

# PERFORMANCE EVALUATION REPORT

DISTRIBUTION COMPANIES



2022-23

Along with Comparison of Last Four Years  
FY 2018-19, 2019-20, 2020-21, & 2021-22



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# EXECUTIVE SUMMARY

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Ensuring that electricity is readily available, easily accessible, and affordable for all citizens throughout the country is necessary for both economic advancement and the overall well-being of the population. The fast-paced evolution of technology and the distinctive business dynamics within the power sector present intricate obstacles in policymaking and strategic planning. These challenges require the development of sectors capable of guaranteeing energy security and affordability for all segments of society.

Electricity sector is the backbone of the economy of every country and plays a key role in challenging the country's progress towards the long-term sustainable pathway. The challenge to achieve and maintain the desired economic growth of the country can only be tackled by providing reliable, sustainable and affordable electric power services to all sectors of economy. In Pakistan, this sector is being regulated by National Electric Power Regulatory Authority (NEPRA).

NEPRA established under the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (Act), amended from time to time, to act as an exclusively empowered as independent regulator to regulate the provision of the electric power services in the country. NEPRA performs its regulatory functions and discharges its duties by exercising powers as conferred under the Act.

Since FY 2010 as a requirement of donor agencies, NEPRA has been annually releasing the Performance Evaluation Report ("PER") of Distribution Licensees ("DISCOs") keeping in view the level of compliance by these DISCOs with respect to the Performance Standards (Distribution) Rules 2005 ("Performance Standards").

Performance Standards mandate that each distribution company is obligated to furnish an Annual Performance Report (APR) to NEPRA in a specified format on annual basis by 31<sup>st</sup> August of the succeeding year. However, few DISCOs have submitted the same in Nov, 2023 too. The APRs for FY 2022-23, which were provided by DISCOs, underwent a thorough review/analysis based on several key parameters. Based on the analysis, a comprehensive Performance Evaluation Report ("PER") has been prepared.

The PER 2023 indicates the compliance level with the Performance Standards by DISCOs. This report captures and presents the status & performance of DISCOs with respect to Transmission and Distribution (T&D) Losses, Recovery, System Average Interruption Frequency Index (SAIFI), System Average Interruption Duration Index (SAIDI), Time frame for New Connection, Load Shedding, Nominal Voltages, Consumers Complaints, Safety, and Fault Rate. The report provides a snapshot of financial impacts pertains to breach of T&D losses by the DISCOs against the targets allowed by NEPRA and less revenue collection. The report comprises the analysis of data for FY 2022-23 along with the comparison of last four years i.e., 2018-19, 2019-20, 2020-21 and 2021-22.

PER 2023 has also highlighted various challenges that were faced during the FY 2023, out of which, the authenticity of data is on top. As discussed in the succeeding chapters, all the issues contributed towards increase in circular debt and compromise the reliability, quality, safety and affordability of electric power supply to the end consumers.

While analyzing the data provided by DISCOs, it is observed that in FY 2022-23, there are some significant improvements by some of the distribution companies especially from losses and recovery point of view as compared to last years. Whereas the performance of some of the DISCOs in other areas seems not distinguishable as no remarkable achievement is observed. It is pertinent to highlight that the performance with regard to few parameters remained stagnant such as load shedding & safety, and no significant improvement has been witnessed. Parameter-wise detail is as under:

#### **T&D Losses:**

Transmission and Distribution (T&D) losses is critical and often contentious parameter within the power sector. As the regulatory authority, NEPRA has consistently advised and directed the DISCOs to implement effective measures to minimize their losses and bring them as close as possible to NEPRA's specified targets.

Unfortunately, the majority of DISCOs have not adhered to the NEPRA given targets, except FESCO, GEPCO, and K-Electric who have managed to keep their losses below the levels or equal to targets set by NEPRA. However, other DISCOs have exceeded these limits, which contributed to a substantial loss of approximately **Rs. 166 Billion** to the national exchequer. Notably, PESCO, HESCO, SEPCO, and QESCO have exhibited below-par performance in this aspect among all DISCOs.

It is worth emphasizing that NEPRA has provided substantial investment and Operation & Maintenance (O&M) funds to DISCOs annually, with the intention that these resources would be used to undertake necessary initiatives. This may include addressing the system constraints, reducing feeder lengths, implementing automated metering, and performing preventive maintenance. However, it is disappointing that many DISCOs have been reluctant to undertake such projects and activities, which are essential for reducing T&D losses and ensuring the efficiency of the power distribution system

#### **Recovery:**

DISCOs have to realize that maximum collection of revenues is the only reason to maintain their financial health. The same can also play an effective role in reducing the burden of circular debt. While considering the data submitted by DISCOs, it is noted that only IESCO, have achieved the landmark of 100% and even crossed the same by recovering the debts of previous years. Whereas FESCO & GEPCO are close to the target of 100%. Similarly, PESCO, LESCO, MEPCO and K-Electric have made collections more than 90%. However, QESCO, SEPCO, and HESCO are lagging far behind in achieving their target recoveries in FY 2022-23. QESCO's performance remained worst in this regard as its number is lowest among all. It is relevant to state that the low

recovery ratios have effectively crumbled the revenues beyond acceptable levels, which has resulted in a loss to national exchequer of around **Rs. 263 Billion**.

#### **Provision of New Connections:**

It is alarming that power demand is not being generated despite availability of ample generation in the country and non-provision of new connections to the eligible consumers within the prescribed time frame is one of the factors contributing to this less power demand. It is important to note that more than 95% of the applied connections must be given connections within the time frame defined in PSDR 2005. Whereas the data submitted by DISCOs is concerning and, in this regard, the performance of GEPCO, FESCO, and QESCO remained poor as they failed to achieve the set targets with huge margin. However, PESCO, MEPCO, SEPCO and K-Electric are closer to target of 95%. Further, IESCO, LESCO, and HESCO have submitted that they have provided more than 95% of applied connections in year 2022-23.

It is important to highlight that non-provision of new connections to the consumers within the prescribed time frame causes huge financial loss to the national exchequer and pushes the public of Pakistan in the dark despite the availability of sufficient generation and payment of capacity charges. If we talk about the non-provision of connections in numbers, there are around 278, 815 ripe connections as on June, 2023 which were not connected within the prescribed timelines, meaning thereby, this much number of consumers made payment but not get the connection.

#### **Load Shedding:**

It is an undeniable fact that DISCOs are deliberately drawing less power than their demand, despite being provided with an adequate quota on account of load shedding based on Aggregate Technical & Commercial (AT&C) losses policy, which is in direct contradiction with the NEPRA Act, 1997 and the Performance Standards Distribution Rules, 2005. Consequently, NEPRA being regulator has decided to initiate legal proceedings against DISCOs (PESCO, QESCO, HESCO, SEPCO & K-Electric) due to their blatant violation of NEPRA laws. The proceedings are underway.

Furthermore, it is relevant to state that the AT&C based load shedding was started back in 2013 with the purpose to improve revenue collections through strong governance mechanism and the same will be gradually reduced. Contrary to this, the AT&C based load shedding is still being carried out for more than 10 years and DISCOs particularly PESCO, QESCO, SEPCO and HESCO have considered it an easy path for them to manage the recovery rather than to put the efforts and ensure maximum collection. In this regard, a sample of 20 feeders of these DISCOs were selected and examined the trend of AT&C losses on these feeders. Upon subsequent analysis of four years data i.e., from July 2018 to June, 2022, it was found that no significant reduction in AT&C losses has been made and the feeders are in same category of load shedding. NEPRA is of the opinion that due to AT&C-based load shedding, the good paying consumers connected on the same feeder also badly suffer and it is highly unjustifiable that they face collective punishment due to some non-paying consumers.

In addition, NEPRA firmly believes that DISCOs should establish their writ, and discontinue such AT&C-based load shedding by disconnecting each & individual connection in case of default, meaning thereby, reducing losses and increasing collections. DISCOs can achieve this by taking concrete measures, including identifying high-loss areas, surveillance and control of illegal activities, the installation of Aerial Bundled Cable (ABC) systems, and the implementation of Advanced Metering Infrastructure (AMI)/Automated Meter Reading (AMR) systems at PMT level.

Since K-Electric has installed more than 50K AMI/AMR meters on all PMTs in its service territory, therefore, NEPRA has issued directives to carry out load shedding (if necessary), at the PMT level rather than the feeder level. NEPRA laws explicitly state that DISCOs cannot conduct load shedding on their own until & unless there is a generation shortage or transmission system constraints in the country. NEPRA vigorously monitors the situation of load shedding on a daily basis by examining DISCO's demand, allocated quota, and their actual power drawl.

### **Complaints:**

NEPRA being a regulator vigilantly observes the interests of consumers, therefore, DISCOs are being persistently advised to improve their complaint handling mechanism and provide relief to consumers at the maximum level.

The data provided by the Distribution Companies (DISCOs) indicates that a total of 3,694,861 complaints were received in the fiscal year 2022-23, related to different issues. It is noteworthy that some DISCOs received a lower number of complaints, despite the fact that their operational performance has been consistently criticized in the media, and physical complaints have been filed with NEPRA. This suggests that there may be deficiencies in the complaint handling mechanisms, reporting systems and development of database in these DISCOs.

Moreover, it is noted with concern that SEPCO did not receive a single complaint on any given day in each of its complaint centers and NEPRA has expressed serious reservations regarding the data reported by DISCOs. Further, out of the total number of complaints received by all DISCOs, KE has a significant share of 37.4%, which indicates that KE has a well-established system that allows consumers to easily approach and register their complaints.

This discrepancy in complaint numbers among DISCOs highlights the need for standardized and efficient complaint management and reporting system to address consumer concerns in minimum possible time.

### **SAFETY:**

FY 2022-23 portrays the dreadful picture with respect to number of fatalities both for employees and public occurred in all distribution companies i.e., 161 (52 Employees & 109 Public). During the reported period, PESCO's share remained high followed by, K-Electric, IESCO and HESCO. However, KE has claimed that all the reported accidents occurred inside the premises or due to consumer's own reasons but not due to KE's

network. NEPRA Authority while taking serious notice directed all regional offices to conduct inquiries of all cases. Further, Show Cause Notices have also been issued to all DISCOs.

It is pertinent to highlight that NEPRA has been taking stern notice of such terrible number of fatalities since last three years and accordingly investigations against all DISCOs under section 27 A of NEPRA Act have been conducted. Based on the investigation reports, all DISCOs have been heavily fined.

During investigations, it was disclosed that some of the accidents occurred in DISCOs due to lack of earthing/ grounding of poles/structures of DISCO's distribution system. The Authority took serious notice of such situation and directed all DISCOs to submit the detail of poles/structures to be earthed along with concrete plan. The implementation of same is under process.

### **Conclusion:**

In the fiscal year 2022-23, NEPRA continued its monitoring activities, particularly in terms of investigations conducted under Section 27A of the NEPRA Act. The primary objective of these investigations is to enforce Performance Standards and other relevant provisions of NEPRA laws, with the ultimate goal of ensuring that end consumers have access to affordable, reliable, and sustainable electricity services.

However, it is evident that the performance of distribution companies (DISCOs) throughout this period remained subpar, and the expected power sector reforms were not achieved. Given this ongoing poor performance, it is apparent that, under the existing circumstances, the current DISCO setup is unlikely to be able to deliver the desired results.

In light of these challenges, significant structural changes on a large scale are needed. These changes could include division of large DISCOs into smaller units/entities, the provincialization of DISCOs, privatization or corporatization of DISCOs on public private partnership mode, reduction in the influence of unions within the power sector, discontinuation of AT&C losses policy by using modern technology, outsourcing of high loss feeders, demand side management, and customer-oriented business approach. Such reforms are necessary to address the systemic issues and improve the overall performance and efficiency of the power distribution system in Pakistan.

# 1. INTRODUCTION

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As per Rule 7 of Performance Standards (Distribution) Rules (PSDR) 2005, each distribution company has to submit to the Authority an Annual Performance Report every year, before 31<sup>st</sup> August of the succeeding year in the prescribed format.

The Annual Performance Report Should cover at least the following information:

- a) System Performance Reports
- b) Consumer Service Performance Reports
- c) Distribution Companies written Report on Performance and plans for Improvement

Rule 7(2) of PSDR states the Annual Performance Report Should also contain all relevant information with respect to compliance with these Rules during the year, including comparisons with a compliance report to the Authority for previous year.

This report contains an analysis of performance parameters through descriptive and graphical representation based on the data reported by each distribution company for last five years. The analysis is based on the following parameters:

- Transmission and Distribution Losses
- Recovery in Percentage
- System Average Interruption Frequency Index (SAIFI)
- System Average Interruption Duration Index (SAIDI)
- Percentage Consumers who were not given new connections in permitted time period
- Total number of consumers who made complaints about voltages
- Average Duration of load shedding (hrs.)
- Total consumer service complaints received by DISCO during the year
- Fault Rate (Faults/Km) of distribution system
- Electrical incident resulting in death permanent disability/serious injury to the member of staff or public

It is further added that keeping in view the NEPRA amendment Act, 2018 and subsequent bifurcation of Distribution companies into network and supplier regime, separate performance standards are required to be developed. In this regard, Performance Standards Supplier Regulations 2023 have been formulated, whereas, Performance Standards Distribution Regulations for network are under finalization.

## 2. ANALYSIS

### 2.1 Transmission and Distribution (T&D) Losses

It's a well-established fact that the electrical energy generated by a power station doesn't perfectly align with the amount distributed to consumers. Some percentage of this energy is lost, and these losses are referred to as transmission and distribution (T&D) losses.

Technical losses are inherent to the distribution system and can be mitigated through sound system design, planning, and maintenance. On the other hand, non-technical losses result from external actions in the power system, such as theft, unauthorized connections, and meter tampering. These losses are more challenging to control through technical means and necessitate effective governance, security measures, and legal enforcement to minimize them.

NEPRA considers this parameter as of paramount importance and always gives strict targets of T&D losses to DISCOs, in order to achieve single digit figure:

Name of DISCO	Actual Reported (%)	Allowed in Tariff (%)	Breach of Target (%)
PESCO	37.13	20.16	16.97
IESCO	8.06	7.80	0.26
GEPCO	8.61	9.10	-0.49
FESCO	8.84	8.84	00
LESCO	11.30	8.00	3.30
MEPCO	14.00	12.34	1.66
QESCO	26.70	14.27	12.43
SEPCO	34.37	17.05	17.32
HESCO	27.00	18.57	8.43
K-Electric	15.27	15.36	-0.09
<b>W. Avg:</b>	<b>16.38</b>	<b>12.21</b>	<b>4.17</b>

Table 01: Transmission and Distribution Losses

NEPRA has been continuously indicating that the governance issues in DISCOs are required to be addressed to reduce their losses, which are resulting in ballooning the circular debt. However, no significant improvement has been witnessed on part of some DISCOs in this regard. During FY 2022-23, the overall actual losses of DISCOs are 16.38% against the actual loss of 16.69 % in FY 2021-22. The actual T&D losses are much higher than the allowed T&D losses for FY 2022-23, which is 12.21%. DISCOs need to focus on their high T&D losses and efforts should be made by them to bring it down at least to the level of given targets.

