



# **PUNJAB STATE POWER CORPORATION LIMITED (PSPCL)**

**REGISTERED OFFICE ADDRESS**  
**THE MALL, PATIALA, DISTRICT PATIALA, PUNJAB – 147001, INDIA**

## **"Report on Annual Energy Audit for FY: 2024-25"**

**Prepared By :**  
**NAMDHARI ECO ENERGIES PVT. LTD.**



[www.ecoenergies.co.in](http://www.ecoenergies.co.in)



[info@ecoenergies.co.in](mailto:info@ecoenergies.co.in)

**FY: 2024-25**

Annual Energy Audit for Punjab State Power Corporation Limited - FY 2024-25 PSPCL  
as per Bureau of Energy Efficiency

(Manner and Intervals for Conduct of Energy Audit in electricity distribution companies)  
Regulations, 2021 Notified on 06.10.2021



**Punjab State Power Corporation Ltd.**

(PSPCL-DIS0014PB) PSPCL,

The Mall, Patiala-147001 Punjab

**Prepared for:**



**BUREAU OF ENERGY EFFICIENCY**  
Government of India, Ministry of Power

**Prepared By:**



**NAMDHARI ECO ENERGIES PVT LTD**

**ENERGY FOR BETTER FUTURE**

**BEE ACCREDITED ENERGY AUDIT FIRM & ESCO**

Address: C-105, Galaxy Vega, Techzone-4, Greater Noida 201306

Mob No. 0120-6056188 Email: [info@ecoenergies.co.in](mailto:info@ecoenergies.co.in)

## Table of Contents

|          |                                                                               |           |
|----------|-------------------------------------------------------------------------------|-----------|
| <b>1</b> | <b>Executive Summary .....</b>                                                | <b>8</b>  |
| <b>2</b> | <b>Background of Annual Energy Audit as per BEE for DISCOMs .....</b>         | <b>12</b> |
| 2.1      | Regulations of BEE for DISCOMs .....                                          | 13        |
| 2.2      | Purpose of Audit and Accounting Report .....                                  | 14        |
| 2.3      | Period of Annual Energy Auditing and Accounting .....                         | 15        |
| <b>3</b> | <b>Introduction about PSPCL .....</b>                                         | <b>16</b> |
| 3.1      | General Details of DISCOM .....                                               | 17        |
| 3.2      | Name and Details of Energy Manager and Authorized Signatory of DISCOM .....   | 18        |
| 3.3      | Vision & Mission of Punjab State Power Corporation Limited (PSPCL) .....      | 18        |
| 3.4      | Performance Summary Profile of DISCOM .....                                   | 20        |
| <b>4</b> | <b>Energy Flows .....</b>                                                     | <b>21</b> |
| 4.1      | Energy Accounts for Previous Years .....                                      | 22        |
| 4.2      | Energy Accounts and Performance in Current Year 2024-25 Vs Previous Year .... | 22        |
| 4.2.1    | Source of Input Energy .....                                                  | 23        |
| 4.2.2    | Power Flow chart of PSPCL Network .....                                       | 30        |
| 4.2.3    | Summary of Input Energy .....                                                 | 31        |
| 4.2.4    | TRANSMISSION MAP OF PUNJAB 132 KV & ABOVE .....                               | 33        |
| <b>5</b> | <b>Quarterly Segregation of Discom Energy .....</b>                           | <b>34</b> |
| 5.1.1    | Quarterly Performa review submitted to BEE .....                              | 34        |
| 5.1.2    | Details of Circle, Division, Feeders, DTs and Consumers .....                 | 35        |
| 5.1.3    | Circle Wise Losses for Different Category .....                               | 35        |
| <b>5</b> | <b>Summary of Electrical Power Distribution Infrastructure .....</b>          | <b>37</b> |
| <b>6</b> | <b>Consumer category, Subsidy, RPO and other compliance details .....</b>     | <b>45</b> |
| 6.1      | Provision of Subsidy .....                                                    | 46        |
| 6.2      | Renewable Purchase obligation .....                                           | 50        |
| 6.3      | Energy Conservation Measures Accomplished .....                               | 51        |
| 6.4      | Energy Conservation Measures Recommended by Auditor .....                     | 56        |
| <b>7</b> | <b>Sampling-Based Field Measurement Study .....</b>                           | <b>57</b> |
| 7.1      | 11KV SANTNAGAR OUTGOING FEEDER .....                                          | 58        |
| 7.2      | 11KV RAJA ENCLAVE OUTGOING FEEDER .....                                       | 65        |
| 7.3      | 11KV HIRABAGH OUTGOING FEEDER .....                                           | 70        |
| 7.4      | 11KV VIRK COLONY OUTGOING FEEDER .....                                        | 75        |
| 7.5      | 100KVA DT NEARBY PSPCL NEAR OFFICERS FLAT .....                               | 82        |
| <b>8</b> | <b>Annexures .....</b>                                                        | <b>89</b> |

|                                                                                                                      |     |
|----------------------------------------------------------------------------------------------------------------------|-----|
| Annexure- I Introduction of Verification Firm/Team.....                                                              | 90  |
| Annexure-II Minutes of Meeting with the DISCOM Team.....                                                             | 91  |
| Annexure-III Check List Prepared by Auditing Firm .....                                                              | 94  |
| Annexure- V Infrastructure Details .....                                                                             | 99  |
| Annexure- VI Electrical Distribution System .....                                                                    | 100 |
| Annexure- VII Category Wise Service Details.....                                                                     | 101 |
| Annexure- X List of Documents Verified with Each Parameter.....                                                      | 103 |
| Annexure- XI List of Parameters Arrived Through Calculation or Formula with List of Documents as Source of Data..... | 104 |
| Power Purchase FY 2024-25.....                                                                                       | 105 |
| Govt. Tariff Subsidy.....                                                                                            | 108 |
| Signed Annual Accounting Report PSPCL FY 2024-25 .....                                                               | 110 |

## List of Tables

|                                                                                   |    |
|-----------------------------------------------------------------------------------|----|
| Table 1: Consumer category wise energy Consumption Details .....                  | 8  |
| Table 2: PSPCL Summary Table of FY 2024-25 .....                                  | 9  |
| Table 3: Period of Energy Audit and Activity .....                                | 15 |
| Table 4: General Details of PSPCL .....                                           | 17 |
| Table 5: Name and Details of Authorized Persons of DISCOM .....                   | 18 |
| Table 6: Summary Profile of PSPCL DISCOM .....                                    | 20 |
| Table 7: Performance .....                                                        | 22 |
| Table 8: Source of Input Energy from Different Generation Station .....           | 23 |
| Table 9: Summary of Input Energy and It's Parameters .....                        | 31 |
| Table 10: Variance in Quarterly and Annual Performa .....                         | 34 |
| Table 11: Details of Circle, Division, Feeders, DTs, and Consumers .....          | 35 |
| Table 12: Circle Wise Losses .....                                                | 35 |
| Table 13: PSPCL Infrastructure Details .....                                      | 38 |
| Table 14: Subsidy Details of PSPCL for FY 2024-25 .....                           | 48 |
| Table 15: Energy Efficiency Project implemented during (2021-22 to 2024-25) ..... | 51 |

## Disclaimer

- a. The contents of this comprehensive energy audit report, including any associated business plan/financial projections, if applicable, are considered confidential. As such, the recipient is required to treat the information within this report with the utmost confidentiality.
- b. Accepting this report signifies an agreement to uphold strict confidentiality and refrain from disclosing, distributing, or disseminating any part or the entirety of its contents without obtaining prior approval from Namdhari Eco Energies Pvt Ltd.
- c. This report has been exclusively prepared for the recipient and its affiliated parties, intended solely for internal use, and is not meant for publication or disclosure to any external entities.
- d. Namdhari Eco Energies, including its directors, officers, agents, employees, and shareholders (collectively referred to as "Relevant Persons"), disclaims any responsibility or liability for any direct or indirect loss, damage, or inconvenience arising from the use of this report and its contents.
- e. This report may contain future expectations, projections, or forward-looking statements, which involve known and unknown risks, uncertainties, and other factors that may result in material differences between actual events and those expressed or implied in the forward-looking statements.
- f. Distribution or utilization of this report by any person or entity in a locality, state, country, or jurisdiction where such actions contravene the law or regulations or could subject Namdhari Eco Energies and its affiliates to registration or licensing requirements is strictly prohibited. Individuals in possession of this document are obligated to adhere to such restrictions and duly inform relevant parties.

Audit Team

Namdhari Eco Energies Pvt Ltd

  
**Bali Singh**  
Accredited Energy Auditor (AEA-206)  
Bureau of Energy Efficiency  
Ministry of Power, Govt. of India

(Mr. Bali Singh)  
Accredited Energy Auditor



## Acknowledgement

We extend our heartfelt gratitude to Punjab State Power Corporation Limited for their invaluable support in facilitating the verification study. The energy audit field visits and data verification process have been accomplished within the designated timeframe. We sincerely appreciate their cooperation throughout the verification process and their willingness to provide the necessary data for this study.

Special thanks are due to the following officers, whose contributions were instrumental in the success of this undertaking:

| PUNJAB STATE POWER CORPORATION LIMITED, Team |                                                                           |
|----------------------------------------------|---------------------------------------------------------------------------|
| 1.                                           | Er. Rakesh Chand Kokria (Chief Engineer (Energy Audit & Enforcement)      |
| 2.                                           | Er. Saleem Mohammad (Dy CE/DSM)                                           |
| 3.                                           | Er. Harpreet Raj Singh Sandhu (ASE/DSM)                                   |
| 4.                                           | Er. Ravi Verma (ASE/Distribution Projects(D-1) cum Energy Auditor EA-7969 |
| 5.                                           | Er. Bhupinder Singh (AEE/DSM)                                             |

We are also thankful to all the supporting staff members who extended their full cooperation and support. Their keen interest and valuable inputs during the study greatly enriched the outcome.

Once again, we express our profound appreciation to Punjab State Power Corporation Limited and its dedicated team for their collaborative efforts, which significantly contributed to the success of this intricate verification study.

## Audit Team

The annual energy audit project was successfully undertaken by a team of dedicated professionals from Namdhari Eco Energies Pvt Ltd. Services Ltd., who were awarded the contract for this work by Punjab State Power Corporation Limited vide Work Order: 001/DSM dated 22-04-2024 and extended vide memo no. 76/DSM-146 dated 10.02.2025 to M/S Namdhari Eco Energies Private Limited. The team members involved in this project played vital roles in ensuring its successful execution. The Audit was held during May 2025. The team members representing Namdhari Eco Energies Pvt Ltd. Services Ltd. were as follows:

| Team Member         | Designation                                                 |
|---------------------|-------------------------------------------------------------|
| BALI SINGH          | ACCREDITED ENERGY AUDITOR – AEA-206                         |
| NEERAJ GAUR         | CERTIFIED ENERGY AUDITOR (EA 28449) & DISOCM SECTOR EXPERT- |
| MURTAZA AHMED GANIE | ENERGY CONSULTANT                                           |
| PRASHANT YADAV      | ENERGY ENGINEER                                             |

Each member of the team contributed their expertise and skills to conduct a comprehensive and meticulous energy audit, which proved essential in the verification study.

We are sincerely thankful to the entire team for their dedication, professionalism, and commitment to delivering high-quality results, meeting the objectives of the project, and working collaboratively with Punjab State Power Corporation Limited to achieve the desired outcomes. Their efforts were instrumental in the successful completion of the annual energy audit.

## Abbreviations

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

# 1 Executive Summary

Punjab State Power Corporation limited (PSPCL), Headquartered at The Mall, Patiala after unbundling of PSEB, came into existence in 2010. It bears the responsibility of generation and distribution of power to various categories of consumers. The coordinating agency, BEE, has framed regulation in exercise of power conferred upon under clause (g) and (n) of section 14 of the energy conservation act 2001 (Amended in 2010) for the designated consumers.

PSPCL has awarded the work of Annual Energy Accounting Audit for FY 2024-25 Work Order: 001/DSM dated 22-04-2024 and extended vide memo no. 76/DSM-146 dated 10.02.2025 to M/S Namdhari Eco Energies Private Limited.

The objective of Annual Energy Accounting is to conduct energy audit to know

- Losses of power in distribution network of various voltages
- Assess the metering status (Functional, Non-functional and Unmetered)
- Types of meters connected
- Monitoring mechanism of system 66 KV to 0.415 KV network and consumers connected at different voltages of various categories
- Calculation of billing efficiency and collection efficiency

The connected load of all categories is 47309.70 MW, which consumes annual input energy (At DISCOM Periphery) 74639.71MU. The actual sold power stands to be 65449.41 MU to the consumers. The billing efficiency stands to be 87.68%. The T & D losses are 12.31 %. The category-wise load calculation & percentage and energy consumption along with percentage are mentioned below.

Table 1: Consumer category wise energy Consumption Details

| Consumer category        | Total Number of connections (Nos) | % of number of connections | Total Connected Load (MW) | % of connected load | Total energy (MW) | % of energy consumption |
|--------------------------|-----------------------------------|----------------------------|---------------------------|---------------------|-------------------|-------------------------|
| Residential              | 8151277                           | 74.02%                     | 17259.5                   | 35.38%              | 20124.98          | 30.75%                  |
| Agricultural             | 1392212                           | 12.65%                     | 11508.62                  | 25.07%              | 14967.02          | 22.87%                  |
| Commercial/Industrial-LT | 1446905                           | 13.14%                     | 9003.173                  | 19.23%              | 8930.705          | 13.65%                  |
| Commercial/Industrial-HT | 11992                             | 0.11%                      | 9073.17                   | 19.30%              | 20294.55          | 31.01%                  |
| Others                   | 6578                              | 0.06%                      | 465.234                   | 1.03%               | 1132.149          | 1.73%                   |
| Total                    | 11008964                          | 100.00%                    | 47309.70                  | 100.00%             | 65449.41          | 100.00%                 |

Table 2: PSPCL Summary Table of FY 2024-25

| Particulars                                                                                      | Value     | Unit |
|--------------------------------------------------------------------------------------------------|-----------|------|
| Total Energy Requirement                                                                         | 78611.54  | MU   |
| Inter State transmission Losses (Inc. BBMB)                                                      | 1636.612  | MU   |
| Net Availability for PSPCL                                                                       | 76974.928 | MU   |
| Intra state losses State Losses                                                                  | 2335.219  | MU   |
| Input Pumped                                                                                     | 74639.71  | MU   |
| Billed Energy                                                                                    | 65449.41  | MU   |
| T&D loss                                                                                         | 13,162.00 | MU   |
| D loss                                                                                           | 9,190.17  | MU   |
| T&D loss (%)                                                                                     | 16.74%    | %    |
| D loss (%)                                                                                       | 12.31%    | %    |
| Others, Embedded (Roof top Solar)                                                                | 131       | MU   |
| AT & C Losses as per Division wise losses/summary Sheet                                          |           |      |
| Total Energy Requirement                                                                         | 78611.54  | MU   |
| Net input energy (at DISCOM Periphery after adjusting the transmission losses and energy traded) | 74639.71  | MU   |
| Total Energy billed (is the Net energy billed, adjusted for energy traded))                      | 65449.41  | MU   |
| D losses                                                                                         | 9190.3    | MU   |
| D loss (%)                                                                                       | 12.31%    | %    |
| Billed Amount in Rs. Crore                                                                       | 47290.92  | Cr.  |
| Collected Amount in Rs. Crore                                                                    | 43411.54  | Cr.  |
| Collection Efficiency                                                                            | 91.80%    | %    |
| AT & C loss (%)                                                                                  | 19.51%    | %    |

The total energy requirement is 78611.54MU, with net availability for PSPCL at 76974.92 MU. The T&D loss stands at 16.74%, while D loss is 12.31%. The AT&C loss is 19.51%, matching the division-wise summary. Collection efficiency is reported at 91.80%.

#### Collection Efficiency:

PSPCL boasts of a collection efficiency of 91.80%, despite the actual collection efficiency being higher, which is restricted to 100% as per PFC guidelines. The AT&C losses are calculated to be 19.51%.

#### Metering and Network Issues:

- About 99.38% of agricultural consumers are not metered due to application of flat rate billing. Currently up to 8 hours of supply is provided to AP consumers.

#### Theft and Loss Assessment:

The Border Zone has been identified as the most theft-prone area, requiring special attention to manage the energy pilferage.

#### Consumer Categories and 11 KV Feeders:

Consumers are broadly categorized as Residential, Agriculture, Commercial/Industrial LT, Commercial HT, and Others.

#### Solar Power and Net Metering:

Encouraging the use of solar power among agricultural consumers, who receive 8 hours of power supply daily, is necessary.

#### Data Collection and Monitoring:

- SAP functions at the apex level, collecting data from various consumer categories through AMR/SMART meters, communicable meters, non-communicable meters, and unmetered consumer assessments.
- The mixed mode of billing assessment and verification is challenging without 100% online monitoring and data acquisition through communicable meters at each system element's input and output.

## Critical Comments

The following comments are provided by the Accredited Energy Audit firm.

| Sr. no | Comments by Auditor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1      | Verification of Input Energy: All input energy data for the financial year 2024–25 was downloaded and verified through the PSPCL portal. The downloaded data was cross-checked against the figures entered in the Performa, and both were found to be consistent and matching.                                                                                                                                                                                                                                                                                                                                                                             |
| 2      | <p>Power Purchase Verification:</p> <p>A site visit was conducted to the purchase department to review the power purchase energy schedule. The energy procurement from different sources was verified against respective monthly bills. Copies of these bills were collected for documentation, and a monthly breakup of the power purchase data was maintained in the energy schedule Excel sheet.</p>                                                                                                                                                                                                                                                    |
| 3      | <p>Change in Kandi Feeder Methodology:</p> <p>From 2021 onwards, PSPCL has revised its methodology for billing unmetered AP <i>Kandi mixed feeders</i>. These feeders, typically located along riverbanks, originally ranged from 325–350 in number in 2021. However, as of 1st April 2024, only 263 feeders remain classified as mixed Kandi feeders, following the segregation of Exclusive Agricultural Pumping (AP) supply feeders in kandi mixed are separated and billed with input energy pumped after subtracting the losses from the that year. This is the reason for continuous reduction in the losses of the DISOCM from 2021 to 2023-24.</p> |
| 4      | Consumption Split for Kandi Feeders: PSPCL considers 30% of the pumped energy for Kandi feeders as Agricultural (AP) supply, while the remaining 70% is treated as metered and billed non-AP consumption. Additionally, actual technical losses of the relevant financial year (e.g., 10.73 % in FY 2023–24) were deducted from the pumped energy.                                                                                                                                                                                                                                                                                                         |
| 5      | <p>Implementation of New Methodology:</p> <p>A new methodology was introduced by the Punjab Government in August 2024, applicable retrospectively from FY 2023–24. This change significantly impacted the reported losses and billing figures of PSPCL</p>                                                                                                                                                                                                                                                                                                                                                                                                 |
| 6      | <p>Impact of Methodology Change:</p> <p>Due to the new methodology, there is an approximate reduction of 600 MU in billed energy. This variance was directly attributed to the revised accounting and categorization norms implemented by PSPCL.</p>                                                                                                                                                                                                                                                                                                                                                                                                       |
| 7      | <p>Billed Data Validation:</p> <p>Billed energy data was cross-verified using the PSPCL online portal, where feeder-wise data was accessed and matched against submitted reports.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

## 2 Background of Annual Energy Audit as per BEE for DISCOMs

The Bureau of Energy Efficiency (BEE), under the framework of the Energy Conservation Act, 2001, has mandated periodic Annual Energy Audits for Distribution Companies (DISCOMs) in India. The objective is to promote energy efficiency across the electricity value chain and to assist DISCOMs in identifying and reducing system losses.

Through Notification No. S.O. 2064(E) dated 30th June 2022, the Ministry of Power classified DISCOMs as Designated Consumers (DCs) under the PAT (Perform, Achieve, and Trade) Scheme. This makes it mandatory for DISCOMs to undertake Annual Energy Audits and report on their energy performance to BEE.

The primary goals of the Annual Energy Audit are to:

1. Quantify total energy input into the DISCOM system and compare it with billed and collected energy.
2. Identify technical and commercial losses (AT&C Losses) at various voltage levels.
3. Enable better energy accounting and monitoring through data-driven insights.
4. Provide a baseline for performance improvements and energy efficiency interventions.
5. Align with the broader national objectives of reducing distribution losses and enhancing grid efficiency.

The audit process involves a systematic review of energy flow — from transmission entry points down to end consumers — and covers various operational aspects such as purchase energy, open access, distributed generation, metering infrastructure, and consumer category-wise billing and collection.

BEE provides standard formats and guidelines for conducting these audits to ensure consistency, transparency, and accountability across all DISCOMs nationwide.

## 2.1 Regulations of BEE for DISCOMs

In 2008, Government of India announced 'National Action Plan on Climate Change (NAPCC)', identifying eight missions to promote inclusive growth in the country. The National Mission for Enhanced Energy Efficiency (NMEEE) is one of the eight identified missions under.

The Bureau of Energy Efficiency (BEE) has issued the regulations namely (Manner and Intervals for Conduct of Energy Audit (Accounting) in Electricity Distribution Companies) published vide notification No.18/1/BEE/DISCOM/2021, dated the 6<sup>th</sup> of October 2021 in the Gazette of India, Extraordinary, Part III, Section 4). These regulations apply to all electricity distribution companies specified as designated consumer and subsequent amendment thereof. The extant regulations specify the following key aspects related to energy accounting and audit for electricity distribution companies.

- i. Intervals of time for conduct of periodic energy accounting and annual energy audit and report submission thereof.
- ii. Pre-requisites for annual energy audit and periodic energy accounting
- iii. Reporting requirements for annual energy audit and periodic energy accounting,
- iv. Manner of annual energy audit and periodic energy accounting
- v. Prioritization and preparation of action plan and
- vi. Structure of annual energy audit report

These regulations have been issued under the ambit of Energy Conservation Act, 2001, with an overall objective to reduce inefficiencies and losses in distribution sector thereby ensuring financial and economic viability of DISCOMs.

Under the above-mentioned regulation, every electricity distribution company shall conduct an annual energy audit for every financial year and submit the annual energy audit report to the Bureau and respective State Designated Agency and also made available on the website of the electricity distribution company.

## 2.2 Purpose of Audit and Accounting Report

The development of a comprehensive energy accounting system serves several important purposes in quantifying and determining actual losses in the power distribution system, which are segregated into technical and commercial losses. The key objectives of such a system are as follows:

1. **Identifying Losses:** The energy accounting system helps in identifying and quantifying losses occurring in the distribution system, distinguishing between technical losses (due to energy dissipation during transmission and distribution) and commercial losses (resulting from inefficient billing, theft, pilferage, etc.).
2. **Address Inefficiencies:** By identifying areas of leakage, theft, wastage, or inefficient use of electricity, the system provides insights for tackling the challenges of high Transmission and Distribution (T&D) losses and Aggregate Technical & Commercial (AT&C) losses. This enables utilities to take corrective actions and improve overall efficiency.
3. **Independent Energy Audit:** The system facilitates an independent 3rd party energy audit of the distribution network, providing an unbiased assessment of T&D losses and AT&C losses. This ensures a transparent and accurate representation of the distribution system's performance.
4. **Targeted Efficiency Improvements:** With a clear understanding of the losses in different areas or customer segments, distribution utilities can undertake targeted efficiency improvement activities. This allows them to focus their efforts and resources on priority areas to reduce losses effectively.
5. **Informed Capital Investments:** The data obtained from the energy accounting system provides a basis for prioritizing energy capital investments. Utilities can use this information to allocate their budgets more accurately, maximizing the impact of investments in reducing losses and enhancing overall performance.
6. **Capacity Planning:** The system aids in identifying overloaded segments of the distribution network, enabling utilities to make necessary capacity additions strategically. This helps ensure the network operates optimally and can handle future load demands efficiently.

Overall, a comprehensive energy accounting system plays a crucial role in improving the distribution system's efficiency, reducing losses, and optimizing investments, ultimately contributing to a more reliable and cost-effective power distribution network.

## 2.3 Period of Annual Energy Auditing and Accounting

The period of Annual Energy Audit in this report covers FY 2024-25, starting from 1st April 2024 until 31st March 2025. The comprehensive energy audit site inspection and data verification took place from 27<sup>th</sup> May 2025 to 28<sup>th</sup> May 2025. A detailed account of day-to-day activities during this period is provided in the table below.

*Table 3: Period of Energy Audit and Activity*

| Date & Time (IST)                  | Activity                                         | Description of Work                                                                                                                                                                             |
|------------------------------------|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 27-May-25<br>(10:00 AM – 11:00 PM) | Opening Meeting                                  | The team met with site engineers and officers to discuss the audit's scope, timetable, and verification approach, seeking necessary site support.                                               |
| 27-May-25<br>(11:00 PM – 12:00 AM) | Site Inspection Planning                         | Team composition and responsibilities were defined for site inspection. Discussions included internal coordination, obtaining approvals, permits from DISCOM, and initiating necessary actions. |
| 27-May-25<br>(13:00 PM – 15:00 PM) | Data Verification at PSPCL Head office           | Data verification was carried out at PSPCL Head Office.                                                                                                                                         |
| 27-May-25<br>(15:00PM - 16:00 PM)  | Data Verification at Division Billing Section    | Data verification was carried out at Division Billing Section                                                                                                                                   |
| 27-May-25<br>(16:00 PM - 17:30 PM) | Feedback by AEA and Sector Expert                | The draft report was reviewed, and necessary revisions were made for finalization.                                                                                                              |
| 28-May-25<br>(10:00 AM – 12:00 AM) | Closing Meeting and Plan for Site visit          | The audit team conducted an exit meeting with PSPCL officials. The PSPCL and AEA team randomly selected the Substation for physical data verification.                                          |
| 28-May-25<br>(13:00 AM – 15:00 PM) | Substation visit and metering cross verification | A visit to the 66/11 KV substation Shakti Vihar, Patiala was conducted, synchronizing clocks to measure power for a specific time to determine transmission loss and meter accuracy.            |
| 28-May-25<br>(15:00 PM - 16:30 PM) | Site inspection and observation                  | Visits to various level feeders were made to observe recording and monitoring practices. Specific site documents such as calibration records, meter replacement records, etc., were assessed.   |
| 28-May-25<br>(16:30 PM - 17:30 PM) | Data analysis and preliminary preparation report | The team analysed the data collected and prepared a preliminary report.                                                                                                                         |

### 3 Introduction about PSPCL

---

Punjab State Power Corporation Limited (PSPCL) is the state-owned power utility responsible for electricity generation and distribution in the state of Punjab. It was constituted following the unbundling of the Punjab State Electricity Board (PSEB) under the provisions of the Electricity Act 2003. PSPCL operates a broad portfolio of power generation assets, which include thermal power plants, hydroelectric stations, and renewable energy sources, to meet the growing electricity demand of the state.

The Corporation manages a robust and widespread transmission and distribution network, delivering power across Punjab's urban, semi-urban, and rural areas. PSPCL caters to a diverse range of consumer categories including residential, commercial, industrial, agricultural, and public service segments. The utility plays a vital role in supporting the state's economic development by ensuring reliable, affordable, and quality electricity supply.

In recent years, PSPCL has placed strong emphasis on operational improvements, modernization of infrastructure, reduction of Aggregate Technical and Commercial (AT&C) losses, deployment of smart metering, and enhancement of energy efficiency in line with the national and state energy conservation objectives. The Annual Energy Audit aims to review the energy performance of the utility, identify areas of improvement, and support PSPCL's commitment towards sustainable and efficient energy management.



**PUNJAB STATE POWER  
CORPORATION LIMITED**

### 3.1 General Details of DISCOM

Table 4: General Details of PSPCL

| General Information |                                             |                                                |                  |              |
|---------------------|---------------------------------------------|------------------------------------------------|------------------|--------------|
| 1                   | Name of the DISCOM                          | Punjab State Power Corporation Limited (PSPCL) |                  |              |
| 2                   | i) Year of Establishment                    | 2010                                           |                  |              |
|                     | ii) Government/Public/Private               | Government                                     |                  |              |
| 3                   | DISCOM's Contact details & Address          |                                                |                  |              |
| i                   | City/Town/Village                           | Patiala                                        |                  |              |
| ii                  | District                                    | Patiala                                        |                  |              |
| iii                 | State                                       | Punjab                                         | Pin              | 147001       |
| iv                  | Telephone                                   | 0175-2212005                                   | Fax              | 0175-2213199 |
| 4                   | Registered Office                           |                                                |                  |              |
| i                   | Company's Chief Executive Name              | Shri Ajoy Kumar Sinha IAS                      |                  |              |
| ii                  | Designation                                 | CMD PSPCL                                      |                  |              |
| iii                 | Address                                     | The Mall, Patiala                              |                  |              |
| iv                  | City/Town/Village                           | Patiala                                        | P.O.             | Patiala      |
| v                   | District                                    | Patiala                                        |                  |              |
| vi                  | State                                       | Punjab                                         | Pin              | 147001       |
| vii                 | Telephone                                   | 0175-2212005                                   | Fax              | 0175-2213199 |
| 5                   | Nodal Officer Details*                      |                                                |                  |              |
| i                   | Nodal Officer Name (Designated at DISCOM's) | Er. Rakesh Chand Kokria                        |                  |              |
| ii                  | Designation                                 | Chief Engineer (Energy Audit & Enforcement)    |                  |              |
| iii                 | Address                                     | Shed No. B2, Shakti Vihar, Patiala             |                  |              |
| iv                  | City/Town/Village                           | Patiala                                        | P.O.             | Patiala      |
| v                   | District                                    | Patiala                                        |                  |              |
| vi                  | State                                       | Punjab                                         | Pin              | 147001       |
| vii                 | Telephone                                   | 0175-2215774                                   | Fax              | 0175-2215774 |
| 6                   | Energy Manager Details*                     |                                                |                  |              |
| i                   | Name                                        | Er. Ravi Verma                                 |                  |              |
| ii                  | Designation                                 | ASE                                            | Whether EA or EM | EA           |
| iii                 | EA/EM Registration No.                      | EA-7969                                        |                  |              |

|    |                                                                 |                               |           |                                                                                                                                        |
|----|-----------------------------------------------------------------|-------------------------------|-----------|----------------------------------------------------------------------------------------------------------------------------------------|
| iv | Telephone                                                       |                               | Fax       |                                                                                                                                        |
| v  | Mobile                                                          | 96461 18860                   | E-mail ID | <a href="mailto:aseraviverma@gmail.com">aseraviverma@gmail.com</a><br><a href="mailto:ivarverma76@gmail.com">ivarverma76@gmail.com</a> |
| 7  | Period of Information                                           |                               |           |                                                                                                                                        |
|    | Year of (FY) information including Date and Month (Start & End) | 1 April 2024 to 31 March 2025 |           |                                                                                                                                        |

### 3.2 Name and Details of Energy Manager and Authorized Signatory of DISCOM

Table 5: Name and Details of Authorized Persons of DISCOM

| Sr.no | Member of ECA         | Name                          | Designation                                 |
|-------|-----------------------|-------------------------------|---------------------------------------------|
| 1.    | Nodal Officer         | Er. Rakesh Chand Kokria       | Chief Engineer (Energy Audit & Enforcement) |
| 2.    | Deputy Chief Engineer | Er. Saleem Mohammad           | (Dy. CE/DSM)                                |
| 3.    | ASE                   | Er. Harpreet Raj Singh Sandhu | (ASE/DSM)                                   |
| 4.    | Energy Auditor        | Er. Ravi Verma                | ASE & Energy Auditor                        |
| 5.    | AEE                   | Er. Bhupinder Singh           | AEE/DSM                                     |

### 3.3 Vision & Mission of Punjab State Power Corporation Limited (PSPCL)

#### Vision and Mission:

- Vision: To be a frontrunner in the power sector by delivering sustainable, reliable, and efficient energy solutions that contribute to the overall progress of Punjab.
- Mission: To generate, transmit, and distribute electricity with the highest standards of quality, efficiency, and environmental responsibility. PSPCL is committed to customer satisfaction, continuous improvement, and innovation in all its operations.

#### Key Functions:

- Power Generation: PSPCL operates a diverse mix of power plants, including thermal, hydro, and renewable energy sources. The corporation is continually expanding its capacity to meet the growing energy demands of the state.
- Power Distribution: Responsible for the distribution of electricity to residential, commercial, and industrial consumers across Punjab. PSPCL ensures equitable distribution and aims to minimize power outages and losses.

- Customer Service: PSPCL prioritizes consumer satisfaction by offering a range of services such as online bill payment, new connections, and efficient grievance redressal mechanisms.

Achievements:

- Infrastructure Development: PSPCL has significantly improved the power infrastructure in Punjab, ensuring widespread electrification and enhancing the quality of power supply.
- Renewable Energy Initiatives: The corporation has made substantial investments in renewable energy projects, including solar and biomass, to promote sustainable energy practices.
- Operational Efficiency: Through the adoption of advanced technologies and smart grid systems, PSPCL has improved operational efficiency, reduced transmission and distribution losses, and ensured better load management.

Corporate Social Responsibility (CSR): PSPCL is dedicated to contributing to the community and the environment through various CSR initiatives. These include rural electrification projects, energy conservation programs, and support for educational and health facilities in underserved areas.

Leadership and Workforce: PSPCL is guided by a visionary leadership team and supported by a skilled and dedicated workforce. The corporation values the continuous development of its employees through training and professional growth opportunities.

Future Plans: PSPCL is focused on future-ready strategies to cope with the increasing demand for electricity and the challenges posed by climate change. Plans include expanding the renewable energy portfolio, modernizing the grid infrastructure, and enhancing customer service through digital transformation.

### 3.4 Performance Summary Profile of DISCOM

The performance of the PSPCL - DISCOM for the financial year 2024–25 is summarized below, covering key operational and financial indicators such as energy input, energy billed, system losses, collection efficiency, and AT&C loss. These metrics provide a comprehensive overview of the distribution efficiency and financial health of the utility.

Table 6: Summary Profile of PSPCL DISCOM

| Performance Summary of Electricity Distribution Companies |                                                                                                  |                                  |          |
|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------|----------------------------------|----------|
| 1                                                         | Period of Information<br>Year of (FY) information including Date and Month (Start & End)         | 1 April 2024<br>to 31 March 2025 |          |
| 2                                                         | Technical Details                                                                                |                                  |          |
| (a)                                                       | Energy Input Details                                                                             |                                  |          |
| (i)                                                       | Input Energy Purchase<br>(From Generation Source)                                                | Million kwh                      | 78611.54 |
| (ii)                                                      | Net input energy (at DISCOM Periphery after adjusting the transmission losses and energy traded) | Million kwh                      | 74639.71 |
| (iii)                                                     | Total Energy billed (is the Net energy billed, adjusted for energy traded))                      | Million kwh                      | 65449.41 |
| (b)                                                       | Transmission and Distribution (T&D) loss Details*                                                | Million kwh                      | 9190.30  |
|                                                           |                                                                                                  | %                                | 12.31%   |
|                                                           | Collection Efficiency                                                                            | %                                | 91.80%   |
| (c)                                                       | Aggregate Technical & Commercial Loss                                                            | %                                | 19.51%   |

#### Observations

The data for FY 2024–25 indicates that the PSPCL managed its distribution operations with a net input energy of 74,639.71 million kWh and achieved billing of 65,449.41 million kWh. The reported T&D loss of 12.31% is within a reasonable range for a large utility, though there remains scope for further technical improvements in network efficiency. The collection efficiency of 91.80% reflects good revenue management practices but indicates some room for strengthening consumer billing and collection processes. The overall AT&C loss of 19.51% suggests that continued efforts are needed to further reduce both technical and commercial losses to enhance operational and financial performance.

## 4 Energy Flows



## 4.1 Energy Accounts for Previous Years

In FY 2023-24, PSPCL (Punjab State Power Corporation Limited) has already submitted its Energy Audit report in compliance with the regulations set forth by the Bureau of Energy Efficiency (BEE). These regulations, titled "Manner and Intervals for Conduct of Energy Audit in electricity distribution companies," were officially notified on 6th October 2021.

The Energy Audit report is a comprehensive assessment of PSPCL's energy consumption, usage patterns, and overall energy efficiency measures. By adhering to the BEE regulations, PSPCL aims to enhance its energy conservation efforts, identify areas for improvement, and implement strategies to optimize energy usage and reduce wastage.

Submitting the Energy Audit report indicates PSPCL's commitment to sustainable practices and aligning with national energy efficiency standards. This report likely includes detailed information about energy consumption patterns, energy-saving initiatives undertaken, and recommendations for further improvements to promote a greener and more efficient operation.

PSPCL regularly submitted the Quarterly period energy accounting report to BEE for the period of FY 23-24 as per as per Bureau of Energy Efficiency (Manner and Intervals for Conduct of Energy Audit in electricity distribution companies) Regulations, 2021 Notified on 06.10.2021 and subsequent amendments.

## 4.2 Energy Accounts and Performance in Current Year 2024-25 Vs Previous Year

Table 7: Performance

| S.No | Observation                                                             | FY 2023-24 | FY 2024-25 |
|------|-------------------------------------------------------------------------|------------|------------|
| 1.   | The consumer growth from FY 24 to FY 25                                 | 10741902   | 11008964   |
| 2.   | DTs                                                                     | 1284607    | 1250538    |
| 3.   | Overall Line length including 66kv and above, 33kv, 11kV and LT (ct km) | 420389     | 432235.7   |
| 4.   | T&D Loss                                                                | 10.73%     | 12.31%     |

The increase in the losses have one reason for change in the billing methodology of Mixed Kandi feeder. The is reduction in billing energy with new methodology.

### 4.2.1 Source of Input Energy

Punjab State Power Corporation Limited own generation from GGSSTP, Ropar OF 840 MW, GHTP, Lehra Mohabbat 920 MW, Guru Amardas Thermal Power Plant 540 MW and Hydro power plants of combine capacity Neary 3500 MW. The details of power generated from different power stations& purchased by PSPCL is shown below

Table 8: Source of Input Energy from Different Generation Station

| Details of Input Energy Sources                   |                                   |                              |                                                                                                        |                        |                                                    |                                        |                                    |                          |                           |                                      |
|---------------------------------------------------|-----------------------------------|------------------------------|--------------------------------------------------------------------------------------------------------|------------------------|----------------------------------------------------|----------------------------------------|------------------------------------|--------------------------|---------------------------|--------------------------------------|
| Period From 01.04.2024 To 31.03.2025              |                                   |                              |                                                                                                        |                        |                                                    |                                        |                                    |                          |                           |                                      |
| A. Generation at Transmission Periphery (Details) |                                   |                              |                                                                                                        |                        |                                                    |                                        |                                    |                          |                           |                                      |
| S.N o.                                            | Name of Generation Station        | Generati on Capacity (In MW) | Type of Station Generation (Based-Solid (Coal, Lignite)/Liquid/Gas/Renewable(bi omass-bagasse)/Others) | Type of Contract       |                                                    | Type of Grid (intra-state/Inter-state) | Point of Conne ction (POC) Loss MU | Voltage Level (at Input) | Remark s (Source of data) | Net Energy Supplied (Mus) FY 2024-25 |
|                                                   |                                   |                              |                                                                                                        | Date of signing of PPA | PPA Duration/Expi ry Date (in years/ months/ days) |                                        |                                    |                          |                           |                                      |
| 1                                                 | GGSSTP, Ropar                     | 840                          | Coal                                                                                                   | Own Generation         |                                                    | Intrastate                             |                                    | 220 KV                   | From Concer ned           | 4120.83                              |
| 2                                                 | GHTP, Lehra Mohabbat              | 920                          | Coal                                                                                                   |                        |                                                    | Intrastate                             |                                    | 220 KV                   |                           | 4452.42                              |
| 3                                                 | GATP, Amardas Thermal Power Plant | 540                          | Coal                                                                                                   |                        |                                                    | Intrastate                             |                                    | 220 KV                   |                           | 2758.19                              |
| 4                                                 | Shanan                            | 110                          | Hydro                                                                                                  |                        |                                                    | Intrastate                             |                                    | 132 kV                   |                           | 505.84                               |
| 5                                                 | UBDC                              | 91                           | Hydro                                                                                                  |                        |                                                    | Intrastate                             |                                    | 132 kV                   |                           | 336.74                               |
| 6                                                 | MHP                               | 225                          | Hydro                                                                                                  |                        |                                                    | Intrastate                             |                                    | 132 kV                   |                           | 1307.51                              |
| 7                                                 | ASHP                              | 134                          | Hydro                                                                                                  |                        |                                                    | Intrastate                             |                                    | 132 kV                   |                           | 484.90                               |
| 8                                                 | RSPP                              | 452                          | Hydro                                                                                                  |                        |                                                    | Intrastate                             |                                    | 220 KV                   |                           | 1253.84                              |
| 9                                                 | Mini/Micro Hydel                  | 3                            | Hydro                                                                                                  | 26-05-2009             | 16-04-2041                                         | Intrastate                             |                                    | 11 KV                    |                           | 3.35                                 |
| 10                                                | Talwandi                          | 1980                         | Coal                                                                                                   | 01.09.2008             | 24.08.2041                                         | Intrastate                             |                                    | 400 KV                   |                           | 10256.84                             |

| Details of Input Energy Sources                   |                             |          |                            |                      |                      |                  |       |                             |        |         |
|---------------------------------------------------|-----------------------------|----------|----------------------------|----------------------|----------------------|------------------|-------|-----------------------------|--------|---------|
| Period From 01.04.2024 To 31.03.2025              |                             |          |                            |                      |                      |                  |       |                             |        |         |
| A. Generation at Transmission Periphery (Details) |                             |          |                            |                      |                      |                  |       |                             |        |         |
| S.N                                               | Name of Generation          | Generati | Type of Station Generation | Type of Contract     |                      | Type of Contract | Point | Voltage                     | Remark | Net     |
|                                                   | Sabo TPP                    |          |                            |                      |                      |                  |       |                             |        |         |
| 11                                                | Rajpura TPP                 | 1400     | Coal                       | 18.01.2010           | 09.07.2039           | Intrastate       |       | 400 KV                      |        | 9639.06 |
| 12                                                | Bhakra Share                | 647      | Hydro                      | Own Generation       |                      | Interstate       | 16.03 | 220 KV                      |        | 2294.33 |
| 13                                                | Dehar Share                 | 410      | Hydro                      |                      |                      | Interstate       | 4.58  | 400 KV,<br>220 KV           |        | 1131.66 |
| 14                                                | Pong Share                  | 85       | Hydro                      |                      |                      | Interstate       | 2.14  | 220 KV                      |        | 306.84  |
| 15                                                | Bairasiul                   | 84       | Hydro                      | 22.03.2022           | 30.08.2046           | Interstate       | 1.52  | Injected<br>through<br>ISTS |        | 242.16  |
| 16                                                | Salal                       | 184      | Hydro                      | 23.10.2012           | 31.03.2030           | Interstate       | 2.52  |                             |        | 808.74  |
| 17                                                | Tanakpur                    | 17       | Hydro                      | 23.10.2012           | 31.03.2028           | Interstate       | 0.17  |                             |        | 61.73   |
| 18                                                | Chamera-I                   | 55       | Hydro                      | 23.10.2012           | 30.04.2029           | Interstate       | 0.75  |                             |        | 199.36  |
| 19                                                | Chamera-II                  | 30       | Hydro                      | 6.12.2011            | 30.03.2039           | Interstate       | 0.43  |                             |        | 161.97  |
| 20                                                | Chamera-III                 | 18       | Hydro                      | 22.03.2022           | 03.07.2047           | Interstate       | 0.23  |                             |        | 97.52   |
| 21                                                | Uri                         | 66       | Hydro                      | 23.10.2012           | 30.05.2032           | Interstate       | 1.70  |                             |        | 246.84  |
| 22                                                | Uri-II                      | 20       | Hydro                      | 22.03.2022           | 28.02.2049           | Interstate       | 0.70  |                             |        | 117.42  |
| 23                                                | Dhauliganga                 | 28       | Hydro                      | 6.12.2011            | 31.10.2040           | Interstate       | 0.29  |                             |        | 134.01  |
| 24                                                | Dulhasti                    | 32       | Hydro                      | 9.03.2006            | 06.04.2042           | Interstate       | 0.74  |                             |        | 216.37  |
| 25                                                | Parbati-III                 | 41       | Hydro                      | 22.03.2022           | 06.06.2049           | Interstate       | 0.12  |                             |        | 56.26   |
| 26                                                | SEWA-II                     | 10       | Hydro                      | 22.03.2022           | 23.07.2045           | Interstate       | 0.26  |                             |        | 33.68   |
| 27                                                | Kishanganga                 | 0        | Hydro                      | unallocated<br>share | unallocated<br>share | Interstate       | 0.00  |                             |        | 27.21   |
| 28                                                | Nathpa<br>Jhakri(SJVNL<br>) | 152      | Hydro                      | 24.10.2002           | 18.5.2039            | Interstate       | 2.30  |                             |        | 825.20  |
| 29                                                | Rampur                      | 23       | Hydro                      | 14.05.2014           | 6.11.2049            | Interstate       | 0.35  |                             |        | 135.89  |

| Details of Input Energy Sources                   |                    |                          |                 |                    |                                                |                                                                                                       |                          |              |        |                     |
|---------------------------------------------------|--------------------|--------------------------|-----------------|--------------------|------------------------------------------------|-------------------------------------------------------------------------------------------------------|--------------------------|--------------|--------|---------------------|
| Period From 01.04.2024 To 31.03.2025              |                    |                          |                 |                    |                                                |                                                                                                       |                          |              |        |                     |
| A. Generation at Transmission Periphery (Details) |                    |                          |                 |                    |                                                |                                                                                                       |                          |              |        |                     |
| S.N                                               | Name of Generation | Generation Capacity (MW) | Type of Station | Type of Generation | Type of Contract                               | Type of Contract                                                                                      | Point of Interconnection | Voltage (kV) | Remark | Net Generation (MW) |
| 30                                                | Tehri (THDC)       | 77                       | Hydro           |                    | 31.07.2003                                     | 08.07.2042                                                                                            | Interstate               | 2.37         |        | 292.82              |
| 31                                                | Koteshwar (THDC)   | 25                       | Hydro           |                    | 16.02.2008                                     | 31.03.2047                                                                                            | Interstate               | 0.76         |        | 89.56               |
| 32                                                | DVC RTPS 1&2       | 300                      | Coal            |                    | 07.11.2006                                     | 30.03.2041                                                                                            | Interstate               | 18.86        |        | 1449.48             |
| 33                                                | DVC - Durgapur     | 200                      | Coal            |                    | 07.11.2006                                     | 04.03.2038                                                                                            | Interstate               | 9.22         |        | 946.17              |
| 34                                                | DVC - BTPS         | 200                      | Coal            |                    | 07.11.2006                                     | 22.02.2042                                                                                            | Interstate               | 12.51        |        | 1186.67             |
| 35                                                | Singrauli          | 200                      | Coal            |                    | 31.01.1994                                     | 31.10.1997                                                                                            | Interstate               | 14.82        |        | 1467.56             |
| 36                                                | Rihand-I           | 110                      | Coal            |                    | 31.01.1994                                     | (In case PSPCL continue to receive power, terms and conditions of agreement will continue to operate) | Interstate               | 8.20         |        | 762.76              |
| 37                                                | Rihand-II          | 102                      | Coal            |                    | 17.09.1998 with amendment signed on 29.09.1998 | 31.03.2031                                                                                            | Interstate               | 8.12         |        | 803.03              |
| 38                                                | Rihand - III       | 83                       | Coal            |                    | 23.10.2008                                     | 26.03.2039                                                                                            | Interstate               | 5.05         |        | 624.03              |
| 39                                                | Anta GPS           | 0                        | Gas             |                    | 31.01.1994                                     | PSPCL has                                                                                             | Interstate               | 0.00         |        | 0.00                |

| Details of Input Energy Sources                   |                    |                  |                 |                    |                                                                                                                                      |                  |                   |              |        |           |
|---------------------------------------------------|--------------------|------------------|-----------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------|------------------|-------------------|--------------|--------|-----------|
| Period From 01.04.2024 To 31.03.2025              |                    |                  |                 |                    |                                                                                                                                      |                  |                   |              |        |           |
| A. Generation at Transmission Periphery (Details) |                    |                  |                 |                    |                                                                                                                                      |                  |                   |              |        |           |
| S.N                                               | Name of Generation | Generation (GWh) | Type of Station | Type of Generation | Type of Contract                                                                                                                     | Type of Contract | Point of Delivery | Voltage (kV) | Remark | Net (GWh) |
| 40                                                | Auraiya GPS        | 0                | Gas             | 31.01.1994         | relinquished its share from Anta, Auraiya and Dadri gas stations in view of PSERC order dated 05.08.2021 in petition no. 28 of 2021. | Interstate       | 0.00              |              |        | 0.00      |
| 41                                                | Dadri NCGPS        | 0                | Gas             | 31.01.1994         |                                                                                                                                      | Interstate       | 0.00              |              |        | 0.00      |
| 42                                                | Unchahar-I         | 0                | Coal            | 31.01.1994         | Unallocated Power and shall remain operative till allocation of power by Gol.                                                        | Interstate       | 0.00              |              |        | 2.61      |
| 43                                                | Unchahar-II        | 60               | Coal            | 29.09.1998         | 28.02.2025                                                                                                                           | Interstate       | 3.55              |              |        | 319.23    |
| 44                                                | Unchahar-III       | 17               | Coal            | 02.11.2002         | 31.12.2031                                                                                                                           | Interstate       | 1.05              |              |        | 86.76     |
| 45                                                | Unchahar-IV        | 0                | Coal            | 16.12.2011         | Unallocated Power and shall remain operative till allocation of power by Gol.                                                        | Interstate       | 0.01              |              |        | 11.69     |

