

## **CHAPTER - 11**

### **ENERGY**

11.1 About 60 percent area of the state is desert/semi desert characterized by low population density, long transmission and distribution lines with lesser load. The state is deficient in water resources and conventional resources of power generation like coal, oil and gas for undertaking new hydro power/thermal power generation schemes. However there is vast potential for power generation from non-conventional energy sources like wind, solar and biomass, therefore, emphasis on renewable energy will supplement the electricity requirement of the State. The gross annual per capita consumption of electricity during 2004-05 of Rajasthan was 583.32 kwh as compared to all India average of 612.50 kwh.

11.2 The Rajasthan Power Sector Reforms Act unbundled RSEB into one generation, one transmission and three distribution companies at Jaipur, Jodhpur and Ajmer. It also established the Rajasthan Electricity Regulatory Commission. The state is one of India's most advanced states in terms of metering and collections (more than 95% electricity is metered & sustained rate is also about 95%). In the Tenth Plan period 755 MW generation capacity was added against the target of 660 MW and T&D losses were brought down by 5% in 2006-07. Further reduction of 3.69% has been achieved till September 2007 against the annual target of 5% for current year. Aiming at self sufficiency in power generation by end of 2008, 1070 MW will be additional generated in the State by November 2008.

11.3 Rajasthan, historically a power deficit state, has made significant strides in the power sector. These are:

- While states like Maharashtra & Delhi were reeling under power cuts, Rajasthan had a satisfactory power supply situation.
- The state already has an installed capacity of 6335 MW (as on 31.12.2007) of power and will add around 6850 MW by 2011-12 through state sector projects of 2570 MW, 13.65 MW from shared projects, private sector projects of 2625 MW will likely to be added from non-conventional projects.
- Besides setting up new state sector power projects, the State Government is also promoting private investment in power generation.
- Rajasthan is on course to become self sufficient in power by 2008.
- There are attractive opportunities for participation in the non-conventional energy sector. Rajasthan is fortunate to be blessed with abundant resources for non-conventional energy.

- Non-conventional energy units come under the 'Clean Development Mechanisms' under the Convention of Climate Change and investors stand to gain carbon credits, making it an attractive proposition.
  - Over 536 MW of non-conventional power is already being generated by private and public units in the State (including 15 MW captive).
- T & D losses are being brought down. By 2008-09, all 8,475 rural feeders will be covered, to reduce T & D losses by 15%.
- In 2006-07, T & D losses have been brought down by 5%. Further reduction of 3.69% has been achieved till September, 2007. 15000 villages/hamlets linked with 4005 feeders where losses are less than 15%, 24 hours of domestic single phase supply is being assured.

11.4 Despite growth in connectivity, there are issues like unconnected households and low consumption of electricity that need to be improved. Agriculture accounts for about 41 percent and industry for over 31 percent of total consumption of electricity in the state. Though almost 75% of electricity consumers are domestic but they account for only 20 percent of the total consumption. Only 55 percent households have access to electricity. About 91 percent villages are connected but electrification has not penetrated adequately at the household level, therefore, 56 percent rural households are still unconnected. The number of customers is around 38.50 lakhs.

### **Strengths, Weaknesses, Opportunities & Threats Analysis**

#### Strengths:

11.5 Generating company is handling 3024 MW generation capacity most of which is at a very high level of efficiency (more than 90%).

- Track record of completing the generation projects ahead of the schedule.
- Strong commitment of the State Government for additional generation capacity & conducive policy for captive generations.
- Low level of power & fuel purchase creditors
- Transmission system is very robust, higher revenue collection efficiency.

#### Weaknesses

- Staff strength is decreasing continuously due to retirement, as staff strength was frozen in 1981.
- Investment on Transmission & Distribution System is quite higher due to large geographical area.

- Weak financial position of distribution companies due to highly subsidised tariff for agriculture & domestic consumers and revenue from sale of electricity is not enough to cover the cost of the supply.

