
NEPAL ELECTRICITY AUTHORITY
DISTRIBUTION & CONSUMER SERVICES DIRECTORATE
A Year Book
Fiscal year 2075/076 (2018/19)
34th Anniversary of NEA
Bhadra 2076 (August 2019)


**Koilachaur Sub-Station, Rolpa**

# Contents


- Message From The Managing Director 3
- Message From The Deputy Managing Director 4
- Organization Chart Of Nea 5
- Organization Chart Of Distribution And Consumer Services Directorate 6
- Distribution And Consumer Services Directorate 10
- Planning And Technical Services Department 28
- Community Rural Electrification Department 36
- Biratnagar Regional Office 38
- JanakpurRegional Office 57
- Hetauda Regional Office 75
- Pokhara Regional Office 90
- Kathmandu Regional Office 109
- Butwal Regional Office 123
- Nepaljung Regional Office 140
- Attariya Regional Office 156
- Annex I 171
- Annex II 173
- Annex III 176
- Annex IV 183



**NEPAL ELECTRICITY AUTHORITY**
**Distribution & Consumer Services Directorate**
Durbarmarga, Kathmandu, Tel : 01-4153142, 014153145
Email : dcs@nea.org.np

## Publication Committee

| | | |
|---|---|---|
| Mr. Ramji Bhandari | Director | Coordinator |
| Mr. Balaram Silwal | Joint Director | Member |
| Mr. Jagadish Chandra Joshi | Deputy Manager | Member |
| Mr. Umesh Kumar Bhandari | Deputy Director | Member |
| Ms. Pramila Chaudhary | Engineer | Member |
| Ms. Milana Prajapati | Engineer | Member |
| Mr. Prabin Dhakal | Engineer | Member |
| Mr. Suraj Kumar Dhungel | Engineer | Member |
| Mr. Bhola Nath Dhungana | Asst. Computer officer | Member |
| Mr. Bijaya Sen Khadka | Assistant Manager | Member Secretary |

## Editorial Team

| | |
|---|---|
| Mr. Bijaya Sen Khadka | Assistant Manager |
| Ms. Pramila Chaudhary | Engineer |
| Ms. Milana Prajapati | Engineer |
| Mr. Prabin Dhakal | Engineer |
| Mr. Suraj Kumar Dhungel | Engineer |
| Mr. Bhola Nath Dhungana | Asst. Computer officer |

# Message from the Managing Director

It has been a wonderful journey of 34 years of continuous service to the nation and people. I am pleased to learn that Distribution and Consumer Services Directorate (DCSD) is publishing its annual magazine on the occasion of NEA's 34th anniversary.

I would like to recognize and appreciate the contribution of all the staffs who sincerely put forth the industrious effort at all situations in elevating the performance of this directorate. Because of such diligent efforts, we have been able to perform as per our commitments and are able to aim higher to serve towards the prosperity of our country.

Progressing towards the new fiscal year, we have new challenges and goals to meet. Load shedding has been completely eliminated from the country and people's aspirations have now shifted towards reliable and quality supply of electricity. Along with that, NEA is working hard to fulfill the national goal of "Electricity for All" and striving to enhance the per capita consumption of electricity. NEA employees worked hard to reduce electricity loss and have been achieving good results in past three years. I am thankful to all the employees for the achievements and more involvement from all levels would ease the tedious task of gaining good results in all sectors.

This publication shows the big picture of the status of the country's distribution system. It gives the reflection of past performance and will help us to direct better in future.

Last but not least, a big congratulation for this publication and I wish more success in coming years to DCSD.

.....

**(Kulman Ghising)**
Managing Director

# Message from the Deputy Managing Director

It gives me great pleasure to present this publication on the occasion of NEA's 34th anniversary. This report showcases the many ways in which we work at local and country level to turn the aims of "Electricity for All" into results.

We had a fruitful and encouraging F/Y 2075/76. DCSD saw a remarkable financial and technical improvements. We saw a growth of 15.3% in net collections compared to previous fiscal year. At the same time, we were able to bring down the distribution losses to 11.28% from 14.82%. We added twenty new substations in a year's time to improve service quality and to extend the reach of grid provided electricity to remotely located consumers. In the context to fully electrified Nepal in coming three years, we have introduced new distribution system projects in all the provinces of Nepal.

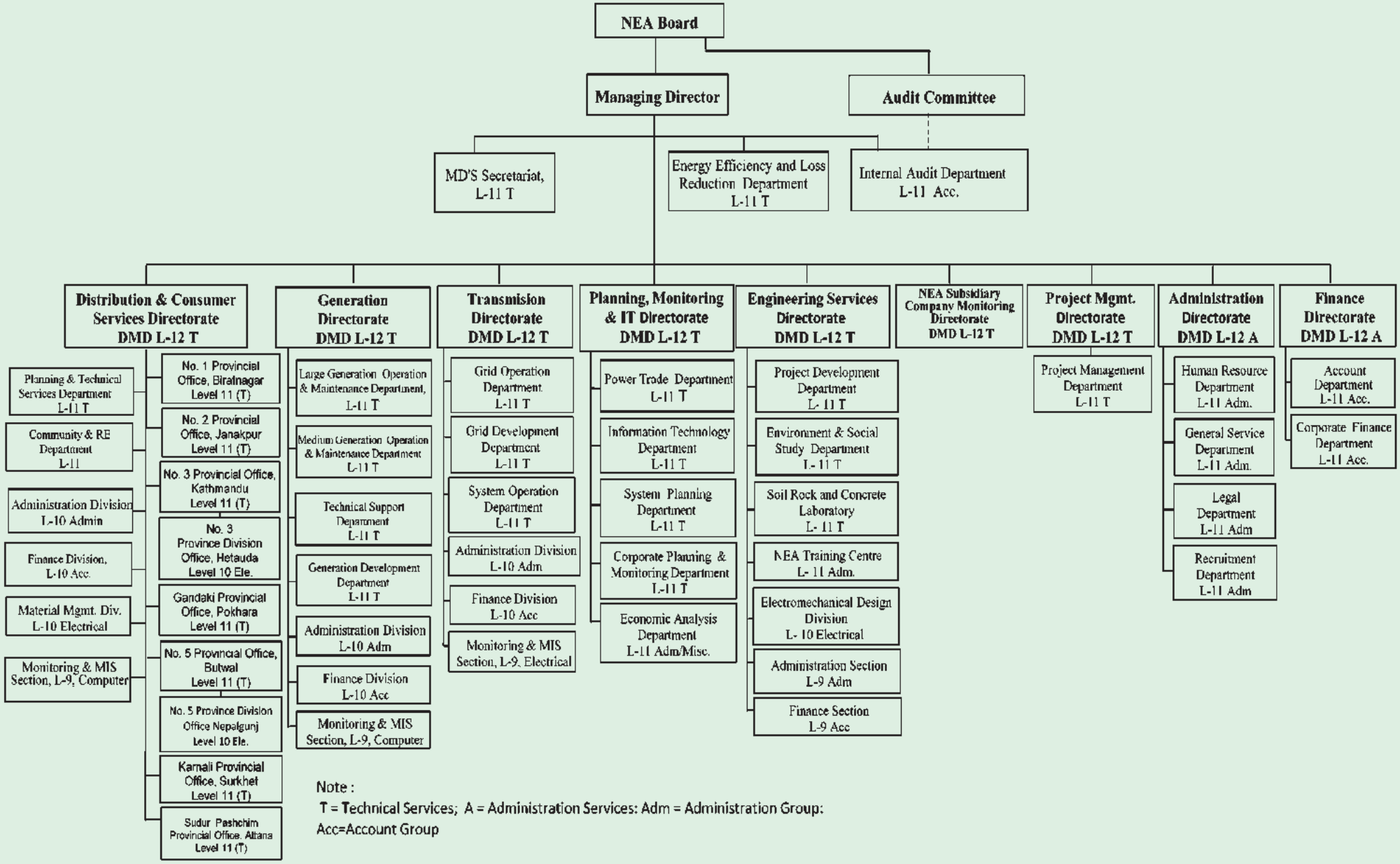
DCSD has many challenges moving towards the new fiscal year. There are challenges to extend the reach of grid provided electricity to all parts of the country by next three years and to increase the per capita consumption to 700 units by next five years. After the end of load shedding, we are striving to provide reliable and quality electricity for all. We have ended F/Y 2075/76 on a high note and are determined to carry the merry way forward in achieving higher goals in F/Y 2076/77.

Lastly, I extend my heartful thanks to DCSD team for their hard work and achievements. I wish them success for the future endeavors.

.....

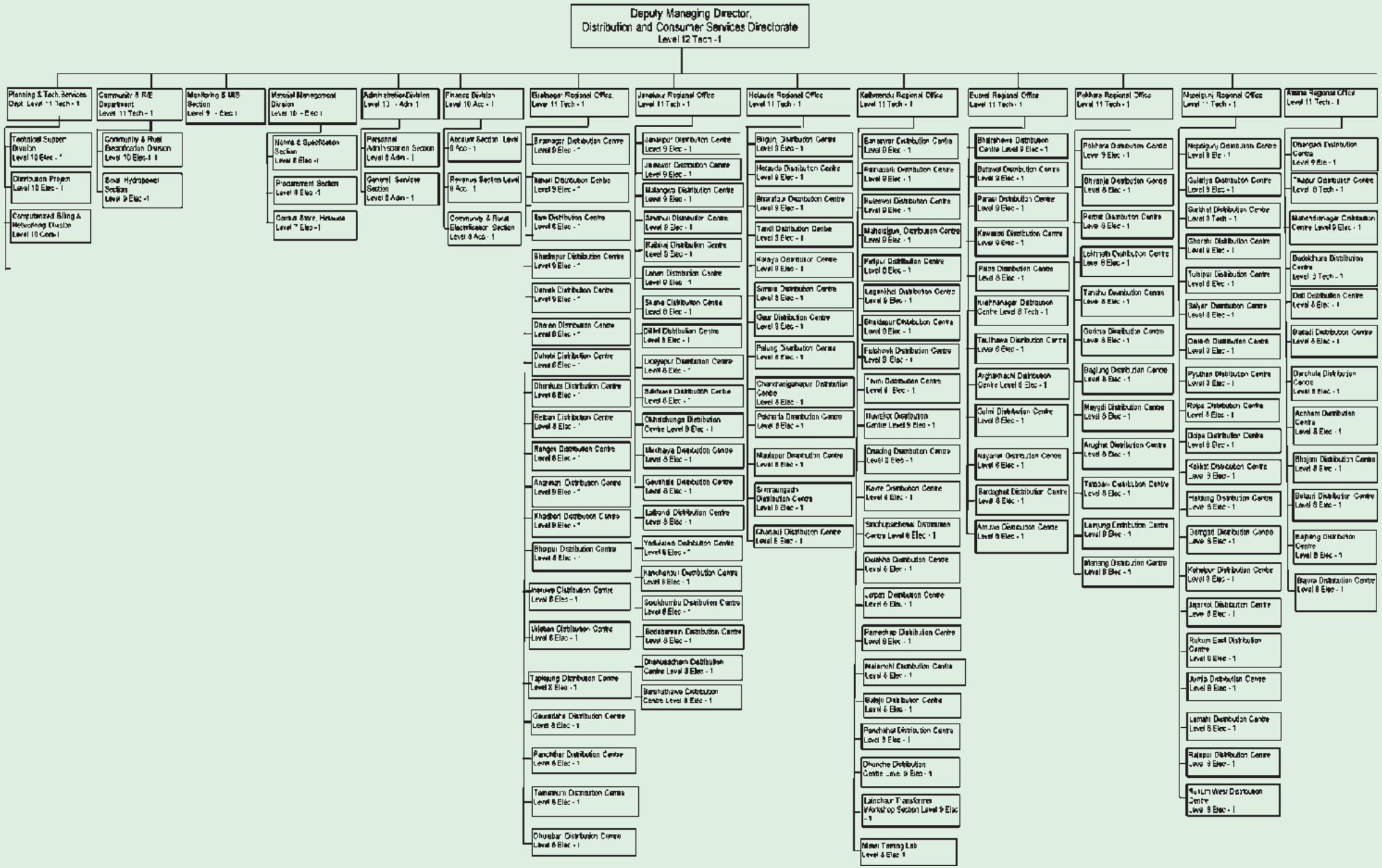
**(Hara Raj Neupane)**
Deputy Managing Director

# ORGANIZATION CHART OF NEPAL ELECTRICITY AUTHORITY




Note :
T = Technical Services; A = Administration Services: Adm = Administration Group:
Acc=Account Group

# ORGANIZATION CHART OF DISTRIBUTION AND CONSUMER SERVICE DIRECTORATE



# DISTRIBUTION AND CONSUMER SERVICE TEAM

**Hara Raj Neupane**
Deputy Managing Director
Distribution and Consumer Services Directorate

**Ramji Bhandari**
Director
Planning & Technical Services Department

**Tirpureshwar Purbe**
Director
Community &Rural Electrification Department

**Balaram Silwal**
Chief
Administration Division

**Nutan Dev Bhattarai**
Chief
Material Management Division

**Umesh Kumar Bhandari**
Chief
Finance Division

**Manoj Kumar Shah**
Chief
Monitoring and MIS Section

**Sujan Kumar Shrestha**
Chief
Computerized Billing & Networking Division

**Sachidananda Yadav**
Chief
Biratnagar Regional office

**Anirudra Prasad Yadav**
Chief
Kathmandu Regional Office

**Om Prakash Mahato**
Chief
Janakpur Regional Office

**Suresh Chhetri**
Chief
Pokhara Regional Office

**Nabaraj Subedi**
Chief
Butwal Regional Office

**Manoj Kumar Singh**
Chief
Nepalgunj & Surkhet Regional Office

**Satish Kumar Karn**
Chief
Attaria Regional Office

**Shreeram Raj Pandey**
Chief
Hetauda Regional Office

# PROJECT CHIEFS

**Jagadish Chandra Joshi**
Distribution System
Agumentation Project

**Pyaru Rana**
Grid Solar and Energy Efficiency
Project (11 kV Line Expansion)

**Bodha Raj Dhakal**
Distribution System
Agumentation Project(B1)

**Narayan Kumar Prasai**
Solu Corridor Rural
Electrification Project

**Manoj Kumar Shah**
Smart Metering Smart Grid
Project

**Sandeep Shrestha**
33 Kv Line Expansion and
Rehabilitation Project

**Laxman Mandal**
GIS Smart
Grid Project

**Bikash Bahadur Raghubansi**
Grid Solar and Energy Efficiency
Project (25 MW Solar Firm)

**Rishi Kumar Baranwal**
Parsa 33/11
TL and SS Project

**Nanda Kishor Mandal**
Transformer Testing Lab
Construction Project

**Prakash Raut**
Rasuwa-Nuwakot Distribution System Re-
Construction and Improvement Project

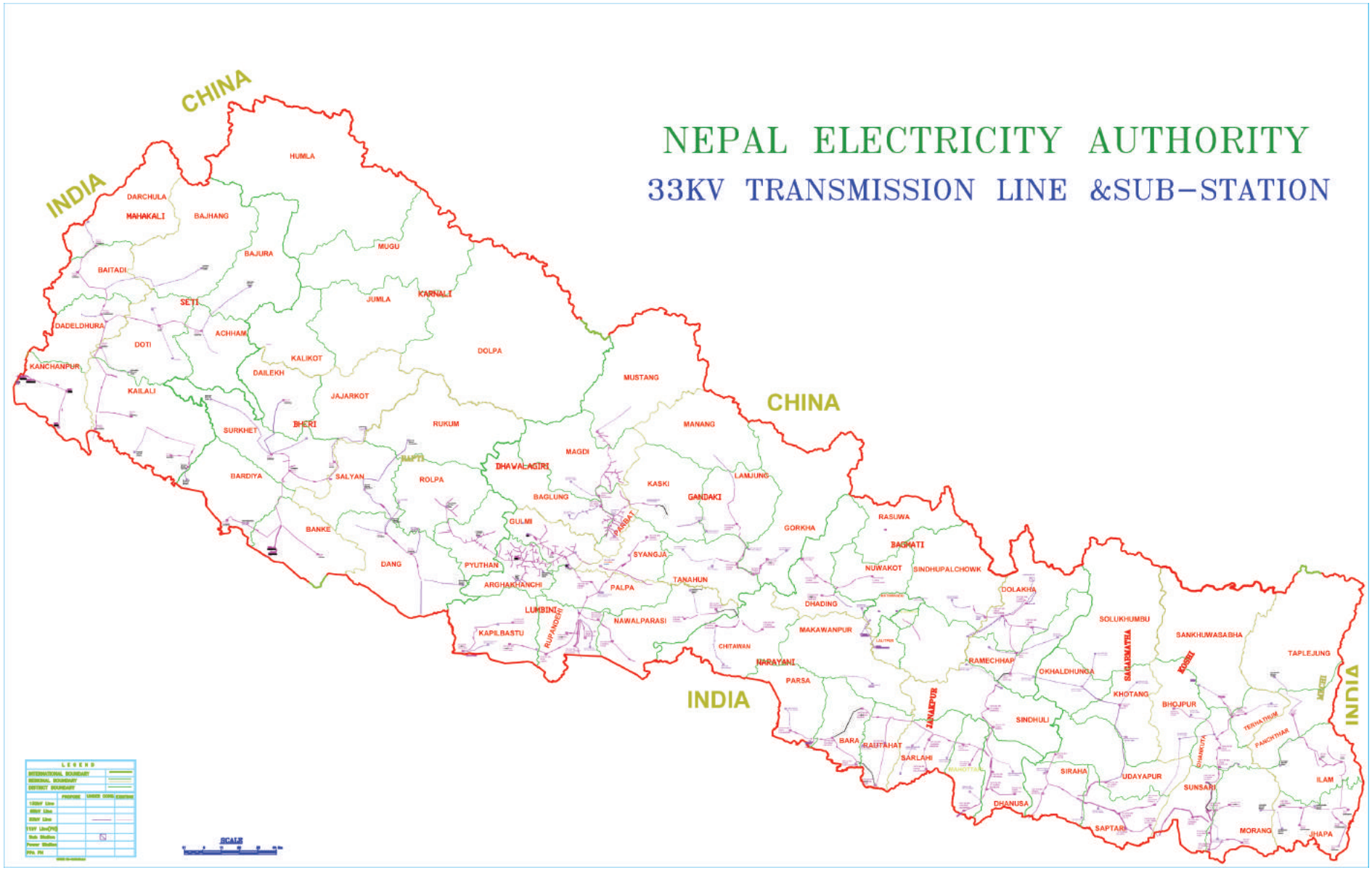
**Bijaya Sen Khadka**
Distribution System Upgradation
and Expansion Project (AIIB)

**Chandra Bir Khadka**
Buipa Okhaldhunga 33kV
TL and SS project

**Surendra Chaudhary**
Mathatirtha Malta/Naubise
33 kV TL and SS project

**Yogendra Thakur**
Nijhgadh-Kohalbi
33 kV Project

# Distribution and Consumer Services Directorate



## Introduction

Distribution and Consumer Services Directorate (DCSD), the largest directorate of NEA, is striving to provide safe, reliable and quality electricity at affordable price to all its consumers. The directorate is responsible for the overall management of electricity distribution services and networks of NEA including planning, expansion, operation, maintenance, and rehabilitation of the electricity distribution networks and substations up to 33 kV voltage level. In addition, enhancement of the consumer services activities such as new consumer connections, meter reading, billing, revenue collection, customer grievance handling and so forth by introducing new technologies and practices also fall under its jurisdiction.

DCSD has introduced some of the smart meter reading and billing techniques and technologies in most of the DCs. Implementation of a Revenue Billing System (M-power) in 168 Revenue Collection Centers has helped NEA for improved Billing and Revenue collection processes in a modern efficient and cost-effective manner. Introduction of the online payment system from the service providers namely CFS Remit, City Express, eSewa, Himalayan Bank, Mahalaxmi Bank, Nepal Investment Bank, Paypoint Nepal and Prabhu Bank has significantly disburdened DCSD. The directorate is also encouraging and supporting energy-saving activities and Demand Side Management for the optimal use of electricity. The operation and maintenance of off-grid small hydropower plants also falls under the jurisdiction of this directorate.

DCSD is headed by the Deputy Managing Director and is organized into two departments at central level namely:

- Planning and Technical Service Department
- Community and Rural Electrification Department

And, eight Regional Offices (RO) throughout the country viz:

Kathmandu Regional Office

Biratnagar Regional Office

Janakpur Regional Office

Hetauda Regional Office

Pokhara Regional Office

Butwal Regional Office

Nepalgunj Regional Office

Attariya Regional office

However, NEA board has already approved to take the Distribution and Consumer Service to Provincial level instead of Regional Level.

The Directorate, at the central level, is further sub-structured to following Division and Section.

- Administration Division
- Finance Division
- Material Management Division
- Monitoring and MIS Section

These central Departments, Divisions, and Section are responsible for Planning and Managing human resources; Preparing yearly O&M and Capital Budget; Procurement activities; and Planning and Preparation of distribution system expansion programs, preparing and monitoring rural electrification programs respectively. Eight Regional Offices through its distributions centers (DCs) manage the overall distribution and consumer services activities in a more effective and efficient manner.

The Regional Offices are the main interface with the public and after a detailed study of the service facilities provided, many improvements have been effected for the convenience of the customers. The functions of operation, maintenance, and expansion of the distribution system up to 33 kV voltage level and consumer services such as new consumer connections, meter reading, billing, and revenue collection are carried out by various Distribution Centers under Regional Offices. In addition, operation and maintenance of off-grid small hydropower plants also fall under the regional office's jurisdiction. Each regional office is headed by a director/chief and reports to the Deputy Managing Director. There is the provision of technical division headed by a Manager

in each RO which looks after:

- The operation & maintenance of 33/11 kV substation
- Rural electrification activities
- Construction of new 33/11 kV substation and 33 kV lines, and
- Management of small hydropower plants.

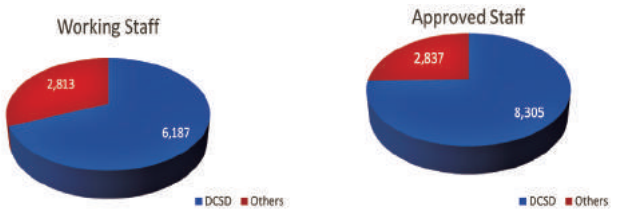
The regional chief is also supported by account and administrative sections in the related matters.

DCSD is the largest directorate of NEA in terms of the number of employees and business activities. Approximately 74.5% of the total staffs of NEA are employed in DCSD. This is also on the forefront to earn revenue for sustaining the operation, maintenance, and development activities of NEA. DCSD is providing services to consumers through its 129 Distribution Centers (DCs) spread over the whole country.

## Divisions and Section at Directorate Level

### Administration Division

The Administration Division is responsible for human resource management, general administration, coordination with branches and concerned department/regional offices, implementation of management decisions and coordination with other NEA offices. The total numbers of approved position in DCSD are 8,305 out of 11,142, the total approved position of NEA. Whereas the working staff by the end of F/Y 2075/76 is 6187 out of 9000, the total of NEA. Details of employee number is included in Annex 1.




Vehicle management is a big challenge for prompt and efficient service delivery. There are 411 SUV/Pickup Trucks, 125 Crane/Trucks and 65 Two-wheelers being used by different offices under the Directorate for providing service to consumers. Annex 2 contains the details of vehicles.

Safety of personnel and equipment is a big challenge in NEA and DCSD is worst affected by it. In the F/Y 2075/76, 54 people and 52 animals lost their life due to various electricity injuries. During this period, 58 people got injured due to various electricity mishaps. Details of electricity accidents in the referenced period are listed in Annex 3.

Employees are scheduled for routine trainings and also are deputed for inspection and testing job in and outside the country. In the F/Y 2075/76, two hundred and thirty three (233) employees within DCSD were involved in trainings, inspections and seminars. Out of those, twenty three (23) employees attended events in Nepal, one hundred ninety eight (198) employees attended events in India and seventy five (75) employees attended in other countries. Details are included in Annex 4

### Finance Division

The Finance Division at the corporate level is responsible for supervising, monitoring and control of financial transaction recorded in the course of daily business activities. This division comprises of two sections:

- Account Section
- Revenue Section

Account section is assigned with the duties of budgetary control, budget preparation, and cash flow management whereas Revenue section analyzes, consolidates and prepares the monthly and annual revenue statements.

### Material Management Division

The Material Management Division (MMD) is responsible for the procurement/management of materials commonly used in the distribution system like Power & Distribution Transformers, Energy Meters, Poles, Instrument Transformers (CT, PT),

Cable, Insulators & Hardwares etc. The material are procured through International Competitive Bidding / National Competitive Bidding. It has a central store in Hetauda and most of the procured materials are stored and distributed as per the requirements of ROs and DCs.

In F/Y 2075/76, MMD has received 20 Power Transformers and 625 Distribution Transformers. In the same time frame, 400,500 Steel Tubular Poles and 474,500 Single Phase Meters were procured by MMD. It also procured 1224 HT metering sets. In the same fiscal year, MMD procured 977 km of ABC cable, 72 km of PVC cable and 574 km of XLPE cable.

### Monitoring and MIS Section

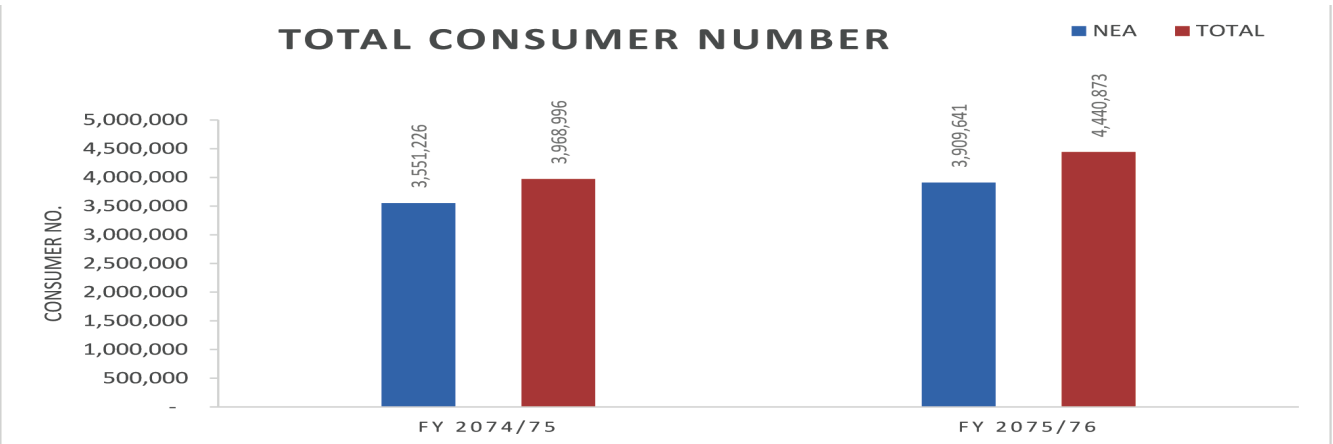
This section deals with following major activities:

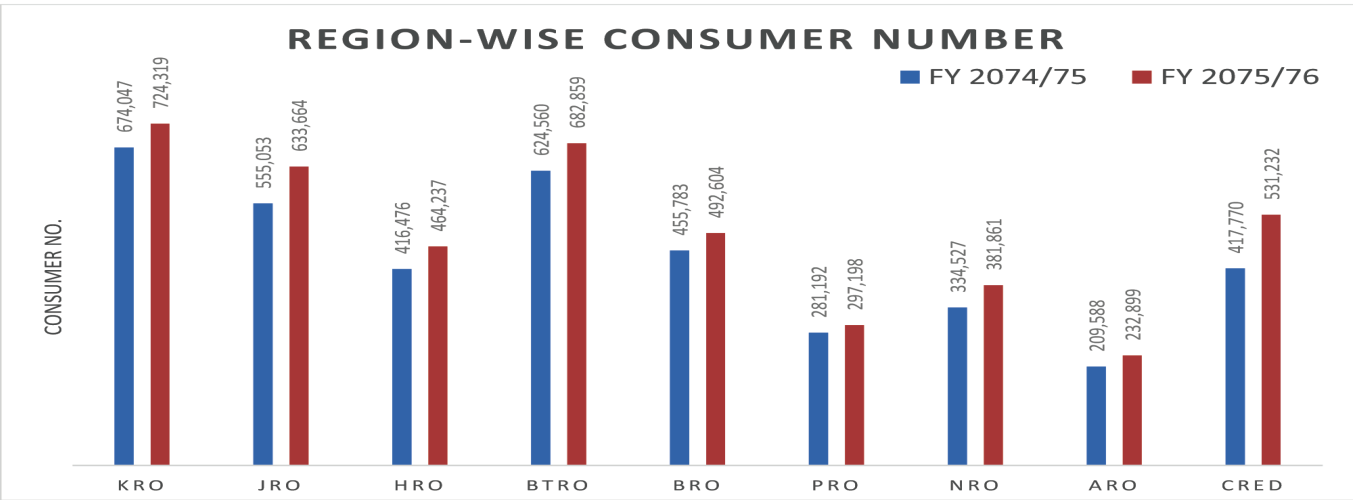
- Preparing annual Rural Electrification Budget for all Regional Offices and get it approved.
- Collecting all the decisions from DCSD and forwarding them to Regional Offices for execution.
- Preparing programs for all Regional Offices and getting approval from concerned authorities.
- Collecting quarterly, yearly progress reports from all Regional Offices and putting them forward to concerned authorities.

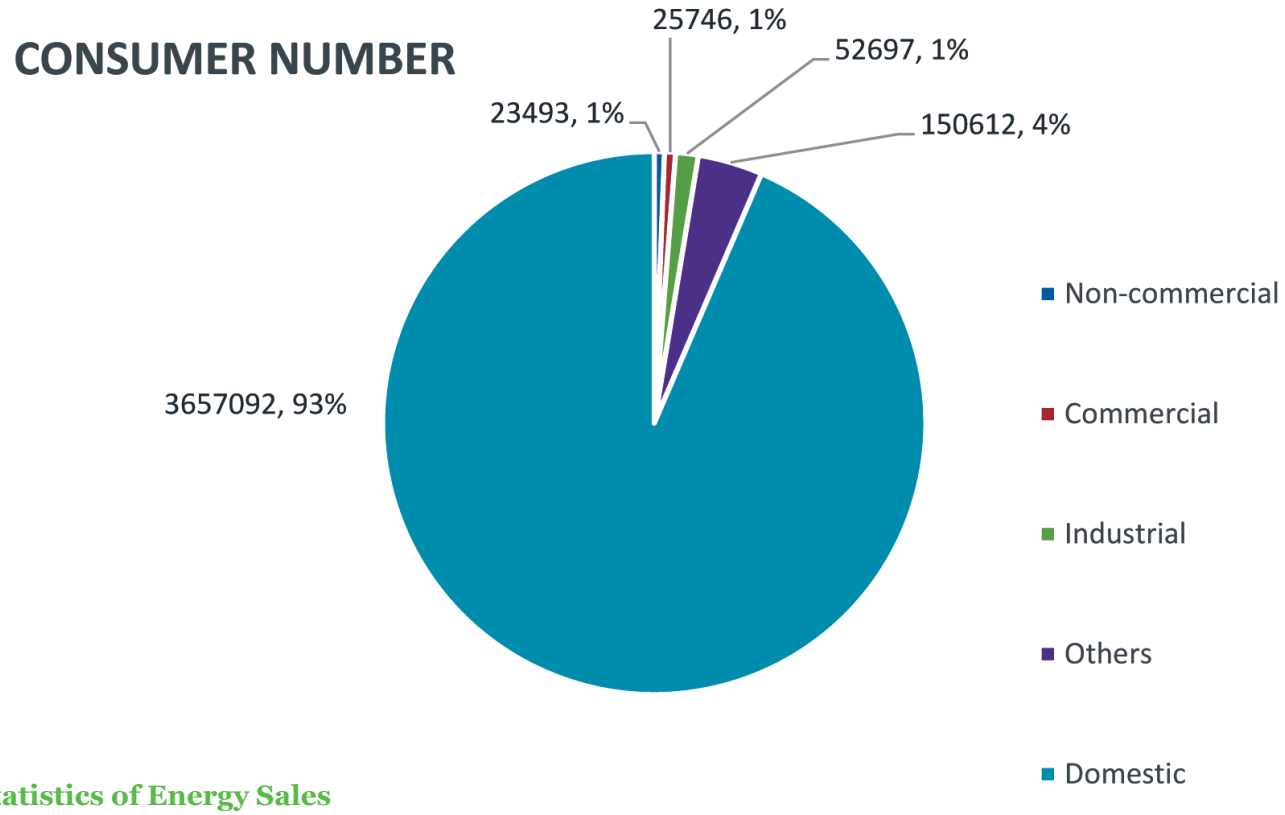
## Highlights of the Directorate

### Statistics of Consumers

Including consumers of Communities under Community and Rural Electrification Department (CRED), in the fiscal year 2075/76, the total number of NEA consumers reached to 4,440,873 from the number 39,68,996 of the last year with an increase of 10.63%. NEA is providing electricity to 531,232 consumers through 504 Community under CRED upto this fiscal year through 2464 load centres.

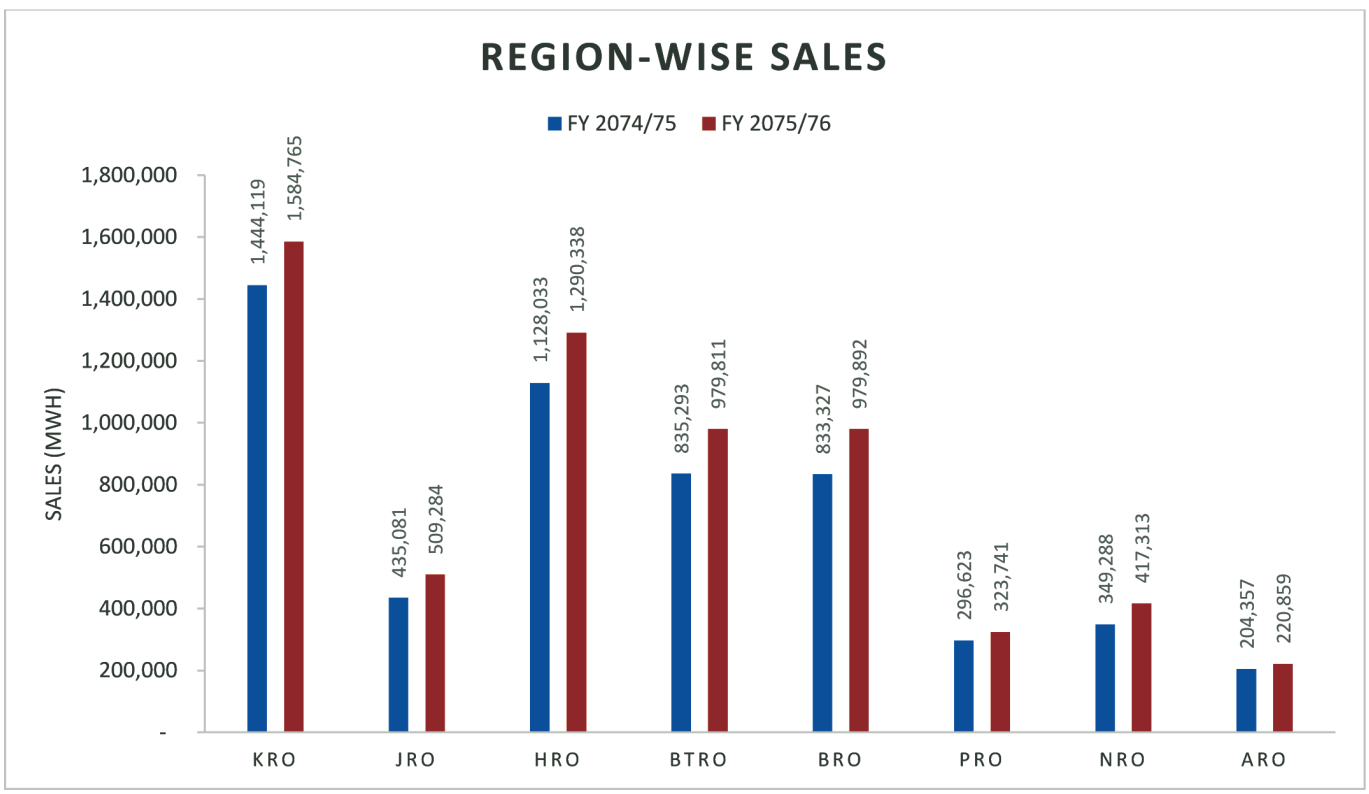


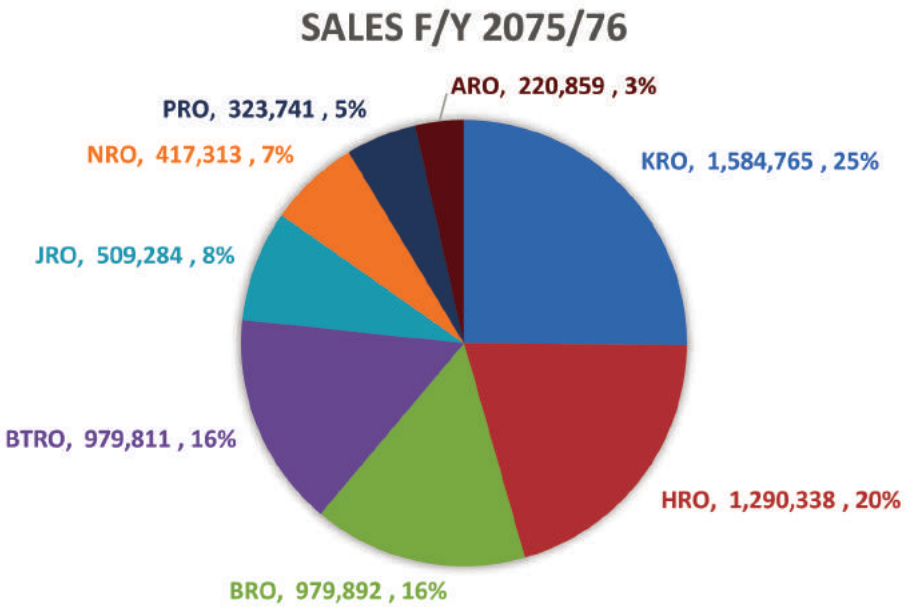






## Statistics of Energy Sales

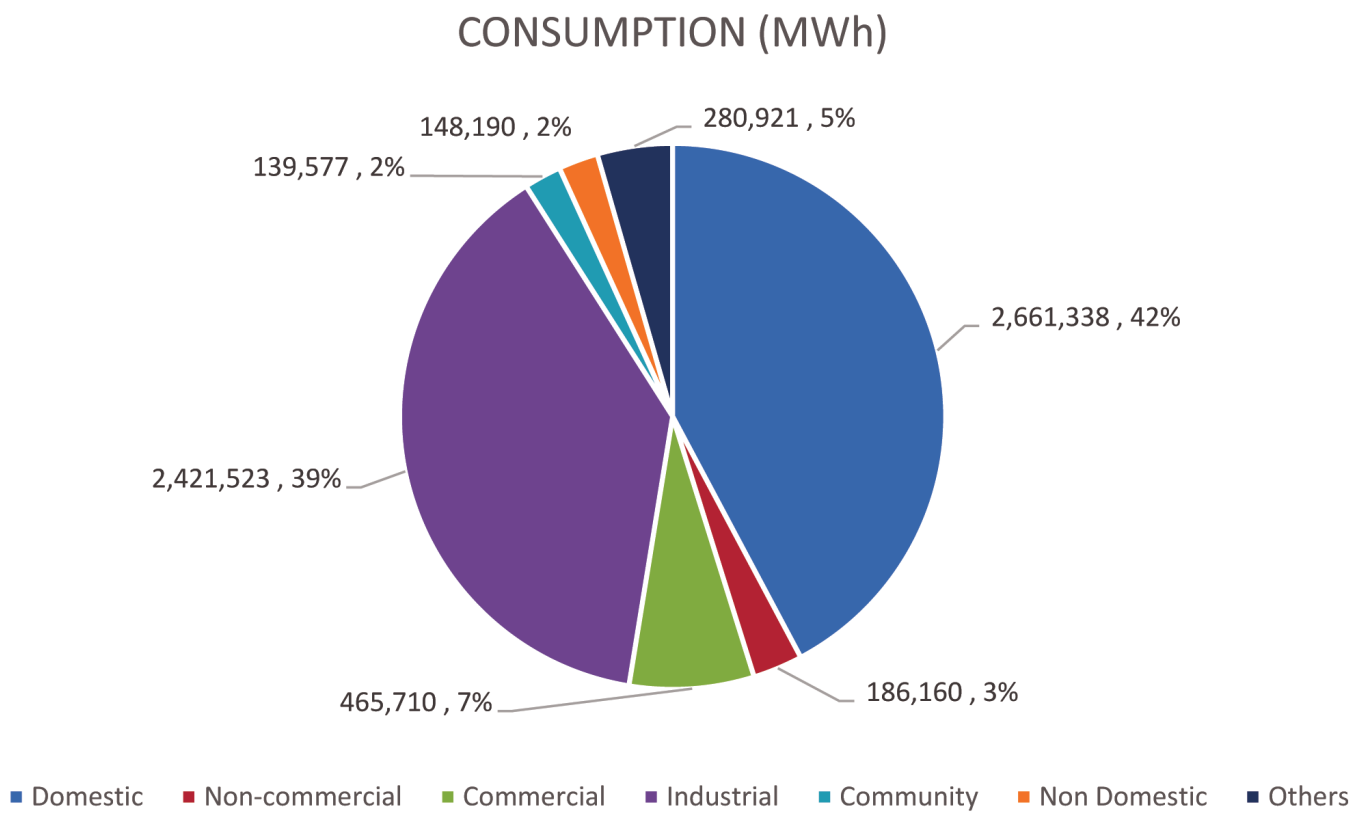
In the F/Y 2075/76, DCSD sold 6,306,002 MWh electricity which is 14.11% higher than that of previous fiscal year.





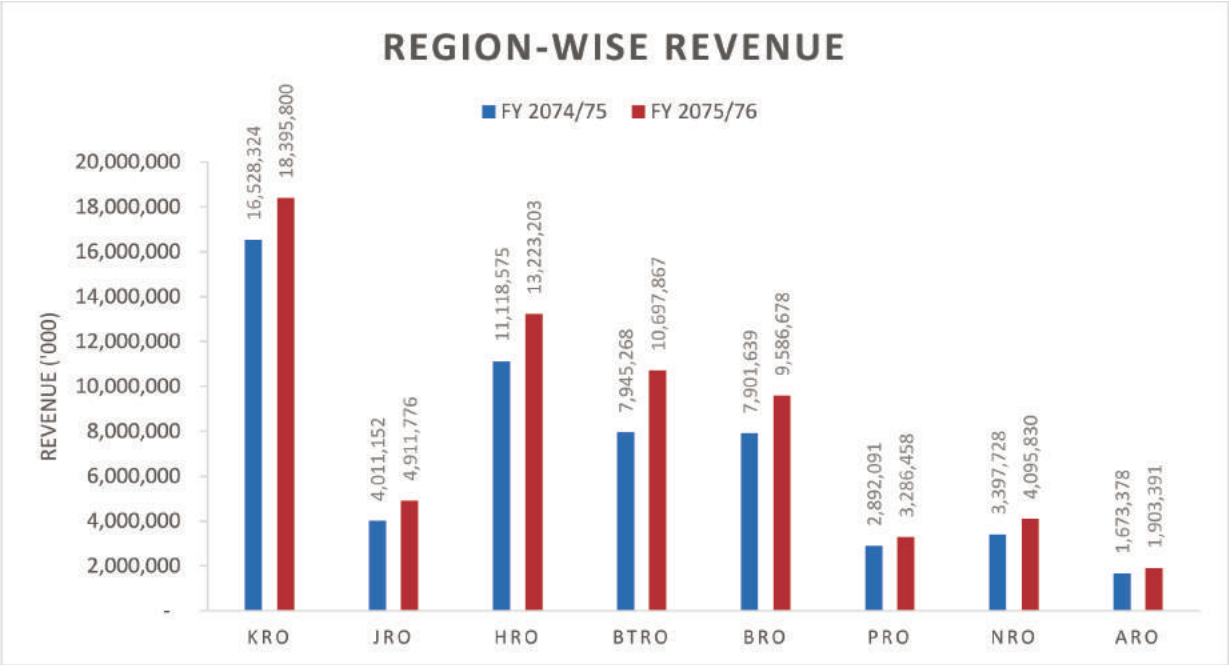

## Category wise Consumption

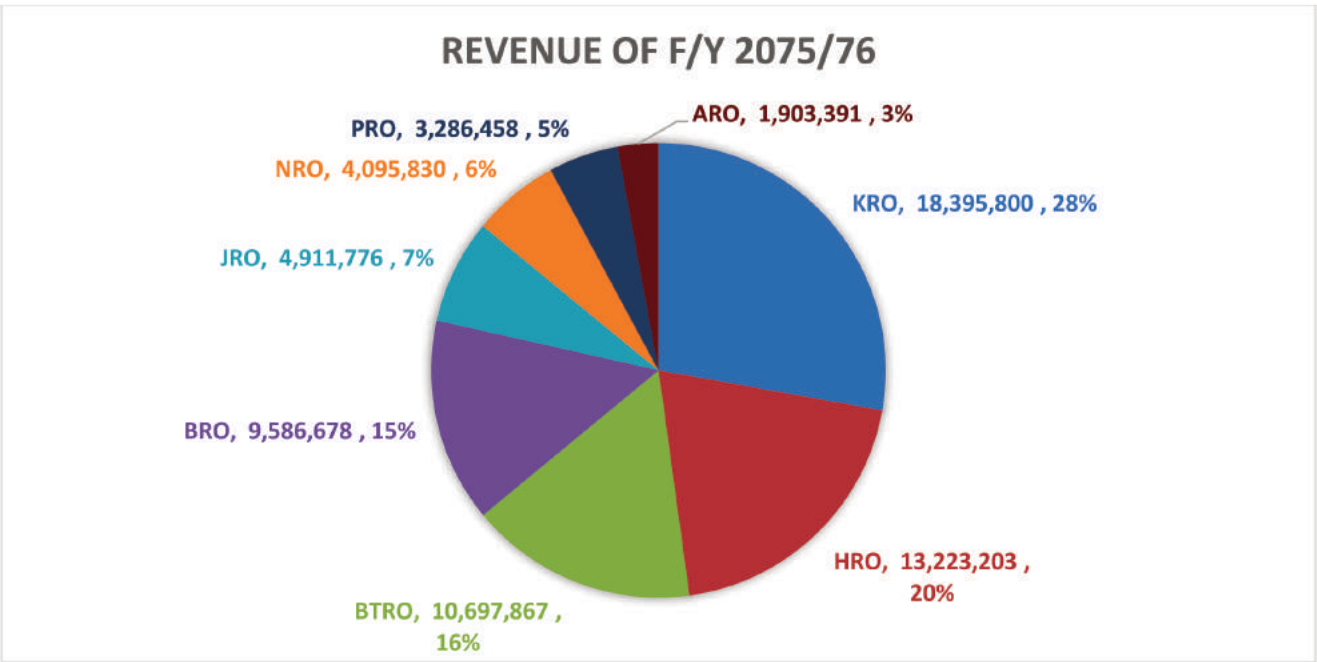
In the F/Y 2075/76, domestic consumption was the highest with 42% share and industrial consumption fared second with 39%.



## Revenue

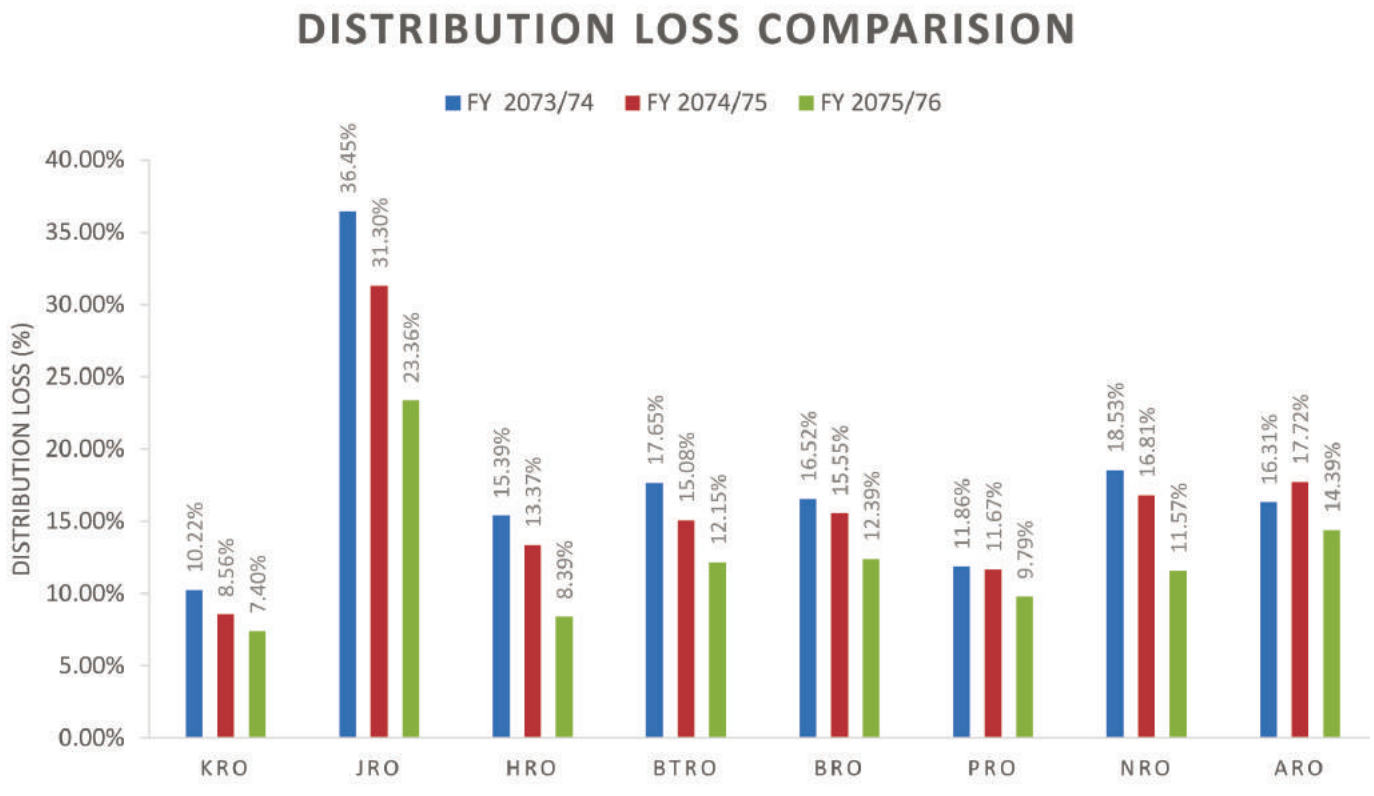
In the F/Y 2075/76, DCSD collected the revenue of Rs. 66,101 million which is 19.17% higher than that of previous fiscal year.



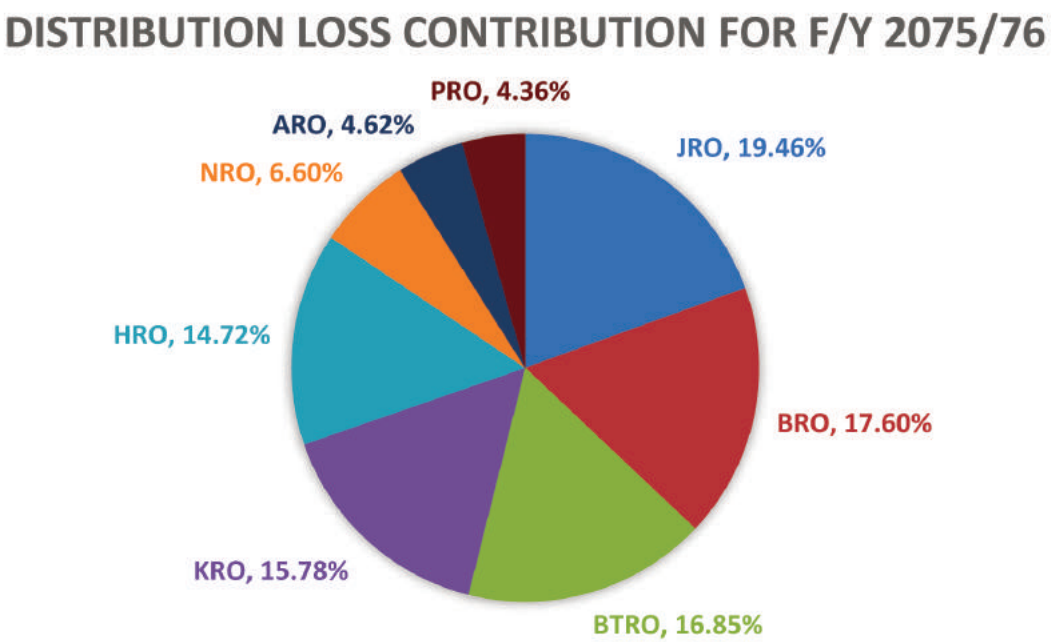




## Distribution Losses

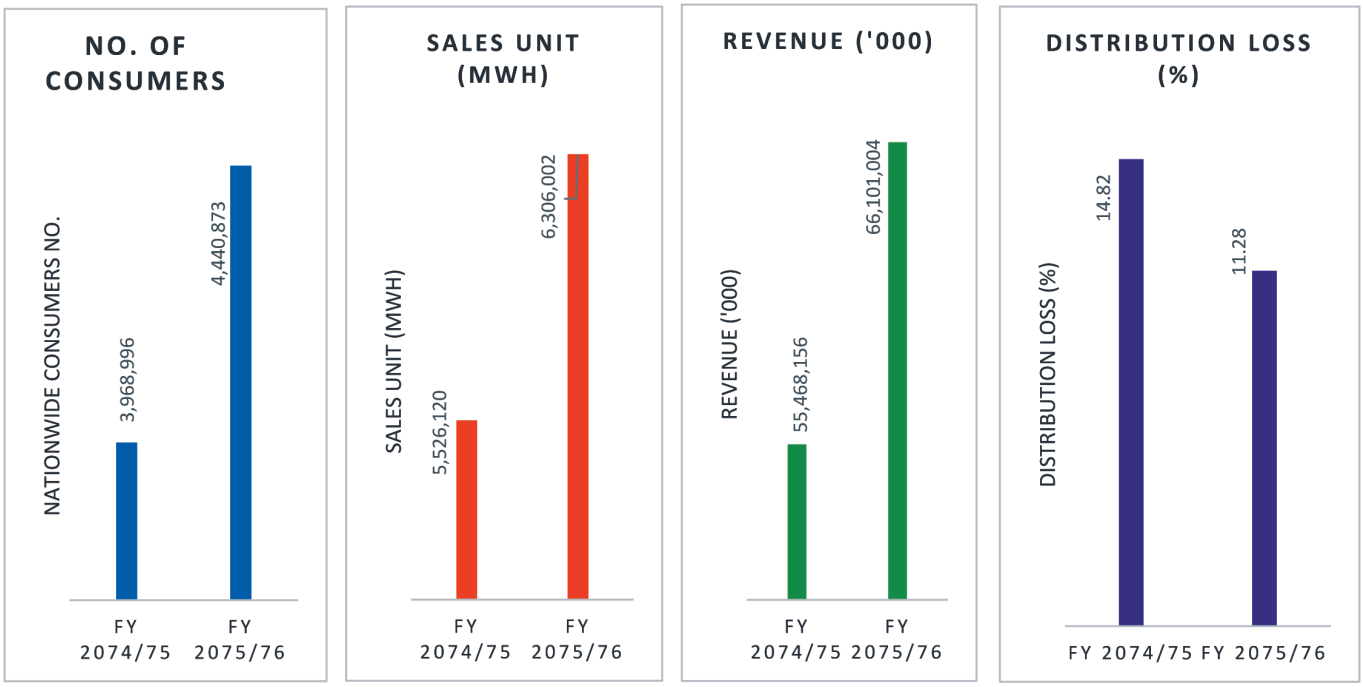
In the F/Y 2075/76, DCSD reduced the overall distribution loss to 11.28%. It is 3.54% lesser than the distribution loss of F/Y 2074/75 (14.82%). In the F/Y 2073/74, distribution loss of NEA was 16.83%.




The following chart depicts the Region-wise contribution of loss in total distribution loss of DCSD.



Salient features Comparison of F.Y.2074/075 and F.Y.2075/2076




## Performance Analysis For F/Y 2075/76

| | |
|---|---|
| No. of Consumer per DCSD employee | 591.1 |
| Unit consumption per consumer per year | 1420 |
| Revenue per consumer per year | Rs. 14,884.70 |
| Unit consumption per domestic consumer per year | 635.42 |
| Revenue per domestic consumer per year | Rs. 5,961.21 |
| Operation and Maintenance cost per kWh | Rs. 1.51 |
| Average revenue per kWh | Rs. 10.48 |
| Per capita consumption | 220 |
| Distribution Loss | 11.28% |

Coming on from F/Y 2074/75 to F/Y 2075/76, DCSD has made progress in few parameters and need substantial efforts in improving others. For example, per capita consumption has increased to 220 (NEA only) kWh, making an increment of 24.31 kWh in one year. To increase per capita consumption to 700 units per year, massive efforts is needed from all levels of NEA. There has been some improvement in per kWh revenue earned. In F/Y 2075/76, DCSD has seen per kWh revenue of Rs. 10.48, which is Rs. 0.44 increment from the previous year. The revenue earned per consumer was determined to be Rs. 14,884.70 in F/Y 2075/76, which is a good improvement from Rs. 13,975.36 from previous fiscal year.

DCSD has made significant improvement in reducing distribution loss to 11.28% from 14.82% of previous year. Per percent of distribution loss reduction benefits NEA with approx. 74 crore rupees, and loss reduction of 3.54% has benefitted 2 Arba 62 Crore Rupees to NEA. Loss reduction has two fold benefits to NEA and the country. Firstly, profit margin of NEA increases. Secondly, NEA can invest surplus benefits in the field of additional generation, transmission and distribution resources. It will positively impact the socio-economic situation of the whole country.

There are areas where substantial improvements need to be made by DCSD. The consumption of domestic consumers was 635.42 units per year in F/Y 2075/76. Generation along with distribution capacity needs to be increased heavily. The operation and maintenance cost was also too high in F/Y 2075/76. Rs. 1.51 per kWh of O&M cost has hampered profit margin of NEA. Similarly, commercial and industrial consumer number and consumer capacity has to be increased by encouraging potential consumers and supplying them required amount of electricity. Average per kWh revenue was priced Rs. 10.48, which needs considerable improvement.

## Programs and Activities

- 416.7 km of 33 kV lines, 2796.2 km of 11 kV lines and 6,508.64 km of 400/230 V lines were added in the national distribution network in the fiscal year 2075/76 totaling 4,907.16 km of 33 kV lines, 35726.48 km of 11 kV lines and 109,176.15 km of 400/240 V lines. Distribution Centers (DCs) and various distribution system expansion and renovation projects are working on expanding and upgrading the distribution system.
- The total loss of NEA distribution network is 11.28%, which is 3.54% less than previous fiscal year. During the year under review, various measures taken in the preceding years were continued to reduce the non-technical losses. Massive awareness campaigns as workshops and review meetings were implemented in various distribution centers. Strict measures for electricity theft control as confiscation of electric equipment and taking legal action against culprits were also conducted in various distribution centers with the help of local administration and security agencies. All the distribution centers are engaged to remove the hookings, to replace the defective meters and penalize the people who are involved in electricity theft. NEA management made various decisions as 'Immediate Action Plans' to improve its functioning. Among many, this plan included regular inspection of Time-of-Day (TOD) meters, data download, and analysis to curb any connection fault or manipulation. All regional offices and distribution centers actively participated in this drive which was found to be much effective.
- Regarding the Chhut revenues (due to change of category of consumers, various technical reasons like CT/PT outage, etc.), a total of fourteen crores twenty-two lakhs three thousand seven hundred fifty-six rupees and fifteen paisa (Rs. 14,22,03,756.15) was collected from 182 cases for Chhut energy of one crore twenty-nine lakhs seven thousand eight hundred and fifty-five (1,29,07,855) units.
- DCSD has actively promoted the online payment of the electricity bills through various merchants. In the fiscal year 2075/76, there were forty-seven lakhs eighty-nine thousand seven hundred and forty-one (47,89,741) online transactions made and five Arba seventy-five crores forty-three lakhs seventy-seven thousand seven hundred and ninety-two rupees (Rs. 5,75,43,77,792) collected through those transactions. Out of that revenue collected, more than four Arba rupees was collected by one single merchant viz. eSewa company. It is notable that every month more than 5,50,000 consumers are using online payment system for bill payments.
- Safety has become a big challenge for DCSD and thus is entrusting major priority on it. In this regard, awareness to NEA employees and also to public is very important. For this, the directorate is giving priority for awareness and electrical safety, right from the implementation of the project till completion and also in operation and maintenance. As in past years, NEA organized various programs to mark "Electrical Safety Day" in collaboration with Society of Electrical Engineers of Nepal (SEEN) at the central level. Similarly, safety day programs and activities were executed by the various offices at Regional and District level. A safety oath to recall its importance and mandatory use of safety tools and tackles were emphasized on the day. A Safety Officer was assigned in each distribution centre.

