

INTEGRATED POWER DEVELOPMENT SCHEME
(IPDS)

State

HARYANA

**Name of Govt Utility
Implementing Project**

DHBVN

**Name of the Project Area
(Circle/ Zone/ Utility)**

Jind/Hisar/DHBVN

Detail Project Report

**Strengthening of sub-transmission & distribution network
including metering**

Ref no. of DPR

Submitted to

POWER FINANCE CORPORATION LTD.

Date of Submission

POWER FINANCE CORPORATION LTD.
Detail Project Report
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POWER FINANCE CORPORATION LTD.
Detail Project Report
INPUT DATA

Utility Details		
Name of State	HARYANA	
Name of Govt Utility Implementing Project (Expanded Name)	INTEGRATED POWER DEVELOPMENT SCHEME	
Name of Govt Utility Implementing Project (Short Name)	IPDS	
Name of Pvt/Distribution Franchisee (in case of Pvt/DF/ Cooperative Society)		
Contact Details of Nodal Officer (Govt Utility Implementing Project)		
Name	Er. K.K. Gupta	
Designation	Chief Engineer, PD&C	
Address	Vidyut Sadan, DHBVN Hisar	
Phone Office	01662-223216	
Mobile No.	9812452524	
Fax	01662-223181	
E-mail	cepdcdhbn@gmail.com	
Utility level AT&C loss	Unit	AT&C Loss for FY 2013-14
AT&C loss as provided by PFC in latest "Report on Performance of State Power Utilities"	%	24.09%
Project Area Details		
Name of the Project Area Circle/ Zone/ Utility	Jind/Hisar/DHBVN	
Nos. of towns covered	3 (Three)	
Total Population of all towns covered in project area	466212	
Nos. of Consumers in all towns covered in the project area	19885	
Contact Details of Project Area Incharge (Govt/Govt Authorised Agency)		
Name	Er. Daljeet Singh	
Designation	S.E	
Address	OP circle, Jind	
Phone Office	01681-225001	
Mobile No.	8221901461	
Fax	01681-222537	
E-mail	seopdhbnjind@gmail.com	
Data for AT&C Losses Computation for Project Area (All)	Unit	Data for Previous FY 2014-15
Energy Input	M Units	1067.47
Energy Sales	M Units	497.13
Total Revenue Billed	Rs. Lac	3682.35
Total Revenue Collected (excluding arrears)	Rs. Lac	3450.74
Billing Efficiency	%	46.57%
Collection Efficiency	%	93.71%
AT&C Losses	%	56.36%
Dedicated team:		
HQ Level		Field Level
Name & Designation		Name & Designation
Er. R.K. Soda		Er. Amit Kamboj , XEN Op Division DHBVN, Jind
SE./ P&D DHBVN Hisar		Er. A.K. Bhanot, XEN Op Division DHBVN, Narwana
Mobile No. : 9992110845		Er. Ashutosh Kumar, XEN Op Division DHBVN, Safidon
Email ID: sepddhbn@gmail.com		

Date of Submission of Proposal	Date	
DPR Ref No.	No.	IPDS/DHBVN/Jind
Proposed Project Start Date	Month-Year	
Proposed Month of Completion	Month-Year	

S.E.Op Circle,
DHBVN, Jind

POWER FINANCE CORPORATION LTD.

Detail Project Report

Guidelines for DPR Preparation & Implementation

The DPR shall be prepared, base on IPDS guidelines as issued from MoP, GoI. Some salient features of IPDS guidelines & additional guidelines for DPR preparation is mentioned below. In case of any mis-match between IPDS guideline issued from MoP & DPR guideline as mentioned below, the IPDS guideline as issued from MoP, GoI shall prevail.

1	DPR is to be prepared based on the broad scope of work validated by Nodal agency at 1st Stage during discussion with utility on NAD, on detailed field survey and latest approved schedule of rates for various items of work. The DPRs shall be duly recommended by the Distribution Reforms Committee (DRC) at the State level. The Nodal Agency will separately provide comparable costs sourced from CPSUs for major equipment for reference of the utility. These reference rates shall be used as ceiling rates for sanctioning of the projects
2	The DPR under the scheme has been formulated for urban areas (Statutory Towns) only
3	In case of private sector Discoms where the distribution of power supply in urban areas is with them, projects under the scheme will be implemented through a concerned State Government Agency and the assets to be created under the scheme will be owned by the State Government / State owned companies. The areas under franchisee shall be covered under the scheme subject to compliance with the terms & conditions of their respective agreements and Cooperative Societies shall also be eligible, but they would be required to submit Audited statements annually regarding the utilization under the approved project through State Cooperative Department and the concerned Discom. Further, all the projects need to be recommended by the State Level DRC.
4	In case of private sector Discoms/Distribution Franchisee/Co-operative Societies, the DPR shall be submitted to PFC by its State Govt Agency.
5	The circle/zone/Utility wise DPRs shall be prepared by the utility and recommended by Distribution Reforms Committee (DRC) at State level. To avoid duplication of works with scope already sanctioned under RAPDRP scheme, Utility shall indicate the additional work component proposed under IPDS DPRs with comparative BOQ for such R-APDRP project area.
6	BoQ for R-APDRP towns in the project area to be filled in Sheet Vol II.b and BoQ for non-RAPDRP towns to be filled in sheet Vol II.c.
7	For ERP & IT component a separate consolidated DPR shall be prepared by respective state.
8	For linking of all 33 KV or 66 KV grid substations/billing offices/Regional/Circle/Zonal offices of Discoms with optic fiber network of NOFNA, a separate and consolidated DPR shall be prepared by the respective utility in consultation with BBNL or any designated agency like BSNL, RailTel, PGCIL etc.
9	The projects shall be implemented on turn-key basis. However, in exceptional circumstances, execution on partial turnkey/departmental basis (to be proposed by utility along with respective DPR duly recommended by DRC) shall be permitted with the approval of the Monitoring Committee.
10	In either mode of implementation (turnkey/partial turnkey/departmental), the maximum time limit for completion of the project viz award and implementation shall not be beyond thirty months from date of communication of the approval of the Monitoring committee.
11	An appropriate Project Management Agency (PMA) will be appointed preferably utility-wise to assist them in project management ensuring timely implementation of the project.
12	The work(s) already executed/to be executed under R-APDRP/NEF/GOI other scheme, etc is/are not eligible under IPDS.
13	The works proposed in the DPR shall aim for meeting utility level AT&C loss reduction trajectory as finalised by MoP in consultation of state utilities (The committed AT&C loss reduction trajectory is given in Annexure-I)
14	Utility to ensure installation of bounadry meters for ring fencing of Non-RAPDRP Towns having population more than 5000.
15	The Utility will have to certify that the DPR is in line with guidelines issued by Ministry of Power/ PFC for IPDS & DRC clearance has been obtained, before the same is forwarded to PFC for consideration of sanction.
16	Utility shall ensure timely availability of any other infrastructure or facilities that are essential for implementation of IPDS works but are not in the scope of Contractor viz. land acqusition, RoW, pole location etc.
17	Utility shall provide detailed informantion regarding exisitng infrastrucuture, any bottleneck in implementation of the works and the works proposed in the project to the Contractor before award of contract.
18	The cost estimates should not include any departmental overhead expenses. All such expenditures should be borne by the utility.
19	No cost escalation shall be admissible for the schemes sanctioned under IPDS. Any additional cost on any account whatsoever to complete the project shall be borne by utility.
20	Distribution Transformers procured under IPDS scheme, shall have efficiency level equivalent / better than that of three star ratings of BEE, where ever BEE standard is applicable. For other DTs, where, BEE standard is not applicable, CEA guidelines shall be followed (available on CEA web site).
21	AMI, Smart meters can be considered for deployment in the towns where SCADA has been/being established under R-APDRP.

22	For Solar Panels - only cost of Solar panels with support structure and Net-meters shall be permissible under IPDS. Utility shall bear cost of associated items.
23	Additional Guideline for DPR preparation
a	Load growth of 05 year in case of HT system & 03 years in case of LT system to be considered for proposing the DPR.
b	For replacement of existing HT & LTCT Electromechanical consumer meters (AMR compatible, open protocol) tamper proof electronic meters and replacement of whole current electromechanical consumer meters, the guidelines of CEA shall be adopted.
c	Service line for new consumers is not eligible in the scheme. In case of installation of meter pillar box or if existing service line is prone to tamper and pilferage the same shall be replaced with armored or XLPE cable for which minimum configuration should be :
	(i) Single Phase consumers: min. 4 sq.mm
	(ii) Three Phase consumers: min. 6 sq.mm
d	Installation of new Distribution Transformers in following cases:
	(i) If the length of LT feeder is more than 300 mtr then new Distribution transformer may be proposed to improve HT: LT ratio.
	(ii) If existing peak load on DT is more than 70% of its rated capacity then new DT may be proposed.
	(iii) Even if the length of LT feeder is below 300 meter but the peak load on the feeder is more than 70% of rated thermal capacity of the conductor, new DT should be installed or conductor should be replaced by higher size.
e	Provision of Isolator, HT fuse / horn gap & LA at each Distribution Transformer, if not provided earlier. Alternatively this isolator, HT fuse / horn gap fuse can be replaced with drop out fuse with On Load maintenance facility thereby reducing system interruptions.
f	Provision of LT distribution box for control and protection of outgoing LT circuits.
g	Each Distribution Transformer of 25 KVA & above shall be provided with minimum two LT feeders.
h	If the peak load on existing 11KV feeder is more than 75% of rated thermal capacity of the conductor, conductor with higher capacity may be proposed or feeder bifurcation may be proposed.
i	If peak load on existing 33/11KV S/S is more than 80% of its transformer capacity, new 33/11KV S/S may be proposed.
j	11 Kv feeder segregation may be proposed for reducing boundary metering points, fixing greater accountability and responsibility etc.
k	Ring Main Unit may be proposed in case of underground cabling area only.
l	Sectionalizer may be proposed in SCADA town only.
m	The Distribution Transformer may be provided with the capacitors of following ratings at LT side:
	(i) 100 KVA : 12 KVR
	(ii) 63 KVA : 8 KVR
	(iii) 40 KVA : 6 KVR
	(iv) 25 KVA : 4 KVR
n	Installation of ABC cables in dense, theft prone & congested areas. Both HT & LT ABC may be proposed. The capacity of ABC shall be 20% more than that of bare conductor, as thermal overloading capacity of ABC is less than Bare conductor.
o	In theft prone area and to improve HT:LT ratio, HVDS may be proposed. Total capacity of HVDS shall be higher by 20% than conventional LT S/S.
p	The following works/ items shall not be eligible for coverage under IPDS scheme:
	(i) Works already sanctioned under other schemes of Govt. of India (like R-APDRP/RGGVY/DDUGJY/NEF etc.). The projects for which any other grant / subsidy from Government of India has already been received / proposed to be received shall not be eligible under this scheme.
	(ii) AMI in the towns where SCADA is not planned under R-APDRP
	(iii) Civil works other than sub station
	(iv) Service lines to new consumers
	(v) GIS survey of consumers
	(vi) Cost of land for sub-stations
	(vii) Compensation towards right of way
	(viii) Distribution automation
	(ix) Office equipment / fixtures
	(x) Spares (other than mandatory spares prescribed by manufacturer)
	(xi) Tools and Plants (T&P)
	(xii) Vehicles
	(xiii) Salaries and Establishment Expenditure

POWER FINANCE CORPORATION LTD.

Detail Project Report

Declaration

This is to certify that:

- 1 Items Proposed in the DPR is for implementation in urban area (Statutory Towns only).
- 2 DPR has been prepared in line with the guidelines of IPDS issued by Ministry of Power / PFC.
- 3 The proposed DPR includes only new works & excludes other works under implementation. Works taken up under GOI scheme viz RAPDRP/RGGVY/ NEF, etc is/are not included in this DPR.
- 4 Additional items proposed in R-APDRP towns has been proposed in separate sheet Vol II.b, clearly defining earlier sanction in R-APDRP, proposed new requirement in IPDS with proper justification.
- 5 All works proposed in the DPR are as per DPR Formats issued by Nodal Agency. Any cost other than allowed by Monitoring Committee in the DPR formats shall be borne by the Utility.
- 6 The cost estimates does not include any departmental overhead expenses. All such expenditures would be borne by the utility.
- 7 Utility will henceforth, procure all meters (wherever applicable) as per guidelines/regulations issued by MoP/CEA (circular available on IPDS web portal).
- 8 Utility shall ensure timely availability of any other infrastructure or facilities that are essential for implementation of IPDS works but are not in the scope of Contractor viz. land acquisition, Row, pole location etc.
- 9 Following items have been excluded from the scope of the DPR:
 - (i) Works already sanctioned under other schemes of Govt. of India (like R-APDRP/RGGVY/DDUGJY/NEF etc.). The projects for which any other grant / subsidy from Government of India has already been received / proposed to be received shall not be eligible under this scheme.
 - (ii) AMI in the towns where SCADA is not planned under R-APDRP
 - (iii) Civil works other than sub station
 - (iv) Service lines to new consumers
 - (v) GIS survey of consumers
 - (vi) Cost of land for sub-stations
 - (vii) Compensation towards right of way
 - (viii) Distribution automation
 - (ix) Office equipment / fixtures
 - (x) Spares (other than mandatory spares prescribed by manufacturer)
 - (xi) Tools and Plants (T&P)
 - (xii) Vehicles
 - (xiii) Salaries and Establishment Expenditure
- 10 A senior level officer has been appointed by the Utility as Nodal Officer , who shall be involved from concept to commissioning of the system and co-ordinate from the Utility side for all issues related to implementation of the project. The details of Nodal Officer are given in Input Sheet.
- 11 Utility has created a dedicated team for implementation of projects at field & HQ levels to ensure smooth implementation of scheme. Details of the team are given in Input sheet.
- 12 Utility will appoint a Project Management Agency (PMA) for monitoring & ensuring timely implementation of the scheme.
- 13 Cost of consumer meters installed under R-APDRP will not be charged to consumers.
- 14 Work shall be awarded within 06 months from date of communication of the approval of the Monitoring committee. & will be completed within 24 months from date of award. In case of departmental execution, the work will be completed within 30 months from date of communication of the approval of the Monitoring committee.. In either mode of implementation (turnkey/partial turnkey/departmental), the maximum time limit for completion of the project viz award and implementation shall not be beyond thirty months from date of communication of the approval of the Monitoring committee.
- 15 The item rates taken for the materials for preparation of the DPR is based on the approved latest Schedule of Rates. For the materials for which the rates are not available in Schedule of Rates, market Rates (duly approved as per Utility system/procedure) or approved schedule rate of works / stock issue rate of other utility (indicated in the cost estimate) has been taken for this purpose. The Nodal Agency will separately provide comparable costs sourced from CPSUs for major equipment for reference of the utility. These reference rates shall be used as ceiling rates for sanctioning of the projects.
- 16 No cost escalation shall be admissible for the schemes sanctioned under IPDS. Any additional cost on any account whatsoever to complete the project shall be borne by utility.
- 17 10% of the project cost as approved by monitoring committee will be arranged by utility from own source & 30% will be arranged from PFC/REC or other Fis within three months of award/start of project.
- 18 Metering of all feeders and distribution transformers including metering at all input points to the utility shall be ensured under this scheme. Utility shall ensure installation of boundary meters for ring fencing of Non-RAPDRP Towns having population more than 5000.
- 19 Projects sanctioned under R-APDRP scheme in the state/utility will continue to be implemented as per R-APDRP guidelines.
- 20 DPR has been prepared after detailed field survey, study of system & with full justification. No revision of DPR OR cost escalation will be proposed by Utility.
- 21 While formulating this DPR, consultation with the respective public representatives including Member of Parliament has been ensured.
- 22 The information and data given in this DPR are correct.
- 23 The DPR is technically & financially viable and tangible & intangible benefits will be achieved from implementation of this DPR making it bankable.
- 24 In case of private sector Discoms/Distribution Franchisee/Co-operative Societies, the project shall be implemented by(State Govt Agency).
- 25 The work will be carried out in semi Turn key basis. Works already sanctioned under other schemes of Govt. of India (like R-APDRP/RGGVY/DDUGJY/NEF etc.) are not proposed under this
- 26 IPDS DPR [The projects for which any other grant / subsidy from Government of India has already been received / proposed to be received shall not be eligible under this scheme].