### Opportunities

- Outsourcing of certain process may lead to improvement in overall efficiency.
- Joint Ventures, PPP, franchise models may enhance mobilisation of additional resources.
- Changing global market will lead to competition and enhance service standard.
- Captive generation through open access & use of sprinkler, drip irrigation, efficient pumps may reduce the demand supply gap.

### Threats

- More than 50 percent consumers are getting electricity on subsidised rates. As per FRP, rationalization of tariff is required. If timely rationalisation of tariff is not done then sustained high T&D losses may adversely affect the economic viability of distribution companies.

11.6 The company-wise details of the outlays kept in the Eleventh Five Year Plan 2007-12, anticipated expenditure to be incurred in the Annual Plan 2007-08 and outlay proposed for these companies in the Annual Plan 2008-09 are as follows:-

Table No. 11.1

(Rs. in crores)

Company		Eleventh Plan Outlay	Anticipated Exp. 2007-08	Proposed Outlay 2008-09
1	Raj. Vidyut Utpadan Nigam Ltd.	11443.00	2741.00	2930.00
2	Raj. Vidyut Prasaran Nigam Ltd.	6600.00	1022.00	1225.00
3	Jaipur Vidyut Vitran Nigam Ltd.	2680.00	453.00	741.00
4	Ajmer Vidyut Vitran Nigam Ltd.	2432.00	652.00	675.00
5	Jodhpur Vidyut Vitran Nigam Ltd.	2435.00	450.00	615.00
<b>Total</b>		25590.00	5318.00	6186.00

11.7 The outlays proposed in the Eleventh Five Year Plan 2007-12 for the different activities of the power companies, are as follows:-

Table No. 11.2

(Rs. in crores)

Particulars	RVUN	RVPN	JVVN	AVVN	JDVVN	Total
1. Generation	11443.00	80.00	-	-	-	11523.00
2. Transmission	-	3895.00	-	-	-	3895.00
3. Sub-Transmission	-	-	680.00	730.00	815.00	2225.00

Particulars	RVUN	RVPN	JVVN	AVVN	JDVVN	Total
4. WB Funded Works	-	625.00	740.00	775.00	360.00	2500.00
5. Normal RE	-	-	882.00	495.00	900.00	2277.00
6. Feeder Renovation Programme	-	-	50.00	180.00	80.00	310.00
7. RGGVY/AREP	-	-	328.00	252.00	280.00	860.00
8. Cash Support for FRP	-	2000.00	-	-	-	2000.00
<b>Total</b>	<b>11443.00</b>	<b>6600.00</b>	<b>2680.00</b>	<b>2432.00</b>	<b>2435.00</b>	<b>25590.00</b>

11.8 The outlays proposed in the Annual Plan 2008-09 for the different activities of the power companies, are as follows:-

Table No. 11.3

(Rs. in crores)

Particulars	RVUN	RVPN	JVVN	AVVN	JDVVN	Total
1. Generation	2930.00	10.00	-	-	-	2940.00
2. Transmission	-	815.00	-	-	-	815.00
3. Sub-Transmission	-	-	450.00	435.00	310.00	1195.00
4. Normal RE	-	-	117.00	100.00	150.00	367.00
5. Feeder Renovation Programme	-	-	25.00	40.00	30.00	95.00
6. RGGVY/AREP	-	-	149.00	100.00	125.00	374.00
7. Cash Support for FRP	-	400.00	-	-	-	400.00
<b>Total</b>	<b>2930.00</b>	<b>1225.00</b>	<b>741.00</b>	<b>675.00</b>	<b>615.00</b>	<b>6186.00</b>

#### **RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LTD.**

11.9 At present Rajasthan Vidyut Utpadan Nigam owns & operates the following Thermal/ Gas Hydel power stations in the state sector. The capacity includes units commissioned upto December 2007.