## Distrubution and Consumer Service's Initiation

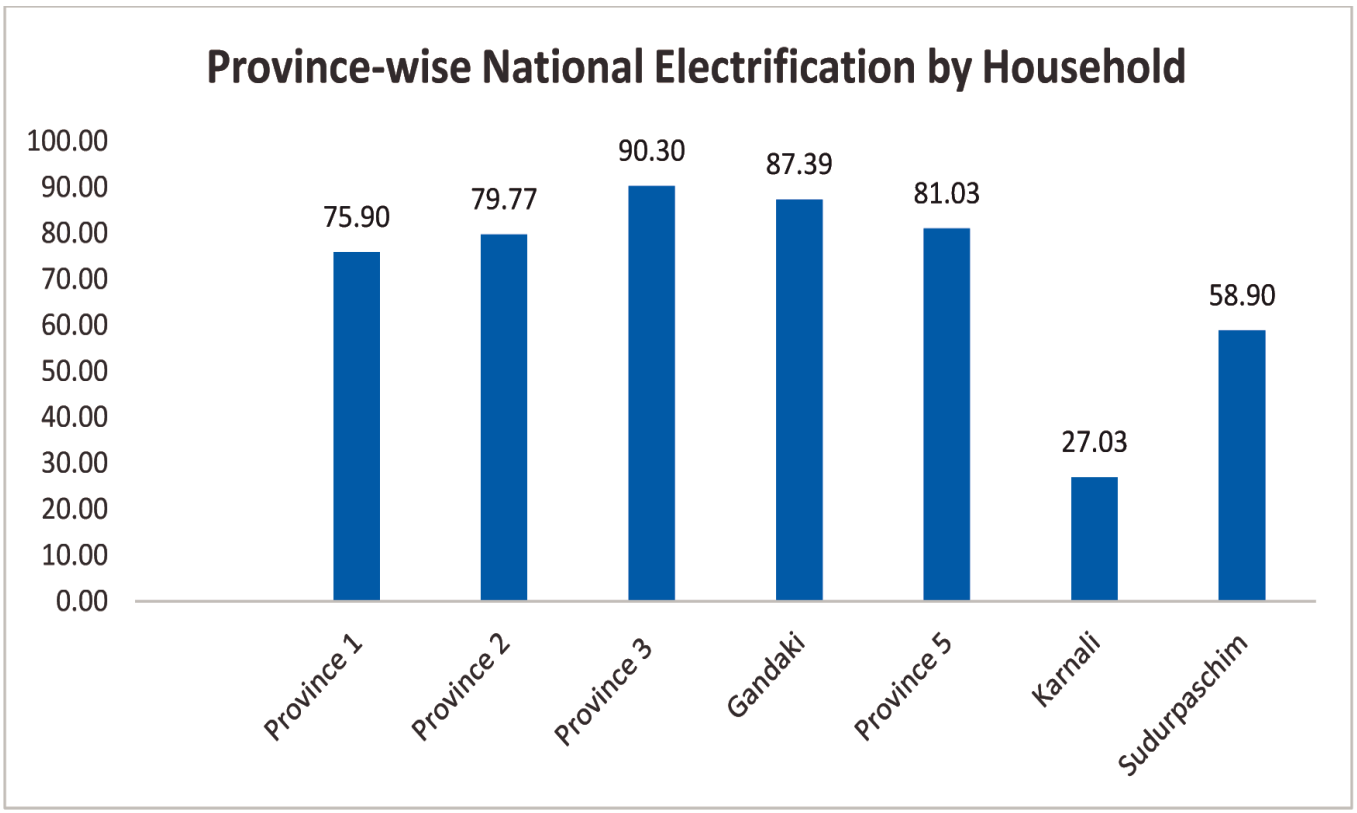
### Electricity for All within three years

Emphasis will be given to the development and expansion of hydroelectricity and all types of renewable energy to provide clean energy to all Nepali household within the coming three years and to avail electricity to all households as per demand within the next five years. The GoN has declared year 2075-2085 as Energy Decade and various distribution projects are scheduled to initiate and complete within this period. The present scenario of electrification of household based on local levels is as follows.

## Electrification Percentage Based on Local Levels*

| Province | 0%-5% | | 5%-35% | | 35%-65% | | 65%-90% | | 90%-100% | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Rural | Urban | Rural | Urban | Rural | Urban | Rural | Urban | Rural | Urban |
| Province 1 | 23 | 0 | 11 | 0 | 17 | 6 | 27 | 19 | 10 | 24 |
| Province 2 | 0 | 0 | 0 | 0 | 8 | 9 | 34 | 48 | 17 | 20 |
| Province 3 | 6 | 0 | 2 | 0 | 12 | 1 | 28 | 11 | 26 | 33 |
| Gandaki | 6 | 0 | 6 | 0 | 8 | 0 | 14 | 7 | 24 | 20 |
| Province 5 | 7 | 0 | 4 | 0 | 13 | 3 | 31 | 15 | 18 | 18 |
| Karnali | 37 | 6 | 12 | 7 | 3 | 11 | 2 | 1 | 0 | 0 |
| Sudurpaschim | 24 | 8 | 12 | 1 | 10 | 5 | 6 | 10 | 2 | 10 |
| Total | 103 | 14 | 47 | 8 | 71 | 35 | 142 | 111 | 97 | 125 |

* Local levels include 6 metropolitants, 11 sub-metropolitants, 276 municipalities and 460 rural municipalities. All together there are 753 Local levels in Nepal.




Presently, National Electrification by Household is 77.82%. Target has been set to fully electrify at least 40 districts in the fiscal year 2076/77. NEA and DCSD is working hard to electrify all parts of Nepal by the end of F/Y 2078/79.

- Distribution Networks are to be upgraded/ expanded to the capacity of 10,000 MVA for the consumption of 5000 MW within five years. Projects like Distribution System Upgrade and Expansion (DSUEP), Grid Solar and Energy Efficiency Project (GSEEP) and various projects under Planning and Technical Services Department (PTSD) are in various stages of execution.
- Most of the 33 kV sub-transmission lines and substation are overloaded in Terai regions. So up-gradation of Substation and replacement of

ACSR conductors with HTLS are prioritized in the coming fiscal year.

- As high system loss is a major challenge for NEA, DCSD is trying to make every effort to bring down the distribution system loss.
- Plans are to handle consumer complaints with new technologies without delay and the procedures for new connection related works shall be made simple and user-friendly.
- DCSD is committed to establish centralized customer care center to ensure a single point of contact for all consumer related activities, timely service, less processing time for new connection and centralized control and monitoring over the entire customer care process.
- To have the proper monitoring of the energy consumption pattern to a macro-level and to have appropriate load management, the Directorate is implementing the followings:
  - Replacement of existing 3-phase meter with SMART TOD Meter
  - All the industries and large consumer are instructed to install an Automatic Power Factor Corrector (APFC) at their end themselves, to maintain the voltage profile.
  - Introduction of single-phase SMART meter
  - Initiation of the underground of 11 kV and 0.4kV distribution lines
  - Launch of SMART Street Light
- Plans to make available the payment and billing information on the internet are being made so that consumer can access information online. A system will be implemented for consumers to pay the electricity bill online through an internet-based payment system.

## Challenges

There are numerous challenges to overcome in various sectors of electricity distribution and consumer services. Few of the challenges are summarized below:

- Due to difficult topography, it takes more time, resources and money to extend the reach of electricity to rural consumers.
- To enhance per capita consumption of electricity, 700 units by next 5 years, rapid expansion and upgradation of distribution network and distribution components needs to be done. A total of 10,000 MVA of distribution capacity needs to be built within five years.
- Reducing distribution losses has always been a challenge to DCSD. This year DCSD made improvements in reducing distribution loss to 11.28% as compared to 14.82% of F/Y 2074/75. In F/Y 2076/77, distribution loss is targeted to further lower it to about 9%.
- There are big challenges to introduce new technologies in metering and billing. Upgradation of Online payment system to make it resilient to malware, phishing, man-in-the-middle attack, password attack and others.

## Customer Care

Distribution centers work as interfaces between NEA and its consumers. So, special efforts are taken to improve the quality of service at the consumer interface points. The employees took special efforts to serve our valued consumers in a more effective way. With the Queue Management System at most of the cash collection centers, difficulties encountered by the consumers in queuing for making payments were minimized. Round the clock no-light services have been implemented in most of the urban no-light centers. The online payment system has decreased the hassle of the consumers for bill payments. Drinking water facilities have also been provided to all the customers within the DCS premises.

To ensure the consumers get all the services in time and easy manner, the Directorate has implemented

**One-door Policy** in some of the Distribution Centres and has plan to extend to all DCs.

## Projects under the Directorate

### Grid Solar and Energy Efficiency Project (GSEEP)

The Government of Nepal (GoN) has received a credit from the World Bank (WB) towards the cost of Grid Solar and Energy Efficiency Project (GSEEP) under IDA Credit. The GSEEP Project comprises of the following two components.

**Component 1: Grid-connected Solar PV Farms Development** deals with the Design, Planning, Engineering, Procurement (Manufacturing/Supply) Construction/Erection, Testing, Commissioning and Five Years of Operation & Maintenance of 25 MWp Utility Scale Grid Tied Solar Farms. The first solar firm in Nepal is being installed there in the Colony area of Devighat Hydropower Station. The landworks, supply and delivery of equipments have been completed and the installation works is going on.

**Component 2: Distribution System Planning & Loss Reduction** deals with the Rural Electrification in three (3) packages along with Distribution Business Management and Implementation of Loss Reduction and Distribution System Rehabilitation. Under this component, the following projects are in process:

- Design, planning, engineering, procurement, installation, testing and commissioning of 8 New 33/11kV substations and 33kV lines in the development of the NEA grid. (Kapilbastu, Arghakhachi, Sindhuli, Ramechap & Gulmi).
- Design, Supply, Installation/Erection, Testing and Commissioning of 11/0.4 kV Distribution System (Dolakha, Sindhuli & Ramechap).
- Design, Supply, Installation/Erection, Testing and Commissioning of 11/0.4 kV Distribution System (Gulmi, Arghakachi & Kapilbastu).
- Design, Supply, Installation/Erection, Testing and Commissioning of 11/0.4 kV Distribution System (Taplejung, Panchthar & Illam).
- Preparation Of Distribution Loss Reduction Master Plan Along With Design, Supervision, And Monitoring Of Loss Reduction Activities.
- Design, Supply, and Installation of Substations and 33kV Lines in Bharatpur, Dhading, Hetauda, Kavre, Lagankhel, Nuwakot, Palung, Ramechhap, Dolakha, and Sindhupalchok districts.
- Design, Supply, and Installation/Erection, Testing and Commissioning of 11/0.4 kV Distribution System in Kavre, Dhading and Nuwakot districts.
- Design, Supply, and Installation/Erection, Testing and Commissioning of Distribution System in Melamchi, Dolakha, Ramechhap, Rasuwa, Palung, Bharatpur and Sindhuli districts.

### Distribution System Upgrade and Expansion Project (DSUEP)

With the vision to electrify all the households by the end of F/Y 2078/79, DSUEP has come into implementation in 23 districts of Province No. 5, Karnali Province and Sudurpaschim Province. As the provinces are the least electrified part of the Nepal, NEA decided to utilize the assistance of Asian Infrastructure Investment Bank (AIIB) in that part of the country.

In pursuance of this program, NEA has identified a project covering 23 districts of the Provinces 5, 6 and 7 and anticipates the establishment of 45 new 33/11 substations. DSUEP comprises a large-scale implementation to construct more than thirty-five 33/11 kV substations, more than 1000 km of 33 kV lines and more than 1500 km of 11 kV lines. Examinations of the existing networks in the associated areas, indicate that a substantial revision of the infrastructure development will need to be carried out to meet the requirements of providing supply to the intended villages and settlements. Accordingly, a network planning study is being carried out followed by a detailed engineering design and feasibility study analysis to identify appropriate development options that will be suitable for the intended electrification program.

This project equally focuses on environment sustainability. It includes preparation of Framework for environmental and social assessment of sub-projects, including criteria for categorization of sub-projects and identification of appropriate EA instruments for each. It also includes scoping of environmental and social risks and impacts, including stakeholder identification, within the overall Project Area of Influence.

Following are the districts covered by the scope of this project:

| Province 5 | Karnali Province | Sudurpaschim Province |
|---|---|---|
| Parasi | Surkhet | Darchula |
| Rupandehi | Kalikot | Bajura |
| Palpa | Jajarkot | Bajhang |
| Gulmi | Salyan | Baitadi |
| Rukum East | West Rukum | |
| Dang | Jumla | |
| Pyuthan | Dolpa | |
| Banke | Mugu | |
| Bardiya | Humla | |
| Rolpa | | |

DSUEP has started the detailed survey of substations, 33 kV lines, 11 kV lines and 400/240 V lines and the detailed project report is expected to come by the mid of Poush 2076. After DPR, the constructions will start and the whole project is expected to in F/Y 2078/79.

## Distribution Activities from Project Management Directorate (PMD)

PMD is responsible for project preparation, procurement and construction of all new and existing projects that is or will be funded by ADB.

PMD is implementing both transmission and distribution projects. PMD has played a vital role in Distribution Sector with the construction of 33/11 kV SS, 33 kV Line, 11 kV Line and 400 Volt line in neediest and strategic places which has helped NEA to connect more consumers, reduce loss and increase the supply reliability.

PMD engagement in distribution sector includes following major works:

- Preparation of bidding document for the construction of 300 km of 33 kV line, 750 km of 11 kV line, 970 km of 0.4 kV lines and 8 nos. of 33/11 kV substation for rural electrification and distribution system reinforcement in Province 2.
- 301 km of 33 kV line (including 46 km conductor upgradation), 909 km of 11 kV OH line (including 245 km augmentation / reinforcement), 540 km of 11 kV underground line, 1261 km of 0.4 kV OH line (including 455 km augmentation), 644 km of 0.4 kV underground line is being and planned to beconstructed. 510 km underground optical fiber installation is underway as well as 165 km OPGW is being planned to be strung.
- PMD has already completed the construction of 180 MVA of 33/11 kV SS including substation capacity upgradation at 11 places totaling 121.8 MVA and new substation at Ghailadubba, Katahari, Bodhebasain, Hasuliya, Maharajgunj, Dhakdhai, BP Nagar and Palungtar totaling a capacity of 59 MVA, 222 km of 33 kV line, 255 km of 11 kV line and 249 km of 0.4 kV line.
- Bidding Document is being prepared for Distribution system undergrounding and reinforcement in main places Lalitpur and Bhaktapur District.
- PMD has been working continuously to adopt modern technology in distribution system. It has initiated the implementation of smart metering, Distribution system undergrounding and Distribution system automation.

In the fiscal year 2076/77, PMD has targeted to complete following transmission line, substations and distribution lines:

- 160 km of 33 kV line, 320 km of 11 kV line, 500 km of 0.4 kV line
- 17 nos. of 33/11 kV substation with the total capacity of 91 MVA.

## Project Highlights

### Grid Substation Reinforcement and Capacity Expansion Project

Upgradation of Dhalkebar - Mujeliya 33 kV Double Circuit Line of length 23 km by replacing the existing 0.10 sq. Inch ACSR conductor with HTLS conductor and addition of capacitor banks at Mujeliya substations is one of the scopes of this project. The Contract has been awarded to JV Contractor M/s Mudhbary & Joshi and APAR, India on 18 June, 2018 and planned to be completed by September, 2019. The cumulative progress achieved till date is 81.10%.

### Distribution System Augmentation and Expansion Project

This project is to augment and expand the distribution system of NEA. The project work includes the construction of twenty-five (25) numbers of 33/11 kV new substations, upgrading of eleven (11) numbers of existing 33/11 kV substations and construction of 33kV, 11 kV and 400 Volt Lines at various districts of the country. With the completion of this project, 266.8 MVA of 33/11 kV SS, 437 km of 33 kV line, 701 km of 11 kV Line, 710 km of 400 Volt line and 91 MVA total capacity of distribution transformer will be added in the distribution system. The project is being executed in following 3 Lots of contracts namely:

Lot 1: Expansion of Distribution Network in the Eastern Region including 13 substations, lines and transformers

Lot 2: Expansion of Distribution Network in the West Regions including 12 substations, lines and transformers

Lot 3: Reinforcement of distribution system including 11 substations upgradation

Lot 3 Contract package has almost been completed with the upgradation of 11 nos. of 33/11 kV substation which has added capacity of 121.8 MVA in the distribution system as well as nearly completion of 46 km of 33 kV line, 202 km of 11 kV Line and 223 km of 400 Volt Line.

33 kV UG cable connection work at Dhakdhai SS

Out of total 25 nos. of substations of Lot 1 and Lot 2, 8 substations have been commissioned and has contributed 59 MVA additional capacity into the system. Similarly, a total of 176 km of 33 kV line, 53 km of 11 kV line and 26 km of 400 Volts line has been completed.

Overall, physical progress of 85.88% has been achieved till date.

### Distribution System Master Plan Project

The principal objective of this project is to prepare a Distribution System/Rural Electrification Master Plan of Nepal (DS/REMP-N) for the entire country, with emphasis on providing electricity for all and enhancement of livelihoods in the remote settlements of the country in an efficient way. Consulting firm M/s Gesto Energy, Portugal has been working closely with NEA to develop the master plan. The prime assignment of the consultant is to identify least cost and economically viable means to reinforce, upgrade and expand Nepal's electricity system, including on- and off-grid, to achieve universal access to electricity by 2023 A.D. The master plan will include policy recommendations, a comprehensive electrification

and distribution augmentation program and detailed case studies. The Project is funded by Norwegian Grant, administered by ADB and planned to be completed by December 2019. A progress of 64.92% has been achieved so far.

### Enhancement of Distribution Network in the Central and Northern Region of Kathmandu Valley

This is a sub-project under Power Transmission and Distribution Efficiency Enhancement Project (PTDEEP) which is funded by ADB under the loan no. 3542 (NEP). This project intends the enhancement of distribution system and/or rehabilitation of the distribution system (11kV and 0.4kV) with the provision of automation for the areas under Maharajgunj Distribution Center in the Northern region of the Kathmandu Valley. The scope of the project includes Design, Supply, Installation and Commissioning of Underground Distribution Network using Trenchless boring methodology under Maharajgunj Distribution Center including Reinforcement and Automation. Major work includes construction of 155 circuit km of underground 11 kV line, 210 circuit km of underground 400 volt line, 125 km of underground optical fiber laying, 40 circuit km of construction and upgrading of 11 kV overhead line by AB Cable & 140 circuit km of 400 Volt overhead line by AB Cable and 230 nos. of RMU installation.

The contract agreement was made on 15 March, 2019 with KEI Industries Limited, India. As of now, detail survey works and design works under supervision of project is on progress and planned to be completed by November 2021. A physical progress of 9.51% has been achieved till date.

### Enhancement of Distribution Network in the Eastern and Southern region of Kathmandu Valley

The project intends towards the enhancement of distribution system and/or rehabilitation of distribution system (11kV and 0.4kV) with the provision of automation for the areas under Ratnapark

Distribution Center. The scope of the project includes Design, Supply, Installation and Commissioning of Underground Distribution Network using Trenchless boring methodology under Ratnapark Distribution Center including Reinforcement and Automation. The major work includes the construction of underground 11 kV Line: 160 circuit km & underground 400 volt Line: 195 circuit km, underground optical fiber laying: 160 km, Construction and upgrading of 11 kV overhead line by AB Cable: 40 circuit km & 400 Volt overhead line by AB Cable: 75 km and RMU installation: 140 nos.

The contract agreement was made on the 15 March, 2019 with KEI Industries Limited, India. Detail survey and design works under the supervision of project is on progress and planned to be completed by November 2021. Till date, cumulative physical progress of 9.46% has been achieved.

### Kathmandu Valley Smart Metering Project

Kathmandu Valley Smart Metering Project is one of the sub-project of PTDEEP which will modernize the distribution business and improve financial health of NEA with reduction of distribution losses and increment of overall efficiency of distribution system operation. NEA intends to introduce smart meters

and deploy Advanced Metering Infrastructure (AMI) System with its auxiliary system all across Kathmandu valley (Kathmandu, Lalitpur and Bhaktapur) within a radius of 220 sq. miles. Through AMI implementation, NEA aims to mirror benefits to the customers that can be seen in a number of countries and replicated in Nepal Electricity Authority (NEA). In the initial stages of program rollout, immediate benefits such as reduced meter reading costs, access to time of use-based tariffs and cut back in AT&C losses will be realized. Hence, Nepal Electricity Authority (NEA) plans to implement Advance Metering Infrastructure to bring about reform in distribution sector.

The project is to design, supply, establish, install, testing, commissioning, operate and maintain the Advanced Metering Infrastructure (AMI) for consumers equipped with Single Phase and Three Phase Whole Current meters. The first stage of overall smart metering project shall include 90,000 metering nodes in areas of Kathmandu central region and Kathmandu northern region (Maharajung and Ratnapark) with an approx. area of 60 sq. miles. AMI system includes communications links provided by Network provider, which is the backbone of AMI. The communication infrastructure is based on RF mesh network and GPRS/GSM system. Further, communication network shall provide reliable medium for two-way communication between various nodes (smart meter) & HES.

The project is supposed to increase the accessibility of real-time data and provide all information on a single console in an integrated manner with the possibility to remotely control entire network, increase operational efficiency and to establish network platform that can support multiple applications like AMI, DMS, DER, Street Light Management and Home Area Network etc. over a single communications platform using RF communication technology. Hence the Network canopy is to be established using RF communication technology which shall communicate with field devices using intermediate network elements such as routers/repeaters/ collectors/ gateways/ data concentrator units/access points etc. In case RF communication technology is not feasible at specific consumer/metering location, the bidder shall provide GPRS/GSM based network connectivity for metering point.

The contract has been awarded to M/s Pinggao-WISDOM JV and planned to be completed by December 2020. Physical progress of 6.70 has been achieved so far.

### Kathmandu Valley West Distribution System Enhancement Project

The project is a sub-project under PTDSSP which intends the enhancement of distribution system and/or rehabilitation of the distribution system (11kV and 0.4kV) with the provision of automation for the areas under Kirtipur, Kuleshwor, Baneshwor, Balaju and Jorparti Distribution Center of the Kathmandu Valley.

The scope of the project includes design, supply, installation and commissioning of underground distribution network using trenchless boring methodology under five distribution Center including reinforcement and automation.

With the ADB concurrence on advance procurement, the notice for IFB was published on 21 May 2019. Technical bids were opened on 25 July 2019 and evaluation is underway.

The major work includes construction of underground 11 kV Line: 225 circuit km & underground 400 volt Line: circuit 239 km, underground optical fiber laying: 225 km, Construction and upgrading of 11 kV overhead line by AB Cable: 165 circuit km & 400 Volt overhead line by AB Cable: 240 km, RMU installation: 360 nos. and OPGW stringing: 165 km

### Rural Electrification and Distribution Network Reinforcements in Province 2

In order to achieve the goal of sustainable energy access and grid access to all, Government of Nepal and Nepal Electricity Authority have emphasized on improving the electricity quality through construction of new substations and augmentation of the existing

substations and transmission lines with distribution network reinforcement.

The scope of works under this proposal include construction of new 33/11 kV substations, 33 kV lines, 11 kV lines and low voltage distribution lines and reinforcement and rehabilitation of existing distribution networks. It is proposed to construct 8 new 33/11kV substations, 300 km of 33 kV lines, 750 km of 11kV lines, 970 km of 400 Volts distribution lines and addition of 300 nos. of distribution transformers.

The project is expected to be started by late 2019 and be completed by fiscal year 2024/25. The project shall be implemented through turnkey contracts in three packages. Adequate attentions will be paid for project preparation to ensure smooth project implementations and timely completion. Required Land acquisition and social & environmental study and bidding document preparation has already been initiated.

### Rural Electrification and Distribution Network Improvement of Tanahu District

This project intends to electrify and improve the networks of the nearby villages which will be affected by the Tanahu Hydropower Project and is financed by ADB through Loan No.2990/2991-NEP (SF): Tanahu Hydropower Project. The scope of this project consists of construction of two 33/11 kV, 6/8 MVA SS at Saranghat and Ghiring, 40 km of 33 kV sub-transmission line, 218 km of 11 kV line, 345 km of 400/230 V line and installation of seventy (70) nos. distribution transformers (11/0.4 kV). The contract was awarded to M/s JV of East India Udhyog and Waiba Infratech on 29 November 2018. Till date, design of major equipment like pole, conductor, stay wire, distribution transformer has been approved and survey for 33, 11 and 0.4 kV line has been completed. The project is expected to complete by the middle of 2020. Till date, cumulative progress of 11.45% has been achieved.

# Planning and Technical Services Department

Planning and Technical Services Department (PTSD) is responsible for planning and preparation of distribution system expansion programs and supporting DCSD in the technical matters.

There are three divisions under this department:

- Computerized Billing and Network Division
- Technical Support Division
- Project Implementation Division

## Computerized Billing and Networking Division

Computerized Billing and Network Division has always been striving towards enhancing the revenue collections of NEA. Our MPower Billing System Software has provided NEA, a competent billing system with several features and modules for monitoring the entire process and transparency of the revenue system.

Mpower has already been implemented in 168 revenue collection centers out of 173 revenue collection centers. This Division has targeted the data migration/implementation (Completion) of M-power Billing System in all the remaining revenue collection centers of NEA within this Fiscal Year. Currently Mpower Billing System covers more than 99% of the total consumer count and also covers more than 99.7% of the total NEA revenue.

Handheld Meter Reading Device (HHD) is currently operating in more than 110 locations which have helped in reducing human errors during meter reading and improve the energy sales. With the innovation in new technology, the division is in the process of implementing Online Meter Reading Handheld Device (HHD) with GPRS functions. The meter reader directly uploads the meter reading data to the concerned branch server system after collecting the data from the consumer premises which results in efficient meter reading and swift payment.

Web Based Services provided to the customers to view the bills, where the consumers can query the bills through NEA website. The Customer Management Information System (LAGAT) has been implemented in various revenue collection centers which will help in keeping the customer database up to date.

Online payment system was introduced from Bhadra, 2074 and has been successfully implemented in 160 revenue collection centers. This system has focused all the groups of consumers where the consumer can pay their electricity bills through various online banking, mobile banking services, kiosks, cooperatives etc. Online system has eased the difficulty of the consumers standing in queue for hours just to pay the electricity bill as well as spending money on transportations to pay electricity bill.

Any Branch Payment System (ABPS) which has been implemented inside Kathmandu valley has helped the customers to pay their bill in any locations within Kathmandu valley with ease. It has helped NEA to collect revenue and get analytical reports on time.

On the process of striving to the excellence, Computerized Billing and Network Division is planning to enhance the online meter reading Hand Held Device by providing SMS facilities to the consumers after meter reading to make paperless environment which will help in financial savings.

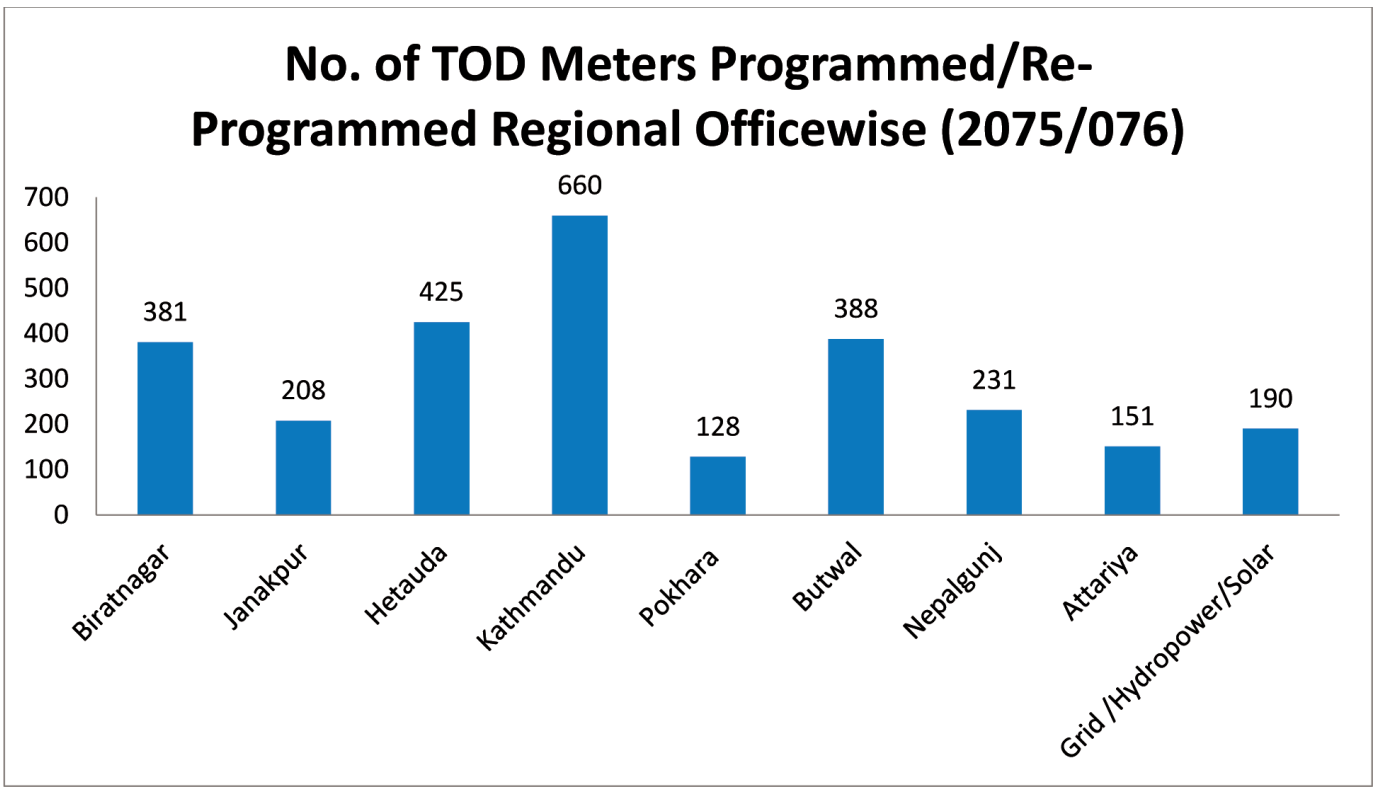
With the concept of making centralized system, Computerized Billing and Network Division are planning to move on Digital Collection Centre to reduce the hustle and bustle of the collection counters.

Furthermore, Computerized Billing and Network Division along with IT department has done enhancement on existing DCS Activities to get a Real time Revenue Management Information which will help MIS for Data Analysis and evaluate NEA's financial health.

## Technical Support Division

Technical support division monitors and conducts all the technical matters under PTSD. Major works under this department include-

- Identification of potential rural electrification and substation rehabilitation projects and implement them.
- Monitoring and evaluation of region wise monthly distribution system losses. Assist to identify and implement programs for loss reduction in distribution systems
- Initiate modern facilities for the electricity consumers in the field of meter reading, billing and revenue collection
- Execute distribution planning, incorporating demand side management and loss reduction as an integral part of it.
- Preparing and updating the construction standards and guidelines for implementation of electrical installations and construction activities up to 33 kV.
- Testing and locating faults of underground cables of 11 kV & 33 kV feeders throughout the country with the help of cable testing equipment along with technical support.
- Programming/re-programming, data download and analysis of TOD energy meters & metering equipment. In the fiscal year 2075/076, TOD section has programmed about 2762 meters for consumers and inter-branch metering for different distribution centers.



## Project Implementation Division

There are various projects under this division which plans, executes and monitors construction of 33/11 kV SS, 33 kV Line, 11 kV Line and 400 Volt line in neediest and strategic places which connects more consumers, reduce loss and increase the supply reliability. The Major Projects under PTSD are as follows:

### GIS Smart Grid Project

The scope of this project is to manage asset inventories along with its position on earth. NEA has planned to develop GIS (Geographical Information System) software that keeps inventories of all the poles, transformers, cables, consumers' connections to each transformer along with geo-positioning. It helps concerned person to know the actual information about poles, transformers and consumers' capacity and also to balance the transformer's load as per connection to the consumer. It also facilitates to provide consumer service faster & reliable and identify any fault in distribution system. GIS based Data Survey work will be conducted in F/Y 2019/20 for 35 branches. This project is funded by the Government of Nepal (GoN). GIS Server hardware has been procured. Document for procurement of GIS based Survey is being prepared.

### Rasuwa–Nuwakot Reconstruction & Distribution System Improvement Project (KfW funding)

The project includes the construction of the 220 kV Chilime-Trishuli Transmission System (Portion I) and a Neighborhood Electrification Component (NEC) (Portion II). The purpose of the Project is to expand and improve the grid infrastructure for the efficient evacuation of electricity from hydropower to the Integrated Nepalese Power System and contribute thereby to an increased power supply and reduction in transmission losses. In addition, the project aims for reliable distribution of power evacuated through the Trishuli-Chilime transmission line and upstream hydropower projects to new customers in some specific locations in the vicinity of the transmission line.

The NEC, Portion II, is related to the neighborhood electrification in Salme, Valche and Kaule VDC and also in the vicinity of the transmission line benefitting local population. The project includes consulting services during project implementation for design, procurement and supervision. It also includes construction of 6/8 MVA, 33/11 kV substation at Bhalche of Nuwakot district, construction of 12 km 33 kV line from Trishuli 3B Hub substation to Bhalche substation, construction of 50 km of 11 kV & 50 km of 0.4 kV lines using covered conductor & ABC cable and installation of 30 numbers of distribution transformers in the vicinity of the 220 kV Chilime-Trishuli Transmission line corridor.

Civil construction works for control building, staff quarter, and office buildings are ongoing. Construction of switchyard is nearly in completion stage. Retaining wall construction work is already completed. Few section of boundary wall construction is underway.

Staff Quarter under construction at Bhalche S/S, Nuwakot

The project is scheduled to complete by the end of December 2019.

### Reconstruction and Improvement of Electricity Distribution System (KfW funding)

The project aims at improving the access to electricity in the Nuwakot and Rasuwa districts by rehabilitating and improving the electricity distribution infrastructure after the earthquake in April 2015. The project comprises the financing of immediate relief measures with respect to the distribution network and short to medium term electrification measures as well as other social issues identified after earthquake.

The envisaged scope of the project consists of Social Development (civil work and supply of ambulance) and Electrical Components. The electrification measures will comprise the construction and reconstruction of several medium and low voltage distribution lines, the construction of small substations, the installation of distribution transformers and other related project measures that will be identified during the design of the final project measures.

### Nijgadh - Kolhabi 33kV Project

The Nijgadh-Kolhabi 33kV project funded by Government of Nepal aims to meet the growing demand of electricity in Kolhabi and nearby area of Bara District. This Project also covers the demand of electricity for Proposed Nijgadh International Airport. The scope of this project includes the construction of 33kV Sub-Transmission Line from Nijgadh 33/11kV Substation to Kolhabi Municipality as well as 33/11kV, 20/24 MVA Substation at Kolhabi Municipality, Bara. The bids are under evaluation to procure 19 km of 33kV line and 33/11kV, 20/24 MVA Substation. The Project is scheduled to be completed by F/Y 2020/21.

### Khokana Nijgadh 33/11kV Substation Project

The project is funded by Government of Nepal and primarily aims to meet the electricity demand of Kathmandu- Nijgadh Fast Track Road. It also aims to meet growing demand of electricity in Thingan, Len Danda, Dhedhre Simpani areas of Makanwanpur District. The scope of this project includes the construction of 33kV Sub-Transmission Line and 33/11kV, 10/12 MVA Substation. The land acquisition is under process. The Project is scheduled to be completed by F/Y 2020/21.

### 33 kV Line Expansion and Rehabilitation Project

The project is funded by GoN and aims to meet the growing demand of electricity in various parts of country by rehabilitation/capacity upgradation/new construction of 33 kV lines. The project scope includes construction of Bhurigaun-Gulariya (Bardia) 33 kV line of length 42 km and construction of Yadukuha-Dhanushadham 33 kV line of length 15 km. The contract has been finalized and procurement and delivery of goods is under process.

### Rasuwaghat-Khotang S/S and RE Project

Works under this Project include the construction of 14 km of 33 kV line, 33/11kV, 3 MVA capacity substation at Bagedhunga and 90 km of 11kV & LV line in Khotang and Udaypur districts. Out of above, 10 km of 33 kV line, 37.2 km of 11kV line, 33 km of LV line and 12 nos. of distribution transformers have been installed and commissioned. Store building has been constructed in Bagedhunga. 33/11kV, 750kVA transformer has been installed in Bagedhunga. Also, 33 kV Bay extension at Jaljale substation has been completed & is in operation. 3 MVA Bagedhunga (Khotang) Substation was completed and tested/ commissioned on 2075/12/30 B.S.

### Transformer Testing Lab Construction Project

The project scope includes the construction of Transformer Testing Lab at Biratnagar, Butwal and Nepalgunj. Thess labs will benefit NEA as well as medium and large consumers by providing facilities in the nearby areas. The construction of workshop building at all the three places has been completed and Transformer testing equipments are already installed in all labs. The civil and crane installation works are on progress. Procurement for supply & installation

of electrical equipment for maintenance facilities has already been initiated. The lab will impart facility for Routine Test of Distribution and Power Transformer up to 16 MVA capacities. The project is scheduled to be complete by FY 2020/21.

Transformer Testing Workshop Building at Kohalpur, Nepalgunj.

## Smart Metering Smart Grid Project

The scope of the project includes:

**Phase 1:** To implement Automatic Meter Reading (AMR) System with implementing Advanced Metering Infrastructure in TOD meters like EDMI, Bluestar, Actarius, Wasion, Risesun. For this purpose, 10,000 Intelligent GPRS/GSM Modem has been procured. Out of the procured modems, 7916 modems have been installed in consumer sites. The information like billing data, load profile, instantaneous data, event tampers can be retrieved via AMR/AMI system. The Integrated Branch Billing data can be retrieved through email and SMS. Server setup with all hardware and Network is completed.

**Phase 2:** Implementation of Smart Three phase energy meter to replace three phase whole current electromechanical meter. The programming of these smart meters can be executed remotely and control of consumer's supply can be executed remotely in case the payment is due. The mode of communication between meter and system is GPRS.

**Phase 3:** To implement smart meter throughout NEA with DTMS (Distribution Transformer Monitoring System) for smart distribution network.

## Matatirtha Naubise 33 kV Transmission Line Project

This project aims to supply power for cement industry at Naubise, Dhading and existing NEA consumers in its vicinity. The scope of the project includes the construction of 33/11 kV, 2*6/8 MVA substations along with 13 km 33 kV double circuit line. Construction of the transmission line & substation at Naubise is completed and Naubise substation is charged from Matatirtha Substation through the newly completed Matatirtha - Naubise 33 kV double circuit transmission line

Charging of Matatirtha- Naubise 33 kV Transmission Line

## Matatirtha Malta 33 kV Transmission Line Project

This project aims to supply power for Laxmi Cement Industry Pvt. Ltd. in Malta, Lalitpur and evacuation of power produced by Pashupati Energy Pvt. Ltd. (6MW) and supply existing NEA consumers in its vicinity. The project will help to improve the quality of

supply and reduce the technical losses of the area. The scope of the project includes the construction of 33/11 kV, 10/13.3/16.6 MVA substation at Malta along with double circuit 35 km 33 kV line. Civil and electrical work of Malta substation is completed and the substation is in operation, charged with Khani khola hydropower feeder. Construction of 33 kV line from Matatirtha to Malta is in progress. Line construction work has been obstructed at different location by local community. Since, number of trees in the ROW (Right of Way) has increased than approved IEE report, the project in process of preparing Updated IEE report which is in final approval stage. About 70% of the transmission line construction work is completed and remaining work is scheduled is to be completed within FY 2076/77.

Underground Cable laying works for
Matatirtha Malta 33 kV Transmission Line

## Dailekh (Dullu)–Kalikot 33 kV Transmission Line, Substation & Electrification Project

This project aims to connect Kalikot District with National Grid. The project will supply electricity to Kalikot district and its vicinity. The main scope of the project is construction of 33/11 kV, 6/8 MVA substation at Manma Bazar, Kalikot with 33 kV single circuit about 55 km Transmission line from Dullu, Dailekh to Kalikot Substation. Transmission line construction work is in progress. Pole erection work from Dullu Substation to Manma Bazar (Kalikot) is completed and around 1145 poles have been erected. Conductor stringing work is in progress. Land acquisition for the construction of substation in Kalikot is in final stage. After finalizaion of the land acquisistion, tender for construction of substation shall be started. The project was started in FY 2075/76 with funds from GoN and is expected to complete in FY 2077/78.

## Matatirtha Markhu 33 kV Transmission Line Project

This project aims to meet the growing demand of electricity in Kulekhani area of Makawanpur district and its vicinity. The project will help to improve the quality of supply and reduce the technical losses of the area. The main scope of the project is construction of 33/11 kV, 6/8 MVA substation at Markhu with single circuit 15 km Transmission line from Matatirtha to Markhu. Substation, Control Building & Installation of Electrical instruments including Power Transformer has been completed. 33 kV Bay extension work and 33 kV Control Panel Installation works at Matatirtha Substation has been also completed. Transmission line construction work is in progress. The project is expected to complete in FY 2076/77.

## Madankudari-Makaibari-Singati 33 kV line Project

The project funded by GoN aims to meet the growing demand of electricity in Madan Kudari– Majhifeda area of Kavre District and its vicinity. Also, power generated by IPP will be connected to this substation and part of this power will be consumed locally and other will be evacuated at Mude-Lamosanghu. The scope of the project includes the construction of 33/11 kV, 6/8 MVA Substation with interconnection facilities. The land acquisition process has been completed. The 33 kV substation and 33 kV transmission line construction works are in progress. The Project is scheduled to be completed by FY 2020/21.

## Chautara-Sindhupalchok 33 kV substation Project

The project funded by GoN aims to meet the growing demand of electricity in Chautara area of Sindhupalchok District and its vicinity. The scope of the project includes the construction of 33/11 kV,

6/8 MVA Substation with interconnection facilities. The construction of 33 kV line from Lamosanghu to Chautara is completed. Substation control building works and guard house has been completed and other civil construction works including bay construction works are in progress. Supply and delivery of equipments to site is in progress. The project is scheduled to be completed by FY 2020/21.

### 33/11 KV Substation Rehabilitation Project

This project is financed by Govt. of Nepal (GON) and NEA. The aim of this Project is for the improvement in reliability of the distribution system of 36 different Substations under different distribution centers all around the country. The main aim of the Project is to rehabilitate substations and strengthen the distribution system by F/Y 2076/077 under 5 different Packages.

The main scope under this project is:

**Package 1:** Rehabilitation of 33/11 KV Substation at Dharan, Inaruwa, Mirchaiya, Rajbiraj, Mujelia with 33/11 kV Power Transformers of 10/13.3/16.6 MVA capacity. It is intended to complete within first quarter of F/Y 2076/077.

**Package 2:** Rehabilitation of 33/11 KV Substation in Pokharia, Harsa, Simrangaud with 33/11 kV Power Transformers of 20/24 MVA capacity. It is intended to complete within first quarter of F/Y 2076/077.

**Package 3:** Rehabilitation of 33/11 KV Substation in Mukundapur, Kawasoti, Kalaiya with 33/11 kV Power Transformers of 20/24 MVA capacity. It is intended to complete within F/Y 2076/077.

**Package 4:** Rehabilitation of 33/11 KV Substation in Guleria, Jeetpur, Bhairahawa and Lumbini with 33/11 kV Power Transformers of 20/24 MVA capacity. It is intended to complete within first quarter of F/Y 2076/077.

**Package 5:** Rehabilitation of 33/11 KV Substation in Jhalari, Belauri, Dhangadhi, Mahendranagar and Ghorahi with 33/11 kV Power Transformers of 20/24

33/11KV, 20/24MVA transformer testing at Butwal

33/11KV, 20/24MVA transformer foundation at Mahendranagar

MVA capacity. It is intended to complete within first quarter of F/Y 2076/077.

### Solu Corridor Rural Electrification Project

Under the project, distribution system will be expanded and reinforced for people and places affected by Solu Corridor 132 kV Transmission Line Project, by constructing 139 km of HT line, 247 km of LT line and installation of 67 numbers of 11/0.4 kV distribution transformers and also upgrading of existing poles, conductors and transformers in Solukhumbu, Okhaldhunga and Udaypur districts of Nepal.

The scope of project includes Solu-Dudhkunda Municipality, Necha-Salyan Rural Municipality and Thulung-Dudhkoshi Rural Municipality of Solukhumbhu District, Siddhicharan Municipality and Manebhanjyang Rural Municipality of Okhaldhunga Districts and Katari Municipality of Udaypur District.

The project is funded by Government of Nepal (GoN). Contact agreement has been signed on July 25, 2019 for both packages. The project is scheduled to be completed by January 24, 2020.

### Distribution System Rehabilitation Project

Capacity upgradation & other Rehabilitation of 33/11kV Sub-stations (Nepalgunj Old, Tulsipur, Shitalnagar/ Butwal, Milanchowk/Myagdhi, Balardaha/Saptari, Dhankuta, Malangawa, Devight and Arghakhanchi has been completed last year. Scope preparation and estimation of other rehabilitation (33 kV Line & 33/11 kV Substation) work is under process.

# Community Rural Electrification Department

In order to expand the access to electricity services to the rural areas on people's participation approach, the Government of Nepal (GoN) has brought forward Community Rural Electrification Program (CREP) since 2003 which is being executed efficiently through Community Rural Electrification Department (CRED) under Distribution and Consumer Services Directorate (DCSD), Nepal Electricity Authority (NEA). Later on in 2010, CRED was dissolved in the process of restructuring of NEA and the activities of CREP were carried out through eight Regional Offices. However, the CREP activities were slowed down due to lack of coordination at central and regional level. On this background, CRED was formed again in July 2013.

The GoN is contributing 90% of total rural electrification and rehabilitation cost of related infrastructure of the electrified areas through NEA; and a Community Rural Electrification Entity (CREE) is required to contribute remaining 10 % of the cost. NEA sells bulk power to the CREEs and they are responsible for operation and management of electricity distribution within their concerned areas. NEA provides services up to 11 kV Line and the REC itself is responsible for 400/230 Volt Line. NEA, Community Rural Electrification By-Law 2071 governs the electrification activities of NEA and CREP.

CREP is becoming more effective to promote energy access, build consumer capacity, develop livelihood,

Extension of LT line to remotely located house of Jorpokhari samudayik bidhyut upabhokta samite, Jorpokhari, Panchthar.

alleviate poverty, and empower Community Rural Electrification Entities (CREEs). In the journey of 16 years, CREP has achieved a major success of providing access to electricity to 531,232 consumers of 53 districts through 506 nos. of different CREEs (290 CBOs and 216 Entities of Kailali Kanchanpur Gramin Bidhyut Chhata Sansthan and Rural Municipalities/ Municipalities). The districts with CREEs have been depicted in following map:


The households have been electrified through 2664 numbers of distribution transformers of which 473 are of 25 kVA, 1291 are of 50 kVA; and 900 are of 100 kVA capacity.

CRED is facing some technical and administrative issues despite which the performance of CRED of FY 2018/19 was satisfactory. During this review period, CRED initiated activities to resolve & complete ongoing community rural electrification works, and initiated new electrification works and substations in different areas of Nepal. CRED's major activities of this year are as follows:

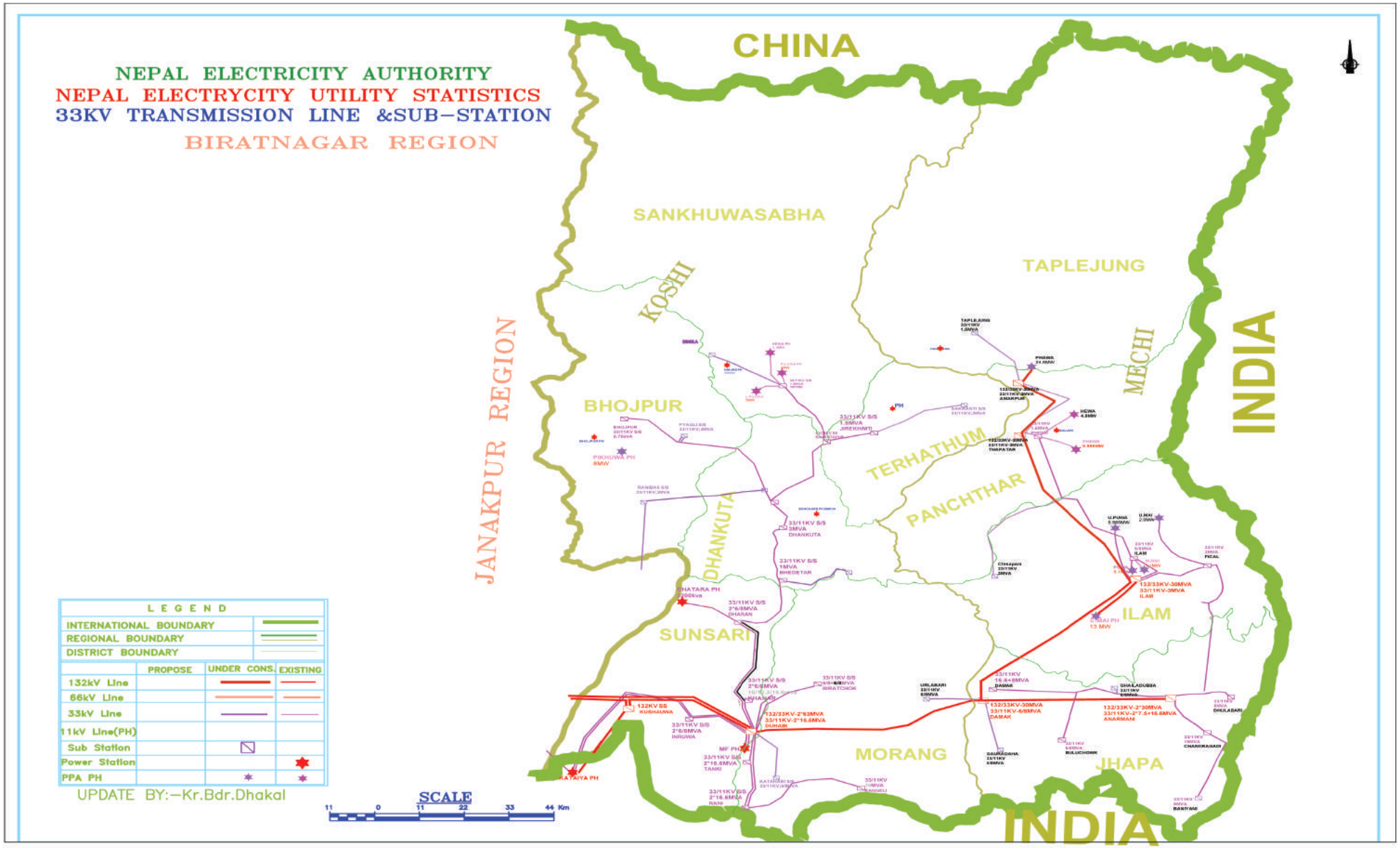
- seventy-one (71) projects, initiated in this year and previous years, have been completed in this Review Period out of which 40 projects are being executed by Contractors and 31 by CREEs.
- the works related to two substations in the rural areas of Sindhuli and Panchthar along with 33 kV line extension have been initiated.
- technical, administrative and accounting trainings were provided to the CREEs of Gandaki Province and Province no. 3.

The details of projects under CRED in different stages of execution from FY 2013/014 to FY 2018/019 are as follows.

- Total number of projects: 157
  - Electrification, System Improvement and Rehabilitation Projects : 148
  - 33/11 kV, 6/8 MVA Substation Projects with 33kV line Construction : 5 ( Lamjung, Baglung, Sindhuli, Taplejung, Panchthar)
  - 33kV Line Construction Project : 1 (Palpa)
  - Building(DivisionOffice)Construction Project: 1 (Pokhara)
  - Material Procurement Projects : 2 (Steel Tubular Pole and Distribution Transformer)
- Completed Projects: 95, Ongoing Projects: 62
- Projects executed by contractors: 119, Projects executed by CREEs: 38
- Consumers to be electrified: 1,09,000
- Proposed Load Centers: 620
- Total Line Length : 108 km (33kV)
  1425 km (11kV)
  3887 km (400V)
- Out of 1,45,000 wooden poles used in the electrification process, 59,000 have been replaced and remaining 86,000 are yet to be replaced.

CRED is planning different activities in coming fiscal years to achieve meaningful result by augmenting implementation of CREP which will strengthen the CRED and support the empowerment and sustainability of the CREEs too.

# BIRATNAGAR REGIONAL OFFICE



# BIRATNAGAR REGIONAL AND DISTRIBUTION CENTRE CHIEFS

**Sachidananda Yadav**
Biratnagar Regional Office Chief

**Rajeev Kumar Singh**
Biratnagar DC

**Jitendra Kumar Jha**
Anarmani DC

**Mithilesh Kumar Gohiwar**
Ithari DC

**Sanjeev Kumar Shah**
Inaruwa DC

**Shivaram Yadav**
Urlabari DC

**Jitendra Kumar Yadav**
Damak DC

**Saroj Kumar Shah**
Gauradaha DC

**Ram Udgar Shah**
Bhadrapur DC

**Binod Kumar Yadav**
Belbari DC

**Ram Pramod Shah**
Duhabi DC

**Pawan Kumar Shah**
Dhankuta DC

**Sanjaya Kumar Gupta**
Rangeli DC

**Rabin Babu Ghimire**
Illam DC

**Dipak Kumar Dahal**
Terathum DC

**Deepak sapkota**
Dharan DC

**Suresh Prasad Singh**
Panchthar DC

**Shiva ji Prasad Shah**
Taplejung DC

**Ram Ashis Shah**
Bhojpur DC

**Dhurba Adhikari**
Khandbari DC

## Introduction

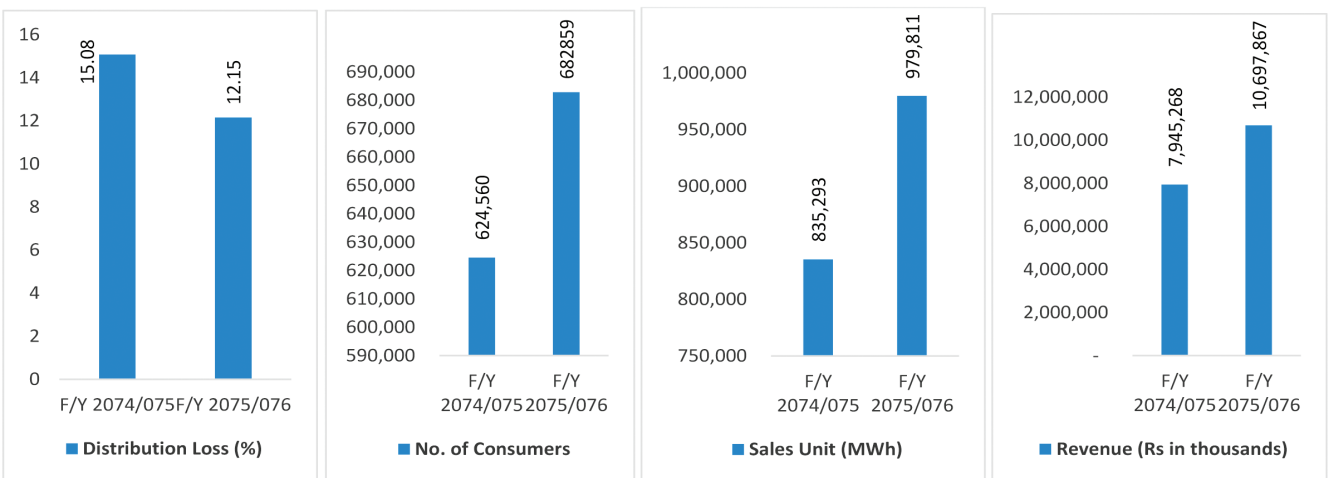
Biratnagar Regional Office is one of the eight Regional Offices under the Distribution and Consumer Services Directorate and is responsible for overall management of electricity distribution services, operation and maintenance of electrical networks of Mechi (Taplejung, Panchthar, Ilam and Jhapa districts) and Koshi (Sankhuwasabha, Terahthum, Bhojpur, Dhankuta, Sunsari and Morang districts) Zones. There are 19 (Nineteen) Distribution Centers (DCs) in this Regional Office. Gauradah DC and Pachthar DC is newly formed DC in F.Y. 2075/2076 under this region. The major activities of this regional Office include operation, maintenance and rehabilitation of the electricity distribution networks up to 33 kV voltage Level and 33/11 kV Substations as well as consumer services activities such as new consumer connections, meter reading, billing, and revenue collection.

fund is Government of Nepal and NEA itself. There are nine 33 kV transmission line, substation project and a rural electrification project funded by Government of Nepal under this regional office.

## Key Objectives

- To decrease the distribution system loss by controlling the electricity leakage and theft energy by loss reduction activities/loss reduction programs.
- To implement interaction and public awareness programs for increment of sales, revenue collection and decrease in electricity loss.
- Supply of reliable electricity to the consumers within the region at statutory levels of voltage.
- Provide new connections to prospective consumers.
- Ensure rational development of the electricity distribution system within the region.