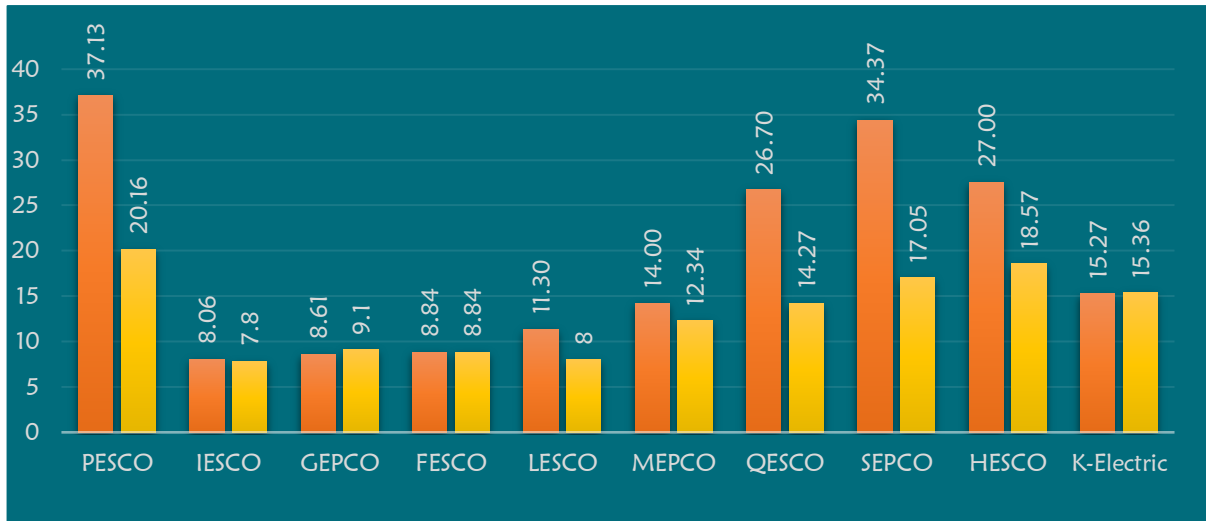


Figure 01: Transmission and Distribution Losses (Actual Reported v/s Allowed in Tariff)

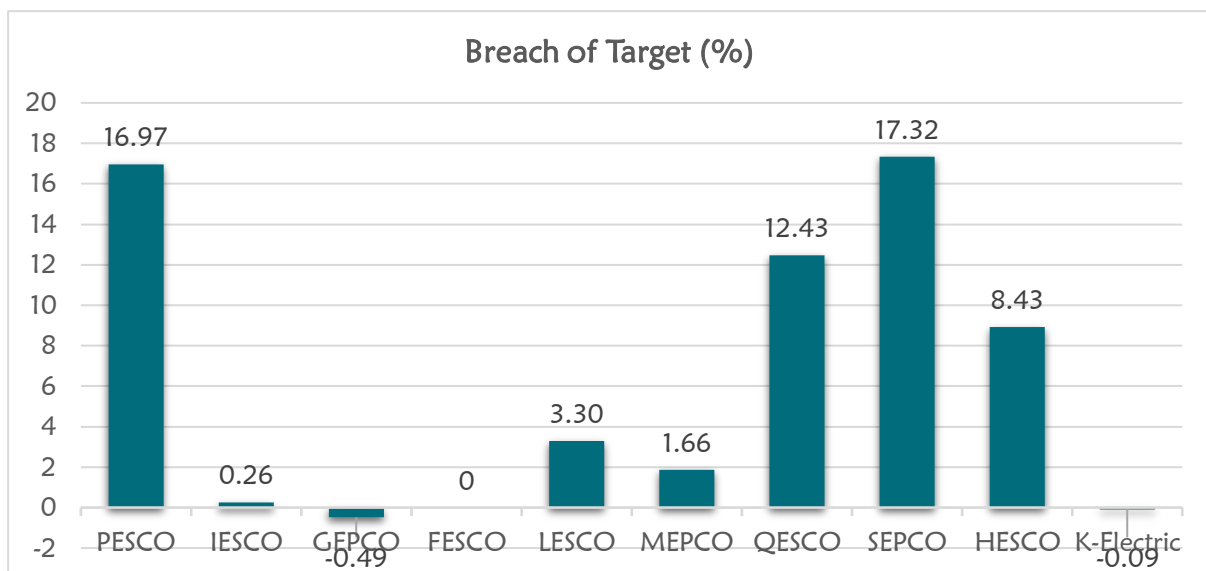


Figure 02: Breach of NEPA Targets (Transmission and Distribution Losses)

The above Figures and table indicate the data reported by the DISCOs and targets set by NEPA through their respective tariff determinations. The data reveals that only FESCO, GEPCO and KE have met with the targets of T&D losses given by the NEPA. Whereas, IESCO and MEPCO are closer to the achievement and LESCO is a bit far from benchmark set by NEPA. Moreover, it is noted with concern that PESCO, QESCO, SEPCO and HESCO remained worst and far away from their targets, which results in an increase of circular debt.

## 2.1.1 Financial loss due to breach of T&D loss target by Distribution Companies

DISCO	Monthly Energy Purchase from CPPA-G (Units) (M.kWh)	Energy Loss (M.KWh)	Financial loss (Rs. Mln)
PESCO	15,254.99	2,588.13	77,471.57
IESCO	11,725.00	30.79	700.01
GEPCO	16,041.00	-39.66	-1,650.62
FESCO	11,439.00	-55.62	-1,640.97
LESCO	26,033.00	860.50	23,099.39
MEPCO	19,504.00	323.03	8,652.04
QESCO	6,005.00	747.84	22,286.38
SEPCO	3,870.00	670.87	21,196.56
HESCO	4,916.00	414.89	14,019.34
K-Electric	18,356.53	-16.98	2,231.38
<b>Total</b>	<b>133,144.52</b>	<b>5,523.78</b>	<b>166,365.08</b>

Table 02: Financial loss due to breach of T&D Loss Target

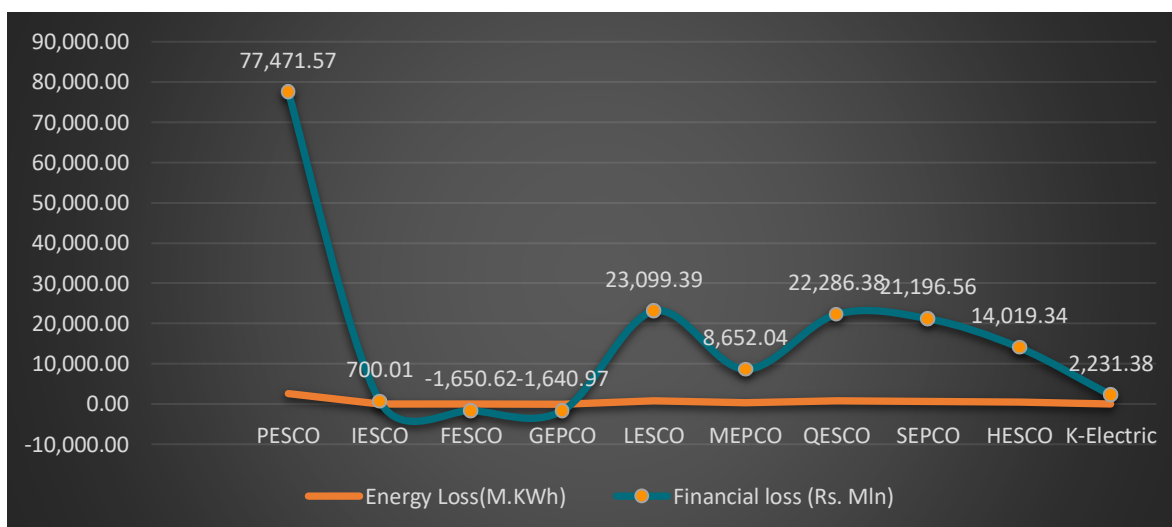


Figure 03: Financial loss due to breach of T&D Loss

Above Table & Graph illustrate the energy loss 5,523.78 M.kWh and subsequent financial loss of more than Rs. 166 Bln. due to breach of T&D loss targets by the distribution companies which has to be borne by the national exchequer for the reported period.

\* DSICO wise Financial loss calculation due to breach of T&D Loss targets on monthly basis are attached at **Annex-I**

## 2.2 RECOVERY (%)

An increase in revenue has the potential to positively impact fiscal deficits and to provide funds for the expansion of public utilities. Recognizing its significance, NEPRA has incorporated this as a vital component of the performance criteria for Distribution Companies (DISCOs). DISCOs are strongly urged to strive for a 100% recovery rate, emphasizing the importance of revenue generation in their operations.

Name of DISCO	Actual Recovery (%)	As per Tariff Determination (%)	Less Recovery (%)
PESCO	92.10	100	-7.9
IESCO	106.32	100	6.32
GEPCO	99.86	100	-0.14
FESCO	98.17	100	-1.83
LESCO	94.33	100	-5.77
MEPCO	98.13	100	-1.87
QESCO	36.90	100	-63.1
SEPCO	68.20	100	-31.8
HESCO	75.90	100	-24.1
K-Electric	92.76	100	-7.24
<b>W. Avg:</b>	<b>86.26</b>	<b>100</b>	<b>-13.74</b>

Table 03: Recovery (%)

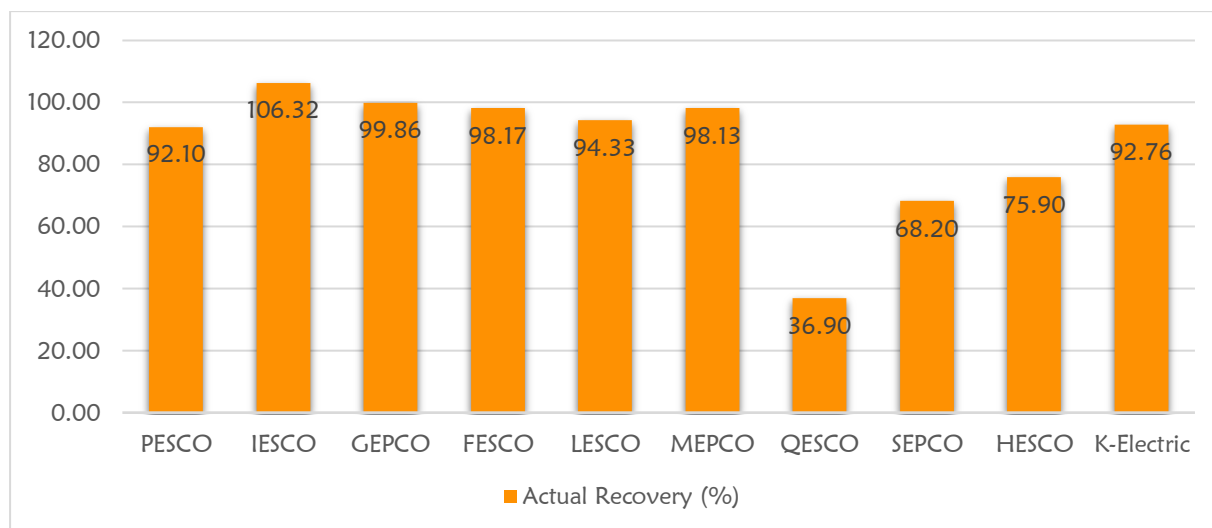


Figure 04: Recovery (%)

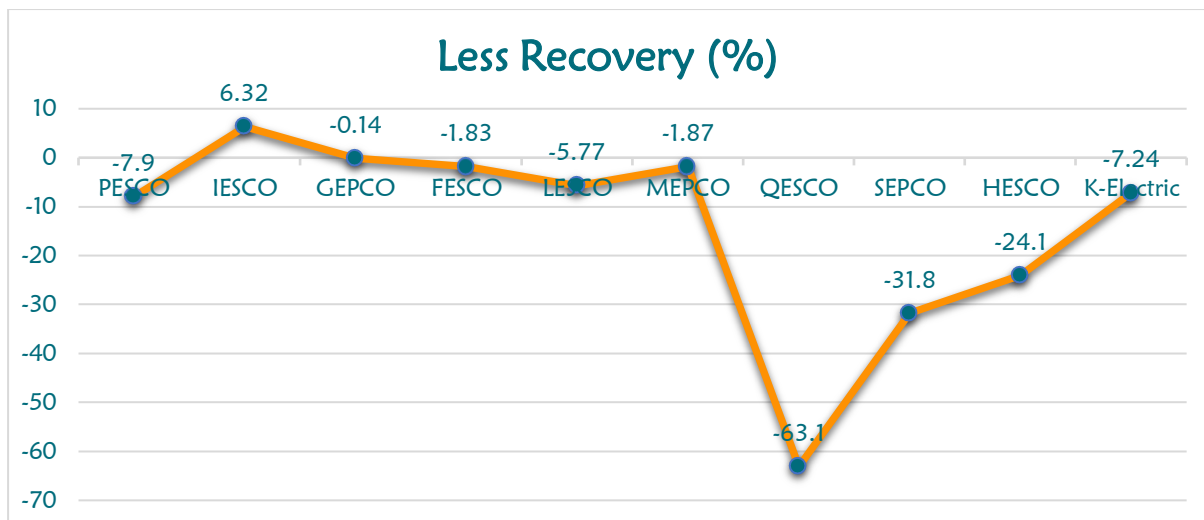


Figure 05: Less Recovery (%)

Taking a closer view of the submitted data, it is observed that only one DISCO i.e., IESCO has significantly achieved the target of 100% recovery in fiscal year 2022-23. Moreover, GEPCO, FESCO, and MEPCO are nearest to the target and achieved the recoveries of 98 to 99%. Similarly, PESCO, LESCO and K-Electric have crossed the figure of 90%. Moreover, HESCO and SEPCO remained the same as in previous year, somewhere in middle with reported values of 75.9 and 68.2 %. However, QESCO has been witnessed as worst performing DISCO among all with the reported position of 36.9%.

NEPRA determines the consumer end tariff for the DISCOs on a 100% collection basis and does not allow any inefficiency on this account. NEPRA consistently highlighted this issue in the previous PERs and has been stressing to take remedial actions to address the same. During FY 2022-23, it has been observed that the overall recovery remained 86.26% as compared to 90.51% during 2021-22, i.e., almost 4% less than the previous financial year.

This is very alarming keeping in view the current average per unit cost of the billed amount, which is over & above the higher T&D losses. Necessary steps are required for corrective measures and improvement in the distribution system. High T&D losses and low recoveries are the main causes of the accumulation of circular debt.

