

ANNUAL ENERGY AUDIT ACCOUNTING 2020-21



Designated Consumer

Electricity Department Puducherry

**UT of Puducherry, Puducherry-605001
(Puducherry)**

FY 2020-2021

Conducted by



A-Z Energy Engineers Private Limited

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ACKNOWLEDGEMENT

A-Z Energy Engineers Pvt. Ltd. is grateful to the Electricity Department Puducherry, for giving us an opportunity to conduct Energy Audit Accounting of their DISCOM, under the Bureau of Energy efficiency 2021 Scheme.

We also express sincere thanks to the management of Electricity Department Puducherry, which is a Designated Consumers in the DISCOM sector for extending necessary co-operation and providing relevant information to us for the successful completion of the audit.

Our sincere thanks to the entire working group comprising of:

- Mr.– T.CHANEMOUGAM (SE cum HoD)
- Mr.– V. SRIDHARAN (SE - O&M Puducherry Region)
- Mr.– RAJESH SANYAL (SE Master Plan & Outlying Region)
- Mr. – M. Ramesh (Exe Engr/General)
- Mr. – C. Umesh Chandra (Asst Engr/Tech I sub division)
- Tmt – M. Lalitha lochana (Junior Engr/Tech I)

A-Z Energy Engineers Pvt. Ltd., looks forward to their continued support in all future endeavours as well.

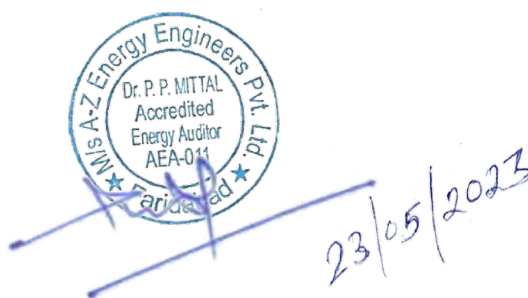


23/05/2023

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List of Abbreviations

AMI	Advanced Metering Infrastructure
AMR	Automated Meter Reading
AMRUT	Atal Mission for Rejuvenation and Urban Transformation
AT & C	Aggregate Technical and Commercial
BEE	Bureau of Energy Efficiency
ckt	Circuit Kilometer
CT	Current Transformer
DC	Designated Consumer
DEEP	Discovery of Efficient Electricity Price
DISCOM	Electricity Distribution Company
DT	Distribution Transformer
EA	Energy Auditor
EHT	Extra High Tension
EHV	Extra High Voltage
EM	Energy Manager
FY	Financial Year
HT	High Tension
HVDS	High Voltage Distribution System
KVA	Kilo Volt Ampere
LT	Low Tension
MoP	Ministry of Power
MU	Million Units
MW	Mega Watt
NO	Nodal Officer
OA	Open Access
POC	Point of Connection
PT	Potential Transformer
PX	Power Exchange
RE	Renewable Energy
RLDC	Regional Load Dispatch Centre
SDA	State Designated Agency
SLD	Single Line Diagram
SLDC	State Load Dispatch Centre
T & D	Transmission and Distribution

Executive Summary

Bureau of Energy efficiency (BEE) notified the Bureau of Energy Efficiency (Manner and intervals for conduct the energy audit (Accounting) in Electricity Distribution Companies) Regulations, 2021 on 6th October 2021. As per regulation, all Electricity Distribution Companies are Mandate to conduct annual energy audit and periodic energy accounting on quarterly basis.

The Union Territory of Puducherry is spread over an area of 492 Sq.Km., which constitutes of the four erstwhile French establishments of Puducherry, Karaikal, Mahe and Yanam. The city of Puducherry located in the Puducherry region serves as the capital of the Union Territory. The Electricity Department of Government of Puducherry is a deemed licensee under Section 14 of Electricity Act, 2003 and is carrying on the business of Transmission. With all the Towns and villages electrified in as early as 1972, the Union Territory is 100% fully electrified. The business of generation of Electricity in the Union Territory of Puducherry is being carried out by the Puducherry Power Corporation Limited, an undertaking wholly owned by the Government of Puducherry. The Puducherry power Corporation Limited presently operates a 33 MW gas power plant in Karaikal region.

The Union Territory has semi-arid type of climate, with a mean annual temperature of around 30° C and 70-85% relative humidity, is prevalent in the Union Territory. While the energy Purchase at generation End, Net Input & billed Unit PED for the customer is 3006.36 MU, 2864.96 MU & 2518.14 MU. The monthly consumption per customer stands at 431.76 KWH/Month. PED caters to area spread in 3 circles, 10 Division

➤ Discom Energy Accounting FY-2020-2021

Net Energy Input to the Discom for FY 2020-2021 is estimated and presented in the table:

S. No	Particulars	Values
1	Input Energy Purchase (MU)	2864.95
2	Transmission Loss (%)	2.45%
3	Transmission Loss (MU)	70.19
4	Energy Sold Outside the periphery (MU)	-
5	Open access sale (MU)	-
6	EHT Sale (MU)	413.94
7	Net Input Energy at Discom	2818.59

➤ Transmission and Distribution (T & D) Losses

The total Transmission and Distribution (T&D) losses approved by the Commission are given in for the FY 2020-21 are 346.82 MUs and percentage loss is 12.11% & D loss is 297.1 MUs and percentage loss is 10.55%. The details of T&D losses and aggregate technical & commercial (AT&C) losses for FY 2020-2021 are presented below:

Total Losses	T & D Loss		AT & C Loss (%)
	T & D Loss (MU)	T & D Loss (%)	19.20%
	346.82	12.11%	
	D Loss (MU)	D Losses	
	297.1	10.55%	

➤ Consumer Profile and Energy Sales for FY 2020-21

The total number of registered consumers in the State as on **31st March, 2022** was 486020 with annual consumption of about 2518.13 MUs. The Energy Export to other region for the FY 2020-21 was 3.92 MUs. The category-wise number of consumers and energy sales during the FY 2020-21 are given in table below.

S. No	Type of Consumers	Category of Consumers	No of Consumers	Total Consumption (In MU)
	LOW TENSION CATEGORY			
1	Domestic	LT	358628	806.17
2	Commercial	LT	56050	148.50
3	IP Sets	LT	7029	59.99
4	Life Line services	LT	8248	3.50
5	Temporary Supply	LT	0	4.43
6	Heating and Motive Power/Water Supply	LT	4386	141.95
7		LT		
8	Public Lighting	LT	51153	21.73
	TOTAL LOW TENSION ENERGY BILLED			1186.27
9	HT Water Supply & Central/state Government services	HT	63	53.49
10	HT Industrial + HT-Commercial	HT	455	864.43
11	Industrial (Extra High Voltage)	EHT	8	413.94
	TOTAL HIGH TENSION ENERGY BILLED			1331.86
	TOTAL ENERGY BILLED (LT+HT)		486020	2518.13
	Export to other region (Tamilnadu)			3.92
	TOTAL ENERGY BILLED in MU			2522.05

➤ Technical Parameters For FY 2021-22

Electricity Department Puducherry, supplies power to four regions, Puducherry, Karaikal, Yaman & Mahe. Distribution area of PED is divided into three circles, ten divisions & the overall purchased Energy, consumption and AT & C losses for the FY-2020-2021 is shown in table below. The AT&C loss for FY 2020-2021 is 19.20% & the T&D losses of the Discom is 12.11%.

Technical Details (FY2020-21)		
Energy Input Details	UoM	Value
Input Energy Purchase (From Generation Source)	Million kwh	3006.36
Net input energy (at DISCOM Periphery after adjusting the transmission losses and energy traded)	Million kwh	2864.96
Total Energy billed (is the Net energy billed, adjusted for energy traded))	Million kwh	2518.14
Transmission and Distribution (T&D) loss Details	Million kwh	346.82
	%	12.11
Collection Efficiency	%	90.33
Aggregate Technical & Commercial Loss	%	19.20%

The total purchased power by PED at the generation end is 3006.36 million units and the net energy after adjusting the transmission losses and energy sales is 2864.96 million units. The total energy billed or net energy billed after all the adjustment is 2518.14 million units. The total T&D losses for FY 2020-21 was 346.82 million units, the overall collection efficiency of the PED was 90.33% & AT&C losses was 19.20%.

➤ Details of Input Energy & Infrastructure

The Input energy, consumption & transmission losses of the Electricity Department Puducherry (PED) are shown in table below:

Parameters	FY 2020-21
Input Energy purchased (MU)	2864.95
Transmission loss (%)	2.45%
Transmission loss (MU)	70.19
Energy sold outside the periphery(MU)	0.00

Open access sale (MU)	0.00
EHT sale	413.94
Net input energy (received at DISCOM periphery or at distribution point, after adjustment)-(MU)	2818.59
Is 100% metering available at 33/22 kV (Select yes or no from list)	yes
Is 100% metering available at 11 kV (Select yes or no from list)	yes
% of metering available at DT	85%
% of metering available at consumer end	96%
No of feeders at 33kV voltage level	2
No of feeders at 22kV voltage level	72
No of feeders at 11kV voltage level	52
No of LT feeders level	6200
Line length (ckt. km) at 33kV voltage level	19
Line length (ckt. km) at 22kV voltage level	1788.685
Line length (ckt. km) at 11kV voltage level	447.179
Line length (km) at LT level	3553.737
HT/LT ratio	0.634505

➤ **Energy Conservation measures to reduce T&D and AT&C loss**

Following energy conservation Measures (ECMs) is adopted for line loss reduction

1. Installation of Smart AMR Meters.
2. Maintaining the accuracy on the billing date.
3. System improvement & automation.
4. AMR Feeder meters to be increased.
5. Targeted Work for Distribution loss reduction under proposed RDSS Scheme
 - Installation of power transformers in Substations.
6. Agricultural Feeder segregation and solarisation
7. SCADA & DMS Implementation for monitoring.
8. Replacing of conventional/non star rated transformer into energy efficient transformers.
9. Laying of AB cable in theft prone area where loss are in higher side.
10. Installation of solar generation plant & solar pumps.
11. Strengthening of energy accounting infrastructure-100% consumer metering.

➤ Action Plan to reduce AT&C Losses

At present the ratio of HT: LT ratio is 0.635 and on implementation of RDSS scheme (Loss Reduction Program) for an amount of sanction Rd.83.21 CRs it is expected the HT: LT ratio will come down to progressively to 1:1.4ratio by the end of the year 2024-25. The technical loss under LT distribution will come down considerably.

Similarly under Smart Prepaid Metering Project through RDSS scheme, it is proposed to provide Smart pre-paid Energy meters to all class of consumers at the UT of Puducherry through M/s.PFC Consulting Limited (PFCCL) under TOTEX model. On implementation of the scheme, real time energy flow could be observed and the commercial loss pockets could be identified through software and therefore significant reduction in commercial loss could be achieved by the department by the end of 2024-25.

The details of anticipated progressive reduction in AT&C loss by end of FY-2024-25 is detailed below:

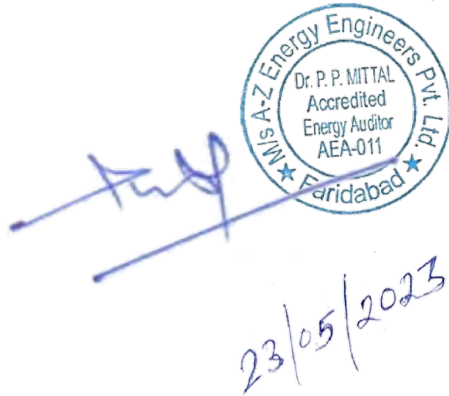
S. No	Result Parameter	AT&C loss Trajectory under RDSS		
		FY23	FY24	FY25
1	AT&C Loss	16.50%	14.00%	11.56%

Critical Analysis

- The Electricity Department of Government of Puducherry is a deemed licensee under Section 14 of Electricity Act, 2003 and is carrying on the business of Transmission, Distribution and retail supply of Electricity in Puducherry, Karaikal, Yanam and Mahe Regions of the Union Territory of Puducherry. With all the Towns and villages electrified in as early as 1972, the Union Territory is 100% fully electrified. The business of generation of Electricity in the Union Territory of Puducherry is being carried out by the Puducherry Power Corporation Limited, an undertaking wholly owned by the Government of Puducherry. The Puducherry power Corporation Limited presently operates a 32.5 MW gas power plant in Karaikal region.
- Electricity Department Puducherry., supplies power to three circles of Puducherry the energy Purchased, Net Input & billed PED for the customer is 3006.36 MU, 2864.96 MU & 2518.14MU. The monthly consumption per customer stands at 431.76 kWh/Month/consumer. PED caters to area spread in 3 circles, 10 Division, 60 numbers of sub-division, 126 number of feeders (33KV/22KV/11KV), 3100 number of DTs and 486020 numbers of consumers.
- Verified transmission losses, distribution (T&D) losses, collection efficiency & aggregate technical & commercial losses of Electricity Department Puducherry for FY

2020-2021, i.e., 1st April' 2020 to 31st March' 2021 was 2.45%, 10.55%, 90.3% & 19.20% respectively.

- The electrical energy is supplied by various interstate and intrastate generating stations at 400 KV, 220 KV, 33 KV and same is supplied to customers at 33 KV, 11 KV, 400V and 230 V single phases.



23/05/2023

A circular blue stamp from A-Z Energy Engineers Pvt. Ltd. is located in the center. The text inside the stamp reads: "Dr. P. P. MITTAL Accredited Energy Auditor AEA-011 Faridabad". The stamp is partially crossed out by a blue ink signature.

I. Background

1.1 Extant Regulation & Role of BEE

The Objectives of BEE

- To develop policies and programmes on efficient use of energy and its conservation with the involvement of stakeholders.
- To plan, manage and implement energy conservation programmes as envisaged in the EC Act.
- To assume leadership and provide policy framework and direction to national energy efficiency and conservation efforts and programmes.
- To demonstrate energy efficiency delivery mechanisms, as envisaged in the EC Act, through Public-Private Partnership (PPP).
- To establish systems and procedures to measure, monitor and verify energy efficiency results in individual sectors as well as at the national level.
- To leverage multi-lateral, bi-lateral and private sector support in implementation of programmes and projects on efficient use of energy and its conservation.
- To promote awareness of energy savings and energy conservation.

Role of BEE

- BEE coordinates with designated agencies, designated consumers and other organizations working in the field of energy conservation/efficiency to recognize and utilize the existing resources and infrastructure in performing the functions assigned to the Bureau under the Energy Conservation Act.
- The Act provides regulatory mandate for: standards & labelling of equipment and appliances; energy conservation building code for commercial buildings; and energy consumption norms for energy intensive industries.
- The EC Act was amended in 2010 to incorporate few additional provisions required to better equip BEE to manage ever evolving sphere of energy efficiency in the country.

The main amendments made to the original Act are given below:

- The Central Government may issue the energy savings certificate to the designated consumer whose energy consumption is less than the prescribed norms and standards in accordance with the procedure as may be prescribed.

- The designated consumer whose energy consumption is more than the prescribed norms and standards shall be entitled to purchase the energy savings certificate to comply with the prescribed norms and standards
- The Central Government may, in consultation with the Bureau, prescribe the value of per metric ton of oil equivalent of energy consumed
- Commercial buildings which are having a connected load of 100 kW or contract demand of 120 kVA and above brought under the purview under the EC Act.

Promotional Role

The major Promotional Role of BEE includes:

- Create awareness and disseminate information on energy efficiency and conservation.
- Arrange and organize training of personnel and specialists in the techniques for efficient use of energy and its conservation.
- Strengthen consultancy services in the field of Energy Efficiency.
- Promote research and development.
- Develop testing and certification procedures and promote testing facilities.
- Formulate and facilitate implementation of pilot projects and demonstration projects.
- Promote use of energy efficient processes, equipment, devices and systems.
- Take steps to encourage preferential treatment for use of energy efficient equipment or appliances.
- Promote innovative financing of energy efficiency projects.
- Give financial assistance to institutions for promoting efficient use of energy and its conservation.
- Prepare educational curriculum on efficient use of energy and its conservation.
- Implement international co-operation programmes relating to efficient use of energy and its conservation.

1.2 Purpose of Audit & Accounting Report

The annual energy audit accounting has been conducted for FY 2020-21 based on the notification no. 18/1/BEE/Discom/2021 from Bureau of Energy Efficiency, New Delhi dated 6th October, 2021 which says:

The energy intensity of India is higher with respect to GDP growth and there is an urgent need to address these issues on priority through integrated and comprehensive approach and by adopting latest techniques and technologies with active participation of all stakeholders.

Sensing the need of the hour Government of India initiated a mechanism for all energy intensive large industries and facilities (designated consumer) known as PAT Scheme which is “A market based mechanism to enhance cost effectiveness of improvements in energy efficiency in designated consumers, through certification of energy savings that could be traded.”

Annual Energy audit (Accounting) will not only help in reducing losses in system but it also helps DISCOM in sustainable growth. The objective of this energy audit is to reduce T&D loss and AT&C loss of the DISCOM through identification of commercially viable and implementable scheme for reduction of technical and commercial loss in the DISCOM thus leading to sustainable energy cost reductions.

(1) Every electricity distribution company shall conduct an annual energy audit for every financial year and submit the annual energy audit report to the Bureau and respective State Designated Agency and also made available on the website of the electricity distribution company within a period of four months from the expiry of the relevant financial year:

Provided that on the commencement of these regulations, the first annual energy audit of every electricity distribution company shall be conducted within six months from the date of such commencement, by taking into account the energy accounting of electricity distribution company for the financial year immediately preceding the date of the commencement of these regulations.

(2) Where a new electricity distribution company is established after the commencement of these regulations, such electricity distribution company shall conduct its first annual energy audit on completion of the first financial year from the date of being notified as designated consumer.

The Annual Energy Audit (Accounting) is conducted with the following Objectives:

- Verification of existing pattern of energy distribution across periphery of electricity distribution company
- Verification of accounted energy flow submitted by electricity distribution company at all applicable voltage levels of the distribution network
- Verification of the accuracy of the data collected and analyse and process the data with respect to consistency, improvement in accounting and reducing loss of DISCOM
- Verification of the information submitted by DC to the SDA/BEE about status of energy input, Output and loss for the previous two year
- Access the past performance of the establishment
- Quantification of Energy Losses, and Energy Saving Potential

1.3 Period of Energy Audit& Accounting

Energy audit activity was started with a meeting at Head Office of Electricity Department Puducherry in the month of Dec. 2022. Based on the requirement visit was made to Division, Subdivision, Grid etc. for data collection and technical discussion. The period of study was from for FY20-21, 1st April, 2020- 31st March, 2021.

II. Introduction of Designated Consumer

Bureau of Energy efficiency (BEE) notified the Bureau of Energy Efficiency (Manner and intervals for conduct the energy audit (Accounting) in Electricity Distribution Companies) Regulations, 2021 on 6th October 2021. As per regulation, all Electricity Distribution Companies are Mandate to conduct annual energy audit and periodic energy accounting on quarterly basis.

2.1 Sector

Electricity Department Puducherry belongs to the Electricity Distribution Sector.

2.2 Name and Address of Designated Consumer

General Information

1	Name of the DISCOM	Electricity Departament, Puducherry		
2	i) Year of Establishment	1962		
	ii) Government/Public/Private	Government		
3	DISCOM's Contact details & Address			
I	City/Town/Village	UT of Puducherry		
II	District	UT of Puducherry		
III	State	Puducherry	Pin	605001
IV	Telephone		Phone	0413-2334277
4	Registered Office			
I	Company's Chief Executive Name	T.Chanemougam		
II	Designation	Superintending Engineer Cum HoD		
III	Address	Electricity Department, Main Office, No.137,NSJ Bose Salai, Puducherry		
IV	City/Town/Village	Puducherry	P.O.	605001
V	District	Puducherry		
VI	State	Puducherry	Pin	605001
VII	Telephone	9489080400	Fax	
5	Nodal Officer Details*			
I	Nodal Officer Name (Designated at DISCOM's)	Thiru.M.Ramesh		
II	Designation	Executive Engineer		
III	Address	Electricity Department, Main Office, No.137,NSJ Bose Salai, Puducherry		
IV	City/Town/Village	Puducherry	P.O.	605001
V	District	Puducherry		
VI	State	Puducherry	Pin	605001

Vii	Telephone	0413-2341238	Fax	0413-2331556
6	Energy Manager Details*			
I	Name			
ii	Designation	-	Whether EA or EM	-
iii	EA/EM Registration No.	-		
iv	Telephone		Fax	
V	Mobile		E-mail ID	ee10ped@py.gov.in
7	Period of Information			
	Year of (FY) information including Date and Month (Start & End)	FY-2020-21		

2.3 Name and details of energy manager and Authorised signatory of DC

PARTICULARS	DETAILS
Energy Manager	NA
Authorized Signatory	Thiru. M. Ramesh (Executive Engineer) Ph: 0413-2341238

2.4 Summary profile of DC's

The Union Territory of Puducherry is spread over an area of 492 Sq.Km., which constitutes of the four erstwhile French establishments of Puducherry, Karaikal, Mahe and Yanam. The total population of the UT of Puducherry is 9,74,375 as per the 2001 census. The city of Puducherry located in the Puducherry region serves as the capital of the Union Territory.

Puducherry region, which is the largest of all the four, lies on the east-coast, consisting of 12 scattered areas, surrounded by the State of Tamil Nadu and by the Bay of Bengal on the east. It is located around 150 Kms south of Chennai. Karaikal region is about 150 Kms south of Puducherry. Like Puducherry region, the Karaikal region is also surrounded by the State of Tamil Nadu and by the Bay of Bengal on the East. Mahe region is located at about 653 Kms west of Puducherry, on the west-coast near Tellicherry in Kerala. Yanam region is located at about 840 Kms north east of Puducherry, on the east-coast near Kakinada in Andhra Pradesh. The Union Territory has semi-arid type of climate, with a mean annual temperature of around 30° C and 70-85% relative humidity, is prevalent in the Union Territory. While Puducherry, Karaikal and Yanam region receive rain mostly through North-East monsoon, Mahe region benefits from the South-West monsoon.

The Electricity Department of Government of Puducherry is a deemed licensee under Section 14 of Electricity Act, 2003 and is carrying on the business of Transmission,

Distribution and retail supply of Electricity in Puducherry, Karaikal, Yanam and Mahe Regions of the Union Territory of Puducherry. With all the Towns and villages electrified in as early as 1972, the Union Territory is 100% fully electrified. The business of generation of Electricity in the Union Territory of Puducherry is being carried out by the Puducherry Power Corporation Limited, an undertaking wholly owned by the Government of Puducherry. The Puducherry power Corporation Limited presently operates a 32.5 MW gas power plant in Karaikal region. While the energy Purchased, Net Input & billed Units PED for the customer is 3006.36 MU, 2864.96 MU & 2518.14 MU. The monthly consumption per customer stands at 431.76 KWH/Month. PED caters to area spread in 3 circles, 10 Division.

Verified transmission losses, distribution (T&D) losses, collection efficiency & aggregate technical & commercial losses of PED for FY 2020-21, i.e., 1st April' 2020 to 31st March' 2021 is 2.45%, 10.55%, 90.33% & 19.20% respectively.