The comparative salient features of this regional office are as follows:



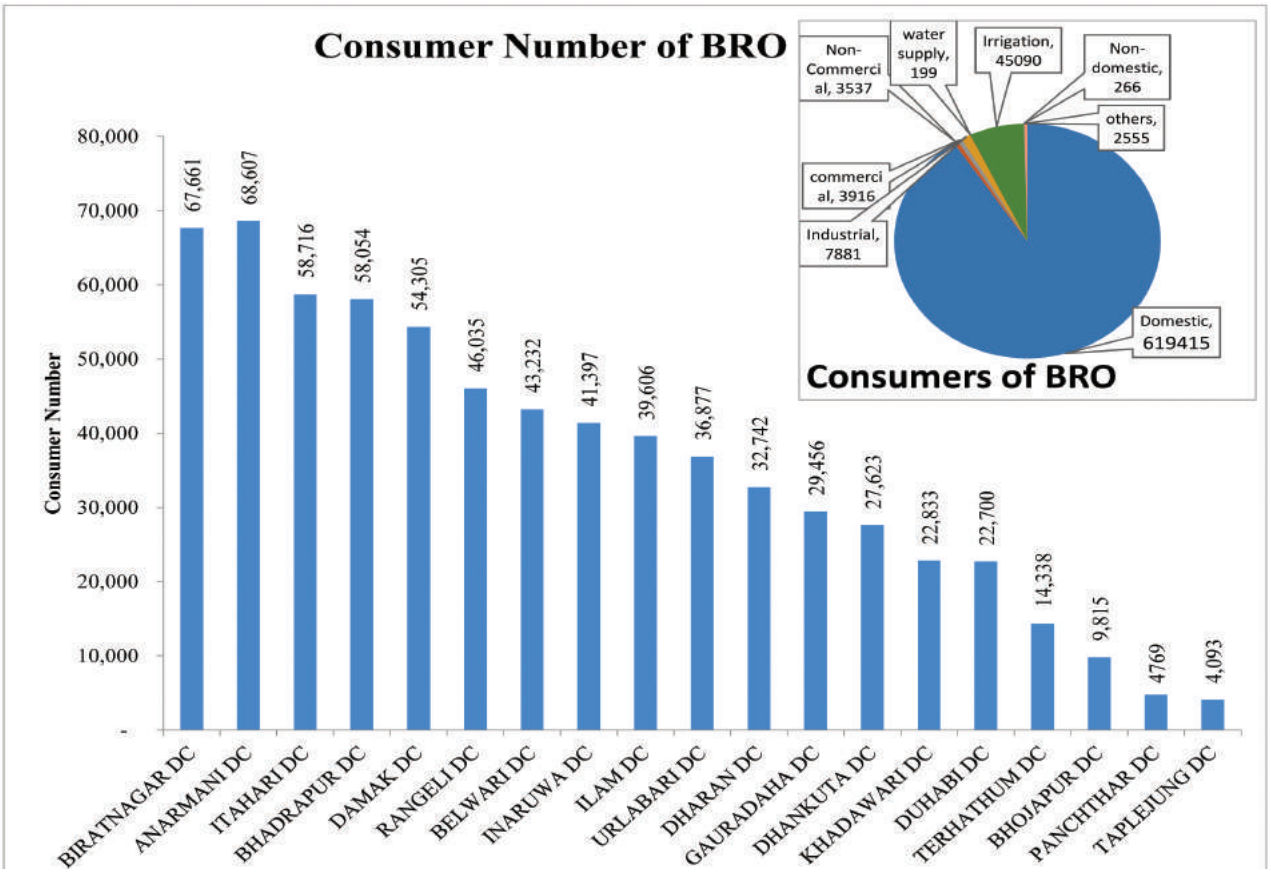

## Operational Structure

There are 19 Distribution Centers under Biratnagar Regional Office (BRO) spread over Mechi and Koshi zones. During the year under consideration two new Distribution Center namely Gauradah and Pachthar were established for the convenience of the consumers. Regional office comprises of technical, financial and admistrative division which monitors various actions of the concern DC's. The source of

## Highlights of the Year

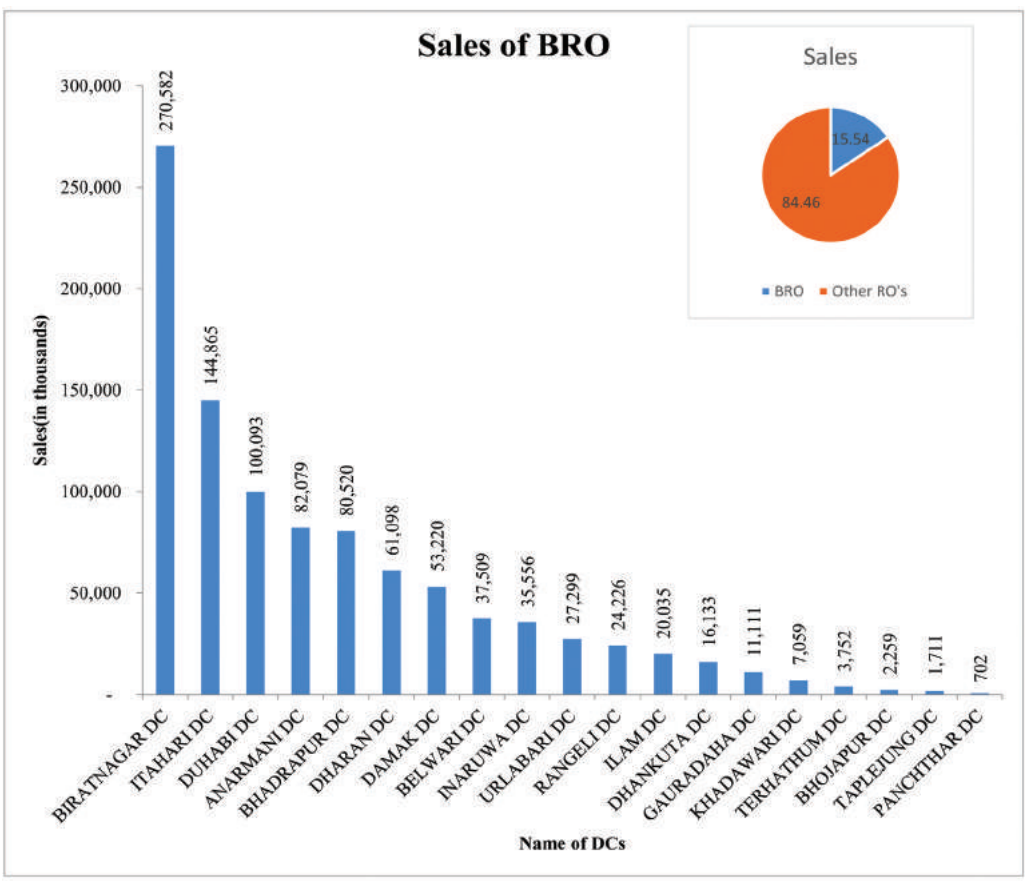
### Consumer Number

BRO recorded 682,859 consumer accounts by the end of the fiscal year 2075/076 which is 9.33% growth from last year. The majority of consumer accounts were in the domestic category approximately which is 91% while the second most were from the irrigation category which is 6.60% of total consumers



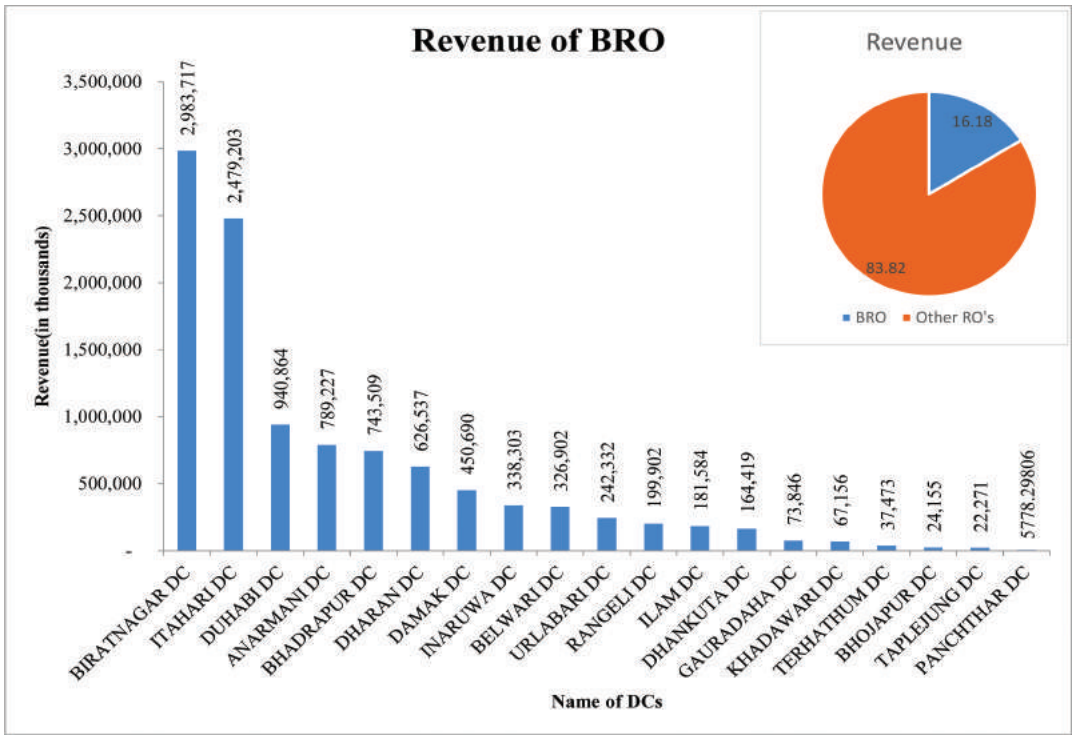

## Sales

A total of 979,810.74 MWh of energy was sold in this FY 2075/076 which is 17.30% increase than last year. Sales contribution to NEA system from this Regional Office is 15.54%

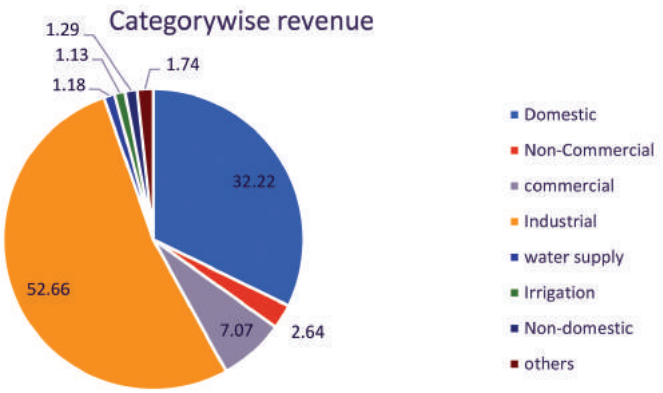


## Revenue

The gross revenue of Rs. 10,697.86 million was earned in F/Y 2075/076 after selling of 979,810.74 MWh energy which is 34.64% increase from last year.




The majority of revenue in BRO recorded from industrial tariff category which is approximately 53% of the total revenue of the region.




Biratnagar distribution center accounts for 22.28%, Itahari accounts for 23.14%, Duhabi 8accounts for 8.79%, Anarmani accounts for 7.37% and Bhadrapur accounts for 6.95% of the total revenue in the Region

## Distribution Infrastructures

The infrastructure of this regional office spread over 10 districts of Mechi and Koshi zones. The regional office includes the following distribution infrastructures.

| | |
|---|---|
| 33 kV Distribution Lines | 688.93km |
| 11 kV Distribution Lines | 5936.40km |
| 33/11 kV primary Substations | 23 |
| LV Distribution Lines | 17464.20km |
| Distribution Transformers Total installed capacity | 418.47MVA |

## Performance Highlights

| | |
|---|---|
| Consumer per Staff | 676 |
| LT 0.4/0.24kV Line Length per Staff (km/staff) | 17 |
| Sales per Consumer per year (kWh/Consumer) | 1,440 |
| Revenue per Consumer per year (Rs./Consumer) | 15,672 |
| Consumer per Distribution Transformers | 140 |

## Customer Care

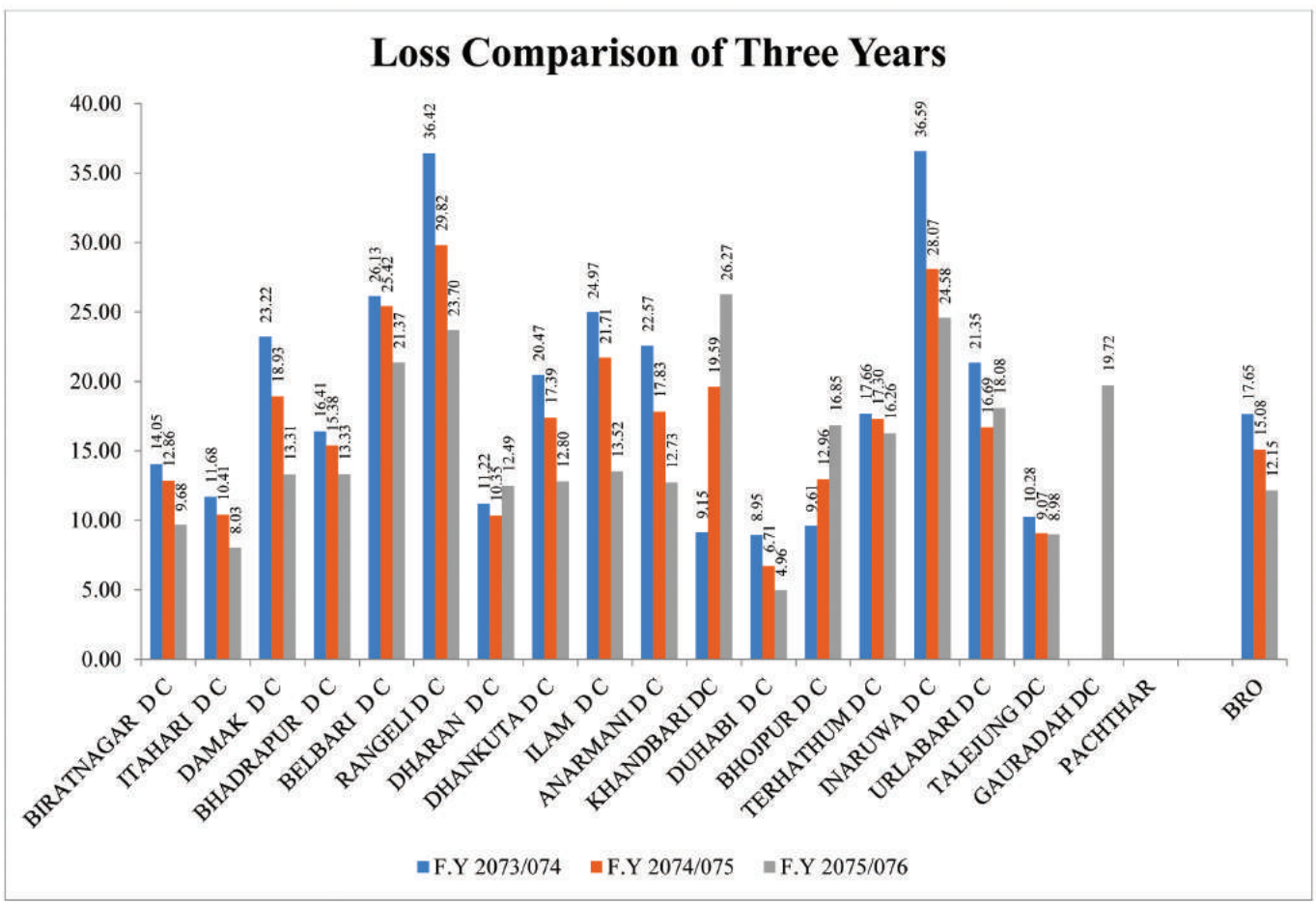
Distribution centers work as interfaces between NEA and its consumers. So, special efforts were taken to improve the quality of service at the consumer interface points. The employees took special attention and efforts to serve their valued consumers in more effective way. With the newly introduced online payment system and queue management system at cash collection centers, difficulties faced by the consumers in queuing for making payments were minimized. Round the clock no-light services have been implemented in most of the urban no-light centers. Implementation of Customer Care programs

in this regional office are:

- New Meter Connection: This regional office has instructed the DCs to connect the new meter within seven days after the registration of application.
- No Light Services: No light Services in this regional office implements consumers services as soon as possible after registering the consumers complain in no light register.
- Quality Supply: NEA regular works for addition of new transformers, shifting of distribution transformer at load centers, addition of two wires and upgradation of Substation have key roles in voltage improvement providing quality supply.
- Online Payment System: This system has given the service of paying the bill online and also updates about the bill payment for the consumers and the compulsion for consumers to come to counters for bill payment has ended, thus saving time of the consumer. Consumers can pay their bills via 8 service providers (eSewa, PayPoint, CFS Remit, City Express, Prabhu Bank, Nepal Investment Bank, Himalayan Bank and Mahalaxmi Bikash Bank)
- Onedoor system: NEA has introduced one door system to facilitate the consumers and to provide the service as quickly as possible. This system saves the time of the consumer.

## Loss Reduction Program/Loss Reduction Activities

The distribution networks comprise of technical and non- technical losses, in which proportion of non-technical losses is quite high. During the year under review, various measures taken in the preceding years were continued to reduce the non-technical losses. Massive awareness campaigns as workshops and review meetings were implemented in various distribution centers. Strict measures for



electricity theft control such as confiscation of electric equipments and taking legal action against culprits were also conducted in various distribution centers with the help of local administration and security agencies. NEA management made various decisions as 'Immediate Action Plans' to improve its functioning. This plan included regular inspection of Time-of-Day (TOD) meters, data download and analysis to curb any connection fault or manipulation.

## Future Plans/Programs

As high system loss is a major challenge for NEA, BRO is trying to make every effort to bring down the distribution system loss. It is also planning to improve the quality of the services through the use of new technologies and capacity building to meet the challenges of new environment in utility business. Consumer complaints shall be addressed without delay and the procedure for new connection related works shall be made simple and user friendly.

To reduce Non–Technical and Technical loss, these future plans shall be implemented with the joint efforts of BRO and DCS.

### For Non-Technical losses:

- Identification of electricity theft prone areas in different Distribution Centers.
- Public Awareness Program.
- Movement of Police and Staffs to remove hooking.
- Changing of Defective meters i.e. burnt, damage, stopped meters.
- Re-sealing of meters.
- Additional billing of HT/LT Consumers after analyzing TOD meter data download report as per the NEA, Electricity Distribution rules 2069.
- Upgrading of electricity meters to meet standard accuracy must be conducted to support reduction of non technical losses through statistical analysis

Electricity Theft Control

### For Technical losses:

- Conversion of single-phase lines to three phase lines by the addition of two wires.
- Balancing of phase loads.
- Optimization of distribution system.
- Improve power factor and reducing the harmonic distortion by installing suitable size of Capacitor Banks at substation as well as installation of LV Capacitors on LV lines.
- Demand management measures.
- Re-location of distribution transformers at load center.
- Upgradation of distribution transformers and substation power transformers.
- Changing of broken insulators like Disc insulator, pin Insulator and shackle insulator.
- Tightining of Jumpers connecting with suitable size of conductors on HV and LV lines.
- Regular Trimming works of Bush and tree branches.

## Safety measures/Safety Day

Safety is one of the major aspects in the distribution center services and the regional office is giving major priority to it. In this regard, not only the NEA employees, public awareness is also important. For this the RO is giving priority for people's awareness for electrical safety.

## Challenges within Regional Office

The various challenges faced by the regional office to provide reliable service to the consumers are as follows:

- Most of the 33 kV feeders of Morang, Sunsari and Jhapa are overloaded and are unable to fulfill consumer demand and evacuate power from IPP's. To solve this problem Khanar-Dharan 33 kV line should be upgraded by HTLS conductor, Anarmani-Dhulabari, Rani-Rangeli 33 kV line should be upgraded.
- The construction of Inarwa-Bhimpur 132 kV, 126 MVA substation can reduce the load of 33/11 kV Rani substation and Tanki sinwari substation, Duhabi-Damak transmission line of capacity126


Electrical Safety day awareness program conducted by Anarmani DC

Electrical Safety day awareness program conducted by Terathum DC

MVA should be constructed for distribution system reliability of the region.

- In Inarwa 400/220/132 kV substation can reduce the load of Duhabi 33/11 kV 63*3 MVA substation which is also is to be upgraded to 105*3 MVA to fulfill the energy demand of the region.
- Parajunge 132/33 kV, 2*24/30 MVA substation is running at almost full capacity of 55 MVA so atleast one of the transformer should be upgraded to 63 MVA.
- Construction of Duhabi-Katahari, Parajunge-Aitabaare, Parajunge-Jurepani 33 kV line should be completed as soon as possible after resolving the social issues.
- Due to the adverse topography in Taplejung, Terathum, Khaadbaari, Urlabaari, Dharan, Dhankuta DC within the regional office, it is very difficult to provide quick service to the consumers. Also line length is long with lack of voltage stability and severe losses in those areas.
- Segregation of technical and non-technical losses, Social and political issues and flooding during the monsoon season are other challenges within the region.

## Projects within the Regional Office

### Ilam-Phidim-Taplejung 33 kV Tr Line & 33/11 kV Substation Project

The scope of the project includes the constrution of 90 km of 33 kV transmission line and construction of 6/8 MVA substation at Taplejung. The construction of 33 kV Tr. Line from Phidim to Taplejung is completed, the civil construction works for 6/8 MVA substation at Taplejung is more than 90% complete and 50% of electro mechanical works is completed.

All electro-mechanical equipments are delivered at substation site. Substation will be charged by the end of 2019.. It is a Government Funded Project with the budget of 55,000 (in thousands). BRO aims to complete whole project by the end of 2019.

### Aathrai-Sankranti Bazar 33 kV Transmission line Project

The project includes the construction of 25 km of 33 kV line, 25 km of 11 kV line, 40 km of LT Line and construction of 33 /11 kV 6/8 MVA substation at Sankranti Bazar and 33 kV Bay at Jiri Khimti, Tehrathum. Polling works of the projects are completed and 40% of conductor stringing is also completed. Remaining stringing will be completed in fiscal year 076/077. It is a Government Funded Project with the budget of 25,00 (in thousands).

### Bhedetar-Rajarani 33/11 kV Transmission Line and Substation Project

The project includes the construction of 28 km of 33 kV Line, 15 km of 11 kV line, 15 km of LV distribution line, 33/11 kV 6/8 MVA Substation at Rajarani and 33 kV Bay at Letang, Morang. The construction of boundary wall at substation site has been completed. The 33 kV line has been re-routed from Rajarani to Letang after the agreement with the contractor and the construction work will start shortly. It is a Government Funded Project with the budget of 8600 (in thousands).

### Taplejung-Panchthar-Bhojpur Distribution Network Strenghtening Project

The scope of the project is to re-inforce/strengthen the distribution network in Taplejung, Panchthar and Bhojpur Districts. Line extension works are also carried out in the areas where there is no electrification. It is a Government Funded Project with the budget of 50,00 (in thousands). For F/Y 074/075 the targeted work is achieved completely. For F/Y 2075/076, construction work is under progress.

### Damak-Dharampur Electrification Project

The scope of the project included the construction of HT/LT Line and Transformer Installation in the area between Damak and Dharampur. It is a Government Funded Project with the budget of 50,00 (in thousands). For F/Y 074/075 the targeted work is achieved completely. For F/Y 2075/076, construction work is under progress. BRO aims to complete whole project by F/Y 2076/077.

### Biratchowk-Letang 33 kV Transmission Line and 33/11 kV substation Project

This project lies in northern part of Morang District. It includes construction of 33 kV line from Biratchowk to Letang and 33/11 kV 6/8 MVA Substation in Letang. This project is vital to provide electricity supply in remote areas of Morang and Dhankuta districts. It not only helps in improving the voltage level but also provides the connection facilities to the many up-coming IPPs. It is a Government Funded Project with the budget of 19,200 (in thousands). Land Acquisition Works of the project is under progress.

# Substation Status

| S.N. | Distribution Centre | Substation Name/Location | Capacity (MVA) | Total Capacity (MVA) | Voltage level (kV) | Existing | Proposed | Planned | Underconstruction | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Dhankuta | Dhankuta | 6/8*1 + 1.5*1 | 11 | 33/11 | √ | | | | |
| | | Bhedetar | 1.5*1 | | | √ | | | | |
| 2 | Bhadrapur | Chandragadhi | 6/8*2 | 40 | | √ | | | | |
| | | Dhulabari | 6/8*2 | | | √ | √ | | | Upgrading of one 6/8 MVA Power transformer by 20/24 MVA |
| | | Baniyani | 6/8*1 | | | √ | | | | |
| 3 | Damak | Damak | 16.6*1 + 6/8*1 | 41.2 | | √ | | | | |
| | | Buluchowk | 16.6 * 1 | | | √ | | | | |
| 4 | Dharan | Dharan | 6/8 * 3 | 24 | | √ | √ | | | Upgrading of one 6/8 MVA Power transformer by 20/24 MVA |
| 5 | Ilam | Fikkal | 6/8 * 1 | 16 | | √ | | | | |
| | | Tilkaini | 6/8 * 1 | | | √ | | | | |
| 6 | Panchthar | Phidim | 3*1 | 3 | | √ | | | | |
| 7 | Taplejung | Taplejung | 1.5*1 + 3*1 | 4.5 | | √ | | √ | | Upgrading of 1.5 MVA Power Transformer by 6/8 MVA |
| 8 | Inaruwa | Inaruwa | 6/8*2 | 16 | | √ | | √ | | Upgrading of one 6/8 MVA Power Transformer by 10/13.3/16.6 MVA |
| 9 | Rangeli | Rangeli | 6/8 * 2 | 16 | | √ | | | | |
| 10 | Bhojpur | Bhojpur | 3*1 | 3 | | √ | | | | |
| 11 | Khadbari | Tirtire | 6/8*1 | 8 | | √ | | | | |
| 12 | Itahari | Khanar | 16.2*2 + 6/8 * 1 | 41.2 | | √ | | | | |
| 13 | Biratnagar | Rani | 16.6 * 2 | 66.4 | | √ | | √ | | Upgrading of one 10/13.3/16.6 MVA power transformer by 20/24 MVA |
| | | Tanki | 16.6 * 2 | | | √ | | | | |
| 14 | Belbari | Biratchowk | 6/8 * 2 | 16 | | √ | | | | |
| 15 | Tehrathum | Jiri Khimti | 3*1 + 1.5 *1 | 6 | | √ | | | | |
| | | Basantapur | 1.5 *1 | | | √ | | | | |
| 16 | Anarmani | Ghailadubba | 6/8 * 1 | 8 | | √ | | √ | | Upgrading of 6/8 MVA Power transformer by 10/13.3/16.6 MVA |
| **Total Existing** | | | | **320.4** | | **23** | | | | |

# 33 kV Feeder Status

| S.N. | Name of Distribution Center | Name of 33 kV Feeder | Length of Feeder (km) | Conductor Name/Size (sq. inch) | Maximum/ Average Load (A) |
|---|---|---|---|---|---|
| 1 | Itahari DC | Khanar | 7.3 | Dog | 325 |
| | | Khanar New | 11 | Dog | 150 |
| | | Reliance | 0.88 | Dog | 205 |
| 2 | Terathum DCS | Basantapur - Jirikhimti | 15 | Dog/ 0.1 | 50 |
| 3 | Khandbari DC | Dhankut-Tirtire s/s 33 kV | 45.94 | Dog/0.1 | 210 |
| 4 | Ilam DC | Anarmani-Fikkal - Puwakhola | 73 KM | Dog(0.1 ACSR Conductor) | 56/36.75 |
| 5 | Dhankuta DC | Dharan-Dhankuta | 34.09 | Dog/0.1 | 201 /128 |
| 6 | Panchthar DC | Illam-Phidim | 41.17 | Dog/0.1 | 30/25 |
| | | Phidim-Thapatar | 3.62 | Dog/0.1 | 20/15 |
| 7 | Bhojpur DC | Hile - Bhojpur Feeder | 44.44 | Dog/0.1 | 19 |
| 8 | Bhadrapur DC | Anarmani-chancragadhi | 12.52 | Racoon .dog | 235 |
| | | chandragadhi-baniyani | 17.72 | Dog | 60.6 |
| | | Anarmani-dhulabari | 14.15 | Dog | 207 |
| | | Sunmai-Charali | 16.5 | Dog | 207 |
| 9 | Urlabari DC | | | No 33KV Feeder | |
| 10 | Gauradaha DC | | | No 33KV Feeder | |
| 11 | Damak DCS | Damak Bazaar Feeder | 4.5 | 0.1 | 325/200 |
| | | Panchgachhi Feeder | 23.5 | 0.1 | 200/100 |
| 12 | Belbari DC | Duhabi-Belbari | 22.13 | 0.1 | 229 |
| 13 | Rangeli DC | Biratnagar Rani-Rangeli | 27 | Dog/0.1 | 170.51 |
| 14 | Dharan DC | Dhuhabi- Dharan-Chatara | 41.56 | Dog (0.1 ) | 327 |
| 15 | Taplejung DC | thapatar hiti | 82.5 | Dog | 1.5 |
| 16 | Biratnagar | Biratnagar 33kV-1 | 18.2 | Racoon | 270/215 |
| | | Biratnagar 33kV-2 | 18.2 | Racoon | 250/200 |
| | | Biratnagar 33kV-3 | 29 | Bear | 535/400 |
| | | RJM | 2 | Dog | 30/30 |
| | | Industrial 33 kV | 10 | Bear | 130/80 |
| 17 | Duhabi Dc | 33 kV Duhabi Industrial feeder | 13.9 | Dog/ 0.1 sq inch | 126 |
| 18 | Inaruwa | Duhabi S/S - Inaruwa S/S | 15 | Dog / 0.1 Sq.Inch | 300/210 |
| 19 | Anarmani DC | 33 KV Damak Prasaran Line | 7 | Dog | 210 |

## 11 kV Feeder Status

| S.N. | Name of Distribution Center | Name of 11 kV Feeder | Length of Feeder (km) | Conductor Name Size (sq.inch) | Maximum/ Average Load (A) |
|---|---|---|---|---|---|
| 1 | Itahari DC | Gaisar | 23.92 | Dog, Rabbit | 260 |
| | | Tarahara | 22.9 | Dog, Rabbit, Weasel | 150 |
| | | Pakali | 52.12 | Dog, Rabbit, Weasel | 175 |
| | | Industrial | 8.25 | Dog, Rabbit | 145 |
| | | NTC | 4.84 | Rabbit | 3.6 |
| | | Itahari | 27.45 | Dog, Rabbit | 225 |
| | | Khanar | 15.22 | Dog, Rabbit, Weasel | 135 |
| | | Industrial Labipur | 18.91 | Dog, Rabbit, Weasel | 185 |
| | Inaruwa DC | Jhumka | 94.46 | Dog, Rabbit, Weasel | 215 |
| 2 | Terathum DCS | Basantapur Sukrabare | 98 | Weaseal/0.03 & Rabbit/0.05 | 65 |
| | | Myanglung | 33 | Weaseal/0.03 & Rabbit/0.05 | 35 |
| | | Morahang | 112 | Weaseal/0.03 & Rabbit/0.05 | 25 |
| | | Lasune | 42 | Weaseal/0.03 & Rabbit/0.05 | 10 |
| 3 | Khandbari DC | Khandbari Feeder | 250.098 | Weasel/0.03 | 114 |
| | | Chainpur Feeder | 71.55 | Weasel/0.03 | 25 |
| | | Madi Feeder | 39.56 | Weasel/0.03 | 13 |
| | | Mudhe Feder | 49.25 | Weasel/0.03 | 23 |
| 4 | Illam DC | Ilam | 12.16 | Rabbit(0.05 ACSR ) | 34/21 |
| | | Sakhejung | 187.45 | Weasel(0.03 ACSR) | 78/62 |
| | | Kanyam | 98.02 | Dog(0.1 ACSR ) | 145/110 |
| | | Laxmipur | 54.57 | Rabbit(0.05 ACSR ) | 94/73 |
| | | Danabari | 181.59 | Rabbit(0.05 ACSR ) | 53/42 |
| 5 | Gauradaha DC | Parajungi Feeder | 120km | Dog(0.1),Rabbit(0.05),Weasel(0.03) | 246 |
| | | Gauriganj Feeder | 107.4 km | Dog(0.1),Rabbit(0.05),Weasel(0.03) | 241 |
| | | Kunjibari Feeder | 34.5 km | Dog(0.1),Rabbit(0.05),Weasel(0.03) | 48 |
| 6 | Dhankuta DCS | Triveni | 49.7 | Weasel/ 0.03 | 56/51 |
| | | Hile | 141.35 | Weasel/ 0.03 | 106/85 |
| | | Belhara | 81.6 | Weasel/ 0.03 | 56/51 |
| | | Rajarani | 91.89 | Weasel/ 0.03 | 45/35 |
| | | Fakshib/Aahale | 41.87 | Weasel/ 0.03 | 15/10 |
| 7 | Panchthar DC | Phidim Feeder | 77.3KM | Rabbit/0.05 | 41/27 |
| | | Jorpokhari Feeder | 35.66KM | Rabbit/0.05 | 4/1.5 |
| | | Kabeli Feeder | 24.14KM | Rabbit/0.05 | 0.5/0.2 |
| | | Yashok Feeder | 63.5KM | Rabbit/0.05 | 16.5/4.03 |
| | Illam DC | Sakhejum Feeder | 15.47KM | Rabbit/0.05 | 80/25 |
| 8 | Bhojpur DC | Bazzar feeder | 74.94 | Rabbit & Wessel/ 0.05 & 0.03 | 34 |
| | | Aale Bokhim feeder | 24.82 | Rabbit & Wessel/ 0.05 & 0.03 | 7.5 |
| | | Kafle feeder | 115.07 | Rabbit & Wessel/ 0.05 & 0.03 | 21.7 |
| | | Hile feeder | 50.72 | Dog & Rabbit/ 0.1 & 0.05 | 5.5 |
| | | Belhara feeder | 7.08 | Weasel/ 0.03 | 2.75 |

| | | | | | |
|---|---|---|---|---|---|
| 9 | Bhadrapur DC | 11 KV Bhadrapur | 24.01 | Dog, Rabbit, Weasel | 197 |
| | | 11 KV Jalthal | 51.5 | Dog, Rabbit, Weasel | 165 |
| | | 11 KV Chandragadhi | 34.52 | Dog, Rabbit, Weasel | 137 |
| | | 11 KV Haldibari | 33.15 | Dog, Rabbit, Weasel | 160 |
| | | 11 KV 750 KVA | 4 | Dog, Rabbit, Weasel | 45 |
| | | 11 KV Prithvinagar | 41.72 | Dog, Rabbit, Weasel | 75 |
| | | 11 KV Baniyani | 28.295 | Dog, Rabbit, Weasel | 39 |
| | | 11 KV Kechana | 89.53 | Dog, Rabbit, Weasel | 62 |
| | | 11 KV Singimadi | 3.306 | Dog | 13 |
| | | 11 KV Kakarvitta | 86.391 | Dog, Rabbit, Weasel | 253 |
| | | 11 KV Dhulabari | 76.081 | Dog, Rabbit, Weasel | 276 |
| | | 11 KV Dhaijan | 45.83 | Dog, Rabbit, Weasel | 162 |
| 10 | Urlabari DC | Urlabari | 60km | Dog,Rabbit | 280 |
| | | Rajghat | 30km | Dog | 175 |
| 11 | Damak DCS | Shivgunj | 42.44 | 0.1/0.05/0.03 | 250/175 |
| | | Kunjibari | 2.53 | 0.05 | 200/100 |
| | | Dhukurpani | 63.56 | 0.1/0.05/0.03 | 300/250 |
| | | Damak Bazaar | 31.85 | 0.1/0.05/0.03 | 325/275 |
| | | NTC dedicated feeder | 2.77 | 0.05 | 5/2.5 |
| | | Kerkha | 87.13 | 0.1/0.05/0.03 | 325/250 |
| | | Padajungi | 13.48 | 0.1/0.05/0.03 | 275/175 |
| 12 | Belbari DC | Belbari | 106.35 | Dog, Rabbit, Weasel | 251 |
| | | Kerabari | 84.55 | Dog, Rabbit, Weasel | 269 |
| | | haraichaa | 85.2 | Dog, Rabbit, Weasel | 116 |
| 13 | Rangeli DC | Rangeli Feeder | 44.22 | Dog:20Km, Weasel:24.22Km | 80 |
| | | Kanepokhari Feeder | 87.85 | Dog:30Km, Rabbit:10Km, Weasel:57.85Km | 170 |
| | | Karshiya Feeder | 82.18 | Dog:20Km, Rabbit:5Km, Weasel:57.18Km | 140 |
| | | Sijuwa Feeder | 106.4 | Dog:50Km, Rabbit:10Km, Weasel:46Km | 180 |
| 14 | Dharan DC | Panmara Feeder | 27.645 | Dog(0.1) ,XLPE ( 100 sq.mm) Rabit (0.05) , Weasel (0.03) | 133 |
| | | Dharan Feeder | 23.445 | Dog(0.1), Rabbit (0.05), Weasel (0.03) | 133 |
| | | Local Chatara | 31.647 | Dog(0.1), Rabbit (0.05), Weasel (0.03) | 136 |
| | | Chatara Bayerban | 21.803 | Dog(0.1), Rabbit (0.05), Weasel (0.03) | 45 |
| | | Bhanu Feeder | 7.185 | Dog(0.1) ,XLPE ( 100 sq.mm) Rabit (0.05) , Weasel (0.03) | 187 |
| | | Railway Feeder | 12.8 | Dog(0.1) ,XLPE ( 100 sq.mm) Rabit (0.05) , Weasel (0.03) | 33 |
| | | BPKIHS feeder | 1.56 | XLPE( 75 Sq.mm) ,Weasel ( 0.03) | 66 |
| | | British feeder | 0.97 | XLPE( 75 Sq.mm) ,Weasel ( 0.03) | 31 |
| | | Industrial feeder | 2.58 | Dog ( 0.1) | 44 |
| | | Khanepani feeder | 9.04 | Dog ( 0.1), Weasel (0.03) | 66 |

| | | | | | |
|---|---|---|---|---|---|
| 15 | Taplejung DC | fungling | 46.5 | Rabbit, Weasel | 55 |
| 16 | Biratnagar DC | bhrikuti | 35 | Dog | 280/200 |
| | | katahari | 27 | Dog | 270/215 |
| | | jhorahat | 36 | Dog | 200/150 |
| | | tanki | 12 | Dog | 200/190 |
| | | nahar | 25 | Dog | 230/180 |
| | | khananbari | 32 | Dog | 280/200 |
| | | airport | 8 | Dog | 10/10 |
| | | bypass | 27 | Dog | 280/200 |
| | | B.G.M | 23 | Dog | 230/200 |
| | | rani | 25 | Dog | 270/200 |
| | | budhnagar | 22 | Dog | 150/80 |
| | | NCELL | 4 | Dog | |
| | | NTC | 6 | Dog | |
| | | biratanagar | 31 | Dog | 290/215 |
| | | hatkhola | 65 | Dog | 150/90 |
| | | tanki-2 | 5 | Dog | 70/40 |
| | | hatimudha | 10 | Dog | 260/200 |
| | | biratnagar 11KV-1 | 12 | Dog | 290/280 |
| | | biratnagar 11KV-3 | 13 | Dog | 125/95 |
| 17 | Duhabi dc | 11 kV Tarhara 1 | 9.1 km | Dog /0.1 | 274 |
| | | 11 kV Tarhara 2 | 17 km | Dog:0.1 ,Rabbit:.05,Weasel:0.03 | 264 |
| | | 11 kV biratnagar 2 | 12.3 km | Dog:0.1, Weasel:0.03 | 159 |
| | | 11 kV duhabi | 31.158 km | Dog:0.1 ,Rabbit:.05,Weasel:0.03 | 102 |
| | | 11 kV inaruwa | 121.805 km | Dog:0.1 ,Rabbit:.05,Weasel:0.04 | 138 |
| 18 | Inaruwa | Industrial Feeder | 12 | Dog:0.1 | 184/160 |
| | | Gramin Feeder | 88.1 | Dog, Rabbit, Weasel(0.1,0.05, 0.03) | 178/105 |
| | | Inaruwa Feeder | 25.18 | Dog, Rabbit(0.1,0.05 ) | 186/110 |
| | | Laukahi Feeder | 86.02 | Dog, Rabbit(0.1,0.05 ) | 170/100 |
| | | Jhumka Feeder | 120 | Dog, Rabbit, Weasel(0.1,0.05, 0.03) | 234/160 |
| 19 | Anarmani DC | Garamani | 71 | Dog,Rabbit,Weasel | 210 |
| | | Birtamode Bazar | 18 | Dog,Rabbit,Weasel | 306 |
| | | Sanischare | 82 | Dog,Rabbit,Weasel | 180 |
| | | Dhulabari | 10 | Dog,Rabbit,Weasel | 335 |
| | | Surunga | 21 | Dog,Rabbit,Weasel | 387 |
| | | Charali | 26 | Dog,Rabbit,Weasel | 247 |
| | | Kankai | 124 | Dog,Rabbit,Weasel | 272.3 |
| | | Rajgud | 54 | Dog,Rabbit,Weasel | 132.2 |
| | | Budhabare | 5 | Dog,Rabbit,Weasel | 247 |

# Electrification Status

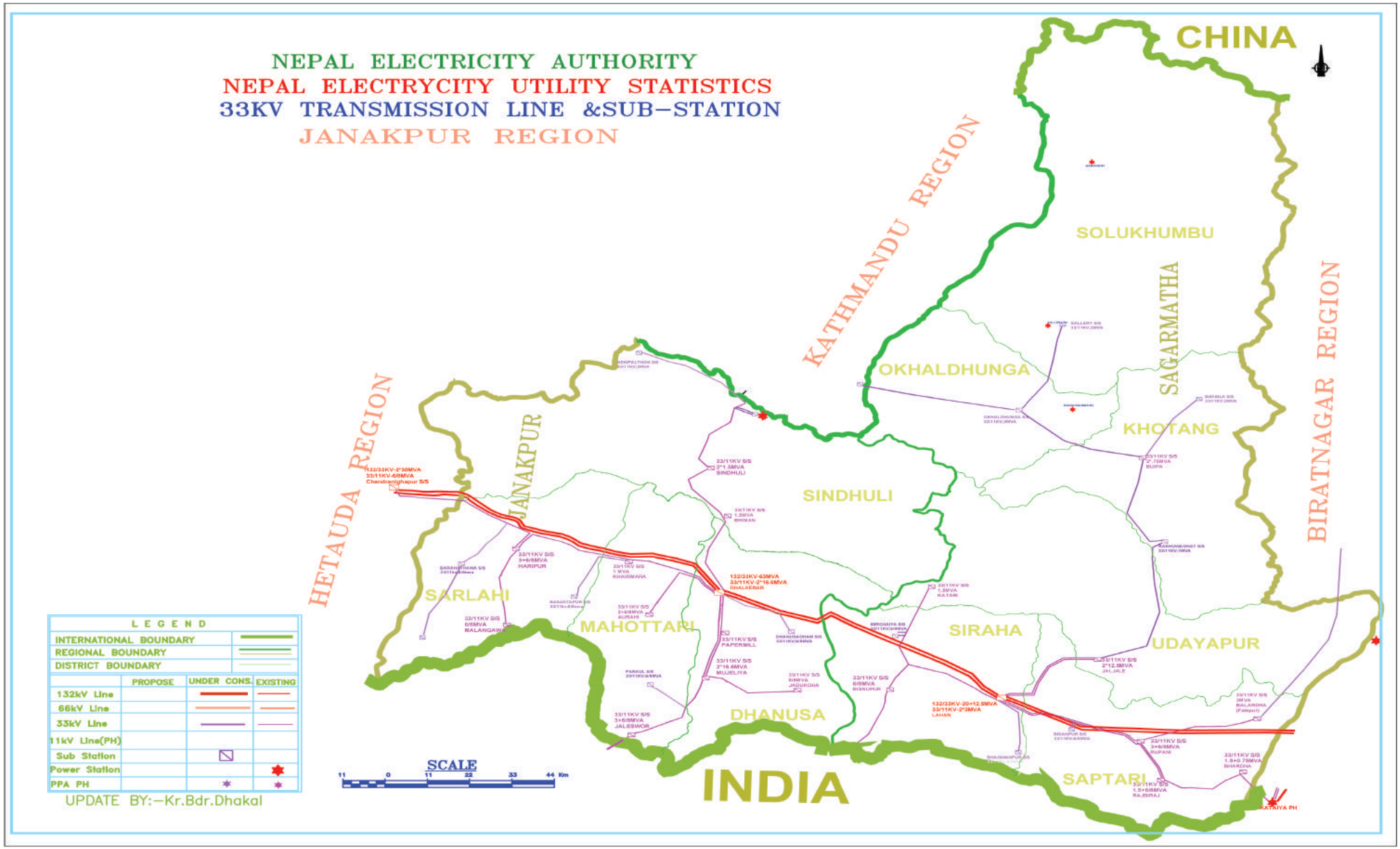
| S.No. | District | Municipalities / Rural Municipalities | Total Electrification % of municipalities (Grid Connected) | Populations | No of House-holds | Total 11 kV (HT) Circuit Kilometer (KM) required to fully electrified the Municipalities or rural municipalities | Total 0.4 kV (LT) Circuit Kilometer (KM) required to fully electrified the Municipalities or rural municipalities | No of Trans-former Required |
|---|---|---|---|---|---|---|---|---|
| 1 | Taplejung | 1. Phungling Municipality | 74.84 | 27029 | 6129 | 25 | 75 | 28 |
| | | 2. Aathrai Triveni Rural Municipality | 84.51 | 14110 | 2956 | 8 | 32 | 12 |
| | | 3. Sidingwa Rural Municipality | 0.00 | 12384 | 2426 | 50 | 120 | 42 |
| | | 4. Fakthanglung Rural Municipality | 0.00 | 12300 | 2584 | 45 | 135 | 35 |
| | | 5. Mikkwakhola Rural Municipality | 0.00 | 9376 | 1912 | 15 | 130 | 15 |
| | | 6. Meringden Rural Municipality | 33.07 | 12844 | 2640 | 24 | 110 | 20 |
| | | 7. Maiwakhola Rural Municipality | 0.00 | 11297 | 2246 | 25 | 105 | 33 |
| | | 8. Pathibhara Yangwarak Rural Municipality | 87.53 | 13912 | 2902 | 15 | 40 | 12 |
| | | 9. Sirijangha Rural Municipality | 0.00 | 16179 | 3304 | 60 | 105 | 38 |
| | | Total District : Taplejung | 38.74 | 129431 | 27099 | 267 | 852 | 235 |
| 2 | Panchthar | 1. Phidim Municipality | 75.85 | 50426 | 11268 | 34 | 73 | 15 |
| | | 2. Hilinang Rural Municipality | 76.28 | 23483 | 4910 | 8 | 25 | 8 |
| | | 3. Kummayak Rural Municipality | 100.00 | 16519 | 3587 | | | |
| | | 4. Maklajung Rural Municipality | 76.84 | 25229 | 5688 | 13 | 31 | 6 |
| | | 5. Phalgunanda Rural Municipality | 79.06 | 24660 | 5290 | 18 | 20 | 9 |
| | | 6. Phalelung Rural Municipality | 25.89 | 22428 | 4664 | 60 | 112 | 28 |
| | | 7. Tumbewa Rural Municipality | 37.14 | 13753 | 2885 | 21 | 31 | 10 |
| | | 8. Yangawarak Rural Municipality | 49.85 | 18737 | 3906 | 43 | 36 | 11 |
| | | Total District : Panchthar | 67.91 | 195235 | 42198 | 197 | 328 | 87 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3 | Ilam | 1. Ilam Municipality | 86.56 | 51773 | 12142 | 4 | 16 | 13 |
| | | 2. Deumai Municipality | 76.54 | 35123 | 7598 | 4 | 18.5 | 14 |
| | | 3. Mai Municipality | 54.24 | 34748 | 7549 | 11 | 26 | 25 |
| | | 4. Suryodaya Municipality | 81.07 | 60489 | 14092 | 6 | 16 | 12 |
| | | 5. Phakaphokthum Rural Municipality | 52.28 | 23062 | 4943 | 7 | 15 | 14 |
| | | 6. Chulachili Rural Municipality | 67.19 | 22208 | 4959 | 6 | 14 | 11 |
| | | 7. Mai Jogmai Rural Municipality | 76.30 | 22448 | 4989 | 4 | 15 | 11 |
| | | 8. Mangsebung Rural Municipality | 36.02 | 19736 | 3977 | 12 | 34 | 21 |
| | | 9. Rong Rural Municipality | 71.45 | 20411 | 4640 | 7 | 19 | 16 |
| | | 10. Sandakpur Rural Municipality | 76.70 | 17136 | 3886 | 5 | 14 | 8 |
| | | Total District : Ilam | 71.68 | 307134 | 68775 | 66 | 187.5 | 145 |
| 4 | Jhapa | 1. Mechinagar Municipality | 92.04 | 125671 | 28716 | 42 | 95 | 55 |
| | | 2. Damak Municipality | 96.93 | 84468 | 20362 | 60 | 150 | 50 |
| | | 3. Kankai Municipality | 93.24 | 45146 | 10603 | 30 | 50 | 35 |
| | | 4. Bhadrapur Municipality | 92.04 | 73706 | 17175 | 24 | 56 | 32 |
| | | 5. Arjundhara Municipality | 80.46 | 67715 | 15323 | 45 | 125 | 40 |
| | | 6. Shivasarakshi Municipality | 86.41 | 72651 | 16525 | 40 | 150 | 30 |
| | | 7. Gauradaha Municipality | 94.92 | 59646 | 13576 | 25 | 73.5 | 41 |
| | | 8. Birtamod Municipality | 97.49 | 92089 | 21501 | 40 | 120 | 70 |
| | | 9. Kamal Rural Municipality | 85.08 | 49896 | 11534 | 30 | 60 | 20 |
| | | 10. Gaurigunj Rural Municipality | 81.87 | 37152 | 8030 | 30 | 75 | 35 |
| | | 11. Barhadashi Rural Municipality | 75.00 | 37850 | 8322 | 25 | 125 | 40 |
| | | 12. Jhapa Rural Municipality | 55.97 | 38916 | 7983 | 20 | 70 | 30 |
| | | 13. Buddashanti Rural Municipality | 87.75 | 46771 | 10682 | 21 | 36 | 25 |
| | | 14. Haldibari Rural Municipality | 80.46 | 32542 | 7214 | 13 | 40 | 22 |
| | | 15. Kanchankawal Rural Municipality | 82.47 | 44467 | 9832 | 19 | 45 | 19 |
| | | Total District : Jhapa | 88.10 | 908686 | 207378 | 464 | 1270.5 | 544 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 5 | Morang | 1. Biratnagar Sub Metropolitan | 91.31 | 240122 | 53471 | 20 | 50 | 25 |
| | | 2. Belbari Municipality | 100.00 | 73708 | 17156 | | | |
| | | 3. Letang Municipality | 90.69 | 35853 | 8211 | 30 | 15 | 8 |
| | | 4. Pathari Sanishchare Municipality | 86.76 | 68383 | 15610 | 35 | 340 | 58 |
| | | 5. Rangeli Municipality | 92.83 | 58181 | 12583 | 25 | 35 | 20 |
| | | 6. Sunwarshi Municipality | 81.60 | 56778 | 12077 | 20 | 30 | 15 |
| | | 7.Urlabari Municipality | 92.11 | 61184 | 14015 | 22 | 227 | 51 |
| | | 8. Sundraharaincha Municipality | 100.00 | 90069 | 20816 | | | |
| | | 9. Ratuwamai Municipality | 83.27 | 61949 | 13961 | 25 | 32 | 20 |
| | | 10. Budhiganga Rural Municipality | 82.65 | 46519 | 10762 | 12 | 50 | 12 |
| | | 11.Dhanpalthan Rural Municipality | 90.86 | 44065 | 8902 | 10 | 25 | 15 |
| | | 12. Gramthan Rural Municipality | 63.43 | 36597 | 8859 | 15 | 45 | 15 |
| | | 13. Jahada Rural Municipality | 60.92 | 46778 | 9144 | 14 | 56 | 15 |
| | | 14. Kanepokhari Rural Municipality | 88.82 | 42545 | 9712 | 10 | 35 | 20 |
| | | 15. Katahari Rural Municipality | 64.82 | 44491 | 8959 | 17 | 51 | 17 |
| | | 16. Kerabari Rural Municipality | 100.00 | 34040 | 7821 | 2 | 17 | 5 |
| | | 17. Miklajung Rural Municipality | 81.19 | 25229 | 5688 | 93 | 587 | 47 |
| | | Total District : Morang | 87.87 | 1066491 | 237747 | 350 | 1595 | 343 |
| 6 | Sunsari | 1. Itahari sub metropolitan | 94.39 | 165093 | 39702 | 20 | 50 | 60 |
| | | 2. Dharan sub metropolitan | 86.01 | 161790 | 38412 | 15 | 50 | 40 |
| | | 3. Inaruwa Municipality | 97.38 | 74716 | 15297 | 4 | 15 | 4 |
| | | 4. Duhabi Municipality | 100.00 | 66049 | 13974 | | | |
| | | 5. Ramdhuni Municipality | 84.62 | 60767 | 13500 | 10 | 30 | 25 |
| | | 6. Barahachhetra Municipality | 70.33 | 90946 | 20622 | 15 | 40 | 15 |
| | | 7. Koshi Rural Municipality | 83.32 | 51257 | 10038 | 12 | 20 | 6 |
| | | 8. Gadhi Rural Municipality | 100.00 | 40948 | 8271 | | | |
| | | 9. Barju Rural Municipality | 100.00 | 36630 | 7346 | | | |
| | | 10. Bhokraha Rural Municipality | 86.75 | 47594 | 7987 | 10 | 15 | 5 |
| | | 11. Harinagara Rural Municipality | 87.70 | 47990 | 8040 | 9 | 12 | 6 |
| | | 12. Dewanganj Rural Municipality | 86.85 | 41208 | 7473 | 18 | 25 | 10 |
| | | Total District : Sunsari | 89.04 | 884988 | 190662 | 113 | 257 | 171 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 7 | Dhankutta | 1.Pakhribas Municipality | 94.50 | 23017 | 5189 | 2 | 5 | 2 |
| | | 2. Dhankuta Municipality | 96.59 | 38175 | 9862 | 2 | 3 | 2 |
| | | 3. Mahalaxmi Municipality | 91.91 | 25856 | 5715 | 2 | 4 | 3 |
| | | 4. Sangurigadhi Rural Municipality | 91.87 | 22452 | 5260 | 3 | 5 | 4 |
| | | 5. Khalsa Chhintang Sahidbhumi Rural Municipality | 89.82 | 19556 | 4040 | 3 | 7 | 4 |
| | | 6. Chhathar Jorpati Rural Municipality | 90.83 | 19101 | 4412 | 3 | 4 | 4 |
| | | 7. Chaubise Rural Municipality | 89.52 | 20103 | 4735 | 4 | 6 | 5 |
| | | Total District: Dhankutta | 92.80 | 168260 | 39213 | 19 | 34 | 24 |
| 8 | Terhathum | 1. Myaglung Municipality | 97.27 | 19528 | 4566 | 3 | 6 | 2 |
| | | 2. Laligurans Municipality | 94.45 | 16821 | 3653 | 2 | 8 | 1 |
| | | 3. Aatharai R.M. | 5.17 | 21605 | 4548 | | | |
| | | 4. Phedap Rural Municipality | 87.75 | 17583 | 3779 | 4 | 18 | 2 |
| | | 5. Chhathar Rural Municipality | 90.26 | 16604 | 3613 | 5 | 12 | 2 |
| | | 6. Menchyayam Rural Municipality | 95.59 | 8025 | 1781 | 3 | 7 | 2 |
| | | Total District : Terhathum | 74.78 | 100166 | 21940 | 17 | 51 | 9 |
| 9 | Sankhuwasabha | 1. Chainpur | 93.03 | 26891 | 5906 | 5 | 25 | 8 |
| | | 2. Dharmadevi | 93.97 | 17956 | 3938 | 8 | 40 | 10 |
| | | 3. Khandbari | 96.02 | 30700 | 7406 | 5 | 20 | 4 |
| | | 4. Madi | 97.33 | 14248 | 3199 | 12 | 40 | 8 |
| | | 5. Panchkhapan | 76.32 | 17253 | 3615 | 18 | 40 | 12 |
| | | 6. Bhotkhola | 0.00 | 6475 | 1372 | 100 | 150 | 15 |
| | | 7. Chichila | 49.09 | 6957 | 1509 | 25 | 56 | 11 |
| | | 8. Makalu | 0.00 | 13364 | 2907 | 70 | 95 | 12 |
| | | 9. Sabhapokhari | 47.04 | 10330 | 2181 | 60 | 90 | 10 |
| | | 10. Silichong | 0.00 | 11626 | 2400 | 65 | 98 | 15 |
| | | Total District : Sankhuwasabha | 69.54 | 155800 | 34433 | 368 | 654 | 105 |
| 10 | Bhojpur | 1. Bhojpur | 68.40 | 23703 | 5610 | 14 | 38 | 7 |
| | | 2. Shadanand | 63.17 | 27538 | 5953 | 25 | 34 | 13 |
| | | 3. Hatuwagadhi | 7.90 | 17778 | 3990 | 21 | 41 | 19 |
| | | 4. Ramprasad Rai | 51.94 | 16456 | 3500 | 11 | 28 | 10 |
| | | 5. Aamchok | 0.00 | 16311 | 3203 | 33 | 32 | 24 |
| | | 6. Tyamke Maiyunm | 22.40 | 15866 | 3538 | 24 | 35 | All Transformers are Provided by Rural Municipality |
| | | 7. Arun Gaunpalika | 91.85 | 15410 | 3296 | 4.5 | 7 | 2 |
| | | 8. Pauwadungma | 47.98 | 13413 | 2858 | 8.5 | 14 | 8 |
| | | 9. Salpasilichho | 8.15 | 11422 | 2378 | 21 | 25 | 16 |
| | | Total District : Bhojpur | 44.04 | 157897 | 34326 | 162 | 254 | 99 |

# JANAKPUR REGIONAL OFFICE



# JANAKPUR DISTRIBUTION CENTRE CHIEFS

**Om Prakash Mahato**
Janakpur Regional Office Chief

**Surya Narayan Mandal**
Janakpur DC

**Bishnu Prasad Yadav**
Lahan DC

**Raj Kumar Raman**
Sakhuwa DC

**Chandra Narayan Shah**
Rajbiraj DC

**Madhav Prasad Yadav**
Malangawa DC

**Madhabendra Yadav**
Jaleshwor DC

**Abdesh Kumar Dube**
Siraha DC

**Ram Ayodhya Raya Yadav**
Udayapur DC

**Bijaya Mahato**
Lalbandi DC

**Digambar Yadav**
Mirchaiya DC

**Sunil Kumar Mahato**
Yadukuwa DC

**Khil Nath Aryal**
Sindhuli DC

**Roshan Kumar Singh**
Gaushala DC

**Ram Dinesh Raya Yadav**
Diktel DC

**Roshan Kumar Singh**
Kanchanpur DC

**Sanjib Shah**
Okhaldhunga DC

## Introduction

Janakpur Regional Office (JRO) is one of the eight Regional Offices under the Distribution and Consumer Services Directorate and is responsible for overall management of electricity distribution services, operation and maintenance of distribution networks of Janakpur and Sagarmatha Zones. It comprises 16 Distribution Centers spread over in Dhanusha, Mahottari, Sarlahi, Sindhuli of Janakpur zone and Siraha, Saptari, Udaypur, Okhaldhunga, Khotang & Solukhumbu districts of Sagarmatha zone. Yadukuha DC and Kanchanpur DC are newly formed distribution centres of this region in the F.Y 2075/2076.