Project Area In-charge (Govt/Govt Authorised Agency)

Signature:

Name Sh. Daljeet Signh

Mobile No. 08221901461

Designation: S.E. Op Circle, DHBVN, Jind

Email address : seopdhbvnjind@gmail.com

Nodal Officer (Govt Utility Implementing Project)

Approved by:

Signature:

Name:

Tel. No. / Mobile No. :

Designation:

Email address :



Mandatroy

Consent of District Electricity Committee (DEC)

The work covered under integrated Power Development Scheme (IPDS) Detail Project Report (DPR) for strengthening of sub-transmission and distribution network, feeder segregation, distribution transformer and metering etc. To ensure uninterrupted and reliable energy have been discussed in the District Electricity Committee.

We hereby submit our consent for approval and execution of work under IPDS scheme amounting to Rs. 1983.71 lacs for urban area of our District/Op. Circle DHBVN, Jind to achieve the ultimate benefit of above scheme to the urban residents.

Sr. No.	Name		Designation of DEC	Signature
1.	Sh. Ramesh Chander Kaushik,	MP	Chairman	
2.	Sh. Ajit Balaji Joshi	DC	Convener	
3.	Sh. Parminder Dhull	MLA	Member	
4.	Sh. Jasbir Deswal	MLA	Member	
5.	Smt. Prem Lata	MLA	Member	
6.	Er. Daljeet Singh	SE/Op.	Member Secretary	

POWER FINANCE CORPORATION LTD.
Detail Project Report
 Executive Summary

Project objective:-	This project aims at - (i) 24x7 power supply for consumers in urban area, (ii) reduction of AT&C losses as per trajectory (discom-wise) finalized by the Ministry of Power in consultation with States (iii) providing access to all urban households
Tripartite/Bipartite Agreement Date	

Brief Profile of State/Utility

Name of State	HARYANA	
Name of Utility (Short Name)	DHBVN	
Total Number of Utility Consumers	2942237 (till May 2015)	
AT&C loss as provided by PFC in latest "Report on Performance of State Power Utilities"		
AT&C Losses	%	24.09%

Project Area Profile

Name of the Project Area Circle/ Zone/ Utility)	Jind/Hisar/DHBVN	
Nos. of towns covered	3	
Nos. of Consumers in all towns covered in the project area	19885	
Data for AT&C Losses Computation for Project Area (All statutory towns of the Circle/ Zone/ Utility)	Unit	Data for Previous FY 2014-15
Energy Input	M Units	1067.47
Energy Sales	M Units	497.13
Total Revenue Billed	Rs. Lac	3682.35
Total Revenue Collected (excluding arrears)	Rs. Lac	3450.74
Billing Efficiency	%	46.57%
Collection Efficiency	%	93.71%
AT&C Losses	%	56.36%

Name of the towns covered in project area and & its In-charges

Name of Town	Town In Charge	Contact No.
Safidon	Er. Hoshiyar Singh, AE	8221901458
Julana	Er. Krishan Chikara, AE	8221901455
Uchana	Er. Virender Malik, AE	8221901470

Project Funding

Recommended Project Cost for Sanction	Rs. Lac	1087.95
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Cost Item		Total Cost	Gol	PFC/ Fis	Own
Total Setup Cost	Rs.Lac	1087.95	652.77	326.39	108.80

		Base Year-0	Year-1	Year-2
Phasing of Capital Expenditure	Rs.Lac	65.28	478.698	543.98

S.E.Op Circle,
 DHBVN, Jind

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Detail Project Report

Background

1.1 Distribution is the most critical segment of the electricity business chain. The real challenge in the power sector today lies in efficient management of the distribution sector. Availability of a robust sub-transmission and distribution network along with adequate metering arrangements is the need of the day for efficient management of the distribution system.

1.2 Electricity is the key ingredient for accelerated economic growth and is considered vital for nation's overall development. Providing reliable and quality power supply in an efficient manner is an immediate requirement of the day. Amongst the three major layers of Power Sector i.e. Generation, Transmission and Distribution, the Distribution Sector has direct interface with the end consumers and is largely accountable for consumer satisfaction and also for flow of revenues in the entire value chain of Power Sector. Thus, Distribution Sector plays a significant role in sustenance as well as growth of the Power Sector.

1.3 There is a consistent increase in electricity demand, particularly in urban areas, due to increase in customer base, changes in lifestyle and consumption pattern, which requires continual up-gradation and creation of infrastructure for electricity distribution. However, the poor financial health of the distribution utilities has resulted in inadequate investment in the distribution network.

1.4 The Government of India has been providing support to State owned Discoms/Power Departments by extending financial assistance through various programmes. However, the State owned Discoms/Power Departments have not been able to keep pace with the growth in demand of electricity, resulting in critical gaps/missing links in the sub transmission and distribution network. The sub-transmission and distribution network has therefore become a bottleneck in ensuring reliable and quality power supply to the consumers.

1.5 Apart from bridging the gaps in the requisite distribution infrastructure, there is also a need to focus on metering of consumers. End-to-end metering is a vital need of the power sector. Effective metering of all consumers will ensure proper accounting, billing, load pattern assessment and planning of infrastructure required. It also helps in identifying high loss pockets so as to initiate remedial measures towards reduction of losses.

Keeping in view the present financial condition of Discoms/Power Deptt., Govt has 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.

POWER FINANCE CORPORATION LTD.**Detail Project Report**

Volume I: Project Area Details

Project Area Asset Information: Restricted to Urban area (Statutory Towns) only, to be considered under IPDS

Assets	Unit	Current Position	Proposed under IPDS
Total Number 33/11 kV Feeders	Nos.	0	2
Total Length of 33/11 kV Feeders (Overhead)	kM	0	0.00
Total Length of 33/11 kV Feeders (Under-ground)	kM	0	0
Total Number of 132/33/11 kV Sub-stations feeding the Project Area.	Nos.	3	2
Total Number of Power Transformers	Nos.	4	2
Total Capacity of Power Transformers	MVA	68	20
Total Number 11 kV Feeders	Nos.	7	13
Number of Metered 11 kV Feeders	Nos.	7	13
Total Length of 11 kV Feeders (Overhead)	kM	91.570	22.100
Total Length of 11 kV Feeders (Under-ground)	kM	0.700	0
Total Length of LT Lines (Overhead)	kM	89.760	0.00
Total Length of LT Lines (Under-ground)	kM	0	0
HT/LT Ratio		1/0.980	1/0.920
Total Number of Distribution Transformers	Nos.	369	119
Total Capacity of Distribution Transformers	MVA	38.20	13.90
Total Annual Energy Input of previous FY	MUs	1067.47	1174.22
Current Peak Demand	MVA	13.9	14.65
Current Average Demand	MVA	120.3	145.3
Capacitor Bank	MVAR	0	0
Please specify name of town of Project area covered under Part-A (IT) of R-APDRP, if any.		Safidon, Uchana & Julana	Safidon, Uchana & Julana
Please specify name of town of Project area covered under Part-A (SCADA/DMS) of R-APDRP, if any.		-	-

POWER FINANCE CORPORATION LTD.**Detail Project Report****Jind Circle**

Volume IIa: SUMMARY Project Cost

4.1 Summary of Project Cost (Bill of Quantities)

SN	Particular	Unit	Qty	Project Cost from lib & lic Rs. In Lac
A	33/11 KV S/S : New	Nos	2	800.00
B	33/11 KV S/S : Additional Transformer	Nos.	0	0
C	33/11 KV S/S : Transformer capacity enhancement	Nos.	0	0
D	Renovation & Modernisation of 33/11 kV SS	Nos.	0	0
E	New 33 KV new feeders/Bifurcation of feeders:	Kms	0	0
F	33 KV feeders Reconductoring/Augmentation	Kms	0	0
G	33 kV Line Bay Extension at EHV station	Nos	0	0
H	11 kV Line : New Feeder/ Feeder Bifurcation	Kms	22.10	148.07
I	11 kV Line : Augmentation/Reconductoring	Kms	0	0
J	Arial Bunched Cable	Kms	0	0
K	UG Cable	Kms	0	0
L	11 KV Bay Extension	Kms	0	0
M	Installation of Distribution Transformer	MVA	0	0
N	Capacity enhancement of LT sub-station	Nos.	0	0
O	LT Line : New Feeder/ Feeder Bifurcation	Kms	0	0
P	LT Line : Augmentation/Reconductoring	Kms	0	0
Q	Capacitor Bank	Nos.	0	0
R	HVDS	Nos.	0	0
S	Metering	Nos.	3829	132.88
T	Provisioning of solar panel	Lot	7	7
U	RMU,Sectionaliser, Auto reclosures, FPI etc.	Lot	0	0
V	Others	Lot	0	0
	GRAND TOTAL			1087.95

1,087.95

POWER FINANCE CORPORATION LTD.

Detail Project Report

Estimated Project Cost - Bill of Quantities

Jind Circle

For Non R-APDRP Julana Towns (Separate BOQ sheet to be furnished for each town)

Bill of Quantities

S. No.	Item Details	Unit	Existing/ Current Position	Qty proposed under IPDS	Unit Price	Cost proposed under IPDS	Reference
					Rs. Lac	Rs. Lac	Annx No.
A	33/11 KV S/S : New						
1	33 KV S/Stn with Line	Nos	-	-		-	
2	33/11 KV S/S Sector. 9 HUDA, Safidon	Nos	-	10.00	40.00	400.00	Detail of Proj
3	New 33/11 KV S/S at village Uchana Kl.	Nos.	-	10.00	40.00	400.00	
	Sub Total		0	20		800	
B	33/11 KV S/S : Additional Transformer						
1		Nos.	-	-		-	
2		Nos.	-	-	-	-	
3		Nos.	-	-	-	-	
	Sub Total		0	0		0	
C	33/11 KV S/S : Transformer capacity enhancement						
1		Nos.	-	-		-	
2		Nos.	-	-	-	-	
3		Nos.	-	-	-	-	
	Sub Total		0	0		0	
D	Renovation & Modernisation of 33/11 kV SS						
1		Nos.	-	-	-	-	
2		Nos.	-	-	-	-	
3		Nos.	-	-	-	-	
	Sub Total		0	0		0	
E	New 33 KV new feeders/Bifurcation of feeders:						Detail of Pro
1	220 KV S/S SFD to Sector 9 HUDA SFD with 130 mm2 ACSR	Kms	-	-	9.95	-	
2	132 KV S/S (Uchana) Bura to 33 KV S/S Uchana Kl.	Kms	-	-	9.95	-	
3		Kms	-	-	-	-	
	Sub Total		0	-		0.00	
F	33 KV feeders Reconductoring/Augmentation						
1		Kms	-	-		-	
2		Kms	-	-	-	-	

3		Kms	-	-	-	-
	Sub Total		0	0		0.00
G	33 kV Line Bay Extension at EHV station					
1		Nos	-	-	-	-
2		Nos	-	-	-	-
3		Nos	-	-	-	-
	Sub Total		0	0		0.00
H	11 kV Line : New Feeder/ Feeder Bifurcation					
1	11 kv New line (10 No.)	Kms	91.57	11.92	6.70	79.88
2	11 KV feeder bifurcation (3 No)	Kms	-	10.18	6.70	68.19
3		Kms	-	-	-	-
	Sub Total		91.57	22.10		148.07
I	11 kV Line : Augmentation/Reconductoring					
1	11 KV feeder augmentation (2 No)	Kms	-	-	4.66	-
2	11 KV feeder reconductoring (2 No)	Kms	-	-	-	-
3		Kms	-	-	-	-
	Sub Total		0	0		0.00
J	Arial Bunched Cable/armoured single cable					
i)	HT					
		Kms	-	-	-	-
		Kms	-	-	-	-
		Kms	-	-	-	-
	Sub Total		0	0.000		0.00
ii)	LT					
	Eection of new LT ABC	Kms	-	-	4.93	-
		Kms	-	-	-	-
		Kms	-	-	-	-
	Sub Total		0	0		0.00
	Total		0	0.000		0.00
K	UG Cable					
i)	HT					
	For railway crossing	Kms	0.70	-	31.64	-
		Kms	-	-	-	-
		Kms	-	-	-	-
	Sub Total		1	0.000		0.00
ii)	LT					
		Kms	-	-	-	-
		Kms	-	-	-	-
		Kms	-	-	-	-
	Sub Total		1	0		0.00
	Total		1	0.000		0.00
L	11 KV Bay Extension					

		<i>Kms</i>	-	-	-	-	
		<i>Kms</i>	-	-	-	-	
		<i>Kms</i>	-	-	-	-	
	Sub Total		0	0		0	
M	Installation of Distribution Transformer						
	100 KVA Dist. TF (99 NO.)	<i>No.</i>	-		2.24	-	Annexure-4
	200 KVA Dist. TF (20 NO.)				3.97	-	
	25 KVA = 43 No.	<i>No.</i>	1.075				
	63 KVA = 84No.	<i>No.</i>	5.292				
	100 KVA= 178 No.	<i>No.</i>	17.800				
	200 KVA = 51 No.	<i>No.</i>	10.200				
	250 KVA = 5 No.	<i>No.</i>	1.250				
	315 KVA = 40 No.	<i>No.</i>	12.600				
	500 KVA = 1 No.	<i>No.</i>	0.500				
	630 KVA = 1 No.	<i>No.</i>	0.630				
	Sub Total		49.347	0.00		0.00	
N	Capacity enhancement of LT sub-station						
		<i>Nos.</i>	-	-	-	-	
		<i>Nos.</i>	-	-	-	-	
		<i>Nos.</i>	-	-	-	-	
	Sub Total		0	0		0	
O	LT Line : New Feeder/ Feeder Bifurcation						
	LT line with 50 mm2 ACSR		89.760				
	New LT line	<i>Kms</i>	-	-	5.21	-	
		<i>Kms</i>	-	-	-	-	
	Sub Total		89.760	0.00		0.00	
P	LT Line : Augmentation/Reconductoring						
	Augmentation of LT line	<i>Kms</i>	-	-	4.29	-	
	Reconductoring	<i>Kms</i>	-	-	4.29	-	
		<i>Kms</i>	-	-	-	-	
	Sub Total		0	0.00		0.00	
Q	Capacitor Bank						
		<i>Nos.</i>	-	-	-	-	
		<i>Nos.</i>	-	-	-	-	
		<i>Nos.</i>	-	-	-	-	
	Sub Total		0	0		0	
R	HVDS						
		<i>Nos.</i>	-	-	-	-	
		<i>Nos.</i>	-	-	-	-	
		<i>Nos.</i>	-	-	-	-	
	Sub Total		0	0		0	

