सत्यमेव जयते

Report of the Comptroller and Auditor General of India for the year ended 31 March 2020

लोकहितार्थ सत्यनिष्ठा

Dedicated to Truth in Public Interest

Government of Punjab

Report No. 6 of the year 2021

Performance audit on

Pre and Post Ujwal Discom Assurance Yojna

in

Punjab State Power Corporation Limited

Report of the
Comptroller and Auditor General of India

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PREFACE

This Audit Report has been prepared for submission to the Governor of Punjab under Article 151 of the Constitution of India for being laid before the Punjab State Legislature. The audit has been carried out in line with the Auditing Standards and Performance Audit guidelines, 2014 issued by the Office of Comptroller and Auditor General of India.

The Report contains the results of Performance Audit on Pre and Post Ujwal Discom Assurance Yojana (UDAY) Scheme in Punjab State Power Corporation Limited (PSPCL). The UDAY scheme was introduced in November 2015 by Ministry of Power, Government of India (MoP) with the aim of financial turnaround of Power Distribution Companies (DISCOMs) to improve the operational and financial efficiency of the State DISCOMs. The Scheme is being implemented in the State of Punjab through a tripartite Memorandum of Understanding between the MoP, Government of Punjab (GoP) and PSPCL.

This Report has covered the implementation of the Scheme in terms of its objective to improve the operational and financial efficiency of PSPCL.

Audit wishes to acknowledge the co-operation received from the Department of Power, GoP and PSPCL in providing records, information and clarifications in completing the Audit.

Executive Summary

Executive Summary

Ministry of Power, Government of India (GoI) launched (20 November 2015) Ujwal Discom Assurance Yojana (UDAY) scheme for financial and operational turnaround of the State owned Distribution Companies with support from their State Governments. The participating States were required to undertake various targeted activities for improving the operational efficiencies. The timeline prescribed for these targeted activities were also required to be followed so as to ensure achievement of the targeted benefits. Government of Punjab (GoP) in its Cabinet meeting held on 25 February 2016 approved the adoption of UDAY scheme. Accordingly, the Memorandum of Understanding (MoU) amongst Ministry of Power, GoI, GoP and Punjab State Power Corporation Limited (Company) was signed on 4 March 2016.

Against this background, Performance Audit of Pre and Post UDAY in Punjab State Power Corporation Limited was conducted during August 2020 to January 2021 with a view to ascertaining the implementation effectiveness of the Scheme. The Performance Audit covered the performance of the PSPCL pre and post implementation of UDAY scheme during the period from 2015-16 to 2019-20.

The major findings of Performance Audit are briefed as below:

- As per the Scheme and MoU, the State Government was required to take over 75 *per cent* of PSPCL's debt amounting to ₹ 15,628.26 crore and to be transferred back to the PSPCL as a mix of grant of ₹ 11,728.26 crore and equity of ₹ 3,900 crore by 2019-20. However, the State Government, in violation to the provision of the Scheme and MoU, converted the entire loan of ₹ 15,628.26 crore into equity.

  (Paragraph 2.2.1)

- Remaining 25 *per cent* debt of ₹ 5,209.42 crore was required to be got converted through the banks/FIs into loan or State Government bonds with the interest rate not more than the banks base rate *plus* 0.10 *per cent*. Neither the bonds have been issued nor the debt got converted into loans at the rates prescribed in the Scheme. Resultantly, the PSPCL had to pay higher interest of ₹ 261.09 crore for the period 2016-17 to 2019-20.

  (Paragraph 2.2.2)

- Despite conversion of loans amounting ₹ 15,628.26 crore into equity, loans of ₹ 15,208.56 crore still remained outstanding as on 31 March 2020. The growth in loans could not be arrested post UDAY also. There was a net increase of ₹ 9,010.29 crore in outstanding loans from September 2015 to March 2020. The debt burden had increased by ₹ 7,181.41 crore primarily due to non-payment of dues on time by Government of Punjab on account of tariff compensation and defaulting dues of Government Departments.

  (Paragraph 2.2.3)

- As per MoU, all outstanding dues from the State Government departments to the Company for supply of electricity were required to be paid by March 2016. Against this, the dues in respect of Government Departments actually increased from ₹ 524.78 crore in March 2016 to ₹ 2,183.49 crore in 2019-20.

  (Paragraph 2.4.2(c))

- The GoP failed to pay the subsidy dues determined by the PSERC and the balance subsidy payable by GoP to the Company increased from ₹ 1,603.17 crore at the end of 2015-16 to ₹ 5,598.60 crore at the end of 2019-20.

  (Paragraph 2.4.5)

- PSERC (Conduct of Business) Regulations, 2005 provides for Fuel Cost Adjustment (FCA) formula to allow recovery of increased fuel costs. Recovery of FCA is approved by PSERC based on the quarterly petition filed by the Company. However, the amount billed was much lesser than the amount due for recovery as per quarterly revision allowed by the PSERC for the years 2015-16 to 2019-20. Resultantly, the PSPCL suffered an irrecoverable loss of interest of ₹ 85.08 crore.

  (Paragraph 2.4.3)

- The Scheme and MoU provides for quarterly tariff revision to offset the increase in price of fuel consumed for generation of power. However, GoP in contravention to the provision of the Scheme and MoU, decided that with effect from 2nd quarter of 2019-20, the FCA surcharge shall be levied on annual basis along with carrying cost. Consequently, PSPCL had to suffer loss of interest amounting to ₹ 4.04 crore.

  (Paragraph 2.3.1)

- The MoU for UDAY scheme required PSPCL to timely file the tariff petition with the PSERC so that Tariff order may be issued for the year as early as possible. However, the tariff orders for the years 2015-16 to 2020-21 were issued with delays ranging between 18 to 205 days. The delay in issue of tariff orders resulted in delayed recovery of increased tariff from the consumers and consequential loss of interest of ₹ 45.44 crore during 2017-18 to 2020-21.

  (Paragraph 2.3.2)

- The MoU prescribed that the PSPCL shall reduce AT&C losses to 14 *per cent* by 2018-19 and provided year-wise loss reduction targets for 98 distribution divisions and the PSPCL as a whole for the years 2014-15 to 2018-19. The number of divisions which did not achieve the targeted reduction in AT&C losses ranged from 52 to 62 during 2015-20 and the maximum AT&C losses ranged between 42.84 *per cent* and 57.65 *per cent.*

  (Paragraph 2.4.1)

- The improvement in the overall billing efficiency was targeted at 86 *per cent* in 2018-19 from 84.68 *per cent* in 2015-16. During 2015-20, 35 to 39 divisions performed below the targets and the lowest annual billing efficiency in the divisions decreased from 61.73 *per cent* in 2015-16 to 51.25 *per cent* in 2019-20.

  (Paragraph 2.4.2(a))

- MoU envisaged improvement in collection efficiency (CE) from 99 *per cent* in 2015-16 to 100 *per cent* in 2016-17 to 2018-19. PSPCL could not achieve the envisaged collection efficiency in even a single year during the period 2015-16 to 2018-19. The lowest annual CE in the divisions decreased from 84.24 *per cent* in 2015-16 to 76.06 *per cent* during 2019-20.

  (Paragraph 2.4.2(b))

- As per MoU, the gap between Average Cost of Supply (ACS) and Average Revenue Realised (ARR) had to be eliminated by 2018-19. The Company failed to eliminate this gap and the target could not be achieved even by 2019-20. Further, the tariff hikes envisaged in the MoU were also not achieved.

  (Paragraph 2.3.3)

- Under-achievement of targeted reduction in T&D losses resulted in the loss of ₹ 1,810.30 crore to Company as the amount could not be passed on to the consumers through tariff.

  (Paragraph 2.3.3.1 (ii))

- The Company surrendered the surplus power of 53,541.65 MUs against which it paid fixed capacity charges of ₹ 6,210.63 crore to the power producers for capacities contracted.

  (Paragraph 2.5.1)

- The Company deviated from power drawal schedules against which it paid deviation charges of ₹ 146.65 crore during 2015-20. PSERC further disallowed the deviation charges of ₹ 146.65 crore paid by the Company on the ground that additional expenses incurred by PSPCL for its non-performance cannot be passed on to the consumers.

  (Paragraph 2.3.3.2)

- As per MoU, Smart Meters for 100 *per cent* consumers (other than Agriculture Pumpset consumers) consuming more than 500 units per month were to be completed by 31 December 2017 and consumers consuming above 200 units per month by 31 December 2019 based on cost benefit analysis. The Company could not ensure execution of the project and only 335 smart meters were installed till April 2021.

  (Paragraph 3.2.1)

- UDAY scheme provided for 100 *per cent* physical segregation of the mixed feeders by March 2017. As on December 2016, there were 285 mixed rural area feeders in the *Kandi* area. As on March 2021, only 37 feeders were segregated. The failure to complete mixed feeder segregation project resulted in loss of ₹ 1,222.13 crore in the form of disallowance of subsidy against AP consumption claimed by the Company in the *Kandi* area for the years 2015-16 to 2019-20.

(Paragraph 3.3.1)

- The monitoring mechanism was found deficient as no terms of reference of State Level Monitoring Committee and Company Level Monitoring Committee were framed in regard to periodicity of meetings and mechanism of monitoring the performance of the Company under UDAY Scheme. The minutes of meetings did not include the review of entire activities/targets envisaged under UDAY scheme and remedial measures to the shortcomings discussed. Audit further observed that no Action Taken Notes on the agenda of previous meetings of SLMC were prepared and submitted by the Company.

(Paragraph 3.4.1)

Chapter-I

Introduction

Chapter-I : Introduction

1.1 Introduction

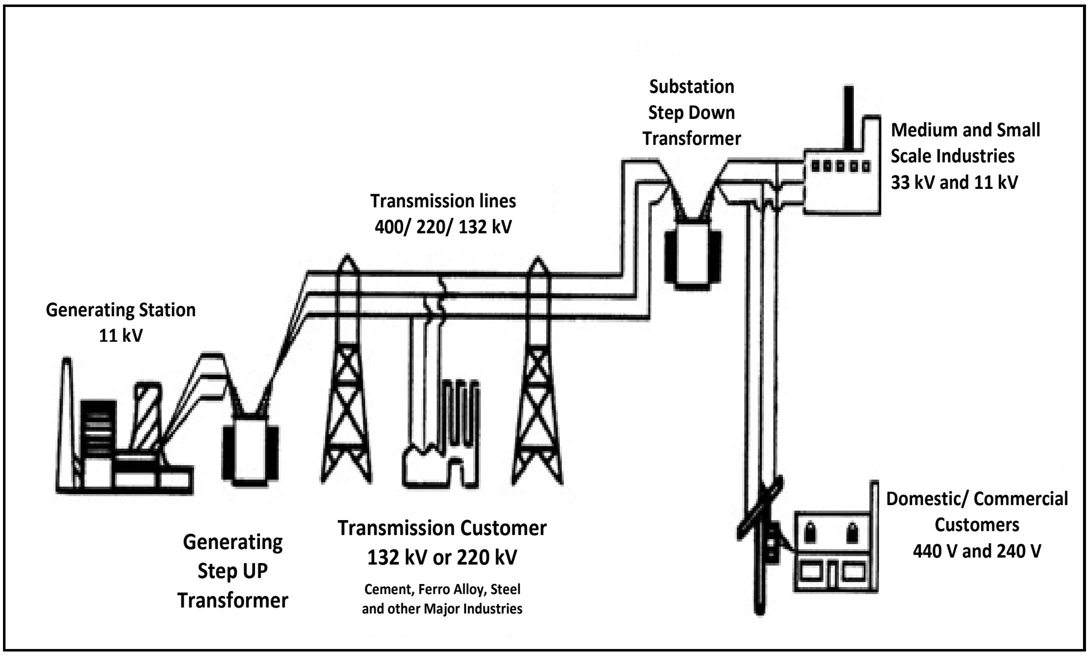
The Punjab State Electricity Board (Board) was a vertically integrated agency responsible for generation, transmission & distribution of electricity in the State. As part of power sector reforms, the Board was unbundled and two successor companies, the Punjab State Power Corporation Limited (PSPCL) and Punjab State Transmission Corporation Limited (PSTCL) were formed (16 April 2010) under the Companies Act, 1956. The activity of generation and distribution of power was entrusted to PSPCL (Company) while transmission of power was the responsibility of PSTCL.

The Management of the Company is vested in a Board of Directors (BoDs) consisting of 15 Directors including the Chairman & Managing Director (CMD). The CMD is the Chief Executive of the Company and is assisted by six Whole Time Directors in managing the day-to-day affairs of the Company and the remaining nine Directors are non-executive Directors.

1.2 Power distribution system

The power distribution system is the link between the power generation sources and consumers. The supply of power to consumers consists of three components - generation, transmission and distribution of power. A pictorial representation of the power supply system from generation of power to its distribution is as follows:

Chart 1.1: Power supply system



In the Company, the Director (Distribution) heads the distribution system (DS). The distribution system of the Company is divided into five zones, each headed by a Chief Engineer. The Zones further consist of various Operation Circles/ DS Divisions and subdivisions. As on March 2020, the Company had 21 Operation Circles, 104[1] DS Divisions and 475 Operation DS Sub-divisions:

Table 1.1: Table showing number of Operation Circles, DS Divisions and DS Sub-divisions under five distribution zones of the Company

Sl. No.	Name of Zone	Number of Operation Circles	Number of DS Operation Divisions	Number of DS Operation Sub-divisions
1.	Border	4	21	99
2.	Central	4	19	66
3.	North	4	20	103
4.	South	5	23	113
5.	West	4	21	94
	Total	**21**	**104**	**475**

Source: Data provided by the Company.

For efficient functioning of the distribution system, it must be ensured that there are minimum aggregate technical and commercial (AT&C[2]) losses in sub-transmission system[3] and distribution of the power. When energy is carried from the generation source to the consumer, some energy is lost in the network. The losses at 33/66 KV stage are termed as sub-transmission losses while those at 11 KV stage and below are termed as distribution losses. These losses are based on the difference between energy received (paid for) by the Distribution Company and energy billed to consumers. The percentage of losses to available power indicates the effectiveness of the distribution system.

1.3 Audit approach

The approach adopted for conducting the performance audit was as follows:

1.3.1 *Scope of Audit*

The performance audit, conducted during August 2020 to January 2021, covers the performance of the Punjab State Power Corporation Limited (Company) pre and post implementation of Ujwal Discom Assurance Yojana (UDAY) during the period from 2015-16 to 2019-20.

An Entry Conference for the performance audit was held in December 2020 with the Company. The scope, objectives and methodology adopted for the

[1] For the purpose of commercial accounting, these 104 operation DS divisions are considered as 98 divisions.

[2] AT&C Losses are the sum total of technical and commercial losses. Technical losses primarily take place due to transformation losses at transformer level, losses on distribution lines due to inherent resistance and poor power factor in electrical network. Commercial losses occur due to wrong metering, incorrect billing of power supplied and collection inefficiency.

[3] The part of the power transmission system that connects the high voltage substations (220 KV and above) to the distribution substations (generally 11 KV) is referred to as the sub-transmission system.

audit were discussed with the Management and Government. The Conference was attended by the Secretary (Power), Government of Punjab (GoP) and CMD of the Company.

An Exit Conference for the performance audit was held in April 2021 with the Company wherein the findings were discussed. This was attended by CMD, Director (Distribution) and Director (Finance) and Director (Generation) of the Company.

The activities relating to distribution of power by the Company were previously also reviewed and included in the Reports of the Comptroller and Auditor General of India on Public Sector Undertakings for the year's ended 31 March 2011, 31 March 2014 and 31 March 2015. Committee on Public Undertakings (COPU) discussed the audit observations and gave (March 2014/ March 2015/ March 2016/ March 2018) recommendations.

