

CHAPTER 15

ENERGY

A. Transmission (Rajasthan Rajya Vidhyut Prasaran Nigam Ltd.)

Tenth Five Year Plan

Plan Outlays

15.1 A Plan outlay of Rs.7777 crores for Xth Five Year Plan for all successor companies of RSEB, which includes a transition cash support of Rs.1100 crores from State Govt.in treams of FRP. Out of outlay of Rs.7777 crores, an outlay of Rs.2145 crore has been fixed for RVPN. The year wise break up of Rs.2145 crores is as under:

Plan

(Rs. in crores)

	2002-03	2003-04	2004-05	2005-06	2006-07	Total
RVPN						
Transmission	380.00	395.00	410.00	425.00	435.00	2045.00
Generation (Shared Generating Projects)	10.00	20.00	20.00	20.00	30.00	100.00
Total	390.00	415.00	430.00	445.00	465.00	2145.00

15.2 Besides above the Transition cash support of Rs.1100 crores shall also be available to RVPN from State Government during X Five Year Plan in terms of FRP. Thus, the total Plan outlay for X Five Year Plan will be Rs.3245 crores (Rs.2145+Rs.1100 Crores).

Resources for X Five Year Plan

15.3 For above Outlays an assessment of resources likely to be available for funding X Five Year Plan has been made. These are as under:

(Rs. in crores)

No.	Source	Amount
1	Bonds	680.00
2	LIC	225.00
3	REC	230.00
4	APDP	160.00
5	World Bank for EAP	132.00
6	Others(SIDBI/IDBI/FI's/WB)	34.00
	Total 1 to 6	1461.00
7	State Govt. Equity/Budgetary support	684.00
	Total Plan Resource	2145.00

No.	Source	Amount
8.	Transition Support from State Govt. (FRP)	1100.00
	Grand Total	3245.00

Transmission works

15.4 At present, work on six 220kV and fifty seven 132kV Sub-Stations has been taken in hand. Besides, this two 400kV Sub-Stations namely Ratangarh & Suratgarh have been commissioned during 2001-2002. The work on 400kV Jodhpur & Merta Sub-Station and 400kV Jaipur-Merta-Jodhpur line will also start soon. Their completion schedule (proposed) is Aug., 2003. Further work on 400kV KTPS (GENCO) and Kankroli will also start soon.

15.5 With the above works in sight, the following physical target for transmission works are proposed for X Five Year Plan.

S.No	Works	Unit	Target X-Five year plan
1	Transmission		
	-400kV Lines	kM.	1000
	-400kV Sub-Station	MVA/Nos.	2200/5
	-220kV Lines	kM.	1800
	-220kV Sub-Station	MVA/Nos.	2200/20
	-132kV Lines	kM.	1550
	-132kV Sub-Station	MVA/Nos.	2000/80
2	Augmentaton		
	-220kV & 132kV	MVA	2500
3	Capacitors	MVAR	1250

Interstate/Shared Projects to be executed by outer agencies

15.6 Number of Inter state hydro projects in Himachal pradesh are proposed to be taken up through equity participation basis in X Five Year Plan. A provision of 100 crores has been kept in X Plan for these projects and shared projects of BBMB.

Annual Plan for the year 2002-03

Introduction

15.7 As per report of the Working Group for the formulation of Xth Five Year Plan for Power Sector, the plan proposals for Annual Plan 2002-03 for RVPN were prepared for Rs.440 crores. The Plan outlay for 2002-03 as under:

Outlay (Rs. in crores)		
1	Raj. Rajya Vidyut Utpadan Nigam Ltd.	240.00
2	Raj. Rajya Vidyut Prasaran Nigam Ltd.	390.00
3	Jaipur/Ajmer/Jodhpur Discom	584.00
4	FRP	200.00
	Total	1414.00

15.8 Out of above outlay, the outlay for RVPN is fixed as under:

I.	Transmission	Rs.380 crores
II.	Generation	Rs.10 crores
Total		Rs.390 crores

15.9 Besides above a transitional cash support of Rs.200 crores shall also be available from State Govt. during the year 2002-03. Thus, the total Plan outlay will be Rs.590 crores.