Table No. 11.4

S. No.	Power Stations	Installed Capacity (MW)
1.	Suratgarh Thermal Power Station	1250
2.	Kota Thermal Power Station	1045
3.	Ramgarh Gas Power Plant	110.50
4.	Mahi Hydel Power Plant	140
5.	Mini Micro Hydel Schemes	23.85
6.	Giral Lignite Thermal Power Plant Stage-I, Unit-I	125.00
7.	Dholpur Combined Cycle Gas Project (GT-I)	330.00
	<b>Total</b>	<b>3024.35</b>

11.10 In addition to this, RVUN is managing and operating following two power stations, which are owned by RVPN:

1. Rana Pratap Sagar Hydel Power Stations	172 MW
2. Jawahar Sagar Hydel Power Stations	99 MW
<b>Total</b>	<b>271 MW</b>

11.11 Installation work of following power projects is under process.

Table No. 11.5

S. No.	Power Station	Capacity (MW)	Commissioning Schedule
1.	Giral Lignite Thermal Power Station Stage-II	125	June, 08
2.	Chhabra Thermal Power Project Stage-I	500	Aug., 08
3.	Kota Thermal Power Station Unit-7	195	Nov.,08
4.	Suratgarh Thermal Power Station Unit-6	250	Sept.,08
5.	Kalisindh Thermal Power Station, Jhalawar	1000	2011-12
6.	Chhabra Thermal Power Project Stage-I, Phase-2	500 + 20%	2011-12
	Total	1525 MW	

15.12 Funding sources for the activities of the Rajasthan Vidyut Utpadan Nigam Limited for the Annual Plan 2007-08 and Annual Plan 2008-09 are as follows:-

Table No. 11.6

(Rs. in crores)

	Source	Annual Plan 2007-08	Annual Plan 2008-09
1	State Equity	658.00	706.00
2	Loan from PFC/Commercial Bank	2083.00	2224.00
	Total	2741.00	2930.00

15.13 The agreed outlay for RVUN Ltd in the Annual Plan 2007-08 is Rs. 2741.00 crores and the proposed outlays for Annual Plan 2008-09 is Rs. 2930.00 crores; this would be utilized on the following projects as under:

Table No. 11.7

(Rs. in crores)

S. No.	Item/ Project	Outlays	
		Annual Plan 2007-08	Annual Plan 2008-09
1	Dholpur Gas Thermal Power Project	425.00	-
2	Giral Lignite Thermal Power Project Stage-II	236.00	100.00
3	Chhabra Thermal Power Project Stage-I Phase-I	1020.00	820.00
4	Kota Thermal Power Project Stage-V Unit-7	410.00	370.00
5	Suratgarh Thermal Power Project Unit-6	470.00	430.00
6	Chhabra Thermal Power Project Stage-I, Phase-II		550.00
7	Kalisindh Thermal Power Project	160.00	600.00
8	Chhabra Thermal Power Project Stage-II (J.V.)	-	40.00
9	Survey Investigation Schemes & carried over liabilities	20.00	20.00
	Total	2741.00	2930.00

11.14 Scheme-wise details are as follows:

**Giral Lignite Thermal Power Project Unit-II (1x125 MW)**

11.15 Unit-II of the Lignite Based Thermal Power Project is being established at Giral district Barmer. RSMM has confirmed availability of lignite from Soneri mines. Land & water allocated for unit-I is adequate for the Unit-II also. Clearance from Ministry of Environment & Forest has been received and BHEL & M/s Tata Projects have been ordered for main equipment & composite balance of plant package respectively. The boiler drum has been placed at its position on 10.05.2007 and further erection work is in progress. The project is targeted for commissioning by June, 2008.

11.16 Estimated cost of the project is Rs. 618 crores, out of which Rs. 185 crores will be provided by the State Government as equity. Remaining 70% capital cost will be arranged by resorting to borrowing from PFC. An expenditure of Rs. 236.00 crores is likely to be incurred during 2007-08; provision of Rs. 100.00 crores is proposed in the Annual Plan 2008-09.

**Dholpur Gas Thermal Power Project Stage-I (3x110 MW)**

11.17 330 MW combined cycle gas based thermal power plant has been established at Dholpur. The project comprises of 2x110 MW Gas Turbine Units & 1x110 MW Steam Turbine Unit. All these units have been commissioned on 29.3.2007, 16.6.2007 and 28.12.2007 respectively.

