

**OUTLAY AT A GLANCE (17-18)(OCP+SCSP+NL)**

SECTOR :

POWER

DEPARTMENT :

(Rs in Lakhs)

Annual Plan 2015-16 Actual Expenditure	:	5167.07
Annual Plan 2016-17 Approved Outlay	:	9489.94
Annual Plan 2016-17 Revised Outlay	:	9349.94
<b>Annual Plan 2017-18 Proposed outlay</b>	:	<b>21950.00</b>

Sl.No	Name of the Scheme	Annual Plan 2015-16	Annual Plan 2016-17		Annual Plan 2017-18	
		Actual Expdr.	Approved Outlay	Revised Outlay	Proposed outlay	Of which Capital Content
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Erection / Establishment /Upgradation / Providing of 230KV and 110 KV Primary Main Sub-stations and EHT lines in the UT of Puducherry.	1639.45	1949.90	2039.10	3144.13	1540.01
			(33.00)	(16.49)	( 33.00 )	
2	Conversion of HT over head lines into UG cables, Modernisation and Augmentation of existing 11 KV RMS system and Rationalisation and Improvement of distribution in urban areas.	516.77	570.56	554.99	999.12	726.13
3	System improvement for reduction of transmission and distribution losses.	1173.80	656.02	670.52	1656.04	1425.26
4	Extension and Development of power supply to all categories of consumers and Street Lights.	1223.42	1179.95	1178.81	1954.01	845.50
			(20.00)	(6.62)	( 20.00 )	
5	Modernisation of billing methods and development and 'E' Governance initiatives and improvement of communication methods of the Electricity Department Puducherry.	31.94	62.20	59.22	68.14	55.50
6	Establishment of computer based system monitoring centre at Pondicherry	337.85	402.50	247.92	513.60	405.50
7	Research and development setting up of standards laboratory.	105.60	155.61	148.43	209.22	20.70
			(47.00)	(36.89)	( 47.00 )	
8	Formation of electrical inspectorate and licensing board/ Regulatory Commission Liaison Cell, for Pondicherry.	0.10	15.00	0.05	100.00	25.00
9	Rural electrification	40.74	50.00	47.70	114.20	114.20

							(Rs in Lakhs)
Sl.No	Name of the Scheme	Annual Plan 2015-16	Annual Plan 2016-17		Annual Plan 2017-18		
		Actual Expdr.	Approved Outlay	Revised Outlay	Proposed Outlay	Of which Capital Content	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	
10	Human resources development	6.63	18.00	18.00	25.00	25.00	
11	Providing meters for all consumers under 100% metering programme.	90.78	229.20	183.20	310.49	302.00	
12	Erection / Establishment /Upgradation / Providing of 230KV and 110 KV Primary Main Sub-stations and EHT lines in the UT of Puducherry. <b>(NL-State share)</b>	0.00	0.00	1.00	0.00	0.00	
13	Modernisation of billing methods and development and 'E' Governance initiatives and improvement of communication methods of the Electricity Department Puducherry. <b>(NL-State share)</b>	0.00	1.00	1.00	0.00	0.00	
14	Building up of infra structure facilities in the Electricity Department <b>(NL-State share)</b>	0.00	0.00	0.00	350.00	350.00	
15	Renovation and Upgradation of Protection & Control system of Grid Sub Stations in Puducherry( <b>Grant from POSOCO</b> )	0.00	0.00	0.00	106.00	106.00	
16	<b>Negotiated Loan Component</b>						
i)	Erection / Establishment /Upgradation / Providing of 230KV and 110 KV Primary Main Sub-stations and EHT lines in the UT of Puducherry. <b>(NL)</b>	0.00	1750.00	1750.00	0.00	0.00	
ii)	Modernisation of billing methods and development and 'E' Governance initiatives and improvement of communication methods of the Electricity Department Puducherry. <b>(NL)</b>	0.00	2450.00	2450.00	0.00	0.00	
iii)	Building up of infra structure facilities in the Electricity Department <b>(NL)</b>	0.00	0.00	0.00	11450.00	11450.00	
17	Renovation and Upgradation of Protection & Control system of Grid Sub Stations in Puducherry( <b>Grant from POSOCO</b> )	0.00	0.00	0.00	950.00	950.00	
<b>TOTAL</b>		<b>5167.07</b>	<b>9489.94</b>	<b>9349.94</b>	<b>21950.00</b>	<b>18341.00</b>	
			<b>(100.00)</b>	<b>(60.00)</b>	<b>(100.00)</b>		

NB: Figures in bracket shows Building component.

**Annexure - I(a)****OUTLAY AT A GLANCE 17-18 (SCSP)**

<b>SECTOR :</b>	POWER
<b>DEPARTMENT :</b>	(Rs in Lakhs)
Annual Plan 2015-16 Actual Expenditure	: 156.62
Annual Plan 2016-17 Approved Outlay	: 400.00
Annual Plan 2016-17 Revised Outlay	: 400.00
<b>Annual Plan 2017-18 Proposed outlay</b>	<b>: 282.00</b>

Sl. No	Name of the Scheme	Annual Plan 2015-16	Annual Plan 2016-17		Annual Plan 2017-18	
		Actual Expdr.	Approved Outlay	Revised Outlay	Proposed Outlay	Of which Capital Content
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Erection / Establishment /Upgradation / Providing of 230KV and 110 KV Primary Main Sub-stations and EHT lines in the UT of Puducherry.	100.00	300.00	310.05	100.00	100.00
2	System improvement for reduction of transmission and distribution losses.	43.54	52.50	42.00	110.00	110.00
3	Extension and Development of power supply to all categories of consumers and Street Lights.	2.71	2.50	3.59	8.00	8.00
4	Rural electrification	10.37	30.00	27.70	47.00	47.00
5	Providing meters for all consumers under 100% metering programme.	0.00	15.00	16.66	17.00	17.00
<b>TOTAL</b>		<b>156.62</b>	<b>400.00</b>	<b>400.00</b>	<b>282.00</b>	<b>282.00</b>

**PROFORMA - I****OUTLAY AT A GLANCE(17-18)****SECTOR : Energy**

ENERGY

**DEPARTMENT :**

(Rs in Lakhs)

Annual Plan 2015 -16 Actual Expenditure	:	59.99
Annual Plan 2016-17 Approved Outlay	:	61.26
Annual Plan 2016-17 Revised Outlay	:	66.26
<b>Annual Plan 2017-18 Proposed Outlay</b>	:	<b>61.26</b>

Sl. No	Name of the Scheme	Annual Plan 2015-16	Annual Plan 2016-17		Annual Plan 2017-18	
		Actual Expr.	Approved Outlay	Revised Outlay	Proposed Outlay	Of which Capital Content
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Development of experimental Non-Conventional Sources of Energy	59.99	61.26	66.26	61.26	61.26
<b>TOTAL</b>		<b>59.99</b>	<b>61.26</b>	<b>66.26</b>	<b>61.26</b>	<b>61.26</b>

**PROFORMA-II (1)**

Scheme Number : 1    Implementing Department : Electricity  
Sector : Power

1. Name of the scheme : Erection / Establishment /Up gradation / Providing of 230KV and 110 KV Primary Main Sub-stations and EHT lines in the UT of Puducherry.

2. Objective of the scheme : To establish new Sub Stations, Augmentation of the existing Sub Stations and erection of its allied 230 / 110KV lines to provide reliable power supply in the UT of Puducherry.

3. **Actual physical achievements made in the Annual Plan 2015-16:**

• **Establishment of new 230 / 110 KV Auto Sub Station at Karaikal.**

Agreement has been signed with M/s. Power Grid Corporation of India Ltd., 10% of estimated cost i.e., Rs. 3.03 Crores has been paid for preliminary commencement of works. Work is awarded to M/s Blue Star Limited, Mumbai. Civil works commenced and leveling of 110 KV yard completed and leveling of 230 KV yard has also been taken up and completed.

• **Erection of 1x16 MVA Power Transformer at 110 KV, Vengata Nagar Sub Station.**

In order to settle the power crisis at Muthialpet and adjoining areas and to ease the 22 KV load of the 110/11-22 KV Marapalam Sub-Station , tender for erection of 16MVA Power Transformer was finalized and work order has been issued to M/s Grenel Power Private Limited, Chennai for erection of a 110/22 KV, 16 MVA Power Transformer with associated bay and panel works at 110 KV Vengata Nagar Sub Station.

• **Establishment of 110/22 KV Sub Station in the premises of 230/110 KV Auto Sub Station at Thondamanatham.**

20 % works completed.

• **Renovation and Modernisation of 110/22 KV Villianur Sub Station.**

85% of works completed.

Phase I (LV 04 associated bays & 110 KV Main Bus area) Renovation & Modernisation work completed and commissioned on 20-04-2015

- **Stringing of 2<sup>nd</sup> circuit of 110 KV Bahour – Eripakkam feeder.**

First phase of works completed from tower location No. 1 to 21.

