

**BEFORE THE  
RAJASTHAN ELECTRICITY REGULATORY  
COMMISSION, JODHPUR**

**PETITION  
FOR  
APPROVAL  
OF  
INVESTMENT PLAN  
FOR  
FY 2017-18**

**FILED BY  
JODHPUR VIDYUT VITRAN NIGAM LIMITED,  
JODHPUR**

(A Govt. of Rajasthan Undertaking)

Regd. Office: New Power House, Industrial Area, Jodhpur -342004

**List of Abbreviations**

CERC	Central Electricity Regulatory Commission
Discom	Distribution Company
EA 2003	Electricity Act, 2003
FY	Financial Year
FY 16	Financial Year 2015-2016
FY 17	Financial Year 2016-17
FY 18	Financial Year 2017-18
GoI	Government of India
GoR	Government of Rajasthan
IEBR	Internal Extra Budgetary Resource
JodhpurDiscom, JdVVNL	JodhpurVidyut Vitran Nigam Ltd.
kVA	Kilo Volt Ampere
kW	Kilo Watt
kWh	Kilo Watt Hour or Unit
Kms	Kilometres
mVA	Mega Volt Ampere
PFC	Power Finance Corporation
R-APDRP	Restructured Accelerated Power Development and Reforms Programme
Regulations	RERC (Terms & Conditions for Determination of Tariff) Regulation, 2014
RERC, Commission	Rajasthan Electricity Regulatory Commission
REC	Rural Electrification Corporation
RGVY	Rajeev Gandhi Grameen Vidyutikaran Yojana
DDUGJY	Deen Dayal Upadhyaya Gram Jyoti Yojna
IPDS	Integrated Power Development Scheme
Rs.	Indian Rupees
MMSLVY	Mukhya Mantri Sabke Liye Vidyut Yojna
FIP	Feeder Improvement Programme
SIP	Sub-Station Improvement Programme
RSEB/Board	Rajasthan State Electricity Board
The licensee/utility	Jodhpur Vidyut Vitran Nigam Ltd.

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**A1: INTRODUCTION**

- 1.1 In accordance with The Rajasthan Electricity Regulatory Commission (Investment Approval) Regulations, 2006, the Discoms are required to submit their Investment Plan Petition to the Commission for approval. Hereby Jodhpur Discom submits its Investment Plan Petition for FY 2017-18 for the Honourable Commission's approval.
- 1.2 The following sections explain in detail the basis and forecasts of the following elements for FY 2017-18:
- Scheme wise provision for capital expenditure
  - Provision for Sub transmission and Distribution
  - Provision for Rural Electrification programme
  - Cost of new scheme and funding
- 1.3 The annual Investment Plan for FY 2017-18, as proposed to the Planning Department of Government of Rajasthan (GOR) is of amount Rs. 2040.00 Cr. Also the annual Investment Plan for FY 2016-17 has been proposed for Rs. 1345.00 Crore as per Revised Budget Estimates of F.Y. 2016-17 submitted to the Planning Department of Government of Rajasthan (GOR).

**A2: JODHPURDISCOM PROPOSED ANNUAL PLAN (2017-18)**

**Proposed Annual Plan (FY 2017-18)**

2.1 Jodhpur Discom, Jodhpur proposes the annual investment plan of Rs2040.00 Cr for FY 2017-18. The provisions for capital expenditure to be incurred under planned activity during FY 2017-18 are as under:

**Table 1: Plan Outlay proposed for FY 2017-18**

Name of scheme	Plan outlay FY 2017-18 (Rs Cr)
Sub- Transmission & Distribution	485.00
Rural Electrification Works	500.00
Rajiv Gandhi GrameenVidyutikaran. Yojana	372.00
R-APDRP-A	25.00
R-APDRP-B	0.00
Feeder Improvement Programme	10.00
Sub-Station Improvement Programme	17.00
DDUGJY	446.00
Integrated Power Development Scheme (IPDS)	185.00
<b>TOTAL</b>	<b>2,040.00</b>