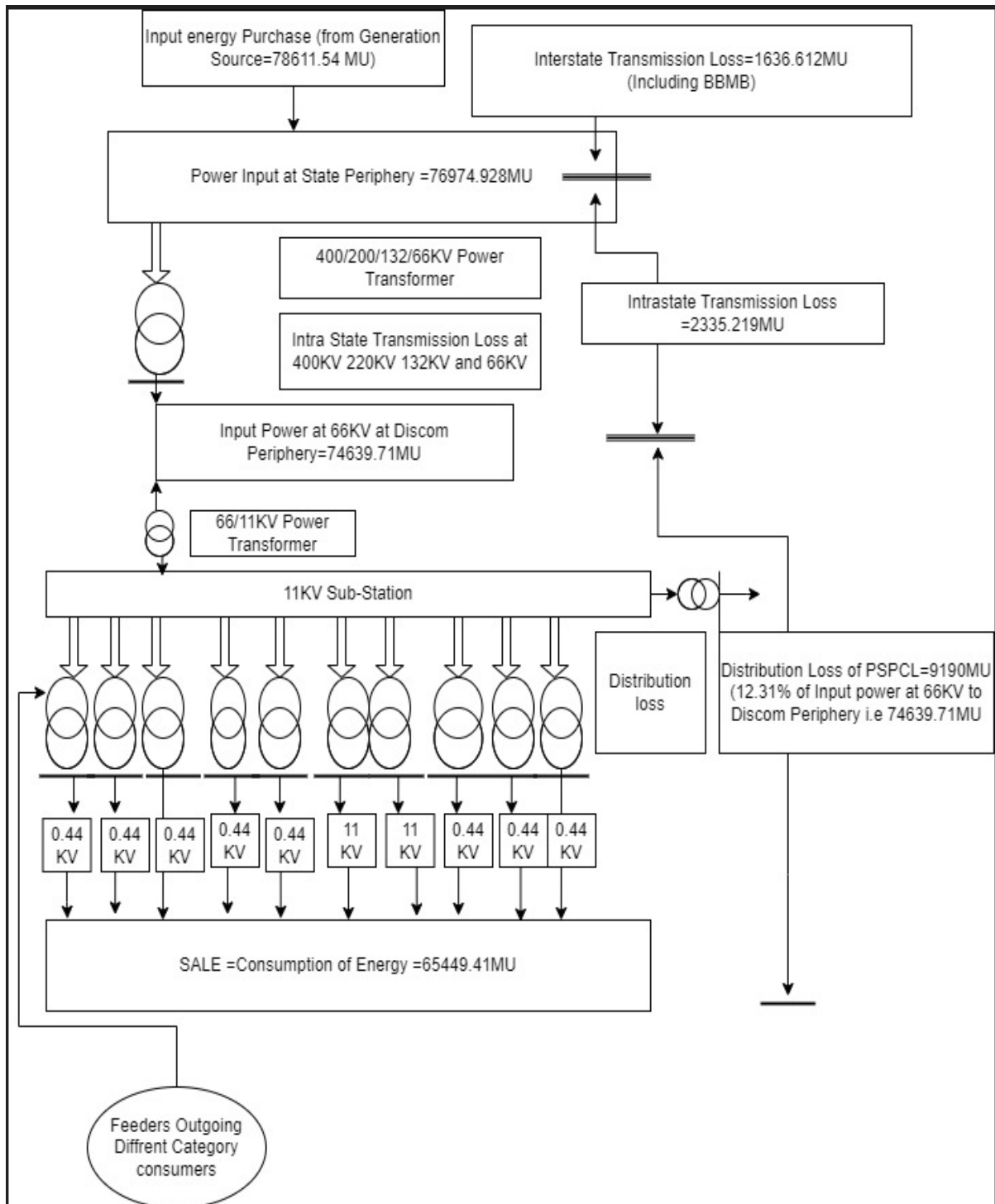
| Details of Input Energy Sources                   |                    |                          |                            |                                                                                    |                                                                                |                  |                          |                    |        |                   |
|---------------------------------------------------|--------------------|--------------------------|----------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|------------------|--------------------------|--------------------|--------|-------------------|
| Period From 01.04.2024 To 31.03.2025              |                    |                          |                            |                                                                                    |                                                                                |                  |                          |                    |        |                   |
| A. Generation at Transmission Periphery (Details) |                    |                          |                            |                                                                                    |                                                                                |                  |                          |                    |        |                   |
| S.N                                               | Name of Generation | Generation Capacity (MW) | Type of Station Generation | Contract Commencement Date                                                         | Contract Termination Date                                                      | Type of Contract | Point of Interconnection | Voltage Level (kV) | Remark | Net Capacity (MW) |
| 46                                                | Jhajjar (JV)       | 0                        | Coal                       | 06.05.2013                                                                         | Unallocated Power and shall remain operative till allocation of power by Govt. | Interstate       | 0.00                     | 132                |        | 56.61             |
| 47                                                | Dadri (Th.)-II     | 0                        | Coal                       | 02.11.2002                                                                         | 30.07.2035                                                                     | Interstate       | 0.03                     |                    |        | 17.48             |
| 48                                                | Koldam HEP         | 62                       | Hydro                      | 01.05.2002                                                                         | 17.07.2050                                                                     | Interstate       | 0.71                     |                    |        | 287.70            |
| 49                                                | Singrauli SHEP     | 0                        | Small Hydro                | unallocated share                                                                  | unallocated share                                                              | Interstate       | 0.00                     |                    |        | 0.27              |
| 50                                                | Telangana STPP     | 1600                     | Thermal                    | unallocated share                                                                  | unallocated share                                                              | Interstate       | 0.00                     |                    |        | 385.76            |
| 51                                                | Tanda Stage-II     | 0                        | Coal                       | unallocated share                                                                  | unallocated share                                                              | Interstate       | 0.00                     |                    |        | 119.57            |
| 52                                                | Meja               | 48                       | Coal                       | 29.12.2010                                                                         | 29.04.2044                                                                     | Interstate       | 2.83                     |                    |        | 252.75            |
| 53                                                | Kahal gaon-II (ER) | 120                      | Coal                       | 02.11.2002 (supplementary agreement for capacity enhancement signed on 07.10.2003) | 19.03.2035                                                                     | Interstate       | 9.10                     |                    |        | 815.97            |
| 54                                                | NAPP               | 51                       | Nuclear                    | 29.08.2023                                                                         | 27.08.2038                                                                     | Interstate       | 3.43                     |                    |        | 409.26            |
| 55                                                | RAPP-B             | 100                      | Nuclear                    | 29.08.2023                                                                         | 27.08.2038                                                                     | Interstate       | 6.90                     |                    |        | 515.25            |
| 56                                                | RAPP-C             | 46                       | Nuclear                    | 25.08.2023                                                                         | 24.08.2038                                                                     | Interstate       | 2.65                     | 400.18             |        |                   |

| Details of Input Energy Sources                   |                              |                  |                 |                   |                   |                  |                   |              |        |           |
|---------------------------------------------------|------------------------------|------------------|-----------------|-------------------|-------------------|------------------|-------------------|--------------|--------|-----------|
| Period From 01.04.2024 To 31.03.2025              |                              |                  |                 |                   |                   |                  |                   |              |        |           |
| A. Generation at Transmission Periphery (Details) |                              |                  |                 |                   |                   |                  |                   |              |        |           |
| S.N                                               | Name of Station              | Generation (GWh) | Type of Station | Generation (GWh)  | Type of Contract  | Type of Contract | Point of Delivery | Voltage (kV) | Remark | Net (GWh) |
| 57                                                | PTC Tala                     | 30               | Hydro           | 38986             | 51713             | Interstate       | 0.00              |              |        | 22.89     |
| 58                                                | Pragati-III(Bawana)C<br>CGT  | 137              | Gas             | 24.09.2008        | 26.03.2029        | Interstate       | 1.70              |              |        | 171.21    |
| 59                                                | MALANA-2 (PTC)               | 88               | Hydro           | 38799             | 55712             | Interstate       | 0.00              |              |        | 149.49    |
| 60                                                | KARCHAM (PTC)                | 200              | Hydro           | 01.09.2006        | 13.09.2046        | Interstate       | 2.33              |              |        | 845.95    |
| 61                                                | SASAN Ultra Mega Project     | 594              | Coal            | 07.08.2007        | 27.03.2040        | Interstate       | 41.01             |              |        | 4200.38   |
| 62                                                | MUNDRA_U MPP                 | 519              | Coal            | 22.04.2007        | 22.03.2038        | Interstate       | 29.47             |              |        | 2512.88   |
| 63                                                | Ramagundam STPS: Stage-1 & 2 | 2100             | Thermal         | unallocated share | unallocated share | Interstate       | 0.00              |              |        | 23.95     |
| 64                                                | Ramagundam STPS: Stage-3     | 500              | Thermal         | unallocated share | unallocated share | Interstate       | 0.00              |              |        | 7.45      |
| 65                                                | Talcher STPS: Stage-2        | 2000             | Thermal         | unallocated share | unallocated share | Interstate       | 0.00              |              |        | 14.15     |
| 66                                                | Simhadri :Stage-2            | 1000             | Thermal         | unallocated share | unallocated share | Interstate       | 0.00              |              |        | 5.98      |
| 67                                                | Kudgi STPS                   | 2400             | Thermal         | unallocated share | unallocated share | Interstate       | 0.00              |              |        | 26.01     |
| 68                                                | Vallur TPS                   | 1500             | Thermal         | unallocated share | unallocated share | Interstate       | 0.00              |              |        | 13.55     |
| 69                                                | NLC TPS-II:                  | 580              | Thermal         | unallocated       | unallocated       | Interstate       | 0.00              |              |        | 4.46      |

| Details of Input Energy Sources                   |                             |          |                            |                   |                   |            |         |        |       |
|---------------------------------------------------|-----------------------------|----------|----------------------------|-------------------|-------------------|------------|---------|--------|-------|
| Period From 01.04.2024 To 31.03.2025              |                             |          |                            |                   |                   |            |         |        |       |
| A. Generation at Transmission Periphery (Details) |                             |          |                            |                   |                   |            |         |        |       |
| S.N                                               | Name of Generation          | Generati | Type of Station Generation | Type of Contract  | Type of Contract  | Point      | Voltage | Remark | Net   |
|                                                   | Stage-1                     |          |                            | share             | share             |            |         |        |       |
| 70                                                | NLC TPS-II: Stage-2         | 790      | Thermal                    | unallocated share | unallocated share | Interstate | 0.00    |        | 7.31  |
| 71                                                | NLC TPS-I: Expansion        | 420      | Thermal                    | unallocated share | unallocated share | Interstate | 0.00    |        | 9.37  |
| 72                                                | NLC TPS-II: Expansion       | 500      | Thermal                    | unallocated share | unallocated share | Interstate | 0.00    |        | 2.33  |
| 73                                                | NNTPS                       | 934      | Thermal                    | unallocated share | unallocated share | Interstate | 0.00    |        | 0.71  |
| 74                                                | NTPL: Tuticorin             | 1000     | Thermal                    | unallocated share | unallocated share | Interstate | 0.00    |        | 14.16 |
| 75                                                | NPCIL MAPS Kalpakam         | 440      | Nuclear                    | unallocated share | unallocated share | Interstate | 0.00    |        | 1.38  |
| 76                                                | NPCIL KAIGA GS: Stage-1 & 2 | 440      | Nuclear                    | unallocated share | unallocated share | Interstate | 0.00    |        | 10.82 |
| 77                                                | NPCIL KAIGA GS: Stage-3 & 4 | 440      | Nuclear                    | unallocated share | unallocated share | Interstate | 0.00    |        | 12.15 |
| 78                                                | NPCIL KKNNP                 | 1000     | Nuclear                    | unallocated share | unallocated share | Interstate | 0.00    |        | 8.99  |

#### 4.2.2 Power Flow chart of PSPCL Network

##### SINGLE LINE DIAGRAM OF PSPCL



##### Single Line Diagram (SLD) of PSPCL

The SLD shows energy flow from purchase (78,611.54 MU) through interstate and intra-state losses, resulting in 74,639.71 MU input at the DISCOM periphery. Power is stepped down via 66/11kV transformers to 11kV substations, where distribution losses of 9,190 MU (12.31%) occur. The net energy sold to consumers is 65,449.41 MU, delivered through 66KV, 11kV and 0.440kV feeders to various categories of consumers.

### 4.2.3 Summary of Input Energy

Table 9: Summary of Input Energy and It's Parameters

| Form-Input energy (Details of Input energy & Infrastructure) |                                                                               |                                               |                                                                                                                                                                    |
|--------------------------------------------------------------|-------------------------------------------------------------------------------|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A. Summary of energy input & Infrastructure                  |                                                                               |                                               |                                                                                                                                                                    |
| S.No                                                         | Parameters                                                                    | Period From<br>01.04.2024<br>To<br>31.03.2025 | Remarks (Source of data)                                                                                                                                           |
| A.1                                                          | Input Energy purchased (MU)                                                   | 78611.54                                      | Historical Data                                                                                                                                                    |
| A.2                                                          | Transmission loss (%)                                                         | 5.05%                                         | Inter State. Inc. BBMB+Intra state transmission losses                                                                                                             |
| A.3                                                          | Transmission loss (MU)                                                        | 3971.83                                       | 1636.612+2335.219 (Inter State. Inc. BBMB+Intra state) =3971.832                                                                                                   |
| A.4                                                          | Energy sold outside the periphery (MU)                                        | -827.63                                       | (Energy Schedule) sheet SR. NO. 13.2+14+15+16+17                                                                                                                   |
| A.5                                                          | Open access sale (MU)                                                         | 10.283                                        | Railway                                                                                                                                                            |
| A.6                                                          | EHT sale                                                                      |                                               |                                                                                                                                                                    |
| A.7                                                          | Net input energy (received at DISCOM periphery or at distribution point)-(MU) | 74639.71                                      |                                                                                                                                                                    |
| A.8                                                          | Is 100% metering available at 66/33 kV (Select yes or no from list)           | Yes                                           |                                                                                                                                                                    |
| A.9                                                          | Is 100% metering available at 11 kV (Select yes or no from list)              | Yes                                           |                                                                                                                                                                    |
| A.10                                                         | % of metering available at DT                                                 | 4.51%                                         | Completion of the HVDS/Pillar Box installation in the AP/DS consumers may obviate the need for "Separate" DT meter installation due to virtually LT-less LD system |
| A.11                                                         | % of metering available at consumer end                                       | 87.43%                                        | Planning                                                                                                                                                           |
| A.12                                                         | No of feeders at 66kV and> voltage level                                      | 181                                           | Link provided by Director/D office                                                                                                                                 |
| A.13                                                         | No of feeders at 33kV voltage level                                           | 4                                             | Link provided by Director/D office                                                                                                                                 |
| A.14                                                         | No of feeders at 11kV voltage level                                           | 13473                                         | Link provided by Director/D office                                                                                                                                 |
| A.15                                                         | No of LT feeders' level                                                       |                                               |                                                                                                                                                                    |
| A.16                                                         | Line length (ckt. km) at 66kV voltage level                                   | 11765.54                                      | P&M                                                                                                                                                                |
| A.17                                                         | Line length (ckt. km) at 33kV voltage level                                   | 73.7                                          | P&M                                                                                                                                                                |
| A.18                                                         | Line length (ckt. km) at 11kV voltage level                                   | 263913                                        | Planning                                                                                                                                                           |
| A.19                                                         | Line length (km) at LT level                                                  | 156484                                        | Planning                                                                                                                                                           |
| A.20                                                         | Length of Aerial Bunched Cables                                               | 2760.43                                       | Zones                                                                                                                                                              |
| A.21                                                         | Length of Underground Cables                                                  | 449.55                                        | Zones                                                                                                                                                              |
| A.22                                                         | HT/LT ratio                                                                   | 1.69                                          |                                                                                                                                                                    |

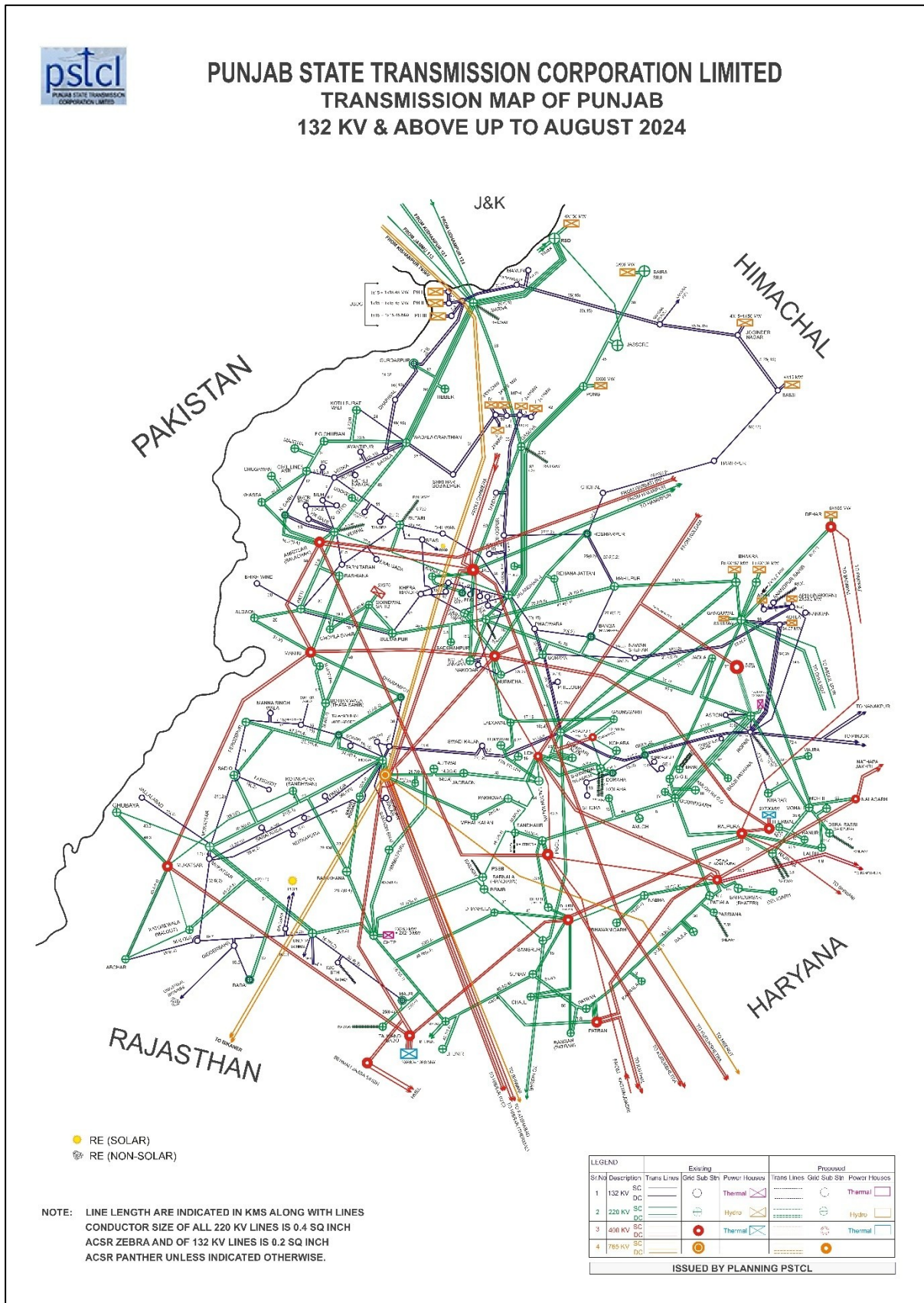
The transmission losses in a combination of Interstate and intrastate transmission losses. Both Interstate and intrastate transmission losses are metered. The methodology used by National Load Despatch Centre to calculate the Interstate transmission losses is shown below

It is to inform that Hon'ble CERC has notified CERC (Sharing of Inter State Transmission Charges and Losses) Regulations, 2020 on 04th May,2020; w.e.f. 1st November,2020. As per clause (10) of these regulations, transmission losses for ISTS shall be calculated on all India average basis for each week, from Monday to Sunday.

All India transmission loss would be based upon the average loss computed from the SEM (Special Energy Meter) data of previous week. All India transmission loss for the period from 03-06-2024 to 09-06-2024 would be as follows: All India transmission Loss (in %) 3.42  
Illustration:

- a. Sum of injection into the ISTS at regional nodes for previous week = 17435.78 MU
- b. Sum of drawl into the ISTS at regional nodes for previous week = 16881.88 MU
- c. Sum of injection into the ISTS at regional nodes by projects covered under Clause (1) of Regulation 13 for previous week = 1224.03 MU
- d. Then, average all-India transmission loss for ISTS shall be  $[(17435.78 - 16881.88) / (17435.78 - 1224.03)] \times 100 = 3.42 \%$
- e. All figures are rounded off up to 2 decimal places.

## 4.2.4 TRANSMISSION MAP OF PUNJAB 132 KV &amp; ABOVE



## 5 Quarterly Segregation of Discom Energy

### 5.1.1 Quarterly Performance review submitted to BEE

Table 10: Variance in Quarterly and Annual Performance

| Variance in Quarterly and Annual Performance                                   |          |          |          |          |                |                    |          |                                               |
|--------------------------------------------------------------------------------|----------|----------|----------|----------|----------------|--------------------|----------|-----------------------------------------------|
| Particulars                                                                    | Q1       | Q2       | Q3       | Q4       | Annual via sum | Annual Performance | Variance | Remarks                                       |
| Input Energy purchased (MU)                                                    | 20685.49 | 28419.06 | 15348.99 | 14186.84 | 78640.38       | 78611              | 27.38    | Slight Inc of 29.38MU But in Acceptable Limit |
| Transmission loss (%)                                                          | 5.18%    | 5.02%    | 5.18%    | 4.98%    | 5.09%          | 5.05%              | 0.04     | Minor                                         |
| Transmission loss (MU)                                                         | 1071.48  | 1426.32  | 795.8    | 707.08   | 4000.68        | 3971               | 27.67    | Minor Increase 29.68 No major Concern         |
| Net input energy (received at DISCOM periphery or at distribution point)- (MU) | 19614.01 | 26992.75 | 14553.19 | 13479.76 | 74639.71       | 74639.71           | 0        | ACCURATE                                      |
| Billing Energy                                                                 | 15747.73 | 24097.21 | 13859.43 | 11745.04 | 65449.41       | 65449.41           | 0        | ACCURATE                                      |
| T & D Losses                                                                   | 19.71%   | 10.73%   | 4.77%    | 12.87%   | 12.02%         | 12.31%             | -0.29%   | Slight Reduction                              |
| Billed Amount                                                                  | 10572.96 | 16943.6  | 11019.22 | 8755     | 47290.78       | 47290.92           | -0.14    |                                               |
| Collected Amount                                                               | 11230.22 | 12417.61 | 9629.15  | 10134.57 | 43411.55       | 43411.54           | 0        | ACCURATE                                      |
| Collection Efficiency                                                          | 106.00%  | 73.24%   | 87.39%   | 115.76%  | 95.60%         | 92                 | 3.60%    | Increase of 3.60%                             |
| A T & C Losses                                                                 | 14.72%   | 34.57%   | 16.78%   | -0.86%   | 16.30%         | 19.51%             | -2.91%   | Decrease of 2.91%                             |

#### OBSERVATIONS:

The quarterly and annual performance data show overall accuracy and consistency across all parameters. The variance in input energy purchased (27.38 MU) and transmission loss (27.67 MU) is minor and within acceptable limits. Net input energy and billing energy figures are perfectly aligned with zero variance, while T&D losses show a slight reduction of 0.29%, indicating improved system efficiency. The billed and collected amounts are accurate, with negligible variance (-0.14 Cr.), and collection efficiency has improved by 3.60%, reflecting better revenue realization. Additionally, AT&C losses have decreased by 2.91%, marking a positive trend in operational performance. Overall, the data reflects sound financial and technical management with no major concerns.

### 5.1.2 Details of Circle, Division, Feeders, DTs and Consumers

Table 11: Details of Circle, Division, Feeders, DTs, and Consumers

| Parameters              | Total    | Remarks (Source of data) |
|-------------------------|----------|--------------------------|
| Number of Circles       | 21       | CE/Planning              |
| Number of Divisions     | 104      | CE/Planning              |
| Number of Sub-Divisions | 508      | CE/Planning              |
| Number of Feeders       | 13658    | Director/D Reports link  |
| Number of DTs           | 1250538  | Director/D Reports link  |
| Number of Consumers     | 11008964 | CE/Planning              |

### 5.1.3 Circle Wise Losses for Different Category

Table 12: Circle Wise Losses

| Circle Wise Energy and Loss Details |                    |                   |                    |               |              |
|-------------------------------------|--------------------|-------------------|--------------------|---------------|--------------|
| S.No                                |                    | Year (2024-25)    |                    |               |              |
|                                     | Name of circle     | Input energy (MU) | Billed energy (MU) | T&D loss (MU) | T&D loss (%) |
| 1                                   | Barnala            | 3524.56719        | 3007.31            | 517.2549      | 14.68%       |
| 2                                   | Bathinda           | 6424.4495         | 5518.42            | 906.0278      | 14.10%       |
| 3                                   | City Amritsar      | 1123.84838        | 951.48             | 172.3734      | 15.34%       |
| 4                                   | Faridkot           | 3685.1051         | 3045.79            | 639.3107      | 17.35%       |
| 5                                   | Gurdaspur          | 2982.5755         | 2551.37            | 431.2047      | 14.46%       |
| 6                                   | Hoshiarpur         | 2797.49624        | 2656.92            | 140.5768      | 5.03%        |
| 7                                   | Firozpur           | 2673.70697        | 1789.23            | 884.477       | 33.08%       |
| 8                                   | Jalandhar          | 3748.85547        | 3488.96            | 259.8961      | 6.93%        |
| 9                                   | Kapurthala         | 2305.70046        | 2021.39            | 284.312       | 12.33%       |
| 10                                  | Khanna             | 7036.58442        | 6787.16            | 249.4289      | 3.54%        |
| 11                                  | Mohali             | 4170.73911        | 4050.92            | 119.8178      | 2.87%        |
| 12                                  | Nawanshahar        | 1739.43205        | 1562.47            | 176.9664      | 10.17%       |
| 13                                  | Patiala            | 4691.05385        | 4165.65            | 525.4033      | 11.20%       |
| 14                                  | Ropar              | 4551.10106        | 4387.25            | 163.8551      | 3.60%        |
| 15                                  | Sangrur            | 3530.78694        | 2858.74            | 672.047       | 19.03%       |
| 16                                  | Sri Muktsar Sahib  | 2785.22957        | 2124.35            | 660.8779      | 23.73%       |
| 17                                  | Suburban, Amritsar | 3419.18661        | 2454.52            | 964.6672      | 28.21%       |
| 18                                  | Tarantaran         | 2830.45278        | 1804.6             | 1025.849      | 36.24%       |
| 19                                  | Ludhiana East      | 3881.85576        | 3830.68            | 51.17471      | 1.32%        |
| 20                                  | Ludhiana West      | 4386.02866        | 4093.07            | 292.9559      | 6.68%        |
| 21                                  | Ludhiana Suburban  | 2350.95758        | 2136.57            | 214.387       | 9.12%        |

**OBSERVATIONS:**

The analysis of circle-wise energy performance for FY 2024-25 reveals significant variation in T&D losses across circles. Circles like Tarantaran (36.24%), Firozpur (33.08%), and Suburban Amritsar (28.21%) exhibit high T&D losses, indicating urgent need for network strengthening, metering improvements, and loss reduction measures. Conversely, Ludhiana East (1.32%), Mohali (2.87%), Khanna (3.54%), and Ropar (3.60%) demonstrate strong performance with low T&D losses, reflecting efficient infrastructure and good operational management. Medium-range losses (10–20%) are observed in circles such as Faridkot, Sangrur, Patiala, and Nawanshahar, suggesting scope for targeted improvement. The wide disparity in circle-wise losses highlights the need for focused interventions in high-loss circles while maintaining best practices in low-loss performing circles.

## 5 Summary of Electrical Power Distribution Infrastructure

---



Table 13: PSPCL Infrastructure Details

| Form-Details of Input Infrastructure |                                                     |                                        |                         |                                     |                          |
|--------------------------------------|-----------------------------------------------------|----------------------------------------|-------------------------|-------------------------------------|--------------------------|
| 1                                    | Parameters                                          | Total                                  | Covered during in audit | Verified by Auditor in Sample Check | Remarks (Source of data) |
| i                                    | Number of circles                                   | 21                                     | 21                      | 21                                  | CE/Planning              |
| ii                                   | Number of divisions                                 | 104                                    | 104                     | 104                                 | CE/Planning              |
| iii                                  | Number of sub-divisions                             | 508                                    | 508                     | 508                                 | CE/Planning              |
| iv                                   | Number of feeders                                   | 13658                                  | 13658                   | 1450                                | Director/D Reports link  |
| v                                    | Number of DTs                                       | 1249085+(1450+3) 66kv,33kv<br>=1250538 | 1250538                 | 12610                               | Director/D Reports link  |
| vi                                   | Number of consumers                                 | 11008964                               | 11008964                | 11008964                            | CE/Planning              |
| 2                                    | Parameters                                          | 66kV and above                         | 33kV                    | 11/22kV                             | LT                       |
| a. i.                                | Number of conventional metered consumers            | 42                                     | 0                       | 67711                               | 8139501                  |
| ii                                   | Number of consumers with 'smart' meters             | 11                                     | 0                       | 31588                               | 1348995                  |
| iii                                  | Number of consumers with 'smart prepaid' meters     | 0                                      | 0                       | 0                                   | 0                        |
| iv                                   | Number of consumers with 'AMR' meters               | 182                                    | 3                       | 33640                               | 3463                     |
| v                                    | Number of consumers with 'non-smart prepaid' meters | 0                                      | 0                       | 0                                   | 0                        |
| vi                                   | Number of unmetered consumers                       | 0                                      | 0                       | 0                                   | 1383828                  |
| vii                                  | Number of total consumers                           | 235                                    | 3                       | 132939                              | 10875787                 |

|      |                                                            |                                               |                       |                                       |                                                                                                                  |
|------|------------------------------------------------------------|-----------------------------------------------|-----------------------|---------------------------------------|------------------------------------------------------------------------------------------------------------------|
| b.i. | Number of conventionally metered Distribution Transformers | 0                                             | 0                     | 24174                                 | 4499                                                                                                             |
| ii   | Number of DTs with communicable meters                     | 1450                                          | 3                     | 22908                                 | 3122                                                                                                             |
| iii  | Number of unmetered DTs                                    | 0                                             | 0                     | 832938                                | 361444                                                                                                           |
| iv   | Number of total Transformers                               | 1450                                          | 3                     | 880020                                | 369065                                                                                                           |
| c.i. | Number of metered feeders                                  | 181                                           | 4                     | 13473                                 | 0                                                                                                                |
| ii   | Number of feeders with communicable meters                 | 164                                           | 4                     | 9438                                  | 0                                                                                                                |
| iii  | Number of unmetered feeders                                | 0                                             | 0                     | 0                                     | 0                                                                                                                |
| iv   | Number of total feeders                                    | 181                                           | 4                     | 13473                                 | 0                                                                                                                |
| d.   | Line length (ct km)                                        | 11765 km                                      | 50.7<br>+23(Idl)=73.7 | 263913                                | 156484                                                                                                           |
| e.   | Length of Aerial Bunched Cables                            | 0                                             | 0                     | 1152.964                              | 1607.467                                                                                                         |
| f.   | Length of Underground Cables                               | 37.48                                         | 0                     | 372.794                               | 39.270                                                                                                           |
| 3    | Voltage level                                              | Particulars                                   | MU                    | Reference                             | Remarks (Source of data)                                                                                         |
| i    | 66kV and above (Inter-State)                               | Long-Term Conventional                        | 27744.35              | Includes input energy for franchisees |                                                                                                                  |
|      |                                                            | Medium Conventional (unscheduled interchange) | -1115.38              |                                       | value of unscheduled interchange energy is entered as the provision of the same has not provided in the performa |
|      |                                                            | Short Term Conventional                       | 10918.27              |                                       |                                                                                                                  |
|      |                                                            | Banking                                       | 671.50                |                                       |                                                                                                                  |
|      |                                                            | Long-Term Renewable energy                    | 3505.98               |                                       |                                                                                                                  |
|      |                                                            | Medium and Short-Term RE                      | 0.00                  | Includes power from bilateral/ PX/    |                                                                                                                  |

|    |                              |                                          |          |                                                                                                      |                                                                     |
|----|------------------------------|------------------------------------------|----------|------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
|    |                              |                                          |          | DEEP                                                                                                 |                                                                     |
|    |                              | Captive, open access input               |          | Any power wheeled for any purchase other than sale to DISCOM. Does not include input for franchisee. |                                                                     |
|    |                              | Sale of surplus power                    | -827.63  |                                                                                                      |                                                                     |
|    |                              | Quantum of inter-state transmission loss | 1636.61  | As confirmed by SLDC, RLDC etc                                                                       |                                                                     |
|    |                              | Power procured from inter-state sources  | 40897.09 | Based on data from Form 5                                                                            |                                                                     |
|    |                              | Power at state transmission boundary     | 39260.48 |                                                                                                      |                                                                     |
| ii | 66kV and above (Intra-State) | Long-Term Conventional                   | 35103.82 |                                                                                                      | Power procured from intra state sources at different voltage levels |
|    |                              | Medium Conventional                      | NA       |                                                                                                      |                                                                     |
|    |                              | Short Term Conventional                  | NA       |                                                                                                      |                                                                     |
|    |                              | Banking                                  | NA       |                                                                                                      |                                                                     |
|    |                              | Long-Term Renewable energy               | 2326.42  |                                                                                                      | NRSE power procured from intra state sources at 66KV and above      |
|    |                              | Medium and Short-Term RE                 |          |                                                                                                      |                                                                     |
|    |                              | Captive, open access input               |          |                                                                                                      |                                                                     |
|    |                              | Sale of surplus power                    |          |                                                                                                      |                                                                     |
|    |                              | Quantum of intra-state transmission loss | 2335.219 |                                                                                                      |                                                                     |

|      |                                             |                                                                |          |                                                                     |                                                      |
|------|---------------------------------------------|----------------------------------------------------------------|----------|---------------------------------------------------------------------|------------------------------------------------------|
|      |                                             | Power procured from intra-state sources                        | 37430.24 |                                                                     | PSTCL                                                |
| iii  |                                             | Input in DISCOM wires network                                  | 74355.49 |                                                                     |                                                      |
| iv   | 33 kV                                       | Renewable Energy Procurement                                   | 17.36    |                                                                     |                                                      |
|      |                                             | Small capacity conventional/ biomass/ hydro plants Procurement | 0.00     |                                                                     |                                                      |
|      |                                             | Captive, open access input                                     | 0.00     |                                                                     |                                                      |
| v    | 11 kV                                       | Renewable Energy Procurement                                   | 266.85   |                                                                     | NRSE power procured from intra state sources at 11KV |
|      |                                             | Small capacity conventional/ biomass/ hydro plants Procurement | 0.00     |                                                                     | PSTCL                                                |
|      |                                             | Sales Migration Input                                          |          |                                                                     |                                                      |
| vi   | LT                                          | Renewable Energy Procurement                                   | 131.37   |                                                                     | Roof Top Solar Energy                                |
|      |                                             | Sales Migration Input                                          | -131.37  |                                                                     |                                                      |
| vii  | Energy Embedded within DISCOM wires network | Energy Embedded within DISCOM wires network                    | 284.22   |                                                                     |                                                      |
| viii | Total Energy Available/ Input               | Total Energy Available/ Input                                  | 74639.71 |                                                                     |                                                      |
| 4    | Voltage level                               | Energy Sales Particulars                                       | MU       | Reference                                                           |                                                      |
| i    | 11KV/LT                                     | DISCOM' consumers                                              |          | Include sales to consumers in franchisee areas, unmetered consumers |                                                      |
|      |                                             | Demand from open access, captive                               | 0        | Non DISCOM's sales                                                  |                                                      |
|      |                                             | Embedded generation used                                       | 0.00     | Demand from embedded generation at LT                               |                                                      |

|     |                        |                                             |          |                                                                             |                                 |
|-----|------------------------|---------------------------------------------|----------|-----------------------------------------------------------------------------|---------------------------------|
|     |                        |                                             |          | level                                                                       |                                 |
|     |                        | Sale at 11KV/LT level                       | 0.00     |                                                                             | Voltage wise Sale not available |
|     |                        | Quantum of 11KV/LT level losses             | 0.000    |                                                                             |                                 |
|     |                        | Energy Input at 11 KV/ LT level             |          |                                                                             |                                 |
| ii  | 33 kV Level            | DISCOM' consumers                           |          | Include sales to consumers in franchisee areas, unmetered consumers         |                                 |
|     |                        | Demand from open access, captive            | 0        | Non DISCOM's sales                                                          |                                 |
|     |                        | Embedded generation at 33 kV level used     |          | Demand from embedded generation at 11kV level                               |                                 |
|     |                        | Sales at 33 kV level                        | 0.00     |                                                                             |                                 |
|     |                        | Quantum of Losses at 33 kV                  | 0.000    |                                                                             |                                 |
|     |                        | Energy input at 33 kV level                 |          |                                                                             |                                 |
| iii | 66>/66/33/11 / 0.44 KV | DISCOM' consumers                           | 65449.41 | Include sales to consumers in franchisee areas, unmetered consumers         | Planning sale                   |
|     |                        | Demand from open access, captive            | 10.283   | Non DISCOM's sales                                                          |                                 |
|     |                        | Embedded generation at 66 kV or below level | 415.59   | This is DISCOM and OA demand met via energy generated at same voltage level |                                 |
|     |                        | Sales at 66 kV level                        | 65459.69 |                                                                             | Planning sale Railway OA        |

|                           |                      |                                  |              |                                                                     |             |
|---------------------------|----------------------|----------------------------------|--------------|---------------------------------------------------------------------|-------------|
|                           |                      | Quantum of Losses at 66 kV>      | 9180.02      | (interstate, Inc. BBMB+Intra state+ DISCOM)                         |             |
|                           |                      | Energy input at 66kV Level       | 74639.71     |                                                                     |             |
| iv                        | > 66 kV              | DISCOM' consumers                |              | Include sales to consumers in franchisee areas, unmetered consumers |             |
|                           |                      | Demand from open access, captive | 0            | Non DISCOM's sales                                                  |             |
|                           |                      | Cross border sale of energy      | 0            |                                                                     |             |
|                           |                      | Sale at other DISCOMs            | 0            |                                                                     |             |
|                           |                      | Banking                          | 0            |                                                                     |             |
|                           |                      | Energy input at > 66kV Level     | 3981.98      |                                                                     | Inter+Intra |
|                           |                      | Sales at 66kV and above (EHV)    | 3981.98      |                                                                     | Inter+Intra |
| Total Energy Requirement  |                      |                                  | 78611.41     |                                                                     |             |
| Total Energy Sales        |                      |                                  | 65449.41     |                                                                     |             |
| Energy Accounting Summary |                      |                                  |              |                                                                     |             |
| 5                         | DISCOM               | Input (in MU)                    | Sale (in MU) | Loss (in MU)                                                        | Loss %      |
| i                         | LT                   |                                  |              |                                                                     |             |
| ii                        | 11KV                 |                                  |              |                                                                     |             |
| iii                       | 33 KV                |                                  |              |                                                                     |             |
| iv                        | 66/33/11 / 0.44 KV   | 74639.71                         | 65449.41     | 9190.30                                                             | 12.31%      |
| 6                         | Open Access, Captive | Input (in MU)                    | Sale (in MU) | Loss (in MU)                                                        |             |
| i                         | LT                   | 0                                | 0            | 0                                                                   |             |
| ii                        | 11 Kv                | 0                                | 0            | 0                                                                   |             |

|                                                                                                                                                                                               |                            |           |                                                                                                      |   |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-----------|------------------------------------------------------------------------------------------------------|---|--|
| iii                                                                                                                                                                                           | 33 kv                      | 0         | 0                                                                                                    | 0 |  |
| iv                                                                                                                                                                                            | > 33 kv                    |           |                                                                                                      |   |  |
|                                                                                                                                                                                               |                            |           |                                                                                                      |   |  |
|                                                                                                                                                                                               |                            |           |                                                                                                      |   |  |
|                                                                                                                                                                                               | Loss Estimation for DISCOM |           |                                                                                                      |   |  |
|                                                                                                                                                                                               | T&D loss                   | 13,162.00 |                                                                                                      |   |  |
|                                                                                                                                                                                               | D loss                     | 9,190.17  |                                                                                                      |   |  |
|                                                                                                                                                                                               | T&D loss (%)               | 16.74%    |                                                                                                      |   |  |
|                                                                                                                                                                                               | D loss (%)                 | 12.31%    | (D losses/(Total Energy Requirement-Interstate transmission losses-intra state transmission losses)) |   |  |
| NOTE: D Losses 12.31 % are calculated by Net input energy (At DISCOM Periphery after adjusting the transmission losses and energy traded)<br>i.e 78611.54-1636.61-2335.22= 74639.71 MU basis. |                            |           |                                                                                                      |   |  |

## 6 Consumer category, Subsidy, RPO and other compliance details

---



## 6.1 Provision of Subsidy

Government of Punjab has notified subsidy for agriculture sector and other deprived section of the society and poor people of general category in the following manner. (Reference from Annexure – 14 (Notification of Government for subsidy))

| Sr No. | Category                                                                            | Provision of subsidy/Payment                                                                                                         |
|--------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| 1      | Agriculture Sector                                                                  | 100%                                                                                                                                 |
| 2      | Schedule Cast (SC), Non –SC BPL, 300units monthly                                   |                                                                                                                                      |
|        | Backward Class (BC)and freedom fighter domestic consumers                           |                                                                                                                                      |
| 2.a.   | Excessover300Limit/Months by them                                                   | Liable to pay for extra unit consumed over 300 Limit/Month as per applicable slab of tariff with full fixed charge and meter rental. |
| 2.b.   | Subsidy payment conditions                                                          | Up to 300unit/month for all kind of use.                                                                                             |
| 3      | General Category                                                                    | (another domestic 300unit/month                                                                                                      |
|        | consumers)                                                                          |                                                                                                                                      |
| 3.a.   | Subsidy Condition                                                                   | For residential use only with full fixed charge and meter rent.                                                                      |
| 3.b.   | In excess over300unit/month                                                         | Liable to pay for entire consumption as per Applicable slab of tariff along with fixed charges, Meter Rentals and Government Levies. |
| 4      | All domestic consumers having                                                       | Rs3/Unit(including taxes)                                                                                                            |
|        | Sanctioned Load upto 7 KW                                                           |                                                                                                                                      |
| 5      | All industrial manufacturing and LT&ITES                                            | Subsidized Tariff Rs 5.50 per Kwh with 3% annual industries and industrial parks and escalation.                                     |
|        | amusement parks/Adventure parks                                                     |                                                                                                                                      |
|        | developed in minimum area of acres dully registered with Department of Tourism.     |                                                                                                                                      |
| 6      | Small scale industries                                                              | Charged at subsidized rate of Rs 5.5/Kwh with 3% annual increment and full waiver of fixed charges.                                  |
| 7      | Medium scale industries                                                             | Charged as subsidized rate of Rs 5.5/kWh with 3% annual escalation and 50 % waiver IN fixed charges.                                 |
| 8      | Large supply industrial consumption                                                 | Charged as subsidized rate of Rs 5.5/Kwh with 3% annual escalation.                                                                  |
| 9      | Central/State/PSUs/PSPCL/PSTCL/BBMB                                                 | No subsidy allowed.                                                                                                                  |
|        | Offices and Government water supply connections under industrial category(SP/MS/LS) |                                                                                                                                      |

During FY 2024–25, PSPCL provided subsidized power to Residential, Agriculture, and Commercial/Industrial-LT categories, with total subsidy billed at ₹20,799.16 crore. Against this, the State Government has released ₹16,892.16 crore, leaving an outstanding balance of ₹3,907 crore to be received.

### Brief about Subsidy Details of PSPCL (FY 2024–25)

During FY 2024–25, PSPCL provided subsidized electricity to multiple consumer categories, including Residential, Agriculture, and Commercial/Industrial-LT segments. The total billed energy during the year was 65449.41 million units (kWh).

The total subsidy due from the State Government for the year amounts to ₹20,799.16 crore. Against this, ₹16,892.16 crore has been released by the Government of Punjab as of the reporting date. The balance subsidy yet to be received stands at ₹3,907 crore.

Category-wise highlights:

Residential Consumers: Subsidy of ₹8,284.57 crore billed, of which ₹6,223.70 crore has been received, leaving a balance of ₹2,060.87 crore.

Agriculture Sector: Subsidy of ₹9,977.32 crore billed, ₹8,491.47 crore received, balance ₹1,485.85 crore.

Commercial/Industrial LT: Subsidy of ₹2,537.27 crore billed, ₹2,176.99 crore received, balance ₹360.28 crore.

PSPCL continues to maintain transparency in subsidy accounting and has complied with all required reporting to the State Government and regulatory bodies for PAT Cycle VII and UDAY monitoring. The reconciliation of the outstanding balance is in progress with the Government of Punjab.

