewable Energy make all out efforts to mobilize additional funds from Internal and Extra Budgetary Resources (IEBR), National Clean Energy Fund (NCEF) and other renewable energy development agencies so that the targets set for the year are fully achieved.**

Solar Energy

3. The Committee note that the target of the Jawaharlal Nehru National Solar Mission launched in 2010, aims deployment of 20,000 MW of grid connected solar power and 2,000 MW of off-grid solar applications including 20 million solar lights by 2022. The Mission is being implemented in three phases. Phase-I (2010 to 2013) has concluded in March, 2013. The achievement under Phase-I is satisfactory vis-a-vis target, i.e against the physical target of 1100 MW capacity addition of grid connected solar power generation, a total capacity of 1684.43 MW has been commissioned and under Off-grid solar applications, against a target of 200 MWp, 252.5 MWp off-grid solar photovoltaic system equivalent capacity has been installed. However, keeping in view the low target kept for Phase -I, the achievement is not laudable. Regarding Phase-II (2013-2017), the Committee note a target of 10000 MW grid connected solar power capacity addition and 1000 MWp capacity equivalent Off-grid solar applications has been fixed. Against this, as on February, 2015, 3382.78 MW grid connected solar power and 357.18 MWp Off-grid solar applications have been commissioned. As such, during the remaining period of Phase-II (2015-17), the Ministry are required to achieve 6617.22 MW grid power and 642.82MWp off-grid solar applications. The Committee are also informed that under the JNNSM, the Ministry has desired to scale up Grid connected Solar Power Projects from 20000 MW to 100000 MW by 2022 subject to availability of finance, demand from States to buy renewable energy and up gradation of grid capacity. While appreciating the ambitious targets of the Ministry under JNNSM, **The Committee recommend that the Ministry may make serious efforts during the remaining period of Phase-II so that the required targets are achieved.**

Wind Energy

4 . The Committee note that wind power potential in the country at the height of 80 metre has been estimated to be more than 1,00,000 MW. Against this, a total capacity of 22645 MW has been reportedly installed as on February, 2015. The Committee find the last three years' performance unsatisfactory. In 2012-13 and 2013-14, against the targets of 2500 MW each, a wind capacity addition of 1700 MW and 2079 MW has been achieved with reportedly full utilization of budget. The withdrawal of Accelerated Depreciation Benefits and Generation Based Incentive scheme have been held responsible for the low achievement of the targets during this periods. During the year 2014-15, in spite of the reintroduction of Generation Based Incentive (GBI) and reinstallation of the Accelerated Depreciation (AD) and reduced target, the achievement is not reasonable, although the budgetary allocation of Rs.578 crore was fully utilized. Against the target of 2000 MW during 2014-15, a capacity addition of only 1513 MW is achieved (as on February, 2015). For the year 2015-16, the Committee were informed that a physical target of 2400 MW has been set with a budgetary allocation of Rs.314 crore. When the Ministry could not achieve a physical target of 2000 MW with an allocation of Rs. 578 crore in 2014-15, the Committee are apprehensive about achievement of enhanced target with a reduced allocation. **The Committee, therefore, recommend that every effort should be made to achieve the target for the current year. The Committee would also like the Ministry to approach the Ministry of Finance to allocate more funds at the time of revised estimates so that smooth and time bound implementation of the projects can be ensured and that work does not suffer for want of funds. The Ministry should also give due publicity for the incentives available to the industry.**

Small Hydro Power

5. The Committee find that the estimated potential for power generation in the country from small hydro projects (upto 25 MW capacity) is around 20,000 from 6474 identified sites all over the country. Against this estimated potential, cumulative capacity of 4025.35 MW capacity has been installed as on February, 2015. The Committee find the performance during 2013-14 quite disappointing. Against the target of 300 MW, a capacity addition of only 171.42MW has been installed which is 57 percent of the target. However, the fund allocation during this period has been fully utilized. During the year 2014-15 against budgetary allocation of Rs.108 crore, Rs.104.03 crore could be spent as on 28th February, 2015 which is quite satisfactory. However, against a physical target of 250 MW, 221.60 MW could be achieved. The Committee observe that during the years, although the allocated budgets were fully utilized, the physical targets were never achieved. For the year 2015-16, the physical target is set for 250 MW capacity with a financial allocation of Rs. 100 crore which is lesser than 2014-15 allocation. The Committee were apprised that the private sector is not finding the setting up of small hydro projects as an attractive business as costs of setting up projects are incrementally increasing and the tariffs are not that attractive. Taking note of the statement of the Ministry that the National Mission on Small Hydro is being finalized for approval, **the Committee believe this new project of the Ministry would revamp the small hydro activity in the country. The Committee also recommend that the Government may critically review its performance under the SHP sector and ensure that the factors which hindered the growth of the sector**

are addressed. Needless to say, the Ministry may also undertake adequate publicity for the incentives available to the industry.