## 2.2.1 Financial Loss Due to Breach of Recovery Targets by DISCOs

Name of DISCO	Billing (Million Rs.)	Collection (Million Rs.)	Loss (Million Rs.)
PESCO	311,974.86	287,305.67	24,669.19
IESCO	380,369.00	404,402.00	-24,033.00
GEPCO	336,506.00	336,040.00	466.00
FESCO	444,755.00	436,620.00	8,135.00
LESCO	796,825.67	751,642.42	45,183.25
MEPCO	485,964.55	476,865.34	9,099.21

QESCO	130,464.10	48,174.10	82,290.00
SEPCO	79,200.00	54,000.00	25,200.00
HESCO	109,711.90	83,252.20	26,459.70
K-Electric	537,159.00	498,276.00	38,883.00
<b>Total</b>	<b>3,612,930.08</b>	<b>3,376,577.73</b>	<b>236,352.35</b>

Table 04: Financial Loss Due to breach of Recovery Targets



Figure 06: Comparison of Billing v/s Collection in DISCOs

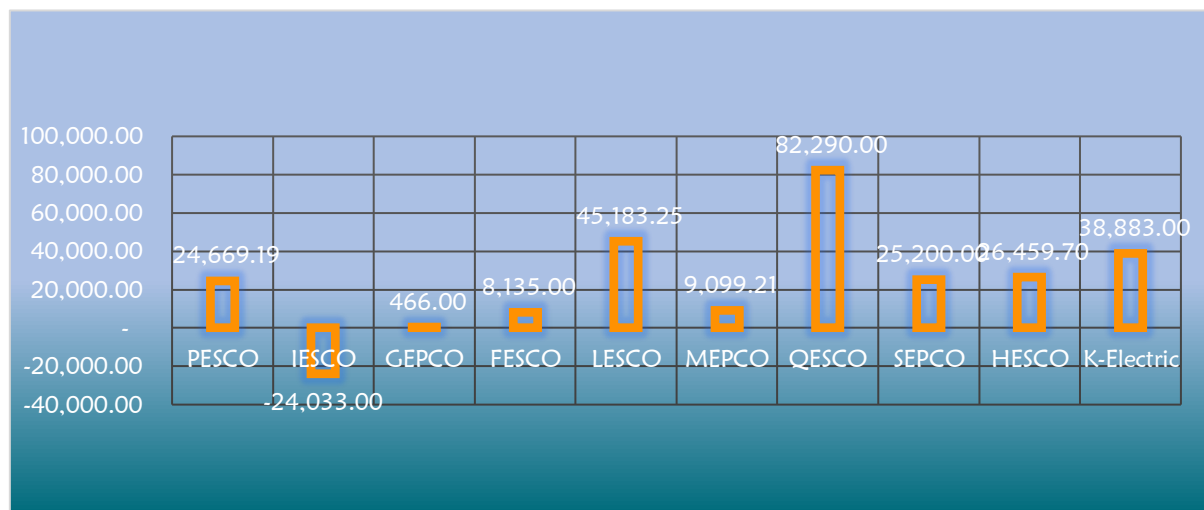


Figure 07: Financial Loss Due to Less Recovery

Table 04 illustrates the revenue losses incurred by distribution companies due to poor governance and management. In the fiscal year 2022-23, DISCOs were able to collect approximately Rs. 3,376 billion against the total billed amount of Rs. 3,612 billion. Consequently, there was a substantial loss of approximately Rs. 236 billion which will be borne by the National Exchequer for the fiscal year 2022-23. Notably, QESCO was the primary contributor to this loss, followed by LESCO, K-E and HESCO. It is evident

that the failure to recover such a significant amount has played a major role in the increasing circular debt.

## 2.3 System Average Interruption Frequency Index (SAIFI):

To evaluate the dependability and the condition of the power distribution system, the indicator known as the System Average Interruption Frequency Index (SAIFI) is employed. SAIFI represents the average number of power outages experienced by a customer within a year. It serves as important indicator for assessing the overall performance of a company especially with respect to reliability.

In accordance with Rule 4(a) of the Performance Standard (Distribution) Rules 2005, a distribution company must ensure that the SAIFI, which quantifies that the annual power supply interruptions per consumer, does not exceed thirteen (13).

Name of DISCO	Reported Figure (NO.)	Target by NEPRA (No.)	Breach of Target
PESCO	162.08	13	Far Away
IESCO	17.98	13	Near to Limit
GEPCO	18.35	13	Near to Limit
FESCO	31.49	13	Near to Limit
LESCO	29.13	13	Near to Limit
MEPCO	28.92	13	Near to Limit
QESCO	86.39	13	Far Away
SEPCO	98.55	13	Far Away
HESCO	114.37	13	Far Away
K-Electric	25.35	13	Near to Limit

Table 05: System Average Interruption Frequency Index (SAIFI) without LT interruptions

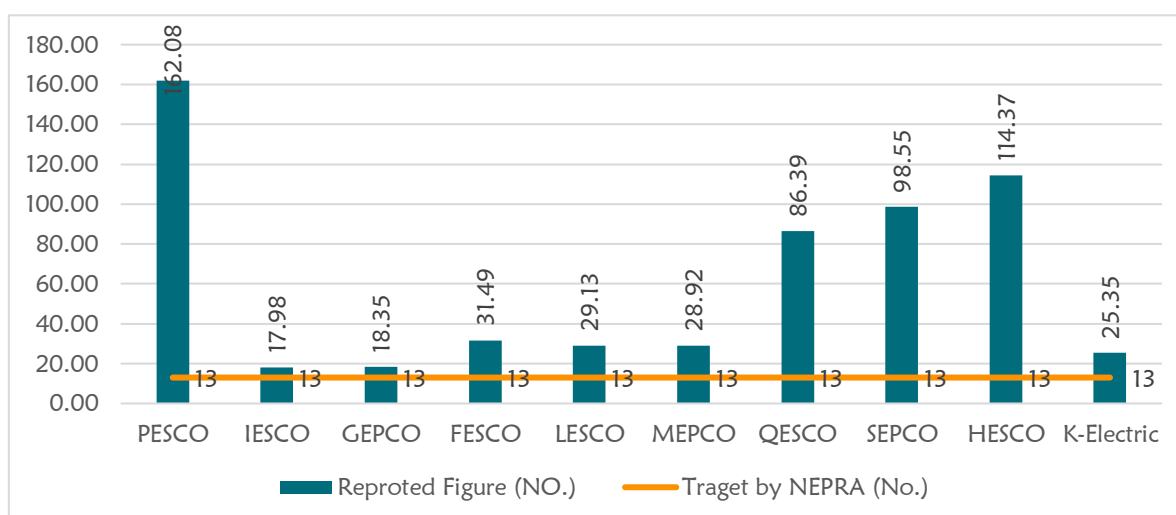


Figure 08: System Average Interruption Frequency Index (SAIFI) without LT interruptions

Name of DISCO	Reported Figure (NO.)	Target by NEPRA (No.)	Breach of Target
PESCO	184.67	13	Far Away
IESCO	17.97	13	Near to Limit
GEPCO	22.01	13	Near to Limit
FESCO	34.95	13	Near to Limit
LESCO	29.13	13	Near to Limit
MEPCO	34.26	13	Near to Limit
QESCO	98.37	13	Far Away
SEPCO	117.50	13	Far Away
HESCO	133.04	13	Far Away
K-Electric	25.34	13	Near to Limit

Table 06: System Average Interruption Frequency Index (SAIFI) with LT interruptions

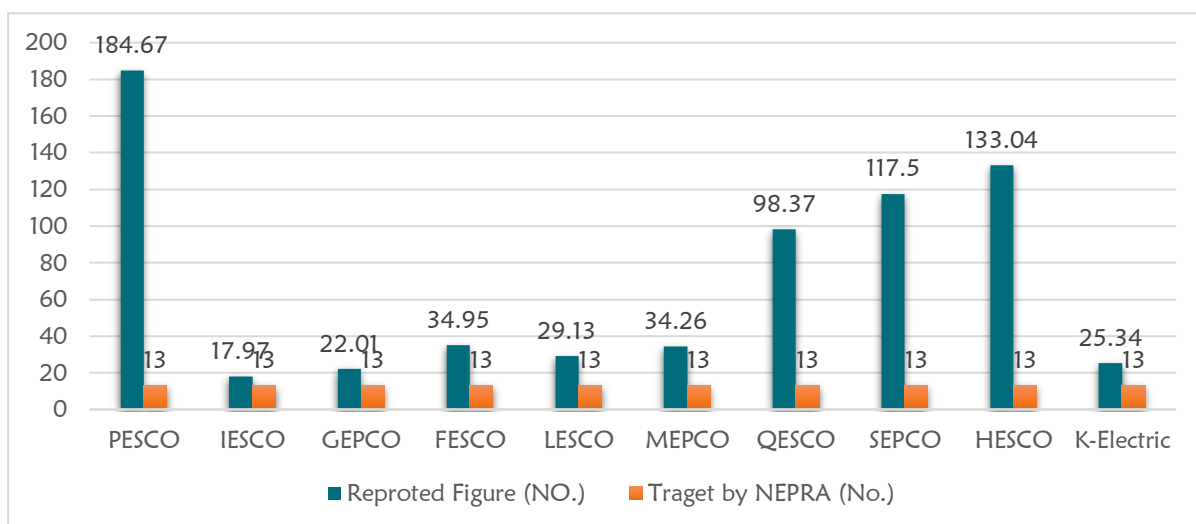


Figure 09: System Average Interruption Frequency Index (SAIFI) with LT interruptions

The Above table and graph clearly demonstrate that none of the distribution companies have been able to meet the SAIFI standard of 13, as outlined in the Performance Standards Rules. Nevertheless, IESCO, GEPCO, FESCO, LESCO, MEPCO, and K-Electric are in close proximity to the targeted values. In contrast, PESCO, QESCO, SEPCO, and HESCO are significantly distant from the limits established by NEPRA to attain the desired level of reliability.

## 2.4 System Average Interruption Duration Index (SAIDI):

The System Average Interruption Duration Index (SAIDI) represents the average total duration of power outages experienced by a customer within a year. SAIDI is a key performance indicator to assess the company's performance in terms of the duration, measured in minutes, of outages that consumers endured during the year.

In accordance with Rule 4(b) of the Performance Standards (Distribution) Rules 2005, a distribution company must ensure that the SAIDI, which measures the annual power supply interruption duration per consumer, does not surpass fourteen (14).

Name of DISCO	Reported Figure (Min.)	Target by NEPRA (Min.)	Breach of Target
PESCO	12265.48	14	Far Away
IESCO	1006.34	14	Far Away
GEPCO	32.16	14	Near to Limit
FESCO	1031.62	14	Far Away
LESCO	3550.05	14	Far Away
MEPCO	3633.73	14	Far Away
QESCO	7020.47	14	Far Away
SEPCO	1319.17	14	Far Away
HESCO	6270.83	14	Far Away
K-Electric	1911.72	14	Far Away

Table 07: System Average Interruption Duration Index (SAIDI) without LT interruptions

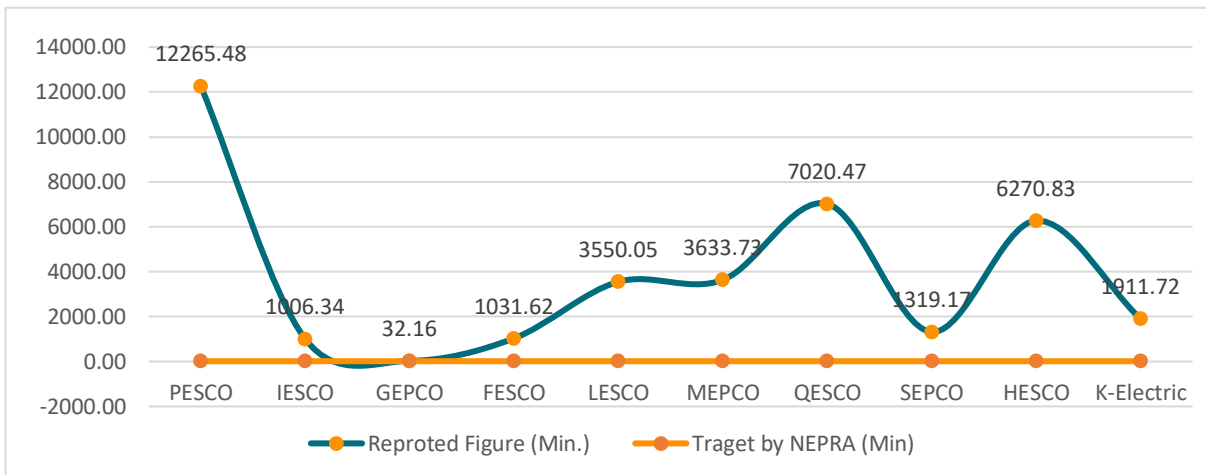


Figure 10: System Average Interruption Duration Index (SAIDI) without LT interruptions

Name of DISCO	Reported Figure (Min.)	Target by NEPRA (Min.)	Breach of Target
PESCO	14,227.82	14	Far Away
IESCO	1,006.34	14	Far Away
GEPCO	38.59	14	Near to Limit
FESCO	1,219.38	14	Far Away
LESCO	3,550.05	14	Far Away
MEPCO	4,723.73	14	Far Away
QESCO	8,083.47	14	Far Away
SEPCO	1,468.03	14	Far Away
HESCO	7,513.75	14	Far Away
K-Electric	1,911.72	14	Far Away

Table 08: System Average Interruption Duration Index (SAIDI) with LT interruptions

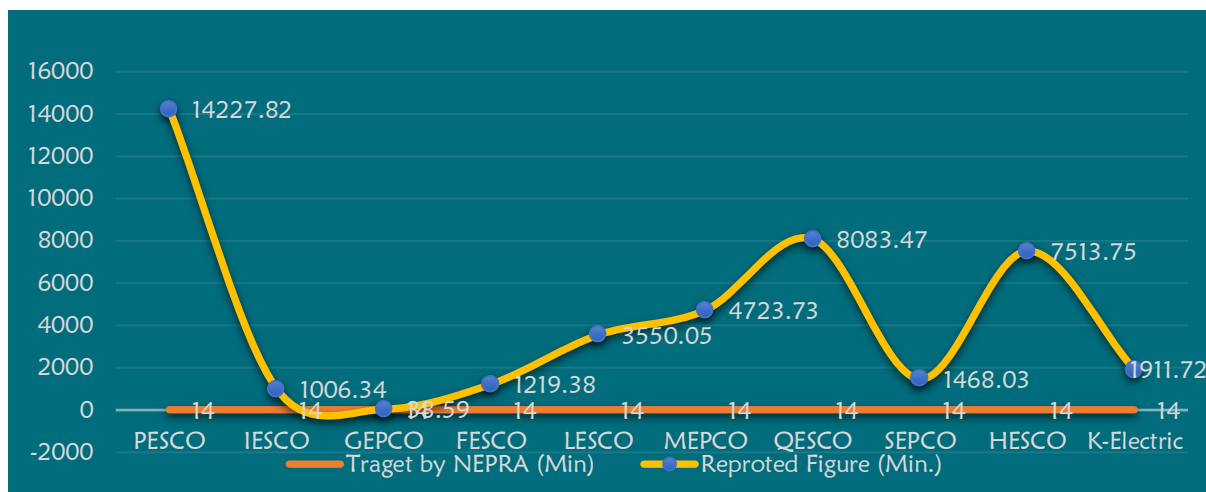


Figure 11: System Average Interruption Duration Index (SAIDI) with LT interruptions

The above Table and Graph show that almost all DSICOs are far away from the set Standard of 14 minutes. Whereas, GEPCO is near the limit as it has submitted that its consumers experienced 38.59 min duration of outage on an average basis in FY 2022-23 which seems not practical.

While reviewing the data of GEPCO, it was noted that each consumer of GEPCO experienced only 22 interruptions in a year for the duration of 38.59 minutes. Whereas, the ground realities are different keeping in view the media reports and consumer complaints.

## 2.5 Time Frame for New Connection (% of Pending Ripe Connections):

As per Rule 4(c), the Timeframe for New Connections (OS3) outlined in the Performance Standards (Distribution) Rules 2005, a distribution company is mandated to ensure the provision of electric power services to a minimum of 95% of new connections for eligible consumers, as delineated in the Consumer Eligibility Criteria established by the Authority in accordance with section 21(2) (b) of the Act. This provision must be met within the time limits specified by NEPRA, starting from the date of the application for a new connection in each of the relevant categories.