**Resources (FY 2017-18)**

2.2 The source wise detail of funding for the proposed Capital Investment Plan is provided in the following table:

**Table 2: Mobilization of plan resources FY 2017-18**

S.no	Particulars	FY 2017-18
<b>(1)</b>	<b>Direct</b>	
A	Life Insurance Corporation	0.00
B	Bonds	0.00
C	Rural Electrification Corporation	
	- Normal RE works including release of new connections	1,626.00
	- FRP	0.00
D	RGGVY	0.00
E	R-APDRP	0.00
F	PFC/Commercial Banks/NCRPB	210.00
	<b>TOTAL (1)</b>	<b>1,836.00</b>
<b>(2)</b>	<b>Through State Govt.</b>	
A	Loan Under APDRP	0.00
B	State Govt. Equity	204.00
C	Equity for CM announcement	0.00
	<b>TOTAL (2)</b>	<b>204.00</b>
<b>(3)</b>	<b>TOTAL (1+2)</b>	<b>2,040.00</b>

**Head Wise overall Plan for FY 2017-18**

**Head A: - Sub-Transmission & Distribution works:-**

- 2.3 Various schemes were launched and completed in XI plan to strengthen the existing network. Accordingly, the system require further improvement and strengthening so that the system becomes robust and improved and thereby is able to provide a quality and reliable supply to the consumer with less number of interruptions. The proposed schemes are also aimed to intensify electrification in the Discom area. The proposed schemes will ensure expansion of the distribution network.
- 2.4 A provision of Rs485.00 Cr has been kept under the plan scheme for Sub-transmission and Distribution System Improvement scheme in the FY 2017-18. This provision is meant for construction of 33 KV Sub- Stations and associated lines with inter connection of 11 KV line and laying of the neutral wire with mid span pole, release of service connection for its identified scheme, etc. for strengthening the Sub-Transmission & Distribution network to reduce the distribution losses & improve the quality & reliability of electric supply in jurisdiction of Jodhpur Discom.
- 2.5 The GPVVY Scheme has been approved from Govt. of Rajasthan and the features of the Scheme are as follows:-
- a. Each Panchayat of state shall have an independent 11KV feeder covering the villages of the Panchayat.
  - b. Additional 33/11 KV S/S will be created for a group of 3 to 4 Panchayat at the load centre.
  - c. The length of 11 KV feeder preferably is not more than 5- Km.
  - d. Each 33/11 KV S/S will have no more than 3 to 4, 11KV feeders for feeding the villages Panchayat wise.
  - e. 33/11 KV S/S capacity will be such that not more than 80% load comes in peak season.
  - f. Each 11KV feeder will be restricted possibly to a maximum load of 80 Amps.
  - g. Spans of overhead 11KV line in the rural areas will be tried to be reduced by providing intermittent poles.
  - h. Neutral wire shall be drawn for each 1 phase transformer upto 33/11 KV so as ensure safety of 1 phase system as a consequence of growth in domestic demand of rural areas in future.
  - i. The works of GPVVY are under progress and are covered under STDP head.
- 2.6 The physical and financial progress of the works undertaken in scheme in FY 2016-17 is summarized in **Annexure-A&Annexure –B**, respectively.
- 2.7 The different associated works under Sub Transmission and Distribution Works and their budget allocation is shown in the table below:-

**Table 3: Physical Targets for Sub-Transmission and Distribution works for FY 2017-18**

Particulars	Unit	Physical Targets
33/11KV Sub Stations.	mVA	355
33/11KV Sub Stations.	No	100
33 KV Lines	Kms.	800

***Procedure for identification, selection and implementation:-***

2.8 The schemes are identified on a need basis, with the objective to increase reliability of the network, to strengthen the network, and for improvement of the system to meet the demand growth; the circle planning department initiate the proposals along with the detailed technical due-diligence & after cost-benefit analysis of the proposed investment to be undertaken in the field. The proposals are being forwarded to the headquarters for approval. The planning circle at headquarters selects the schemes on the basis of technical and financial feasibility and according to the available sanction for the year from the government. All the schemes under Sub-Transmission and Distribution works, RE works are under Rs. 10 Cr. And the same are being implemented after administrative, technical and financial sanctions of the competent authority in accordance to delegation of powers (DOP)

**Head B - Normal Rural Electrification (RE) work including release of new connection:-**

2.9 Schemes under RE works are aimed at electrification, providing electricity connections, improvement of sub transmission and distribution system and reduction of Distribution losses in rural areas.