11.18 Gas supply agreement has been signed with ONGC for providing 1.5 mm SCMD gas from the Panna-Mukta Tapti fields. Gas is being transported to site on HBJ pipeline for which agreement has been signed with GAIL. Total cost of the project is Rs. 1155 crores, out of which 30% share i.e. Rs. 347 crores has been provided by the State Government as equity and remaining 70% capital cost has been arranged by resorting to borrowing from PFC. Likely expenditure to be incurred during Eleventh Plan is Rs. 425.00 crores to meet complete liabilities. Which would be incurred during 2007-08.

**Chhabra Thermal Power Project Stage-I (2x250 MW)**

11.19 2x250 MW Thermal Power Project Stage-I is being established at Chhabra district Baran. 526 hectare land has been made available for the project. Water Resources Department has agreed to provide 500 mcft water from Baithali dam, Hindloth dam and anicuts on Parvati river. M/s TCE has been appointed as consultant for the project. All statutory clearances have been obtained. Orders for the main package & composite balance plant package have been placed on M/s BHEL & M/s Punj Lloyd respectively. The boiler drum of unit was placed at its position on 07.08.2007 and unit-2 on 26.11.07. Further evocation work is in progress. First unit of the project is targeted for commissioning by August, 08 and the second unit by November, 2008.

11.20 Estimated cost of the project is Rs. 2350 crores, out of which 20% of the capital cost i.e. Rs. 470 crores is being arranged as state equity. Balance amount of the capital cost shall be arranged by resorting to borrowing from PFC Rs. 1840 crores is kept for the Eleventh Five Year Plan. Likely expenditure to be incurred during 2007-08 is Rs. 1020.00 crores and a provision of Rs. 820.00 crores is proposed in Annual Plan 2008-09.

**Kota Thermal Power Station Unit-7 (1x195 MW)**

11.21 All statutory clearances for establishing 195 MW unit-7 at Kota Thermal Power Station at Kota have been obtained. Available land & water at KTPs are adequate for Unit-7 also. Orders for main equipment package & composite balance plant package have been placed on M/s BHEL M/s Tata Projects respectively. The boiler drum of the unit works placed at its position on 28.10.2007. Other erections work is in progress. Commissioning of the project is targeted by November, 08.

11.22 Estimated cost of the project is Rs. 880 crores, out of which 20% of capital cost i.e. Rs. 176 crores is to be provided by the State Government as equity, balance capital cost is being arranged by resorting to borrowing from PFC/NCR Planning Board. Rs. 780.00 crores has been kept for this unit in the Eleventh Five Year Plan 2007-12. The likely expenditure to be incurred during 2007-08 is Rs. 410.00 crores; provision of Rs. 370.00 crores is proposed for the unit in Annual Plan 2008-09.

**Suratgarh Thermal Power Station Unit-6 (1 x 250 MW)**

11.23 All statutory clearances for establishing 1 x 250 MW Suratgarh Thermal Power Station Unit-6 have been obtained. Available land and water at STPS are adequate for the unit-6 also. Orders for main equipment package and composite balance of plant package have been placed on M/s BHEL & M/s Indure respectively. The boiler drum of the unit works placed at its position on 30.09.2007 and other erections work is in progress. The foundation work of main boiler and ESP area has been completed and erection work is in progress. Commissioning target of the project is September, 2008.

11.24 Estimated cost of the project is Rs. 1000.00 crores, out of which 20% i.e. Rs. 200.00 crores is to be made available by the State Government as equity. Remaining capital cost shall be arranged by resorting to borrowing from PFC. A provision of Rs. 900.00 crores has been kept for the project in the Eleventh Five Year Plan 2007-12. The likely expenditure to be incurred on the project during 2007-08 is Rs. 470.00 crores; provision of Rs. 430.00 crores is proposed in Annual Plan 2008-09.