- For supply at voltage level up to 400V and load up to 15 kW: **30 Days**
- For supply at voltage level up to 400 V and load not exceeding 70 kW: **44 days**
- For supply at voltage level up to 400 V and load above 70 kW but not exceeding 500 kW: **58 days**
- For supply at voltage level 11 kV or 33 kV and load above 500 kW but not exceeding 5000 kW: **106 days**
- For supply at voltage level 66 kV and above and for all loads: **496 days**

According to the data provided by DISCOs, following summary has been prepared:

Name of DISCO	% Eligible consumers who were not provided new connections within the prescribed time frame	Allowed Limit in PSDR 2005(%)	Breach (%)
PESCO	8.33	5	3.33
IESCO	00	5	0
GEPCO	15.01	5	10.01
FESCO	34.80	5	29.80
LESCO	2.28	5	-2.72
MEPCO	7.20	5	2.20
QESCO	9.27	5	4.27
SEPCO	6.00	5	1.00
HESCO	00	5	0
K-Electric	6.84	5	1.84

Table 09: % Eligible consumer who were not provided new connection within prescribed time frame

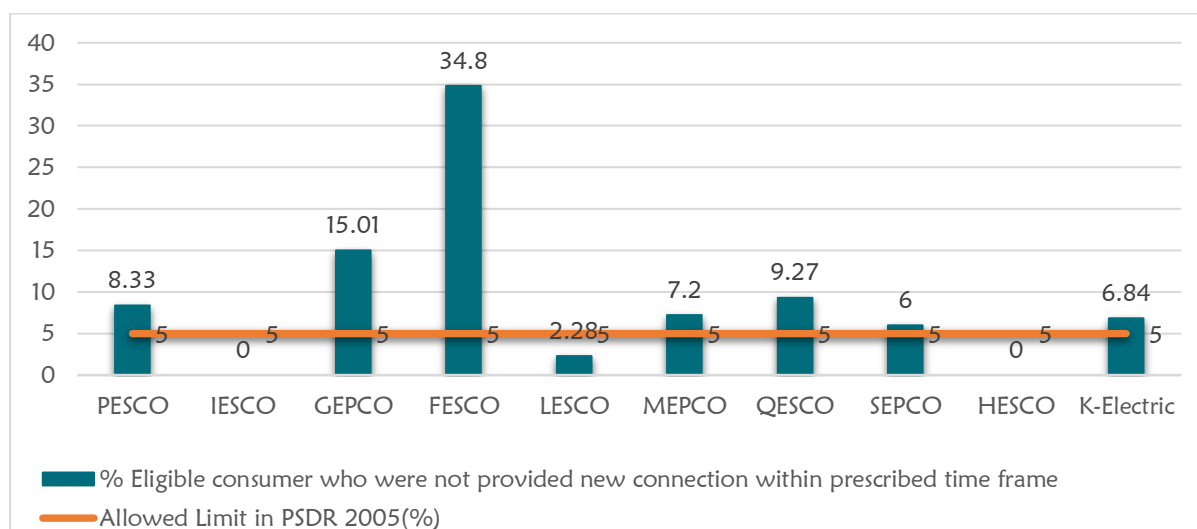


Figure 12: % Eligible consumer who were not provided new connection within prescribed time frame

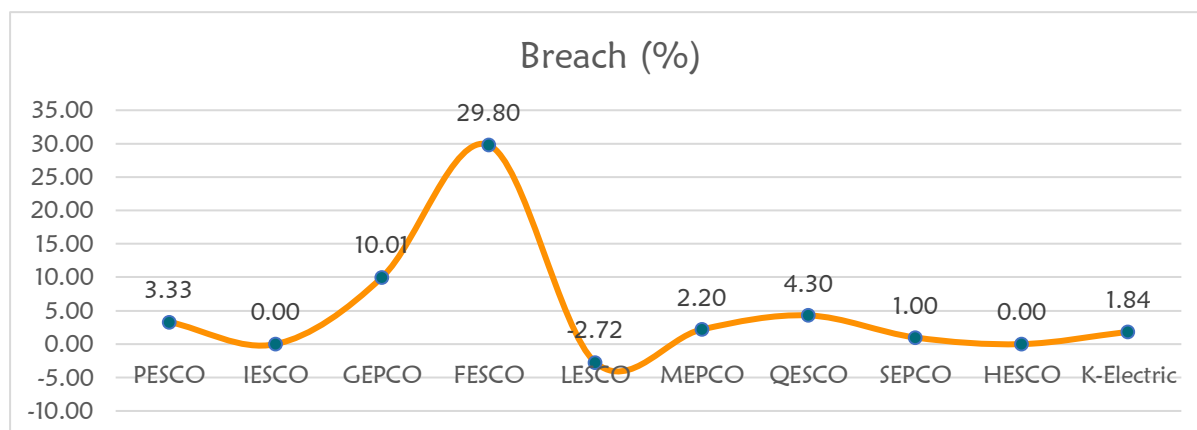


Figure 13: Breach of Targets (%)

Above table 09 outlines the percentage of consumers who did not receive new connections within the designated time frame in the year 2022-23. The data submitted by DISCOs is compared with the standard given in the Performance Standards (Distribution) Rules 2005.

It's noteworthy that IESCO, LESCO, MEPCO, and HESCO have claimed that they have surpassed this requirement by providing new connections to over 95% of their eligible consumers, meeting the specified standard. In contrast, SEPCO, and K-Electric did not achieve the target but remained nearest to the target. However, PESCO, GEPCO, FESCO, and QESCO, fell short of the set limit, as they did not provide new connections to 8.33%, 15.01%, 34.8%, and 9.27% of eligible consumers, respectively, within the specified time frame, despite these consumers having made their payments on time.

It is pertinent to highlight that the NEPRA being a regulator vigilantly monitors the progress of DISCOs through the Online Data Exchange Portal, where DISCOs are required to submit the data on a monthly basis regarding category-wise Pending Ripe Connections, load (MW) that could not be served due to pendency, and duration of pendency in terms of months. Accordingly, the DISCO wise progressive data as on June, 2023 is as under:

Name of DISCO	Domestic		Commercial		Industrial		Agriculture		Other		Number of Pending Applications	
	Total No.	Load (kW)	Total No.	Load (kW)	Total No.	Load (kW)	Total No.	Load (kW)	Total No.	Load (kW)	Total No.	Load (KW)
PESCO	13,424	30,217	945	5,095	48	85,479	39	991	8	221	14,464	122,003
IESCO	6,509	164,84	597	3,783	23	3,039	22	307	4	51	7,155	23,664
GEPCO	23,399	47,188	1,106	4,292	176	22,115	264	2,423	0	0	24,945	76,018
FESCO	15,977	50,289	806	3,508	95	10,534	263	3,445	51	1,782	17,192	69,558
LESCO	48,337	100,050	3,050	9,190	299	90,303	927	10,750	2	48	52,615	210,341
MEPCO	151,990	375,904	3,210	13,015	211	26,519	745	16,655	159	3,588	156,315	435,681
QESCO	786	1,965	302	1,057	5	1,090	0	0	214	3,654	1,307	7,766
SEPCO	188	316	46	161	35	10,675	51	684	17	236	337	12,072
HESCO	689	1,700	109	586	71	32,856	32	835	36	4,236	937	40,213
K-Electric	548	5,097	555	7,215	350	39,450	0	0	2,095	54,620	3,548	106,382
<b>TOTAL</b>	<b>261,847</b>	<b>629,210</b>	<b>10,726</b>	<b>47,902</b>	<b>1,313</b>	<b>322,060</b>	<b>2,343</b>	<b>36,090</b>	<b>2,586</b>	<b>68,436</b>	<b>278,815</b>	<b>1,103,698</b>

Table 10: DISCO/Category wise progressive total no. of pending connections as on June, 2023

Name of DISCO	Total Nos.	Total Load (KW)	No. of Pending connections after expiry of time limit given in NEPRA PSDR 2005					
			Up to 1 month	Up to 2 months	Up to 3 months	Up to 6 months	Up to 1 year	Above 1 year
PESCO	14,464	122,003	11,620	2,706	34	19	25	60
IESCO	7,155	23,664	6,440	313	357	32	10	3
GEPCO	24,945	76,018	24,330	609	0	4	2	0
FESCO	17,192	69,558	15,533	1,577	82	0	0	0
LESCO	52,615	210,341	3,2611	19,624	217	163	0	0

MEPCO	156,315	435,681	25,583	30,042	26,411	74,201	51	27
QESCO	1,307	7,766	1,170	19	26	24	62	6
SEPCO	337	12,072	267	23	24	10	4	9
HESCO	937	40,213	749	53	27	10	17	81
K-Electric	3,548	106,382	388	159	1451	940	145	465
<b>Total</b>	<b>278,815</b>	<b>1,103,698</b>	<b>118,691</b>	<b>55,125</b>	<b>28,629</b>	<b>75,403</b>	<b>316</b>	<b>651</b>

Table 11: DISCO wise aging of no. of pending ripe connections as on June, 2023

Above both tables indicate that a total no. of 278,815 connections were not given to the eligible consumers despite the fact that they made payments due to which more than 1100 MW demand/load could not be served, which is a serious matter of concern as the ample generation capacity is available. Taking a closer look, the major part pertains to domestic in terms of number & load (MW), however, the share of industrial category is also on higher side. Non-meeting up of industry demand by DISCOs particularly LESCO & MEPCO knowing the fact that they are good paying consumers clearly indicate the seriousness of DISCOs to make themselves profitable. On one side, LESCO & MEPCO have claimed that they have provided more than 95% of new connections to the eligible consumers as per requirements of PSDR 2005, whereas, on the other side, the number of pending connections of both the entities are on top among all the DISCOs. In this regard, serious observation was raised and both the utilities were asked through written notices. In response, MEPCO has submitted the reply, however, LESCO has yet not submitted the same. The justification given by MEPCO seems inappropriate as it tried cover the difference of number by claiming that the same have been provided as on Sep, 2023 at the time of submitting annual performance report, which is being verified by NEPRA Regional Office. Lastly, it is noteworthy that legal proceedings against all DISCOs on this account have already been initiated.

## 2.6 Load Shedding (Hours):

Table 12 represents the data for the average daily load shedding conducted by distribution companies during the fiscal year 2022-23.

The figures reported by the DISCOs, indicate that the load shedding for an average of 2 to 3 hours daily is being carried out in IESCO, FESCO, GEPCO, LESCO, MEPCO and SEPCO. In contrast, PESCO, QESCO, HESCO and K-Electric have reported load shedding duration hours 4.5 to 10.25 hours, which seems quite reasonable keeping in view the media reports and consumer complaints.

Name of DISCO	Reported figures of average daily load-shedding hours	Actual Load Shedding being monitored by NEPRA
PESCO	4.50	> 08 hours as per AT&C
IESCO	1.50	2 to 3 hours
GEPCO	0.85	2 to 3 hours
FESCO	0.56	2 to 3 hours
LESCO	0.50	3 to 4 hours
MEPCO	1.15	4 to 5 hours
QESCO	10.25	> 10 hours as per AT&C

SEPCO	2.33	> 10 hours as per AT&C
HESCO	8.66	> 10 hours as per AT&C
K-Electric	5.21	> 6 hours as per AT&C

Table 12: Average Load Shedding (Hours) daily

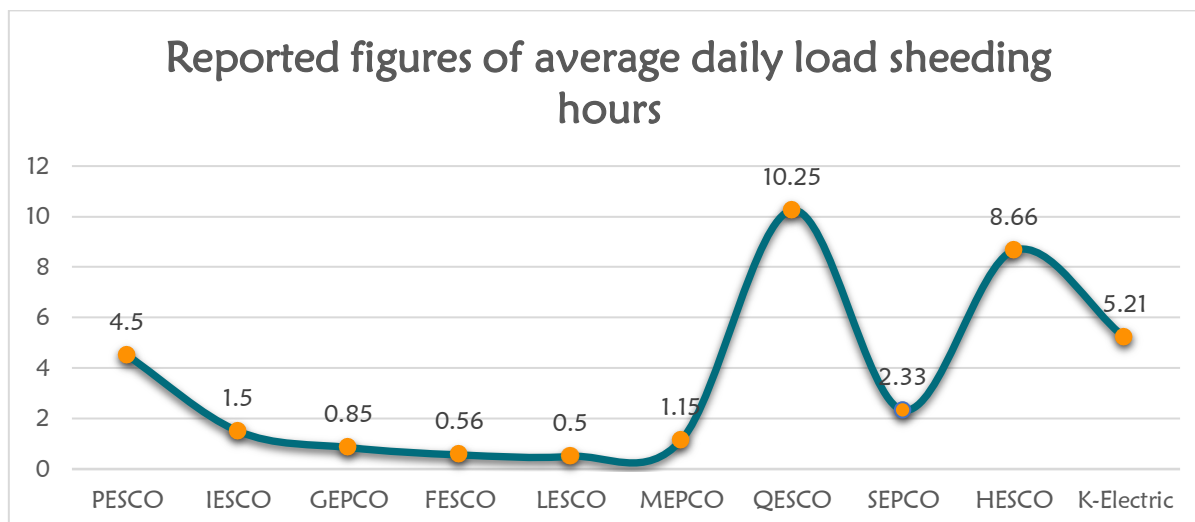


Figure 14: Average Load Shedding (Hours) daily

It is further observed that distribution companies especially PESCO, QESCO, SEPCO, HESCO and K-Electric are carrying out load shedding as per AT&C losses criteria which is not in line with the requirements Performance Standards (Distribution) Rules 2005 and has never been recognized by the NEPRA.

In this regard, Rule 4(f) of PSDR states that:

*“A distribution company shall have plans and schedules available to shed up to 30% of its connected load at any time upon instruction of NTDC. When instructed by NTDC, the Distribution Company shall shed the load in the following order*

1. *Supply to consumers in rural area, and residential consumers in urban areas where separate feeders exist;*
2. *Supply to the consumers other than the industrial, in urban areas;*
3. *Supply to agriculture consumers where there is a dedicated power supply;*
4. *Supply to industrial consumers;*
5. *Supply to school & hospital;*
6. *Supply to defense and strategic installation;”*

Keeping in view the requirements of performance Standards, distribution companies are persistently directed to follow the order of load shedding according to different categories of consumers as provided in PSDR 2005, so that a particular class of consumers cannot be overburdened.

It is pertinent to highlight that NEPRA always tried to ensure the rights of end consumers aimed to provide un-interrupted power supply to people of Pakistan. Accordingly, NEPRA has initiated legal proceedings against PESCO, QESCO, SEPCO, HESCO and K-Electric on account of AT&C based load shedding which is in utter violation of the

NEPRA PSDR, 2005. All these DISCOs have been clearly communicated that the very purpose behind this concept of AT&C was to improve recoveries through strong governance mechanism and the same will be gradually decreased, which the National Electricity Policy, 2021 is envisaged. Contrary to that, the quantum of such type of load shedding has been increased in these DISCOs with the passage of time except K-Electric.

Whereas, KE has drastically reduced such type of load shedding in its territory and has exempted the same from its area around 75%. Moreover, KE in its recent investment plan for the period FY 2024 to FY 2030 has committed that it will take all possible measures and make its feeders around 95% free from load shedding. Further keeping in view, the installation of more than 50K AMI/AMR meters at PMT level by KE, NEPRA has issued directions to carry out load shedding (if any) at PMT level rather feeder level.

NEPRA laws clearly states that DISCOs can never carry out load shedding on their own until & unless there is generation shortage in the country or there are transmission system constraints. NEPRA vigorously monitor the situation of load shedding on daily basis through examination of DISCO's demand, quota allocated to them and subsequent drawl of power by them.

## 2.7 Nominal Voltages (% of consumers whose voltages remained beyond the prescribed limit):

According to Rule 4(d) of Performance Standards (Distribution) Rule 2005, a distribution company shall supply power to at least 95% of its consumers within the range of  $\pm 5\%$  of the nominal voltages.