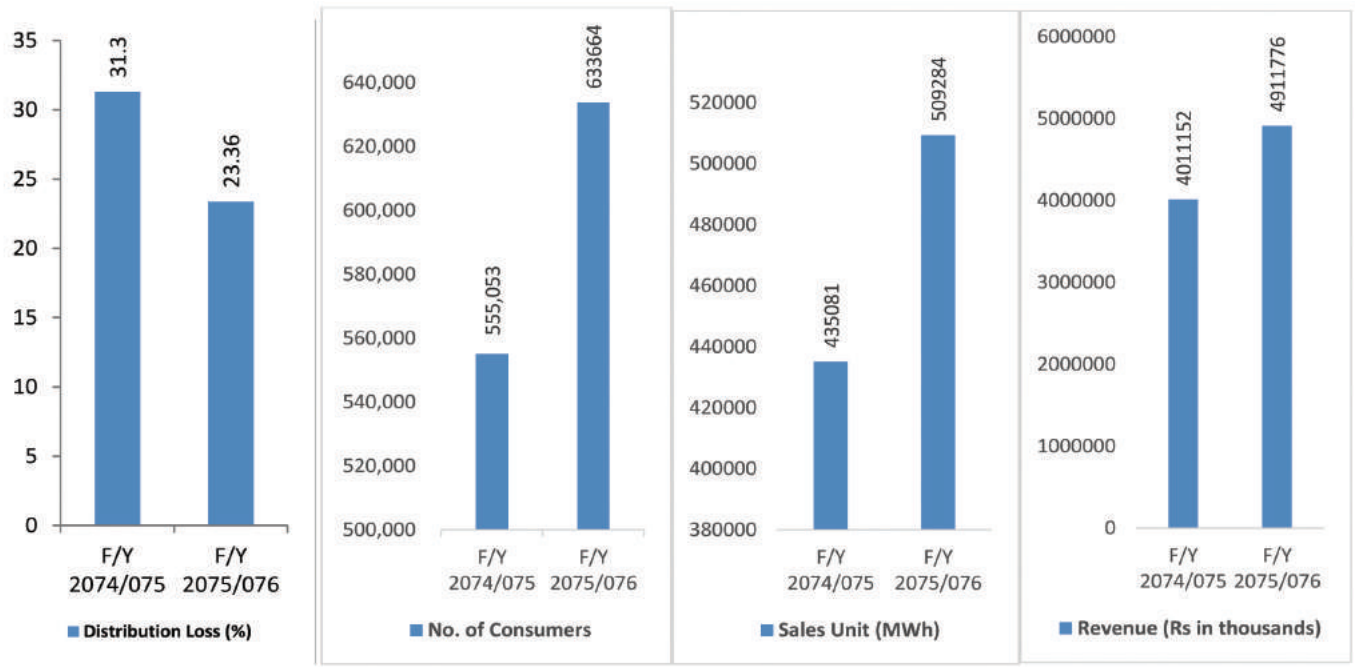
The major activities of this regional Office include operation, maintenance and rehabilitation of the electricity distribution networks up to 33 kV voltage Level and 33/11 kV Substations as well as consumer services activities such as new consumer connections, meter reading, billing, and revenue collection.

year under consideration two new distribution center namely Yadukuha and Kanchanpur were established for the convenience of the consumers. Regional office comprises of technical, financial and admistrative division which monitors various actions of the concern DCs. The source of fund is Government of Nepal and NEA itself. There are nine 33 kV transmission line, substation project and a rural electrification project funded by Government of Nepal under this regional office

## Key Objectives

- To decrease the distribution system loss by controlling the electricity leakage and theft energy using the different tools of loss reduction activities/loss reduction programs.
- To implement interaction and public awareness programs which will enhance in the increment of sales, revenue collection and decrease in electricity loss.

The comparative salient features of this regional office are as follows:




## Operational Structure

There are 16 Distribution Centers under JRO spread over Janakpur and Sagarmatha Zones. During the

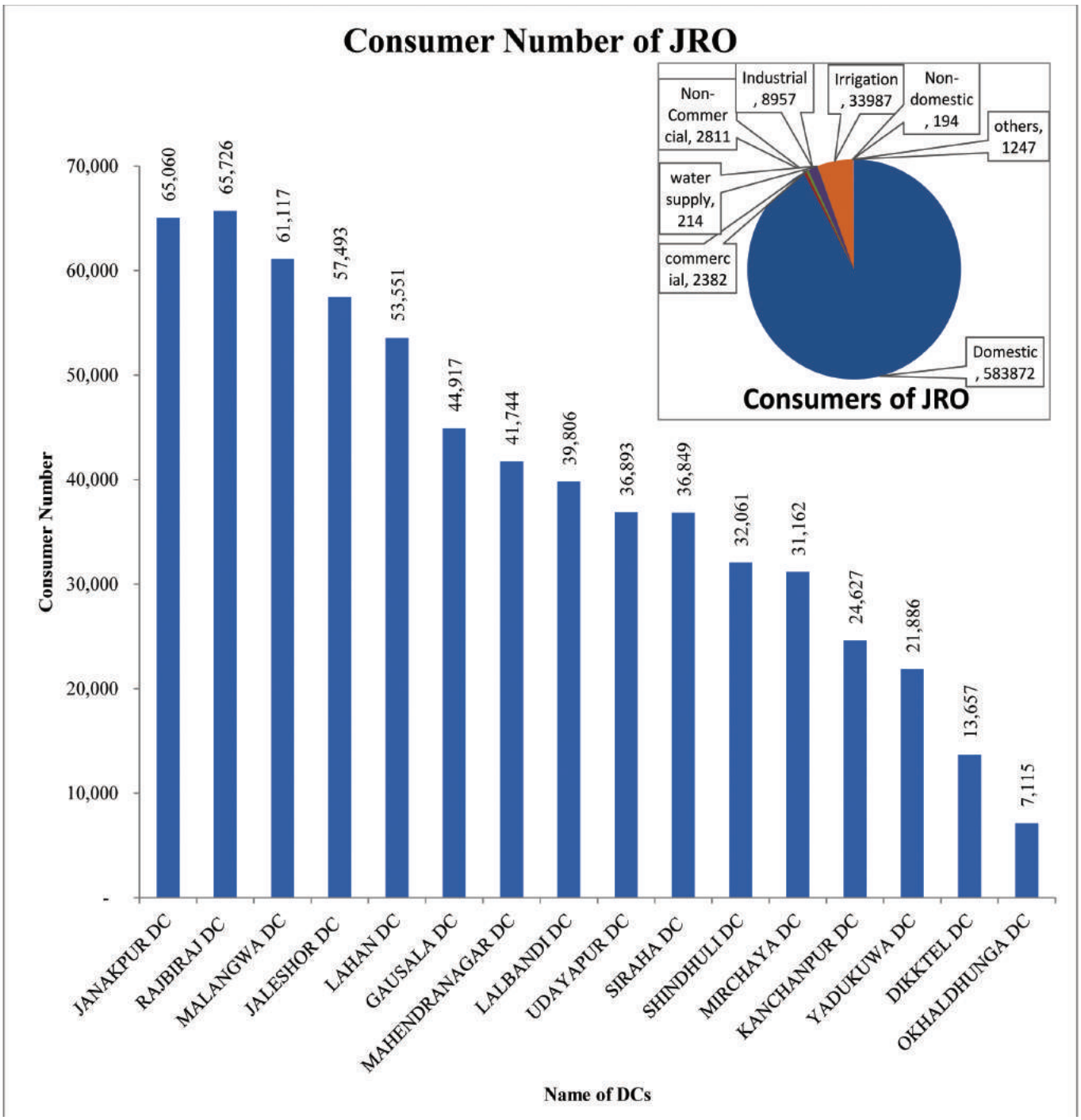
- Supply of reliable electricity to the consumers within the Region at statutory levels of voltage.

- Increase the revenue by increasing sales of electricity in the region.
- Provide new connections to prospective consumers.
- Ensure rational development of the electricity distribution system within the Region.

## Highlights of the Year

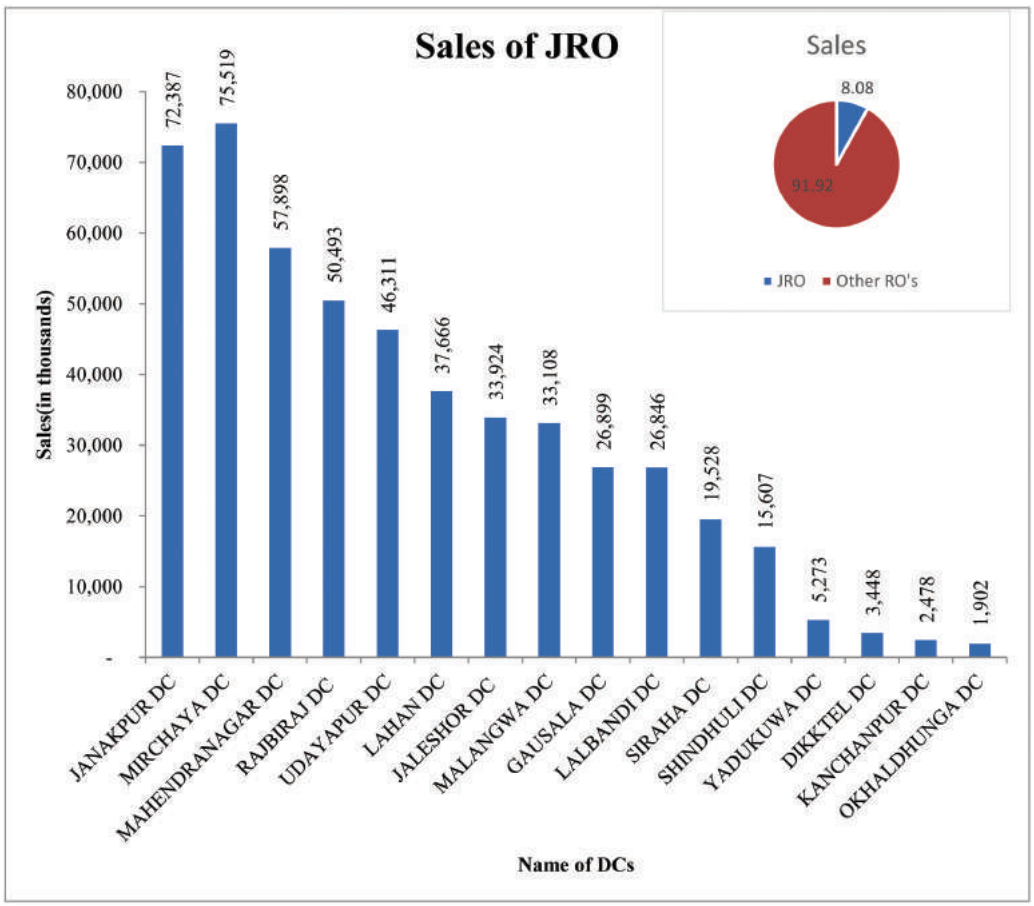
### Consumer Number

JRO recorded 633,664 consumer accounts by the end of the fiscal year 2075/076 which is 14.16% growth of consumers to that of last year. The majority of consumer accounts were in the domestic category while the second most were from the irrigation category.



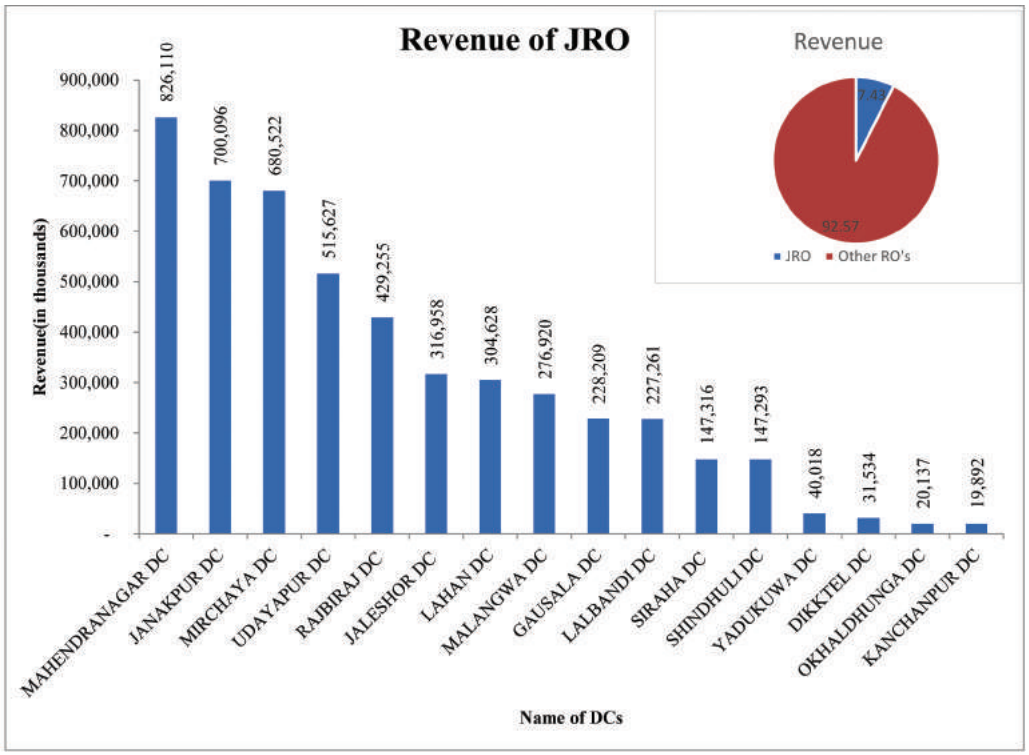
## Sales

A total of 509,284.02 MWh of energy was sold in this FY 2075/076 which is an increase of 17.05% from last year. Sales contribution to NEA system from this Regional Office is 8.08%.

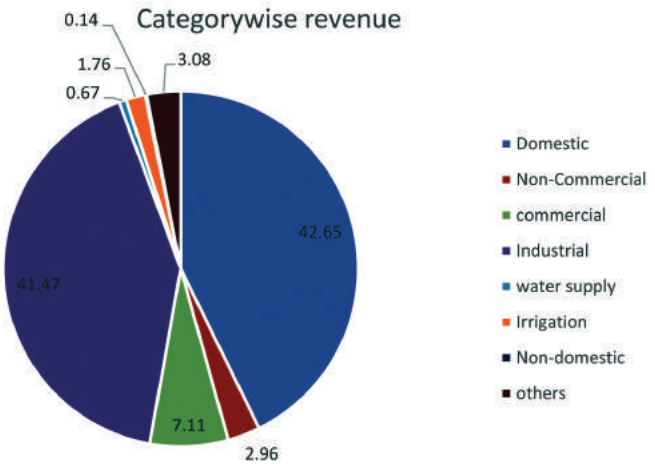



## Revenue

The gross revenue of Rs. 66,101.00 million was earned in F/Y 2075/076 after selling of 509,284.02 MWh energy, which is 22.45% more than that of last year.



The majority of revenue in JRO recorded from domestic tariff category which is approximately 43% of the total revenue of the region.




Mahendranagar distribution Center accounts for 16.81%, Janakpur accounts for 14.25%,, Mirchya accounts for 13.85%, Udayapur accounts for 10.49% and Rajbiraj accounts for 8.73% of the total revenue in the Region

## Distribution Infrastructure

| | |
|---|---|
| 33 kV Distribution Lines | 774.70km |
| 11 kV Distribution Lines | 5364.05 km |
| 33/11 kV primary Substations | 24 |
| LV Distribution Lines | 14500 km |
| LV Distribution transformers | 4,249 Nos |
| Distribution Transformers Total installed capacity | 351.96 MVA |

## Performance Highlights

| | |
|---|---|
| Consumer per Staff | 814 |
| LT 0.4/0.24KV Line Length per Staff (km/staff) | 18.64 |
| Sales per Consumer per year (kWh/Consumer) | 804 |
| Revenue per Consumer per year (Rs./Consumer) | 7,752 |
| Consumer per Distribution Transformers | 149 |

## Customer Care

Distribution centers work as interfaces between NEA and its consumers. So, special efforts were taken to improve the quality of service at the consumer interface points. The employees took special attention and efforts to serve their valued consumers in more effective way. Nepal Electricity Authority has made arrangements to submit electricity bill easily through the online systems. This system has given the service of paying the bill online and also updates about the bill payment for the consumers and the compulsion for consumers to come to counters for bill payment has ended, thus saving time of the consumer. Consumers can pay their bills via 8 service providers (eSewa, PayPoint,CFS Remit,City Express, Prabhu Bank,Nepal Investment Bank, Himalayan Bank and Mahalaxmi Bikash Bank). NEA has introduced one door system to facilitate the consumers and to provide the service as quickly as possible. This system saves the time of the consumer.

For the consumers having bulk payments and those who wants to pay bill at cash collection centers, the Queue Management System was initiated and is continued till date. This system solved the difficulties faced by the consumers in queuing for making the payments. Round the clock no-light services have been implemented in most of the urban no-light centers. Help desk and quick service is maintained in no light and consumer services for instant service to the costumer.

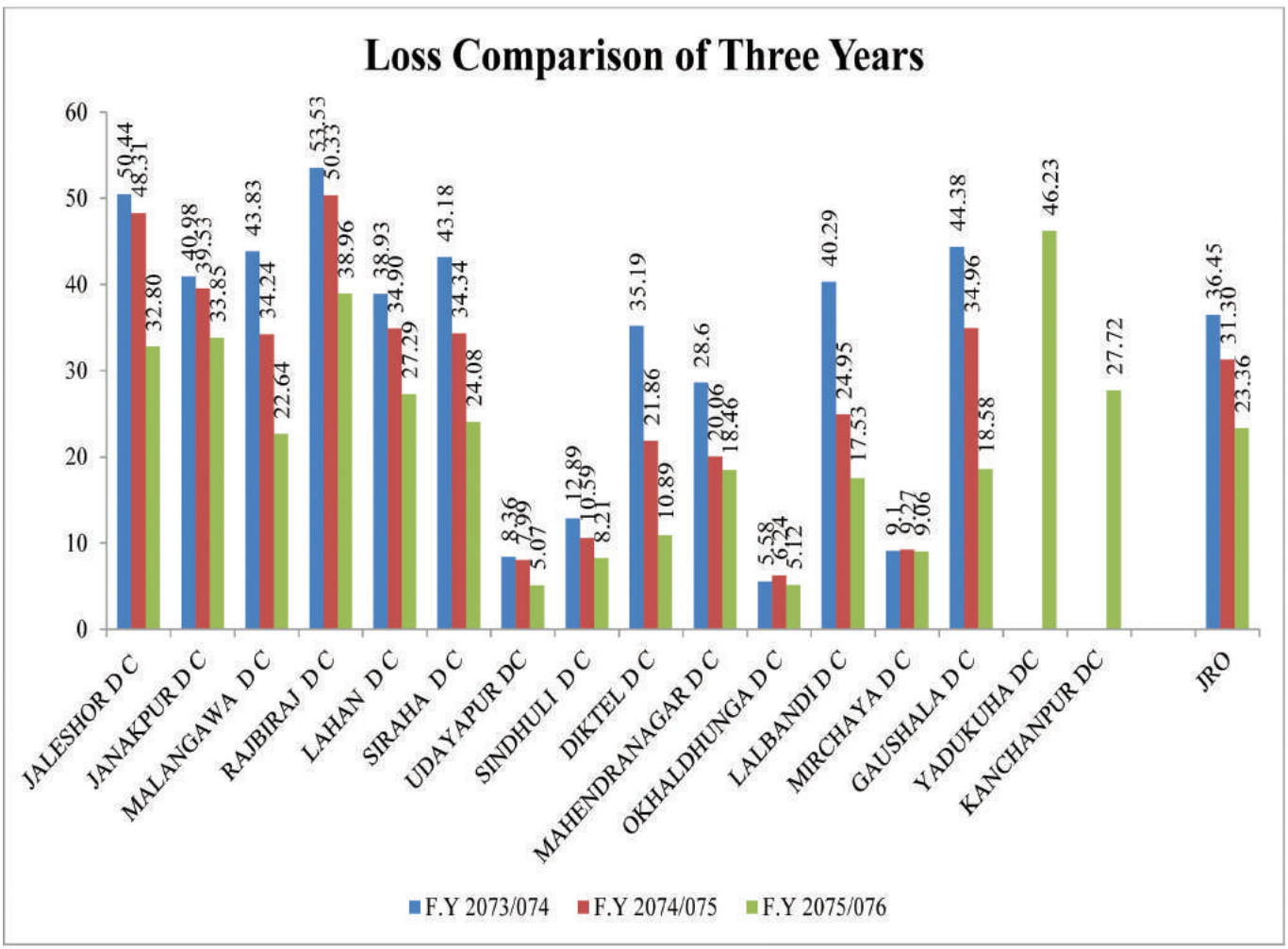
Introduction of Public Help Desk and One Door Service (Siraha DC)

## Loss Reduction Program/Loss Reduction Activities

Loss reduction program was conducted as campaign throughout the fiscal year. In the initial phase, pamphlet distribution, miking and public hearing programmed were conducted in different DCs for awareness. Also with the help of Security Personnel, massive direct

hooking control program was carried out. Similarly, intensive meter resealing and inspection program was done to minimize the chances of theft. Data download and analysis of All TOD meters were completed and additional billings against CT/PT outage, MF and reverse energy case have been processed.

Loss reduction program will be carried out as a campaign in this fiscal year. Consumers and local people will be motivated such that they do not indulge in illegal use of electricity. Activities like pamphleting, public hearing program, meter resealing, random inspection of energy meters,




## Future Plans/Programs

As high system loss is a major challenge for NEA, JRO is trying to make every effort to bring down the distribution system loss. It is planning to improve the quality of the services through the use of new technologies and capacity building to meet the challenges of new environment in utility business. Consumer complaints shall be addressed without delay and the procedure for new connection related works shall be made simple and user friendly.

action against direct hooking and meter bypass case and TOD meter data download and analysis will be carried out continuously. Also reduction of technical loss will be given priority. Under this activity, actions like conductor upgrading, upgrading and installation of distribution transformer in appropriate load center to avoid the overloading and heavy loss will be carried out. Also all the industries will be informed to maintain power factor at minimum 0.8 and shunt capacitor connection will be made mandatory for new three phase industrial consumer.

Various Loss Reduction Activites conducted within the Region.

## Safety Measures/ Safety day

Safety measures have become necessary as there is occurence of electric accidents of employees, people and domestic animals every year due to leakage of electricity and non-safety working habit. Initiative will be taken to raise the awareness of the working staff regarding safety hazards. Use of safety tools will be made mandatory for all the working staffs.

## Challenges within Regional Office

The various challenges faced by the regional office to provide reliable service to the consumers are as follows:

- Chapur-Haripur-Malangwa 33KV Line connected to Chapur grid is about 100 km long which is overloaded to 22 MVA.Therefore, 132/33 kV grid substation must be constructed nearby Lalbandi & Malangwa.
- Janakpur 1 & Janakpur 2, 33 KV double circuit line of Mujeliya SS is connected to dhalkebar grid and 25 km long, also branched to paraul &Yadukuha. These lines are overloaded upto 20 MVA. Therefore, grid must be established near Janakpur and Jaleshowor area.
- Dhalkebar-Sindhuli and Lahan-Bishnupur 33


Electricity Saftey Day in Rajbiraj DC.

kV line should be shortened by constructing substation between the lines.

- Every year strong wind and floods occur in these area. Most of the substation are submerged in water. It is very difficult to restore line in those situation. This year Jaleshwor 33/11 kV SS was submerged under water in flood. Bishnupur SS, Rajbiraj SS, Rupni SS have most probable chances to be flooded during rainy season. Jaljale-Buipa-Okhaldhunga 33 kV line is mostly effected during flood.
- Most of the street lights are unaccounted in this region causing loss. It is common problem of almost all distribution center.
- Most of the 33/11 KV substation of this region does not have Power Capacitor Bank causing more technical loss. Power capacitor is only available in jaleshwor SS while remaining other does not have.
- Unauthorized use of electricity service increases loss in this region. Rajbiraj, Malangwa, Lahan, Yadukuha, Sakhuwa, Jaleshwor, Kanchanpur, Siraha dc have such major problem
- Line Upgrade and line rehabilation is needful work in present condition for proper supply of electricity.
    - 33 kV Janakpur 1 & Janakpur 2 line must be upgraded.
    - 33 KV line must be constructed between Dhanushadham and yadukuha.
    - Underground distribution network must be established in cities like Rajbiraj & Janakpur.
    - HT line must be made in 11 m Pole.
    - Galvanized Line material should be used and old rusty one should be replaced.

## Projects within the Regional Office

### Khurkot Nepalthok 33kV Transmission Line and Substation Project

The scope of the project is to construct 33 kV transmission line and substation within the Khurkot Nepalthok region. It is a Government Funded Project with the budget of 230,500 (in thousands) and inception date of 066/067. The percentage of work completed is 35% with the amount of budget expended 66,862(in thousands). The work progress achieved so far is construction of staff quarter, control room and 22 km 33 kV line. Its completion date is FY 2076/77.

### Okaldhunga Salleri(Solukhumbu) 33 kV Transmission Line and Substation Project

The scope of the project is to construct 33kV transmission line and substation within the Okaldhunga Salleri (Solukhumbu) region. It is a Government Funded Project with the budget of 170,500 (in thousands) and inception date of 066/67. . The percentage of work completed is 30% with the amount of budget expended 16,225(in thousands). The work progress achieved so far is construction of 38 km 33 kV line. Its completion date is FY 2076/77.

### Bhagwanpur 33 kV Transmission Line and Substation Project

The scope of the project is to construct 33 kVtransmission line and substation within the Bhagwanpur region. It is a Government Funded Project with the budget of 221,635 (in thousands) and inception date of 066/67. The percentage of work completed is 22% with the amount of budget expended 37,224(in thousands). The work progress achieved so far is construction of staff quarter and control room. Its completion date is FY 2076/77.

### Sanghutar(Ramechhap) 33 KV Transmission Line and Substation Project

The scope of the project is to construct 33kV transmission line and substation within the Sanghutar (Ramechhap) region. It is a Government Funded Project with the budget of 131,000 (in thousands) and inception date of 066/67. The percentage of work completed is 22% with the amount of budget expended 20,921(in thousands). The work progress achieved so far is erection of 195 poles and stringing of conductor upto 10 Km out of 24 Km and construction of staff

quarter and control room. Its completion date is FY 2076/77.

### Haripurwa Basanpur 33 kV Transmission Line and Substation Project

The scope of the project is to construct 33 kV transmission line and substation within the Haripurwa Basanpur region. It is a Government Funded Project with the budget of 212,618 (in thousands) and inception date of 066/67. The percentage of work completed is 28% with the amount of budget expended 54,107(in thousands). The work progress achieved so far is construction of staff quarter and control room. Its completion date is FY 2076/77.

### Gadhariya Dumariya 33&11 kV Transmission Line and Substation Project

The scope of the project is to construct 33&11 kV transmission line and substation within the Gadhariya Dumariya region. It is a Government Funded Project with the budget of 199,164 (in thousands) and inception date of 066/67. The percentage of work completed is 32% with the amount of budget expended 50,782(in thousands). The work progress achieved so far is construction of staff quarter and control room. Its completion date is FY 2076/77.

### HT/LT Line Construction at Singhadevi Raniban, Okhaldhunga

The scope of the project is to construct HT/LT line within the Singhadevi Raniban, Okhaldhunga region. It is a Government Funded Project with the budget of 39,000 (in thousands) and inception date of 070/71. The percentage of work completed is 35% with the amount of budget expended 6,365(in thousands). The work progress achieved so far is underconstruction of 2.2 KM 11 KV Line and 11 km 0.4 KV line. Its completion date is FY 2076/77.

### HT/LT Line Construction at Nirmali Dada, Khotang

The scope of the project is to construct HT/LT line within the Nirmali Dada, Khotang region. It is a Government Funded Project with the budget of 17,000 (in thousands) and inception date of 070/71. The percentage of work completed is 95% with the amount of budget expended 10,922 (in thousands). The work progress is achieved and only measurement work is remaining. Its completion date is FY 2076/77.

### Khurkot Ghurmi 33 KV Transmission Line and Substation Project

The scope of the project is to construct 33 kV transmission line and substation within the Khurkot Ghurmi region. It is a Government Funded Project with the budget of 282,441 (in thousands) and inception date of 066/67. Its completion date is FY 2077/78.

### Rupni Sarsawar Kusumhar 33 KV Transmission Line and Substation Project

The scope of the project is to construct 33 kV transmission line and substation within the Rupni Sarsawar Kusumhar region. It is a Government Funded Project with the budget of 302,300 (in thousands) and inception date of 075/76. Its completion date is FY 2077/78.

### Lohna Janakpur33 KV Transmission Line and Substation Project

The scope of the project is to construct 33 kV transmission line and substation within the Lohna Janakpur region. It is a Government Funded Project with the budget of 322,740 (in thousands) and inception date of 075/76. Its completion date is FY 2077/78.

Construction of New Substation in Siraha

# Substation Status

| S. No | Distribution Center | Name of Substation | Total Capacity (MVA) | Voltage Level (kV) | Existing | Proposed | Planned | Underconstruction | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Janakpur | Mujeliya | 32.1 | | √ | | | | Planned to be Upgraded soon by 40MVA |
| 2 | Yadukuha | Yadukuha | 16.6 | | √ | | | | Before FY 2075/076,it was under Janakpur DC |
| 4 | Sakhuwa | Dhanushadham | 8 | | √ | | | | |
| 5 | Jaleshwor | Jaleshwor | 16 | | √ | | | | |
| 6 | Jaleshwor | Paraul | 8 | | √ | | | | |
| 7 | Gaushala | Aurhi | 16 | | √ | | | | |
| 8 | Gaushala | Khairmara | 3 | | √ | | | | |
| 9 | Malangwa | Malangwa | 16 | | √ | | | | |
| 10 | Malangwa | Barahathwa | 8 | | √ | | | | |
| 11 | Lalbandi | Haripur | 24 | | √ | | | | |
| 12 | Sindhuli | Sindhuli | 8 | | √ | | | | |
| 13 | Sindhuli | Bhiman | 1.5 | | √ | | √ | | Planned to be Upgraded soon by 6/8MVA |
| 14 | Siraha | Bishnupur | 16 | | √ | | | | |
| 15 | Mirchaiya | Mirchaiya | 8 | 33/11 | √ | | √ | | Planned to be Upgraded soon by 16MVA |
| 16 | Rajbiraj | Rajbiraj | 16 | | √ | | | | |
| 17 | Rajbiraj | Rupni | 11 | | √ | | | | |
| 18 | Rajbiraj | Bode Barsain | 8 | | √ | | | | Recently Charged |
| 19 | Kanchanpur | Bhardah | 3 | | √ | | | | Before FY 2075/076,it was under Rajbiraj DC |
| 20 | Kanchanpur | Balardah | 8 | | √ | | | | Before FY 2075/076,it was under Rajbiraj DC |
| 21 | Udayapur | Jaljale | 25 | | √ | | | | |
| 22 | Udayapur | Taraghari(Katari) | 3 | | √ | | | | |
| 23 | Okhaldhunga | Okhaldhunga | 2.25 | | √ | | | | |
| 24 | Diktel | Buipa | 3 | | | | | | |
| 25 | Diktel | Bagedhunga | 3 | | √ | | | | Recently Charged but no outgoing11 KV Feeder |
| 26 | Lahan | Bhagwanpur | | | | | | √ | Under Construction (16.6 MVA) |
| 27 | | Rakathum | | | | | | √ | Under Construction (16.6 MVA) |
| 28 | | Haripurwa | | | | | | √ | Under Construction (16.6 MVA) |
| 29 | | Gadhaiya | | | | | | √ | Under Construction (16.6 MVA) |
| **Existing total MVA** | | | **263.45** | | **24** | | | | |

# 33 kV Feeder Status

| S.N. | Name of Distribution Center | Name of 33kV Feeder | Length of Feeder (km) | Conductor Name/Size (sq.inch) | Maximum/ Average Load (A) |
|---|---|---|---|---|---|
| 1 | Janakpur | Janakpur 1 | 25 | Dog | 300/240 |
| 2 | Janakpur | Janakpur 2 | 25 | Dog | 320/280 |
| 3 | Sakhuwa | Dhanushadham | 28 | Dog | 35/20 |
| 4 | Jaleshwor | Parul | 35 | Dog | 80/60 |
| 5 | Jaleshwor | Sursand(India) to Jaleshwor | 10 | Dog | 180/140 |
| 6 | Gaushala | Dhalkebar to Aurhi SS | 30 | Dog | 140/100 |
| 7 | Gaushala | Bardibas to Khairmara | 35 | Dog | 20/14 |
| 8 | Malangwa | Haripur to Malangwa | 25 | Dog | 240/200 |
| 9 | Malangwa | Bagmati - Barahatwa | 20 | Dog | 80/60 |
| 10 | Lalbandi | Chapur-Haripur | 37 | AAA | 400/340 |
| 11 | Lalbandi | Bagmati - Bailbash | 16 | Dog | 18/15 |
| 12 | Sindhuli | Dhalkebar to Sindhuli SS | 45 | Dog | 70/50 |
| 13 | Siraha | Lahan- Bishnupur | 34 | Dog | 130/100 |
| 14 | Siraha | Jayanagar(India) to Bishnupur | 25 | Dog | 130/100 |
| 15 | Mirchaiya | Mirchaiya to Paanbari | 8 | Dog | Not in Operation |
| 16 | Rajbiraj | Lahan to Rajbiraj | 44 | Dog | 260/220 |
| 17 | Rajbiraj | Lahan- Rupni | 32 | Dog | 150/120 |
| 18 | Rajbiraj | Rupni to Rajbiraj | 12 | Dog | 260/230 |
| 19 | Rajbiraj | Bishanpur to Bode Barsain | 11 | Dog | 50/38 |
| 20 | Rajbiraj | Bhardah to Rajbiraj | 20 | Dog | 150/120 |
| 21 | Rajbiraj | Rajbiraj Switchyard to Pumpcanal Switchyard | 36 | Dog | |
| 22 | Kanchanpur | Kataiya(India) to Bhardah | 13 | Dog | 80/60 |
| 23 | Kanchanpur | Rupni to Balardah | 32 | Dog | 120/100 |
| 24 | Udayapur | Lahan to Jaljale | 23.5 | Dog | 200/160 |
| 25 | Udayapur | Mirchaiya to Taraghare | 28.2 | Dog | 40/35 |
| 26 | Diktel | Jaljale to Buipa | 69 | Dog | 30/20 |
| 27 | Diktel | Raswaghat to Bagedhunga | 8 | Dog | |
| 28 | Okhaldhunga | Buipa to Okhaldhunga | 33 | Dog | 16/14 |
| 29 | Yadukuha | Mujeliya to Yadukuha | 15 | Dog | 100/80 |
| **Total** | | | **774.7** | | |

# 11 kV Feeder Status

| S.N. | Name of Distribution Center | Name of 11kV Feeder | Length of Feeder (km) | Conductor Name Size (sq.inch) | Maximum/ Average Load (A) |
|---|---|---|---|---|---|
| 1 | Yadukuha | Bhatihan | 32 | Rabbit and Weasel | 110/80 |
| | | Sonigama | 42 | Rabbit and Weasel | 80/60 |
| | | Dhabauli | 78 | Rabbit and Weasel | 140/115 |
| 2 | Janakpur | City1 | 97 | Dog and Rabbit | 150/120 |
| | | City2 | 74 | Dog and Rabbit | 180/160 |
| | | City 3 | 89 | Dog and Rabbit | 150/120 |
| | | City 4 | 62 | Dog and Rabbit | 120/100 |
| | | Pidari | 94 | Dog ,Rabbit and Weasel | 200/160 |
| | | Ring | 123 | Dog, Rabbit and Weasel | 120/100 |
| | | Dedicated | 19 | Rabbit and Weasel | 16/14 |
| | | Mahendranagar | 91 | Dog,Rabbit and Weasel | 140/120 |
| | | Industrial | 7 | Rabbit and Weasel | 40/30 |
| 3 | Sakhuwa | Mahendranagar | 91 | Dog, Rabbit and Weasel | 235/200 |
| | | Lalgadh | 22 | Dog, Rabbit and Weasel | 185/150 |
| | | Godar | 154 | Dog, Rabbit and Weasel | 265/200 |
| | | Industrial | 7.92 | Dog, Rabbit and Weasel | 75/60 |
| | | Sabaila | 31 | Dog, Rabbit and Weasel | 40/30 |
| 4 | Jaleshwor | City | 30 | Dog, Rabbit and Weasel | 80/60 |
| | | Ring | 15 | Dog, Rabbit and Weasel | 20/15 |
| | | Ekdara | 45 | Dog, Rabbit and Weasel | 80/60 |
| | | Katti | 55 | Dog, Rabbit and Weasel | 125/80 |
| | | Pipara | 73 | Dog, Rabbit and Weasel | 150/120 |
| | | Mathiyani | 45 | Dog, Rabbit and Weasel | 120/90 |
| | | Paraul | 61 | Dog, Rabbit and Weasel | 70/60 |
| | | Loharpatti | 74 | Dog, Rabbit and Weasel | 80/70 |
| 5 | Gaushala | Gaushala | 98 | Rabbit | 140/100 |
| | | Sonamai | 50 | Rabbit | 100/85 |
| | | Bhangaha | 51 | Rabbit | 100,/70 |
| | | Aurhi | 40 | Dog and Weasel | 80/55 |
| | | Lalgadh | 46 | Dog and Weasel | 130/78 |
| | | Bazar | 20 | Dog, Rabbit and Weasel | 60/40 |
| | | Bharat tole | 3 | Dog, Rabbit and Weasel | 20/18 |
| 6 | Malangwa | Malangwa | 18 | Dog, Rabbit | 140/100 |
| | | Kaudena | 330 | Rabbit | 180/150 |
| | | Gramin | 51 | Rabbit | 140/100 |
| | | Barahathwa | 65.2 | Rabbit | 180/140 |
| | | Hirapur | 55 | Rabbit | 60/40 |
| | | Panchgachhiya | 46 | Dog, Rabbit and Weasel | 120/70 |
| | | Gair | 26 | Dog, Rabbit and Weasel | 40/20 |
| 7 | Lalbandi | Lalbandi Feeder | 75 | DOG | 150/120A |
| | | Harion Feeder | 85 | DOG | 170/150A |
| | | Gair Feeder | 20 | DOG | 40/20A |

| | | | | | |
|---|---|---|---|---|---|
| | | Pangachhiya Feeder | 77 | DOG | 120/70A |
| 8 | Sindhuli | Bazar | 12.5 | Dog & Rabbit | 90/70 |
| | | Beni | 175 | Rabbit | 60/45 |
| | | Majhitar | 80 | Rabbit | 22/20 |
| | | Ranibas | 86 | Dog and Rabbit | 70/50 |
| | | Bhiman | 8 | Dog and Rabbit | 15/14 |
| | | Dudhauli | 75 | Dog and Rabbit | 60/40 |
| 9 | Lahan | Lahan | 40.5 | Dog and Rabbit | 200/160 |
| | | Jahadi | 150 | Dog and Rabbit | 220/200 |
| | | Thadi | 111 | Dog and Rabbit | 240/205 |
| | | Sitapur | 66 | Dog and Rabbit | 200/160 |
| | | Bastipur | 56 | Dog and Rabbit | 80/60 |
| 10 | Siraha | Siraha | 62.47 | Dog, Rabbit and Weasel | 220/200 |
| | | Sanhaitha | 90.96 | Dog, Rabbit and Weasel | 80/60 |
| | | Kalyanpur | 68.89 | Dog, Rabbit and Weasel | 120/100 |
| 11 | Mirchaiya | Mirchaiya | 55 | Dog and Rabbit | 110/90 |
| | | Golbazar | 95 | Dog, Rabbit and Weasel | 180/150 |
| | | Bandipur | 39 | Dog, Rabbit and Weasel | 80/60 |
| 12 | Rajbiraj | Bazaar1 | 16 | Dog and Rabbit | 140/120 |
| | | Bazaar2 | 18 | Dog and Rabbit | 160/140 |
| | | East | 32 | Dog, Rabbit and Weasel | 120/100 |
| | | Hospital | 1 | Dog, Rabbit and Weasel | 5 |
| | | Raipur Feeder | 14 | Dog, Rabbit and Weasel | 190/160 |
| | | South | 37 | Dog, Rabbit and Weasel | 150/120 |
| | | West | 65 | Dog, Rabbit and Weasel | 145/100 |
| | | Kalyanpur | 172 | Dog, Rabbit and Weasel | 305/260 |
| | | Raipur | 8 | Dog, Rabbit and Weasel | 16/14 |
| | | Kanchanpur | 30 | Dog, Rabbit and Weasel | 130/110 |
| | | Industrial | 7 | Dog, Rabbit and Weasel | 10 |
| 13 | Kanchanpur | Kanchanpur (From Bhardah) | 28 | Dog, Rabbit and Weasel | 90/70 |
| | | Hanumannagar | 8 | Dog, Rabbit and Weasel | 70/60 |
| | | Kanchanpur (From Balardah) | 44 | Dog, Rabbit and Weasel | 50/40 |
| 14 | Udayapur | Gaighat | 110 | Rabbit and Weasel | 180/150 |
| | | Katari | 64.76 | Rabbit and Weasel | 60/40 |
| | | Beltar | 99.18 | Dog, Rabbit and Weasel | 120/100 |
| | | jojdiah | 27 | Rabbit and Weasel | 45/26 |
| | | Jaljale | 35 | Rabbit and Weasel | 32/20 |
| | | Sindhuli | 20.67 | Rabbit and Weasel | 60/40 |
| 15 | Okhaldhunga | Ramechhap Singhadevi | 80 | Weasel | 18 |
| | | Okhaldhunga | 85 | Weasel | 25 |
| | | Pokhre Feeder | 40 | Weasel | 6 |
| 16 | Diktel | Diktel | 127 | Weasel | 60/40 |
| | | Rajapani | 132 | Weasel | 30/25 |
| | | Halesi | 124 | Rabbit and Weasel | 40/30 |
| **Total** | | | **5364.05** | | |

# Electrification Status

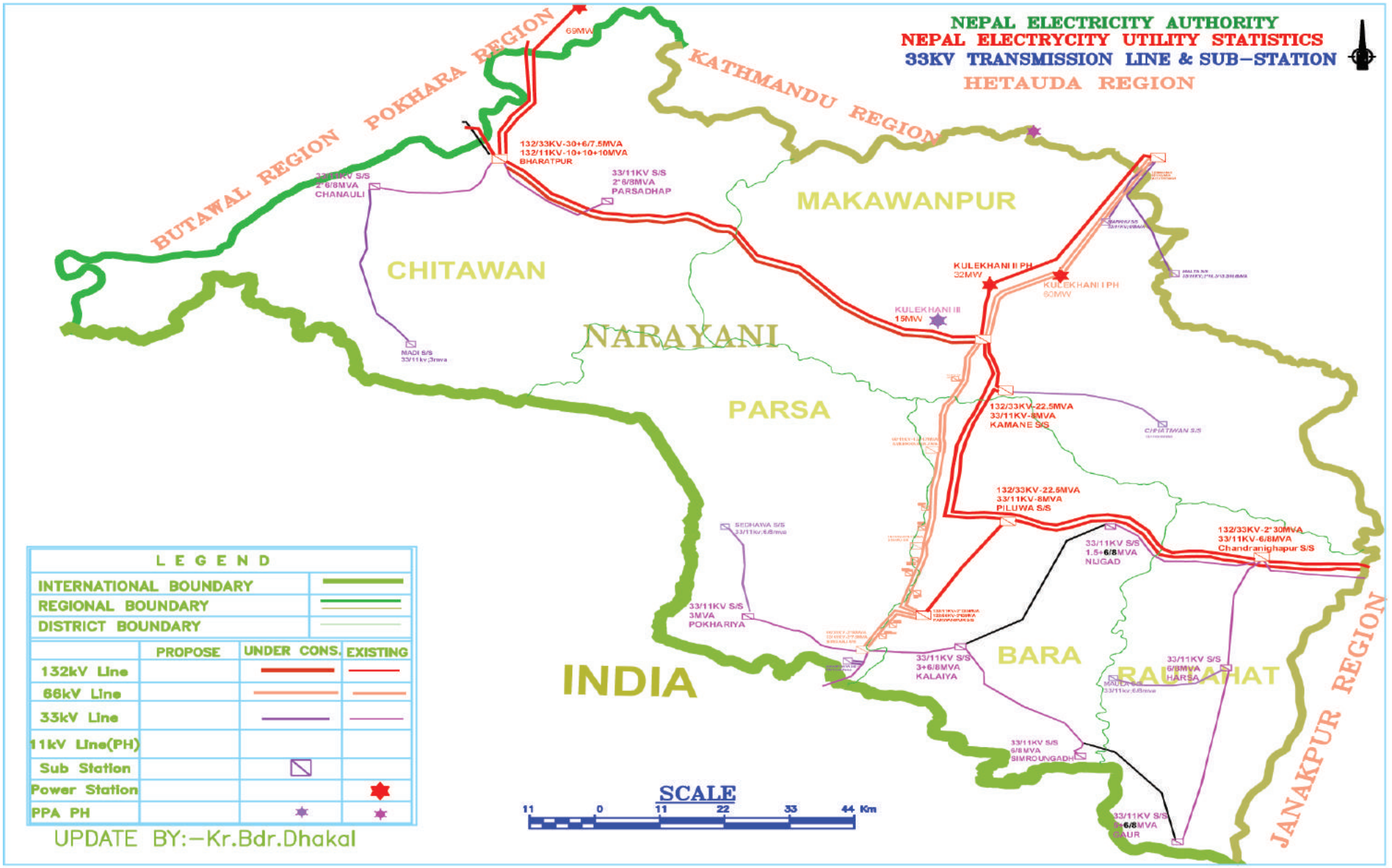
| S. No. | District | Municipalities Rural Municipalities | Total Electrification % of Municipality (Grid Connected) | Popula-tions | No of House-holds | Total 11 kV (HT) Circuit Kilometer (KM) required to fully electrified the Municipalities or rural municipalities | Total 0.4 kV (LT) Circuit Kilometer (KM) required to fully electrified the Municipalities or rural municipalities | No of Transformer Required |
|---|---|---|---|---|---|---|---|---|
| 1 | Saptari | 1. Bodebarsain | 44.53 | 47553 | 8824 | 10 | 25 | 15 |
| | | 2. Dakneshwori | 53.75 | 47030 | 8964 | 12 | 30 | 20 |
| | | 3. Hanumannagar Kankalini | 68.33 | 50309 | 8970 | 15 | 25 | 20 |
| | | 4. Kanchanrup | 88.47 | 58617 | 11212 | 6 | 16 | 18 |
| | | 5. Khadak | 55.79 | 49905 | 9477 | 10 | 25 | 10 |
| | | 6. Sambhunath | 65.74 | 34953 | 6805 | 12 | 25 | 10 |
| | | 7. Saptakoshi | 88.20 | 23243 | 4994 | 6 | 19 | 16 |
| | | 8. Surunga | 67.52 | 48646 | 9515 | 15 | 25 | 10 |
| | | 9. Rajbiraj | 76.75 | 76020 | 14731 | 10 | 30 | 15 |
| | | 10. Agnisaira Krishnasavaran | 86.46 | 30811 | 6023 | 4 | 10 | 10 |
| | | 11. Balan-Bihul | 66.36 | 24002 | 4373 | 15 | 30 | 15 |
| | | 12. Belhi Chapena | 66.16 | 29971 | 5403 | 10 | 25 | 10 |
| | | 13. Bishnupur | 65.45 | 25343 | 4809 | 12 | 25 | 12 |
| | | 14. Chhinnamasta | 76.89 | 26782 | 5190 | 10 | 20 | 12 |
| | | 15. Mahadeva | 65.69 | 31396 | 5935 | 8 | 25 | 15 |
| | | 16. Rupani | 76.34 | 29026 | 5514 | 10 | 30 | 15 |
| | | 17. Tilathi Koiladi | 67.01 | 34908 | 6267 | 10 | 30 | 15 |
| | | 18. Tirhut | 85.88 | 24211 | 4485 | 3 | 8 | 8 |
| | | **Total District : Saptari** | **69.72** | **692726** | **131491** | **178** | **423** | **246** |
| 2 | Siraha | 1. Lahan | 81.30 | 100299 | 18780 | 14 | 22 | 5 |
| | | 2. Dhangadhimai | 69.34 | 51863 | 9572 | 16 | 10 | 4 |
| | | 3. Siraha | 86.15 | 90206 | 16916 | 16 | 21 | 29 |
| | | 4. Golbazar | 79.21 | 56987 | 11051 | 7 | 35 | 5 |
| | | 5. Mirchaiya | 81.53 | 53459 | 10202 | 30 | 45 | 15 |
| | | 6. Kalyanpur | 77.09 | 53874 | 10264 | 7 | 13 | 12 |
| | | 7. Karjanha | 72.60 | 33848 | 6653 | 8 | 40 | 3 |
| | | 8. Sukhipur | 72.93 | 40314 | 7361 | 12 | 22 | 5 |
| | | 9. Bhagwanpur | 71.75 | 22906 | 4001 | 7 | 12 | 2 |
| | | 10. Aurahi | 79.43 | 25189 | 4640 | 4 | 40 | 7 |
| | | 11. Bishnupur | 78.72 | 20244 | 3791 | 5 | 6 | 8 |
| | | 12. Bariyarpatti | 70.00 | 27605 | 4660 | 13 | 19 | 3 |
| | | 13. Lakshmipur Patari | 70.00 | 30663 | 5279 | 15 | 30 | 10 |
| | | 14. Naraha | 80.09 | 21169 | 4016 | 4 | 9 | 5 |
| | | 15. Sakhuwanankar Katti | 71.06 | 20284 | 3704 | 10 | 14 | 5 |
| | | 16. Arnama | 79.69 | 25043 | 4423 | 5 | 4 | 8 |
| | | 17. Navarajpur | 79.75 | 20787 | 3584 | 4 | 12 | 3 |
| | | Total District : Siraha | **77.88** | **694740** | **128897** | **177** | **354** | **129** |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3 | Dhanusha | 1. Janakpur Sub Metropolitan City | 93.00 | 178925 | 33746 | 34 | 96 | 36 |
| | | 2. Chhireshwarnath | 96.38 | 46110 | 8578 | 1 | 3 | 10 |
| | | 3. Ganeshman Charanath | 88.04 | 40093 | 7764 | 2 | 4 | 8 |
| | | 4. Dhanusadham | 91.60 | 50292 | 9614 | 1 | 5 | 12 |
| | | 5. Nagarain | 93.03 | 39260 | 7022 | 5 | 36 | 9 |
| | | 6. Bideha | 77.88 | 35599 | 6419 | 8 | 30 | 20 |
| | | 7. Mithila | 87.21 | 42871 | 7823 | 5 | 40 | 10 |
| | | 8. Sahidnagar | 64.84 | 52320 | 9567 | 19 | 60 | 20 |
| | | 9. Sabaila | 84.62 | 57799 | 11112 | 3 | 14 | 19 |
| | | 10. Kamala | 41.48 | 42613 | 7722 | 12 | 45 | 20 |
| | | 11. Mithila Bihari | 93.87 | 37022 | 6693 | 7.5 | 40 | 10 |
| | | 12. Hansapur | 93.08 | 42164 | 7626 | 5 | 40 | 7 |
| | | 13.Janaknandani | 75.00 | 27955 | 4922 | 12 | 45 | 10 |
| | | 14. Bateshwar | 89.86 | 23754 | 4050 | 5 | 12 | 10 |
| | | 15. Mukhiyapatti Musharniya | 91.95 | 28114 | 4556 | 4 | 36 | 6 |
| | | 16. Lakshminya | 95.22 | 31170 | 5511 | 2.5 | 20 | 8 |
| | | 17. Aurahi | 89.94 | 24910 | 4416 | 1 | 8 | 2 |
| | | 18. Dhanauji | 90.38 | 23606 | 4101 | 5 | 12 | 10 |
| | | **Total District : Dhanusha** | **83.69** | **824577** | **151242** | **132** | **546** | **227** |
| 4 | Mohottari | 1. Aurahi Municipality | 88.32 | 35567 | 6502 | 6 | 21 | 12 |
| | | 2. Balawa Municipality | 95.00 | 47282 | 8555 | 11 | 10 | 3 |
| | | 3. Bardibas Municipality | 85.49 | 71706 | 14643 | 35 | 40 | 17 |
| | | 4. Bhangaha Municipality | 84.40 | 52214 | 9558 | 8 | 35 | 15 |
| | | 5. Gaushala Municipality | 83.17 | 74461 | 13281 | 8 | 30 | 15 |
| | | 6. Jaleshwor Municipality | 95.00 | 64264 | 11206 | 12 | 50 | 5 |
| | | 7. Loharpatti Municipality | 95.00 | 44538 | 8171 | 9 | 45 | 4 |
| | | 8. Manara Shiswa Municipality | 94.08 | 55492 | 9528 | 8 | 30 | 3 |
| | | 9. Matihani Municipality | 95.00 | 34647 | 5837 | 9 | 20 | 2 |
| | | 10. Ramgopalpur Municipality | 95.00 | 33960 | 5871 | 9 | 45 | 4 |
| | | 11. Ekdara Rural Municipality | 95.00 | 32737 | 5370 | 6 | 20 | 2 |
| | | 12. Mahottari Rural Municipality | 95.00 | 30633 | 5428 | 6 | 20 | 2 |
| | | 13. Pipara Rural Municipality | 95.00 | 39669 | 7247 | 7 | 20 | 2 |
| | | 14. Samsi Rural Municipality | 95.00 | 37735 | 6009 | 7 | 20 | 2 |
| | | 15. Sonama Rural Municipality | 87.03 | 43269 | 7080 | 8 | 20 | 11 |
| | | **Total District : Mahottari** | **90.93** | **698174** | **124286** | **149** | **426** | **99** |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 5 | Sarlahi | 1.Bagmati Municipality | 80.32 | 46256 | 9143 | 10 | 20 | 11 |
| | | 2.Balara Municipality | 98.00 | 51746 | 8809 | 20 | 35 | 8 |
| | | 3.Barahathwa Municipality | 96.00 | 79946 | 13573 | 22 | 32 | 6 |
| | | 4.Godaita Municipality | 98.81 | 54603 | 9046 | 16 | 30 | 7 |
| | | 5.Harion Municipality | 75.32 | 50294 | 9848 | 3 | 22 | 11 |
| | | 6.Haripur Municipality | 86.09 | 42767 | 7461 | 4 | 15 | 9 |
| | | 7.Haripurwa Municipality | 97.00 | 41267 | 6761 | 24 | 35 | 8 |
| | | 8.Ishworpur Municipality | 80.34 | 68685 | 12680 | 6 | 20 | 14 |
| | | 9.Kabilasi Municipality | 96.00 | 48475 | 7867 | 21 | 31 | 9 |
| | | 10.Lalbandi Municipality | 70.30 | 68007 | 14012 | 4 | 25 | 17 |
| | | 11.Malangwa Municipality | 99.00 | 53261 | 9060 | 12 | 25 | 7 |
| | | 12.Basbariya Rural Municipality | 95.00 | 26985 | 4236 | 18 | 26 | 6 |
| | | 13.Bishnu Rural Municipality | 97.00 | 28336 | 4588 | 22 | 35 | 8 |
| | | 14.Brahampuri Rural Municipality | 96.00 | 34159 | 5422 | 17 | 28 | 6 |
| | | 15.Chakraghatta Rural Municipality | 98.00 | 32005 | 5047 | 25 | 37 | 8 |
| | | 16.Chandranagar Rural Municipality | 95.00 | 38160 | 6342 | 22 | 35 | 7 |
| | | 17.Dhankaul Rural Municipality | 96.00 | 28383 | 4539 | 17 | 32 | 7 |
| | | 18.Kaudena Rural Municipality | 98.00 | 29867 | 4664 | 16 | 22 | 6 |
| | | 19.Parsa Rural Municipality | 96.00 | 24788 | 3827 | 17 | 23 | 5 |
| | | 20.Ramnagar Rural Municipality | 95.00 | 32892 | 5137 | 19 | 24 | 6 |
| | | **Total District : Sarlahi** | 90.12 | 880882 | 152062 | **315** | **552** | **166** |
| 6 | Solukhumbu | 1. Solududhkunda | 46.00 | 19804 | 4834 | 80 | 240 | 22 |
| | | 2. Thulung Dudhkoshi | 0.00 | 19097 | 4116 | 72 | 216 | 18 |
| | | 3. Necha Salyan | 0.00 | 15658 | 3530 | 45 | 135 | 12 |
| | | 4. Nappe Dudhkoshi | 0.00 | 13021 | 2721 | 56 | 168 | 14 |
| | | 5. Maha Kulung | 0.00 | 11118 | 2378 | 50 | 200 | 10 |
| | | 6. Sotang | 0.00 | 9252 | 1988 | 36 | 108 | 12 |
| | | 7. Likhu Pike | 0.00 | 5373 | 1134 | 50 | 100 | 10 |
| | | 8. Khumbu Pasanglhamu | 43.00 | 8727 | 2362 | 50 | 100 | 10 |
| | | **Total District : Solukhumbu** | **14.05** | **102050** | **23063** | **439** | **1267** | **108** |
| 7 | Okhaldhunga | 1. Siddhicharan | 66.46 | 28608 | 7145 | 60 | 120 | 12 |
| | | 2. Manebhanjyang | 7.53 | 21536 | 4720 | 90 | 200 | 15 |
| | | 3. Champadevi | 1.06 | 19022 | 3879 | 100 | 220 | 20 |
| | | 4. Sunkoshi | 0.00 | 18955 | 4075 | 80 | 240 | 20 |
| | | 5. Molung | 0.00 | 16598 | 3751 | 80 | 240 | 16 |
| | | 6. Chisankhugadhi | 60.70 | 15529 | 3406 | 20 | 60 | 6 |
| | | 7. Khiji Demba | 0.00 | 15436 | 3178 | 90 | 270 | 18 |
| | | 8. Likhu | 47.00 | 14356 | 3022 | 27 | 60 | 7 |
| | | **Total District : Okhaldhunga** | **26.02** | **150040** | **33176** | **547** | **1410** | **114** |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 8 | Khotang | 1. Rupakot Majhuwagadhi | 83.71 | 40422 | 8661 | 10 | 49 | 8 |
| | | 2. Halesi Tuwachung | 57.73 | 25451 | 5030 | 45 | 75 | 18 |
| | | 3. Khotehang | 57.05 | 19367 | 4054 | 23 | 65 | 15 |
| | | 4. Diprung | 72.58 | 17386 | 3568 | 10 | 39 | 8 |
| | | 5. Aiselukharka | 14.22 | 13872 | 3008 | 35 | 87 | 21 |
| | | 6. Jantedhunga | 4.38 | 13309 | 2736 | 23 | 121 | 23 |
| | | 7. Kepilasgadhi | 19.85 | 13175 | 2884 | 35 | 127 | 24 |
| | | 8. Barahpokhari | 16.68 | 12367 | 2329 | 12 | 121 | 22 |
| | | 9. Lamidanda | 89.71 | 11521 | 2407 | 0 | 15 | 1 |
| | | 10. Sakela | 57.81 | 9991 | 2076 | | 65 | 12 |
| | | **Total District : Khotang** | **54.21** | **176861** | **36753** | **193** | **764** | **152** |
| 9 | Udayapur | 1. Triyuga | 74.03 | 97094 | 21605 | 25 | 65 | 25 |
| | | 2. Katari | 61.25 | 62259 | 12995 | 30 | 65 | 30 |
| | | 3. Chaudandigadhi | 67.26 | 53865 | 11664 | 40 | 80 | 25 |
| | | 4. Belaka | 59.84 | 47001 | 9903 | 20 | 45 | 20 |
| | | 5. Udayapurgadhi | 4.85 | 34078 | 6851 | 40 | 80 | 25 |
| | | 6. Rautamai | 18.37 | 26038 | 5173 | 40 | 70 | 20 |
| | | 7. Tapli | 0.00 | 16148 | 2997 | 35 | 65 | 15 |
| | | 8. Limchungbung | 0.00 | 13297 | 2568 | 25 | 40 | 12 |
| | | Total District : Udayapur | **52.89** | **349780** | **73756** | **255** | **510** | **172** |
| 10 | Sindhuli | 1.Kamalamai Municipality | 82.66 | 67285 | 14960 | 8 | 15 | 5 |
| | | 2. Dudhauli Municipality | 73.20 | 68243 | 13758 | 10 | 20 | 9 |
| | | 3. Golanjor | 46.40 | 20200 | 3848 | 10 | 19 | 5 |
| | | 4. Ghyanglekh | 3.06 | 14381 | 2568 | 10 | 20 | 5 |
| | | 5. Teen Patan | 54.82 | 38043 | 7189 | 10 | 15 | 4 |
| | | 6. Phikkal | 0.00 | 17733 | 3172 | 10 | 15 | 4 |
| | | 7. Marin | 69.34 | 29076 | 5090 | 10 | 15 | 3 |
| | | 8. Sunkoshi | 55.06 | 22440 | 4763 | 10 | 15 | 4 |
| | | 9. Hariharpur Gadhi | 1.54 | 28976 | 4794 | 9 | 12 | 4 |
| | | **Total District : Sindhuli** | 57.31 | 306377 | 60142 | 87 | 146 | 43 |

# HETAUDA REGIONAL OFFICE



**Shreeram Raj Pandey**
Hetauda Regional Office Chief

**Munindra Thakur**
Birgunj DC

**Shambhu Kusiyat Yadav**
Hetauda DC

**Chutun Kumar Shreewastav**
Tandi DC

**Gajendra Kumar Chaudhary**
Kalaiya DC

**Suresh Kumar Mahato**
Bharatpur DC

**Rohini Paudel**
Simara DC

**Umesh Kumar Yadav**
Gaur DC

**Sudhir Kumar Ray**
Pokhariya DC

**Shekh Maksud Aalam**
Chandranigahapur DC

**Santosh Prasad Pant**
Palung DC

## Introduction

Hetauda Regional Office (HRO) is one of the eight Regional Offices under Distribution and Consumer Services Directorate (DCSD). Area of operation of this regional office covers Narayani Zone. It is responsible for overall management of electricity distribution services, operation and maintenance of electrical networks within the area under its scope.