S	Metering						
i)	Prepaid / smart meters in Govt. establishment	Nos.	-	144.00	0.120	17.28	
ii)	AMI, Smart meters in the towns where SCADA being established under R-APDRP.	Nos.	-	-	0.125	-	
iii)	Boundary meters for ring fencing of Non-RAPDRP Towns with population more than 5000	Nos.	-	5.00	1.040	5.20	Annexure-9
iv)	AMR for feeders, Distribution transformer and high load consumers	Nos.	-	20.00	0.030	0.60	
v)	Consumers for existing un-metered connections, replacement of faulty meters & electro-mechanical meters	Nos.	-	3,660.00	0.030	109.80	
vi)	6 in 1	Nos.					
	Sub Total		0	3829		132.88	
T	Provisioning of solar panel						
	Location 1/(Capacity)		-	7.00	1.00	7.00	
	Location 2/(Capacity)		-	-	-	-	
	Location 3/(Capacity)		-	-	-	-	
	Net-Meters		-	-	-	-	
	Sub Total		0	7		7.00	
U	RMU,Sectionaliser, Auto reclosures, FPI etc.						
i)	33 kV Line : Installation of switchable breaker/switches	Nos.	-	-	-	-	
ii)	33 kV Line : Installation of commnuicable/non-communicable FPIs (O/C&E/F)	Nos.	-	-	-	-	
iii)	11 kV Line : Installation of RMUs/Sectionaliser alongwith aux power supply to operate sw/breaker.	Nos.	-	-	-	-	
iv)	11 kV Line :- Installation of communicable/non communicable FPIs (O/C,E/F)	Nos.	-	-	-	-	
v)	11 kV Line : Installation of switchable breakers alongwith aux power supply to operate sw/breaker	Nos.	-	-	55.00	-	
vi)	Installation of remote operable switches for breaker/switches operation for Distribution Transformer alongwith aux power supply to operate sw/breaker	Nos.	-	-	-	-	
vii)	Installation of remote operable switches for breaker/switches operation for cap bank alongwith aux power supply to operate sw/breaker .	Nos.	-	-	-	-	
	Sub Total		0	0		0.00	
V	Others						
	M&R of existing dist. Transformer		-	-	0.15	-	Annexure-8
	Modernisation of districbution T/F		-	-	0.15	-	
	Sub Total		0	0.00		0.00	
	Grand Total					1,087.95	

Note: Unit price and Total Cost are inclusive of all taxes and duties

posed work Jind

posed work Jind

25
63
100

49.347

POWER FINANCE CORPORATION LTD.**Detail Project Report****Justification / Details of Proposed Works (Separate Sheet for Each TOWN to be furnished)****A. Details of 33/11 KV Substation : New**

Sr No.	Circle	IPDS Town	Total Number of Proposed 33 kV	Total Capacity of Proposed 33 kV substation (MVA)	Name of Substation	Unit Cost @Rs 40 lacs/MVA
1	Jind	Safidon	1	10	33/11 KV S/S Sector. 9 HUDA, Safidon	400
2	Jind	Uchana	1	10	33/11 KV S/S Uchana Kl.	400
			0	0		0
			0	0		0
Sub Total			2	20		800

B.33/11 KV S/S : Additional Transformer

Sr No.	Circle	IPDS Town	Total Number of Additional Power	Total Capacity of Proposed Additional Power Transformer	Name of Substation	Unit Cost @Rs 14 lacs/MVA
			0	0		0
			0	0		0
			0	0		0
			0	0		0
Sub Total			0	0		0

C.33/11 KV S/S : Transformer capacity enhancement

Sr No.	Circle	IPDS Town	Existing capacity of Power	Proposed capacity of Power Transformer (MVA)	Name of Substation	Unit Cost @Rs 14 lacs/MVA
			0	0		0
			0	0		0
			0	0		0
			0	0		0
Sub Total			0	0		0

E.New 33 KV new feeders/Bifurcation of feeders:

Sr No.	Circle	New Feeder/ Bifurcation	EHV Substation (Feeding source)	Proposed Name of the feeder (Conductor Size 150 Sqmm)	Length of Feeder (Km)	Unit Rate @ Rs 9.95 lac/Km
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1	Jind	New feeder	220 KV S/S SFD	220 KV S/S SFD to Sector 9 HUDA SFD with 150 mm2 ACSR	6.98	69.451
1	Jind	New feeder	132 KV S/S Khark Bura	Khark bura to Uchana Kl.	4.2	41.79
					0	0
Sub Total					11.18	111.241

F. 33 KV feeders Reconductoring/Augmentation

Sr No.	IPDS Town	Augmentation/ Reconductoring	EHV Substation (Feeding Source)	Name of the feeder (Conductor Size 150 Sqmm)	Existing size of conductor	Length of Feeder (Km)	Unit Rate @ 7.55
						0	0
						0	0
						0	0
Sub Total						0	0

G. 11 kV Line : New Feeder/ Feeder Bifurcation

Sr No.	IPDS Town	New Feeder/ Bifurcatoi	EHV Substation (Feeding Source)	Name of the feeder (Conductor Size 100 Sqmm)	Length of Feeder (Km)	Unit Rate @ 6.70 Lac/ Km
1	Safidon	New Feeder	33/11 KV S/S Sector. 9 HUDA, Safidon	City No.4	2.8	18.76
2	Safidon	New Feeder	33/11 KV S/S Sector. 9 HUDA, Safidon	City No.5	2.14	14.338
3	Safidon	New Feeder	33/11 KV S/S Sector. 9 HUDA, Safidon	Assandh road	2.65	17.755
4	Safidon	New Feeder	33/11 KV S/S Sector. 9 HUDA, Safidon	Jind road	1.52	10.184
5	Safidon	Bifurcation	220 KV S/S SFD	City No.2	5.3	35.51
6	Safidon	Bifurcation	220 KV S/S SFD	City No.1	5.878	39.3826
7	Julana	New feeder	132 KV S/S Julana	Main Bazzar	2.500	16.75
8	Julana	New feeder	132 KV S/S Julana	Old Anaj Mandi	2.000	13.4
9	Julana	New feeder	132 KV S/S Julana	Old Bus stand	2.300	15.41

18.000
17.000

15

10.000

10	Julana	New feeder	132 KV S/S Julana	Grain Market	1.200	8.04
11	Uchana	New feeder	33 KV S/S Uchana Kl.	Rly road	2.400	16.080
12	Uchana	New feeder	33 KV S/S Uchana Kl.	Narwana road	2.140	14.338
13	Julana	Bifurcation	132 KV S/S Julana	Julana (Line Par)	6	40.2
Sub Total					38.828	135.9296

H.11 kV Line : Augmentation/Reconductoring

Sr No.	IPDS Town	Augmentation/ Reconductoring	EHV Substation (Feeding Source)	Name of the feeder (Conductor Size 100 Sqmm)	Existing size of conductor	Length of Feeder (Km)	Unit Rate @ 4.66 lac/Km
1	Safidon	Augmentation	220 KV S/S SFD	City No.1	50 mm2 (Rabbit)	4.5	20.97
2	Safidon	Augmentation	220 KV S/S SFD	City No.2	50 mm2 (Rabbit)	5.5	25.63
1	Julana	Augmentation	132 KV S/S Julana	Julana (Line Par)	50 mm2 (Rabbit)	4.5	20.97
Sub Total						10.00	46.60

I. Aerial Bunched Cable (LT)

Sr No.	IPDS Town	Size of Cable (3Cx120 +1x70 Sqmm)	EHV Substation (Feeding Source)	Name of the feeder	Length of Feeder (Km)	Unit Rate @ Rs 4.93 lac /Km
1	Safidon	3Cx120 +1x70 Sqmm	33/11 KV S/S Sector. 9 HUDA, Safidon	City No.4	3.100	15.283
2	Safidon	3Cx120 +1x70 Sqmm	33/11 KV S/S Sector. 9 HUDA, Safidon	City No.5	2.700	13.311
3	Safidon	3Cx120 +1x70 Sqmm	33/11 KV S/S Sector. 9 HUDA, Safidon	Assandh road	2.500	12.325

9.98

8.4

1.58

4	Safidon	3Cx120 +1x70 Sqmm	33/11 KV S/S Sector. 9 HUDA, Safidon	Jind road	1.580	7.7894
1	Julana	3Cx120 +1x70 Sqmm	132 KV S/S Julana	Main Bazzar	2.000	9.86
2	Julana	3Cx120 +1x70 Sqmm	132 KV S/S Julana	Old Anaj Mandi	1.560	7.6908
3	Julana	3Cx120 +1x70 Sqmm	132 KV S/S Julana	Old Bus stand	1.770	8.7261
4	Julana	3Cx120 +1x70 Sqmm	132 KV S/S Julana	Grain Market	1.780	8.7754
1	Uchana	3Cx120 +1x70 Sqmm	33 KV S/S Uchana Kl.	Rly road	8.000	39.44
2	Uchana	3Cx120 +1x70 Sqmm	132 KV S/S Julana	Narwana road	6.000	29.58
Sub Total					30.990	152.7807

J.UG Cable

Sr No.	IPDS Town	Size of Cable	EHV Substation (Feeding Source)	Name of the feeder	Length of Feeder (Km)	Unit Rate @ Rs 31.64 Lacs/KM
1	Safidon	3x300Sqmm	33/11 KV S/S Sector. 9 HUDA, Safidon	City No.5	0.485	15.345
1	Julana	3x300Sqmm	132 KV S/S Julana	Grain Market	0.3	9.492
Sub Total					0.785	24.837

K. Installation of Distribution Transformer

Sr No.	Circle	Feeding Souce (EHV Substation)	Name of 11 kV Feeder	Proposed 100 KVA DTs (Nos)	Unit Rate for 100 KVA DT @ 2.24 lac/ DT	Proposed 200 kVA DTs (Nos)	Unit Rate for 200 KVA DT @3.97 lac/DT
1	Jind	33/11 KV S/S Sector. 9 HUDA, Safidon	City No.4	11	24.64	7	27.79
2	Jind	33/11 KV S/S Sector. 9 HUDA, Safidon	City No.5	11	24.64	6	23.82
3	Jind	33/11 KV S/S Sector. 9 HUDA, Safidon	Assandh road	10	22.4	5	19.85
4	Jind	33/11 KV S/S Sector. 9 HUDA, Safidon	Jind road	8	17.92	2	7.94
1	Jind	132 KV S/S Julana	Main Bazzar	12	26.88	0	0
2	Jind	132 KV S/S Julana	Old Anaj Mandi	11	24.64	0	0
3	Jind	132 KV S/S Julana	Old Bus stand	9	20.16	0	0
4	Jind	132 KV S/S Julana	Grain Market	10	22.4	0	0
1	Jind	33 KV S/S Uchana Kl.	Rly road	9	20.16	0	0
2	Jind	33 KV S/S Uchana Kl.	Narwana road	8	17.92	0	0
Sub Total				99	221.76	20	79.4
Total Cost				301.16			

List of Govt Eshtablishments where Prepaid Meter are to be installed.

Sr No.	IPDS Town	Name of Govt Eshtablishment	Total Nos of Prepaid meter Requirement	Unit rate @ Rs 0.12 Lac / meter
1	Safidon	SDM SAFIDON	1	0.12
2	Safidon	TRAIURY OFFICESAFIDON	1	0.12
3	Safidon	MUNICIPAL COOMMITTEESAFIDON	1	0.12

4	Safidon	NEHRU BAL BHAWAN	1	0.12
5	Safidon	HEAD MASTER GIRLHIGH SCHOOL SAFIDON	1	0.12
6	Safidon	SHO POLICE STNSAFIDON CITY	1	0.12
7	Safidon	GENERAL MANAIGER HRSAFIDON	1	0.12
8	Safidon	SDE PUBLIC HEALTHSAFIDON	1	0.12
9	Safidon	MUNICIPALSAFIDO N	1	0.12
10	Safidon	VAITRANARI HOSPITALSAFIDON	1	0.12
11	Safidon	CHAIRMAN MKT COMSAFIDON	1	0.12
12	Safidon	3BDO OFFICESAFIDON	1	0.12
13	Safidon	AISST INSPECTOR FOODSAFIDON	1	0.12
14	Safidon	MANAGER STATE WAREHOUSE SAFIDON MANDI	1	0.12
15	Safidon	MANAGER STATE WAREHOUSE SAFIDON MANDI	1	0.12
16	Safidon	AADARSH COLLEGESAFIDON	1	0.12
17	Safidon	S.D.E.P.W.D.8 B.R.	1	0.12
18	Safidon	SDO AGRICUTURALSAFI DON	1	0.12
19	Safidon	EDO OFFICER	1	0.12
20	Safidon	BDO OFFICEJIND ROAD MANDI	1	0.12

21	Safidon	BDO OFFICEJIND ROAD MANDI	1	0.12
22	Safidon	BDO OFFICEJIND ROAD MANDI	1	0.12
23	Safidon	BDO OFFICEJIND ROAD MANDI	1	0.12
24	Safidon	RAINER FOREST OFFICNEAR RLY COLONY	1	0.12
25	Safidon	BDO OFFICEHARI KISHAN JIND ROA	1	0.12
26	Safidon	BDO OFFICEHARI KISHAN JIND ROA	1	0.12
27	Safidon	BDO OFFICECHANDER BHAN JIND RO	1	0.12
28	Safidon	MAINAIGER FCIHATT ROAD	1	0.12
29	Safidon	MAINAIGER FCIHATT ROAD	1	0.12
30	Safidon	POST MASTERMANDI ANANJ	1	0.12
31	Safidon	BDO OFFICESIYA RAM JIND ROAD	1	0.12
32	Safidon	BDO OFFICESIYA RAM JIND ROAD	1	0.12
33	Safidon	BDO OFFICEMANDI JIND ROAD	1	0.12
34	Safidon	MAINAGER HAIFADEHARYANA JIND ROAD	1	0.12
35	Safidon	POLICE CHOKIMANDI	1	0.12
36	Safidon	SDO CIVIL RAMPURA ROSAFIDON	1	0.12

37	Safidon	SDO PWD REST HOUSERLY ROAD MANDI	1	0.12
38	Safidon	THE SAFIDON COOPSOLY SAFIDON	1	0.12
39	Safidon	ED COM MARKET COMMITSAFIDON	1	0.12
40	Safidon	THE PRINCIPALGOVT COLLAGE	1	0.12
41	Safidon	THASILDAR OFFICESAFIDON	1	0.12
42	Safidon	TEHSILDARPATWAR KHANA	1	0.12
43	Safidon	PRINCIPAL GOVT SRSEC SCHOOL	1	0.12
44	Safidon	XEN WATER SERVICE	1	0.12
45	Safidon	DIV ENG N R RAILWAYCROSSING	1	0.12
46	Safidon	RAILWAY CORSSING	1	0.12
47	Safidon	DSP OFFICE MINI SECT	1	0.12
48	Safidon	DIVISIONAL ELECT ENGINEER	1	0.12
49	Safidon	ADDITIONAL CIVILJUDGE	1	0.12
50	Safidon	POST MASTERPOST OFFICE SAFIDON	1	0.12
51	Safidon	ZILEDAR OFFICEWATER SERVICE RODALA	1	0.12