Following are the nominal voltage for the distribution system:

- a) 400/230 V
- b) 11 kV
- c) 33kV
- d) 66kV
- e) 132kV

Name of DISCO	No of Consumer made complaint about voltage
PESCO	22,721
IESCO	4,890
GEPCO	9,725
FESCO	4,677
LESCO	5,357
MEPCO	3,225
QESCO	3,702
SEPCO	216
HESCO	174
K-Electric	148,138

Table 13: No. of Consumers Complaints made about Nominal Voltages

The data presented in the above table and graph reveals that K-Electric received the highest number of complaints related to voltage fluctuations, with 148,138 number, followed by PESCO with 22,721 and GEPCO with 9,725. On the contrary, SEPCO and HESCO reported the lowest number of complaints, with 216 and 174 numbers respectively. This raises serious questions about the accuracy of these figures and develops two potential explanations for this situation; either HESCO & SEPCO lack an effective complaint management system & preventing many consumers from registering their complaints, or there may be issues with their database systems. Practically, it seems not possible that only 216 & 174 consumers had faced voltage problem in FY 2022-23 as compared to their total consumers i.e., 823,650 and 1,212,190 respectively. The remaining DISCOs have also reported voltage-related complaints ranging from 2,000 to 5,000.

It is important to note that overall, it appears that more than 95% of consumers for all DISCOs received voltage levels within the acceptable limits, which is hard to believe and needs thorough verification.

## 2.8 Consumer Service Complaints:

The below mentioned table and graph depicts an overview of the consumer complaints received by Distribution Companies (DISCOs) in FY 2022-23. The same has been analyzed in terms of the average number of consumer complaints per day per complaint center received by these DISCOs and subsequently resolved in the same year i.e., 2022-23. The table also includes the data of number of complaint centers being operated at Circle/Division/Sub-division level in these distribution companies.

Name of DISCO	Reported Complaints	Total No. of compliant center in DISCO	No. of Complaints per complaint center	Average number of complaints per day per compliant center
PESCO	85,090	174	489.02	1.34
IESCO	350,447	124	2,826.18	7.74
GEPCO	255,553	146	1,750.36	4.80
FESCO	345,417	376	918.66	2.52
LESCO	978,393	233	4,199.11	11.50
MEPCO	145,160	217	668.94	1.83
QESCO	45,847	75	611.29	1.67
SEPCO	2,961	78	37.96	0.10
HESCO	103,838	88	1,179.98	3.23
K-Electric	1,382,155	30	46,071.83	126.22

Table 14: Consumer Complaints

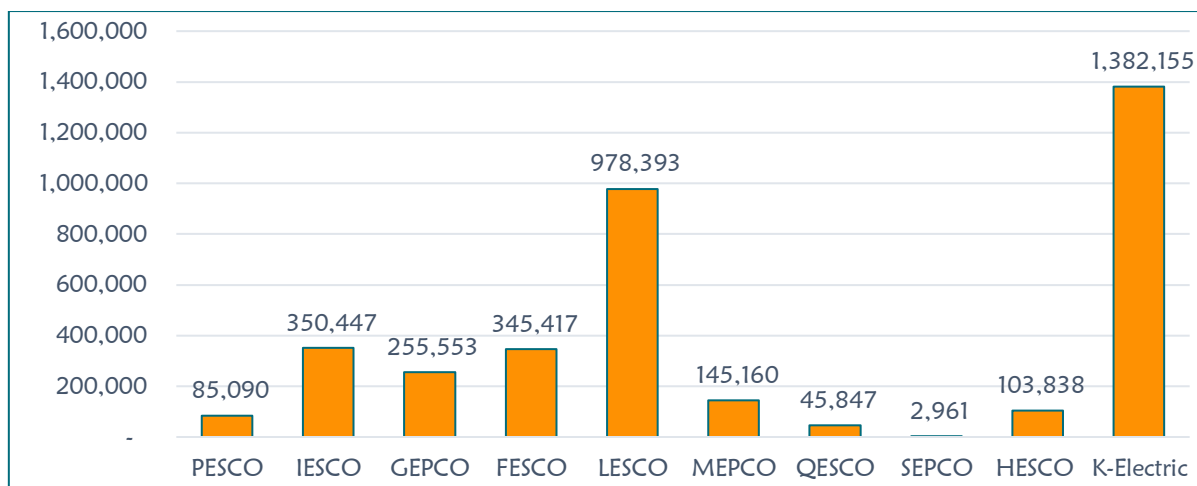


Figure 15: Consumer Complaints

SEPCO reported almost zero complaints per day in each of its complaint centers, while K-Electric had a relatively high rate of 126 complaints per day per complaint center. This suggests that K-Electric's complaint registration and handling system is notably effective compared to other DISCOs. However, the data provided by PESCO, FESCO, MEPCO, QESCO, and HESCO shows that they received only 2-3 complaints per day in each of their complaint centers during the year 2022-23. From the above, it seems that these figures may not accurately reflect the true situation, as it could be an indication that there is lack of a robust system for registering complaints.

Moreover, it is relevant to state that all these DISCOs have been repeatedly directed by NEPRA to develop computerized database system including the data of complaint centers. However, DISCOs are still operating under legacy based manual system, whereby printed registers of WAPDA Era are being used. Even then, such registers are not being properly fulfilled by the sub-division staff resulting in serious lack mechanism to extract the exact number of complaints received.

## 2.9 Safety (No. of Fatalities for Employee & Public):

The data for the fiscal year 2022-23 reveals a concerning picture regarding the number of fatal accidents. A total of 161 fatalities, including both employees and the general public, occurred within the service territories of distribution companies. This figure is indicating a failure on the part of DISCOs to adhere with the safety standards as outlined in the Performance Standards (Distribution) Rules, 2005.

Specifically, Rule 4(g) of these standards stipulates that a distribution company should establish and enforce appropriate rules, regulations, and operational procedures as outlined in its Distribution Code or relevant documents to ensure the safety of both its staff and the public. The increase in fatal accidents suggests a need for more concrete safety measures and a closer adherence to these established standards by the distribution companies.

Name of DISCO	No. of fatalities for employees	No. of fatalities for Public	Total No. of fatalities reported
PESCO	12	29	41
IESCO	8	16	24
GEPCO	3	6	9
FESCO	3	3	6
LESCO	8	3	11
MEPCO	4	1	5
QESCO	4	5	9
SEPCO	6	3	9
HESCO	4	10	14
K-Electric	0	33	33
<b>Total</b>	<b>52</b>	<b>109</b>	<b>161</b>

Table 15: Safety Accidents

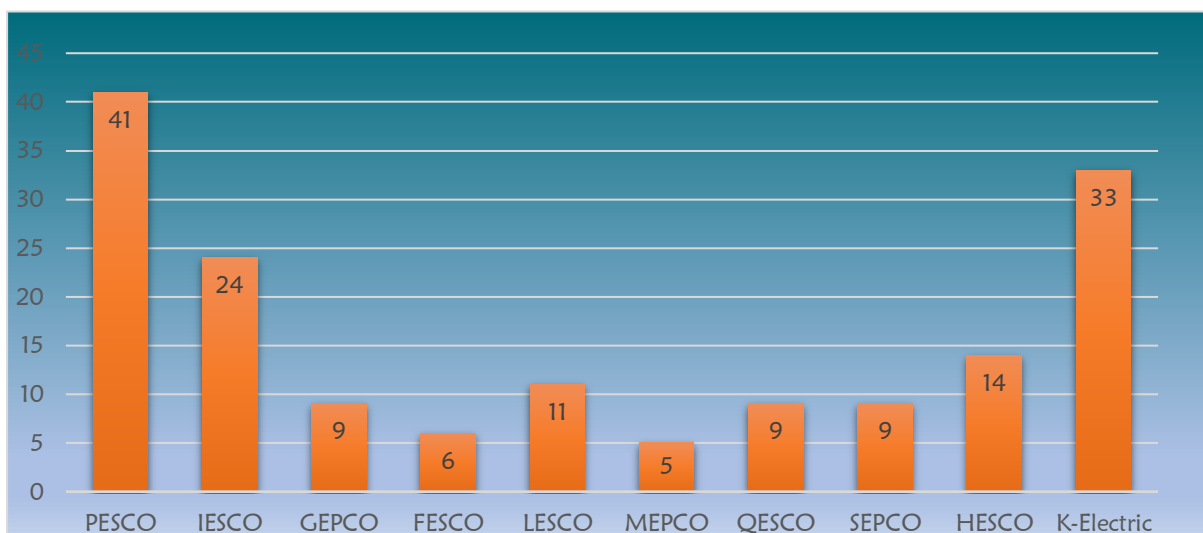


Figure 16: Safety Accidents

The highest number of deaths occurred in PESCO followed by K-Electric and IESCO during FY 2022-23. Further it is observed that most of the fatalities of these distribution companies pertain to general public. Similarly, the lowest number of deaths occurred in MEPCO followed by FESCO.

NERPA being a Regulator consider the safety as of paramount importance and persistently directs the DISCOs to develop safety culture by adhering the safety standards. NEPRA has established health, safety and Environment (HSE) Department in order to frame safety legislation, review and update of already existing safety standards and subsequent its implementation in letter & spirit. Furthermore, investigations against all DISCOs have been carried out on account of fatal accidents and heavy fines have been imposed.

In addition, DISCOs are directed to conduct detailed surveys to identify all safety hazard points including earthing/grounding of HT/LT poles/structures and take immediate steps

to remove such safety hazards in order to avoid fatal accidents in future. All DISCOs have also been directed to submit a robust plan in this regard. Upon instructions and continuous follow up by NEPRA, the said exercise is underway.

## 2.10 Fault Rate (No. of Faults/KM)

The fault rate is a key performance indicator used to evaluate the performance of a distribution company in terms of the number of faults that occur in a one-kilometer. It provides insights into the reliability and quality of the distribution network, helping to assess the overall efficiency and effectiveness of the company in maintaining its infrastructure and providing uninterrupted electrical supply to its customers. A lower fault rate typically indicates a more reliable and well-maintained distribution system

Name of DISCO	Total length of Distribution System(Km)	Total No. of Faults	Fault Rate (No. of Faults/km)
PESCO	91,419.10	39,423	0.43
IESCO	59,451.55	275,293	4.63
GEPCO	46,649.00	152,473	3.27
FESCO	82,228.17	103,724	1.26
LESCO	50,953.70	274,498	5.39
MEPCO	52,409.50	40,603	0.77
QESCO	71,104.35	91,874	1.29
SEPCO	41,437.33	57,203	1.38
HESCO	47,152.00	51,127	1.08
K-Electric	30,261.00	49,572	1.64

Table 16: Fault Rate (No. of faults/KM)

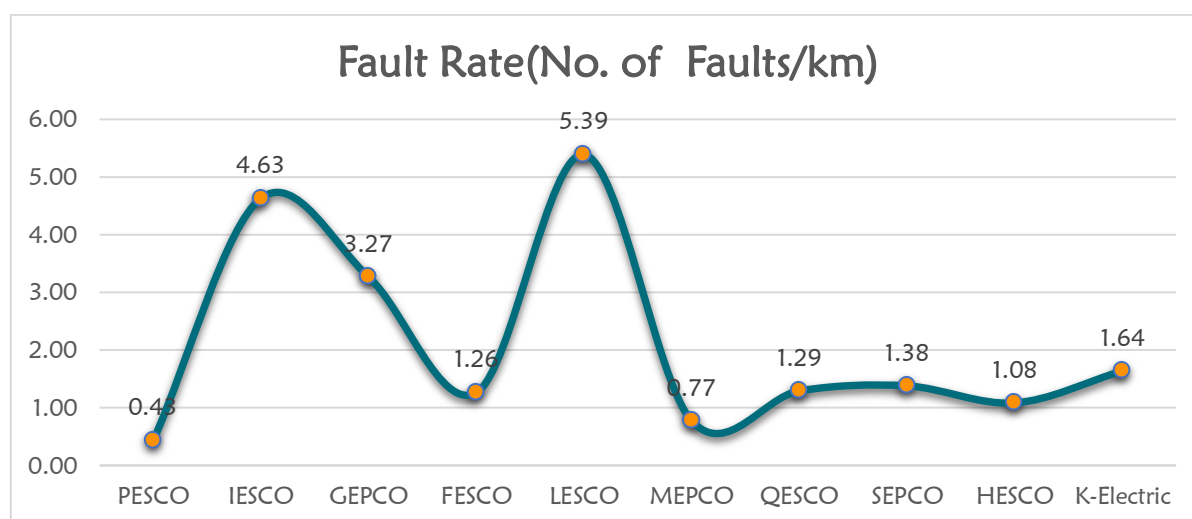


Figure 17: Fault Rate (No. of faults/KM)

The above table explains the ratios of faults/km based on the data submitted by DISCOs. The data reveals that PESCO's distribution system is most efficient system in the country, which is far away from ground reality. Similarly, the ratios of other DISCOs also seem not realistic except IESCO & LESCO who have submitted the same as 4 to 5 faults per kilometer.

On one hand, DISCOs have tried to show that their system is too healthy and there were no faults in FY 2023, whereas on the other hand, daily reports regarding power failure indicate that severe power outages occurred in FY 2022-23 in addition to scheduled load shedding due to which consumers suffered from dark for unexplainably longer durations.

It is further observed that the results of SAIFI and SAIDI are also in contradiction with the figures of these ratios. Ideally, all these parameters should be consistent with each other if the performance of DISCOs is going to be better in true sense.

## 03 COMPARISON OF DATA FOR FY 2022-23 WITH LAST FOUR YEARS (2018-19, 2019-20, 2020-21, & 2021-22)

### 3.1 Transmission and Distribution (T&D) Losses (%):

Name of DISCO	2018-19	2019-20	2020-21	2021-22	2022-23
PESCO	36.6	38.9	38.2	37.23	37.13
IESCO	8.86	8.69	8.55	8.18	8.06
GEPCO	9.87	9.51	9.23	9.07	8.61
FESCO	9.80	9.60	9.30	9.10	8.84
LESCO	13.20	12.40	12.00	11.50	11.30
MEPCO	15.80	15.20	14.90	14.70	14.00
QESCO	23.60	26.70	27.90	28.10	26.70
SEPCO	37.00	36.30	35.30	35.60	34.37
HESCO	29.50	28.90	28.00	27.40	27.00
K-Electric	19.10	19.73	17.54	15.30	15.27

Table 17: Transmission and Distribution (T&D) Losses

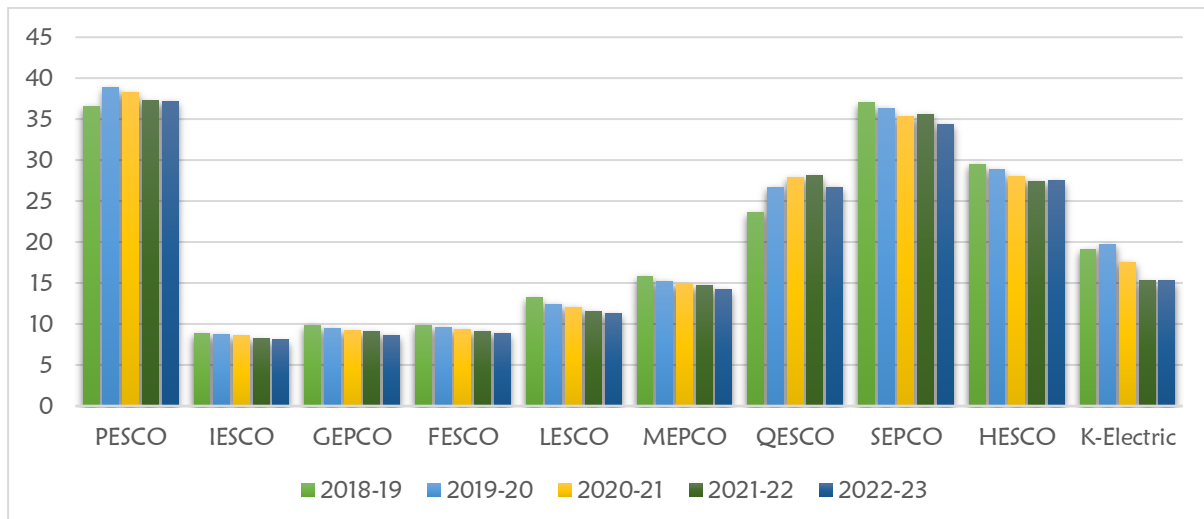


Figure 18: Transmission and Distribution (T&D) Losses

The above table and figure reflect the trends of T&D losses for the last four years in comparison to FY 2022-23. It observed that the Distribution Companies (DISCOs) have shown improved performance over the past few years, gradually reducing their losses. However, some specific DISCOs, namely PESCO, QESCO, SEPCO, and HESCO, continue to experience on higher side and require concrete measures to bring down the same near to NEPRA assigned targets.