Renewable Energy for Rural Applications

6. The Committee note that for the year 2015-16, a budgetary allocation of Rs.160 crore has been made for different renewable energy systems and devices such as biogas plants, improved cookstoves and solar cookers which include Rs.5 crore for Remote Village Electrification Programme (RVEP). The Committee were, however, informed that no physical target was set under RVEP for 2015-16 as the scheme is discontinued. The Committee could not understand an allocation of Rs.5 crore when the scheme is not existing. The Committee feel the sudden discontinuation of such an important scheme would badly affect the people living in the remote areas in terms of basic lighting. Further, scrutiny of the data supplied by MNRE under biogas, improved Cookstoves and solar cookers during the last three years reveal a declining performances both in physical and financial terms. The financial allocations as well as the physical targets have been reduced over the years. So was with the achievements. Under Improved Cookstoves, the target during 2014-15 was 7.5 lakhs, however, achievement is still awaited from States which shows apathy of the Ministry towards this programme. For the year 2015-16 the target has been reduced to 3.5 lakhs. Regarding biogas plants, the targets are low and the achievements are also not satisfactory. The Committee were informed that non achievement of biogas targets was due to high cost of installation of biogas plants and improved supply of LPG of rural areas. The Committee find that apart from electricity generation and power saving, the application of these technologies viz. biogas plants, improved cookstoves and solar cookers has

benefitted millions of rural folk by meeting their cooking and other energy requirements in an environmentally benign way. **The Committee, therefore, recommend that the Ministry may revisit the feasibility, affordability and availability of the technologies in the rural areas so as to provide opportunity for economic activities at village level ultimately improving their standard of living in remote area of the country.**

Renewable Energy for Urban, Industrial and Commercial Applications

7. The Committee note that there is a consecutive reduction of budget both at BE and RE stage under waste to energy sector during the last three years. The BE of Rs. 32.05 crore in 2012-13, Rs.33 crore in 2013-14 and Rs.20.50 crore in 2014-15 has been reduced to Rs.12.71 crore, Rs.10 crore and Rs.9.07 crore respectively at RE stage. The allocated budget (RE) has been fully utilized. Although, the physical target for 2013-14 has been fully achieved, the performance in 2012-13 and 2014-15 are not satisfactory i.e against a target of 40 MW in 2012-13 and 30 MW in 2014-15 a capacity addition of 20.23 MW and 20.13 MW could be achieved respectively. The Committee are aware that the activities under waste to energy are now under the Ministry of Urban Development. The physical as well as financial performance under biomass (non-bagasse) co-generation is quite satisfactory. Under the programme Renewable Energy for Urban, Industrial and Commercial Applications, the Committee note an allocation of R.4.62 crore for 2015-16 which include Rs.2 crore for Green Buildings, Rs.2 crore for Solar Cities and Rs.0.62 crore for Alternate Fuel for Surface Transport. The Committee are informed that the outlay for Alternate Fuel for Surface Transport programme is mainly to meet past liabilities. Regarding target for 2015-16, the

Committee note that the Ministry have proposed to take up 5 new solar cities. Under Green Buildings and Solar Cities the proposed activities include Awards focusing on awareness creation/promotional activities, national level workshops/regional seminars, training and capacity building activities etc. The Committee also note the provisions of financial assistance for power generation from Urban, Industrial and Commercial Applications for renewable energy. **The Committee, therefore, urge the Ministry to give due importance to the proposed activities during the current financial year with a view to facilitate promotion and development of Solar Cities and Green Buildings. The Committee also recommend publicity of the financial assistance available under this sector.**

Research, Design, Demonstration and Development in New and Renewable Energy (RDD&D)

8. The Committee note that the allocation under RDD&D for the last three years has been reduced both at BE and RE stage. Moreover, the reduced amount could not be fully utilised. In 2012-13, the BE of Rs.192 crore was reduced to Rs.126 crore and the actual expenditure was Rs.108.90 crore. In 2013-14 and 2014-15, the BE of Rs.158 crore and Rs.149.50 crore were reduced to Rs.148 crore and Rs.128 crore at RE stage with actual expenditure of Rs. 136.97 crore and Rs.113.52 crore respectively. The continuous reduction of budgetary allocation and the non-utilization of the reduced amount indicates the non-seriousness of the Government towards RDD&D an important component of the programme under new and renewable energy sector. The Committee are surprised to find a much lesser allocation of Rs.90 crore for 2015-16 which includes only Rs. 32.75 crore for RDD&D, and the remaining budget is for MNRE Institutions, namely, National Institute of Solar Energy (NISE), Gurgaon, National