1.3.2 *Audit objectives*

The objectives of the performance audit were to ascertain whether:

- the directives pertaining to financial parameters envisaged in the UDAY Scheme and the Memorandum of Understanding (MoU) signed were adhered to and overall objective of financial turnaround of the Company was achieved; and
- the targeted operational improvements and outcomes were achieved as envisaged in the MoU and the Scheme.

1.3.3 *Coverage and Sampling*

Audit examination involved scrutiny of records in the head office and the selected distribution divisions of the Company. The distribution divisions were selected by adopting the criteria of the AT&C losses for sampling as follows:

A. Divisions having highest/lowest AT&C losses during 2019-20; and

B. Divisions which had significant reduction/increase in AT&C losses from 2015-16 to 2019-20.

Sampling Methodology

As per criteria A, six divisions were selected[4] of which three divisions had highest AT&C losses while three had lowest AT&C losses (based on data of 2019-20), as given in **Table 1.2**:

[4] Due to COVID-19 pandemic and consequent travel restrictions, the criteria for selection of DS Divisions falling within 100 Kilometres from Chandigarh city was also applied. Due to this, out of total five DS Zones of the Company, three DS Zones (Central zone, North zone and South zone) were considered for selection of DS Divisions.

Table 1.2: Distribution divisions selected as per Criteria A

Sl. No.	Zone	Circle	Division	AT&C losses as on 31st March 2020 (in *per cent*)
1.	Central	City West, Ludhiana	Agar Nagar, Ludhiana	12.70
2.	Central	Khanna	Gobindgarh	(-) 8.11[5]
3.	North	Nawanshahar	Garhshankar	40.37
4.	North	Nawanshahar	Banga	13.48
5.	South	Patiala	Patiala East	21.59
6.	South	Mohali	Mohali	0.26

Source: Data provided by the Company.

As per criteria B, six divisions were selected, excluding those already selected under criteria A, of which there was highest increase in AT&C losses in four divisions and highest decrease in AT&C losses in other two divisions, as follows:

Table 1.3: Distribution divisions selected as per Criteria B

Sl. No.	Zone	Circle	Division	AT&C losses (in *per cent*)	
				during 2015-16	during 2019-20
7.	Central	City East, Ludhiana	Focal Point, Ludhiana	0.40	6.52
8.	Central	City East, Ludhiana	Sunder Nagar, Ludhiana	12.20	5.31
9.	North	Nawanshahar	Nawanshahar	11.68	16.28
10.	South	Patiala	Patiala West	3.44	13.60
11.	South	Ropar	Anandpur Sahib	17.33	6.28
12.	Central	Khanna	Sirhind	7.54	9.53

Source: Data provided by the Company.

1.3.4 *Audit criteria*

The audit findings were benchmarked against the criteria sourced from:

- UDAY scheme guidelines (November 2015) issued by Ministry of Power, Government of India (MoP);
- Tripartite MoU signed (March 2016) amongst MoP, Government of Punjab and the Company;
- Electricity Act 2003; Electricity Supply Instructions Manual, 2011 and 2018; Punjab State Electricity Regulatory Commission (Electricity Supply code and related matters) Regulations 2014; and directions issued by Punjab State Electricity Regulatory Commission, Central Electricity Authority from time to time;
- Punjab State Electricity Regulatory Commission (Terms and Conditions for Determination of Generation, Transmission, Wheeling and Retail Supply Tariff) Regulations, 2014;

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5 AT&C losses is a multiple of billing efficiency and collection efficiency. Due to collection of arrears, the collection efficiency exceeds 100 *per cent*. This results in minus AT&C losses.

- Punjab State Electricity Regulatory Commission (Conduct of Business) Regulations, 2005;
- Annual Revenue Requirement (ARR) filed by the Company and Tariff Orders issued by the Punjab State Electricity Regulatory Commission;
- Regulations, Manuals and instructions issued by the Company; and
- Directives as well as guidelines issued by the Government of India/ State Government.

1.3.5 *Audit methodology*

The following methodologies were used for conducting the performance audit:

- Scrutiny of minutes/agenda of meetings of the Board of Directors (BoDs), Whole Time Directors (WTDs) and BoDs committees formed by the Company;
- Examination of records of implementing units of UDAY scheme in Company;
- Collection of information on the basis of physical evidence, documents, questionnaires, surveys and direct observation and their analysis;
- Interaction with the Management.

1.4 UDAY Scheme

The Ministry of Power, Government of India (GoI) launched (20 November 2015) Ujwal Discom Assurance Yojana (UDAY) scheme for financial and operational turnaround of the State owned power distribution companies (DISCOMs) with support from their respective State Governments. The salient features of the Scheme were:

1. The State Government to take over 75 *per cent* of the debt of DISCOM's, outstanding as on 30 September 2015 over two years – 50 *per cent* in 2015-16 and 25 *per cent* in 2016-17.
2. The debt taken over to be converted into State Government grant during the period 2015-16 to 2017-18 with a relaxation of two years. In exceptional cases, where DISCOM require equity support, not more than 25 *per cent* of this grant to be given as equity.
3. Fifty *per cent* of DISCOM debt as on 30 September 2015 which will remain with the DISCOM by the end of 2015-16 to be converted by the Banks/Financial Institutions (FIs) into loans or bonds with interest rate not more than the banks base rate *plus* 0.10 *per cent*. Alternately, this debt to be fully or partly issued by the DISCOM as State guaranteed DISCOM bonds at the prevailing market rates which shall be equal to or less than banks base rate *plus* 0.10 *per cent*.
4. The participating States in the Scheme were required to undertake various targeted activities for improving the operational efficiencies of DISCOMs. The timeline prescribed for these targeted activities were

also required to be followed to ensure achievement of the targeted benefits.

Outcomes of operational improvements were to be measured through following indicators:

a) Reduction of AT&C loss to the level of 15[6] *per cent* in the year 2018-19 as per the loss reduction trajectory to be finalised by Ministry of Power (MoP) and States; and

b) Reduction in gap between Average Cost of Supply (ACS) and Average Revenue Realised (ARR) to zero by 2018-19 as finalised by MoP and States.

The Company had been under severe financial stress at the time the Scheme was contemplated for implementation. As on 30 September 2015, the Company had outstanding debts of ₹ 20,837.68 crore. The annual gap between ACS and ARR was ₹ 0.53 per unit (31 March 2016). The loss for the year 2015-16 (as per Annual Accounts) was ₹ 1,694.85 crore and AT&C losses were 15.90 *per cent* (31 March 2016).

To help improve the operational and financial efficiency of the Company, Government of Punjab (GoP) approved (25 February 2016) the adoption of UDAY scheme. Accordingly, a Memorandum of Understanding (MoU) amongst Ministry of Power, GoI, Government of Punjab (GoP) and the Company was signed (4 March 2016). In line with the tenets of the Scheme, the obligations of the parties to the MoU were:

Table 1.4: Obligations of parties to the tripartite MoU for UDAY scheme

Sl. No.	Description	Obligations
1.	Obligations of Ministry of Power, Government of India	• To facilitate GoP to take over ₹ 10,418.84 crore (50 *per cent* of the outstanding debt of ₹ 20,837.68 crore) of the Company, as on 30 September 2015 in the year 2015-16 and ₹ 5,209.42 crore (25 *per cent* of the outstanding debt) in the year 2016-17. • To facilitate Banks/Financial Institutions (FIs) to not to levy any prepayment charge on the Company's debt. Banks/FI's shall waive off any unpaid overdue interest and penal interest on the Company's debt and refund/adjust any such overdue/penal interest paid since 1 October 2013. • To facilitate increased supply of domestic coal to the Company through Ministry of Coal, GoI. • To allocate coal linkage to the State at notified price based on which the State will go for tariff-based bidding which will help it in getting cheaper power. • To ensure supply of 100 *per cent* crushed coal from Coal India Limited by 1 April 2016 and rationalisation of coal prices based on Gross Calorific Value.
2.	Obligations of Government of Punjab	• To take over outstanding debts of the Company to the extent of ₹ 15,628.26 crore (75 *per cent* of total debts of ₹ 20,837.68 crore as on 30 September 2015) in the years 2015-16 (50 *per cent*) and 2016-17 (25 *per cent*). The debts

6 As per MOU, it was 14 *per cent.*

		taken over would be transferred to the Company as a loan from 2015-16 to 2019-20 and thereafter as a mix of grant (₹ 11,728.26 crore, 75 *per cent* of ₹ 15,628.26 crore), and equity (₹ 3,900 crore, 25 *per cent* of ₹ 15,628.26 crore) as on 31 March 2020. Government of Punjab would guarantee repayment of principal and interest payment for the balance debt remaining with/Bonds issued by the Company. • To take over future losses of the Company in a graded[7] manner. • To pay the outstanding dues of the State Government Departments towards the Company for supply of electricity by March 2016. • To replace street lights with Light Emitting Diodes (LEDs) through Municipal Corporation/Nagar Nigam. • To improve the efficiency of State Generating Units and reduce the transmission losses from 3.80 *per cent* to 2.50 *per cent* by 2018-19. • To endeavour for ensuring appropriate tariff hikes. • To monitor the performance of the Company on monthly basis.
3.	Obligations of Punjab State Power Corporation Limited (Company)	• Conversion of 25 *per cent* of the Company's debts into loan/Bonds (by the Company) with interest not more than Banks base rate *plus* 0.1 *per cent*. • To reduce AT&C losses to 14 *per cent* by 2018-19. • To eliminate the gap between Average Cost of Supply (ACS) and Average Revenue Realised (ARR) per unit of power by 2018-19. • To implement 100 *per cent* metering at Distribution Transformer (DT) level by June 2017 except Agriculture Pumpset (AP) DTs, as per the Company's policy. • To ensure energy audit upto 11 KV level in rural areas by September 2016. • To undertake Feeder improvement program for network strengthening and optimisation, to be completed by March 2017. • To achieve physical feeder segregation by March 2017. • To install Smart Meters for 100 *per cent* consumers (other than AP consumers) consuming above 500 units per month by 31 December 2017 and consumers consuming above 200 units per month by 31 December 2019, based on cost benefit analysis. • To take measures for Demand Side Management and Energy Efficiency by providing LED bulbs to consumers under DELP[8].

[7] 2017-18: 5 *per cent* of the losses of 2016-17, 2018-19: 10 *per cent* of the losses of 2017-18, 2019-20: 25 *per cent* of the losses of 2018-19 and 2020-21: 50 *per cent* of the losses of 2019-20.

[8] DELP- Domestic Efficiency Lighting Programme (DELP) was announced by GoI on 5 January 2015, urging the people to use LED bulbs in place of incandescent bulbs, tube lights and CFL bulbs; being more efficient and economical. The DELP scheme was launched as "Unnat Jyoti by Affordable LEDs for All (UJALA)" on 1 May 2015. Under UJALA scheme, LED bulbs were to be distributed by the Electricity Distribution Company at subsidised rates to every electricity consumer with a metered connection.

		• To revise tariff quarterly particularly to offset increase in cost of fuel and to undertake appropriate measures for timely filing of Tariff Petition before Punjab State Electricity Regulatory Commission so that the Tariff Order may be issued for the next year as early as possible. • To initiate capacity building of employees to enhance technical, managerial and professional capabilities. • To set up Centralised Customer Call Center for timely resolution of complaints related to 'No Current' and other technical complaints, harassment by officials, reporting of theft and safety related complaints. • To monitor the performance of the Company at CMD level on a monthly basis. Monthly monitoring formats along with the targets shall be provided by the Company by March 2016.

Source: MoU signed amongst MoP, GoP and the Company.

The performance of the State owned Distribution Companies is reported on UDAY portal (website) of Ministry of Power, GOI, which provides information on national as well as State level performance on various efficiency parameters. It also provides State Health Card and the Memorandum of Understanding (MoU) signed with Government of India.

1.5 Renewable purchase obligations

As per Electricity Act, 2003, the State Regulatory Commissions are required to promote cogeneration and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and specifying a percentage of the total requirement of electricity to be purchased from renewable sources. As per PSERC (Renewable Purchase Obligation and its compliance) Regulations, 2011 (RPO Regulations), the RPO can be complied with by the Company by purchasing electricity from renewable sources of energy or alternatively buying Renewable Energy Certificates (RECs) or a combination of both. In case the Company fails to comply with the obligation to procure the required percentage of electricity from renewable sources of energy or buy RECs, it is liable to pay penalty as may be decided under Section 142 of the Electricity Act, 2003.

As per UDAY scheme, the Company had to comply with the Renewable energy purchase obligation outstanding since 1 April 2012 within a period to be decided in consultation with MoP. However, no provision in this regard was included in the tripartite MoU signed amongst MoP, GoP and Company for implementation of UDAY scheme.

As on 1 April 2012, the Company had RPO shortfall of 252.62 MUs which accumulated to 480.10 MUs by 2019-20. The Company could not achieve the RPO targets fixed by the PSERC for 2015-20 (except for 2017-18 & 2018-19).

During 2015-16 to 2019-20, the Company, due to its failure in purchase of required renewable energy as per RPO, purchased RECs amounting to ₹ 104.59 crore.

Chapter-II

Financial Turnaround

Chapter-II : Financial Turnaround

2.1 Introduction

The UDAY guidelines/MoU stipulate financial and operational efficiency parameters to be monitored for time-bound improvement. The targeted activities under financial parameters along with the targeted benefits were as follows:

Table 2.1: Financial parameters under UDAY scheme and targeted benefits

Sl. No.	Financial parameters	Purpose/envisaged benefits
1.	Taking over 75 *per cent* of Company's outstanding debts as on 30 September 2015 by Government of Punjab (GoP).	Financial support by reducing debts and interest burden of the Company.
2.	Conversion of 25 *per cent* of the Company's debts into loan/Bonds (by the Company) at rates of interest not more than banks base rate *plus* 0.1 *per cent*.	Financial support for reducing interest burden of PSPCL.
3.	Taking over of future losses of the Company (2017-18 to 2020-21) in a graded manner.	Improving financial health and liquidity position for operations.
4.	Quarterly tariff revision to offset fuel price increase.	Such periodic and graded tariff revision will be easier to implement and can be absorbed by consumers.

Source: MoU signed amongst MoP, GoP and the Company. Targeted benefits are as per UDAY scheme.

It was observed that the GoP had spent ₹ 51,326.02 crore on power sector during 2015-20 on account of subsidy to consumers (₹ 35,455.81[1] crore), losses taken over (₹ 241.95 crore) and investment in equity (₹ 15,628.26 crore). The key financial parameters, their targets and achievement there against were as follows:

Table 2.2: Achievements of the Company against financial parameter under UDAY scheme

Sl. No.	Financial position	As on 31 March 2016	Target	Post UDAY position as on 31 March 2020
1.	Outstanding debts of the Company	₹ 20,837.68 crore (as on 30 September 2015)	Debt of ₹ 15,628.26 crore was to be taken over by GoP (up to 2016-17).	Debt of ₹ 15,628.26 crore was taken over by 2016-17 and converted into equity.
			Bonds in respect of remaining 25 *per cent* debt amounting to ₹ 5,209.42 crore to be issued by the Company by 2016-17.	Not issued.

[1] Actually paid during 2015-16 to 2019-20.