52	Safidon	ZILEDAR OFFICEWATER SERVECE RODALA	1	0.12
53	Safidon	ZILEDAR OFFICEWATER SERVIVE SAFIDO	1	0.12
54	Safidon	ZILEDAR OFFICEWATER SERVIVE SAFIDO	1	0.12
55	Safidon	SECTY.MUN.COMMI TEESAFIDON	1	0.12
56	Safidon	SEC MUNICIPAL COMMSAFIDON CITY	1	0.12
57	Safidon	SR. SECTION ENGG.VIDHUT UTTAR RAILWAY	1	0.12
58	Safidon	PRI.GOV.T.COLLEGE RAMLILA GROUND	1	0.12
59	Safidon	SACHIV MARKET COMTI.PH-II NEW ANAJ MANDI	1	0.12
60	Safidon	SINIOR ELC.ENGG.GEN. NORTHRAN RAILWAY	1	0.12
61	Safidon	SEINOR SEC.ENGG.RAILWAY GATE NO-26	1	0.12
62	Safidon	SECT.MKT.COMMIT TEE NEW GRAIN MANDI	1	0.12
63	Safidon	SDO Telephone Exchange HATT ROAD	1	0.12
64	Safidon	SMO Civil HospitalNagd	1	0.12
65	Safidon	D E Northern Railway	1	0.12

66	Julana	Govt. Primary School Ju	1	0.12
67	Julana	Govt. Primary School M	1	0.12
68	Julana	Post Office	1	0.12
69	Julana	Market Committee	4	0.48
70	Julana	Animal hospital	1	0.12
71	Julana	Municipal Market Comm	1	0.12
72	Julana	Zileadar Office	1	0.12
73	Julana	Medical Office Julana	1	0.12
74	Julana	SHO Poilce Office	1	0.12
75	Julana	Officer Panchayat Comm	2	0.24
76	Julana	Govt. High School	1	0.12
77	Julana	Govt. Vocational Institut	1	0.12
78	Julana	Inspector Food & Supply	1	0.12
79	Julana	Govt. Primary School	4	0.48
80	Julana	Manager State Ware Hou	1	0.12
81	Julana	Govt. College	1	0.12
82	Julana	State bank of Patiala	1	0.12
83	Julana	State Bak Of India	1	0.12
84	Julana	Co-Operative Bank	1	0.12
85	Julana	Panjab National ank	1	0.12
86	Julana	Canara Bank	1	0.12
87	Julana	Uco bank	1	0.12
88	Julana	Tehsildar Julana	1	0.12
89	Julana	OBC Bank	1	0.12
90	Uchana	PUBLIC HEALTH Ucha	8	0.96
91	Uchana	Sect. Nagar Palika	22	2.64
92	Uchana	NAIB TESHILDAR UC	1	0.12
93	Uchana	Sect. Market Committee	5	0.6
94	Uchana	BDP Office	1	0.12
95	Uchana	ATO Office	1	0.12
96	Uchana	CDPO office	1	0.12
97	Uchana	Asst. Food Supply Office	1	0.12
98	Uchana	Police Station	1	0.12
99	Uchana	Eye Hospital	1	0.12
100	Uchana	Railway	2	0.24
101	Uchana	Post office	1	0.12
102	Uchana	Gramin Bank	1	0.12
103	Uchana	DPEP office	1	0.12

104	Uchana	State Bank of Patiala	1	0.12
Sub Total			144	17.28

Provision for Solar Panel

Details of 1 kVe Solar panel to be furnished by Town against Proposed New 33 kV Substation

Unit Cost @ Rs 1 Lac per KVE

Sr. No.	Name of town	Location of Solar Pannel	No.	Rate (In lacs)
1	Safidon	33 KV 9 Sec. HUDA SF	1	1.00
2	Safidon	SDO City office SFD	1	1.00
3	Safidon	SDO S/U office SFD	1	1.00
4	Safidon	Xen. Office	1	1.00
5	Julana	SDO Office Julana	1	1.00
6	Uchana	33 KV S/S Uchana Kl	1	1.00
7	Uchana	SDO Office Uchana	1	1.00
Sub Total			7	7.00

T. Switching Substation (33 kV and 11 kV)

Sr No	IPDS Town	Name of Substation	Voltage Level (33 kV/ 0.4 kv or 11 kV/0.4 kv)	Unit Rate For 33 kV level	Unit Rate For 11 kV level	

0.166333 15 2.495

Detail Project Report

Project area asset detail

Details of EHV Sub-stations feeding project area

SN	Name of EHV Substation	Voltage Ratio	EHV Transformer Details			Maximum Demand (MVA)
			Rating (MVA)	Nos.	Capacity (MVA)	
3	132 KV S/Stn Julana	132/ 11	T1- 10/ 16	1	16	15.89
4	132 KV Kharak Bura/Uchana	132/11 KV	T1- 10/ 16	1	16	16
5	220 KV S/Stn. Safidon	132/11	T3- 16/ 20	1	20	18.28
			T6- 10/16	1	16	16

Details of 11 KV feeders emanating from 33/11 or 66/11 KV Sub-stations feeding project area

Details of 11 KV feeders emanating from EHV Sub-stations feeding project area

Sl. No.	From EHV Substation	Name & Capacity of Power Transformer	Name of 11 KV feeder	Type of conductor	Peak Demand (MVA)	Distribution Transformer Details		
						Rating (KVA)	Nos.	Capacity (KVA)

14		T3-16/20	City -I	Rabbit	300	25	8	200		
						63	20	1260		
						100	63	6300		
						160	0	0		
						200	14	2800		
						250	0	0		
						315	0	0		
						500	0	0		
15	220 KV S/S Safidon	T6-10/16	City-2	Rabbit	310	25	4	100		
						63	18	1134		
						100	35	3500		
						160	0	0		
						200	12	2400		
						250	0	0		
						315	0	0		
						500	0	0		
		800	0	0						
					City-3	Rabbit	120	25	0	0
								63	2	126
								100	5	500
								160	0	0
								200	2	400
								250	0	0
								315	0	0
500	0							0		
19	132 S/S Uchana	10/16 Mva	11 KV JTL	50 mm2	280	25	10	250		
						63	11	693		
						100	24	2400		
						160	0	0		
						200	2	400		
						315	7	2205		
					11 KV Uchana	50 mm2	230	25	4	100
								63	19	1197
								100	15	1500
								160	0	0
								200	6	1200
								250	2	500
19	132 S/S Julana	10/16 Mva	11 KV Julana City	50 mm2	300	25	9	225		
						63	10	630		
						100	35	3500		
						160	0	0		
						200	14	2800		
						315	2	630		
					11 KV Lunana MU	50 mm2	80	25	8	200
								63	4	252
								100	1	100
								160	0	0
								200	1	200
								250	2	500
Total DT Count							369	38202		

Detail Project Report

Volume Ila: SUMMARY Project Cost

4.1 Summary of Project Cost (Bill of Quantities)

SN	Particular	Unit	Qty	Project Cost from lib & lic
				Rs. In Lac
A	33/11 KV S/S : New	Nos	1	400.00
B	33/11 KV S/S : Additional Transformer	Nos.	0	0
C	33/11 KV S/S : Transformer capacity enhancement	Nos.	0	0
D	Renovation & Modernisation of 33/11 kV SS	Nos.	0	0
E	New 33 KV new feeders/Bifurcation of feeders:	Kms	0	0
F	33 KV feeders Reconductoring/Augmentation	Kms	0	0
G	33 kV Line Bay Extension at EHV station	Nos	0	0
H	11 kV Line : New Feeder/ Feeder Bifurcation	Kms	10.29	68.93
I	11 kV Line : Augmentation/Reconductoring	Kms	0	0
J	Arial Bunched Cable	Kms	0	0
K	UG Cable	Kms	0	0
L	11 KV Bay Extension	Kms	0	0
M	Installation of Distribution Transformer	Nos.	0	0
N	Capacity enhancement of LT sub-station	Nos.	0	0
O	LT Line : New Feeder/ Feeder Bifurcation	Kms	0	0
P	LT Line : Augmentation/Reconductoring	Kms	0	0
Q	Capacitor Bank	Nos.	0	0
R	HVDS	Nos.	0	0
S	Metering	Nos.	89.00	12.56
T	Provisioning of solar panel	Lot	4	4
U	RMU,Sectionaliser, Auto reclosures, FPI etc.	Lot	0	0
V	Others	Lot	0	0
	GRAND TOTAL			485.49

For Non R-APDRP Safidon Towns (Separate BOQ sheet to be furnished for each town)**Bill of Quantities**

S. No.	Item Details	Unit	Existing/ Current Position	Qty proposed under IPDS	Unit Price	Cost proposed under IPDS	Reference
					Rs. Lac	Rs. Lac	Annx No.
A	33/11 KV S/S : New						
1	33 KV S/Stn	Nos	-	0	40.00	-	
2	Proposed 33/11 KV S/S Sector. 9 HUDA, Safidon	Nos		10	40.00	400.00	
		Nos.		0		-	
	Sub Total			0		400.00	
B	33/11 KV S/S : Additional Transformer						
1		Nos.	-				
2		Nos.	-				
3		Nos.	-				
	Sub Total		0				
C	33/11 KV S/S : Transformer capacity enhancement						
1		Nos.	-				
2		Nos.	-				
3		Nos.	-				
	Sub Total		0				
D	Renovation & Modernisation of 33/11 kv SS						
1		Nos.	-				
2		Nos.	-				
3		Nos.	-				
	Sub Total		0				
E	New 33 KV new feeders/Bifurcation of feeders:						
1	220 KV S/S SFD to Sector 9 HUDA SFD with 130 mm2 ACSR	Kms	-				
2		Kms	-				
3		Kms	-				
	Sub Total		0				
F	33 KV feeders Reconductoring/Augmentation						
1		Kms	-				
2		Kms	-				
3		Kms	-				
	Sub Total		0				
G	33 kv Line Bay Extension at EHV station						
1		Nos	-				
2		Nos	-				
3		Nos	0				
	Sub Total		0				
H	11 kV Line : New Feeder/ Feeder Bifurcation						
1	11 kv New line (4 No.) which will be fed from proposed 33 KV S/S	Kms	36.00	4.110	6.70	27.54	Annexure-1
2	11 KV feeder bifurcation (2 No) 11 KV City No.1 & 2.	Kms		6.178	6.70	41.39	Annexure-1
3		Kms				-	
	Sub Total		36.00	10.29		68.93	
I	11 kV Line : Augmentation/Reconductoring						
1	11 KV feeder augmentation (2 No)	Kms	-				
2		Kms	-				
3		Kms					
	Sub Total		0.00				

J	Arial Bunched Cable/armoured single cable						
	i) HT						
		Kms					
		Kms					
		Kms					
	Sub Total		0				
	ii) LT						
	Erection of new LT feeder against 40 No. DTF	Kms					
		Kms					
	Sub Total		0				
	Total		0				
K	UG Cable						
	i) HT						
	For railway crossing	Kms	0.50				
		Kms					
		Kms					
	Sub Total		0.50				
	ii) LT						
		Kms					
		Kms					
		Kms					
	Sub Total		0.00				
	Total		0.50				
L	11 KV Bay Extension						
		Kms					
		Kms					
		Kms					
	Sub Total		0				
M	Installation of Distribution Transformer						
	100 KVA Dist. TF (40 No.)	No.					
	200 KVA Dist. TF (20 No.)	No.					
	25 KVA = 12 No.	No.	0.300				
	63 KVA = 40 No.	No.	2.520				
	100 KVA= 103 No.	No.	10.300				
	200 KVA = 28 No.	No.	5.600				
	250 KVA =	No.	0.000				
	315 KVA =	No.	0.000				
	500 KVA =	No.	0.000				
	630 KVA =	No.	0.000				
	Sub Total		18.720				
N	Capacity enhancement of LT sub-station						
	100 to 200 KVA T/F	Nos.					
		Nos.					
		Nos.					
	Sub Total		0				
O	LT Line : New Feeder/ Feeder Bifurcation						
	LT line of 50 mm2 ACSR	Kms	45.510				
		Kms					
		Kms					
	Sub Total		45.510				
P	LT Line : Augmentation/Reconductoring						
	Augmentation of LT line	Kms					
	Reconductoring of LT line	Kms					
		Kms					
	Sub Total		0				
Q	Capacitor Bank						
		Nos.					
		Nos.					
		Nos.					

		Sub Total		0			
R	HVDS						
		Nos.					
		Nos.					
		Nos.					
		Sub Total		0			
S	Metering						
i)	Prepaid / smart meters in Govt. establishment	Nos.		65	0.12	7.80	
ii)	AMI, Smart meters in the towns where SCADA being established under R-APDRP.	Nos.			0.125	-	
iii)	Boundary meters for ring fencing of Non-RAPDRP Towns with population more than 5000	Nos.		4	1.04	4.16	Annexure-9
iv)	AMR for feeders, Distribution transformer and high load consumers	Nos.		20	0.03	0.60	
v)	Consumers for existing un-metered connections, replacement of faulty meters & electro-mechanical meters	Nos.			0.03		
vi)	6 in 1	Nos.					
		Sub Total		0	89	12.56	
T	Provisioning of solar panel						
	Location 4x1 (1KWE Capacity)	KWe		4	1	4	
	Location 2 /(Capacity)	KWe					
	Location 3 /(Capacity)	KWe					
	Net-Meters	Nos.					
		Sub Total		0	4	4	
U	RMU,Sectionaliser, Auto reclosures, FPI etc.						
i)	33 kV Line : Installation of switchable breaker/switches	Nos.					
ii)	33 kV Line : Installation of commnuicable/non-communicable FPIs (O/C&E/F)	Nos.					
iii)	11 kV Line : Installation of RMUs/Sectionaliser alongwith aux power supply to operate sw/breaker.	Nos.					
iv)	11 kV Line :- Installation of communicable/non communicable FPIs (O/C,E/F)	Nos.					
v)	11 kV Line : Installation of switchable breakers alongwith aux power supply to operate sw/breaker	Nos.					
vi)	Installation of remote operable switches for breaker/switches operation for Distribution Transformer alongwith aux power supply to operate sw/breaker	Nos.					
vii)	Installation of remote operable switches for breaker/switches operation for cap bank alongwith aux power supply to operate sw/breaker .	Nos.					
		Sub Total		0	0	0.00	
V	Others						
	M&R of existing dist. Transformer						
	Modernisation of districbution T/F						
		Sub Total		0			
		Grand Total				485.49	

Note: Unit price and Total Cost are inclusive of all taxes and duties

POWER FINANCE CORPORATION LTD.**Detail Project Report****Justification / Details of Proposed Works (Separate Sheet for Each TOWN to be furnished)****A. Details of 33/11 KV Substation : New**

Sr No.	Circle	IPDS Town	Total Number of Proposed 33 kV	Total Capacity of Proposed 33 kV substation (MVA)	Name of Substation	Unit Cost @Rs 40 lacs/MVA
1	Jind	Safidon	1	10	33/11 KV S/S Sector. 9 HUDA, Safidon	400
			0	0		0
			0	0		0
			0	0		0
Sub Total			1	10		400

B.33/11 KV S/S : Additional Transformer

Sr No.	Circle	IPDS Town	Total Number of Additional Power	Total Capacity of Proposed Additional Power Transformer	Name of Substation	Unit Cost @Rs 14 lacs/MVA
			0	0		0
			0	0		0
			0	0		0
			0	0		0
Sub Total			0	0		0