## **RAJASTHAN RAJYA VIDYUT PRASARAN NIGAM LTD.**

11.25 The resources envisaged for financing the outlays of the Rs. 6600.00 crores for the Eleventh Five Year Plan, and Rs. 1022 crores for the Annual Plan 2007-08 and Rs. 1225.00 crores for the Annual Plan 2008-09 are as follows:-

Table No. 11.8

(Rs. in crores)

	Resources	Eleventh Plan Outlay	Anticipated Exp. 2007-08	Proposed Outlay 2008-09
1	Bonds	450.00	-	-
2	LIC	250.00	100.00	50.00
3	Rural Electrification Corporation	1230.00	236.00	306.00
4	PFC/Commercial Banks	1256.00	157.80	304.00
5	World Bank	500.00	3.20	-
6	State Equity	914.00	125.00	165.00
7	Transition support for FRP	2000.00	400.00	400.00
	<b>Total</b>	6600.00	1022.00	1225.00

11.26 These outlays are proposed to be utilized on the following activities:-

Table No. 11.9

(Rs. in crores)

	Resources	Eleventh Plan Outlay	Anticipated Exp. 2007-08	Proposed Outlay 2008-09
1	Generation (Shared Generating Project)	80.00	10.00	10.00
2	Transmission (on going & New works)	4520.00	612.00	815.00
3	Transition support for FRP	2000.00	400.00	400.00
	<b>Total</b>	6600.00	1022.00	1225.00

### **Generation (Shared Generating Projects)**

#### **Survey & Investigation of New Projects and Preliminary Expenses**

11.27 A provision of Rs. 1.00 crores has been proposed for making payment for S & I work and for preliminary expenses for inter-state new projects and Chambal Development Plan (Phase-II) commonly known as Rahughat Hydro Electric Projects.

#### **Bhakhra Beas Management Board Works**

11.28 A provision of Rs. 9.00 crores is proposed for up-rating of Bhakra Left Bank and for other capital works of BBMB.



## Transmission

11.29 A provision of Rs. 815 crores is proposed for Transmission works in the Annual Plan 2008-09; this is mainly for ongoing EHV normal development works and evacuation system of Chhabra TPS (Stage-I, Phase-I), Suratgarh TPS (Unit-6), Giral LTPS (Phase-I & II), Raj West LTPS, Wind Farm Project & Barsingsar LTPS. The work of 400 KV Chhabra TPS- Bhilwara line with 400 KV GSS at Bhilwara, 400 KV Chhabra TPS-Hindaun line with 400 KV S/S at Hindaun under evacuation of Chhabra TPS and 400 KV STPS-Bikaner line with 400 KV S/S at Bikaner under evacuation of STPS (Unit-6) are scheduled to be completed in 2008-09, matching with commissioning of Generating Projects. The work on 400 KV S/C Chhabra TPS-Hindaun and 400 KV D/C Chhabra TPS-Dahra (Kota) under evacuation of Chhabra TPS (Phase-I) 400 KV S/C sub station STPS-Bikaner line has already been started. During 2008-09, the work on 400 KV & 220 KV lines for evacuation of power from Raj West LTPS will also be in full swing.

11.30 Besides evacuation schemes the work on schemes for construction of 220kV and 132kV sub-station included in Annual Plan 2007-08 under normal development will be in full progress during 2008-09. Work of evacuation schemes related to Chhabra TPS (Stage-I, Phase-II) approved in 2007-08 will be taken up during 2008-09. Recently the scheme from construction of 2 Nos. of 220kV GSS and 3 Nos. of 132kV GSS under the Power Transmission System for Mahindra's SEZ at Jaipur has been approved. Out of these, one no. 220kV GSS and one of 132kV GSS is required by 2009-10 and balance system is required by 2012-13. So one 220 kV GSS & one 132kV GSS proposed for SEZ are included in Annual Plan 2008-09 as New Start. Besides these, new schemes for construction of 2 Nos. of 132kV GSS at Kumher and Bijolia have also been approved and same are also included in Annual Plan for 2008-09 as New Start. Some more new works related to Evacuation system of forthcoming generating projects, 220kV new Sub-stations as per requirement and 132kV new Sub-Stations as per requirement of Discoms will be included in Annual Plan 2008-09.