- **Strengthening of 110 KV Villianur - Bahour Line.**

The first phase of works for 6.5 Kms out of 12.35 Kms has already been completed and lines energized. The second phase of works are in progress and 80% of works completed.

#### **4. Actual Physical achievements for the Annual Plan 16-17:**

**(i) Establishment of new 230 / 110 KV Auto Sub Station at Karaikal.**

- Major equipments i.e., Circuit Breakers, Isolators, Capacitive Voltage Transformer, Lattice structure etc., supplied and received at site.
- Supply orders placed for Power Transformers, pipe structures, Current Transformers, control & Relay panels etc.
- Sanction of the Government has been obtained for availing loan from M/s REC for an amount of Rs.43.35 crores vide G.O. Ms. No. 05, dated: 07-02-2017 and an amount of Rs. 25.50 crores has been deposited with M/s PGCIL .

**(ii) Erection of 1x16 MVA Power Transformer at 110 KV, Vengata Nagar Sub Station.**

- 100% work completed.
- The 110/22 KV , 16 MVA, Power Transformer was energized on 01-02-2017.

**(iii) Establishment of 110/22 KV Sub Station in the premises of 230/110 KV Auto Sub Station at Thondamanatham.**

- 20% of works completed.

Works commenced at site, award of work has been issued to M/s Andrew Yule & Co Ltd, Chennai for Power Transformer package by M/s Power Grid Corporation of India Limited.

**Major equipments received at site:-**

145 KV Circuit Breaker, 33 KV Vacuum Circuit Breaker, 145 KV & 36 KV Isolators, 98 KV Lightning Arrestor, 18 KV Lightning Arrestor, 145 KV & 33 KV Bus Post Insulators, Disc Insulators, pipe structures, 145 KV Current Transformers, 22 KV Current Transformers, 22 KV Voltage Transformers, cables, conductors & other erection hard ware materials. Balance materials like Control & Relay panels, Lattice Structures, hardware etc., received at site.

- **Civil works:**

Equipment foundations: 10/76 nos. completed.

Tower foundations: 8/12 nos. of tower foundations completed.

Power Transformer foundation: Excavation is under progress at site

**Renovation and Modernization of 110/22 KV Villianur Sub Station.**

- 85 % of works completed.
- Balance work is programmed to be carried out only on approval of Shut down/Line clear. Due to certain technical reasons the balance work could not be completed, as this department is not in a position to shift the existing feeder loads to the neighbouring Sub-Station due to loading constraints in the Sub-Station Transformation capacity and link feeder.
- Action is being taken to link the feeder for transfer of load. Once this work is completed the line clear at the Sub-Station shall be issued. It is expected that the work shall be completed within two months once the line clear is issued.

**Stringing of 2<sup>nd</sup> circuit of 110 KV Bahour – Eripakkam feeder.**

- Tenders have been invited for the works of stringing of 2<sup>nd</sup> phase from tower location No.22 to 39.
- Provisional order has been issued to the successful bidder.

**5. Proposed Physical Targets for the Annual Plan 2017-18:**

**ON-GOING WORKS**

- (i) Renovation and Modernisation of 110 KV Villianur Sub Station.
- (ii) Strengthening of 110 KV Villianur - Bahour line.
- (iii) Stringing of 2<sup>nd</sup> circuit of 110 KV Bahour – Eripakkam feeder.

**NEW WORKS**

- (i) Replacement of existing 16 MVA Power Transformers by
  - (a) 2 nos. of 25 MVA Power Transformer at 110/22 KV Thirubhuvanai Sub Station
  - (b) 1 no. of 25MVA Power Transformer in Bahour Sub Station,
  - (c) Provision of 1 no. of new 110/22KV, 25MVA Power Transformer at 110/22KV Villianur Sub Station

- (ii) Renovation and Modernisation of 230 KV Villianur and 230 KV Bahour Auto Sub Stations.
- (iii) Providing of Bay equipments at 230 KV Bahour Auto Sub Station and 110 KV Eripakkam Sub Station.
- (iv) Evacuation of power from the proposed 110/22 KV Thondamanatham SS by erecting 22 KV feeders.
- (v) Extension of II Circuit, Villianur - Bahour line.
- (vi) Strengthening of Sedharapet - Kurumbapet feeder.

**6. Object head-wise breakup :**

(Rs. in lakhs)

Sl. No.	Name of the Department / Sector	Actual Expenditure 2015-16	B.E. 2016-17	R.E 2016-17	Proposed Outlay 2017-18
(1)	(2)	(3)	(4)	(5)	(6)
1	Electricity Department / Power Sector				
2.	<b>Name of the Scheme :</b> Erection / Establishment /Up gradation / Providing of 230KV and 110 KV Primary Main Sub-stations and EHT lines in the UT of Puducherry.	1539.45	1616.90	1711.30	3011.13

**7. Remarks : Continuing Scheme.**





Scheme Number : 2    Implementing Department : Electricity  
Sector : Power

1. Name of the scheme : Conversion of HT over head lines into UG cables, Modernisation and Augmentation of existing 11 KV RMS system and Rationalisation and Improvement of distribution in urban areas.

2. Objective of the scheme : To meet the rapidly growing demand for Power in and around Pondicherry, Karaikal, Mahe and Yanam with stabilized system parameter and reduced line losses by providing underground cable distribution system and convert existing overhead lines into Under Ground cable system in selected urban areas. To provide additional Power supply through 11 KV feeders to the existing Ring Main system and strengthening the same to meet the load growth in urban areas.

### 3. Actual physical achievements made in the Annual Plan 2015-16:

Sl.No.	Item description	Units	Achievement
1.	HT UG Cable laid	Kms.	2.678
2.	LT UG Cable laid	Kms.	14.992
3.	Conversion of OH service into UG cable system	Nos.	621
4.	Conversion of OH Street lights into UG cable system	Nos.	25
5.	Erection of Switch Gears	Nos.	2

### 4 . Actual Physical achievement for the Annual Plan 2016-17:

Sl.No.	Item	Units	Achievement
1.	Laying of HT UG cables	Kms.	1.212
2.	Laying of LT UG Cables	Kms.	0.76
3.	Conversion of OH service into UG cable system	Nos.	135
4.	Conversion of OH Street lights into UG cable system	Nos.	14
5.	Erection of Switch Gears	Nos.	22

**5. Proposed Physical Targets for the Annual Plan 2017-18:**

SI.No.	Item	Units	Proposed Target
1.	Laying of HT cables	Kms	2
2.	Laying of LT cables	Kms	15
3.	Conversion of OH service into UG cable system	Nos	600
4.	Conversion of OH Street lights into UG cable system	Nos	50
5.	Erection of 11 KV distribution transformers	Nos.	5
6.	Enhancement of 11 KV distribution transformers	Nos.	5
7.	Erection of Switch Gears	Nos.	10
8.	Erection of pillar box	Nos	25

**6. Object head-wise breakup :***(Rs. in lakh)*

Sl. No.	Name of the Department / Sector	Actual Expenditure 2015-16	B.E. 2016-17	R.E 2016-17	Proposed Outlay 2017-18
(1)	(2)	(3)	(4)	(5)	(6)
1	Electricity Department / Power Sector				
2.	<b>Name of the Scheme :</b> Conversion of HT over head lines into UG cables, Modernisation and Augmentation of existing 11 KV RMS system and Rationalisation and Improvement of distribution in urban areas	516.77	570.56	554.99	999.12

**7. Remarks : Continuing Scheme.**

**PROFORMA-II (3)**

Scheme Number : 3  
Sector : Power

Implementing Department : Electricity

1. Name of the scheme : System improvement for reduction of transmission and distribution losses

2. Objective of the scheme :
1. To provide link line with the existing HT feeders and connect up with the existing and new EHV sub-stations to feed additional loads and to reduce the route length of the existing feeders in order to bring down the line losses.
  2. To provide additional HT feeders and strengthening the existing HT feeders to feed the additional loads to bring down the voltage regulation within statutory limit and to reduce line losses in the system.