C.33/11 KV S/S : Transformer capacity enhancement

Sr No.	Circle	IPDS Town	Existing capacity of Power	Proposed capacity of Power Transformer (MVA)	Name of Substation	Unit Cost @Rs 14 lacs/MVA
			0	0		0
			0	0		0
			0	0		0
			0	0		0
Sub Total			0	0		0

E.New 33 KV new feeders/Bifurcation of feeders:

Sr No.	Circle	New Feeder/ Bifurcation	EHV Substation (Feeding source)	Proposed Name of the feeder (Conductor Size 150 Sqmm)	Length of Feeder (Km)	Unit Rate @ Rs 9.95 lac/Km
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1	Jind	New feeder	220 KV S/S SFD	220 KV S/S SFD to Sector 9 HUDA SFD with 150 mm2 ACSR	6.98	69.451
					0	0
					0	0
Sub Total					6.98	69.451

F. 33 KV feeders Reconductoring/Augmentation

Sr No.	IPDS Town	Augmentation/ Reconductoring	EHV Substation (Feeding Source)	Name of the feeder (Conductor Size 150 Sqmm)	Existing size of conductor	Length of Feeder (Km)	Unit Rate @ 7.55
						0	0
						0	0
						0	0
Sub Total						0	0

G. 11 kV Line : New Feeder/ Feeder Bifurcation

Sr No.	IPDS Town	New Feeder/ Bifurcation	EHV Substation (Feeding Source)	Name of the feeder (Conductor Size 100 Sqmm)	Length of Feeder (Km)	Unit Rate @ 6.70 Lac/ Km
1	Safidon	New Feeder	33/11 KV S/S Sector. 9 HUDA, Safidon	City No.4	2.8	18.76
2	Safidon	New Feeder	33/11 KV S/S Sector. 9 HUDA, Safidon	City No.5	2.14	14.338
3	Safidon	New Feeder	33/11 KV S/S Sector. 9 HUDA, Safidon	Assandh road	2.65	17.755
4	Safidon	New Feeder	33/11 KV S/S Sector. 9 HUDA, Safidon	Jind road	1.52	10.184
5	Safidon	Bifurcation	220 KV S/S SFD	City No.2	5.3	35.51
6	Safidon	Bifurcation	220 KV S/S SFD	City No.1	5.878	39.3826
Sub Total					20.288	135.9296

18.000
17.000

15

10.000

H.11 kV Line : Augmentation/Reconductoring

Sr No.	IPDS Town	Augmentation/ Reconductoring	EHV Substation (Feeding Source)	Name of the feeder (Conductor Size 100 Sqmm)	Length of Feeder (Km)	Unit Rate @ 4.66
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		Reconducting (Feeding Source)	(Conductor Size 100 Sqmm)	Existing size of conductor		lac/Km
1	Safidon	Augmentation	220 KV S/S SFD	City No.1	50 mm2 (Rabbit)	20.97
2	Safidon	Augmentation	220 KV S/S SFD	City No.2	50 mm2 (Rabbit)	25.63
Sub Total					10.00	46.60

I. Aerial Bunched Cable (LT)

Sr No.	IPDS Town	Size of Cable (3Cx120 +1x70 Sqmm)	EHV Substation (Feeding Source)	Name of the feeder	Length of Feeder (Km)	Unit Rate @ Rs 4.93 lac /Km
1	Safidon	3Cx120 +1x70 Sqmm	33/11 KV S/S Sector. 9 HUDA, Safidon	City No.4	3.100	15.283
2	Safidon	3Cx120 +1x70 Sqmm	33/11 KV S/S Sector. 9 HUDA, Safidon	City No.5	2.700	13.311
3	Safidon	3Cx120 +1x70 Sqmm	33/11 KV S/S Sector. 9 HUDA, Safidon	Assandh road	2.500	12.325
4	Safidon	3Cx120 +1x70 Sqmm	33/11 KV S/S Sector. 9 HUDA, Safidon	Jind road	1.580	7.7894
Sub Total					9.880	48.7084

9.98

8.4

1.58

J.UG Cable

Sr No.	IPDS Town	Size of Cable	EHV Substation (Feeding Source)	Name of the feeder	Length of Feeder (Km)	Unit Rate @ Rs 31.64 Lacs/KM
1	Safidon	3x300Sqmm	33/11 KV S/S Sector. 9 HUDA, Safidon	City No.5	0.485	15.345
Sub Total					0.485	15.345

K. Installation of Distribution Transformer

Sr No.	Circle	Feeding Souce (EHV Substation)	Name of 11 kV Feeder	Proposed 100 KVA DTs (Nos)	Unit Rate for 100 KVA DT @ 2.24 lac/ DT	Proposed 200 kVA DTs (Nos)	Unit Rate for 200
1	Jind	33/11 KV S/S Sector. 9 HUDA, Safidon	City No.4	11	24.64	7	27.79

2	Jind	33/11 KV S/S Sector. 9 HUDA, Safidon	City No.5	11	24.64	6	23.82
3	Jind	33/11 KV S/S Sector. 9 HUDA, Safidon	Assandh road	10	22.4	5	19.85
4	Jind	33/11 KV S/S Sector. 9 HUDA, Safidon	Jind road	8	17.92	2	7.94
							0
Sub Total				40	89.6	20	79.4
Total Cost				169			

List of Govt Eshtablishments where Prepaid Meter are to be installed.

Sr No.	IPDS Town	Name of Govt Eshtablishment	Total Nos of Prepaid meter Requirement	Unit rate @ Rs 0.12 Lac / meter
1	Safidon	SDM SAFIDON	1	0.12
2	Safidon	TRAIURY OFFICESAFIDON	1	0.12
3	Safidon	MUNICIPAL COOMMITTEESAFIDON	1	0.12
4	Safidon	NEHRU BAL BHAWAN	1	0.12
5	Safidon	HEAD MASTER GIRLHIGH SCHOOL SAFIDON	1	0.12
6	Safidon	SHO POLICE STNSAFIDON CITY	1	0.12
7	Safidon	GENERAL MANAIGER HRSAFIDON	1	0.12
8	Safidon	SDE PUBLIC HEALTHSAFIDON	1	0.12
9	Safidon	MUNICIPALSAFIDON	1	0.12

10	Safidon	VAITRANARI HOSPITALSAFIDON	1	0.12
11	Safidon	CHAIRMAN MKT COMSAFIDON	1	0.12
12	Safidon	3BDO OFFICESAFIDON	1	0.12
13	Safidon	AISST INSPECTOR FOODSAFIDON	1	0.12
14	Safidon	MANAGER STATE WAREHOUSE SAFIDON MANDI	1	0.12
15	Safidon	MANAGER STATE WAREHOUSE SAFIDON MANDI	1	0.12
16	Safidon	AADARSH COLLEGESAFIDON	1	0.12
17	Safidon	S.D.E.P.W.D.8 B.R.	1	0.12
18	Safidon	SDO AGRICUTURALSAFI DON	1	0.12
19	Safidon	EDO OFFICER	1	0.12
20	Safidon	BDO OFFICEJIND ROAD MANDI	1	0.12
21	Safidon	BDO OFFICEJIND ROAD MANDI	1	0.12
22	Safidon	BDO OFFICEJIND ROAD MANDI	1	0.12
23	Safidon	BDO OFFICEJIND ROAD MANDI	1	0.12
24	Safidon	RAINGER FOREST OFFICNEAR RLY COLONY	1	0.12
25	Safidon	BDO OFFICEHARI KISHAN JIND ROA	1	0.12
26	Safidon	BDO OFFICEHARI KISHAN JIND ROA	1	0.12

27	Safidon	BDO OFFICECHANDER BHAN JIND RO	1	0.12
28	Safidon	MAINAIGER FCIHATT ROAD	1	0.12
29	Safidon	MAINAIGER FCIHATT ROAD	1	0.12
30	Safidon	POST MASTERMANDI ANANJ	1	0.12
31	Safidon	BDO OFFICESIYA RAM JIND ROAD	1	0.12
32	Safidon	BDO OFFICESIYA RAM JIND ROAD	1	0.12
33	Safidon	BDO OFFICEMANDI JIND ROAD	1	0.12
34	Safidon	MAINAGER HAIFADEHARYANA JIND ROAD	1	0.12
35	Safidon	POLICE CHOKIMANDI	1	0.12
36	Safidon	SDO CIVIL RAMPURA ROSAFIDON	1	0.12
37	Safidon	SDO PWD REST HOUSERLY ROAD MANDI	1	0.12
38	Safidon	THE SAFIDON COOPSOLY SAFIDON	1	0.12
39	Safidon	ED COM MARKET COMMITSAFIDON	1	0.12
40	Safidon	THE PRINCIPALGOVT COLLAGE	1	0.12
41	Safidon	THASILDAR OFFICESAFIDON	1	0.12

42	Safidon	TEHSILDARPATWAR KHANA	1	0.12
43	Safidon	PRINCIPAL GOVT SRSEC SCHOOL	1	0.12
44	Safidon	XEN WATER SERVICE	1	0.12
45	Safidon	DIV ENG N R RAILWAYCROSSING	1	0.12
46	Safidon	RAILWAY CORSSING	1	0.12
47	Safidon	DSP OFFICE MINI SECT	1	0.12
48	Safidon	DIVISIONAL ELECT ENGINEER	1	0.12
49	Safidon	ADDITIONAL CIVILJUDGE	1	0.12
50	Safidon	POST MASTERPOST OFFICE SAFIDON	1	0.12
51	Safidon	ZILEDAR OFFICEWATER SERVICE RODALA	1	0.12
52	Safidon	ZILEDAR OFFICEWATER SERVECE RODALA	1	0.12
53	Safidon	ZILEDAR OFFICEWATER SERVIVE SAFIDO	1	0.12
54	Safidon	ZILEDAR OFFICEWATER SERVIVE SAFIDO	1	0.12
55	Safidon	SECTY.MUN.COMMI TEESAFIDON	1	0.12
56	Safidon	SEC MUNICIPAL COMMSAFIDON CITY	1	0.12

57	Safidon	SR. SECTION ENGG.VIDHUT UTTAR RAILWAY	1	0.12
58	Safidon	PRI.GOV.T.COLLEGE RAMLILA GROUND	1	0.12
59	Safidon	SACHIV MARKET COMTI.PH-II NEW ANAJ MANDI	1	0.12
60	Safidon	SINIOR ELC.ENGG.GEN. NORTHRAN RAILWAY	1	0.12
61	Safidon	SEINOR SEC.ENGG.RAILWAY GATE NO-26	1	0.12
62	Safidon	SECT.MKT.COMMIT TEE NEW GRAIN MANDI	1	0.12
63	Safidon	SDO Telephone Exchange HATT ROAD	1	0.12
64	Safidon	SMO Civil HospitalNagd	1	0.12
65	Safidon	D E Northern Railway	1	0.12
Sub Total			65	7.80

Provision for Solar Panel

Details of 1 kVe Solar panel to be furnished by Town against Proposed New 33 kV Substation

Unit Cost @ Rs 1 Lac per KVE

Sr. No.	Name of town	Location of Solar Pannel	No.	Rate (In lacs)
1	Safidon	33 KV 9 Sec. HUDA SF	1	1.00
2		SDO City office SFD	1	1.00
3		SDO S/U office SFD	1	1.00
4		Xen. Office	1	1.00
Sub Total			4	4.00

T. Switching Substation (33 kV and 11 kV)

Sr No	IPDS Town	Name of Substation	Voltage Level (33 kV/ 0.4 kv or 11 kV/0.4 kv)	Unit Rate For 33 kV level	Unit Rate For 11 kV level	

0.166333 15 2.495

POWER FINANCE CORPORATION LTD.**Detail Project Report**

Julana Town

Volume Ila: SUMMARY Project Cost

4.1 Summary of Project Cost (Bill of Quantities)

SN	Particular	Unit	Qty	Project Cost from lib & lic
				Rs. In Lac
A	33/11 KV S/S : New	Nos	0	0
B	33/11 KV S/S : Additional Transformer	Nos.	0	0
C	33/11 KV S/S : Transformer capacity enhancement	Nos.	0	0
D	Renovation & Modernisation of 33/11 kV SS	Nos.	0	0
E	New 33 KV new feeders/Bifurcation of feeders:	Kms	0	0
F	33 KV feeders Reconductoring/Augmentation	Kms	0	0
G	33 kV Line Bay Extension at EHV station	Nos	0	0
H	11 kV Line : New Feeder/ Feeder Bifurcation	Kms	10	67.00
I	11 kV Line : Augmentation/Reconductoring	Kms	0	0
J	Arial Bunched Cable	Kms	0	0
K	UG Cable	Kms	0	0
L	11 KV Bay Extension	Kms	0	0
M	Installation of Distribution Transformer	Nos.	0	0
N	Capacity enhancement of LT sub-station	Nos.	0	0
O	LT Line : New Feeder/ Feeder Bifurcation	Kms	0	0
P	LT Line : Augmentation/Reconductoring	Kms	0	0
Q	Capacitor Bank	Nos.	0	0
R	HVDS	Nos.	0	0
S	Metering	Nos.	32.00	4.76
T	Provisioning of solar panel	Lot	1	1
U	RMU,Sectionaliser, Auto reclosures, FPI etc.	Lot	0	1
V	Others	Lot	0	0
	GRAND TOTAL			73.76

For Non R-APDRP Julana Towns (Separate BOQ sheet to be furnished for each town)**Bill of Quantities**

S. No.	Item Details	Unit	Existing/ Current Position	Qty proposed under IPDS	Unit Price	Cost proposed under IPDS	Reference
					Rs. Lac	Rs. Lac	Annx No.
A	33/11 KV S/S : New						
1		Nos	-	0		-	
2		Nos		0		-	
3		Nos.		0		-	
	Sub Total			0		0	
B	33/11 KV S/S : Additional Transformer						
1		Nos.	-	0			
2		Nos.		0			
3		Nos.		0			
	Sub Total			0		0	
C	33/11 KV S/S : Transformer capacity enhancement						
1		Nos.	-	0		-	
2		Nos.		0		-	
3		Nos.		0			
	Sub Total			0		0	
D	Renovation & Modernisation of 33/11 kV SS						
1		Nos.	-	0	-		
2		Nos.		0		-	
3		Nos.		0			
	Sub Total			0		0	
E	New 33 KV new feeders/Bifurcation of feeders:						
1		Kms		0		-	
2		Kms		0		-	
3		Kms		0		-	
	Sub Total			0		0	
F	33 KV feeders Reconductoring/Augmentation						
1		Kms		0		-	
2		Kms		0		-	
3		Kms		0			
	Sub Total			0		0	
G	33 kV Line Bay Extension at EHV station						
1		Nos		0		-	
2		Nos		0		-	
3		Nos		0			
	Sub Total			0		0	
H	11 kV Line : New Feeder/ Feeder Bifurcation						
1	11 kv New line (4 No.) Main Bazzar, Old Anaj Mandi, Old Bus stand, Grain Market,	Kms	15.750	6.00	6.70	40.20	
2	11 KV Bifurcation (1 No.) Julana (line par)	Kms		4.00	6.70	26.80	
3		Kms				-	
	Sub Total		15.750	10.00		67.00	
I	11 kV Line : Augmentation/Reconductoring						
1	11 KV feeder augmentation (2 No)	Kms					
2	11 KV feeder reconductoring (2 No)	Kms					
	Sub Total			0			