2.10 A provision of Rs500.00 Cr has been kept for Rural Electrification program for FY 2017-18.

2.11 Under this provision approximate 10000Nos. Agriculture connections shall be released. This will help theDiscom to clear the pending waiting list of Agriculture consumers in rural areas.

2.12 The benefits envisaged from execution of schemes under RE works include:

- Expansion of distribution network to supply power to rural areas.
- Reduction in system losses and improvement in reliability parameters.
- Providing domestic connections in rural areas
- Energisation of wells with a view to increase water supply.

2.13 The physical and financial progress during FY 2016-17is summarizedin***Annexure-A&Annexure-B***, respectively.

**Head C- Rajiv Gandhi GraminVidhyutikaranYojana( RGGVY work)(12<sup>th</sup> plan)**

2.14 A lump sum provision of Rs. 372.00 Cr has been kept for execution of works under this scheme.



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- 2.15 The scope of this scheme has been expanded in the XII Plan to include electrification of hamlets with a population of more than hundred people. The RGGVY works include the creation of infrastructure required to electrify the identified villages, hamlets and to provide B.P.L and A.P.L connections.
- 2.16 The scheme provides for free of cost connection to all rural households living below poverty line.
- 2.17 Supply of good quality power would enable dispersal of small industries, khadi and village industries in the rural areas. It will also facilitate delivery of modern health care, education and application of information technologies. This is aimed at accelerating rural development, employment generation and poverty alleviation.
- 2.18 The benefits envisaged from execution of schemes under RGGVY works include:
- Intensive village and hamlet electrification
  - Release of connection to BPL and APL consumers

### ***Estimated Cost of Works***

- 2.19 The Plan provision for execution of works under this scheme shall approximate to Rs. 372.00 Cr during the FY 2017-18. The Schemes will be funded as per the RGGVY policy by Rural Electrification Corporation.
- 2.20 The physical and financial progress in FY 2016-17 is summarized in ***Annexure-A & Annexure-B***, respectively.
- 2.21 In regard to the circle wise physical and financial target and the progress against same in the FY 2017-18, details are summarized in ***Annexure C & Annexure D***.

**Head D: - R-APDRP**

**R-APDRP works – Part – A for IT Implementation & SCADA**

***Brief Description of Proposal***

- 2.22 Under the scheme works for developing IT enable activities such as SCADA etc. and strengthening of existing network have been taken up. As per the phasing the scheme for IT enable activities under Part-A of R-APDRP has been sanctioned by MOP, GOI. The work has started and it is expected that execution of scheme under R-APDRP Part-A shall be completed shortly.
- 2.23 R-APDRP- part A is further divided into two parts:
- Establish IT system in towns having population of more than 30,000.
  - Install SCADA in selected towns having population of more than 4 Lakhs & annual input energy of 350 MU's
- 2.24 Benefits arising after execution:
- Strengthening of existing network with sustained loss reduction.
  - Enable accurate baseline data.
  - Process automation will be achieved.
  - Enable IT implementation
- 2.25 The major works that are being undertaken are Installation of hardware and software for data center, installation of hardware and software for Disaster recovery centre, establishment of customer care center at Discoms HQ's, installation of Modems for Meter Data Acquisition System etc.

***Estimated Cost of Works***

- 2.26 The estimated cost of RAPDRP-A works to be undertaken during FY 2017-18 is Rs. 25.00 Cr. The schemes will be funded under R-APDRP schemes from central government by PFC.
- 2.27 The physical and financial details of the scheme for FY 2017-18 are shown in ***Annexure C and Annexure D*** respectively.