2.	Takeover of losses	Not Applicable	5 *per cent* to 50 *per cent* of losses of previous year to be taken over during 2017-18 to 2020-21.	Losses were taken over during 2017-18 to 2019-20 as per MoU.
3.	Annual Gap between ACS and ARR (Excess of cost over revenue)	₹ 0.53 per unit	Elimination of gap by 2018-19.	₹ 0.30 per unit
4.	Annual AT&C losses (in *per cent*)	15.90	14.00	13.98
5.	Quarterly tariff revision, particularly to offset fuel price increase.	Fuel Cost Adjustment (FCA) not carried out since 2nd quarter of 2019-20 (was to be levied in 4th quarter of 2019-20) to 3rd quarter of 2020-21.		

Source: MoU for UDAY scheme and UDAY portal data provided by the Company.

It was observed that the Company, on the direction of the State Government, converted the entire loan into equity whereas only ₹ 3,900 crore was to be converted into equity and remaining was to be treated as a grant. Further, the Company did not issue Bonds for remaining debt (25 *per cent*) of ₹ 5,209.42 crore, to be issued by it up to 2016-17. The Company also failed to eliminate the ACS-ARR gap. The quarterly tariff revision to offset fuel price increase was not done during 2019-20 (2nd quarter) to 2020-21 (up to 3rd quarter) on orders of Government of Punjab. These issues have been discussed in detail in following paragraphs.

The position in respect of future losses projected in MoU and the actual losses of the Company during the five years' period 2015-20 was as follows:

Table 2.3: Achievements of the Company against losses projected under UDAY scheme

(₹ in crore)

Year	Projected losses in UDAY	Actual losses	Previous year losses taken over
2015-16	(-) 1,839.00	(-) 1,694.85	-
2016-17	(-) 1,681.00	(-) 2,836.17	-
2017-18	(-) 220.00	(-) 906.92	₹ 141.81
2018-19	467.00	(-) 37.80	₹ 90.69
2019-20	NA	(-) 1,158.20[2]	₹ 9.45

Source: MoU for UDAY scheme and Annual accounts of the Company.

The actual losses of the Company remained higher as compared to those projected for the years 2016-17 to 2018-19 in the MoU. The Company failed to reduce the losses in line with the projections made in the MoU of UDAY scheme. It was observed that increase in loss to ₹ 1,158.20 crore during 2019-20 was due to increase in power purchase cost at a rate higher than increase in the income of the Company as compared to previous year 2018-19. Taking over of loans and losses by GoP indicated that the GoP was paying for the management inefficiency of the Company.

The financial issues are discussed in detail as follows:

[2] 50 *per cent* of this loss *i.e.* ₹ 579.10 crore was taken over by GoP in 2020-21.

2.2 Loan and equity

2.2.1 *Conversion of loan into equity*

As per the Scheme and MoU signed thereunder, the State Government was required to take over 75 *per cent* of DISCOM's outstanding debt as on 30 September 2015 of ₹ 20,837.68 crore, over two years – 50 *per cent* in 2015-16 and 25 *per cent* in 2016-17. The debt of ₹ 15,628.26 crore taken over, was required to be converted into State Government grant during the period 2015-16 to 2017-18 with a relaxation of two years. In case, DISCOM required equity support, not more than 25 *per cent* of this grant was to be given as equity. The borrowings of ₹ 15,628.26 crore made by the State to takeover Company's debt were thus required to be transferred to the Company in the shape of grant ₹ 11,728.26 crore and equity ₹ 3,900 crore.

Audit, however, observed that the State Government, in non-observance of Rule 6.1 of the UDAY scheme notification which prescribed approval of the MoP/GoI for any amendment to the MoU, decided to convert (March 2020) the entire loan of ₹ 15,628.26 crore into equity. This resulted in understatement of revenue deficit of the State by ₹ 11,728.26 crore for the year 2019-20.

The Company/State Government replied (May 2021/August 2021) that Ministry of Power, Government of India (GoI) had been apprised regarding conversion of loans of ₹ 15,628.26 crore into equity during the UDAY review meetings. The reply is not tenable as GoI's specific approval for deviation from MoU was not obtained.

2.2.2 *Non-issuance of bonds*

As per the Scheme and the tripartite MoU, DISCOMs were required to convert 25 *per cent* of the debt outstanding of the banks/ financial institutions (FIs) into loan or State Government guaranteed bonds with the interest at rate not more than the banks base rate *plus* 0.10 *per cent*.

It was noticed that the proposal to issue bonds amounting to ₹ 5,209.42 crore, during the year 2016-17, was approved (June 2016) by the Company and a special resolution in extra ordinary general meeting (December 2016) was also passed for the same.

However, even after a lapse of more than four years from the approval for issue of bonds, neither the bonds have been issued nor the debt has been converted into loans at the rates as prescribed in the Scheme. Audit observed that the rating agencies did not provide a rating to the Bonds proposed to be issued.

Resultantly, the Company paid higher rates of interest to banks/FIs, ranging between 8 *per cent* and 12.25 *per cent*, as against the rate of interest for Punjab Government bonds issued under UDAY scheme *i.e.* 8.72 *per cent*. The Company paid excess interest of ₹ 261.09 crore due to banks charging higher rate of interest during the period 2016-17 to 2019-20.

The Company/State Government stated (April/May 2021) that the bonds could not be issued due to rating issues. The fact remains that the target rate of interest *i.e.* banks base rate *plus* 0.1 *per cent* could not be achieved.

2.2.3 *Increase in outstanding debt post UDAY*

The primary objective of the Scheme was to reduce the interest burden of the DISCOMs to help in their financial turnaround. For this purpose, the debts of the Company were taken over by the GoP. The debt position (excluding loans not considered under UDAY scheme *i.e.* GPF loans, Centrally Sponsored Schemes loans, Bonds, Debentures and Cash credit/overdraft limits) of the Company pre and post UDAY are as below:

Table 2.4: Table showing outstanding loans of the Company

(₹ in crore)

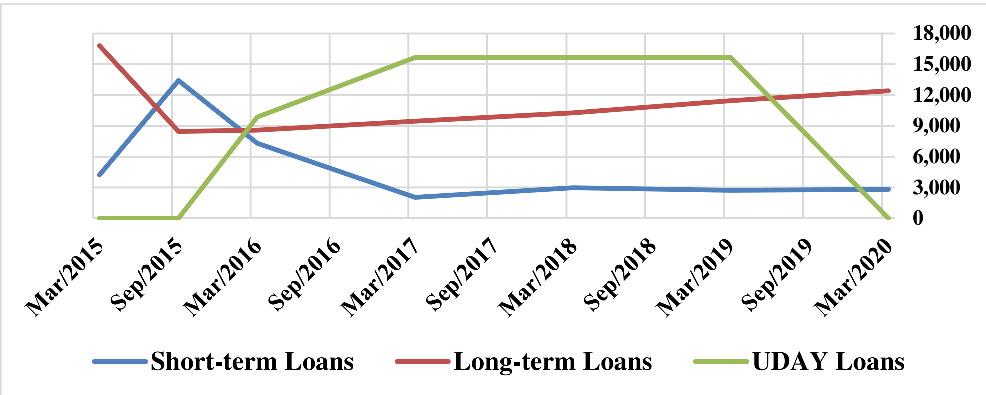
Date (As on)	Short-term loans	Long-term loans	UDAY loans	Total loans
31 March 2015	4,205.64	16,788.61	0.00	20,994.25
30 September 2015	13,381.53	8,445.00	0.00	21,826.53
31 March 2016	7,295.14	8,569.33	9,859.72	25,724.19
31 March 2017	2,030.05	9,454.04	15,628.26	27,112.35
31 March 2018	2,949.60	10,236.50	15,628.26	28,814.36
31 March 2019	2,702.74	11,418.74	15,628.26	29,749.74
31 March 2020	2,806.16	12,402.40	0.00	15,208.56

Source: Annual accounts of the Company.

The total loans of the Company pre-UDAY in September 2015 were ₹ 21826.53 crore. They included loans for generation business amounting to ₹ 988.82 crore. Despite conversion of loans of ₹ 15,628.26 crore into equity, total loans of ₹ 15,208.56 crore still remained outstanding as on 31 March 2020. The upward trend of outstanding loans could not be arrested post UDAY. There was a net increase of ₹ 9,010.29 crore in outstanding loans from September 2015 to March 2020. It was also observed that the outstanding receivable from State Government on account of tariff compensation and dues of Government Departments had increased by ₹ 7,181.41[3] crore during 2015-20 implying that the debt burden had increased primarily due to non-payment of dues on time by Government of Punjab.

Chart 2.1: Short term, long term and UDAY loans from March 2015 to March 2020

(₹ in crore)



[3] Outstanding dues against State Government on account of tariff compensation: ₹ 5,338.54 crore and defaulting dues of Government Departments: ₹ 1,842.87 crore.

As seen from the **Chart 2.1**, the increase in loan extended under UDAY corresponded with a decrease in Short term loans indicating the impact of UDAY scheme. The Long term loans have increased from ₹ 8,569.33 crore as on March 2016 to ₹ 12,402 crore as on March 2020.

The Company/State Government (May 2021/August 2021) replied that during the period April 2020 to February 2021, ₹ 712 crore have been recovered from Government departments and subsidy amounting to ₹ 9,656.95 crore has been received from GoP during 2020-21. The reply is not acceptable as the management failed to lay out concrete steps to prevent the outstanding loans from reaching pre UDAY levels.

2.2.4 *Pending penal interest*

As per MoU, GoI was to facilitate waiver of unpaid overdue interest and penal interest on Company's debt and refund/adjust of any such overdue/penal interest paid since 1 October 2013 to Banks/Financial Institutions.

Audit observed that the Company had paid penal interest amounting to ₹ 56 lakh to various banks after 1st October 2013 on loans availed from them, however, only one bank had refunded an amount of ₹ 8.37 lakh and balance ₹ 47.63 lakh was still (December 2020) pending for waiver and refund. Matter was taken up (October 2018 and December 2020) by the Company with GoI to direct the banks to refund the amount of penal interest to Company, however, response from the MoP/GoI was awaited (March 2021).

The Company/State Government replied (April/May 2021) that efforts are being made to recover the amount from the banks and the matter has also been taken up with Ministry of Power, GoI.

2.3 Tariff

2.3.1 *Levy of quarterly fuel cost adjustment surcharge*

The Scheme and the tripartite MoU provides for quarterly tariff revisions to offset the increase in price of fuel consumed for generation of power. Periodic tariff revisions being easier to implement, are absorbed by the consumers. Accordingly, based on petition filed by the Company, PSERC fixes fuel cost adjustment (FCA) surcharge quarterly as per Regulation 55 of the PSERC (Conduct of Business) Regulations, 2005. Further, GoP directions (March 2013/January 2020) required Company to seek prior approval of GoP for all such petitions, where tariff was affected, before submitting them to PSERC.

Audit observed that the Company implemented the quarterly tariff revisions on account of FCA upto 1st quarter of 2019-20. Though the Electricity Act did not mandate the State Government to direct a distribution licensee (PSPCL in the State of Punjab), GoP in contravention to the provision of the Act, Scheme and MoU, decided (August 2020) that with effect from 2nd quarter of 2019-20, the FCA surcharge shall be levied on annual basis along with carrying cost. GoP directed the Company to take up the matter with

PSERC for amendment in concerned PSERC Regulations and to file the petition for FCA for 2nd to 4th quarter of 2019-20 at the time of filing aggregate revenue requirement (ARR) for the next year.

Due to these orders of the State Government, the Company could not implement the quarterly FCA tariff revision due for the 2nd to 4th quarters of financial year 2019-20 and respective amounts of FCA could not be recovered from/paid to the consumers as follows:

Table 2.5: Table showing loss of interest due to non-recovery of FCA

(₹ in crore)

FCA surcharge	Dates of applicability of FCA	FCA surcharge to be recovered for the quarter	Total FCA surcharge to be recovered during the quarter	Delay in months	Base rate of interest charged by SBI (in *per cent*)	Loss of interest
(1)	(2)	(3)	(4)	(5)	(6)	(7) = (4)*{(6)/ 100}*{(5)/12}
2nd Quarter 2019-20	1 January 2020	67.22	67.22	3	9.05	1.52
3rd Quarter 2019-20	1 April 2020	7.52	74.74	3	8.15	1.52
4th Quarter 2019-20	1 July 2020	(-) 25.45	49.29	3	8.15	1.00
			Total			**4.04**

Source: Petition for quarterly FCA revision.

Audit observed that the petition made by Company to PSERC for amendment of PSERC regulations enabling yearly FCA tariff revision was rejected (December 2020) by the PSERC. Consequently, Company had to suffer loss of interest amounting to ₹ 4.04 crore due to non timely recovery of FCA.

The Company/State Government replied (April/May 2021) that the FCA shortfall was met in the first quarter of 2020-21 for which the amount of FCA was worked out as (-) ₹ 115.59 crore. The reply is not tenable as the recovery of FCA shortfall did not compensate for the interest cost suffered by the Company thereon.

2.3.2 *Delay in revision of tariff*

The National Tariff Policy (January 2016) of Ministry of Power, GoI provides that requisite tariff changes should come into effect from the date of commencement of each financial year. PSERC (Terms and Conditions for Determination of Generation, Transmission, Wheeling and Retail Supply Tariff) Regulations, 2014 prescribed that the Company shall file a petition for approval of its Aggregate Revenue Requirement and Tariff, for each financial year on or before 30th November of the year preceding the financial year and the process of issue of tariff orders should be completed by 30th April of each financial year. The MoU for UDAY required the Company to timely file its tariff petition with the PSERC, so that Tariff order may be issued for the year as early as possible.

Audit observed that though the Company filed the tariff petitions within the stipulated timeframe (*i.e.* 30th November each year), there was delay on its part in furnishing further information sought by PSERC. Delay in furnishing State Government's assurances regarding continuation of various subsidies was also observed. Consequently, the tariff orders for the years 2015-16 to 2020-21 were issued with delays ranging between 18 to 205 days. The delay in issue of tariff orders resulted in delayed recovery of increased tariff from consumers which had consequential interest cost of ₹ 45.44 crore during 2017-18 to 2020-21.

The Company/State Government replied (April/May 2021) that the tariff petitions were filed within the stipulated time and the Company cannot influence the PSERC in their decision making. The fact remains that delay in furnishing the information to PSERC and GoP's assurance regarding continuation of subsidies led to delay in issue of Tariff Orders.

2.3.3 *Gap between Average Cost of Supply and Average Revenue Realised*

One of the primary purpose of UDAY scheme was to progressively eliminate the gap between average cost of supply and average revenue realised of the DISCOMs. This was sought to be achieved by rationalising costs and ensuring adequate periodical tariff hikes.

As per MoU, the gap between Average Cost of Supply (ACS) and Average Revenue Realised (ARR) had to be eliminated by the year 2018-19. To eliminate cost and revenue gap, GoP was required to ensure tariff hikes as reflected in the MoU. Actual achievement of Company in elimination of the gap during 2015-20 is given below:

Table 2.6: Table showing targeted and actual gap between ACS and ARR

Year	Targeted ACS minus ARR gap (in ₹)	Actual ACS minus ARR gap (in ₹)
2015-16	0.43	0.68
2016-17	0.37	0.65
2017-18	0.04	0.48
2018-19	(-) 0.09	0.05
2019-20	Not prescribed[4]	0.30

Source: MoU for UDAY scheme and UDAY portal data provided by the Company.

As can be seen the Company could not bridge this gap even by the year 2019-20. Also, the tariff hikes envisaged in the MoU were also not achieved. Audit observed that the non-elimination of gap and non-achievement of tariff hikes were attributed to the disallowance of projected revenue requirements of Company by PSERC who observed that the revenue requirements were outside norms:

[4] In MoU, the targets were prescribed up to the year 2018-19.