**3. Actual physical achievements made in the Annual Plan 2015-16:**

Sl.No	Item	Units	Achievement
1.	Transformers energized	Nos.	80
2.	Transformers enhanced	Nos.	22
3.	HT Line laid	Kms.	13.274
4.	LT Line laid	Kms.	26.394
5.	HT Line Strengthened	Kms.	1.32
6.	LT Line Strengthened	Kms.	29.042
7.	HT U.G Cable laid	Kms.	0.54
8.	LT U.G Cable laid	Kms.	1.517

**4. Actual physical achievements made in the Annual Plan 2016-17 :**

Sl.No.	Item	Units	Achievement
1.	Transformers energised	Nos	34
2.	Transformers enhanced	Nos	14
3.	HT Lines energized	Kms	9.674
4.	LT Lines energized	Kms	11.63
5.	HT Lines strengthened	Kms	2.594
6.	LT Lines strengthened	Kms	17.505
7.	HT U.G Cable laid	Kms	1.547
8.	LT U.G Cable laid	Kms	0.664

**5. Proposed Physical Targets for the Annual Plan 2017-18:**

Sl.No	Item	Units	Proposed Target
1.	Transformers to be energized	Nos	60
2.	Transformers to be enhanced	Nos	25
3.	HT Lines to be erected	Kms	10
4.	LT Lines to be erected	Kms	50
5.	HT Lines to be strengthened	Kms	1
6.	LT Lines to be strengthened	Kms	20
7.	HT U.G Cable laid	Kms	1
8.	LT U.G Cable laid	Kms	2

**6. Object head-wise breakup :***(Rs. in lakh)*

Sl. No	Name of the Department / Sector	Actual Expenditure 2015-16	B.E. 2016-17	R.E 2016-17	Proposed Outlay 2017-18
(1)	(2)	(3)	(4)	(5)	(6)
1	Electricity Department / Power Sector				
2.	<b>Name of the Scheme :</b> System improvement for reduction of transmission and distribution losses	1130.26	603.52	628.52	1546.04

**7. Remarks : Continuing Scheme.**

**PROFORMA-II (4)**

Scheme Number : 4  
Sector : Power

Implementing Department : Electricity

1. Name of the scheme : Extension and Development of power supply to all categories of consumers and Street Lights.

2. Objective of the scheme : 1. To provide adequate and comprehensive infrastructure facilities for all categories of consumers, to make use of ground water potential for agricultural purposes, to provide better living conditions to the house/colonies and strengthen the existing distribution system for more stable conditions and to provide additional street lights to ensure better living conditions of the public.

2. To improve the distribution system so as to ensure reliable power supply.

**3. Actual physical achievements made in the Annual Plan 2015-16:**

Sl.No	Item	Units	Achievement
1.	Transformer energized	Nos	13
2.	Transformer enhanced	Nos	4
3.	HT Line laid	Kms	3.237
4.	LT Line laid	Kms	35.83
5.	LT Line Strengthened	Kms	0.49
6.	HT Industries energized	Nos	20
7.	LT Industries energized	Nos	62
8.	Domestic Services effected	Nos	11253
9.	Commercial Services effected	Nos	1674
10.	Agriculture Services effected	Nos	34
11.	Street lights	Nos	305
12.	HT UG Cable laid	Kms	0.351
13.	LT UG Cable laid	Kms	0.585

**4. Actual physical achievements for the Annual Plan 2016-17:**

Sl.No	Item	Units	Achievement
1.	Transformers energized	Nos	13
2.	Transformers enhanced	Nos	8
3.	HT Line laid	Kms	1.945
4.	LT Line laid	Kms	29.23
5.	LT Line Strengthened	Kms	2.5
6.	HT Industries energized	Nos	20
7.	LT Industries energized	Nos	55
8.	Domestic Services effected	Nos	12996
9.	Commercial Services effected	Nos	1860
10.	Agriculture Services effected	Nos	42
11.	Street lights	Nos	178
12.	HT UG Cable laid	Kms	0.15

**5. Proposed Physical Targets for the Annual Plan 2017-18:**

Sl.No	Item	Units	Proposed Target
1.	Transformers energized	Nos	15
2.	Transformers enhanced	Nos	10
3.	HT Line laid	Kms	3
4.	LT Line laid	Kms	20
5.	LT Line Strengthened	Kms	10
6.	HT Industries energized	Nos	30
7.	LT Industries energized	Nos	80
8.	Domestic Services effected	Nos	15000
9.	Commercial Services effected	Nos	2000
10.	Agriculture Services effected	Nos	45
11.	One Hut One Bulb	Nos	10
11.	Street lights	Nos	100

**6. Object head-wise breakup :****(Rs. in lakh)**

Sl. No	Name of the Department / Sector	Actual Expenditure 2015-16	B.E. 2016-17	R.E 2016-17	Proposed Outlay 2017-18
(1)	(2)	(3)	(4)	(5)	(6)
1	Electricity Department / Power Sector				
2.	<b>Name of the Scheme :</b> Extension and Development of power supply to all categories of consumers and Street Lights	1220.71	1157.45	1168.61	1926.01

**7. Remarks: Continuing Scheme.**



**PROFORMA-II (5)**

Scheme Number : 5  
Sector : Power

Implementing Department : Electricity

1. Name of the scheme : Modernization of billing methods and development and 'E' Governance initiatives and improvement of communication methods of the Electricity Department Puducherry.

2. Objective of the scheme : To modernize issue of bills for current consumption charges, payments and other commercial and technical activities by introducing Computers and to establish effective communication network among various sub-stations and O&M sections for minimizing power interruption period.

**3. Actual physical achievements made in the Annual Plan 2015-16:**

- Procurement of Data processing forms and consumables
- Finalization of Annual maintenance contract for computer systems and UPS units.
- Implementation of Part-A(IT) of R-APDRP Scheme in the UT of Puducherry.
- Purchase of 154 nos of UPS batteries.

**4. Actual Physical achievements for the Annual Plan 2016-17:**

- Replacement of Personal computers .
- Procurement of Data processing forms and consumables.
- Finalization of Annual maintenance contract for computer systems,peripherals and UPS units.
- Implementation of Part-A of R-APDRP Scheme in the UT of Puducherry.
- Setting up of Network Band Width Service Provider (NBSP) for setting up the communication back bone under Part-A of R-APDRP Scheme.
- Customization of Core software modules under part A (IT) of R-APDRP scheme.
- Installation of metering arrangement for distribution transformers under part A (IT) of R-APDRP scheme.
- Activation of All India Toll free number 1912 and 18004251912.
- Payment of Spectrum Charges
- Purchase of VHF batteries(12 volts)

**5. Proposed Physical Targets for the Annual Plan 2017-18:**

- Upgrading of existing Network and Computer systems.
- Introduction of E-Governance as per Government of India guidelines.
- Development of Internet web pages for the Department.
- Development of Intra Departmental Intranet pages.
- Establishment of Customer Care cum Call Centre for collection of application forms for various services and attending Fuse off call complaints round the Clock.
- Purchase of Uninterrupted Power supply units for Computers.
- Purchase of batteries (12 volts) for UPS units.
- Royalty and license fees
- Purchase of Lead acid Batteries(88Ahr,12Volts)
- Purchase of RF Cable with connector and slim joint antenna
- Purchase of 860VA Inverter
- Other Spares

**Facility to be availed by the consumers of electricity:**

- Automatic entry and transfer of meter reading data through meter reading instrument (MRI) and scheduling of billing Decentralized processing, printing of bills and notices
- 24x7 online internet bill payment and establishment of anywhere bill payment counters.
- Online access of power consumption, bill dues, bill payments, service conditions and meter working conditions.
- Online alerts (email & SMS) upon generation of bills and reminder for payment of dues.
- Registration and monitoring of complaints and grievances through 24x7 call centre operation.

**6. Object head-wise breakup :****(Rs. in lakh)**

Sl. No	Name of the Department / Sector	Actual Expenditure 2015-16	B.E. 2016-17	R.E 2016-17	Proposed Outlay 2017-18
(1)	(2)	(3)	(4)	(5)	(6)
1	Electricity Department / Power Sector				
2.	<b><u>Name of the Scheme :</u></b> Modernisation of billing methods and development and 'E' Governance initiatives and improvement of communication methods of the Electricity Department Puducherry.	31.94	62.20	59.22	68.14

**7. Remarks: Continuing Scheme.**

**PROFORMA-II (5) (NL)**

Scheme Number : 5  
Sector : Power

Implementing Department : Electricity

1. Name of the scheme : Modernisation of billing methods and development and 'E' Governance initiatives and improvement of communication methods of the Electricity Department Puducherry.(Negotiated Loan)
2. Objective of the scheme : To modernize issue of bills for current consumption charges, payments and other commercial and technical activities by introducing computers and to establish effective communication network among various sub-stations and O&M sections for minimizing power interruption period.

**(i) Implementation of SCADA / DMS System in Puducherry Town Under Part-A R-APDRP**

**(ii) Strengthening of Power Distribution System in Puducherry Town by**

- Setting up of new Sub Stations and Augmentation of capacity of existing Sub Stations.
- Renovation & Modernization of the existing Sub Stations.
- Provision/Replacement of Capacitor banks in Sub Stations.
- Establishment of new Distribution feeders and strengthening of the existing feeders.
- Erection of new Distribution Transformers and enhancing the capacity of the existing Distribution Transformers.
- Earthing of Distribution Transformers, etc.,

**3.Actual physical achievements made in the Annual Plan 2015-16.**

**PART-A of R-APDRP:**

- Letter of Award (LOA) placed with M/s Dongfong Electronics Co Ltd., for implementation of Supervisory and Data Acquisition System / Distribution Management System (SCADA / DMS) for Puducherry Town under part-A of R-APDRP scheme.