### 3.2 Recovery (%):

Name of DISCO	2018-19	2019-20	2020-21	2021-22	2022-23
PESCO	88.6	87.70	102.50	92.20	92.10
IESCO	90.00	90.30	116.87	95.62	106.32
GEPCO	98.00	94.36	106.00	99.70	99.86
FESCO	91.03	94.18	102.00	99.53	98.17
LESCO	97.67	94.60	98.72	97.10	94.33
MEPCO	99.80	94.21	103.61	99.73	98.13
QESCO	24.40	80.60	39.80	35.40	36.90
SEPCO	63.90	56.60	64.70	64.70	68.20
HESCO	74.50	70.10	76.70	75.10	75.90
K-Electric	92.60	92.14	94.80	96.60	92.76

Table 18: Recovery (%)

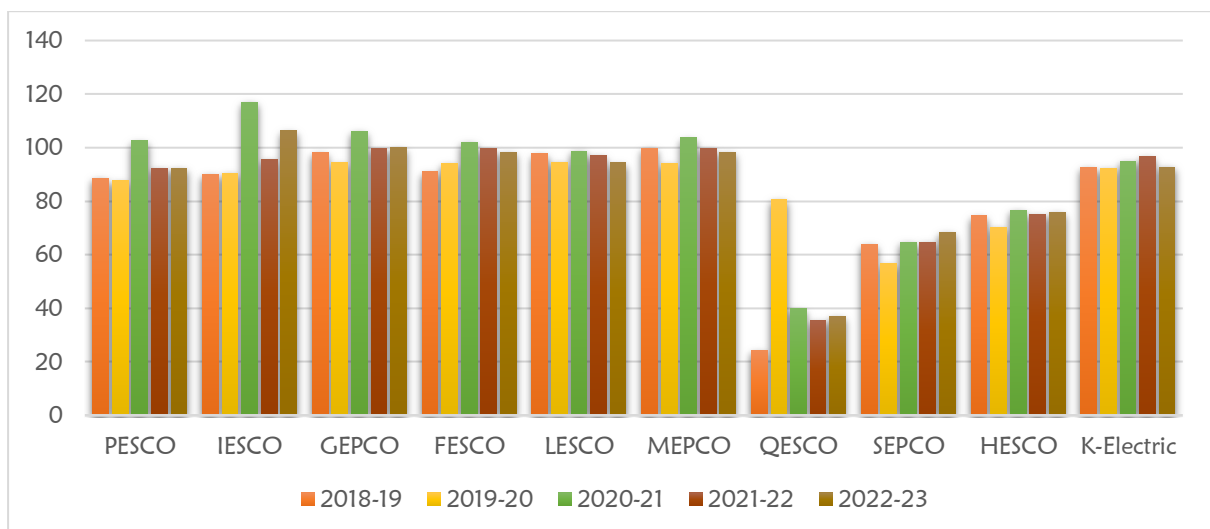


Figure 19: Recovery (%)

Above table and graph illustrate the mix trend in terms of recovery as some DISCOs have slightly improved, whereas, some have slightly declined in 2022-23 as compared to previous years. LESCO and K-Electric are the utilities whose recoveries have been decreased by almost 4% in 2022-23 as compared to last year.

### 3.3 System Average Interruption Frequency Index (SAIFI):

Name of DISCO	2018-19	2019-20	2020-21	2021-22	2022-23
PESCO	189.01	187.93	193.70	188.92	184.67
IESCO	0.05	0.06	0.05	20.56	17.97
GEPCO	27.13	25.64	24.78	23.02	22.01
FESCO	36.86	35.65	35.53	35.20	34.95
LESCO	30.19	33.03	34.66	32.86	29.13
MEPCO	369.16	375.98	471.00	43.94	34.26
QESCO	97.98	99.12	97.96	97.11	98.37
SEPCO	516.37	478.00	441.04	410.70	117.50
HESCO	170.86	162.85	137.10	134.05	133.04
K-Electric	28.95	27.56	28.00	25.95	25.34

Table 19: System Average Interruption Frequency Index

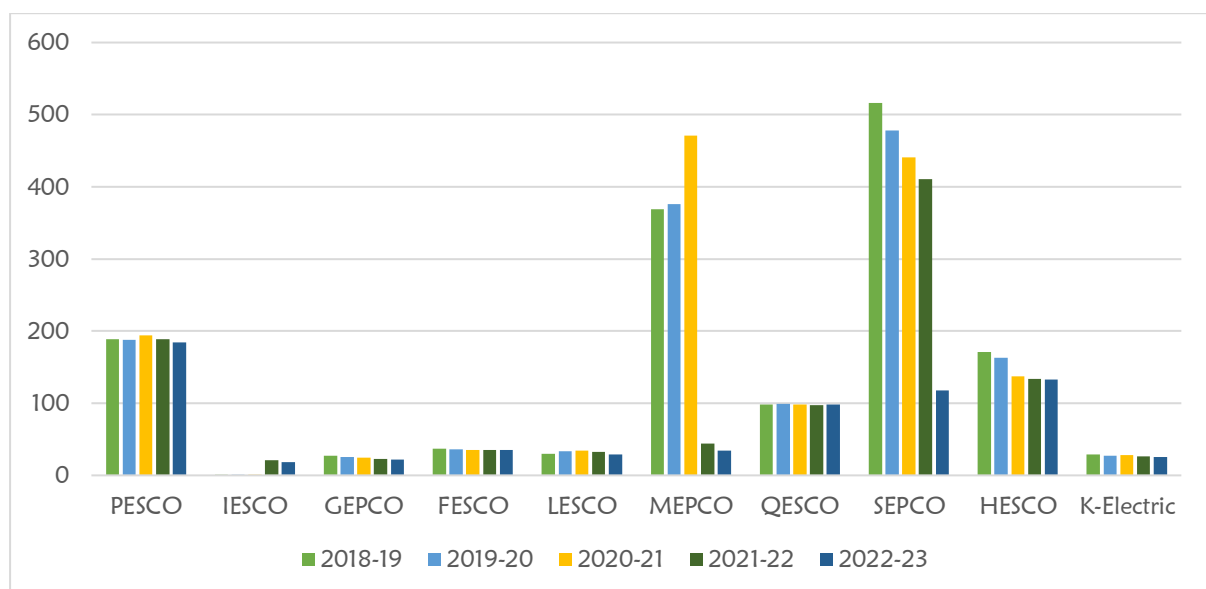


Figure 20: System Average Interruption Frequency Index

While comparing the data of SAIFI for last five years, it is observed that all distribution companies are improving gradually over the last few years. Although the data submitted by DISCOs shows some reduction, but it is also a matter of fact that the same is away from ground facts as the consumers experience more outages than the claimed ones.

### 3.4 System Average Interruption Duration Index (SAIDI):

Name of DISCO	2018-19	2019-20	2020-21	2021-22	2022-23
PESCO	16,696.51	14,924.40	14,821.00	14,518.00	14,227.82
IESCO	1.27	1.36	1.36	1,027.01	1,006.34
GEPCO	45.19	42.40	40.33	38.98	38.59
FESCO	1,627.99	1,331.10	1,252.70	1,243.15	1,219.38
LESCO	3,538.93	3,593.73	3,821.84	3,747.88	3,550.05
MEPCO	31,419.30	31,920.87	39.73	2,794.00	4,723.73
QESCO	8,402.40	8,375.85	8,176.20	8,015.17	8,083.47
SEPCO	4,306.74	4,095.00	3,893.30	3,593.30	1,468.02
HESCO	10,973.67	9,751.00	7,852.20	7,558.00	7,513.70
K-Electric	2,950.22	2,655.00	2,564.66	1,963.60	1,911.72

Table 20: System Average Interruption Duration Index (SAIDI)

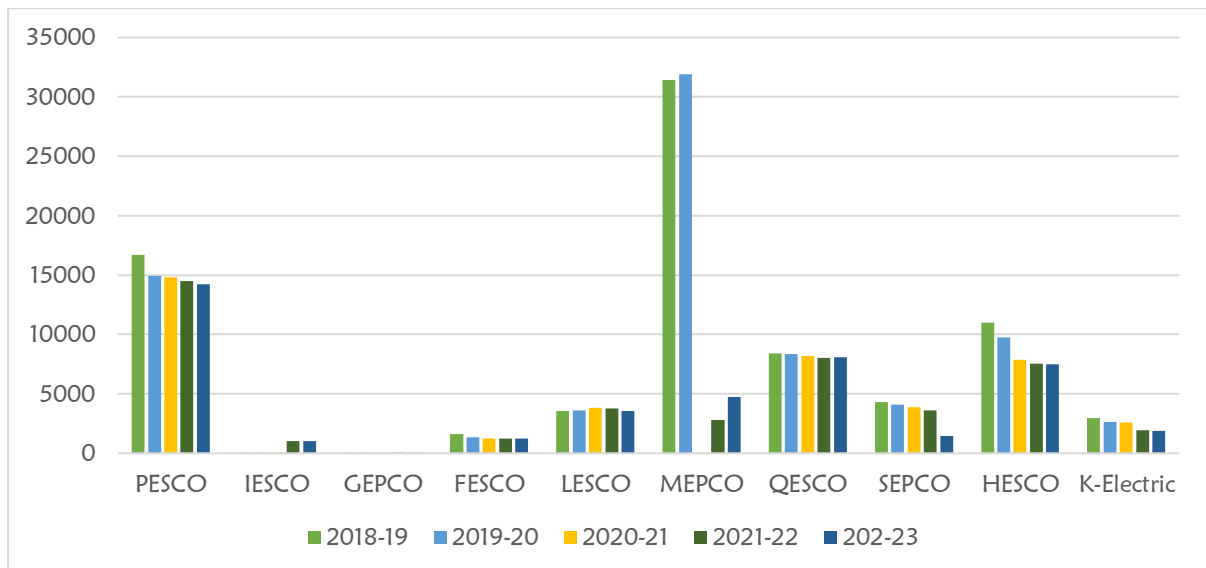


Figure 21: System Average Interruption Duration Index (SAIDI)

The data submitted by DISCOs related to SAIDI in 2022-23 is compared to last four years and it is observed that all DISCOs have shown gradual decreased except MEPCO as its SAIDI figure has been significantly increased as compared to last year. Although the SAIDI figures of DISCOs are improving but these are still on higher side.

It is important to understand that SAIFI and SAIDI only contains the unplanned power supply interruptions or we can say faults that are occurring at 132kV and down to 440/220v. Therefore, these two indicators can be improved by carrying out corrective and preventive maintenance on regular basis. For this purpose, colossal amounts are being allowed to these DISCOs every year under O&M head in their tariff determinations. However, the performance of DISCOs in this regard against the allowed funds seems not up to the mark.

### 3.5 Time Frame for New Connection (% of Pending Ripe Connections):

Name of DISCO	2018-19	2019-20	2020-21	2021-22	2022-23
PESCO	0.50	2.01	6.90	5.14	8.33
IESCO	0	0	0	0	0
GEPCO	21.90	22.90	23.20	25.00	15.01
FESCO	21.00	17.43	17.90	20.5	34.80
LESCO	4.10	1.85	1.70	1.99	2.28
MEPCO	7.90	5.44	4.60	4.60	7.20
QESCO	4.13	17.72	31.30	37.40	9.27
SEPCO	13.20	13.39	8.75	4.16	6.00
HESCO	0.003	3.78	0.03	0.04	0
K-Electric	3.30	9.62	17.50	15.96	6.84

Table 21: % of Pending Ripe Connections

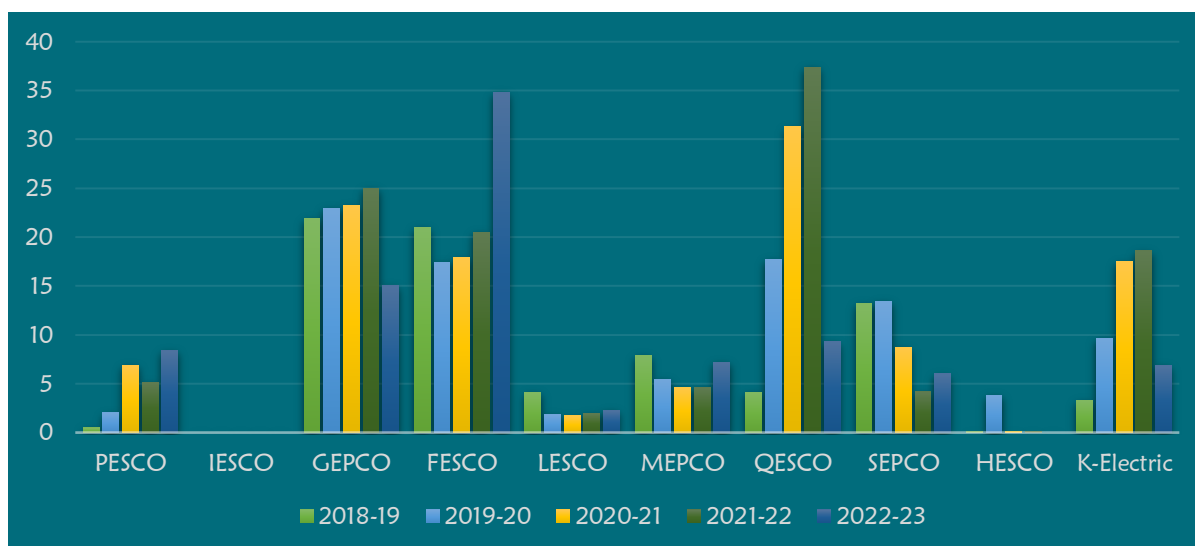


Figure 22: % of Pending Ripe Connections

The above table and figure represent the data pertaining to %age of pending ripe connections which were not provided as per time limits specified in PSDR, 2005. The trend of last four year's shows that DISCOs are remained inconsistent in their performance as there are variations in data in different years and the number of few DISCOs is on higher side in comparison to previous year.