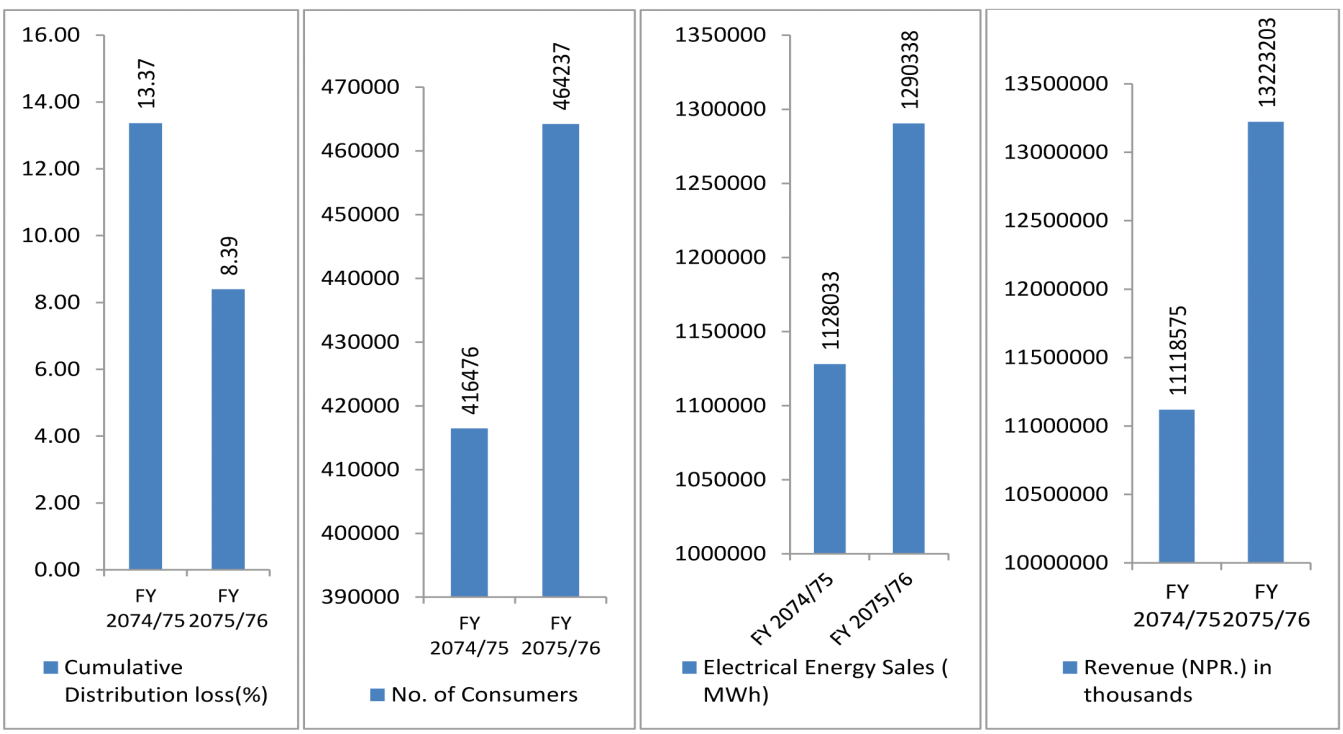
The major activities of this Regional Office (RO) include operation, maintenance, rural electrification and rehabilitation of the electricity distribution networks up to 33 kV voltage Level and 33/11 kV Substations as well as consumer services activities such as new consumer connections, meter reading, billing, and revenue collection.

matters like projects, planning & development, corporate work and co-ordination of rural electrification activities within the region. There is a finance and revenue section to look after the financial and budgetary functions of the region. The regional office is provided with a separate administrative officer to attend human resource function. The source of fund is Government of Nepal and NEA itself. There are nine 33 kV transmission line, substation project and a rural electrification project funded by Government of Nepal under this regional office.

## Key Objectives

- To decrease distribution system loss by controlling electricity leakage and theft of the energy by loss reduction programs.

The comparative salient features of the regional office are as follows:




## Operational Structure

There are 10 Distribution Centers (DCs) and 1 Sub Distribution Center under the regional office. Technical division of the RO looks after all the technical

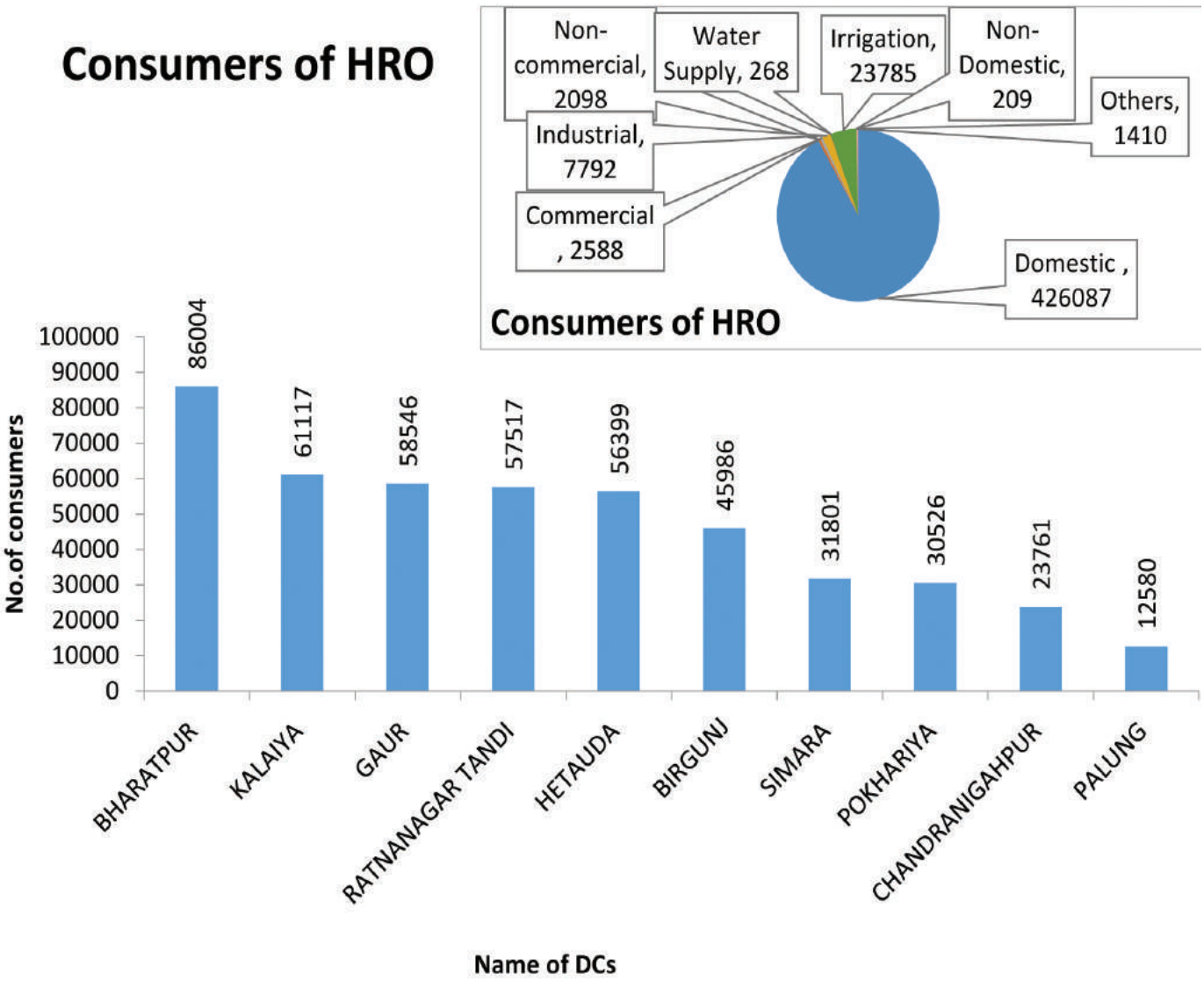
- Supply of reliable electricity to the consumers within the Region at statutory levels of voltage.
- Sell electricity and achieve planned surpluses of revenue.

- Provide new connections to prospective consumers.
- Ensure rational development of the electricity distribution system within the Region.

## Highlights of the Year

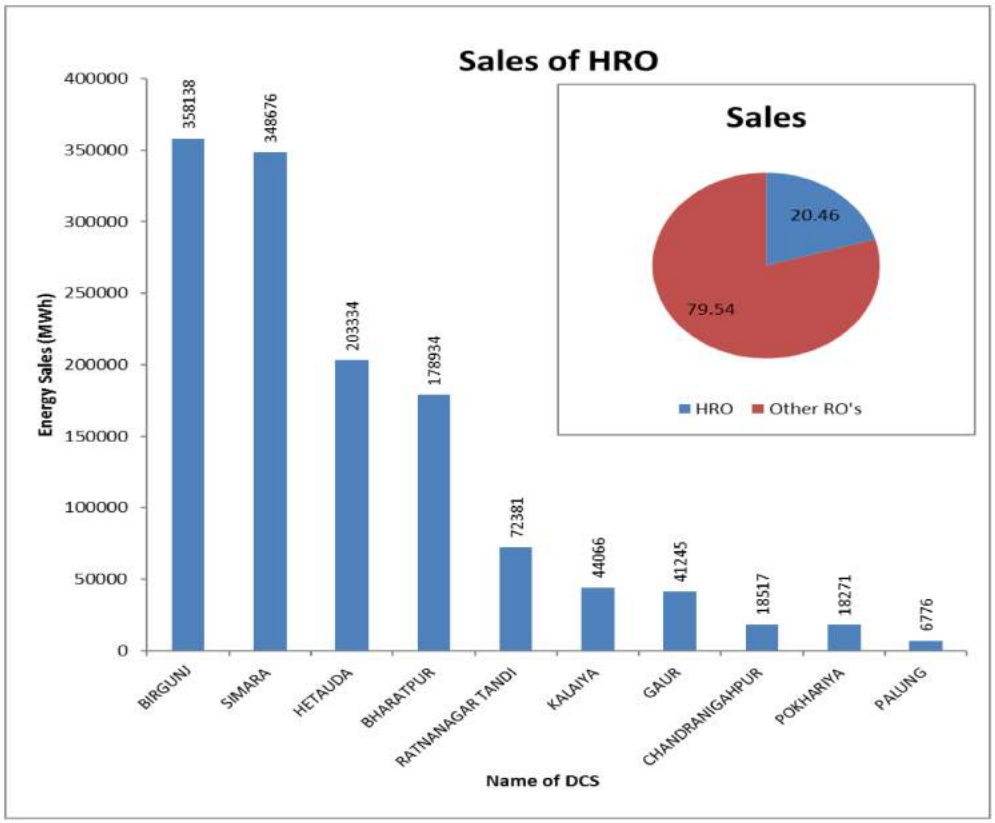
### Consumer Number

The HRO recorded a total of 464,237 new consumer accounts this fiscal year and most of them belonged to domestic category. There has been increase in the number of consumers by 11.47% as compared to last fiscal year. Most of the new consumers were connected to Bharatpur DC.



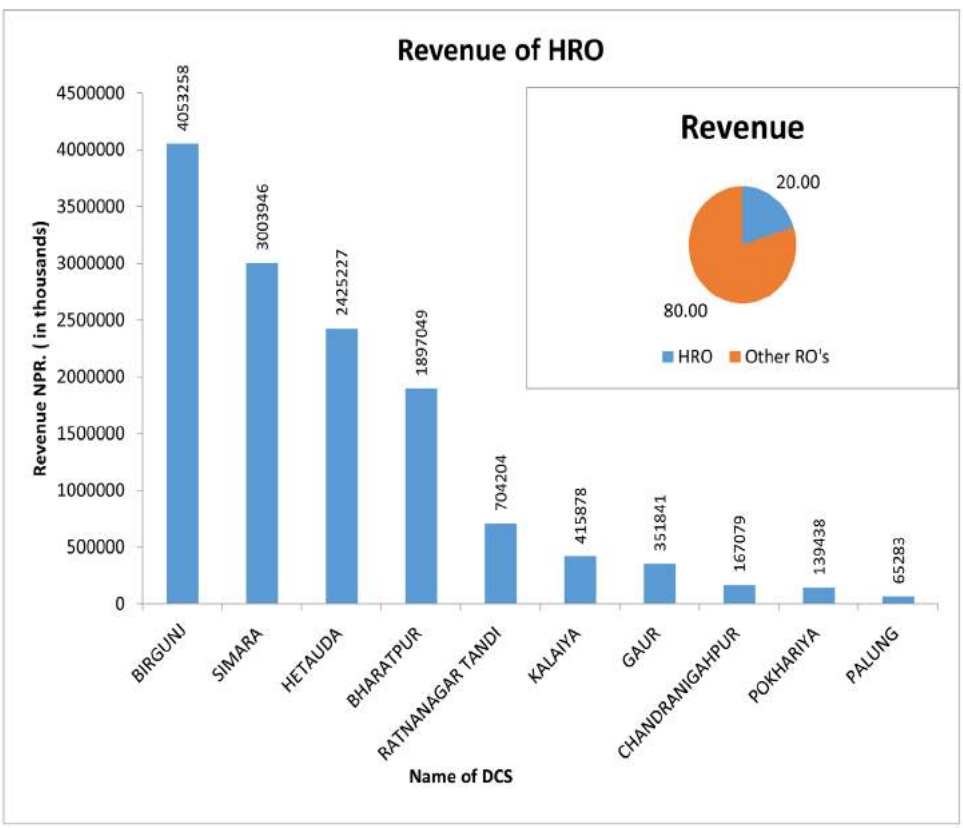
## Sales

The Electrical energy sales of the RO has gone up by 14.39% as compared to last fiscal year. Hetauda Regional Office reported 20.46 % of total sales of electrical energy of Nepal Electricity Authority (NEA). Birgunj, Simara, Hetauda and Bharatpur DCs are top four contributors in increased energy sales of the RO for this fiscal year with 27.76%, 27.02%, 15.76% and 13.87% contribution respectively

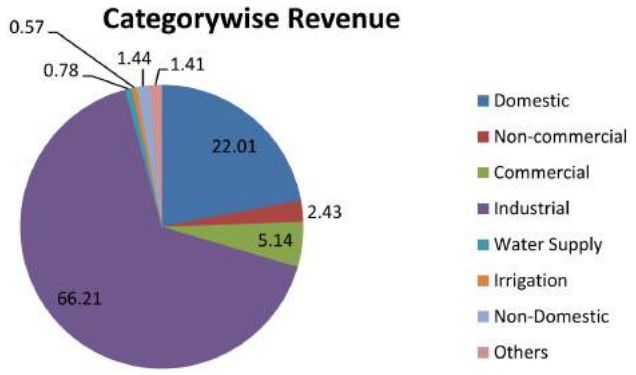



## Revenue

The revenue of the RO has increased by 18.93% as compared to the last fiscal year.The total revenue earned by the RO this Fiscal Year is NPR.13.22 billion which is about 20% of total revenue earned. Birgunj, Simara, Hetauda and Bharatpur DCs are top four contributors in increased revenue of the RO for this fiscal year with 30.65%, 22.72%,18.34% and 14.35% contribution respectively. Industrial, Domestic and Commercial consumers respectively were first, second and third highest contributors to total revenue of the RO.



The majority of revenue in HRO is recorded from industrial tariff category which is approximately 66.21% of the total revenue of the region followed by domestic consumers of 24.83%.




## Distribution Infrastructure

| | |
|---|---|
| Length of 33 kV Distribution Line, excluding line length under Palung DC (ckt. km.) | 239.7 |
| Length of 11 kV Distribution Line (ckt. km) | 3831.45 |
| 33/11 kV Substations (no.) | 26 |
| Length of LV Distribution Lines (ckt. km) | 9327.74 |
| No. of LV distribution transformers | 3961 |

## Performance Highlights

| | |
|---|---|
| Consumer per Staff | 702 |
| LT 0.4/0.24KV Line Length per Staff (km/staff) | 14.11 |
| Sales per Consumer per year (kWh/Consumer) | 2,784 |
| Revenue per Consumer per year (Rs./Consumer) | 28,488 |
| Consumer per Distribution Transformers | 117 |

## Customer Care

Special efforts were taken to improve the service at the customer interface points. The staff attached to 10 distribution centers took special efforts to serve our valued customers better during the year. Nepal Electricity Authority has made arrangements to submit electricity bill easily through the online systems. This system has given the service of paying the bill online and also updates about the bill payment for the consumers and the obligation for consumers to come to counters for bill payment has ended, thus saving time of the consumers. NEA has introduced one door system to facilitate the consumers and to provide the service as quickly as possible.

## Loss Reduction Program/Loss Reduction Activities

The distribution networks comprise of technical and non- technical losses, in which proportion of non-technical losses is quite high. During the year under review, various measures taken in the preceding years were continued to reduce the non-technical losses. Massive awareness campaigns as workshops and review meetings were implemented in various distribution centers.

Strict measures for electricity theft control such as confiscation of electric equipments and taking legal action against culprits were also conducted in various distribution centers with the help of local administration and security agencies. The amount of revenue collected from line disconnection was NPR. 251.7 million in the fiscal year 2075/076. NEA management made various decisions as 'Immediate Action Plans' to improve its functioning. This plan included regular inspection of Time-of-Day (TOD) meters, data download and analysis to curb any connection fault or manipulation.

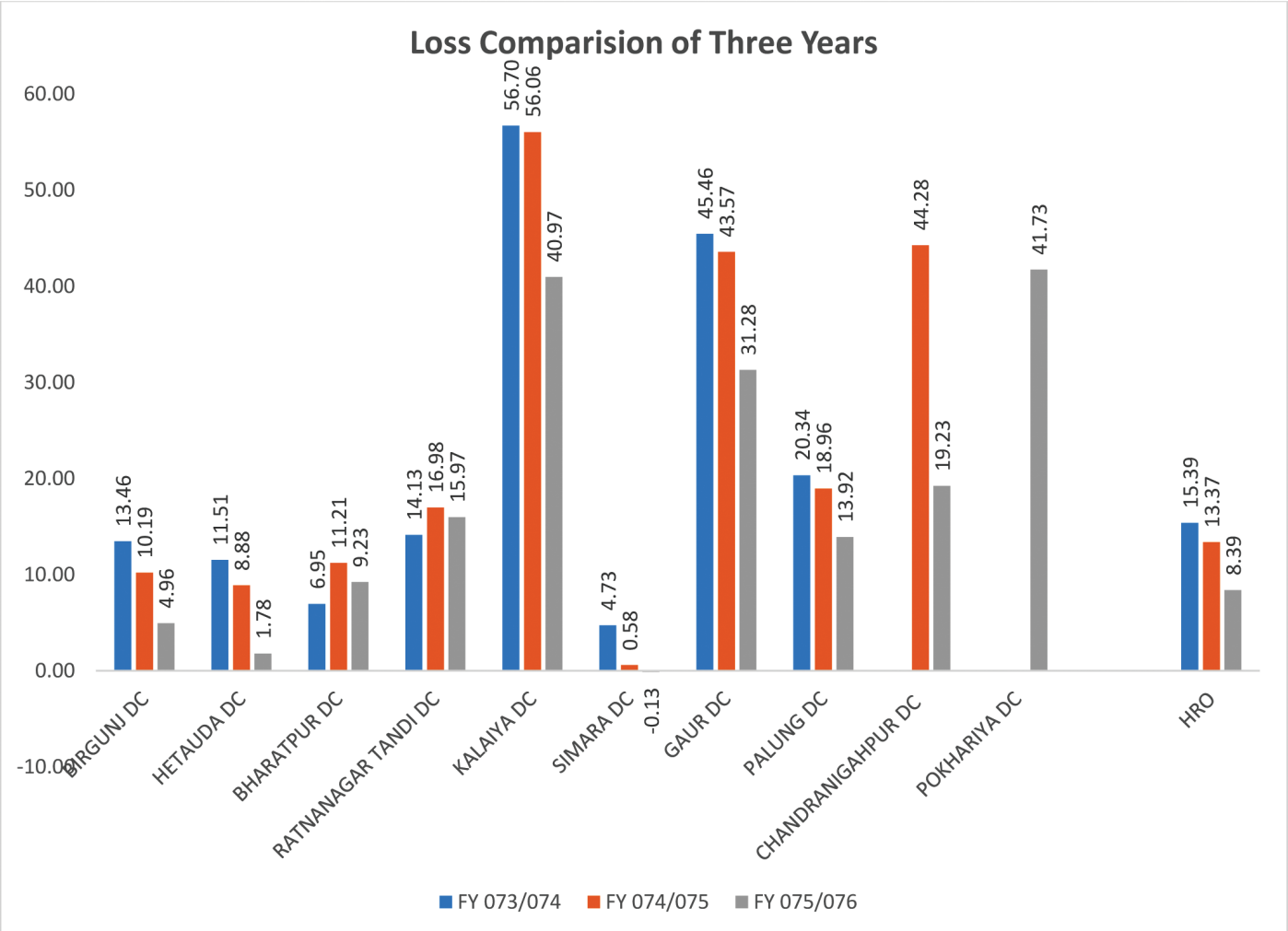
## Future Plans/Programs

As high system loss is a major challenge for NEA, HRO is trying to make every effort to bring down the distribution system loss. It is also planning to improve the quality of the services through the use of new technologies and capacity building to meet the challenges of new environment in utility business. Consumer complaints shall be addressed without delay and the procedure for new connection related works shall be made simple and user friendly.

To reduce Non–technical and Technical losses, these future plans shall be implemented with the joint efforts of HRO and DCS.

### For Non-Technical losses:

- Identification of electricity theft prone areas in different Distribution Centers.




- Public Awareness Program.
- Mobilization of Police and Staffs to remove hooking.
- Changing of Defective meters i.e. burnt, damage, stopped meters.
- Re-sealing of meters.
- Additional billing of HT/LT Consumers after analyzing TOD meter data download report as per the NEA, Electricity Distribution Rules 2069.
- Upgrading of electricity meters to meet standard accuracy must be conducted to support reduction of non technical losses through statistical analysis

**For Technical losses:**

- Conversion of single-phase lines to three phase lines by the addition of two wires.
- Balancing of phase loads.
- Optimization of distribution system.
- Improve power factor and reducing the harmonic distortion by installing suitable size of Capacitor Banks at substation as well as installation of LV Capacitors on LV lines.
- Demand management measures.
- Re-location of distribution transformers at load center.
- Up-gradation of distribution transformers and substation power transformers.

Electricity theft control activities in Kalaiya DC


Electricity theft control activities in Birgunj DC

- Changing of broken insulators like Disc insulator, pin Insulator and shackle insulator.

## Challenges within the Regional Office

The various Challenges faced by the Regional office to provide reliable service to the consumers are as follows:

- 33/11 KV, 24 MVA Parsa substation of Tadi is currently over loaded.132/33kV Bhandara substation should be constructed to minimize the load of Parsa S/S.
- Palung DC is supplied by only one 11KV feeder from Kulekhani I Hydropower due to which there is high technical loss and reliability of the system is very low. 33kV line should be constructed to connect areas of Palung DC.
- Non-Technical loss reduction in this region is a major challenge. Electricity theft and hooking is still a problem in the region.
- Major technical challenge within the region is distribution system reliability which needs to be sorted out by system up-gradation like conductor upgrading, feeder separation, substation rehabilitation, etc.
- Segregation of technical and non-Technical losses within the region.
- Social and political challenges are also vibrant within the Region.
- Flooding in the rainy seasons and occasional storm (Bara, Parsa districts in this year) around the region creates hindrance to system continuity, reliability and restoration.

After flood scenario in Birgunj

After flood scenario in Birgunj

## Ongoing Projects under the Regional Office:

### Chandranigahpur-Manpur 33/11kV Project

It is funded by Government of Nepal and has the scope of construction of 33/11 kV substation. The overall budget of the project is NRs.8.2 Million.

### Chanauli - Madi 33kV Project

It shall be constructing 33 kV underground cable using NRs. 20 Million from Government of Nepal.

### Devnagar-Chanauli 33/11kV16MVA S/S

The Government of Nepal has provided fund of NRs. 3 Million for the construction of 33/11 kV, 16 MVA substation.

### Devnagar - Chitwan 33/11kV, 16MVA S/S Project.

A 33/11 kV substation with the maximum capacity of 16 MVA shall be constructed using fund of NRs. 30 Million from Government of Nepal.

### Maulapur Pataura Rural Electrificaton and Rehabiliation Project

The scope of the project is construction of HT and LT lines with the budget of NRs. 11.2 Million. It is funded by Government of Nepal. The inception date of the project was 5 Baisakh 2076

### Riddi Siddi Cement Project

Funded by Government of Nepal has scope of construction of 33 kV line with the budget of 10 Million Nepalese Rupees. The inception date of the project was 4 Baisakh 2076 and its expected completion date is 3 Mangsir 2076. About 60% of the total budget has already been expended.

## Substation Status

| S.N. | Distribution Centre | Substation Name/Location | Total Capacity ( MVA) | Voltage level (kV) | Existing | Proposed | Planned | Under Construction | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Kalaiya | Kalaiya S/S | 16 | 33/11 | √ | | | | |
| 2 | | Simaraungadh S/S | 8 | | √ | | | | |
| 3 | Simara | Nijgadh S/S | 8 | | √ | | | | |
| 4 | Pokhriya | Pokhariya S/S | 8 | | √ | | | | |
| 5 | Birgunj | Chapkiya | 8 | | √ | | | | |
| 6 | Bharatpur | Chanauli S/S | 16 | | √ | | | | |
| 7 | | Madi S/S | 3 | | √ | | | | |
| 8 | Ratnanagar Tandi | Parsa S/S | 24.6 | | √ | | | | |
| 9 | Gaur | Gaur S/S | 16 | | √ | | | | |
| 10 | Chapur | Harsaha S/S | 8 | | √ | | | | |
| **Total Existing** | | | **115.6** | | **10** | | | | |

## 33 kV Feeder Status

| S.N. | Name of DC | Name of 33KV Feeder | Length of Feeder (ckt-km) | Conductor Name size (sq.inch) | Remark(s) |
|---|---|---|---|---|---|
| 1 | Gaur | Gaur | 42 | Wolf/0.3 | |
| | | Harshaha | 18 | Dog/0.1 | |
| 2 | Pokhariya | Birganj to Pokhariya | 19.17 | Dog | |
| 3 | Hetauda | Shivam 2 | 11.62 | Panther/(0.3 sq inch) | Gird S/S |
| 4 | Simara | Chapur- Nijgadh | 21 | dog | |
| 5 | Ratnagar Tandi | Bharatpur- Parasa | 20.5 | dog /0.1 | |
| 6 | Kalaiya | Birgunj -Kalaiya | 12 | 0.1 | |
| | | Nijgadh- Kalaiya | 30 | 0.1 | |
| | | Kalaiya- Simraungadh | 24 | 0.1 | |

## 11 kV Feeder Status

| S.N. | Name of DC | Name of 11KV Feeder | Length of Feeder | Conductor Name/Size (sq.inch) | |
|---|---|---|---|---|---|
| 1 | Gaur | Gaur | 36.5 | Dog/0.1 | |
| | | Bauharba | 77.6 | Dog/0.1 | |
| | | Bankul | 114.1 | Dog/0.1 | |
| | | Bairiya | 68.5 | Dog/0.1 | |
| | | Harshaha | 159.7 | Dog/0.1 | |
| 2 | Simara | Hulash | 9.31 | 0.1 ACSR | |
| | | Jeetpur | 3.04 | 0.1 ACSR | |
| | | Dumarwana | 3.73 | 0.1 ACSR | |
| | | Narbasti | 8.215 | 0.1 ACSR | |
| | | Musarnimai | 20.18 | 0.05/0.1 ACSR | |
| | | Ramban | 70.31 | 0.05/0.1 | |
| | | Airport | 1.5 | 0.05ACSR+XLPE Single core cable | |
| | | Nijgadh 1 | 19.765 | 0.1/0.05/0.03 ACSR | Nijgadh S/S |
| | | Nijgadh 2 | 4.083 | 0.1/0.05/0.03 ACSR | |
| | | Nijgadh 3 | 34.19 | 0.1/0.05/0.03 ACSR | |
| | | Parwanipur | 3.702 | 0.1 ACSR | |
| | | Simara | 6.746 | 0.1 ACSR | |
| | | Pathlaiya 1 | 17.94 | 0.1 ACSR | |
| | | Pathlaiya 2 | 39.139 | 0.1 ACSR | |
| | | Piluwa | 14.364 | 0.1/0.05 | |
| | | Amlekhganj | 23.377 | 0.05 ACSR | |
| | | Oil Nigam | 1.118 | 0.05 ACSR | |
| | | Pole plant | 0.076 | 0.05ACSR | |
| | | Ramban | 3.2 | Dog, Rabbit, Weasel | Simra DCS |
| 3 | Pokhariya | Pokhariya | 45.75 | Dog, Rabbit, Weasel | |
| | | Janki Tola | 101.87 | Dog, Rabbit, Weasel | |
| | | Langadi | 69.73 | Dog, Rabbit, Weasel | |
| 4 | Parwanipur S/S | Gramin | 5.3 | Dog, Rabbit, Weasel | Parwanipur S/S |
| 5 | Hetauda | Bhutandevi | 68.67 Km | Dog(size 0.16 sq inch) | Grid S/S |
| | | Unilever | 102.9 | Dog(size 0.16 sq inch) | |
| | | Gramin | 168.68 | Rabbit(size 0.077 sq inch) | |
| | | Bhaise | 44.27 | Rabbit(size 0.077 sq inch) | |
| | | Bansagopal | 64.68 | Rabbit(size 0.077 sq inch) | |
| | | Chaugada | 53.71 | Dog(size 0.16 sq inch) | |
| | | HID | 7.48 | Panther/(0.3 sq inch) | |
| | | Ncell | 0.13 | Dog(size 0.16 sq inch) | |
| 6 | Palung | Markhu Feeder | 120.146 | 0.05/0.03 ACSR | KL1 |
| | | Sisneri Feeder | 42.78 | 0.05 /0.03 ACSR | |
| 7 | Ratanagar Tandi | Tandi | 125 | 0.1/0.05/0.03 | |
| | | Khairahni | 121 | 0.1/0.05/0.03 | |
| | | Parsa | 119 | 0.1/0.05/0.03 | |
| | | Chainpur | 140 | 0.1/0.05/0.03 | |

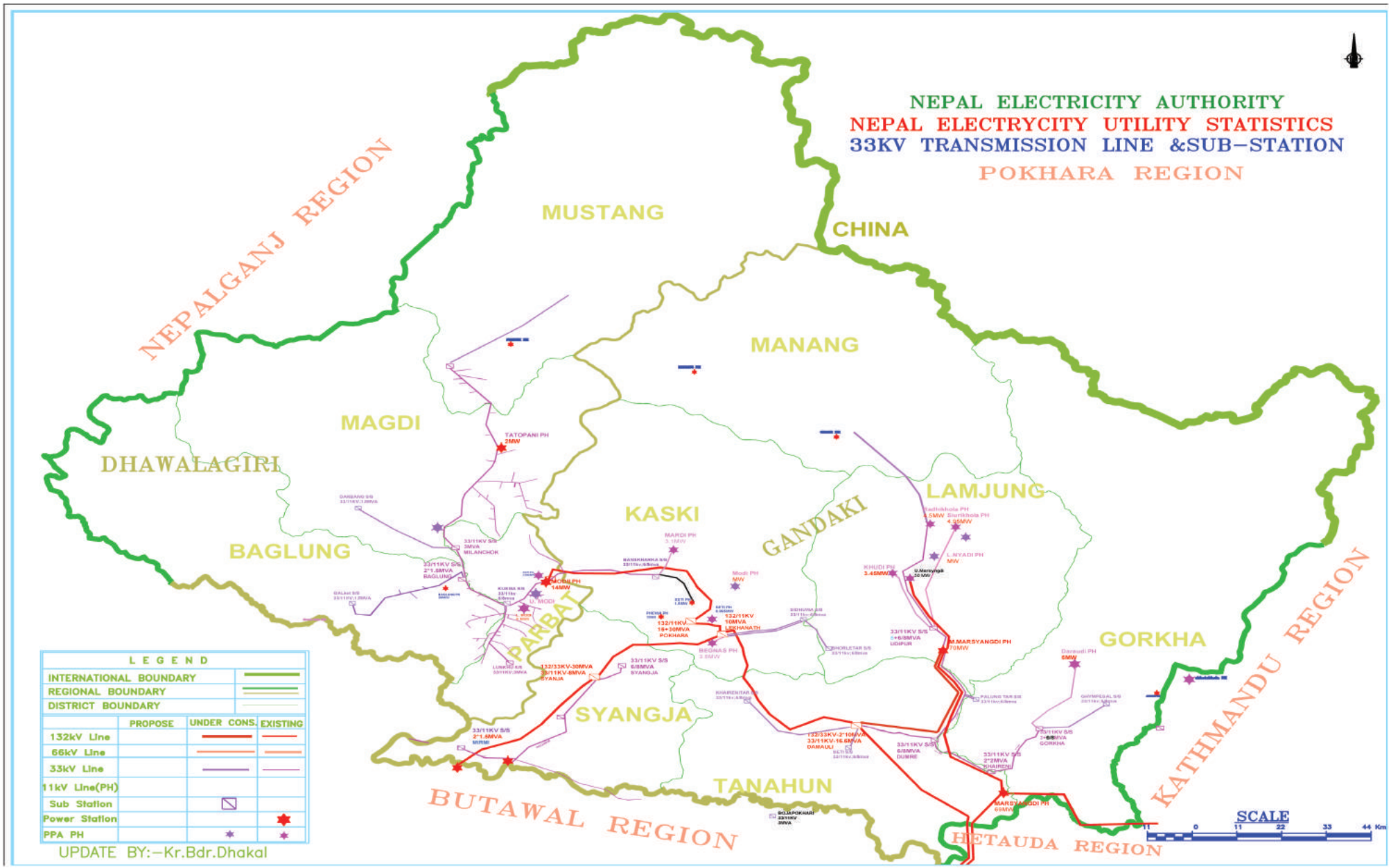
| | | | | | |
|---|---|---|---|---|---|
| 8 | Bharatpur | Bharikuti | 15 | 0.1 | |
| | | Narayanghat | 57 | 0.1 | |
| | | Audhogik 1 | 32 | 0.1 | |
| | | Audhogik 2 | 40 | 0.1 | |
| | | Hospital | 15 | 0.1 | |
| | | Bharatpur 1 | 42 | 0.1 | |
| | | Bharatpur 2 | 35 | 0.1 | |
| | | Gaidakot | 73 | 0.1 | |
| | | Gitanagar | 79 | 0.1 | |
| | | Rampur | 43.9 | 0.1 | |
| | | Narayani | 55.2 | 0.1 | |
| | | Megauli | 39 | 0.1 | |
| | | Basantapur | 14 | 0.1 | |
| | | Kalyanpur | 24 | 0.1 | |
| | | Muglin | 57 | 0.1 | |
| 9 | Birgunj | Birgunj feeder No. 1 | 14.56 | 0.1 | Grid S/S |
| | | Birgunj feeder No. 2 | 21.58 | 0.1 | |
| | | Birgunj feeder No. 4 | 27.07 | 0.1 | |
| | | Birgunj feeder No. 5 | 14.22 | 0.1 | |
| | | Birgunj feeder No. 6 | 21.52 | 0.1 | |
| | | Bindawasini feeder | 14.084 | 0.1 | |
| | | Jagarnathpur feeder | 16.1 | 0.1 | |
| | | Prasauni feeder | 6.52 | 0.1 | |
| | | Himal feeder | 9.1 | 0.1 | |
| | | Jagadamba feeder | 6.92 | 0.1 | |
| | | Dabur dedicated feeder | 1.43 | 0.1 | |
| | | Parwanipur feeder | 7.67 | 0.1 | |
| | | Krishi feeder | 17.06 | 0.1 | |
| | | Nitanpur feeder | 13.9 | 0.1 | |
| | | Narayani feeder | 4.28 | 0.1 | |
| | | Gramin feeder | 25.45 | 0.1 | |
| | | Simara feeder | 9.65 | 0.1 | |
| | | Gandak feeder | 14.89 | 0.1 | |
| | | Chorni feeder | 4.89 | 0.1 | |
| | | Birgunj feeder | 10.61 | 0.1 | |
| | | 6 No | 83.12 | Dog, Rabbit, Weasel | Birganj DC |
| | | Bindavasini | 12.62 | Dog, Rabbit, Weasel | Birganj DC |
| 10 | Kalaiya | Nagarpalika | 19.7 | 0.03/0.05/0.1 | |
| | | Bariyarpur | 40.44 | 0.03/0.05/0.1 | |
| | | Sitalpur | 90.3 | 0.03/0.05/0.1 | |
| | | Gunjbhawanipur | 90 | 0.03/0.05/0.1 | |
| | | Badharwa | 40 | 0.03/0.05/0.1 | |
| | | Krishi | 91.36 | 0.03/0.05/0.1 | |
| | | Simarungadh Bazar | 30.32 | 0.03/0.05/0.1 | |
| | | Batra | 25 | 0.03/0.05/0.1 | |
| | | Pachrauta | 55.48 | 0.03/0.05/0.1 | |
| 11 | Chandranigahapur | Chandranigahapur North | 44.75 | 0.1/0.05 | |
| | | Chandranigahapur South | 99.79 | 0.1/0.05 | |
| | | Chandranigahapur -Harsawa | 28.59 | 0.1/0.05 | |

# Electrification Status

| S.no. | District | Municipality Rural Municipality | Total Electrification % of municipalities (Grid Connected) | Population | No of House-holds | Total 11 kV (HT) Circuit Kilometer (KM) required to fully electrify the Municipalities or rural municipalities | Total 0.4 kV (LT) Circuit Kilometer (KM) required to fully electrify the Municipalities or rural municipalities | No of Transformer Required |
|---|---|---|---|---|---|---|---|---|
| 1 | Bara | 1. Kolhavi | 71.79 | 52125 | 9601 | 20 | 30 | 10 |
| | | 2. MahaGadhi Mai (Bariyapur) | 71.85 | 61950 | 9200 | 15 | 25 | 15 |
| | | 3. Nijagadh | 91.13 | 41826 | 8478 | | | |
| | | 4. Pachrauta | 63.49 | 40450 | 5571 | 10 | 20 | 8 |
| | | 5. Simraungadh | 67.93 | 57491 | 8396 | 18 | 28 | 10 |
| | | 6. Adarsh Kotwal | 65.56 | 32613 | 4686 | 10 | 17 | 7 |
| | | 7. Baragadhi | 66.71 | 32187 | 5054 | 15 | 20 | 10 |
| | | 8. Bisrampur | 73.43 | 28154 | 4019 | 7 | 16 | 8 |
| | | 9. Devtaal | 70.07 | 27490 | 3770 | 13 | 20 | 7 |
| | | 10. Feta | 66.68 | 30365 | 4242 | 12 | 25 | 24 |
| | | 11. Karaiyamai | 71.2 | 31352 | 4940 | 15 | 20 | 6 |
| | | 12. Parwanipur | 86.78 | 26972 | 3748 | 3 | 6 | 5 |
| | | 13. Prasauni | 78.69 | 29651 | 4292 | 8 | 17.5 | 9 |
| | | 14. Suwarna | 68.92 | 34963 | 4777 | 15 | 25 | 10 |
| | | 15. Jitpur Simara | 96.03 | 138601 | 25650 | 3 | 5 | 3 |
| | | 16. Kalaiya | 72.68 | 145624 | 22123 | 15 | 30 | 15 |
| | | Total District:Bara | 77.39 | 749864 | 119347 | 179 | 304.5 | 147 |
| 2 | Chitwan | 1. Bharatpur | 97.61 | 331106 | 81490 | 12 | 65 | 10 |
| | | 2. Kalika | 76.41 | 50160 | 10761 | 15 | 30 | 20 |
| | | 3. Khairhani | 69.1 | 66215 | 14555 | 52 | 104 | 30 |
| | | 4. Madi | 38.02 | 44482 | 10576 | 20 | 80 | 15 |
| | | 5. Rapti | 70.3 | 68591 | 14231 | 235 | 980 | 90 |
| | | 6. Ratnanagar | 80.05 | 82452 | 18970 | 71 | 142 | 40 |
| | | 7.Ichchhakamana | 51.2 | 29512 | 5640 | 50 | 115 | 26 |
| | | **Total District:Chitwan** | **83.16** | **672518** | **156223** | **455** | **1516** | **231** |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3 | Makwanpur | 1. Thaha | 70 | 45291 | 9714 | | | |
| | | 2. Bagmati | 54.33 | 33181 | 6235 | 30 | 50 | 15 |
| | | 3. Bakaiya | 48 | 43112 | 8204 | 20 | 50 | 15 |
| | | 4. Bhimphedi | 90.91 | 25401 | 5234 | 10 | 20 | 10 |
| | | 5. Indra Sarowar | 70 | 15026 | 3323 | | | |
| | | 6. Kailash | 46.74 | 26029 | 4638 | 35 | 55 | 35 |
| | | 7. Makwanpur Gadhi | 59.38 | 27554 | 5445 | 15 | 30 | 15 |
| | | 8. Manahari | 72.86 | 41780 | 8586 | 13 | 21 | 11 |
| | | 9. Rakshirang | 41.86 | 28500 | 4957 | 44 | 60 | 25 |
| | | 10. Hetauda | 95.46 | 166345 | 37287 | 7 | 15 | 9 |
| | | Total District:Makwanpur | 75.32 | 452219 | 93623 | 174 | 301 | 135 |
| 4 | Parsa | 1. Birgunj | 91.53 | 281780 | 45947 | 20 | 42 | 54 |
| | | 2. Bahudar Mai | 65.96 | 46401 | 6644 | 12 | 24 | 14 |
| | | 3. Parsa Gadhi | 61.74 | 45155 | 7500 | 11 | 23 | 15 |
| | | 4. Pokhariya | 75.38 | 38460 | 5702 | 9 | 22 | 12 |
| | | 5. Bindyabasini | 54.84 | 28618 | 4182 | 9.5 | 20 | 11 |
| | | 6. Chipaharmai | 49.82 | 31195 | 4658 | 8.5 | 19 | 11 |
| | | 7. Dhobini | 47.96 | 23288 | 3479 | 12 | 25 | 13 |
| | | 8. Jagarnathpur | 58.19 | 38201 | 5793 | 8 | 17 | 11 |
| | | 9. Jirabhawani | 41.19 | 26626 | 4815 | 7.5 | 16 | 11 |
| | | 10. Kalikamai | 62.34 | 24727 | 3558 | 8 | 23 | 13 |
| | | 11. Pakaha Mainpur | 54.16 | 24231 | 3553 | 9 | 17 | 11 |
| | | 12. Paterwa Sugauli | 54.42 | 27955 | 4681 | 9.5 | 19 | 13 |
| | | 13. Sakhuwa Prasauni | 55.72 | 38653 | 6232 | 11 | 18 | 14 |
| | | 14. Thori | 47.59 | 23855 | 4968 | 12 | 25 | 13 |
| | | **Total District: Parsa** | **70.07** | **699145** | **111712** | **147** | **310** | **216** |
| 5 | Rautahat | 1. Baudhimai | 75.1 | 40041 | 5788 | 2 | 15 | 3 |
| | | 2. Brindaban | 63.55 | 51439 | 7673 | 135 | 390 | 20 |
| | | 3. Chandrapur | 43.55 | 86737 | 16183 | 125 | 350 | 15 |
| | | 4. Debahi Gonahi | 74.32 | 38691 | 5646 | 3 | 15 | 4 |
| | | 5. Fatuwa Bijaypur | 64.72 | 43706 | 6780 | 2 | 12 | 2 |
| | | 6. Gadhi Mai | 74.34 | 48643 | 7304 | 2 | 15 | 3 |
| | | 7. Garuda | 71.36 | 60763 | 8959 | 12.5 | 53 | 8 |
| | | 8. Gaur | 82.32 | 42054 | 6781 | 3 | 20 | 5 |
| | | 9. Gujara | 40.33 | 56083 | 8897 | 80 | 250 | 17 |
| | | 10. Ishanath | 73.6 | 49875 | 7021 | 2 | 20 | 3 |
| | | 11. Katahariya | 74.83 | 46237 | 7123 | 2 | 19 | 3 |
| | | 12. Madhav Narayan | 74.19 | 42340 | 6596 | 3 | 18 | 5 |
| | | 13. Maulapur | 74.01 | 31805 | 4608 | 3 | 25 | 4 |
| | | 14. Paroha | 73.97 | 45083 | 6475 | 2.5 | 18 | 4 |
| | | 15. Rajdevi | 74.53 | 36796 | 6458 | 5 | 25 | 4 |
| | | 16. Rajpur | 74.24 | 49443 | 6943 | 3 | 22 | 3 |
| | | 17. Durga Bhagwati | 75.03 | 27323 | 4588 | 1 | 15 | 2 |
| | | 18. Yamunamai | 73.73 | 28750 | 4545 | 2 | 12 | 3 |
| | | **Total District: Rautahat** | **67.15** | **825809** | **128368** | **388** | **1294** | **108** |

# POKHARA REGIONAL OFFICE



# POKHARA REGIONAL AND DISTRIBUTION CENTRE CHIEFS

**Suresh Chhetri**
Pokhara Regional Office Chief

**Surendra Kumar Shah**
Pokhara DC

**Nabin Kumar Labh**
Lekhnath DC

**Shiva Narayan Goshali**
Tanahu DC

**Sunil Sapkota**
Syangja DC

**Kapil Raj Pandey**
Baglung DC

**Netramani Neupane**
Myagdi DC

**Madhab Neupane**
Gorkha DC

**Dipak Kumar Dahal**
Lamjung DC

**Niroj Paudel**
Aarughat DC

**Rajendra Lal Dev**
Tatopani DC

## Introduction

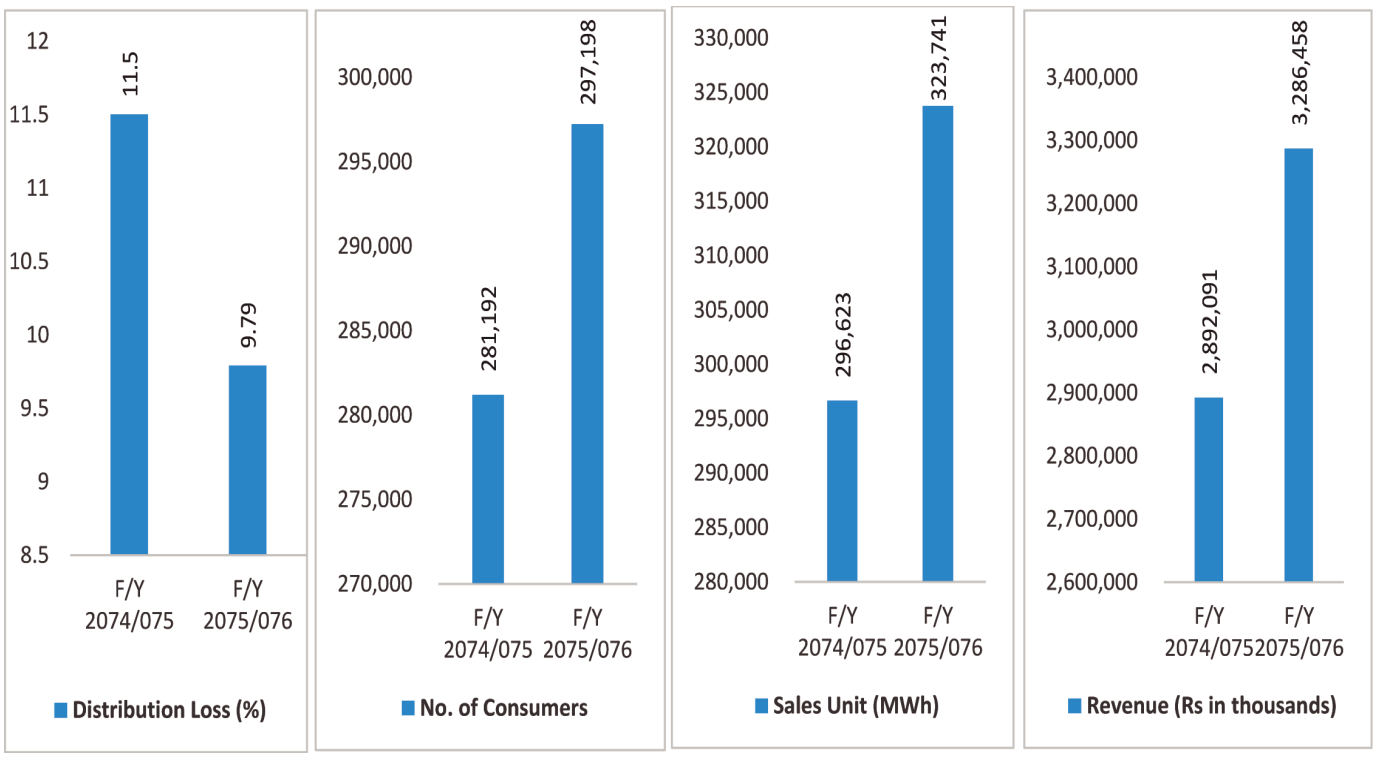
Pokhara Regional Office (PRO) is one of the eight Regional Offices under the Distribution and Consumer Services Directorate and is responsible for overall management of electricity distribution services, operation and maintenance of electrical networks of Gandaki & Dhaulagiri Zones. There are 11 (Eleven) Distribution Centers (DCs) in this Regional Office. Area of operation of this regional office covers all the distribution area of Pokhara, Lekhanath, Tanahu, Gorkha, Syanga, Parbat, Baglung, Myagdi, Tatopani, Aarughat, and Lamjung. The major activities of this regional office include operation, maintenance and rehabilitation of the electricity distribution networks up to 33 kV voltage Level and 33/11 kV Substations as well as consumer services activities such as new consumer connections, meter reading, billing, and revenue collection.

zones. Regional office comprises of technical, financial and admistrative division which monitors various actions of the concern DCs. The source of fund is Government of Nepal and NEA itself. There are seven 33 kV transmission line, substation project and a rural electrification project funded by Government of Nepal under this regional office.

## Key Objectives

- To decrease the distribution system loss by controlling the electricity leakage and theft energy by loss reduction activities/loss reduction programs.
- To implemente interaction and public awareness programs which will enhance in the increment of sales, revenue collection and decrease in electricity loss.

The comparative salient features of this regional office are as follows:




## Operational Structure

There are 11 Distribution Centers under Pokhara Regional Office spread over Gandaki & Dhaulagiri

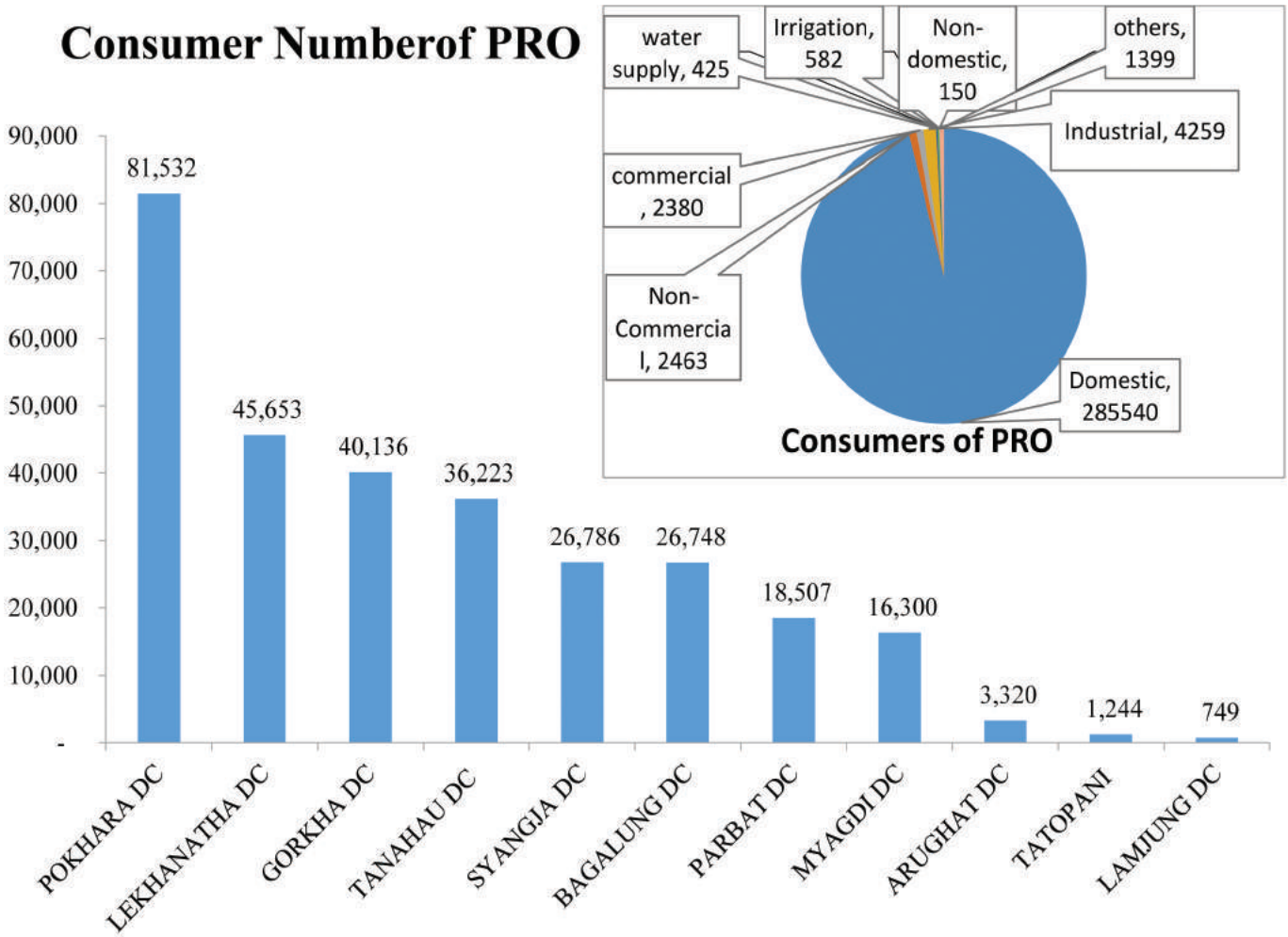
- Supply of reliable electricity to the consumers within the region at statutory levels of voltage.

- Sell electricity and achieve planned surpluses of revenue.
- Provide new connections to prospective consumers.
- Ensure rational development of the electricity distribution system within the Region.

## Highlights of the year

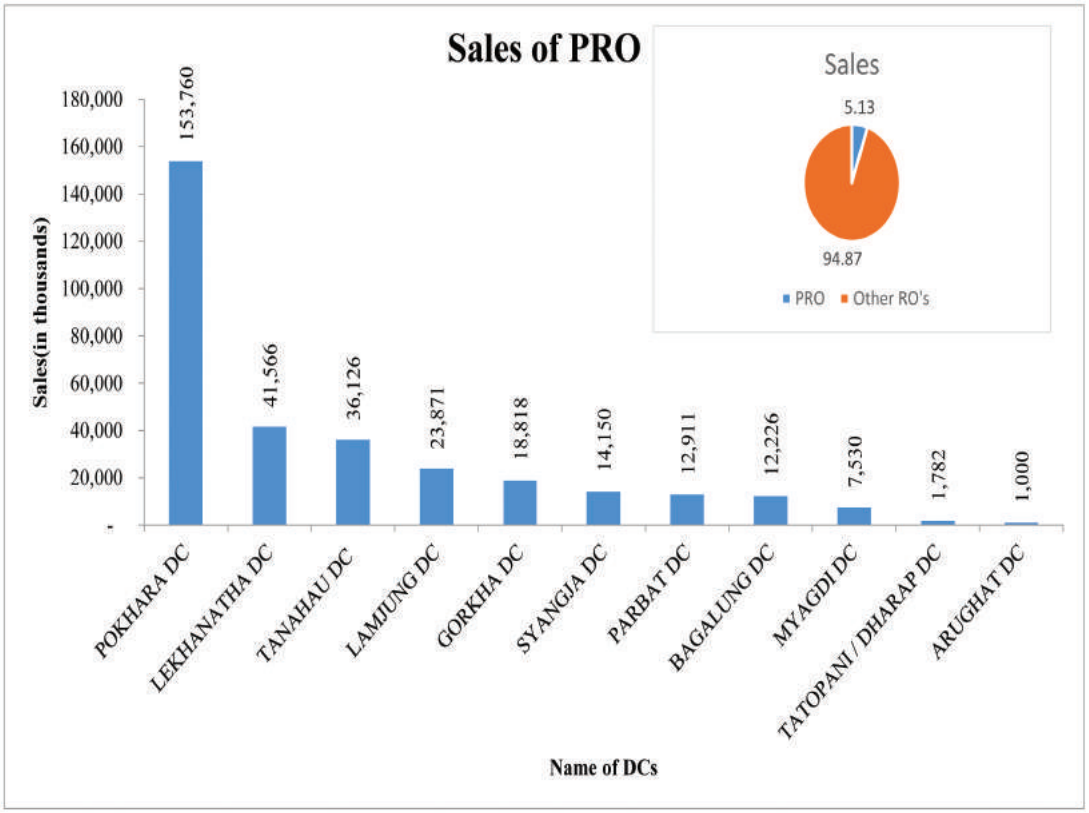
### Consumer Number

PRO recorded 2,97,198 consumer accounts by the end of the fiscal year 2075/076 which is increased by 5.69% from last year. The majority of consumer accounts were in the domestic category while the second most were from the industrial category.



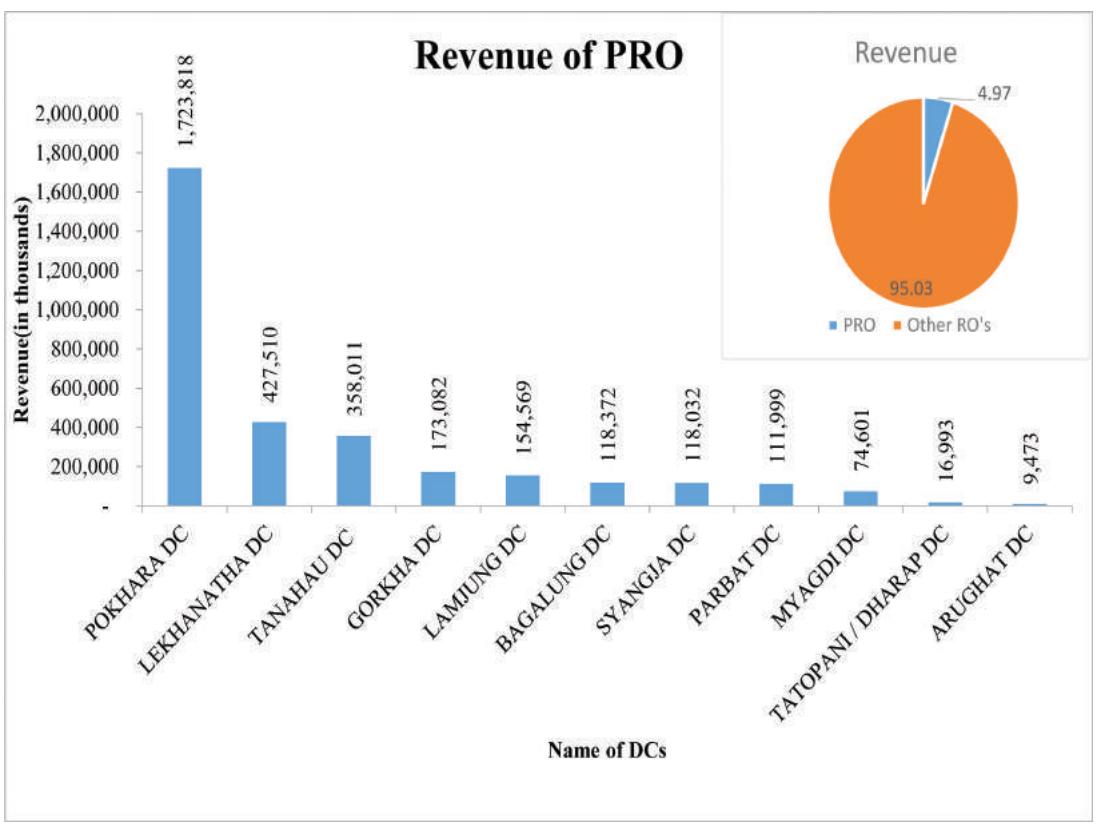
## Sales

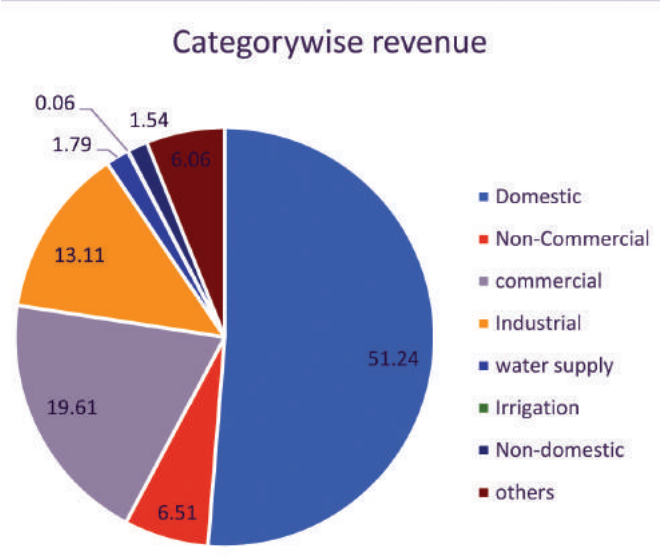
A total of 323,740.86MWh of energy was sold in this FY 2075/076 which is 9.14% higher than last year. Sales contribution to NEA system from this Regional Office is 5.13%.