11.31 Targets for the Eleventh Five Year Plan 2007-12, likely achievements in the Annual Plan 2007-08 and proposed targets for the Annual Plan 2008-09 are as follows:-

Table No. 11.10

S.No.	Head of Scheme	Unit	Eleventh Plan Target	Ach. 2007-08	Proposed Target 2008-09
I.	400 KV Lines	Km	2445	485	600
	400 KV Substations	MAV	2205	-	630
	400 KV Substations	No.	7	-	2

S.No.	Head of Scheme	Unit	Eleventh Plan Target	Ach. 2007-08	Proposed Target 2008-09
II.	220 KV Lines	Km	2950	500	500
	220 KV Substations	MVA	2600	300	500
	220 KV Substations	No.	26	3	5
III.	132 KV Lines	Km.	1750	300	350
	132 KV Substations	MVA	1875	300	375
	132 KV Substations	No.	75	12	15
IV.	Augmentation	MVA	5000	600	750

## DISTRIBUTION COMPANIES

11.32 The details of resources envisaged for financing the outlays of Rs. 7547.00 crores kept in the Eleventh Five Year Plan 2007-12 are as follows:-

Table No. 11.11

(Rs. in crores)

Resources	Proposed Outlay Eleventh Five Year Plan			
	Jaipur	Ajmer	Jodhpur	Total
1. LIC	245.00	330.00	370.00	945.00
2. REC	860.00	485.00	912.00	2257.00
3. Feeder Renovation Programme	50.00	180.00	80.00	310.00
4. RGGVY/AREP	328.00	252.00	280.00	860.00
5. State Equity	455.00	415.00	420.00	1290.00
6. World Bank	592.00	620.00	288.00	1500.00
7. APDRP	150.00	150.00	85.00	385.00
<b>Total</b>	2680.00	2432.00	2435.00	7547.00

11.33 The details of resources envisaged for financing the outlays of Rs. 1555.00 crores proposed in the Annual Plan 2008-09 for distribution companies are as follows:-

Table No. 11.12

(Rs. in crores)

Resources	Proposed Outlay Annual Plan 2008-09			
	Jaipur	Ajmer	Jodhpur	Total
1. LIC	80.00	70.00	50.00	200.00
2. Normal RE	112.00	97.00	156.00	365.00
3. Feeder Renovation Programme	25.00	40.00	30.00	95.00
4. RGGVY/AREP	149.00	100.00	125.00	374.00
5. State Equity	135.00	120.00	110.00	365.00
6. PFC and Commercial Banks	210.00	218.00	127.00	555.00
7. APDRP	30.00	30.00	17.00	77.00
<b>Total</b>	741.00	675.00	615.00	2031.00

11.34 Proposed outlays for various activities of the Distribution Companies in the Eleventh Five Year Plan 2007-12 are as follows:-

Table No. 11.13

(Rs. in crores)

Schemes	Proposed Outlay in Eleventh Five Year Plan			
	Jaipur	Ajmer	Jodhpur	Total
1. Sub Transmission	680.00	730.00	815.00	1225.00
2. WB Funded Works	740.00	775.00	360.00	1875.00
3. Normal Rural Elect.	882.00	495.00	900.00	2277.00
4. Feeder Renovation Programme	50.00	180.00	80.00	310.00
5. RGGVY/AREP	328.00	252.00	280.00	860.00
<b>Total</b>	2680.00	2432.00	2435.00	7547.00

11.35 Proposed outlays for various activities of the Distribution Companies in the Annual Plan 2008-09 are as follows:-

Table No. 11.14

(Rs. in crores)