# Annual Energy Audit Report: PSPCL FY 2024-25



Table 14: Subsidy Details of PSPCL for FY 2024-25

| Consumer Category        | Metered Billed Energy (kWh) | Unmetered Billed Energy (kWh) | Total Billed Energy (kWh) | Subsidized Metered Energy (kWh) | Subsidized Unmetered Energy (kWh) | Total Subsidized Energy (kWh) | Applicable Rate of Subsidy                                               | Unmetered Energy Rate | Subsidy Due Metered (Rs. Cr.) | Subsidy Due Unmetered (Rs. Cr.) | Total Subsidy Due (Rs. Cr.) | Subsidy Claimed (Rs. Cr.) | Subsidy Received (Rs. Cr.) | Balance Subsidy (Rs. Cr.) |
|--------------------------|-----------------------------|-------------------------------|---------------------------|---------------------------------|-----------------------------------|-------------------------------|--------------------------------------------------------------------------|-----------------------|-------------------------------|---------------------------------|-----------------------------|---------------------------|----------------------------|---------------------------|
| Residential              | 20124979860.00              | -                             | 20124979860.00            | 16566220911                     | -                                 | 16566220911                   | Rs. 2.50 to Rs. 7.15 per KWh                                             | -                     | 8284.57                       | -                               | 8284.57                     | 8284.57                   | 6223.70                    | 2060.87                   |
| Agriculture              | 1254670000.00               | 14841556297.17                | 14967023297.17            | 125480000                       | 14817730000                       | 14943210000                   | Rs.6.55 per KW upto 15.06.2024 & from 16.06.2024 at the rate 6.70 per KW | -                     | 83.69                         | 9893.62                         | 9977.31                     | 9977.32                   | 8491.47                    | 1485.85                   |
| Commercial/Industrial-LT | 29225257960.00              | -                             | 29225257960.00            | 24643613529                     | -                                 | 24643613529                   | Rs 0.15 to 1.37 per KVA                                                  | -                     | 2537.27                       | -                               | 2537.27                     | 2537.27                   | 2176.99                    | 360.28                    |
| Commercial/Industrial-HT | -                           | -                             | -                         | -                               | -                                 | -                             | -                                                                        | -                     | -                             | -                               | -                           | -                         | -                          | -                         |
| Other (Specify) WW       | 876588882.83                | -                             | 1132148882.80             | -                               | -                                 | -                             | -                                                                        | -                     | -                             | -                               | -                           | -                         | -                          | -                         |
| Total                    | 50352293702.83              | 14841556297.17                | 65449410000.00            | 41335314440                     | 14817730000                       | 56153044440                   | -                                                                        | -                     | 10905.53                      | 9893.62                         | 20799.15                    | 20799.16                  | 16892.16                   | 3907.00                   |



### Policy of calibration of meters

Central Electricity authority vide notification no 502/70/CEA/DP & D, in exercise of powers conferred by sub section (1) of section 55 and clause (e) of section 73 read with sub section 177 of Electricity Act, 2003 made regulation known as the Central Electricity Authority (Installation and operation of meter is cited below for ready reference)

➤ 18.b. All interface meters shall be tested at least once in five years. These meters shall also be tested whenever the energy and other quantities recorded by the meter are abnormal or inconsistent with electrically adjacent meters. Whenever there is unreasonable difference between the quantity recorded by interface meter and the corresponding value monitored at the billing centre via communication network, the communication system and terminal equipment shall be tested and rectified. The meters may be tested using NABL accredited mobile laboratory or at any accredited laboratory and recalibrated if required at manufacturer's works.

➤ 18.c Testing and calibration of interface meters may be carried out in the presence of the representatives of the supplier and buyer. The owner of the meter shall send advance notice to the other party regarding the date of testing.

➤ 18. (2) Consumer meters: The testing of consumer meters shall be done at site at least once in five years. The licensee may instead of testing the meter at site can remove the meter and replace the same by a tested meter duly tested in an accredited test laboratory. In addition, meters installed in the circuit shall be tested if study of consumption pattern changes drastically from the similar months or season of the previous years or if there is consumer's complaint pertaining to a meter. The standard reference meter of better accuracy class than the meter under test shall be used for site testing of consumer meters up to 650 volts. The testing for consumers meters above 650 volts should cover the entire metering system including CTs, VTs. Testing may be carried out through NABL accredited mobile laboratory using secondary injection kit, measuring unit and phantom loading or at any accredited test laboratory and recalibrated if required at manufacturer's works.

➤ 18. (3) Energy accounting and audit meters: Energy accounting and audit meters shall be tested at site at least once in five years or whenever the accuracy is suspected or whenever the readings are inconsistent with the readings of other meters, e.g., check meters, standby meters. The testing must be carried out without removing the CTs and VTs connection. Testing may be carried out through NABL accredited mobile laboratory using secondary injection kit, measuring unit and phantom loading or at any accredited test laboratory and recalibrated if required at manufacturer's works.

Comment:

But there is general practice to change the meter in case erratic reading is observed. Manpower needed for testing of LT meter, DTs meter, and Feeder meter through NABL across the country is not adequate to take up the work regularly at 5 years on call of DISCOM. But in place of such non feasible provisions DISCOM's meter readers read the energy consumption/download consumption and observe the functioning of meters. They report about the meters to the department looking after metering. Meter is tested and calibrated before installation but thereafter there is system of regular calibration by NABL at

every 5 Years interval. Each zone has ME (Meter Equipment) labs for testing and calibrating the meter before installation of new meter or replacement of defective meters.

Few samples are attached in Annexure

## 6.2 Renewable Purchase obligation

The verdict of Punjab state electricity regulatory commission in petition number 30 of 2022 Dt. 06-01-2023 has allowed PSPCL to carry forward the deficit target of RPO of FY 2022-23 and 2023-24 to FY 2024-25.

As per present target and provisions for RPO PSPCL is hoping to be surplus in respect of RPO. The new provisions for RPO consideration are in favour of PSPCL.

### ➤ Provisions for RPO

1) The energy from the Large Hydropower Projects (LHPs) including Pump Storage Project (PSPs) having capacity more than 25 MW and commissioned after 8th March 2019 will be considered as RPO, notified nomenclature as HPO.

2) From FY 2022-23 onwards the energy from all Hydropower Projects (HPPs) will be considered as part of RPO. All other HPPs will be considered as part of RPO under category of 'Other RPO'

RPO Trajectory for the period 2021–22 to 2029–30

| Year    | Wind RPO in % | HPO in% | Other RPO in% | Total RPO in% |
|---------|---------------|---------|---------------|---------------|
| 2022-23 | 0.81          | 0.35    | 23.44         | 24.61         |
| 2023-24 | 1.60          | 0.66    | 24.81         | 27.08         |
| 2024-25 | 2.46          | 1.08    | 26.37         | 29.91         |
| 2025-26 | 3.36          | 1.48    | 28.17         | 33.01         |
| 2026-27 | 4.29          | 1.80    | 29.86         | 35.95         |
| 2027-28 | 5.23          | 2.15    | 31.43         | 38.81         |
| 2028-29 | 6.16          | 2.51    | 32.69         | 41.36         |
| 2029-30 | 6.94          | 2.82    | 33.57         | 43.39         |

PSPCL after the inclusion of all the existing hydro energy from state share of Bhakhra Nangal project as category 'Other RPO' will exceed its RPO target.

### 6.3 Energy Conservation Measures Accomplished

ACTION ALREADY TAKEN/ IN PROCESS FOR IMPROVEMENT IN ENERGY EFFICIENCY:

The detailed component-wise physical progress, including sanctioned, awarded, and executed quantities, is presented in the table below.

Table 15: Energy Efficiency Project implemented during (2021-22 to 2024-25)

| Energy Efficiency Project implemented during (2021-22 to 2024-25) |                                                                                                                                                                                                                                        |                          |                                   |                              |                                                |                                                                                                               |                                                                                                                                                  |
|-------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------------------|------------------------------|------------------------------------------------|---------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| S.No.                                                             | Implemented                                                                                                                                                                                                                            |                          |                                   |                              |                                                |                                                                                                               | A                                                                                                                                                |
|                                                                   | Project                                                                                                                                                                                                                                | Year of Implement action | Annual Energy Savings in Lakh KWH | Annual Energy Saving in toe* | Annual Energy Consumption (before) in Lakh KWH | Investment (in Crores)                                                                                        | Remarks                                                                                                                                          |
| 1                                                                 | In FY 2021-22, 31057 meters were shifted outside consumer premises enabling enhanced monitoring and increasing consumer awareness. This strategic relocation of meters led to a reduction in electricity theft and increasing billing. | 2021-22                  | 90.7                              | 779.880                      | 108.84                                         | 15.53 Cr. (While considering the investment of @ Rs. 5000/- per meter for shifting outside consumer premises) | Assuming Saving of 100 Watt per household. While considering 8 hours of consumption per day, the total saving from 31061 household is 90.70 LUs. |
| 2                                                                 | As Part of DSM & Energy efficiency initiatives, PSPCL has successfully installed 46657 no. of Smart meters across various consumer categories.                                                                                         | 2021-22                  | 83.98                             | 722.120                      | 2799.42                                        |                                                                                                               | Assuming Avg 6000 Kwh/year per smart meter and 3% saving from improved metering accuracy & theft detection.                                      |

| Energy Efficiency Project implemented during (2021-22 to 2024-25) |                                                                                                                                                                                                                                        |                          |                                   |                              |                                                |                                                                                                               |                                                                                                                                                   |
|-------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------------------|------------------------------|------------------------------------------------|---------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| S.No.                                                             | Implemented                                                                                                                                                                                                                            |                          |                                   |                              |                                                |                                                                                                               | A                                                                                                                                                 |
|                                                                   | Project                                                                                                                                                                                                                                | Year of Implement action | Annual Energy Savings in Lakh KWH | Annual Energy Saving in toe* | Annual Energy Consumption (before) in Lakh KWH | Investment (in Crores)                                                                                        | Remarks                                                                                                                                           |
| 3                                                                 | Distribution of 1175545 No. of 9W LEDs among consumers of SC, BC, BPL categories under KLBV Scheme & further extended to General categories.                                                                                           | 2021-22                  | 1750.62                           | 15052.623                    | 2059.55                                        | 7.071 Cr                                                                                                      | Energy consumption is calculated by considering 8 hrs per day for 365 days of working of lights.                                                  |
| 4                                                                 | In FY 2022-23, 44958 meters were shifted outside consumer premises enabling enhanced monitoring and increasing consumer awareness. This strategic relocation of meters led to a reduction in electricity theft and increasing billing. | 2022-23                  | 131.28                            | 1128.805                     | 157.53                                         | 22.47 Cr. (While considering the investment of @ Rs. 5000/- per meter for shifting outside consumer premises) | Assuming Saving of 100 Watt per household. While considering 8 hours of consumption per day, the total saving from 44958 household is 131.28 LUs. |
| 5                                                                 | As Part of DSM & Energy efficiency initiatives, PSPCL has successfully installed 45252 no. of Smart meters across various consumer categories.                                                                                         | 2022-23                  | 81.45                             | 700.375                      | 2715.12                                        |                                                                                                               | Assuming Avg 6000 Kwh/year per smart meter and 3% saving from improved metering accuracy & theft detection.                                       |
| 6                                                                 | Energy Efficient (Level 2 efficiency) transformers                                                                                                                                                                                     | 2022-23                  | 1.78                              | 15.305                       |                                                | Rs. 2.4 Cr.                                                                                                   |                                                                                                                                                   |

| Energy Efficiency Project implemented during (2021-22 to 2024-25) |                                                                                                                                                                                                                                       |                          |                                   |                              |                                                |                                                                                                              |                                                                                                                                                 |
|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------------------|------------------------------|------------------------------------------------|--------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| S.No.                                                             | Implemented                                                                                                                                                                                                                           |                          |                                   |                              |                                                |                                                                                                              | A                                                                                                                                               |
|                                                                   | Project                                                                                                                                                                                                                               | Year of Implement action | Annual Energy Savings in Lakh KWH | Annual Energy Saving in toe* | Annual Energy Consumption (before) in Lakh KWH | Investment (in Crores)                                                                                       | Remarks                                                                                                                                         |
|                                                                   | installed.                                                                                                                                                                                                                            |                          |                                   |                              |                                                |                                                                                                              |                                                                                                                                                 |
| 7                                                                 | Replacement of Flood Lights into LED Lights at Nakkian Power House.                                                                                                                                                                   | 2022-23                  | 0.87                              | 7.481                        |                                                | Rs. 0.03 Cr.                                                                                                 |                                                                                                                                                 |
| 8                                                                 | In FY 2023-24, 8968 meters were shifted outside consumer premises enabling enhanced monitoring and increasing consumer awareness. This strategic relocation of meters led to a reduction in electricity theft and increasing billing. | 2023-24                  | 26.19                             | 225.193                      | 31.42                                          | 4.48 Cr. (While considering the investment of @ Rs. 5000/- per meter for shifting outside consumer premises) | Assuming Saving of 100 Watt per household. While considering 8 hours of consumption per day, the total saving from 8968 household is 26.19 LUs. |
| 9                                                                 | As Part of DSM & Energy efficiency initiatives, PSPCL has successfully installed 530530 no. of Smart meters across various consumer categories.                                                                                       | 2023-24                  | 954.95                            | 8211.092                     | 31831.8                                        |                                                                                                              | Assuming Avg 6000 Kwh/year per smart meter and 3% saving from improved metering accuracy & theft detection.                                     |

| Energy Efficiency Project implemented during (2021-22 to 2024-25) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                          |                                   |                              |                                                |                        |                                                                                                                                                 |
|-------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------------------|------------------------------|------------------------------------------------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| S.No.                                                             | Implemented                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                          |                                   |                              |                                                |                        | A                                                                                                                                               |
|                                                                   | Project                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Year of Implement action | Annual Energy Savings in Lakh KWH | Annual Energy Saving in toe* | Annual Energy Consumption (before) in Lakh KWH | Investment (in Crores) | Remarks                                                                                                                                         |
| 10                                                                | Replacement of all types of 810 Nos tube lights below 100W with 18W high efficiency LED tube lights, 210 nos. conventional 125 W tubes with 210 nos 30 W LED Lights, 35 Nos 250 W flood light with 35 nos. flood light 50 W, 40 no. (30 no 400 W & 10 no. parking light 100 W) replaced with 30 no. flood light 100 W and 10 no. parking light 20 W, 200 nos 40 W conventional tubes replaced with 20 W LED tubes, 30 nos. 70-watt sodium vapor lamps have been replaced with 30 nos. 30W LED Street lights & 18 nos. 250-watt sodium/mercury lights have been replaced with 18 no. 100W LED Flood lights. | 2023-24                  | 3.241                             | 27.868                       | 4.19                                           | 0.121                  | All lights installed under Power House at RSD Sahpurkandi, ASHP PH-II, Nakkian, Shanan Powerhouse Joginder Nagar., UBDC Hydel Project Malikpur. |

| Energy Efficiency Project implemented during (2021-22 to 2024-25) |                                                                                                                                                                                                                                       |                          |                                   |                              |                                                |                                                                                                              |                                                                                                                                                 |
|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------------------|------------------------------|------------------------------------------------|--------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| S.No.                                                             | Implemented                                                                                                                                                                                                                           |                          |                                   |                              |                                                |                                                                                                              | A                                                                                                                                               |
|                                                                   | Project                                                                                                                                                                                                                               | Year of Implement action | Annual Energy Savings in Lakh KWH | Annual Energy Saving in toe* | Annual Energy Consumption (before) in Lakh KWH | Investment (in Crores)                                                                                       | Remarks                                                                                                                                         |
| 11                                                                | In FY 2024-25, 4059 meters were shifted outside consumer premises enabling enhanced monitoring and increasing consumer awareness. This strategic relocation of meters led to a reduction in electricity theft and increasing billing. | 2024-25                  | 11.85                             | 101.892                      | 14.222736                                      | 2.02 Cr. (While considering the investment of @ Rs. 5000/- per meter for shifting outside consumer premises) | Assuming Saving of 100 Watt per household. While considering 8 hours of consumption per day, the total saving from 4059 household is 11.85 LUs. |
| 12                                                                | As Part of DSM & Energy efficiency initiatives, PSPCL has successfully installed 745058 no. of Smart meters across various consumer categories.                                                                                       | 2024-25                  | 1341.10                           | 11531.384                    | 44703.48                                       |                                                                                                              | Assuming Avg 6000 Kwh/year per smart meter and 3% saving from improved metering accuracy & theft detection.                                     |
|                                                                   | Total                                                                                                                                                                                                                                 | From 2021-22 to 2024 -25 | <b>4478.011</b>                   | <b>38503.96</b>              |                                                |                                                                                                              |                                                                                                                                                 |

## 6.4 Energy Conservation Measures Recommended by Auditor

| S. No. | Energy Conservation Measure                                            | Description                                                                                                                                                                                           |
|--------|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1      | Implementation of Advanced Distribution Management System (ADMS)       | Integrating ADMS to enable real-time monitoring, fault detection, load forecasting, and automated switching operations to optimize power flow and reduce losses.                                      |
| 2      | Time-of-Day (ToD) Based Tariff Rollout                                 | Encouraging consumers to shift consumption to off-peak hours by introducing differential pricing, which reduces peak load stress and overall system losses.                                           |
| 3      | Deployment of AI/ML for Loss Analytics                                 | Using Artificial Intelligence and Machine Learning to detect energy theft, predict demand patterns, and optimize load balancing in feeder and DT-level monitoring.                                    |
| 4      | Upgradation to Energy-Efficient Distribution Transformers (Star Rated) | Phasing out old transformers and replacing them with BIS 5-Star rated transformers to reduce core and copper losses significantly.                                                                    |
| 5      | Consumer Awareness and Behavioural Energy Efficiency Programs          | Conducting <b>(Information, Education, and Communication)</b> IEC campaigns, energy conservation drives, and mobile-app-based consumption insights to empower end-users to adopt efficient practices. |
| 6      | SCADA Expansion to All Urban Substations                               | Extending SCADA systems across urban and semi-urban substations for remote monitoring and faster fault diagnosis, enhancing system reliability and reducing outage losses.                            |
| 7      | Integration of Rooftop Solar with Net Metering & Virtual Net Metering  | Promoting decentralized renewable energy generation to reduce grid demand, especially during peak hours, and support RPO/RCO compliance.                                                              |
| 8      | Smart Metering and GIS Integration                                     | Implementing smart metering across all HT and high-load LT consumers, integrating with GIS for real-time monitoring of energy usage, loss detection, and enhanced asset management.                   |
| 9      | Battery Energy Storage Systems (BESS) at Substations                   | Installing BESS in select substations to manage peak loads, frequency stabilization, and reactive power support for grid efficiency.                                                                  |
| 10     | Dynamic Voltage Optimization (DVO) at Consumer End                     | Deploying voltage regulation technologies at distribution transformers to maintain optimal voltage levels, thereby reducing energy wastage at consumer premises.                                      |

## 7 Sampling-Based Field Measurement Study

### Sample-Based Field Measurement Study:

#### PSPCL Input Energy Meter Validation and Power Quality Assessment

Throughout the energy audit process, the team of Energy Auditors conducted a study involving field measurements at PSPCL. Within this study, the team undertook a sample-based approach. They specifically focused on assessing the accuracy of the Input Energy Meter by measuring the incomer feeder. Furthermore, a comprehensive analysis of the overall substation load and power quality was conducted.



Using a three-phase power analyzer, the Energy Auditor team recorded critical electrical parameters and power quality indicators. These included measurements of frequency, voltage, current, kW, power factor, and the percentage of Total Harmonic Distortion (%THD) in both voltage and current. Notably, the data collected through this sample-based methodology has been organized in the subsequent table and graph.

### FIELD MEASUREMENT 1:

#### Field Measurement Summary of 66/11 kV Shakti Vihar Substation

Field measurements were conducted at the 66/11 kV Shakti Vihar Substation, which plays a key role in the power distribution network of the area. The primary input to the Shakti Vihar Substation is supplied at 220/66 kV level from two major upstream substations — Pasiyana and Ablawal. This dual sourcing ensures reliability and stability in power supply to the Shakti Vihar network.

For this field assessment, the measurements focused on the 11 kV side of the substation. Specifically, the evaluation was performed at the feeder output level, capturing the actual energy flow just before distribution to end consumers. The objective was to assess feeder-level performance and identify potential energy losses occurring after transformation at the substation.

Two 11 kV outgoing feeders were selected for detailed analysis:

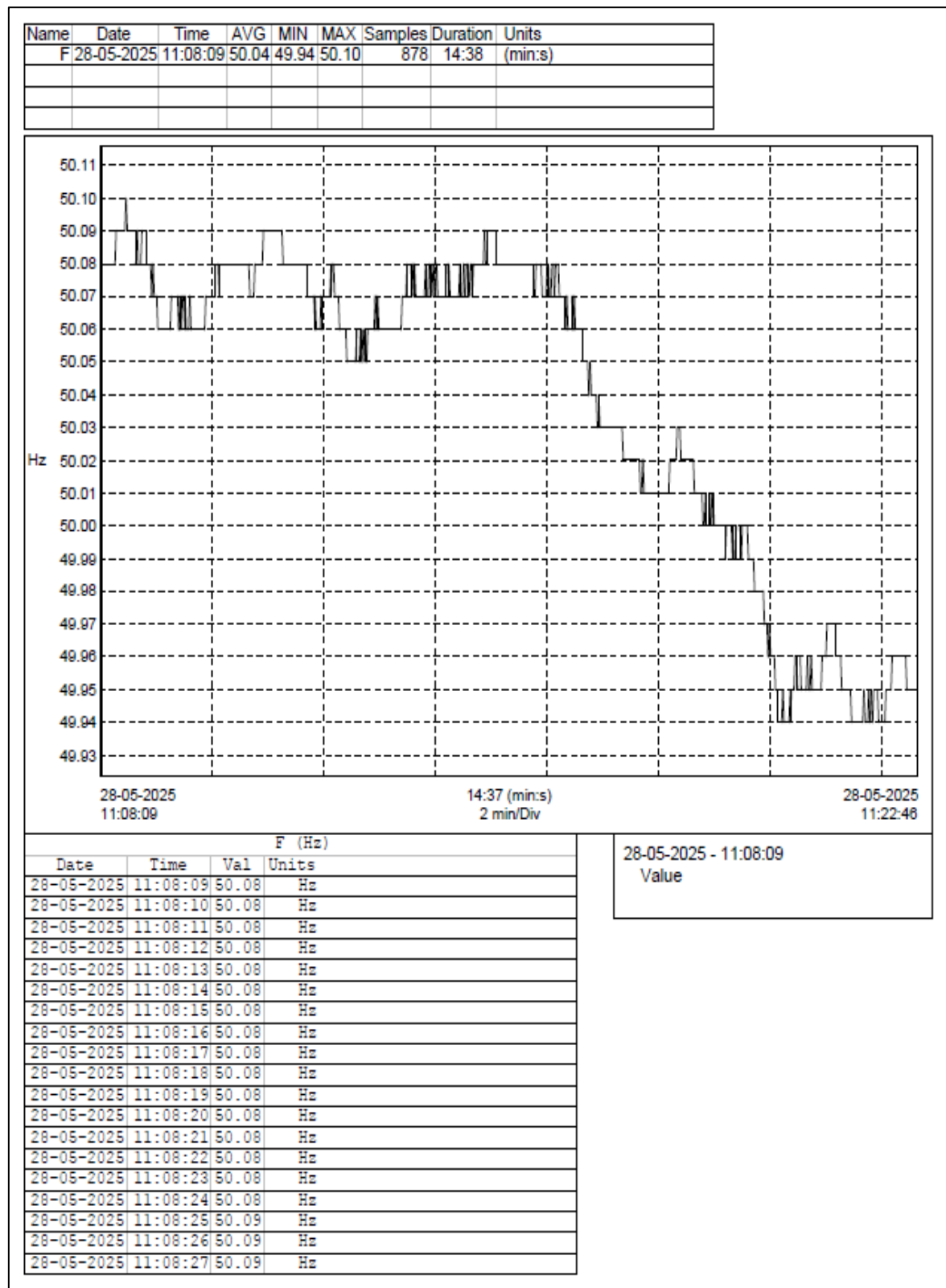
1. 11 kV Santnagar Outgoing Feeder
2. 11 kV Raja Enclave Outgoing Feeder

These feeders distribute power directly into residential and commercial zones, ensuring supply to the public in their respective areas.

By capturing accurate field data on these feeders, insights into feeder performance, load profiles, and distribution losses can be derived. The findings from these field measurements are crucial for optimizing network performance, improving energy efficiency, and supporting future infrastructure planning.

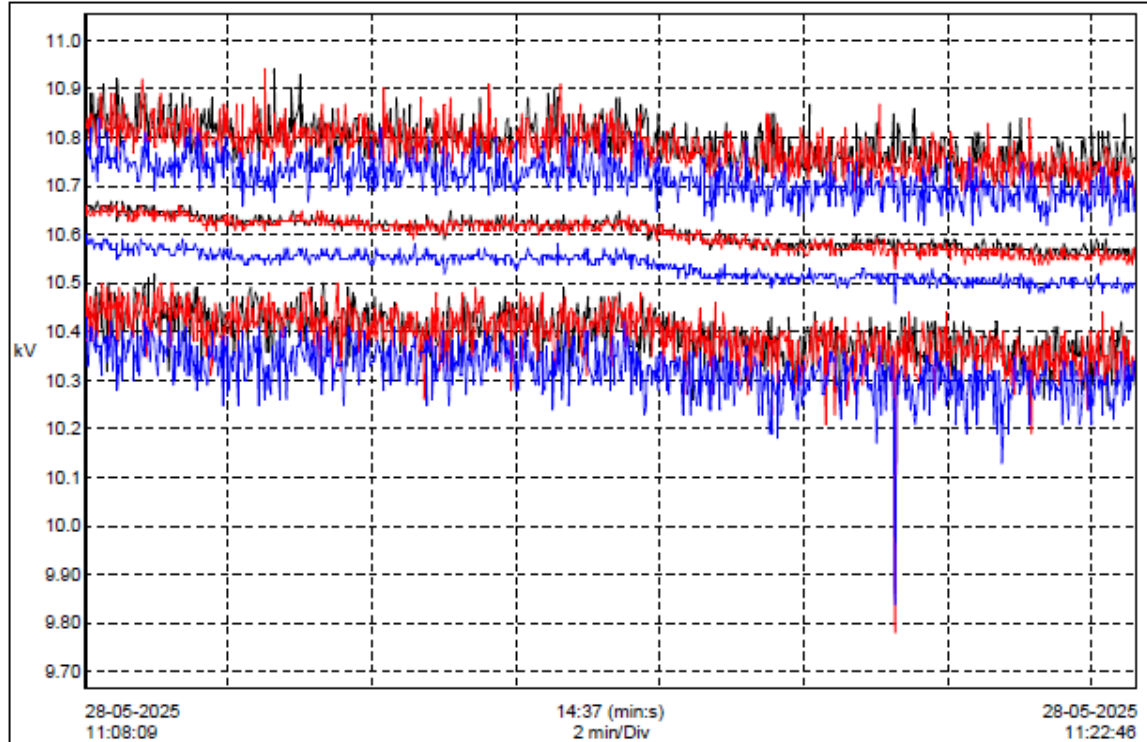
## 7.1 11KV SANTNAGAR OUTGOING FEEDER

Frequency:



## Voltage:

| Name    | Date       | Time     | AVG   | MIN   | MAX   | Units | Duration | Units   |
|---------|------------|----------|-------|-------|-------|-------|----------|---------|
| U12 RMS | 28-05-2025 | 11:08:09 | 10.61 | 9.860 | 10.94 | kV    | 14:38    | (min:s) |
| U23 RMS | 28-05-2025 | 11:08:09 | 10.60 | 9.780 | 10.94 | kV    | 14:38    | (min:s) |
| U31 RMS | 28-05-2025 | 11:08:09 | 10.54 | 9.840 | 10.84 | kV    | 14:38    | (min:s) |



| U12 RMS (V) |          |       |       |       |       |
|-------------|----------|-------|-------|-------|-------|
| Date        | Time     | Val   | MIN   | MAX   | Units |
| 28-05-2025  | 11:08:09 | 10.66 | 10.45 | 10.84 | kV    |
| 28-05-2025  | 11:08:10 | 10.66 | 10.42 | 10.82 | kV    |
| 28-05-2025  | 11:08:11 | 10.66 | 10.45 | 10.81 | kV    |
| 28-05-2025  | 11:08:12 | 10.66 | 10.44 | 10.83 | kV    |
| 28-05-2025  | 11:08:13 | 10.65 | 10.40 | 10.89 | kV    |
| 28-05-2025  | 11:08:14 | 10.65 | 10.44 | 10.79 | kV    |
| 28-05-2025  | 11:08:15 | 10.66 | 10.43 | 10.89 | kV    |
| 28-05-2025  | 11:08:16 | 10.65 | 10.46 | 10.83 | kV    |
| 28-05-2025  | 11:08:17 | 10.66 | 10.49 | 10.80 | kV    |
| 28-05-2025  | 11:08:18 | 10.66 | 10.39 | 10.85 | kV    |
| 28-05-2025  | 11:08:19 | 10.67 | 10.41 | 10.84 | kV    |
| 28-05-2025  | 11:08:20 | 10.66 | 10.48 | 10.88 | kV    |
| 28-05-2025  | 11:08:21 | 10.65 | 10.44 | 10.82 | kV    |
| 28-05-2025  | 11:08:22 | 10.66 | 10.48 | 10.88 | kV    |

28-05-2025 - 11:08:09

Value

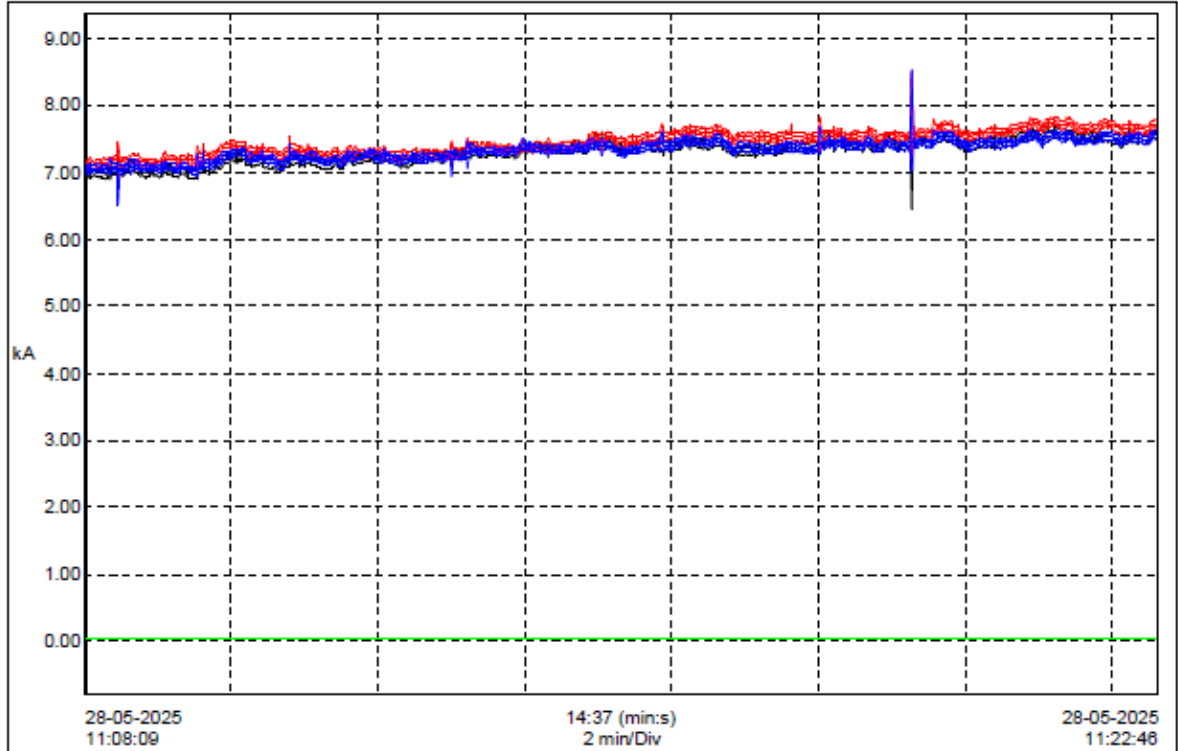
10.45k — U12 RMS

10.38k — U23 RMS

10.39k — U31 RMS

## Current:

| Name   | Date       | Time     | AVG   | MIN   | MAX   | Units | Duration | Units   |
|--------|------------|----------|-------|-------|-------|-------|----------|---------|
| A1 RMS | 28-05-2025 | 11:08:09 | 7.322 | 6.444 | 8.416 | kA    | 14:38    | (min:s) |
| A2 RMS | 28-05-2025 | 11:08:09 | 7.447 | 6.900 | 8.500 | kA    | 14:38    | (min:s) |
| A3 RMS | 28-05-2025 | 11:08:09 | 7.331 | 6.520 | 8.528 | kA    | 14:38    | (min:s) |
| AN RMS | 28-05-2025 | 11:08:09 | 52.42 | 48.00 | 56.00 | A     | 14:38    | (min:s) |



| A1 RMS (A) |          |       |       |       |       |
|------------|----------|-------|-------|-------|-------|
| Date       | Time     | Val   | MIN   | MAX   | Units |
| 28-05-2025 | 11:08:09 | 6.996 | 6.932 | 7.052 | kA    |
| 28-05-2025 | 11:08:10 | 6.992 | 6.940 | 7.036 | kA    |
| 28-05-2025 | 11:08:11 | 7.004 | 6.920 | 7.084 | kA    |
| 28-05-2025 | 11:08:12 | 7.036 | 6.960 | 7.104 | kA    |
| 28-05-2025 | 11:08:13 | 7.008 | 6.948 | 7.056 | kA    |
| 28-05-2025 | 11:08:14 | 6.996 | 6.928 | 7.048 | kA    |
| 28-05-2025 | 11:08:15 | 7.004 | 6.948 | 7.064 | kA    |
| 28-05-2025 | 11:08:16 | 7.012 | 6.956 | 7.068 | kA    |
| 28-05-2025 | 11:08:17 | 7.004 | 6.948 | 7.072 | kA    |
| 28-05-2025 | 11:08:18 | 7.012 | 6.952 | 7.064 | kA    |
| 28-05-2025 | 11:08:19 | 7.012 | 6.940 | 7.076 | kA    |
| 28-05-2025 | 11:08:20 | 6.996 | 6.932 | 7.064 | kA    |
| 28-05-2025 | 11:08:21 | 6.996 | 6.944 | 7.048 | kA    |
| 28-05-2025 | 11:08:22 | 6.992 | 6.940 | 7.036 | kA    |

28-05-2025 - 11:08:09

Value

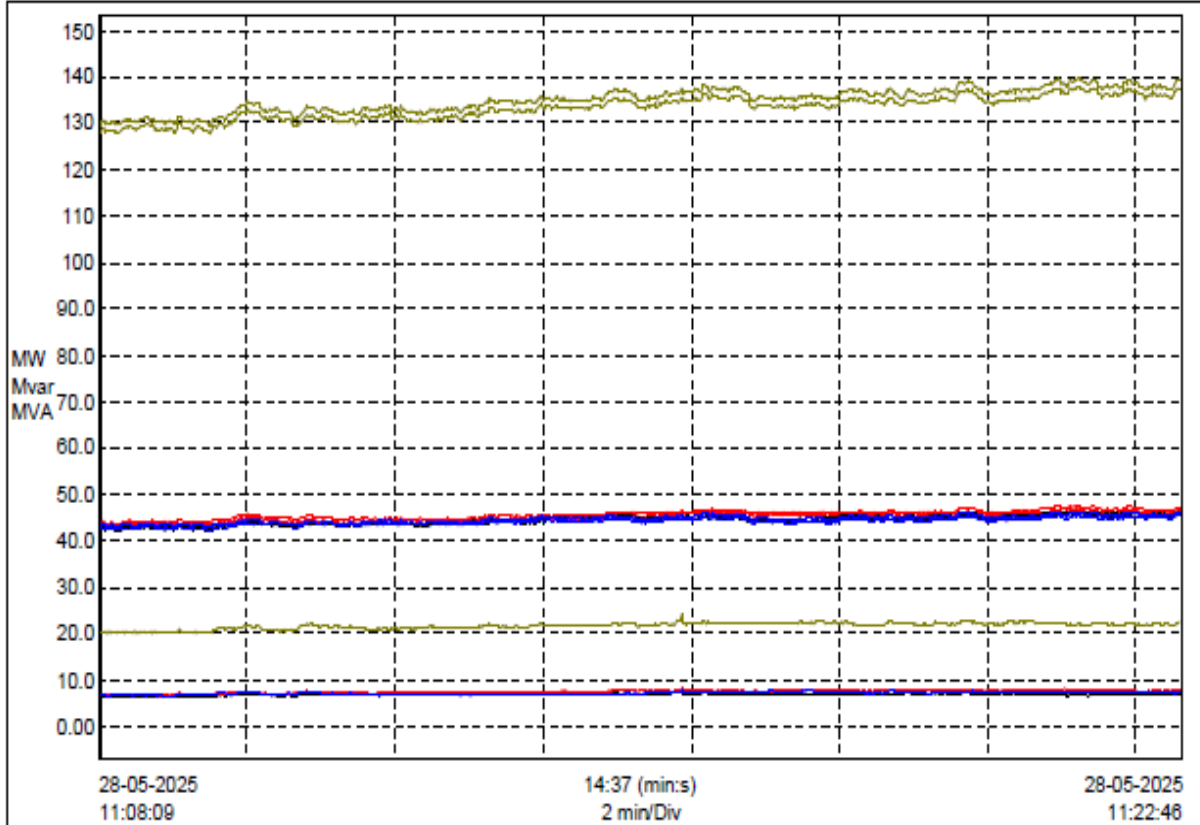
6.932k — A1 RMS

7.080k — A2 RMS

6.996k — A3 RMS

## Power:

| Name     | Date       | Time     | AVG   | MIN   | MAX   | Units | Duration | Units   |
|----------|------------|----------|-------|-------|-------|-------|----------|---------|
| N1 (var) | 28-05-2025 | 11:08:09 | 6.978 | 6.372 | 7.703 | Mvar  | 14:38    | (min:s) |
| N2 (var) | 28-05-2025 | 11:08:09 | 7.456 | 6.723 | 8.331 | Mvar  | 14:38    | (min:s) |
| N3 (var) | 28-05-2025 | 11:08:09 | 7.168 | 6.629 | 7.902 | Mvar  | 14:38    | (min:s) |
| NT (var) | 28-05-2025 | 11:08:09 | 21.61 | 19.91 | 23.94 | Mvar  | 14:38    | (min:s) |
| P1 (W)   | 28-05-2025 | 11:08:09 | 44.12 | 42.07 | 45.77 | MW    | 14:38    | (min:s) |
| P2 (W)   | 28-05-2025 | 11:08:09 | 45.06 | 43.26 | 46.88 | MW    | 14:38    | (min:s) |
| P3 (W)   | 28-05-2025 | 11:08:09 | 44.07 | 42.26 | 45.38 | MW    | 14:38    | (min:s) |
| PT (W)   | 28-05-2025 | 11:08:09 | 133.2 | 127.6 | 138.0 | MW    | 14:38    | (min:s) |



| N1 (var) (var) |          |       |       |
|----------------|----------|-------|-------|
| Date           | Time     | Val   | Units |
| 28-05-2025     | 11:08:09 | 6.677 | Mvar  |
| 28-05-2025     | 11:08:10 | 6.678 | Mvar  |
| 28-05-2025     | 11:08:11 | 6.753 | Mvar  |
| 28-05-2025     | 11:08:12 | 6.703 | Mvar  |
| 28-05-2025     | 11:08:13 | 6.700 | Mvar  |
| 28-05-2025     | 11:08:14 | 6.701 | Mvar  |
| 28-05-2025     | 11:08:15 | 6.711 | Mvar  |
| 28-05-2025     | 11:08:16 | 6.786 | Mvar  |
| 28-05-2025     | 11:08:17 | 6.610 | Mvar  |
| 28-05-2025     | 11:08:18 | 6.604 | Mvar  |
| 28-05-2025     | 11:08:19 | 6.647 | Mvar  |
| 28-05-2025     | 11:08:20 | 6.637 | Mvar  |
| 28-05-2025     | 11:08:21 | 6.640 | Mvar  |
| 28-05-2025     | 11:08:22 | 6.638 | Mvar  |

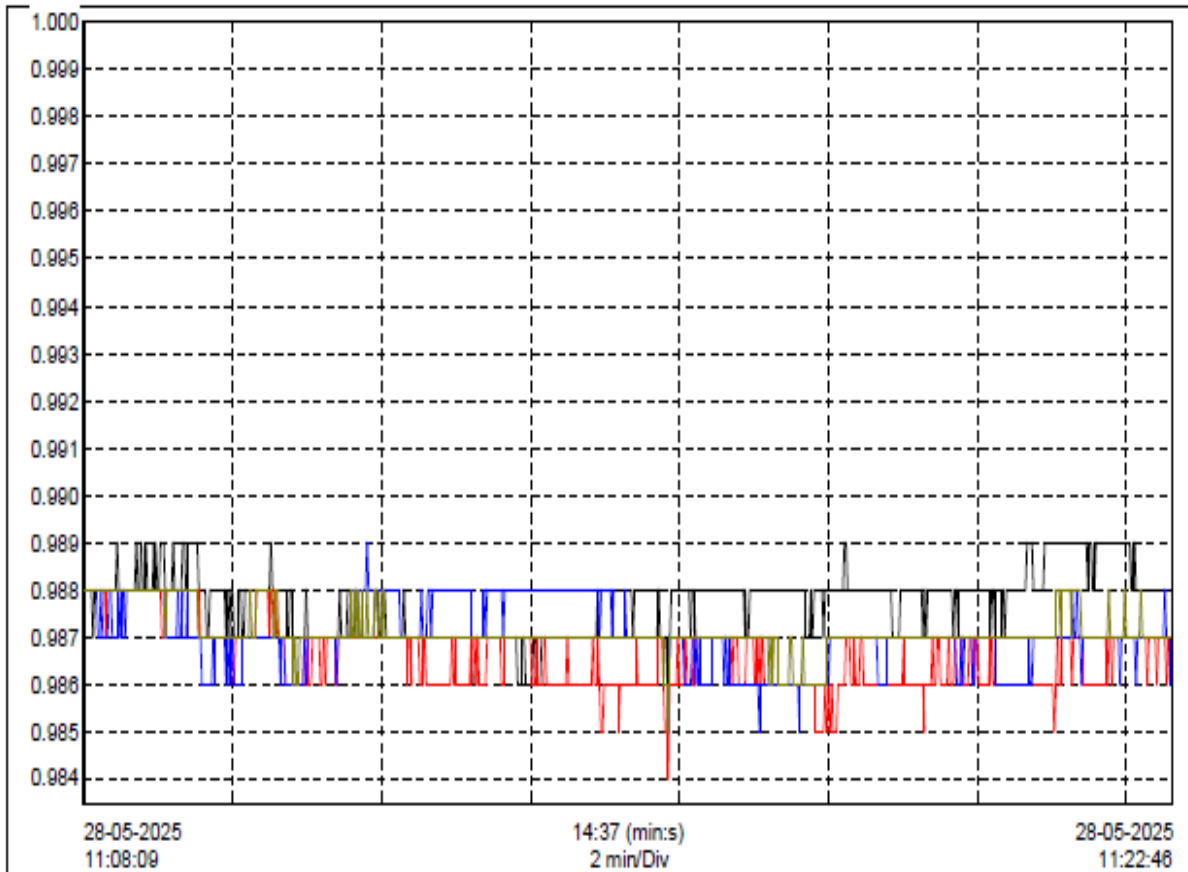
28-05-2025 - 11:08:09

Value

42.37M — P1 (W)  
 43.32M — P2 (W)  
 42.58M — P3 (W)  
 128.3M — PT (W)  
 6.677M — N1 (var)  
 6.845M — N2 (var)  
 6.793M — N3 (var)  
 20.32M — NT (var)  
 42.89M — S1 (VA)  
 43.85M — S2 (VA)  
 43.12M — S3 (VA)  
 129.9M — ST (VA)

## Power Factor:

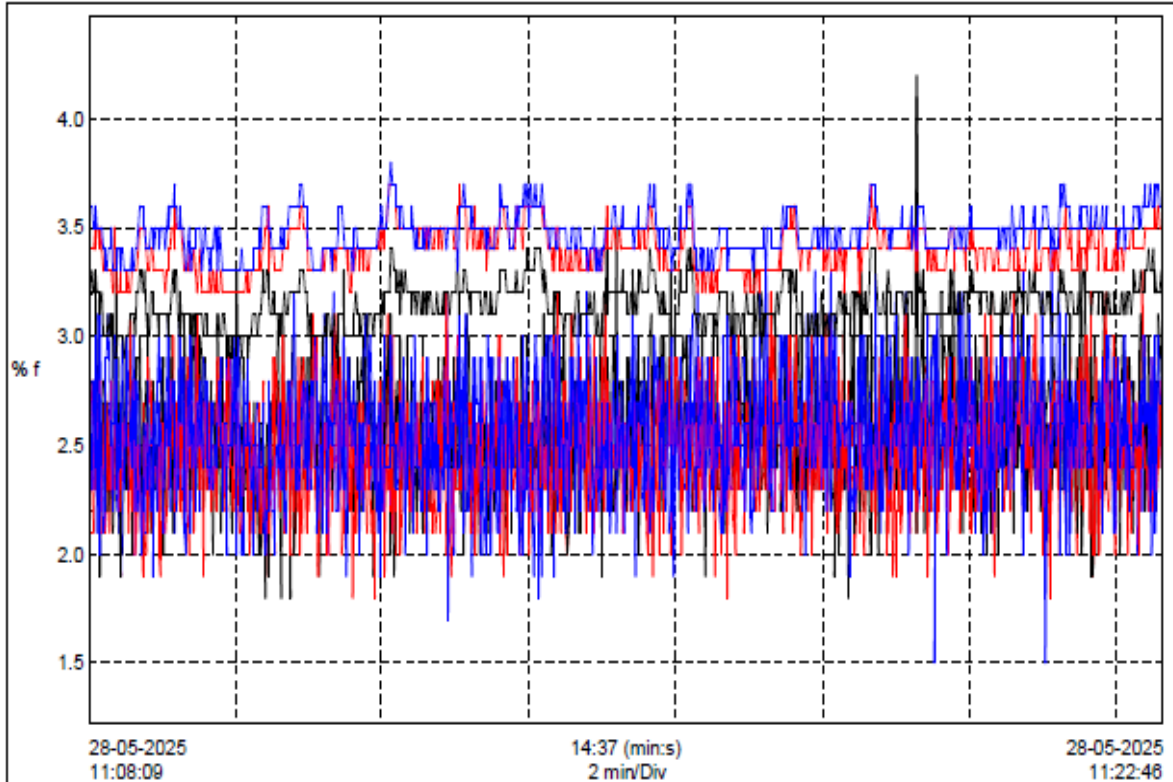
| Name | Date       | Time     | AVG   | MIN   | MAX   | Units | Duration | Units   |
|------|------------|----------|-------|-------|-------|-------|----------|---------|
| PF1  | 28-05-2025 | 11:08:09 | 0.988 | 0.986 | 0.989 |       | 14:38    | (min:s) |
| PF2  | 28-05-2025 | 11:08:09 | 0.987 | 0.984 | 0.988 |       | 14:38    | (min:s) |
| PF3  | 28-05-2025 | 11:08:09 | 0.987 | 0.985 | 0.989 |       | 14:38    | (min:s) |
| PFT  | 28-05-2025 | 11:08:09 | 0.987 | 0.985 | 0.988 |       | 14:38    | (min:s) |
|      |            |          |       |       |       |       |          |         |
|      |            |          |       |       |       |       |          |         |
|      |            |          |       |       |       |       |          |         |
|      |            |          |       |       |       |       |          |         |



| PF1 ( )    |          |       |       | 28-05-2025 - 11:08:09 |             |
|------------|----------|-------|-------|-----------------------|-------------|
| Date       | Time     | Val   | Units |                       |             |
| 28-05-2025 | 11:08:09 | 0.988 |       | Value                 | 0.988 — PF1 |
| 28-05-2025 | 11:08:10 | 0.988 |       |                       | 0.988 — PF2 |
| 28-05-2025 | 11:08:11 | 0.988 |       |                       | 0.988 — PF3 |
| 28-05-2025 | 11:08:12 | 0.988 |       |                       | 0.988 — PFT |
| 28-05-2025 | 11:08:13 | 0.988 |       |                       |             |
| 28-05-2025 | 11:08:14 | 0.988 |       |                       |             |
| 28-05-2025 | 11:08:15 | 0.988 |       |                       |             |
| 28-05-2025 | 11:08:16 | 0.987 |       |                       |             |
| 28-05-2025 | 11:08:17 | 0.988 |       |                       |             |
| 28-05-2025 | 11:08:18 | 0.988 |       |                       |             |
| 28-05-2025 | 11:08:19 | 0.988 |       |                       |             |
| 28-05-2025 | 11:08:20 | 0.988 |       |                       |             |
| 28-05-2025 | 11:08:21 | 0.988 |       |                       |             |
| 28-05-2025 | 11:08:22 | 0.988 |       |                       |             |

THD:

| Name     | Date       | Time     | AVG   | MIN   | MAX   | Units | Duration | Units   |
|----------|------------|----------|-------|-------|-------|-------|----------|---------|
| A1 THDf  | 28-05-2025 | 11:08:09 | 3.144 | 2.900 | 4.100 | % f   | 14:38    | (min:s) |
| A2 THDf  | 28-05-2025 | 11:08:09 | 3.392 | 3.200 | 3.700 | % f   | 14:38    | (min:s) |
| A3 THDf  | 28-05-2025 | 11:08:09 | 3.478 | 3.300 | 3.800 | % f   | 14:38    | (min:s) |
| U12 THDf | 28-05-2025 | 11:08:09 | 2.522 | 1.800 | 3.400 | % f   | 14:38    | (min:s) |
| U23 THDf | 28-05-2025 | 11:08:09 | 2.469 | 1.800 | 3.200 | % f   | 14:38    | (min:s) |
| U31 THDf | 28-05-2025 | 11:08:09 | 2.547 | 1.500 | 3.300 | % f   | 14:38    | (min:s) |
| V1 THDf  | 28-05-2025 | 11:08:09 | 2.618 | 1.800 | 4.200 | % f   | 14:38    | (min:s) |
| V2 THDf  | 28-05-2025 | 11:08:09 | 2.474 | 1.800 | 3.300 | % f   | 14:38    | (min:s) |
| V3 THDf  | 28-05-2025 | 11:08:09 | 2.531 | 1.500 | 3.400 | % f   | 14:38    | (min:s) |



| A1 THDf (% f) |          |       |       |
|---------------|----------|-------|-------|
| Date          | Time     | Val   | Units |
| 28-05-2025    | 11:08:09 | 3.200 | % f   |
| 28-05-2025    | 11:08:10 | 3.200 | % f   |
| 28-05-2025    | 11:08:11 | 3.300 | % f   |
| 28-05-2025    | 11:08:12 | 3.200 | % f   |
| 28-05-2025    | 11:08:13 | 3.300 | % f   |
| 28-05-2025    | 11:08:14 | 3.300 | % f   |
| 28-05-2025    | 11:08:15 | 3.200 | % f   |
| 28-05-2025    | 11:08:16 | 3.200 | % f   |
| 28-05-2025    | 11:08:17 | 3.200 | % f   |
| 28-05-2025    | 11:08:18 | 3.100 | % f   |
| 28-05-2025    | 11:08:19 | 3.200 | % f   |
| 28-05-2025    | 11:08:20 | 3.000 | % f   |
| 28-05-2025    | 11:08:21 | 3.000 | % f   |
| 28-05-2025    | 11:08:22 | 3.000 | % f   |

28-05-2025 - 11:08:09

Value

2.200 — V1 THDf  
 2.300 — V2 THDf  
 2.600 — V3 THDf  
 2.500 — U12 THDf  
 2.100 — U23 THDf  
 2.400 — U31 THDf  
 3.200 — A1 THDf  
 3.500 — A2 THDf

Observation:

Power Profile:

- Total active power (PT) is approximately 129.9 MW, with individual phases P1, P2, and P3 contributing 42–43 MW each, indicating balanced load.
- Total reactive power (NT) is around 20.32 MVAR, with phase-wise contributions of 6.68–7.45 MVAR.
- Apparent power (ST) is approximately 129.9 MVA, showing minimal reactive power draw relative to active power.