J	Arial Bunched Cable/armoured single cable					
	i) HT					
		Kms				
		Kms				
		Kms				
	Sub Total		0			
	ii) LT					
	Eection of new LT 3.5 core 95 mm2 against new TF	Kms				
		Kms				
		Kms				
	Sub Total		0			
	Total		0			
K	UG Cable					
	i) HT					
	For railway crossing	Kms	0.200			
		Kms				
		Kms				
	Sub Total		0.200			
	ii) LT					
		Kms				
		Kms				
		Kms				
	Sub Total		0.200			
	Total		0.400			
L	11 KV Bay Extension					
		Kms				
		Kms				
		Kms				
	Sub Total		0			
M	Installation of Distribution Transformer					
	100 KVA Dist. TF (42 NO.)	No.				
	25 KVA = 17 No.	No.	17.000			
	63 KVA = 14 No.	No.	14.000			
	100 KVA= 36 No.	No.	36.000			
	200 KVA = 15 No.	No.	15.000			
	250 KVA = 3 No.	No.	3.000			
	315 KVA = 3 No.	No.	3.000			
	500 KVA = 1 No.	No.	1.000			
	630 KVA = 1 No.	No.	1.000			
	Sub Total		90.000			
N	Capacity enhancement of LT sub-station					
		Nos.				
		Nos.				
		Nos.				
	Sub Total		0			
O	LT Line : New Feeder/ Feeder Bifurcation					
	LT line with 50 mm2	Kms	22.250			
	New LT line with 50 mm2	Kms				
		Kms				
	Sub Total		22.250			
P	LT Line : Augmentation/Reconductoring					
		Kms				
		Kms				
		Kms				
	Sub Total		0			
Q	Capacitor Bank					
		Nos.				
		Nos.				
		Nos.				
	Sub Total		0			

R	HVDS					
		Nos.				
		Nos.				
		Nos.				
	Sub Total		0			
S	Metering					
i)	Prepaid / smart meters in Govt. establishment	Nos.		31	0.12	3.72
ii)	AMI, Smart meters in the towns where SCADA being established under R-APDRP.	Nos.			0.125	-
iii)	Boundary meters for ring fencing of Non-RAPDRP Towns with population more than 5000	Nos.		1	1.04	1.04 Annexure-9
iv)	AMR for feeders, Distribution transformer and high load consumers	Nos.			0.03	-
v)	Consumers for existing un-metered connections, replacement of faulty meters & electro-mechanical meters	Nos.			0.03	
vi)	6 in 1	Nos.				
	Sub Total		0	32		4.76
T	Provisioning of solar panel					
	Location 1x1(Capacity)	No.		1	1	1.00
	Location 2 /(Capacity)					
	Location 3 /(Capacity)					
	Net-Meters					
	Sub Total		0	1		1.000
U	RMU,Sectionaliser, Auto reclosures, FPI etc.					
i)	33 kV Line : Installation of switchable breaker/switches	Nos.				
ii)	33 kV Line : Installation of commuicable/non-communicable FPIs (O/C&E/F)	Nos.				
iii)	11 kV Line : Installation of RMUs/Sectionaliser alongwith aux power supply to operate sw/breaker.	Nos.				
iv)	11 kV Line :- Installation of communicable/non communicable FPIs (O/C,E/F)	Nos.				
v)	11 kV Line : Installation of switchable breakers alongwith aux power supply to operate sw/breaker	Nos.				
vi)	Installation of remote operable switches for breaker/switches operation for Distribution Transformer alongwith aux power supply to operate sw/breaker	Nos.				
vii)	Installation of remote operable switches for breaker/switches operation for cap bank alongwith aux power supply to operate sw/breaker .	Nos.				
	Sub Total		0	0		0
V	Others					
	M&R of existing dist. Transformer					
	Modernisation of districbution T/F					
	Sub Total		0			
	Grand Total			0		72.76

Note: Unit price and Total Cost are inclusive of all taxes and duties

Detail Project Report

Justification / Details of Proposed Works (Separate Sheet for Each TOWN to be furnished)

A. Details of 33/11 KV Substation : New

Sr No.	Circle	IPDS Town	Total Number of Proposed 33 kV	Total Capacity of Proposed 33 kV substation (MVA)	Name of Substation	Unit Cost @Rs 40 lacs/MVA
1	Jind	Julana				0
			0	0		0
			0	0		0
			0	0		0
Sub Total			0	0		0

B.33/11 KV S/S : Additional Transformer

Sr No.	Circle	IPDS Town	Total Number of Additional Power	Total Capacity of Proposed Additional Power Transformer	Name of Substation	Unit Cost @Rs 14 lacs/MVA
			0	0		0
			0	0		0
			0	0		0
			0	0		0
Sub Total			0	0		0

C.33/11 KV S/S : Transformer capacity enhancement

Sr No.	Circle	IPDS Town	Existing capacity of Power	Proposed capacity of Power Transformer (MVA)	Name of Substation	Unit Cost @Rs 14 lacs/MVA
			0	0		0
			0	0		0
			0	0		0
			0	0		0
Sub Total			0	0		0

E.New 33 KV new feeders/Bifurcation of feeders:

Sr No.	Circle	New Feeder/ Bifurcatorin	EHV Substation (Feeding source)	Proposed Name of the feeder (Conductor Size 150 Sqmm)	Length of Feeder (Km)	Unit Rate @ Rs 9.95 lac/Km
1						0
					0	0

					0	0
Sub Total					0	0

F. 33 KV feeders Reconductoring/Augmentation

Sr No.	IPDS Town	Augmentation/ Reconductoring	EHV Substation (Feeding Source)	Name of the feeder (Conductor Size 150 Sqmm)	Existing size of conductor	Length of Feeder (Km)	Unit Rate @ 7.55
						0	0
						0	0
						0	0
Sub Total						0	0

G. 11 kV Line : New Feeder/ Feeder Bifurcation

Sr No.	IPDS Town	New Feeder/ Bifurcatoi	EHV Substation (Feeding Source)	Name of the feeder (Conductor Size 100 Sqmm)	Length of Feeder (Km)	Unit Rate @ 6.70 Lac/ Km
1	Julana	New feeder	132 KV S/S Julana	Main Bazzar	2.500	16.75
2	Julana	New feeder	132 KV S/S Julana	Old Anaj Mandi	2.000	13.4
3	Julana	New feeder	132 KV S/S Julana	Old Bus stand	2.300	15.41
4	Julana	New feeder	132 KV S/S Julana	Grain Market	1.200	8.04
5	Julana	Bifurcation	132 KV S/S Julana	Julana (Line Par)	6	40.2
Sub Total					14.000	93.8

H.11 kV Line : Augmentation/Reconductoring

Sr No.	IPDS Town	Augmentation/ Reconductoring	EHV Substation (Feeding Source)	Name of the feeder (Conductor Size 100 Sqmm)	Existing size of conductor	Length of Feeder (Km)	Unit Rate @ 4.66 lac/Km
1	Julana	Augmentation	132 KV S/S Julana	Julana (Line Par)	50 mm2 (Rabbit)	4.5	20.97
2							0
Sub Total						4.50	20.97

I. Arial Bunched Cable (LT)

Sr No.	IPDS Town	Size of Cable (3Cx120 +1x70 Sqmm)	EHV Substation (Feeding Source)	Name of the feeder	Length of Feeder (Km)	Unit Rate @ Rs 4.93 lac /Km
1	Julana	3Cx120 +1x70 Sqmm	132 KV S/S Julana	Main Bazaar	2.000	9.86
2	Julana	3Cx120 +1x70 Sqmm	132 KV S/S Julana	Old Anaj Mandi	1.560	7.6908
3	Julana	3Cx120 +1x70 Sqmm	132 KV S/S Julana	Old Bus stand	1.770	8.7261
4	Julana	3Cx120 +1x70 Sqmm	132 KV S/S Julana	Grain Market	1.780	8.7754
Sub Total					7.110	35.0523

7.11

8.4

-1.29

J.UG Cable

Sr No.	IPDS Town	Size of Cable	EHV Substation (Feeding Source)	Name of the feeder	Length of Feeder (Km)	Unit Rate @ Rs 31.64 Lacs/KM
1	Julana	3x300Sqmm	132 KV S/S Julana	Grain Market	0.3	9.492
Sub Total					0.3	9.492

K. Installation of Distribution Transformer

Sr No.	Circle	Feeding Souce (EHV Substation)	Name of 11 kV Feeder	Proposed 100 KVA DTs (Nos)	Unit Rate for 100 KVA DT @ 2.24 lac/ DT	Proposed 200 kVA DTs (Nos)	Unit Rate for 200
1	Jind	132 KV S/S Julana	Main Bazaar	12	26.88	0	0
2	Jind	132 KV S/S Julana	Old Anaj Mandi	11	24.64	0	0
3	Jind	132 KV S/S Julana	Old Bus stand	9	20.16	0	0
4	Jind	132 KV S/S Julana	Grain Market	10	22.4	0	0
Sub Total				42	94.08	0	0
Total Cost				94.08			

List of Govt Eshtablishments where Prepaid Meter are to be installed.

Sr No.	IPDS Town	Name of Govt Eshtablishment	Total Nos of Prepaid meter Requirement	Unit rate @ Rs 0.12 Lac / meter
1	Julana	Govt. Primary School Ju	1	0.12
2	Julana	Govt. Primary School M	1	0.12

3	Julana	Post Office	1	0.12
4	Julana	Market Committee	4	0.48
5	Julana	Animal hospital	1	0.12
6	Julana	Municipal Market Comm	1	0.12
7	Julana	Zileedar Office	1	0.12
8	Julana	Medical Office Julana	1	0.12
9	Julana	SHO Poilce Office	1	0.12
10	Julana	Officer Panchayat Comm	2	0.24
11	Julana	Govt. High School	1	0.12
12	Julana	Govt. Vocational Institut	1	0.12
13	Julana	Inspector Food & Supply	1	0.12
14	Julana	Govt. Primary School	4	0.48
15	Julana	Manager State Ware Hou	1	0.12
16	Julana	Govt. College	1	0.12
17	Julana	State bank of Patiala	1	0.12
18	Julana	State Bak Of India	1	0.12
19	Julana	Co-Operative Bank	1	0.12
20	Julana	Panjab National ank	1	0.12
21	Julana	Canara Bank	1	0.12
22	Julana	Uco bank	1	0.12
23	Julana	Tehsildar Julana	1	0.12
24	Julana	OBC Bank	1	0.12
Sub Total			31	3.72

Provision for Solar Panel

Details of 1 kVe Solar panel to be furnished by Town against Proposed New 33 kV Substation

Unit Cost @ Rs 1 Lac per KVE

Sr. No.	Name of town	Location of Solar Pannel	No.	Rate (In lacs)
2	Julana	SDO Office Julana	1	1.00
Sub Total			1	1.00

T. Switching Substation (33 kV and 11 kV)

Sr No	IPDS Town	Name of Substation	Voltage Level (33 kV/ 0.4 kv or 11 kV/0.4 kv)	Unit Rate For 33 kV level	Unit Rate For 11 kV level

1.7775

15 26.6625

POWER FINANCE CORPORATION LTD.**Detail Project Report****Uchana**

Volume Ila: SUMMARY Project Cost

4.1 Summary of Project Cost (Bill of Quantities)

SN	Particular	Unit	Qty	Project Cost from lib & lic
				Rs. In Lac
A	33/11 KV S/S : New	Nos	10	400.00
B	33/11 KV S/S : Additional Transformer	Nos.	0	0.00
C	33/11 KV S/S : Transformer capacity enhancement	Nos.	0	0.00
D	Renovation & Modernisation of 33/11 kV SS	Nos.	0	0.00
E	New 33 KV new feeders/Bifurcation of feeders:	Kms	0	0.00
F	33 KV feeders Reconductoring/Augmentation	Kms	0	0.00
G	33 kV Line Bay Extension at EHV station	Nos	0	0.00
H	11 kV Line : New Feeder/ Feeder Bifurcation	Kms	1.81	12.14
I	11 kV Line : Augmentation/Reconductoring	Kms	0.00	0.00
J	Arial Bunched Cable	Kms	0	0.00
K	7	Kms	0.00	0.00
L	11 KV Bay Extension	Kms	0.00	0.00
M	Installation of Distribution Transformer	Nos.	0.00	0.00
N	Capacity enhancement of LT sub-station	Nos.	0.00	0.00
O	LT Line : New Feeder/ Feeder Bifurcation	Kms	0.00	0.00
P	LT Line : Augmentation/Reconductoring	Kms	0.00	0.00
Q	Capacitor Bank	Nos.	0.00	0.00
R	HVDS	Nos.	0.00	0.00
S	Metering	Nos.	3660.00	115.56
T	Provisioning of solar panel	Lot	2.00	2.00
U	RMU,Sectionaliser, Auto reclosures, FPI etc.	Lot	0.00	0.00
V	Others	Lot	0.00	0.00
	GRAND TOTAL			529.70

For Non R-APDRP Uchana Towns (Separate BOQ sheet to be furnished for each town)**Bill of Quantities**

S. No.	Item Details	Unit	Existing/ Current Position	Qty proposed under IPDS	Unit Price	Cost proposed under IPDS	Reference
					Rs. Lac	Rs. Lac	Annx No.
A	33/11 KV S/S : New						
1		Nos	-		-	-	
2	New 33/11 KV S/S at village Uchana Kl.	Nos		10	40.00	400.00	
3		Nos.				-	
	Sub Total			0		400.00	
B	33/11 KV S/S : Additional Transformer						
1		Nos.					
2		Nos.					
3		Nos.					
	Sub Total						
C	33/11 KV S/S : Transformer capacity enhancement						
1		Nos.				-	
2		Nos.				-	
3		Nos.				-	
	Sub Total					-	
D	Renovation & Modernisation of 33/11 kV SS						
1		Nos.		-	-	-	
2		Nos.				-	
3		Nos.				-	
	Sub Total			-		-	
E	New 33 KV new feeders/Bifurcation of feeders:						
1	132 KV S/S Khark bura to 33 KV S/S Uchana Kl.	Kms	-				
2		Kms					
3		Kms					
	Sub Total						
F	33 KV feeders Reconductoring/Augmentation						
1		Kms			-		
2		Kms				-	
3		Kms					
	Sub Total		0	-		0.00	
G	33 kV Line Bay Extension at EHV station						
1		Nos				-	
2		Nos				-	
3		Nos					
	Sub Total		0	0		0	
H	11 kV Line : New Feeder/ Feeder Bifurcation						
1	HT Line (Rly road & Barwala road)	Kms	39.820	1.81	6.70	12.14	
2		Kms				-	
3		Kms				-	
	Sub Total		39.820	1.81		12.14	
I	11 kV Line : Augmentation/Reconductoring						
1		Kms					
2		Kms					
3		Kms					
	Sub Total						
J	Arial Bunched Cable						
i)	HT						
		Kms					

		Kms					
		Kms					
	Sub Total		0				
ii) LT							
	Size of Cable (3Cx120 +1x70 Sqmm)	Kms					
		Kms					
		Kms					
	Total						
	Sub Total						
K UG Cable							
i) HT							
		Kms					
		Kms					
		Kms					
	Sub Total		0				
ii) LT							
		Kms					
		Kms					
		Kms					
	Sub Total		0				
	Total		0				
L 11 KV Bay Extension							
		Kms					
		Kms					
		Kms					
	Sub Total		0				
M Installation of Distribution Transformer							
	100 KVA Distt T/F (17 No)	Nos.					
	25 KVA = 14 No.	Nos.	14.00				
	63 KVA = 30 No.	Nos.	30.00				
	100 KVA= 39 No.	Nos.	39.00				
	200 KVA = 8 No.	Nos.	8.00				
	250 KVA = 2 No.	Nos.	2.00				
	315 KVA = 37No.	Nos.	37.00				
	500 KVA =	Nos.	0.00				
	630 KVA =	Nos.	0.00				
	Sub Total		130.00				
N Capacity enhancement of LT sub-station							
		Nos.					
		Nos.					
		Nos.					
	Sub Total						
O LT Line : New Feeder/ Feeder Bifurcation							
	LT Line with 50 mm2	Kms	22.00				
	New LT line with 100 mm2 ACSR	Kms					
		Kms					
	Sub Total		22.00				
P LT Line : Augmentation/Reconductoring							
		Kms					
		Kms					
		Kms					
	Sub Total						
Q Capacitor Bank							
		Nos.					
		Nos.					
		Nos.					
	Sub Total						
R HVDS							
		Nos.					
		Nos.					