Table 2.7: Table showing tariff hike during 2015-20 and disallowance of revenue requirement of Company

Year	Tariff hike envisaged under MoU (in *per cent*)	Tariff hike as per PSERC tariff order (in *per cent*)	Revenue Requirement claimed by Company (₹ in crore)	Revenue Requirement allowed by PSERC (₹ in crore)	Net Disallowance of Revenue Requirement by PSERC (₹ in crore)
2015-16	0.00	0.00	25,867.72	23,547.89	2,319.83
2016-17	5.00	(-) 0.65	27,815.82	26,935.60	880.22
2017-18	9.00	9.33	31,127.52	27,232.40	3,895.12
2018-19	3.00	2.17	33,000.28	30,620.02	2,380.26
2019-20	Not prescribed	1.78	34,813.00	30,424.44	4,388.56
				Total	**13,863.99**

Source: MoU for UDAY scheme and Tariff Orders of PSERC for the years 2015-16 to 2020-21.

Audit observed that Company failed to keep its costs within PSERC norms. The significant costs disallowed by PSERC, noticed during audit and reasons thereof were as follows:

- Interest and finance charges on working capital loans were disallowed by PSERC on normative basis as the working capital loans raised by Company were in excess of the requirement determined as per PSERC norms.

- The fuel/generation cost was disallowed on normative basis due to high operation parameters over and above the norms *i.e.* high station heat rate and high consumption of oil per unit of electricity generated.

- The power purchase was disallowed on account of unscheduled interchange (deviation) charges, late payment surcharges and excess power purchased due to higher transmission & distribution losses.

Due to disallowance, these expenses could not be passed to the consumers through tariff and the Company had to absorb them, resulting in loss at least equivalent to expenses.

The Company/State Government replied (April/May 2021) that the orders of PSERC were challenged in APTEL and the decision was awaited. Audit observed that the Company had not been able to get any relief on disallowances in the latest decision of APTEL pertaining to the year 2017-18.

Some of the disallowances are discussed as follows:

2.3.3.1 *Transmission and Distribution losses*

(i) *Transmission losses*

As per MoU, GoP was to make efforts to reduce transmission losses from 3.80 *per cent* in 2014-15 to 2.50 *per cent* by 2018-19. PSERC fixed norm of

2.50 *per cent* as transmission loss allowed during the years 2015-16 to 2018-19 for Punjab State Transmission Corporation Limited (PSTCL).

Audit observed that the actual transmission losses reported by PSTCL during the period 2016-19 ranged between 2.87 and 4.24 *per cent* which were higher than the target prescribed in the MoU and norm approved by the PSERC. PSTCL achieved the targeted level of reduction in transmission losses in the year 2019-20 when the losses stood at 2.22 *per cent*. The failure to contain the transmission losses within norms during 2016-19 resulted in loss of energy of 1,136.02 MUs valuing ₹ 466.05 crore as shown below. These excess transmission losses during 2016-19 were disallowed as part of overall transmission and distribution losses of the Company as shown in **Table 2.9**:

Table 2.8: Excess transmission losses

Year	Transmission losses approved by PSERC (in *per cent*)	Actual transmission losses of PSTCL[5] (in *per cent*)	Excess transmission losses[6] (in MUs)	Cost of power purchase (₹ per unit)	Cost of excess transmission losses (₹ in crore)
2016-17	2.50	4.24	612.37	3.97	243.11
2017-18	2.50	3.12	306.00	4.22	129.13
2018-19	2.50	2.87	217.65	4.31	93.81
2019-20	2.50	2.22	-	-	-
		Total	**1,136.02**	**-**	**466.05**

Source: Management Information Reports and information provided by the Company.

(ii) *Distribution Losses*

PSERC (Terms and Conditions for Determination of Generation, Transmission, Wheeling and Retail Supply Tariff) Regulations, 2014 stipulate that the Company shall bear the entire losses on account of its failure to achieve the norms/targets for transmission and distribution business, as laid down by the PSERC from time to time. The Committee on Public Undertaking (CoPU) while discussing paragraph 2.2.19 of Audit Report 2010-11 also recommended (March 2015) that the Company should make efforts to reduce its distribution losses.

PSERC in its Tariff Orders for the Company for the years 2015-16 to 2019-20 fixed the targets of transmission and distribution (T&D) losses which ranged between 13.75 and 15.50 *per cent*. However, the actual T&D losses of the Company remained higher than the targets prescribed by the PSERC who consequentially disallowed the power purchase cost of the Company as shown in **Table 2.9**:

5 The boundary metering of PSTCL was operationalised *w.e.f.* July 2016 and the transmission losses were calculated thereafter.

6 {Energy inflow into the system of PSTCL (in MUs) x (Actual transmission losses of the PSTCL (in *per cent*) *minus:* losses approved by the PSERC for the respective year (in *per cent*))}/100.

Table 2.9: Year-wise T&D losses of the Company and disallowance of the power purchase cost of the Company

Year	Target fixed by PSERC (in *per cent*)	T&D losses reported by Company (in *per cent*)	Power disallowed by PSERC (in MUs)	Power purchase cost disallowed by PSERC (₹ in crore)
2015-16	15.50	14.71	450.00	175.80
2016-17	14.50	15.26	1,046.63	331.78
2017-18	14.25	13.68	1,360.36	495.17
2018-19	14.39	14.20	662.52	228.57
2019-20	13.75	16.00	1,751.04	578.98
		Total	**5,270.55**	**1,810.30***

Source: Tariff orders of PSERC for the years 2015-16 to 2020-21.
Note: * includes cost of excess transmission loss of ₹466.05 crore at Table 2.8

PSERC observed that the under-achievement of the targeted distribution loss level by the Company had resulted in additional short term power purchases which were avoidable. PSERC worked out difference of 5,270.55 MUs between energy requirement and energy availability and disallowed ₹ 1,810.30 crore against the same during the period 2015-20. The T&D losses increased from 14.71 *per cent* in 2015-16 to 16.00 *per cent* in 2019-20.

The Company/State Government replied (April/May 2021) that efforts were being made to keep the T&D losses at minimum level and to control the theft of power by checking of connections. The reply is not acceptable as steps taken by the Company proved inadequate to contain the distribution losses within the norms fixed by the PSERC.

2.3.3.2 *Deviation charges*

To maintain grid discipline and grid security, charges for deviation are imposed under Central Electricity Regulatory Commission (Deviation Settlement Mechanism and related matters) Regulations, 2014, on the companies which deviate from their scheduled generation or scheduled drawal of power from the electricity grid. These charges are payable depending upon the extent of deviation from the schedule subject to the grid condition *i.e.* frequency at that time of deviation.

The Committee on Public Undertaking (CoPU) of State Legislature while discussing paragraph 2.2.18 of Audit Report 2010-11 recommended (March 2015) that the Company should plan the possibility of purchase of power from economic sources and stay within the limits approved by PSERC by controlling various costs and reducing losses.

It was noticed that the Company deviated from its power drawal schedules and paid deviation charges of ₹ 146.65 crore during 2015-20. The PSERC disallowed recovery of these deviation charges in the form of tariff terming them as additional expenses incurred for its non-performance. Besides, an amount of ₹ 2.06 crore paid by the Company during 2017-18 against delayed payment of Deviation charges was disallowed by PSERC.

The Company/State Government replied (May 2021/August 2021) that deviation was unavoidable due to many factors like sudden weather changes, load variation, etc. and every effort was made to control it. The reply is not acceptable as PSERC also specifically attributed these charges to the non-performance of the Company.

2.4 Billing and collection of revenue

2.4.1 *Aggregate Technical & Commercial Losses*

Aggregate Technical & Commercial (AT&C) Losses are the sum total of technical and commercial losses. Technical losses primarily take place due to transformation losses at transformer level, losses on distribution lines due to inherent resistance and poor power factor in electrical network. Commercial losses occur due to wrong metering, incorrect billing of power supplied and collection inefficiency. AT&C losses provide realistic picture of the loss situation in a particular period.

As per the UDAY scheme, the distribution utilities were required to bring down their AT&C losses to 15 *per cent* by 2018-19 as per the loss reduction trajectory finalised by Ministry of Power and the States. The MoU between Company, GoP and GoI, however, envisaged that the Company shall endeavour to bring its AT&C losses to 14 *per cent* by 2018-19 and provided year-wise AT&C loss reduction targets for its 98 distribution divisions individually and for the Company as a whole for the years 2014-15 to 2018-19 for the purpose.

The year-wise targets of AT&C losses and achievements there against of the Company as a whole were as follows:

Table 2.10: Year-wise achievements against targets of reduction of AT&C losses

(in *per cent*)

Year	Target AT&C losses as per MOU	AT&C losses reported on UDAY portal	AT&C losses as per Management Information Reports
2015-16	16.16	15.90	15.08
2016-17	15.30	14.46	14.63
2017-18	14.50	17.26	13.88
2018-19	14.00	12.04	13.78
2019-20	Not prescribed	13.98	14.56

Source: *MoU for UDAY scheme, UDAY portal data provided by the Company and Management Information Reports of the Company.*

The Company achieved the targets prescribed in MoU for reducing AT&C losses. However, data reported on UDAY portal did not match with the data in the Management Information Reports of the Company. The Management did not offer reasons for the differences.

It was further observed that against the overall targeted level of bringing AT&C losses to 14 *per cent*, the target in respect of as many as 16 divisions was kept above 20 *per cent*. The performance of 98 distribution divisions with respect to achievement of year-wise targeted reduction in AT&C losses is given in **Table 2.11**:

Table 2.11: Table showing achievement of AT&C losses by distribution divisions

Particulars	2015-16	2016-17	2017-18	2018-19	2019-20
Total number of divisions	98	98	98	98	98
Number of divisions achieving yearly target of reduction of AT&C losses	45	43	39	36	46
Number of divisions which did not achieve the targeted AT&C losses	53	55	59	62	52
Maximum AT&C Loss of a division observed during the year (in *per cent*)	43.60	42.84	49.47	49.92	57.65
Minimum AT&C Loss of a division observed during the year (in *per cent*)	(-) 6.08	(-) 4.09	(-) 2.74	(-) 13.83	(-) 10.65

Source: Management Information Reports of the Company.

The above **Table 2.11** shows that the number of divisions which did not achieve the targeted reduction in AT&C losses ranged from 52 (53 *per cent*) to 62 (63 *per cent*) during 2015-20. Whereas minimum AT&C losses achieved by the divisions during 2015-20 ranged between (-) 2.74 *per cent* and (-) 13.83 *per cent*, the maximum AT&C losses ranged between 42.84 *per cent* and 57.65 *per cent* ***(Annexure 1)***. This indicated that performance of underperforming divisions was absorbed by efficiently performing divisions. The wide gap between the maximum and minimum AT&C loss between divisions had increased during 2015-20 which showed that the better performing divisions were getting better and the performance of non-achiever divisions had not improved.

The Company/State Government attributed (April/May 2021) the higher level of AT&C losses to load switching between temporary/permanent feeders, outstanding payments from connections to defaulting Government entities, faulty boundary meters and non-adjustment of high billed amount against sundry charges.

Audit, however, observed that all these factors were controllable on part of the Company. This showed failure to implement remedial actions to achieve the targeted levels of AT&C losses in divisions. Further, the Company did not analyse the reasons for negative figures of AT&C losses.

2.4.2 *Billing and Collection efficiency*

AT&C losses are calculated on the basis of billing and collection efficiency. Thus, it was imperative to improve billing and collection efficiency upto the benchmark percentage so as to bring down the AT&C losses.

2.4.2(a) *Billing efficiency*

Billing efficiency is an indicator of proportion of energy billed to consumers with respect to the total energy supplied to an area.

As per MOU, improvement in the overall billing efficiency was targeted at 84.68 *per cent* to 86 *per cent* during 2015-16 to 2018-19. The division-wise targets were not fixed for each division. The achievement of billing efficiency against the targets set in MoU was as follows:

Table 2.12: Achievement of billing efficiency by the distribution divisions

Particulars	2015-16	2016-17	2017-18	2018-19	2019-20
Targeted billing efficiency (in *per cent*)	84.68	84.70	85.50	86.00	Not prescribed
Actual achievement (in *per cent*)	87.29	87.10	88.10	88.79	88.55
Number of divisions which achieved the targets	63	62	59	61	62
Number of divisions which did not achieve the targets	35	36	39	37	36
Minimum billing efficiency recorded amongst all divisions (in *per cent*)	61.73	54.07	54.80	52.86	51.25

Source: Management Information Reports of the Company.

It was noticed that the billing efficiency of Company remained higher than the targets prescribed in the MoU, however, during 2015-20, 35 to 39 divisions performed below the envisaged company targets and the lowest annual billing efficiency in the divisions decreased from 61.73 *per cent* in 2015-16 to 51.25 *per cent* in 2019-20. The Company needs to analyse the reasons for lower billing efficiency in these divisions and take corrective actions to ensure achievement of targeted billing efficiency.

The Company/State Government stated (May 2021/August 2021) that during checking of connections, Company's staff faced stiff resistances from local public and various Kisaan unions. Inspite of the resistance, massive checking of the connections had been conducted to improve billing efficiency and efforts were made to seek the help of District administration to carry out checking. The reply is not acceptable and the Company/GoP needs to strengthen the controls in the field offices having low billing efficiency.

2.4.2(b) *Collection efficiency*

Collection efficiency (CE) is an indicator of proportion of amount that has been collected from consumers with respect to the amount billed to them. UDAY MoU envisaged improvement in collection efficiency from 99 *per cent* in 2015-16 to 100 *per cent* in 2016-17 to 2018-19. The actual achievement was as follows:

Table 2.13: Table showing achievement of collection efficiency by the Distribution divisions

Particulars	2015-16	2016-17	2017-18	2018-19	2019-20
Targeted collection efficiency (in *per cent*)	99	100	100	100	Not prescribed
Actual achievement (in *per cent*)	97.29	98.01	97.75	97.11	96.49
Amount not realised during the year (₹ in crore)	618.61	509.55	353.23	655.51	894.50
Minimum collection efficiency recorded amongst all divisions (in *per cent*)	84.24	79.14	80.12	81.27	76.06

Source: Management Information Reports of the Company.

The Company was required to decrease its defaulting amount and ensure zero default from 2016-17. However, Company could not achieve the envisaged collection efficiency in even a single year during the period 2015-16 to 2018-19. Out of 98 divisions, 72 to 90 divisions performed below the targets of the Company as a whole. The lowest annual CE in the divisions decreased from 84.24 *per cent* in 2015-16 to 76.06 *per cent* during 2019-20. The decreasing trend indicated failure to improve the realisation of billed revenue.

The methodology for calculation of AT&C losses as approved by MoP provides that for computing Collection Efficiency, the revenue collected shall exclude the arrears of revenue and the Collection efficiency shall be capped at 100 *per cent*. During review of selected divisions, it was observed that AT&C losses were understated due to incorrect calculation of collection efficiency by the Company as the Company did not capture the data relating to collection of arrears of revenue and the arrears collected were not excluded from computation of collection efficiency. Further, the collection efficiency was not capped at 100 *per cent.* It was seen that collection efficiency exceeded 100 *per cent* in 8 to 24 divisions during 2015-20. As such AT&C losses were understated and even showed minus figures in eight divisions.

The Company/State Government (May 2021/August 2021) replied that low collection efficiency was due to Government departments defaulting in payment of their electricity dues and that efforts were being made to recover this defaulting amount.

2.4.2(c) *Electricity supply dues of Government departments*

As per MoU, all outstanding dues from the State Government departments to the Company for supply of electricity were required to be paid by March 2016. As per the ESIM of the Company, (i) the outstanding dues were to be referred to the Head of the Department for early liquidation of arrears and in event of no tangible response, the matter was to be referred to the concerned Secretary and then to the Chief Secretary.