**PART-B of R-APDRP:****11 KV Cable works.**

- Laying of 11 KV, 3x400 sq.mm XLPE UG cable from Vengata Nagar Sub Station to OH cut point near Sudandhira Ponvizha Nagar.
- Laying of 11KV, 3x400 Sq.mm XLPE UG cable from 110/11 KV Vengata Nagar Sub Station to the 11 KV GRT yard at Vallalar Salai.
- Erection of 5 Panel SF6 RMU at Needaraja Yard.
- Replacement of 11 nos. of existing 22 KV DTs with 11 KV, 315 KVA DTs in Vengata Nagar & Saram O&M area.
- Supply, Erection, Testing and Commissioning of one no. of 630 KVA, 11/0.433 KV Distribution Transformer at Needaraja Yard.
- Provision of 22 KV/0.433 KV, 315 KVA Distribution Transformers to overcome overloading of existing 22KV Distribution Transformers.
  - 25 nos. of 22 KV/0.433 KV , 315 KVA Distribution Transformers were provided at various O&M areas of Puducherry Town under R-APDRP Part-B scheme as below:
    - Ariyankuppam O&M : 4 nos.
    - Murungapakkam O&M : 6 nos.
    - Ashok Nagar & Lawspet O&M : 6 nos.
    - Mudaliarpet O&M : 4 nos.
    - Town west O&M : 4 nos.
    - Kalapet O&M : 1 no.

**4.Actual Physical achievements made in the Annual Plan 2016-17**

- Replacement of existing Electromechanical O/C and E/F relays of feeder panels of existing 110/22 Marapalam, Kurumbapet and Kalapet Sub Stations with Numerical Over Current and Earth fault Relays with accessories capable of communicating with RTUs proposed under SCADA/DMS package along with Annunciator panels and AC/DC System.
- Award of work has been issued for provision of 40 nos of new Automated RMUs at 40 locations by replacing the existing old RMUs required for SCADA/DMS system. Erection works have been completed at the following 28 locations and the work is in progress in the other 12 locations.

Sl.no	RMU yard locations.
1.	Distillery SS I
2.	Padmini
3.	Rathna
4.	Veeramamunivar
5.	11 KV Railway RMS yard
6.	Mullah SS-I & 2
7.	South boulevard yard
8.	11 KV Golkonda RMS yard
9.	Botanical yard
10.	11 Easwaran RMS yard
11.	S.V. Patel yard
12.	11 KV Papermill RMS yard
13.	Immaculate
14.	Chest clinic
15.	Laporte yard
16.	11 KV Anandha RMS yard
17.	11 KV Ambala yard
18.	BSNL yard
19.	11 KV cable RMS yard
20.	Bazaar Switch yard
21.	Assembly yard
22.	G.H. yard
23.	Sourcouf yard
24.	PWD yard
25.	Sonampalayam yard
26.	AIR yard
27.	Thirumoolar yard
28.	M.G. Road (Indoor)

16 nos. of 22 KV/0.433 KV, 315 KVA Distribution Transformers were provided in various O&M areas of Puducherry Town under R-APDRP, Part-B scheme as below:

- Gorimedu O&M : 2 nos.
- Boomianpet O&M : 4 nos.
- Villianur O&M : 3 nos.
- Muthirapalayam O&M : 6 nos.
- Ashok Nagar O&M : 1 no.

#### **R-APDRP-PART-A (IT)**

M/s Power Finance Corporation has sanctioned a total loan amount of Rs.15.01 crores under Part A of R-APDRP scheme in the Union Territory of Puducherry. Out of the above amount, an amount of Rs. 4.50 Crores has been availed as first tranche during the year 2012-2013. An amount of Rs.4.50 Crores is proposed to be availed during the year 2017-18.

#### **7. Object head-wise breakup :**

*(Rs. in lakh)*

Sl. No	Name of the Department / Sector	Actual Expenditure 2015-16	B.E. 2016-17	R.E 2016-17	Proposed Outlay 2017-18
(1)	(2)	(3)	(4)	(5)	(6)
1	Electricity Department / Power Sector				
2.	<b>Name of the Scheme :</b> Modernisation of billing methods and development and 'E' Governance initiatives and improvement of communication methods of the Electricity Department Puducherry.(Negotiated Loan)	0.00	2450.00	1650.00	*0.00

\*All the schemes under NL have been merged into a single scheme "Building up of infrastructure facilities in Electricity Department (Negotiated loan)" from the year 2017-18 onwards.

**PROFORMA-II (6)**

Scheme Number : 6  
Sector : Power

Implementing Department : Electricity

1. Name of the scheme : Establishment of Computer based system monitoring centre in Pondicherry.

2. Objective of the scheme : To have control of the 110 KV Sub-stations for data acquisition and Tele-metering and Tele-operation.

3. **Actual physical achievements during Annual Plan 2015-16:**

- ULDC Tariff charges bill payment
- Procurement of 2 nos. of ETL-41 CC set
- Procurement of Multifunction Transducers
- MUX-AMC charges payment
- Payment of RILC renewal charges
- Replacement of RTU & IF panel lock

4. **Actual physical achievements for the Annual Plan 2016-17:**

- ULDC tariff charges payment
- Renewal of RILC charges
- Procurement of RTU 56 modules

**5. Proposed Physical Target for the Annual Plan 2017-18:**

- ULDC tariff bill payment
- Communication equipments maintenance and up gradation works.
- Remote tripping and SCADA/DMS infrastructure work
- Reliable communication system through OPGW cable
- Remote tripping facilities for ADMS scheme
- Providing of new battery bank.
- Maintenance works of System Control Centre.
- Balance payment of the ULDC upgradation project.
- Provision of Video conferencing facility at SCC.
- Annual maintenance charges towards the SCADA systems , Software and UPS.

**6.Object head-wise breakup :***(Rs. in lakh)*

Sl. No.	Name of the Department / Sector	Actual Expenditure 2015-16	B.E. 2016-17	R.E 2016-17	Proposed Outlay 2017-18
(1)	(2)	(3)	(4)	(5)	(6)
1	Electricity Department / Power Sector				
2.	<b><u>Name of the Scheme :</u></b> Establishment of Computer based system monitoring centre in Pondicherry.	337.85	402.50	247.92	513.60

**7. Remarks: Continuing Scheme.**



**PROFORMA-II (7)**

Scheme Number : 7  
Sector : Power

Implementing Department : Electricity

**1. Name of the scheme : Research and Development, setting up of standards lab.**

**2. Objective of the scheme :**

- 1. To set up a standard accredited lab to test the Static Energy Meters as per CEA Metering Regulation 2006, inclusive of building alteration and provision of Air Conditioners.**

- 2. Procurement of Scientific Instruments to test the Sub-station equipments based on the latest technology.**

**3. Actual Physical Achievements In the Annual Plan 2015-16**

- Tested and calibrated Instruments such as Standard Reference Meters and protective testing equipments in various standard laboratories.

**4. Actual Physical Achievements in the Annual Plan 2016-17**

- Tested and calibrated Instruments such as Standard Reference Meters and protective testing equipments in various standard laboratories.
- Procurement of Digital Multimeter, Leakage Clamp meter and Digital Clamp on Meter

**5. Proposed Physical Targets for the Annual Plan 2017-18**

- Testing and calibration of Instruments such as Standard Reference Meters and protective testing equipments in various standard laboratories.
- Procurement of 1 no. of 5KV Diagnostic Insulation Tester and 1 no. of Contact Resistant meter for Protection wing.
- Procurement of Scientific equipment for HTM wing
- Repairing of Common Meter Reading Instruments.
- Procurement of Scientific equipments , tools and plants for LTM & Lab section
- Recalibration of Scientific equipments , tools and plants for LTM & Lab section

**6. Object head-wise breakup:****(Rs. in lakh)**

Sl. No.	Name of the Department / Sector	Actual Expenditure 2015-16	B.E. 2016-17	R.E 2016-17	Proposed Outlay 2017-18
(1)	(2)	(3)	(4)	(5)	(6)
1	Electricity Department / Power Sector				
2.	<b>Name of the Scheme :</b> Research and Development, setting up of standards lab.	105.60	108.61	112.79	162.22

**7. Remarks: Continuing Scheme.**

Scheme Number : 8  
Sector : Power

Implementing Department : Electricity

**PROFORMA-II (8)**

<b>1. Name of the scheme</b>	<b>: Formation of Electrical Inspectorate and licensing board for Pondicherry.</b>
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**2. Objective of the scheme** :

1. Electrical Inspectorate for inspection of the electrical installation in the Union Territory of Pondicherry.
2. Licensing board to issue different grades of supervisory permits and contractor licenses to all qualified persons / firms to enable them to undertake electrical installation / maintenance work in the Union Territory of Pondicherry.

**3. Actual physical achievement during Annual Plan 2015-16:**

- Renewal of 800 nos of different grades of Supervisory permits and contractors licenses and procured Stationery items for Licensing Board.
- Govt of Puducherry issued, The Puducherry Electrical Inspectorate (Appointment of Chief Electrical Inspector and Electrical Inspectors)Rules,2015.