## Revenue

Thegrossrevenue of Rs.3286.45 million was earned in F/Y 2075/076 after selling of 323740.86 MWh energy which is 13.63% more than last year.






The majority of revenue in PRO recorded from domestic tariff category which is approximately 51.24% of the total revenue of the region. The higher sales in domestic category resulted for higher revenue. Pokhara distribution Center accounts for 52.45%, Lekhnath DC accounts for 13.00%, Tanahun accounts for 10.89%, Gorkha accounts for 5.26% and Lamjung accounts for 4.70% of the total revenue in the Region.

## Distribution Infrastructure

| | |
|---|---|
| 33 kV Distribution Lines | 389.56 km |
| 11 kV Distribution Lines | 3,586.54km |
| 33/11 kV primary Substations | 16 |
| LV Distribution Lines | 9,570.34km |
| LV Distribution transformers | 3000 |
| Distribution Transformers Total installed capacity | 218.35MVA |

## Performance Highlights

| | |
|---|---|
| Consumer per Staff | 610 |
| LT 0.4/0.24KV Line Length per Staff (km/staff) | 20 |
| Sales per Consumer per year (kWh/Consumer) | 1,092 |
| Revenue per Consumer per year (Rs./Consumer) | 11,064 |
| Consumer per Distribution Transformers | 99 |

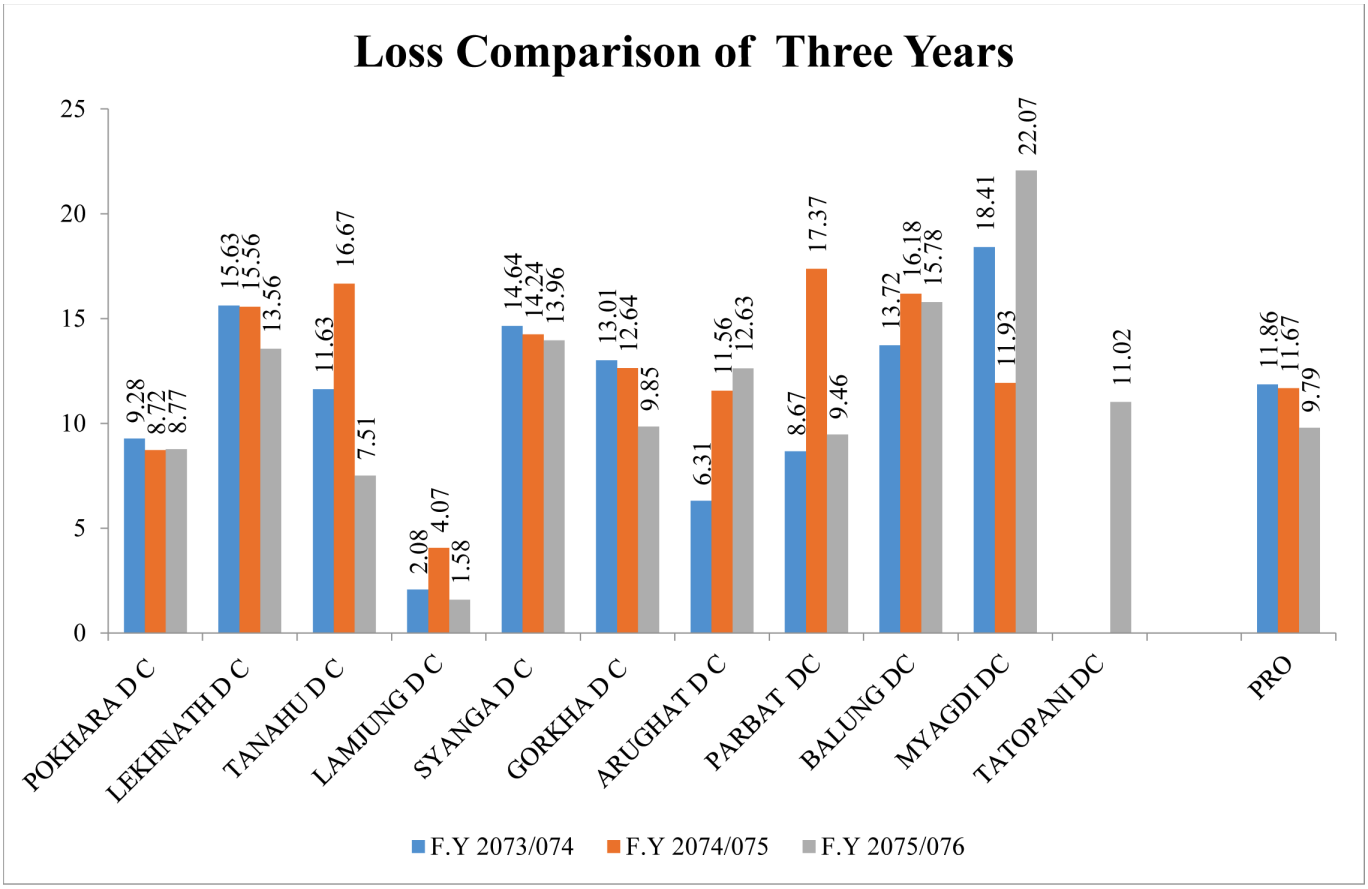
## Customer Care

Distribution centers work as interfaces between NEA and its consumers. So, special efforts were taken to improve the quality of service at the consumer interface points. Nepal Electricity Authority has made arrangements to submit electricity bill easily through the online systems since Bhadra 13 2074. This system has given the service of paying the bill online and also updates about the bill payment for the consumers and the compulsion for consumers to come to counters for bill payment has ended, thus saving time of the consumer. Consumers can pay their bills via 8 service providers (eSewa, PayPoint, CFS Remit,City Express, Prabhu Bank,Nepal Investment Bank, Himalayan Bank and Mahalaxmi Bikash Bank). NEA has introduced one door system to facilitate the consumers and to provide the service as quickly as possible. This system saves the time of the consumer.

For the consumers having bulk payments and those who wants to pay bill at cash collection centers, the Queue Management System was initiated and is continued till date. This system solved the difficulties faced by the consumers in queuing for making the payments. Round the clock no-light services have been implemented in most of the urban no-light centers.

## Loss Reduction Program/ Loss Reduction Activities

The distribution networks comprise of technical and non- technical losses, in which proportion of non-technical losses is quite high. During the year under review, various measures taken in the preceding years were continued to reduce the non-technical losses. Massive awareness campaigns as workshops and review meetings were implemented in various distribution centers. Strict measures for electricity theft control such as confiscation of electric equipment's and taking legal action against culprits were also conducted in various distribution centers with the help of local administration and security agencies. NEA management made various decisions as 'Immediate Action Plans' to improve its functioning. This plan included regular inspection of Time-of-Day (TOD) meters, data download and analysis to curb any connection fault or manipulation.




## Future Plans/Programs

As high system loss is a major challenge for NEA, PRO is trying to make every effort to bring down the distribution system loss. It is planning to improve the quality of the services through the use of new technologies and capacity building to meet the challenges of new environment in utility business. Consumer complaints shall be addressed without delay and the procedure for new connection related works shall be made simple and user friendly.

To reduce Non–technical and Technical loss, these future plans shall be implemented with the joint efforts of PRO and DCSD.

### For Non-Technical losses:

- Identification of electricity theft prone areas in different Distribution Centers.
- Public Awareness Program.
- Mobilize the police and the staffs to remove hooking.
- Changing of Defective meters i.e. burnt, damage, stopped meters.
- Re-sealing of meters.
- Additional billing of HT/LT Consumers after analyzing TOD meter data download report as per the NEA, Electricity Distribution rules 2069.
- Upgrading of electricity meters to meet standard accuracy.

### For Technical losses:

- Conversion of single-phase lines to three phase lines by the addition of two wires.
- Balancing of phase loads.
- Optimization of distribution system.
- Improve power factor and reducing the harmonic distortion by installing suitable size of Capacitor Banks at substation as well as installation of LV Capacitors on LV lines.
- Demand management measures.
- Re-location of distribution transformers at load center.

- Upgradation of distribution transformers and substation power transformers.
- Changing of broken insulators like Disc insulator, pin Insulator and shackle insulator.
- Tightening of Jumpers connecting with suitable size of conductors on HV and LV lines.
- Regular Trimming works of Bush and tree branches.

Line Shifting/Upgrading work for
Construction of Middle Highway (Pokhara DC)

Monitoring of 33/11 kV panel board of Hemja substation


Electricity Safety day Rally (Tanahun DC)

## Safety measures/Safety Day

Safety is one of the major aspects in the distribution center services and the regional office is entrusting it as a major priority. In this regard, not only the NEA employees, public awareness is also important. For this the RO is giving priority for people's awareness for electrical safety.

## Challenges within Regional Office

The various Challenges faced by the Regional office to provide reliable service to the consumers are as follows:

- Udipur-manang feeder has problems in voltage regulation due to long line length and also has line tripping problem. Switching substation should be made near dharapani, manang. Tower structure should be made at few places prone to landslide like Nigalghari, Taal, Jagat etc.
- Myagdi -Mustang feeder has tripping problems due to landslide and trees along the line. Few Tower structures should be made in landslide and heavy flood prone area like Begkhola, Myagde Bhir, etc. Line re-routing should be done along the higway.

- All feeders of lamjung district are from Udipur Substation resulting in overloading of substation. So load should be shifted to Bhorletar substation which is under construction.
- All the feeders in pokhara city are from Kudhar substation. Birauta substation should be constructed and rural feeders should be shifted to Hemja substation.
- 11 kV Khaireni feeder of lekhnath DC is very long so, construction of Khairenitar 33/11 kV, 6/8 MVA substation should be completed to make system reliable.
- 11 kV Pokharichaap feerder of Tanahun is 76 km long.so, new 11kV feeder should be constructed from 33/11 kV, 6/8 MVA Dumre substation to decrease voltage drop of the line.
- 33/0.4 KV load centers are still existing in trunk line in Parbat, Baglung and tatopani DCs. Kusmisera substation should be completed soon and load should be shifted to 11/0.4 loadcenters.
- Due to the adverse topography of the DC's in hilly regions within the Regional office, it is very difficult to provide quick service to the consumers.
- Segregation of Technical and non-Technical losses and social and political issues are the other challenges within the region.

## Projects within the Regional Office

### Udipur Besisahar Manang 33 KV Transmission Line Project

The scope of the project is to construct of 33kV line from Udipur Substation to Thanchowk Substation and 33/11kV 1.5MVA Substation at Thanchowk, Manang to develop reliable grid source for electrification of Manang District. It is a Government Funded Project with the budget of 178,000 (in thousands) and inception date of 059/60. The percentage of work completed is 40% with the amount of budget expended 36,347(in thousands). The project is planned to be completed by F.Y.2077/078

### Galkot 33kV Transmission Line and Substation Project

The scope of the project is to construct 33kV and 11kV line from Baglung Substation to Galkot Substation and 33/11kV 3MVA Substation at Harichaur, Baglung to develop reliable grid source for electrification of Western Region of Baglung District and connection point for IPPs of Daram Khola. It is a Government Funded Project with the budget of 93,550 (in thousands) and inception date of 071/72. The percentage of work completed is 90% with the amount of budget expended 43,335(in thousands). The project is planned to be completed by F.Y. 2076/77

Sindhabesi Lamjung Lekhnath 33 kV Transmission Line and Substation Project

### Sindhabesi Lamjung Lekhnath 33 kV Transmission Line and Substation Project

The scope of the project is to construct 33kV line from Lekhnath Grid Substation to Sindhabesi Substation and 33/11kV 6/8 MVA Substation at Mungri danda, Sindhabesi, Kaski to develop reliable grid source for electrification of North-East Region of Kaski and North-West Region of Lamjung and connection point for IPPs of Rudi Khola. It is a Government Funded Project with the budget of 131,100 (in thousands). The percentage of work completed is 90%.

### Bhorletar 33 kV Transmission Line and Substation Project

The scope of the project is to construct 33kV line from Damauli Grid Substation, Tanahun to Bhorletar Substation, Lamjung and 33/11kV 6/8 MVA Substation at Bhorletar, Lamjung to develop reliable grid source for electrification of Western Region of Lamjung and connection point for IPPs' Midim and Madi Khola . It is a Government Funded Project with the budget of 204,200 (in thousands) and inception date of 2070/71. The percentage of work completed is 70% with the amount of budget expended 90,311(in thousands). Its completion date is FY 2076/77.

### Righa Kharwang 33 kV Transmission Line and Substation Project

The scope of the project is to construct 33kV line from Galkot Substation to Kharwang Substation, and 33/11kV 6/8 MVA Substation at Kharwang, Baglung to develop reliable grid source for electrification of Western Region of Baglung District and connection point for IPPs' Daram and Badigadh Khola. It is a Government Funded Project with the budget of 168,000 (in thousands) and inception date of FY 2070/071. Its completion date is FY 2080/81.

### Khairenitar 33 kV Transmission Line and Substation Project

The scope of the project is to construct 33kV line from Damauli Grid Substation to Khairenitar 33/11KV substation to improve voltage regulation and line reliability of Khairenitar area and southern Tanahun. It is a Government Funded Project with the budget of 281,000 (in thousands) and inception date of 2070/2071. The percentage of work completed is 90% with the amount of budget expended 30,089(in thousands). Its completion date is FY 2076/77.

### Gorkha Siranchaur 33 kV Transmission Line and Substation Project

The scope of the project is to construct 33kV line from Palungtar Substation to Chipleti Substation and 33/11kV 6/8 MVA Substation at Siranchaur Gorkha to develop reliable grid source for electrification of Northern Region of Gorkha District and connection point for IPPs' of nearby river basin Daraudi and Chepe. It is a Government Funded Project with the budget of 209,200 (in thousands) and inception date of 2074/75. Its completion date is FY 2080/81.

### Tatopani Small Hydropower Rehabilitation Project

The scope of the project is rehabilitation of Tatopani 2MW powerhouse in Gharap, Myagdi. It is a Government Funded Project with the budget of 15,000 (in thousands) and inception date of 2070/71.

Tatopani Small Hydropower
Rehabilitation/Maintenance work (Tatopani DC)

Its completion date is FY 2076/77. The percentage of work completed is 50% with the amount of budget expended 5,704 (in thousands).

### Lekhnath Distribution System Rehabilitation Project

The scope of the project is rehabilitation and improvement of 11kV distribution line in Lekhnath Area. It is a Government Funded Project with the budget of 43,200 (in thousands) and inception date of 2070/71. The percentage of work completed is 90% with the amount of budget expended 22,058(in thousands). Its completion date is FY 2075/76.

### Gharap-Chusang 33kV Line and Substation Project

The scope of the project is to construct 33kV line from Gharap, Myagdi to Chusang Substation, Mustang and 33/11kV 6/8 MVA Substation at Chusang, Mustang to develop reliable grid source for electrification of Upper Mustang Area. It is a Government Funded Project with the budget of 265,000 (in thousands) and inception date of 2076/77. Its completion date is FY 2080/81.

## Substation Status

| S.N. | Distribution Center | Substation Name/ Location | Capacity (MVA) | Total Capacity (MVA) | Voltage level | Existing | Proposed | Planned | Underconstruction | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Pokhara | Hemja Substation (Pokahara-25) | 6/8 | 8.00 | 33/11 kV | √ | | | | |
| 2 | Lekhnath | Sindabesi Substation (Mungri Dada) | 6/8 | 8.00 | 33/11 | √ | | | | |
| | | Khaireni Substation (Khairenitar) | 6/8 | 8.00 | 33/11 | | | | √ | |
| | | Ghiring Substation (Ghiring) | 6/8 | 8.00 | 33/11 | | √ | | | |
| 3 | Tanahun | Dumre substation (Dumre) | 8 | 8.00 | 33/11 | √ | | | | |
| | | Aabukhaireni substation (Aanbu Khaireni) | 7 | 7.00 | 33/11 | √ | | | | |
| 4 | Gorkha | gorkha s/s (Gorkha) | 6 | 8.00 | 33/11 | √ | | | | |
| | | palungtar s/s (palungtar) | 6 | 8.00 | 33/11 | √ | | | | |
| | | Ghyampesal s/s (Ghyampesal) | 3 | 4.50 | 33/11 | | | | √ | |
| | | chipleti, jaubari (Siranchowk) | 6/8 | 8.00 | | | √ | | | |
| 5 | Syangja | Badkhola Substation, Putalibazar-3 Badkhola Syangja | 6/8 | 8.00 | 33/11 | √ | | | | |
| | | Mirmi Substation, Kaligandaki-7 Mirmi | 1.5 + 1.55 | 3.00 | 33/11 | √ | | | | |
| 6 | Parbat | Kushma Substation (kushma) | 6/8 | 8.00 | 33/11 | √ | | | | |
| | | Lunkhu Substation (baglung) | 3 | 3.00 | 33/11 | √ | | | | |
| 7 | Baglung | Baglung Substation, Lampata, baglung | 3+3 | 6.00 | 33/11 | √ | | | | |
| | | Galkot Substation, Harichaur | 3 | 3.00 | 33/11 | √ | | | | |
| | | Kharwang Substation, Kharwang | 6/8 MVA | 8.00 | 33/11 | | √ | | | |
| 8 | Myagdi | Milanchowk Substation , Milanchowk Parbat | 6/8 MVA | 8.00 | 33/10 | √ | | | | |
| | | Dana Substation | | 3.00 | 33/11 | √ | | | | |
| | | Darwang Substation, Darwang | 6/8 MVA | 8.00 | 33/11 | | | | √ | |
| 9 | Tatopani | Kowang, mustang | 5 | 5.00 | 33/11 | √ | | | | |
| 10 | Lamjung | Udipur | 6/8 | 8.00 | 33/11 | √ | | | | |
| **Pokhara Regional Office** | | | | **102.00** | | **16** | | | | |

# 33 kV Feeder Status

| S.N. | Name of Distribution Center | Name of 33 kV Feeder | Length of Feeder, km | Conductor Name/ Size (sq.inch) | Maximum Average Load (A) |
|---|---|---|---|---|---|
| 1 | Pokhara | Hemja to Modi P/H | 14 | Dog [0.1 sq mm] | |
| 2 | Lekhnath | No | | | |
| 3 | Tanahun | Damauli to Dumre | 33.49 | Dog [0.1 sq mm] | 210 |
| 4 | Gorkha | Gorkha | 18.63 | Dog | |
| 5 | Syangja | Keware | 56.36 | Rabbit + Weasel (50 & 30 Sqinch) | Reading Not Available |
| 6 | Parbat | Baglung | 13.56 | Dog(100mm$^2$)ACSR | 140 |
| | | Lunkhu | 57.27 | Dog(100mm$^2$)ACSR | 50 |
| | | Bhuka | 12.29 | Weasel(30mm$^2$) | 6 |
| | | Community Area | 12.82 | Dog(100mm$^2$)ACSR | |
| 7 | Baglung DC | Kushma-Baglung | 18 | Dog | |
| | | Modibeni tapping | 15 | Dog | 18.6/6.5 |
| | | Falebas tapping | 6 | Rabbit | 7.4/2.59 |
| | | Kurgha tapping | 21 | Rabbit | 8.1/2.83 |
| 8 | Myagdi Distribution Center | Gharap | 45 | Dog | 145 |
| 9 | Arughat | No | | | |
| 10 | Tatopani | Mustang (kowang) feeder | 42 | Dog | 16.04 |
| | | Gharap feeder | 26 | Dog | |
| 11 | Lamjung | Dumre Udipur | 27.5 | Dog [0.1 sq mm] | 125 |
| | | Udipur Manang | 59 | Dog [0.1 sq mm] | |

# 11 kV Feeder Status

| S.N. | Name of Distribution Center | Name of 11kV Feeder | Length of Feeder, km | Conductor Name Size (sq.inch) | Maximum/ Average Load(A) |
|---|---|---|---|---|---|
| 1 | Pokhara | Aarba | 15.99 | Dog(8.57), Rabbit (8.4), Weasel (0.95), XLPE(0.08) | 158/105 |
| | | Airport | 15.08 | Dog(6.76), Rabbit (5.48), Weasel (2.48), XLPE(0.32), 95 mm cover (0.24) | 149/99 |
| | | Baidam | 15.09 | Dog(6.96), Rabbit (5.98), Weasel (2.48), XLPE(0.32), 50 mm$^2$ cover(0.82) | 291 |
| | | City | 9.38 | Dog(7.7), Rabbit (0.49), Weasel (0.95), XLPE(0.24) | 185 |
| | | Fewa | 61.54 | Dog(16.4), Rabbit (35.68), Weasel (10.1), XLPE(0.35) | 244/140 |
| | | Fewa Incommer | 12.42 | Dog(4.52), Rabbit (0.31), Weasel (7.46), XLPE(0.13) | 49 |
| | | Hemja | 40.22 | Dog(7.43), Rabbit (15.27), Weasel (17.08), XLPE(0.44) | 58/38.5 |
| | | Kaskikot | 23.45 | Dog(11.87), Rabbit (11.04), Weasel (0.39), 100 mm cover (0.22) | 13/8 |
| | | Lumle | 41.53 | Dog(10.01), Rabbit (20.4), Weasel (11.12), 100 mm cover (0.22) | 20/13 |
| | | New Road | 8.34 | Dog(8.65), Rabbit (0.2),XLPE (0.15), 95 mm cover (0.75) | 215/144 |
| | | PID | 0.52 | Weasel (0.42),XLPE (0.07), 95 mm cover (0.03) | 160/107 |
| | | Rambazar | 37.84 | Rabbit (34.19), Weasel (3.05), XLPE(0.56), 95 mm cover (0.34) | 279/186 |
| | | Sahid Chowk | 11.6 | Dog(7.05), Rabbit (2.62), Weasel (1.95), XLPE(0.15), 95 mm cover(0.22) | 197/131 |
| | | Sarangkot | 17.58 | Dog(5.52), Rabbit (11.3), Weasel (1.61), XLPE(0.15) | 227/152 |
| | | Seti Incommer | 3.88 | Rabbit (3.82), XLPE(0.06) | 76 |
| | | Tatopani | 107.11 | Dog(41.33), Rabbit (38.87), Weasel (23.04), 180 ABC (3.81), 95 mm$^2$cover (0.57) | 250/100 |
| 2 | Arughat | Arughat | 60.44 | Rabbit [0.05 sq mm] | 25 |

| | | | | | |
|---|---|---|---|---|---|
| 3 | Lekhnath DCS | Khaireni | 258 | Dog/Rabbit/Weasel | 310/235 |
| | | Begnas | 120 | Dog/Rabbit/Weasel | 166/115 |
| | | Kalika | 74 | Dog/Rabbit/Weasel | 43/22 |
| | | Budibazaar | 40 | Dog/Rabbit/Weasel | 202/147 |
| 4 | Tanahun | Damauli | 75 | 100 , 50, 30 ACSR | 140 |
| | | Tanahusur | 37 | 100 , 50, 30 ACSR | 33 |
| | | Soti | 69.36 | 30 ACSR | 52 |
| | | Tharpu | 62.04 | 100 , 50, 30 ACSR | 62 |
| | | Dumre | 18.4 | 30 ACSR | 25 |
| | | Pokharichhap | 82.68 | 30 ACSR | 51 |
| | | Bandipur | 35.4 | 30 ACSR | 21 |
| | | Mugling | 25.16 | 50, 30 ACSR | 70 |
| | | Aabukhaireni | 13.14 | 50, 30 ACSR | 50 |
| | | Satrasay | 28.34 | 30 ACSR | 70 |
| 5 | Syangja | Arjunchaupari | 65.58 | Rabbit + Weasel (50 & 30) | |
| | | Biruwa Manakamana | 49.58 | Rabbit + Weasel (50 & 30 ) | |
| | | Syangja | 6.44 | Dog + Rabbit (100 & 50 ) | |
| | | Pragatinagar | 14.91 | Rabbit + Weasel (50 & 30 ) | 49 |
| | | Thuladihi | 51.58 | Rabbit + Weasel (50 & 30 ) | 31 |
| | | Setidobhan | 95.25 | Rabbit + Weasel (50 & 30 ) | 77 |
| | | Panchamul | 5.35 | Rabbit + Weasel (50 & 30 ) | 0 |
| | | Pidikhola | 27.86 | Weasel (30 ) | 41 |
| | | Birgha | 44.25 | Weasel (30 ) | 30 |
| | | Kaligandaki | 12.04 | Rabbit + Weasel (50 & 30) | Reading Not Available |
| 6 | Lamjung | Besishahar | 199 | Rabbit and Weasel | 110 |
| | | Bhotewodar | 110 | Rabbit and Weasel | 90 |
| | | Okhari | 109 | Rabbit and Weasel | 70 |
| | | Nayagaun | 78 | Rabbit and Weasel | 45 |
| 7 | Tatopani | Beni feeder | 26 | Dog | |
| | | jomsom feeder | 100 | wiesel | |
| 8 | Parbat | Kushma bazar | 14 | Dog(100mm$^2$)ACSR | 32 |
| | | Armadi | 32.18 | Dog(100mm$^2$)ACSR | 27 |
| | | Badgaun | 5 | Weasel(30mm$^2$) | 17 |
| | | Painyu | 32.52 | Rabbit(50mm$^2$) | 23 |
| | | Bhoksing | 21 | Rabbit(50mm$^2$) | 9 |
| | | Bajung | 13.94 | Weasel(30mm$^2$) | 8 |
| | | DeupurDeurali | 14.4 | Weasel(30mm$^2$) | 10 |
| | | Tilahar Ramja | 19.15 | Weasel(30mm$^2$) | 7 |
| | | Parbat | 22.88 | Weasel(30mm$^2$) | 25 |
| | | Karkineta | 5 | Weasel(30mm$^2$) | 6 |
| | | Ratnechaur | 13.11 | Weasel(30mm$^2$) | 7 |

| | | | | | |
|---|---|---|---|---|---|
| 9 | Myagdi | Beni | 85 | Dog,Rabbit ,Weasel | 106 |
| | | Ratnechaur | 10 | Dog,Rabbit | 25 |
| | | Dana | 90 | Dog,Rabbit ,Weasel | 62 |
| 10 | Gorkha DC,gorkha s/s | Mahendrajyoti | 114.9 | Dog,Rabbit ,Weasel | 70 |
| | | khoplang | 90.65 | Dog,Rabbit ,Weasel | 95 |
| | | Nayabajar | 9.48 | Dog,Rabbit ,Weasel | 42 |
| | Gorkha DC, palungtar s/s | Pokharichhap | 13.68 | Rabbit,Weasel | |
| | Tanahun DC,dumre s/s | Gorkha | 85.95 | Rabbit,Weasel | |
| | dhaging DC, gajuri s/s | Gajuri to gorkha | 21.23 | Rabbit,Weasel | |
| | Tanahun DC ,khaireni s/s | Aabu muglin kuringhat | 74.66 | Rabbit,Weasel | |
| | | daritar | 8.4 | Rabbit,Weasel | |
| | | satrasaye | 9.3 | Rabbit,Weasel | |
| 11 | Baglung DC | Bazar feeder | 117 | Dog/Rabbit/Weasel | 118/41.3 |
| | | Galkot feeder | 128 | Dog/Rabbit/Weasel | 128/44.8 |
| | | Maldhunga feeder | 5 | Rabbit | 22/7.7 |

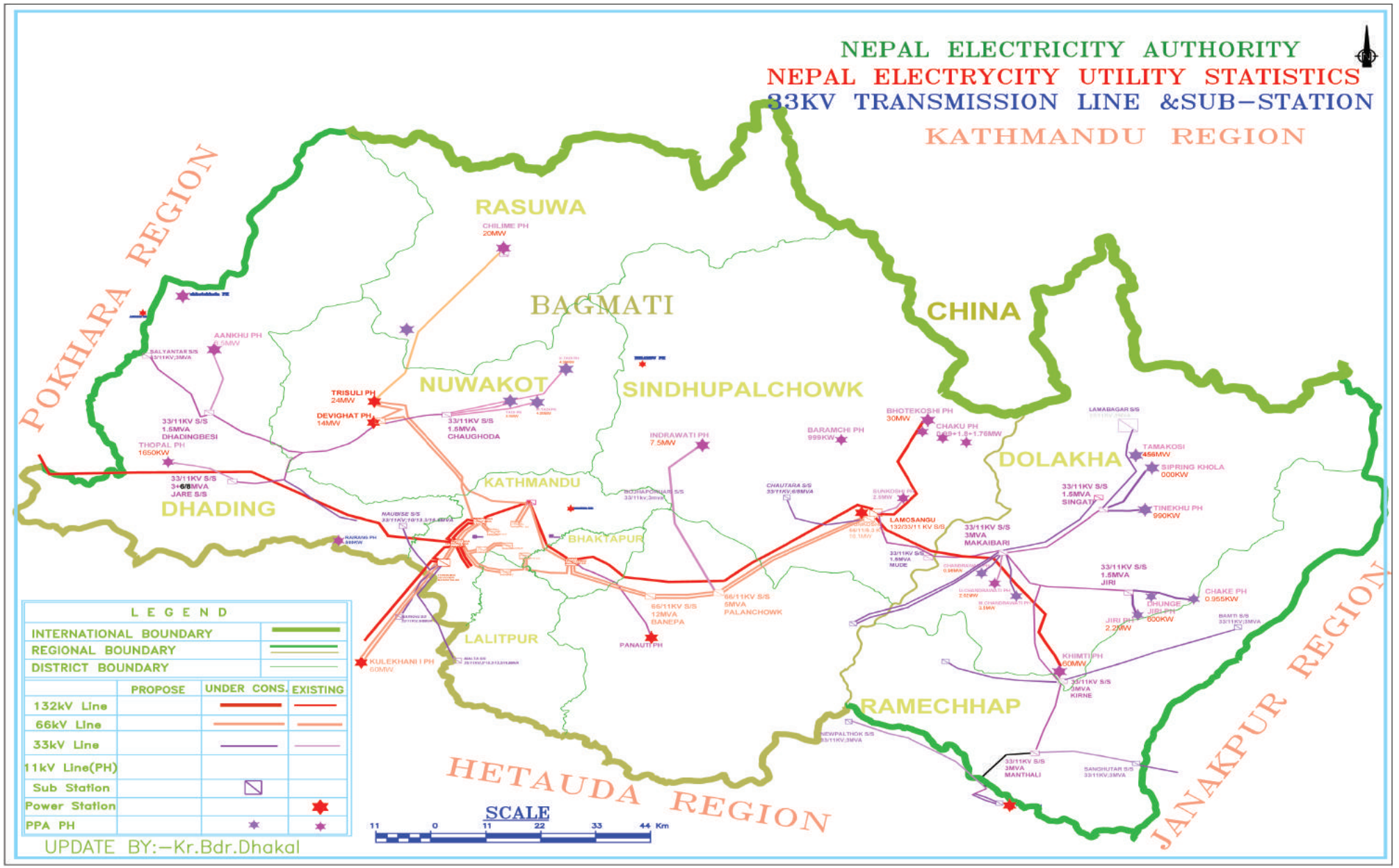
## Electrification Status

| S. No. | District | Municipalities Rural Municipalities | Total Electrification % of municipalities (Grid Connected) | Populations | No of Households | Total 11 kV (HT) Circuit Kilometer (KM) required to fully electrified the Municipalities or rural municipalities | Total 0.4 kV (LT) Circuit Kilometer (KM) required to fully electrified the Municipalities or rural municipalities | No of Transformer Required |
|---|---|---|---|---|---|---|---|---|
| 1 | Gorkha | 1.Gorkha Municipality | 100.00 | 45387 | 12092 | | | 20 |
| | | 2.Palungtar Municipality | 100.00 | 35162 | 9140 | | | 10 |
| | | 3.Sulikot | 41.60 | 23386 | 5369 | 40 | 60 | 16 |
| | | 4.Siranchok | 100.00 | 21763 | 5430 | | | 10 |
| | | 5.Ajirkot | 22.94 | 14370 | 3333 | 35 | 45 | 15 |
| | | 6.Aarughat | 71.42 | 21999 | 5172 | 55 | 90 | 21 |
| | | 7.Gandaki | 100.00 | 21418 | 4840 | | | 10 |
| | | 8.Chumanubri | 0.00 | 6377 | 1795 | 200 | 95 | 15 |
| | | 9.Dharche | 0.00 | 12184 | 2880 | 70 | 60 | 12 |
| | | 10.Bhimsen | 100.00 | 20294 | 5008 | | | 10 |
| | | 11.Shahid Lakhan | 100.00 | 25380 | 6153 | | | 10 |
| | | **Total District : Gorkha** | **80.63** | **247720** | **61212** | **400** | **350** | **149** |
| 2 | Lamjung | 1.Besishahar Municipality | 100.00 | 40245 | 10658 | | | 10 |
| | | 2.Madhya Nepal Municipality | 94.39 | 23913 | 6020 | | 5 | 10 |
| | | 3.Rainas Municipality | 100.00 | 18945 | 4857 | | | |
| | | 4.Sundarbazar Municipality | 100.00 | 27470 | 7363 | | | |
| | | 5.Khola Sothar | 80.08 | 10260 | 2507 | 20 | 30 | 10 |
| | | 6.Dhudh Pokhari | 62.10 | 11222 | 2649 | 25 | 50 | 16 |
| | | 7.Dordi | 94.86 | 18664 | 4435 | 3 | 8 | 12 |
| | | 8.Marsyangdi | 97.30 | 19182 | 4511 | 3 | 4 | 11 |
| | | **Total District : Lamjung** | **94.91** | **169901** | **43000** | **51** | **97** | **69** |
| 3 | Tanahu | 1.Bhanu Municipality | 96.39 | 48713 | 12867 | 2 | 10 | 10 |
| | | 2.Bhimad Minucipality | 98.27 | 33362 | 7966 | 3 | 10 | 11 |
| | | 3.Byas Minucipality | 98.29 | 74823 | 19510 | 3 | 12 | 10 |
| | | 4.Sukla Gandaki Municipality | 100.00 | 51548 | 12963 | | | 10 |
| | | 5.Aanbu Khaireni | 89.32 | 22091 | 5225 | 34 | 84 | 20 |
| | | 6.Rishing | 71.48 | 27521 | 5547 | 30 | 54 | 10 |
| | | 7.Ghiring | 19.62 | 20550 | 4401 | 3 | 23 | 11 |
| | | 8.Devghat | 41.74 | 17160 | 3654 | 40 | 80 | 25 |
| | | 9.Myagde | 100.00 | 23937 | 5987 | 0 | 0 | 10 |
| | | 10.Bandipur | 97.17 | 21290 | 5163 | 4 | 15 | 15 |
| | | **Total District : Tanahu** | **89.33** | **340995** | **83283** | **119** | **288** | **132** |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 4 | Syangja | 1.Galyang Municipality | 100.00 | 33466 | 7324 | | | 10 |
| | | 2.Chapakot Municipality | 100.00 | 23018 | 5252 | | 2 | 10 |
| | | 3.Putalibazar Municipality | 100.00 | 39721 | 10516 | | | 10 |
| | | 4.Bhirkot Municipality | 100.00 | 22644 | 5385 | | | 10 |
| | | 5.Waling Municipality | 100.00 | 45355 | 10782 | | | 10 |
| | | 6.Arjun Chaupari | 100.00 | 14319 | 3486 | | | 5 |
| | | 7.Aandhi Khola | 100.00 | 14683 | 3650 | | | 5 |
| | | 8.Kali Gandaki | 100.00 | 19222 | 4400 | | | 5 |
| | | 9.Phedi Khola | 100.00 | 10922 | 2880 | | | 5 |
| | | 10.Biruwa | 100.00 | 25179 | 3593 | | | 5 |
| | | 11.Harinas | 68.22 | 15350 | 3458 | 4 | 12 | 2 |
| | | **Total District : Syangja** | **98.19** | **263879** | **60726** | **4** | **14** | 77 |
| 5 | Kaski | 1.Pokhara Lekhnath Metropolitan | 97.51 | 471505 | 123588 | 30 | 50 | 100 |
| | | 2.Annapurna | 65.31 | 27398 | 7054 | 50 | 60 | 21 |
| | | 3.Machhapuchhre | 90.63 | 25584 | 6448 | 20 | 36 | 12 |
| | | 4.Madi | 82.02 | 21240 | 5274 | 4 | 12 | 4 |
| | | 5.Rupa | 100.00 | 16987 | 4424 | | | 15 |
| | | **Total District : Kaski** | **95.18** | **562714** | **146788** | **104** | **158** | 152 |
| 6 | Manang | 1.Chame | 69.37 | 1097 | 271 | 70 | 70 | 10 |
| | | 2.Nar Phu | 0.00 | 522 | 118 | 70 | 75 | 5 |
| | | 3.Nashong | 22.95 | 1883 | 440 | 20 | 70 | 5 |
| | | 4.Nesyang | 50.00 | 2157 | 576 | 10 | 55 | 5 |
| | | **Total District : Manang** | **41.07** | **5659** | **1405** | **170** | **270** | **25** |
| 7 | Mustang | 1.Gharpajhong | 95.40 | 2642 | 763 | 10 | 20 | 5 |
| | | 2.Thasang | 93.65 | 2540 | 672 | 10 | 15 | 5 |
| | | 3.Dalome | 26.18 | 1241 | 352 | 30 | 55 | 7 |
| | | 4.Lomanthang | 0.00 | 1656 | 464 | 50 | 75 | 9 |
| | | 5.Barha Gaun Muktichhetra | 92.70 | 2033 | 633 | 24 | 40 | 15 |
| | | **Total District : Mustang** | **70.60** | **10112** | **2884** | **124** | **205** | **41** |
| 8 | Myagdi | 1.Beni Municipality | 94.50 | 32808 | 8476 | 2 | 20 | 10 |
| | | 2.Annapurna | 76.03 | 13040 | 3625 | 20 | 30 | 16 |
| | | 3.Dhawalagiri | 6.80 | 13813 | 3162 | 170 | 160 | 18 |
| | | 4.Mangala | 81.13 | 15951 | 3746 | 30 | 75 | 13 |
| | | 5.Malika | 43.59 | 18728 | 4136 | 50 | 90 | 17 |
| | | 6.Raghu Ganga | 61.07 | 15429 | 4014 | 120 | 150 | 12 |
| | | **Total District : Myagdi** | **67.29** | **109769** | **27159** | **392** | **525** | **86** |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 9 | Parbat | 1.Kushma Municipality | 99.77 | 40068 | 10433 | 1 | 2 | 19 |
| | | 2.Phalebas Municipality | 99.67 | 24979 | 5952 | 1 | 2 | 21 |
| | | 3.Jaljala | 100.00 | 21707 | 5627 | 1 | 5 | 10 |
| | | 4.Painyoo | 97.05 | 15563 | 3333 | 1 | 5 | 10 |
| | | 5.Maha Shila | 99.57 | 9974 | 2256 | 2 | 5 | 15 |
| | | 6.Modi | 99.57 | 21535 | 5544 | | 5 | 8 |
| | | 7.Bihadi | 100.00 | 13561 | 2977 | | 5 | 10 |
| | | **Total District : Parbat** | **99.51** | **147387** | **36122** | **6** | **29** | **93** |
| 10 | Baglung | 1.Baglung Municipality | 100.00 | 60725 | 15945 | | 3 | 10 |
| | | 2.Galkot Municipality | 74.02 | 34759 | 8098 | 30 | 60 | 17 |
| | | 3.Jaimini Municipality | 79.34 | 33654 | 7853 | 25 | 50 | 10 |
| | | 4.Dhorpatan Municipality | 84.48 | 27531 | 5994 | 55 | 118 | 22 |
| | | 5.Bareng | 87.93 | 15219 | 3403 | 10 | 25 | 6 |
| | | 6.Kathe Khola | 100.00 | 27392 | 6435 | | | 10 |
| | | 7.Taman Khola | 65.24 | 11195 | 2543 | 38 | 80 | 16 |
| | | 8.Tara Khola | 82.54 | 12611 | 2620 | 40 | 75 | 15 |
| | | 9.Nisi Khola | 75.44 | 24469 | 5139 | 35 | 75 | 17 |
| | | 10.Badi Gad | 84.13 | 32458 | 6542 | 48 | 104 | 19 |
| | | **Total District : Baglung** | **86.51** | **280013** | **64572** | **281** | **590** | **142** |

# KATHMANDU REGIONAL OFFICE



# KATHMANDU REGIONAL AND DISTRIBUTION CENTRE CHIEFS

**Anirudra Prasad Yadav**
Kathmandu Regional Office Chief

**Thir Kumar Khatri**
Ratnapark DC

**Sashi Bhushan Shah**
Maharajgunj DC

**Manoj Kumar Yadav**
Transformer Workshop

**Santosh Kumar Jaiswal**
Nuwakot DC

**Birendra Kumar Singh**
Lagankhel DC

**Baburam Subedi**
Baneshwor DC

**Prajwal Man Shrestha**
Bhaktapur DC

**Partha Shrestha**
Thimi DC

**Ranjan Raj Gurung**
Kavre DC

**Madhav Paudel**
Kirtipur DC

**Narendra Bir Shrestha**
Pulchowk DC

**Roshan Khadka**
Kuleshwor DC

**Sano Babu Thapa**
Sindhupalshowk DC

**Dhruba Karki**
Dhading DC

**Amrit Babu Adhikari**
Dolakha DC

Rajendra Kumar Chaudhary
Jorpati DC

Krishna Hari Dahal
Dhunche DC

**Suraj Regmi**
Balaju DC

**Binod Adhikari**
Ramechhap DC

Khagendra Bhandari
Melamchi DC

**Bharat Pokharel**
Meter Testing Lab

## Introduction

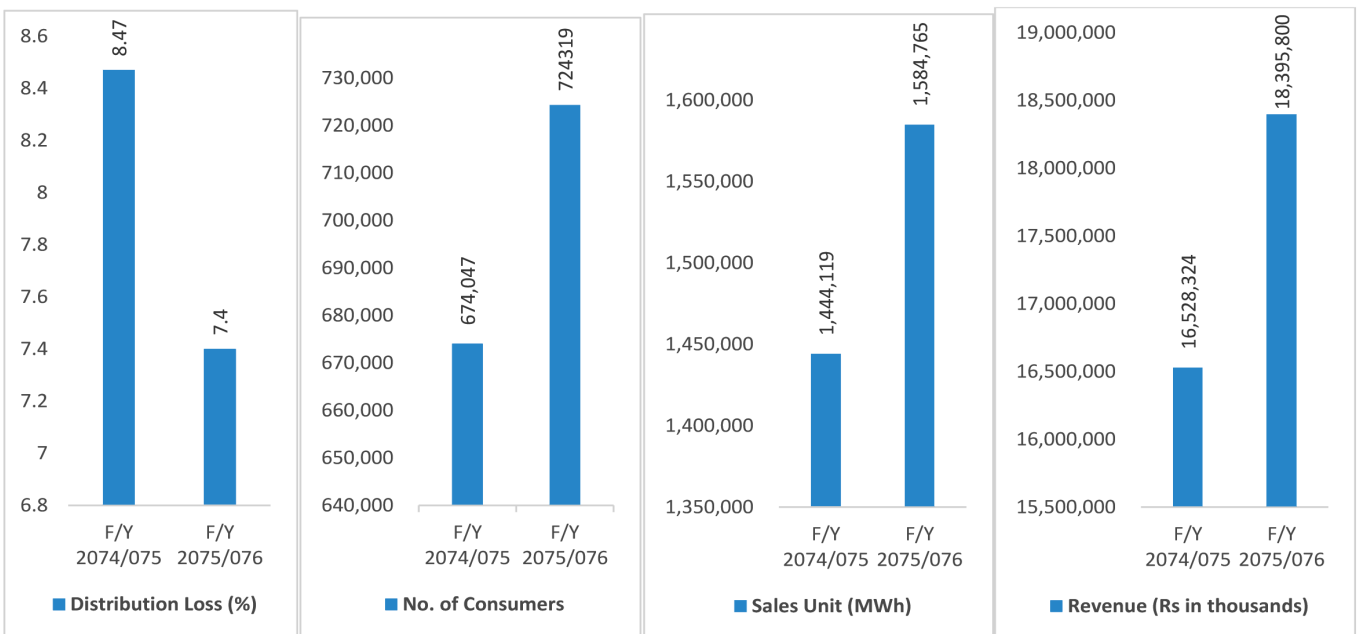
The Kathmandu Regional Office (KRO) is one among the eight Regional Offices of Distribution and Consumer Services Directorate (DCSD) and is responsible for overall management of electricity distribution services, operation and maintenance of electrical networks of all the districts of Bagmati Zone and Ramechhap and Dolakha district of Janakpur Zone. The major activities of this regional office include operation, maintenance and rehabilitation of the electricity distribution networks up to 33 kV voltage Level and 33/11 kV Substations as well as consumer services activities such as new consumer connections, meter reading, billing, and revenue collection.

## Key Objectives

- Supply reliable electricity to the consumers within the region at statutory levels of voltage.
- Provide new connections to prospective consumers.
- Ensure rational development of the electricity distribution system within the region.
- Co-ordinate with the distribution centers of the region to cope with the organizational and consumer related challenges of the regions.

## Operational Structure

The comparative salient features of this regional office are as follows:

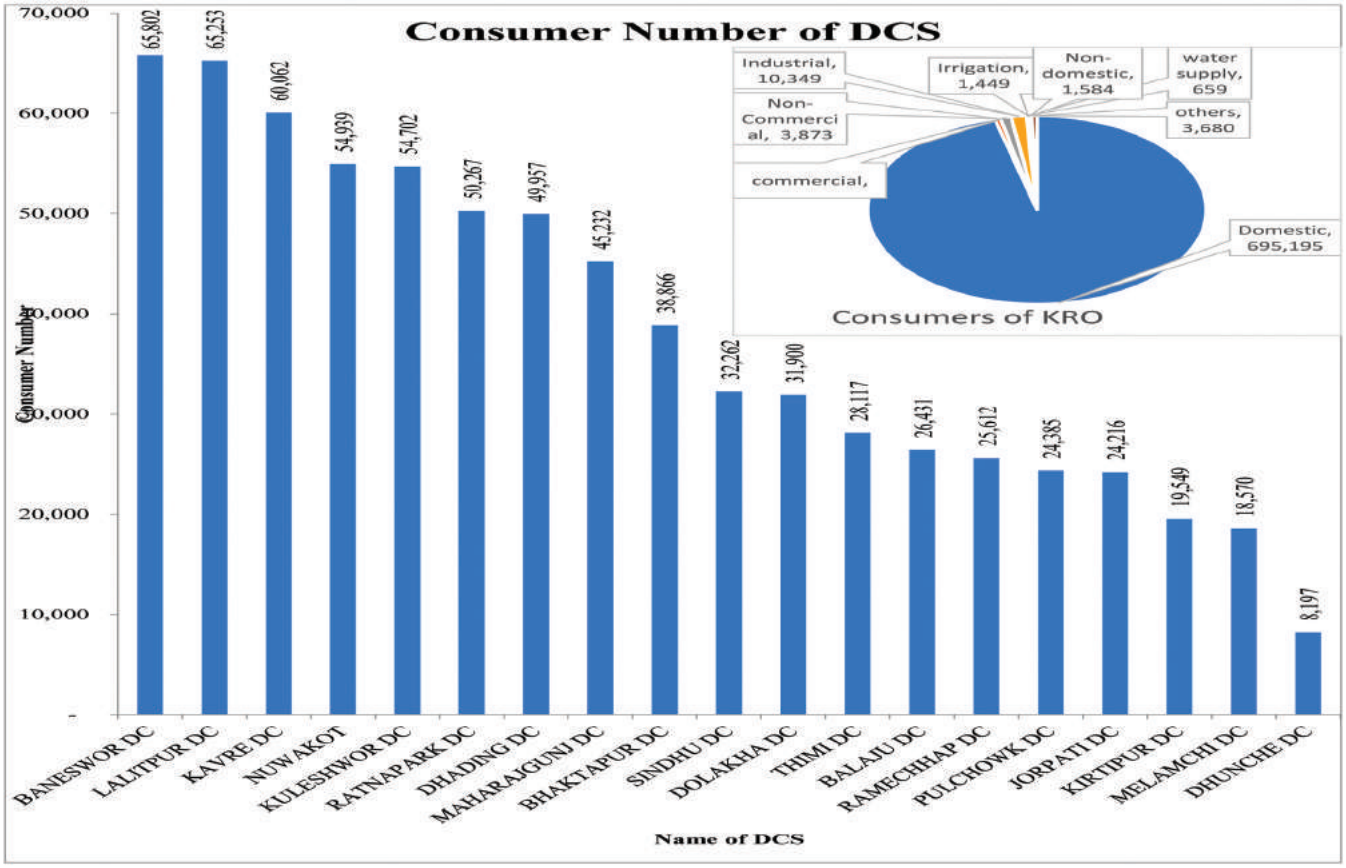



There are 19 Distribution Centers and one Transformer workshop within the regional office. Technical division of the RO looks after all the technical matters like projects, planning & development work and co-ordination of rural electrification activities within the region. There is a finance and revenue section to look after the financial and budgetary functions of the region. The regional office also comprises administration and material management departments. The source of fund is Government of Nepal and NEA itself. There are 33 kV transmission line, substation project and rural electrification project funded by Government of Nepal under this regional office.

## Highlights of the Year

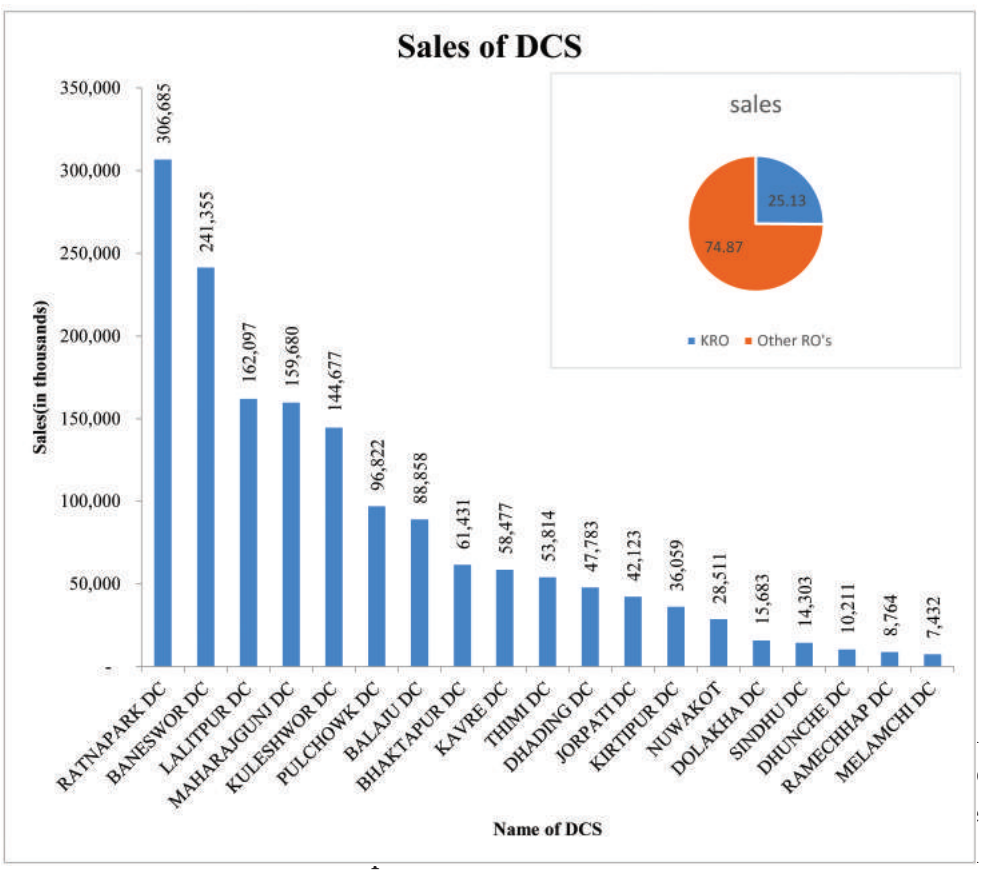
### Consumer Number

KRO recorded 724,319 consumer accounts by the end of the fiscal year 2075/076 which is an increase of 7.45% from last year. The majority of consumer accounts were in the domestic category while the second most were from the Industrial category.



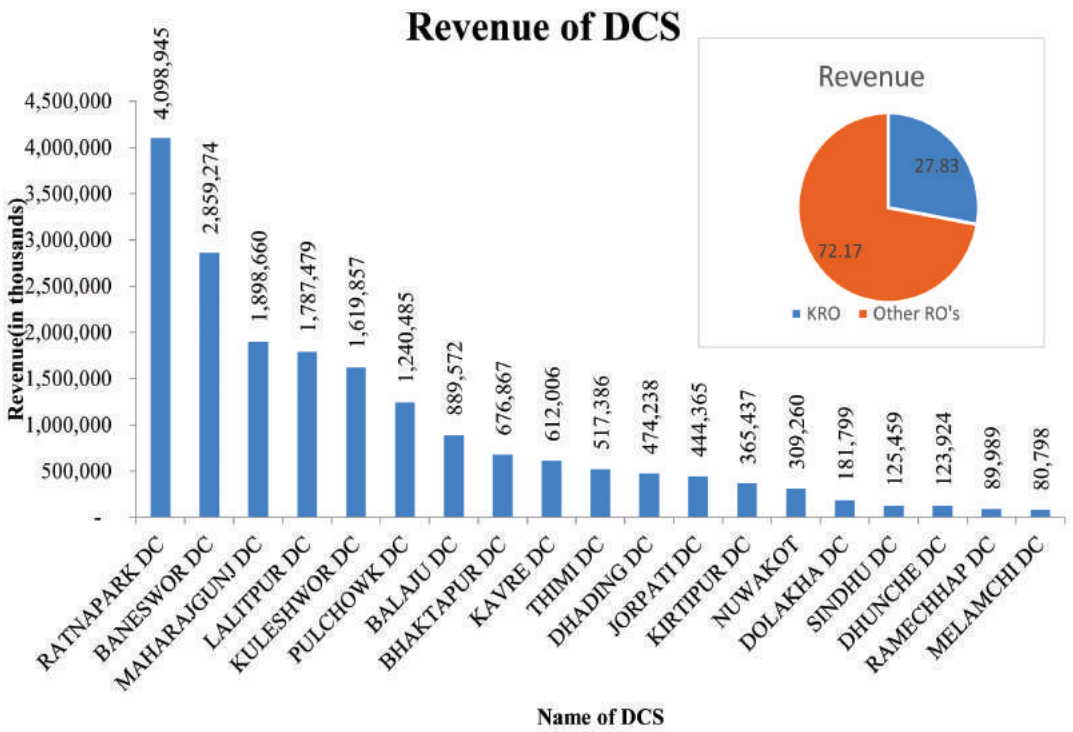

## Sales

KRO reported 25.13 % of electricity sales within its DCs. In the fiscal year 2075/76, 1,584,765 MWh of electricity was sold in the Region which is a 9.74% increase over previous year's sales. Ratnapark distribution Centers accounts for 19.35% of total sales in the region.



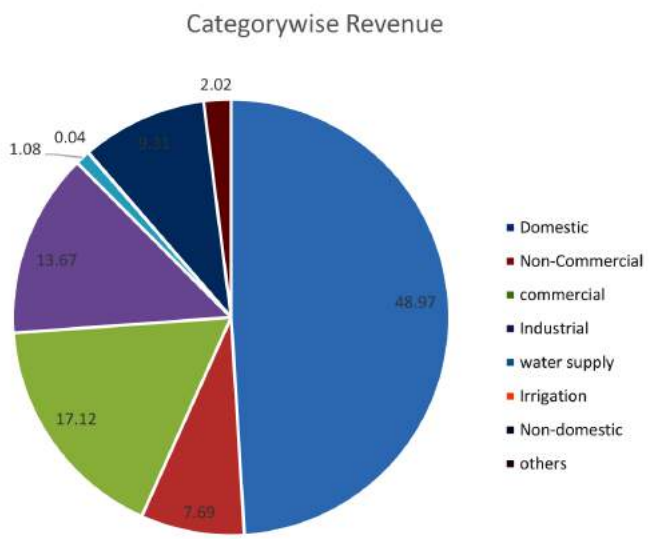
## Revenue

The revenue from electricity sales during the year was Rs. 18,395.8 million which is 11.30% increase in the revenue from last year's. The reasons for increase of revenue are the growth of energy sales, recovery of old dues from consumers. KRO accounts for 27.83% of the total revenue of DCSD.




The majority of revenue in KRO is recorded from domestic tariff category which is approximately 48.97% of the total revenue of the region.

Ratnapark distribution Center accounts for 22.28%, Baneshwor accounts for 15.54%,, Maharajgunj accounts for 10.32%, Lalitpur accounts for 9.71% and Kuleshwor accounts for 8.8% of the total revenue in the Region.