The defaulting amount from State Government Departments formed a substantial part of total defaulting amount of the Company and contributed to collection inefficiency. The position of total defaulting amount of the Company and share of defaulting amount outstanding against the Government offices during the period 2015-20 was as follows:

Table 2.14: Details of default by Government offices and disconnections made

Year	Total defaulting amount of Company (₹ in crore)	Number of defaulting Government offices	Defaulting amount of Government offices (₹ in crore)	Defaulting amount of Government offices to total defaulting amount (in *per cent*)	Number of Government office connections disconnected	Percentage of disconnection
1	**2**	**3**	**4**	**5=(4)*100/(2)**	**6**	**7=(6)*100/(3)**
2015-16	1433.68	6,204	524.78	36.60	84	1.35
2016-17	1,910.05	7,406	747.53	39.14	128	1.73
2017-18	2,603.31	9,460	1,185.66	45.54	118	1.25
2018-19	3,694.94	11,504	1,746.86	47.28	217	1.89
2019-20	4,111.58	11,855	2,183.49	53.11	165	1.39

Source: Management Information Reports and information provided by the Company.

As against the GoP commitment to clear the outstanding dues of Government offices by March 2016, the dues increased from ₹ 524.78 crore (6,204 offices) in March 2016 to ₹ 2,183.49 crore (11,855 offices) in 2019-20. In percentage terms, the share of dues of Government offices in total defaulting amount increased from 36.60 *per cent* to 53.11 *per cent*. Company, however, disconnected the electricity supply of negligible number of such Government offices. The Ministry of Power, GoI also observed (October 2019) the high outstanding dues of Government Departments and urged for realisation of the dues.

The Company/State Government replied (May 2021/August 2021) that matter has been taken up with Government Departments to impress upon them to deposit the outstanding dues. The reply is not acceptable as the defaulting amount continued to increase substantially each year.

2.4.3 *Delayed recovery of Fuel Cost Adjustment surcharge*

PSERC (Conduct of Business) Regulations, 2005 provides for Fuel Cost Adjustment (FCA) formula to allow recovery of increased fuel costs. Recovery of FCA is approved by PSERC based on the petition filed by the Company every quarter. After PSERC's decision on the petition, Company recovers the FCA by levying surcharge through regular energy bills of the consumers.

Table 2.15 shows the FCA amount calculated by Company and allowed by PSERC *vis-à-vis* the FCA amount actually billed by the Company to consumers, along with the consequential loss of interest[7] due to delayed recovery:

Table 2.15: Table showing delayed recovery of FCA and loss of interest thereon

(₹ in crore)

Year	FCA amount due as per Tariff orders	FCA amount billed	Delay in recovery[8] (in days)	Loss of interest up to date of true up of financial year by PSERC
2015-16	169.71	78.21	661 to 936	20.03
2016-17	(-)150.74	34.98	473 to 748	--
2017-18	159.47	11.16	511 to 786	23.51
2018-19	499.24	294.01	517 to 792	37.07
2019-20	60.81	149.34	455 to 730	4.47
Total	**738.49**	**567.70**		**85.08**

Source: Petitions approved by PSERC for levy of FCA and information provided by the Company.

Audit observed that the amount billed was much lower (except 2016-17 and 2019-20) than the amount due for recovery as per quarterly revisions allowed by the PSERC for the years 2015-16 to 2019-20. Audit observed that the Company did not ensure accurate and timely billing of the FCA allowed by PSERC. The Company failed to update its billing system to ensure levy of FCA across all Distribution zones. The recovery of FCA was not done through billing but through PSERC (in True-up petition) and included in the next Tariff order. The primary reasons for non-billing was failure of centralised

7 Calculated at Base rate of SBI as on 1st April of each financial year for the period of delay in recovery.

8 Difference between the date since when the FCA was due for recovery and date of true up of ARR of the financial year by PSERC wherein the fuel costs for that particular year are finalised based on the audited accounts.

monitoring in SAP/Non-SAP Billing software being used in distribution zones. Resultantly, the Company suffered an irrecoverable interest cost of ₹ 85.08 crore.

The Company/State Government replied (April/May 2021) that as the quarterly FCA tariff is decided on the basis of projected sales, there is bound to be a gap between the FCA due and FCA billed. The reply is not acceptable as the gap should have been on higher side since the actual energy sales were higher than the projected sales (2015-19) which should have resulted in higher billing than the amount due. This is indicative of poor functioning of billing system.

2.4.4 *Non-compliance of PSERC regulations*

The MoU provided for Customer Service Strategy for timely resolution of consumer complaints relating to no electricity, theft, safety, technical matters including harassment by the officials. The Committee on Public Undertaking (CoPU) taking note of paragraph 2.2.31 of Audit Report 2010-11 and paragraph 3.5 of Audit report 2013-14 of Audit Reports (Commercial) Government of Punjab recommended (March 2016/March 2018) to fix responsibility for non-recovery of dues from consumers and for forcing the consumers to approach the Courts.

To deal with the consumer grievances, the Company has two Redressal Forums (CGRF). In test checked 100 cases out of 546 decided by CGRF, Ludhiana in the months[9] of November 2018, March 2019 and March 2020, it was observed that in 58[10] cases involving 62 instances and financial implication of ₹ 5.90 crore, there was negligence on part of Company staff due to which the consumers were forced to approach the Court and these cases were decided against the Company. The breakup of 62 instances, amount involved therein and reasons has been tabulated as follows:

Table 2.16: Table showing details of Court cases and reasons thereof

Sl. No.	Number of instances	Disputed amount (in ₹)	Particulars of the cases
1.	13	7,71,009	Delayed levy of Power Factor surcharge – resulted in non-recovery of Power Factor surcharge.
2.	12	48,58,315	Advanced Consumption Deposit not updated in consumer accounts and interest thereon not allowed to the consumers.
3.	21	4,27,73,637	Wrong billing due to wrong overhauling of account, Tariff rebates not given, defective meter, wrong reading, wrong multiplying factor, etc.
4.	6	39,68,530	Excess service connection charges taken from consumers.
5.	2	8,60,698	Wrong billing due to abnormal Maximum demand indicated.
6.	2	33,26,495	Wrong SAP reversals.
7.	2	7,12,491	Non-granting of the refund due.
8.	2	4,23,451	Accumulation of meter reading
9.	2	13,34,761	Others - Fraudulent refund, Online payment, etc.
Total	**62**	**5,90,29,387**	

Source: CGRF orders in respective cases as accessed from the Company's website.

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9 random selection of months.

10 Out of remaining 42 cases, 23 cases were also decided against the Company but no negligence on part of Company staff was observed, 16 cases were decided in favour of Company and 3 cases were withdrawn/compromised/referred to other authority.

The Company was directed to overhaul the accounts of the consumers and issue revised bills which is indicative of the fact that litigations were avoidable had the Company acted with due diligence as per Electricity Supply Code, 2014 and other relevant instructions.

The Company/State Government replied (April/May 2021) that the disputes arose due to different interpretations of the instructions and were being resolved timely. The reply, however, did not intimate action taken on specific cases.

2.4.5 *Subsidy from Government of Punjab*

Section 65 of the Act provides for State Government to grant subsidy to any class of consumers provided subsidy amount is paid to the distribution entity in advance and in such manner as directed by the State Electricity Regulatory Commission.

Government of Punjab provides subsidy to various categories of consumers *viz.* Agriculture Pumpset (AP) consumers, Domestic supply (DS) consumers belonging to scheduled castes and Below Poverty Line (Non-SC) consumers Backward class DS consumer, Industrial consumers (concessional tariff at the rate of ₹ 4.99 per unit for Small Power, Medium Supply and Large Supply Consumers), Freedom fighters and Dairy/Fish/Goat/Pig Farming consumers.

The subsidy determined by PSERC in the yearly tariff orders for the Company was as follows:

Table 2.17: Table showing subsidy payable by GoP to Company for various categories of consumers

(₹ in crore)

Sl. No.	Category	2015-16	2016-17	2017-18	2018-19	2019-20	Total
1.	Agriculture Pumpset (AP)	4,957.16	5,289.17	6,084.17	5,669.51	6,090.52	28,090.53
2.	Scheduled Caste (SC)/ Domestic Supply	1,053.07	1,196.68	1,233.91	1,193.22	1,552.53	6,229.41
3.	BPL (Non-SC) DS consumers	70.28	75.87	76.91	71.20	86.09	380.35
	Sub Total (A)	**6,080.51**	**6,561.72**	**7,394.99**	**6,933.93**	**7,729.14**	**34,700.29**
4.	Backward class DS consumer free power	0	7.12	102.72	163.55	225.20	498.59
5.	Small Power	0	38.49	103.95	138.4	130.17	411.01
6.	Dairy and Fish/Goat/ Pig Farming	0	1.08	1.05	0	0	2.13
7.	Freedom fighter	0	0	0	0.02	0.04	0.06
8.	Medium Supply Consumers	0	0	52.54	175.82	169.35	397.71
9.	LS supply consumers	0	0	425.35	1,140.96	1,180.12	2,746.43
	Sub Total (B)	**0**	**46.69**	**685.61**	**1,618.75**	**1,704.88**	**4,055.93**
	Total (A+B)	**6,080.51**	**6,608.41**	**8,080.60**	**8,552.68**	**9,434.02**	**38,756.22**

Source: Tariff orders of PSERC for the years 2015-16 to 2020-21.

The status of subsidy determined by PSERC and subsidy actually paid by the GoP during the years 2015-16 to 2019-20 was as follows:

Table 2.18: Table showing details of subsidy received from the GoP

(₹ in crore)

Year	Subsidy determined by PSERC as per latest Tariff Order	Interest on delayed payment of subsidy	Total Subsidy payable for the year	Subsidy received during the year	Adjustment	Shortfall for the year	Cumulative shortfall as per PSERC
						Opening balance	260.06
2015-16	6,080.51	109.60	6,190.11	4,847.00	0	1,343.11	1,603.17
2016-17	6,608.41	307.79	6,916.20	5,600.70	0	1,315.50	2,918.67
2017-18	8,080.60	463.85	8,544.45	6,577.57	(-) 57.65[11]	1,909.23	4,827.90
2018-19	8,552.68	556.54	9,109.22	9,036.43	0	72.79	4,900.69
2019-20	9,434.02	658.00	10,092.02	9,394.11	0	697.91	5,598.60
Total	**38,756.22**	**2,095.78**	**40,852.00**	**35,455.81**			

Source: Tariff orders of PSERC for the years 2015-16 to 2020-21.

It was seen that the GoP failed to fully pay the subsidy dues determined by the PSERC, in advance. The cumulative shortfall of subsidy payable by GoP to the Company increased from ₹ 1,603.17 crore at the end of 2015-16 to ₹ 5,598.60 crore at the end of 2019-20. Audit observed that during 2015-20, the State Government had sanctioned sufficient budgets for full amount of subsidy as decided by the PSERC, however, only partial payments were made to the Company. The Company/State Government replied (May 2021/August 2021) that more consumer subsidy had been received during 2020-21 as compared to previous year. The Company, despite the continuous shortfalls in receipt of subsidy, continued the implementation of State Government schemes.

2.5 Power purchase

2.5.1 *Payment of fixed capacity charges*

One of the objectives of the Scheme was to reduce cost of power. During 2015-20, the Company had surplus power available with it as its net installed capacity was higher than its maximum unrestricted power demand (except 2019-20) and the average demand. Total gross installed capacity (including contracted through long term PPAs), net installed capacity, maximum unrestricted demand and average demand of the Company during the years 2015-16 to 2019-20 is given in **Table 2.19**:

[11] PSERC reduced (December 2019) the subsidy payable for AP consumption of year 2017-18 along with interest thereon. Accordingly, an adjustment of ₹ 54.88 crore and ₹ 2.77 crore was carried out in the subsidy payable by GoP for 2017-18.

Table 2.19: Gross installed capacity, net installed capacity, maximum unrestricted demand and average demand of the Company during 2015-20

Year	Gross installed capacity (MW)	Net installed capacity (MW)	Maximum unrestricted demand[12] (MW)	Average demand (MW)	Surplus capacity (MW)
(1)	(2)	(3)	(4)	(5)	(6) = (3)-(4)
2015-16	11,995.82	11,330.48	10,851.87	5,727.73	478.61
2016-17	13,960.97	13,182.75	11,408.00	6,060.43	1,774.75
2017-18	13,391.12	12,708.48	11,705.00	6,265.62	1,003.48
2018-19	13,465.74	12,780.36	12,638.00	6,293.25	142.36
2019-20	13,902.30	13,205.62	13,606.00	6,435.92	(-) 400.38

Source: Data provided by the Company.

The Company sold small share (3,720.62 MUs) of the surplus power through power exchange during 2015-20 after meeting its demand. The Company surrendered the remaining surplus power of 53,541.65 MUs against which it paid fixed capacity charges of ₹ 6,210.63 crore to the power producers for capacities contracted as shown below:

Table 2.20: Year-wise details of surplus power surrendered and fixed capacity charges paid

Year	Surplus power sold (in MUs)	Surplus power surrendered (in MUs)	Fixed charges paid (₹ in crores)	Energy sales (MUs)	Impact on tariff (₹ per unit)
(1)	(2)	(3)	(4)	(5)	(6)=(4)*10/(5)
2015-16	62.49	11,276.78	1,283.07	43,200	0.297
2016-17	356.44	10,597.30	1,250.78	44,724	0.280
2017-18	1,218.68	7,550.48	820.46	47,332	0.173
2018-19	1,801.80	8,570.94	976.87	49,561	0.197
2019-20	281.21	15,546.15	1,879.45	50,152	0.375
Total	**3,720.62**	**53,541.65**	**6,210.63**		

Source: Management Information Reports of the Company.

Out of total power surrendered during last five years, the share of three[13] IPPs ranged between 50.74 *per cent* (in 2017-18) to 71.92 *per cent* (in 2019-20). The power surrendered to three IPPs during 2015-16 to 2019-20 ranged between 17.64 *per cent* (in 2017-18) to 38.63 *per cent* (in 2019-20), of entitled power from them. The surrendering of available power to the respective IPPs along with payment of fixed capacity charges amounting to ₹ 6,210.63 crore during 2015-16 to 2019-20 made the power costly (ranging between ₹ 0.17 to ₹ 0.38 per unit) for the Company and consumers thereby defeating the objective of the Scheme.

2.5.2 *Purchase of power without approval of Power Purchase Agreements*

Electricity Act, 2003 *inter alia* provides that the State Regulatory Commission shall regulate the process of purchase and procurement of electricity by the distribution licensees, including the price at which electricity shall be procured

[12] On a particular day of the year at a particular time.

[13] Nabha Power Limited: 1,400 MW; Talwandi Sabo Private Limited: 1,980 MW; and GVK Power Limited: 540 MW.

from the Generating Companies or other sources through agreements for purchase of power for distribution and supply within the State. PSERC (Conduct of Business) Regulations, 2005 states that the Company shall not enter into a contractual commitment of such long term power purchase till the PSERC approves the procurement of electricity by the Company.

It was noticed that the Company signed 66 power purchase agreements of New and Renewable Source of Energy for 778.09 MW during the period March 2005 to May 2019. Of these, in case of 50 PPAs, the Company did not obtain prior approval of PSERC, before signing the PPAs. In violation of provisions of Electricity Act and PSERC Regulations, *post facto* approval of the PSERC to 37 PPAs was obtained during November 2010 to December 2020, after delay ranging between six months (203 days) and eleven years (4,081 days). Further, in remaining 13 cases, period of more than two years (999 days) to twelve years (4,409 days) had already elapsed but approval of the PSERC is still awaited (December 2020). It is worthwhile to mention that against these unapproved PPAs, total power of 1,085.75 MUs valuing ₹ 465.31 crore was purchased during the period 2010-11 to 2019-20.