**4. Actual physical achievement for the Annual Plan 2016-17:**

- Renewal of 800 nos of different grades of Wireman Supervisory permits and Contractor Licenses.
- Procurement of Stationery items for smooth functioning of the Licensing Board.
- Government of Puducherry issued Amendment to the Puducherry Electrical Inspectorate (Appointment of Chief Electrical Inspector and Electrical Inspectors) Rules, 2015

**5. Proposed physical Targets for Annual Plan 2017-18:**

- Renewal of existing 800 nos of different grades of Supervisory permits and contractors licenses.
- Constitution of Electrical Inspectorate in the U.T.of Puducherry
- Appointing of Chief Electrical Inspector, Electrical Inspectors & their Complementary Staff
- Re-constitution of Licensing Board
- Issuance of different grades of Supervisory permits & Contractor licenses.

**6.Object head-wise breakup :****(Rs. in lakh)**

Sl. No.	Name of the Department / Sector	Actual Expenditure 2015-16	B.E. 2016-17	R.E 16-17	Proposed Outlay 2017-18
(1)	(2)	(3)	(4)	(5)	(6)
1	Electricity Department / Power Sector				
2.	<b><u>Name of the Scheme :</u></b> Formation of Electrical Inspectorate and licensing board for Pondicherry.	0.10	15.00	0.05	100.00

**7.Remarks: Continuing Scheme.**

**PROFORMA-II (9)**

Scheme Number : 9  
Sector : Power

Implementing Department : Electricity

**1. Name of the scheme : Rural Electrification**

**2. Objective of the scheme :** To electrify the villages and Harijan areas. To strengthen the existing LT distribution system by enhancing the existing transformers capacities and strengthening of the LT lines in rural areas.

**3. Actual physical achievements made in the Annual Plan 2015-16:**

Sl.No	Item	Units	Achievement
1.	Transformers energised	Nos	8
2.	Transformer enhanced	Nos	1
3.	HT lines	Kms	1.75
4.	LT lines	Kms	10.79
5.	Strengthening of LT lines	Kms.	1.767

**4. Actual Physical achievement for the Annual Plan 16-17:**

Sl.No	Item	Units	Achievement
1.	Transformers energised	Nos	1
2.	New HT Lines	Kms.	0.545
3.	New LT lines	Kms	4.11
4.	Strengthening of LT lines	Kms.	1.05

**5. Proposed Physical Targets for the Annual Plan 2017-18:**

Sl.No	Item	Units	Proposed Target
1.	Energisation of Transformers	Nos	25
2.	Enhancement of Transformers	Nos.	15
3.	HT Lines	Kms.	5
4.	LT lines	Kms	15
5.	Strengthening of LT lines	Kms.	3

**6.Object head-wise breakup :****(Rs. in lakh)**

Sl. No.	Name of the Department / Sector	Actual Expenditure 2015-16	B.E. 2016-17	R.E 2016-17	Proposed Outlay 2017-18
(1)	(2)	(3)	(4)	(5)	(6)
1	Electricity Department / Power Sector				
2.	<b><u>Name of the Scheme</u></b> Rural Electrification	30.37	20.00	20.00	67.20

**7. Remarks : Continuing Scheme.**

**PROFORMA-II (10)**

Scheme Number : 10  
Sector : Power

Implementing Department : Electricity

1. Name of the scheme : Human Resources and Development

2. Objective of the scheme : The objective of the scheme is to upgrade the knowledge of the officers/staff in Technical/other important sectors like reforms through agencies like NPTI,PSTI etc.

3. Actual physical achievements made in the Annual Plan 2015-16:

Sl.No	Item	Units	Achievement
1.	Imparting Internal training to Officers	Nos.	73
2.	Imparting Internal training to Staff	Nos.	456
3.	Imparting External training to Officers	Nos.	16
4.	Imparting External training to Staff	Nos.	7

4. Actual physical achievements for the Annual Plan 2016-17:

Sl.No	Item	Units	Achievement
1.	Imparting Internal training to Officers	Nos	206
2.	Imparting Internal training to Staff	Nos	640
3.	Imparting External training to Officers	Nos	13

5. Proposed Physical Targets for the Annual Plan 2017-18:

Sl.No	Item	Units	Proposed Target
1.	Imparting Internal training to Officers	Nos	140
2.	Imparting Internal training to Staff	Nos	300
3.	Imparting External training to Officers	Nos	30
4.	Imparting External training to Staff	Nos	15
5.	Conducting training day for each month	Nos	360
6.	Imparting Safety classes to the technical staff at SS & Distribution	Nos	240
7.	Purchase of Smart TV	Nos	1
8.	Purchase of Audio Visual Equipment and OH Projector	Nos	1
9.	Refurbishing of TTC Conference Hall		

**6. Object head-wise breakup :***(Rs. in lakh)*

Sl. No.	Name of the Department / Sector	Actual Expenditure 2015-16	B.E. 2016-17	R.E 2016-17	Proposed Outlay 2017-18
(1)	(2)	(3)	(4)	(5)	(6)
1	Electricity Department / Power Sector				
2.	<b>Name of the Scheme :</b> Human Resources and Development	6.63	18.00	18.00	25.00

**7. Remarks: Continuing scheme.**



**PROFORMA-II (11)**

Scheme Number : 11  
Sector : Power

Implementing Department : Electricity

1. Name of the scheme : Providing meters for all categories of consumers under 100% metering Programme.

2. Objective of the scheme : The objective of the scheme is to provide meters in the distribution system upto 11 / 22 KV feeders and for all categories of consumers.

**3. Actual physical achievements made in the Annual Plan 2015-16**

- Converted Existing Electromechanical meter by Static meter in the L.T. services.

**4. Actual physical achievements in the Annual Plan 2016-17**

- Converted Existing Electromechanical meter by Static meter in the L.T. services.

**5. Proposed Physical targets for the Annual Plan 2017-18**

- Provision of static meters in existing Electromechanical meter in the L.T. services .
- Replacement of Feeder meters at EHV substations.

**6. Object head-wise breakup :**

, (Rs. in lakh)

Sl. No.	Name of the Department / Sector	Actual Expenditure 2015-16	B.E. 2016-17	R.E 2016-17	Proposed Outlay 2017-18
(1)	(2)	(3)	(4)	(5)	(6)
1	Electricity Department / Power Sector				
2.	<b>Name of the Scheme :</b> Providing meters for all categories of consumers under 100% metering Programme	90.78	214.20	166.54	293.49

**7. Remarks: Continuing Scheme.**

**PROFORMA-II (12) (Negotiated Loan)**

Scheme Number : 12  
Sector : Power

Implementing Department : Electricity

1. Name of the scheme : Building up of Infra structure facilities in Electricity Department

**Proposed Physical targets for the Annual Plan 2017-18:****(i)Erection/Establishment/Upgradation/Providing of 230 and 110 KV Sub-stations and EHT lines in the UT of Puducherry. (EHV)**

- Establishment of 230 KV Auto Sub Station at Karaikal.
- Establishment of 110/22KV Substation inside the premises of 230KV Thondamanatham Auto Substation

**(ii) Modernisation of Billing Methods and Development and Improvement of Communication methods (R-APDRP Part- A (SCADA) & B (System Improvement))****ON-GOING WORKS**

- Procurement of 3 Phase energy meters
- Erection of Wedge Connectors for DP Structures, LT & HT Cut Point location
- Earthing of Distribution Transformers
- Procurement of LT CT Meters
- Procurement and providing of SMC metering Box
- Procurement and erection of Distribution Pillar Box
- Procurement of 22KV, 63 KVA Distribution Transformers
- Provision of Fault passage indicators in 22KV feeders.
- Erection/Provision/Replacement of 22 KV Capacitor banks in 110/22KV Sub Stations at Marapalam, Villianur, Kalapet & Kurumbapet.
- Provision of Automatic Power Factor Correction (APFC) panel

**NEW WORKS**

- Provision of new 110/22 KV Sub Station at Lawspet
- Supply and erection of 11KV RMU and Distribution Transformer package.
- Procurement of 22KV, 630KVA Distribution Transformers
- Provision of Auto Recloser & Sectionalisers on 22 KV network.
- Additional RMU
- Balance 11KV Cable works
- Procurement and provision of additional 11KV, 315 & 630 KVA Distribution Transformers
- Erection of 110/22KV, 25MVA Power Transformer at Kalapet Substation and 31.5MVA Power Transformer at Marapalam 110/22-11KV Substation.

**(iii) Deen Dayal Upadhyaya Gram Jothi Yojana (DDUGJY)**

Objective of the scheme : Providing reliable and quality power supply to all Villages and reduction of line losses .