Institute of Wind Energy, Chennai and National Institute of Renewable Energy, Kapurthala. Regarding the RDD&D activities during the last three years, the Committee are informed that the projects taken up has facilitated strengthening of R&D capacity of the R&D institutions, industries, etc. to take up R&D projects for technology development and demonstration with commercial potential in long term. For the year 2015-16, the Committee note that the RDD&D efforts is to focus on development of materials and technologies to achieve higher efficiency and cost effectiveness. **The Committee note that the RDD&D is the most crucial and prime factor for development of various renewable energy sources and feel that this sector should not suffer for want of funds. Keeping in view the importance of the sector for research and development activities for overall development of renewable energy sources in the country, the Committee recommend adequate allocation of funds for RDD&D so that uninterrupted and smooth implementation of all the RDD&D Projects can be ensured. The Committee also recommend that the Ministry of New and Renewable Energy should focus on full utilization of the allocated funds as soon as possible so that at the time of RE, more funds for this head can be sought. Needless to say, the Ministry should also put all out efforts on development of materials and technologies which are most efficient and cost effective. Further, close monitoring of all the RDD&D projects should be ensured with a view to evaluate their functioning in a result-oriented manner.**

**NEW DELHI
24th April, 2015
Vaisakha 04, 1937 (Saka)**

**DR. KIRIT SOMAIYA,
Chairman,
Standing Committee on Energy**

(Vide Para No.2.1 of the Report)

12th Plan – Programme-wise Physical Targets and Financial allocaion:

Sr. No.	Programme	Physical Target	Financial Outlay
I-GRID-INTERACTIVE AND DISTRIBUTED RENEWABLE			(Rs. in Crore)
(A)	Grid-interactive		
1	Wind Power	15,000 MW	5,800
2	Small Hydro Power	2,100 MW	750
3	Solar Power	10,000 MW	2,000
4	Biomass Power (Combustion Gasification & Bagasse Cogeneration)	2,200 MW	350
5	Urban & Industrial Waste to Energy	300 MW	300
6	Transmission Infrastructure		50
	Sub-total (A)	29,600 MW	9,250
(B)	Off-Grid/DRPS		
1	Solar applications	1,000 MWeq	4,000
2	Energy from Urban/Municipal/Industrial Wastes	200 MW	75
3	Non Bagasse Cogeneration in Industry	2,000 MWeq	175
4	Biomass Gasifiers	55 MWeq	60
5	Bio-gas based energy	50 MWeq	40
6	Micro hydel& Watermills	25 MW	40
7	Aero-generators/Hybrid systems	10 MW	50
	Sub-Total (B)	3,340 Mweq	4,440
	I-Total (A) + (B)		13,690
II-RENEWABLE ENERGY FOR RURAL APPLICATIONS			
1	RVE Programme / Energy Access	Depends on proposal from the States	1000
2	Family type biogas plants	5.75 lakh	650
3	Other Biogas applications		10
4	Cook Stove (lakh)	27.50 lakh	300
5	Solar Cookers (lakh)		130
6	Energy Plantations		25
	II-Total		2115
III-RENEWABLE ENERGY FOR URBAN, INDUSTRIAL & COMMERCIAL			
1	Solar Thermal Systems	8 million sq meter(including cooker)	600
2	Green buildings		10
3	Solar Cities/pilot/related activities		100
4	Alternate fuel vehicles (lakh)		90
	III-Total		800
IV-RESEARCH, DESIGN & DEVELOPMENT IN RENEWABLE ENERGY			
1	Bio-Energy		
	Bio-fuel		40

	Biogas		20
	Biomass Gasification		5
	Waste-to-Energy		5
	Cookstoves		10
2	Solar Energy		330
3	Small Hydro Power		35
4	New Technology		
	Hydrogen Energy & HEFC		80
	Fuel Cells		60
	Tidal Energy		15
	Geo Thermal		30
	Battery Operated Vehicles		10
5	Solar Energy Centre (SEC)/NISE		120
6	C-WET		100
7	NIRE		50
	IV-Total		910
V-SUPPORT PROGRAMMES			
1	Information and Publicity programmes (incl.SADP)		145
2	International Relations		20
3	HRD & Training		120
4	Monitoring & Evaluation		6
5	Plan Secretariat (Administration)		120
6	IREDA Equity		300
7	Outstanding liabilities of 11th plan RVE,VESP & other		30
8	e-governance		7
9	Support to SNA		50
10	Solar Energy Corporation		600
11	National Renewable Energy/ Bio energy Corporation		150
	V-Total		1548
	Total		19,063
	Externally Aided Projects (EAP)		50
	TOTAL		19,113