The Company/State Government in its reply (May 2021/August 2021) stated that the PSERC did not approve the tariff and the contracted capacity due to various reasons. The Company, however, did not furnish the reasons for not obtaining prior approval of PSERC before signing the PPAs.

Chapter-III

Operational Efficiency

Chapter-III : Operational Efficiency

3.1 Introduction

The UDAY guidelines/MoU stipulated monitoring of operational efficiency parameters for time-bound improvement. The targeted activities under these parameters along with the envisaged benefits were as follows:

Table 3.1: Operational parameters under UDAY scheme and targeted benefits

Sl. No.	Parameters	Purpose/envisaged benefits
1.	Compulsory Feeder and Distribution Transformer (DT) metering.	Ability to track losses at the feeder and DT level for corrective action.
2.	Feeder segregation.	Segregation of feeders for agricultural and non-agricultural consumers ensures better management of subsidy to agriculture consumers. It also helps in peak load management[1].
3.	Feeder improvement for network strengthening and optimisation.	Reduce technical losses and minimise power outages.
4.	Smart metering of all consumers consuming above 200 units per month by December 2019.	Smart meters will be tamper proof and allow remote reading thus helping reduce theft, implementation of DSM activities and consumer engagement.
5.	Undertake measures for Demand Side Management (DSM)[2] which includes energy efficient LED bulbs and agricultural pumps.	Reduction in peak load and energy consumption as well as savings in consumer's energy bills.
6.	Undertaking energy audit upto 11 KV in rural areas by September 2016.	Identification of loss making areas for corrective action.

***Source:** MoU signed amongst MoP, GoP and the Company. Targeted benefits taken from UDAY scheme.*

The position of achievement of operational parameters as on 31 March 2020 is given in **Table 3.2**:

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1 Peak Load management means management of peak/excess load/demand which is more than the supply. This is done by reducing the supply to non-essential category consumers at peak time.

2 Demand-Side Management (DSM) is the selection, planning, and implementation of measures intended to have an influence on the demand or customer-side of the electric meter. DSM program can reduce energy costs for utilities, and in the long term, it can limit the requirement for further generation capacity augmentation and strengthening of transmission and distribution system.

Table 3.2: Achievements of the Company against operational parameters under UDAY scheme

Sl. No.	Operational performance indicators	Position as on 31 March 2016	Target as per UDAY scheme (up to 2018-19)	Position as on 31 March 2020
1.	Feeder metering-Urban (in nos.)	3,386	3,386	3,640
2.	Feeder metering- Rural (in nos.)	7,414	7,414	8,018
3.	Rural Feeder Audit (in nos.)	0	100 *per cent*	90.15 *per cent* (March 2021)
4.	DT Metering (Urban)	28,650	73,140	46,093
5.	DT Metering (Rural)	969	1,18,997	969
6.	Smart Metering of consumers with consumption above 200 Units per month (in nos.)	0	16,32,105	0
7.	Feeder Segregation (in nos.)	5,686	5,962	6,415
8.	Distribution of LED Bulbs under DELP/UJALA (in lakh nos.)	0	120	13.19
9.	Street Lighting LED (in nos.)	0	4,90,000	2,03,424
10.	Feeder improvement (in nos.)	0	10,800	10,968

Source: UDAY scheme, MoU for UDAY scheme and UDAY portal data provided by the Company.

The Company could not achieve the operational parameters of Distribution Transformer (DT) metering and smart metering and feeder segregation. Against the target of metering 192,137 distribution transformers upto the year 2018-19, only 47,062 were metered by 31 March 2020.

3.2 Network

3.2.1 *Implementation of Smart Meter Project*

As part of operational efficiency measures, MoU for UDAY scheme envisaged installation of Smart Meters for 100 *per cent* consumers (other than Agriculture Pumpset consumers) consuming more than 500 units per month by 31 December 2017 and for consumers consuming above 200 units but less than 500 units per month by 31 December 2019 based on cost benefit analysis. The National Tariff Policy (January 2016) of Ministry of Power, Government of India (MoP, GoI) had noted that Smart Meters[3] have the advantages of remote metering and billing, implementation of peak and off-peak tariff and demand side management through demand response.

The Company decided (September 2016) to invite tenders for providing smart meters (with integrated modem) for all consumers with sanctioned load of 20 KW and above along with requisite infrastructure to integrate with existing Meter Data Acquisition System. However, the purchase order for procurement

[3] Smart Meter is a new kind of electricity meters that can digitally send meter readings to energy supplier for more accurate energy bills. Smart meters come within-home displays so as to better understand consumers’ energy usage. Prepayment mechanism is one of the features of smart meters.

of smart meters could be placed only in May 2020 *i.e.* after a gap of more than three and half years of first tender. The deliveries were to be completed by December 2020. It was noticed that even after placement of purchase order, the Company could not ensure execution of the project upto December 2020.

Audit observed that the selected firm was to supply 96,000 smart meters by 28 December 2020 after acceptance of sample from in-house laboratory or a reputed outside laboratory by 27 June 2020. They were to supply 16,000 smart meters every month. Audit observed that up to April 2021, only 335 smart meters were installed. The delay in implementation was attributed to delay in approval (November 2020) of sample smart meters by the Company which were submitted to it by the firm on 31 July 2020.

Thus, the important milestone, of installation of smart meters, to achieve operational efficiency was eluding the Company even after lapse of almost five years from signing of MoU.

The Company/State Government stated (May 2021/August 2021) that out of 96,000 smart meters ordered, 20,100 meters have been supplied. A roadmap for replacement of all the existing single phase and three phase meters with smart meters has been prepared and submitted for the approval. As per the plan, eight lakh meters will be replaced each year for which grant of ₹ 900 per meter will be admissible from GoI.

3.2.2 *Distribution Transformer metering*

The MoU required the Company to achieve 100 *per cent* metering of its Distribution Transformers (DTs) by June 2017. The aim of the project was to track losses at the feeder and DT level for corrective action for reduction of losses to achieve efficiency targets given in the MoU. As of March 2016, out of total 1,92,137 DTs of the Company, only 29,619 DTs (15.4 *per cent*) were metered and balance 1,62,518 DTs (except AP DTs) were unmetered.

The total cost of DT metering was estimated at ₹ 275.77 crore. UDAY scheme Monitoring Committee[4] of the Company, considering the prevailing infrastructure and cost involved decided (July 2016) to implement the project in phased manner. In the first phase only 20 *per cent* of DT metering (cost: ₹ 55.15 crore) was proposed to be carried out to analyse the usefulness of the system. The Company decided (April 2017) to seek approval of GoP and GoI for necessary amendment in the MoU regarding achieving 20 *per cent* work of DT metering (except AP DTs) in the first phase under UDAY scheme and submitted (December 2018) the metering implementation schedule to the State Government for 32,500 DTs for complete DT metering in South Zone (26,045 DTs) and partial DT metering in Central zone (6,455 DTs). After obtaining (January 2019) concurrence of the State Government, the proposal for the amendment in the MoU was submitted

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4 Committee constituted (May 2016) under the chairmanship of CMD, Company for monitoring the progress of UDAY scheme. It comprises of Director (Finance), Director (Commercial), Director (Distribution) and Director (Generation) of Company.

(January 2019) to GoI regarding executing the project of DT metering in phased manner with 20 *per cent* of work in first phase to analyse the usefulness of the project and 100 *per cent* achievement by September 2020. The decision of the GoI was awaited (December 2020).

Audit observed:

- Partial progress was made in DT metering in urban areas. DT metering in rural areas was slow due to fund constraints. The Company also did not provide for funds for metering of existing DTs in any of the ongoing rural electrification schemes.
- The selection of South zone and Central zone of the Company for implementation of DT metering in the first phase lacked justification as these zones reported comparatively lesser loss as compared to the high loss making Border zone (21.05 *per cent* losses) and West zone (19.52 *per cent* losses). PSERC had also recommended DT metering in high loss making areas of Border Zone.

The Company/State Government replied (April/May 2021) that the reliable zones were selected to avoid teething problems and that the proposal sent for amendment to the MOU for reducing the DT metering target was pending with GoI.

The delay in implementation of DT metering resulted in non-fulfilment of the commitment as per MoU and non-achievement of the objective to narrow down the loss making areas for reducing the overall distribution losses.

3.2.3 *Overloaded sub-transmission lines*

Overloading of an electrical network is one of the biggest contributors to technical losses. As per the instructions (June/November 2016) of the Company, the High Tension/Extra High Tension feeders/Main distribution lines (lines) were to be loaded upto 80 *per cent* of maximum current carrying capacity of the conductor. If the existing lines reached beyond 80 *per cent* of their maximum current carrying capacity, bifurcation/augmentation of existing lines or construction of new lines was required to be planned immediately for keeping the loading of the system within limits.

It was observed that during 2015-20, the maximum load on some of the distribution lines of the Company ranged between 154 *per cent* and 158 *per cent* indicating thereby that the lines were being overloaded beyond permissible limits, as shown below:

Table 3.3: Overloaded lines of the Company

Sl. No.	Particulars	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Total lines under operation during the year	885	923	963	987	1,018
2.	Overloaded lines:					
	80 to less than 100 *per cent*	33	51	70	84	66
	100 *per cent* and above	10	34	35	32	64
	Total Overloaded Lines	**43**	**85**	**105**	**116**	**130**
	Percentage of Total Lines	**4.86**	**9.21**	**10.90**	**11.75**	**12.77**

Source: Data provided by the Company.

It was noticed that the number of overloaded lines showed an increasing trend. Further, the number of lines overloaded more than 100 *per cent* of their capacity increased from 10 in 2015-16 to 64 in 2019-20.

The Company/State Government replied (April/May 2021) that the load greater than 80 *per cent* was a benchmark to plan the deloading and that the lines could be used up to 100 *per cent*. To de-load the system, the Company had carried out various activities like commissioning of new grids and new lines. The reply is not acceptable as the instructions of the Company categorically provided that 11/66 KV lines/grid substations were to loaded upto 80 *per cent* and bifurcation/augmentation/new feeders should be planned immediately thereafter.

3.2.4 *Delay in implementation of rural feeder energy audit project*

As per MoU, Energy audit in rural areas up to 11KV feeder level was to be completed by September 2016. To conduct Energy Audit, an accurate estimation of transmission and distribution losses on periodical basis was essential. Keeping in view the large quantum of feeder meter data which required analysis, a system was needed that delivered data with minimal human interface to avoid unintentional errors.

In order to capture real time supply parameters of rural India and monitor the availability/quality of power supply in rural areas of the country by capturing actual distribution parameters (power supply, outages and conduct feeder wise Energy audit and AT&C losses), MoP introduced a 11 KV Rural Feeder Monitoring Scheme (RFMS) and appointed (October 2016) REC Transmission Projects Company Limited (RECTPCL) as its Implementing Agency for engaging with the States/Distribution companies. Entire cost of the Scheme was to be borne by the MoP. Under the Scheme, rural feeders meter data shall be acquired through modem and sent to data centers of the Company and Central Meter Data Acquisition System (MDAS) for further analysis and the same would be integrated with National Power Portal (NPP) to make it available for use of all stake holders. For the feeders that were already communicable, RECTPCL was to coordinate with Distribution Companies for porting the feeder information to the National Power Portal. For non-communicating Rural/Mixed feeders, RECTPCL evolved a project for making the 66/33KV incoming and 11 KV outgoing feeders communicable.

The Company signed (August 2018) a tripartite agreement with RECTPCL and the zonal implementing agency (ZIA) for execution of project in the State. As per agreement, 6,630 feeders were to be covered and the quantity could be increased to 25 *per cent.* The term of the agreement was for five years after Go-Live status *i.e.* integration of at least 90 *per cent* feeders with Central MDAS for at least 15 days continuously. The implementation period of project was six months from date of issue of work order wherein all the hardware, software, resources, etc. were to be installed.

However, as of March 2021, total feeders to be metered increased to 8,246 of which 7,434 (90.15 *per cent*) feeders were metered under the RFMS and modems on remaining 812 feeders were yet to be installed. Further, out of 7,434 feeders, only 6,277 feeders (84.44 *per cent*) were communicating with the data centre of the Company against the benchmark of integration of 90 *per cent*. Thus, even after lapse of more than two years, the work could not be completed and the overall objective of rural feeder energy audit was yet to be achieved.

The Company/State Government stated (April/May 2021) that delay in installation of modems was due to delay in providing compatible meters by meter suppliers. The reply is not acceptable as the Company failed to ensure timely availability of compatible meters which led to delay in installation of modems.

3.3 Project delays

3.3.1 *Non-segregation of mixed load feeders and non-metering of AP consumers on mixed feeders*

The MoU for UDAY scheme provided for 100 *per cent* physical segregation of the mixed feeders[5] by March 2017. As on December 2016, there were 285 mixed rural area feeders in the *Kandi* area. All the consumers including unmetered agriculture connections were provided 24 hours supply from these feeders. This not only led to wasteful use of ground water but also hindered the efforts of PSERC to assess AP consumption accurately for *Kandi* area.

PSERC in its tariff orders for the year 2013-17 issued directions to the Company to segregate the *Kandi* area feeders and in case of any difficulty in segregating, install meters on all AP motors of such feeders. Company decided (June 2017) to physically segregate 78 mixed load feeders and meter all AP motors on 193 feeders by November 2019.

However, it was noticed that upto August 2020 only seven out of 78 mix load feeders were segregated and not even a single meter was installed on AP connections running on 193 mix load feeders. The delay in works was attributed to resistance of the consumers to installation of meters on AP motors and segregation of feeders. As on March 2021, only 37 feeders were segregated. Failure to complete mixed feeder segregation project resulted in burden of ₹ 1,222.13 crore in the form of disallowance of subsidy against AP consumption claimed by the Company in the *Kandi* area for the years 2015-16 to 2019-20.

The Company/State Government replied (May 2021/August 2021) that work of 47 feeders has been completed; there were Right of Way (RoW) and forest issues on some feeders; and MoP/GoI has granted time extension up to 30 September 2021 and the Company planned to complete the work of feeder segregation and AP consumer metering within this extended time.

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5 Mixed feeder provides supply of electricity to agricultural and non-agricultural (domestic and non-domestic) consumers simultaneously.

3.3.2 *Domestic Efficiency Lighting Programme/Unnat Jyoti by Affordable LEDs for All (UJALA)*

As per MoU, the Company was to undertake measures for demand side management to provide LED lights to the consumer under domestic efficiency lighting programme (DELP) through EESL[6]. The target for LED lights to be distributed[7] during the year and actual achievement there against was as follows:

Table 3.4: Distribution of LEDs under DELP/UJALA

(Figures in lakhs)

Year	Target for distribution of LED Lights	Actual LED Lights distributed	Percentage achievement
2015-16	Not prescribed	0	-
2016-17	20	0	0
2017-18	45	9.92	22.00
2018-19	55	2.40	4.36
2019-20	Not prescribed	0.87	-
Total	**120**	**13.19**	**10.99**

Source: MoU for UDAY scheme and UDAY portal data provided by the Company.

The Company could distribute only 10.99 *per cent* of the targeted LED lights. Audit observed that the Company did not establish and communicate the area wise targets of distribution of LED bulbs to EESL in regard to minimum sale points per town and targeted sales.