2.1.1 Assets Details

Sr. No.	Particulars	FY 2020-21
1	No. of 33KV Feeder	2
2	Total no. of 33 kv feeder(KM)	19
3	Total no. of 11 kv feeder(Nos.)	52
4	Total no. of 11 kv feeder(KM)	447
5	No. of distribution Transformers	3100
6	Length of LT (KM)	3553.737
7	Number of circles	3
8	Number of divisions	10
9	Number of sub-divisions	60

2.1.2 Consumer wise connections & energy consumptions for FY 2020-21

The total number of registered consumers in the State as on 31st March, 2021 was 486020 with annual consumption of about 2518.13 MUs. The Energy Export to other region for the FY 2020-21 was 3.92 MUs. The category-wise number of consumers and energy sales during the FY 2020-21 are given in table below

S. No	Type of Consumers	Category of Consumers	No of Consumers	Total Consumption (In MU)
	LOW TENSION CATEGORY			
1	Domestic	LT	358628	806.17

S. No	Type of Consumers	Category of Consumers	No of Consumers	Total Consumption (In MU)
2	Commercial	LT	56050	148.50
3	IP Sets	LT	7029	59.99
4	Life Line services	LT	8248	3.50
5	Temporary Supply	LT	0	4.43
6	Heating and Motive Power/Water Supply	LT	4386	141.95
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8	Public Lighting	LT	51153	21.73
	TOTAL LOW TENSION ENERGY BILLED			1186.27
9	HT Water Supply & Central/state Government services	HT	63	53.49
10	HT Industrial + HT-Commercial	HT	455	864.43
11	Industrial (Extra High Voltage)	EHT	8	413.94
	TOTAL HIGH TENSION ENERGY BILLED			1331.86
	TOTAL ENERGY BILLED (LT+HT)		486020	2518.13
	Export to other region (Tamilnadu)			3.92
	TOTAL ENERGY BILLED in MU			2522.05

2.1.3 Consumer base for FY 2020-21

Voltage wise Metered & Unmetered Consumers. The voltage wise meter types of meter values given table:

Parameters	66kV and above	33kV	11/22kV	LT
Number of conventional metered consumers	0			
Number of consumers with 'smart' meters	0			31500
Number of consumers with 'smart prepaid' meters	0			
Number of consumers with 'AMR' meters	8	0	0	0
Number of consumers with 'non-smart prepaid' meters	0	0	518	438725
Number of unmetered consumers				15277
Number of total consumers	8		518	485502

2.1.4 Category wise Consumers, Consumption & Losses

Consumer category	Total Number of connections (Nos)	Total Connected Load (MW)	Input energy (MU)	Total energy	D loss (MU)
Residential	358628	606.964	2815.32	786.37	297.10
Agricultural	7029	44.654		61.6185	
Commercial/Industrial-LT	60436	282.343		319.2988	
Commercial/Industrial-HT	518	559.359		893.0503	
Others	59409	9.147		457.8824	
	486020	1502.467	2815.32	2518.22	297.10

Consumer category	D loss (%)	Billed Amount in Rs. Crore	Collected Amount in Rs. Crore	Collection Efficiency	AT & C loss (%)
Residential	10.55%				19.20%
Agricultural					
Commercial/Industrial-LT					
Commercial/Industrial-HT					
Others					
	10.55%	1433.676	1295.069	90.33%	19.20%

Note: - Actual collection efficiency 90.33% (limited to 100%), Category wise Billed & collected amount is not available but as a whole available.

2.1.5 Administrative structure

The Distribution network of PED is divided into three numbers of circles, ten numbers of divisions & sixty numbers of sub divisions.

Parameters	Values
Number of circles	3
Number of divisions	10
Number of sub-divisions	60
Number of feeders	126

➤ Numbers of Distribution Transformers

Parameters	66kV and above	33kV	11/22kV
Number of conventionally metered Distribution Transformers	0		
Number of DTs with communicable meters	2635		
Number of unmetered DTs	465		
Number of total Transformers	3100		

➤ Numbers of Feeders

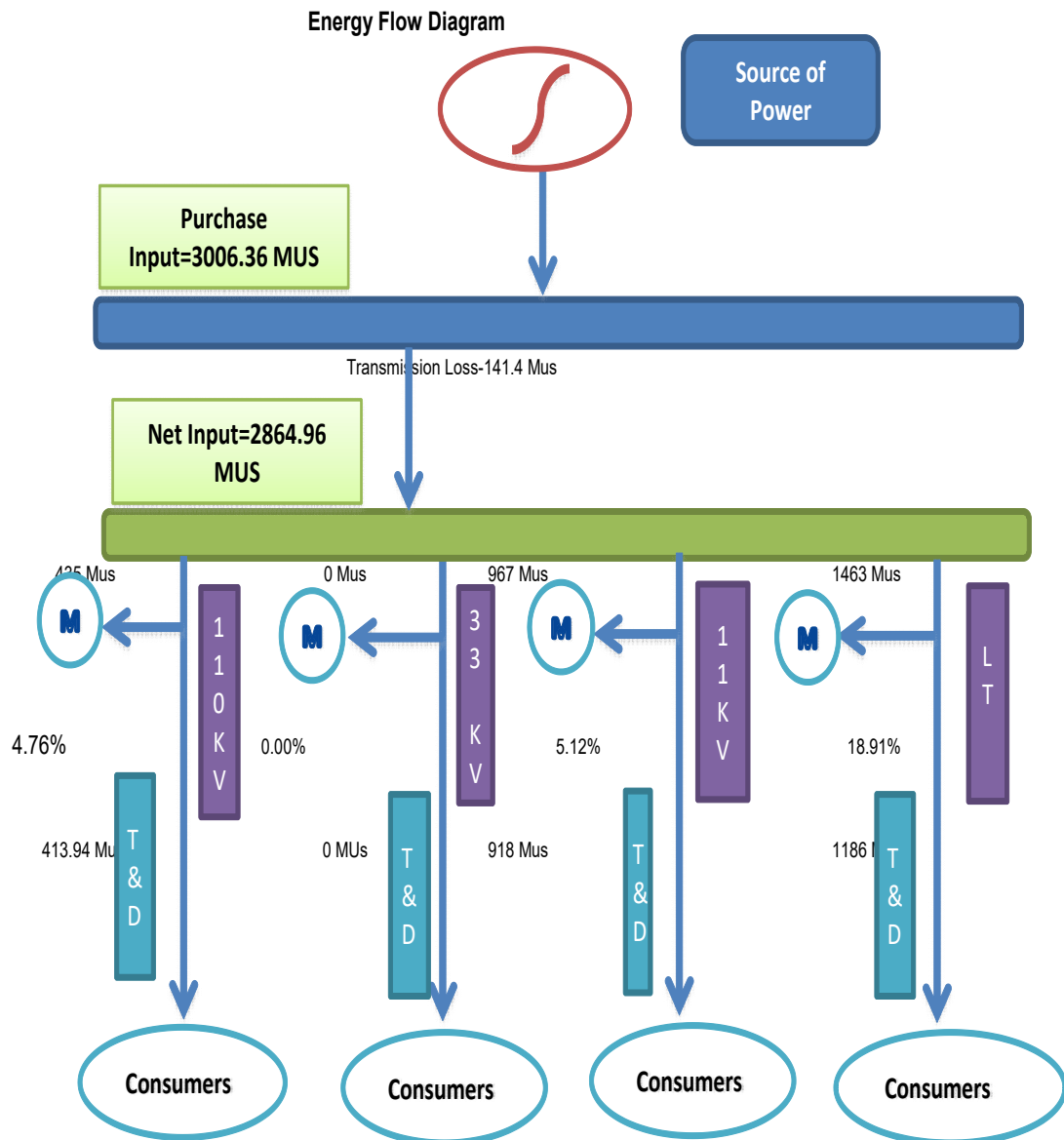
Parameters	66kV and above	33kV	11/22kV	LT
Number of metered feeders	0	2	124	6200
Number of feeders with communicable meters	0	2	124	0
Number of unmetered feeders	0	0	0	
Number of total feeders	0	2	124	6200

2.1.6 Energy Flow

PED supplies power to three Circle and four region of Puducherry in Puducherry, Yaman, Mahe & karaikal region of UT of Puducherry, It is divided into three circles, ten divisions & the overall purchased Energy, consumptions & AT & C losses for the FY-2020-2021 is shown in table below the AT&C losses for FY 2020-2021 is 19.20% & the T&D losses of the sector is 10.55% for FY 2020-21. This reflects an overall collection efficiency of 90.33%.

Technical Details (FY2020-21)		
Energy Input Details	UoM	Value
Input Energy Purchase (From Generation Source)	Million Units	3006.36
Net input energy (at DISCOM Periphery after adjusting the transmission losses and energy traded)	Million Units	2864.96
Total Energy billed (is the Net energy billed, adjusted for energy traded))	Million Units	2518.14
Transmission and Distribution (T&D) loss Details	Million Units	346.82
	%	12.11
Collection Efficiency	%	90.33
Aggregate Technical & Commercial Loss	%	19.20%

The total purchased power by PED is 3006.36 million units and the net energy after adjusting the transmission losses and energy sales is 2864.18. million units, The total energy billed or net energy billed after all the adjustment is 2518.14 million units. The total T & D loss for FY 2020-21 is 346.82 million units.



23/05/2023

2.1.7 Energy Balance for FY 2020-21

Voltage level	Particulars	MU	Reference
230 kV	Long-Term Conventional	2936.90	Includes input energy for franchisees
	Medium Conventional	NA	
	Short Term Conventional	NA	
	Banking	NA	
	Long-Term Renewable energy	NA	
	Medium and Short-Term RE	NA	Includes power from bilateral/ PX/ DEEP
	Captive, open access input	NA	Any power wheeled for any purchase other than sale to DISCOM. Does not include input for franchisee.
	Sale of surplus power		
	Quantum of inter-state transmission loss	71.95	As confirmed by SLDC, RLDC etc
	Power procured from inter-state sources	2,936.90	Based on data from Form 5
	Power at state transmission boundary	2,864.95	
33kV	Long-Term Conventional		
	Medium Conventional	0	
	Short Term Conventional		
	Banking	0	
	Long-Term Renewable energy	0	
	Medium and Short-Term RE	0	
	Captive, open access input		
	Sale of surplus power		
	Quantum of intra-state transmission loss	0	
	Power procured from intra-state sources	0	
	Input in DISCOM wires network	2,864.95	
33 kV	Renewable Energy Procurement	0	
	Small capacity conventional/ biomass/ hydro plants Procurement		
	Captive, open access input	0	
11 kV	Renewable Energy Procurement		
	Small capacity conventional/ biomass/ hydro plants Procurement		
	Sales Migration Input		
LT	Renewable Energy Procurement		

Voltage level	Particulars	MU	Reference
	Sales Migration Input		
	Energy Embedded within DISCOM wires network	0	
	Total Energy Available/ Input	2,865	
Voltage level	Energy Sales Particulars	MU	Reference
LT Level	DISCOM' consumers	1,186.27	Include sales to consumers in franchisee areas, unmetered consumers
	Demand from open access, captive		Non DISCOM's sales
	Embedded generation used at LT level		Demand from embedded generation at LT level
	Sale at LT level	1,186.27	
	Quantum of LT level losses	277	
	Energy Input at LT level	1,462.84	
22/11 kV Level	DISCOM' consumers	917.92	Include sales to consumers in franchisee areas, unmetered consumers
	Demand from open access, captive	0	Non DISCOM's sales
	Embedded generation at 11 kV level used	0	Demand from embedded generation at 11kV level
	Sales at 22/11 kV level	917.92	
	Quantum of Losses at 22/11 kV	50	
	Energy input at 22/11 kV level	967.48	
33 kV Level	DISCOM' consumers	0	Include sales to consumers in franchisee areas, unmetered consumers
	Demand from open access, captive		Non DISCOM's sales
	Embedded generation at 33 kV or below level		This is DISCOM and OA demand met via energy generated at same voltage level
	Sales at 33 kV level	0	
	Quantum of Losses at 33 kV	0	
	Energy input at 33kV Level	0	
> 33 kV(110 KV)	DISCOM' consumers	413.94	Include sales to consumers in franchisee areas, unmetered consumers
	Demand from open access, captive		Non DISCOM's sales

Voltage level	Particulars	MU	Reference
	Cross border sale of energy		
	Sale to other DISCOMs		
	Banking		
	Energy input at > 33kV Level	434.64	
	Sales at 66kV and above (EHV)	413.94	
Total Energy Requirement		2,864.96	
Total Energy Sales		2,518.13	

➤ **Voltage wise losses-** Voltage wise input energy, sales & losses is tabulated below:

5	DISCOM	Input (in MU)	Sale (in MU)	Loss (in MU)	Loss %
i	LT	1,463	1,186	277	18.91
ii	22/11 KV	967	918	50	5.12
iii	33 KV	0	0	0	0.00
iv	110 KV	435	413.94	21	4.76

2.1.8 Salient Features

At present population of Residential consumer & Agriculture consumer contribute to be 74% & 1% respectively compare to the other category of consumers, high loss prone areas.

III. Discussions & Analysis-

3.1 Energy Accounts for Previous Year

Electricity Department Puducherry has undertaken first year of energy accounting as per notification. No. 18/1/BEE/DISCOM/2021 from BUREAU OF ENERGY EFFICIENCY dated 6th October, 2021.

3.2 Energy Accounts & Performance in current year (FY 2020-2021)

The net energy input to the DISCOM for FY 2020-21 presented in the following table.

S.No	Parameters	Value
A.1	Input Energy purchased (MU)	2864.95
A.2	Transmission loss (%)	2.45%
A.3	Transmission loss (MU)	70.19
A.4	Energy sold outside the periphery(MU)	0.00
A.5	Open access sale (MU)	0.00
A.6	EHT sale	413.94
A.7	Net input energy (received at DISCOM periphery or at distribution point)-(MU)	2818.59

➤ Summary of Energy Consumption

The total sale for various category wise details of consumers is given in the table:

S. No	Type of Consumers	Category of Consumers	No of Consumers	Total Consumption (In MU)
	LOW TENSION CATEGORY			
1	Domestic	LT	358628	806.17
2	Commercial	LT	56050	148.50
3	IP Sets	LT	7029	59.99
4	Life Line services	LT	8248	3.50
5	Temporary Supply	LT	0	4.43
6	Heating and Motive Power/Water Supply	LT	4386	141.95
7		LT		
8	Public Lighting	LT	51153	21.73
	TOTAL LOW TENSION ENERGY BILLED			1186.27
9	HT Water Supply & Central/state Government services	HT	63	53.49

S. No	Type of Consumers	Category of Consumers	No of Consumers	Total Consumption (In MU)
10	HT Industrial +HT-Commercial	HT	455	864.43
11	Industrial (Extra High Voltage)	EHT	8	413.94
	TOTAL HIGH TENSION ENERGY BILLED			1331.86
	TOTAL ENERGY BILLED (LT+HT)		486020	2518.13
	Export to other region (Tamilnadu)			3.92
	TOTAL ENERGY BILLED in MU			2522.05

The total Transmission and Distribution (T&D) losses approved by the Commission are given in for the FY 2020-21 are 346.82 MUs and percentage loss is 12.11% & D loss is 297.1 MUs and percentage loss is 10.55%. The details of T&D losses and aggregate technical & commercial (AT&C) losses for FY 2020-2021 are presented below:

Total Losses	T & D Loss		AT & C Loss (%)
	T & D Loss (MU)	T & D Loss (%)	19.20%
	346.82	12.11%	
	D Loss (MU)	D Losses	
	297.1	10.55%	

3.3 Month wise Purchase Energy (FY 2020-2021)

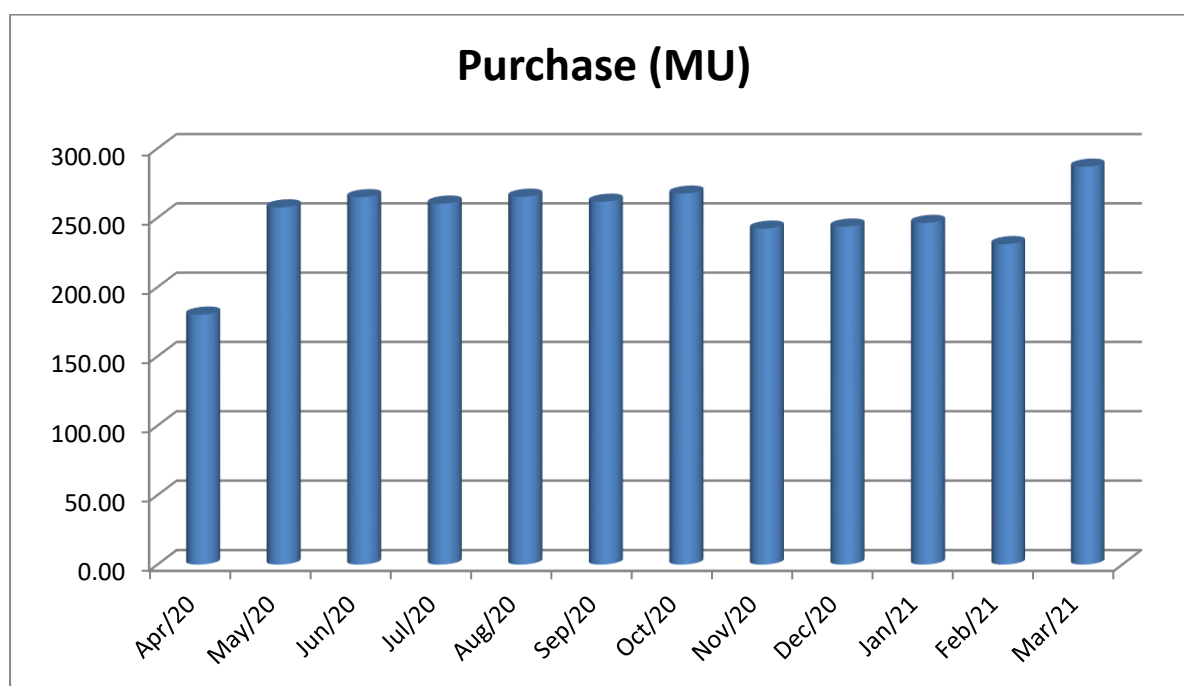
➤ Summary of Purchase Energy

The Region wise purchase power and self generated PPCL power & Month wise breakup is shown in below table:

MONTH	PP-NTPC-RSTPS-1E	PP-NTPC-RSTPS-3E	PP-NTPC-SMTPS-2E	PP-NTPC-TSTPS-2E	NLC	KAIGA	MAPS
Apr-20	28.43	0.00	3.66	32.68	24.68	19.31	2.51
May-20	50.06	0.00	6.00	46.69	55.27	23.20	2.45
Jun-20	45.95	9.41	4.11	43.22	66.21	28.70	2.53
Jul-20	55.46	14.37	8.24	48.32	30.72	29.31	2.44
Aug-20	51.18	14.55	7.07	46.98	40.87	30.08	2.77
Sep-20	33.65	13.45	4.33	38.60	44.18	28.93	2.63
Oct-20	37.93	11.53	0.99	43.47	38.36	26.31	2.12
Nov-20	31.36	10.28	1.75	29.90	54.72	24.61	0.84
Dec-20	35.19	10.71	3.50	36.88	52.80	17.78	2.56
Jan-21	31.62	12.52	4.55	35.86	59.33	22.11	1.98

MONTH	PP-NTPC-RSTPS-1E	PP-NTPC-RSTPS-3E	PP-NTPC-SMTPS-2E	PP-NTPC-TSTPS-2E	NLC	KAIGA	MAPS
Feb-21	32.93	12.76	3.47	33.48	57.98	24.32	1.69
Mar-21	48.23	15.38	5.22	49.17	59.73	23.48	2.14
TOTAL (MU)	481.97	124.96	52.91	485.25	584.84	298.15	26.66

MONTH	NTECL	KUDANKULAM	NTPL	PPCL	NNTPS	TOTAL (MU)
Apr-20	1.77	33.83	7.19	18.44	7.56	180.07
May-20	3.33	26.85	8.00	19.91	15.71	257.47
Jun-20	1.51	22.96	9.55	19.35	11.28	264.79
Jul-20	5.07	15.36	15.70	18.18	17.01	260.18
Aug-20	7.09	24.79	15.75	17.58	6.43	265.14
Sep-20	1.72	46.00	15.75	17.81	14.48	261.55
Oct-20	6.84	48.68	15.62	20.54	15.02	267.40
Nov-20	4.97	41.87	10.38	18.51	12.93	242.11
Dec-20	4.00	43.64	7.81	19.84	8.88	243.59
Jan-21	5.22	37.48	9.22	16.23	10.13	246.26
Feb-21	5.39	23.57	6.91	11.13	17.34	230.97
Mar-21	6.59	22.89	6.03	20.39	27.58	286.82
TOTAL (MU)	53.51	387.94	127.90	217.92	164.35	3006.36

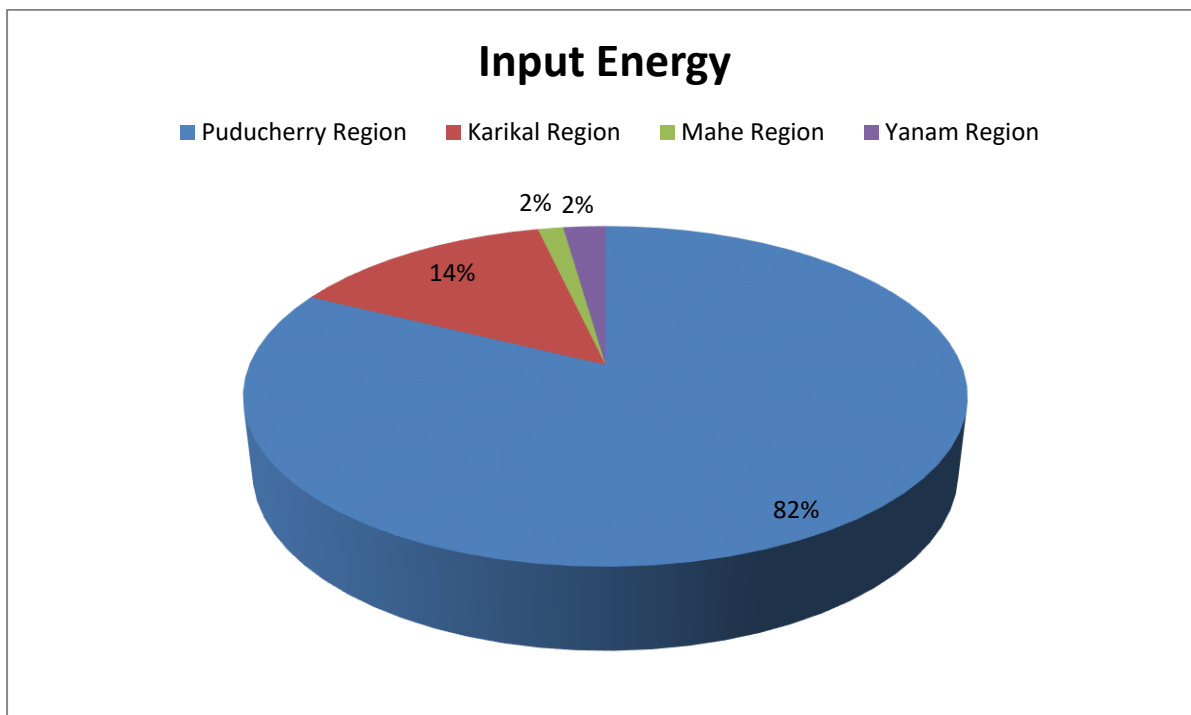


Note: Sample Bills attached in Annexure

➤ Region wise Input Energy

Puducherry divided into four Regions, Puducherry, Yanam, mahe & karikal, Input Energy at substation Feeder is shown in below table:

1.Puducherry Region			2.Karikal Region	
SI No	Name of the SS	2020-21	Name of the SS	2020-21
1	110/22-11 KV Marapalam SS	260101320	PPCL SS	89526900
2	Kurumbapet SS	339541114	PT Vasal SS	116439700
3	Kalapet SS	84950000	Surakudy SS	132069400
4	Vengata Nagar SS	186299400	3.Yanam Region	
5	Sedarapet SS	95751500	Yanam SS	29951920
6	Villianur SS	170880300	Adivipolam SS	24139900
7	Thethampakkam SS	66675500	4.Mahe Region	
8	Bahour SS	150882500	Mahe SS	32628470
9	Korkadu SS	153990000	Whole region	2404700724
10	Eripakkam SS	174784000	EHT	413940000
11	Thirubuvanai SS	203891800	Total Input (MU)	2818.64
12	Thondamanatham SS	92197000		



3.4 Circle-wise Performance (FY 2020-2021)

➤ Circle wise Input Energy & Total Energy

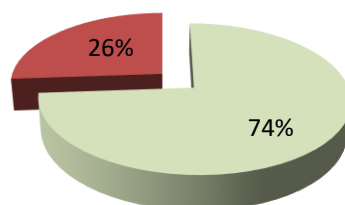
Electricity Department Puducherry, has three circles and ten numbers of division & Sixty numbers of sub division. Circle wise, Input energy (MU) & total energy (MU) is given in the table:

Circle Wise Input & Metered Energy

Circle	Total Number connections	Input energy (MU)	Total energy (MU)	D Loss (MU)
Puducherry Region Circle-3	359193	2371.92	2118.96	264.35
Outlying Region Circle-2	126827	443.41	399.26	51.67

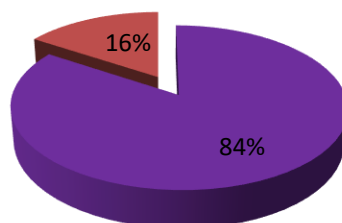
Circle wise Share of Consumers

■ Puducherry Region Circle-3 ■ Outlying Region Circle-2



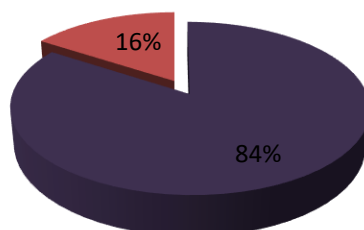
Circle wise share of Input energy

■ Puducherry Region Circle-3 ■ Outlying Region Circle-2



Circle wise Share of Billed Energy

■ Puducherry Region Circle-3 ■ Outlying Region Circle-2



➤ Circle wise T&D and AT&C Losses

The circle wise connected load & input energy & metered energy with transmission & distribution losses is given in following table:

Circle	Input energy (MU)	Total energy billed (MU)	D Loss (MU)	D Loss (%)	Billed Amount in Rs. Crore	Collected Amount in Rs. Crore	Collection Efficiency (%)	AT&C loss
Puducherry Region Circle-3	2371.92	2118.96	264.35	11.14%	1187.726	1066.449	89.79%	19.79%
Outlying Region Circle-2	443.41	399.26	51.67	11.65%	245.95	228.62	92.95%	16.30%

3.5 Region/Division-wise Performance (FY 2020-2021)

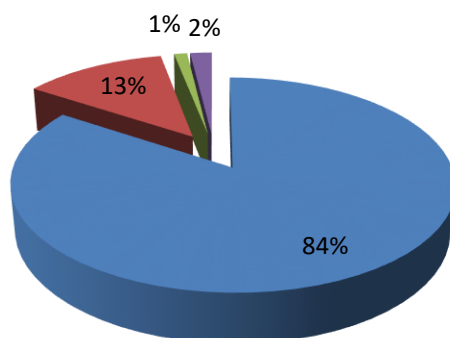
➤ Region/Division wise energy parameters

The total twelve numbers of divisions, the energy parameter input energy, metered energy & T & D Losses of division wise is shown in below table:

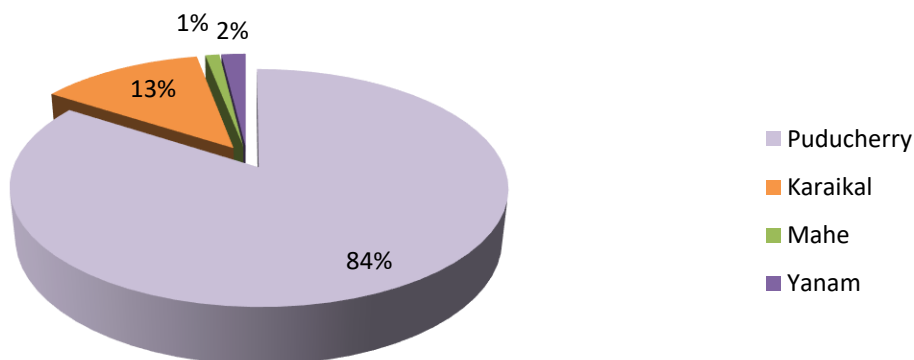
Sr No	Name of Division	Total Number connections (Nos)	Input energy (MU)	Total energy (MU)
1	Puducherry	359193	2371.92	2118.96
2	Karaikal	90986	356.69	322.98
3	Mahe	18255	32.63	28.24
4	Yanam	17586	54.09	48.03
	Total	486020	2815.32	2518.22

Region Wise Share of Input energy

■ Puducherry ■ Karaikal ■ Mahe ■ Yanam



Region Wise share Billed Energy

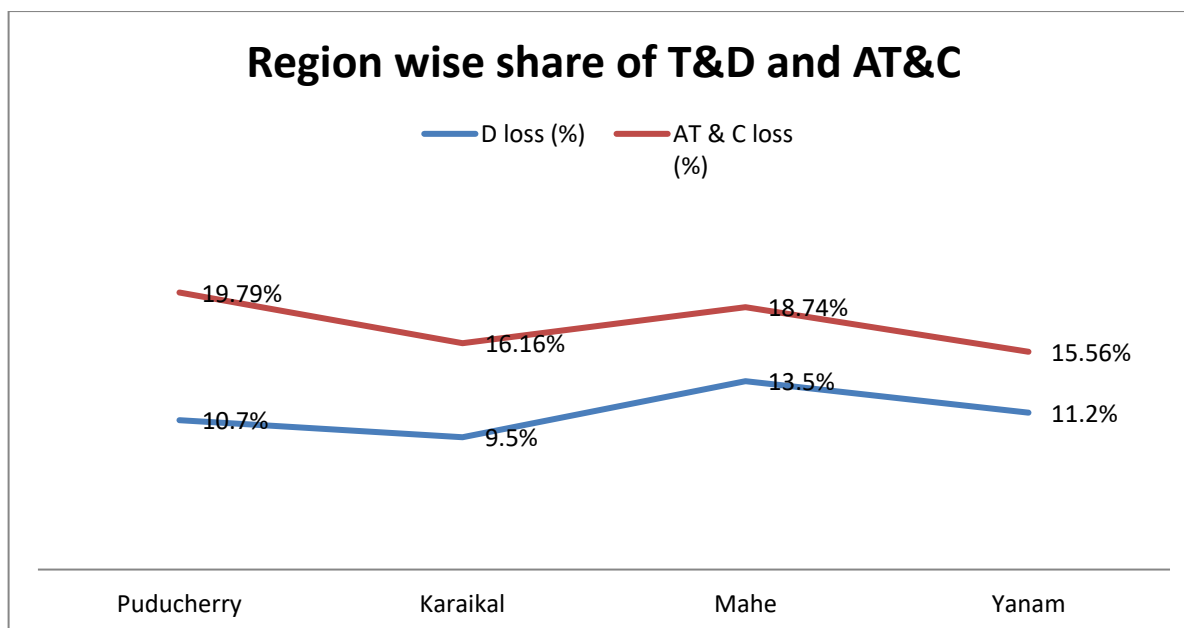


➤ Division wise energy parameters & Losses

The Division wise T&D Losses, Billed Amount & Collected Amount with transmission & distribution losses is given in following table

Division Wise T&D Losses & AT&C losses

Sr No	Name of Division	D Loss (MU)	D loss (%)	Billed Amount in Rs. Crore	Collected Amount in Rs. Crore	Collection Efficiency (%)	AT & C loss (%)
1	Puducherry	252.96	10.66%	1187.73	1066.45	89.79	19.79
2	Karaikal	33.71	9.45%	203.51	188.42	92.59	16.16
3	Mahe	4.39	13.45%	13.1	12.3	93.89	18.74
4	Yanam	6.06	11.20%	29.34	27.9	95.09	15.56
	Total	297.12	10.55%	1433.68	1295.07	90.33%	19.20%



Electricity Department Puducherry has identified high loss feeders of high loss division, the following works were proposed under capex to bring down the losses.

- Bifurcation of feeder by providing link lines.
- Reconduction of old conductors by higher capacity conductors.
- New Lines
- Providing additional transformers.

Further to bring down the losses in high loss division and capacity additions of overload segments of the network, similar works are proposed under RDSS schemes.

➤ Consumer Category wise energy parameters & Losses

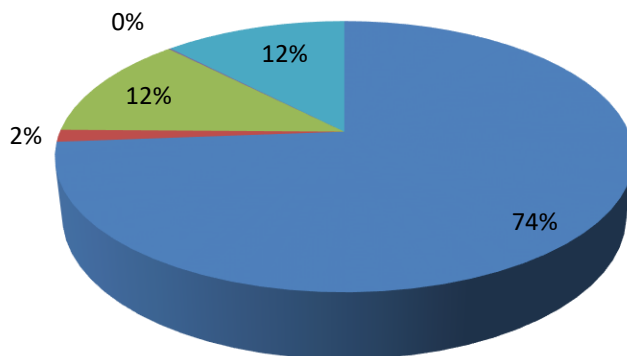
The consumer wise all the parameters like input energy, metered energy, no of consumers, billed amount, collection efficiency & AT&C losses are given in below table:

Consumer category	Total Number of connections (Nos)	Total Connected Load (MW)	Input energy (MU)	Total energy	D loss (MU)
Residential	358628	606.964	2815.32	786.37	297.10
Agricultural	7029	44.654		61.6185	
Commercial/Industrial-LT	60436	282.343		319.2988	
Commercial/Industrial-HT	518	559.359		893.0503	
Others	59409	9.147		457.8824	
	486020	1502.467	2815.32	2518.22	297.10

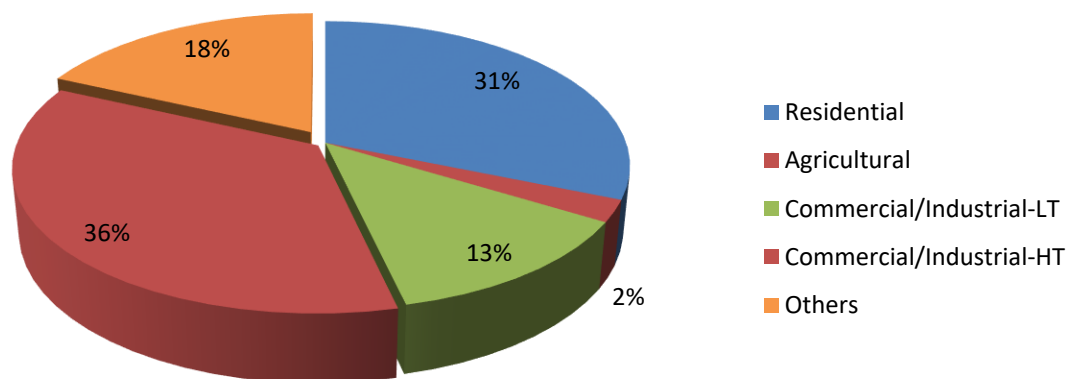
Consumer category	D loss (%)	Billed Amount in Rs. Crore	Collected Amount in Rs. Crore	Collection Efficiency	AT & C loss (%)
Residential	10.55%				19.20%
Agricultural					
Commercial/Industrial-LT					
Commercial/Industrial-HT					
Others					
	10.55%	1433.676	1295.069	90.33%	19.20%

Category wise consumer share

■ Residential ■ Agricultural ■ Commercial/Industrial-LT ■ Commercial/Industrial-HT ■ Others



Category wise share of Billed Energy



3.6 Category wise Subsidy

NA

3.7 Analysis on T&D Losses and AT&C Losses

➤ % Losses -aggregated-

The overall technical loss (T&D Loss) is 12.11% and overall AT&C Loss is 19.20% for financial year 2020-21. This reflects an overall collection efficiency of 90.33%.

➤ Division wise losses-

The range of T&D losses, collection efficiency and AT&C losses among the divisions is tabulated below.

% Losses- Division Wise

Description	Data
D Losses	10.55%
D Losses Range	9.45 % to 11.20%
Division with highest losses	Yanam
Division with lowest losses	Karaikal
Collection efficiency	90.33%
AT & C Loss (%)	19.20%
AT & C Range	15.56 % to 19.79%
Division with highest AT&C Losses	Puducherry
Division with lowest AT&C Losses	Yanam

➤ **Division wise losses summary-** The following divisions of the DISCOM are having D losses more than the average value 10.55% and requires special attention.

Sr No.	Average D Loss	Divisions with More than Average D loss	T&D Loss %
1	10.55%	Puducherry	10.66%
2		Karaikal	9.45%
3		Mahe	13.45%
4		Yanam	11.20%

➤ **Division wise losses summary-** The following divisions of the DISCOM are having AT&C Losses more than the average value 19.20% and requires special attention.

Sr No.	Average AT&C Losses	Divisions with Less than Average AT&C Losses	AT&C Losses %
--------	---------------------	--	---------------

Sr No.	Average AT&C Losses	Divisions with Less than Average AT&C Losses	AT&C Losses %
1	19.20%	Puducherry	19.79%
2		Karaikal	16.16%
3		Mahe	18.74%
4		Yanam	15.56%

Note: Actual collection efficiency 90.33% (limited to 100%), & T& D Losses is 12.11%.

- **Category wise collection efficiency-** The Category wise collection efficiency of various consumers is tabulated below.

Category Wise Billed And collected Amount not available, Hence UT circle wise being furnished. Collection Efficiency as a whole is available.

Sr. No.	Category	Collection Efficiency
1	Residential	
2	Agricultural	
3	Commercial/Industrial-LT	
4	Commercial/Industrial-HT	
5	Others	
	Overall	=1295.07/1433.68=90.33%

- **Feeder Wise Input & Export Energy-** Voltage wise Feeder name input energy, & Export is tabulated below:

Voltage level	Feeder Name	Meter S.No	CT/PT ratio	Import (MU)	Export (MU)
22KV	Nellithope feeder 22 KV	x236639	400/1,22000/110 V	33.3304	0
22KV	Ariyankuppam feeder22 KV	x236574	400/1,22000/110 V	60.9501	0
22KV	Mill Feeder 22 KV	x236520	300/1,22000/110 V	26.35492	0
22KV	Raj Nivas feeder22 KV	x236524	400/1,22000/110 V	7.2462	0
22KV	Town feeder22 KV	x236521	300/1,22000/110 V	18.0547	0
22KV	Amaravathy feeder22 KV	x236573	400/1,22000/110 V	26.9522	0
22KV	New Feeder 22 KV	x236522	400/1,22000/110 V	7.5702	0
22KV	Pillaihattam feeder22 KV	x236523	300/1,22000/110 V	46.7192	0
22KV	Marapalam Feeder 22 KV	x236623	300/1,22000/110 V	42.7727	0
22KV	Kanuvapet Feeder 22 KV	x236622	300/1,22000/110 V	20.823	0
22KV	Agaram Feeder 22 KV	KA100158	300/1,22000/110 V	37.8101	0
22KV	Sedarapet Interlinking feeder	x236620	300/1,22000/110 V	43.4849	0
22KV	Industrial feeder22 KV	x236621	300/1,22000/110 V	25.9896	0

Voltage level	Feeder Name	Meter S.No	CT/PT ratio	Import (MU)	Export (MU)
22KV	Pandasozhanallur Feeder	x236615	400/1,22000/110 V	20.1561	3.33
22KV	Mittal Feeder 22 KV	x236614	400/1,22000/110 V	53.3395	0
22KV	Industrial Feeder 22 KV	x236612	400/1,22000/110 V	14.2263	0
22KV	Steel Mill 22 KV	x236611	400/1,22000/110 V	16.8964	0
22KV	Bahour Feeder 22 KV	x236515	400/1,22000/110 V	25.4487	0
22KV	Thavalakuppam Feeder 22 KV	x236610	400/1,22000/110 V	0	0
22KV	Paper Mill Feeder 22 KV	x236613	400/1,22000/110 V	20.8155	0
22KV	Pillaichavady Feeder22 KV	x236544	300/1,22000/110 V	18.6082	0
22KV	Kazhuperumpakkam feeder	x236519	300/1,22000/110 V	0	0
22KV	Alankuppam Feeder 22 KV	x236517	300/1,22000/110 V	5.6999	0
22KV	Kanaga chettiukulam 22 KV	x236608	300/1,22000/110 V	54.8796	0
22 KV	University 22 KV	x0236673	300/1,22000/110 V	5.7609	0
22KV	Kurumbapet Interlinking 22 KV	x236635	300/1,22000/110 V	0	0
22KV	Kurumbapet feeder22 KV	x236526	400/1,22000/110 V	50.9004	0
22 KV	Karuvadikuppam 22 Kv		400/1,22000/110 V	29.4326	0
22KV	JIPMER feeder22 KV (old)	x236618	400/1,22000/110 V	39.5127	0
22KV	Lawspet feeder22 KV	x236527	300/1,22000/110 V	38.2767	0
22KV	ECR feeder22 KV	x236617	400/1,22000/110 V	37.5904	0
22KV	New Jipmer feeder22 KV	x236567	400/1,22000/110 V	24.0902	0
22KV	Moolakulam 22 KV	x236525	400/1,22000/110 V	56.7204	0
22KV	PIPDIC -I Feeder 22 KV	x236616	400/1,22000/110 V	10.8188	0
22KV	PIPDIC -II Feeder22 KV	x236565	400/1,22000/110 V	24.979	0
22KV	Sedarapet Feeder 22 KV	x236619	400/1,22000/110 V	27.2228	0
22KV	Industrial Feeder 22 KV	x236572	400/1,22000/110 V	31.606	0
22KV	Villianur Interlinking Feeder	x236631	400/1,22000/110 V	12.965	0
22KV	Abishegapakkam 22 KV	x236636	400/1,22000/110 V	12.402	0
22KV	Mangalam Feeder 22 KV	x236571	400/1,22000/110 V	51.739	0
22KV	Embalam 22 KV	x236570	400/1,22000/110 V	45.278	0
22KV	Manalmedu feeder	x236605	300/1,22000/110 V	20.948	0
22KV	Motchakulam 22 KV	x236568	300/1,22000/110 V	0	0
22KV	Madukarai Feeder 22 KV	x236609	300/1,22000/110 V	18.712	0
22KV	Industrial 1 Feeder 22 KV	x236542	300/1,22000/110 V	11.581	0

Voltage level	Feeder Name	Meter S.No	CT/PT ratio	Import (MU)	Export (MU)
22KV	Industrial 2 Feeder 22 KV	x236606	300/1,22000/110 V	13.321	0
22KV	Snam Alloys Feeder 22 KV	x236543	300/1,22000/110 V	38.052	0
22KV	Pushpit Feeder 22 KV	x236607	400/1,22000/110 V	51.265	0
22KV	Thirubhuvanai Interlink Feeder	x236569	400/1,22000/110 V	20.905	0
22KV	Rampakam feeder 22 KV			0	0
22KV	Industrial 1 Feeder 22 KV	x236557	400/1,22000/110 V	22.4319	0
22KV	Kalitheerthalkuppam 22 KV	x236534	300/1,22000/110 V	19.6707	0
22KV	Industrial 2 Feeder 22 KV	x236530	300/1,22000/110 V	52.0541	0
22KV	Industrial 3 Feeder 22 KV			11.6232	0
22KV	Eripakkam interlinking feeder	x236532	400/1,22000/110 V	34.9301	0
22KV	P.S.Pallayam 22 KV	x236531	300/1,22000/110 V	27.8982	0
22KV	Sellipet 22 KV	x236555	300/1,22000/110 V	35.2836	0
22KV	Station Aux				
22KV	Spare				
22KV	L.R.Palayam 22 KV	x236671	300/1,22000/110 V	8.98	0
22KV	Manalipet 22 KV	x236672	300/1,22000/110 V	16.04	0
22KV	Vadanur 22 KV	x236558	300/1,22000/110 V	15.99	0
22KV	Industrial Feeder 22 KV	x236556	300/1,22000/110 V	19.44	0
22KV	Interlinking Feeder 22 KV	x236559	300/1,22000/110 V	6.22	0
22KV	BALLARPUR 22 KV	x236670	400/1,22000/110 V	23.35	0
22KV	KATTERIKUPPAM 22 KV	x236541		0	0
22KV	KURUMBAPET 22 KV	x236633	300/1,22000/110 V	20.4	0
22KV	PIPDIC - II 22 KV	x236632	300/1,22000/110 V	27.26	0
22KV	PIPDIC - I 22 KV	x236630	300/1,22000/110 V	14.54	0
22KV	V S K 22 KV	x236540	300/1,22000/110 V	0	0
22KV	Pathukannu 22 KV	x236634	400/1,22000/110 V	10.2	0
22KV	Muthialpet 22 KV	xB464429	200/1,22000/110 V	21.4	0
22KV	Uppar 22 KV	xB464431	200/1,22000/110 V	21.53	0
22KV	Villianur Interlinking Feeder	x381284	400/1,22000/110 V	20.556	0
22KV	Sedarapet Interlinking feeder	x381296	400/1,22000/110 V	32.2007	0
22KV	Industrial 22 KV	x381285	400/1,22000/110 V	39.4403	0
22KV	Pillayarkuppam 22KV			0	0