(Vide Para No.3.3 of the Report)

Details of the Budget Estimates for the year 2015-16 vis-à-vis BE/RE of 2014-15 and Actuals of 2013-14

DEMAND NO.69

A. The Budget allocations, net of recoveries and receipts, are given below:

(In crores of Rupees)

Sr. No.	Group/Sub Group/Sub Sub Group/Scheme/Sub Scheme/Programme/Sub Programme	Major Head	Actual 2013-2014			Budget 2014-2015			Revised 2014-2015			Budget 2015-2016		
			Plan	Non-Plan	Total	Plan	Non-Plan	Total	Plan	Non-Plan	Total	Plan	Non-Plan	Total
		Revenue	282.89	12.96	295.85	846.00	15.39	861.39	446.00	13.89	459.89	192.67	15.54	208.21
		Capital	99.34	0.00	99.34	95.00	0.00	95.00	95.00	0.00	95.00	95.00	0.00	95.00
		Total	382.23	12.96	395.19	941.00	15.39	956.39	541.00	13.89	554.89	287.67	15.54	303.21
1.	Secretariat-Economic Services	3451	16.46	12.31	28.77	23.00	14.14	37.14	23.00	12.87	35.87	10.47	14.06	24.53
	New and Renewable Energy													
2.	<i>Grid Interactive and Distributed Renewable Power</i>													
2.01	Grid Interactive and Distributed Renewable Power	2810	1132.68	0.00	1132.68	1949.00	0.00	1949.00	1800.00	0.00	1800.00	2410.00	0.00	2410.00
2.02	Less - Amount met from National Clean Energy Fund	2810	-1091.84	0.00	-1091.84	-	0.00	-	-	0.00	-	-	0.00	-2410.00
	<i>Net</i>		<i>40.84</i>	<i>0.00</i>	<i>40.84</i>	<i>461.50</i>	<i>0.00</i>	<i>461.50</i>	<i>115.00</i>	<i>0.00</i>	<i>115.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>
3.	Renewable Energy for Rural Applications	2810	88.05	0.00	88.05	97.50	0.00	97.50	97.50	0.00	97.50	90.00	0.00	90.00
		3601	21.18	0.00	21.18	35.00	0.00	35.00	35.00	0.00	35.00	41.00	0.00	41.00
		<i>Total</i>	<i>109.23</i>	<i>0.00</i>	<i>109.23</i>	<i>132.50</i>	<i>0.00</i>	<i>132.50</i>	<i>132.50</i>	<i>0.00</i>	<i>132.50</i>	<i>131.00</i>	<i>0.00</i>	<i>131.00</i>
4.	Renewable Energy for Urban,	2810	10.00	0.00	10.00	14.00	0.00	14.00	14.00	0.00	14.00	4.62	0.00	4.62

	Industrial and Commercial Applications													
5.	<i>Research, Design & Development in Renewable Energy</i>													
5.01	Research, Design & Development in Renewable Energy													
5.01.01	Research, Design & Development in Renewable Energy	2810	118.93	0.00	118.93	149.50	0.00	149.50	128.00	0.00	128.00	90.00	0.00	90.00
5.01.02	Less - Amount met from National Clean Energy Fund	2810	-25.94	0.00	-25.94	-90.50	0.00	-90.50	-69.00	0.00	-69.00	-90.00	0.00	-90.00
	Net		92.99	0.00	92.99	59.00	0.00	59.00	59.00	0.00	59.00	0.00	0.00	0.00
5.02	Research, Design & Development in Renewable Energy	4810	18.34	0.00	18.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	<i>Total-Research, Design & Development in Renewable Energy</i>		111.33	0.00	111.33	59.00	0.00	59.00	59.00	0.00	59.00	0.00	0.00	0.00
6.	<i>Supporting Programmes</i>													
6.01	External Support(EAP)	2810	6.30	0.00	6.30	8.00	0.00	8.00	8.00	0.00	8.00	2.87	0.00	2.87
6.02	Domestic Support	2810	24.63	0.65	25.28	54.00	1.25	55.25	52.50	1.02	53.52	14.71	1.48	16.19
6.03	Less - amount met from National Clean Energy Fund	2810	-1.00	0.00	-1.00	0.00	0.00	0.00	-24.00	0.00	-24.00	0.00	0.00	0.00
	Net		29.93	0.65	30.58	62.00	1.25	63.25	36.50	1.02	37.52	17.58	1.48	19.06
7.	Other Expenditure	2810	2.99	0.00	2.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		3601	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total		2.99	0.00	2.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8.	<i>Investment in Public Enterprises</i>													
8.01	Investment in Public Enterprises	4810	181.00	0.00	181.00	95.00	0.00	95.00	295.00	0.00	295.00	95.00	0.00	95.00
8.02	Less - Amount met from Clean Energy	4810	-100.00	0.00	-100.00	0.00	0.00	0.00	-200.00	0.00	-200.00	0.00	0.00	0.00