		Nos.				
	Sub Total		0			
S	Metering					
i)	Prepaid / smart meters in Govt. establishment	Nos.	48	0.12	5.76	
ii)	AMI, Smart meters in the towns where SCADA being established under R-APDRP.	Nos.		0.125		
iii)	Boundary meters for ring fencing of Non-RAPDRP Towns with population more than 5000	Nos.		1.04		
iv)	AMR for feeders, Distribution transformer and high load consumers	Nos.		0.03		
v)	Consumers for existing un-metered connections, replacement of faulty meters & electro-mechanical meters	Nos.	3660	0.03	109.80	
vi)	Installation of Pillar Box for relocation of meters outside the premises of consumers including associated cables and accessories	Nos.				
	Sub Total		3660		115.56	
T	Provisioning of solar panel					
	Location 2x1(Capacity)	KWe	2	1	2	
	Location 2 /(Capacity)	KWe				
	Location 3 /(Capacity)	KWe				
	Net-Meters	Nos.				
	Sub Total		0	2	2	
U	RMU,Sectionaliser, Auto reclosures, FPI etc.					
i)	33 kV Line : Installation of switchable breaker/switches	Nos.				
ii)	33 kV Line : Installation of commnuicable/non-communicable FPIs (O/C&E/F)	Nos.				
iii)	11 kV Line : Installation of RMUs/Sectionaliser alongwith aux power supply to operate sw/breaker.	Nos.				
iv)	11 kV Line :- Installation of communicable/non communicable FPIs (O/C,E/F)	Nos.				
v)	11 kV Line : Installation of switchable breakers alongwith aux power supply to operate sw/breaker	Nos.				
vi)	Installation of remote operable switches for breaker/switches operation for Distribution Transformer alongwith aux power supply to operate sw/breaker	Nos.				
vii)	Installation of remote operable switches for breaker/switches operation for cap bank alongwith aux power supply to operate sw/breaker .	Nos.				
	Sub Total		0	0	0	
V	Others					
	Others (Distribution transformer R & M)		0			
	Modernisation of districbution T/F		0			
	Sub Total		0			
	Grand Total				529.70	

Note: Unit price and Total Cost are inclusive of all taxes and duties

Detail Project Report

Justification / Details of Proposed Works (Separate Sheet for Each TOWN to be furnished)

A. Details of 33/11 KV Substation : New

Sr No.	Circle	IPDS Town	Total Number of Proposed 33 kV substation	Total Capacity of Proposed 33 kV substation (MVA)	Name of Substation	Unit Cost @Rs 40 lacs/MVA
1	Jind	Uchana	1	10	33 KV S/S Uchana Kl.	400
			0	0		0
			0	0		0
			0	0		0
Sub Total			1	10		400

B.33/11 KV S/S : Additional Transformer

Sr No.	Circle	IPDS Town	Total Number of Additional Power	Total Capacity of Proposed Additional Power Transformer	Name of Substation	Unit Cost @Rs 14 lacs/MVA
			0	0		0
			0	0		0
			0	0		0
			0	0		0
Sub Total			0	0		0

C.33/11 KV S/S : Transformer capacity enhancement

Sr No.	Circle	IPDS Town	Existing capacity of Power	Proposed capacity of Power Transformer (MVA)	Name of Substation	Unit Cost @Rs 14 lacs/MVA
			0	0		0
			0	0		0
			0	0		0
			0	0		0
Sub Total			0	0		0

E.New 33 KV new feeders/Bifurcation of feeders:

Sr No.	Circle	New Feeder/ Bifurcation	EHV Substation (Feeding source)	Proposed Name of the feeder (Conductor Size 150 Sqmm)	Length of Feeder (Km)	Unit Rate @ Rs 9.95 lac/Km
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1	Jind	New feeder	132 KV S/Stn.Khark bura	Khark Bura to Uchana Kl.	4.2	41.79
					0	0
					0	0
Sub Total					4.2	41.79

F. 33 KV feeders Reconductoring/Augmentation

Sr No.	IPDS Town	Augmentation/ Reconductoring	EHV Substation (Feeding Source)	Name of the feeder (Conductor Size 150 Sqmm)	Existing size of conductor	Length of Feeder (Km)	Unit Rate @ 7.55
						0	0
						0	0
						0	0
Sub Total						0	0

G. 11 kV Line : New Feeder/ Feeder Bifurcation

Sr No.	IPDS Town	New Feeder/ Bifurcatoi	EHV Substation (Feeding Source)	Name of the feeder (Conductor Size 100 Sqmm)	Length of Feeder (Km)	Unit Rate @ 6.70 Lac/ Km
1	Uchana	New feeder	33 KV S/S Uchana Kl.	Rly road	2.400	16.080
2	Uchana	New feeder	33 KV S/S Uchana Kl.	Narwana road	2.140	14.338
						0
						0
Sub Total					4.540	30.418

H.11 kV Line : Augmentation/Reconductoring

Sr No.	IPDS Town	Augmentation/ Reconductoring	EHV Substation (Feeding Source)	Name of the feeder (Conductor Size 100 Sqmm)	Existing size of conductor	Length of Feeder (Km)	Unit Rate @ 4.66 lac/Km
1							0
2							0
Sub Total						0.00	0.00

I. Arial Bunched Cable (LT)

Sr No.	IPDS Town	Size of Cable (3Cx120 +1x70 Sqmm)	EHV Substation (Feeding Source)	Name of the feeder	Length of Feeder (Km)	Unit Rate @ Rs 4.93 lac /Km
1	Uchana	3Cx120 +1x70 Sqmm	33 KV S/S Uchana Kl.	Rly road	8.000	39.44
2	Uchana	3Cx120 +1x70 Sqmm	132 KV S/S Julana	Narwana road	6.000	29.58
3						
4						
Sub Total					14.000	69.02

7.11

8.4

-1.29

J.UG Cable

Sr No.	IPDS Town	Size of Cable	EHV Substation (Feeding Source)	Name of the feeder	Length of Feeder (Km)	Unit Rate @ Rs 31.64 Lacs/KM
1						0.000
Sub Total					0	0.000

K. Installation of Distribution Transformer

Sr No.	Circle	Feeding Souce (EHV Substation)	Name of 11 kV Feeder	Proposed 100 KVA DTs (Nos)	Unit Rate for 100 KVA DT @ 2.24 lac/ DT	Proposed 200 kVA DTs (Nos)	Unit Rate for 200
1	Jind	33 KV S/S Uchana Kl.	Rly road	9	20.16	0	0
2	Jind	33 KV S/S Uchana Kl.	Narwana road	8	17.92	0	0
3							
4							0
Sub Total				17	38.08	0	0
Total Cost				38.08			

List of Govt Eshtablishments where Prepaid Meter are to be installed.

Sr No.	IPDS Town	Name of Govt Eshtablishment	Total Nos of Prepaid meter Requirement	Unit rate @ Rs 0.12 Lac / meter
1	Uchana	PUBLIC HEALTH Ucha	8	0.96
2	Uchana	Sect. Nagar Palika	22	2.64
3	Uchana	NAIB TESHILDAR UC	1	0.12

4	Uchana	Sect. Market Committee	5	0.6
5	Uchana	BDP Office	1	0.12
6	Uchana	ATO Office	1	0.12
7	Uchana	CDPO office	1	0.12
8	Uchana	Asst. Food Supply Office	1	0.12
9	Uchana	Police Station	1	0.12
10	Uchana	Eye Hospital	1	0.12
11	Uchana	Railway	2	0.24
12	Uchana	Post office	1	0.12
13	Uchana	Gramin Bank	1	0.12
14	Uchana	DPEP office	1	0.12
15	Uchana	State Bank of Patiala	1	0.12
Sub Total			48	5.76

Provision for Solar Panel

Details of 1 kVe Solar panel to be furnished by Town against Proposed New 33 kV Substation

Unit Cost @ Rs 1 Lac per KVE

Sr. No.	Name of town	Location of Solar Pannel	No.	Rate (In lacs)
1	Uchana	33 KV S/S Uchana K1	1	1.00
2	Uchana	SDO Office Uchana	1	1.00
Sub Total			2	2.00

T. Switching Substation (33 kV and 11 kV)

Sr No	IPDS Town	Name of Substation	Voltage Level (33 kV/ 0.4 kv or 11 kV/0.4 kv)	Unit Rate For 33 kV level	Unit Rate For 11 kV level

1.7775

15 26.6625

Project Benefits:

a. **Reduction in AT&C loss**

Implementation of the project will facilitate to achieve Utility level /Circle level (Project area) AT&C Loss reduction trajectory as per		Jind
Base Year: AT&C Loss for FY 2013-14	%	56.36
FY 15-16	%	50.72
FY 16-17	%	45.65
FY 17-18	%	41.09
FY 18-19	%	36.98
FY 19-20	%	33.28
FY 20-21	%	29.95
FY 21-22	%	26.96

b. **Other intangible benefit shall be as follows:**

- . Accurate & reliable energy accounting on sustainable basis.
- . Better accountability at all level.
- . Improve the reliability of the power supply.
- . 24x7 power supply for consumers in urban area.
- . Reduction of Losses to meet AT&C loss reduction trajectory.
- . Providing electricity access to all urban house hold.
- . Improvement in network planning
- . Improvement in quality of supply like voltage level, PF etc.
- . Prompt and effective solution to the consumer queries / grievances.

Line loss reduction: With strengthening of network, conductor resistance will be reduced, resulting reduction in cu loss.

Ensuring better accounting: With metering of all nodal points, the energy accounting & auditing will be improved, resulting better administrative action:

Better voltage profile: With strenthening of network & improvement in PF, tail end voltage will be imroved & reactive current will be reduced resulting improvement of quality of power & better consumer satisfaction..

Decrease in the DT failure: With addition of DT & enhancement of DT capacity the load on DT will be reduced, resulting decrease in DT failure & improvement in reliability.

Curbing the theft/ pilferage/ and unaccounted usage: With ABC, HVDS, meter pillar boxes & proper consumer metering, theft / piferage & unaccounted usages will be minimised.

Annexure-1

Cost sheet for one KM HT line with 100 mm² ACSR with span length 40 meter.

Sr. No.	Description of material	Unit	Quantity	Rate	Amount
1	PCC pole 11 mtr. Long	No.	28	5350	149800.00
2	PCC pole 9 mtr. Long	No.	0	2100	0.00
2	Top Brackes/Top Hamper	No.	22	76	1672.00
3	11 KV Pin Insulator with GI Pin	No.	75	90	6750.00
4	11 KV Disc Insulator	No.	18	182	3276.00
5	11 KV Disc Fitting	No.	18	133	2394.00
6	ACSR 100 mm ² (Dog.)	Mtr	3060	76.422	233851.32
7	ACSR 80 mm ² (Raccon)	Mtr	0	50.22	0.00
8	ACSR 50 mm ² (Rabbit)	Mtr	0	33.785	0.00
9	PG Clamp off sizes	No.	18	60	1080.00
10	Stay wire 7/8 SWG	Kg.	180	63	11340.00
11	GSL 8 SWG	Kg.	244	59	14396.00
12	V-Shape X-Arms 12.135 Kg.	No.	22	625	13750.00
13	Stay set 8' long complete with X-plate	No.	18	749	13482.00
14	Earthing set with 40mm dia, (6 M)	No.	9	1540	13860.00
15	GI strip 25x6 (mtr.) for earthing	No.	9	675	6075.00
16	GI Nutts & Bolts	Kg.	48	59	2832.00
17	Eye Scre bolts 9"x5/8"	No.	56	29	1624.00
18	Half clamp	No.	56	75	4200.00
19	Full Clamp	No.	36	120	4320.00
20	MS Channel 100x50x6 2200 mm (H-Pole)	No.	6	492	2952.00
21	MS Angle 50x50x6 2400 mm (earthing)	No.	3	537	1611.00
22	MS Channel 100x50x6 1600 mm (earthing)	No.	22	614	13508.00
23	MS Angle 50x50x6 2860 mm (Bresing H-Pole)	No.	6	640	3840.00
24	MS Angle 50x50x6 1400 mm (Balting H-Pole)	No.	6	310	1860.00
25	Barbad wire	Kg.	28	50	1400.00
26	Danger Plate(Enamelled with claimp)	No.	28	66	1848.00
27	Number plate with claimp	No.	25	66	1650.00
28	Phase indicator for H-Pole	Set	4	55	220.00
	Total				513591.32
	15% Total Over Head Charges on cost of material				77038.70
	E/Charges @ 15 % on item no.1				22470.00
	E/Charges @ 10 % on item no.2 to 28				36379.13
	G.Total				649479.15

* Erection and overhead charges are included in the case work got carried out on turnkey basis.

Annexure-2

Cost sheet for one KM HT line augmentation with 100 mm² ACSR with providing additional pole

Sr. No.	Description of material	Unit	Quantity	Rate	Amount
1	PCC pole 11 mtr. Long	No.	0	5350	0.00
2	PCC pole 9 mtr. Long	No.	10	2100	21000.00
2	Top Brackes/Top Hamper	No.	10	76	760.00
3	11 KV Pin Insulator with GI Pin	No.	30	90	2700.00
4	11 KV Disc Insulator	No.	6	182	1092.00
5	11 KV Disc Fitting	No.	0	133	0.00
6	ACSR 100 mm ² (Dog.)	Mtr	3060	76.422	233851.32
7	ACSR 80 mm ² (Raccon)	Mtr	0	50.22	0.00
8	ACSR 50 mm ² (Rabbit)	Mtr	0	33.785	0.00
9	PG Clamp off sizes	No.	18	60	1080.00
10	Stay wire 7/8 SWG	Kg.	6	63	378.00
11	GSL 8 SWG	Kg.	244	59	14396.00
12	V-Shape X-Arms 12.135 Kg.	No.	10	625	6250.00
13	Stay set 8' long complete with X-plate	No.	6	749	4494.00
14	Earthing set with 40mm dia, (6 M)	No.	6	1540	9240.00
15	GI strip 25x6 (mtr.) for earthing	No.	6	675	4050.00
16	GI Nutts & Bolts	Kg.	20	59	1180.00
17	Eye Scre bolts 9"x5/8"	No.	28	29	812.00
18	Half clamp	No.	28	75	2100.00
19	Full Clamp	No.	28	120	3360.00
20	MS Channel 100x50x6 2200 mm (H-Pole)	No.	0	492	0.00
21	MS Angle 50x50x6 2400 mm (earthing)	No.	3	537	1611.00
22	MS Channel 100x50x6 1600 mm (earthing)	No.	6	614	3684.00
23	MS Angle 50x50x6 2860 mm (Bresing H-Pole)	No.	6	640	3840.00
24	MS Angle 50x50x6 1400 mm (Balting H-Pole)	No.	6	310	1860.00
25	Barbad wire	Kg.	28	50	1400.00
26	Danger Plate(Enamelled with claimp)	No.	28	66	1848.00
27	Number plate with claimp	No.	25	66	1650.00
28	Phase indicator for H-Pole	Set	4	55	220.00
	Total				322856.32
	15% Total Over Head Charges on cost of material				48428.45
	E/Charges @ 15 % on item no.1				3150.00
	E/Charges @ 10 % on item no.2 to 28				30185.63
	G.Total				404620.40

* Erection and overhead charges are included in the case work got carried out on turnkey basis.