Power Factor:

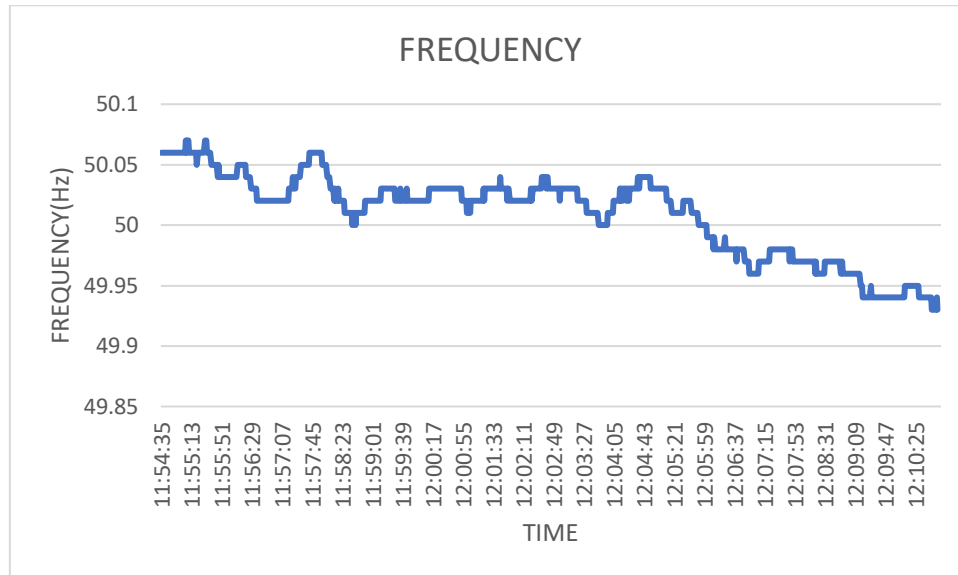
- Power Factor ranges between 0.985–0.989, indicating excellent power factor (>0.95) across all three phases. It means system is operating efficiently.

Total Harmonic Distortion:

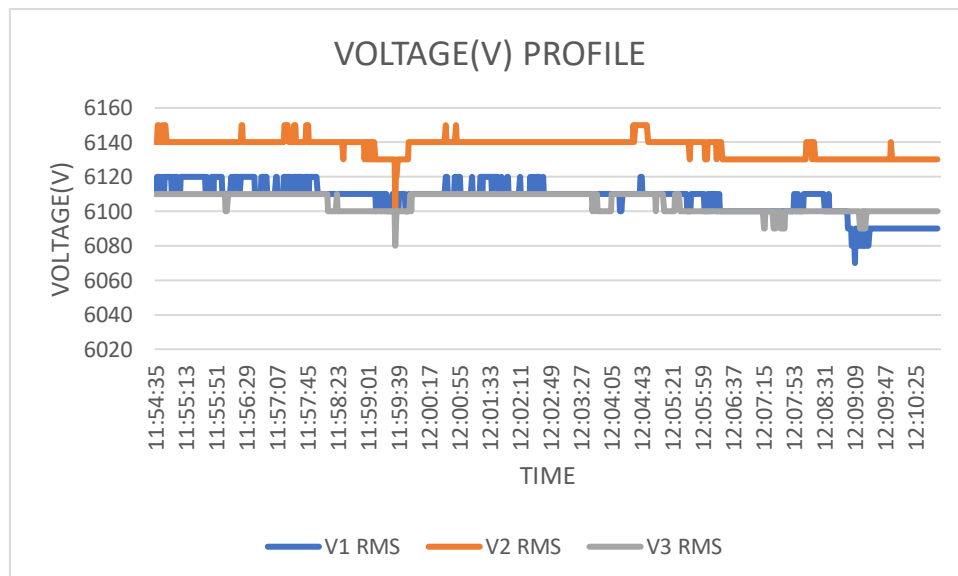
- Voltage THD values are well within IEEE 519 limits of 5%.
- Current THD values are within acceptable limits, though on the higher side.

## 7.2 11KV RAJA ENCLAVE OUTGOING FEEDER

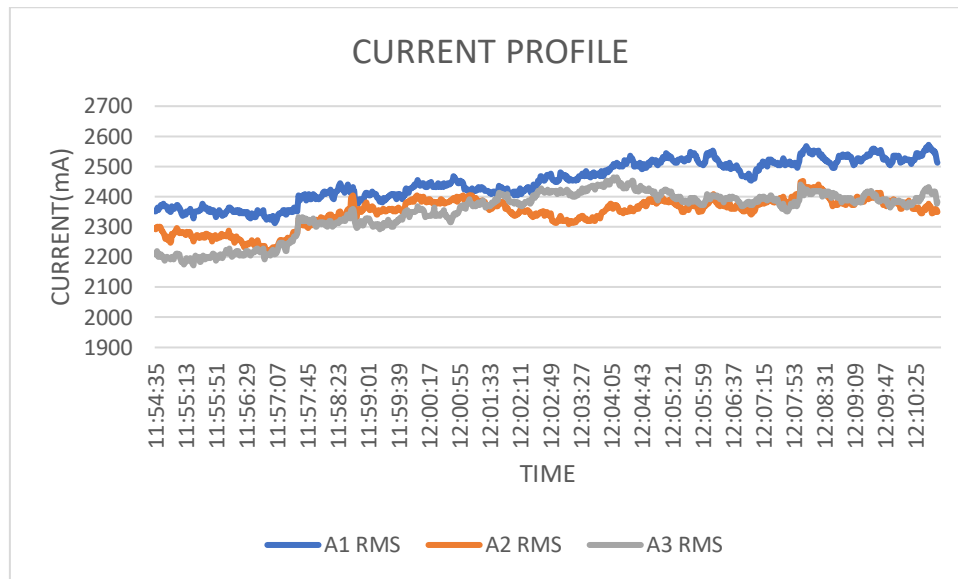
Frequency:



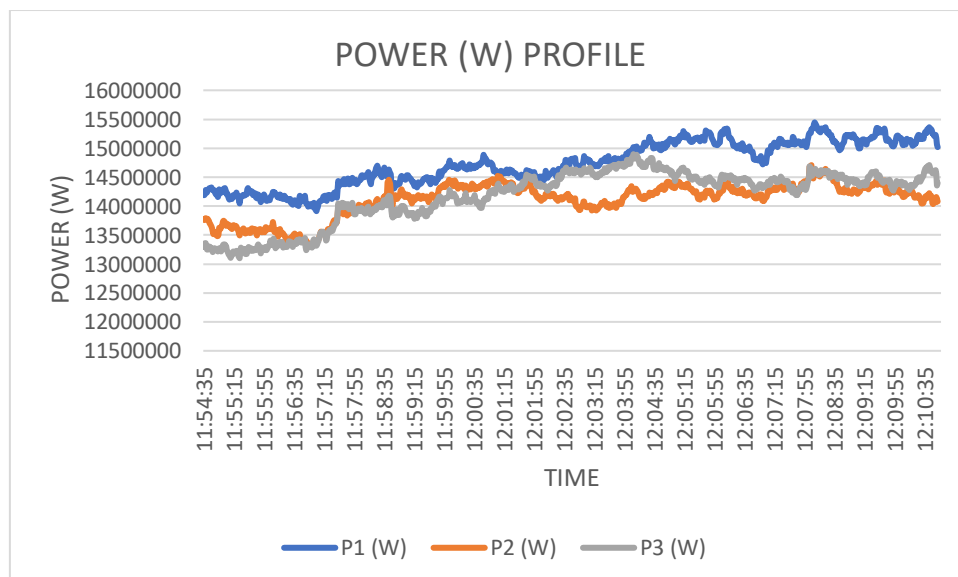
Voltage:



Current:

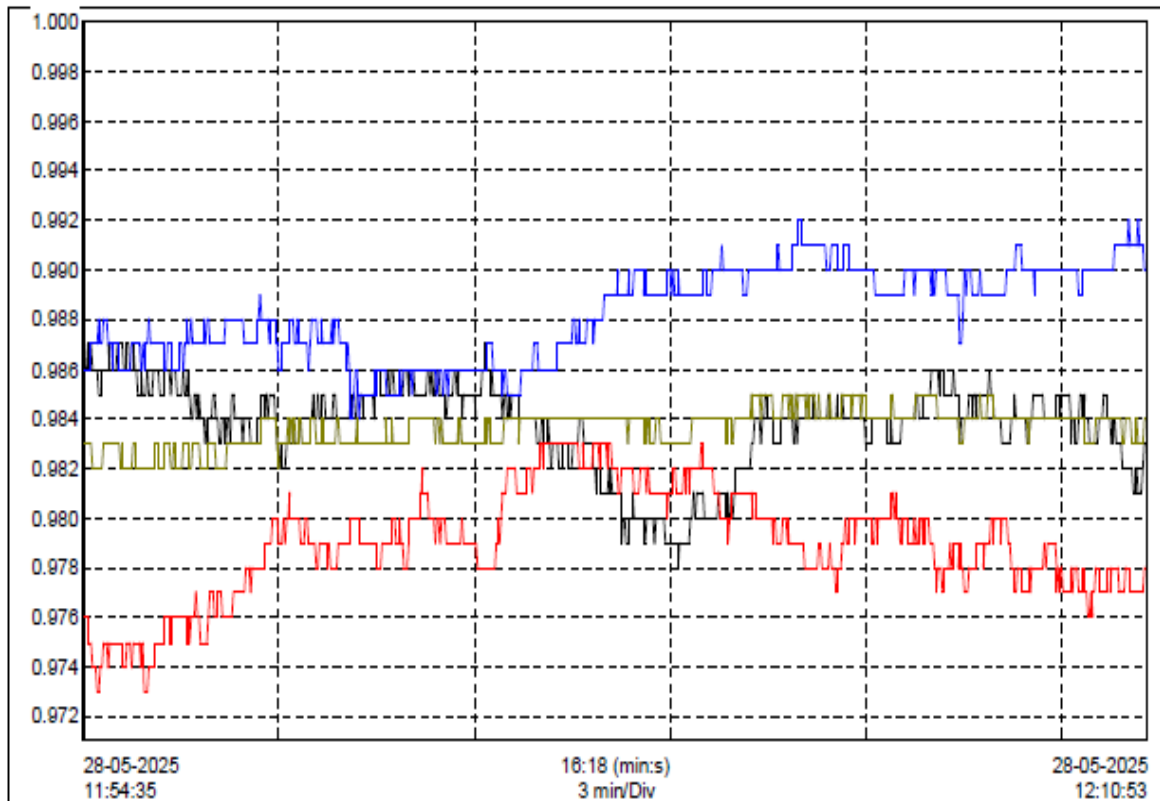


Power:



## Power Factor:

| Name | Date       | Time     | AVG   | MIN   | MAX   | Units | Duration | Units   |
|------|------------|----------|-------|-------|-------|-------|----------|---------|
| PF1  | 28-05-2025 | 11:54:35 | 0.984 | 0.978 | 0.987 |       | 16:19    | (min:s) |
| PF2  | 28-05-2025 | 11:54:35 | 0.979 | 0.973 | 0.983 |       | 16:19    | (min:s) |
| PF3  | 28-05-2025 | 11:54:35 | 0.988 | 0.984 | 0.992 |       | 16:19    | (min:s) |
| PFT  | 28-05-2025 | 11:54:35 | 0.984 | 0.982 | 0.985 |       | 16:19    | (min:s) |
|      |            |          |       |       |       |       |          |         |
|      |            |          |       |       |       |       |          |         |
|      |            |          |       |       |       |       |          |         |
|      |            |          |       |       |       |       |          |         |



| PF1 ()     |          |       |       |
|------------|----------|-------|-------|
| Date       | Time     | Val   | Units |
| 28-05-2025 | 11:54:35 | 0.987 |       |
| 28-05-2025 | 11:54:36 | 0.987 |       |
| 28-05-2025 | 11:54:37 | 0.986 |       |
| 28-05-2025 | 11:54:38 | 0.986 |       |
| 28-05-2025 | 11:54:39 | 0.987 |       |
| 28-05-2025 | 11:54:40 | 0.987 |       |
| 28-05-2025 | 11:54:41 | 0.987 |       |
| 28-05-2025 | 11:54:42 | 0.987 |       |
| 28-05-2025 | 11:54:43 | 0.986 |       |
| 28-05-2025 | 11:54:44 | 0.986 |       |
| 28-05-2025 | 11:54:45 | 0.986 |       |
| 28-05-2025 | 11:54:46 | 0.986 |       |
| 28-05-2025 | 11:54:47 | 0.986 |       |
| 28-05-2025 | 11:54:48 | 0.985 |       |

28-05-2025 - 11:54:35

Value

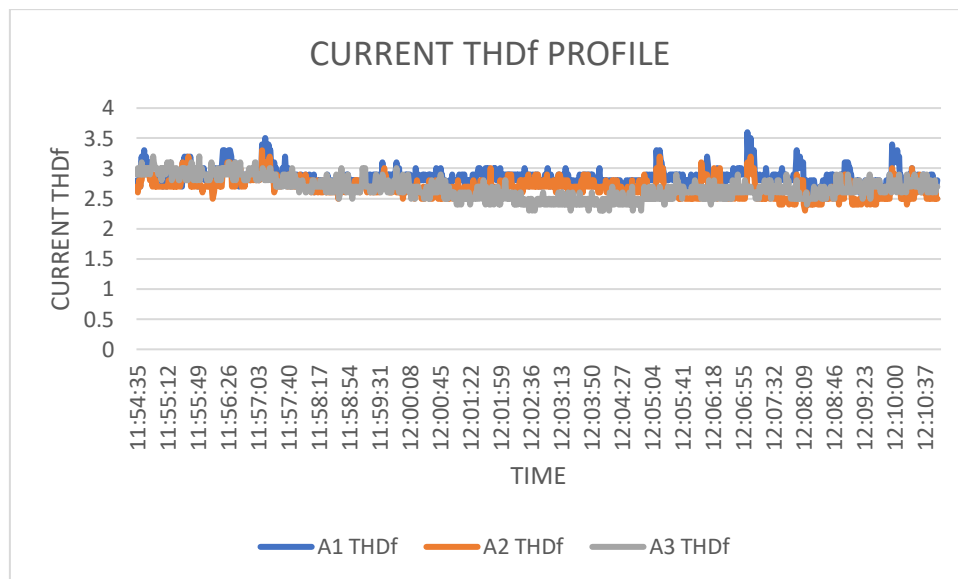
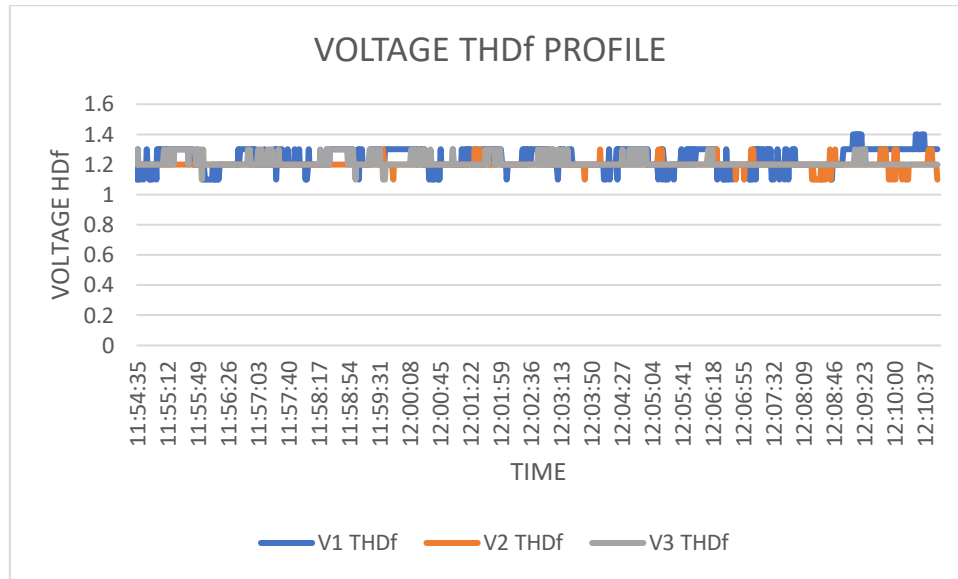
0.987 — PF1

0.976 — PF2

0.986 — PF3

0.983 — PFT

THDf:



### Observation:

#### Power Profile:

- P1, P2, P3 show relatively stable power delivery between 13 MW to 15.5 MW per phase.
- Slight fluctuations are observed, likely due to load variation or operational switching.
- Phase imbalance is minimal, though P1 consistently draws slightly higher power compared to P2 and P3.

#### Power Factor:

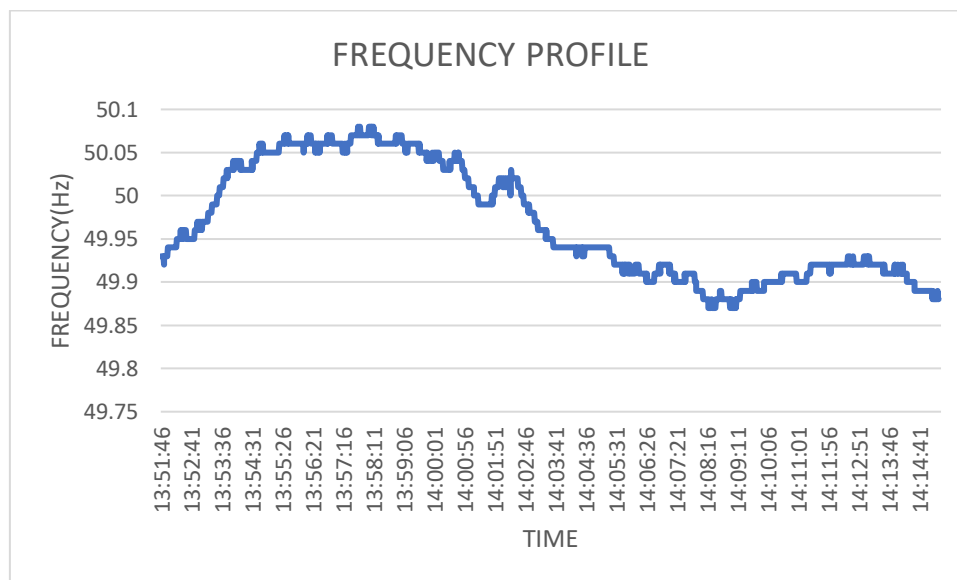
- The overall power factor remains above 0.98, which is considered excellent and well within acceptable limits as per:
- IEEE 141 (Red Book) recommends  $PF > 0.95$  for efficient operation.
- BEE guidelines under PAT scheme encourage maintaining  $PF > 0.95$  to avoid utility penalties and reduce apparent power.

#### Total Harmonics Distortion:

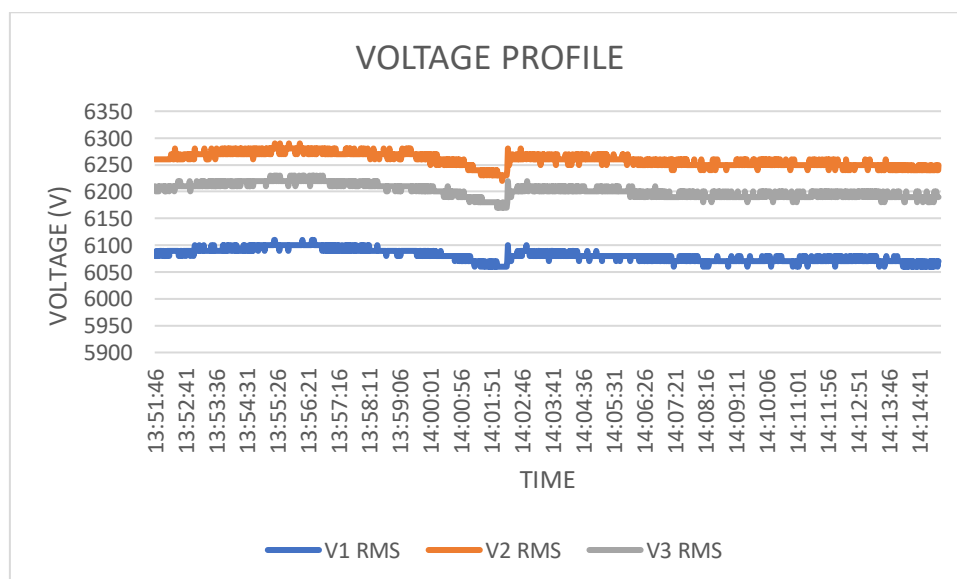
- Voltage THD levels are consistently below 1.5%, with most values hovering around 1.1%–1.4%.
- As per IEEE 519-2014, acceptable Voltage THD limit is  $\leq 5\%$  for system
- Current THD values are in the range of 2.5% to 3.5%, with few spikes.
- As per IEEE 519, acceptable current limit is  $< 5\%$ . So, this shows THD within acceptable value.

## 7.3 11KV HIRABAGH OUTGOING FEEDER

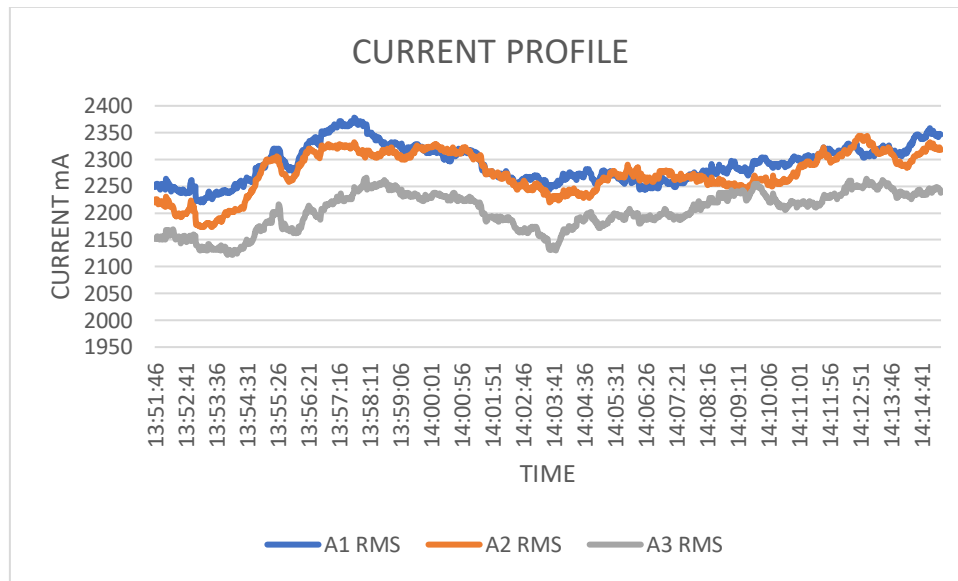
Frequency:



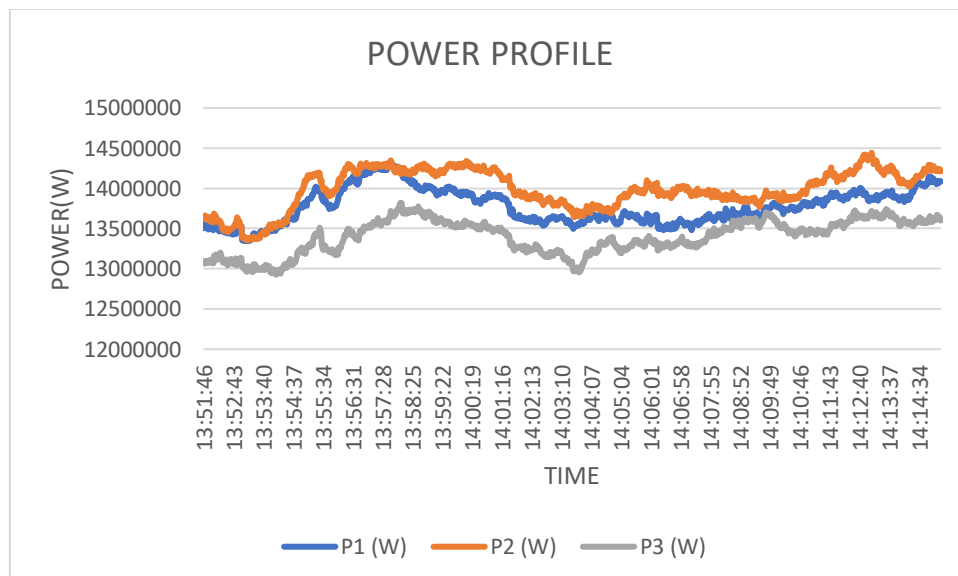
Voltage:



Current:

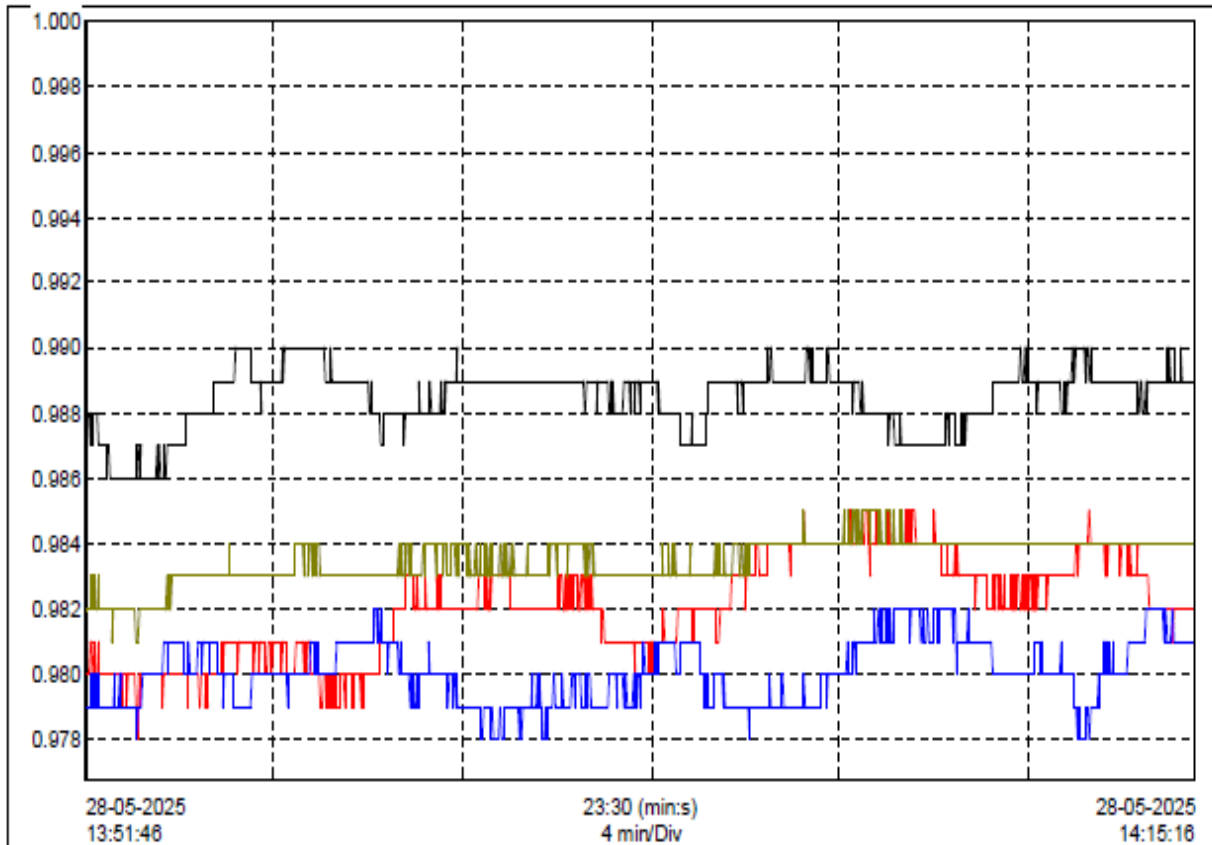


Power:



## Power Factor:

| Name | Date       | Time     | AVG   | MIN   | MAX   | Units | Duration | Units   |
|------|------------|----------|-------|-------|-------|-------|----------|---------|
| PF1  | 28-05-2025 | 13:51:46 | 0.989 | 0.986 | 0.990 |       | 23:31    | (min:s) |
| PF2  | 28-05-2025 | 13:51:46 | 0.982 | 0.978 | 0.985 |       | 23:31    | (min:s) |
| PF3  | 28-05-2025 | 13:51:46 | 0.980 | 0.978 | 0.982 |       | 23:31    | (min:s) |
| PFT  | 28-05-2025 | 13:51:46 | 0.983 | 0.981 | 0.985 |       | 23:31    | (min:s) |
|      |            |          |       |       |       |       |          |         |
|      |            |          |       |       |       |       |          |         |
|      |            |          |       |       |       |       |          |         |
|      |            |          |       |       |       |       |          |         |



| PF1 ( )    |          |       |       |
|------------|----------|-------|-------|
| Date       | Time     | Val   | Units |
| 28-05-2025 | 13:51:46 | 0.988 |       |
| 28-05-2025 | 13:51:47 | 0.988 |       |
| 28-05-2025 | 13:51:48 | 0.988 |       |
| 28-05-2025 | 13:51:49 | 0.988 |       |
| 28-05-2025 | 13:51:50 | 0.988 |       |
| 28-05-2025 | 13:51:51 | 0.987 |       |
| 28-05-2025 | 13:51:52 | 0.988 |       |
| 28-05-2025 | 13:51:53 | 0.987 |       |
| 28-05-2025 | 13:51:54 | 0.988 |       |
| 28-05-2025 | 13:51:55 | 0.988 |       |
| 28-05-2025 | 13:51:56 | 0.988 |       |
| 28-05-2025 | 13:51:57 | 0.988 |       |
| 28-05-2025 | 13:51:58 | 0.988 |       |
| 28-05-2025 | 13:51:59 | 0.988 |       |

28-05-2025 - 13:51:46

Value

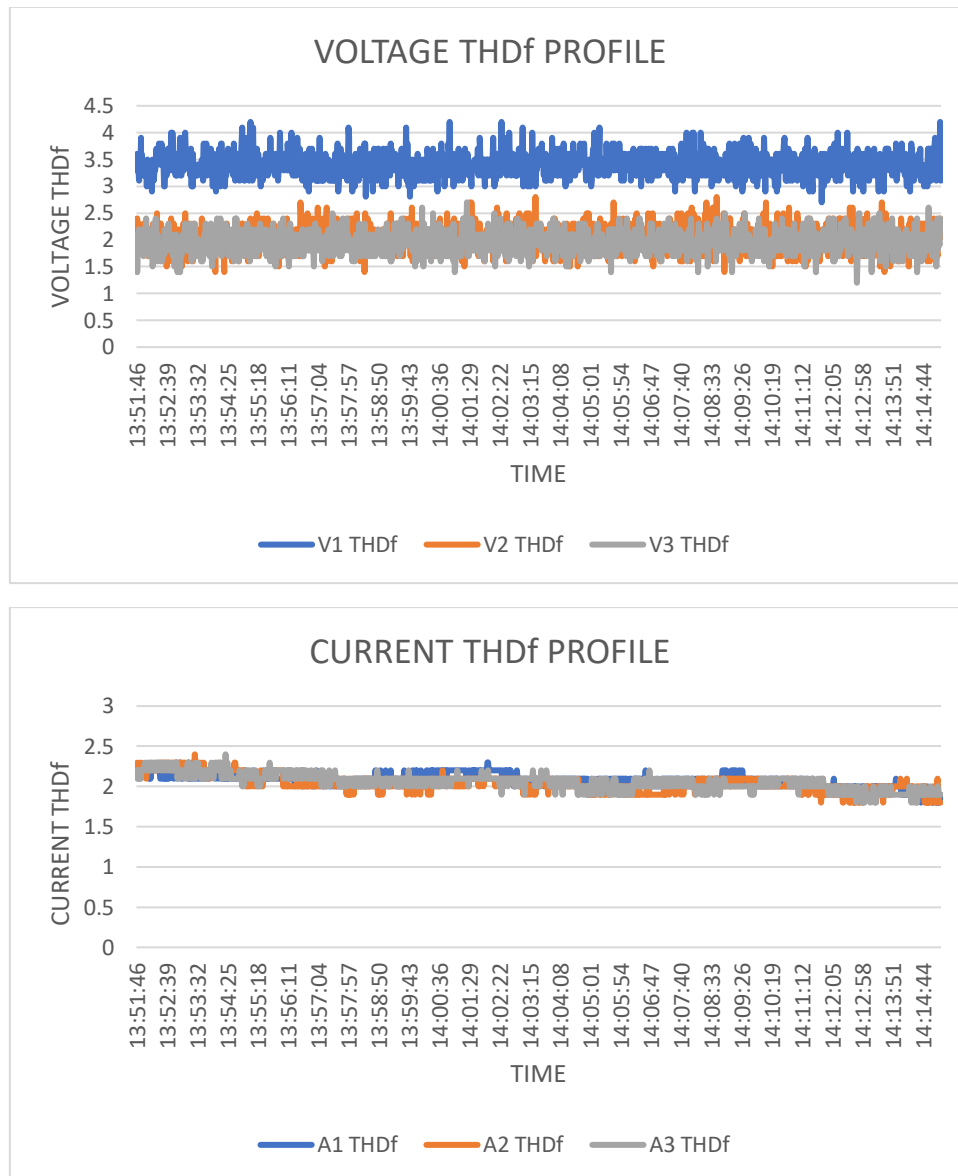
0.988 — PF1

0.980 — PF2

0.979 — PF3

0.982 — PFT

THDf:



Observation:

Power Profile:

- The power flow in phases P1, P2, and P3 ranges from 13 MW to 14.5 MW across the observation period.
- P2 consistently shows higher loading, followed by P1 and then P3.
- This indicates a slight load variation, which can lead to unequal voltage drops, higher neutral current, and reduced system efficiency.

Power Factor:

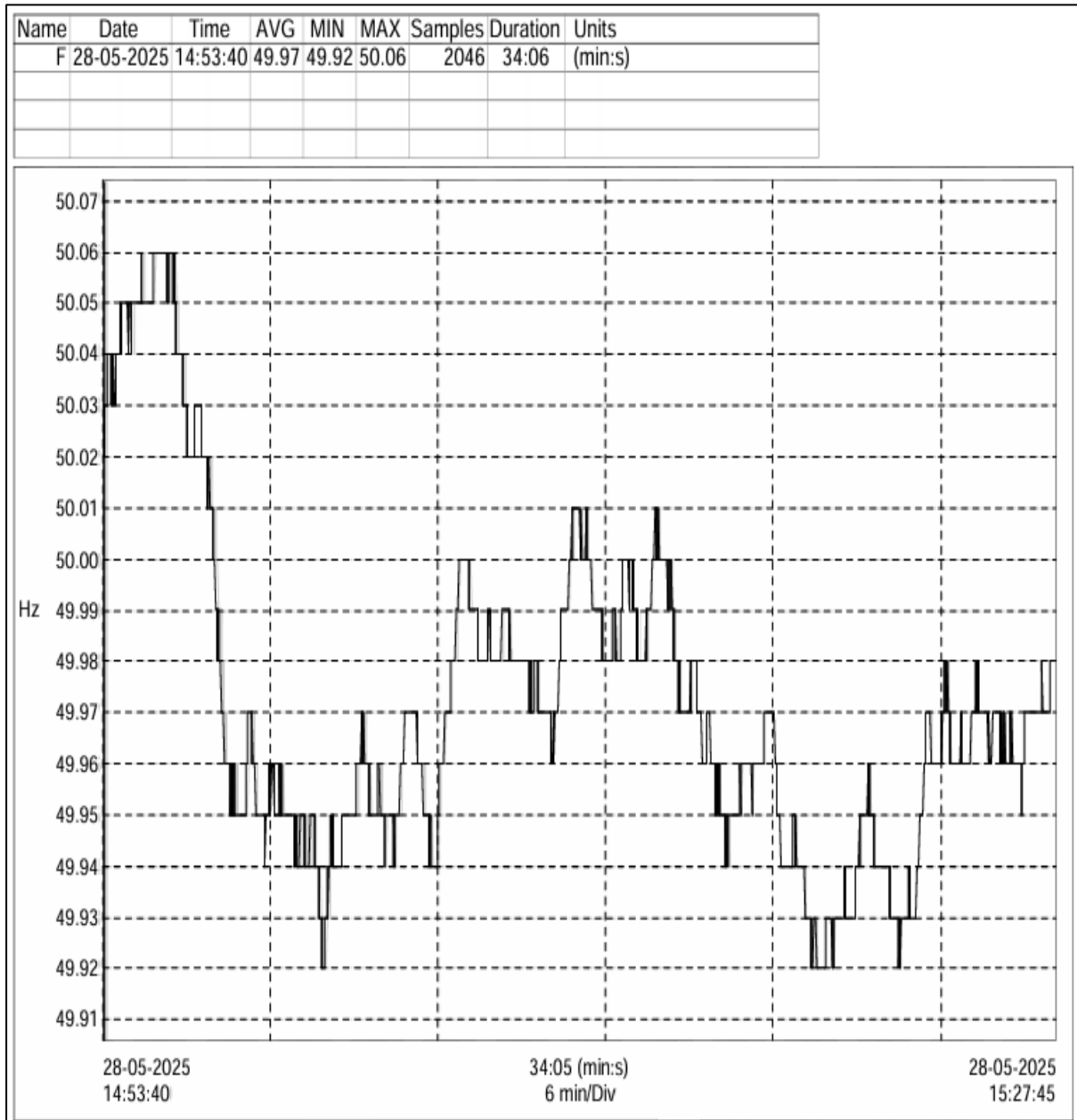
- All power factor values are above 0.978, meeting the IEEE 519 and BEE threshold ( $>0.95$ ).
- However, slight variations in PF2 and PF3 suggest minor reactive power fluctuations.

Total Harmonics Distortion:

- V1 THD shows consistent values above 3.5%, which, while within the IEEE 519 limit of 5%, is borderline for sensitive loads.
- V2 and V3 are within healthy limits.
- Current harmonics are very low, suggesting clean and efficient current waveform.