	Fund													
	Net		81.00	0.00	81.00	95.00	0.00	95.00	95.00	0.00	95.00	95.00	0.00	95.00
	Total-New and Renewable Energy		385.32	0.65	385.97	824.00	1.25	825.25	452.00	1.02	453.02	248.20	1.48	249.68
9.	Lumpsum Provision for N.E.Region & Sikkim													
9.01	Lumpsum Provision for N.E.Region & Sikkim	2552	0.00	0.00	0.00	94.00	0.00	94.00	66.00	0.00	66.00	29.00	0.00	29.00
9.02	Less - Amount met from Clean Energy Fund	2552	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Net		0.00	0.00	0.00	94.00	0.00	94.00	66.00	0.00	66.00	29.00	0.00	29.00
10.	Actual Recoveries	2810	-19.55	0.00	-19.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Grand Total		382.23	12.96	395.19	941.00	15.39	956.39	541.00	13.89	554.89	287.67	15.54	303.21
B. Investment in Public Enterprises		Head of Development	Budget Support	IEBR	Total	Budget Support	IEBR	Total	Budget Support	IEBR	Total	Budget Support	IEBR	Total
8.01	Indian Renewable Energy Development Agency	12810	145.00	1463.78	1608.78	40.00	3000.00	3040.00	240.00	3346.58	3586.58	20.00	3373.06	3393.06
8.02	Solar Energy Corporation of India	12810	36.00	0.00	36.00	55.00	0.00	55.00	55.00	0.00	55.00	75.00	0.00	75.00
	Total-		181.00	1463.78	1644.78	95.00	3000.00	3095.00	295.00	3346.58	3641.58	95.00	3373.06	3468.06
C.Plan Outlay*														
1	New and Renewable Energy	12810	383.04	1463.78	1846.82	847.00	3000.00	3847.00	475.00	3346.58	3821.58	258.67	3373.06	3631.73
2	North Eastern Areas	22552	0.00	0.00	0.00	94.00	0.00	94.00	66.00	0.00	66.00	29.00	0.00	29.00
Total			383.04	1463.78	1846.82	941.00	3000.00	3941.00	541.00	3346.58	3887.58	287.67	3373.06	3660.73
<i>*Inclusive of works outlay in the Ministry of Urban Development</i>														
Demand No. 105		12810	0.81	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ending - SBE														
Starting - Part B1														
B1. Investment in Public Enterprises-Details of Budgetary Support and IEBR		Head of Development	Year	Budgetary Support			IEBR							
				Equity	Loan	Total	IR	Bonds/ Deb.	ECB/Sup.	Others	Total			
8.01	Indian Renewable	12810	Act 2013-	145.00	0.00	145.00	1041.33	0.00	416.35	6.10	1463.78			