Voltage level	Feeder Name	Meter S.No	CT/PT ratio	Import (MU)	Export (MU)
11KV	Laporte feeder11 KV	x236668	600/1,11000/110 V	0	0
11KV	GH Feeder11 KV	X236664	600/1,11000/110 V	17.9246	0
11KV	Kandan Feeder 11 KV	x236669	600/1,11000/110 V	0	0
11KV	Golconda feeder11 KV	x236667	600/1,11000/110 V	14.9988	0
11KV	Market Feeder11 KV	x236666	400/1,11000/110 V	0	0
11KV	Mettakur Feeder 11 KV	x236562	150/1A,11000/110 V	4.06	0
11 KV	Savithri Nagar feeder 11KV	x236596	300/1A,11000/110 V	9.7	0
11KV	Industrial Feeder 11 KV	x236561	300/1A,11000/110 V	4.54	
11KV	Kurasampeta feeder 11 KV	x236598	300/1A,11000/110 V	9.89	0
11KV	Town Feeder 11 KV	x236597	300/1A,11000/110 V	11.31	0
11KV	Kanakadurga 11 KV			0	0
11KV	Kanakalpet 11 KV	x236595	600/1A,11000/110 V	13.82	0
11KV	11KV VKR Feeder	x236560	200/1A,11000/110 V	0.75	0
11KV	Clock Tower Feeder	x236538	300/1,11000/110 V	11.86	0
11KV	DAT feeder 11 KV	x236604	300/1,11000/110 V	12.27	0
11KV	Mandi Feeder 11 KV	x236600	300/1,11000/110 V	11.04	0
11KV	Chief Secretariat Feeder	x236603	300/1,11000/110 V	11.4	0
11KV	Paper Mill Feeder 11 KV	x236602	300/1,11000/110 V	10.72	0
11KV	Vengatanagar Feeder 11 KV	x236537	300/1,11000/110 V	10.76	0
11KV	Brindavanam feeder 11 KV	x236554	300/1,11000/110 V	16.83	0
11KV	GRT Feeder 11 KV			13.62	0
11KV	Gingee Salai 11 KV	x236535	300/1,11000/110 V	15.77	0
11KV	Krishna Nagar 11 KV	x236550	300/1,11000/110 V	9.3	0
11KV	Muthialpet 11 KV	x236601	300/1,11000/110 V	19.79	0
11KV	Nedungadu feeder 11 KV	x236654	300/1A,11000/110 V	23.28	0
11KV	Ambagarathur feeder 11 KV	x236652	600/1A,11000/110 V	29.97	0
11KV	Ceramic feeder 11 KV	x236653	300/1A,11000/110 V	2.81	0
11KV	Industrial feeder 11 KV	x236651	600/1A,11000/110 V	7.33	0
11KV	Alloy feeder 11 KV	x236648	600/1A,11000/110 V	25.35	0
11KV	Agalankannu feeder 11 KV	x236650	600/1A,11000/110 V	4.38	0
11KV	Thirunallar feeder 11 KV	x236647	300/1A,11000/110 V	7.52	0
11KV	Link feeder 11 KV	x236649	600/1A,11000/110 V	15	0
11KV	Karaikal Chlorate feeder	x236646	300/1A,11000/110 V	16.43	0
11KV	Melakasakudy feeder 11 KV	x236645	400/1A,11000/110 V	0	0

Voltage level	Feeder Name	Meter S.No	CT/PT ratio	Import (MU)	Export (MU)
11KV	Station 11KV			0	0
11KV	PPCL 11 KV	x236551	400/1A,11000/110 V	0	0
11KV	INDUSTRIAL 11 KV	x236552	400/1A,11000/110 V	9.68	0
11KV	VANJUR 11 KV	x236545	400/1A,11000/110 V	2.02	0
11KV	Karaikal Town feeder 11 KV	x236549	400/1A,11000/110 V	26.59	0
11KV	INTERLINK 11 KV	x236547	400/1A,11000/110 V	14.5	0
11KV	POLAGAM 11 KV	x236548	400/1A,11000/110 V	3.19	0
11KV	ALLOY 11 KV	x236553	400/1A,11000/110 V	17.32	0
11KV	STEEL 11 KV	x236546	400/1A,11000/110 V	16.22	0
11KV	LINK 11 KV (Mandapathur)	x236656	300/1A,11000/110 V	11.79	0
11KV	TOWN 2 - 11 KV	x236662	300/1A,11000/110 V	23.13	0
11KV	TOWN 1 - 11 KV	x236660	300/1A,11000/110 V	21.33	0
11KV	POOVAM 11 KV	x236658	300/1A,11000/110 V	29.54	0
11KV	KEEZHAKASAKUDY 11 KV	x236661	300/1A,11000/110 V	24.95	0
11KV	TOWN 3 - 11 KV	x236663	300/1A,11000/110 V	5.7	0
11KV	Town North				0
11KV	SPINNING MILL -11 KV	xD452858	200/5,11000/110 V	0.068	0
11KV	MAHE - 11 KV	x236686	200/5,11000/110 V	13.1776	0
11KV	PANDAKKAL - 11 KV	x236683	200/5,11000/110 V	10.62	0
11KV	CHALAKKARA - 11KV	x236681	200/5,11000/110 V	4.7553	0
11KV	AUX - 11 KV	x236687	200/5,11000/110 V	0.0709	0

Voltage level	Feeder Name	Meter S.No	CT/PT ratio	Import (MU)	Export (MU)
33KV	Adivipulam-33KV Line-1	x621354	500/1A,11000/110 V	0	0
33KV	Adivipulam-33KV Line-2			0	0
110 KV	All EHT feeders			413.94	0

3.8 Unit wise Performance

Electricity Department Puducherry, supplies power to four region and three circle of UT of Puducherry. PED has total three circles, ten divisions and there are following category in which the energy consumption is divided Residential, agriculture, Commercial & others. The performance of all the division are shown in below table:

S.No	Name of circle	Name of Division	Consumer category	Total Number of Connections (Nos)	Input energy (MU)	Total Energy (MU)	T&D loss (MU)	T&D loss (%)	Billing Efficiency	Billed Amount in Rs. Crore	Collected Amount in Rs. Crore	Collection Efficiency	AT & C loss (%)
1	Circle-1	Puducherry	Residential	276735	2371.92	632.03	264.35	11.15%					
			Agricultural	6170		56.69							
			Commercial/Industrial-LT	47950		264.75							
			Commercial/Industrial-HT	436		742.18							
			Others	41105		423.32							
	Circle-1	Puducherry		359193	2371.92	2118.96	264.35	11.15%	89.34	1187.726	1066.449	89.79	19.79
2	Circle-2	Karaikal	Residential	65390	356.69	115.08	41.229	11.56%					
			Agricultural	809		4.62							
			Commercial/Industrial-LT	11962		31.88							
			Commercial/Industrial-HT	68		138.65							
			Others	12757		32.75							
	Circle-2	Karaikal		90986	356.69	322.98	41.229	11.56%	90.55	203.51	188.42	92.59	16.16
3	Circle-2	Mahe	Residential	10318	32.63	19.26	4.39	13.45%					
			Agricultural	3		0.00							
			Commercial/Industrial-LT	4800		7.87							
			Commercial/Industrial-HT	4		1.02							
			Others	3130		0.09							

S.No	Name of circle	Name of Division	Consumer category	Total Number of Connections (Nos)	Input energy (MU)	Total Energy (MU)	T&D loss (MU)	T&D loss (%)	Billing Efficiency	Billed Amount in Rs. Crore	Collected Amount in Rs. Crore	Collection Efficiency	AT & C loss (%)
	Circle-2	Mahe		18255	32.63	28.24	4.39	13.45%	86.55	13.1	12.3	93.89	18.74
4	Circle-2	Yanam	Residential	13152	54.09	20.00	6.06	11.20%					
			Agricultural	57		0.31							
			Commercial/Industrial-LT	1789		14.81							
			Commercial/Industrial-HT	25		11.20							
			Others	2563		1.72							
	Circle-2	Yanam		17586	54.09	48.03	6.06	11.20%	88.80	29.34	27.9	95.09	15.56
5		U.T of Puducherry	Residential	358628	2815.32	786.37	297.102 146	10.55%					
			Agricultural	7029		61.62							
			Commercial/Industrial-LT	60436		319.30							
			Commercial/Industrial-HT	518		893.05							
			Others	59409		457.88							
Overall				486020	2815.32	2518.22	297.10	10.55%	89.45	1433.676	1295.069	90.33	19.20

Note: 1. Four regions namely Puducherry, Karaikal, Mahe & Yanam called in two circle Circle 1- Puducherry Region alone and Circle -2 contains Karaikal, Mahe and Yanam region. All four regions combined called UT of Puducherry.

Note: 2. Region wise connected load is not available Hence UT connected load is being furnished.

Note: 3. Category Wise Billed And collected Amount not available, Hence UT circle wise being furnished.


 23/05/2023

3.9 Energy Conservation measures already taken & proposed for Future

At present the ratio of HT: LT ratio is 0.635 and on implementation of RDSS scheme (Loss Reduction Program) for an amount of sanction Rd.83.21 CRs it is expected the HT: LT ratio will come down to progressively to 1:1.4 ratio by the end of the year 2024-25. The technical loss under LT distribution will come down considerably.

Similarly under Smart Prepaid Metering Project through RDSS scheme, it is proposed to provide Smart pre-paid Energy meters to all class of consumers at the UT of Puducherry through M/s.PFC Consulting Limited (PFCCL) under TOTEX model. On implementation of the scheme, real time energy flow could be observed and the commercial loss pockets could be identified through software and therefore significant reduction in commercial loss could be achieved by the department by the end of 2024-25.

The details of anticipated progressive reduction in AT&C loss by end of FY-2024-25 is detailed below:

S.No	Result Parameter	AT&C loss Trajectory under RDSS		
		FY23	FY24	FY25
1	AT&C Loss	16.50%	14.00%	11.56%

3.10 Critical Comments

The Concept of Aggregate Technical & Commercial losses provides a realistic picture of loss situation in the context it is measured. It is combination of energy loss (Technical loss + Theft + inefficiency in billing) & Commercial loss (Default in payment + inefficiency in collection)

Transmission & Distribution losses (T&D losses)

$$\text{T\&D Losses} = \{1 - (\text{Total energy Billed} / \text{Total energy Input in the system})\} \times 100$$

Aggregate technical and commercial losses (AT&C losses)

$$\text{AT\&C Losses} = \{1 - (\text{Billing Efficiency} \times \text{Collection Efficiency})\} \times 100$$

where, Billing efficiency = Total unit Billed / Total unit Inputs

Collection efficiency = Revenue collected / Amount Billed

It is a well-known and acknowledged fact that distribution is the most risk prone segment and weakest link of the entire value chain of power sector, which has also been recognized in the National Electricity Policy. Apart from meeting high consumer expectations in terms of services provided and universal service obligation, the most challenging task of a distribution

licensee is containing the losses in its system. Losses arise both as a natural phenomenon in the network (technical losses) and also due to unauthorized consumption by some consumers of the distribution licensee (commercial losses).

The overall average T & D Losses & AT & C Losses of the PED, are 12.11% & 19.20% in the year of FY 2020-21.

DISCOM T & D Losses computation approach

Transmission losses = Total Energy Purchased - Total Energy Sale - Total Input

Transmission losses (MU)	Value
Total Energy Purchased	3006.36
Total Energy Sale	2518.14
Transmission losses	70.19
Total Input	2818.59
Transmission losses (%)	2.45

3.11 Inclusion & Exclusions

Not applicable

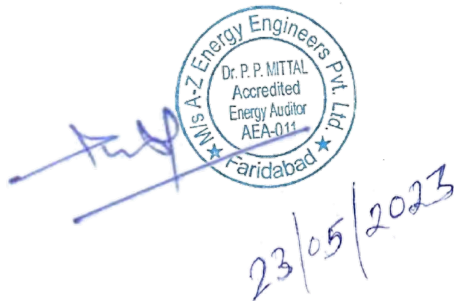
3.12 Detailed Formats to be annexed

An annual energy audit checklist is used to assess the energy efficiency of PED based on equipment, appliances, design, and usage. Accredited Energy Audit for develops this checklist to identify opportunities for energy cost reduction and recommend solutions.

Documentary evidence for T & D system related data voltage-wise energy input data, sale data, feeder-wise loss data, collection efficiency etc.

- ▶ List of Measures adopted for energy conservation and quantity of energy saved with proper document support.
- ▶ Checking & verification of over loading of feeders at Substation level either by the study of SCADA system or by the log book
 - Month wise input and billed energy.
 - T&D losses computation approach.
 - Un-metered energy consumption approach.
 - Internal field audit report of input and billed energy.
 - Performance of Discom on distribution losses.

- Outcome of internal filed audit.
- Measures taken to reduce losses and improve losses.
- Zone/circle/Division/Sub-division wise loss computation.
- Reduction achieved, measures adopted for energy conservation and quantity of energy saved.
- Report on distribution losses.
- Write up on energy scenario.
- Net Input Energy Computation Details.
- Category wise consumer's details.
- Category wise consumers connected load and % load
- Division wise subsidy details.
- Bifurcation of Billed Energy (metered billed energy and unmetered billed energy).

A handwritten signature in blue ink is written over a circular stamp. Below the signature, the date '23/05/2023' is handwritten in blue ink.

23/05/2023

IV. Note of the EA/EM along with queries & replies to data gaps

Electricity Department Puducherry has T&D losses 12.11% which is good. AT&C losses 19.20% which is higher for Discom sector. Various schemes have been implemented by PED to reduce losses.

Feeder-wise/unit-wise losses are not available due to:

- I. The entire EHT/HT/LT system is in Ring Main. For ring-main connectivity, the electrical connection keeps changing in fault conditions, maintenance purpose and optimization of asset. Thus, feeder-wise energy accounting will not be correct; it is calculated as a whole.
- II. 100% consumer indexing is not in place; thus, feeder wise /DTR wise energy accounting or loss calculation is not possible.
- III. PED operates in small area comprising of single unit. Thus, loss of entire unit is given. However, from FY 2020-2021 onwards, unit wise loss can be provided by dividing the licensed area in units/divisions by proper arrangement at our end.
- IV. PED is having the following documents for purchase power, Input/Billed energy i.e. Internal Departmental Report, Petition & billing software database. Also supporting documents for the same has been provided which is attached in annexure of report.
- V. Four regions namely Puducherry, Karaikal, Mahe & Yanam called in two circle Circle 1- Puducherry Region alone and Circle -2 contains Karaikal, Mahe and Yanam region. All four regions combined called UT of Puducherry.
- VI. Region wise connected load is not available Hence UT connected load is being furnished.
- VII. Category wise Billed amount & collected Amount is not available, Hence UT has provided the amount as a whole (Circle wise).
- VIII. Month wise billed and input energy is not available. Hence UT has provided the total Billed and input energy from book of account.
- IX. There is 3.27 MU data gap in division wise and feeder wise input energy, i.e in division wise it is 2815.32 MU and in feeder wise it is 2818.59 MUs.

Designated Consumer has T&D losses 12.11% & AT&C losses 19.20%. Various schemes have been implemented by DC to reduce losses which are shown in annual report and attached in the annexure of report.

V. Annexures

5.1 Introduction to verification firm

We A-Z Energy Engineers Pvt. Ltd. provides consultancy services in the areas of energy management while conducting Energy Audits in all segments of energy input. For conducting Detailed Energy Audits, Energy Audits under PAT (Mandatory and M&V), we have a pool of experienced BEE Accredited & Certified Energy Auditors, Electrical Engineers, Mechanical Engineers and Technicians having experience of more than 30 years. The Energy Audits is being carried out with sophisticated instruments namely Power-Analyzer, Flue Gas Analyzer, Ultra-sonic flow meter, Techo-meter, Anemometer, Hego-Meter, Digital Thermometer, Thermographic Camera's, Lux Meter, Leak detectors. Laser gun etc.

Objective

- To carry out and take ahead the business of Energy Efficiency and climate change including promotion and dissemination of energy efficient product and services.
- To disseminate the culture of safe manufacturing and Services through safety audits and trainings.
- To facilitate implementation of energy efficiency projects for Demand Side Measures including optimization of energy mix for industries, railways, building sector, lighting, HVAC etc.
- To facilitate implementation of schemes, programs and policies of central and state governments or its agencies applicable for enhancing energy efficiency.
- To provide consultancy services in the field of Clean Development Mechanism and Renewable Energy Certificate projects, Carbon Markets, Demand Side Management, Energy Efficiency, Climate change and other related areas.
- To identify and impart training to build the capacity of stakeholders in the field of Energy Efficiency and safe practices in Industry.
- To act as a resource center in the field of Energy Efficiency and take up the activities of Capacity Building Training and other related activities.

Vision

- ❖ To make use of energy sustainable.
- ❖ To create and sustain markets for energy efficiency in India
- ❖ To facilitate energy efficiency improvement through private sector investments in energy efficiency.

Mission

- ❖ To assist all stakeholders in implementing energy efficiency and realizing savings.

- ❖ To create awareness regarding merits of improvement of energy efficiency and safety practices in private and public sector.

We are Accredited Energy Auditor from BEE, also empanelled by BEE for PAT M & V Audits and Mandatory Energy Audit Projects. A-Z Energy Engineers Pvt. Ltd. has been short listed by Bureau of Energy Efficiency as an Energy Service Company (ESCO), it is an ISO 9001:2015 certified company. We have completed more than 1260 nos. projects, including 52 PAT projects

Dr. P.P. Mittal the Founder Director of A-Z Energy Engineers Pvt. Ltd. was awarded by Govt. of India in National Energy Conservation Award 2013, 2015 & 2016. MSME Ministry Govt. of India awarded “Best Services Providing Company” it was awarded by Hon’ble Prime Minister of India. Dr. P.P. Mittal, also received the “Energy Engineer” of South-East Asia Sub-continent award 2016 & 2018 at Washington DC & Charlotte USA respectively. Haryana Govt. also recognized the services of Dr. P.P. Mittal, Ph.D, MBA, Post Graduate Diploma in Power Distribution, Chartered Engineer, Lead Auditor - Indian Green Building Council Hyderabad, Accredited Energy Auditor (AEA-011).

Accolades

- Stand first in MSME Micro Services Award 2013 and award received from **Hon’ble Prime Minister of India on 18/10/2016 at Ludhiana**. This award consist Trophy, Certificate & cash prize of Rs. 3 lacs.
- Received prestigious “**Legend in Energy**” Award for Asian Sub-continent from AEE, Atlanta at Washington, DC on 20/09/2016.
- Received Award from AEE Atlanta at Washington citing as “Energy Engineer–2016 & 2018” of South-East Asia sub-continent
- Received Letter of appreciation from **Chief Minister of Haryana**
- Winner Haryana State Energy Conservation Award 2012 with Certificate & Rs. 50,000/-
- National Energy Conservation Award 2013
- National Energy Conservation Award 2015
- National Energy Conservation Award 2016
- Appreciation from Sh. Kalraj Misra, Hon'ble Minister of State for MSME.
- Received Appreciation from Sh. Haribhai Parathibhai Chaudhary, Minister of State for MSME, Govt. of India
- Received Appreciation from Sh. K.K. Jalan, IAS Secretary, MSME
- Received appreciation from Sh. Devender Singh, IAS, Secretary Power, Haryana
- Received Appreciation from Institute of Engineers on Energy Day

- Received Appreciation from HAREDA, Chandigarh
- Received feedback & appreciation from 400 units including CERC, UNDP & CAG

I. Name of the Firm

Name of Accredited Firm	Accredited Energy Auditor
A-Z Energy Engineers Pvt. Ltd. Darya Ganj New Delhi-110002	Dr. P PMittal :- AEA 0011 Registration Number:- EmAEA-0024

II. Composition of Team

Sr. No.	Name	Qualification	EM/EA/AEA/EmAEA Registration No	Experience (In Years)/ Sector
Team Leader				
1	Dr. P.P Mittal	Ph.D, MBA	AEA-011	+45 Years
Sector Expert				
2	Mr. Vipon Chanda	DISCOM Sector	-	30 Years
Team Members				
3	Mr. V.P Sharma	B. Tech	EA- 10061	32 Years
4	Mr. Alok Kumar Tiwari	B.Tech	EM-300137	6 Years
5	Mr. Pankaj Chauhan	Team Member	-	8 Years

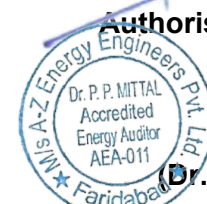
III. Registration No.

EmAEA – 0024

IV. Undertaking from EmAEA

We A-Z Energy Engineers Pvt. Ltd. hereby confirms that our AEA and all other audit team members mentioned in this report has conduct mandatory annual energy audit (Accounting) for Electricity Department Puducherry (hereafter called as DC).

We also confirm that none of our team member was in the employment of the DC within the previous four years, and was not involved in undertaking energy audit of the DC within the previous four years.


Authorised Signatory

(Dr. P.P. MITTAL)
Director

5.2 Minutes of Meeting with the Discom.

Minutes of Meeting with Electricity Department Puducherry., Puducherry & A-Z Energy Engineers Pvt. Ltd., New Delhi

Electricity Department Puducherry.

AZ Energy Engineers Pvt. Ltd.

AZ Energy Engineers audit team visited the site on Month of December and conduct the energy audit accounting with reference to the Electricity department Puducherry work order dated 22th Feb 2023 and notification from the Bureau of Energy Efficiency dated 6th October 2021 for Conduct of Energy Audit (Accounting) in Electricity Distribution Companies).

Following are the key observations during audit.

- Filled in proforma (Region wise) for FY 2020-21 was filled with PED available & Audit team.
- Client has provided the following documents for Purchase input Energy i.e. Government Approved bills copy & Internal Department Sheet.
- Client has provided details for action plan to reduce losses
- Verified T&D losses, AT&C losses & Collection Efficiency is 12.11%, 19.20% & 90.33% respectively based on the filled in proforma and verified source documents.
- Region wise connected load is not available Hence UT connected load is being furnished.
- Month wise breakup & Category Wise Billed And collected Amount not available, Hence UT circle wise being furnished.
- Feeder wise /DTR wise energy accounting or loss calculation is not provided.
- Month wise billed and input energy is not available. Hence UT has provided the total Billed and input energy from book of account.

Electricity Department Puducherry.

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GENERAL DIVISION
ELECTRICITY DEPARTMENT
PUDUCHERRY.

AZ energy Engineers Pvt. Ltd.



5.3 Check List prepared by EM/AEA

An annual energy audit checklist is used to assess the energy efficiency of PED based on equipment, appliances, design, and usage. Accredited Energy Auditor develops this checklist to identify opportunities for energy cost reduction and recommend solutions.

Documentary evidence for T & D system related data voltage-wise energy input data, sale data, feeder-wise loss data, collection efficiency etc.

► List of Measures adopted for energy conservation and quantity of energy saved with proper document support.

► Checking & verification of over loading of feeders at Substation level either by the study of SCADA system or by the log book

- Month wise input and billed energy.
- T&D losses computation approach.
- Un-metered energy consumption approach.
- Internal field audit report of input and billed energy.
- Performance of discom on distribution losses.
- Outcome of internal filed audit.
- Measures taken to reduce losses and improve losses.
- Zone/circle/Division/Sub-division wise loss computation.
- Reduction achieved, measures adopted for energy conservation and quantity of energy saved.
- Report on distribution losses.
- Write up on energy scenario.
- Net Input Energy Computation Details.
- Category wise consumer's details.
- Category wise consumers connected load and % load
- Division wise category wise consumer's subsidy details.
- Bifurcation of Billed Energy (metered billed energy and unmetered billed energy).