Resources

15.10 The details of resources envisaged for financing above outlay of Rs.590 crores for the year 2002-03 are as under:

		(Rs.in crores)
1.	Bonds	- 120.00
2.	LIC	- 45.00
3.	REC including MNP	- 61.00
4.	IDBI	- 8.00
5.	World Bank (EAP)	- 45.00
6.	State Govt Equity	- 111.00

	Total	- 390.00
7.	FRP (Transition cash support from State Government)	- 200.00

	Grand Total	<u>590.00</u>

Headwise overall Plan for the year 2002-03

15.11 A loan agreement for US \$ 180 million has been executed with the World Bank on February 27, 2001 as a first investment loan. World Bank assistance of Rs.45 crores will be utilised during the year 2002-03 by RVPN.

15.12 The head-wise details of Plan outlay of Rs.590 crores including EAP Works of Rs. 56.25 crores (Rs.45 crores+Rs.11.25 crores matching amount) will be as under:

(Rs. in crores)		
S.No.	Head	Plan Outlay
1	Generation	
	1. Inter state Projects	5.00
	2. S&I & Preliminary Exps.	1.00
	3. Renovation & Modernisation/ Uprating of shared Generating Stations	
	a) Uprating of Pong Power Plant	0.50
	b) Uprating of Ganguwal & Kotla	0.50
	c) Uprating of B&B & BLB	3.00
	Total Generation	10.00
2	Transmission	
	I. Ongoing + New Works	323.75
	II. EAP works /World Bank Loan	45.00
	III. Counterpart for II	11.25
	Total Transmission	380.00
	Total (1+2)	390.00

S.No.	Head	Plan Outlay
3	Transition support from State Government	200.00
	Grand Total	590.00

Works Position

15.13 The detailed works position for RVPN is given as under:

Generation

Bhakra Beas Complex

15.14 A provision of Rs.0.50 Crores for uprating of Pong Power Plant, Rs.0.50 Crores for uprating of Ganguwal and Kotla PS and Rs.3.00 crore for uprating of BRB & BLB during the year 2002-03 has been kept. This provision is for the Rajasthan's Share in modernization works. PFC will provide loan assistance of Rs.1.16 crores during the year 2002-03 for Pong Power Plant with uprating of one unit of Pong Power Plant in the year 2002-03. Addition in Rajasthan share during 2002-03 will be 3.51 MW.

Survey & Investigation of New Projects and Preliminary Expenses

15.15 A provision of Rs.1.00 Crores has been kept during the year 2002-2003 for making payment for S&I Work and for preliminary expenses for interstate new projects.

Interstate Projects to be executed by outer agencies.

15.16 Number of Inter-state hydro projects in Himachal Pradesh are proposed to be taken up through equity participation basis in X Five Year Plan. A token provision of Rs.5 crores has been kept during 2002-03. The benefits from these projects shall be beyond X Plan.

Head : Transmission

15.17 A provision of Rs.380 Crores has been kept during the year 2002-03 mainly for ongoing EHV normal development works and evacuation system of Suratgarh STPS, Ramgarh TPS, KTPS Stage-IV and for 400kV GSS at Jodhpur & Merta and associated Transmission system.

15.18 During 2001-02 one 400kV, one 220kV & 18 Nos. of 132kV GSS are likely to be constructed and further work on five 220kV and 39Nos. 132kV Sub-Stations is under process of construction. Besides this, work on 400kV Jodhpur & Merta Sub-Station and 400kV Jaipur-Merta-Jodhpur line will be started on tturnkey basis. Their completion schedule (proposed) is Aug. 2003. Further the work on 400kV Kota-Kankroli line with Sub-Station at 400kV Kankroli will also be under taken on priority to match the Generation of VI Unit of KTPS.

15.19 With above works in progress the following physical targets have been kept for the transmission works to be undertaken as per plan outlay.

S.No.	Works	Unit	Target For The Year 2002-03 (Tentative)
i.	Transmission : - 220 kV Lines - 220 kV Substations - 132 kV Lines - 132 kV Substations	KM MVA/Nos KM MVA/Nos	486 500/5 430 500/20
ii	.Augmentation : - 220 kV and 132 kV	MVA	500
iii.	Capacitors	MVAR	250

15.20 During the year 45 crores of World Bank loan will be utilised and these schemes shall be completed in 2003-04.

Government support during 2002-03

Implementation of Budget speech and Announcement made by Chief Minister/Governor

15.21 In Budget speech of year 2001-02 it was announced that in next three years 475 Nos. of GSS shall be constructed which includes 3 Nos. of 400kV GSS, 12 Nos. of 220kV GSS, 60 Nos. of 132kV GSS and 400 Nos. of 33kV GSS. Accordingly in the year 2002-03 two 400kV Sub-Stations and 5 Nos. 220kV GSS and 20 Nos. 132kV GSS have been targeted for completion in addition to other on-going schemes which are to be completed in the next year.