	Energy Development Agency		2014											
			BE 2014-2015	40.00	0.00	40.00	1200.00	1000.00	800.00	0.00	3000.00			
			RE 2014-2015	240.00	0.00	240.00	1408.58	700.00	1238.00	0.00	3346.58			
			BE 2015-2016	20.00	0.00	20.00	1829.06	0.00	1544.00	0.00	3373.06			
8.02	Solar Energy Corporation of India	12810	Act 2013-2014	36.00	0.00	36.00	0.00	0.00	0.00	0.00	0.00			
			BE 2014-2015	55.00	0.00	55.00	0.00	0.00	0.00	0.00	0.00			
			RE 2014-2015	55.00	0.00	55.00	0.00	0.00	0.00	0.00	0.00			
			BE 2015-2016	75.00	0.00	75.00	0.00	0.00	0.00	0.00	0.00			
	Total-		Act 2013-2014	181.00	0.00	181.00	1041.33	0.00	416.35	6.10	1463.78			
			BE 2014-2015	95.00	0.00	95.00	1200.00	1000.00	800.00	0.00	3000.00			
			RE 2014-2015	295.00	0.00	295.00	1408.58	700.00	1238.00	0.00	3346.58			
			BE 2015-2016	95.00	0.00	95.00	1829.06	0.00	1544.00	0.00	3373.06			
Ending - Part B1														
E. State and UT Plan Schemes														
		Major Head	Actual 2013-2014			Budget 2014-2015			Revised 2014-2015			Budget 2015-2016		
			Revenue	Cap./ Loan	Total	Revenue	Cap./ Loan	Total	Revenue	Cap./ Loan	Total	Revenue	Cap./ Loan	Total
No State/UT Plan Schemes in Demand No 69														
Ending - Part E (State and UT Plan Schemes)														
		Major Head	Actual 2013-2014			Budget 2014-2015			Revised 2014-2015			Budget 2015-2016		
			Plan	Non-Plan	Total	Plan	Non-Plan	Total	Plan	Non-Plan	Total	Plan	Non-Plan	Total
Starting - Part D (Major Head-wise Totals)														
		2552	0.00	0.00	0.00	94.00	0.00	94.00	66.00	0.00	66.00	29.00	0.00	29.00
		2810	245.25	0.65	245.90	694.00	1.25	695.25	322.00	1.02	323.02	112.20	1.48	113.68

		3451	16.46	12.31	28.77	23.00	14.14	37.14	23.00	12.87	35.87	10.47	14.06	24.53
		3601	21.18	0.00	21.18	35.00	0.00	35.00	35.00	0.00	35.00	41.00	0.00	41.00
		4810	99.34	0.00	99.34	95.00	0.00	95.00	95.00	0.00	95.00	95.00	0.00	95.00
		Total	382.23	12.96	395.19	941.00	15.39	956.39	541.00	13.89	554.89	287.67	15.54	303.21
Ending - Part D (Major Head-wise Totals)														
Starting - Part F (Recoveries)														
		2552	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		2810	0.00	0.00	0.00	-	0.00	-1578.00	-	0.00	-1778.00	-2500.00	0.00	-2500.00
						1578.00			1778.00					
		4810	0.00	0.00	0.00	0.00	0.00	0.00	-200.00	0.00	-200.00	0.00	0.00	0.00
			0.00	0.00	0.00	-	0.00	-1578.00	-	0.00	-1978.00	-2500.00	0.00	-2500.00
						1578.00			1978.00					
Ending - Part F (Recoveries)														
Starting - Part G (Charged Expenditure)														
No Charged Expenditure in Demand No 69														
Ending - Part G (Charged Expenditure)														
Starting - Part H (Receipts)														
No Receipts in Demand No 69														
Ending - Part H (Receipts)														
Starting - Part I (Gross Expenditure)														
		2552	0.00	0.00	0.00	94.00	0.00	94.00	66.00	0.00	66.00	29.00	0.00	29.00
		2810	245.25	0.65	245.90	2272.00	1.25	2273.25	2100.00	1.02	2101.02	2612.20	1.48	2613.68
		3451	16.46	12.31	28.77	23.00	14.14	37.14	23.00	12.87	35.87	10.47	14.06	24.53
		3601	21.18	0.00	21.18	35.00	0.00	35.00	35.00	0.00	35.00	41.00	0.00	41.00
		4810	99.34	0.00	99.34	95.00	0.00	95.00	295.00	0.00	295.00	95.00	0.00	95.00
			382.23	12.96	395.19	2519.00	15.39	2534.39	2519.00	13.89	2532.89	2787.67	15.54	2803.21
Ending - Part I (Gross Expenditure)														
Starting - Part SP (Special Statements)														
No Special Statements in Demand No 69														
Ending - Part SP (Special Statements)														
								2015-2016 Demands For Grants						
								DEMAND NO.69						