5.4 Brief Approach, Scope & Methodology for audit

Scope of annual energy accounting is as per guidelines and notification from BUREAU OF ENERGY EFFICIENCY, New Delhi dated 6th October, 2021



5.5 Infrastructure Details

Infrastructure details

1	Parameters	Total	Covered during in audit	Verified by Auditor in Sample Check	
i	Number of circles	3	3		
ii	Number of divisions	10	10		
iii	Number of sub-divisions	60	60		
iv	Number of feeders	126	126		
v	Number of DTs	3123	3123		
vi	Number of consumers	499294	499293		
2	Parameters	66kV and above	33kV	11/22kV	LT
a. i.	Number of conventional metered consumers	0			
ii	Number of consumers with 'smart' meters	0			31500
iii	Number of consumers with 'smart prepaid' meters	0			
iv	Number of consumers with 'AMR' meters	8	0	0	0
v	Number of consumers with 'non-smart prepaid' meters	0	0	524	451416
vi	Number of unmetered consumers				15846
vii	Number of total consumers	8		524	498762
b.i.	Number of conventionally metered Distribution Transformers	0			
ii	Number of DTs with communicable meters	2645			
iii	Number of unmetered DTs	467			
iv	Number of total Transformers	3112			
c.i.	Number of metered feeders	0	2	124	5290
ii	Number of feeders with communicable meters	0	2	124	
iii	Number of unmetered feeders	0	0	0	
iv	Number of total feeders	0	2	124	5290
d.	Line length (ct km)	6319.857			
e.	Length of Aerial Bunched Cables	0			
f.	Length of Underground Cables	994.246			

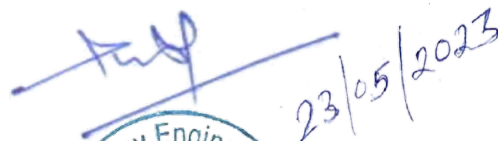
Voltage level	Particulars	MU	Reference
230 kV	Long-Term Conventional	2936.90	Includes input energy for franchisees
	Medium Conventional	NA	
	Short Term Conventional	NA	
	Banking	NA	
	Long-Term Renewable energy	NA	
	Medium and Short-Term RE	NA	Includes power from bilateral/ PX/ DEEP
	Captive, open access input	NA	Any power wheeled for any purchase other than sale to DISCOM. Does not include input for franchisee.
	Sale of surplus power		
	Quantum of inter-state transmission loss	71.95	As confirmed by SLDC, RLDC etc
	Power procured from inter-state sources	2,936.90	Based on data from Form 5
	Power at state transmission boundary	2,864.95	
33kV	Long-Term Conventional		
	Medium Conventional	0	
	Short Term Conventional		
	Banking	0	
	Long-Term Renewable energy	0	
	Medium and Short-Term RE	0	
	Captive, open access input		
	Sale of surplus power		
	Quantum of intra-state transmission loss	0	
	Power procured from intra-state sources	0	
	Input in DISCOM wires network	2,864.95	
33 kV	Renewable Energy Procurement	0	
	Small capacity conventional/ biomass/ hydro plants Procurement		
	Captive, open access input	0	
11 kV	Renewable Energy Procurement		
	Small capacity conventional/ biomass/ hydro plants Procurement		
	Sales Migration Input		
LT	Renewable Energy Procurement		
	Sales Migration Input		

Voltage level	Particulars	MU	Reference
	Energy Embedded within DISCOM wires network	0	
	Total Energy Available/ Input	2,865	
Voltage level	Energy Sales Particulars	MU	Reference
LT Level	DISCOM' consumers	1,186.27	Include sales to consumers in franchisee areas, unmetered consumers
	Demand from open access, captive		Non DISCOM's sales
	Embedded generation used at LT level		Demand from embedded generation at LT level
	Sale at LT level	1,186.27	
	Quantum of LT level losses	277	
	Energy Input at LT level	1,462.84	
22/11 kV Level	DISCOM' consumers	917.92	Include sales to consumers in franchisee areas, unmetered consumers
	Demand from open access, captive	0	Non DISCOM's sales
	Embedded generation at 11 kV level used	0	Demand from embedded generation at 11kV level
	Sales at 22/11 kV level	917.92	
	Quantum of Losses at 22/11 kV	50	
	Energy input at 22/11 kV level	967.48	
33 kV Level	DISCOM' consumers	0	Include sales to consumers in franchisee areas, unmetered consumers
	Demand from open access, captive		Non DISCOM's sales
	Embedded generation at 33 kV or below level		This is DISCOM and OA demand met via energy generated at same voltage level
	Sales at 33 kV level	0	
	Quantum of Losses at 33 kV	0	
	Energy input at 33kV Level	0	
> 33 kV(110 KV)	DISCOM' consumers	413.94	Include sales to consumers in franchisee areas, unmetered consumers
	Demand from open access, captive		Non DISCOM's sales
	Cross border sale of energy		
	Sale to other DISCOMs		
	Banking		
	Energy input at > 33kV Level	434.64	
	Sales at 66kV and above (EHV)	413.94	

Voltage level	Particulars	MU	Reference
	Total Energy Requirement	2,864.96	
	Total Energy Sales	2,518.13	

5	DISCOM	Input (in MU)	Sale (in MU)	Loss (in MU)	Loss %
I	LT	1,463	1,186	277	18.91
ii	22/11 Kv	967	918	50	5.12
iii	33 kv	0	0	0	0.00
iv	110 KV	435	413.94	21	4.76

Loss Estimation for DISCOM		
	T&D loss in MU	347
	D loss in MU	297.10
	T&D loss (%)	12.11%
	D loss (%)	10.55%




5.6 Power Purchase details

There is no major Generating Station in the UT of Puducherry except a 32.5 MW Gas Power plant namely Puducherry Power Corporation Limited at Karaikal .The Power requirement is being met through power allocation made by Ministry of Power, Government of India from various Central Generating Stations . The allocation made by MOP, GOI is 591 MW. The agencies wise allocation is detailed below. The Power is being recovered at 230 KV level from Grid

PED, Puducherry purchase the power from the various type of generation station the details of month wise purchase power is given in the following table

Power Purchase Details

S. No.	Name of Generation Station	Generation Capacity
1	Neyveli Lignite Corporation of India Limited	202 MW
2	National Thermal Power Corporation	213 MW
3	Madras Atomic Power Station	8 MW
4	KAIGA Atomic Power Station	38 MW
5	Kudankulam Atomic Power Station	70 MW
6	NTPC Tamilnadu Energy company Limited (NTECL)	28 MW
7	NLC Tamilnadu Power Limited(NTPL)	32 MW
	Total	591 MW
	State Owned Generating Station	
	Puducherry Power Corporation Limited	32 MW

5.7 Details of Consumers

Details of Consumers

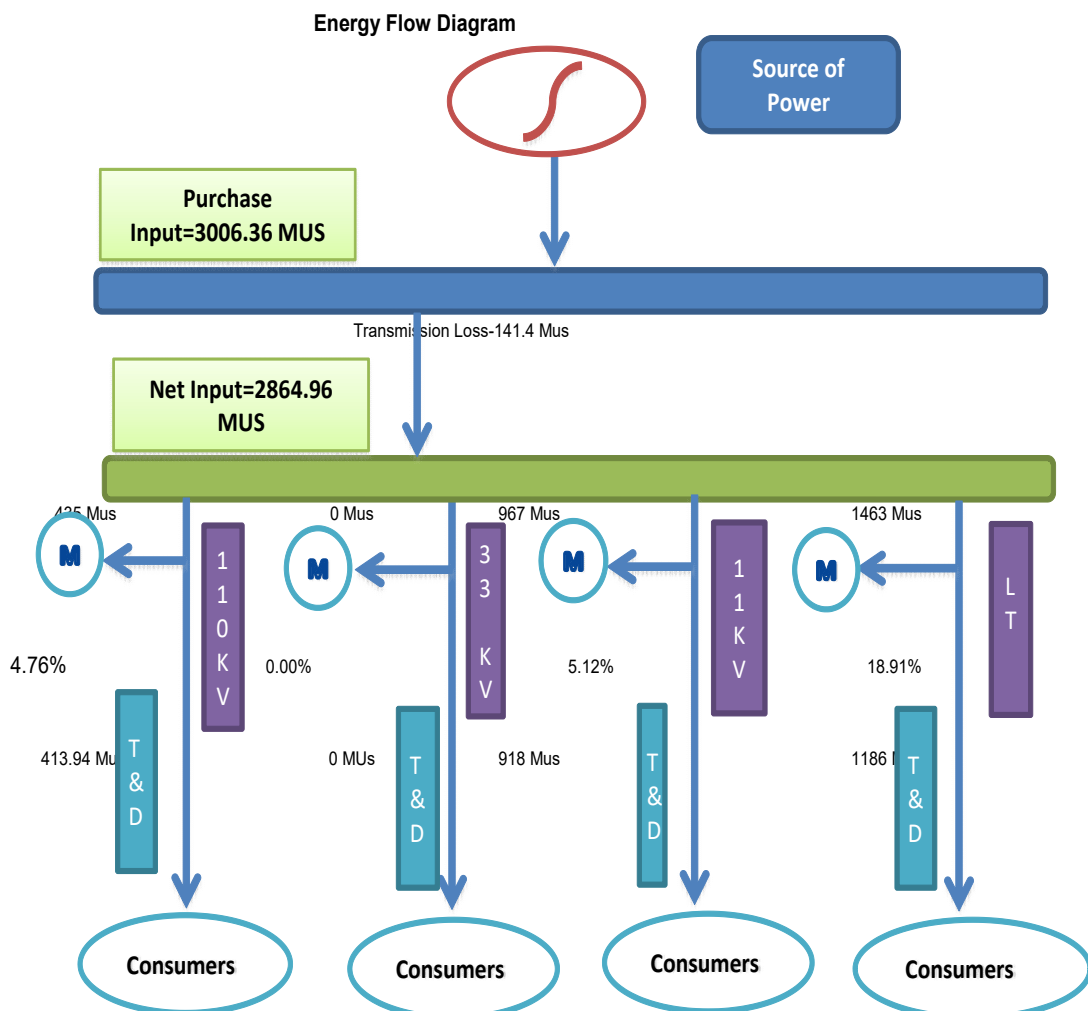
S. No	Type of Consumers	Category of Consumers	No of Consumers	Total Consumption (In MU)
	LOW TENSION CATEGORY			
1	Domestic	LT	358628	806.17
2	Commercial	LT	56050	148.50
3	IP Sets	LT	7029	59.99
4	Life Line services	LT	8248	3.50
5	Temporary Supply	LT	0	4.43
6	Heating and Motive Power/Water Supply	LT	4386	141.95
7		LT		
8	Public Lighting	LT	51153	21.73
	TOTAL LOW TENSION ENERGY BILLED			1186.27
9	HT Water Supply & Central/state Government services	HT	63	53.49
10	HT Industrial + HT-Commercial	HT	455	864.43
11	Industrial (Extra High Voltage)	EHT	8	413.94
	TOTAL HIGH TENSION ENERGY BILLED			1331.86
	TOTAL ENERGY BILLED (LT+HT)		486020	2518.13
	Export to other region (Tamilnadu)			3.92
	TOTAL ENERGY BILLED in MU			2522.05

5.8 Electrical Distribution System

- ▶ Energy flow between transmission and 220kV/132kV/33kV/22kV/11kV incoming distribution feeders
- ▶ Energy flow between 132kV/33kV outgoing and 22 kV/11kV incoming feeders
- ▶ Energy flow between 33/22/11kV feeders and distribution transformers, or high voltage distribution system

Energy flow between distribution transformer, or high voltage distribution system to end-consumer, including ring main system

Energy flow between Feeder to end-consumer & Energy flow between 132kV/33kV/22kV/11 kV directly to consumer



5.9 Detailed Proforma & Document Verified with each Parameters

A. Signed Proforma

General Information				
1	Name of the DISCOM	Electricity Department, Puducherry		
2	i) Year of Establishment	1962		
	ii) Government/Public/Private	Government		
3	DISCOM's Contact details & Address			
i	City/Town/Village	UT of Puducherry		
ii	District	UT of Puducherry		
iii	State	Puducherry	Pin	605001
iv	Telephone		Fax	0413-2331556
4	Registered Office			
i	Company's Chief Executive Name	T.Chanemougam		
ii	Designation	Superintending Engineer Cum HoD		
iii	Address	Electricity Department, Main Office, No.137, NSJ Bose Salai,		
iv	City/Town/Village	Puducherry	P.O.	605001
v	District	Puducherry		
vi	State	Puducherry	Pin	605001
vii	Telephone	9489080400	Fax	
5	Nodal Officer Details*			
i	Nodal Officer Name (Designated at DISCOM's)	Thiru.Rajesh Sanyal		
ii	Designation	Superintending Engineer		
iii	Address	Electricity Department, Main Office, No.137, NSJ Bose Salai,		
iv	City/Town/Village	Puducherry	P.O.	605001
v	District	Puducherry		
vi	State	Puducherry	Pin	605001
vii	Telephone	0413-2341238	Fax	0413-2331556
6	Energy Manager Details*			
i	Name	M.Ramesh		
ii	Designation	Executive Engineer	Whether EA or EM	EM
iii	EA/EM Registration No.	-		
iv	Telephone	0413-2341238	Fax	
v	Mobile	9489080400	E-mail ID	ee10ped@pv.gov.in
7	Period of Information			
	Year of (FY) information including Date and Month (Start & End)	FY-2020-21		

I/we undertake that the information supplied in the Form Input Energy and SJ is accurate to the best of my knowledge.

Authorised Signatory and Seal

Name of Authorised Signatory:
Name of the Designated Consumer:
Full Address:-

**T. CHANEMOUGAM, B.E., M.I.E., PGDCA,
SUPERINTENDING ENGINEER
- cum - HOD
ELECTRICITY DEPARTMENT
PUDUCHERRY.**

Signature:-
Name of Energy Manager:
Registration Number:

Signature of Accredited Energy Auditor
Name
Date

**M. RAMESH
EXECUTIVE ENGINEER - GENERAL
GENERAL DIVISION
ELECTRICITY DEPARTMENT
PUDUCHERRY.**

Performance Summary of Electricity Distribution Companies			
1	Period of Information Year of (FY) information including Date and Month (Start & End)		FY-20-21
2	Technical Details		
(a)	Energy Input Details		
(i)	Input Energy Purchase (From Generation Source)		3006.36
(ii)	Net input energy (at DISCOM Periphery after adjusting the transmission losses and energy traded)		2864.96
(iii)	Total Energy billed (is the Net energy billed, adjusted for energy traded)) in MU		2518.14
(b)	Transmission and Distribution (T&D) loss Details	MU	346.82
	Collection Efficiency	%	12.11
(c)	Aggregate Technical & Commercial Loss	%	90.33%
		%	19.20%

I/We undertake that the information supplied in this Document and Pro-forma is accurate to the best of my knowledge and if any of the information supplied is found to be incorrect and such information result into loss to the Central Government or State Government or any of the authority under them or any other person affected, I/we undertake to indemnify such loss.

Authorised Signatory and Seal

Name of Authorised Signatory
Name of the DISCOM:
Full Address:-

T.CHANEMOUGAM

Electricity Department, Puducherry
Electricity Department,
Main Office, No.137, NSJ Bose Salai,
Puducherry - 605 001

Signature:-

Name of Energy Manager:

Registration Number:

Seal

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Form-Details of Input Infrastructure April-20 to March-21							Remarks (Source of data)
1	Parameters	Total	Covered during in audit	Verified by Auditor In Sample Check			
i	Number of circles	3					
ii	Number of divisions	10					
iii	Number of sub-divisions	60					
iv	Number of feeders	126					
v	Number of DTs	3100					
vi	Number of consumers	486020					
2	Parameters	66kV and above	33kV	11/22kV	LT	Total	
a. i.	Number of conventional metered consumers	0					
ii	Number of consumers with 'smart' meters	0			31500	31500	
iii	Number of consumers with 'smart prepaid' meters	0					
iv	Number of consumers with 'AMR' meters	8	0	0	0	8	
v	Number of consumers with 'non-smart prepaid' meters	0	0	518	438725	439235	
vi	Number of unmetered consumers				15277	15277	
vii	Number of total consumers	8		518	486020	486020	
						Total no of consumer including street light of 51153 nos.	

b.i.	Number of conventionally metered Distribution Transformers	0					
ii	Number of DTs with communicable meters	2635				2635	
iii	Number of unmetered DTs	465				465	
iv	Number of total Transformers	3100				3100	
c.i.	Number of metered feeders	0	2	124	5270		
ii	Number of feeders with communicable meters	0	2	124	0		
iii	Number of unmetered feeders	0	0	0	930		
iv	Number of total feeders	0	2	124	6200		
d.	Line length (ct km)		5789.601				
e.	Length of Aerial Bunched Cables		0				
f.	Length of Underground Cables		658.986				

3	Voltage level	Particulars	MU	Reference	Remarks (Source of data)
i	230 kV	Long-Term Conventional	2936.90	Includes input energy for franchisees	includes long term conventional power and Puducherry owned Power generation (PPCL)
		Medium Conventional	NA		
		Short Term Conventional	NA		
		Banking	NA		
		Long-Term Renewable energy	NA		
		Medium and Short-Term RE	NA	Includes power from bilateral/ PX/ DEEP	
		Captive, open access input	NA	Any power wheeled for any purchase other than sale to DISCOM. Does not include input for franchisee.	
		Sale of surplus power	71.95	As confirmed by SLDC, RLDC etc	
		Quantum of inter-state transmission loss		Based on data from Form 5	
		Power procured from inter-state sources			
ii	33kV	Power at state transmission boundary	2,864.95		
		Long-Term Conventional			
		Medium Conventional	0		
		Short Term Conventional			
		Banking	0		
		Long-Term Renewable energy	0		
		Medium and Short-Term RE	0		
		Captive, open access input			
		Sale of surplus power			
		Quantum of intra-state transmission loss	0		
iii		Power procured from intra-state sources	0		
		Input in DISCOM wires network	2,864.95		

iv	33 kV	Renewable Energy Procurement	0				
		Small capacity conventional/ biomass/ hydro plants Procurement					
		Captive, open access input	0				
v	11 kV	Renewable Energy Procurement					
		Small capacity conventional/ biomass/ hydro plants Procurement					
		Sales Migration Input					
vi	LT	Renewable Energy Procurement					
		Sales Migration Input					
vii		Energy Embedded within DISCOM wires network	0				
viii		Total Energy Available/ Input	2,865				
4	Voltage level	Energy Sales Particulars	MU	Reference			
		DISCOM' consumers	1,186.27	Include sales to consumers in franchisee areas, unmetered consumers			
		Demand from open access, captive		Non DISCOM's sales			
i	LT Level	Embedded generation used at LT level		Demand from embedded generation at LT level			
		Sale at LT level	1,186.27				
		Quantum of LT level losses	291				
		Energy Input at LT level	1,477.33				

iii	22/11 kV Level	DISCOM* consumers	917.92	Include sales to consumers in franchisee areas, unmetered consumers			
ii		Demand from open access, captive	0	Non DISCOM's sales			
		Embedded generation at 11 kV level used	0	Demand from embedded generation at 11kV level			
		Sales at 22/11 kV level	917.92				
		Quantum of Losses at 22/11 kV	50				
		Energy input at 22/11 kV level	967.48				
iii	33 kV Level	DISCOM* consumers	0	Include sales to consumers in franchisee areas, unmetered consumers			
		Demand from open access, captive		Non DISCOM's sales			
		Embedded generation at 33 kV or below level		This is DISCOM and OA demand met via energy generated at same voltage level			
		Sales at 33 kV level	0				
		Quantum of Losses at 33 kV	0				
		Energy input at 33kV Level	0				

iv	> 33 kv(110 kv)	DISCOM* consumers	413.94	Include sales to consumers in franchisee areas, unmetered consumers (Non DISCOM's sales)		
		Demand from open access, captive				
		Cross border sale of energy				
		Sale to other DISCOMs				
		Banking				
		Energy input at > 33kv Level	420.15			
		Sales at 66kv and above (EHV)	413.94			
		Total Energy Requirement	2,864.96			
		Total Energy Sales	2,518.13			
Energy Accounting Summary						
5	DISCOM	Input (in MU)	Sale (in MU)	Loss (in MU)	Loss %	
i	LT	1,477	1,186	291	19.70	
ii	22/11 Kv	967	918	50	5.12	
iii	33 kv	0	0	0	0.00	
iv	110 KV	420	413.94	6	1.48	
6	Open Access, Captive	Input (in MU)	Sale (in MU)	Loss (in MU)		
i	LT	0	0			
ii	11 Kv	0	0			
iii	33 kv	0	0			
iv	> 33 kv	0	0			

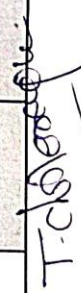
Loss Estimation for DISCOM	
T&D loss in MU	347
D loss in MU	275
T&D loss (%)	12.11%
D loss (%)	10.92%

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Details of Input Energy Sources							
Period From April-20 To March-21							
A. Generation at Transmission Periphery (Details)							
S.No.	Name of Generation Station	Generation Capacity (In MW)	Type of Generation (Based- Solid (Coal /Lignite)/Liquid/Gas/ Renewable (biomass- bagasse)/Others)	Type of Contract (in years/months /days)	Type of Grid (Intra- state/Inter- state)	Point of Connection (POC) Loss MU	Voltage Level (At input)
	There is no major Generating Station in the UT of Puducherry except a 32.5 MW Gas Power plant namely Puducherry Power Corporation Limited at Karaikal .The Power requirement is being met through power allocation made by Ministry of Power,Government of India from various Central Generating Stations . The allocation made by MOP,GOI is 591 MW.The agencies wise allocation is detailed below. The Power is being received at 230 KV level from Grid.						
1	Neyveli Lignite Corporation of India Limited						202 MW
2	National Thermal Power Corporation						213 MW
3	Madras Atomic Power Station						8 MW
4	KAIGA Atomic Power Station						38 MW
5	Kudankulam Atomic Power Station						70 MW
6	NTPC Tamilnadu Energy company Limited (NTECL)						28 MW
7	NLC Tamilnad Power Limited (NTPL)						32 MW
	Total						591 MW
	State Owned Generating Station						
	Puducherry Power Corporation Limited						32 MW


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Form-Input energy(Details of Input energy & Infrastructure)			
Sector-Electricity Distribution Companies			
A. Summary of energy Input & Infrastructure			
S.No	Parameters	FY-2020-21	Remarks (Source of data)
A.1	Input Energy purchased (MU)	2864.95	
A.2	Transmission loss (%)	2%	
A.3	Transmission loss (MU)	70.19	
A.4	Energy sold outside the periphery(MU)	0.00	
A.5	Open access sale (MU)	0.00	
A.6	EHT sale	413.94	
A.7	Net input energy (received at DISCOM periphery or at distribution point, after adjustment)-(MU)	2818.59	
A.8	Is 100% metering available at 33/22 kV (Select yes or no from list)	YES	
A.9	Is 100% metering available at 11 kV (Select yes or no from list)	YES	
A.10	% of metering available at DT	85%	
A.11	% of metering available at consumer end	96%	
A.12	No of feeders at 33KV voltage level	2	
A.13	No of feeders at 22KV voltage level	72	
A.14	No of feeders at 11KV voltage level	52	
A.15	No of LT feeders level	6200	
A.16	Line length (ckt. km) at 33KV voltage level	19	
A.17	Line length (ckt. km) at 22KV voltage level	1788.685	
A.18	Line length (ckt. km) at 11KV voltage level	447.179	
A.19	Line length (km) at LT level	3553.737	
A.20	HT/LT ratio	0.634505	