## Distribution Infrastructure

| | |
|---|---|
| 33 kV Distribution Lines | 360.278km |
| 11 kV Distribution Lines | 5978.18 km |
| 33/11 kV primary Substations | 11 |
| LV Distribution Lines | 22343.24 km |
| LV Distribution transformers | 6,579Nos |
| Distribution Transformers Total installed capacity | 629.48MVA |

## Performance Highlights

| | |
|---|---|
| Consumer per Staff | 480 |
| LT 0.4/0.24KV Line Length per Staff (km/staff) | 14.81 |
| Sales per Consumer per year (kWh/Consumer) | 2,184 |
| Revenue per Consumer per year (Rs./Consumer) | 25,392 |
| Consumer per Distribution Transformers | 81 |

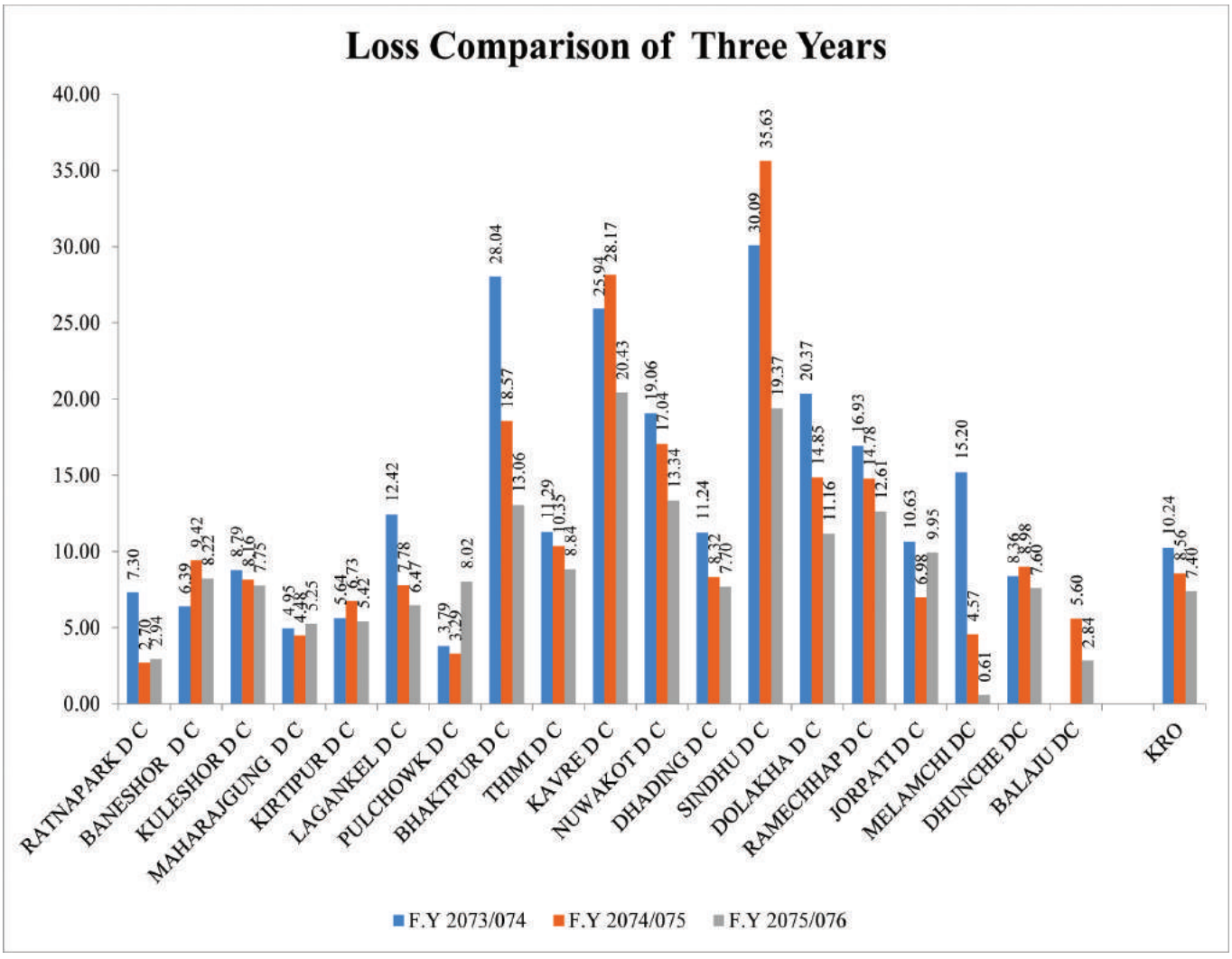
## Customer Care

Special efforts were taken to improve the service at the customer interface points. The staff attached to 19 Distribution Centers and Transformer workshop took special efforts to serve our valued customers better during the year. Nepal Electricity Authority has made arrangements to submit electricity bill easily through

payment has ended, thus saving time of the consumer. Consumers can pay their bills via 8 service providers (eSewa, PayPoint, CFS Remit, City Express, Prabhu Bank,Nepal Investment Bank, Himalayan Bank and Mahalaxmi Bikash Bank). NEA has introduced one door system to facilitate the consumers and to provide the service as quickly as possible. This system saves the time of the consumer as they are not obligated to go to all the departments of the office for the service they need.

## Loss Reduction Program/Loss Reduction Activities

The distribution networks comprise of technical and non- technical losses, in which proportion of non-technical losses is quite high. During the year under review, various measures taken in the preceding years were continued to reduce the non-technical losses. Massive awareness campaigns as workshops and review meetings were implemented in various distribution centers. Strict measures for electricity theft control such as confiscation of electric equipment and taking legal action against culprits were also conducted in various distribution centers with the help of local administration and security agencies. The amount of revenue collected from line disconnection was 181.21 million in the fiscal year 2075/076. NEA management made various decisions as 'Immediate Action Plans' to improve its functioning.This plan included regular inspection of Time-of-Day (TOD) meters, data download and analysis to curb any connection fault or manipulation.



## Future Plans/Programs

As high system loss is a major challenge for NEA, KRO is trying to make every effort to bring down the distribution system loss. It is also planning to improve the quality of the services through the use of new technologies and capacity building to meet the challenges of new environment in utility business. Consumer complaints shall be addressed without delay and the procedure for new connection related works shall be made as simple and as friendlier as possible.

To reduce Non –technical and Technical loss, these future plans shall be implemented with the joint efforts of KRO and DCS.

### For Non-Technical losses:

- Identification of electricity theft prone areas in different Distribution Centers.
- Public Awareness Program.
- Mobilization of Police and Staffs to remove hooking.
- Changing of Defective meters i.e. burnt, damage, stopped meters.

Electricity Theft control (Baneshwor DC)

Electricity Theft control (Kavre DC)

- Re-sealing of meters.
- Additional billing of HT/LT Consumers after analyzing TOD meter data download report as per the NEA, Electricity Distribution rules 2069.
- Upgrading of electricity meters to meet standard accuracy must be conducted to support reduction of non-technical losses through statistical analysis.

### For Technical losses:

- Conversion of single-phase lines to three phase lines by the addition of two wires.
- Balancing of phase loads.
- Optimization of distribution system.
- Improve power factor and reducing the harmonic distortion by installing suitable size of Capacitor Banks at substation as well as installation of LV Capacitors on LV lines.
- Demand management measures.
- Re-location of distribution transformers at load center.
- Upgradation of distribution transformers and substation power transformers.
- Changing of broken insulators like Disc insulator, pin Insulator and shackle insulator.

Distribution system maintenance work (Rantnapark DC)

## Safety Measures/ Safety day

Safety measures have become necessary as there are occurrences of electric accidents of employees, people and domestic animals every year due to leakage of electricity and non-safety working habit. Initiative will be taken to raise the awareness of the working staff regarding safety hazards. Use of safety tools will be made mandatory for all the working staffs.


Safety Awareness program (Kuleshwor DC)

## Challenges within Regional Office

The various challenges faced by the regional office to provide reliable service to the consumers are as follows:

- Devighat-Dhading 33 kV line has frequent tripping problems due to 33 k V tapping from many places. New substation should be constructed near Ratmate to solve this problem.
- 132/33 kV, Singati S/S should be constructed in Dolakha district to seggregate 33kV lines in the district and power evacuation from hydropower.
- Right of way problem for pole shifting in road extension along Ringroad of Kathmandu.
- Undergrounding of conductor in areas of Ratnapark and Maharajgunj DC is also a challenge due to social issues.
- Due to the adverse topography of the DCs in hilly regions within the regional office, it is very difficult to mobilize the resources and to provide quick service to the consumers.
- Major technical challenge within the region is distribution system reliability which needs to be sorted out by system upgradation like conductor upgrading, feeder separation, substation rehabilitation, etc.
- Segregation of Technical and non-Technical losses within the region.

11/0.4 kV Transformer 11 kV line damaged by Flood (Pulchowk DC)

## Projects within the Regional Office

### Nuwakot District Rural Electrification/ Dist. System Reinforcement Project

The scope of the project is rural electrificaton/ district system reinforcement works at Buddhasing, Dangsing, Gorsyang, Khadgabhanjyang, Fikuri, Kaule, Bhalche. It is a Government Funded Project with the budget of 20,000 (in thousands) and inception date of 075/76. The percentage of work completed is 100% with the amount of budget expended 20,984.23(in thousands).

### Nuwakot District Rural Electrification/ Dist. System Reinforcement Project

The scope of the project is rural electrificaton/ district system reinforcement works. It is a Government Funded Project with the budget of 10,000 (in thousands) and inception date of 076/77.

### Dolakha Khaire Marbu Project

The scope of the project is HT/LT Line construction. It is a Government Funded Project with the budget of 40,000 (in thousands) and inception date of 1/17/2076. The percentage of work completed is 30%.

### Sindhupalchok Electricity Expansion & Distribution Line Re-enforcement Project (SEEDLRP)

The scope of the project is supply, delivery, installation/erection/commissioning & testing of 11kV conductor upgrading for various feeders & 0.4/0.23kV ABC conductor distribution lines in various feeders Load Centers. It is a Government Funded Project with the budget of 100,000,000 (in thousands) and inception date of 6/29/2073. The percentage of work completed is 90% with the amount of budget expended 67,054,697 (in thousands). Its completion date is FY 2076/77.

### Construction of Electrical Structure in road expansion

The scope of the project is to reconstruct electrical structure in road. It is a Government Funded Project with the budget of 700,000,000 (in thousands) and inception date of FY 2074/075. Its completion date is FY 2076/77.

## Substation Status

| S.N. | Distribution Center | Name of Substation | Capacity (MVA) | Total Capacity (MVA) | Voltage level (kV) | Existing | Proposed | Planned | Under-construction | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Nuwakot | Chaugada | 3 | 3 | 33/11 | √ | | | | |
| 2 | Ramechaap | Manthali Substation | 3 | 3 | 33/11 | √ | | √ | | 6/8 MVA |
| 3 | Kavre | Makaibari | 3 | 3 | 33/11 | √ | | | | |
| 4 | Dolkha | Jiri | 3 | 3 | 33/11 | √ | | | | |
| 5 | Dolkha | Kirne | 1.5 | 1.5 | 33/11 | √ | | | | |
| 6 | Dolkha | Sigati | 1.5 | 1.5 | 33/11 | √ | | | | |
| 7 | Bhaktapur | Bhaktapur / dudhpati | 1.5 | 1.5 | 132/11 | √ | | | | |
| 8 | Dhading | Dhadingbesi S/S | 6/8 | 8 | 33/11 | √ | | | | |
| 9 | Dhading | Salyantar S/S | 3 | 3 | 33/11 | √ | | √ | | 6/8 MVA |
| 10 | Dhading | Jahare S/S | 16 | 16.6 | 33/11 | √ | | | | |
| 11 | Dhading | Naubise S/S | 2x6/8 | 16 | 33/11 | √ | | | | |
| 12 | Kavre | Majhifeda Substation | 6/8 | | 33/11 | | | | √ | |
| 13 | Kavre | Mahabharat Substation | 6/8 | | 33/11 | | | | √ | |
| 14 | Bhaktapur | Katunjebesi substation | 6/8 | | 33/11 | | | | √ | |
| **Total Existing** | | | | **60.1** | | **11** | | | | |

## 33 kV Feeder Status

| S.N. | Name of Distribution Center | Name of 33 kV Feeder | Length of Feeder (km) | Conductor Size (sq.inch) | Maximum Average Load (A) |
|---|---|---|---|---|---|
| 1 | Nuwakot DC | Devighat-Chaugada | 13.79 | 0.01 | 30.2 |
| 2 | Ramechhap DC | Kirne- Manthali | 27 | 0.01 | |
| | | Sindhuli/Manthali | 40 | 0.01 | |
| 3 | Dolakha DCS | Makaibari Lamosaghu | 26.768 | 0.1 | 240/200 |
| | | Makabari-tamakosi- Kirne-Jiri | 46.675 | 0.1/0.05 | 65/50 |
| | | Makaibari-Sigati-Gongar | 42.933 | 0.1 | 136/100 |
| | | Makaibari-Charnawati IPP | 6.396 | 0.1 | 61/50 |
| | | Jiri - Garjyang IPP | 11.134 | 0.1 | 49/30 |
| | | Jiri- Bojini IPP | 6.482 | 0.1 | 44/30 |
| 4 | DhadingDC | Devigaht PH to Tarukaghat | 14 | Dog/0.1 | |
| | | Tarukaghat to Galchi | 8.6 | Dog/0.1 | |
| | | Galchi to Jahare | 10.5 | Dog/0.1 | |
| | | Galchi to Naubise S/S | 26 | Dog/0.1 | |
| | | Dharke-Naubise | 2 | Dog/0.1 | |
| | | Tarukaghat to Dhadingbesi | 17 | Dog/0.1 | |
| | | Dhading Besi to Salyantar | 21 | Dog/0.1 | |
| | | Jare to Thoppal PH | 10 | Dog/0.1 | |
| | | Dhadingbesi to Akhu | 12 | Dog/0.1 | |
| 5 | Kavre DC | Bhaktapur-Khopasi | 18 | | |

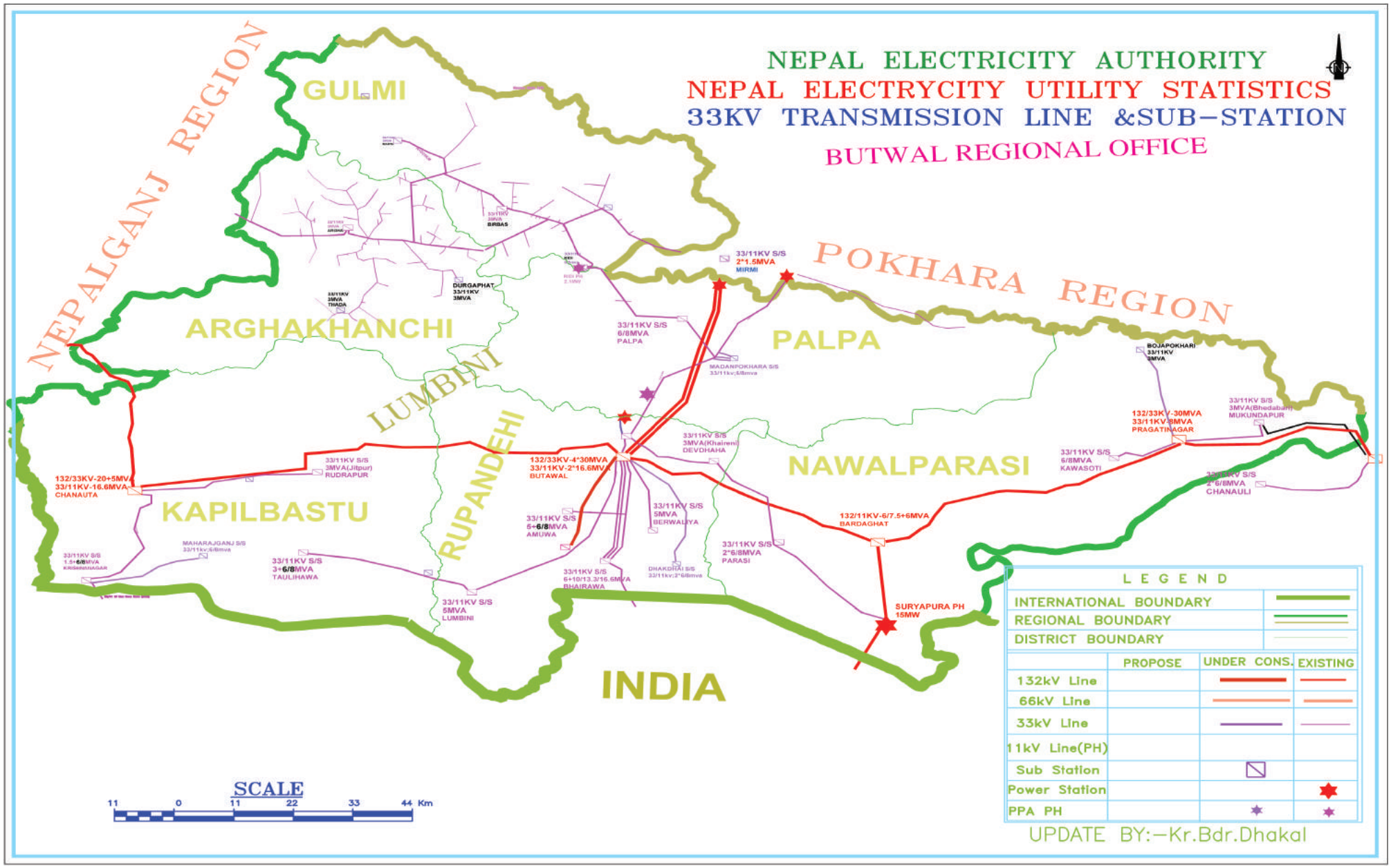
# Electrification Status

| S. No. | District | Municipalities / Rural Municipalities | Total Electrification % of municipalities (Grid Connected) | Populations | No of Households | Total 11 kV (HT) Circuit Kilometer (KM) required to fully electrified the Municipalities or rural municipalities | Total 0.4 kV (LT) Circuit Kilometer (KM) required to fully electrified the Municipalities or rural municipalities | No of Transformer Required |
|---|---|---|---|---|---|---|---|---|
| 1 | Ramechhap | 1. Manthali Municipality | 96.58 | 43825 | 10376 | 3 | 8 | 2 |
| | | 2. Ramechhap Municipality | 81.91 | 29395 | 6295 | 5 | 20 | 2 |
| | | 3. Umakunda | 24.24 | 18084 | 3976 | 25 | 50 | 8 |
| | | 4. KhandaDevi | 67.20 | 26467 | 5520 | 20 | 40 | 5 |
| | | 5.Gokul Ganga | 100.00 | 20607 | 4568 | | | |
| | | 6.Doramba | 89.82 | 23362 | 5129 | 2 | 5 | 1 |
| | | 7.Likhu | 79.27 | 23742 | 5064 | 10 | 40 | 4 |
| | | 8.Sunapati | 87.55 | 18624 | 4161 | 1 | 6 | 1 |
| | | **Total District : Ramechhap** | **81.36** | **204106** | **45089** | **66** | **169** | **23** |
| 2 | Dolakha | 1.Jiri Municipality | 100.00 | 15565 | 3867 | | | |
| | | 2.Bhimeshwor Muncipality | 100.00 | 32590 | 8667 | | | |
| | | 3.Kalinchok | 98.00 | 23028 | 5476 | 2 | 5 | |
| | | 4.Gauri Shankar | 72.53 | 17117 | 4079 | 66 | 80 | 4 |
| | | 5.Tamakoshi | 98.00 | 18910 | 4360 | 2 | 5 | 1 |
| | | 6.Melung | 100.00 | 20274 | 4858 | | | |
| | | 7.Bigu | 58.31 | 18509 | 4433 | 5 | 25 | 5 |
| | | 8.Baiteshwor | 99.26 | 28865 | 7740 | 3 | 5 | 2 |
| | | 9.Shailung | 100.00 | 19761 | 4974 | | | |
| | | **Total District : Dolakha** | **93.35** | **194619** | **48454** | **78** | **120** | **12** |
| 3 | Sindhupalchowk | 1.Chautara Sangachokgadhi | 86.87 | 47466 | 11132 | 10 | 25 | 5 |
| | | 2.Barhabise Municipality | 85.34 | 27088 | 6354 | 15 | 27 | 6 |
| | | 3.Melamchi Municipality | 97.14 | 46286 | 10308 | 20 | 35 | 8 |
| | | 4.Indrawati | 92.75 | 29109 | 6342 | 10 | 15 | 5 |
| | | 5.Jugal | 66.32 | 19631 | 4023 | 20 | 30 | 8 |
| | | 6.PanchaPokhari | 86.32 | 21295 | 5110 | 15 | 20 | 5 |
| | | 7.Balephi | 90.00 | 19303 | 4522 | 5 | 5 | 2 |
| | | 8.Bhotekoshi | 80.00 | 16978 | 4270 | 10 | 25 | 5 |
| | | 9.Lishankhu Pakhar | 80.00 | 15447 | 3757 | 15 | 35 | 7 |
| | | 10.Sunkoshi | 90.00 | 17604 | 4449 | 10 | 15 | 3 |
| | | 11.Helambu | 95.03 | 18039 | 4292 | 15 | 25 | 14 |
| | | 12.TripuraSundari | 90.00 | 13471 | 3465 | 10 | 15 | 5 |
| | | **Total District : Sindhupalchowk** | **87.85** | **291717** | **68024** | **155** | **272** | **73** |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 4 | Kavrepalanchowk | 1.Dhulikhel Municipality | 94.70 | 33717 | 7402 | 30 | 50 | 10 |
| | | 2.Banepa Municipality | 95.10 | 58316 | 12691 | 15 | 30 | 20 |
| | | 3.Panauti Municipality | 88.72 | 48846 | 10688 | 15 | 50 | 15 |
| | | 4.Panchkhal Municipality | 91.38 | 39832 | 8955 | 15 | 40 | 12 |
| | | 5.Namobuddha Municipality | 91.46 | 30945 | 6903 | 20 | 30 | 13 |
| | | 6.Mandan Deupur | 79.64 | 34235 | 7682 | 15 | 40 | 15 |
| | | 7.Khanikhola | 0.00 | 15093 | 2486 | 15 | 30 | 15 |
| | | 8.Chaunri Deurali | 80.14 | 21836 | 4890 | 15 | 30 | 12 |
| | | 9.Temal | 76.90 | 23809 | 5112 | 16 | 40 | 15 |
| | | 10.Bethanchok | 78.75 | 17589 | 3776 | 13 | 20 | 10 |
| | | 11.Bhumlu | 84.58 | 19830 | 4733 | 20 | 30 | 15 |
| | | 12.Mahabharat | 0.00 | 19165 | 3050 | 15 | 30 | 10 |
| | | 13.Roshi | 66.76 | 28127 | 5801 | 30 | 45 | 20 |
| | | **Total District : Kavrepalanchowk** | **80.64** | **391340** | **84169** | **234** | **465** | **182** |
| 5 | Lalitpur | 1. Lalitpur Metropolitan | 99.85 | 341851 | 84295 | 15 | 70 | 40 |
| | | 2.Godawari Municipality | 98.74 | 93946 | 21311 | 35 | 95 | 45 |
| | | 3.MahaLaxmi Municipality | 99.61 | 74594 | 17914 | 20 | 60 | 25 |
| | | 4.Konjyosom | 83.59 | 11649 | 2401 | 3 | 10 | 3 |
| | | 5.Bagmati | 79.50 | 15656 | 3136 | 5 | 15 | 9 |
| | | 6.Mahankal | 80.09 | 11343 | 2330 | 4 | 11 | 7 |
| | | Total District : Lalitpur | 98.50 | 549039 | 131387 | 82 | 261 | 129 |
| 6 | Bhaktapur | 1.Changunarayan Municipality | 99.24 | 65973 | 14484 | 60 | 230 | 75 |
| | | 2.Bhaktapur Municipality | 99.38 | 84191 | 17860 | 35 | 140 | 60 |
| | | 3.Madhyapur Municipality | 100.00 | 98829 | 24164 | 0 | 0 | 0 |
| | | 4.Surya Binayak Municipality | 90.46 | 93419 | 21954 | 85 | 185 | 60 |
| | | **Total District : Bhaktapur** | **97.05** | **342412** | **78462** | **180** | **555** | **195** |
| 7 | Kathmandu | 1.Kathmandu Metropolitan | 100.00 | 1222048 | 318577 | | | 200 |
| | | 2.Kageswori-Manohara Municipality | 98.82 | 75466 | 17950 | 5 | 10 | 30 |
| | | 3.Kirtipur Municipality | 97.82 | 82186 | 24354 | 5 | 10 | 20 |
| | | 4.Gokarneshwor Municipality | 98.66 | 134490 | 33959 | 5 | 10 | 11 |
| | | 5.Chandragiri Municipality | 96.08 | 106733 | 25722 | 10 | 20 | 20 |
| | | 6.Tokha Municipality | 97.35 | 124068 | 32023 | 10 | 15 | 18 |
| | | 7.Tarkeshwor Municiplaity | 98.86 | 102032 | 25255 | 4 | 15 | 16 |
| | | 8.Daxinkali Municipality | 96.93 | 30440 | 6876 | 5 | 15 | 20 |
| | | 9.Nagarjun Municipality | 100.00 | 84464 | 20979 | 5 | 20 | 18 |
| | | 10.Budhanialkantha Municipality | 97.61 | 135200 | 33180 | 10 | 15 | 18 |
| | | 11.Sankharapur Municipality | 93.23 | 31745 | 6773 | 10 | 20 | 35 |
| | | **Total District : Kathmandu** | **99.12** | **2128872** | **545648** | **69** | **150** | **406** |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 8 | Nuwakot | 1.Bidur Municipality | 97.46 | 56124 | 12913 | 2 | 3 | 5 |
| | | 2.Belkot Gadhi Municipality | 96.53 | 42026 | 8363 | 2 | 2 | 6 |
| | | 3.Kakani | 96.48 | 27120 | 5352 | 2 | 3 | 5 |
| | | 4.Kispang | 96.90 | 15346 | 3450 | 2 | 3 | 5 |
| | | 5.Tadi | 92.28 | 18517 | 3699 | 5 | 4 | 5 |
| | | 6.Tarkeshwor | 96.25 | 16230 | 3625 | 3 | 3 | 5 |
| | | 7.Dupcheshwor | 71.63 | 22827 | 4595 | 28 | 16 | 8 |
| | | 8.PanchaKanya | 95.36 | 16465 | 3430 | 2 | 2 | 5 |
| | | 9.Likhu | 95.83 | 17402 | 3748 | 2 | 3 | 5 |
| | | 10.Meghang | 95.67 | 13918 | 3500 | 4 | 4 | 5 |
| | | 11.Shivpuri | 95.96 | 21447 | 4828 | 3 | 3 | 5 |
| | | 12.Surya Gadhi | 96.22 | 17349 | 3624 | 2 | 2 | 5 |
| | | **Total District : Nuwakot** | **94.38** | **284771** | **61127** | **57** | **48** | **64** |
| 9 | Rasuwa | 1.Uttar Gaya | 70.13 | 8555 | 1914 | 12 | 20 | 5 |
| | | 2.Kalika | 90.32 | 9765 | 2165 | 4 | 12 | 3 |
| | | 3.GosaiKunda | 87.49 | 7403 | 2092 | 10 | 15 | 4 |
| | | 4.NauKunda | 92.13 | 12255 | 2573 | 8 | 20 | 10 |
| | | 5.ParbatiKunda (Aamaxodingmo) | 94.22 | 5690 | 1353 | 3 | 24 | 2 |
| | | **Total District : Rasuwa** | **86.89** | **43668** | **10097** | **37** | **91** | **24** |
| 10 | Dhading | 1.Dhunibesi Municipality | 82.05 | 32531 | 7086 | 20 | 27 | 5 |
| | | 2.Nilkantha Municipality | 98.27 | 61346 | 14660 | 6 | 25 | 4 |
| | | 3.Khaniyabas | 60.37 | 13366 | 2779 | 10 | 20 | 8 |
| | | 4.Gajuri | 68.36 | 28395 | 5871 | 10 | 15 | 10 |
| | | 5.Galchhi | 90.13 | 26896 | 5671 | 10 | 15 | 4 |
| | | 6.Ganga Jamuna | 50.61 | 22839 | 5099 | 10 | 25 | 9 |
| | | 7.Jwalamukhi | 82.12 | 25125 | 6007 | 11 | 14 | 6 |
| | | 8.Thakre | 16.39 | 34507 | 7264 | 40 | 90 | 25 |
| | | 9.Netrawati | 100.00 | 13494 | 3272 | 12 | 20 | 5 |
| | | 10.Benighat Rorang | 67.43 | 32999 | 6468 | 7 | 10 | 17 |
| | | 11.Rubi Valley | 0.00 | 10025 | 2236 | 60 | 150 | 20 |
| | | 12.Sidda Lekh | 100.00 | 24876 | 5386 | 6 | 8 | 6 |
| | | 13.Tripura Sundari | 90.66 | 24072 | 5614 | 3 | 5 | 3 |
| | | **Total District : Dhading** | **74.71** | **350471** | **77413** | **205** | **424** | **122** |

# BUTWAL REGIONAL OFFICE



**Nabaraj Subedi**
Butwal Regional Office Chief

**Umesh Kumar Jha**
Bhairahawa DC

**Suraj Gautam**
Parasi DC

**Sanjay Kumar Mishra**
Butwal DC

**Rajib Kumar Sharma**
Kawasoti DC

**Ramu Shrestha**
Palpa DC

**Narayan Aryal**
Gulmi DC

**Jaya Kumar Yadav**
Taulihawa DC

**Kamar Alam Khan**
Nayamil DC

**Birman Raskoti**
Arghakhanchi DC

**Laxmi Aaganja**
Krishnanagar DC

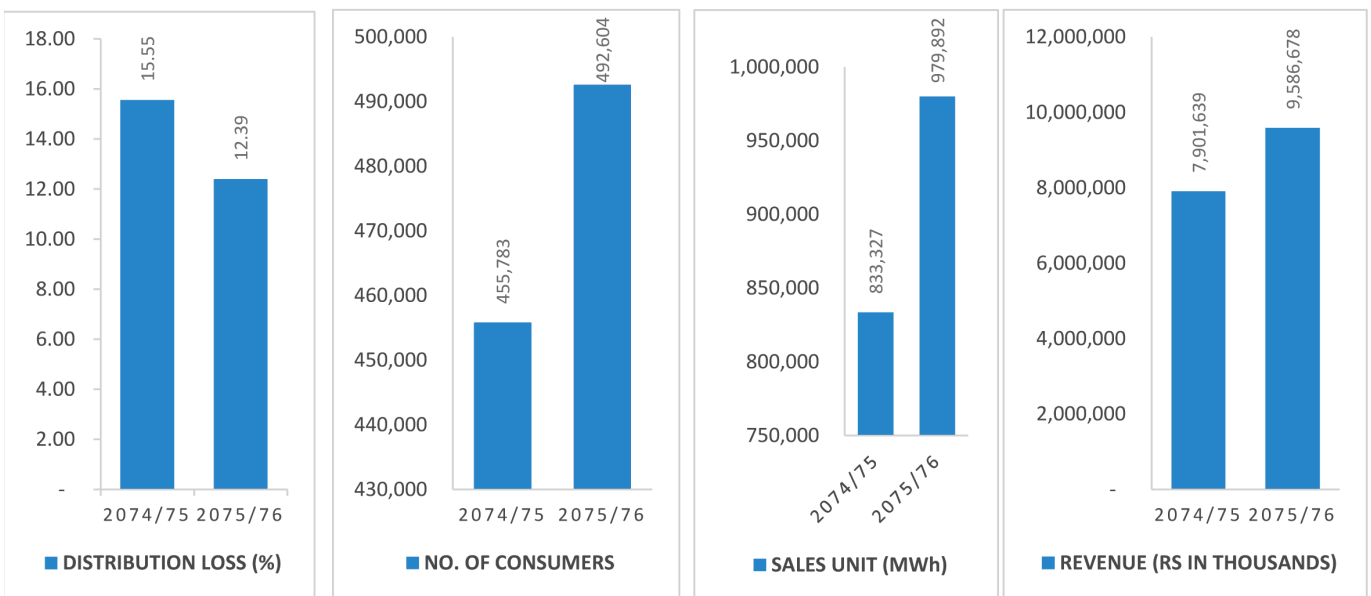
## Introduction

Butwal Regional Office (BuRO) is one of the eight Regional Offices under the Distribution and Consumer Services Directorate and is responsible for overall management of electricity distribution services, operation and maintenance of electrical networks of Lumbini Zone. There are 10 (Ten) Distribution Centers (DCs) in this Regional Office. Area of operation of this regional office covers Nawalpur, Parasi, Rupandehi, Kapilbastu, Palpa, Gulmi, and Arghakhanchi districts. The major activities of this regional office include operation, maintenance and rehabilitation of the electricity distribution networks up to 33 kV voltage Level and 33/11 kV substations as well as consumer services activities such as new consumer connections, meter reading, billing, and revenue collection region are coordinated by the technical division. The finance and revenue functions are carried out by the Joint Director of the region. The Regional Office is provided with a separate administrative officer to attend human resource function. The source of fund is Government of Nepal and NEA itself. There are nine 33 kV transmission line, substation project and a rural electrification project funded by Government of Nepal under this regional office.

## Key Objectives

- To provide good quality electricity to domestic and industrial consumers.
- To supply reliable electricity to new industrial consumers.
- Provide new connections to prospective consumers.

The comparative salient features of this regional office are as follows:




## Operational Structure

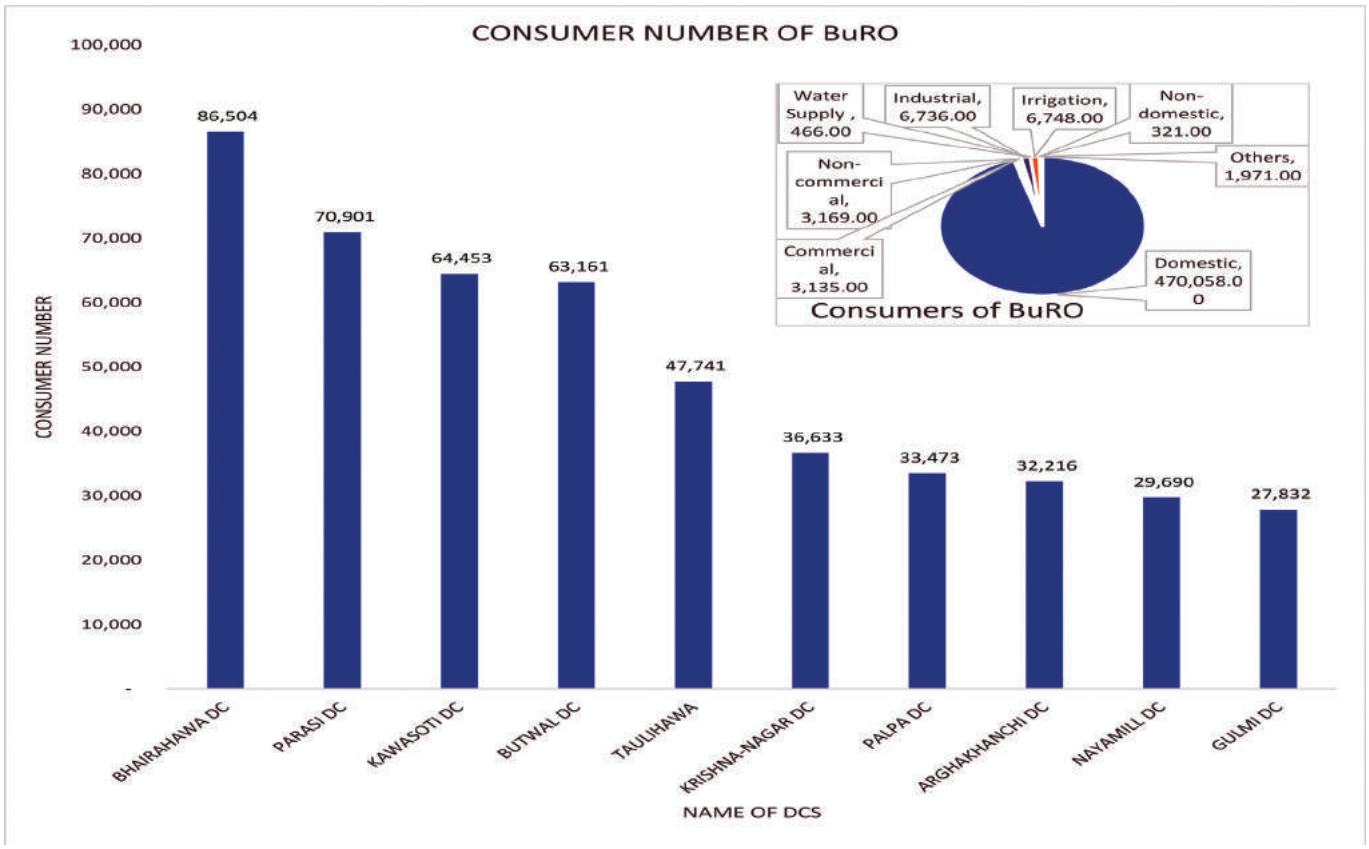
There are 10 Distribution Centers within this Regional Office for effective administration. Naya mill DC is the new dc established in the fiscal year to facilitate the consumers. In addition to above, there is technical division represented by a Manager who looks after all the technical matters, projects, planning & development and corporate work of the region. Rural Electrification activities within the

- Ensure rational development of the electricity distribution system within the Region.

## Highlights of the Year

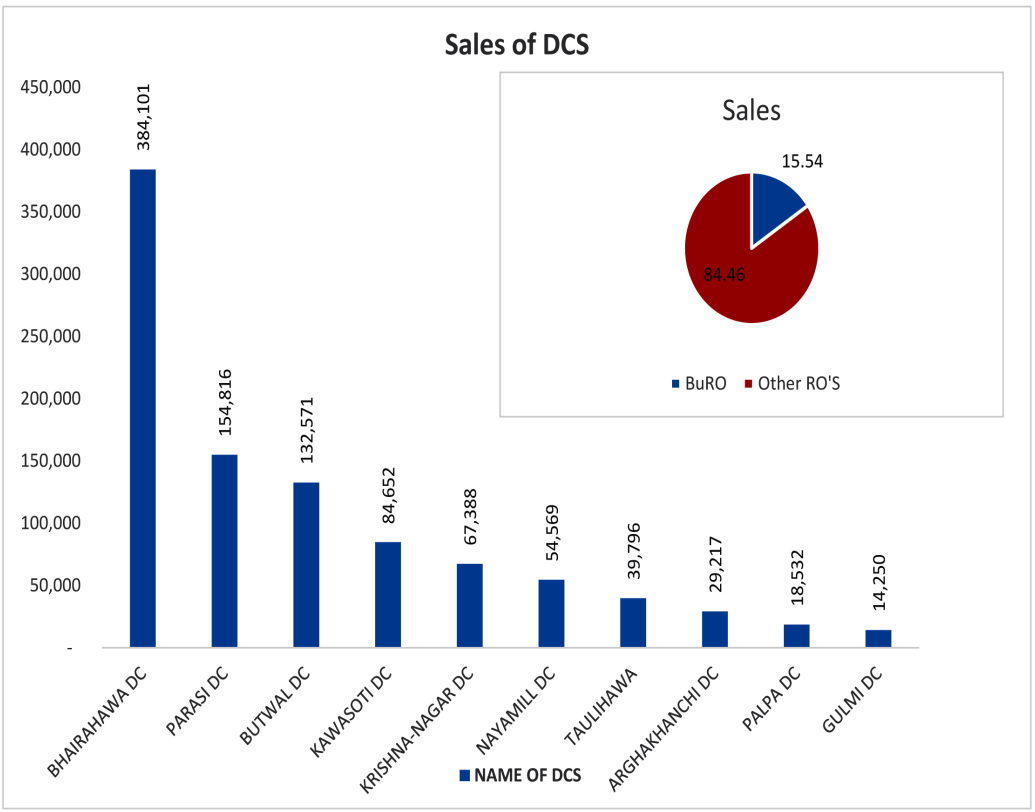
### Consumer Number

BuRO recorded 492,604 consumer accounts by the end of the fiscal year 2075/76. The majority of consumer accounts were in the domestic category (470,058) while the second most were from the irrigation category (6,748).



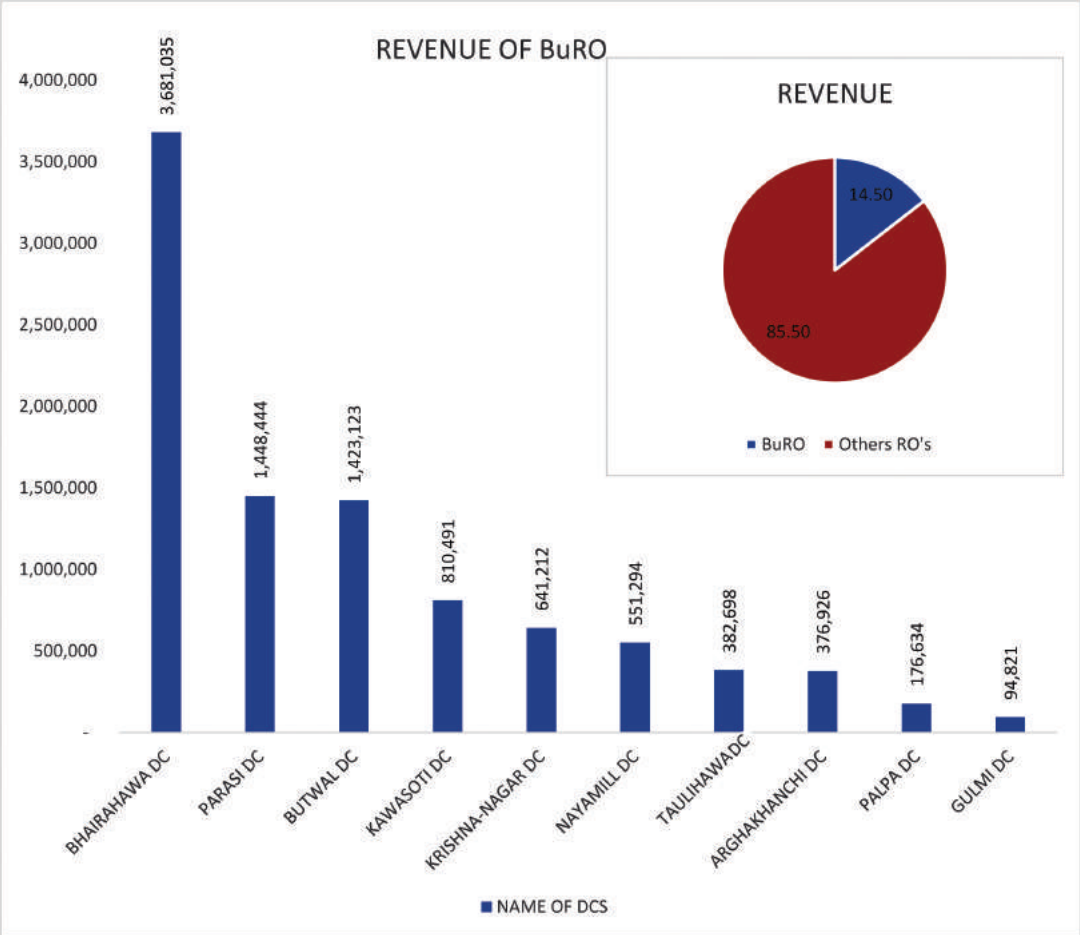

## Sales

BuRO reported 15.54% of electricity sales within DCs. In the fiscal year 2075/76, 979,892 MWh of electricity was sold in the region, a 17.6% increase over previous year. Bhairahawa DC accounts for 39.20% of total sales in the region.



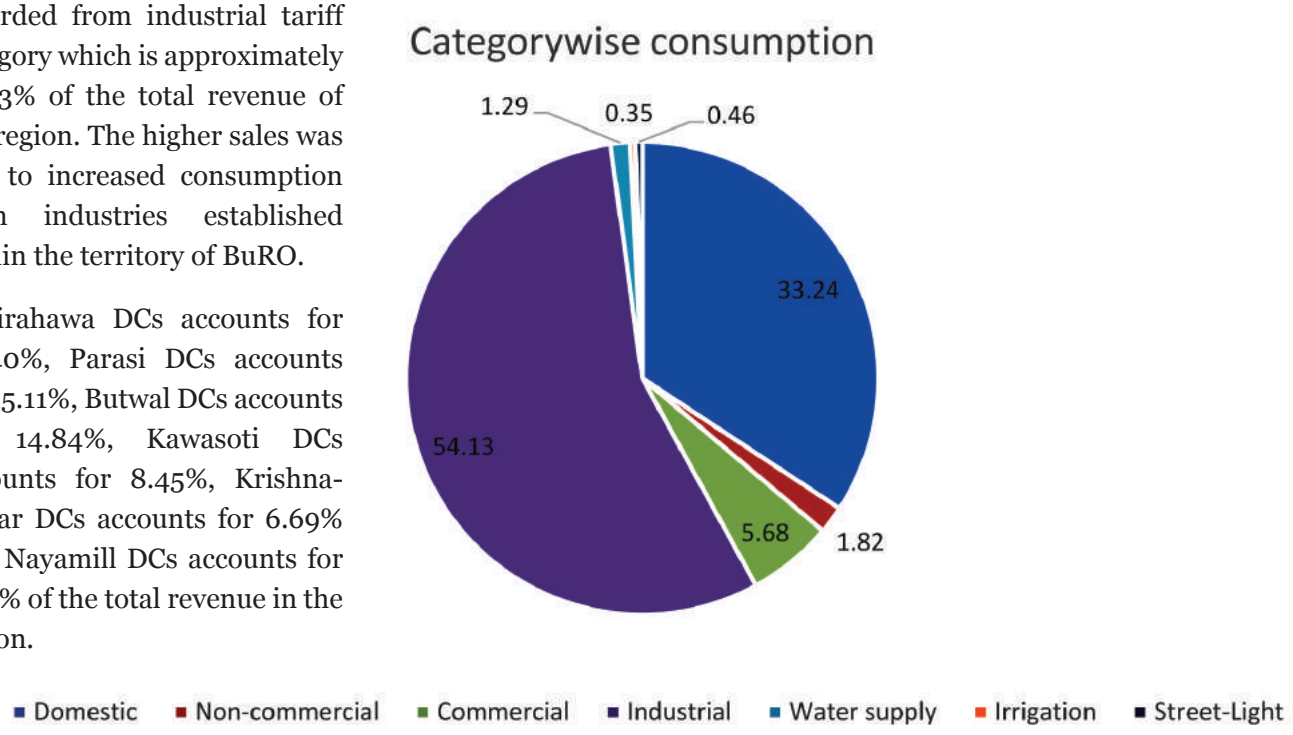
## Revenue

The revenue from electricity sales during the year was Rs. 9,586.7 million which is 21.32% increase from last year. The reasons for increase of revenue are the growth of energy sales, recovery of old dues from consumers. BuRO accounts for 14.50% of the total revenue of the DCs.




The majority of revenue in BuRO recorded from industrial tariff category which is approximately 54.13% of the total revenue of the region. The higher sales was due to increased consumption from industries established within the territory of BuRO.

Bhairahawa DCs accounts for 38.40%, Parasi DCs accounts for 15.11%, Butwal DCs accounts for 14.84%, Kawasoti DCs accounts for 8.45%, Krishna-Nagar DCs accounts for 6.69% and Nayamill DCs accounts for 5.75% of the total revenue in the region.



## Distribution Infrastructure

| | |
|---|---|
| 33 kV Distribution Lines | 937.85 km |
| 11 kV Distribution Lines | 3896.88 km |
| 33/11 kV primary Substations | 18 |
| LV Distribution Lines | 13,131.89 km |
| LV Distribution transformers | 4,078 Nos. |
| Distribution Transformers Total installed capacity | 240.24 MVA |

## Performance Highlights

| | |
|---|---|
| Consumer per Staff | 775.75 |
| LT 0.4/0.24 kV Line Length per Staff (km/staff) | 20.68 |
| Sales per Consumer per year (kWh/Consumer) | 1992 |
| Revenue per Consumer per year (Rs./Consumer) | 19,464 |
| Consumer per Distribution Transformers | 121 |

## Customer Care

The staff attached to 10 Distribution Centers took special efforts to serve our valued customers better during the year. The low voltage problems were addressed by installing distribution transfomers in potential locations. Nepal Electricity Authority has made arrangements to submit electricity bill easily through the online systems. This system has given the service of paying the bill online and also updates about the bill payment for the consumers and the obligation for consumers to come to counters for bill payment has ended, thus saving time of the consumer. Consumers can pay their bills via 8 service providers (eSewa, PayPoint, CFS Remit, City Express, Prabhu Bank, Nepal Investment Bank, Himalayan Bank and

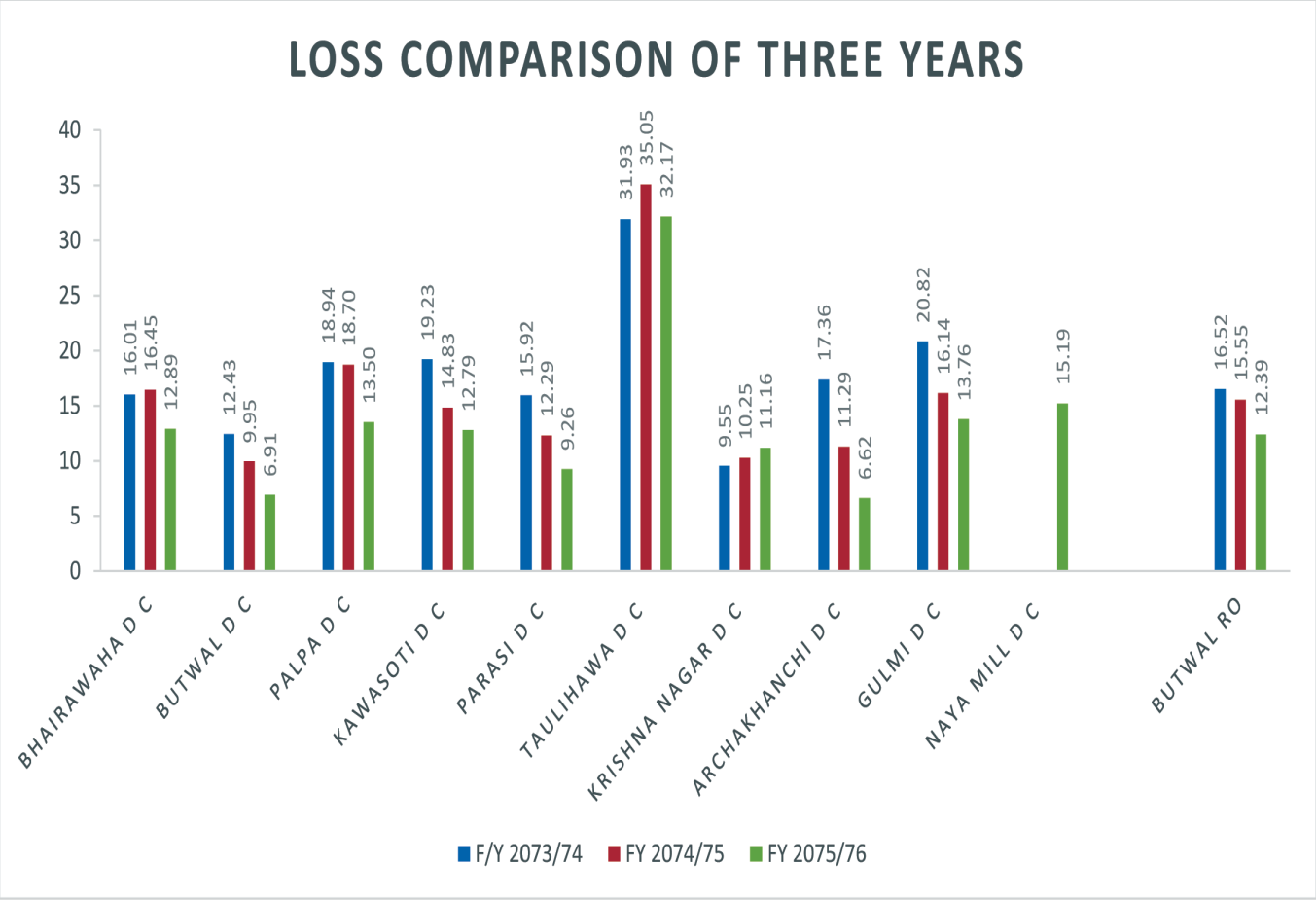

Implementation of One door service (Bhairahawa DC)

Mahalaxmi Bikash Bank). NEA has introduced one door system to facilitate the consumers and to provide the service as quickly as possible. This system saves the time of the consumer. Round the clock no-light services have been implemented in most of the urban no-light centers.

NEA regular works for addition of new transformers, shifting of distribution transformer at load centers, addition of two wires and upgradation of substation have key roles in voltage improvement providing quality supply.

## Loss Reduction Program/Loss Reduction Activities

The distribution networks comprise of technical and non-technical losses, in which proportion of non-technical losses is quite high. During the year under review, various measures taken in the preceding years were continued to reduce the non-technical losses. Massive awareness campaigns as workshops and review meetings were implemented in various distribution centers. Strict measures for electricity theft control such as confiscation of electric equipments and taking legal action against culprits were also conducted in various distribution centers with the help of local administration and security agencies. NEA management made various decisions as 'Immediate Action Plans' to improve its functioning. This plan included regular inspection of Time-of-Day (TOD) meters, data download and analysis to curb any connection fault or manipulation.



## Future Plans/Programs

As high system loss is a major challenge for NEA, BuRO is trying to make every effort to bring down the distribution system loss. It is also planning to improve the quality of the services through the use of new technologies and capacity building to meet the challenges of new environment in utility business. Consumer complaints shall be addressed without delay and the procedure for new connection related works shall be made simple and user friendly.

To reduce Non–technical and Technical loss, these future plans shall be implemented with the joint efforts of BuRO and DCs.

### For Non-Technical losses:

- Identification of electricity theft prone areas in different Distribution Centers.
- Public Awareness Program.
- Mobilization of Police and Staffs to remove hooking.
- Changing of Defective meters i.e. burnt, damage, stopped meters.
- Re-sealing of meters.
- Additional billing of HT/LT Consumers after analyzing TOD meter data download report as per the NEA, Electricity Distribution rules 2069.
- Upgrading of electricity meters to meet standard accuracy must be conducted to support reduction of non-technical losses through statistical analysis.

### For Technical losses:

Conversion of single-phase lines to three phase lines by the addition of two wires.

- Balancing of phase loads.
- Optimization of distribution system.
- Improve power factor and reducing the harmonic

विद्युत चुहावट रोक्न निःशुल्क मिटर बितरण

कपिलवस्तु, २७ चैत-कपिलवस्तु नगरपालिका वडा नम्बर १२ सौरहाका ७६ वर्षिय तमेश्वर कहाँर औंधी खुसी देखिए।

पैसाको जोहो नहुँदा छिमेकी घरको झिलीमिली बत्ती देखेर चित्त बुझाउने उनले घर बनेको ३० वर्ष सम्म टुकी र चाईनिज लाईटको भरमा घर चलाए। तर घर छेउमै आएर निःशुल्क विद्युत मिटर जडान होला भनेर कल्पना समेत नगरेका उनले एकाएक निःशुल्क मिटर जडान हुने भए पछि खुसी नहुने कुरै थिएन। "२/४ वर्ष बाँकी रहेको जिन्दगी परमा बिजुली नबालेर सक्किएला कि भन्ने लागेको थियो। तर अब घरमा बत्ती आउने भयो।" उनले खुसी हुँदै भने। उनी जस्तै सोही वडाका सावित्री लोहार र चन्द्रावती मल्लाह समेत गाउँमै आएर निःशुल्क विद्युत मिटर जडान हुने भएपछि खुसी देखिन्थे।

गर्मीयाम शुरु भई बिद्युतको माग वृद्धि हुँदै गर्दा कपिलवस्तु नगरपालिकामा बिद्युत चुहावट नियन्त्रणका लागि निःशुल्क बिद्युत बितरण गरिएपछि उनीहरुमा सो खुसीको आगमन भएको हो। नेपाल विद्युत प्राधिकरण तौलिहवा बितरण केन्द्रको आयोजनामा कपिलवस्तु नगरपालिका १२ सौरहाका ८३ गरिब, दलित र बिपन्न परिवारलाई बिद्युत मिटर बितरण गरिएको हो। प्रतिनिधीसभाका सांसद बृजेश कुमार गुप्ता, प्रदेश सदस्य धर्म बहादुरलाल श्रीवास्तब, प्राधिकरण क्षेत्रिय प्रमुख भानुभक्त भट्टराई, बितरण केन्द्र प्रमुख जय कुमार यादव र वडा अध्यक्ष ओम प्रकाश पाण्डेयले ८३ परिवारका घरमुलीलाई बिद्युत मिटर हस्तान्तरण गरेका हुन। बर्षौदेखि मिटर नपाएकाले बिद्युत चोरी गर्दा सम्झाउने गाहो पर्ने गरेको अनुभव सुनाउँदै अब भने बिद्युत चुहावट नियन्त्रणमा सहयोग पुग्ने वडा अध्यक्ष ओम प्रकाश पाण्डेयले बताए। "बिगतमा बिद्युत मिटरका लागी आवेदन दिएर महिनौं कुर्नु पर्ने बानी परेका बडाबासी घरमै निःशुल्क मिटर पाउदाँ खुसी छन," वडा अध्यक्ष पाण्डेयले भने।

प्राधिकरणको केन्द्रिय निती अनुसार चुहावट बढि हुने स्थानमा निःशुल्क बिद्युत मिटर बितरण गरि जडान समेत गर्ने धालिएको बितरण केन्द्र प्रमुख जय कुमार यादवले जानकारी दिए। "हामीले बढि बिद्युत चुहावट हुने ठाउँमा चुहावट नियन्त्रणमा स्थानियको सरोकार बृद्धि गर्नका लागी निःशुल्क बिद्युत मिटर बितरण गरेका हौं। आशा छ, चुहावट नियन्त्रणको बिषय सबैको सरोकारको बिषय बन्ने छ।" बितरण केन्द्र प्रमुख यादवले भने। सरकार र प्राधिकरणको उज्यालो नेपाल अभियानलाई साकार पार्न चुहावट नियन्त्रण मुख्य मुद्दा भएकाले यस्तो अभियानलाई प्राधिकरणले प्राथमिकता दिएको नेपाल बिद्युत प्राधिकरण बुटवलका क्षेत्रिय प्रमुख भानुभक्त भट्टराईले बताए। निःशुल्क बिद्युत बितरणको कार्यले बिद्युत चोरी र चुहावट नियन्त्रणमा सहयोग पुग्ने प्रदेशसभा सदस्य धर्मबहादुर लाल श्रीवास्तबको भनाइ थियो। समृद्ध नेपालको परिकल्पना गर्न उर्जाको सहि सदुपयोग गर्ने कार्यका लागि प्राधिकरणको अभियानले सहयोग पुर्याउने प्रतिनिधीसभाका सदस्य बृजेश कुमार गुप्ताले बताए। प्राधिकरणको तौलिहवा बितरण केन्द्रले बिद्युत चुहावट नियन्त्रणका लागि छुटके चेकजाँच सगै पछिल्लो समय टोल टोलमै पुगी मिटर बितरण गर्ने कार्य अगाडी बढाउँदा बिद्युत चुहावटको दर ३८ प्रतिशतबाट घटेर २३ प्रतिशतमा पुगेको छ। तौलिहवा बितरण केन्द्रले चुहावट नियन्त्रण अभियान र कार्यक्षेत्रका ६ वटा स्थानीय तहमा चुहावट नियन्त्रण समिति समेत गठन गरेको छ।

Electricity Theft control (Taulihawa DC)

distortion by installing suitable size of Capacitor Banks at substation as well as installation of LV Capacitors on LV lines.

- Demand management measures.
- Re-location of distribution transformers at load center.
- Upgradation of distribution transformers and substation power transformers.
- Changing of Broken insulators like Disc insulator, pin Insulator and shackle insulator.

## Safety Measures/ Safety day

Safety measures have become necessary as there are occurence of electric accidents of employees, people and domestic animals every year due to leakage of electricity and non-safety working habit. Initiative will be taken to raise the awareness of the working staff regarding safety hazards. Use of safety tools will be made mandatory for all the working staffs.


Electrical safety day activities

## Challenges within Regional Office

The various Challenges faced by the Regional office to provide reliable service to the consumers are as follows:

### Bhairahawa DC

- 33 kV, feeders, New 2 (350 Ampere), Old (380 Ampere), Lumbini (370 Ampere) and Bharaulia (390 Amperes) are overloaded and has an excessive problems of tripping.
- 11 kV feeders from Bhirahawa S/S (Feeder No. 7, 3 and 4) needs to be upgraded and rehabed to provide quality supply to consumers.
- Voltage drop in 33kV feeder of Bhairahawa DC is high. During Baishak and Jestha supply in 33kV voltage is reduced to 26 kV.

### NayaMill DC

- 11kV Naya mill east and Naya mill west feeders are overloaded and feeder segregation and upgradation is necessary.
- Major technical challenge within the region is distribution system reliability which needs to be sorted out by system upgradation like conductor upgrading, feeder separation, substation rehabilitation, etc.