MINISTRY OF NEW AND RENEWABLE ENERGY														
I. Estimates of the amount required in the year ending 31st March,2016 to defray charges in respect of MINISTRY OF NEW AND RENEWABLE ENERGY														
									Revenue	Capital	Total			
								Charged	0.00	0.00	0.00			
								Voted	2708.21	95.00	2803.21			
												(In crores of Rupees)		
II. The Heads under which this Grant will be accounted for on behalf of the MINISTRY OF NEW AND RENEWABLE ENERGY.														
				Major Head	Budget 2014-2015			Revised 2014-2015			Budget 2015-2016			
					Plan	Non-Plan	Total	Plan	Non-Plan	Total	Plan	Non-Plan	Total	
REVENUE SECTION														
				Secretariat-Economic Services	3451	23.00	14.14	37.14	23.00	12.87	35.87	10.47	14.06	24.53
				North Eastern Areas	2552	94.00	0.00	94.00	66.00	0.00	66.00	29.00	0.00	29.00
				New and Renewable Energy	2810	2272.00	1.25	2273.25	2100.00	1.02	2101.02	2612.20	1.48	2613.68
				Grants-in-aid to State Governments	3601	35.00	0.00	35.00	35.00	0.00	35.00	41.00	0.00	41.00
				Total-Revenue Section		2424.00	15.39	2439.39	2224.00	13.89	2237.89	2692.67	15.54	2708.21
CAPITAL SECTION														
				Capital Outlay on New and Renewable Energy	4810	95.00	0.00	95.00	295.00	0.00	295.00	95.00	0.00	95.00
				Total-Capital Section		95.00	0.00	95.00	295.00	0.00	295.00	95.00	0.00	95.00
				GRAND TOTAL		2519.00	15.39	2534.39	2519.00	13.89	2532.89	2787.67	15.54	2803.21
<i>Notes: The above estimates do not include the recoveries shown below which are adjusted in reduction of expenditure.</i>														
Revenue Section														
				North Eastern Areas	2552	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				New and Renewable Energy	2810	-1578.00	0.00	-1578.00	-1778.00	0.00	-1778.00	-2500.00	0.00	-2500.00
				Total-Revenue Section		-1578.00	0.00	-1578.00	-1778.00	0.00	-1778.00	-2500.00	0.00	-2500.00
Capital Section														
				Capital Outlay on New and Renewable Energy	4810	0.00	0.00	0.00	-200.00	0.00	-200.00	0.00	0.00	0.00
				Total Recoveries		-1578.00	0.00	-1578.00	-1978.00	0.00	-1978.00	-2500.00	0.00	-2500.00
<i>The expenditure provisions, net of above recoveries, will be as under:</i>														
				Revenue		846.00	15.39	861.39	446.00	13.89	459.89	192.67	15.54	208.21
				Capital		95.00	0.00	95.00	95.00	0.00	95.00	95.00	0.00	95.00
				Total		941.00	15.39	956.39	541.00	13.89	554.89	287.67	15.54	303.21

MINUTES OF THE 18TH SITTING OF THE STANDING COMMITTEE ON ENERGY (2014-15) HELD ON 7TH APRIL, 2015 COMMITTEE ROOM 'B', PARLIAMENT HOUSE ANNEXE, NEW DELHI

The Committee met from 1215 hrs to 1330 hrs.

PRESENT

LOK SABHA

Dr. Kirit Somaiya - Chairman

2. Om Birla
3. Shri M. Chandrakasi
4. Shri Ashwini Kumar Chaubey
5. Shri Harish Dwivedi
6. Kunwar Sarvesh Kumar
7. Dr. Arun Kumar
8. Shri Jagdambika Pal
9. Shri Ravindra Kumar Pandey
10. Shrimati Krishna Raj
11. Shri M.B. Rajesh
12. Shri Vinayak Bhaurao Raut
13. Shri Gutha Sukender Reddy
14. Shri Purno Agitok Sangma
15. Shri Devendra Singh alias Bhole Singh
16. Shri Bhanu Pratap Singh Verma

RAJYA SABHA

17. Shri V.P. Singh Badnore
18. Shri Oscar Fernandes
19. Shri Pyarimohan Mohapatra
20. Shri S. Muthukaruppan

21. Shri Javed Ali Khan
22. Dr. K.P. Ramalingam
23. Shri Ananda Bhaskar Rapolu
24. Dr. Anil Kumar Sahani
25. Smt. Viplove Thakur

SECRETARIAT

- | | | |
|------------------------|---|---------------------|
| 1. Shri Devender Singh | - | Addl. Secretary |
| 2. Shri N.K.Pandey | - | Director |
| 3. Shri Arun K Kaushik | - | Additional Director |
| 4. Smt. L.N. Haokip | - | Under Secretary |

Witnesses

MINISTRY OF NEW AND RENEWABLE ENERGY

- | | | |
|-----|-----------------------|-------------------------|
| 1. | Shri Upendra Tripathy | Secretary |
| 2. | Shri Tarun Kapoor | Joint Secretary |
| 3. | Ms. Varsha Joshi | Joint Secretary |
| 4. | Shri J.B. Mohapatra | JS&FA |
| 5. | Shri J.C. Sharma | Eco. Adv. |
| 6. | Dr. N.P Singh | Adviser |
| 7. | Dr. Praveen Saxena | Adviser |
| 8. | Shri K.S. Popli | CMD, IREDA |
| 9. | Dr. S.Gomathi Nayagam | Director General (NIWE) |
| 10. | Dr. Ashvini Kumar | MD, SECI |

2. At the outset, the Chairman welcomed the Members of the Committee and the representatives of the Ministry of New and Renewable Energy to the sitting of

the Committee and made known to them the provisions of Directions 55(1) and 58 of the Directions by the Speaker.