**Head E: - Feeder Improvement Programme**

***Brief description about proposal:***

2.28 A provision of Rs10.00 crores has been kept for execution of feeder Improvement Programme. Main features of this programme are as under-

1. Tightening of loose wires
2. Straightening of tilted poles
3. Insertion of Pole in long span for providing adequate ground clearance
4. Reconditioning of distribution transformer single phase
5. Reconditioning of distribution transformer three phase
6. Replacement of obsolete AB cables
7. Capacity argumentation of single phase DT's
8. Earthling of single phase DT's
9. Providing three phase systems in villages near to 33/11 KV S/s
10. Tightening of loose AB cable
11. Providing M-seal / repairing of unsealed cable points.
12. Providing Insulated connectors
13. Replacement of defective meters
14. Transformer reading platform etc

**Head F: - Sub Station Improvement Programme**

***Brief description about proposal:***

2.29 A provision of Rs. 17.00 crores has been kept for execution of Sub Station Improvement Programme. Main features of this programme are as under-

1. Replacement of non-operative roster switches
2. Installation of new roster switches
3. Repair/replacement of non-operative circuit breakers
4. Installation of new circuit breakers
5. Replacement of non-functioning feeder meters.
6. Installation of new feeder meters
7. Improvement of earthling at 33 KV substation/power transformers, etc.

**Head G: - DeendayalUpadhyaya Gram JyotiYojan (DDUGJY)**

***Brief description about proposal:***

2.30 Government of India has approved the "DeendayalUpadhyaya Gram JyotiYojna" (DDUGJY) on 3rd December, 2014 for:

- i. Separation of agriculture and non-agriculture feeders facilitating judicious restoring of supply to agricultural & non-agriculture consumers in the rural areas;
  - ii. Strengthening and augmentation of sub-transmission & distribution infrastructure in rural areas, including metering of distribution transformers/feeders/consumers.
  - iii. Rural electrification, as per CCEA approval dated 01.08.2013 for completion of the targets laid down under RGGVY for 12th and 13th Plans by carrying forward the approved outlay for RGGVY to DDUGJY.
- 2.31 The existing Rajiv Gandhi GrameenVidyutikaranYojana (RGGVY) has been subsumed in the new scheme and the unspent amount of RGGVY will be carried forward to DDUGJY. All Discoms are eligible for financial assistance under the scheme. Rural Electrification Corporation Limited (REC) will be the nodal agency for implementation of the scheme.
- 2.32 A provision of Rs 446.00 Crores has been kept for the works to be carried out under this DDUGJY Scheme for Jodhpur Discom in FY 2017-18.
- 2.33 The details of the scheme along with RGGVY for FY 2017-18 are shown in *Annexure C*.

**Head H: - Integrated Power Development Scheme (IPDS)**

***Brief description about proposal:***

- 2.34 Government of India launched the Integrated Power Development Scheme (IPDS) to extend financial assistance against capital expenditure to address the gaps in sub transmission & distribution network and metering in Urban areas to supplement the resources of DISCOMs/Power Deptt.
- 2.35 The scheme for urban areas comprises of the following components:
- a) Strengthening of Sub-transmission and Distribution network in urban areas including providing of solar panels on Govt. buildings with Net-Metering.
  - b) Metering of feeders / distribution transformers / consumers in urban areas and,
  - c) IT enablement of distribution sector and strengthening of distribution network, as per CCEA approval dated 21.06.2013 for completion of the targets laid down under R-APDRP for 12th and 13th Plans by subsuming R-APDRP in IPDS and carrying forward the approved outlay for RAPDRP to IPDS.
- 2.36 The projects under the scheme shall be formulated for urban areas (Statutory Towns) only and will cover works relating to strengthening of sub-transmission & distribution network, including providing of solar panels on Govt. buildings with Net-metering, metering of feeders /distribution transformers / consumers and IT enablement of distribution sector. Scope of IT enablement extended to the statutory towns having population up to 5000 as per Census 2011. In 1st phase towns having population up to 15000 may be taken up and the population threshold may be gradually reduced to 5000. For special category states the population threshold may be 5000.