### 3.6 Load Shedding (Hours):

Name of DISCO	2018-19	2019-20	2020-21	2021-22	2022-23
PESCO	1.55	2.92	1.80	6.00	4.50
IESCO	1.62	1.83	1.00	2.50	1.50
GEPCO	0.50	0	0.33	0.40	0.85
FESCO	0.32	0	0	1.00	0.56
LESCO	2.40	3.00	3.00	0.50	0.50
MEPCO	0.43	0.32	0.66	0.60	1.15
QESCO	7.33	6.00	8.00	11.30	10.25
SEPCO	2.25	2.33	7.30	2.30	2.33
HESCO	5.50	5.67	6.00	8.00	8.66
K-Electric	1.77	2.73	1.94	3.40	5.21

Table 22: Load Shedding (Hours)

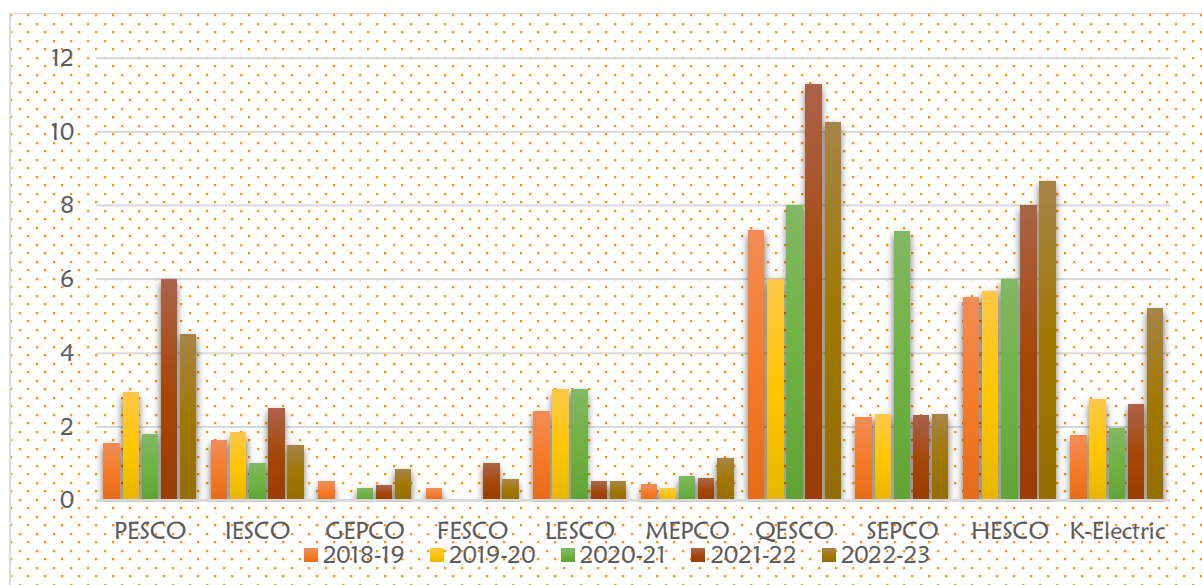


Figure 23: Load Shedding (Hours)

The above data indicates the average daily load shedding hours in each DISCO. The trend analysis shows the variation in data pertaining to load shedding hours submitted by DISCOs. It is a matter of fact that actual load shedding being carried out in DISCOs is much more than the data portrayed by the DISCOs and NEPRA being regulator continuously monitor the situation through NEPRA Regional Offices.

### 3.7 Nominal Voltages (No. of Consumers Complaints who made about Voltages):

Name of DISCO	2018-19	2019-20	2020-21	2021-22	2022-23
PESCO	19,118	9,640	10,869	24,594	22,721
IESCO	10,079	10,114	9,513	7,125	4,890
GEPCO	9,604	10,433	10,133	10,600	9,725
FESCO	5,682	5,241	7,782	5,613	4,677
LESCO	12,287	4,197	5,525	5,385	5,357
MEPCO	7,888	6,623	4,308	4,085	3,225
QESCO	4,525	3,519	3,273	2,987	3,702
SEPCO	928	1,100	432	484	216
HESCO	191	186	189	183	174
K-Electric	3,096	262,170	219,577	164,505	148,138

Table 23: No. of Consumers complaints who made about Voltages

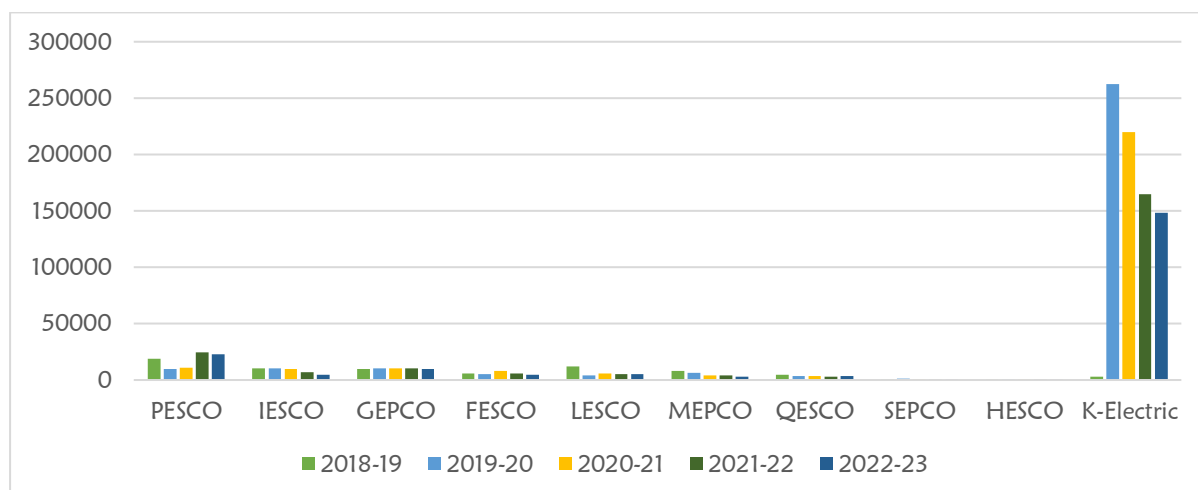


Figure 24: No. of Consumers complaints who made about Voltages

The provided data presents the count of consumer complaints related to voltage fluctuations during the fiscal year 2022-23 in comparison to previous years. Notably, the number of complaints has become lower compared to the preceding years except the data submitted by QESCO whose number has been increased. However, it is essential to acknowledge that the issue of a significant concern, particularly during the summer season, impacting a large number of consumers.

Further, it is important to note that voltage fluctuations can be controlled and better quality of supply can be provided to consumers by taking some measures such as preventive maintenance of feeders, timely rehabilitating and upgrading the distribution system, and investing in infrastructure improvements. Addressing these challenges is pivotal to provide a more reliable and stable electrical supply to meet consumer needs and expectations.

### 3.8 Consumer Service Complaints:

Name of DISCO	2018-19	2019-20	2020-21	2021-22	2022-23
PESCO	79,832	111,303	124,363	90,084	85,090
IESCO	555,437	513,524	372,326	329,722	350,447
GEPCO	838,502	255,019	239,918	255,884	255,553
FESCO	354,801	335,662	312,514	356,100	345,417
LESCO	548,487	528,442	544,663	768,076	978,393
MEPCO	88,785	218,091	226,862	270,443	145,160
QESCO	48,378	47,152	36,827	33,876	45,847
SEPCO	7,571	7,598	21,148	7,480	2,961
HESCO	90,703	120,113	126,437	117,716	103,838
K-Electric	1,807,368	2,034,227	2,018,041	1,543,091	1,382,155

Table 24: Consumer Service Complaints

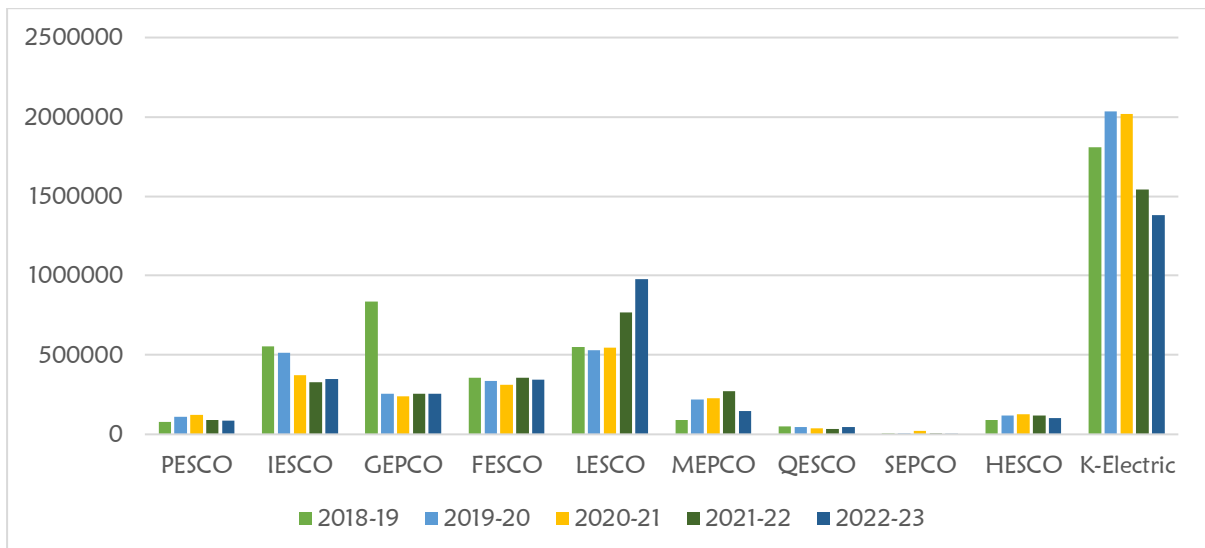


Figure 25: Consumer Service Complaints

The above table depicts the number of complaints received by the distribution companies over the period of last 04 years in comparison with FY 2022-23, Overall mixed trend has been observed. IESCO, LESCO and QESCO have received higher number of consumer complaints in FY 2022-23 as compared to last year. Whereas, the remaining DISCOs have reported less number as compared to FY 2021-22.

### 3.9 SAFETY (Total No. of Fatal Accidents for both Employees and General Public):

Name of DISCO	2018-19	2019-20	2020-21	2021-22	2022-23
PESCO	16	31	23	39	41
IESCO	29	17	22	27	24
GEPCO	12	8	7	10	9
FESCO	8	12	9	5	6
LESCO	9	8	11	27	11
MEPCO	14	13	13	8	5
QESCO	7	7	6	8	9
SEPCO	12	13	14	10	9
HESCO	12	8	32	35	14
K-Electric	54	43	39	27	33
<b>Total</b>	<b>173</b>	<b>160</b>	<b>176</b>	<b>196</b>	<b>161</b>

Table 25: No. of Fatal Accidents

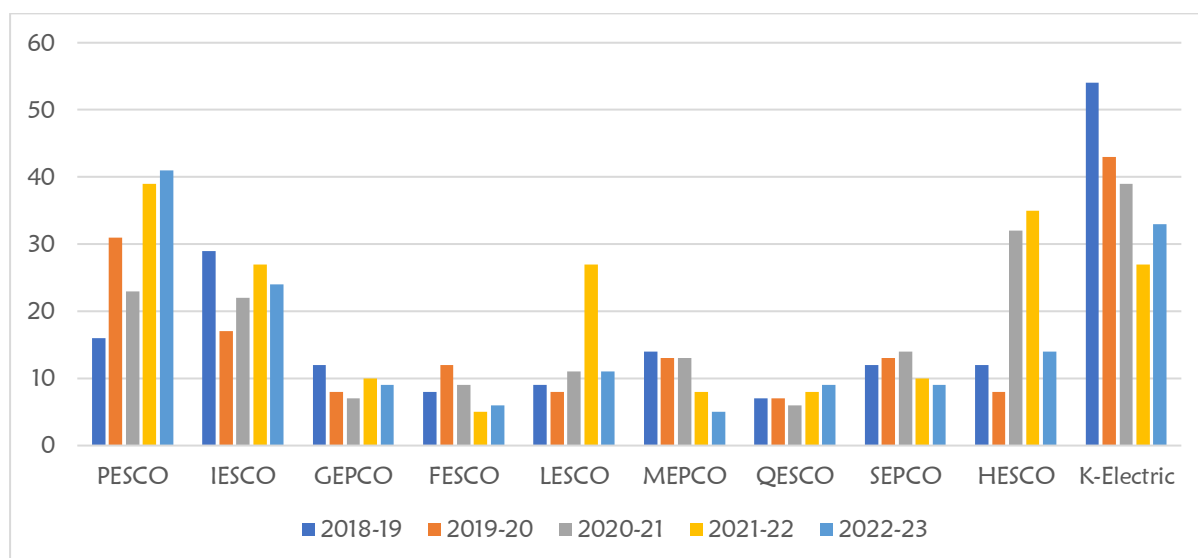


Figure 26: No. Fatal Accidents

The above data shows the number fatal accidents in FY 2022-23 as compared to last four years. While comparing the same, it is observed that with the continues efforts of the Authority and strict directions to distribution companies regarding compliance with safety standards, the number of fatal accidents has been somehow reduced. Taking a closer look, MEPCO remained the best performing DISCO among all in terms of safety accidents as its number has been significantly decreased over the period of last five years. Whereas, PESCO expressed itself as worst performing as its number has been increased from 23 to 41 during last three years. The number of LESCO and HESCO has been significantly declined in comparison to last year. Although the overall number of fatalities has been decreased but still it is matter of serious concern and DISCOs are required to carry out something out of the box to achieve the target of zero accident.

### 3.10 Fault Rate (No. of Faults/KM):

Name of DISCO	2018-19	2019-20	2020-21	2021-22	2022-23
PESCO	0.57	0.40	0.38	0.45	0.43
IESCO	12.09	11.34	8.77	4.91	4.63
GEPCO	3.33	3.49	2.28	3.46	3.27
FESCO	1.25	1.38	1.61	1.13	1.26
LESCO	6.08	5.58	5.46	5.39	5.38
MEPCO	6.67	60.60	6.55	1.06	0.77
QESCO	0.78	1.01	1.34	1.23	1.29
SEPCO	1.89	1.55	1.26	1.18	1.38
HESCO	0.99	0.96	0.82	1.18	1.08
K-Electric	1.31	1.34	1.34	1.34	1.63

Table 26: No. of Faults/KM

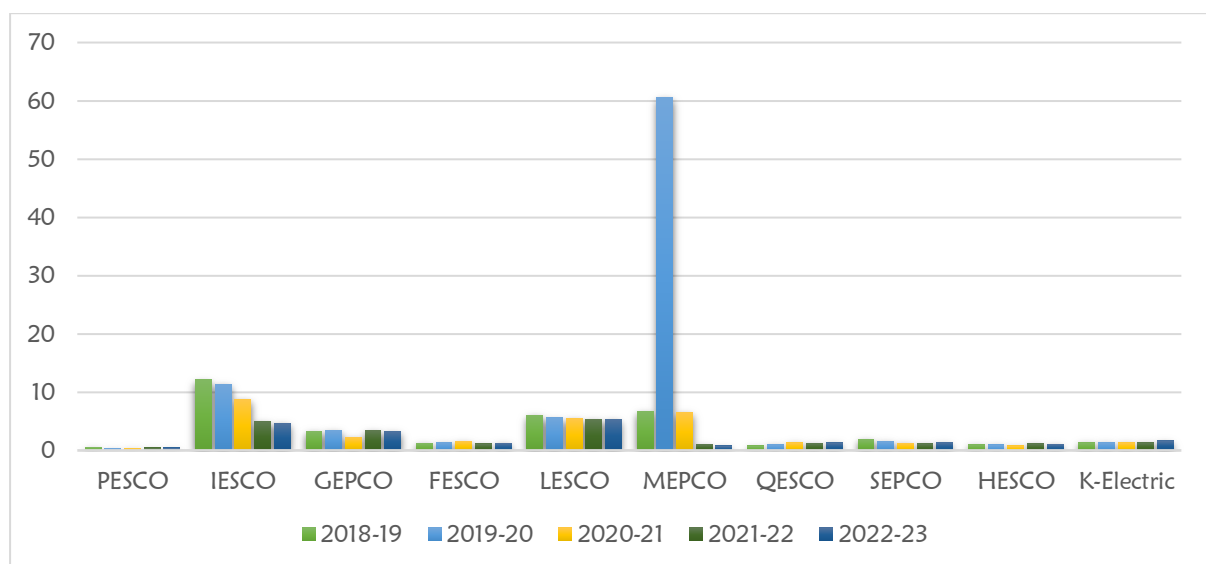


Figure 27: No. of Faults/KM

Upon reviewing the data related to the fault rate over the past five years, it is evident that the trend of this particular indicator displays lack of consistency. Some DISCOs have shown some improvement in 2022-23 as compared to last year, whereas, the fault rate of other DISCOs has been increased.