3. After introducing themselves to the Committee, the representatives of the Ministry of New and Renewable Energy made power point presentation covering the various programmes and projects of the Ministry. Thereafter, the Secretary, MNRE briefed the Committee on the Demands for Grants (2015-16) and the Budgetary allocation vis-a-vis actual expenditure of the last three years.

4. The Committee inter-alia raised with the representatives of the MNRE, the following important points: -

- i) Achievements vis-a-vis targets under various programmes during 2014-15;
- ii) Financial requirements and allocation for 2015-16 vis-à-vis physical targets;
- iii) Physical and financial achievement vis-à-vis targets of the first three years of the 12th Plan;
- iv) Importance of various renewable energy – wind, solar, small hydro, waste to energy, biomass, biogas, tidal, geo-thermal etc;
- v) Inclusion of all hydro power projects under new and renewable energy;
- vi) Role and responsibilities of IREDA in the development of new and renewable energy; and
- vii) Research and Development Programmes in the renewable energy sector.

5. The Members sought clarifications on various issues relating to the subject and the representatives of the Ministry responded to the same. The Committee

directed the representatives of the Ministry to furnish written replies to the queries which could not be responded to by them.

6. The verbatim proceedings of the sitting of the Committee were kept on record.

The Committee then adjourned.

MINUTES OF THE TWENTIETH SITTING OF THE STANDING COMMITTEE ON ENERGY (2014-15) HELD ON 24TH APRIL, 2015 IN COMMITTEE ROOM 'E', PARLIAMENT HOUSE ANNEXE, NEW DELHI

The Committee met from 1000 hrs. to 1030 hrs.

PRESENT

LOK SABHA

Shri Kirit Somaiya - Chairperson

- 1 Shri M. Chandrakasi
- 2 Shri Harish Dwivedi
- 3 Shri Bhagat Singh Koshyari
- 4 Shri R.P. Marutharajaa
- 5 Shrimati Krishna Raj
- 6 Shri M.B. Rajesh
- 7 Shri Vinayak Bhaurao Raut
- 8 Shri Devendra Singh alias Bhole Singh
- 9 Shri Malyadri Sriram
- 10 Shri Bhanu Pratap Singh Verma

RAJYA SABHA

- 11 Shri V.P. Singh Badnore
- 12 Shri Oscar Fernandes
- 13 Shri S. Muthukaruppan
- 14 Shri Pyarimohan Mohapatra
- 15 Shri Ananda Bhaskar Rapolu
- 16 Smt. Viplove Thakur

SECRETARIAT

1. Shri N.K.Pandey Director
2. Shri Arun K Kaushik Additional Director
3. Smt. L.N. Haokip Under Secretary

2. At the outset, the Chairman welcomed the Members and briefly apprised them of the agenda for the sitting. The Committee then took up for consideration the following draft Reports:-

- i) 5th Report on Demands for Grants of the Ministry of Power for the year 2015-16.
- ii) 6th Report on Demands for Grants of the Ministry of New and Renewable Energy for the year 2015-16.

3. After discussing the contents of the Reports in detail, the Committee adopted the aforementioned draft Reports without any change. The Committee also authorized the Chairman to finalise the above-mentioned Reports and present the same to both the Houses of Parliament in the current Session.

The Committee then adjourned.

2. At the outset, the Chairman welcomed the Members and briefly apprised them of the agenda for the sitting. The Committee then took up for consideration the following draft Reports:-

- i) 1st Report on Demands for Grants of the Ministry of Power for the year 2014-15.
- ii) 2nd Report on Demands for Grants of the Ministry of New and Renewable Energy for the year 2014-15.
- iii) 3rd Report on Action Taken by the Government on the recommendations contained in the 41st Report (15th Lok Sabha) on Implementation of Rajiv Gandhi Grameen Vidyutikaran Yojana.

3. After discussing the contents of the Reports in detail, the Committee adopted the aforementioned draft Reports without any change. The Committee also authorized the Chairman to finalise the above-mentioned Reports and present the same to both the Houses of Parliament in the current Session.

4.	X	X	X	X	X	X	X	X	X	X	X	X
5.	X	X	X	X	X	X	X	X	X	X	X	X
6.	X	X	X	X	X	X	X	X	X	X	X	X

The Committee then adjourned.