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Zone/Circle	B. Meter reading of Input energy injection points										Remarks (Source of data)	
	S.No	Voltage level	Feeder ID	Feeder Name	Whole Year (2020-21)				Export (MU)			
					Meter S.No	CT/PT ratio	Import (MU)					
Pondy	B.1	22KV		Nellithope feeder 22 KV	x236639	400/1.22000/1 10 V	33.33	0.00			From the Log Register of Marapalam 110/22-11 KV SS	
	B.2	22KV		Ariyankuppam feeder22 KV	x236574	400/1.22000/1 10 V	60.95	0.00				
	B.3	22KV		Mill Feeder 22 KV	x236520	300/1.22000/1 10 V	26.35	0.00				
	B.4	22KV		Raj Nivas feeder22 KV	x236524	400/1.22000/1 10 V	7.25	0.00				
	B.5	22KV		Town feeder22 KV	x236521	300/1.22000/1 10 V	18.05	0.00				
	B.6	22KV		Amaravathy feeder22 KV	x236573	400/1.22000/1 10 V	26.95	0.00				
	B.7	22KV		New Feeder 22 KV	x236522	400/1.22000/1 10 V	7.57	0.00				
	B.8	22KV		Pillaihattam feeder22 KV	x236523	300/1.22000/1 10 V	46.72	0.00				
	B.9	11KV		Laporte feeder11 KV	x236668	600/1.10000/1 10 V	0.00	0.00				
	B.10	11KV		GH Feeder11 KV	x236664	600/1.10000/1 10 V	17.92	0.00				
	B.11	11KV		Kandan Feeder 11 KV	x236669	600/1.10000/1 10 V	0.00	0.00				
	B.12	11KV		Golconda feeder11 KV	x236667	600/1.10000/1 10 V	15.00	0.00				
	B.13	11KV		Market Feeder11 KV	x236666	400/1.10000/1 10 V	0.00	0.00				
	B.14	22KV		Marapalam Feeder 22 KV	x236623	300/1.22000/1 10 V	42.77	0.00				From the Log Register of Villianur 110 /22 KV SS
	B.15	22KV		Kanuvapet Feeder 22 KV	x236622	300/1.22000/1 10 V	20.82	0.00				
	B.16	22KV		Agaram Feeder 22 KV	KA100158	300/1.22000/1 10 V	37.81	0.00				
	B.17	22KV		Sedarapet Interlinking feeder 22 KV	x236620	300/1.22000/1 10 V	43.48	0.00				
	B.18	22KV		Industrial feeder22 KV	x236621	300/1.22000/1 10 V	25.99	0.00				

B.19	22KV		Pandasozhanallur Feeder 22 KV	4236415	400/1.22000/1 10 V	20.16	3.92				From the Log Register of Bahour 110 /22 KV SS
B.20	22KV		Mittal Feeder 22 KV	4236614	400/1.22000/1 10 V	53.34	0.00				
B.21	22KV		Industrial Feeder 22 KV	4236612	400/1.22000/1 10 V	14.23	0.00				
B.22	22KV		Steel Mill 22 KV	4236611	400/1.22000/1 10 V	16.90	0.00				
B.23	22KV		Bahour Feeder 22 KV	4236615	400/1.22000/1 10 V	25.45	0.00				
B.24	22KV		Thavalakuppam Feeder 22 KV	4236610	400/1.22000/1 10 V	0.00	0.00				
B.25	22KV		Paper Mill Feeder 22 KV	4236613	400/1.22000/1 10 V	20.82	0.00				From the Log Register of Kalapet 110/22KV SS
B.26	22KV		Pillaichavady Feeder 22 KV	4236544	300/1.22000/1 10 V	18.61	0.00				
B.27	22KV		Kazhupurupakkam feeder 22 KV	4236519	300/1.22000/1 10 V	0.00	0.00				
B.28	22KV		Alankuppam Feeder 22 KV	4236517	300/1.22000/1 10 V	5.70	0.00				
B.29	22KV		Kanaga chettiukulam 22 KV	4236608	300/1.22000/1 10 V	54.88	0.00				
B.30	22 KV		University 22 KV	40236673	300/1.22000/1 10 V	5.76	0.00				
B.31	22KV		Kurumbapet Interlinking 22 KV	4236635	300/1.22000/1 10 V	0.00	0.00				
B.32	22KV		Kurumbapet feeder 22 KV	4236526	400/1.22000/1 10 V	50.90	0.00				From the Log Register of Kurumbapet 110 /22 KV SS
B.33	22 KV		Karuvadikuppam 22 Kv		400/1.22000/1 10 V	29.43	0.00				
B.34	22KV		JIPMER feeder 22 KV (old)	4236618	400/1.22000/1 10 V	39.51	0.00				
B.35	22KV		Lawspet feeder 22 KV	4236527	300/1.22000/1 10 V	38.28	0.00				
B.36	22KV		ECR feeder 22 KV	4236617	400/1.22000/1 10 V	37.59	0.00				
B.37	22KV		New Jipmer feeder 22 KV	4236567	400/1.22000/1 10 V	24.09	0.00				
B.38	22KV		Moolakulam 22 KV	4236525	400/1.22000/1 10 V	56.72	0.00				
B.39	22KV		PIPDIC -I Feeder 22 KV	4236616	400/1.22000/1 10 V	10.82	0.00				
B.40	22KV		PIPDIC -II Feeder 22 KV	4236565	400/1.22000/1 10 V	24.98	0.00				
B.41	22KV		Sedarapet Feeder 22 KV	4236619	400/1.22000/1 10 V	27.22	0.00				
B.42	22KV		Industrial Feeder 22 KV	4236572	400/1.22000/1 10 V	31.61	0.00				From the Log Register of KORKADU 110/22KV SS
B.43	22KV		Villianur Interlinking Feeder 22 KV	4236631	400/1.22000/1 10 V	12.97	0.00				
B.44	22KV		Abishegappakkam 22 KV	4236636	400/1.22000/1 10 V	12.40	0.00				
B.45	22KV		Mangalam Feeder 22 KV	4236571	400/1.22000/1 10 V	51.74	0.00				
B.46	22KV		Embalam 22 KV	4236570	400/1.22000/1 10 V	45.28	0.00				

B.47	22KV		Manalmedu feeder 22 KV	+236605	300/1.22000/1 10 V	20.95	0.00				From the Log Register of Eripakkam 110/22 KV SS
B.48	22KV		Motchkulam 22 KV	+236568	300/1.22000/1 10 V	0.00	0.00				
B.49	22KV		Madukarai Feeder 22 KV	+236609	300/1.22000/1 10 V	18.71	0.00				
B.50	22KV		Industrial 1 Feeder 22 KV	+236542	300/1.22000/1 10 V	11.58	0.00				
B.51	22KV		Industrial 2 Feeder 22 KV	+236606	300/1.22000/1 10 V	13.32	0.00				
B.52	22KV		Snam Alloys Feeder 22 KV	+236543	300/1.22000/1 10 V	38.05	0.00				
B.53	22KV		Pushpit Feeder 22 KV	+236607	400/1.22000/1 10 V	51.27	0.00				
B.54	22KV		Thirubhuvanai Interlink Feeder 22 KV	+236569	400/1.22000/1 10 V	20.91	0.00				
B.55	22KV		Rampakam feeder 22 KV			0.00	0.00				From the Log Register of Thirubhuvanai 110/22 KV SS
B.56	22KV		Industrial 1 Feeder 22 KV	+236557	400/1.22000/1 10 V	22.43	0.00				
B.57	22KV		Kalitheerthalkuppam 22 KV	+236534	300/1.22000/1 10 V	19.67	0.00				
B.58	22KV		Industrial 2 Feeder 22 KV	+236530	300/1.22000/1 10 V	52.05	0.00				
B.59	22KV		Industrial 3 Feeder 22 KV			11.62	0.00				
B.60	22KV		Eripakkam interlinking feeder 22 KV	+236532	400/1.22000/1 10 V	34.93	0.00				
B.61	22KV		P.S.Pallayam 22 KV	+236531	300/1.22000/1 10 V	27.90	0.00				
B.62	22KV		Sellipet 22 KV	+236555	300/1.22000/1 10 V	35.28	0.00				
B.63	22KV		Station Aux								
B.64	22KV		Spare								
B.65	22KV		L.R.Palayam 22 KV	+236671	300/1.22000/1 10 V	8.98	0.00				From the Log Register of Thethampkkm 110/22 KV SS
B.66	22KV		Manalipet 22 KV	+236672	300/1.22000/1 10 V	16.04	0.00				
B.67	22KV		Vadanur 22 KV	+236558	300/1.22000/1 10 V	15.99	0.00				
B.68	22KV		Industrial Feeder 22 KV	+236556	300/1.22000/1 10 V	19.44	0.00				
B.69	22KV		Interlinking Feeder 22 KV	+236559	300/1.22000/1 10 V	6.22	0.00				
B.70	22KV		BALLARPUR 22 KV	+236670	400/1.22000/1 10 V	23.35	0.00				From the Log Register of SEDHARAPET 110/22 KV SS
B.71	22KV		KATTERIKUPPAM 22 KV	+236541		0.00	0.00				
B.72	22KV		KURUMBAPET 22 KV	+236633	300/1.22000/1 10 V	20.40	0.00				
B.73	22KV		PIPDIC - II 22 KV	+236632	300/1.22000/1 10 V	27.26	0.00				
B.74	22KV		PIPDIC - I 22 KV	+236630	300/1.22000/1 10 V	14.54	0.00				
B.75	22KV		V S K 22 KV	+236640	300/1.22000/1 10 V	0.00	0.00				

Circle-2 Yanam	B.76	22KV	Pathukanni 22 KV	4296834	400/1,2000/1 10 V	10.20	0.00				From the Log Register of Yanam 132/ 11 KV 55
	B.77	11KV	Mettakur Feeder 11 KV	4295662	350/1A,11000 /110 V	4.06	0.00				
	B.78	11 KV	Savithri Nagar feeder 11KV	4295896	300/1A,11000 /110 V	9.70	0.00				
	B.79	11KV	Industrial Feeder 11 KV	4295861	300/1A,11000 /110 V	4.54					
	B.80	11KV	Kurasampeta feeder 11 KV	4295948	300/1A,11000 /110 V	9.89	0.00				
	B.81	11KV	Town Feeder 11 KV	4295897	300/1A,11000 /110 V	11.31	0.00				
	B.82	11KV	Kanakadurga 11 KV			0.00	0.00				
	B.83	11KV	Kanakalpet 11 KV	4296795	600/1A,11000 /110 V	13.82	0.00				
	B.84	11KV	11KV VKR Feeder	4296560	200/1A,11000 /110 V	0.75	0.00				
	B.85	33KV	Adivipulam-33KV Line-1	4611314	600/1A,11000 /110 V	0.00	0.00				
Circle-1 Pondy	B.86	33KV	Adivipulam-33KV Line-2			0.00	0.00				
	B.87	11KV	Clock Tower Feeder 11 KV	4296536	300/1,11000/1 10 V	11.86	0.00				From the Log Register of Vengatanagar 110/11 KV 55
	B.88	11KV	DAT feeder 11 KV	4296224	300/1,11000/1 10 V	12.27	0.00				
	B.89	11KV	Mandi Feeder 11 KV	4296600	300/1,11000/1 10 V	11.04	0.00				
	B.90	11KV	Chief Secretariat Feeder 11 KV	4296603	300/1,11000/1 10 V	11.40	0.00				
	B.91	11KV	Paper Mill Feeder 11 KV	4296602	300/1,11000/1 10 V	10.72	0.00				
	B.92	11KV	Vengatanagar Feeder 11 KV	4295537	300/1,11000/1 10 V	10.76	0.00				
	B.93	11KV	Brindavanam feeder 11 KV	4295554	300/1,11000/1 10 V	16.83	0.00				
	B.94	11KV	GRT Feeder 11 KV			13.62	0.00				
	B.95	11KV	Gingee Salai 11 KV	4295535	300/1,11000/1 10 V	15.77	0.00				
	B.96	11KV	Krishna Nagar 11 KV	4295550	300/1,11000/1 10 V	9.30	0.00				
	B.97	11KV	Muthialpet 11 KV	4296601	300/1,11000/1 10 V	19.79	0.00				
	B.98	22KV	Muthialpet 22 KV	46464419	200/1,2000/1 10 V	21.40	0.00				
	B.99	22KV	Uppar 22 KV	46464431	200/1,2000/1 10 V	21.53	0.00				

Circle-2 Karaikal	B.100	11KV		Nedungadu feeder 11 KV	x236654	300/1A,11000 /110 V	23.28	0.00				From the Log Register of Surakudy 110/11 KV SS
	B.101	11KV		Ambagarathur feeder 11 KV	x236652	600/1A,11000 /110 V	29.97	0.00				
	B.102	11KV		Ceramic feeder 11 KV	x236653	300/1A,11000 /110 V	2.81	0.00				
	B.103	11KV		Industrial feeder 11 KV	x236651	600/1A,11000 /110 V	7.33	0.00				
	B.104	11KV		Alloy feeder 11 KV	x236648	600/1A,11000 /110 V	25.35	0.00				
	B.105	11KV		Agalakannu feeder 11 KV	x236650	600/1A,11000 /110 V	4.38	0.00				
	B.106	11KV		Thirunallar feeder 11 KV	x236647	300/1A,11000 /110 V	7.52	0.00				
	B.107	11KV		Link feeder 11 KV	x236649	600/1A,11000 /110 V	15.00	0.00				
	B.108	11KV		Karaikal Chlorate feeder 11 KV	x236646	300/1A,11000 /110 V	16.43	0.00				
	B.109	11KV		Melakasakudy feeder 11 KV	x236645	400/1A,11000 /110 V	0.00	0.00				
	B.110	11KV		Station 11KV			0.00	0.00				
	B.111	11KV		PPCL 11 KV	x236551	400/1A,11000 /110 V	0.00	0.00				From the Log Register of T.R.PATTINAM SS
	B.112	11KV		INDUSTRIAL 11 KV	x236552	400/1A,11000 /110 V	9.68	0.00				
	B.113	11KV		VANJUR 11 KV	x236545	400/1A,11000 /110 V	2.02	0.00				
	B.114	11KV		Karaikal Town feeder 11 KV	x236549	400/1A,11000 /110 V	26.59	0.00				
	B.115	11KV		INTERLINK 11 KV	x236547	400/1A,11000 /110 V	14.50	0.00				

Circle-2 Karaikal	B.116	11KV	POLAGAM 11 KV	x236548	400/1A,11000 /110 V	3.19	0.00					
	B.117	11KV	ALLOY 11 KV	x236553	400/1A,11000 /110 V	17.32	0.00					
	B.118	11KV	STEEL 11 KV	x236546	400/1A,11000 /110 V	16.22	0.00					
	B.119	11KV	LINK 11 KV (Mandapathur)	x236656	300/1A,11000 /110 V	11.79	0.00					From the Log Register of PT VASAL 110/11KV
	B.120	11KV	TOWN 2 - 11 KV	x236662	300/1A,11000 /110 V	23.13	0.00					
	B.121	11KV	TOWN 1 - 11 KV	x236660	300/1A,11000 /110 V	21.33	0.00					
	B.122	11KV	POOVAM 11 KV	x236658	300/1A,11000 /110 V	29.54	0.00					
	B.123	11KV	KEEZHKASAKUDY 11 KV	x236661	300/1A,11000 /110 V	24.95	0.00					
	B.124	11KV	TOWN 3 - 11 KV	x236663	300/1A,11000 /110 V	5.70	0.00					
	B.125	11KV	Town North				0.00					
	B.126	11KV	TOWN 4 - 11 KV				0.00					
Circle-2 Mahe	B.127	11KV	SPINNING MILL - 11 KV	x2452858	200/5,11000/1 10 V	0.07	0.00					From the Log Register of Mahe 110 /11 KV SS
	B.128	11KV	MAHE - 11 KV	x236686	200/5,11000/1 10 V	13.18	0.00					
	B.129	11KV	PANDAKKAL - 11 KV	x236683	200/5,11000/1 10 V	10.62	0.00					
	B.130	11KV	CHALAKKARA - 11KV	x236681	200/5,11000/1 10 V	4.76	0.00					
	B.131		East Palloor	x236688	200/5,11000/1 10 V	3.93	0.00					
	B.132	11KV	AUX - 11 KV	x236687	200/5,11000/1 10 V	0.07	0.00					

PDY&KKL	B.133	22KV	Villianur Interlinking Feeder 22 KV	x381284	400/1.22000/1 10 V	20.56	0.00				From the Log Register of Thondamanatham 110/22 KV SS
	B.134	22KV	Sedarapet Interlinking feeder 22 KV	x381296	400/1.22000/1 10 V	32.20	0.00				
	B.135	22KV	Industrial 22 KV	x381285	400/1.22000/1 10 V	39.44	0.00				
	B.136	22KV	Pillayarkuppam 22KV			0.00	0.00				
	B.137	110 KV	All EHT feeders			413.94	0.00				
	B.214					0.00	0.00				
	B.334					0.00	0.00				
	B.335					0.00	0.00				
	B.336					0.00	0.00				
	B.337					0.00	0.00				
	B.338					0.00	0.00				
	B.339					0.00	0.00				
	B.340					0.00	0.00				
	B.341					0.00	0.00				
	B.342					0.00	0.00				
	B.370					0.00	0.00				
	B.371					0.00	0.00				
						0.00	0.00				
						0.00	0.00				
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						0.00	0.00				
						0.00	0.00				
						0.00	0.00				
						0.00	0.00				
						0.00	0.00				
Total (MU)						2818.59	3.92				
Net input energy at DISCOM periphery (MU)						2814.67					
Total (MU)						2818.59	3.92				
Net input energy at DISCOM periphery (MU)						2814.67					


M. RAMESH
 EXECUTIVE ENGINEER - GENERAL
 GENERAL DIVISION
 ELECTRICITY DEPARTMENT
 PUDUCHERRY.


T. CHANEMOOGAM, B.E., M.I.E., PGDCA.,
 SUPERINTENDING ENGINEER
 - cum - HOD
 ELECTRICITY DEPARTMENT
 PUDUCHERRY.

Details of Division Wise Losses (See note below*)																									
Division Wise Losses																									
Period from April 20 To March-21																									
S.No	Name of circle	Circle code	Name of Division	Consumer profile				Energy parameters				Losses			Commercial Parameter			AT & C loss (%)							
				No of connection metered (Nos)	No of connection Un-metered	Total number of connections	% of connections metered	Connected Load metered (MW)	Un-metered Load (MW)	Total Connected Load (MW)	% of connected load	Input energy (MU)	Measured energy (MU)	Unmetered energy (MU)	Total energy (MU)	% of energy consumption	Billed Amount in Rs. Crore		Collected Amount in Rs. Crore	Collection Efficiency					
1	Circle-1		Puducherry	289768	0	276735	74%	606.964	0	606.964	40%	632.03	0.00	632.03	30%	0.00	56.694	56.694	0						
				41885	0	47950	13%	282.343	0	282.343	19%	2371.92	264.75	0.00	264.75	13%	264.3525	11.15%							
				421	0	486	0%	559.359	0	559.359	37%	742.18	0.00	742.18	35%										
				35085	5874	41059	114%	6.304	2.843	9.147	1%	2371.92	2061.953	57.0104	2118.963	100%	264.3525	11.15%	1187.726	1066.449	89.79	13.79			
Sub-total				347159	12054	359213	100%	1454.97	47.497	1502.47	100%														
2	Circle-2		Karaiikal	65390	0	65390	72%					115.08	0	115.08	96%	0	4.62	4.62	1%						
				0	809	809	1%					356.69	31.881	0	31.881	10%	41.229	11.56%							
				11962	0	11962	13%					138.65	0	138.65	44%										
				68	0	68	0%					32.752	0	32.752	8%										
Sub-total				10857	1900	12757	14%					356.69	310.837	4.62	322.983	100%	41.229	11.56%	90.55	203.51	188.42	92.59	16.16		
3	Circle-2		Mahe	10318	0	10318	57%					19.26	0	19.26	68%										
				0	3	3	0%						0	0	0	0%									
				4800	0	4800	26%					32.63	7.8668	0	7.8668	28%	4.39	13.45%							
				4	0	4	0%					0.093864	0	0.093864	0%										
Sub-total				18331	124	18455	100%	0	0	0	100%	32.6247	28.23878	0	28.23878	100%	4.39	13.45%	86.55	13.1	12.3	93.89	18.74		
4	Circle-2		Yanam	13152	0	13152	73%					20	0	20	42%										
				0	57	57	0%						0	0.081	0.081	1%									
				1789	0	1789	100%					54.09	14.80603	0	14.80603	31%	6.06	11.20%							
				25	0	25	0%					11.2023	0	11.2023	23%										
Sub-total				17180	410	17590	15%	0	0	0	100%	54.09182	47.72322	0.311656	48.03448	100%	6.06	11.20%	88.80	29.34	27.9	95.09	15.54		
5	Circle-2		LIT of Puducherry	358628	0	358628	74%	606.964	0	606.964	40%		786.37	0	786.37	31%									
				0	7029	7029	1%	44.654	0	44.654	3%		61.6185	0	61.6185	2%									
				60436	0	60436	12%	282.343	0	282.343	15%	2815.32	319.2988	0	319.2988	13%	297.1021	10.55%							
				518	0	518	0%	559.359	0	559.359	37%	893.0503	0	893.0503	35%										
Sub-total				470743	13277	484020	100%	1454.97	47.497	1502.467	100%	2815.322	2456.278	61.94206	2518.22	100%	297.1021	10.55%	89.45	1433.676	1295.069	90.33	13.29		

Note 1: Four regions namely Puducherry, Karaiikal, Mahe & Yanam called in two circle Circle 1 - Puducherry Region alone and Circle 2 contains Karaiikal, Mahe and Yanam region. All four regions combined called UT of Puducherry

Note 2: Region wise connected load is not available Hence UT connected load is being furnished.

Circle Code	Parameter
	Please enter name of circle
	Please enter circle code
0	Please enter numeric value or 0
	Formula protected

I/We undertake that the information supplied in this Document and Pro-forma is accurate to the best of my knowledge and (if any of the information supplied is found to be incorrect and such information result into loss to the Central Government or State Government or any of the authority under them or any other person affected, I/we undertake to indemnify such loss.

Authorised Signatory and Seal

Name of Authorised Signatory:

Name of the DISCOM/ELECTRICITY DEPARTMENT GOVERNMENT OF PUDUCHERRY
Full Address: No.137, N.S.J. Bose Salai,
Electricity Department,
Main Campus,
Puducherry - 605 001.