The Company/State Government replied (May 2021/August 2021) that as on 31 March 2021, 14.26 lakh LED bulbs have been distributed. The fact remains that due to non-fixation of targets for contractor for distribution of LEDs, the performance of the Company remained dismal even after lapse of five years.

3.3.3 *Non-implementation of Smart Grid pilot project*

MoU provided that the Company will undertake feeder improvement programme for network strengthening, optimisation and loss reduction.

MoP, GoI planned (2010) to develop Smart Grids in India by taking up pilot Smart Grid projects in stages for increasing power availability, reducing AT&C losses and optimal utilisation of resources for sustainable growth. As a part of the pilot project, initially 14 State Utilities in the country including Company were selected (2012). MoP approved (August 2013) a pilot project in Punjab for eight feeders at a cost of ₹ 10.11 crore, of which 50 *per cent* was to be contributed by GoI and 50 *per cent* was required to be borne by Company.

The Company placed (April 2015) a work order (WO) of ₹ 8.17 crore for implementation of Smart Grid Pilot Project which was scheduled to be completed by October 2016. The work order mentioned that any of the three

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6 Stands for Energy Efficiency Services Limited, Noida - a Government of India enterprise promoted by Ministry of Power as a Joint Venture of four Public Sector Undertakings - NTPC Limited, Power Finance Corporation Limited, REC Limited and POWERGRID Corporation of India Limited.

7 At concession rates.

brands of the meters specified in the work order may be supplied by the contractor. It was noticed that the first brand of meter offered by the contractor failed (October 2016) in the lab test. The contactor offered (May 2017) to supply the meters of other brands listed in the work order. However, the Company without considering the other brands of meters, terminated (August 2017) the work order. The contractor filed (August 2017) a court case and then, upon order (September 2017) of the court, served (October 2017) notice for arbitration against the decision of the Company. The Arbitration Tribunal gave award (December 2018) in favour of the contractor citing the fact that manufacturing and supply of smart energy meters of first brand of meter offered was not mandatory. The award of the Tribunal was challenged by the Company in District Court, Patiala which was pending for hearing (May 2021).

The Company had also submitted (October 2017) proposal to MoP to complete the Smart Grid pilot project on its own by March 2018. But failure of Company to finalise project plan and submit timelines led to cancellation of the project by MoP (December 2018). GoI directed the Company (December 2018) to refund the grant of ₹ 89.50 lakh received for the project.

Audit observed that due to unjustified decision of termination of the contract, the Company had to forego the GoI grant besides bearing an avoidable loss of ₹ 1.72 crore on account of amount due under the terminated contract and legal expenses. Further, cancelation of the project resulted in loss of opportunity to add a new dimension of Smart Grid to the distribution network of the Company.

The Company/State Government replied (April/May 2021) that changing the meter make was a contradiction of the terms and conditions of the work order, therefore, same could not be allowed. The reply is not acceptable as the Company itself had made provision for alternate makes of meters in the work order.

3.4 Monitoring and control

3.4.1 *Monitoring at State Level and at DISCOM level*

As per MoU, the GoP was required to review the performance of the Company on monthly basis at State Government level in the presence of State finance representatives. Further, the CMD of the Company was also to monitor the performance of the Company on monthly basis. It was noticed that:

(i) GoP constituted (June 2016) a State Level Monitoring Committee (SLMC) to review the performance of Company under UDAY scheme under the chairmanship of Principal Secretary, Power including one representative from Department of Finance, Government of Punjab not below the rank of Under Secretary. Audit observed that while constituting the SLMC, no terms of reference of SLMC were framed with regard to periodicity and mechanism of monitoring the performance of the Company under UDAY Scheme. No provision regarding meetings to be held by the SLMC during a year/execution phase of the Scheme was made for appraisals of the achievement of milestones/targets. SLMC held four meetings during 2016-17, three during 2017-18, two during 2018-19 and no meeting was held during 2019-20. The minutes of meetings of SLMC did not include the review of entire activities/targets envisaged under UDAY scheme and remedial measures to be taken to bridge the shortcomings. Audit further observed that no Action Taken Notes on the agenda of previous meetings of SLMC were prepared and submitted by the Company.

(ii) The Company constituted (May 2016) a Company Level Monitoring Committee (CLMC) under the chairmanship of CMD to review its performance under the UDAY scheme. Audit observed that while constituting the CLMC, a monthly review was mandated, however, no terms of reference of CLMC with regard to periodicity and mechanism of review/monitoring of performance were framed. No provision regarding the number of meetings to be held by the CLMC during a year/execution phase of the Scheme was made for appraisals of the achievement of milestones/targets. CLMC held two meetings during 2016-17, no meeting during 2017-18; and 2018-19 and one during 2019- 20. The number of meetings of CLMC indicated that CLMC did not monitor the entire activities/targets of UDAY scheme. The minutes of the meetings of CLMC did not include remedial measures to the shortcomings discussed. Audit further observed that no Action Taken Notes on the agenda of previous meetings of SLMC were prepared and submitted by the Company.

The Company/State Government stated (April/May 2021) that the meetings were held at management level to discuss the quarterly as well as monthly performance of the Company under UDAY scheme but the minutes of these meetings were not recorded. The reply is not acceptable as in absence of documentary evidence, the monitoring mechanism for implementation of UDAY could not be ensured.

3.4.2 *Incorrect uploading of data on UDAY Dashboard*

The Company uploads the data in quarterly monitoring formats on the UDAY Dashboard (a web portal) on monthly basis, to enable the GoI to monitor the current status of obligations being met under UDAY scheme. A scrutiny of the data uploaded on the UDAY Dashboard and MoU/record of the Company revealed that the data uploaded by the Company was incorrect to the following extent:

(i) The data in respect of the target and achievement of segregation of feeders uploaded on the dashboard was incorrect. The dashboard was depicting (March 2020) that out of 276 feeders, 246 feeders had been segregated. As observed in paragraph 3.3.1, the target segregation was 78 mixed load feeders and installation of meters on 193 mixed feeders. Of these, Company had completed the segregation of seven *Kandi* area feeders (upto August 2020). Hence both the target (276) and achievement (246) figures were incorrectly uploaded on the Dashboard since March 2018. Further, as on March 2021, the UDAY Dashboard showed progress of segregation as 248 feeders whereas the actual progress made was 37 feeders.

(ii) As observed in paragraph 3.3.2, for distribution of LED bulbs under Domestic Efficient Lighting Program, the targeted distribution as per MoU was 120 lakh bulbs spread over 2016-17 (20 lakh), 2017-18 (45 lakh) and 2018-19 (55 lakh). The target indicated in UDAY dashboard was shown as 'nil' during 2016-17 to 2018-19.

The Company/State Government assured (April/May 2021) that figures of the feeder segregation will be set right on the UDAY Dash Board and matter regarding updation of targets of LED Bulbs has been taken up with the UDAY Cell. Audit noticed that updation of data was still pending (June 2021).

Chapter-IV

Conclusion and Recommendations

Chapter-IV: Conclusion and Recommendations

4.1 Conclusion

The Performance Audit covered the implementation of the Scheme in order to examine whether the directives pertaining to financial and operational parameters envisaged in the UDAY scheme and MoU were adhered to and overall objective of financial turnaround of the Company was achieved.

Audit noticed that performance of the Company in implementation of the Scheme was dismal as the Company failed to achieve most of the financial and operational parameters envisaged in the UDAY scheme and MoU. During Performance Audit, it was noticed that:

As per the Scheme and MoU, the State Government was required to take over 75 *per cent* of Company's debt to be transferred back to the Company as a mix of grant of and equity. However, the State Government, in violation to the provision of the Scheme and MoU, converted the entire loan into equity. Remaining 25 *per cent* debt was required to be got converted through the banks/FIs into concessional loan or State Government bonds. The Company could neither issue the bonds nor got the debt converted into loans at the rates prescribed in the Scheme.

Despite conversion of loans to equity, the Company failed to arrest the trend of increase in outstanding loans post UDAY and there was huge increase in outstanding loans from September 2015 to March 2020.

The decision of GoP to levy the FCA surcharge on annual basis instead of quarterly basis, as mandated by the Scheme and MoU, led to its delayed recovery and consequent loss of interest thereon.

Inordinate delay in issue of the tariff orders for the years 2015-16 to 2020-21 resulted in delayed recovery of increased tariff from the consumers.

The Company failed to eliminate gap between Average Cost of Supply and Average Revenue Realised due to huge disallowance of projected revenue requirement by PSERC.

The Company failed to pay the power purchase bills by due dates and consequently paid late payment surcharge. Further, the Company also deviated from power drawal schedules against which it paid deviation charges and PSERC disallowed these charges on the ground that additional expenses incurred by Company for its non-performance cannot be passed on to the consumers.

Targets for reduction in AT&C losses, improvement in overall billing and collection efficiency were not achieved by majority of the DS Division offices.

The Company billed as Fuel Cost Adjustment (FCA) surcharge an amount which was much lower than the amount due for recovery as per quarterly revision allowed by the PSERC for the years 2015-16 to 2019-20.

There was substantial increase in the default of electricity dues by the Consumers including Government departments. As per MoU, all outstanding dues from the State Government departments to the Company for supply of electricity were required to be paid by March 2016. However, the dues in respect of Government Departments increased. The Company failed to take action as per the provisions of ESIM.

The Government of Punjab (GoP) failed to pay the subsidy dues determined by the PSERC and the balance subsidy payable by GoP kept on increasing year after year. Despite the continuous shortfalls in receipt of subsidy, the Company in violation to the Electricity Act not only continued the implementation of State Government subsidy schemes but also implemented additional subsidy schemes of the State Government.

The Company surrendered the surplus power against which it paid fixed capacity charges to the power producers for capacities contracted.

The Company failed to complete various operational activities committed in MoU like smart metering, DT metering, feeder segregation, etc.

The monitoring mechanism was deficient and thereby execution of Scheme activities and uploading of correct data on the portal was not ensured.

4.2 Recommendations

Following recommendations are proposed to address the issues raised in this Performance Audit:

The Company should explore the possibilities for conversion of remaining 25 *per cent* debts into loans at the rates prescribed in the Scheme.

The Company should analyse increasing trend in outstanding loans post UDAY and make detailed action plan to come out of debt trap.

Timely and accurate billing of Fuel Cost Adjustment (FCA) as per quarterly revision allowed by the PSERC may be ensured. The matter regarding loss of interest due to delay in levy of FCA as per GoP orders may be taken up with the State Government.

Delays in issue of the tariff orders need to be avoided by ensuring proper and timely response to clarifications/information sought by the PSERC.

The Company should evolve time bound framework to eliminate the gap between Average Cost of Supply and Average Revenue Realised and ensure timely payment for the power purchase bills by due dates.

The Company should assess its power drawal requirements in such way that deviation is minimised so that payment of deviation charges is avoided.

Achievement of the targeted reduction in AT&C losses, improvement in billing and collection efficiency in all the division offices may be ensured by close monitoring.

The Company should make efforts to recover electricity dues from the Consumers including State Government departments.

The Company should ensure recovery of the subsidy dues determined by the PSERC from State Government before implementation of subsidised tariff.

The Company should explore the avenues to utilise surplus power in more remunerative way to avoid payment of fixed capacity charges to the power producers for capacities contracted.

The Company should plan to complete various operational activities committed in MoU like smart metering, feeder segregation, DT metering etc. in a time bound manner.

Monitoring mechanism needs to be strengthened to ensure timely execution of Scheme activities and uploading of correct data on the portal.

Chandigarh **(PUNAM PANDEY)**
Dated: 22 February 2022 **Principal Accountant General (Audit)**
Punjab

Countersigned

New Delhi **(GIRISH CHANDRA MURMU)**
Dated: 25 February 2022 **Comptroller and Auditor General of India**

Annexure

Annexure-1

(Referred to in Paragraph 2.4.1)

Statement showing Aggregate Technical and Commercial losses of Distribution divisions of Punjab State Power Corporation Limited during the period 2015-16 to 2019-20

Sl. No.	Name of Division	2015-16			2016-17			2017-18			2018-19			2019-20		
		Target	Actual	Short-fall	Target	Actual	Short-fall	Target	Actual	Short-fall	Target	Actual	Short-fall	Target	Actual	Short-fall
1.	Abohar	27.30	29.95	2.65	25.28	26.69	1.41	23.70	21.14	-2.56	22.95	20.85	-2.10	14.00	29.62	15.62
2.	Adda Dakha	7.12	12.06	4.94	6.98	9.71	2.73	6.84	9.26	2.42	6.70	8.13	1.43	14.00	8.48	-5.52
3.	Agar Nagar Division, Ludhiana	14.36	10.91	-3.45	13.65	8.73	-4.92	12.96	5.58	-7.38	12.32	6.23	-6.09	14.00	12.72	-1.28
4.	Ahamedgarh	10.42	10.28	-0.14	9.90	14.09	4.19	9.70	10.43	0.73	9.51	12.13	2.62	14.00	8.77	-5.23
5.	Ajnala	39.85	28.20	-11.65	36.85	32.87	-3.98	34.11	35.40	1.29	33.47	37.82	4.35	14.00	46.28	32.28
6.	Amloh	6.10	6.98	0.88	5.98	6.68	0.70	5.86	6.01	0.15	5.75	6.22	0.47	14.00	7.16	-6.84
7.	Anandpur Sahib	5.05	17.32	12.27	4.99	2.88	-2.11	4.93	**-2.74**	-7.67	4.87	-10.13	-15.00	14.00	5.67	-8.33
8.	Badal	40.05	36.05	-4.00	37.25	36.47	-0.78	34.63	26.35	-8.28	33.89	30.34	-3.55	14.00	32.19	18.19
9.	Baghapurana	22.62	27.87	5.25	21.10	29.44	8.34	20.14	34.10	13.96	19.41	30.65	11.24	14.00	33.66	19.66
10.	Banga	12.15	15.39	3.24	11.54	11.19	-0.35	10.97	12.35	1.38	10.42	11.67	1.25	14.00	13.49	-0.51
11.	Barnala City	17.51	17.29	-0.22	16.46	20.27	3.81	15.47	18.22	2.75	14.75	17.39	2.64	14.00	20.56	6.56
12.	Barnala Suburban	17.96	17.85	-0.11	16.86	20.88	4.02	15.59	18.56	2.97	14.85	17.90	3.05	14.00	18.58	4.58
13.	Batala City	26.70	26.22	-0.48	25.10	21.64	-3.46	24.17	19.93	-4.24	23.57	16.78	-6.79	14.00	17.97	3.97
14.	Batala Suburban	35.67	28.63	-7.04	33.36	27.14	-6.22	31.58	26.95	-4.63	30.89	26.08	-4.81	14.00	29.44	15.44
15.	Bathinda City	8.77	11.32	2.55	8.60	11.85	3.25	8.43	7.70	-0.73	8.26	8.44	0.18	14.00	12.38	-1.62
16.	Bathinda Suburban	31.20	30.38	-0.82	29.92	24.62	-5.30	27.45	23.94	-3.51	26.71	27.37	0.66	14.00	28.04	14.04
17.	Bhagta Bhai Ka	27.85	22.94	-4.91	26.77	21.48	-5.29	24.79	30.43	5.64	24.01	28.35	4.34	14.00	30.69	16.69
18.	Bhikhiwind	38.26	40.33	2.07	34.89	22.26	-12.63	31.58	**49.47**	17.89	30.82	46.66	15.84	14.00	**57.65**	43.65
19.	Bhogpur	9.43	10.18	0.75	9.24	8.51	-0.73	9.05	10.08	1.03	8.87	11.73	2.86	14.00	11.98	-2.02
20.	Budhladha	16.16	13.78	-2.38	15.19	16.41	1.22	14.28	15.97	1.69	13.56	16.29	2.73	14.00	16.07	2.07
21.	City Central Division, Ludhiana	9.51	10.46	0.95	9.32	6.52	-2.80	9.13	5.56	-3.57	8.95	6.51	-2.44	14.00	6.64	-7.36
22.	City Circle Amritsar	17.20	18.77	1.57	16.17	17.42	1.25	15.20	15.62	0.42	14.69	12.94	-1.75	14.00	13.54	-0.46
23.	City Sunam	15.19	15.35	0.16	14.28	17.36	3.08	13.57	16.02	2.45	12.89	17.44	4.55	14.00	15.84	1.84
24.	CMC, Ludhiana	6.70	4.89	-1.81	6.56	5.83	-0.73	6.43	3.05	-3.38	6.30	-1.21	-7.51	14.00	3.99	-10.01