15.22 Further based on announcement made during visits of Chief Minister following schemes are under implementation.

- 400kV Jodhpur GSS and associated with 400kV Jaipur-Merta-Jodhpur line with S/S at Merta for the total cost of scheme of Rs.180.32 crores. During the year expenditure to the extent of Rs. 115 crores is likely to be made.
- 132kV GSS at Bagra and Daspan are under construction which will be commissioned in the year 2002-03.
- 220kV GSS at Bhopalgarh is under construction which will also be commissioned during 2002-03.

Announcements made by Governor.

15.23 400kV GSS at Kota will be constructed under KTPS Stage-IV. For evacuation of Power from 400kV Kota GSS construction of 400kV Kota-Kankroli line with S/S at Kankroli GSS will be started in the year 2002-03 which will be commissioned during the year 2003-04.

Counterpart for EAP works

15.24 As per agreement with World Bank for loan assistance 20% of the total cost shall be funded by Govt. of Rajasthan. Accordingly during 2002-03 Rs.11.25 crores are required as Govt. support for EAP works.

15.25 For all these works Government support of at least Rs.111 crores is essentially required as mentioned in the resources for 2002-03. The State Government has agreed to provide State equity during Xth Five Year Plan as Rs. 330.00 crores of which Rs. 60.00 crores has been proposed in Annual Plan 2002-2003. The difference between required equity and agreed would meet by raising RVPN own Internal Resource.

B. Generation (Rajasthan Rajya Vidyut Utpadan Nigam Limited)

15.26 The total outlay for 10th Five year Plan for generation has been proposed at Rs. 1320.00 crores of which Rs. 240.00 crores is under Annual Plan 2002-2003.

15.27 Out of Rs. 7777.00 crores outlay for Xth Five Year Plan an outlay of Rs. 1320.00 crores has been fixed for RVUN.

15.28 For above outlay an assessment of resources likely to be available for funding X five Year Plan has been made. These are as under :-

(Rs. in Crores)

S.No.	Source	Amount
1	State Govt. Equity / Budgetary Support	1320.00
	Total	1320.00

15.29 Out of above outlay the outlay for RVUN has been for Annual Plan 2002-03 fixed as under:-

(Rs. in Crores)

S.No.	Head	Amount
1	Generation	240.00
	Total	240.00

15.30 The Head wise detail of Plan of Rs. 240.00 crores is as under :-

(Rs. in Crores)

S.No.	Head	Amount
1	Suratgraph TPS Stage II	31.00
2	Suratgarh TPS State III	50.00
3	Kota TPS State IV	114.00
4	Ramgarh TPS State II	45.00
	Total	240.00

C. Distribution (All Vidyut Vitaran Nigam Limited)

Introduction

15.31 The Planning Department ,Govt. of Rajasthan constituted a working group for the formulation of Xth Plan for Power Sector. This working group has given its report and according to it propose plan outlay for the year 2002-03 is Rs. 679

Crores revised to 584 crores. According to Working Group studies the proposed plan outlay for the year 2002-03 and resources for finance are detailed below:-

(Rs. in crores)

	Jaipur Discom	Ajmer Discom	Jodhur Discom	Total
Sub-Transmission	173.50	173.50	117.00	464.00
Rural Electrification	44.00	44.00	32.00	120.00
Total:-	217.50	217.50	149.00	584.00

Resources

15.32 The details of resources envisaged for financing outlay of Rs. 584.00 crores for the year 2002-03 are as under:-

(Rs. in crores)

	Jaipur Discom	Ajmer Discom	Jodhur Discom	Total
1.REC	44.00	44.00	32.00	120.00
2.World Bank (EAP)	110.00	110.00	80.00	300.00
3. Loan Assistance under APDP	10.00	10.00	11.00	31.00
4.State Govt. Loan/Equity	29.50	29.50	19.00	78.00
5.Others	11.00	11.00	1.00	23.00
Total:-	217.50	217.50	149.00	584.00