**Proposed Works for the Annual Plan 2017-18:**

Sl.No.	Item	Units	Proposed Works
1.	Erection of new 22/11 KV feeders	Kms	39.50
2.	Erection and enhancement of 22KV Distribution Transformer	Nos	21
3.	Erection of 22KV Spur line	Kms	8.56
4.	Erection of LT Overhead lines	Kms	12.95
5.	Provision of metering arrangements	Nos.	79,912
6.	Augmentation of 33/11KV Sub station	Nos.	1

**(iv) Integrated Power Development Scheme (IPDS)**

Objective of the scheme : Reduction of AT&C losses and improvement in quality and reliability of power supply.

**Proposed Works for the Annual Plan 2017-18:**

Sl.No.	Item	Units	Proposed Works
1.	New 22KV Line feeder / bifurcation of feeders(each one feeder in Marapalam SS, Villianur SS & Kurumbapet SS	Kms	15
2.	22KV Line bay extension at EHV Substation (MPLM-1,VLR SS-1, KMBPT SS-1)	Nos	3
3.	Aerial Bunched Cable(LT) in Mahe and Yanam	Kms	8
4.	11KV UG Cable feeder each one in Karaikal, Mahe & Yanam	Kms	14
5.	Provision of 11KV bay equipment only at Karaikal & Yanam	Nos.	2
6.	Provision of Indoor type Switchgear panel with associated equipment including 1RMU at Palloor SS	Nos.	1
7.	New 22/0.433KV,315KVA Distribution Transformer	Nos.	20
8.	New 11/0.433KV,200KVA Distribution Transformer	Nos	30
9.	Installation of Capacitor bank	Nos	5
10.	Installation of HVDS 63KVA	Nos	15
11.	Replacement of Single phase Static meter with LPRF	Nos	30,000
12.	Replacement of Three phase Static meter with LPRF	Nos	5,000
13.	Provision of Solar Panel	Kw	240
14.	Provision of 11KV RMU	Nos	3

**(v) Project for Development of Rural Electrification at Rural areas of Puducherry and Karaikal regions (NABARD)**

Objective of the scheme : Providing reliable and quality power supply to all Villages and reduction of line losses .

**Proposed Works for the Annual Plan 2017-18:**

Sl.No.	Item
1.	System strengthening
2.	Erection of 22KV Bay
3.	Erection of new 11KV feeders
4.	Erection of new 22KV feeders
5.	Erection of Capacitor banks(SS and DTRs)
6.	Erection of LT lines
7.	Erection of Distribution Transformers

**(vi) R-APDRP-PART-A (IT)**

M/s Power Finance Corporation has sanctioned a total loan amount of Rs.15.01 crores under Part A of R-APDRP scheme in the Union Territory of Puducherry. Out of the above amount, an amount of Rs. 4.50 Crores has been availed as first tranche during the year 2012-2013. An amount of Rs.4.50 Crores is proposed to be availed during the year 2017-18.

The balance payment is required for :-

- Procurement of current transformers,
- Payment to ITIA after Installation of Servers and hardware items for Customer care centre in Puducherry, Data centre at Chennai and Data Recovery centre at Madurai.
- Installation of systems and peripherals to the Customer care centre, Sub-Divisional Offices and Other Offices.
- Setting up of communication back bone and Networking arrangement for the above offices to the Data centre.Payment of FMS and Band width charges.
- Payment of Project Management charges.

**Object head-wise breakup :****(Rs. in lakh)**

Sl. No.	Name of the Department / Sector	Proposed Outlay 2017-18
(1)	(2)	(6)
1	Electricity Department / Power Sector	
2.	<b><u>Name of the Scheme :</u></b>  <b>Building up of Infra structure facilities in Electricity Department (Negotiated Loan)</b>	
	(i) Erection/Establishment/Upgradation of EHV substations	Rs.1900.00
	(ii) Modernisation of Billing Methods (R-APDRP part-B and SCADA)	Rs. 6500.00
	(iii) DDUGJY	Rs. 800.00
	(iv) IPDS	Rs. 800.00
	(v) NABARD	Rs. 1000.00
	(vi) R-APDRP(Part A-IT)	Rs. 450.00
	<b>Total</b>	<b>Rs. 11450.00</b>

**PROFORMA-II (13) (Grant from POSOCO)**

Scheme Number : 13  
Sector : Power

Implementing Department : Electricity

1. Name of the scheme : Renovation and Upgradation of Protection & Control system of Grid Sub Stations in Puducherry

2. Objective of the scheme : To renovate and upgrade the existing Sub Stations and Control system of Grid Sub Stations in Puducherry

3. Object head-wise breakup :

(Rs. in lakhs)

Sl. No.	Name of the Department / Sector	Actual Expenditure 2015-16	B.E. 2016-17	R.E 2016-17	Proposed Outlay 2017-18
(1)	(2)	(3)	(4)	(5)	(6)
1	Electricity Department / Power Sector				
2.	Renovation and Upgradation of Protection & Control system of Grid Sub Stations in Puducherry( Grant from POSOCO)	0.00	0.00	0.00	950.00





**PROFORMA-III****(a)SECTORAL WRITE-UP (GENERAL)****Power Sector****Power Position**

The Union Territory of Puducherry consists of four regions, geographically located in three different States. There is no major power generation in the Union Territory of Puducherry. The requirement of power for the Puducherry region is met from the allocation of power from the Central Generating Stations and partly from the TANGEDCO. The power requirement of Karaikal region is met from the Puducherry Power Corporation Limited and from the TANGEDCO. While the requirement of power in Yanam region is met from Central Generating Stations, the power requirement of Mahe region is fulfilled by availing power from Kerala State Electricity Board. The total power allocation from CGS is 450 MW, the power availed from TANGEDCO is 86 MW. 32.5 MW of power is availed from PPCL and around 7 MW of power is availed from Kerala State Electricity Board.

It is proposed to avail additional Power from the proposed Ramagundam Super Thermal Power Station(RSTPS Stage-IV) for the Union Territory of Puducherry.

Ministry of Power, Govt of India has allocated 53MW of additional power from Neyveli Lignite Corporation (NLC) New Thermal Power Project over and above of 4.24MW power already allotted to the Union Territory of Puducherry.

**II. POWER INFRASTRUCTURE**

Power to Puducherry region is fed through three numbers of 230/ 110 KV auto Sub-Stations with total installed capacity of 560 MVA. Ten 110/22-11 KV Sub-Stations with a total installed capacity of 415 MVA and One number of the 110/11 KV Sub-Station with installed capacity of 63 MVA are connected to the above auto Sub-stations.

Power to Karaikal region is fed through two numbers of the 110/11 KV Sub-Stations with installed capacity of 80 MVA owned by EDP and one number of the 110/ 11 KV Sub-Station owned by PPCL with installed capacity of 30 MVA owned by Puducherry Power Corporation Limited.

In Mahe region, there is one 110/11 KV Sub-station of capacity 20 MVA and in Yanam region, there are two numbers of 132/33-11 KV Sub-stations of capacity 36 MVA and one 33/11 KV Sub-station of capacity 10 MVA.

**(b) Major projects / works completed in the Annual Plan 2016-17**

An outlay of Rs. **9356.20** Lakhs was allocated for development schemes during RE 2016-17, out of which Rs. **400.00** lakhs was allocated for SCSP. Under the transmission schemes, the following works have been programmed:

**(i) Establishment of new 230 / 110 KV Auto Sub Station at Karaikal.**

- Major equipments i.e., Circuit Breakers, Isolators, CVT, Lattice structure etc., supply made and received at site.
- Supply orders placed for Power Transformers, pipe structures, C.T, control & Relay panels etc.
- Sanction of the Government has been obtained for availing loan from M/s REC for an amount of Rs.43.35 crores vide G.O. Ms. No. 05, dated: 07-02-2017 and an amount of 25.50 crores has been deposited with M/s PGCIL .

**(ii) Erection of 1x16 MVA Power Transformer at 110 KV, Vengata Nagar Sub Station.**

- 100% work completed.
- The 110/22 KV , 16 MVA, Power Transformer was energized on 01-02-2017.

**(iii) Establishment of 110/22 KV Sub Station in the premises of 230/110 KV Auto Sub Station at Thondamanatham.**

- 20% of works completed.

Works commenced at site, award of work has been issued to M/s Andrew Yule & Co Ltd, Chennai for Power Transformer package by M/s Power Grid Corporation of India Limited.

- **Supply of following major equipments received at site:-**

145 KV Circuit Breaker, 33 KV Vacuum Circuit Breaker, 145 KV & 36 KV Isolators, 98 KV Lightning Arrestor, 18 KV Lightning Arrestor, 145 KV & 33 KV BPI, Disc Insulators, pipe structures, 145 KV CT, 22 KV CT, 22 KV VT, cable, conductor & other erection hard ware materials. Balance materials like C & R panels, Lattice Structures, hard wares etc.,received at site.

**Civil works:**

Equipment foundations: 10/76 nos. completed.

Tower foundations: 8/12 nos. of tower foundations completed.