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- 2.37 A provision of Rs185.00 Crores has been kept for the works to be carried out under this IPDS Scheme for Jodhpur Discom in FY 2017-18.
- 2.38 The proposed circle wise physical targets and expenditure for FY 2017-18 are shown in *Annexure C & Annexure D*.

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### **Prayer to the Honourable Commission-**

- a. To invoke the power conferred to it under section 181 of electricity Act-2003 to be read with RERC (Investment Approval) Regulation 2006 and to admit the petition seeking approval of investment plan for FY 2017-18.
- b. To pass any order as the Hon'ble Commission may deem fit and appropriate under the circumstances of the case and in the interest of justice.
- c. To condone any error/omission, delay and to give opportunity to rectify the same in submission.
- d. To permit the petitioner to make further submission, addition and alteration to this petition as may be necessary from time to time.

**Achievements of physical target in FY 2016-17 (Up to October, 16)**

<b>Plan Works</b>	<b>Units</b>	<b>Target</b>	<b>Achieved</b>
<b>1)Sub Transmission and Distribution</b>			
1.1) 33 KV Lines	Kms	390	397.92
1.2) 33/11 KV S/S	Nos	60	45
1.3) 33/11 KV S/S (New+Aug)	MVA	258	197.45
<b>2) Rural Electrification Works</b>			
2.1) Agriculture Pump Sets	Nos	7445	2841
2.2) HarizanBasties	Nos	16	0
<b>3) RGGVY/AREP/MMSLY</b>			
3.1) Villages Electrified (Along with REC)	Nos	39	38
3.2) BPL (As per RGGVY)	Nos	50000	19336

**Annexure –B****Expenditure against the financial plan of FY 2016-17 (Up to October'16)**

<b>Plan Works</b>	<b>Plan Allocation (Rs Cr.)</b>	<b>Expenditure Incurred (Rs Cr.)</b>
1) Sub transmission and Distribution	300.00	162.69
2) Rural Electrification Works	450.00	275.75
3) R.G.G.V.Y	280.00	113.23
4) R-APDRP Part A	50.00	1.56
5) R-APDRP Part B	110.00	66.90
6) Feeder Improvement Programme (FIP)	50.00	39.94
7) Sub Station Improvement Programme (SIP)	40.00	29.20
8) DDUGJY	35.00	0.00
9) IPDS	30.00	0.00
<b>Total</b>	<b>1,345.00</b>	<b>689.27</b>



## Tentative Physical Targets (scheme wise and circle wise) for FY 2017-18

S.No	Particulars	Unit	Target	Name of District/Circle												
				Jodhpur CC	Jodhpur DC	Pali	Sirohi	Jalore	Barmer	Jaisalmer	Bikaner CC	Bikaner DC	Hanumangarh	Sriganganagar	Churu	Nagaur (P.S. Ladnu)
	<b>Sub-Transmission &amp; Distribution works</b>															
1	33 KV Lines	Kms.	800	--	255	40	25	110	75	25	--	120	40	50	60	--
2	33 KV S/S	No.	100	--	34	5	3	13	10	1	--	15	5	7	7	--
		MVA	355	--	124	15	9	51	30	10	--	56	15	20	25	--
	<b>RURAL ELECTRIFICATION</b>															
1	Rural Electrification Works Normal RE Works including release of new connections	No.	124999	1875	30650	15195	6512	12912	9812	9356	330	8338	10320	11700	8000	--
2	Wells under Normal Plan	No.	10000	--	2000	900	600	900	1400	500	--	1500	1000	600	600	--
	<b>RGVY</b>															
1	Dhanies (Unelectrified & Partly Electrified) under RGVY* (CSS)	No.	7740	--	1830	894	113	350	--	666	--	1627		1620	568	72
2	Domestic connection for BPL under RGVY (CSS)	No.	100000	--	5000	16000	5000	11000	--	6500	--	27000		5000	23000	1500
	<b>DDUGJY</b>															
1	<b>Connecting/ unconnecting Hhs</b>															
A	Dhanies (Unelectrified & Partly Electrified)	No.	9650	--	1815	2	0	1174	5347	124	--	586	338	255	9	--
B	Domestic connection for BPL	No.	48828	--	7710	4	--	10077	25393	367	--	3909	447	800	121	--
C	Domestic connection for APL	No.	128890	--	12101	10	--	11290	96793	932	--	5152	1199	1331	82	--