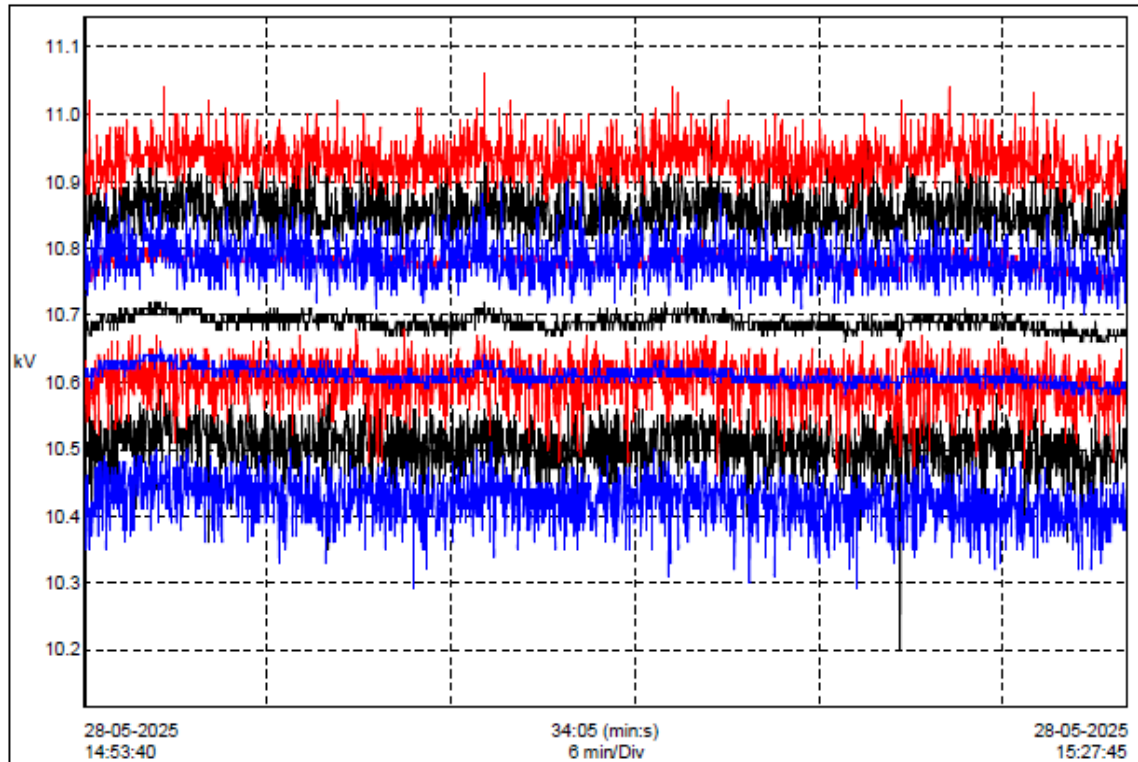
## 7.4 11KV VIRK COLONY OUTGOING FEEDER

Frequency:



Voltage:

| Name    | Date       | Time     | AVG   | MIN   | MAX   | Units | Duration | Units   |
|---------|------------|----------|-------|-------|-------|-------|----------|---------|
| U12 RMS | 28-05-2025 | 14:53:40 | 10.69 | 10.20 | 11.00 | kV    | 34:06    | (min:s) |
| U23 RMS | 28-05-2025 | 14:53:40 | 10.78 | 10.46 | 11.06 | kV    | 34:06    | (min:s) |
| U31 RMS | 28-05-2025 | 14:53:40 | 10.61 | 10.29 | 10.90 | kV    | 34:06    | (min:s) |



| Date       | Time     | Val   | MIN   | MAX   | Units |
|------------|----------|-------|-------|-------|-------|
| 28-05-2025 | 14:53:40 | 10.68 | 10.53 | 10.83 | kV    |
| 28-05-2025 | 14:53:41 | 10.68 | 10.46 | 10.84 | kV    |
| 28-05-2025 | 14:53:42 | 10.68 | 10.53 | 10.90 | kV    |
| 28-05-2025 | 14:53:43 | 10.69 | 10.49 | 10.87 | kV    |
| 28-05-2025 | 14:53:44 | 10.69 | 10.49 | 10.83 | kV    |
| 28-05-2025 | 14:53:45 | 10.68 | 10.51 | 10.83 | kV    |
| 28-05-2025 | 14:53:46 | 10.69 | 10.50 | 10.81 | kV    |
| 28-05-2025 | 14:53:47 | 10.67 | 10.50 | 10.88 | kV    |
| 28-05-2025 | 14:53:48 | 10.67 | 10.50 | 10.84 | kV    |
| 28-05-2025 | 14:53:49 | 10.67 | 10.45 | 10.82 | kV    |
| 28-05-2025 | 14:53:50 | 10.68 | 10.52 | 10.84 | kV    |
| 28-05-2025 | 14:53:51 | 10.68 | 10.56 | 10.87 | kV    |
| 28-05-2025 | 14:53:52 | 10.68 | 10.49 | 10.86 | kV    |
| 28-05-2025 | 14:53:53 | 10.69 | 10.47 | 10.84 | kV    |

28-05-2025 - 14:53:40

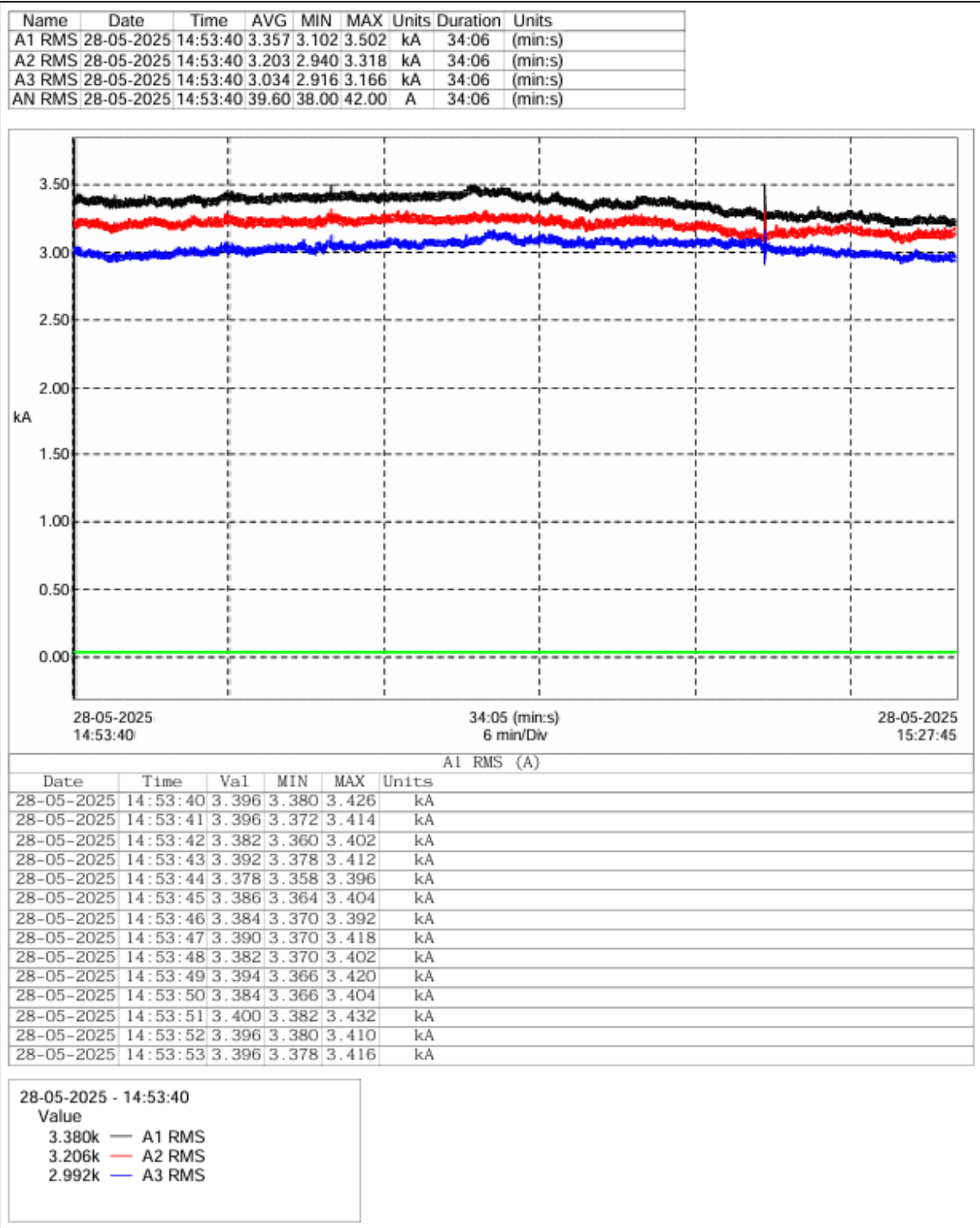
Value

10.53k — U12 RMS

10.57k — U23 RMS

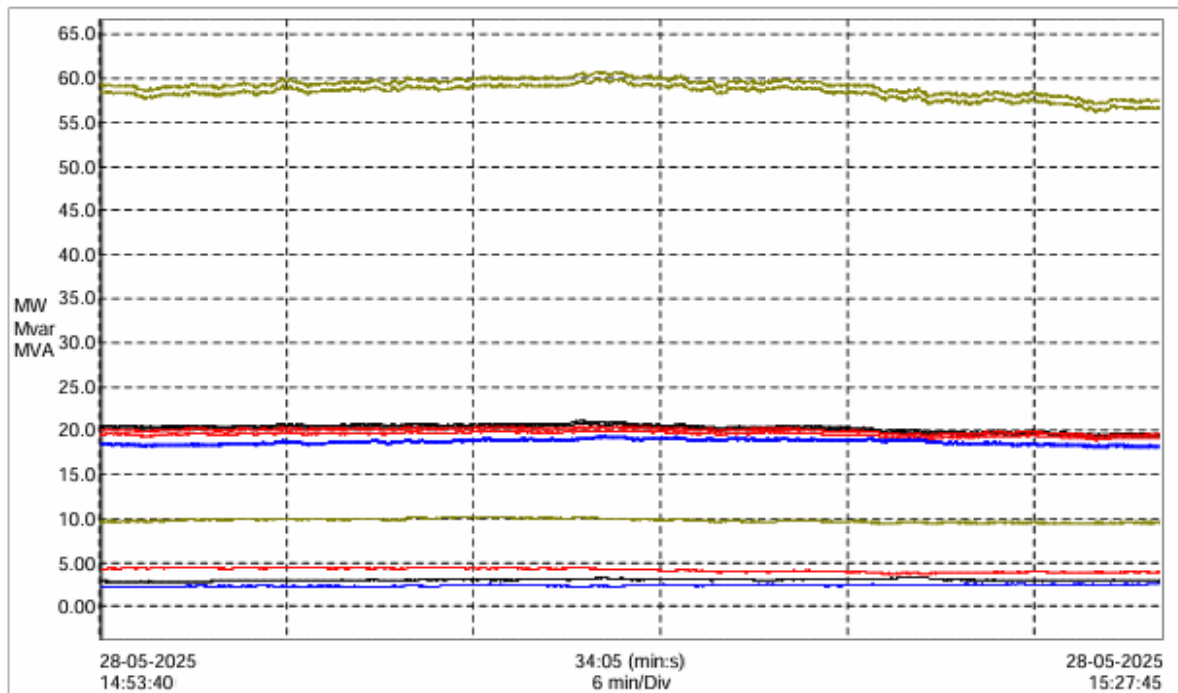
10.43k — U31 RMS

Current:



Power:

| Name     | Date       | Time     | AVG   | MIN   | MAX   | Units | Duration | Units   |
|----------|------------|----------|-------|-------|-------|-------|----------|---------|
| N1 (var) | 28-05-2025 | 14:53:40 | 3.038 | 2.746 | 3.365 | Mvar  | 34:06    | (min:s) |
| N2 (var) | 28-05-2025 | 14:53:40 | 4.157 | 3.690 | 4.468 | Mvar  | 34:06    | (min:s) |
| N3 (var) | 28-05-2025 | 14:53:40 | 2.389 | 2.173 | 2.607 | Mvar  | 34:06    | (min:s) |
| NT (var) | 28-05-2025 | 14:53:40 | 9.806 | 9.392 | 10.26 | Mvar  | 34:06    | (min:s) |
| P1 (W)   | 28-05-2025 | 14:53:40 | 20.16 | 19.26 | 20.87 | MW    | 34:06    | (min:s) |
| P2 (W)   | 28-05-2025 | 14:53:40 | 19.59 | 18.89 | 20.03 | MW    | 34:06    | (min:s) |
| P3 (W)   | 28-05-2025 | 14:53:40 | 18.64 | 18.04 | 19.33 | MW    | 34:06    | (min:s) |
| PT (W)   | 28-05-2025 | 14:53:40 | 58.40 | 56.29 | 59.96 | MW    | 34:06    | (min:s) |



| Date       | Time     | N1 (var) | (var) |
|------------|----------|----------|-------|
| 28-05-2025 | 14:53:40 | 2.882    | Mvar  |
| 28-05-2025 | 14:53:41 | 2.912    | Mvar  |
| 28-05-2025 | 14:53:42 | 2.905    | Mvar  |
| 28-05-2025 | 14:53:43 | 2.927    | Mvar  |
| 28-05-2025 | 14:53:44 | 2.897    | Mvar  |
| 28-05-2025 | 14:53:45 | 2.954    | Mvar  |
| 28-05-2025 | 14:53:46 | 2.906    | Mvar  |
| 28-05-2025 | 14:53:47 | 2.922    | Mvar  |
| 28-05-2025 | 14:53:48 | 2.926    | Mvar  |
| 28-05-2025 | 14:53:49 | 2.904    | Mvar  |
| 28-05-2025 | 14:53:50 | 2.887    | Mvar  |
| 28-05-2025 | 14:53:51 | 2.875    | Mvar  |
| 28-05-2025 | 14:53:52 | 2.828    | Mvar  |
| 28-05-2025 | 14:53:53 | 2.860    | Mvar  |

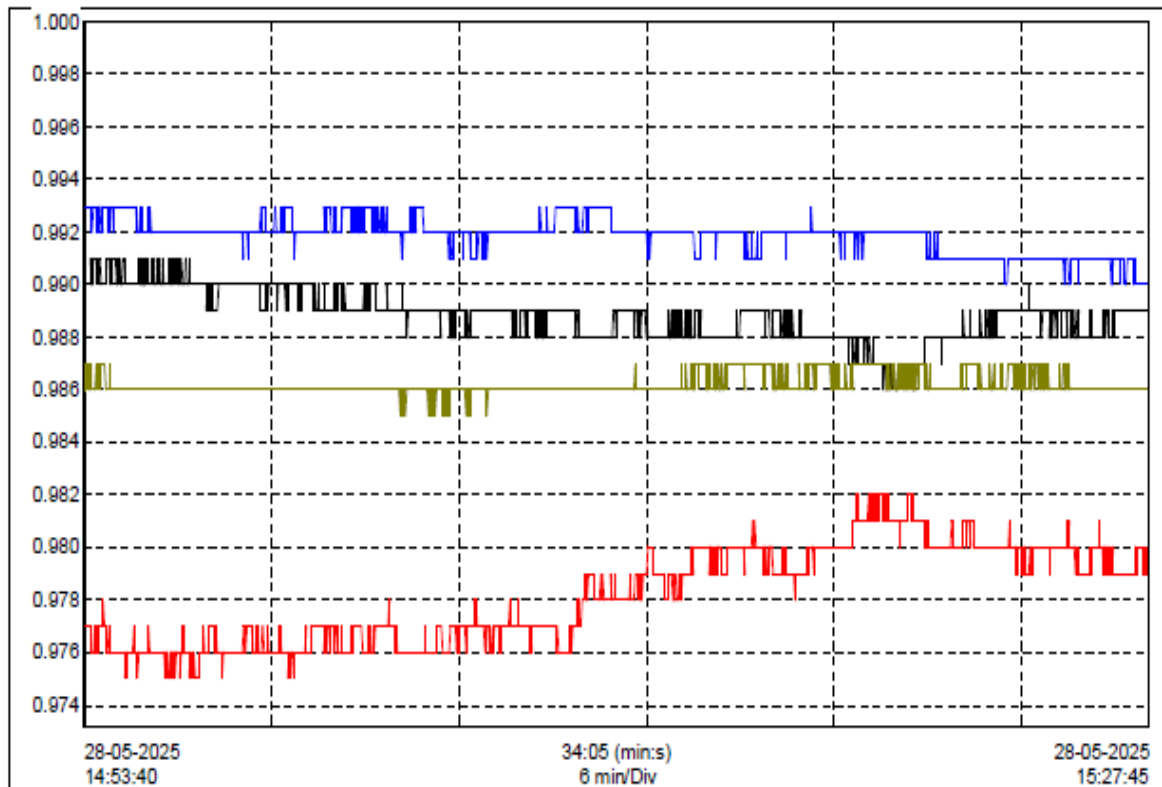
28-05-2025 - 14:53:40

Value

20.44M — P1 (W)  
 19.63M — P2 (W)  
 18.53M — P3 (W)  
 58.60M — PT (W)  
 2.882M — N1 (var)  
 4.305M — N2 (var)  
 2.237M — N3 (var)  
 9.736M — NT (var)  
 20.64M — S1 (VA)  
 20.10M — S2 (VA)  
 18.66M — S3 (VA)  
 59.40M — ST (VA)

## Power Factor:

| Name | Date       | Time     | AVG   | MIN   | MAX   | Units | Duration | Units   |
|------|------------|----------|-------|-------|-------|-------|----------|---------|
| PF1  | 28-05-2025 | 14:53:40 | 0.989 | 0.986 | 0.991 |       | 34:06    | (min:s) |
| PF2  | 28-05-2025 | 14:53:40 | 0.978 | 0.975 | 0.982 |       | 34:06    | (min:s) |
| PF3  | 28-05-2025 | 14:53:40 | 0.992 | 0.990 | 0.993 |       | 34:06    | (min:s) |
| PFT  | 28-05-2025 | 14:53:40 | 0.986 | 0.985 | 0.987 |       | 34:06    | (min:s) |
|      |            |          |       |       |       |       |          |         |
|      |            |          |       |       |       |       |          |         |
|      |            |          |       |       |       |       |          |         |
|      |            |          |       |       |       |       |          |         |



| PF1 ( )    |          |       |       |
|------------|----------|-------|-------|
| Date       | Time     | Val   | Units |
| 28-05-2025 | 14:53:40 | 0.990 |       |
| 28-05-2025 | 14:53:41 | 0.990 |       |
| 28-05-2025 | 14:53:42 | 0.990 |       |
| 28-05-2025 | 14:53:43 | 0.990 |       |
| 28-05-2025 | 14:53:44 | 0.990 |       |
| 28-05-2025 | 14:53:45 | 0.990 |       |
| 28-05-2025 | 14:53:46 | 0.990 |       |
| 28-05-2025 | 14:53:47 | 0.990 |       |
| 28-05-2025 | 14:53:48 | 0.990 |       |
| 28-05-2025 | 14:53:49 | 0.990 |       |
| 28-05-2025 | 14:53:50 | 0.990 |       |
| 28-05-2025 | 14:53:51 | 0.990 |       |
| 28-05-2025 | 14:53:52 | 0.991 |       |
| 28-05-2025 | 14:53:53 | 0.990 |       |

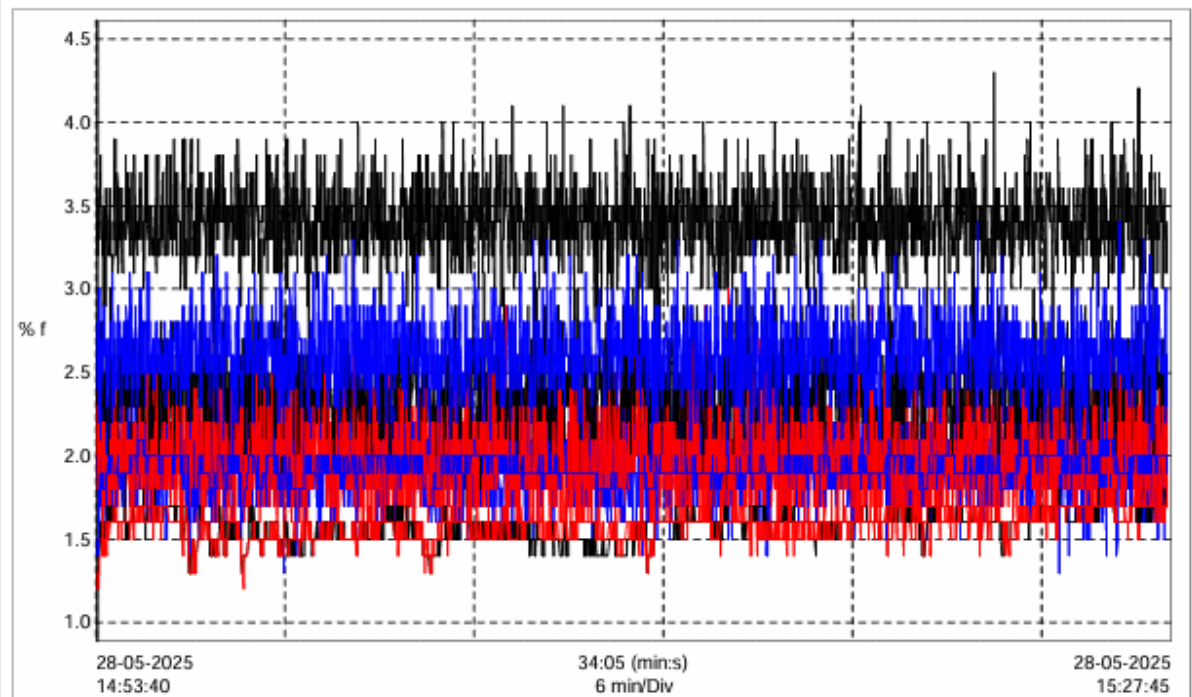
28-05-2025 - 14:53:40

Value

0.990 — PF1  
 0.977 — PF2  
 0.993 — PF3  
 0.986 — PFT

THDf:

| Name     | Date       | Time     | AVG   | MIN   | MAX   | Units | Duration | Units   |
|----------|------------|----------|-------|-------|-------|-------|----------|---------|
| A1 THDf  | 28-05-2025 | 14:53:40 | 1.575 | 1.200 | 1.800 | % f   | 34:06    | (min:s) |
| A2 THDf  | 28-05-2025 | 14:53:40 | 1.584 | 1.200 | 1.900 | % f   | 34:06    | (min:s) |
| A3 THDf  | 28-05-2025 | 14:53:40 | 1.917 | 1.400 | 2.100 | % f   | 34:06    | (min:s) |
| U12 THDf | 28-05-2025 | 14:53:40 | 2.397 | 1.600 | 3.500 | % f   | 34:06    | (min:s) |
| U23 THDf | 28-05-2025 | 14:53:40 | 1.980 | 1.400 | 2.800 | % f   | 34:06    | (min:s) |
| U31 THDf | 28-05-2025 | 14:53:40 | 2.617 | 2.000 | 3.400 | % f   | 34:06    | (min:s) |
| V1 THDf  | 28-05-2025 | 14:53:40 | 3.408 | 2.800 | 4.300 | % f   | 34:06    | (min:s) |
| V2 THDf  | 28-05-2025 | 14:53:40 | 2.033 | 1.400 | 3.000 | % f   | 34:06    | (min:s) |
| V3 THDf  | 28-05-2025 | 14:53:40 | 1.976 | 1.300 | 2.600 | % f   | 34:06    | (min:s) |



| Date       | Time     | Val   | Units |
|------------|----------|-------|-------|
| 28-05-2025 | 14:53:40 | 1.200 | % f   |
| 28-05-2025 | 14:53:41 | 1.200 | % f   |
| 28-05-2025 | 14:53:42 | 1.300 | % f   |
| 28-05-2025 | 14:53:43 | 1.200 | % f   |
| 28-05-2025 | 14:53:44 | 1.400 | % f   |
| 28-05-2025 | 14:53:45 | 1.400 | % f   |
| 28-05-2025 | 14:53:46 | 1.400 | % f   |
| 28-05-2025 | 14:53:47 | 1.500 | % f   |
| 28-05-2025 | 14:53:48 | 1.600 | % f   |
| 28-05-2025 | 14:53:49 | 1.500 | % f   |
| 28-05-2025 | 14:53:50 | 1.600 | % f   |
| 28-05-2025 | 14:53:51 | 1.600 | % f   |
| 28-05-2025 | 14:53:52 | 1.600 | % f   |
| 28-05-2025 | 14:53:53 | 1.500 | % f   |

28-05-2025 - 14:53:40

Value

3.400 — V1 THDf  
 2.400 — V2 THDf  
 2.000 — V3 THDf  
 2.500 — U12 THDf  
 1.800 — U23 THDf  
 2.800 — U31 THDf  
 1.200 — A1 THDf  
 1.200 — A2 THDf

Observation:

Power Profile:

- The active power across all three phases is consistent, within balance and steady condition.
- Reactive power draw (MVAR) is below 10 MVAR, indicating normal compensation is effective.

Power Factor:

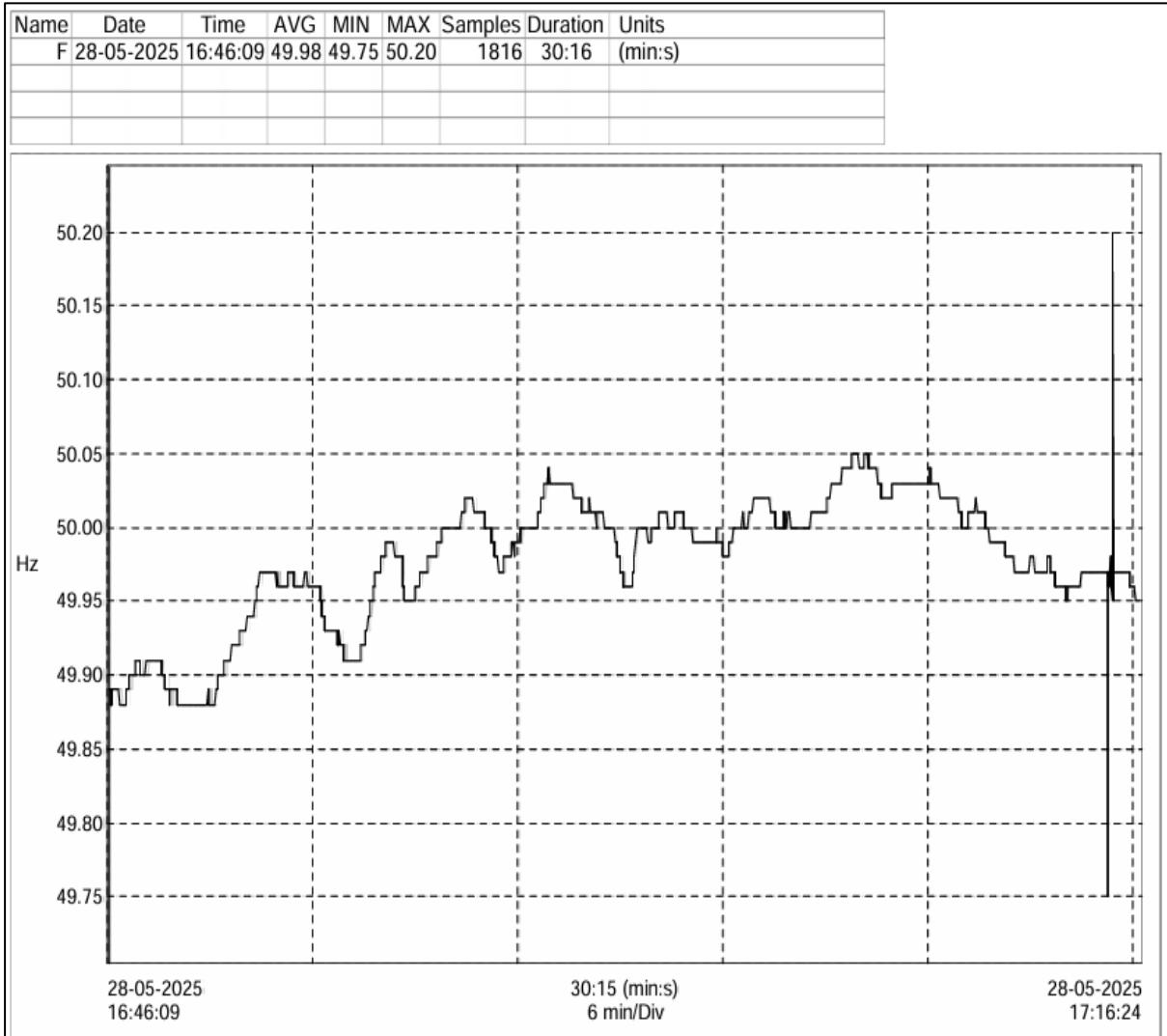
- All phases maintain PF > 0.975, complying with IEEE 519 (>0.95) and BEE norms.
- Slightly lower PF on PF2, but still within acceptable range.

Total Harmonics Distortion:

- Voltage harmonic distortion is well within IEEE 519 limits.
- V1 is relatively higher (up to 4.3%) but does not exceed the 5% limit.
- Current THD is also within the IEEE standard limits. Which shows better system efficiency.

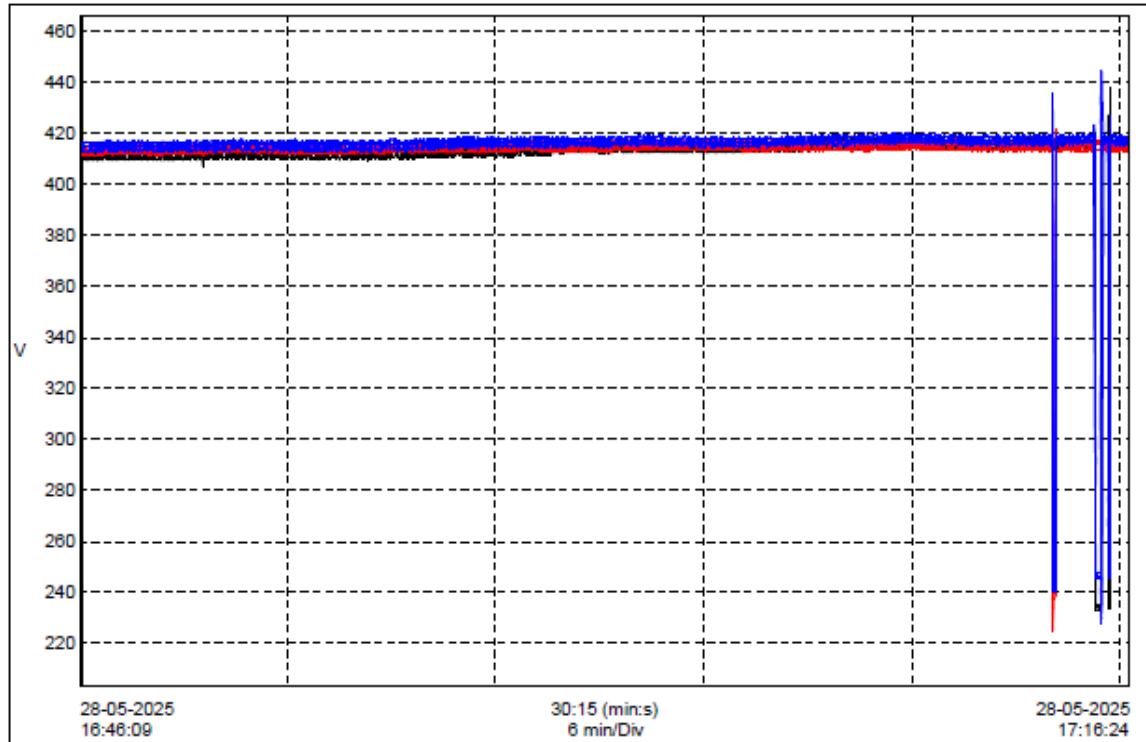
## 7.5 100KVA DT NEARBY PSPCL NEAR OFFICERS FLAT

Frequency:



Voltage:

| Name    | Date       | Time     | AVG   | MIN   | MAX   | Units | Duration | Units   |
|---------|------------|----------|-------|-------|-------|-------|----------|---------|
| U12 RMS | 28-05-2025 | 16:46:09 | 412.9 | 229.6 | 437.8 | V     | 30:16    | (min:s) |
| U23 RMS | 28-05-2025 | 16:46:09 | 414.5 | 224.9 | 421.3 | V     | 30:16    | (min:s) |
| U31 RMS | 28-05-2025 | 16:46:09 | 415.1 | 227.7 | 444.2 | V     | 30:16    | (min:s) |



| U12 RMS (V) |          |       |       |       |       |
|-------------|----------|-------|-------|-------|-------|
| Date        | Time     | Val   | MIN   | MAX   | Units |
| 28-05-2025  | 16:46:09 | 411.3 | 409.1 | 413.3 | V     |
| 28-05-2025  | 16:46:10 | 411.2 | 409.7 | 412.8 | V     |
| 28-05-2025  | 16:46:11 | 411.2 | 409.1 | 413.1 | V     |
| 28-05-2025  | 16:46:12 | 411.2 | 410.7 | 411.6 | V     |
| 28-05-2025  | 16:46:13 | 411.2 | 409.7 | 412.6 | V     |
| 28-05-2025  | 16:46:14 | 411.2 | 409.1 | 413.2 | V     |
| 28-05-2025  | 16:46:15 | 411.2 | 410.6 | 411.7 | V     |
| 28-05-2025  | 16:46:16 | 411.2 | 409.1 | 413.3 | V     |
| 28-05-2025  | 16:46:17 | 411.2 | 410.6 | 411.7 | V     |
| 28-05-2025  | 16:46:18 | 411.2 | 409.2 | 413.1 | V     |
| 28-05-2025  | 16:46:19 | 411.2 | 410.8 | 411.6 | V     |
| 28-05-2025  | 16:46:20 | 411.3 | 409.2 | 413.2 | V     |
| 28-05-2025  | 16:46:21 | 411.3 | 410.7 | 411.8 | V     |
| 28-05-2025  | 16:46:22 | 411.3 | 409.2 | 413.4 | V     |

28-05-2025 - 16:46:09

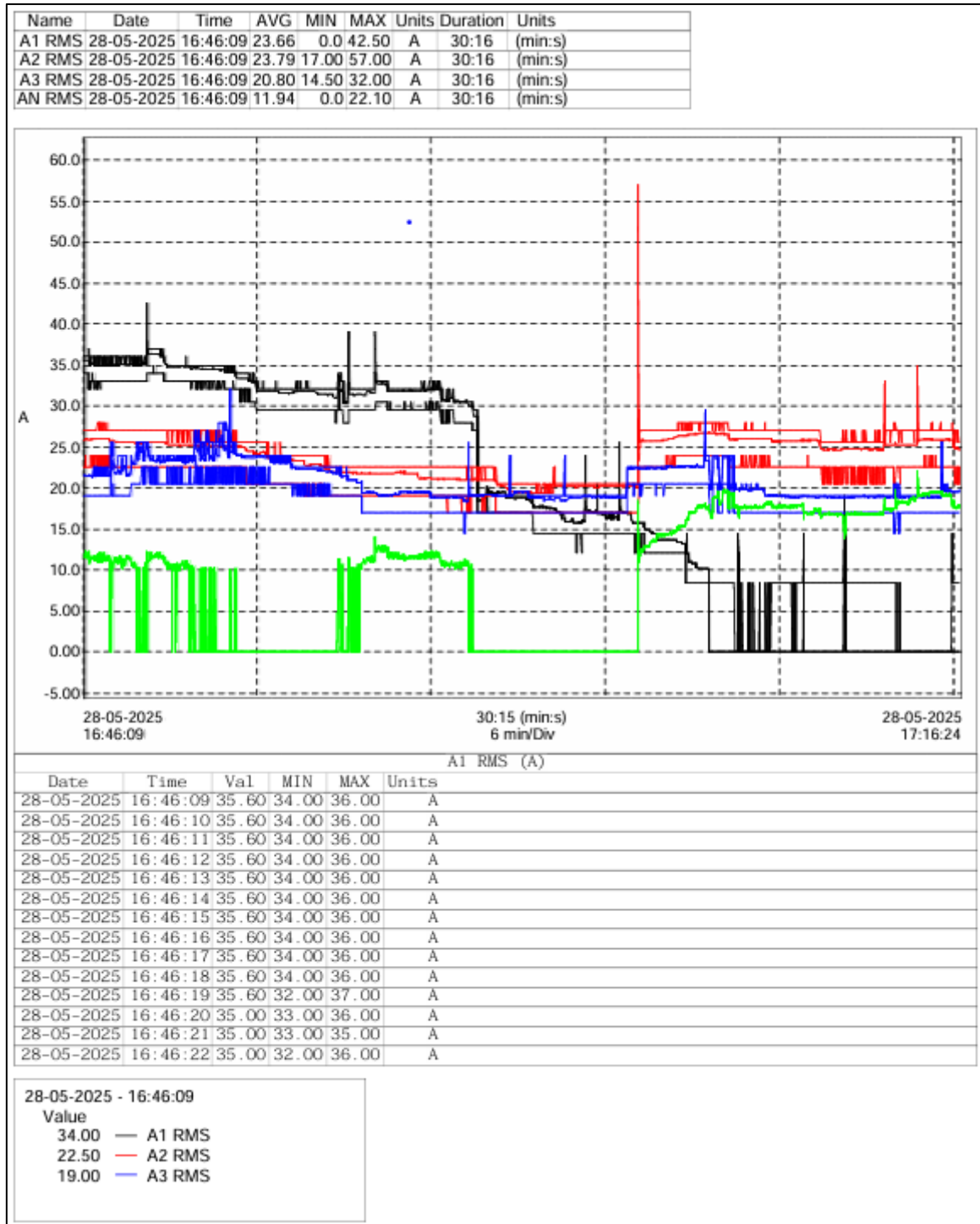
Value

409.1 — U12 RMS

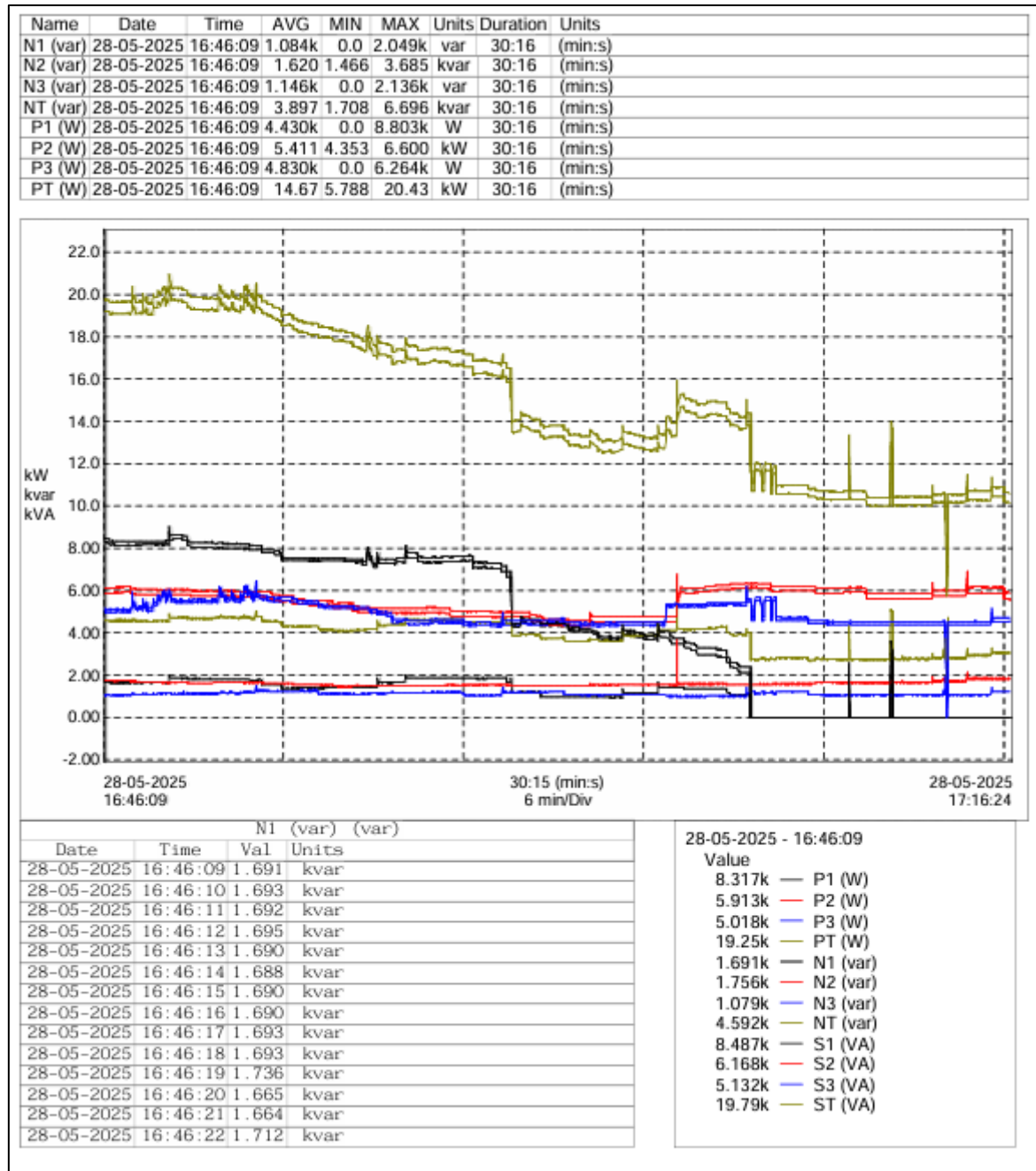
411.3 — U23 RMS

413.3 — U31 RMS

Current:

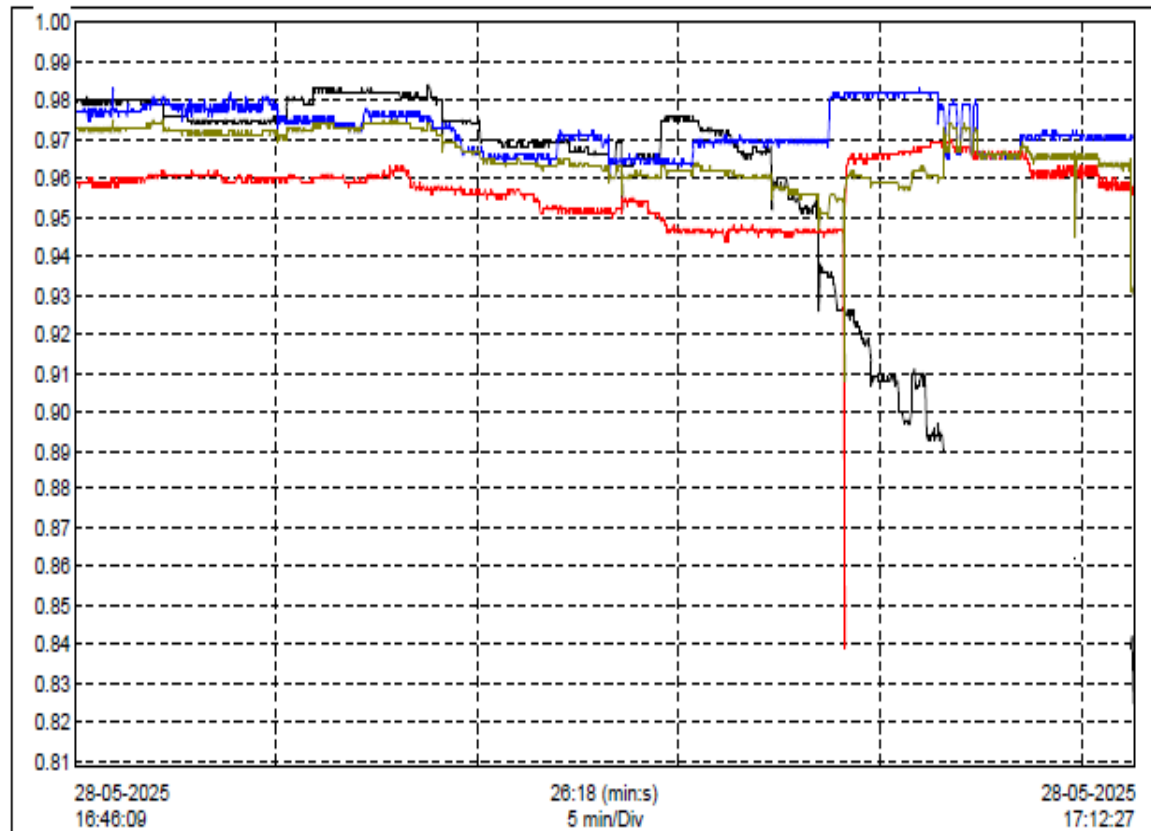


Power:



## Power Factor:

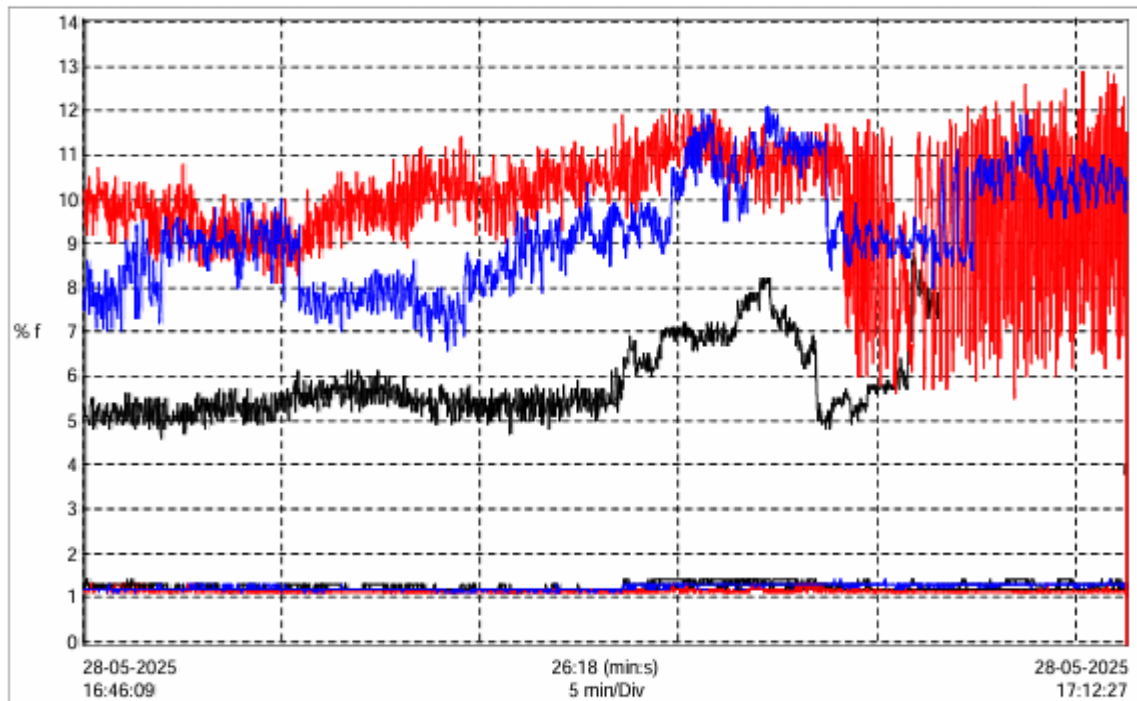
| Name | Date       | Time     | AVG   | MIN   | MAX   | Units | Duration | Units   |
|------|------------|----------|-------|-------|-------|-------|----------|---------|
| PF1  | 28-05-2025 | 16:46:09 | 0.964 | 0.825 | 0.984 |       | 26:19    | (min:s) |
| PF2  | 28-05-2025 | 16:46:09 | 0.957 | 0.839 | 0.970 |       | 30:16    | (min:s) |
| PF3  | 28-05-2025 | 16:46:09 | 0.972 | 0.541 | 0.983 |       | 30:16    | (min:s) |
| PFT  | 28-05-2025 | 16:46:09 | 0.965 | 0.834 | 0.975 |       | 30:16    | (min:s) |
|      |            |          |       |       |       |       |          |         |
|      |            |          |       |       |       |       |          |         |
|      |            |          |       |       |       |       |          |         |
|      |            |          |       |       |       |       |          |         |



| PF1 ()     |          |       |       | 28-05-2025 - 16:46:09 |     |
|------------|----------|-------|-------|-----------------------|-----|
| Date       | Time     | Val   | Units | Value                 |     |
| 28-05-2025 | 16:46:09 | 0.980 |       | 0.980                 | PF1 |
| 28-05-2025 | 16:46:10 | 0.980 |       | 0.959                 | PF2 |
| 28-05-2025 | 16:46:11 | 0.980 |       | 0.978                 | PF3 |
| 28-05-2025 | 16:46:12 | 0.980 |       | 0.973                 | PFT |
| 28-05-2025 | 16:46:13 | 0.980 |       |                       |     |
| 28-05-2025 | 16:46:14 | 0.980 |       |                       |     |
| 28-05-2025 | 16:46:15 | 0.980 |       |                       |     |
| 28-05-2025 | 16:46:16 | 0.980 |       |                       |     |
| 28-05-2025 | 16:46:17 | 0.980 |       |                       |     |
| 28-05-2025 | 16:46:18 | 0.980 |       |                       |     |
| 28-05-2025 | 16:46:19 | 0.979 |       |                       |     |
| 28-05-2025 | 16:46:20 | 0.980 |       |                       |     |
| 28-05-2025 | 16:46:21 | 0.980 |       |                       |     |
| 28-05-2025 | 16:46:22 | 0.979 |       |                       |     |

THDf:

| Name     | Date       | Time     | AVG   | MIN   | MAX   | Units | Duration | Units   |
|----------|------------|----------|-------|-------|-------|-------|----------|---------|
| A1 THDf  | 28-05-2025 | 16:46:09 | 5.833 | 3.800 | 8.800 | % f   | 26:19    | (min:s) |
| A2 THDf  | 28-05-2025 | 16:46:09 | 9.839 | 5.500 | 13.00 | % f   | 30:16    | (min:s) |
| A3 THDf  | 28-05-2025 | 16:46:09 | 9.399 | 6.600 | 12.10 | % f   | 30:16    | (min:s) |
| U12 THDf | 28-05-2025 | 16:46:09 | 1.227 | 1.100 | 8.500 | % f   | 30:16    | (min:s) |
| U23 THDf | 28-05-2025 | 16:46:09 | 1.125 | 1.100 | 6.200 | % f   | 30:16    | (min:s) |
| U31 THDf | 28-05-2025 | 16:46:09 | 1.254 | 1.100 | 9.500 | % f   | 30:16    | (min:s) |
| V1 THDf  | 28-05-2025 | 16:46:09 | 1.420 | 1.100 | 84.00 | % f   | 30:16    | (min:s) |
| V2 THDf  | 28-05-2025 | 16:46:09 | 1.182 | 1.100 | 8.100 | % f   | 30:16    | (min:s) |
| V3 THDf  | 28-05-2025 | 16:46:09 | 1.241 | 1.100 | 5.700 | % f   | 30:16    | (min:s) |



| A1 THDf (% f) |          |       |       |
|---------------|----------|-------|-------|
| Date          | Time     | Val   | Units |
| 28-05-2025    | 16:46:09 | 5.100 | % f   |
| 28-05-2025    | 16:46:10 | 5.200 | % f   |
| 28-05-2025    | 16:46:11 | 5.300 | % f   |
| 28-05-2025    | 16:46:12 | 5.100 | % f   |
| 28-05-2025    | 16:46:13 | 5.100 | % f   |
| 28-05-2025    | 16:46:14 | 5.100 | % f   |
| 28-05-2025    | 16:46:15 | 5.100 | % f   |
| 28-05-2025    | 16:46:16 | 5.000 | % f   |
| 28-05-2025    | 16:46:17 | 5.000 | % f   |
| 28-05-2025    | 16:46:18 | 4.900 | % f   |
| 28-05-2025    | 16:46:19 | 4.900 | % f   |
| 28-05-2025    | 16:46:20 | 5.300 | % f   |
| 28-05-2025    | 16:46:21 | 5.500 | % f   |
| 28-05-2025    | 16:46:22 | 5.400 | % f   |

28-05-2025 - 16:46:09

Value

1.200 — V1 THDf  
 1.200 — V2 THDf  
 1.200 — V3 THDf  
 1.200 — U12 THDf  
 1.100 — U23 THDf  
 1.200 — U31 THDf  
 5.100 — A1 THDf  
 10.00 — A2 THDf

Observation:

Power Profile:

- Active power is significantly lower.
- Phase-wise distribution is reasonably balanced.