Head Wise Over All Plan for the year 2002-03

Head : Sub Transmission and Distribution

15.33 A provision of Rs. 464.00 crores has been kept in plan for Sub-Transmission and Distribution System Improvement Scheme as well as that for LT less schemes during 2002-03. Out of this provision Rs.31 crores are to be spent on works under APDP. This provision is also meant to provide circuit breakers both 33KV and 11KV, release of service connections, extension of 11KV, LT system and matching funds for U.D. schemes financed by PFC and World Bank and Indian Banks. Expenditure on meters for carrying out energy audit will also be made from this head. Rs. 200.00 crores is expected as World Bank loan assistance for identified schemes for World Bank works. It is proposed to lay 33KV lines of 1129 Kms. and construct 33/11KV sub stations of total capacity 503 MVA.

D. Rural Electrification

15.34 A provision of Rs. 120.00 crores has been kept for RE programme during 2002-03 which includes electrification of villages, energisation of pump sets and

electrification of Harizan Basties etc. This provision also includes system improvement schemes (CEN-SI schemes) sanctioned by REC.

15.35 The State Government has agreed to provide State equity during Annual Plan 2002-03 is Rs. 32.00 crores to 3 DISCOM against Rs. 78.00 crores proposed by the department. The difference between required equity and agreed would meet by raising their own internal resources.

E. Rajasthan Energy Department Agency

15.36 State Government of Rajasthan has given a due priority to programmes based on Non-Conventional Energy Sources Technology. State Government created an autonomous Agency as REDA in 1985. Since then most of the REDA Programmes were only subsidy programmes. Though REDA installed variety of systems but their long term impact was not seen. Since 1999 onwards agency modified its approach and an effort was made to off-load the subsidy and make these programmes peoples programme, results achieved are amazing. Agency could install 9,900 Solar Photovoltaic Domestic Lights in financial year 2000-2001. Similar type of achievements were recorded in most on the programmes. Therefore, 10th Plan proposal has been prepared with lesser State Plan component and larger share form beneficiary / industry people.

15.37 Physical targets and progress made in developing and promoting use of Non-Conventional Energy Sources has been given. Notable progress has been in REDA's Re Programme, when by till date about 29345 Domestic Lighting Systems (DLS) have been installed in about 1268 villages. In the last two years of 9th Plan, MNES sponsored Demonstration Wind Power Projects having capacity of 6.35 MW at 3 different potential sites in Rajasthan and 9.76 MW capacity Wind Farm in private sector, have been commissioned at Jaisalmer. Such more projects in private sector are in pipeline totaling to about 30 MW.

15.38 One Biomass based Power Project of capacity 6 MW from M/s CREM Power Pvt. Ltd., Chennai has been given, "In principle approval" for setting up plant at Kotqashim area of Alwar District.

15.39 In Addition to above, in the 9th Plan about 3 lac lit. per day capacity of Solar Water Heading has been created and about 34,000 Solar Cookers distributed.

15.40 During this period State Adopted its Policy for promoting generation of power from Non-Conventional Energy Sources and promoting electricity generation from wind which have been instrumental in attracting private sector for putting up power plants based on Non-Conventional Energy Sources.

15.41 The proposals from private developers are given highest priority at all levels such as Revenue, Energy, Pollution Control, Electrical Inspectorate, Town Planning Deptt. etc., Mechanism may also be formed for getting clearances for these projects from defense Authorities expeditiously. REDA should be the single window where a power developer submits his application and he should receive all clearances, PPA executions etc. without having to approach different agencies.

15.42 A sum of Rs. 8343.50 lakhs and Rs. 1517.00 lakhs have been proposed for meeting out above mentioned activities as state grants in aid.

F. Matheia Solar Power Project - KFW (EAP)

15.43 One of the most important project initiated by REDA but being executed by RSPCL is 140 MW Combined Cycle Solar Power Project at Mathania. Required land has been acquired and discussion are on for finalisation of PPA with RVPN after getting all clearances. The financial closure of the project is also in the offing. A sum of Rs. 600.00 crores has been proposed for Xth Five Year Plan of which Rs. 100.00 crores is for Annual Plan 2002-2003.