Schemes	Proposed Outlay Annual Plan 2008-09			
	Jaipur	Ajmer	Jodhpur	Total
1. Sub Transmission	450.00	435.00	310.00	1195.00
2. Normal Rural Elect.	117.00	100.00	150.00	367.00
3. Feeder Renovation Programme	25.00	40.00	30.00	95.00
4. RGGVY/AREP	149.00	100.00	125.00	374.00
<b>Total</b>	741.00	675.00	615.00	2031.00

### **Feeder Renovation Programme**

11.36 The distribution system suffers from very high losses as well as poor quality of infrastructure. The present distribution losses in the state are as high as 40 percent. A massive Feeder Renovation Programme has been launched for renovation of distribution feeders to bring down T&D losses. Under this programme higher capacity existing 11/0.4 KV transformers on rural feeders are being replaced by 25 KVA with meter inbuilt transformers and the LT Lines will also be replaced by insulated AB Cables. Under FRP length of 11 KV Lines will be increased and for individual agriculture connection separate L.T. Line from distribution transformer is to be drawn upto the maximum length of 270 meter.

11.37 The main objectives of this programme are as follows:

1. Reduce T&D losses & burning rate of transformers
2. Providing reliable power supply to all
3. Reduction of peak demand in agriculture season.

11.38 A provision of Rs. 95.00 crores is proposed in the Annual Plan 2008-09 for Feeder Renovation Programme of all discom.

### **Rajiv Gandhi Gramin Vidyutikaran Yojana (RGGVY)**

11.39 The Government of India has launched the scheme of RGGVY in April 2005. As per this scheme, all the villages/hamlets will have to be electrified during the next 5 years and provide access of electricity to rural households including BPL families. Connections to BPL families will be given free of cost. 90% of the cost of the scheme would be released as grant where 10% as loan. Rural Electrification Corporation has been designated as Nodal Agency for implementation of this programme.

11.40 Number of 33 schemes has been submitted to REC covering 1751093 BPL households and 519837 general households and 6600 dhanies. Total cost of these projects is Rs. 1080 crores. REC has so far sanctioned 18 schemes, which are to be completed by March, 2008. 15 Nos. of schemes are pending for sanction with 'REC; these schemes covers 1055551 BPL households, 217557 general households of 21984 villages.

11.41 A provision of Rs. 374.00 crores is proposed for all Discom for this scheme in the Annual Plan 2008-09.

### **RAJASTHAN RENEWABLE ENERGY CORPORATION**

11.42 Rajasthan Energy Development Agency and Rajasthan State Power Corporation Ltd. have been merged in 2002 to form a new Corporation namely Rajasthan Renewable Energy Corporation (RREC) is responsible for development of non-conventional energy sources in the State. The main objective of power sector under RREC during Eleventh Five Year Plan will be to ensure the followings-

- Rural Electrification through SPV domestic Lighting System.
- Remote village electrification
- Reducing the burden on conventional electricity in city/towns.
- Installing the wind energy plant.
- Generating energy through biomass power sector.

11.43 A provisions of Rs. 1625.00 lakhs has been kept for the corporation in the Eleventh Five Year Plan 2007-12, an expenditure of Rs. 280.00 lakhs is anticipated to be incurred by the corporation during the year 2007-08; provision of Rs. 280.00 lakhs is proposed for the Corporation in the Annual Plan 2008-09 for rural electrification and grants for establishment expenses.

### **Rural Electrification**

11.44 There are still a large number of un-electrified villages in the state. These villages are located in remote areas and sparsely populated due to which cost of electrification of these villages is very high. Therefore, these villages are economically illuminated through Solar Photo-Voltaic Domestic Lighting System (DLS). State Government is providing a

subsidy of Rs. 4550/- for installing a DLS. State has achieved targets of installation of 78,000 Nos SPV DLS (Model-II) in the State. 19415 Nos including Ministry New & Renewable Energy & State Plan is in progress. It is proposed to provide subsidy of Rs. 1125.00 lakhs for installing 24725 DLS during the Eleventh Five Year Plan and Rs. 180.00 lakhs for 3956 DLS during the Annual Plan 2008-09.