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S.No	Particulars	Unit	Target	Name of District/Circle												
				Jodhpur CC	Jodhpur DC	Pali	Sirohi	Jalore	Barmer	Jaisalmer	Bikaner CC	Bikaner DC	Hanumangarh	Sriganganagar	Churu	Nagaur (P.S. Ladnu)
2	Feeder Separation	No.	211	--	35	22	18	40	16	--	--	27	22	2	29	--
3	Metering	No.	1260	--	204	55	49	136	127	65	--	325	113	42	144	--
4	System Strengthening (New 33/11 KV S/S + AUG.)	No.	9	--	2	1	1	--	1	--	--	1	1	1	1	--
5	SansadAdarsh Gram Yojna	No.	13	--	4	1	--	1	2	2	--	1	--	1	1	--
6	R-APDRP															
	R-APDRP-A	No.	31	4		3	2	2	2	1	3		5	2	6	1
7	Feeder Improvement Programme	No.	1529	75	300	123	45	201	184	66	47	188	94	81	125	11
8	Sub-Station Improvement Programme	No.	315	14	57	24	11	38	39	13	9	37	20	20	33	0
9	IPDS		56	1	3	9	5	3	2	2	1	3	6	10	11	--

**Annexure-D**

**Proposed financial targets (scheme wise and circle wise) for FY 2017-18 (Rs. Cr)**

Particulars	Proposed Estimates	Name of District/Circle												
		Jodhpur CC	Jodhpur DC	Pali	Sirohi	Jalore	Barmar	Jaisalmer	Bikaner CC	Bikaner DC	Hanumangarh	Sriganganagar	Churu	PS Ladnu
<b>Sub-Transmission &amp; Distribution works</b>	<b>485.00</b>	22.63	92.13	40.67	22.11	60.13	77.37	18.69	14.75	43.42	25.53	36.00	31.55	0.00
<b>Normal RE works Including release of new connection</b>	<b>500.00</b>	35.75	92.10	24.30	22.85	27.55	47.75	13.00	36.00	97.20	41.20	27.80	34.50	0.00
<b>R-APDRP Part-A</b>	<b>25.00</b>	8.45	4.55	0.70	0.20	0.30	1.60	0.10	3.90	2.10	0.60	1.00	1.40	0.10
<b>RGGVY</b>	<b>372.00</b>	–	88.90	34.10	12.40	25.85	–	93.00	–	86.80	–	6.20	22.75	2.00
<b>DDUGJY</b>	<b>446.00</b>	–	59.80	14.25	11.25	31.50	220.45	15.50	–	35.00	28.00	13.50	16.75	0.00
<b>Feeder Improvement Programme (FIP)</b>	<b>10.00</b>	0.50	1.90	0.90	0.35	1.30	1.20	0.45	0.10	1.40	0.60	0.50	0.80	0.00
<b>Sub Station Improvement Programme (SIP)</b>	<b>17.00</b>	0.90	2.20	1.00	0.30	2.00	2.25	0.90	0.90	2.25	1.25	1.30	1.75	0.00
<b>IPDS</b>	<b>185.00</b>	2.78	8.64	34.85	15.42	8.64	5.25	5.25	2.78	8.60	16.95	37.00	38.84	0.00
<b>TOTAL</b>	<b>2040.00</b>	<b>71.01</b>	<b>350.22</b>	<b>150.77</b>	<b>84.88</b>	<b>157.27</b>	<b>355.87</b>	<b>146.89</b>	<b>58.43</b>	<b>276.77</b>	<b>114.13</b>	<b>123.30</b>	<b>148.34</b>	<b>2.10</b>