Sl. No.	Name of Division	2015-16			2016-17			2017-18			2018-19			2019-20		
		Target	Actual	Short-fall	Target	Actual	Short-fall	Target	Actual	Short-fall	Target	Actual	Short-fall	Target	Actual	Short-fall
25.	Dasuya	7.95	10.85	2.90	7.79	8.73	0.94	7.64	11.43	3.79	7.49	10.23	2.74	14.00	16.94	2.94
26.	Dhariwal Division	20.23	20.45	0.22	19.51	21.47	1.96	18.50	22.22	3.72	17.75	21.70	3.95	14.00	25.01	11.01
27.	Dhuri	16.86	16.79	-0.07	15.68	14.88	-0.80	14.90	15.42	0.52	14.15	12.34	-1.81	14.00	15.59	1.59
28.	Dirba	11.99	10.87	-1.12	11.39	11.49	0.10	10.82	13.62	2.80	10.28	13.25	2.97	14.00	13.99	-0.01
29.	Doraha	6.47	5.35	-1.12	6.34	8.13	1.79	6.22	5.03	-1.19	6.09	4.54	-1.55	14.00	9.37	-4.63
30.	East Division, Amritsar	23.46	22.08	-1.38	22.20	23.23	1.03	21.02	21.53	0.51	20.22	24.86	4.64	14.00	13.21	-0.79
31.	East Division, Jalandhar	10.71	7.59	-3.12	10.18	14.08	3.90	9.67	7.27	-2.40	9.48	4.32	-5.16	14.00	6.65	-7.35
32.	Estate Division Ludhiana	5.42	5.93	0.51	5.31	3.00	-2.31	5.20	5.43	0.23	5.10	3.42	-1.68	14.00	4.64	-9.36
33.	Faridkot	20.77	21.25	0.48	19.11	20.61	1.50	18.12	14.93	-3.19	17.66	15.57	-2.09	14.00	14.45	0.45
34.	Fazilka	22.56	19.17	-3.39	21.25	20.05	-1.20	20.03	15.50	-4.53	19.52	18.13	-1.39	14.00	17.28	3.28
35.	Ferozepur City	16.51	18.57	2.06	15.52	19.94	4.42	14.59	17.42	2.83	13.86	20.31	6.45	14.00	24.72	10.72
36.	Ferozepur Suburban	16.41	22.55	6.14	15.43	20.29	4.86	14.50	16.79	2.29	13.78	21.09	7.31	14.00	26.88	12.88
37.	Focal Point Ludhiana	3.25	0.37	-2.88	3.19	3.06	-0.13	3.12	2.57	-0.55	3.06	5.44	2.38	14.00	1.74	-12.26
38.	Garhshanker	14.92	15.05	0.13	14.17	24.99	10.82	13.46	32.32	18.86	12.79	33.55	20.76	14.00	40.38	26.38
39.	Giddarbaha	31.40	30.25	-1.15	29.26	23.73	-5.53	27.52	24.37	-3.15	26.82	28.42	1.60	14.00	27.14	13.14
40.	Gobindgarh	3.64	3.20	-0.44	3.61	3.54	-0.07	3.58	0.95	-2.63	3.54	-2.12	-5.66	14.00	-8.00	-22.00
41.	Goraya	11.32	11.69	0.37	10.75	11.22	0.47	10.21	11.62	1.41	9.70	11.73	2.03	14.00	12.52	-1.48
42.	Gurdaspur Division	16.79	17.22	0.43	15.78	13.65	-2.13	14.84	12.07	-2.77	14.10	13.62	-0.48	14.00	15.78	1.78
43.	Hoshiarpur City	12.10	8.77	-3.33	11.50	9.01	-2.49	10.92	10.60	-0.32	10.38	6.64	-3.74	14.00	10.34	-3.66
44.	Hoshiarpur Suburban	6.23	4.84	-1.39	6.10	2.25	-3.85	5.98	4.01	-1.97	5.86	4.27	-1.59	14.00	5.12	-8.88
45.	Jagraon	14.63	13.29	-1.34	13.89	13.47	-0.42	13.20	16.14	2.94	12.54	14.71	2.17	14.00	17.99	3.99
46.	Jalalabad	29.05	30.74	1.69	27.52	32.11	4.59	26.01	32.14	6.13	25.57	31.22	5.65	14.00	39.98	25.98
47.	Jandiala Guru	14.40	20.20	5.80	13.68	14.69	1.01	13.00	17.64	4.64	12.35	17.60	5.25	14.00	20.98	6.98
48.	Janta Nagar, Ludhiana	14.06	16.52	2.46	13.36	8.27	-5.09	12.69	7.10	-5.59	12.05	6.08	-5.97	14.00	7.89	-6.11
49.	Kapurthala City	13.03	13.79	0.76	12.38	14.83	2.45	11.76	11.33	-0.43	11.17	12.16	0.99	14.00	14.14	0.14
50.	Kapurthala Suburban	19.03	13.95	-5.08	18.70	12.23	-6.47	17.63	12.59	-5.04	16.94	15.46	-1.48	14.00	11.29	-2.71
51.	Kartarpur	13.74	13.62	-0.12	13.05	5.96	-7.09	12.40	7.50	-4.90	11.78	12.59	0.81	14.00	9.69	-4.31
52.	Khanna	10.82	11.49	0.67	10.28	9.46	-0.82	9.76	8.31	-1.45	9.57	5.47	-4.10	14.00	6.42	-7.58

Sl. No.	Name of Division	2015-16			2016-17			2017-18			2018-19			2019-20		
		Target	Actual	Short-fall	Target	Actual	Short-fall	Target	Actual	Short-fall	Target	Actual	Short-fall	Target	Actual	Short-fall
53.	Kotkapura	13.93	15.71	1.78	13.24	18.15	4.91	12.58	13.6	1.02	11.95	11.00	-0.95	14.00	14.74	0.74
54.	Lalru	6.23	5.87	-0.36	6.11	4.88	-1.23	5.99	9.40	3.41	5.87	7.59	1.72	14.00	7.59	-6.41
55.	Laltonkalan	8.72	10.17	1.45	8.55	12.69	4.14	8.38	8.79	0.41	8.21	10.26	2.05	14.00	10.37	-3.63
56.	Lehra Gagga	21.02	19.74	-1.28	20.12	24.65	4.53	20.08	26.49	6.41	19.55	30.61	11.06	14.00	27.65	13.65
57.	Mahilpur	8.75	9.69	0.94	8.58	22.19	13.61	8.40	26.21	17.81	8.24	25.04	16.80	14.00	29.04	15.04
58.	Malerkotla	14.17	10.85	-3.32	13.46	7.47	-5.99	12.79	7.93	-4.86	12.15	6.14	-6.01	14.00	8.18	-5.82
59.	Malout	37.55	**43.60**	6.05	35.25	42.57	7.32	32.41	41.53	9.12	31.65	43.83	12.18	14.00	49.38	35.38
60.	Mansa	15.53	19.96	4.43	14.60	17.08	2.48	13.87	16.38	2.51	13.17	15.48	2.31	14.00	14.01	0.01
61.	Maur	12.21	15.39	3.18	11.60	13.92	2.32	11.02	14.52	3.50	10.47	13.63	3.16	14.00	9.21	-4.79
62.	Model Town Division, Jalandhar	15.12	14.39	-0.73	14.21	9.09	-5.12	13.50	9.61	-3.89	12.83	**-13.83**	-26.66	14.00	8.08	-5.92
63.	Model Town Division, Ludhiana	12.60	12.79	0.19	11.97	12.41	0.44	11.37	11.99	0.62	10.80	4.64	-6.16	14.00	10.28	-3.72
64.	Moga City	14.36	13.05	-1.31	13.64	18.31	4.67	12.96	16.66	3.70	12.31	17.95	5.64	14.00	19.72	5.72
65.	Moga Suburban	10.32	13.57	3.25	9.80	14.37	4.57	9.61	14.18	4.57	9.42	11.71	2.29	14.00	13.03	-0.97
66.	Mohali	6.60	7.58	0.98	6.47	-0.42	-6.89	6.34	-0.47	-6.81	6.21	3.48	-2.73	14.00	1.22	-12.78
67.	Morinda	15.36	15.02	-0.34	14.44	15.46	1.02	13.72	16.82	3.10	13.03	15.77	2.74	14.00	20.16	6.16
68.	Mukatsar	21.45	23.35	1.90	19.73	21.91	2.18	18.55	20.12	1.57	17.82	21.05	3.23	14.00	22.86	8.86
69.	Mukerian	9.90	12.81	2.91	9.70	**-4.09**	-13.79	9.51	2.47	-7.04	9.32	0.65	-8.67	14.00	4.13	-9.87
70.	Nabha	13.06	12.82	-0.24	12.41	12.67	0.26	11.79	11.34	-0.45	11.20	13.18	1.98	14.00	10.74	-3.26
71.	NawanShahar	12.67	11.69	-0.98	12.03	9.33	-2.70	11.43	10.70	-0.73	10.86	9.49	-1.37	14.00	16.32	2.32
72.	Nokadar City	14.95	13.43	-1.52	14.20	18.73	4.53	13.49	17.32	3.83	12.82	19.86	7.04	14.00	19.47	5.47
73.	Nokadar Suburban	14.14	17.30	3.16	13.43	13.88	0.45	12.76	13.68	0.92	12.12	14.49	2.37	14.00	15.62	1.62
74.	Pathankot City	19.96	22.75	2.79	19.10	15.08	-4.02	18.44	14.78	-3.66	17.68	16.45	-1.23	14.00	**-10.65**	-24.65
75.	Patiala East	13.72	12.58	-1.14	13.04	20.48	7.44	12.38	18.44	6.06	11.76	23.33	11.57	14.00	21.70	7.70
76.	Patiala Suburban	11.67	12.27	0.60	11.09	12.13	1.04	10.53	14.08	3.55	10.01	15.76	5.75	14.00	11.43	-2.57
77.	Patiala West	6.78	**-6.08**	-12.86	6.64	5.29	-1.35	6.51	4.47	-2.04	6.38	9.98	3.60	14.00	14.70	0.70
78.	Patran	20.50	21.61	1.11	19.44	29.47	10.03	18.34	31.16	12.82	17.80	34.86	17.06	14.00	27.24	13.24
79.	Patti	36.60	41.54	4.94	33.45	23.57	-9.88	31.65	49.20	17.55	30.85	**49.92**	19.07	14.00	53.72	39.72
80.	Phagwara	9.75	8.96	-0.79	9.55	18.50	8.95	9.36	8.79	-0.57	9.17	9.09	-0.08	14.00	13.86	-0.14
81.	Raikot	18.64	20.31	1.67	17.95	19.37	1.42	16.47	16.61	0.14	15.78	14.89	-0.89	14.00	17.22	3.22

Sl. No.	Name of Division	2015-16			2016-17			2017-18			2018-19			2019-20		
		Target	Actual	Short-fall	Target	Actual	Short-fall	Target	Actual	Short-fall	Target	Actual	Short-fall	Target	Actual	Short-fall
82.	Rajpura	11.94	11.84	-0.10	11.34	5.02	-6.32	10.77	8.42	-2.35	10.23	6.12	-4.11	14.00	8.28	-5.72
83.	Rayya	9.59	18.11	8.52	9.40	11.82	2.42	9.21	17.79	8.58	9.03	18.54	9.51	14.00	20.96	6.96
84.	Roop Nagar	5.09	7.53	2.44	5.05	7.92	2.87	5.01	8.42	3.41	4.97	8.45	3.48	14.00	9.94	-4.06
85.	Samana	14.87	14.53	-0.34	14.13	17.02	2.89	13.42	12.30	-1.12	12.75	18.47	5.72	14.00	16.12	2.12
86.	Samrala	6.58	10.47	3.89	6.45	6.78	0.33	6.32	6.59	0.27	6.20	7.53	1.33	14.00	9.11	-4.89
87.	Sangrur	12.22	12.84	0.62	11.61	9.00	-2.61	11.03	14.49	3.46	10.48	13.27	2.79	14.00	11.26	-2.74
88.	Sh. Hargobindpur Sahib	19.99	20.37	0.38	18.79	16.22	-2.57	17.67	17.57	-0.10	16.91	18.31	1.40	14.00	17.55	3.55
89.	Srihind	5.19	7.55	2.36	5.08	6.79	1.71	4.98	8.10	3.12	4.88	10.71	5.83	14.00	9.64	-4.36
90.	Suburban Division, Amritsar	38.81	31.64	-7.17	35.35	35.78	0.43	33.08	34.21	1.13	32.56	35.12	2.56	14.00	36.59	22.59
91.	Suburban Pathankot	15.35	14.07	-1.28	14.43	5.74	-8.69	13.71	5.74	-7.97	13.02	9.39	-3.63	14.00	7.27	-6.73
92.	Sunder Nagar Division, Ludhiana	12.58	12.21	-0.37	11.95	12.51	0.56	11.36	8.92	-2.44	10.79	6.98	-3.81	14.00	5.07	-8.93
93.	Tarn Taran City	28.12	16.91	-11.21	27.02	29.13	2.11	26.12	28.85	2.73	25.41	32.46	7.05	14.00	34.03	20.03
94.	Tarn Taran Suburban	19.24	22.33	3.09	18.09	12.90	-5.19	17.00	27.33	10.33	16.12	31.08	14.96	14.00	31.45	17.45
95.	West Division, Amritsar	35.01	32.38	-2.63	33.50	22.92	-10.58	30.94	46.10	15.16	30.19	42.48	12.29	14.00	48.74	34.74
96.	West Ludhiana	9.37	11.45	2.08	9.18	10.96	1.78	9.00	11.25	2.25	8.82	9.90	1.08	14.00	6.89	-7.11
97.	Zira	20.20	27.03	6.83	19.20	**42.84**	23.64	18.23	30.01	11.78	17.48	35.51	18.03	14.00	42.36	28.36
98.	Zirakpur	12.17	15.66	3.49	11.57	10.51	-1.06	10.99	12.88	1.89	10.44	7.92	-2.52	14.00	16.92	2.92
	Total	**16.16**	**15.08**		**15.30**	**14.63**		**14.50**	**13.88**		**14.00**	**13.78**		**14.00**	**14.56**	
No. of Divisions which achieved their respective targets				**45**			**43**			**39**			**36**			**46**
No. of Divisions which did not achieve their respective targets				**53**			**55**			**59**			**62**			**52**
Maximum AT&C Loss during the year				**43.60**			**42.84**			**49.47**			**49.92**			**57.65**
Minimum AT&C Loss during the year				**(-) 6.08**			**(-) 4.09**			**(-) 2.74**			**(-) 13.83**			**(-) 10.65**

Note: All figures in percentage