Power Factor:

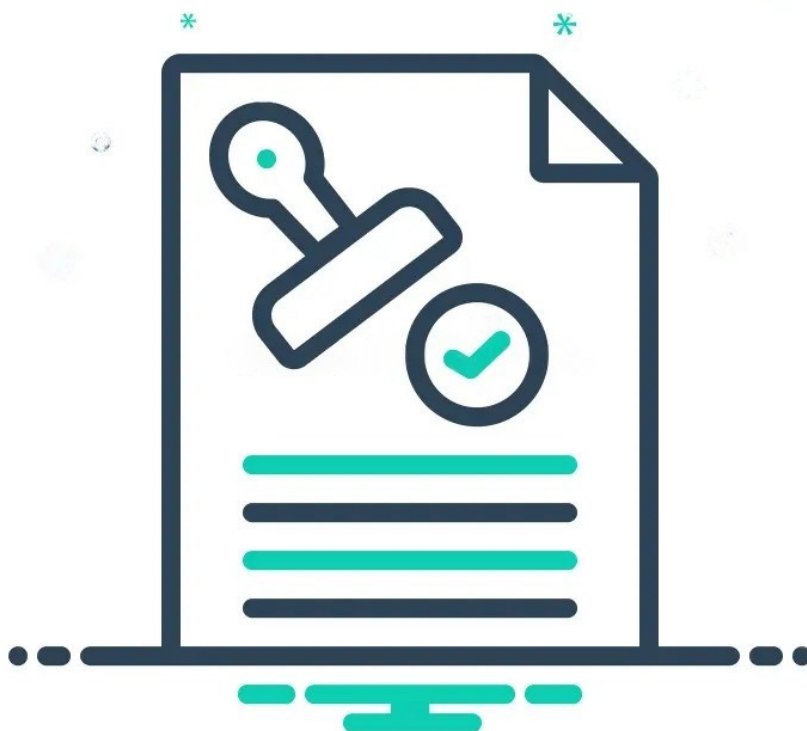
- Average PF is acceptable ( $>0.95$ ), but PF3 and PFT show dips below 0.9, with PF3 minimum at 0.541, which violates IEEE 519 and BEE norms.

Total Harmonics Distortion:

- Here the current and voltage THD are within the permissible limits prescribed by IEEE 519-2014 and BEE guidelines. This indicates that the electrical system maintains good power quality with minimal harmonic distortion.

## 8 Annexures

---



## Annexure- I Introduction of Verification Firm/Team

Eco Energies is a leading solutions provider dedicated to addressing energy and efficiency challenges in today's dynamic and resource-intensive environments. Established in 2011, we specialize in optimizing processes, embracing automation, and enhancing energy management systems. With a commitment to sustainability, we have successfully assisted over 100+ satisfied clients across diverse industry sectors in India, offering tailored energy auditing and consulting services.

### Team and Expertise:

Eco Energies boasts a dedicated team of management and technical professionals with diverse industrial experience. Our team includes lead auditors certified by the Bureau of Energy Efficiency (B.E.E.), Government of India, and the Association of Energy Engineers (A.E.E.), U.S.A. This blend of expertise allows us to deliver unparalleled consultancy and training services in both manufacturing and service industries.

### Our Accreditations: -

Energy Log – Energy Monitoring System 2nd Prize in category as Most Innovative Energy Saving project of the year for 2021. The Power Minister of Haryana personally awarded the Cash Prize of INR 50,000 for this innovative Project.

- Bureau of Energy Efficiency empanelled Grade 2 Energy Service Company
- Accredited Energy Audit Firm of Bureau of Energy Efficiency
- Empanelled with Directorate of Energy Himachal Pradesh
- Team members have International Certification from Association of Energy Engineers, USA
- Team members are Accredited from Bureau of Energy Efficiency
- Empanelled with Power grid for Energy Efficiency Projects
- Empanelled with PCRA for Energy Efficiency Projects
- Empanelled with Gujarat Energy development Agency.
- Empanelled with Uttarakhand Energy Development Agency

Our Team member – Bali Singh has been awarded as Best Energy Engineer of the World for 2021 by AEE, USA

Namdhari Eco Energies Pvt Ltd

Audit Team:

| Team Member         | Designation                                                |
|---------------------|------------------------------------------------------------|
| BALI SINGH          | ACCREDITED ENERGY AUDITOR AEA-206                          |
| NEERAJ GAUR         | CERTIFIED ENERGY AUDITOR (EA 28449) & DISOCM SECTOR EXPERT |
| MURTAZA AHMED GANIE | ENERGY CONSULTANT                                          |
| PRASHANT YADAV      | ENERGY ENGINEER                                            |

## Annexure-II Minutes of Meeting with the DISCOM Team

| MINUTES OF MEETING                                                                |                                                                                                                                                                                                                                 |                                 |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
|  | Punjab State Power Corporation Limited (PSPCL)<br>PSEB Building, The Mall (Sheranwala Gate),<br>Patiala – 147001, Punjab, India Telephone:<br>0175-2220853, 0175-2213570 to 77<br>Fax: 0175-2215897, 0175-2548121, 0175-2504669 | Date: 27 <sup>th</sup> May 2025 |
|  | Namdhari Eco Energies Pvt Ltd. Greater Noida                                                                                                                                                                                    | Revision: NA                    |

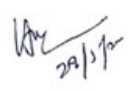
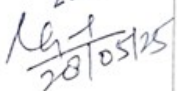
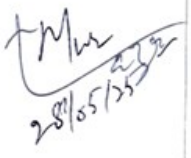
| Topic                                                                                                                                                                                                                                                                             |  | Annual Energy Audit of Punjab State Power Corporation Limited<br>FY 2024-25                                                                                                                          |                                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Meeting Details                                                                                                                                                                                                                                                                   |  |                                                                                                                                                                                                      |                                                                                                                             |
| Date: 27 <sup>th</sup> May 2025<br>to<br>28 <sup>th</sup> May 2025                                                                                                                                                                                                                |  | Time: 11:00 Am                                                                                                                                                                                       | Venue: Punjab State Power Corporation limited (PSPCL)<br>Shakti Vihar, B-3 Shed, PSPCL- Patiala – 147001,<br>Punjab, India. |
| Punjab State Power Corporation Limited (PSPCL), Team:                                                                                                                                                                                                                             |  | 1. Er. Saleem Mohammad (Dy CE/DSM)<br>2. Er. Harpreet Raj Singh Sandhu (ASE/DSM)<br>3. Er. Ravi Verma (ASE/Distribution Projects(D-1) cum Energy Auditor EA-7969<br>4. Er. Bhupinder Singh (AEE/DSM) |                                                                                                                             |
| Consultant Team                                                                                                                                                                                                                                                                   |  | 1. Mr. Bali Singh<br>2. Mr. Neeraj Gaur<br>3. Mr. Murtaza Ahmad Ganie                                                                                                                                |                                                                                                                             |
| Agenda: The meeting was Convened to discuss the findings of the Annual Energy Audit conducted by Namdhari Eco Energies Pvt Ltd for Punjab State Power Corporation Limited (PSPCL). The audit covered the various data points and measurements as outlined in the agenda.          |  |                                                                                                                                                                                                      |                                                                                                                             |
| Meeting Minutes:                                                                                                                                                                                                                                                                  |  |                                                                                                                                                                                                      |                                                                                                                             |
| 1. <b>Introduction:</b> The meeting commenced with introductions to all attendees and a brief overview of the purpose of the Annual Energy Audit.                                                                                                                                 |  |                                                                                                                                                                                                      |                                                                                                                             |
| 2. <b>Data Provided by PUNJAB STATE POWER CORPORATION LIMITED:</b> The Consultant, Namdhari Eco Energies Pvt Ltd, has shared the proceeds of the Audit and data required for the verification.                                                                                    |  |                                                                                                                                                                                                      |                                                                                                                             |
| 3. <b>Verification of Energy and Losses:</b> The Consultant verified the purchase energy, billed energy, transmission loss, billed amount, collected amount, and AT&C loss. These figures were cross-checked against the data provided by PUNJAB STATE POWER CORPORATION LIMITED. |  |                                                                                                                                                                                                      |                                                                                                                             |
| 4. We verified the sample-based input energy and Consumer Billed energy from 1 <sup>st</sup> April 2024 to 31 <sup>st</sup> March 2025.                                                                                                                                           |  |                                                                                                                                                                                                      |                                                                                                                             |
| 5. Verified all the energy purchase records w.r.t Source Energy Bills.                                                                                                                                                                                                            |  |                                                                                                                                                                                                      |                                                                                                                             |
| 6. Verified distributed energy at different levels of consumers.                                                                                                                                                                                                                  |  |                                                                                                                                                                                                      |                                                                                                                             |
| 7. <b>Verification of Consumer Data:</b> The Consultant verified the category-wise number of consumers, connected load, and billed energy. The data was reviewed for accuracy and consistency.                                                                                    |  |                                                                                                                                                                                                      |                                                                                                                             |
| 8. <b>Infrastructure Details:</b> The Consultant examined the infrastructure details, including the number of 66kV, 11kV substations, and DT substations, as well as the number of voltage-wise feeders. This information was validated during the audit.                         |  |                                                                                                                                                                                                      |                                                                                                                             |

9. **Field Measurements:** The Consultant performs the filed measurement at 100 KVA -DT-(11KV/440V) at the PSPCL own premises. The Feeder Level Sample Measurements was also be done during the Annual audit at Shakti Vihar Substation 66/11 KV substation , Sampled on 11KV outgoing Sant Nagar feeder, 11KV outgoing RAJA ENCLAVE feeder, and on Other Substation Named Patiala 66/11kv on which Two Test was conducted on 11KV outgoing Feeder Towards HIRABAGH and VIRK COLONY.
10. **Substation Power quality:** Sample test on Incoming & Outgoing Feeder field measurements were conducted, and power quality, PF, Harmonics Voltage and current were recorded.
11. The installed meter value was checked against the NABL calibrated power Analyzer by the Auditor Team. The meter was working satisfactory, and the power readings were matching satisfactory.
12. **Data Collection Completion:** The Consultant confirmed that all the necessary data, as required in the Annual Energy Accounting Form, had been successfully collected. Additionally, sample measurements and verifications were completed during the audit.

#### Recommendations/Points of Discussion:

13. **Change in Kandi Feeder Methodology:**  
From 2021 onwards, PSPCL has revised its methodology for billing unmetered AP *Kandi mixed feeders*. These feeders, typically located along riverbanks, originally ranged from 325–350 in number in 2021. However, as of 1st April 2024, only 263 feeders remain classified as mixed Kandi feeders, following the segregation of Exclusive Agricultural Pumping (AP) supply feeders in Kandi mixed are separated and billed with input energy pumped after subtracting the losses from the that year. This is the reason for the continuous reduction in the losses of DISOCM from 2021-22 to 2023-24
14. **Consumption Split for Kandi Feeders:**  
PSPCL considers 30% of the pumped energy for Kandi feeders as Agricultural (AP) supply, while the remaining 70% is treated as metered and billed non-AP consumption. Additionally, actual technical losses of the relevant financial year (e.g., 10.76% in FY 2023–24) were deducted from the pumped energy.
15. **Implementation of New Methodology:**  
A new methodology was introduced by the Punjab Government in August 2024, applicable retrospectively from FY 2023–24. This change significantly impacted on the reported losses and billing figures of PSPCL.
16. **Impact of Methodology Change:**  
Due to the new methodology, there is an approximate reduction of **600 MU** in billed energy. This variance was directly attributed to the revised accounting and categorization norms implemented by PSPCL.
17. **Billed Data Validation:**  
Billed energy data was cross-verified using the PSPCL online portal, where feeder-wise data was accessed and matched against submitted reports.

Closing Remarks: The meeting concluded on a positive note, with both parties expressing their appreciation for each other's cooperation during the audit process. The Consultant assured PSPCL that having collected the relevant data the company assures timely completion of the Audit exercise.

| Signed on behalf Punjab State power Corporation Limited (PSPCL)                             |                                                                                    | Signed on behalf of Namdhari Eco Energies Pvt Ltd                                   |                                                                                      |
|---------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Name                                                                                        | Signature & Date                                                                   | Name                                                                                | Signature & Date                                                                     |
| 1. Er. Saleem Mohammad<br>(Dy CE/DSM)                                                       |   | 1. Mr. Bali Singh (Accredited<br>Energy Auditor- AEA-206)                           |   |
| 2. Er. Harpreet Singh<br>Sandhu (ASE/DSM)                                                   |   | 2. Mr. Neeraj Gaur (Certified<br>Energy Auditor EA-30332 &<br>Discom Sector Expert) |   |
| 3. Er. Ravi Verma<br>(ASE/Distribution<br>Projects (D-1) cum<br>Energy Manager EA-<br>7969) |   | 3. Murtaza Ahmad Ganie                                                              |  |
| 4. Er. Bhupinder Singh<br>(AEE/DSM)                                                         |  |                                                                                     |                                                                                      |


  
Dy. CE/DSM  
PSPCL Patiala


  
**Bali Singh**  
Accredited Energy Auditor (AEA-206)  
Bureau of Energy Efficiency  
Ministry of Power, Govt. of India

## Annexure-III Check List Prepared by Auditing Firm

| Sr. No. | Particulars                                                                                                                                                                              | Data Provided by PSPCL                                                                                                      | Remarks                                                 |
|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| 1.      | Annual Performance review data for the FY 2024-25 (April 2024 to March 2025)                                                                                                             | Detailed Energy accounting FY 2024-25                                                                                       | Internal data Base & Calculation Sheet                  |
| 2.      | Details of purchased energy                                                                                                                                                              | Power purchase bills documents, energy accounts, Audit statement, tariff petition                                           | Bills to PSPCL                                          |
| 3.      | Transmission loss %                                                                                                                                                                      | Calculation of transmission loss viz difference in total energy purchased and total energy drawl at distribution periphery. | Based on Generator bills and Implementation Schedule    |
| 4.      | Transmission loss in (MU) Energy sold outside the periphery, Open access sale, EHT Sale                                                                                                  | Energy accounting statements                                                                                                | Statement and as per formula mentioned in the BEE forma |
| 5.      | Net input energy (received at DISCOM periphery, after adjustment) in MU                                                                                                                  | Internal data base                                                                                                          | A per Internal data base                                |
| 6.      | Energy input details meter wise, with other mentioned details                                                                                                                            | Statements, MIS Database                                                                                                    | As per Internal data base                               |
| 7.      | Summary of Circle wise Loss Number of metered consumers and connected load, category wise of each circle Number of un-metered consumers and connected load, category wise of each circle | Statements, MIS Database                                                                                                    | As per Internal data base                               |
| 8.      | Circle wise input Energy for billed meter energy and billed unmetered energy                                                                                                             | Meter logs through which input energy of circle was computed.                                                               | As per Internal data base                               |

#### Annexure- IV Brief Approach, Scope & Methodology for Audit

The Scope of Work for the detailed energy audit is as per following:

1. Visit to DISCOM office and discussion with DISCOM officials and management on Energy Audit (Accounting), Energy Efficiency and Energy Management.
2. Verification of details of category wise nos. of consumer and their annual energy consumption (Domestic, Industrial, Commercial, Agricultural and Municipalities)
3. Verification of details of category wise nos. of consumer and their annual energy consumption (LT, HT, EHT, Unmetered connections)
4. Verification of details of nos. of connections, nos. of disconnections, connected load and % of total connected load, energy billed, Net Input energy, Power Factor, Total Supply Hour, Scheduled outage, scheduled supply hours, Unscheduled Outage, Available Supply Hours.
5. Verification of details of Feeders by consumer class of categories (Domestic, Industrial, Commercial, Agricultural and Municipalities)
6. Verification of Metered Energy Sales
7. Verification of Unmetered Energy Sales
8. Estimation of unaccounted energy / theft
9. Verification of Total Energy Billed, Amount billed, Gross Amount Collected, Arrears Collected, subsidy received from state and central government.
10. Verification of Average Billing Rate (ABR)
11. Total revenue billed categories wise & Consumption wise
12. Categories wise & Consumption wise ABR with tariff subsidy
13. Categories wise & Consumption wise ABR without tariff subsidy
14. Verification of T & D Loss
15. Verification of collection Efficiency (Division Wise)
16. Verification of Billing Efficiency (Division Wise)
17. Verification of Transmission and Distribution Losses
18. Verification of AT & C Losses
19. Analysis of T & D Losses, AT & C Losses

20. Review of the energy losses data (AT & C & T&D) of last 3 years with the authenticated documents.
21. Verification of detailed calculation methodology adopted by DISCOMs for calculating AT & C and T & D loss.
22. Study of Loss Reduction measures undertaken by DISCOM.
23. Study of Demand Side Management undertaken by DISCOM
24. Identification of a power sub-station at 66kV/33kV level having input energy injection points and 11kV/440V transformers for verification of the status of energy metering along with their healthiness of incoming / outgoing feeders at 66kV, 33 kV and 11 kV and DTRs at field for sample study.
25. Carrying out field study to ascertain the status of consumer metering, type and healthiness for various categories of consumers, meter calibration frequency bands the time taken for replacement of faulty meters.
26. Verification of energy sales (metered and unmetered) in the distribution network area of identified power sub-station.
27. Computation of losses:
  - a) Above 11 kV level:
    - ✓ Computation of grid losses by using grid balancing approach.
    - ✓ Verification of the healthiness and life of Power transformer.
    - ✓ Computation of energy handled and power transformer losses at each voltage level (like 66/33, 33/11, 66/11).
  - b) At 11 kV level:
    - ✓ Computation feeder wise losses of all 11kV feeders emanating from identified power substation.
  - c. Below 11 kV level:
    - ✓ Calculation of DT transformation losses.
    - ✓ Verification the healthiness and life of distribution transformer.
    - ✓ Computation LT losses (DT wise) under the distribution network of identified power substation.
28. Evaluation of existing Energy Management policy, Energy Management systems.
29. Providing recommendation to reduce T&D loss, AT & C Losses, furnishing details of energy saving measures, investment to be made and cost benefit analysis of each recommended energy savings measures.
30. Identification of cost-effective energy saving opportunities in short, medium & long term.
31. Development of an action plan for time bound implementation activities.
32. Based on the above study the draft detailed energy audit report is prepared and submitted for review of the management. After receipt of necessary observation, the draft report shall be modified, and final report shall be submitted to the management.

33. The Detailed Energy Audit and report preparation has been carried out in accordance with provision of "The Bureau of Energy Efficiency (Manner and Intervals of Time for conduct of Energy Audit) Regulations, 2010" and its amendment from time to time and based on revised scope of work as prescribed by BEE.

#### Methodology:

The following step by step methodology and approach were adopted to carry out the detailed energy audit of PSPCL Utility:

##### A. Informing Management:

- The energy audit team informed the management of PSPCL about the planned visit for conducting the energy audit.

##### B. Pre-Audit Meeting:

- A meeting was held with concerned PSPCL officials to explain the significance of the energy audit for Designated Consumers (DCs) and to outline the procedure for the audit work.

##### C. System Familiarization:

- A representative from PSPCL accompanied the energy audit team to different sections, including MIS (Management Information System), MRT (Meter Reading & Testing), ABT (Availability Based Tariff) cell, and Energy Audit section. This allowed the team to familiarize themselves with the systems and collect technical and financial information Data Collection:
- The energy audit team collected data through discussions with Technical and Commercial in-charges of PSPCL and from past Management Information System (MIS) records.

##### D. Utility Infrastructure Details:

- The details of divisions, sub-divisions, sections, assets list, and network configurations (e.g., 220/132/33 KV and 11 KV networks) were collected.

##### E. Consumer and Energy Consumption Details:

- Information related to the number of consumers in various categories (Domestic, Industrial, Commercial, Agricultural, and Municipalities) with their annual energy consumption (Low Tension (LT), High Tension (HT), Extra High Tension (EHT), Unmetered connections) was gathered.

##### F. Supply and Billing Data:

- Various supply-related data, billing information, net input energy, power factor, supply hours, outage details, and metered/unmetered energy sales were collected.

##### G. Metering and Power Loss Analysis:

- Measurement was carried out at sample basis to analyze power loss and unaccounted energy at 33 KV and 11 KV meter points.

##### H. Billing Efficiency and Collection Efficiency Calculation:

- Division-wise billing efficiency and collection efficiency were calculated based on the data from the last three financial years.

##### I. Loss Analysis:

- T&D (Transmission and Distribution) losses and AT&C (Aggregate Technical and Commercial) losses for the last three financial years were calculated.

##### J. Demand Side Management and Loss Reduction Measures:

- The energy audit team studied the demand-side management and loss reduction measures undertaken by PSPCL Utility.

##### K. Energy Management Policy and Conservation Options:

- The existing Energy Management policy and systems were evaluated, and energy conservation options to reduce T&D and AT&C losses were identified and prioritized.
- L. Draft Energy Audit Report:
- A draft soft copy of the energy audit report, containing observations, recommendations, financial justifications, and vendor support data, was prepared and submitted to PSPCL for acceptance.
- M. Final Report Submission:
- After PSPCL accepts the draft energy audit report, the final energy audit report will be submitted to the management of PSPCL.

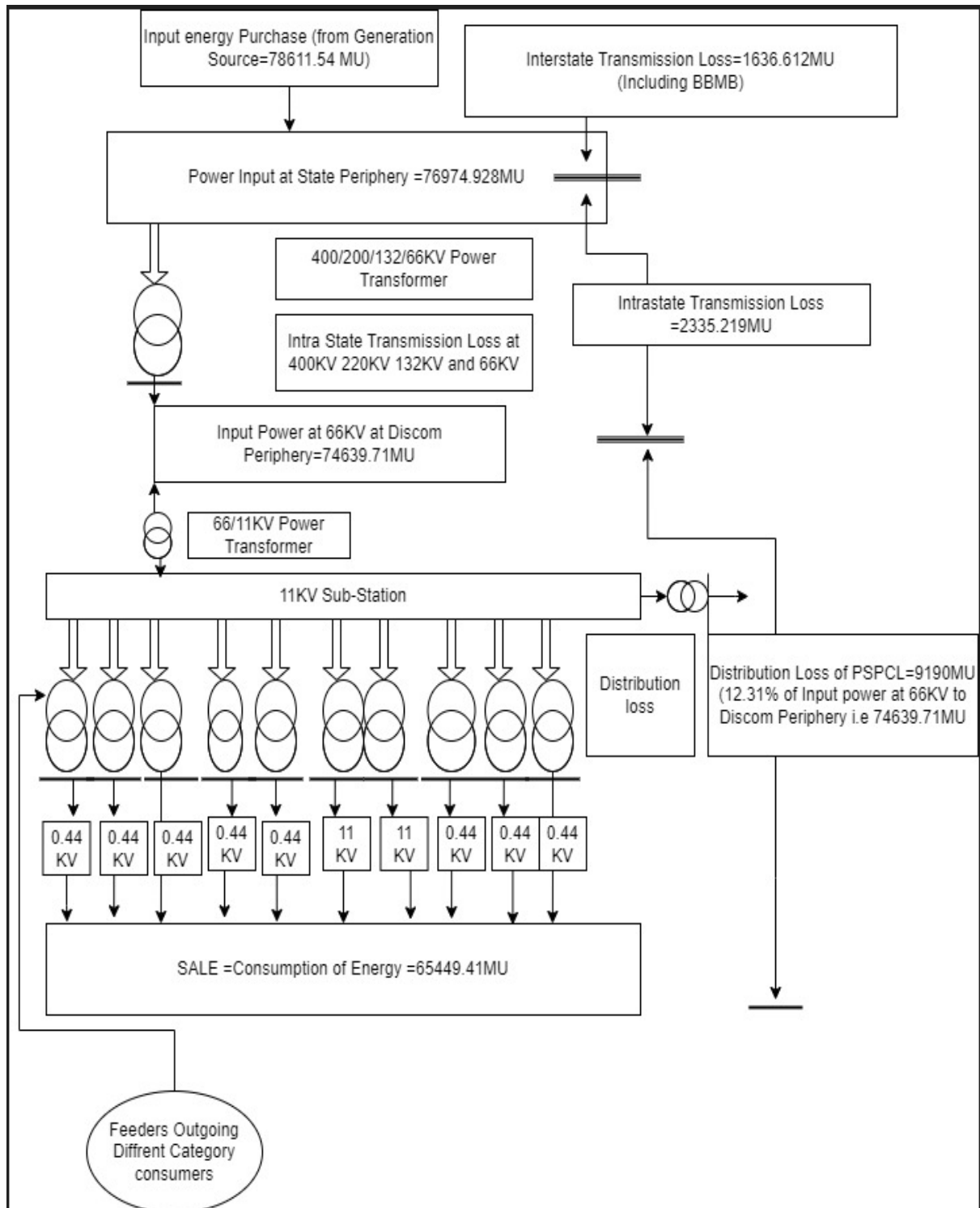
The energy audit is crucial in identifying areas for improvement, optimizing energy consumption, reducing losses, and enhancing overall energy efficiency for PSPCL.

## Annexure- V Infrastructure Details

| Parameters              | Total    | Remarks (Source of data) |
|-------------------------|----------|--------------------------|
| Number of Circles       | 21       | CE/Planning              |
| Number of Divisions     | 104      | CE/Planning              |
| Number of Sub-Divisions | 508      | CE/Planning              |
| Number of Feeders       | 13658    | Director/D Reports link  |
| Number of DTs           | 1250538  | Director/D Reports link  |
| Number of Consumers     | 11008964 | CE/Planning              |

| Performance Summary of Electricity Distribution Companies |                                                                                                  |                   |                               |
|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------|-------------------|-------------------------------|
| 1                                                         | Period of Year of (FY) information including Date and Month (Start & End)                        | Information       | 1 April 2024 to 31 March 2025 |
| 2                                                         | Technical Details                                                                                |                   |                               |
| (a)                                                       | Energy Input Details                                                                             |                   |                               |
| (i)                                                       | Input Energy Purchase (From Generation Source)                                                   | Million kwh       | 78611.54                      |
| (ii)                                                      | Net input energy (at DISCOM Periphery after adjusting the transmission losses and energy traded) | Million kwh       | 74639.71                      |
| (iii)                                                     | Total Energy billed (is the Net energy billed, adjusted for energy traded))                      | Million kwh       | 65449.41                      |
| (b)                                                       | Distribution (D) loss Details                                                                    | Million kwh       | 9190.30                       |
|                                                           |                                                                                                  | DISTRIBUTION LOSS | %                             |
|                                                           |                                                                                                  |                   | 12.31%                        |
|                                                           | Collection Efficiency                                                                            | %                 | 91.80%                        |
| (c)                                                       | Aggregate Technical & Commercial Loss                                                            | %                 | 19.51%                        |

## Annexure- VI Electrical Distribution System



## Annexure- VII Category Wise Service Details

| Period From 01.04.2024 To 31.03.2025 |                                                   |                                           |                            |                 |                           |                                                  |
|--------------------------------------|---------------------------------------------------|-------------------------------------------|----------------------------|-----------------|---------------------------|--------------------------------------------------|
| S. No                                | Type of Consumers                                 | Category of Consumers (EHT/HT/LT /Others) | Voltage Level (In Voltage) | No of Consumers | Total Consumption (In MU) | Remarks (Source of data)                         |
| 1                                    | Domestic                                          | EHT/HT/LT                                 | 400/220/6/33/11/LT         | 8151272         | 20124.980                 |                                                  |
| 2                                    | Commercial                                        | EHT/HT/LT                                 | 400/220/6/11/LT            | 1297737         | 5226.749                  |                                                  |
| 3                                    | IP Sets                                           |                                           |                            |                 |                           |                                                  |
| 4                                    | Hor. & Nur. & Coffee/Tea & Rubber (Metered)       | NA                                        | NA                         |                 |                           |                                                  |
| 5                                    | Hor. & Nur. & Coffee/Tea & Rubber (Flat)          | NA                                        | NA                         |                 |                           |                                                  |
| 6                                    | Heating and Motive Power                          | NA                                        | NA                         |                 |                           |                                                  |
| 7                                    | Water Supply                                      |                                           |                            | 16026           |                           | Consumption taken in Category in which it falls. |
| 8                                    | Public Lighting                                   | LT                                        | LT                         | 6013            | 150.763                   |                                                  |
| 9                                    | HT Water Supply                                   |                                           |                            | 227             |                           | Consumption taken in Category in which it falls. |
| 10                                   | HT Industrial                                     | EHT/HT/LT                                 | 400/132/6/11               | 16377           | 20294.553                 |                                                  |
| 11                                   | Industrial (Small)                                |                                           |                            | 97993           | 1126.776                  |                                                  |
| 12                                   | Industrial (Medium)                               |                                           |                            | 30537           | 2577.180                  |                                                  |
| 13                                   | HT Commercial                                     | EHT/HT/LT                                 | 400/220/6/33/11/LT         |                 |                           |                                                  |
| 14                                   | Applicable to Government Hospitals & Hospitals    |                                           |                            |                 |                           |                                                  |
| 15                                   | Lift Irrigation Schemes/Lift Irrigation Societies |                                           |                            |                 |                           |                                                  |
| 16                                   | HT Res. Apartments Applicable to all areas        |                                           |                            |                 |                           |                                                  |
| 17                                   | Mixed Load                                        |                                           |                            |                 |                           |                                                  |

| Period From 01.04.2024 To 31.03.2025 |                                                                                                                                |                                                                      |                            |                 |                           |                                                  |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|----------------------------|-----------------|---------------------------|--------------------------------------------------|
| S. No                                | Type of Consumers                                                                                                              | Category of Consumers (EHT/HT/LT /Others)                            | Voltage Level (In Voltage) | No of Consumers | Total Consumption (In MU) | Remarks (Source of data)                         |
| 18                                   | Government offices and department                                                                                              |                                                                      |                            |                 |                           |                                                  |
| 19                                   | Others-1 (if any, specify in remarks)                                                                                          | Agricultural power                                                   | LT                         | 1392176         | 14967.023                 |                                                  |
| 20                                   | Others-2 (if any, specify in remarks)                                                                                          | Railway Traction                                                     | 400/132                    | 8               | 89.361                    |                                                  |
| 21                                   | Others-3 (if any, specify in remarks)                                                                                          | Bulk Supply                                                          | LT/11/33                   | 546             | 729.464                   |                                                  |
| 22                                   | Others-4 (if any, specify in remarks)                                                                                          | others (AP High Technology, Waste management & charitable hospitals) |                            | 52              |                           | Consumption taken in Category in which it falls. |
| 23                                   | Theft Units, Short Assessment, Unbilled Revenue (Eq. Units)<br><br>Theft Units, Short Assessment, Unbilled Revenue (Eq. Units) |                                                                      |                            |                 | 255.56                    |                                                  |
| 24                                   | Misc. Sale adjustment to match with planning (Temporary, night Supply, Non-Operation sale etc)                                 |                                                                      |                            |                 | -93.00                    |                                                  |
|                                      | Total                                                                                                                          |                                                                      |                            | 11008964        | 65449.41                  |                                                  |

### Annexure- X List of Documents Verified with Each Parameter

| Sr. No. | Particulars                                                  | Verified (YES/No) |
|---------|--------------------------------------------------------------|-------------------|
| 1.      | Annual Performance review data for FY 2024-25                | Yes               |
| 2.      | Sector-specific Pro-forma submitted to BEE & baseline values | Yes               |
| 3.      | Quarterly Energy Accounting Reports FY 2024-25               | Yes               |
| 4.      | Mandatory Energy Audit report                                | Yes               |
| 5.      | Energy Purchased Documents for April 2024 to March 2025      | Yes               |
| 6.      | Metered energy                                               | Yes               |
| 7.      | Open access document wherever applicable                     | Yes               |
| 8.      | Division wise assets List/Fact sheet of whole DISCOM         | Yes               |
| 9.      | Circle wise Connected Load                                   | Yes               |
| 10.     | Division wise consumer list of whole DISCOM                  | Yes               |
| 11.     | Category wise Metered connection                             | Yes               |
| 12.     | Feeder wise Electricity import (MU)                          | Yes               |
| 13.     | Details of various schemes and energy-saving projects        | Yes               |
| 14.     | Energy Policy                                                | Yes               |
| 15.     | Description of Energy Management / Monitoring system adopted | Yes               |
| 16.     | Overall energy management committee structure                | Yes               |
| 17.     | Team details: roles and responsibilities                     | Yes               |
| 18.     | Frequency of meeting / minutes of meeting                    | Yes               |
| 19.     | Major challenges faced by the DC in reducing T & D Loss      | Yes               |

### Annexure- XI List of Parameters Arrived Through Calculation or Formula with List of Documents as Source of Data

| S.No. | Data                                        | Unit | Sources of Data                                      |
|-------|---------------------------------------------|------|------------------------------------------------------|
| 1.    | Input Energy Purchased                      | MUs  | Power Purchase bills of PSPCL                        |
| 2.    | Transmission Loss                           | %    | Based on Generator bills and Implementation Schedule |
| 3.    | Energy sold outside the periphery           | MUs  | Internal Database and Calculated                     |
| 4.    | Open access sale                            | MUs  | Internal Database and Calculated                     |
| 5.    | EHT sale                                    | MUs  | Internal Database and Calculated                     |
| 6.    | Power Transmission Details                  | MUs  | Internal Database                                    |
| 7.    | % of metering available at DT               | %    | Internal Database                                    |
| 8.    | % of metering available at consumer end     | %    | Internal Database                                    |
| 9.    | No of feeders at 66kV voltage level         | Nos. | Internal Database                                    |
| 10.   | No of feeders at 33kV voltage level         | Nos. | Internal Database                                    |
| 11.   | No of feeders at 11kV voltage level         | Nos. | Internal Database                                    |
| 12.   | No of LT feeders' level                     | Nos. | Internal Database                                    |
| 13.   | Line length (ckt. km) at 66kV voltage level | Km   | Internal Database                                    |
| 14.   | Line length (ckt. km) at 33kV voltage level | Km   | Internal Database                                    |
| 15.   | Line length (ckt. km) at 11kV voltage level | Km   | Internal Database                                    |
| 16.   | Line length (km) at LT level                | Km   | Internal Database                                    |
| 17.   | HT/LT ratio                                 |      | Internal Database                                    |
| 18.   | Feeder wise Import & Export Energy          | MUs  | Internal Database                                    |
| 19.   | Nos. of Consumers                           | Nos. | Internal Database                                    |
| 20.   | Connected Load of Consumers                 | MW   | Internal Database                                    |
| 21.   | Input Energy                                | MUs  | Internal Database                                    |
| 22.   | Consumer wise Billed Energy                 |      | Internal Database                                    |
| 23.   | T&D Loss                                    | MUs  | Internal Database and Calculated                     |
| 24.   | T&D Loss %                                  | %    | Internal Database and Calculated                     |
| 25.   | Feeder meters accuracy and error            |      | Document based Calibration reports                   |

## Power Purchase FY 2024-25

| 1 | Voltage level                | Particulars                                   | MU       | Reference                                                                                             | Remarks<br>(Source of data)                                                                                         |
|---|------------------------------|-----------------------------------------------|----------|-------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| i | 66kV and above (Inter-State) | Long-Term Conventional                        | 27744.35 | Includes input energy for franchisees                                                                 |                                                                                                                     |
|   |                              | Medium Conventional (unscheduled interchange) | -1115.38 |                                                                                                       | value of unscheduled interchange energy is entered as the provision of the same has not provided in the performance |
|   |                              | Short Term Conventional                       | 10918.27 |                                                                                                       |                                                                                                                     |
|   |                              | Banking                                       | 671.50   |                                                                                                       |                                                                                                                     |
|   |                              | Long-Term Renewable energy                    | 3505.98  |                                                                                                       |                                                                                                                     |
|   |                              | Medium and Short-Term RE                      | 0.00     | Includes power from bilateral/ PX/ DEEP                                                               |                                                                                                                     |
|   |                              | Captive, open access input                    |          | Any power wheeled for any purchase other than sale to DISCOM . Does not include input for franchisee. |                                                                                                                     |
|   |                              | Sale of surplus power                         | -827.63  |                                                                                                       |                                                                                                                     |

|     |                              |                                                                |          |                                |                                                                     |
|-----|------------------------------|----------------------------------------------------------------|----------|--------------------------------|---------------------------------------------------------------------|
|     |                              | Quantum of inter-state transmission loss                       | 1636.61  | As confirmed by SLDC, RLDC etc |                                                                     |
|     |                              | Power procured from inter-state sources                        | 40897.09 | Based on data from Form 5      |                                                                     |
|     |                              | Power at state transmission boundary                           | 39260.48 |                                |                                                                     |
| ii  | 66kV and above (Intra-State) | Long-Term Conventional                                         | 35103.82 |                                | Power procured from intra state sources at different voltage levels |
|     |                              | Medium Conventional                                            | NA       |                                |                                                                     |
|     |                              | Short Term Conventional                                        | NA       |                                |                                                                     |
|     |                              | Banking                                                        | NA       |                                |                                                                     |
|     |                              | Long-Term Renewable energy                                     | 2326.42  |                                | NRSE power procured from intra state sources at 66KV and above      |
|     |                              | Medium and Short-Term RE                                       |          |                                |                                                                     |
|     |                              | Captive, open access input                                     |          |                                |                                                                     |
|     |                              | Sale of surplus power                                          |          |                                |                                                                     |
|     |                              | Quantum of intra-state transmission loss                       | 2335.219 |                                |                                                                     |
|     |                              | Power procured from intra-state sources                        | 37430.24 |                                | PSTCL                                                               |
| iii |                              | Input in DISCOM wires network                                  | 74355.49 |                                |                                                                     |
| iv  | 33 kV                        | Renewable Energy Procurement                                   | 17.36    |                                |                                                                     |
|     |                              | Small capacity conventional/ biomass/ hydro plants Procurement | 0.00     |                                |                                                                     |
|     |                              | Captive, open access input                                     | 0.00     |                                |                                                                     |
| v   | 11 kV                        | Renewable Energy Procurement                                   | 266.85   |                                | NRSE power procured from intra state                                |

|       |                                             |                                                                |          |  |                       |
|-------|---------------------------------------------|----------------------------------------------------------------|----------|--|-----------------------|
|       |                                             |                                                                |          |  | sources at 11KV       |
|       |                                             | Small capacity conventional/ biomass/ hydro plants Procurement | 0.00     |  | PSTCL                 |
|       |                                             | Sales Migration Input                                          |          |  |                       |
| vi    | LT                                          | Renewable Energy Procurement                                   | 131.37   |  | Roof Top Solar Energy |
|       |                                             | Sales Migration Input                                          | -131.37  |  |                       |
| vii   | Energy Embedded within DISCOM wires network | Energy Embedded within DISCOM wires network                    | 284.22   |  |                       |
| vii i | Total Energy Available/ Input               | Total Energy Available/ Input                                  | 74639.71 |  |                       |

## Govt. Tariff Subsidy

## ANNUAL SUBSIDY PERFORMA FOR FY 2024-25

| Billed Energy       |                        |                       | Subsidized Billed Energy |                            |                 | Applicable rate of Subsidy as notified by State Govt.                                                           |                     | Subsidy Due from State Govt. |                   |             | Subsidy Actually Billed/claimed from State Govt. (As against col.12) | Subsidy Received from State Govt. (As against col.13) | Balance Subsidy yet to be Received from State Govt. (In Rs. Cr.) |
|---------------------|------------------------|-----------------------|--------------------------|----------------------------|-----------------|-----------------------------------------------------------------------------------------------------------------|---------------------|------------------------------|-------------------|-------------|----------------------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------------|
| Metered             | Un-metered*            | Total                 | Metered (out of col.2)   | Un-metered* (Out of col.3) | Total           | Metered Energy **                                                                                               | Un-metered Energy** | Metered Energy               | Un-metered Energy | Total       |                                                                      |                                                       |                                                                  |
| (In kwh)            |                        |                       | (In kwh)                 |                            |                 | (In Rs/Kwh)                                                                                                     |                     | (In Rs. Cr.)                 |                   |             | (In Rs. Cr.)                                                         | (In Rs. Cr.)                                          | (In Rs. Cr.)                                                     |
| 2                   | 3                      | 4=2+3                 | 5                        | 6                          | 7=5+6           | 8                                                                                                               | 9                   | 10=5x8                       | 11=6x9            | 12=10+11    | 13                                                                   | 14                                                    | 15=13-14                                                         |
| 2012497986<br>0.00  |                        | 201249798<br>6000%    | 1656622<br>0911          |                            | 1656622<br>0911 | Rs.<br>2.50 to<br>Rs.<br>7.15<br>per<br>KWh                                                                     |                     | 8284.<br>57                  |                   | 8284.<br>57 | 8284.57                                                              | 6223.7<br>0                                           | 2060.8<br>7                                                      |
| 12,54,67,00<br>0.00 | 14,84,15,56,<br>297.17 | 14,96,70,23<br>,297.2 | 1254800<br>00            | 14,81,77,30<br>,000.0      | 1494321<br>0000 | Rs.6.5<br>5 per<br>KW<br>upto<br>15.06.2<br>024 &<br>from<br>16.06.2<br>024 at<br>the<br>rate<br>6.70<br>per KW |                     | 83.69                        | 9893<br>.62       | 9977.<br>31 | 9977.32                                                              | 8491.4<br>7                                           | 1485.8<br>5                                                      |

# Annual Energy Audit Report: PSPCL FY 2024-25



|                        |                        |                        |                 |                 |                 |                                     |  |              |             |              |              |              |             |
|------------------------|------------------------|------------------------|-----------------|-----------------|-----------------|-------------------------------------|--|--------------|-------------|--------------|--------------|--------------|-------------|
| 29,22,52,57,<br>960.00 |                        | 29,22,52,57,<br>,960.0 | 2464361<br>3529 |                 | 2464361<br>3529 | Rs<br>0.15 to<br>1.37<br>per<br>KVA |  | 2537.<br>27  |             | 2537.<br>27  | 2537.27      | 2176.9<br>9  | 360.28      |
|                        |                        |                        |                 |                 |                 |                                     |  |              |             |              |              |              |             |
| 87,65,88,88<br>2.83    |                        | 1,13,21,48,<br>882.8   |                 |                 |                 |                                     |  |              |             |              |              |              |             |
| 50,35,22,93,<br>702.83 | 14,84,15,56,<br>297.17 | 65,44,94,10<br>,000.0  | 4133531<br>4440 | 148177300<br>00 | 5615304<br>4440 |                                     |  | 10905<br>.53 | 9893<br>.62 | 20799<br>.15 | 20799.1<br>6 | 16892.<br>16 | 3907.0<br>0 |



## Signed Annual Accounting Report PSPCL FY 2024-25

| General Information |                                                                 |                                                |                  |                                                 |
|---------------------|-----------------------------------------------------------------|------------------------------------------------|------------------|-------------------------------------------------|
| 1                   | Name of the DISCOM                                              | Punjab State Power Corporation Limited (PSPCL) |                  |                                                 |
| 2                   | i) Year of Establishment                                        | 2010                                           |                  |                                                 |
|                     | ii) Government/Public/Private                                   | Government                                     |                  |                                                 |
| 3                   | DISCOM's Contact details & Address                              |                                                |                  |                                                 |
| i                   | City/Town/Village                                               | Patiala                                        |                  |                                                 |
| ii                  | District                                                        | Patiala                                        |                  |                                                 |
| iii                 | State                                                           | Punjab                                         | Pin              | 147001                                          |
| iv                  | Telephone                                                       | 0175-2212005                                   | Fax              | 0175-2213199                                    |
| 4                   | Registered Office                                               |                                                |                  |                                                 |
| i                   | Company's Chief Executive Name                                  | Sh. Ajoy Kumar Sinha IAS                       |                  |                                                 |
| ii                  | Designation                                                     | CMD PSPCL                                      |                  |                                                 |
| iii                 | Address                                                         | The Mall, Patiala                              |                  |                                                 |
| iv                  | City/Town/Village                                               | Patiala                                        | P.O.             | Patiala                                         |
| v                   | District                                                        | Patiala                                        |                  |                                                 |
| vi                  | State                                                           | Punjab                                         | Pin              | 147001                                          |
| vii                 | Telephone                                                       | 0175-2212005                                   | Fax              | 0175-2213199                                    |
| 5                   | Nodal Officer Details*                                          |                                                |                  |                                                 |
| i                   | Nodal Officer Name (Designated at DISCOM's)                     | Er. Rakesh Chand Kokria                        |                  |                                                 |
| ii                  | Designation                                                     | Chief Engineer (Energy Audit & Enforcement)    |                  |                                                 |
| iii                 | Address                                                         | Shed No. B2, Shakti Vihar, Patiala             |                  |                                                 |
| iv                  | City/Town/Village                                               | Patiala                                        | P.O.             | Patiala                                         |
| v                   | District                                                        | Patiala                                        |                  |                                                 |
| vi                  | State                                                           | Punjab                                         | Pin              | 147001                                          |
| vii                 | Telephone                                                       | 0175-2215774                                   | Fax              | 0175-2215774                                    |
| 6                   | Energy Manager Details*                                         |                                                |                  |                                                 |
| i                   | Name                                                            | Er. Ravi Verma                                 |                  |                                                 |
| ii                  | Designation                                                     | ASE                                            | Whether EA or EM | EA                                              |
| iii                 | EA/EM Registration No.                                          | EA-7969                                        |                  |                                                 |
| iv                  | Telephone                                                       |                                                | Fax              |                                                 |
| v                   | Mobile                                                          | 96461 18860                                    | E-mail ID        | aseraviverma@gmail.com<br>ivarverma76@gmail.com |
| 7                   | Period of Information                                           |                                                |                  |                                                 |
|                     | Year of (FY) information including Date and Month (Start & End) | 1 April 2024 to 31 March 2025                  |                  |                                                 |

*Ravi Verma*  
**Er. Ravi Verma**  
 EA- 7969  
 Energy Auditor  
 PSPCL, Patiala.

*Ravi Verma*  
**Dy. C.E./D.S.M.**  
**P.S.P.C.L., Patiala**

| Performance Summary of Electricity Distribution Companies |                                                                                                  |                               |          |
|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------|-------------------------------|----------|
| 1                                                         | Period of Information<br>Year of (FY) information including Date and Month (Start & End)         | 1 April 2024 to 31 March 2025 |          |
| 2                                                         | Technical Details                                                                                |                               |          |
| (a)                                                       | Energy Input Details                                                                             |                               |          |
| (i)                                                       | Input Energy Purchase (From Generation Source)                                                   | Million kwh                   | 78611.54 |
| (ii)                                                      | Net input energy (at DISCOM Periphery after adjusting the transmission losses and energy traded) | Million kwh                   | 74639.71 |
| (iii)                                                     | Total Energy billed (is the Net energy billed, adjusted for energy traded))                      | Million kwh                   | 65449.41 |
| (b)                                                       | Transmission and Distribution (T&D) loss Details*                                                | Million kwh                   | 9190.30  |
|                                                           |                                                                                                  | %                             | 12.31%   |
|                                                           | Collection Efficiency                                                                            | %                             | 91.80%   |
| (c)                                                       | Aggregate Technical & Commercial Loss                                                            | %                             | 19.51%   |

DISCOM  
Distribution Losses

NOTE (\*): Point 2(b) T&D Losses are calculated only for PSPCL, i.e. DISCOM. Inter state & Intra state Transmission losses of PSTCL not included.