T. CHANEMOUCAM, B.E., M.I.E., PGDCA,
SUPERINTENDING ENGINEER
- cum - HOD
ELECTRICITY DEPARTMENT
PUDUCHERRY.

Name of Energy Manager:
Registration Number:



M. RAMESH
EXECUTIVE ENGINEER - GENERAL
GENERAL DIVISION
ELECTRICITY DEPARTMENT
PUDUCHERRY.

(Details of Consumers)						
Summary of Energy						
Period From April -2020 To March-21						
S.No	Type of Consumers	Category of Consumers (EHT/HT/LT/Others)	Voltage Level (In Voltage)	No of Consumers	Total Consumption (In MU)	Remarks (Source of data)
	LOW TENSION CATEGORY					
1	Domestic	LT		358628	806.17	From Billing
2	Commercial	LT		56050	148.50	software
3	IP Sets	LT		7029	59.99	data base
4	Life Line services	LT		8248	3.50	
5	Tempeoary Supply	LT		0	4.43	
6		LT		4386		
7	Heating and Motive Power/Water Supply	LT			141.95	
8	Public Lighting	LT		51153	21.73	
	TOTAL LOW TENSION ENERGY BILLED				1186.27	
9	HT Water Supply &Central/state Government services	HT		63	53.49	
10	HT Industrial +HT-Commercial	HT		455	864.43	
11	Industrial (Extra High Voltage)	EHT		8	413.94	
	TOTAL HIGH TENSION ENERGY BILLED				1331.86	
	TOTAL ENERGY BILLED (LT+HT)			486020	2518.13	
	Export to other region(Tamilnadu)				3.92	
	TOTAL ENERGY BILLED in MU				2522.05	


M. RAMESH
 EXECUTIVE ENGINEER - GENERAL
 GENERAL DIVISION
 ELECTRICITY DEPARTMENT
 PUDUCHERRY.


T. CHANEMOIGAM, B.E., M.I.E., PGDCA.,
 SUPERINTENDING ENGINEER
 - cum - HOD
 ELECTRICITY DEPARTMENT
 PUDUCHERRY.

B. Supporting Documents

STATEMENT SHOWING THE DETAILS OF MONTH WISE/ AGENCY WISE EXPENDITURE INCURRED TOWARDS PURCHASE OF POWER IN RESPECT OF U.T. OF PUDUCHERRY FOR THE YEAR 2020-21 (SALE OF POWER AND NON-PLAN)													
MONTH	PPATPC-ASTPS-E	PPATPC-ASTPS-E	PPATPC-SHPS-E	PPATPC-TSPS-E	NLC	KANGA	MAPS	NTECL	KUDANKULAM	NTHL	PPCL	NNPTS	TOTAL
Apr-20	28,428,320	-	3,663,110	32,680,405	24,676,294	19,310,008	2,599,757	1,773,355	33,833,196	7,187,665	18,442,800	7,560,490	180,065,400
May-20	50,060,973	-	6,004,660	46,689,060	55,266,933	29,204,750	2,446,273	3,334,210	26,854,241	7,996,205	19,908,800	15,708,885	257,474,990
Jun-20	45,948,008	9,413,973	4,114,768	43,223,133	66,206,251	28,702,613	2,528,224	1,508,225	22,963,796	9,545,448	19,353,800	11,282,105	264,792,344
Jul-20	55,458,165	14,365,925	8,240,850	48,319,710	30,723,701	28,306,645	2,444,567	5,068,378	15,362,203	15,700,785	18,179,200	17,010,065	260,180,194
Aug-20	51,181,530	14,546,483	7,070,845	46,977,040	40,867,729	30,078,118	2,767,671	7,089,060	24,791,931	15,751,293	17,584,600	6,430,745	265,137,045
Sep-20	33,648,868	13,448,915	4,330,763	38,603,328	44,175,361	28,932,767	2,634,290	1,724,245	46,001,587	15,754,250	17,812,800	14,484,030	261,551,204
Oct-20	37,925,375	11,528,875	989,705	43,466,253	38,360,999	26,312,055	2,115,540	6,842,745	48,681,111	15,620,738	20,538,000	15,015,030	267,396,426
Nov-20	31,356,463	10,279,563	1,750,375	29,896,800	54,720,653	24,608,213	844,675	4,965,955	41,867,849	10,377,263	18,512,200	12,932,758	242,112,767
Dec-20	35,190,353	10,711,810	3,502,885	36,876,443	52,797,503	17,782,178	2,559,826	4,001,820	43,635,701	7,814,100	19,840,800	8,881,253	243,594,672
Jan-21	31,615,815	12,522,645	4,549,870	35,862,313	59,329,799	22,111,196	1,982,532	5,224,765	37,484,658	9,220,570	16,233,600	10,125,920	246,263,683
Feb-21	32,929,133	12,759,518	3,469,765	33,482,340	57,982,171	24,316,541	1,694,343	5,387,815	23,574,976	6,907,553	11,126,000	17,337,170	230,967,325
Mar-21	48,229,118	15,381,100	5,217,988	49,173,763	59,728,914	23,483,490	2,136,160	6,587,133	22,890,526	6,025,975	20,387,800	27,380,420	286,822,387
All (kWh)	481,972,121	124,958,806	52,905,584	485,250,559	584,838,308	298,148,574	26,663,858	53,507,706	387,941,775	127,901,845	217,920,400	164,348,871	3,006,358,438

Deviation for FY-2020-21

True-up of FY 2020-21

Joint Electricity Regulatory Commission (JERC)

3.21. Revenue at existing Retail Tariff**Petitioner's Submission**

The Petitioner has submitted the net actual revenue for the FY 2020-21 as INR 1433.57 Cr (including revenue from regulatory surcharge). The table below provides the revenue at existing tariff as submitted by the Petitioner:

Table 43: Revenue at existing tariff submitted by the Petitioner for FY 2020-21 (In INR Cr)

Particulars	Sales (MUs)	Revenue (INR Crore)
LT Category		
Domestic	806.17	265.38
Lifeline Services	3.50	0.36
Commercial	148.50	112.15
Agriculture	59.99	3.44
Public Lighting	21.73	22.39
LT Industrial & Water Tank	141.95	91.85
Temporary Supply - LT&HT	4.43	5.37
Total LT	1,186.27	500.94
HT Category		
HT 1 Industrial / Commercial	864.43	615.48
HT 2 - Government	53.49	50.60
HT 3 - EHT	413.94	245.84
Total HT	1331.86	911.92
Total LT and HT	2518.14	1412.86
BPSC Charges LT		
BPSC Charges HT		
Penal Charges		27.42
Incentives		(28.35)
Export to Other Region	3.92	3.42
Consumption of this Financial Year's March billed in Next FY's April		103.40
Consumption of previous FY's March billed Current FY's in April		(85.18)
Total Revenue	2,522.06	1,433.57

Commission's analysis

While verifying the consumer category wise revenue it was observed that the total revenue was reflected as INR 1433.70 Cr in the annual accounts. The category/ slab wise revenue now Trued-up by the Commission is shown in the following table:

Order on True-Up for FY 2020-21, APR for FY 2021-22 and ARR for FY 2022-23 to FY 2024-25
Retail Tariff for the FY 2022-23
Electricity Department, Government of Puducherry

52

GOVERNMENT OF PUDUCHERRY - DIRECTORATE OF ACCOUNTS AND TREASURIES

Consolidation
Supplementary Data - 31/03/2021

STATE CREDIT

Page No. 155

Reporting Date 23/06/2021

Head of Account	D.A.T Pondy	T.O Pondy	T.O.V.L.R.	S.T.O. B&R	P.W.D	PORT	T.E.	MUNICIPAL	MAHE	YANAM	TOTAL	DTPO P&T	CUMULATIVE
00 0801 05 800 00 00													
00 -													
0801 - Power													
05 - TRANSMISSION & DI													
800 - Other Receipts													
00 -													
00 -							-12781		913192		900411	41255786	42154197
00 -													
Major Head Total								-260	913192		912912	12394941294	123950364184
00 0851 00 101 00 00													
00 -													
0851 - Village and Sea													
00 -													
101 - Industrial Estate													
00 -													
00 -											0	42506	42506
00 -													
00 0851 00 800 00 00													
00 -													
0851 - Village and Sea													
00 -													
800 - Other Receipts													
00 -													
00 -											0	25600	25600
00 -													
Major Head Total											0	68106	68106
00 0853 00 102 00 00													
00 -													
0853 - Non Ferrous Min													
00 -													
102 - Mineral Concessi													
00 -													
00 -											0	3135800	3135800
00 -													

True-up for FY 2020-21, APR for FY 2021-22, and ARR for MYT control period from FY 2022-23 to 2024-25

CHAPTER 3 TRUE UP OF FY 2020-21

3.1 Preamble

3.1.1 This section outlines the performance of Puducherry Electricity Department (PED) for FY 2020-21. PED had filed a petition for determination of tariff and revised ARR of FY 2020-21 before the Hon'ble Commission on December, 2019. The Hon'ble Commission after undertaking a thorough analysis had issued the Tariff Order for FY 2020-21 on 18th May, 2020. The Hon'ble Commission had issued the Tariff Order for FY 2021-22 including Annual Performance review for FY 2020-21 on 07th April, 2021.

3.1.2 This chapter summarizes each of the components of True-up for FY 2020-21 and thereby working out the revenue gap for that year.

3.2 Number of Consumers

3.2.1 PED submits before the Hon'ble Commission the actual consumer numbers for FY 2020-21 in comparison of the approved numbers below:

Table 3-1: Details of No. of Consumers for FY 2020-21

No	Particulars	Approved in Tariff Order	Actuals
1	Domestic	365595	358628
2	OHOB	35537	8248
3	Commercial	59652	56050
4	Agriculture	7039	7029
5	Public Lighting	51077	51153
6	LT Industrial & Water Tank	6869	4386
7	Total LT	525771	485494
8	HT 1 Industrial & Commercial	433	455
9	HT 2 Government & Water Tank	68	63
10	HT 3 EHT	7	8
11	Total HT	508	526
12	TOTAL LT & HT	526279	486020

3.2.2 It is requested to Hon'ble Commission to consider the number of consumers as submitted in the above table for FY 2020-21.

3.3 Energy Sales

3.3.1 The total sales of PED for FY 2020-21 are 2522.06 MUs. The category wise actual and approved sales for FY 2020-21 are shown in the table below.

T. Chandra
SUPERINTENDING ENGINEER
-Cum-HOD
Electricity Department
Puducherry

Electricity Department, Puducherry

Category	2017-18		2018-19		2019-20		2020-21		added during 2021-22	2021-22 per quarter		2021-22 q2
	CL IN MW	% of load	CL IN MW	% of load	CL IN MW	% of load	CL IN MW	% of load		21-22	2021-22 q1	
Residential	530.2	40.05406	554.648	40.21053	580.218	40.2942038	606.966	40.39446	27.501	6.87525	613.8413	620.7165
Agricultural	44.654	3.373395	44.654	3.237298	44.654	3.10107128	44.654	2.971788	15.646	3.9115	48.5655	52.477
Commercial/Industrial-LT	244.326	18.45765	256.19	18.57311	268.842	18.6701797	282.334	18.78974	0.57575	0.1439375	282.9098	283.0537
Commercial/Industrial-HT	495.569	37.43785	514.845	37.32492	537.155	37.3036222	559.496	37.23527	219.5874	54.896844	614.3978	669.2897
Others	8.962	0.677036	9.023	0.654144	9.085	0.63092293	9.147	0.608746	0.053	0.01325	9.16025	9.1735
Total	1323.711	100	1379.36	100	1439.954	100	1502.597	100	263.3631	65.840782	1568.87	1634.71

NOTE: eht CONNECTED LOAD NOT ADDED BECAUSE IN ZENITH THE EHT CATEGORY NOT INCLUDED IN FORM-SJ

C. Purchase Power

• NPCL Bill



न्यूक्लियर पावर कॉर्पोरेशन ऑफ इंडिया लिमिटेड
NUCLEAR POWER CORPORATION OF INDIA LTD.
 (भारत सरकार का उद्यम A Government of India Enterprise)
कैगा स्थल KAIGA SITE
वित्तएवमलेखाविभाग Finance & Accounts Department



प्रशासन भवन, संयंत्र स्थल, डाक घर:
 कैगा- 581400
 वया: कारवार, जिला: उत्तर कन्नड,
 कर्नाटक
 Admin. Bldg., Plant Site, PO:
 Kaiga-581400
 Via: Karwar, Dist.: Uttara
 Kannada, Karnataka

निगम पहचान सं Corporate Identity
 No.:U40104MH1987GOI149458
 वेब साइट Website: www.npcil.nic.in

दूरभाष Tel.: 08382-264032

फैक्स Fax: 08382-264032

मोब. Mob: 9448999732

ई-मेल E-mail: upkumar@npcil.co.in

No. EBILL-FEB-2021EB04

05-Mar-2021

THE SUPERINTENDING ENGINEER
 PUDUCHERRY ELECTRICITY BOARD
 58, SUBHASH CHANDRA BOSE SALAI,
 PUDUCHERRY 605 001.
 FAX NO: 0413-2341148

Sir/Madam,

BILL OF SUPPLY
GSTIN NO: 29AAACN3154F1ZM
ENERGY BILL FOR THE MONTH OF FEBRUARY_2021
HSN CODE: 2716

SL NO.	PARTICULARS	AMOUNT (RS.)
1	Energy Bill for the Month of FEBRUARY_2021	71,853,630
2	Unit Adjust.Bill for the Month of JANUARY_2021	-76,305
	Sub Total(A)	71,777,325
3	SRLDC Charges for the month of FEBRUARY_2021	13,708
	Sub Total(B)	13,708
	GRAND TOTAL (A)+(B)	71,791,033
Rupees Seven Crore Seventeen Lakh(s) Ninety One Thousand Thirty Three Only		

NOTE:- 1 REBATE ON ENERGY BILL IS ADMISSIBLE ONLY AFTER DEDUCTING THE DECOMMISSIONING LEVY @ 2 PAISE/UNIT & NUCLEAR LIABILITY FUND LEVY @ 5 PAISE/UNIT.

2 REBATE IS NOT APPLICABLE ON SL. NO.3.

For and on behalf of KGS, NPCIL

PRADEEP KUMAR U.
SR. MANAGER(F&A)

Registered Office: 16th Floor, Centre- 1, WTC, Cuffe Parade, Colaba, MUMBAI - 400005
CIN: U40104MH1987GOI149458.
www.npcil.nic.in

- NTPC Bill



एन टी पी सी
NTPC
A Maharatna Company

एन टी पी सी लिमिटेड
(भारत सरकार का स्वाम्य)
NTPC Limited
(A Govt. of India Enterprise)
केन्द्रीय कार्यालय / Corporate Centre
(On behalf of NTPC TAMILNADU ENERGY COMPANY Ltd.)

PAN NO: AABCN9916C

CIN: U46108DL2003PLC120487

INVOICE SUMMARY

Send To: SUPERINTENDING ENGINEER-1 ELECTRICITY DEPARTMENT 137, Netaaji Subhash Chandra Bose Salai PUDUCHERRY-605 001	Copy To:	Tariff Ref: CERC order dtd 11.07.2017 & CERC Regulation 2019-24
--	-----------------	--

Beneficiary: ED Puducherry
Invoice Date: 6-Apr-2021

Sl. No.	Station	From	To	Ref. Bill No.	Rebatable amount (A)	Non-Rebatable amount (B)	Total (A+B)
1	NTECL Vellur	1-Mar-21	31-Mar-21	NTPC/NTECL/2020-21/ 12	52341780	0	52341780
2	RRMS ADJUSTMENT						-1403779
3	TAX COLLECTED AT SOURCE (Non-Rebatable)						0
Total: Rs					52341780	0	50938001

Net Amount Payable
₹ 5,09,38,001
Five Crore Nine lakh Thirty Eight Thousand One Rupees

The payment for this bill may be made through RTGS/ e-payment/LC to the account given below:

Account Name	NTPC TAMILNADU ENERGY COMPANY LTD.
Account Number	510341000000563
IFSC CODE	CORP000577 MICR CODE :600017013
Bank/ Branch Name	CORPORATION BANK / MUNGAMBAKKAM

Notes:

This bill is raised based on the Tariff Order issued by the Hon'ble CERC dated 11.07.2017.

The Due Date for payment of bill as per clause 6.2.1 of the PPA is 1380 Hrs of 3rd Bank working day from the date of presentation of bills. There after NTECL shall have the right to realise the payment through LC on Due Date.

Rebate/Surcharge on the bills paid shall be as per CERC Tariff regulations, 2019.

The details of the payment made indicating all components such as transaction details, billed amount, amount deposited, TDS deducted, if any etc. and the bill reference after making payments may pl be given.

The receipt of the bill may pl be acknowledged.

For NTPC LTD

एन टी पी सी गवर्न स्कोप कॉम्प्लेक्स, 7, इन्स्टीट्यूशनल एरिया, लोदी रोड, नई दिल्ली- 110003 टेल/Tel : 24360100, फैक्स/Fax : 011-24361018

NTPC Bhawan, SCOPE Complex, 7, Institutional Area, Lodi Road, New Delhi-110003, वेबसाइट/Website : www.ntpc.co.in

• **NTPL Bill**

एनएलसी तमिलनाडु पावर लिमिटेड NLC TAMILNADU POWER LIMITED (एनएलसी इंडिया लिमिटेड एवं टेंजको का संयुक्त उद्यम एवं एनएलसी इंडिया लिमिटेड का सहायक कंपनी) (A JVC between NLC India Ltd & TANGEDCO and a subsidiary of NLC India Ltd) मुख्य कार्यकारी अधिकारी का कार्यालय OFFICE OF THE CHIEF EXECUTIVE OFFICER 2*500 मेगावाट संयुक्त उद्यम ताप विद्युत परियोजना: 2*500 MW JV Thermal Power Project हारबर इस्टेट/Harbour Estate, टुटिकोरिन/Tuticorin- 628004 NTPL फ़ैक्स/Fax: 0461-2352480, फ़ोन /Phone : 0461-2352844, रजिस्ट्रार/CIN : U40102TN2005GOI058050 ई-मेल/E-mail: ceo.ntpl@nclindia.in, वेब/Web : www.ntplpower.com		 
--	--	---

Lr.No. Comml/NTPL/PED/March-2021/2021-2022

Dated : 06.04.2021

To :
PUDUCHERRY ELECTRICITY BOARD
PUDUCHERRY
UNION TERRITORY OF PONDICHERRY, Pondicherry 605001
Customer GST No: 34AAAGO0342Q1Z7 Customer State Code: 34

Sir,

Sub: PED-NTPL-Power Bill for the month of March-2021

Please find enclosed Invoices for PED amounting to Rs. 49515147.00 (Rupees Four Crore Ninety Five Lakh Fifteen Thousand One Hundred Forty Seven Only) towards the value of the power supplied from NLC Tamilnadu Power Limited for the month of March-2021 as detailed below:

Invoice No.	Date	Thermal Power Station	Bill Value (Rs.)
90003191	06.04.2021	NTPL	49,515,147.00
Total:			49,515,147.00

It is certified that the claim preferred is based on the REA of the respective month. The energy and capacity charges claimed by NTPL are, as per CERC orders. As per PSA dated 20.05.2015 between NTPL and PED, all payments made by PED towards amounts due, shall be appropriated by NTPL in the following order of priority.

- Towards late payment surcharge, payable if any, as intimated by NTPL through late payment surcharge bills as per CERC Tariff Regulation.
- Towards earlier unpaid bill(s), including arrears bills, if any.
- Towards Statutory dues like Income Tax, Other Tax, Royalty etc, in the current bill(s) and
- Towards Other Charges in current monthly bill.

The above CC is billed based on CERC Tariff order (2014-19) and as per clause 10(4) of CERC notification dtd 07.03.2019 ECR is calculated based on norms notified in CERC Regulations - 2019. The CC and EC are subject to revision, based on the outcome of tariff petitions for 2019-24.

Kindly arrange to settle the amount immediately. The Beneficiary Account No - 801530110000037 of Bank Of India. IFSC CODE : BKID0008015, Anna Salai, Chennai 600002.

Due Date: 19.05.2021

Yours Faithfully,


VALARMATHI G
DGM/COMMERCIAL

Encl:

1. Invoices
2. Energy & Capacity Charge working sheets
3. REA Data
4. Form 15 and Operational data

- NTPC RSTPS I&III Bill

Bill No. 601955029



NTPC Ltd.
 SR-Headquarters
 NTPC BHAWAN, Old Praga Tools
 Secunderabad 500080

CIN: L40101DL1975GOI007966

Energy Bill	01.11.2020 – 30.11.2020		Tariff Ref.
Bill No.	601955029	Revision Bill	
Date	04.01.2021		REA Ref.
Beneficiary	Elec Department of Pondicherry .		REA Date
Station	Ramagundam Super Thermal Power Stn 1		

Regular Energy

SNo	Description	Unit	Rate	Current Amount	Already Claimed	Net Now Claimed
01	Cap Charge(Peak-LD)	Rs. Cr/Yr	1,057.68970	6,208,639	6,208,639	0
02	Cap Charge(OffPeak-LD)	Rs. Cr/Yr	1,057.68970	25,546,732	25,546,732	0
03	Energy Charges Coal	Rs./kWh	2.47700	77,669,959	77,669,959	0
04	URS Trade Gain Share		0.00000	-617,201	-617,201	0
05	RLDC Charges	Rs. Cr.	0.07694	27,744	0	27,744
Totals				108,835,873	108,808,129	27,744
Grand Total						27,744

Rupees (in words) **Twenty-Seven Thousand Seven Hundred Forty-Four Only**

Bank Details: Current Account No. 10813608669, State Bank of India, 5th Floor, Redfort Capital, Parsvnath Towers, Bhai Veer Singh Marg, Gole Market, New Delhi- 110001; IFSC CODE : SBIN0017313; SWIFT CODE : SBININBB824; BRANCH CODE :17313.

		Bill No. 601955030 NTPC Ltd. SR-Headquarters NTPC BHAWAN, Old Praga Tools Secunderabad 500080				
CIN: L40101DL1975GOI007966						
Energy Bill	01.11.2020 – 30.11.2020		Tariff Ref.			
Bill No.	601955030	Revision Bill				
Date	04.01.2021	REA Ref.				
Beneficiary	Elec Department of Pondicherry .		REA Date			
Station	Ramagundam Super Thermal Power Stn 3					
Regular Energy						
SNO	Description	Unit	Rate	Current Amount	Already Claimed	Net Now Claimed
01	Cap Charge(Peak-LD)	Rs. Cr/Yr	268.05540	2,125,772	2,125,772	0
02	Cap Charge(OffPeak-LD)	Rs. Cr/Yr	268.05540	8,519,790	8,519,790	0
03	Energy Charges Coal	Rs./kWh	2.43600	25,041,015	25,041,015	0
04	URS Trade Gain Share		0.00000	-100,991	-100,991	0
05	RLDC Charges	Rs. Cr.	0.01832	7,221	0	7,221
Totals				35,592,807	35,585,586	7,221
Grand Total						7,221
Rupees (In words) Seven Thousand Two Hundred Twenty-One Only						

Bank Details: Current Account No. 10613608669, State Bank of India, 5th Floor, Redfort Capital, Parsvnath Towers, Bhai Veer Singh Marg, Gole Market, New Delhi- 110001; IFSC CODE : SBIN0017313; SWIFT CODE : SBININBB624; BRANCH CODE :17313.

• NPCIL

	न्यूक्लियर पावर कॉर्पोरेशन ऑफ इंडिया लिमिटेड NUCLEAR POWER CORPORATION OF INDIA LIMITED		
	(भारत सरकार का उद्यम A Government of India Enterprise)		
	मद्रास परमाणु बिजलीघर MADRAS ATOMIC POWER STATION		
	कल्पक्कम - 603 102 कांचीपुरम जिला (तमिलनाडु) Kalpakkam - 603 102 Kancheepuram Dist. (T.N.)		
नियम CTN: U40104MH1987GOI149458	GSTIN: 33AAACN3154F2ZW	वेबसाइट पता Website Address: www.npcil.nic.in	
दूरभाष सं. Phone No.: 044-27480135	फैक्स सं. Fax No.: 044-27480329	ई-मेल Email: mbchauhan@npcil.co.in	
विन एवं लेखा FINANCE & ACCOUNTS			

Ref: MAPS/OT/EBS/ 3320116

5-Jan-21

To
THE SUPERINTENDING ENGINEER
ELECTRICITY DEPARTMENT
PONDICHERRY.

SIR,

Sub: Energy Bills for December 2020 - reg.