Power Transformer foundation: Excavation is under progress at site

- **Renovation and Modernization of 110/22 KV Villianur Sub Station.**
- 85 % of works completed.
- Balance work is programmed to be carried out only on approval of Shut down/Line clear. Due to certain technical reasons the balance work could not be completed, as this department is not in a position to shift the existing feeder loads to the neighboring Sub-Station due to loading constraints in the Sub-Station Transformation capacity and link feeder.
- Action is being taken to link the feeder for transfer of load. Once this work is completed the line clear at the Sub-Station shall be issued. It is expected that the work shall be completed within two months once the line clear is issued.
- **Stringing of 2<sup>nd</sup> circuit of 110 KV Bahour – Eripakkam feeder.**
- Tenders are invited for stringing of 2<sup>nd</sup> phase of works from tower location No.22 to 39.
- Provisional order has been issued to the successful bidder.

**Under Sub-transmission schemes, during the year 2016-17, the following have been achieved against the target for 2016-17 (Actual/Target)**

- To energize 64/100 numbers of new distribution transformers of various capacities and to enhance 26/50 numbers of existing distribution transformers to higher capacities.
- To erect and commission 14.993Kms/20.00 Kms of new HT lines and 47.33Kms/80 Kms of new LT lines and to strengthen 2.594Km / 2.00 Kms of existing HT lines and 21.57Kms/40 Kms of existing LT lines.
- To energize 20/25 numbers of new HT industrial services and 55/65 numbers of new LT industrial services.
- To effect 12996 /13000 numbers of new domestic services, 1860/1700 numbers of new commercial Services, 42/35 numbers of new agricultural services and 184 numbers of new Street Lights .
- In addition, it is also proposed to lay 7.202Kms/5.978 Kms of new HT cables and 1.271Kms/25.942 Kms of new LT cables to convert 123/600 numbers of OH services and 13/50 numbers of OH street lights into UG cable system. Further to erect 1 / 5

numbers of new 11 KV distribution transformers and to enhance 5 Nos of distribution transformers into higher capacities under UG cable system.

- 17,951 nos of Electromechanical meters were replaced into Static meters.
- External training was given to 13 Nos of Officers and also internal training was given to 206 nos of Officers and 640 Nos of staff.

**(c) Major projects / works proposed for the Annual Plan 2017-18**

An outlay of Rs.21950.00 lakhs has been proposed for the development schemes of this department. Out of which an amount of Rs. 282 lakhs is proposed for SCSP schemes. The following major transmission works planned during 2017-18:-

**ON-GOING WORKS**

- (i) Renovation and Modernisation of 110 KV Villianur Sub Station.
- (ii) Strengthening of 110 KV Villianur - Bahour line.
- (iii) Stringing of 2<sup>nd</sup> circuit of 110 KV Bahour – Eripakkam feeder.

**NEW WORKS**

- (i) Replacement of existing 16 MVA Power Transformers by
  - (a) 2 nos. of 25 MVA Power Transformer at 110/22 KV Thirubhuvanai Sub Station
  - (b) 1 no. of 25MVA Power Transformer in Bahour Sub Station,
  - (c) Provision of 1 no. of new 110/22KV, 25MVA Power Transformer at 110/22KV Villianur Sub Station
- (ii) Renovation and Modernisation of 230 KV Villianur and 230 KV Bahour Auto Sub Stations.
- (iii) Providing of Bay equipments at 230 KV Bahour Auto Sub Station and 110 KV Eripakkam Sub Station.
- (iv) Evacuation of power from the proposed 110/22 KV Thondamanatham SS by erecting 22 KV feeders.
- (v) Extension of II Circuit, Villianur - Bahour line.
- (vi) Strengthening of Sedharapet - Kurumbapet feeder.

**Under normal development schemes, the following programmes are proposed during 2017-18**

- It is proposed to energize 125 numbers of new distribution transformers of various capacities and to enhance the capacity of 65 numbers of existing distribution transformers.
- To erect 25.000 Kms of new HT lines and 100.000 Kms of new LT lines and also strengthen 3.000 Kms of existing HT lines and 50.000 Kms of existing LT lines.
- With the completion of the above, it is proposed to connect 15000 numbers of domestic services, 2000 numbers of commercial services, 45 numbers of agricultural services, 30 numbers of HT Industrial services, 80 numbers of LT Industrial Services and 10 numbers of OHOB services.
- 100 numbers of new Street lights were also proposed to be energized during this period.
- It is also proposed to lay and energize 3.00 Kms of new HT cables and 17.00 Kms of new LT cables to convert 600 numbers of OH services and 50 numbers of OH Street lights into U.G. cable system.
- Further to erect 5 numbers of new 11 KV distribution transformers and to enhance 5 Nos of distribution transformers into higher capacities under UG cable system.
- It is proposed to give internal training to 140 officers and 300 staffs and to give external training to 30 officers and 15 staffs respectively.

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**PROFORMA- IV**

Sector : Power  
 Implementing Department : Electricity

**Region- wise Financial and Physical Achievements and Outlay****(a) Financial Achievements and Outlay**

Sl.No	Name of the Scheme	Annual Plan 2015-16	Annual Plan 2016-17		Annual Plan 2017-18	
		Actual Expdr.	Approved Outlay	Revised Outlay	Proposed Outlay	Of which Capital Content
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Puducherry	4286.26	8378.28	8329.81	20233.48	17446.30
2	Karaikal	649.19	680.02	651.50	1008.08	542.50
3	Mahe	88.30	194.92	174.44	348.88	210.00
4	Yanam	203.31	197.98	200.45	320.77	142.00
<b>Total</b>		<b>5227.06</b>	<b>9451.20</b>	<b>9356.20</b>	<b>21911.21</b>	<b>18340.80</b>

**(b) Region wise Physical performance in bullet points :  
(Puducherry/ Karaikal/ Mahe/ Yanam)**

**I. Actual physical achievements made during 2015-16:**

**1.Puducherry region:-**

• **Erection of 1x16 MVA Power Transformer at 110 KV, Vengata Nagar Sub Station.**

In order to settle the power crisis at Muthialpet and adjoining areas and to ease the 22 KV load of the 110/11-22 KV Marapalam Sub Station , tender for erection of 16MVA Power Transformer was finalized and work order has been issued to M/s Grenel Power Private Limited, Chennai for erection of a 110/22 KV, 16 MVA Power Transformer with associated bay and panel works at 110 KV Vengata Nagar Sub Station.

• **Establishment of 110/22 KV Sub Station in the premises of 230/110 KV Auto Sub Station at Thondamanatham.**

20 % works completed.

• **Renovation and Modernisation of 110/22 KV Villianur Sub Station.**

85% of works completed.

Phase I (LV 04 associated bays & 110 KV Main Bus area) R& M work completed and commissioned on 20-04-2015

• **Stringing of 2<sup>nd</sup> circuit of 110 KV Bahour – Eripakkam feeder.**

First phase of works completed from tower location No. 1 to 21.

• **Strengthening of 110 KV Villianur - Bahour Line.**

The first phase of works for 6.5 Kms out of 12.35 Km has already been completed and lines energized. The second phase of works are in progress and 80% of works completed.

• **45 numbers of new distribution transformers of various capacities were commissioned and 19 numbers of existing distribution transformers were enhanced into higher capacities.**

• **12.454 Kms of new HT lines and 62.626 Kms of new LT lines were energized, 5.711 Kms of existing HT lines and 18.877 Kms of existing LT lines were strengthened .**

- With the erection of new lines and strengthening of existing lines, 8985 nos of Domestic Services, 1245 nos of Commercial Services, 18 nos of HT industrial Services, 49 nos of LT industrial Services, 26 nos of Agriculture Services and 299 nos of street light services were effected.

### **2.Karaikal region:-**

- **Establishment of new 230 / 110 KV Auto Sub Station at Karaikal.**  
Agreement has been signed with M/s. Power Grid Corporation of India Ltd., 10% of estimated cost i.e., Rs. 3.03 Crores has been paid for preliminary commencement of works. Work is awarded to M/s Blue Star Limited, Mumbai. Civil works commenced and leveling of 110 KV yard completed and leveling of 230 KV yard has also been taken up and completed.
- 18 numbers of new distribution transformers of various capacities were commissioned and 5 number of existing distribution transformers were enhanced into higher capacities.
- 5.892 Kms of new HT lines and 9.313 Kms of new LT lines were energized and 10.221 Kms of existing LT lines were strengthened.
- 1553 nos of Domestic Services, 278 nos of Commercial Services, 9 nos of LT industrial Services, 6 nos of Agriculture Services .

### **3.Mahe region:-**

- 1 number of new distribution transformer was commissioned and 3 numbers of existing distribution transformers were enhanced into higher capacities.
- 2 Kms of new LT lines were energized and 3.00 Kms of existing LT lines were strengthened.
- 232 nos of Domestic Services, 112 nos of Commercial Services, 3 nos of LT industrial Services.