Annexure-3

Cost sheet for one KM HT line reconductor with providing additional pole

Sr. No.	Description of material	Unit	Quantity	Rate	Amount
1	PCC pole 11 mtr. Long	No.	0	5350	0.00
2	PCC pole 9 mtr. Long	No.	10	2100	21000.00
2	Top Brackes/Top Hamper	No.	10	76	760.00
3	11 KV Pin Insulator with GI Pin	No.	30	90	2700.00
4	11 KV Disc Insulator	No.	6	182	1092.00
5	11 KV Disc Fitting	No.	0	133	0.00
6	ACSR 100 mm2 (Dog.)	Mtr	0	76.422	0.00
7	ACSR 80 mm2 (Raccon)	Mtr	0	50.22	0.00
8	ACSR 50 mm2 (Rabbit)	Mtr	3060	33.785	103382.10
9	PG Clamp off sizes	No.	18	60	1080.00
10	Stay wire 7/8 SWG	Kg.	6	63	378.00
11	GSL 8 SWG	Kg.	244	59	14396.00
12	V-Shape X-Arms 12.135 Kg.	No.	15	625	9375.00
13	Stay set 8' long complee with X-plate	No.	6	749	4494.00
14	Earthing set with 40mm dia, (6 M)	No.	6	1540	9240.00
15	GI strip 25x6 (mtr.) for earthing	No.	6	675	4050.00
16	GI Nutts & Bolts	Kg.	20	59	1180.00
17	Eye Scre bolts 9"x5/8"	No.	28	29	812.00
18	Half clamp	No.	28	75	2100.00
19	Full Clamp	No.	28	120	3360.00
20	MS Channel 100x50x6 2200 mm (H-Pole)	No.	0	492	0.00
21	MS Angle 50x50x6 2400 mm (earthing)	No.	3	537	1611.00
22	MS Channel 100x50x6 1600 mm (earthing)	No.	6	614	3684.00
23	MS Angle 50x50x6 2860 mm (Bresing H-Pole)	No.	6	640	3840.00
24	MS Angle 50x50x6 1400 mm (Balting H-Pole)	No.	6	310	1860.00
25	Barbad wire	Kg.	28	50	1400.00
26	Danger Plate(Enamelled with claimp)	No.	28	66	1848.00
27	Number plate with claimp	No.	25	66	1650.00
28	Phase indicator for H-Pole	Set	4	55	220.00
	Total				195512.10
	15% Total Over Head Charges on cost of material				29326.82
	E/Charges @ 15 % on item no.1				3150.00
	E/Charges @ 10 % on item no.2 to 28				17451.21
	G.Total				245440.13

* Erection and overhead charges are included in the case work got carried out on turnkey basis.

Annexure-4

Cost sheet for one no. 100 KVA Dist. TF on pole mounted substation

Sr. No.	Description of material	Unit	Quantity	Rate	Amount
1	PCC pole 11 mtr. Long	No.	2	5350	10700.00
2	11 KV Pin Insulator with GI Pin	No.	6	90	540.00
3	11 KV Disc Insulator	No.	10	182	1820.00
4	11 KV Disc Fitting	No.	6	133	798.00
5	ACSR 50 mm2 (Rabbit)	Mtr	100	33.785	3378.50
6	PG Clamp off sizes	No.	6	60	360.00
7	Stay wire 7/8 SWG	Kg.	40	63	2520.00
8	GSL 8 SWG	Kg.	10	59	590.00
9	V-Shape X-Arms 12.135 Kg.	No.	0	625	0.00
10	Stay set 8' long complete with X-plate	No.	4	749	2996.00
11	Earthing set with 40mm dia, (6 M)	No.	3	1540	4620.00
12	GI strip 25x6 (mtr.) for earthing	No.	3	675	2025.00
13	GI Nutts & Bolts	Kg.	20	59	1180.00
14	Half clamp	No.	17	75	1275.00
15	Full Clamp	No.	4	120	480.00
16	GO Switch 400 amp.	No.	1	5200	5200.00
17	LA 11 KV	Set	1	7260	7260.00
18	100 KVA Dist. TF	No.	1	116508	116508.00
19	200 KVA TF TF	No.	0	214986	0.00
20	Plate form set (Complete) with J-Bolt	No.	1	3033	3033.00
21	S/C 185 mm2 cable	Mtr.	40	137.239	5489.56
22	S/C 50 mm2 Cable	Mtr.	15	40.619	609.29
23	Biomatlic clamp	No.	7	60	420.00
24	MS Channel 100x50x6 2200 mm (H-Pole)	No.	3	492	1476.00
25	MS Angle 50x50x6 2400 mm (earthing)	No.	1	537	537.00
26	MS Channel 100x50x6 1600 mm (earthing)	No.	2	614	1228.00
27	Danger Plate(Enamelled with claimp)	No.	1	66	66.00
28	Number plate with claimp	No.	1	66	66.00
29	Phase indicator for H-Pole	Set	1	55	55.00
30	LT fuse unit board	No.	1	750	750.00
31	Thimbles off sizes	No.	20	25	500.00
	Total				176480.35
	15% Total Over Head Charges on cost of material				26472.05
	E/Charges @ 15 % on item no.1				1605.00
	E/Charges @ 2 % on item no.18				2330.16
	E/Charges @ 5 % on item no. 21 & 22				304.94
	E/Charges @ 10 % on item 2-17,19-20 & 23-31				4317.35
	G.Total				206887.56

* Erection and overhead charges are included in the case work got carried out on turnkey basis.

Annexure-5

Cost sheet for one no. 200 KVA Dist. TF on pole mounted substation

Sr. No.	Description of material	Unit	Quantity	Rate	Amount
1	PCC pole 11 mtr. Long	No.	2	5350	10700.00
2	11 KV Pin Insulator with GI Pin	No.	6	90	540.00
3	11 KV Disc Insulator	No.	10	182	1820.00
4	11 KV Disc Fitting	No.	6	133	798.00
5	ACSR 50 mm2 (Rabbit)	Mtr	100	33.785	3378.50
6	PG Clamp off sizes	No.	6	60	360.00
7	Stay wire 7/8 SWG	Kg.	40	63	2520.00
8	GSL 8 SWG	Kg.	10	59	590.00
9	V-Shape X-Arms 12.135 Kg.	No.	0	625	0.00
10	Stay set 8' long complete with X-plate	No.	4	749	2996.00
11	Earthing set with 40mm dia, (6 M)	No.	3	1540	4620.00
12	GI strip 25x6 (mtr.) for earthing	No.	3	675	2025.00
13	GI Nutts & Bolts	Kg.	20	59	1180.00
14	Half clamp	No.	17	75	1275.00
15	Full Clamp	No.	4	120	480.00
16	GO Switch 400 amp.	No.	1	5200	5200.00
17	LA 11 KV	Set	1	7260	7260.00
18	100 KVA Dist. TF	No.	0	116508	0.00
19	200 KVA TF TF	No.	1	214986	214986.00
20	Plate form set (Complete) with J-Bolt	No.	1	3033	3033.00
21	S/C 185 mm2 cable	Mtr.	40	137.239	5489.56
22	S/C 50 mm2 Cable	Mtr.	15	40.619	609.29
23	Biomatlic clamp	No.	7	60	420.00
24	MS Channel 100x50x6 2200 mm (H-Pole)	No.	3	492	1476.00
25	MS Angle 50x50x6 2400 mm (earthing)	No.	1	537	537.00
26	MS Channel 100x50x6 1600 mm (earthing)	No.	2	614	1228.00
30	Danger Plate(Enamelled with claimp)	No.	1	66	66.00
31	Number plate with claimp	No.	1	66	66.00
32	Phase indicator for H-Pole	Set	1	55	55.00
33	LT fuse unit board	No.	1	750	750.00
34	Thimbles off sizes	No.	20	25	500.00
	Total				274958.35
	15% Total Over Head Charges on cost of material				41243.75
	E/Charges @ 15 % on item no.1				1605.00
	E/Charges @ 2 % on item no.18				0.00
	E/Charges @ 5 % on item no. 21 & 22				304.94
	E/Charges @ 10 % on item 2-17,19-20 & 23-31				25815.95
	G.Total				317807.10

* Erection and overhead charges are included in the case work got carried out on turnkey basis.

Annexure-6

Cost sheet for one KM LT line with AB Cable/Armoured Single core cable.

Sr. No.	Description of material	Unit	Quantity	Rate	Amount
1	PCC pole 9 mtr. Long	No.	25	2100	52500.00
2	LT Armoured cable 3.5 core for 95 mm ²	Mtr	1110	243.952	270786.72
3	Eye Hook	No.	560	50	28000.00
4	Deand end clamp assembly with eye hook	No.	80	182	14560.00
5	Stay set 8' long complete with X-plate	No.	10	749	7490.00
6	Stay wire 7/8 SWG	Kg.	100	63	6300.00
7	Earthing set with 40mm dia, (6 M)	No.	5	1540	7700.00
8	GI strip 25x6 (mtr.) for earthing	No.	5	675	3375.00
9	Half claimp.	No.	25	75	1875.00
10	Full Clamp Assembly (alongwith nuts, bolt and washers) for stay	No.	25	120	3000.00
11	Guy Insulators	No.	25	492	12300.00
12	MS Channel 75x50x6 300 mm (3.420 Kg)	No.	25	176	4400.00
13	Number plate with claimp	No.	25	66	1650.00
14	Junction box	No.	4	5000	20000.00
	Total				433936.72
	15% Total Over Head Charges on cost of material				65090.51
	E/Charges @ 15 % on item no.1				7875.00
	E/Charges @ 5 % on item no. 2.				13539.34
	E/Charges @ 10 % on item 3 to 14				11065.00
	G.Total				531506.56

* Erection and overhead charges are included in the case work got carried out on turnkey basis.

110650.00

Annexure-7

Cost sheet for one KM LT line reconductor with providing additional pole

Sr. No.	Description of material	Unit	Quantity	Rate	Amount
1	PCC pole 11 mtr. Long	No.	0	5350	0.00
2	PCC pole 9 mtr. Long	No.	10	2100	21000.00
3	ACSR 50 mm ² (Rabbit)	Mtr	4080	33.785	137842.80
4	Stay wire 7/8 SWG	Kg.	60	63	3780.00
6	Stay set 8' long complete with X-plate	No.	6	749	4494.00
7	GI Nutts & Bolts	Kg.	50	59	2950.00
8	Half clamp	No.	10	75	750.00
9	Full Clamp	No.	6	120	720.00
10	MS Channel 75x50x6 300 mm (3.420 Kg)	No.	10	176	1760.00
11	LT Insulator	No.	40	12	480.00
12	D-Strap	No.	40	66	2640.00
13	Danger Plate(Enamelled with claiamp)	No.	28	66	1848.00
14	Number plate with claiamp	No.	25	66	1650.00
15	Phase indicator for H-Pole	Set	4	55	220.00
	Total				180134.80
15% Total Over Head Charges on cost of material					27020.22
E/Charges @ 15 % on item no.2					3150.00
E/Charges @ 10 % on item no.3 to 15					15913.48
G.Total					226218.50

* Erection and overhead charges are included in the case work got carried out on turnkey basis.

159134.80

Annexure-8

Cost sheet for repair & mtc. of one no. TF on pole mounted substation

Sr. No.	Description of material	Unit	Quantity	Rate	Amount
1	Fancing of Dist TF	Mtr	1	5000	5000.00
2	Earthing set with 40mm dia, (6 M)	No.	3	1540	4620.00
3	GI strip 25x6 (mtr,) for earthing	No.	3	675	2025.00
4	GI Nutts & Bolts	Kg.	5	59	295.00
5	Half clamp	No.	2	75	150.00
6	Full Clamp	No.	2	120	240.00
7	11 KV GO Switch	No.	1	5200	5200.00
8	Number plate with claimp	No.	1	66	66.00
9	Phase indicator for H-Pole	Set	1	55	55.00
	Total				17651.00
15% Total Over Head Charges on cost of material					2647.65
E/Charges @ 10 % on item 2-17,19-20 & 23-34					1765.10
G.Total					20298.65

* Erection and overhead charges are included in the case work got carried out on turnkey basis.

Annexure-9

Cost sheet for repair & mtc. of one number boundary metering

Sr. No.	Description of material	Unit	Quantity	Rate	Amount
1	Cubical box	No.	1	60000	60000.00
2	HT feeder meter (RS-485)	No.	1	3030	3030.00
3	PCC Pole 11 Mtr. Long	No.	4	5350	21400.00
4	Stay wire	Kg.	40	63	2520.00
5	Stay set 8' long complete with X-plate	No.	4	749	2996.00
6	Earthing set with 40mm dia, (6 M)	No.	6	1540	9240.00
7	GI strip 25x6 (mtr.) for earthing	No.	6	675	4050.00
8	GI Nutts & Bolts	Kg.	20	59	1180.00
9	Half clamp	No.	34	75	2550.00
10	Full Clamp	No.	8	120	960.00
11	GO Switch 400 amp.	No.	2	5200	10400.00
12	LA 11 KV	No.	2	7260	14520.00
13	HT U/G 3x300 mm XLPE cable	Mtr.	40	966.888	38675.52
14	Cable boxes I/D 300 mm ²	No.	2	1250	2500.00
15	Cable boxes O/D 300 mm ²	No.	2	1250	2500.00
16	11 KV GO Switch	No.	2	5200	10400.00
17	MS Channel 100x50x6 2200 mm (H-Pole)	No.	6	609	3654.00
18	MS Angle 50x50x6 2400 mm (Earthing)	No.	2	537	1074.00
19	MS Angle 50x50x6 2400 mm (Belting)	No.	4	492	1968.00
20	MS Angle 50x50x6 2860 mm (Bracing)	No.	4	640	2560.00
21	Number plate with clamp	No.	2	66	132.00
22	Foundation for cubical boxes with fancying	No.	1	15000	15000.00
	Total				211309.52
	15% Total Over Head Charges on cost of material				31696.43
	E/Charges @ 15 % on item no.3				3210.00
	E/Charges @ 2 % on item no.13				773.51
	E/Charges @ 10 % on item 1-2, 4-12 & 14-22				15123.40
	G.Total				262112.86

* Erection and overhead charges are included in the case work got carried out on turnkey basis.