S.No.	Particulars	Bill No.	Bill Date	Amount (Rs.)
1	Outstanding SOP			11,266,957
2	Outstanding DPC			37,902
3	Add: Prov. Energy Bill for Dec 2020	318RB7195	05-Jan-21	6,538,649
4	Revision Energy bill for Nov 2020	318ABU7175	29-Dec-20	-149,298
5	SOC/MOC Charges bill for Dec 2020	BS/SOC-MOC/2020-21/09	00-Jan-00	2,713
6	Debit note for Nuclear Liability Fund 2015	BS/NL-FUND/2020-21/09	00-Jan-00	125,340
7	Delayed Payment Charges bill	DR.BILL/DPC/PEB/2018-19(19)	05-Jan-21	40,704
	Net Amount Payable			17,862,967

FAC Calculation from 01/12/2020 (worked out by procedural formula of Tariff Notification)

Revised FAC = 78.21/19452 x [Rate (Rs./Kg) applicable for the period - 19452]

78.21/19452 x [19452 - 19452] = 0.00 p/Kwh

Effective Energy Billing Rate w.e.f 01/12/2020: Rs 2.5488 per Kwh. (Excl. Nuc Liab Fund 2015 and inclusive of Provisional water charges, Heavy Water Adj. Chrgs & Revision in Insurance for Compliance of CLND Act & MAPS SFSP).

As per clause no 8.1.8 of BPSA / PPA, 'if any error is noticed in bill may please be communicated within 30 days. otherwise the bill is construed as accepted by SEB.'

Payment may please be made to Nuclear Power Corporation India Limited, Bank Account No. 10937612405 maintained at SBI, Overseas Branch, Mumbai (Branch code 4791), IFS Code: SBIN0004791, Mumbai under intimation to mail ids sprradhan@npcil.co.in, ssundaramoorthy@npcil.co.in.

Thanking you,

Yours faithfully,


(I.R. Hegde)
Senior Manager (F&A)

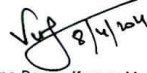
*- Note:-Rebate if any will be admissible as per PPA.

- KNPP

KUDANKULAM NUCLEAR POWER PROJECT, KUDANKULAM
SUMMARISED OUT STANDING ENERGY DUES OF M/s. PEB (PUDHUCHERRY)
As on 08.04.2021

I	Opening Outstanding Balance as on 01.03.2021 including DPC	Amount (Rs.)
	Energy Dues	1,121,302,333
	DPC	46,465,623
	Total Outstanding Balance as on 01.03.2021	1,167,767,956
II	Add:	
	Energy Bill for the month of March 2021 (Feb 2021 Prov)	83,356,116
	DPC bill for the period up to Feb 2021	-
	Less:	
III	Receipt Received for the month of March 2021	989,256,845
	Rebate Allowed for the month of March 2021	-
	Closing Balance: as on 31.03.2021	
IV	Energy Dues	215,401,604
	DPC	46,465,623
	Add:	
V	Energy Bill for the month of April 2021 (March 2021 Prov)	106,018,892
	DPC bill for the period up to March 2021	-
	Outstanding Balance as on 08.04.2021	
VI	Energy Dues	321,420,496
	DPC	46,465,623
	GRAND TOTAL	-
	GRAND TOTAL	367,886,119

In Words Rupees ThirtySix Crore SeventyEight Lakh EightySix Thousand One Hundred NineteenOnly


 Lakshmana Pavan Kumar V
 Manager (F&A)
 वी.एल. पवन कुमार
 V.L. Pavan Kumar
 प्रबंधक (विएफ&ए)
 Manager (F&A)
 एनपीसीआईएल, केरळ
 NPCIL KKNR

• **NLCIL Bill**

 एनएलसी इंडिया लिमिटेड (भारत सरकार का 'नवरत्न' उद्यम) 135, ई.वी.आर.पेरियार हाई रोड, कीलपौक, चेन्नई- 600 010.	NLC INDIA LIMITED (‘NAVRATNA’ Govt. of India Enterprise) 135, EVR Periyar High Road, Kilpauk, Chennai-600 010.	
वाणिज्य विभाग / COMMERCIAL DEPARTMENT		
सी.आई.एन / CIN : L93090TN1956GOI003507 जी.एस.टी.एन / GST No : 33AAACN1121C1ZG पी.ए.एन / PAN : AAACN1121C		
दूरभाष / Phone : 044-28360037 फ़ैक्स / Fax : 044-28360057 वेबसाइट / Website : www.nlcindia.com		
ई-मेल / E-mail : ed.commercial@nlcindia.in, commercial@nlcindia.in		

Lr. No. /Comm1/NLCIL TPS /PED/December-2020/2020-2021

Dated: 05/01/2021

To

PUDUCHERRY ELECTRICITY BOARD
NSC BOSE ROAD

PUDUCHERRY , UNION TERRITORY OF PONDICHERRY - 605001

Fax No : 413-2331556

Sir,

Sub: NLCIL - TPS -PED- Power Bills for December-2020

Please find enclosed Invoices for PED amounting to Rs. 33,16,51,648/- (Rupees Thirty-Three Crore Sixteen Lakh Fifty-One Thousand Six Hundred Forty-Eight Only) towards the value of power supplied from NLC India Limited for the month of December - 2020 as detailed below:

Invoice No	Date	Thermal Power Station	Bill Value (Rs.)
2020020506	05/01/2021	TPS1EXPN	27,709,027
2020020537	05/01/2021	TPS2STG2	31,630,974
2020020519	05/01/2021	TPS2EXPN	31,144,881
2020020524	05/01/2021	TPS2STG1	181,273,315
2020020556	05/01/2021	NNTPS	59,893,451
Total :			331,651,648

It is certified that the claim preferred is based on the REA of the respective month. The energy and capacity charges are claimed by NLCIL as per CERC Orders. As per Deed of amendment to PPA dated 20-MAY-15 between NLCIL and PED, all payments made by PED towards amounts due, shall be appropriated by NLCIL in the following order of priority.

- Towards Late Payment Surcharge, payable if any, as intimated by NLCIL through Late Payment surcharge bills as per CERC Tariff Regulations.
- Towards earlier Unpaid Bills(s), including arrear bills, if any.
- Towards Statutory Dues like Income Tax, Other Tax, Royalty etc, in the current Bill(s) and
- Towards Other Charges in current monthly Bill.

The above CC is billed based on CERC Tariff order (2014-19) and as per clause 10(4) of CERCC notification dtd 7.3.2019. ECR is calculated based on norms notified in CERC Regulations - 2019. The CC and EC are subject to revision, based on the outcome of tariff petitions for 2019-24.

Kindly arrange to settle the amount immediately. The Beneficiary Account No - 10895276180 of State Bank Of India. IFSC CODE : SBIN0000958, Block - 2, Neyveli - 607801.

Yours faithfully,

Encl.

1. Invoices
2. Energy & Capacity Charge Working sheets
3. REA Data
4. Form 15 and Operational data for November 2020

For NLC India Limited


DGM/Finance

- NTPC SMTPS-II Bill



NTPC Ltd.
SR-Headquarters
NTPC BHAWAN, Old Praga Tools
Secunderabad 500080

CIN: L40101DL1975GOI007966

Energy Bill 01.02.2021 – 28.02.2021
Bill No. 602015886 Revision Bill
Date 06.04.2021
Beneficiary Elec Department of Pondicherry
Station Simhadri Super Thermal Power Station 2

Tariff Ref.

REA Ref.

REA Date

Regular Energy

SNo	Description	Unit	Rate	Current Amount	Already Claimed	Net Now Claimed
01	Cap Charge(Peak-HD)	Rs. Cr/Yr	1,066.71170	2,426,769	2,426,769	0
02	Cap Charge(OffPeak-HD)	Rs. Cr/Yr	1,066.71170	10,980,019	10,980,019	0
03	Energy Charges Coal	Rs./KWh	2.66400	9,243,454	9,243,454	0
04	Compensation Charges(Th)	Rs./KWh	0.13700	14,445,525	14,445,525	0
05	RLDC Charges	Rs. Cr.	0.03625	5,488	0	5,488
06	RTM Trade Gain Share		0.00000	-825,895	-825,895	0
Totals				36,275,360	36,269,872	5,488

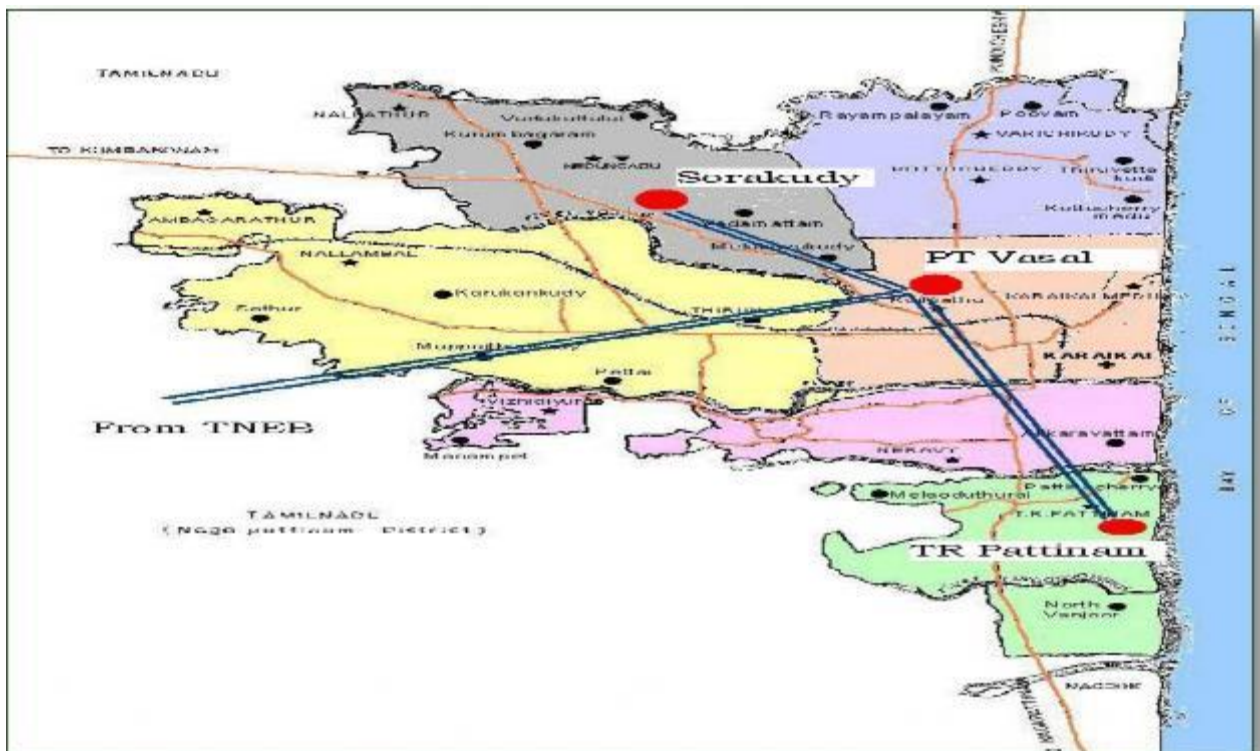
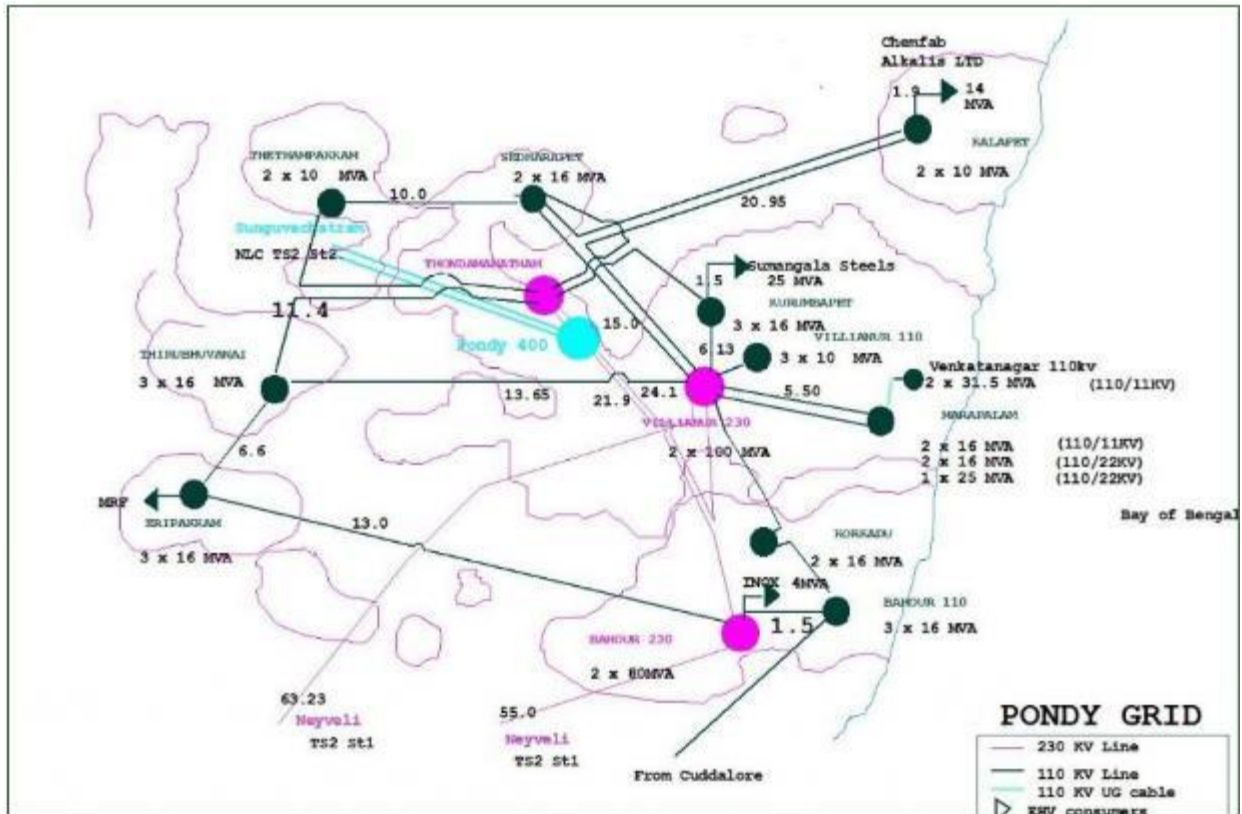
Grand Total 5,488

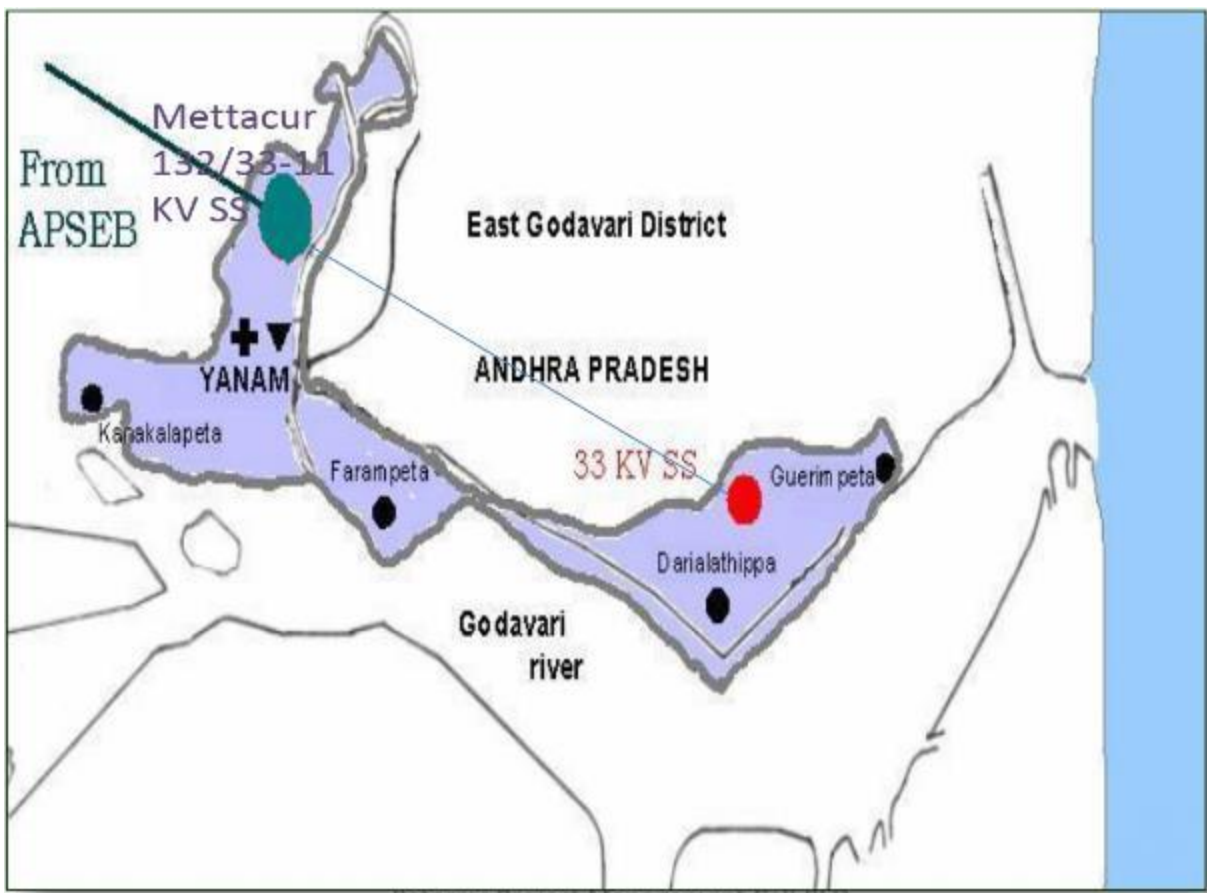
Rupees (in words) Five Thousand Four Hundred Eighty-Eight Only

Bank Details: Current Account No. 10813608669, State Bank of India, 5th Floor, Redfort Capital, Parsvnath Towers, Bhai Veer Singh Marg, Gole Market, New Delhi- 110001; IFSC CODE : SBIN0017313; SWIFT CODE : SBININBB824; BRANCH CODE : 17313.

5.11 SLD (Single Line Diagram)

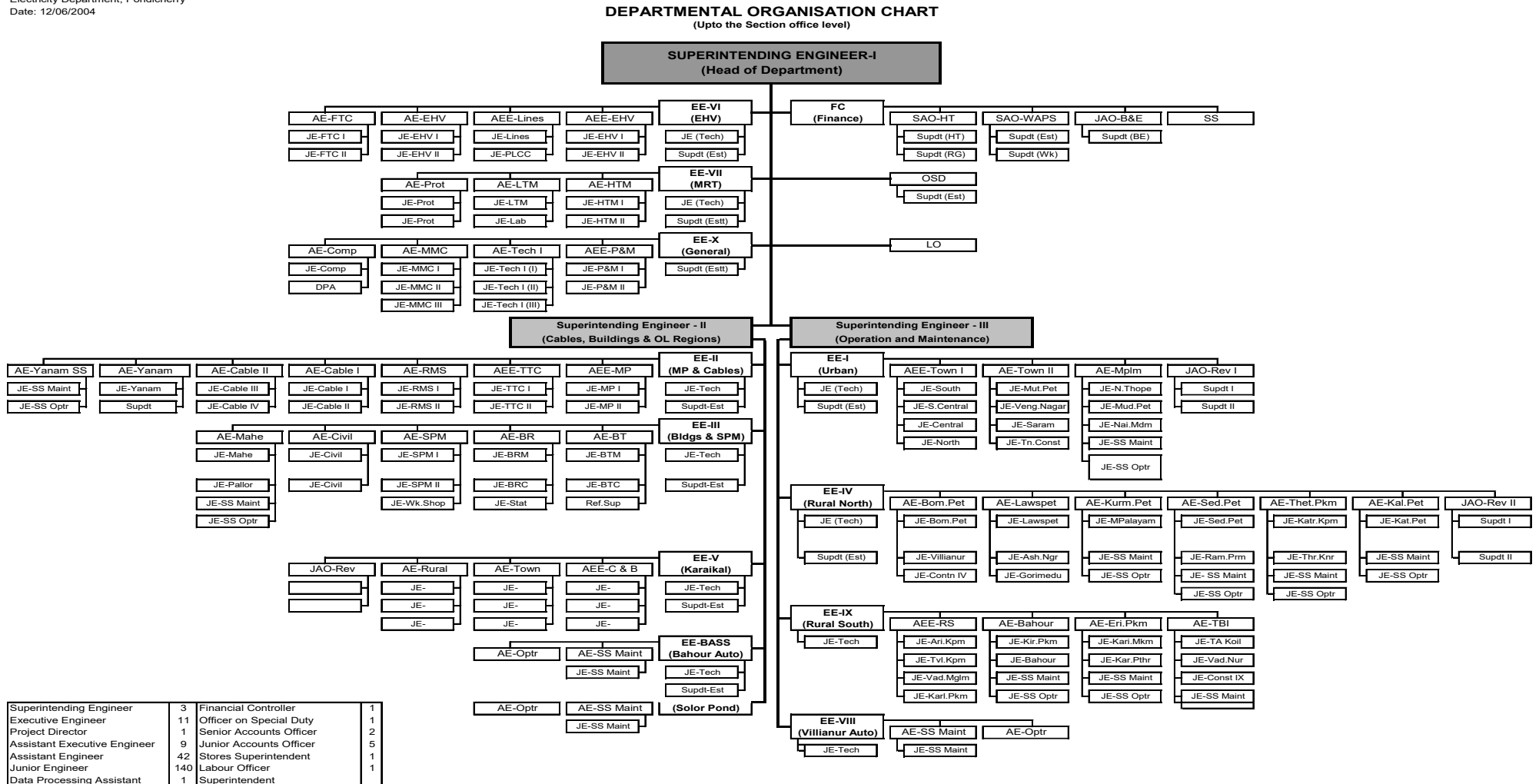
The SLD of all the Four Regions are attached Below. i.e Puducherry, Karaikal, Mahe & Yanam Respectively.





5.12 Organizational Chart

Electricity Department, Pondicherry
Date: 12/06/2004



5.13 List of parameters arrived through calculation or Formulae with list of source of data

- Transmission and Distribution Losses (T&D Losses)
 - Energy losses occur in the process of supplying electricity to consumers due to technical and commercial reasons.
 - The technical losses are due to energy dissipated in the conductors, transformers and other equipment used for transmission, transformation, sub-transmission and distribution of power.
 - These technical losses are inherent in a system and can be reduced to a certain level.
 - Pilferage by hooking, bypassing meters, defective meters, errors in meter reading and in estimating un-metered supply of energy are the main sources of the commercial losses.
 - There is another component of commercial losses, which is attributable to non-recovery of the billed amount, which is reflected in collection efficiency.
 - T&D losses together with loss in collection give us Aggregate Technical & Commercial (AT&C) losses.

Calculation of transmission losses:

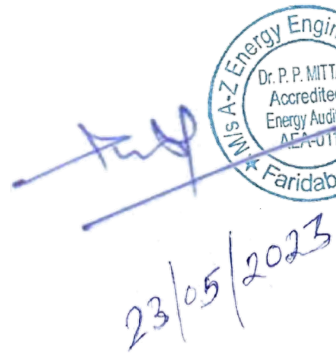
Transmission losses = Total Energy Purchased - Total Energy Sale - Total Input

Calculation of transmission losses

Transmission losses (MU)	Value
Total Energy Purchased	3006.36
Total Energy Sale	2518.14
Transmission losses	70.19
Total Input	2818.59
Transmission losses (%)	2.45

5.14 Recommendation to improve technical losses & commercial losses.

1. Ensure Installation of Smart Meter/ Functional Meter in all consumers. DTR & Feeder.
2. Installation of Capacitor bank in S/s for power factor improvement.
3. GIS based mapping of all 33/11 KV Substations, 11KV Lines, DTR and all Consumers both HT & LT.
4. Development & Implementation of technology based energy accounting system including associated software as per guideline of BEE.


23/05/2023