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

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

Signature:-

Name of Energy Manager:  
Registration Number:  
**Dr. Kavi Verma**  
**EA- 7969**  
**Energy Auditor**  
**PSPCL, Patiala.**

Seal  
**CE/EA & Enforcement**  
**P.S.P.C.L., Patiala**

**Dy. C.E. / D.S.M.**  
**P.S.P.C.L., Patiala**

50/3

| Form-Details of Input Infrastructure |                                                            |                                         |                      |                                     |                          |
|--------------------------------------|------------------------------------------------------------|-----------------------------------------|----------------------|-------------------------------------|--------------------------|
| 1                                    | Parameters                                                 | Total                                   | Covered during audit | Verified by Auditor in Sample Check | Remarks (Source of data) |
| i                                    | Number of circles                                          | 21                                      | 21                   | 21                                  | CE/Planning              |
| ii                                   | Number of divisions                                        | 104                                     | 104                  | 104                                 | CE/Planning              |
| iii                                  | Number of sub-divisions                                    | 508                                     | 508                  | 508                                 | CE/Planning              |
| iv                                   | Number of feeders                                          | 13658                                   | 13658                | 1450                                | Director/D Reports link  |
| v                                    | Number of DTs                                              | 1249085+(1450*3) 66kv, 33kv<br>=1250538 | 1250538              | 12610                               | Director/D Reports link  |
| vi                                   | Number of consumers                                        | 11008964                                | 11008964             | 11008964                            | CE/Planning              |
| 2                                    | Parameters                                                 | 66kV and above                          | 33kV                 | 11/22kV                             | LT                       |
| a. i.                                | Number of conventional metered consumers                   | 42                                      | 0                    | 67711                               | 8139501                  |
| ii                                   | Number of consumers with 'smart' meters                    | 11                                      | 0                    | 31588                               | 1348995                  |
| iii                                  | Number of consumers with 'smart prepaid' meters            | 0                                       | 0                    | 0                                   | 0                        |
| iv                                   | Number of consumers with 'AMR' meters                      | 182                                     | 3                    | 33640                               | 3463                     |
| v                                    | Number of consumers with 'non-smart prepaid' meters        | 0                                       | 0                    | 0                                   | 0                        |
| vi                                   | Number of unmetered consumers                              | 0                                       | 0                    | 0                                   | 1383828                  |
| vii                                  | Number of total consumers                                  | 235                                     | 3                    | 132939                              | 10875787                 |
| b. i.                                | Number of conventionally metered Distribution Transformers | 0                                       | 0                    | 24174                               | 4499                     |
| ii                                   | Number of DTs with communicable meters                     | 1450                                    | 3                    | 22908                               | 3122                     |
| iii                                  | Number of unmetered DTs                                    | 0                                       | 0                    | 832938                              | 361444                   |
| iv                                   | Number of total Transformers                               | 1450                                    | 3                    | 880020                              | 369065                   |
| c. i.                                | Number of metered feeders                                  | 181                                     | 4                    | 13473                               | 0                        |
| ii                                   | Number of feeders with communicable meters                 | 164                                     | 4                    | 9438                                | 0                        |
| iii                                  | Number of unmetered feeders                                | 0                                       | 0                    | 0                                   | 0                        |
| iv                                   | Number of total feeders                                    | 181                                     | 4                    | 13473                               | 0                        |
| d.                                   | Line length (ct km)                                        | 11765 km                                | 50.7 *23(die)=73.7   | 263913                              | 156484                   |
| e.                                   | Length of Aerial Bunched Cables                            | 0                                       | 0                    | 1152.964                            | 1607.467                 |
| f.                                   | Length of Underground Cables                               | 37.48                                   | 0                    | 372.794                             | 39.270                   |

*Dahur*  
Dy. CE / D.S.M.

P.S.P.C.L. Patiala

54/4

| 1.   | Voltage level                               | Particulars                                        | MU       | Reference                                                                                            | Remarks (Source of data)                                                                                        |
|------|---------------------------------------------|----------------------------------------------------|----------|------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| i    | 66kV and above (Inter-State)                | Long-Term Conventional                             | 2744.35  | Includes input energy for franchisees                                                                |                                                                                                                 |
|      |                                             | Medium Conventional (unscheduled interchange)      | -1115.88 |                                                                                                      | Value of unscheduled interchange energy is entered as the provision of the same has not provided in the perform |
|      |                                             | Short-Term Conventional                            | 10918.27 |                                                                                                      |                                                                                                                 |
|      |                                             | Banking                                            | 671.50   |                                                                                                      |                                                                                                                 |
|      |                                             | Long-Term Renewable energy                         | 3505.98  |                                                                                                      |                                                                                                                 |
|      |                                             | Medium and Short-Term RE                           | 0.00     | Includes power from bilateral/ PK/DEEP                                                               |                                                                                                                 |
|      |                                             | Captive, open access input                         |          | Any power wheeled for any purchase other than sale to DISCOM. Does not include input for franchisees |                                                                                                                 |
|      |                                             | Sale of surplus power                              | -877.63  |                                                                                                      |                                                                                                                 |
|      |                                             | Quantum of inter-state transmission loss           | 1636.61  | As confirmed by SLDC, RLDC etc.                                                                      |                                                                                                                 |
|      |                                             | Power procured from inter-state sources            | 40897.09 | Based on data from Form 5                                                                            |                                                                                                                 |
| ii   | 66kV and above (Intra-State)                | Power at state transmission boundary               | 39760.48 |                                                                                                      |                                                                                                                 |
|      |                                             | Long-Term Conventional                             | 35103.82 |                                                                                                      | Power procured from intra state sources at different voltage levels                                             |
|      |                                             | Medium Conventional                                | NA       |                                                                                                      |                                                                                                                 |
|      |                                             | Short-Term Conventional                            | NA       |                                                                                                      |                                                                                                                 |
|      |                                             | Banking                                            | NA       |                                                                                                      |                                                                                                                 |
|      |                                             | Long-Term Renewable energy                         | 2326.42  |                                                                                                      | NRSE power procured from intra state sources at 66kV and above                                                  |
|      |                                             | Medium and Short-Term RE                           |          |                                                                                                      |                                                                                                                 |
|      |                                             | Captive, open access input                         |          |                                                                                                      |                                                                                                                 |
|      |                                             | Sale of surplus power                              |          |                                                                                                      |                                                                                                                 |
|      |                                             | Quantum of intra-state transmission loss           | 2835.210 |                                                                                                      |                                                                                                                 |
| iii  |                                             | Power procured from intra-state sources            | 37430.24 |                                                                                                      | PSTCL                                                                                                           |
| iv   | 33 kV                                       | Input in DISCOM wires network                      | 74355.69 |                                                                                                      |                                                                                                                 |
|      |                                             | Renewable Energy Procurement                       | 17.38    |                                                                                                      |                                                                                                                 |
|      |                                             | Small capacity conventional/ biomass/ hydro plants | 0.00     |                                                                                                      |                                                                                                                 |
|      |                                             | Procurement                                        |          |                                                                                                      |                                                                                                                 |
|      |                                             | Captive, open access input                         | 0.00     |                                                                                                      |                                                                                                                 |
| v    | 11 kV                                       | Renewable Energy Procurement                       | 266.85   |                                                                                                      | NRSE power procured from intra state sources at 11kV                                                            |
|      |                                             | Small capacity conventional/ biomass/ hydro plants | 0.00     |                                                                                                      | PSTCL                                                                                                           |
|      |                                             | Procurement                                        |          |                                                                                                      |                                                                                                                 |
| vi   | LT                                          | Sales Migration Input                              |          |                                                                                                      |                                                                                                                 |
|      |                                             | Renewable Energy Procurement                       | 131.37   |                                                                                                      |                                                                                                                 |
|      |                                             | Sales Migration Input                              | -131.37  |                                                                                                      | Roof Top Solar Energy                                                                                           |
| vii  | Energy embedded within DISCOM wires network | Energy Embedded within DISCOM wires network        | 284.22   |                                                                                                      |                                                                                                                 |
| viii | Total Energy Available/ Input               | Total Energy Available/ Input                      | 74619.71 |                                                                                                      |                                                                                                                 |

*Dahur*  
Dy. CE / D.S.M.

P.S.P.C.L. Patiala

| 4                        | Voltage level         | Energy Sales Particulars                    | MU       | Reference                                                                        |
|--------------------------|-----------------------|---------------------------------------------|----------|----------------------------------------------------------------------------------|
| i                        | 11KV/1T               | DISCOM consumers                            |          | Include sales to consumers in franchisee areas, unmetered consumers              |
|                          |                       | Demand from open access, captive            | 0        | Non DISCOM's sales                                                               |
|                          |                       | Embedded generation used                    | 0.00     | Demand from embedded generation at LT level                                      |
|                          |                       | Sale at 11KV/1T level                       | 0.00     |                                                                                  |
|                          |                       | Quantum of 11KV/1T level losses             | 0.000    | Voltage level energy requirement input not available input available approximate |
| ii                       | 33 kV Level           | DISCOM consumers                            |          | Include sales to consumers in franchisee areas, unmetered consumers              |
|                          |                       | Demand from open access, captive            | 0        | Non DISCOM's sales                                                               |
|                          |                       | Embedded generation at 33 kV level used     |          | Demand from embedded generation at 11KV level                                    |
|                          |                       | Sales at 33 kV level                        | 0.00     |                                                                                  |
|                          |                       | Quantum of losses at 33 kV                  | 0.000    |                                                                                  |
| iii                      | 66-76/13/11 / 0.44 kV | DISCOM consumers                            | 65449.41 | Include sales to consumers in franchisee areas, unmetered consumers              |
|                          |                       | Demand from open access, captive            | 10.283   | Non DISCOM's sales                                                               |
|                          |                       | Embedded generation at 66 kV or below level | 415.59   | This is DISCOM and O&A demand met via energy generated at same voltage level     |
|                          |                       | Sales at 66 kV level                        | 65459.69 |                                                                                  |
|                          |                       | Quantum of losses at 66 kV                  | 9380.02  | Energy input at 66KV level                                                       |
| iv                       | > 66 kV               | DISCOM consumers                            |          | Include sales to consumers in franchisee areas, unmetered consumers              |
|                          |                       | Demand from open access, captive            | 0        | Non DISCOM's sales                                                               |
|                          |                       | Cross border sale of energy                 | 0        |                                                                                  |
|                          |                       | Sale at other DISCOMs                       | 0        |                                                                                  |
|                          |                       | Banking                                     | 0        |                                                                                  |
| Total Energy Requirement |                       |                                             | 78611.41 |                                                                                  |
| Total Energy Sales       |                       |                                             | 65449.41 |                                                                                  |

*[Signature]*  
Dy. C.E. / D.S.M.

P.S.P.C.L., Patiala

50/6

| Energy Accounting Summary |                      |               |              |              |        |
|---------------------------|----------------------|---------------|--------------|--------------|--------|
| S                         | DISCOM               | Input (In MU) | Sale (In MU) | Loss (In MU) | Loss % |
| i                         | LT                   |               |              |              |        |
| ii                        | 11KV                 |               |              |              |        |
| iii                       | 33 kV                |               |              |              |        |
| iv                        | 66/13/11 / 0.44 kV   | 74639.71      | 65449.41     | 9190.30      | 12.31% |
| 5                         | Open Access, Captive | Input (In MU) | Sale (In MU) | Loss (In MU) |        |
| i                         | LT                   | 0             | 0            | 0            |        |
| ii                        | 11 kV                | 0             | 0            | 0            |        |
| iii                       | 33 kV                | 0             | 0            | 0            |        |
| iv                        | > 33 kV              | 0             | 0            | 0            |        |

| Loss Estimation for DISCOM |           |
|----------------------------|-----------|
| T&D loss                   | 13,142.00 |
| D loss                     | 9,190.17  |
| T&D loss (%)               | 16.74%    |
| D loss (%)                 | 12.31%    |

NOTE: D losses 12.31 % are calculated by Net input energy (At DISCOM Periphery after adjusting the transmission losses and energy traded)  
78611.54-5636.61-2335.22= 74639.71 MU basis.

*he*  
CE/EA & Enforcement  
P.S.P.C.L., Patiala

*[Signature]*  
Er. Ravi Verma  
EA- 7969  
Energy Auditor  
PSPCL, Patiala.

*[Signature]*  
Dy. C.E. / D.S.M.

P.S.P.C.L., Patiala

| Sl. No. | Name of the Unit | Unit Code | Name of Division | Period of Review (From 1st Jan 2024 to 31st Dec 2024) |  |  |  |  |  |  |  |  |  |  |  |  |  | Remarks |  |  |  |  |
|---------|------------------|-----------|------------------|-------------------------------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|---------|--|--|--|--|
|         |                  |           |                  | Period of Review (From 1st Jan 2024 to 31st Dec 2024) |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |
|         |                  |           |                  | Period of Review (From 1st Jan 2024 to 31st Dec 2024) |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |
|         |                  |           |                  | Period of Review (From 1st Jan 2024 to 31st Dec 2024) |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |
|         |                  |           |                  | Period of Review (From 1st Jan 2024 to 31st Dec 2024) |  |  |  |  |  |  |  |  |  |  |  |  |  | Remarks |  |  |  |  |
|         |                  |           |                  | Period of Review (From 1st Jan 2024 to 31st Dec 2024) |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |
|         |                  |           |                  | Period of Review (From 1st Jan 2024 to 31st Dec 2024) |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |
|         |                  |           |                  | Period of Review (From 1st Jan 2024 to 31st Dec 2024) |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |
|         |                  |           |                  | Period of Review (From 1st Jan 2024 to 31st Dec 2024) |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |
|         |                  |           |                  | Period of Review (From 1st Jan 2024 to 31st Dec 2024) |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |
|         |                  |           |                  | Period of Review (From 1st Jan 2024 to 31st Dec 2024) |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |
|         |                  |           |                  | Period of Review (From 1st Jan 2024 to 31st Dec 2024) |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |
|         |                  |           |                  | Period of Review (From 1st Jan 2024 to 31st Dec 2024) |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |
|         |                  |           |                  | Period of Review (From 1st Jan 2024 to 31st Dec 2024) |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |
|         |                  |           |                  | Period of Review (From 1st Jan 2024 to 31st Dec 2024) |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |
|         |                  |           |                  | Period of Review (From 1st Jan 2024 to 31st Dec 2024) |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |
|         |                  |           |                  | Period of Review (From 1st Jan 2024 to 31st Dec 2024) |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |
|         |                  |           |                  | Period of Review (From 1st Jan 2024 to 31st Dec 2024) |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |
|         |                  |           |                  | Period of Review (From 1st Jan 2024 to 31st Dec 2024) |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |
|         |                  |           |                  | Period of Review (From 1st Jan 2024 to 31st Dec 2024) |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |
|         |                  |           |                  | Period of Review (From 1st Jan 2024 to 31st Dec 2024) |  |  |  |  |  |  |  |  |  |  |  |  |  |         |  |  |  |  |

Dy. C.E. / D.S.M.  
P.S.P.C.L., Patiala

Dy. C.E./D.S.M.  
D.S.P.C.L. Ratnala

Dy. C.E. / D.S.M.  
P.S.P.C.L. Patiala

Dy. C.L.O.S.M.  
P.S.P.C.L., Patiala

Dy. S.E. / D.S.M.  
P.S.P.C.L., Patiala

|                     |                     |
|---------------------|---------------------|
| Dy.C.E./D.S.M.      | Dy.C.E./D.S.M.      |
| P.S.P.C.I., Patiala | P.S.P.C.I., Patiala |

Dy. C.E. D.S.M.  
DSPCI Patiala

Dy. C.E./D.S.M.

Name of Authorized Signatory: [Redacted]  
 Full Address: [Redacted]  
 Date: [Redacted]

CE/EA & Enforcement  
 P.S.P.C.L., Patiala

Er. Ravi Verma  
 EA- 7969  
 Energy Auditor  
 PSPCL, Patiala.

Signature: [Redacted]  
 Name of Energy Manager  
 Registration Number: [Redacted]

Dy. G.E./ D.S.M.  
 P.S.P.C.L., Patiala

Dy. C.E. / D.S.M.  
P.S.P.C.L., Patia

50/17

| Sl. No. | Gen. Station          | Gen. Type | Capacity (MW) | Location | Gen. Co. | Contract No. | Contract Date | Contract Type | Contract Value (Rs. Crore) | Net Energy Supplied (MWh) |
|---------|-----------------------|-----------|---------------|----------|----------|--------------|---------------|---------------|----------------------------|---------------------------|
| 1       | GGSTP, Roper          | Coal      | 840           | Coal     | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 2       | GATP, Goidwal Sahib   | Coal      | 920           | Coal     | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 3       | GATP, Goidwal Sahib   | Coal      | 540           | Coal     | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 4       | Shanan                | Hydro     | 110           | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 5       | UBDC                  | Hydro     | 91            | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 6       | MHP                   | Hydro     | 225           | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 7       | ASHP                  | Hydro     | 134           | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 8       | RSP                   | Hydro     | 452           | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 9       | Mini/Micro Hydel      | Hydro     | 3             | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 10      | Tarawandi Sato TPP    | Coal      | 1980          | Coal     | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 11      | Rajpura TPP           | Coal      | 1400          | Coal     | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 12      | Bhakra Share          | Hydro     | 647           | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 13      | Dehar Share           | Hydro     | 410           | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 14      | Pong Share            | Hydro     | 85            | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 15      | Batalu                | Hydro     | 68            | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 16      | Sala                  | Hydro     | 194           | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 17      | Tanakpur              | Hydro     | 17            | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 18      | Chamera-I             | Hydro     | 55            | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 19      | Chamera-II            | Hydro     | 30            | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 20      | Chamera-III           | Hydro     | 18            | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 21      | Uri                   | Hydro     | 86            | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 22      | Unai                  | Hydro     | 20            | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 23      | Dhauliganga           | Hydro     | 28            | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 24      | Dukhri                | Hydro     | 32            | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 25      | Farbani-III           | Hydro     | 41            | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 26      | SEWA-II               | Hydro     | 10            | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 27      | Kashanaga             | Hydro     | 0             | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 28      | Ratnaga (Ratnaga/PPN) | Hydro     | 152           | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 29      | Rangpur               | Hydro     | 23            | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 30      | Tehri (TDC)           | Hydro     | 77            | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 31      | Koteswar (TDC)        | Hydro     | 25            | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 32      | DVC RPS 1&2           | Coal      | 300           | Coal     | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 33      | DVC Chauragar         | Coal      | 200           | Coal     | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 34      | DVC-BTPS              | Coal      | 200           | Coal     | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 35      | Singauli              | Coal      | 200           | Coal     | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 36      | Rihand-I              | Coal      | 110           | Coal     | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 37      | Rihand-II             | Coal      | 102           | Coal     | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 38      | Rihand-III            | Coal      | 83            | Coal     | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 39      | Anta GPS              | Gas       | 9             | Gas      | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 40      | Parvati GPS           | Gas       | 0             | Gas      | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 41      | Dadi NGPS             | Gas       | 0             | Gas      | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 42      | Unchahar-I            | Coal      | 0             | Coal     | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |

50/18

| Sl. No. | Gen. Station          | Gen. Type | Capacity (MW) | Location | Gen. Co. | Contract No. | Contract Date | Contract Type | Contract Value (Rs. Crore) | Net Energy Supplied (MWh) |
|---------|-----------------------|-----------|---------------|----------|----------|--------------|---------------|---------------|----------------------------|---------------------------|
| 1       | GGSTP, Roper          | Coal      | 840           | Coal     | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 2       | GATP, Goidwal Sahib   | Coal      | 920           | Coal     | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 3       | GATP, Goidwal Sahib   | Coal      | 540           | Coal     | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 4       | Shanan                | Hydro     | 110           | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 5       | UBDC                  | Hydro     | 91            | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 6       | MHP                   | Hydro     | 225           | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 7       | ASHP                  | Hydro     | 134           | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 8       | RSP                   | Hydro     | 452           | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 9       | Mini/Micro Hydel      | Hydro     | 3             | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 10      | Tarawandi Sato TPP    | Coal      | 1980          | Coal     | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 11      | Rajpura TPP           | Coal      | 1400          | Coal     | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 12      | Bhakra Share          | Hydro     | 647           | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 13      | Dehar Share           | Hydro     | 410           | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 14      | Pong Share            | Hydro     | 85            | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 15      | Batalu                | Hydro     | 68            | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 16      | Sala                  | Hydro     | 194           | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 17      | Tanakpur              | Hydro     | 17            | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 18      | Chamera-I             | Hydro     | 55            | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 19      | Chamera-II            | Hydro     | 30            | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 20      | Chamera-III           | Hydro     | 18            | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 21      | Uri                   | Hydro     | 86            | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 22      | Unai                  | Hydro     | 20            | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 23      | Dhauliganga           | Hydro     | 28            | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 24      | Dukhri                | Hydro     | 32            | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 25      | Farbani-III           | Hydro     | 41            | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 26      | SEWA-II               | Hydro     | 10            | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 27      | Kashanaga             | Hydro     | 0             | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 28      | Ratnaga (Ratnaga/PPN) | Hydro     | 152           | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 29      | Rangpur               | Hydro     | 23            | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 30      | Tehri (TDC)           | Hydro     | 77            | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 31      | Koteswar (TDC)        | Hydro     | 25            | Hydro    | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 32      | DVC RPS 1&2           | Coal      | 300           | Coal     | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 33      | DVC Chauragar         | Coal      | 200           | Coal     | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 34      | DVC-BTPS              | Coal      | 200           | Coal     | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 35      | Singauli              | Coal      | 200           | Coal     | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 36      | Rihand-I              | Coal      | 110           | Coal     | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 37      | Rihand-II             | Coal      | 102           | Coal     | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 38      | Rihand-III            | Coal      | 83            | Coal     | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 39      | Anta GPS              | Gas       | 9             | Gas      | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 40      | Parvati GPS           | Gas       | 0             | Gas      | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 41      | Dadi NGPS             | Gas       | 0             | Gas      | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |
| 42      | Unchahar-I            | Coal      | 0             | Coal     | PPA      | 11.01.2012   | 11.01.2012    | Interstate    | 208.234                    | 4120.83                   |

## Annual Energy Audit Report: PSPCL FY 2024-25

|    |                              |      |             |                                                                                    |                                                                                |            |       |         |
|----|------------------------------|------|-------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|------------|-------|---------|
| 43 | Unchahar-II                  | 60   | Coal        | 29.09.1998                                                                         | 28.02.2025                                                                     | Interstate | 3.55  | 319.23  |
| 44 | Unchahar-III                 | 17   | Coal        | 02.11.2002                                                                         | 31.12.2031                                                                     | Interstate | 1.05  | 86.76   |
| 45 | Unchahar-IV                  | 0    | Coal        | 16.12.2011                                                                         | Unallocated Power and shall remain operative till allocation of power by Govt. | Interstate | 0.01  | 11.69   |
| 46 | Jhajjar (IV)                 | 0    | Coal        | 05.05.2013                                                                         | Unallocated Power and shall remain operative till allocation of power by Govt. | Interstate | 0.00  | 56.61   |
| 47 | Dugri (Th)-II                | 0    | Coal        | 02.11.2002                                                                         | 30.07.2035                                                                     | Interstate | 0.03  | 17.48   |
| 48 | Koldam HEP                   | 52   | Hydro       | 01.05.2002                                                                         | 17.07.2050                                                                     | Interstate | 0.71  | 287.70  |
| 49 | Singrauli SHEP               | 0    | Small Hydro | unallocated share                                                                  | unallocated share                                                              | Interstate | 0.00  | 0.27    |
| 50 | Telangana STPP               | 1600 | Thermal     | unallocated share                                                                  | unallocated share                                                              | Interstate | 0.00  | 385.76  |
| 51 | Tanda Stage-II               | 0    | Coal        | unallocated share                                                                  | unallocated share                                                              | Interstate | 0.00  | 119.57  |
| 52 | Moja                         | 48   | Coal        | 29.12.2010                                                                         | 29.04.2044                                                                     | Interstate | 7.83  | 252.75  |
| 53 | Kahalgaon-II (ER)            | 120  | Coal        | 02.11.2002 (supplementary agreement for capacity enhancement signed on 07.10.2003) | 19.03.2035                                                                     | Interstate | 9.10  | 815.97  |
| 54 | NAPP                         | 51   | Nuclear     | 29.08.2023                                                                         | 27.08.2038                                                                     | Interstate | 3.43  | 409.26  |
| 55 | RAPP-II                      | 100  | Nuclear     | 29.08.2023                                                                         | 27.08.2038                                                                     | Interstate | 6.40  | 515.25  |
| 56 | RAPP-C                       | 45   | Nuclear     | 29.08.2023                                                                         | 24.08.2038                                                                     | Interstate | 2.65  | 409.18  |
| 57 | PTC Tata                     | 30   | Hydro       | 88886                                                                              | 51713                                                                          | Interstate | 0.00  | 22.88   |
| 58 | Pragati-III(Bawana)/CCGT     | 117  | Gas         | 24.09.2008                                                                         | 26.03.2029                                                                     | Interstate | 1.70  | 171.21  |
| 59 | MALANA-2 (PTC)               | 88   | Hydro       | 38799                                                                              | 55712                                                                          | Interstate | 0.00  | 149.49  |
| 60 | KARCHANA (PTC)               | 200  | Hydro       | 01.09.2006                                                                         | 11.09.2046                                                                     | Interstate | 2.33  | 845.95  |
| 61 | SASAN Ultra Mega Project     | 594  | Coal        | 07.08.2007                                                                         | 27.03.2040                                                                     | Interstate | 41.01 | 4200.38 |
| 62 | MUNDRA UMPP                  | 519  | Coal        | 22.04.2007                                                                         | 22.03.2038                                                                     | Interstate | 29.47 | 2512.88 |
| 63 | Ramagundam STPS: Stage-1 & 2 | 2100 | Thermal     | unallocated share                                                                  | unallocated share                                                              | Interstate | 0.00  | 23.05   |
| 64 | Ramagundam STPS: Stage-3     | 500  | Thermal     | unallocated share                                                                  | unallocated share                                                              | Interstate | 0.00  | 7.45    |
| 65 | Talcher STPS: Stage-2        | 2000 | Thermal     | unallocated share                                                                  | unallocated share                                                              | Interstate | 0.00  | 14.15   |
| 66 | Sinbadri Stage-2             | 1000 | Thermal     | unallocated share                                                                  | unallocated share                                                              | Interstate | 0.00  | 5.98    |
| 67 | Kudgi STPS                   | 2400 | Thermal     | unallocated share                                                                  | unallocated share                                                              | Interstate | 0.00  | 26.01   |
| 68 | Vallur TPS                   | 1500 | Thermal     | unallocated share                                                                  | unallocated share                                                              | Interstate | 0.00  | 13.55   |
| 69 | NLC TPS-II Stage-1           | 540  | Thermal     | unallocated share                                                                  | unallocated share                                                              | Interstate | 0.00  | 4.46    |
| 70 | NLC TPS-II Stage-2           | 790  | Thermal     | unallocated share                                                                  | unallocated share                                                              | Interstate | 0.00  | 7.31    |
| 71 | NLC TPS-I Expansion          | 420  | Thermal     | unallocated share                                                                  | unallocated share                                                              | Interstate | 0.00  | 9.37    |
| 72 | NLC TPS-II Expansion         | 500  | Thermal     | unallocated share                                                                  | unallocated share                                                              | Interstate | 0.00  | 2.33    |
| 73 | NTPS                         | 914  | Thermal     | unallocated share                                                                  | unallocated share                                                              | Interstate | 0.00  | 0.71    |
| 74 | NTPS: Tuticorin              | 1000 | Thermal     | unallocated share                                                                  | unallocated share                                                              | Interstate | 0.00  | 14.16   |
| 75 | NPCIL MAPS Kalpakkam         | 440  | Nuclear     | unallocated share                                                                  | unallocated share                                                              | Interstate | 0.00  | 1.38    |
| 76 | NPCIL KAIGA GS: Stage-1 & 2  | 440  | Nuclear     | unallocated share                                                                  | unallocated share                                                              | Interstate | 0.00  | 10.82   |
| 77 | NPCIL KAIGA GS: Stage-3 & 4  | 440  | Nuclear     | unallocated share                                                                  | unallocated share                                                              | Interstate | 0.00  | 12.15   |
| 78 | NPCIL KRRMP                  | 1000 | Nuclear     | unallocated share                                                                  | unallocated share                                                              | Interstate | 0.00  | 8.99    |

Dr. C.E./D.S.M.  
P.S.P.C.L. Patiala

| NIRSI POWER |                                                                                 | Name of Project         |                          | Net Energy Supplied (in MUs)   |                                         | Short Term/ Long Term |  | Total FY 2024-25 |
|-------------|---------------------------------------------------------------------------------|-------------------------|--------------------------|--------------------------------|-----------------------------------------|-----------------------|--|------------------|
| Sr.No       | Source                                                                          | Installed Capacity (MW) | Contracted Capacity (MW) | Evacuation Voltage Levels (KV) | Grid Attached                           |                       |  |                  |
| 1           | Abundant Energy Pvt. Ltd. Plant-I                                               | 2                       | 2.00                     | 11                             | 66 KV S/Sn, Nartai                      | Long Term             |  | 2.650            |
| 2           | Abundant Energy Pvt. Ltd. Plant-II                                              | 1                       | 1.00                     | 11                             | 66 KV S/Sn, Nartai                      | Long Term             |  | 1.173            |
| 3           | Acme Solar Rooftop system Pvt. Ltd. Jhunj                                       | 15                      | 15.00                    | 66                             | 66KV S/Sn, Dandewala                    | Long Term             |  | 21.618           |
| 4           | Acme Solar Rooftop system Pvt. Ltd. Nangia Talwandi Sahib                       | 15                      | 15.00                    | 66                             | 66 KV S/Sn, Nangia                      | Long Term             |  | 21.802           |
| 5           | Aditya Mediasales Ltd. Ludhiana                                                 | 4                       | 4.00                     | 66                             | 66 KV Jangarh                           | Long Term             |  | 2.539            |
| 6           | Aditya Mediasales Pvt. Ltd. Sodana Kalan, Ludhiana                              | 2                       | 2.00                     | 11                             | 66 KV S/Sn, Aikae                       | Long Term             |  | 2.216            |
| 7           | Aster Solar Power Pvt. Ltd. Jhunj, Mansa                                        | 1                       | 1.00                     | 11                             | 220 KV S/Sn, Jhunj                      | Long Term             |  | 1.492            |
| 8           | Atma Powers Pvt. Ltd. Labhewali, Mukatsar                                       | 2                       | 2.00                     | 11                             | 66 KV S/Sn, Labhewali                   | Long Term             |  | 2.797            |
| 9           | Azuro Power Makampala Pvt. Ltd. Bhithwala                                       | 4                       | 4.00                     | 66                             | 66 KV S/Sn, Bhithwala                   | Long Term             |  | 5.800            |
| 10          | Azuro Power Makampala Pvt. Ltd. Kilaanwali                                      | 24                      | 24.00                    | 66                             | 66 KV S/Sn, Kilaanwali                  | Long Term             |  | 36.368           |
| 11          | Azuro Power Plots Pvt. Ltd. Bahadurgarh Janda-1                                 | 25                      | 25.00                    | 66                             | 66 KV Paoon                             | Long Term             |  | 34.522           |
| 12          | Azuro Power Plots Pvt. Ltd. Bahadurgarh Janda-2                                 | 25                      | 25.00                    | 66                             | 66 KV Tharapada                         | Long Term             |  | 31.383           |
| 13          | Azuro Power Plots Pvt. Ltd. Korianwali                                          | 25                      | 25.00                    | 66                             | 66 KV Ranowli                           | Long Term             |  | 35.447           |
| 14          | Azuro Power Plots Pvt. Ltd. Badal                                               | 15                      | 15.00                    | 66                             | 132 KV Badal                            | Long Term             |  | 22.238           |
| 15          | Azuro Power Plots Pvt. Ltd. Bahadurgarh                                         | 25                      | 25.00                    | 66                             | 66 KV Bahadurgarh                       | Long Term             |  | 31.329           |
| 16          | Azuro Power Plots Pvt. Ltd. Bhithwala                                           | 10                      | 10.00                    | 66                             | 66 KV Bhithwala                         | Long Term             |  | 15.461           |
| 17          | Azuro Power Plots Pvt. Ltd. Vanawala                                            | 25                      | 25.00                    | 66                             | 66 KV Vanawala Anuak                    | Long Term             |  | 36.762           |
| 18          | Azuro Renewable Energy Pvt. Ltd. PSAMB, Mansa                                   | 0.63                    | 0.63                     | 11                             | 66 KV Anai Mandi                        | Long Term             |  | 0.805            |
| 19          | Azuro Renewable Energy Pvt. Ltd. Bhagwant Singh & Kalandar, Kala, Kala          | 0.55                    | 0.55                     | 11                             | 66 KV Attewali                          | Long Term             |  | 0.800            |
| 20          | Azuro Renewable Energy Pvt. Ltd. Anil Singh Warehouse, Mochiwal                 | 0.801                   | 0.801                    | 11                             | 66 KV Attewali                          | Long Term             |  | 0.800            |
| 21          | Azuro Renewable Energy Pvt. Ltd. Vikas Singh Warehouse, Jodhpur Ramana, Bahinda | 0.503                   | 0.503                    | 11                             | 66 KV Badali Aia Singh                  | Long Term             |  | 0.800            |
| 22          | Azuro Renewable Energy Pvt. Ltd. Bots Computers Ltd. Zirkhali                   | 1.25                    | 1.25                     | 11                             | 66 KV Bhutab                            | Long Term             |  | 1.173            |
| 23          | Azuro Renewable Energy Pvt. Ltd. CA Veg Fruits, Kharar                          | 0.599                   | 0.599                    | 11                             | 66 KV Chhawan                           | Long Term             |  | 0.599            |
| 24          | Azuro Renewable Energy Pvt. Ltd. Ganesh Gora, Moriana                           | 1.80                    | 1.80                     | 11                             | 66 KV Furgala                           | Long Term             |  | 1.598            |
| 25          | Azuro Renewable Energy Pvt. Ltd. PSAMB, Ludhiana                                | 0.76                    | 0.76                     | 11                             | 66 KV Namawal                           | Long Term             |  | 0.305            |
| 26          | Azuro Renewable Energy Pvt. Ltd. PSAMB, Mohali                                  | 2.05                    | 2.05                     | 11                             | 66 KV Ph. S. Isak Area, Distt SAS Nagar | Long Term             |  | 2.291            |
| 27          | Azuro Renewable Energy Pvt. Ltd. Skytriss, Langur                               | 1.20                    | 1.20                     | 11                             | 66 KV Hindampur                         | Long Term             |  | 1.246            |
| 28          | Azuro Lupa Pvt. Ltd. 15 MW (Tahsil) Jattan, Project-I                           | 15                      | 15.00                    | 66                             | 66 KV Annawala                          | Long Term             |  | 16.482           |
| 29          | Azuro Lupa Pvt. Ltd. 15 MW (Sahawa) Punjab, Project-II                          | 15                      | 15.00                    | 66                             | 66 KV Sahawa                            | Long Term             |  | 20.435           |
| 30          | Azuro Lupa Pvt. Ltd. 4 MW (Sahawa) Punjab, Project-III                          | 4                       | 4.00                     | 66                             | 66 KV Sahawa                            | Long Term             |  | 5.525            |
| 31          | Bhushan Energy Industrial Development Ltd. (BIDIL)                              | 15                      | 15.00                    | 66                             | 66 KV Aikae                             | Long Term             |  | 21.360           |
| 32          | Bhushan Energy Infrastructure Pvt. Ltd. (BEIPL)                                 | 15                      | 15.00                    | 66                             | 66 KV Aikae                             | Long Term             |  | 22.322           |
| 33          | Canal Solar Energy Pvt. Ltd.                                                    | 7.5                     | 7.50                     | 66                             | 66KV Alawal                             | Long Term             |  | 7.332            |
| 34          | Canal Energy Pvt. Ltd. Bhagpur, Mukatsar                                        | 1.5                     | 1.50                     | 11                             | 66KV SN Bhagpur                         | Long Term             |  | 1.89             |
| 35          | Continental Engineering & Power Pvt. Ltd.                                       | 1                       | 1.00                     | 11                             | 66 KV Gori Chauri                       | Long Term             |  | 1.557            |
| 36          | Earth Solar Pvt. Ltd. Beharwal, Nangia                                          | 4                       | 4.00                     | 66                             | 66 KV S/Sn, Bhadoun                     | Long Term             |  | 4.735            |
| 37          | Enterprise Business Solutions Pvt. Ltd. Sarbia, Shadhra SBO Nagar               | 1.5                     | 1.50                     | 11                             | 66KV S/Sn, Karawar                      | Long Term             |  | 0.811            |

Dr. C.E./D.S.M.  
P.S.P.C.L. Patiala

|    |                                                            |      |       |     |                             |           |        |
|----|------------------------------------------------------------|------|-------|-----|-----------------------------|-----------|--------|
| 38 | Ecoenergy Inc. Bopara Kalan, Ludhiana                      | 1    | 1.00  | 33  | 66KV S/S'n. Sathar          | Long Term | 0.902  |
| 39 | Focal Energy Solar India Pvt. Ltd. Nangla, Bathinda        | 4    | 4.00  | 66  | 66 KV S/S'n. Nangla         | Long Term | 6.917  |
| 40 | G S Alwal & Co (Engineers) Pvt. Ltd. Bhutwal Mukhar        | 1.5  | 1.5   | 33  | 66KV S/S'n. Bhutwal         | Long Term | 1.418  |
| 41 | IK Energy Pvt. Ltd. Lajan Kalan, Jalandhar                 | 1    | 1     | 33  | 66 KV S/S'n. Jalandhar      | Long Term | 1.160  |
| 42 | International Switchgears Pvt. Ltd. Ph-1, Randas, Amritsar | 1    | 1     | 33  | 66 KV S/S'n. Randas         | Long Term | 0.991  |
| 43 | International Switchgears Pvt. Ltd. Ph-1, Randas, Amritsar | 1    | 1     | 33  | 66 KV S/S'n. Randas         | Long Term | 1.009  |
| 44 | JSSK Energy Pvt. Ltd.                                      | 1    | 1.00  | 33  | 66 KV S/S'n. Bhagpur        | Long Term | 1.354  |
| 45 | Madhar Solar Pvt. Ltd.- Baha, Mansa                        | 2    | 2.00  | 33  | 66KV S/S'n. Baha            | Long Term | 2.857  |
| 46 | Madhar Solar Pvt. Ltd.- Baha, Mansa                        | 2    | 2.00  | 33  | 66 KV S/S'n. Baha           | Long Term | 2.944  |
| 47 | Magnez Buildtech Pvt. Ltd.- Sherikawala                    | 25   | 25.00 | 66  | 66 KV Baha                  | Long Term | 17.130 |
| 48 | Magnez Buildtech Pvt. Ltd.- Todhar                         | 25   | 25.00 | 66  | 66 KV Baha                  | Long Term | 17.882 |
| 49 | Magnificent Power Pvt. Ltd.                                | 1    | 1.00  | 33  | 220KV S/S. Jhunj            | Long Term | 1.425  |
| 50 | Mint Solar Power Pvt. Ltd., Chandakalan                    | 24   | 24.00 | 66  | 66 KV Sandigarh             | Long Term | 34.753 |
| 51 | Mint Solar Power Pvt. Ltd. Kheta Khurad                    | 25   | 25.00 | 66  | 66 KV S/S'n. Sandigarh      | Long Term | 37.128 |
| 52 | Mint Solar Power Pvt. Ltd. Markhara                        | 25   | 25    | 66  | 66 KV S/S'n. Sangha         | Long Term | 38.411 |
| 53 | Moka Green Energy Pvt. Ltd. Bopara Kalan, Ludhiana         | 4    | 4     | 66  | 66 KV S/S'n. Baha           | Long Term | 5.835  |
| 54 | Mynah Aesthya Power Pvt. Ltd. Baran                        | 25   | 25    | 66  | 66 KV S/S'n. Baran          | Long Term | 38.113 |
| 55 | Mynah Aesthya Power Pvt. Ltd. Baran                        | 25   | 25    | 66  | 66 KV Dabwali               | Long Term | 38.039 |
| 56 | Nandhan Solar Power Pvt. Ltd. Jhunj, Mansa                 | 1    | 1     | 33  | 220 KV Jhunj                | Long Term | 1.501  |
| 57 | Nandhan Solar Power Pvt. Ltd. Mipunkalan, Mansa            | 1    | 1     | 33  | 66KV Alwar                  | Long Term | 1.538  |
| 58 | Nandhan Solar Power Pvt. Ltd. Patiala, Bathinda            | 4    | 4     | 66  | 66KV Patiala                | Long Term | 5.954  |
| 59 | Oasis Green Pvt. Ltd.                                      | 3    | 3     | 66  | 66 KV S/S'n. Baran          | Long Term | 4.434  |
| 60 | Omega Infraengines Pvt. Ltd.                               | 1    | 1     | 33  | 66 KV S/S'n. Chawala        | Long Term | 1.216  |
| 61 | Omega Solar Projects Pvt. Ltd. Sangarpur, Lehra            | 10   | 10.00 | 66  | 66KV Gurgaon                | Long Term | 13.787 |
| 62 | PGL Khayal Kalan SPV                                       | 6.2  | 6.20  | 33  | 220 KV Barga                | Long Term | 0.228  |
| 63 | Prakashen PEDS SPV                                         | 1    | 1.00  | 33  | 66KV Ram Mandi              | Long Term | 1.145  |
| 64 | Photon Sunbeam Pvt. Ltd.-I                                 | 10   | 10.00 | 66  | 66 KV S/S'n. Ramgarhi       | Long Term | 30.478 |
| 65 | Photon Sunbeam Pvt. Ltd.-II                                | 25   | 25.00 | 66  | 220 KV S/S'n. Talsandhar    | Long Term | 33.486 |
| 66 | PN Clean Energy Ltd., Lakhiwala, Mansa                     | 20   | 20.00 | 66  | 66 KV S/S'n. Kot Dharms     | Long Term | 29.232 |
| 67 | Pu Renewable Energy Ltd. Baha, Mansa                       | 10   | 10.00 | 66  | 66 KV S/S'n. Takhliya, Baha | Long Term | 14.178 |
| 68 | Prayana Developers Pvt. Ltd.-I, Sandigarh                  | 50   | 50.00 | 132 | 132 KV S/S'n. Baliaana      | Long Term | 83.168 |
| 69 | Prayana Developers Pvt. Ltd.-II Chughakalan                | 50   | 50.00 | 132 | 132 KV S/S'n. Baliaana      | Long Term | 82.971 |
| 70 | Prashant Industries Ltd. Viji, Bajaj, Bathinda             | 3    | 3.00  | 66  | 66 KV S/S'n. Nandkoti       | Long Term | 4.439  |
| 71 | Radient Solar Enigres Pvt. Ltd.                            | 3    | 3.00  | 66  | 66 KV S/S'n. Pathra         | Long Term | 4.486  |
| 72 | RSSD Educational & Environmental Society, Beas (Beas)      | 12   | 12.00 | 132 | 132KV S/S'n. Beas           | Long Term | 15.683 |
| 73 | RSSD Educational & Environmental Society, Beas (Beas)      | 7.52 | 7.52  | 132 | 132KV Beas                  | Long Term | 8.528  |
| 74 | SAM SOLAR Pvt. Ltd. Doraha, Canal Top                      | 2.5  | 2.50  | 33  | 66 KV S/S'n. Daburi         | Long Term | 3.368  |
| 75 | SAM SOLAR Pvt. Ltd. Nidampur, Sangarh                      | 2.5  | 2.50  | 33  | 66KV S/S'n. Nidampur        | Long Term | 2.173  |
| 76 | Squarednet Projects India Pvt. Ltd. Dhadiwala, Fazika      | 30   | 30.00 | 66  | 66 KV S/S'n. Katta Tala     | Long Term | 31.224 |

Dr. G. E. D. S. M.  
P.S.P.C.L., Patiala

|                              |                                                              |        |        |    |                                       |           |          |
|------------------------------|--------------------------------------------------------------|--------|--------|----|---------------------------------------|-----------|----------|
| 77                           | Solare Power Pvt. Ltd. Usmankhara                            | 24     | 24.00  | 66 | 66 KV S/S'n. Karer Khara              | Long Term | 37.683   |
| 78                           | Solare Usa Pvt. Ltd.                                         | 25     | 25.00  | 66 | 66 KV S/S'n. Khuan Sangar             | Long Term | 37.587   |
| 79                           | Soma Enterprises Ltd. Khara Kalan                            | 1      | 1.00   | 33 | 66KV Rangoli                          | Long Term | 0.857    |
| 80                           | Sovex Renewables Pvt. Ltd. Mohandpur                         | 1      | 1.00   | 33 | 66KV Usen, Kathgarh, Tahsil Kalachaur | Long Term | 0.679    |
| 81                           | T R Energy & Agro Pvt. Ltd. Jandwala, Mansa, Fazika          | 2      | 2.00   | 33 | 66 KV Khewadi Dhru                    | Long Term | 2.811    |
| 82                           | T R Energy & Agro Pvt. Ltd. Viji, Pathra, Fazika             | 1      | 1.00   | 33 | 66 KV Pathra                          | Long Term | 1.683    |
| 83                           | Vector Green Sunshine Pvt. Ltd. Gamiwala Baha                | 28     | 28.00  | 66 | 66 KV S/S'n. Gamiwala Baha            | Long Term | 31.366   |
| 84                           | Vector Green Surya Usa Pvt. Ltd. Gamiwala, Baha, Mansa       | 28     | 28.00  | 66 | 66 KV S/S'n. Gamiwala Baha            | Long Term | 30.756   |
| 85                           | Vijay Printing Press Pvt. Ltd. Chagar branch canal (Rooftop) | 7.5    | 7.50   | 66 | 66KV Bhutwal                          | Long Term | 8.904    |
| 86                           | Vivian Solar Pvt. Ltd. Bajaj Bathinda                        | 2      | 2.00   | 33 | 66 KV S/S'n. Randgarh                 | Long Term | 3.981    |
| 87                           | Walihan Solar Punjab Ltd.-I, Tona pujan                      | 20     | 20.00  | 66 | 66 KV S/S'n. Jaga Ram Tirath          | Long Term | 27.352   |
| 88                           | Walihan Solar Punjab Ltd.-II, Jagaram Tirath                 | 10     | 10.00  | 66 | 66 KV S/S'n. Jaga Ram Tirath          | Long Term | 13.958   |
| 89                           | Walihan Solar Punjab Ltd.-III, Jagaram Tirath                | 2      | 2.00   | 33 | 66 KV S/S'n. Jaga Ram Tirath          | Long Term | 2.785    |
| 90                           | Walihan Solar Punjab Ltd.-IV, Tona pujan                     | 4      | 4.00   | 66 | 66 KV S/S'n. Jaga Ram Tirath          | Long Term | 5.340    |
| 91                           | SAME Solar Solutions Pvt. Ltd.                               |        |        |    |                                       |           | 83.233   |
| 92                           | PEDA 4MW Solar                                               |        |        |    |                                       |           | 4.456    |
| i) Total Solar (Interest)    |                                                              | 884.22 | 884.22 |    |                                       |           | 1370.099 |
| ii) Solar (Interest)         |                                                              |        |        |    |                                       |           | 0.000    |
| 1) Bundled NRVs (solar only) |                                                              | 37.08  | 37.08  |    | Outside Punjab                        | Long Term | 52.292   |
| 2) SEC Solar                 |                                                              | 30.00  | 30.00  |    | Outside Punjab                        | Long Term | 17.418   |
| Total ii)                    |                                                              | 67.08  | 67.08  |    |                                       |           | 109.729  |
| Total Solar (i+ii)           |                                                              | 951.22 | 951.22 |    |                                       |           | 1479.819 |
| B Co Generation              |                                                              |        |        |    |                                       |           | 0.000    |
| B Bagasse (Co-gen)           |                                                              |        |        |    |                                       |           | 0.000    |
| 1                            | A B Sugars Ltd.                                              | 23     | 20.00  | 66 | 66 KV Pathra                          | Long Term | 27.275   |
| 2                            | Chandigarh Sugars & Ind. Ltd.                                | 23     | 20.00  | 66 | 66 KV S/S. Rajga                      | Long Term | 15.878   |
| 3                            | Indian Sugars Ltd.                                           | 42     | 30.00  | 66 | 132 KV Lichi Basi                     | Long Term | 113.358  |
| 4                            | Nakamthar Power Pvt. Ltd.                                    | 15     | 13.50  | 66 | 132 KV Nakamthar                      | Long Term | 18.148   |
| 5                            | Rana Sugars Ltd (JMW)                                        | 34     | 20.00  | 66 | 66 KV Sethala                         | Long Term | 27.784   |
| 6                            | Wahid Sandhar Sugars Ltd.                                    | 12     | 7.60   | 33 | 66 KV S/S Phagwara                    | Long Term | 17.383   |
| 7                            | The Bhuppur Co-op Sugar Mills Ltd.                           | 15     | 4.54   | 66 | 66 KV S/S Voh Sassi                   | Long Term | 45.030   |
| Total Co-gen Bagasse         |                                                              | 162    | 116.54 |    |                                       |           | 148.136  |
| B Biomass (Co-gen)           |                                                              |        |        |    |                                       |           | 0.000    |
| 1                            | A B. Chana Sweets, Pvt. Ltd.                                 | 5.5    | 3.00   | 66 | 66 KV Rajga                           | Long Term | 0.980    |
| 2                            | Chandigarh Distillers & Breweries Ltd. (B. 25.12.01)         | 9.25   | 5.00   | 66 | 66 KV Rajga                           | Long Term | 5.118    |
| 3                            | Chandigarh Distillers & Breweries Ltd. (B. 25.12.01)         | 19     | 2.50   | 66 | 66 KV Rajga                           | Long Term | 4.008    |
| 4                            | N. V. Distillers & Breweries Pvt. Ltd.                       | 10     | 6.00   | 66 | 66 KV Chandigarh                      | Long Term | 14.287   |
| 5                            | Shree Ganesh Estates Pvt. Ltd. (New PPA)                     | 15     | 4.00   | 66 | 66 KV Rajga                           | Long Term | 5.487    |
| 6                            | M/s OM Sams Marketing Pvt. Ltd.                              | 9.80   | 3.00   | 33 | 66 KV Sangarh Kalan                   | Long Term | 18.882   |
| Total Co-gen Biomass         |                                                              | 51.65  | 23.50  |    |                                       |           | 55.597   |
| Total Co-gen Biomass         |                                                              | 213.65 | 140.04 |    |                                       |           | 308.736  |
|                              |                                                              |        |        |    |                                       |           | 0.000    |