### **4.Yanam region:-**

- 9 numbers of new distribution transformers were commissioned and 1 number of existing distribution transformer was enhanced into higher capacity.
- 2.02 Kms of new HT lines were energized, 5.13 Kms of new LT lines were energized and 1 Km of existing HT line and 1.5 Kms of existing LT lines were strengthened.



- 483 nos of Domestic Services, 39 nos of Commercial Services, 2 nos of HT Industrial Services and 1 no of LT industrial Service, 2 nos of Agriculture Services .

## **II ) Actual physical achievements during 2016-17:**

### **1. Puducherry region:-**

#### **(ii) Erection of 1x16 MVA Power Transformer at 110 KV, Vengata Nagar Sub Station.**

- 100% work completed.
- The 110/22 KV , 16 MVA, Power Transformer was energized on 01-02-2017.

#### **(iii) Establishment of 110/22 KV Sub Station in the premises of 230/110 KV Auto Sub Station at Thondamanatham.**

- 20% of works completed.

Works commenced at site, award of work has been issued to M/s Andrew Yule & Co Ltd, Chennai for Power Transformer package by M/s Power Grid Corporation of India Limited.

- **Supply of following major equipments received at site:-**

145 KV Circuit Breaker, 33 KV Vacuum Circuit Breaker, 145 KV & 36 KV Isolators, 98 KV Lightning Arrestor, 18 KV Lightning Arrestor, 145 KV & 33 KV BPI, Disc Insulators, pipe structures, 145 KV CT, 22 KV CT, 22 KV VT, cable, conductor & other erection hard ware materials. Balance materials like C & R panels, Lattice Structures, hard wares etc., received at site.

#### **Civil works:**

Equipment foundations: 10/76 nos. completed.

Tower foundations: 8/12 nos. of tower foundations completed.

Power Transformer foundation: Excavation is under progress at site

- **Renovation and Modernization of 110/22 KV Villianur Sub Station.**
- 85 % of works completed.
- Balance work is programmed to be carried out only on approval of Shut down/Line clear. Due to certain technical reasons the balance work could not be completed, as this department is not in a position to shift the existing feeder loads to the neighboring Sub-Station due to loading constraints in the Sub-Station Transformation capacity and link feeder.

- Action is being taken to link the feeder for transfer of load. Once this work is completed the line clear at the Sub-Station shall be issued. It is expected that the work shall be completed within two months once the line clear is issued.
- **Stringing of 2<sup>nd</sup> circuit of 110 KV Bahour – Eripakkam feeder.**
- Tenders are invited for stringing of 2<sup>nd</sup> phase of works from tower location No.22 to 39.
- Provisional order has been issued to the successful bidder.
- 31 numbers of new distribution transformers of various capacities are commissioned and 15 numbers of existing distribution transformers are enhanced into higher capacities.
- 8.305 Kms of new HT lines and 30.081 Kms of new LT lines are energized.
- 0.689Kms of new HT lines and 11.05Kms of LT lines are strengthened.
- 10211 nos of Domestic Services,1054 nos of Commercial Services,15 nos of HT industrial Services,43 nos of LT industrial Services, 23 nos of Agriculture Services and 172 numbers of Street lights were effected.

## **2. Karaikal region:-**

### **Establishment of new 230 / 110 KV Auto Sub Station at Karaikal.**

- Major equipments i.e., Circuit Breakers, Isolators, CVT, Lattice structure etc., supply made and received at site.
- Supply orders placed for Power Transformers, pipe structures, C.T, control & Relay panels etc.
- Sanction of the Government has been obtained for availing loan from M/s REC for an amount of Rs.43.35 crores vide G.O. Ms. No. 05, dated: 07-02-2017 and an amount of 25.50 crores has been deposited with M/s PGCIL .
- 12 numbers of new distribution transformers of various capacities are commissioned and 8 numbers of existing distribution transformers are enhanced into higher capacities.
- 5.345 Km of new HT lines and 14.879 Km of new LT lines are energized. 6.42 Kms of existing LT lines were strengthened and 0.23Kms of existing HT lines were strengthened and 3.206kms of HT UG Cables were laid under Under ground Cable conversion system.

- 2172 nos of Domestic Services, 349 nos of Commercial Services, 05 nos of HT industrial services, 06 nos of LT industrial Services, 18 nos of Agriculture Services .
- Replacement of 2166 nos of Electromechanical into Static Energy Meters under the 100% metering scheme .
- Energisation of one number of 11KV Underground Town-II feeder from 110/11KV Pillaiteruvasal substation which has improved the reliability of power supply to the Karaikal town.

### **3. Mahe region:-**

- 0.59 Kms of new LT lines were energized and 1.445Kms of LT lines were strengthened.
- 168 nos of Domestic Services, 75 nos of Commercial Services, 1 nos of LT industrial Service.
- Replacement of 1040 nos of Electromechanical into Static Energy Meters under the 100% metering scheme

### **4. Yanam region:-**

- 2 numbers of new distribution transformers were commissioned and 3 numbers of existing distribution transformers were enhanced into higher capacities.
- 1.74 Kms of new HT lines and 1.205 Kms of new LT lines were energized. 1.675Kms of HT lines and 1.98 Kms of LT lines were strengthened .
- 445 nos of Domestic Services, 21 nos of Commercial Services, 3 nos of LT industrial Services .

### **III. Proposed Physical Targets for the Annual Plan (2017-18)**

#### **1. Puducherry region:-**

##### **ON-GOING WORKS**

- (i) Renovation and Modernisation of 110 KV Villianur Sub Station.
- (ii) Strengthening of 110 KV Villianur - Bahour line.
- (iii) Stringing of 2<sup>nd</sup> circuit of 110 KV Bahour – Eripakkam feeder.

##### **NEW WORKS**

- (i) Replacement of existing 16 MVA Power Transformers by
    - (a) 2 nos. of 25 MVA Power Transformer at 110/22 KV Thirubhuvanai Sub Station
    - (b) 1 no. of 25MVA Power Transformer in Bahour Sub Station,
    - (c) Provision of 1 no. of new 110/22KV, 25MVA Power Transformer at 110/22KV Villianur Sub Station
  - (ii) Renovation and Modernisation of 230 KV Villianur and 230 KV Bahour Auto Sub Stations.
  - (iii) Providing of Bay equipments at 230 KV Bahour Auto Sub Station and 110 KV Eripakkam Sub Station.
  - (iv) Evacuation of power from the proposed 110/22 KV Thondamanatham SS by erecting 22 KV feeders.
  - (v) Extension of II Circuit, Villianur - Bahour line.
  - (vi) Strengthening of Sedharapet - Kurumbapet feeder.
- 65 numbers of new distribution transformers of various capacities are proposed to be commissioned and 35 numbers of existing distribution transforms are proposed to be enhanced into higher capacities.
  - 15 Kms of new HT lines and 50 Km of new LT lines are proposed to be energized.

- **11000 nos of Domestic Services,1400 nos of Commercial Services,20 nos of HT industrial Services,50nos of LT industrial Services, 40 nos of Agriculture Services and 10 numbers of OHOB services are proposed to be effected. Further it is proposed to energise 100 Nos. of Street lights.**

**Karaikal region:-**

- **50 numbers of new distribution transformers of various capacities are proposed to be commissioned and 20 numbers of existing distribution transformers are proposed to be enhanced into higher capacities.**
- **7.00 Kms of new HT lines and 40.00 Km of new LT lines are proposed to be energized.**
- **3000 nos of Domestic Services,500 nos of Commercial Services,5 nos of HT industrial Services,20nos of LT industrial Services, 5 nos of Agriculture Services.**
- **It is proposed to replace 3000 nos of Electromechanical meters into Static meters.**
- **The works for establishing a 230/110KV Auto substation in the existing 110/11KV Pillaitheruvasal Substation is to be completed which will ensure reliable and quality power supply to the Karaikal region.**
- **It is proposed to erect 3 nos of new 11KV feeders under DDUGJY to improve the voltage levels in the Rural areas.**
- **Erection of 15 nos of Distribution Transformers in Karaikal Municipality limit under Integrated Power Development scheme (IPDS)to improve the voltage condition in Karaikal Municipality area.**

**Mahe region:-**

- **3 numbers of new distribution transformers of various capacities are proposed to be commissioned and 3 numbers of existing distribution transforms are proposed to be enhanced into higher capacities.**
- **1.00 Km of new HT lines and 5.00 Km of new LT lines are proposed to be energized.**
- **300 nos of Domestic Services,50 nos of Commercial Services, 1no of HT industrial Services 3nos of LT industrial Services.**

- It is proposed to replace 1500 nos of Electromechanical meters into Static meters.

**Yanam region:-**

- 7 numbers of new distribution transformers of various capacities are proposed to be commissioned and 7 number of existing distribution transforms is proposed to be enhanced into higher capacity.
- 2.0 Kms of new HT lines and 5.00 Kms of new LT lines are proposed to be energized.
- 700 nos of Domestic Services, 50 nos of Commercial Services, 4nos of HT industrial Services and 7nos of LT industrial Services.

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