## DISCOs wise financial loss due to breach of T&D loss target on monthly basis.

### 1. PESCO

Month	T&D Losses			Monthly Energy Purchase from CPPAG (Units) (M. kWh)	Energy Loss (M. kWh)	Applicable Tariff including FCA & QTAs (Rs.)	Financial loss (Rs. Mln)
	Target	Actual	Breach				
July (01.07.22 to 25.7.22)	20.16	41.68	21.52	1,402	301.80	27.89	8416.89
July (26.7.22 to 31.7.22)	20.16	41.68	21.52	337	72.43	36.15	2618.06
August	20.16	38.39	18.23	1,600	291.68	38.14	11125.35
September	20.16	34.97	14.81	1,484	219.78	32.59	7161.85
October	20.16	20.80	0.64	1,118	7.16	31.35	224.31
November	20.16	27.44	7.28	1,000	72.80	31.24	2274.19
December	20.16	42.15	21.99	1,154	253.76	29.94	7597.38
January	20.16	41.56	21.40	1,184	253.38	30.45	7715.10
February	20.16	34.74	14.58	1,000	145.80	25.78	3759.22
March	20.16	29.81	9.65	1,052	101.52	28.58	2901.17
April	20.16	37.55	17.39	1,115	193.90	26.32	5103.29
May	20.16	44.46	24.30	1,270	308.61	27.11	8366.93
June	20.16	43.91	23.75	1,539	365.51	27.93	10207.84
<b>Total</b>				<b>15,255</b>	<b>2588.13</b>		<b>77,471.57</b>

Table 01: PESCO's Financial Impact

### 2. IESCO

Month	T&D Losses			Monthly Energy Purchase from CPPAG (Units) (M. kWh)	Energy Loss (M. kWh)	Applicable Tariff including FCA & QTAs (Rs.)	Financial loss (Rs. Mln)
	Target	Actual	Breach				
July (01.07.22 to 25.7.22)	7.8	12.24	4.44	1,087	48.27	24.54	1,184.65
July (26.7.22 to 31.7.22)	7.8	12.24	4.44	261	11.58	33.45	387.48
August	7.8	10.02	2.22	1,400	31.08	35.45	1,101.69
September	7.8	1.66	-6.14	1,200	- 73.68	30.00	-2,210.41
October	7.8	-4.35	-12.15	901	- 109.47	27.07	- 2,963.87
November	7.8	0.79	-7.01	716	- 50.19	26.96	- 1,353.39
December	7.8	12.52	4.72	792	37.38	26.14	977.13
January	7.8	6.70	-1.10	828	- 9.11	26.65	- 242.72
February	7.8	-7.09	-14.89	682	- 101.55	23.35	- 2,371.54
March	7.8	13.83	6.03	715	43.11	26.15	1,127.35
April	7.8	13.50	5.70	791	45.09	24.06	1,084.76
May	7.8	17.60	9.80	1,046	102.51	24.85	2,547.49
June	7.8	12.07	4.27	1,306	55.77	25.67	1,431.38
<b>Total</b>				<b>11,725</b>	<b>30.79</b>		<b>700.01</b>

Table 02: IESCO's Financial Impact

### 3. GEPCO

Month	T&D Losses			Monthly Energy Purchase from CPPAG (Units) (M. kWh)	Energy Loss (M. kWh)	Applicable Tariff including FCA & QTAs (Rs.)	Financial loss (Rs. Mln)
	Target	Actual	Breach				
July (01.07.22 to 25.7.22)	9.1	15.81	6.71	1,074	72.08	25.46	1,835.10
July (26.7.22 to 31.7.22)	9.1	15.81	6.71	258	17.30	33.40	577.71
August	9.1	9.56	0.46	1,420	6.53	35.39	231.19
September	9.1	7.45	-1.65	1,221	-20.15	30.65	-617.58
October	9.1	2.58	-6.52	921	-60.05	28.23	-1,694.89
November	9.1	-5.85	-14.95	644	-96.27	28.12	-2,706.88
December	9.1	2.64	-6.46	674	-43.54	26.87	-1,169.87
January	9.1	2.85	-6.25	673	-42.06	27.38	-1,151.64
February	9.1	0.94	-8.16	612	-49.94	25.69	-1,283.12
March	9.1	10.99	1.89	731	13.82	28.49	393.58
April	9.1	12.24	3.14	845	26.53	25.93	687.98
May	9.1	14.85	5.75	1,083	62.27	26.72	1,664.02
June	9.1	13.61	4.51	1,283	57.86	27.54	1,593.41
<b>Total</b>				<b>11,439</b>	<b>-55.62</b>		<b>-1,640.97</b>

Table 03: GEPCO's Financial Impact

### 4. FESCO

Month	T&D Losses			Monthly Energy Purchase from CPPAG (Units) (M. kWh)	Energy Loss (M. kWh)	Applicable Tariff including FCA & QTAs (Rs.)	Financial loss (Rs. Mln)
	Target	Actual	Breach				
July (01.07.22 to 25.7.22)	8.84	15.71	6.87	1,473	101.17	26.47	2,677.81
July (26.7.22 to 31.7.22)	8.84	15.71	6.87	353	24.28	33.96	824.43
August	8.84	6.79	-2.05	1,827	-37.45	35.95	-1,346.55
September	8.84	4.50	-4.34	1,594	-69.18	29.92	-2,069.77
October	8.84	4.75	-4.09	1,366	-55.87	27.24	-1,521.86
November	8.84	-3.51	-12.35	987	-121.89	27.13	-3,306.97
December	8.84	3.27	-5.57	947	-52.75	26.67	-1,406.72
January	8.84	4.14	-4.70	954	-44.84	27.18	-1,218.66
February	8.84	1.69	-7.15	934	-66.78	24.98	-1,668.42
March	8.84	11.59	2.75	1,061	29.18	27.78	810.49
April	8.84	15.32	6.48	1,235	80.03	25.03	2,003.05
May	8.84	14.64	5.80	1,575	91.35	25.82	2,358.81
June	8.84	13.63	4.79	1,735	83.11	26.64	2,213.75
<b>Total</b>				<b>16,041</b>	<b>-39.66</b>		<b>-1,650.62</b>

Table 04: FESCO's Financial Impact

## 5. LESCO

Month	T&D Losses			Monthly Energy Purchase from CPPAG (Units) (M. kWh)	Energy Loss (M. kWh)	Applicable Tariff including FCA & QTAs (Rs.)	Financial loss (Rs. Mln)
	Target	Actual	Breach				
July (01.07.22 to 25.7.22)	8	14.10	6.100	2,390	145.81	24.25	3,536.29
July (26.7.22 to 31.7.22)	8	14.10	6.100	574	34.99	31.30	1,095.28
August	8	13.20	5.200	3,027	157.40	33.30	5,240.92
September	8	9.50	1.500	2,658	39.87	26.77	1,067.12
October	8	12.40	4.400	2,154	94.77	25.30	2,397.53
November	8	2.90	-5.100	1,639	-83.59	25.19	-2,105.35
December	8	6.50	-1.500	1,603	-24.04	25.50	-613.12
January	8	6.50	-1.500	1,689	-25.33	26.01	-658.94
February	8	4.20	-3.800	1,539	-58.48	23.58	-1,379.21
March	8	11.00	3.000	1,673	50.19	26.38	1,323.90
April	8	12.60	4.600	1,895	87.17	23.81	2,075.46
May	8	13.40	5.400	2,457	132.68	24.60	3,264.10
June	8	19.30	11.300	2,735	309.05	25.42	7,855.40
<b>Total</b>				<b>26,033</b>	<b>860.49</b>		<b>23,099.39</b>

Table 05: LESCO's Financial Impact

## 6. MEPCO

Month	T&D Losses			Monthly Energy Purchase from CPPAG (Units) (M. kWh)	Energy Loss (M. kWh)	Applicable Tariff including FCA & QTAs (Rs.)	Financial loss (Rs. Mln)
	Target	Actual	Breach				
July (01.07.22 to 25.7.22)	12.34	17.2	4.86	1,744	84.78	27.33	2,316.98
July (26.7.22 to 31.7.22)	12.34	17.2	4.86	419	20.35	34.71	706.15
August	12.34	15.9	3.56	2,166	77.11	36.70	2,830.22
September	12.34	13.7	1.36	2,070	28.15	30.76	866.02
October	12.34	6.3	-6.04	1,685	-101.77	29.56	-3,008.00
November	12.34	1.1	-11.24	1,137	-127.80	29.45	-3,763.14
December	12.34	10.5	-1.84	1,030	-18.95	28.52	-5,40.49
January	12.34	7.5	-4.84	1,074	-51.98	29.03	-1,508.99
February	12.34	6.5	-5.84	1,065	-62.20	26.67	-1,658.98
March	12.34	17.7	5.36	1,224	65.61	29.47	1,933.28
April	12.34	17.1	4.76	1,651	78.59	24.59	1,932.42
May	12.34	20.1	7.76	2,034	157.84	25.38	4,006.20
June	12.34	20.2	7.86	2,205	173.31	26.20	4,540.36
<b>Total</b>				<b>19,504</b>	<b>323.03</b>		<b>8,652.04</b>

Table 06: MEPCO's Financial Impact

## 7. QESCO

Month	T&D Losses			Monthly Energy Purchase from CPPAG (Units) (M. kWh)	Energy Loss (M. kWh)	Applicable Tariff including FCA & QTAs (Rs.)	Financial loss (Rs. Mln)
	Target	Actual	Breach				
July (01.07.22 to 25.7.22)	14.27	29.92	15.65	429	67.14	28.11	1,887.09
July (26.7.22 to 31.7.22)	14.27	29.92	15.65	103	16.11	36.83	593.52
August	14.27	30.07	15.80	418	66.04	38.83	2,564.39
September	14.27	26.78	12.51	441	55.17	31.47	1,736.08
October	14.27	22.74	8.47	505	42.77	28.69	1,227.35
November	14.27	21.01	6.74	491	33.09	28.58	945.96
December	14.27	25.12	10.85	530	57.51	28.68	1,649.17
January	14.27	31.68	17.41	471	82.00	29.19	2,393.55
February	14.27	24.15	9.88	433	42.78	29.10	1,245.06
March	14.27	27.14	12.87	489	62.93	31.90	2,007.47
April	14.27	26.87	12.60	526	66.28	26.32	1,744.34
May	14.27	28.08	13.81	572	78.99	27.11	2,141.64
June	14.27	27.17	12.90	597	77.01	27.93	2,150.78
<b>Total</b>				<b>6,005</b>	<b>747.84</b>		<b>22,286.38</b>

Table 07: QESCO's Financial Impact

## 8. SEPCO

Month	T&D Losses			Monthly Energy Purchase from CPPAG (Units) (M. kWh)	Energy Loss (M. kWh)	Applicable Tariff including FCA & QTAs (Rs.)	Financial loss (Rs. Mln)
	Target	Actual	Breach				
July (01.07.22 to 25.7.22)	17.05	45.88	28.83	352	101.37	29.23	2,962.55
July (26.7.22 to 31.7.22)	17.05	45.88	28.83	84	24.32	37.72	917.71
August	17.05	37.66	20.61	366	75.43	39.72	2,996.05
September	17.05	36.76	19.71	436	85.94	32.70	2,809.77
October	17.05	29.26	12.21	344	42.00	33.49	1,406.53
November	17.05	21.2	4.15	222	9.21	33.38	307.50
December	17.05	23.49	6.44	192	12.36	34.05	421.01
January	17.05	22.97	5.92	200	11.84	34.56	409.18
February	17.05	15.99	-1.06	176	-1.86	30.52	-56.94
March	17.05	35.5	18.45	238	43.91	33.32	1,463.02
April	17.05	38.11	21.06	342	72.02	27.50	1,980.65
May	17.05	38.79	21.74	431	93.69	28.29	2,650.91
June	17.05	37.71	20.66	487	100.61	29.11	2,928.62
<b>Total</b>				<b>3,870</b>	<b>670.87</b>		<b>21,196.56</b>

Table 08: SEPCO's Financial Impact

## 9. HESCO

Month	T&D Losses			Monthly Energy Purchase from CPPAG (Units) (M. kWh)	Energy Loss (M. kWh)	Applicable Tariff including FCA & QTAs (Rs.)	Financial loss (Rs. Mln)
	Target	Actual	Breach				
July (01.07.22 to 25.7.22)	18.57	26.00	7.43	398	29.60	30.40	899.81
July (26.7.22 to 31.7.22)	18.57	26.00	7.43	96	7.11	39.21	278.58
August	18.57	30.00	11.43	459	52.46	41.21	2,162.13
September	18.57	32.40	13.83	481	66.52	37.10	2,468.16
October	18.57	28.20	9.63	440	42.37	36.21	1,534.43
November	18.57	13.20	-5.37	322	-17.29	36.10	-624.28
December	18.57	19.90	1.33	272	3.62	33.82	122.34
January	18.57	17.30	-1.27	271	-3.44	34.33	-118.15
February	18.57	10.10	-8.47	265	-22.44	28.38	-637.08
March	18.57	33.10	14.53	359	52.16	31.18	1,626.32
April	18.57	28.30	9.73	455	44.27	30.05	1,330.33
May	18.57	38.40	19.83	537	106.48	30.84	3,284.24
June	18.57	28.10	9.53	561	53.46	31.66	1,692.51
<b>Total</b>				<b>4,916</b>	<b>414.88</b>		<b>14,019.34</b>

Table 9: HESCO's Financial Impact

## 10.K-Electric

Month	T&D Losses			Total Sent outs of K-E Including (K-Own Sources+ CPPG + Other)	Energy Loss (M. kWh)	Applicable Tariff including FCA & QTAs (Rs.)	Financial loss (Rs. Mln)
	Target	Actual	Breach				
July	15.36	13.70	-1.66	1,796	-29.80	51.25	- 1,527.6
August	15.36	18.18	2.82	1,713	48.30	53.24	2,571.4
September	15.36	15.64	0.28	1,675	4.69	47.32	221.9
October	15.36	15.92	0.56	1,680	9.41	29.34	276.0
November	15.36	5.22	-10.14	1,431	-145.08	29.10	- 4,221.5
December	15.36	2.86	-12.50	1,177	-147.12	31.77	- 4,674.1
January	15.36	4.43	-10.93	1,024	-111.92	19.44	- 2,176.1
February	15.36	16.73	1.37	1,116	15.28	16.08	245.7
March	15.36	21.96	6.60	1,477	97.45	28.59	2,785.6
April	15.36	17.25	1.89	1,527	28.86	32.62	941.7
May	15.36	28.50	13.14	1,862	244.72	35.98	8,804.8
June	15.36	13.67	-1.69	1,880	-31.76	32.00	- 1,016.4
<b>Total</b>					<b>-16.982</b>		<b>2,231.40</b>

Table 10: K-E's Financial Impact

Fiscal Year	Total Energy Loss (M. kWh)	Total Financial Loss (Rs. Billion)
<b>FY 2022-23</b>	<b>5523.77</b>	<b>166.365</b>