Dr. G. E. D. S. M.  
P.S.P.C.L., Patiala

50  
23

|    |                                                            |       |        |     |                                     |                     |         |
|----|------------------------------------------------------------|-------|--------|-----|-------------------------------------|---------------------|---------|
| C  | Biomass/PP                                                 |       |        |     |                                     |                     | 0.000   |
| 1  | Dee Development Engineers Pvt. Ltd.                        | 8     | 8      | 66  | 66 KV Kathiawar, Malad              | Long Term           | 56.234  |
| 2  | Green Planet Energy Pvt. Ltd., BirPind                     | 6     | 6      | 66  | 66 KV 55 Mehraipur                  | Long Term           | 31.414  |
| 3  | Green Planet Energy Pvt. Ltd., Birjon (Ranunc cycle)       | 6     | 6      | 66  | 33/ 66 KV Faldi (Ror Talu)          | Long Term           | 25.034  |
| 4  | Mahe Power Pvt Ltd                                         | 5     | 5      | 66  | 66 KV Lubanewah, Sri Muktabar Sahib | Long Term           | 15.669  |
| 5  | Green Planet Energy Pvt. Ltd., Manuke                      | 6     | 6      | 66  | 66KV S/S Samadh Bhai                | Long Term           | 50.641  |
| 6  | Sukhbir Agro Energy Ltd (Farazpur)                         | 18    | 18     | 132 | 132 KV Farazpur                     | Long Term           | 140.584 |
| 7  | Sukhbir Agro Energy Ltd (Jaito)                            | 18    | 18     | 66  | 220 KV Bajakhara                    | Long Term           | 136.559 |
| 8  | Universal Biomass Energy Pvt. Ltd.                         | 14.5  | 14.5   | 132 | 132 KV Gaddabala                    | Long Term           | 85.624  |
| 9  | Vision Energy Pvt. Ltd.                                    | 19.80 | 19.80  | 66  | 66 KV Mania                         | Long Term           | 44.272  |
| 10 | SAEL Ltd (Jakhri)                                          | 19    | 19.80  | 66  | 66 KV Tohra                         | Long Term           | 53.930  |
|    | Total Biomass/PP                                           | 102.5 | 102.50 |     |                                     |                     | 638.958 |
|    |                                                            |       |        |     |                                     |                     | 0.000   |
| D  | Waste to energy                                            |       |        |     |                                     |                     | 0.000   |
| 1  | Habswal Biomethanation LDH                                 | 1     | 1.00   | 11  | 66 KV Kitchanagar, Ludhiana         | Long Term           | -1.200  |
|    | Total Waste to energy                                      | 1     | 1.00   |     |                                     |                     | -1.200  |
|    |                                                            |       |        |     |                                     |                     | 0.000   |
| E  | Bogas                                                      |       |        |     |                                     |                     | 0.000   |
| 1  | Green Planet Energy Pvt. Ltd., Birjon export (sotto cycle) | 4     | 4.00   | 66  | 66 KV 55 Mehraipur                  | Long Term           | 2.295   |
| 2  | Sampuran Agro Ventures Ltd                                 | 1     | 0.70   | 11  | 66 KV Fazila                        | Long Term           | 0.720   |
|    | Total Bogas                                                | 5     | 4.70   |     |                                     |                     | 3.015   |
|    |                                                            |       |        |     |                                     |                     | 0.000   |
| F  | Mini Hydel                                                 |       |        |     |                                     |                     | 0.000   |
| 1  | Aqua Power Plant Ltd                                       |       |        |     |                                     |                     | 0.000   |
| 1  | Chakshu MHP                                                | 2     | 2.00   | 11  | 66 KV S/Sin, Mehak Katan            | Long Term           | 9.475   |
| 2  | Lohgarh                                                    | 2     | 2.00   | 11  | 66 KV S/Sin, Kutha                  | Long Term           | 7.834   |
| 3  | Sidhwa                                                     | 1.5   | 1.50   | 11  | 66 KV Pahal                         | Long Term           | 6.036   |
|    | Aqua Power Plant Ltd. Total                                | 5.2   | 5.20   |     |                                     |                     | 23.466  |
|    |                                                            |       |        |     |                                     |                     | 0.000   |
| G  | Abolar Power Generation Pvt. Ltd.                          |       |        |     |                                     |                     | 0.000   |
| 1  | Ghola MHP                                                  | 0.5   | 0.50   | 11  | 132 KV S/Sin, Ghola Katan           | Long Term           | 2.886   |
| 2  | Channuwal MHP                                              | 0.9   | 0.90   | 11  | 66KV S/Sin, Mani Mastafa            | Long Term           | 3.495   |
| 3  | Akhara MHP                                                 | 1.1   | 1.10   | 11  | 66 KV S/Sin, Aggar Uppan            | Long Term           | 4.583   |
| 4  | Khanpur                                                    | 1.10  | 1.10   | 11  | 132 KV S/Sin, Bhatpur               | Long Term           | 5.075   |
| 5  | Sudhar                                                     | 1.40  | 1.40   | 11  | 66 KV S/Sin, Sudhar                 | Long Term           | 5.033   |
|    | Abolar Power Generation TOTAL                              | 5.3   | 5.50   |     |                                     |                     | 21.072  |
|    |                                                            |       |        |     |                                     |                     | 0.000   |
| H  | Kolla Hydro Ltd                                            |       |        |     |                                     |                     | 0.000   |
| 1  | Balambar MHP                                               | 1.25  | 1.25   | 11  | 66 KV Dhun                          | Long Term           | 1.795   |
| 2  | Kola                                                       | 1.75  | 1.75   | 11  | 66 KV Rangpur                       | Long Term           | 18.149  |
| 3  | Sahoke                                                     | 1.2   | 1.20   | 11  | 66 KV Ashpal Katan                  | Long Term           | 5.868   |
|    | Kolla Hydro Ltd Total                                      | 4.2   | 4.20   |     |                                     |                     | 17.808  |
|    |                                                            |       |        |     |                                     |                     | 0.000   |
| I  | Punjabi Hydro Ltd                                          |       |        |     |                                     |                     | 0.000   |
| 1  | Doodwad MHP                                                | 1.4   | 1.40   | 11  | 66 KV S/Sin, Lajon                  | Interim Arrangement | 6.036   |
| 2  | Satar MHP                                                  | 1.5   | 1.50   | 11  | 66 KV S/Sin, Amargath               | Interim Arrangement | 6.185   |

Dy. C.E. / D.S.M.

P.S.P.C.L. Patiala

50  
24

|    |                                                           |      |        |    |                                |                     |          |
|----|-----------------------------------------------------------|------|--------|----|--------------------------------|---------------------|----------|
| 3  | Bhambura MHP                                              | 1.3  | 1.30   | 11 | 66 KV S/Sin, Bhambura          | Interim Arrangement | 6.308    |
|    | Punjabi Hydro Ltd. Total                                  | 4.20 | 4.20   |    |                                |                     | 18.529   |
|    |                                                           |      |        |    |                                |                     | 0.000    |
| J  | Individual Hydro Plant                                    |      |        |    |                                |                     | 0.000    |
| 1  | Atlantic Power Pvt. Ltd (Phoola)                          | 0.80 | 0.80   | 11 | 66 KV Nankana                  | Long Term           | 2.389    |
| 2  | Atlantic Power Pvt. Ltd (Rakham)                          | 0.30 | 0.30   | 11 | 132 KV Nankana                 | Long Term           | 0.800    |
| 3  | Atlantic Power Pvt. Ltd (Takhana)                         | 0.65 | 0.65   | 11 | 66 KV Bhartiyagan              | Long Term           | 1.550    |
| 4  | Atlantic Power Pvt. Ltd (Takhana) PSPCL Free energy share | 0.00 | 0.00   | 11 |                                | Long Term           | 0.664    |
| 5  | Gill Aqua Hydro Power Generation Co. Pvt. Ltd - MBL-II    | 6.00 | 6.00   | 66 | 66 KV S/Sin, Ranipur           | Long Term           | 9.658    |
| 6  | Gill Aqua Hydro Power Generation Co. Pvt. Ltd - MBL-III   | 3.80 | 3.80   | 66 | 66 KV S/Sin, Ranipur           | Long Term           | 6.808    |
| 7  | Gill Power Generation Co. (P) Ltd                         | 2.70 | 2.70   | 11 | 220 KV S/Sin, Tibbar           | Long Term           | 7.453    |
| 8  | Hurkalyan Renewable Energy Pvt. Ltd                       | 0.60 | 0.60   | 11 | 66 KV S/Sin, Talawaal          | Long Term           | 4.416    |
| 9  | Kolla Renewables Pvt. Ltd Doudhar                         | 1.50 | 1.50   | 11 | 220 KV S/Sin, Radham Katan     | Long Term           | 5.221    |
| 10 | Kolla Renewables Pvt. Ltd Nidampur                        | 0.80 | 0.80   | 11 | 66 KV S/Sin, Nidampur          | Long Term           | 1.938    |
| 11 | Kolla Renewables Pvt. Ltd Thuli                           | 0.80 | 0.80   | 11 | 66 KV S/Sin, Bhara             | Long Term           | 2.809    |
| 12 | Mahe Canal Hydro Project Pvt Ltd Ludhiana                 | 0.65 | 0.65   | 11 | 66 KV S/Sin, Jithanwal         | Long Term           | 1.064    |
| 13 | P & R Guddiwala Hydro Power Pvt. Ltd.                     | 2.00 | 2.00   | 11 | 66 KV Mullaowal                | Long Term           | 8.918    |
| 14 | Preestak Power Pvt. Ltd (Tugheal)                         | 0.85 | 0.85   | 11 | 66 KV Harshowal                | Long Term           | 1.979    |
| 15 | Sami India Hydro Power Pvt. Ltd.                          | 1.20 | 1.20   | 11 | 132 KV S/Sin, Bhatpur          | Long Term           | 3.330    |
| 16 | Solihwal Hydro Power Pvt. Ltd                             | 0.70 | 0.70   | 11 | 66 KV Muddowal, Ext. Ludhiana  | Long Term           | 1.637    |
| 17 | SRR Hydro Power Generators Pvt. Ltd                       | 0.40 | 0.40   | 11 | 66 KV S/Sin, MBS, Bhatnagar    | Long Term           | 0.830    |
| 18 | UBRC Hydro Company                                        | 2.00 | 2.00   | 11 | 66 KV S/Sin, Rai Khara Bhagwal | Long Term           | 8.469    |
| 19 | Preestak Power Pvt. Ltd (Kallab)                          | 0.80 | 0.80   | 11 | 0                              | Long Term           | 2.043    |
| 20 | Hydro Energy & Infrastructure                             | 0.25 | 0.25   | 11 | 66KV S/Sin, Chaudhri           | Long Term           | 1.243    |
| 21 | Sainkar Hydro Uja Pvt. Ltd                                | 1.5  | 1.50   | 11 | Lothgarh Thakran               | Long Term           | 7.861    |
|    | Individual Hydro Total                                    | 28.1 | 28.10  |    |                                |                     | 82.956   |
|    |                                                           |      |        |    |                                |                     | 0.000    |
| K  | Punjabi Genco Ltd                                         |      |        |    |                                |                     | 0.000    |
| 1  | Naragwal MHP                                              | 1.50 | 1.50   | 11 | 66 KV Naragwal                 | Long Term           | 5.815    |
| 2  | Datta MHP                                                 | 1.00 | 1.00   | 11 | 66 KV Bura                     | Long Term           | 4.513    |
| 3  | Tupper MHP                                                | 1.50 | 1.50   | 11 | 66 KV Sudhar                   | Long Term           | 5.071    |
| 4  | Chauk MHP                                                 | 1.50 | 1.50   | 11 | 66 KV Alangar                  | Long Term           | 5.807    |
| 5  | Kharla MHP                                                | 1.00 | 1.00   | 11 | 66 KV Mani                     | Long Term           | 4.441    |
| 6  | Kangrahar MHP                                             | 1.30 | 1.30   | 11 | 66 KV Sandhu                   | Long Term           | 5.406    |
| 7  | Bomani MHP                                                | 1.80 | 1.80   | 11 | 132 KV Bhatpur                 | Long Term           | 3.773    |
| 8  | Lajera MHP                                                | 1.30 | 1.30   | 11 | 66 KV Ahmadgarh                | Long Term           | 4.802    |
|    | Total PGL                                                 | 9.8  | 9.80   |    |                                |                     | 15.327   |
|    | Total Mini Hydel                                          | 56.8 | 56.80  |    |                                |                     | 201.588  |
|    |                                                           |      |        |    |                                |                     | 0.000    |
| L  | Wind Power                                                |      |        |    |                                |                     | 0.000    |
| 1  | SECI Wind Power (150 MW)                                  | 150  | 150.00 |    | Outside Punjab                 | Long Term           | 395.435  |
| 2  | SECI Wind Power (200 MW)                                  | 200  | 200.00 |    | Outside Punjab                 | Long Term           | 513.762  |
|    | Total Wind Power                                          | 350  | 350.00 |    |                                |                     | 913.137  |
|    |                                                           |      |        |    |                                |                     | 0.000    |
| M  | SECI Hybrid Power                                         |      |        |    |                                |                     | 0.000    |
| 1  | SECI 500 MW Hybrid Power PSA (Solar)                      | 400  | 400.00 |    | Outside Punjab                 | Long Term           | 1400.261 |

Dy. C.E. / D.S.M.

P.S.P.C.L. Patiala

Dy. C.E. / D.S.M.  
P.S.P.C.I., Patiala

By: C.E./D.S.M  
P.S.P.C. Patia

By C.E./D.S.M.  
P.S.P.C.I., Patiale

Dy.C.E./D.S.M.  
P.S.P.C.L. Patna



Dy. C.E./D.S.M.  
P.S.P.C.I. Patta

Dy. C.E./D.S.M.  
P.S.P.C.L., Rattials

Dy. C.E./D.S.M.  
P.S.P.C.I., Patiala

P.S.P.C.  iala

50  
33

"A" (Details of Distribution Transformers(DT) Level Information)

| Ending 31.03.2025                    |        |          |             |                           |                      |                          |                          |                                      |                                          |                                              |
|--------------------------------------|--------|----------|-------------|---------------------------|----------------------|--------------------------|--------------------------|--------------------------------------|------------------------------------------|----------------------------------------------|
| Zone                                 | Circle | Division | Feeder Name | Total No. of DT on Feeder | No. of unmetered DTs | No. of Metered DTs       |                          |                                      | No. of DTs with functional meters        |                                              |
|                                      |        |          |             |                           |                      | AMR metered Communicable | AMI metered Communicable | Non AMR/AMI metered Non Communicable | Communicating (Total No. out of 7 and 8) | Non Communicating (Total No. out of 7 and 8) |
| 1                                    | 2      | 3        | 4           | 5=(6+7+8+9)               | 6                    | 7                        | 8                        | 9                                    | 10                                       | 11                                           |
| Total Transformers ending 31.12.2024 |        |          |             |                           |                      |                          |                          |                                      |                                          |                                              |
|                                      | SKVA   | 6.3 KVA  | 10 KVA      | 15 KVA                    | 16 KVA               | 25 KVA                   | 50 KVA                   | 63 KVA                               | 100 KVA                                  | Above 100KVA                                 |
| PSPCL                                | 41     | 78470    | 363429      | 1                         | 198967               | 311117                   | 4                        | 143805                               | 125770                                   | 27481                                        |
|                                      |        |          |             |                           |                      |                          |                          |                                      |                                          | 1249085                                      |

 Er. Ravi Verma  
EA- 7969  
Energy Auditor  
PSPCL, Patiala.

Dy. C.E./D.S.M.

P.S.P.C.L. Patiala

 50  
34

| Division Wise status of DT level metering ending 31.03.2025 |             |                   |                |                            |                                       |                                           |                                   |
|-------------------------------------------------------------|-------------|-------------------|----------------|----------------------------|---------------------------------------|-------------------------------------------|-----------------------------------|
| Sr. No.                                                     | Zone        | Circle            | Division       | Total No. of DTs installed | No. of DTs where AMR Meters installed | No. of DTs where Non AMR Meters installed | No. of DTs with functional meters |
| 1                                                           | BORDER ZONE | Gurdaspur         | City Batala    | 7620                       | 472                                   | 111                                       | 7037                              |
| 2                                                           |             |                   | Sub Batala     | 13909                      | 231                                   | 61                                        | 13617                             |
| 3                                                           |             |                   | Qadian         | 12804                      | 185                                   | 91                                        | 12528                             |
| 4                                                           |             |                   | Dhariwal       | 8149                       | 118                                   | 43                                        | 7988                              |
| 5                                                           |             |                   | Gurdaspur      | 9536                       | 278                                   | 133                                       | 9125                              |
| 6                                                           |             |                   | City Pathankot | 5422                       | 390                                   | 168                                       | 4864                              |
| 7                                                           |             |                   | Sub Pathankot  | 5129                       | 412                                   | 203                                       | 4514                              |
| 8                                                           |             |                   | Total          | 62569                      | 2086                                  | 810                                       | 59673                             |
| 9                                                           |             | Sub Asr           | EAST           | 3871                       | 310                                   | 216                                       | 3345                              |
| 10                                                          |             |                   | WEST           | 12673                      | 0                                     | 42                                        | 12631                             |
| 11                                                          |             |                   | SUBURBAN       | 18090                      | 85                                    | 40                                        | 17965                             |
| 12                                                          |             |                   | AJNALA         | 20867                      | 178                                   | 109                                       | 20580                             |
| 13                                                          |             |                   | JANDIALA       | 10449                      | 152                                   | 37                                        | 10260                             |
| 14                                                          |             |                   | Total          | 65950                      | 725                                   | 444                                       | 64781                             |
| 15                                                          |             | City Asr          | Ind            | 681                        | 223                                   | 0                                         | 458                               |
| 16                                                          |             |                   | CL             | 881                        | 520                                   | 0                                         | 361                               |
| 17                                                          |             |                   | CC             | 1173                       | 109                                   | 0                                         | 1064                              |
| 18                                                          |             |                   | HG             | 491                        | 281                                   | 0                                         | 210                               |
| 19                                                          |             |                   | Total          | 3226                       | 1133                                  | 0                                         | 2093                              |
| 20                                                          |             | Tarn Taran        | Rayya          | 16057                      | 40                                    | 0                                         | 16017                             |
| 21                                                          |             |                   | City TT        | 15665                      | 162                                   | 0                                         | 15503                             |
| 22                                                          |             |                   | SUB TT         | 13079                      | 0                                     | 63                                        | 13016                             |
| 23                                                          |             |                   | PATTI          | 19563                      | 0                                     | 98                                        | 19465                             |
| 24                                                          |             |                   | Bhikhiwind     | 20054                      | 0                                     | 0                                         | 20054                             |
| 25                                                          |             |                   | Total          | 84418                      | 202                                   | 161                                       | 84055                             |
| 26                                                          |             | Border zone Total |                | 216163                     | 4146                                  | 1415                                      | 210602                            |

Dy. C.E./D.S.M.

P.S.P.C.L. Patiala



# Annual Energy Audit Report: PSPCL FY 2024-25

|    |              |                |                    |        |       |      |        |      |
|----|--------------|----------------|--------------------|--------|-------|------|--------|------|
| 22 | CENTRAL ZONE | East           | City Centre        | 666    | 355   | 152  | 159    | 475  |
| 23 |              |                | CMC                | 1352   | 724   | 158  | 470    | 325  |
| 24 |              |                | Focal Point        | 3735   | 2448  | 1079 | 208    | 2117 |
| 25 |              |                | Sunder Nagar       | 3721   | 1673  | 856  | 1192   | 1340 |
| 26 |              |                | Total              | 9474   | 5200  | 2245 | 2029   | 4257 |
| 27 |              | West           | City West          | 2306   | 258   | 1062 | 986    | 4    |
| 28 |              |                | Estate             | 4633   | 1008  | 1391 | 2234   | 5    |
| 29 |              |                | Model Town         | 1680   | 74    | 1319 | 287    | 1    |
| 30 |              |                | Janta Nagar        | 1158   | 48    | 231  | 879    | 0    |
| 31 |              |                | Aggar Nagar        | 2359   | 0     | 1172 | 1187   | 0    |
| 32 |              |                | Total              | 12136  | 1388  | 5175 | 5573   | 10   |
| 33 |              | Sub Urban Ldh  | Sub Urban Ldh      | 6571   | 0     | 21   | 6550   | 2    |
| 34 |              |                | Adda Dakha         | 6816   | 137   | 12   | 6667   | 137  |
| 35 |              |                | Jagraon            | 8561   | 374   | 12   | 8175   | 0    |
| 36 |              |                | Raikot             | 12101  | 250   | 14   | 11837  | 0    |
| 37 |              | Khanna         | Ahmedgarh          | 6137   | 218   | 36   | 5883   | 218  |
| 38 |              |                | Total              | 40186  | 979   | 95   | 39112  | 357  |
| 39 |              |                | Khanna             | 9270   | 570   | 485  | 8215   | 115  |
| 40 |              |                | Doraha             | 5678   | 163   | 162  | 5353   | 44   |
| 41 |              |                | MGG                | 1991   | 0     | 855  | 1136   | 0    |
| 42 |              |                | Amloh              | 11538  | 0     | 124  | 11414  | 0    |
| 43 |              | Patiala Circle | Sirhind            | 15935  | 409   | 14   | 15512  | 110  |
| 44 |              |                | Total              | 44412  | 1142  | 1640 | 41630  | 269  |
| 45 |              |                | Central zone Total | 106208 | 3709  | 9155 | 88344  | 4893 |
| 46 |              |                | East Patiala       | 15448  | 0     | 88   | 15360  | 0    |
| 47 | SOUTH ZONE   | Sangrur        | West Patiala       | 1718   | 1287  | 0    | 431    | 0    |
| 48 |              |                | Model Town Patiala | 1126   | 990   | 0    | 136    | 259  |
| 49 |              |                | Sub Patiala        | 12222  | 0     | 0    | 12222  | 0    |
| 50 |              |                | Rajpura            | 10483  | 825   | 0    | 9658   | 214  |
| 51 |              | Barnala        | Nabha              | 16087  | 356   | 60   | 15671  | 356  |
| 52 |              |                | Samana             | 17633  | 807   | 63   | 16763  | 807  |
| 53 |              |                | Total              | 74717  | 4265  | 211  | 70241  | 1636 |
| 54 |              |                | Sangrur            | 17427  | 522   | 19   | 16886  | 503  |
| 55 |              | Roop Nagar     | Sunam              | 21822  | 426   | 32   | 21364  | 117  |
| 56 |              |                | Lehra Gaga         | 20416  | 282   | 0    | 20134  | 282  |
| 57 |              |                | Dirba              | 17802  | 27    | 87   | 17688  | 27   |
| 58 |              |                | Patran             | 20534  | 157   | 0    | 20377  | 0    |
| 59 |              | Mohali         | Dhuri              | 20843  | 275   | 0    | 20568  | 275  |
| 60 |              |                | Total              | 118844 | 1689  | 138  | 117017 | 1204 |
| 61 |              |                | City Barnala       | 28336  | 381   | 0    | 27955  | 277  |
| 62 |              |                | Sub Barnala        | 22129  | 834   | 0    | 21295  | 598  |
| 63 |              | Bathinda       | Malerkotla         | 21103  | 336   | 114  | 20653  | 267  |
| 64 |              |                | Total              | 71568  | 1551  | 114  | 69903  | 1142 |
| 65 |              |                | Roop Nagar         | 7974   | 0     | 297  | 7677   | 297  |
| 66 |              |                | Anand Pur Sahib    | 6245   | 0     | 194  | 6051   | 194  |
| 67 |              | Bathinda       | Kharar             | 9436   | 0     | 889  | 8547   | 0    |
| 68 |              |                | Samrala            | 12229  | 0     | 292  | 11937  | 292  |
| 69 |              |                | Total              | 35884  | 0     | 1672 | 34212  | 783  |
| 70 |              |                | Mohali Spl.        | 5033   | 1993  | 702  | 2338   | 1993 |
| 71 |              | Bathinda       | Zirakpur           | 5557   | 385   | 146  | 5026   | 222  |
| 72 |              |                | Lalru              | 7501   | 165   | 100  | 7236   | 120  |
| 73 |              |                | Total              | 18091  | 2543  | 948  | 14600  | 2335 |
| 74 |              |                | South zone Total   | 319104 | 10048 | 3083 | 305973 | 7100 |
| 75 | Bathinda     | Bathinda       | Bathinda           | 24090  | 503   | 1748 | 21839  | 834  |
| 76 |              |                | Rampura            | 17422  | 63    | 30   | 17329  | 30   |
| 77 |              |                | Bhagta             | 20653  | 0     | 198  | 20455  | 198  |
| 78 |              |                | Maur               | 30850  | 0     | 117  | 30733  | 117  |
| 79 | Bathinda     | Bathinda       | Mansa              | 25713  | 92    | 207  | 25414  | 202  |
| 80 |              |                | Budlada            | 24811  | 95    | 138  | 24578  | 233  |
| 81 |              |                | Total              | 143539 | 753   | 2438 | 140348 | 1614 |
| 82 |              |                |                    |        |       |      |        |      |

Dy. C.E./D.S.M.  
PSPCL

|    |            |            |                  |        |       |      |        |      |
|----|------------|------------|------------------|--------|-------|------|--------|------|
| 47 | SOUTH ZONE | Sangrur    | Samana           | 17633  | 807   | 63   | 16763  | 807  |
| 48 |            |            | Total            | 74717  | 4265  | 211  | 70241  | 1636 |
| 49 |            |            | Sangrur          | 17427  | 522   | 19   | 16886  | 503  |
| 50 |            |            | Sunam            | 21822  | 426   | 32   | 21364  | 117  |
| 51 |            | Barnala    | Lehra Gaga       | 20416  | 282   | 0    | 20134  | 282  |
| 52 |            |            | Dirba            | 17802  | 27    | 87   | 17688  | 27   |
| 53 |            |            | Patran           | 20534  | 157   | 0    | 20377  | 0    |
| 54 |            |            | Dhuri            | 20843  | 275   | 0    | 20568  | 275  |
| 55 |            | Roop Nagar | Total            | 118844 | 1689  | 138  | 117017 | 1204 |
| 56 |            |            | City Barnala     | 28336  | 381   | 0    | 27955  | 277  |
| 57 |            |            | Sub Barnala      | 22129  | 834   | 0    | 21295  | 598  |
| 58 |            |            | Malerkotla       | 21103  | 336   | 114  | 20653  | 267  |
| 59 |            | Mohali     | Total            | 71568  | 1551  | 114  | 69903  | 1142 |
| 60 |            |            | Roop Nagar       | 7974   | 0     | 297  | 7677   | 297  |
| 61 |            |            | Anand Pur Sahib  | 6245   | 0     | 194  | 6051   | 194  |
| 62 |            |            | Kharar           | 9436   | 0     | 889  | 8547   | 0    |
| 63 |            | Bathinda   | Samrala          | 12229  | 0     | 292  | 11937  | 292  |
| 64 |            |            | Total            | 35884  | 0     | 1672 | 34212  | 783  |
| 65 |            |            | Mohali Spl.      | 5033   | 1993  | 702  | 2338   | 1993 |
| 66 |            |            | Zirakpur         | 5557   | 385   | 146  | 5026   | 222  |
| 67 |            | Bathinda   | Lalru            | 7501   | 165   | 100  | 7236   | 120  |
| 68 |            |            | Total            | 18091  | 2543  | 948  | 14600  | 2335 |
| 69 |            |            | South zone Total | 319104 | 10048 | 3083 | 305973 | 7100 |
| 70 |            |            | Bathinda         | 24090  | 503   | 1748 | 21839  | 834  |
| 71 | Bathinda   | Bathinda   | Rampura          | 17422  | 63    | 30   | 17329  | 30   |
| 72 |            |            | Bhagta           | 20653  | 0     | 198  | 20455  | 198  |
| 73 |            |            | Maur             | 30850  | 0     | 117  | 30733  | 117  |
| 74 |            |            | Mansa            | 25713  | 92    | 207  | 25414  | 202  |
| 75 | Bathinda   | Bathinda   | Budlada          | 24811  | 95    | 138  | 24578  | 233  |
| 76 |            |            | Total            | 143539 | 753   | 2438 | 140348 | 1614 |
| 77 |            |            |                  |        |       |      |        |      |
| 78 |            |            |                  |        |       |      |        |      |

Dy. C.E./D.S.M.  
PSPCL Patiala

|    |              |                   |                   |       |      |        |       |     |
|----|--------------|-------------------|-------------------|-------|------|--------|-------|-----|
| 70 | WEST<br>ZONE | Faridkot          | Faridkot          | 16499 | 382  | 0      | 16042 | 101 |
| 71 |              |                   | Kotkapura         | 25592 | 398  | 0      | 25165 | 105 |
| 72 |              |                   | City Moga         | 18250 | 400  | 0      | 17795 | 114 |
| 73 |              |                   | Sub. Moga         | 12469 | 384  | 0      | 12056 | 122 |
| 74 |              |                   | Baghapurana       | 23963 | 396  | 0      | 23554 | 68  |
|    |              |                   | Total             | 96773 | 1960 | 0      | 94612 | 510 |
| 75 |              | Ferozepur         | City Ferozepur    | 13728 | 467  | 70     | 13191 | 385 |
| 76 |              |                   | S/U Ferozepur     | 11481 | 351  | 0      | 11130 | 195 |
| 77 |              |                   | Jalalabad         | 28827 | 0    | 95     | 28732 | 0   |
| 78 |              |                   | Zira              | 24853 | 232  | 0      | 24631 | 0   |
|    |              | Total             | 78899             | 1050  | 165  | 77684  | 580   |     |
| 79 |              | Sri Muktsar Sahib | Sri Muktsar Sahib | 26542 | 0    | 205    | 26337 | 0   |
| 80 |              |                   | Malout            | 27405 | 410  | 360    | 26635 | 180 |
| 81 |              |                   | Gidderbaha        | 17909 | 151  | 0      | 17758 | 30  |
| 82 |              |                   | Abohar            | 18078 | 434  | 94     | 17550 | 434 |
| 83 |              |                   | Fazilka           | 22649 | 38   | 337    | 22274 | 5   |
| 84 |              | Badal             | 17773             | 0     | 20   | 17753  | 4     |     |
|    |              | Total             | 130356            | 1033  | 1016 | 128307 | 653   |     |
|    |              | West zone Total   | 449567            | 4796  | 3619 | 440951 | 3357  |     |
| 85 | Kapurthala   | City Divn KPT     | 12615             | 615   | 134  | 11866  | 134   |     |
| 86 |              | Sub Divn. KPT     | 7842              | 29    | 124  | 7689   | 136   |     |
| 87 |              | City Nakoder      | 14822             | 157   | 65   | 14600  | 263   |     |
| 88 |              | Sub Divn. Nakoder | 14815             | 0     | 222  | 14593  | 200   |     |
| 89 |              | Kartarpur         | 11362             | 240   | 79   | 11043  | 270   |     |
|    |              | Total             | 61456             | 1041  | 624  | 59791  | 1003  |     |
| 90 | Jalandhar    | East              | 3357              | 1296  | 0    | 2061   | 1095  |     |
| 91 |              | Cannt             | 4663              | 1099  | 0    | 3564   | 1099  |     |
| 92 |              | M/Town            | 4379              | 716   | 0    | 3663   | 716   |     |
| 93 |              | West              | 2046              | 1180  | 0    | 866    | 982   |     |
| 94 |              | Phagwara          | 6798              | 585   | 69   | 6144   | 514   |     |

Dy. C.E. & D.S.M.  
P.S.P.C.L., Patiala

|                                                                         |             |                   |                          |                         |                 |                          |         |        |
|-------------------------------------------------------------------------|-------------|-------------------|--------------------------|-------------------------|-----------------|--------------------------|---------|--------|
| 95                                                                      | NORTH ZONE  | Hoshiarpur        | Total                    | 21243                   | 4876            | 69                       | 16298   | 4406   |
|                                                                         |             |                   | City Hsp                 | 5169                    | 472             | 142                      | 4555    | 460    |
| 96                                                                      |             |                   | Sub Hsp                  | 8667                    | 205             | 0                        | 8462    | 24     |
| 97                                                                      |             |                   | Dasuya                   | 6680                    | 128             | 167                      | 6385    | 167    |
| 98                                                                      |             |                   | Mukerian                 | 7651                    | 234             | 0                        | 7417    | 212    |
| 99                                                                      |             |                   | Bhogpur                  | 8944                    | 0               | 72                       | 8872    | 72     |
|                                                                         |             |                   | Mahilpur                 | 7205                    | 71              | 34                       | 7100    | 76     |
| 100                                                                     |             |                   | Total                    | 44316                   | 1110            | 415                      | 42791   | 1011   |
| 101                                                                     |             | Nawanshahar       | Nawanshahar              | 6880                    | 363             | 110                      | 6407    | 363    |
| 102                                                                     |             |                   | Banga                    | 7241                    | 148             | 56                       | 7037    | 148    |
| 103                                                                     |             |                   | Garhshankar              | 8752                    | 253             | 168                      | 8331    | 253    |
| 104                                                                     |             |                   | Goraya                   | 8155                    | 448             | 51                       | 7656    | 448    |
|                                                                         |             |                   | Total                    | 31028                   | 1212            | 385                      | 29431   | 1212   |
|                                                                         |             |                   | North zone Total         |                         | 158043          | 8239                     | 1493    | 148311 |
|                                                                         |             | GRAND TOTAL PSPCL |                          | 1249085                 | 35938           | 18765                    | 1194181 | 27067  |
|                                                                         |             |                   |                          |                         |                 |                          |         |        |
| "B" Details of DT-wise losses (please add more rows as per requirement) |             |                   |                          |                         |                 |                          |         |        |
| Zone Name                                                               | Circle name | Division name     | Name of the Sub-division | Name of the Sub-station | Substation Code | Name of the 11 kV Feeder |         |        |

Note 1: DT wise losses are not available Presently.

Note 2: a) Voltage wise Input Energy is not available.

b) Due to inadequate DT metering, DT wise losses cannot be calculated.

c) Feeder-wise Sales, T&D losses & AT&C losses details are not available.

d) It is pertinent to mention here that the work of smart meter installation under RDSS Scheme is in progress.

CE/EA & Enforcement  
P.S.P.C.L., Patiala

Er. Ravi Verma  
EA- 7969  
Energy Auditor  
PSPCL, Patiala.

Dy. C.E. & D.S.M.  
P.S.P.C.L., Patiala

Dy. C.E./D.S.M.  
D.B.C.I. Detail.

$$\frac{50}{40}$$

# Annual Energy Audit Report: PSPCL FY 2024-25

|            |          |                  |                      |           |                                                                                 |
|------------|----------|------------------|----------------------|-----------|---------------------------------------------------------------------------------|
| 13031 West | MUKATSAR | DS DIVN. MUKTSAR | DS S/U S/D MUKTSAR   | 83.97826  | Kochi Dal DS254103 66 Kv Bhag 900-450/5 9154893 AMR AP 3Phase 11KV 1.584        |
| 13032 West | MUKATSAR | DS DIVN. MUKTSAR | DS S/U S/D MUKTSAR   |           | JALALABAD DS501110 220 KV AMR 7030204 AMR Category 1 11KV 6.336                 |
| 13033 West | MUKATSAR | DS DIVN. MUKTSAR | DS S/U S/D MUKTSAR   |           | 11KV Gaur DS609103 66 Kv Tibh 1200/577 16194452 NON AMR Category 1 11KV 7.016   |
| 13034 West | MUKATSAR | DS DIVN. MUKTSAR | DS S/U S/D MUKTSAR   |           | 11KV Old DS609102 66 Kv Tibh 1200/577 2285 NON AMR Category 1 11KV 8.711        |
| 13035 West | MUKATSAR | DS DIVN. MUKTSAR | DS S/U S/D MUKTSAR   |           | 11KV New DS609103 66 Kv Tibh 1200/577 16194477 NON AMR Category 1 11KV 9.071    |
| 13036 West | MUKATSAR | DS DIVN. MUKTSAR | DS S/U S/D MUKTSAR   |           | 11KV Fattah DS609104 66 Kv Tibh 1200/577 16194455 NON AMR Category 1 11KV 7.363 |
| 13037 West | MUKATSAR | DS DIVN. MUKTSAR | DS S/U S/D MUKTSAR   |           | 11KV Dha DS609105 66 Kv Tibh 1200/577 2283 NON AMR Category 1 11KV 9.193        |
| 13038 West | MUKATSAR | DS DIVN. MUKTSAR | DS S/U S/D MUKTSAR   |           | 11KV Mukt DS609106 66 Kv Tibh 1200/577 3416 AMR AP 3Phase 11KV 2.392            |
| 13039 West | MUKATSAR | DS DIVN. MUKTSAR | Sub Office Lakhewali |           | Lakhewali DS277101 66 Kv Lakh 1200-600/ 15193846 AMR Category 1 11KV 6.327      |
| 13040 West | MUKATSAR | DS DIVN. MUKTSAR | Sub Office Lakhewali |           | Madrasa DS277102 66 Kv Lakh 1200-600/ 34024 AMR AP 3Phase 11KV 2.129            |
| 13041 West | MUKATSAR | DS DIVN. MUKTSAR | Sub Office Lakhewali |           | Roramali DS011003 66 Kv Lakh 1200-600/ 15123893 AMR AP 3Phase 11KV 2.549        |
| 13042 West | MUKATSAR | DS DIVN. MUKTSAR | Sub Office Lakhewali |           | Rand Gaur DS277104 66 Kv Lakh 1200-600/ 15124786 AMR Category 1 11KV 5.712      |
| 13043 West | MUKATSAR | DS DIVN. MUKTSAR | Sub Office Lakhewali |           | BATTA THE DS188105 66 Kv Khul 1200-600/ 2046454 AMR Category 1 11KV 3.606       |
| 13044 West | MUKATSAR | DS DIVN. MUKTSAR | Sub Office Lakhewali |           | Kanlanwali DS288101 66 Kv Khul 1200-600/ 777499 AMR AP 3Phase 11KV 1.205        |
| 13045 West | MUKATSAR | DS DIVN. MUKTSAR | Sub Office Lakhewali |           | HALIMWAL DS288102 66 Kv Khul 1200-600/ 777518 AMR AP 3Phase 11KV 0.998          |
| 13046 West | MUKATSAR | DS DIVN. MUKTSAR | Sub Office Lakhewali |           | ROSIANWAL DS288104 66 Kv Khul 1200-600/ 2046410 AMR Category 1 11KV 10.258      |
| 13047 West | MUKATSAR | DS DIVN. MUKTSAR | Sub Office Lakhewali |           | Chenay DS288103 66 Kv Khul 1200-600/ 915147 AMR Category 1 11KV 1.600           |
| 13048 West | MUKATSAR | DS DIVN. MUKTSAR | Sub Office Lakhewali | 57.41051  | Gandhar DS328103 66 Kv Chak 900-450/5 10382779 AMR AP 3Phase 11KV 1.017         |
| 13049 West | MUKATSAR | DS DIVN. MUKTSAR | Sub Office Lakhewali |           | GANGHAR DS328105 66 Kv Chak 900-450/5 2067742 AMR Category 1 11KV 2.734         |
| 13050 West | MUKATSAR | DS DIVN. MUKTSAR | Sub Office Lakhewali |           | MAHABADI DS508101 66 Kv Bhag 900-450/5 777264 AMR AP 3Phase 11KV 1.107          |
| 13051 West | MUKATSAR | DS DIVN. MUKTSAR | Sub Office Lakhewali |           | JATEENDW DS508102 66 Kv Bhag 900-450/5 2066402 AMR AP 3Phase 11KV 1.312         |
| 13052 West | MUKATSAR | DS DIVN. MUKTSAR | Sub Office Lakhewali |           | BHAGSAR DS508103 66 Kv Bhag 900-450/5 777497 AMR AP 3Phase 11KV 1.000           |
| 13053 West | MUKATSAR | DS DIVN. MUKTSAR | Sub Office Lakhewali |           | BHAGSAR DS508104 66 Kv Bhag 900-450/5 23316 AMR Category 1 11KV 8.195           |
| 13054 West | MUKATSAR | DS DIVN. MUKTSAR | Sub Office Lakhewali |           | TELFURAI DS498104 66 Kv Chak 900-450/5 23626 AMR AP 3Phase 11KV 1.345           |
| 13055 West | MUKATSAR | DS DIVN. MUKTSAR | Sub Office Lakhewali |           | NANDGAR DS177105 66 Kv Lakh 1200-600/ 31977 AMR AP 3Phase 11KV 1.916            |
| 13056 West | MUKATSAR | DS DIVN. MUKTSAR | Sub Office Lakhewali |           | ROSIANWAL DS128106 66 Kv Khul 1200-600/ 15133947 AMR AP 3Phase 11KV 1.558       |
| 13057 West | MUKATSAR | DS DIVN. MUKTSAR | Sub Office Lakhewali |           | Batta Ther DS498105 66 Kv Chak 900-450/5 15194788 AMR Category 1 11KV 2.804     |
| 13058 West | MUKATSAR | DS DIVN. MUKTSAR | Sub Office Lakhewali |           | Samewal DS177106 66 Kv Lakh 1200-600/ 4814 AMR AP 3Phase 11KV 0.940             |
| 74518.628  |          | 74518.628        | 74518.628            | 74518.628 | 74518.628                                                                       |
| 131.368    |          | 131.368          | 131.368              | 131.368   | 131.368                                                                         |
| 10.283     |          | 10.283           | 10.283               | 10.283    | 10.283                                                                          |
| 74639.714  |          | 74639.714        | 74639.714            | 74639.714 | 74639.714                                                                       |

CE/EA & Enforcement  
P.S.P.C.L., Patiala

Er. Ravi Verma  
EA- 7969  
Energy Auditor  
PSPCL, Patiala.

By C.E./D.S.M.  
P.S.P.C.L., Patiala

Annexure - 1: Proforma for Quarterly Consumer Category-wise Subsidy Billed/Received/Due for FY 2024-25 Annual

| Consumer Category<br>(Separate for each subsidized consumer category) | Billed Energy      |                    |                    | Subsidized Billed Energy |                            |             | Applicable rate of Subsidy as |                     | Subsidy Due from State Govt. |                   |          | Subsidy Actually Billed/Claimed from State Govt. (As against col.13) | Subsidy Received from State Govt. (As against col.13) | Balance Subsidy yet to be Received from State Govt. |
|-----------------------------------------------------------------------|--------------------|--------------------|--------------------|--------------------------|----------------------------|-------------|-------------------------------|---------------------|------------------------------|-------------------|----------|----------------------------------------------------------------------|-------------------------------------------------------|-----------------------------------------------------|
|                                                                       | Metered            | Un-metered*        | Total              | Metered (out of col.2)   | Un-metered* (out of col.3) | Total       | Metered Energy**              | Un-metered Energy** | Metered Energy               | Un-metered Energy | Total    |                                                                      |                                                       |                                                     |
|                                                                       | (In kWh)           |                    |                    | (In kWh)                 |                            |             | (In Rs./kWh)                  |                     | (In Rs. Cr.)                 |                   |          | (In Rs. Cr.)                                                         | (In Rs. Cr.)                                          | (In Rs. Cr.)                                        |
| 1                                                                     | 2                  | 3                  | 4=2+3              | 5                        | 6                          | 7=5+6       | 8                             | 9                   | 10=5x8                       | 11=6x9            | 12=10+11 | 13                                                                   | 14                                                    | 15=13-14                                            |
| Residential                                                           | 20124979860.00     |                    | 20124979860.00     | 16546220911              |                            | 16546220911 | Rs. 2.50 to Rs. 7.15 per kWh  |                     | 8284.57                      |                   | 8284.57  | 8284.57                                                              | 6223.70                                               | 2060.87                                             |
| Agriculture                                                           | 12,54,67,000.00    | 14,84,15,56,297.17 | 14,84,15,56,297.17 | 12480000                 | 14,81,77,30,000.0          | 14943210000 | Rs. 0.50 to Rs. 1.37 per kWh  |                     | 83.69                        | 9893.62           | 9977.31  | 9977.31                                                              | 8491.47                                               | 1485.85                                             |
| Commercial/Industrial-LT                                              | 29,22,52,57,940.00 |                    | 29,22,52,57,940.00 | 24643613529              |                            | 24643613529 | Rs. 0.15 to 1.37 per kWh      |                     | 2537.27                      |                   | 2537.27  | 2537.27                                                              | 2176.99                                               | 360.28                                              |
| Commercial/Industrial-HT                                              |                    |                    |                    |                          |                            |             |                               |                     |                              |                   |          |                                                                      |                                                       |                                                     |
| Other (Specch)                                                        | 87,65,88,882.89    |                    | 1,13,21,48,882.8   |                          |                            |             |                               |                     |                              |                   |          |                                                                      |                                                       |                                                     |
| WWT                                                                   |                    |                    |                    |                          |                            |             |                               |                     |                              |                   |          |                                                                      |                                                       |                                                     |
| Total                                                                 | 50,35,22,93,702.83 | 14,84,15,56,297.17 | 65,44,94,10,000.0  | 41335314440              | 14817730000                | 56153044440 |                               |                     | 10905.53                     | 9893.62           | 20799.15 | 20799.16                                                             | 16892.16                                              | 3907.00                                             |

Note: The subsidy due for FY 2024-25 comes to Rs. 20799.16 crore where as State Govt has released Rs. 16892.16 cr. The net subsidy recoverable from GoP is Rs. 3907.00 crore.

CE/EA & Enforcement  
P.S.P.C.L., Patiala

CE/EA & Enforcement  
P.S.P.C.L., Patiala

Er. Ravi Verma  
EA- 7969  
Energy Auditor  
PSPCL, Patiala.

By C.E./D.S.M.  
P.S.P.C.L., Patiala

Finance Auditor  
PSPCL Patiala



**Punjab State Power Corporation Limited (PSPCL)**

**A Comprehensive Annual Energy Audit for FY 2024-25**



**Punjab State Power Corporation Ltd.**

**(PSPCL-DIS0014PB) PSPCL,  
THE MALL, PATIALA-147001 PUNJAB**

**Prepared By**

**NAMDHARI ECO ENERGIES PVT. LTD.**



[www.ecoenergies.co.in](http://www.ecoenergies.co.in)



[info@ecoenergies.co.in](mailto:info@ecoenergies.co.in)



Call Us+91 1206056188

**"Optimized power, minimized waste—paving the way for a  
smarter, sustainable future."**