### Kawasoti DC

- Kawasoti and Mukundapur S/S are overloaded and are under upgradation under the project of PTSD. 11kV kawasoti and Arunkhola feeder needs to be upgraded, segregated for reliable and stable supply.132/33kV substation should be constructed in nearyby area to solve the problem.
- Social and political challenges are also vibrant within the Region.

### Taulihawa DC

- 33 kV feeder are long and overloaded and needs to be upgraded.
- 30 MVA transformer of Chanduta grid is over loaded since it is connected to two substations of Taulihawa dc and it is connected to industrial feeder too.
- Taulihawa substation (6/8 + 3 MVA) is overloaded and 3 MVA transformer needs to be upgraded to 8MVA to meet the demands of consumers.
- Conductor 11kV Lumbini and Krishnanagar feeder should be upgraded.

### Krishnanagar DC

- 33/11 kV,3 MVA transformer of Chanduta grid is overload and it needs to be upgraded to 6/8 MVA.
- Maharajgunj feeder from Krishnanagar S/S is very long so substation should be constructed in Krishnanagar promptly.

### Palpa DC

- 33kV feeder from Butwal grid to Palpa S/S is very long and has excessive tripping problems.
- 11kV Pacchim and Purba feeder from Palpa S/S is long and overloaded.
- There are many NEA 33/0.4kV transformers in trunk lines and those loadcenters should be shifted to 11/0.4kV.

### Gulmi DC

- 33 kV feeder are long and overloaded and needs to be upgraded
- There are many NEA 33/0.4kV transformers in trunk lines and those loadcenters should be shifted to 11/0.4kV.
- 33/11 kV Bastu substation is charged without any protection system and 11kV breakers and other protection should be incorporated in the S/S.

### Argakhachi DC

- 33 kV feeder are long and overloaded and needs to be upgraded
- There are many NEA 33/0.4kV transformers in trunk lines and those loadcenters should be shifted to 11/0.4kV.
- 3MVA substation in Argakhachi needs to be upgraded and protected system and 11kV lines needs to be rehabed.

### Argakhachi DC

- 33 kV feeder are long and overloaded and needs to be upgraded
- There are many NEA 33/0.4kV transformers in trunk lines and those loadcenters should be shifted to 11/0.4kV.
- 3MVA substation in Argakhachi needs to be upgraded and protected system and 11kV lines needs to be rehabed.

### Parasi DC

- 33 kV and 11kV feeders are long and overloaded and needs to be upgraded.
- 33/11 kV, 2*6/8MVA Parasi substation is overload and needs to be upgraded and rehabilitated.

### Butwal DC

- 33 kV Jogokuti-Chauraha feeder overloaded and to solve this problem 3km 33kV line extension is in progress.
- Saljhandi feeder is long and overloaded (380 Amperes) and to slove this problem Saljhandi 33/11kV, 16.6 MVA substation is under construction.
- 3.3/33KV, 1 MVA substation (from Tinau Power house) at Chauraha, Butwal is overloaded and needs to be upgraded.

## Projects within the Regional Office

### Jitpur-Thada 33 kV Transmission line and Substation Project

This project funded by Government of Nepal, started on 2072/02/05 and the work is in progess. This project is targeted to complete in next six months.

### Bhairahawa-Taulihawa Distribution System Reinforcement Project

This project is funded by Government of Nepal, started on 2072/01/06 and it is targeted to complete in next six months.

### Ridi 33 kV Transmission line and Substation Project

The scope of this project is to construct 11 kV line from Ridi to Birbas and 33/0.4 kV transformers replacement with 11/0.4 kV transformers at Ridi,

Gulmi. This project is also funded by Government of Nepal and the budget spent in this project is Rs. 27,953,383. This project is targeted to complete in next one year.

### 33 kV Double Circuit Yogikuti-Shitalnagar Line Construction

This project is funded by Government of Nepal and the budget allocation for this project is Rs. 25,000,000.

### 33 kV Double Circuit Dhakdhai-Sej Bhairahawa and Breaker installation at Dhakdhai

This project is funded by Government of and it started on 2074/03/18. The scope of this project includes the installation of Bay and Breaker at Dhakdhai, and the construction of 33 kV Double Circuit Dhakdhai-Sej, Bhairahawa. This project is targeted to complete in next 12 months.

### 33 kV Double Circuit Yogikuti-Chauraha project

This project started on 2072/02/04 and is funded by NEA. This project is targeted to complete in next three months.

### 33/11 kV 3 MVA Substation at Siluwa, Palpa

The inception date of this project is 2071/06/26 and is targeted to complete in next one and half years.

# Substation Status

| S.N. | Distribution Centre | Substation Name/ Location | Capacity (MVA) | Total Capacity (MVA) | Voltage level (kV) | Existing | Proposed | Planned | Underconstruction | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Nayamill DC | Bharauliya/ Tillottama-16 Bharauliya | 6/8 | 8 | 33/11 | √ | | | | |
| 2 | Taulihawa DC | Taulihawa | 11 | 38 | 33/11 | √ | | | | |
| | | Jeetpur | 11 | | 33/11 | √ | | | | |
| | | Labani | 6/8 | | 33/11 | | | | √ | |
| | | Ghanchaura | 6/8 | | 33/11 | | | | √ | |
| 3 | Krishnanagar DC | Krishnanagar Substation | 2*6/8 | 72.5 | 33/11 | √ | | | | |
| | | Maharajgunj Substation | 1*6/8 | | 33/11 | √ | | | | |
| | | Chandrauta Substation (Butwal Grid) | 1*30 | | 132/33 | √ | | | | |
| | | | 1*12.5 | | 132/33 | √ | | | | |
| | | | 1*6/8 | | 33/11 | √ | | | | |
| | | | 1*3 | | 33/11 | √ | | | | |
| 4 | Gulmi DC | Birbas S/S Gulmi | 6/8 | 13 | 33/11 | √ | | | | |
| | | Ridi S/S Gulmi | 2 | | 33/11 | √ | | | | |
| | | Bistu S/S Gulmi | 3 | | 33/11 | √ | | | | |
| | | Kisantari S/S Gulmi | | | 33/11 | | | | √ | |
| | | Santipur S/S Gulmi | | | 33/11 | | | | √ | |
| | | Paudiamarai S/S Gulmi | | | | | √ | | | |
| | | Unayachaur S/S Gulmi | | | | | √ | | | |
| 5 | Arghakhachi DC | Argha | 3 | 57 | 33/11 | √ | | | | |
| | | Hansapur | 6/8 | | 33/11 | | | | √ | |
| | | Fudwang | 30 | | 132/33 | | | | √ | |
| | | Durgafaant | 6/8 | | 33/11 | | | | √ | |
| | | Thada | 6/8 | | 33/11 | | | | √ | |
| 6 | Palpa DC | Batasedanda SS, Batase Tansen Palpa | 6/8 | 20 | 33/11 | √ | | | | |
| | | Rupse SS, Mathagadi Rupse | 3 | | 33/11 | | | | √ | |
| | | Siluwa SS, Purbakhola Siluwa | 3 | | 33/11 | | | | √ | |
| | | Jhumsha SS, Tinau Jhumsha | 3 | | 33/11 | | | √ | | |
| | | Amlabas SS, Rainadevi Chhahara | 3 | | 33/11 | | | √ | | |
| 7 | Kawasoti DC | Kawasoti Sbstation | 6/8 | 15.5 | 33/11 | √ | | | | To Upgrade |
| | | Mukundapur Substation | 6/7.5 | | 33/11 | √ | | | | To Upgrade |
| 8 | Parasi DC | Parasi Substaion, Parasi | 2*6/8 | 16 | 33/11 | √ | | | | 6/8*2 MVA Substation is required to upgrade upto capacity 16*2 MVA |
| 9 | Bhairahawa DC | Bhairahwa | 33.2 | 54.2 | 33/11 | √ | | | | |
| | | Lumbini | 8 | | 33/11 | √ | | | | |
| | | Amuwa | 13 | | 33/11 | √ | | | | |
| | | Dhakdhai | 8 | | 33/11 | √ | | | | |
| | | Mainahiya | - | | 132/33/11 | | | | √ | |
| 10 | Butwal DC | Chauraha/ Butwal | 2*6/8 | 25 | 33/11 | √ | | | | |
| | | | 1 | | 3.3/11 | √ | | | | |
| | | Sitalnagar / Sitalnagar | 6/8 | | 33/11 | √ | | | | |
| | | | **Total Existing** | **273.20** | | | | | | |

# 33 kV Feeder Status

| S.N. | Name of DC | Name of 33KV Feeder | Length of Feeder | Conductor Name Size (sq.inch) | Maximum/ Average Load (A) |
|---|---|---|---|---|---|
| 1 | Nayamill | Ground Water | 11.6 | Dog ACSR | 380/340 |
| 2 | Taulihawa DC | Krishnanagar | 44 | 0.1, 0.05. 0.03 | 90 |
| | | Lumbini | 72 | 0.1, 0.05. 0.03 | 100 |
| | | Mahita | 40 | 0.1 | 50 |
| | | Market | 10 | 0.1 | 100 |
| | | Dohani | 50 | 0.1, 0.05. 0.03 | 90 |
| | | Gajeda | 85 | 0.1, 0.05. 0.03 | 250 |
| | | Pipra | 20 | 0.1 | 350 |
| | | Kopwa | 43 | 0.1, 0.05 | 150 |
| | | Pipra | 17 | 0.1, 0.05 | 100 |
| 3 | Krishnanagar | Krishnanagar Feeder | 20.04 | | |
| | | Industrial Feeder | 19 | | |
| | | New Feeder | 5.9 | Dog | |
| | | Maharajgunj Feeder | | | Not completed yet |
| 4 | Gulmi | Ridi to Birbas | 25 | Dog | |
| | | Birbas to Tamghas | 20 | Rabbit | |
| | | Tamghas to Bastu | 21 | Rabbit | |
| | | Gwadi | 15 | Rabbit | |
| | | Digaam | 9 | Rabbit | |
| | | Baletaksar to Khureni | 13 | Rabbit | |
| | | Charpala | 10 | Rabbit | |
| | | Simichaur | 13 | Rabbit | |
| 5 | Arghakhachi | Lamahi grid to Subhashri Agni Cement | 35 | 0.05 | |
| | | Gulmi to Rahatle (Incoming feeder 1) | 48.6 | 0.05 | 65 |
| | | Gulmi to Mareng | 14.3 | 0.03 | |
| | | Rahatle to Hanspur | 23.8 | 0.03 | |
| | | Maulipokhara to Pali Maidan | 48.6 | 0.03 | |
| | | Maulipokhara to Thulapokhara | 12.4 | 0.03 | |
| | | Rahatle to Thada | 75.8 | 0.03 | |
| | | Khilji to Argha Substation (Incoming feeder 2) | 27.7 | 0.05 | 65 |
| 6 | Palpa | Khanepani 33 KV | 11.8 | Rabbit/ 0.05 | 4.2/3.8 |
| 7 | Kawasoti | Kawasoti 33kV Feeder | 7 Km | DOG (0.1 Sq.inch) | 132 |
| | | Mukundapur 33kV Feeder | 15 Km | DOG (0.1 Sq.inch) | 142 |
| 8 | Parasi | Parasi- gandak 33 kV | 45 | Dog, 0.1 | 300 |
| | | Parasi- Butwal 33 kV | 30 | Dog, 0.1 | 120 |
| 9 | Bhairahawa | New 1 | 17.73 | Dog | 400 |
| | | New 2 | 32.38 | Dog | 360 |
| | | Old 33 | 28.18 | Dog | 400 |
| | | Lumbini | 34.47 | Dog | 360 |
| | | Ground Water Bharwaliya | 34.34 | Dog | 340 |
| | | Dhakdhai East | 22.00 | Dog | |
| | | Dhakdhai West | 22.00 | Dog | 94 |
| 10 | Butwal | BID | 3.08 | 0.1 Sq Inch | 80 |
| | | Butwal Palpa | 3.4 | 0.1 Sq Inch | 390 |
| | | Chaurawa Sitalnagar | 22.33 | 0.1 Sq Inch | 320 |

# 11 kV Feeder Information

| S.N. | Name of DC | Name of 11KV Feeder | Length of Feeder | Conductor Name Size (sq.inch) | Maximum/ Average Load (A) |
|---|---|---|---|---|---|
| 1 | Nayamill | Nayamill West | 24 | Dog, Rabbit and Weasel ACSR | 295/240 |
| | | Nayamill East | 28 | Dog, Rabbit and Weasel ACSR | 315/270 |
| | | 6 Number | 12 | Dog, Rabbit and Weasel ACSR | 125/90 |
| | | Nayamill | 47 | Dog, Rabbit and Weasel ACSR | 112/85 |
| | | Dhakdhai | 13 | Dog, Rabbit and Weasel ACSR | 172/160 |
| | | Bharauliya | 24 | Dog, Rabbit and Weasel ACSR | 95/80 |
| | | Tikuligadh | 46 | Dog, Rabbit and Weasel ACSR | 215/185 |
| 2 | Krishnanagar | Bahadurgunj Feeder | 21 | | |
| | | Shivpur Feeder | 42 | | |
| | | Pipara Feeder | 75 | | |
| | | Maharajgunj Feeder | 119 | | |
| | | Premnagar Feeder | 80 | | |
| | | Bahadurgunj Feeder | 75 | | |
| | | \|Krishnanagar Feeder | 7 | | |
| 3 | Gulmi DCS | Bhotka | 2.5 | Rabbit | |
| | | Ridi | 1.2 | Rabbit | |
| | | Balethum | 44 | Rabbit | 20/8 |
| | | Majuwa | 32 | Rabbit | 23/10 |
| | | Huga | 35 | Rabbit | 25/11 |
| | | Bastu | 46 | Rabbit | |
| | | Isma | 49 | Rabbit | |
| | | Jaisithok | 41 | Rabbit | |
| | | Kaligandaki Jayakhani | 35 | Rabbit | |
| | | Kaligandaki Harchikot | 29 | Rabbit | |
| 4 | Arghakhachi DCS | Bazar feeder | 19.4 | 0.05 | 50 |
| | | Dharampani feeder | 48.7 | 0.05 | 17 |
| | | Nuwakot feeder | 61.8 | 0.05 | 16 |
| | | Dhikura feeder | 56.9 | 0.05 | 12.5 |
| | | Bangla feeder | 15.8 | 0.05 | 12 |
| | | Dang Arghakhachi feeder | 5.7 | 0.05 | |
| | | Palpa Arghakhachi feeder | 24.5 | 0.05 | |
| 5 | Kawasoti Distribution Center | Dumkibas Feeder | 32 Km | DOG (0.1 Sq.inch) | 215 A |
| | | Kawasoti Feeder | 51 Km | DOG (0.1 Sq.inch) | 110 A |
| | | Arunkhola Feeder | 69Km | DOG (0.1 Sq.inch) | 225 A |
| | | Pragatinagar Feeder | 37 Km | DOG (0.1 Sq.inch) | 210 A |
| | | Rajhar Feeder | 42 Km | DOG (0.1 Sq.inch) | 235A |
| | | Industrial Feeder | 10 Km | DOG (0.1 Sq.inch) | 120 A |
| | | Mukundapur Feeder | 5 Km | DOG (0.1 Sq.inch) | 86 A |
| | | Gaidakot Feeder | 29 Km | DOG (0.1 Sq.inch) | 290 A |

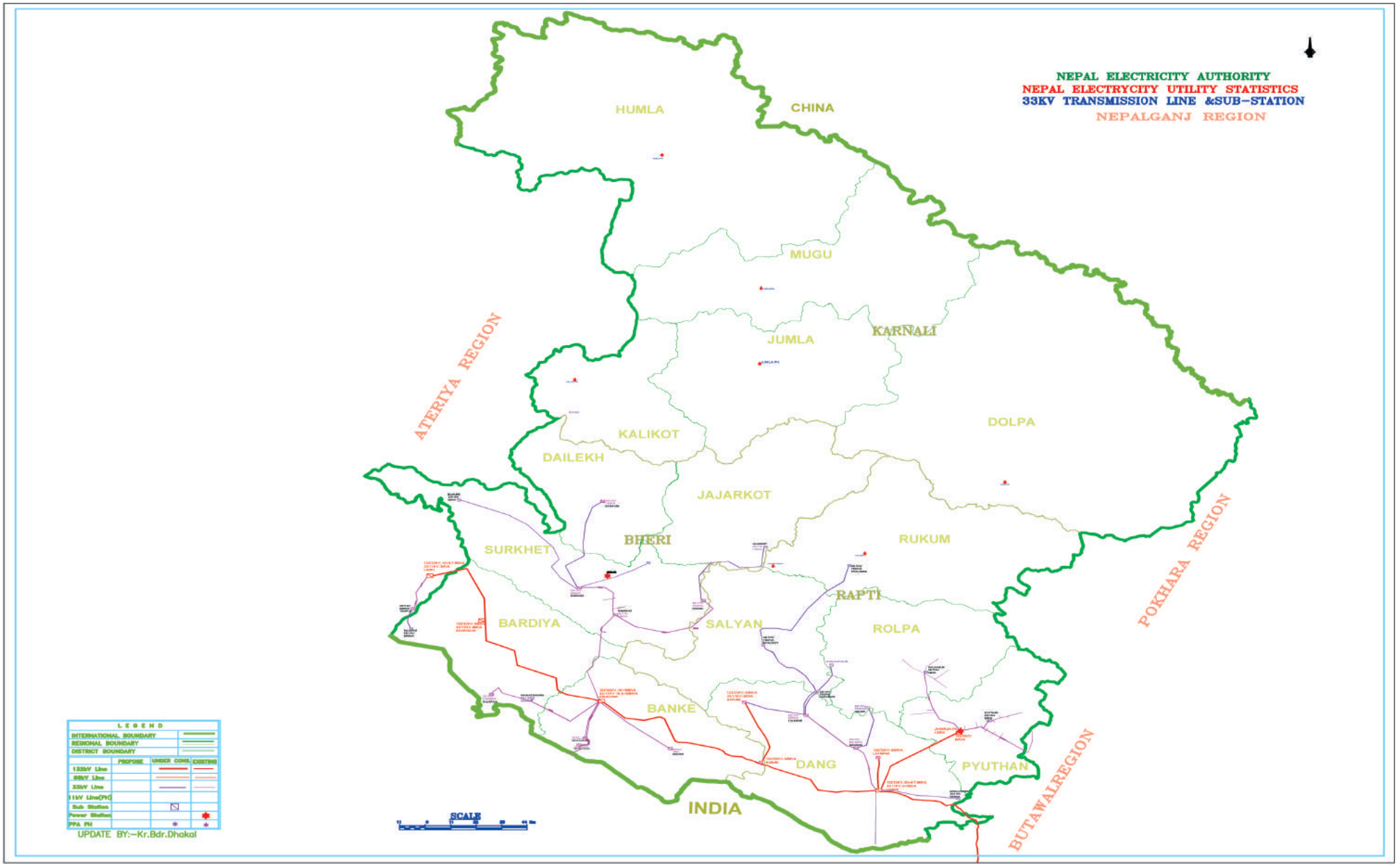
| | | | | | |
|---|---|---|---|---|---|
| 6 | Parasi Dc | Triveni Feeder | 35 | , 0.3 | 150 |
| | | Local Feeder | 40 | , 0.5 | 100 |
| | | South feeder | 30 | , 0.3 | 120 |
| | | West Feeder | 20 | , 0.3 | 80 |
| | | Dumkibas Feeder | 18 | Dog, 0.1 | 150 |
| | | Pratappur Feeder | 50 | , 0.5 | 90 |
| | | Bardaghat Sunwal Feeder | 55 | Dog, 0.1 | 130 |
| | | Bardaghat Feeder | 40 | Dog, 0.1 | 130 |
| | | Industrial Feeeder | 16 | Dog, 0.1 | 200 |
| | | Sunwal Feeder | 25 | , 0.5 | 85 |
| | | Rakshaha Feeder | 10 | Dog, 0.1 | 75 |
| | | Parasi Feeder | 10 | Dog, 0.1 | 110 |
| | | Maheshpur Feeder | 35 | Dog, 0.1 | 75 |
| | | Industrial Feeeder | 10 | Dog, 0.1 | 80 |
| | | Devdah Feeder | 16 | , 0.5 | 75 |
| 7 | Palpa | East | 134 | Dog, Rabbit, Weasel | 70/30 |
| | | West | 158 | Dog, Rabbit, Weasel | 58/22 |
| | | Bajar | 44 | Dog, Rabbit, Weasel | 102/60 |
| 8 | Bhairahawa | 1 Number | 16.74 | Dog, Rabbit | 235.00 |
| | | 2 Number | 25.10 | Dog, Rabbit | 223.00 |
| | | 3 Number | 39.94 | Dog, Rabbit, Weasel | 152.00 |
| | | 4 Number | 111.08 | Dog, Rabbit, Weasel | 200.00 |
| | | 5 Number | 9.57 | Dog, Rabbit | 100.00 |
| | | 6 Number | 16.91 | Dog, Rabbit | 175.00 |
| | | 7 Number | 15.75 | Dog, Rabbit, Weasel | 152.00 |
| | | Suryapura | 58.56 | Rabbit, Weasel | 100.00 |
| | | Chhapiya | 12.07 | Rabbit, Weasel | 25.00 |
| | | Farsatikar Old | 46.66 | Rabbit, Weasel | 75.00 |
| | | Farsatikar New | 21.75 | Dog, Rabbit, Weasel | 85.00 |
| | | Kamhariya | 46.33 | Dog, Rabbit, Weasel | 80.00 |
| | | Tikuligadh | | Rabbit, Weasel | 155.00 |
| | | 1 Number | 71.25 | Rabbit, Weasel | 100.00 |
| | | 2 Number | 26.72 | Rabbit, Weasel | 90.00 |
| | | 3 Number | 54.52 | Rabbit, Weasel | 80.00 |
| | | 4 Number | 66.49 | Rabbit, Weasel | 140.00 |
| | | Dhakdhai | 67.61 | Rabbit, Weasel | 210.00 |
| | | Nayamill | 29.90 | Dog, Weasel | 60.00 |
| | | Bihuli | 23.75 | Rabbit, Weasel | 70.00 |
| 9 | Butwal Dcs | East | 25.9 | 0.1 Sq Inch | 300 |
| | | West | 45.8 | 0.1 Sq Inch | 350 |
| | | Shaljandi | 179 | 0.1 Sq Inch | 390 |
| | | Devinagar | 19.6 | 0.1 Sq Inch | 320 |
| | | Charange | 21.1 | 0.1 Sq Inch | 200 |
| | | Chaurawa East | 3.5 | 0.1 Sq Inch | 130 |
| | | Devdaha | 28 | 0.1 Sq Inch | 180 |
| | | Bhaluhai | 23.27 | 0.1 Sq Inch | 90 |
| | | Sarantadi | 4.64 | 0.05 Sq Inch | 30 |

# Electrification Status

| S.N. | District | Municipalities / Rural Municipalities | Total Electrification % of municipalities (Grid Connected) | Population | No of Households | Total 11 kV (HT) Circuit Kilometer (KM) required to fully electrified the Municipalities or rural municipalities | Total 0.4 kV (LT) Circuit Kilometer (KM) required to fully electrified the Municipalities or rural municipalities | No of Transformer Required |
|---|---|---|---|---|---|---|---|---|
| 1 | Nawalpur | 1.Kawasoti Municipality | 87.09 | 69750 | 15759 | 25 | 75 | 35 |
| | | 2.Gaindakot Municipality | 83.72 | 65749 | 15221 | 30 | 85 | 20 |
| | | 3.Devchuli Municipality | 79.02 | 47604 | 10341 | 35 | 85 | 20 |
| | | 4.Madhya Bindu Municipality | 70.48 | 60496 | 13346 | 25 | 45 | 40 |
| | | 5.Bungdi Kali | 0.00 | 17582 | 3350 | 100 | 235 | 50 |
| | | 6.Bulingtar | 0.00 | 21366 | 3897 | 80 | 225 | 70 |
| | | 8.Hupsekot | 31.70 | 28008 | 5127 | 100 | 115 | 40 |
| | | **Total District : Nawalpur** | **66.11** | **310555** | **67041** | **395** | **865** | **275** |
| 2 | Parasi | 1.Bardaghat | 83.60 | 68692 | 14989 | 239 | 413 | 86 |
| | | 2.Ramgram Municipality | 85.29 | 63520 | 11491 | 243 | 435 | 151 |
| | | 3.Sunwal Municipality | 84.45 | 62342 | 13430 | 153 | 262 | 68 |
| | | 4.Triveni Susta | 80.58 | 40104 | 6962 | 102 | 183 | 53 |
| | | 5.Palhi Nandan | 87.60 | 39589 | 6572 | 111 | 223 | 64 |
| | | 6.Pratappur | 86.56 | 50553 | 8253 | 129 | 250 | 101 |
| | | 7.Sarawal | 89.23 | 41812 | 7412 | 105 | 168 | 55 |
| | | **Total District: Parasi** | **85.08** | **366612** | **69109** | **1082** | **1934** | **578** |
| 3 | Gulmi | 1.Musikot Municipality | 42.51 | 30335 | 6544 | 45 | 130 | 50 |
| | | 2.Resunga Municipality | 97.98 | 30099 | 7723 | | 50 | 15 |
| | | 3.Isma | 72.08 | 19386 | 4361 | 15 | 55 | 20 |
| | | 4.Kali Gandaki | 95.00 | 17456 | 3789 | 2 | 5 | 10 |
| | | 5.Gulmi Durbar | 86.69 | 20379 | 4870 | 5 | 15 | 10 |
| | | 6.Satyawati | 90.00 | 22015 | 5109 | 2 | 5 | 8 |
| | | 7.Chandrakot | 90.00 | 27304 | 6753 | 5 | 8 | 8 |
| | | 8.Ruru | 89.32 | 17181 | 4350 | 3 | 5 | 8 |
| | | 9.Chhatrakot | 85.50 | 19864 | 4914 | 8 | 15 | 8 |
| | | 10.Dhurkot | 71.32 | 20764 | 4908 | 15 | 60 | 20 |
| | | 11.Madane | 70.00 | 20252 | 4491 | 20 | 85 | 15 |
| | | 12.Malika | 60.00 | 20092 | 4208 | 30 | 95 | 20 |
| | | **Total District: Gulmi** | **79.40** | **265127** | **62020** | **150** | **528** | **192** |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 4 | Palpa | 1.Rampur Municipality | 87.18 | 33863 | 7780 | | | |
| | | 2.Tansen Municipality | 96.52 | 48224 | 13056 | 20 | 50 | 20 |
| | | 3.Nisdi | 0.00 | 21634 | 3723 | 20 | 200 | 30 |
| | | 4.Purba Khola | 78.09 | 18741 | 3908 | 25 | 100 | 15 |
| | | 5.Rambha | 95.25 | 19316 | 4425 | 10 | 50 | 10 |
| | | 6.Matha Gadhi | 56.08 | 23936 | 4847 | 40 | 400 | 40 |
| | | 7.Tinau | 66.74 | 18258 | 3721 | 30 | 200 | 15 |
| | | 8.Bagnaskali | 95.45 | 20435 | 5044 | 10 | 100 | 10 |
| | | 9.Ribdikot | 83.00 | 17957 | 4446 | 15 | 100 | 10 |
| | | 10.Raina Devi Chhahara | 86.05 | 25323 | 5750 | 30 | 200 | 20 |
| | | **Total District: Palpa** | **79.90** | **247687** | **56700** | **200** | **1400** | **170** |
| 5 | Rupendehi | 1.Butwal Sub-Metropolitan | 99.06 | 165155 | 40587 | 4 | 10 | 20 |
| | | 2.Devdaha Municipality | 98.56 | 63713 | 13584 | 3 | 3 | 16 |
| | | 3.Lumbini Sanskritik Municipality | 86.69 | 86296 | 11840 | 12 | 22 | 25 |
| | | 4.Siddharthanagar Municipality | 100.00 | 75567 | 14878 | | | 10 |
| | | 5.Saina Maina Municipality | 98.91 | 66448 | 14751 | 3 | 5 | 8 |
| | | 6.Tilottama Municipality | 76.04 | 119213 | 26137 | 50 | 300 | 60 |
| | | 7.Gaidahawa | 78.81 | 56619 | 8672 | 18 | 24 | 15 |
| | | 8.Kanchan | 87.43 | 39368 | 8432 | 5 | 12 | 10 |
| | | 9.Kotahi Mai | 62.00 | 48811 | 6657 | 4 | 6 | 10 |
| | | 10.Marchawari | 50.00 | 46158 | 6264 | 20 | 60 | 20 |
| | | 11.Mayadevi | 97.44 | 56134 | 8108 | 5 | 8 | 5 |
| | | 12.Om Satiya | 50.00 | 40700 | 6888 | 20 | 50 | 20 |
| | | 13.Rohini | 100.00 | 44252 | 6734 | | | 10 |
| | | 14.Sammari Mai | 50.00 | 45597 | 6096 | 20 | 50 | 20 |
| | | 15.Siyari | 96.13 | 45789 | 8085 | 12 | 20 | 13 |
| | | 16.Suddodhana | 96.13 | 41232 | 7316 | 16 | 28 | 14 |
| | | **Total District : Rupendehi** | **87.47** | **1041052** | **195029** | **192** | **598** | **276** |
| 6 | Kapilbastu | 1.Kapilbastu Municipality | 73.46 | 87998 | 13931 | 10 | 30 | 40 |
| | | 2.Buddabhumi Municipality | 87.92 | 74815 | 13269 | 11 | 22 | 15 |
| | | 3.Shivaraj Municipality | 97.27 | 76924 | 12957 | 12 | 16 | 9 |
| | | 4.Maharajganj Municipality | 97.50 | 63124 | 9189 | 3 | 5 | 8 |
| | | 5.Krishna Nagar Municipality | 97.57 | 71833 | 9816 | 4 | 6 | 7 |
| | | 6.Banganga Municipality | 71.02 | 86670 | 18390 | 7 | 35 | 50 |
| | | 7.Mayadevi | 58.77 | 55543 | 7496 | 12 | 30 | 15 |
| | | 8.Yashodhara | 60.14 | 44869 | 6235 | 12 | 30 | 18 |
| | | 9.Suddodhana | 65.25 | 52066 | 7310 | 10 | 25 | 10 |
| | | 10.Bijay Nagar | 95.72 | 42547 | 6532 | 5 | 8 | 6 |
| | | **Total district: Kapilbastu** | **81.12** | **656389** | **105125** | **86** | **207** | **178** |
| 7 | Arghakhanchi | 1.Sandhikharka Municipality | 99.48 | 41995 | 10817 | 10 | | 15 |
| | | 2.Shit Ganga Municipality | 63.20 | 44341 | 9406 | 20 | 50 | 15 |
| | | 3.Bhumikasthan Municipality | 98.98 | 33369 | 7899 | | 10 | 2 |
| | | 4.Chhatra Dev | 98.24 | 25900 | 6482 | 15 | 10 | 10 |
| | | 5.Panini | 99.14 | 27013 | 6289 | | 10 | 10 |
| | | 6.Malarani | 90.93 | 28670 | 6976 | | 5 | 4 |
| | | **Total District : Arghakhachi** | **90.81** | **201288** | **47869** | **45** | **85** | **56** |

# NEPALGUNJ REGIONAL OFFICE



# NEPALGUNJ REGIONAL AND DISTRIBUTION CENTRE CHIEFS

**Manoj Kumar Singh**
Nepalgunj Regional Office Chief

**Paritosh Kumar Chaudhary**
Gularia DC

**Ram Dular Yadav**
Nepalgunj DC

**Madhusudan Yadav**
Ghorahi DC

**Suraj Bhandari**
Surkhet DC

**Deepak Jung Chaudhary**
Tulsipur DC

**Jagannath Lamichhane**
Kohalpur DC

**Dhirendra Bajgain**
Dailekh DC

**Jayanand Bogati**
Pyuthan DC

**Shyam Kumar Sharma**
Rolpa DC

**Shankar Singh Thakuri**
Dolpa DC

**Lal Bahadur Lamsal**
Heldung DC

**Shiva Prasad Pandey**
Gamgad DC

**Arjun Pokhrel**
Salyan DC DC

**Shamvu Prasad Mandal**
Kalikot DC

**Lok Bahadur Khadka**
Jajarkot DC

**Trilochan Bhattarai**
Rukum (West) DC

## Introduction

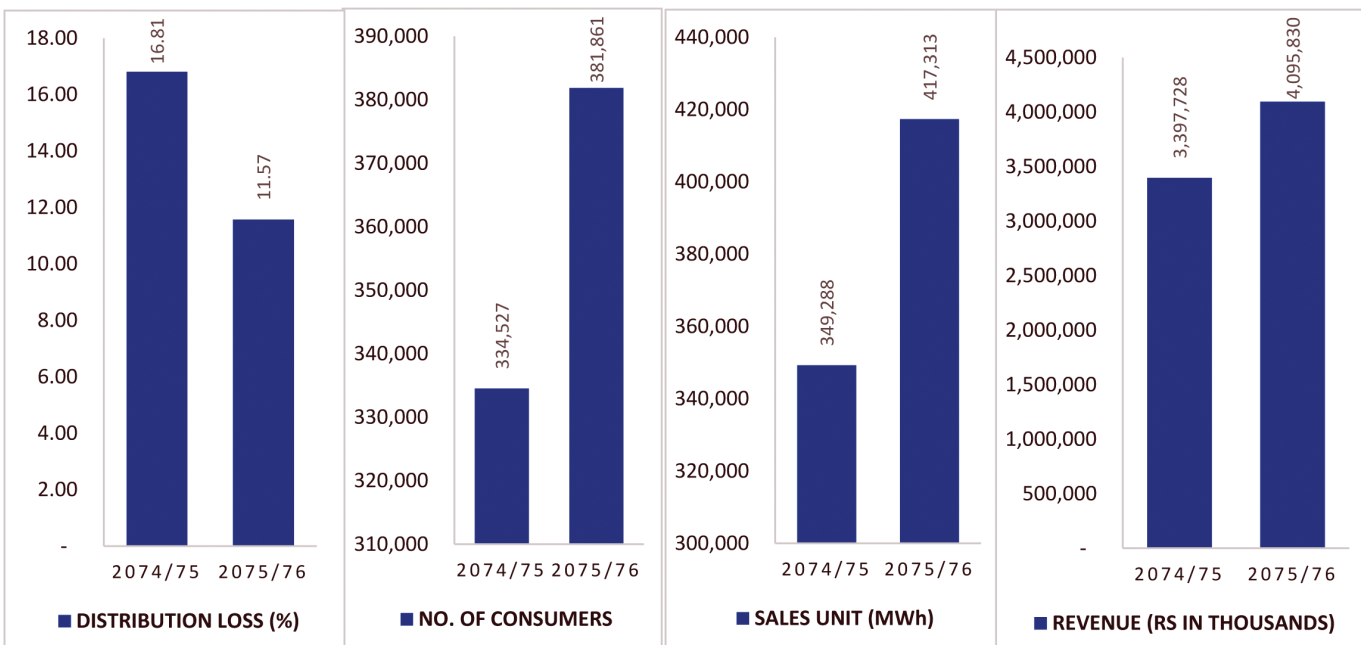
Nepaljung Regional Office (NRO) is one of the eight Regional Offices under the Distribution and Consumer Services Directorate (DCSD) and is responsible for overall management of electricity distribution services, operation and maintenance of electrical networks of Bheri, Karnali and Rapti Zone. Area of operation of this regional office covers Banke, Bardia, Dang, Salyan, Dailekh, Rolpa, Surkhet, Dolpa, Kalikot, Humla, Mugu, Rukum and Jajarkot districts. There are 16 (Sixteen) Distribution Centers (DCs) in this Regional Office. The major activities of this regional office include operation, maintenance and rehabilitation of the electricity distribution networks up to 33 kV voltage level and 33/11 kV substations as well as consumer services activities such as new consumer connections, meter reading, billing, and revenue collection.

Meeting with DCS Chiefs at Regional office

projects, planning & development and corporate work of the region.

Rural Electrification activities within the Region are coordinated by the technical division. The finance and revenue functions are carried out by the Joint Director of the region. The regional office is provided with a separate administrative officer to attend human resource function. The source of fund is Government

The comparative salient features of this regional office are as follows:




## Operational Structure

There are 16 Distribution Centers within this Regional Office for effective administration. In addition to above, there is technical division represented by a Manager who looks after all the technical matters, of Nepal and NEA itself. There are 33 kV transmission line, substation project and a rural electrification project funded by Government of Nepal under this regional office.

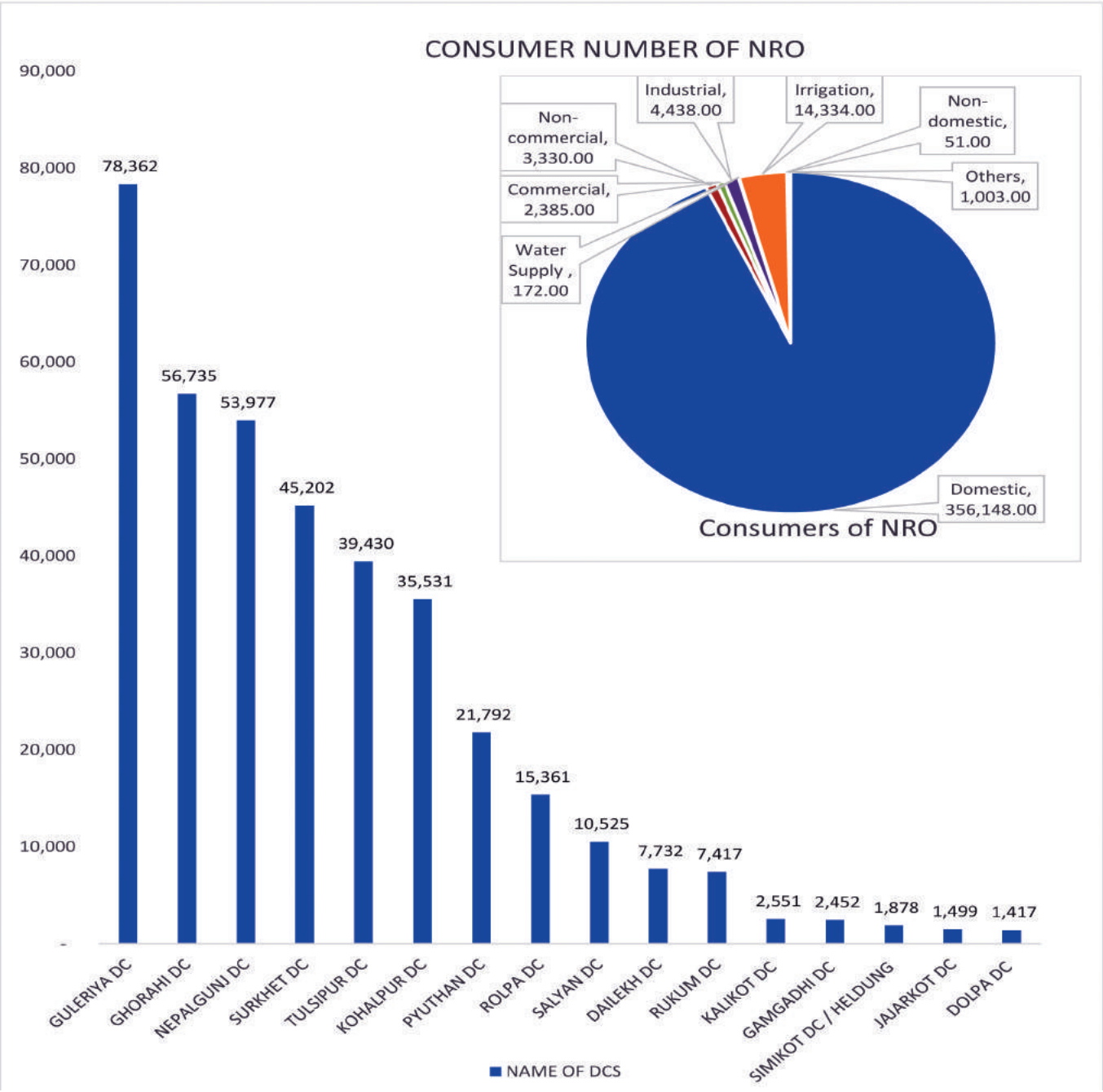
## Key Objectives

- To provide electricity to consumers at remote parts of the region.
- To increase industrial electricity consumption by providing electricity to new industries in the region.
- To reduce electricity theft and distribution losses.
- Ensure rational development of the electricity distribution system within the Region.

## Highlights of the Year

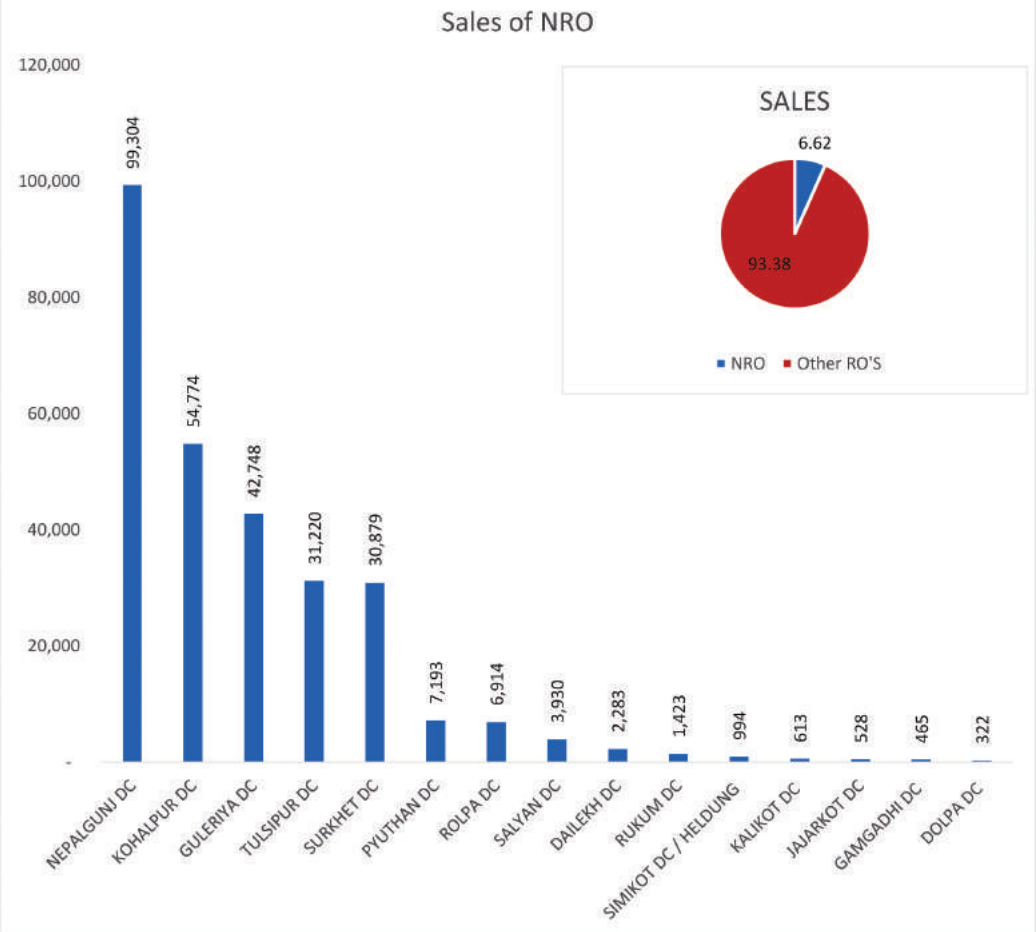
### Consumer Number

NRO recorded 381,861 consumer accounts by the end of the fiscal year 2075/76. The majority of consumer accounts were in the domestic category (356,148) while the second most were from the irrigation category (14,334).



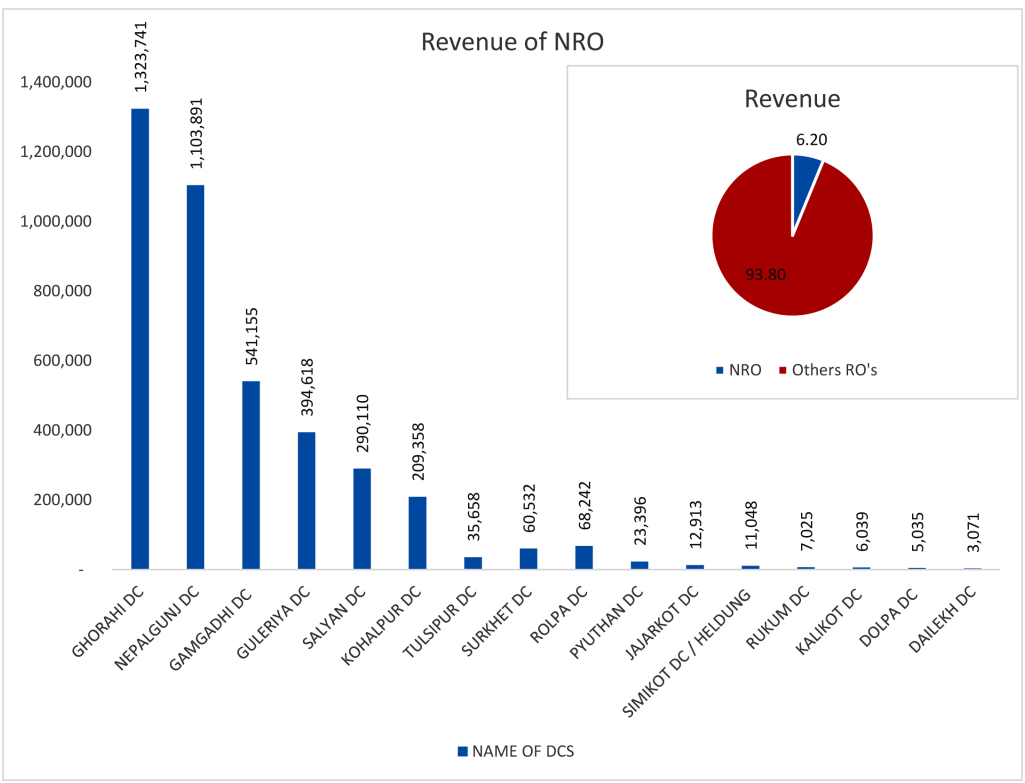
## Sales

NRO reported 6.62% of electricity sales within DCS. In the fiscal year 2075/76, 417,313 MWh of electricity was sold in the region, a 19.48% increase over previous year. Ghorahi DC accounts for 32.04% of total sales in the region followed by Nepalgunj DC and Kohalpur DC.



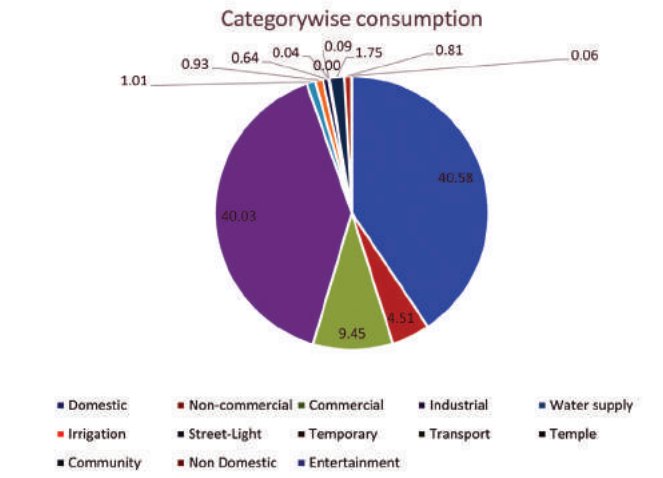

## Revenue

The revenue from electricity sales during the year was Rs. 4,095.8 million which is 20.54% increase from last year. The reasons for increase of revenue are the growth of energy sales, recovery of old dues from consumers. NRO accounts for 6.20% of the total revenue of the DCS.



The majority of revenue in NRO recorded from domestic tariff category which is approximately

Ghorahi DCS accounts for 32.32%, Nepalgunj DCS accounts for 26.95%, Kohalpur DCS accounts for 13.21%, Guleriya DCS accounts for 9.63%, Surkhet DCS accounts for 7.08% and Tulsipur DCS accounts for 5.11% of the total revenue in the Region.




## Distribution Infrastructure

| | |
|---|---|
| 33 kV Distribution Lines | 927.92 km |
| 11 kV Distribution Lines | 3267.31 km |
| 33/11 kV primary Substations | 15 |
| LV Distribution Lines | 2494 km |
| LV Distribution transformers | 3,204 Nos. |
| Distribution Transformers Total installed capacity | 218 MVA |

## Performance Highlights

| | |
|---|---|
| Consumer per Staff | 695.56 |
| LT 0.4/0.24 kV Line Length per Staff (km/staff) | 4.54 |
| Sales per Consumer per year (kWh/Consumer) | 1092 |
| Revenue per Consumer per year (Rs./Consumer) | 10728 |
| Consumer per Distribution Transformers | 134 |

## Customer Care

Special efforts were taken to improve the service at the customer interface points. The staff attached to 16 Distribution Centers took special efforts to serve our valued customers better during the year. Nepal Electricity Authority has made arrangements to submit electricity bill easily through the online

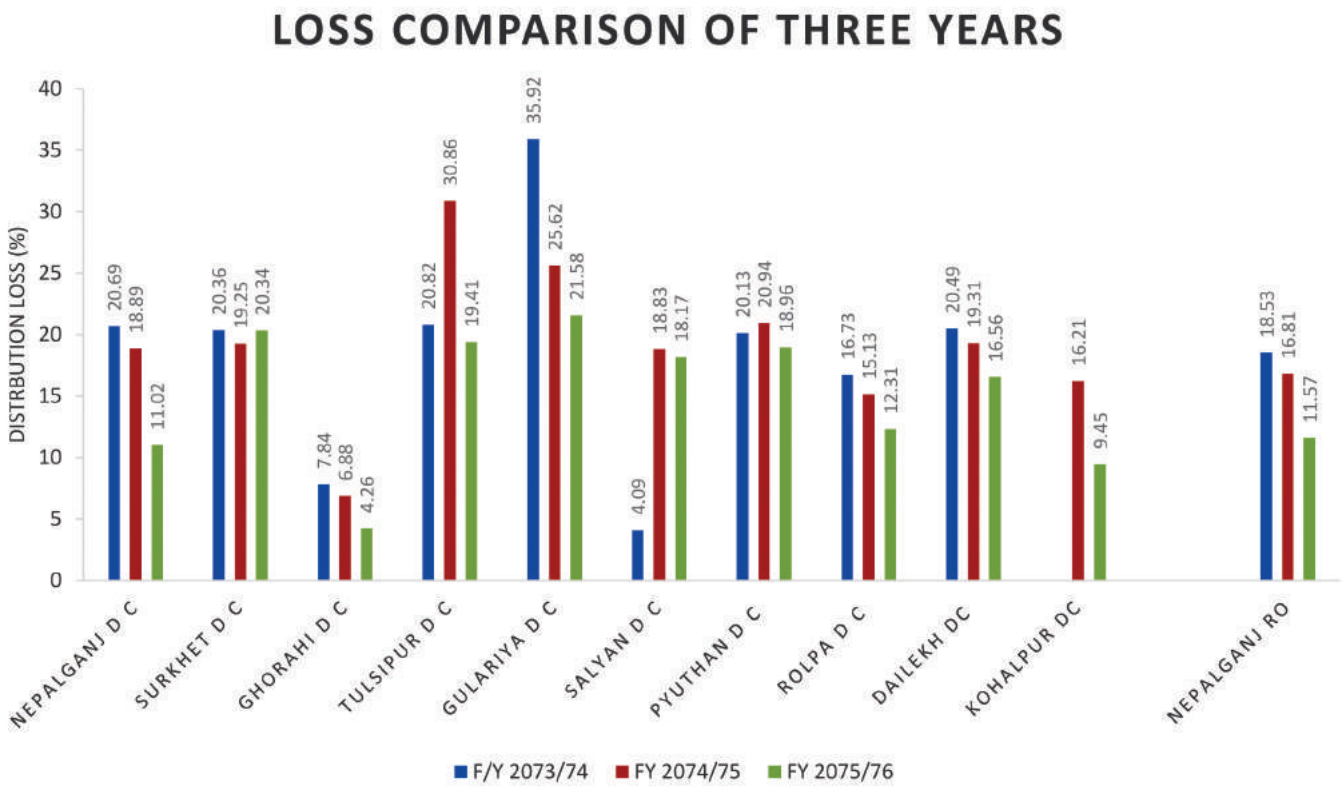
Free Meter distribution for under privileged consumers (Kohalpur DC)

saving time of the consumer. Consumers can pay their bills via 8 service providers (eSewa, PayPoint, CFS Remit, City Express, Prabhu Bank, Nepal Investment Bank, Himalayan Bank and Mahalaxmi Bikash Bank). NEA has introduced one door system to facilitate the consumers and to provide the service as quickly as possible. This system saves the time of the consumer.

Round the clock no-light services have been implemented in most of the urban no-light centers. Help desk and quick service is maintained in no light and consumer services for instant service to the costumer.

## Loss Reduction Program/Loss Reduction Activities

The distribution networks comprise of technical and non- technical losses, in which proportion of non-technical losses is quite high. During the year under review, various measures taken in the preceding years were continued to reduce the non-technical losses. Massive awareness campaigns as workshops and review meetings were implemented in various distribution centers. Strict measures for electricity theft control such as confiscation of electric equipments and taking legal action against culprits were also conducted in various distribution centers with the help of local administration and security agencies. NEA management made various decisions as 'Immediate Action Plans' to improve its functioning. .




This plan included regular inspection of Time-of-Day (TOD) meters, data download and analysis to curb any connection fault or manipulation.

## Future Plans/Programs

As high system loss is a major challenge for NEA, NRO is trying to make every effort to bring down the distribution system loss. It is also planning to improve the quality of the services through the use of new technologies and capacity building to meet the challenges of new environment in utility business. Consumer complaints shall be addressed without delay and the procedure for new connection related works shall be made simple and user friendly.

To reduce Non–technical and Technical loss, these future plans shall be implemented with the joint efforts of NRO and DCS.

### For Non-Technical losses:

- Identification of electricity theft prone areas in different Distribution Centers.
- Public Awareness Program.
- Mobilization of Police and Staffs to remove hooking.
- Changing of Defective meters i.e. burnt, damage, stopped meters.
- Re-sealing of meters.
- Additional billing of HT/LT Consumers after analyzing TOD meter data download report as per the NEA, Electricity Distribution rules 2069.
- Upgrading of electricity meters to meet standard accuracy must be conducted to support reduction of non technical losses through statistical analysis.

### For Technical losses:

- Conversion of single-phase lines to three phase lines by the addition of two wires.
- Balancing of phase loads.
- Optimization of distribution system.
- Improve power factor and reducing the harmonic distortion by installing suitable size of Capacitor

Banks at substation as well as installation of LV Capacitors on LV lines.

- Demand management measures.
- Re-location of distribution transformers at load center.
- Upgradation of distribution transformers and substation power transformers.
- Changing of broken insulators like Disc insulator, pin Insulator and shackle insulator.

## Safety Measures/ Safety day

Safety measures have become necessary as there are occurrences of electric accidents of employees, people

Safety day programs in Heldung DC

and domestic animals every year due to leakage of electricity and non-safety working habit. Initiative will be taken to raise the awareness of the working staff regarding safety hazards. Use of safety tools will be made mandatory for all the working staffs.

## Challenges within Regional Office

The various Challenges faced by the regional office to provide reliable service to the consumers are as follows:

- The 33 kV line of Kohalpur-Surkhet passes through Banke and Bardiya national park which makes it very difficult for maintenance. For the solution of this problem, Kohalpur-Surkhet 132 kV transmission line should be completed.
- The 33 kV distribution system around Ramghat area of Surkhet needs to be replaced by 11 kV feeder in order to increase reliability and decrease the operation and maintenance cost of the feeder.
- Due to the adverse topography in Jajarkot, it is very difficult to construct new lines. The 33 kV line length from Ramghat to Jajarkot is very long.
- In Rolpa and Pyuthan there is no centralized grid supply and the distribution is provided by Jhimruk Hydropower.Similarly, Humla, Dolpa, Jumla, Kalikot and Mugu are electrified by microhydros. Dullu-Kalikot 33 kV line and 6/8 MVA substation at kalikot should be constructed to connect these districts to national grid. Ongoing construction of Dullu-Kalikot 33 kV line is facing transportation issues due to a topography.
- Banke and Bardiya, is supplied from India which has weak infrastructure and long line length resulting in high system loss. Nepalgung region itself should be connected with 20MVA power from national gird to overcome such problems.
- Segregation of technical and non-technical losses, Social and political issues are other challenges within the region

## Projects within the Regional Office

### Shitalpati 33/11 kV, 6/8 MVA Substation Project

This project did its test operation on 2075/10/29 and was inaugurated by Honorable Minister of Energy, Water Resource and Irrigation Barsaman Pun on 2075/11/10. This substation is now serving 9000 consumers of Salyan district and 3000 consumers of Rukum district.


Inauguration of the Substation by Honorable Minister of Energy, Water Resource and Irrigation Barsaman Pun

### Hapure-Tulsipur-Dudhraksha 33 kV Transmission Line and 33/11 kV, 6/8 MVA Tulsipur Substation Project

The length of Hapure-Tulsipur Double Circuit 33 kV Transmission line is 23 km and Tulsipur new substation to Dudhrakha (Sonapur cement) is 34 km. Both the lines were charged on 2076/02/03 and are

Conductor stringing of the Project

in operation. Approximately 22,000 consumers are benifitted from that project. 60% works of 33/11 kV 6/8 MVA Tulsipur substation has been completed until Asadh 2076.

### Ghorahi-Holerai 33 kV Transmission Line and 33/11, 0.75 MVA Holeri Substation Project

Substation switchyard of the Project

The works of Holerai substation has come into operation since 2075/12/20.

### Chinchu-Rakam-Jajarkot 33 kV Transmission Line, 11 kV Distribution Line and 33/11 kV 3 MVA Kudu Substation Project

The substation of the project is completed and is in operation since 2075/03/24. Consumers of Jajarkot district and Rukum district are benifitted from this substation. The construction of 11 kV distribution line is in progress.

### Pyuthan 33 kV Transmission line, 11 kV Distribution line and 33 kV, 3 MVA Damti Substation Project

This project was completed on 2075/03/27.

### Rajapur 33 kV Transmission line and 6/8 Substation

This project came into operation since 2076/02/08.

### 33/11 kV, 6/8 MVA Koilachaur Substation Project

This project has come into operation since 2076/02/14 and has solved the low voltage problem of west parts of Rolpa and east parts of Salyan.

### Surkhet-Bijaura 33 kV Transmission line and Substation Project

All the works of the substation is completed and substation equipments testing was completed on 2076/02/26. IEE Report of 33 kV transmission line has been approved and the works of line route clearing is in progress.

## Substation Status

| S.N. | District | Substation Name/Location | Capacity (MVA) | Total Capacity (MVA) | Voltage level (kV) | Existing | Proposed | Planned | Underconstruction | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. | Banke | Nepalgunj Old | 6/8 + 6/8 | 16 | 33/11 | √ | | | | |
| | | Nepalgunj New | 16 + 6/8 | 24 | 33/11 | √ | | | | |
| | | Dhampur | 6/8 | 8 | 33/11 | √ | | | | |
| 2. | Bardiya | Gulariya | 6/8 + 3+ 1.5 | 12.5 | 33/11 | √ | | | | |
| | | Rajapur | 6/8 | 8 | 33/11 | √ | | | | |
| | | Mainapokhar | 7.5 | 7.5 | 33/11 | √ | | | | |
| 3. | Surkhet | Budbude | 6/8 + 3 | 11 | 33/11 | √ | | | | |
| | | Rakam | 1.5 | 1.5 | 33/11 | √ | | | | |
| | | Matela | 3 | 3 | 33/11 | √ | | | | |
| | | Ramghat | 6/8 | 8 | 33/11 | √ | | | | |
| | | Babiyachaur | 3 | 3 | 33/11 | √ | | | | |
| 4. | Dang | Tulsipur Old | 6/8 + 8 | 16 | 33/11 | √ | | | | |
| | | Ghorahi | 6/8 + 3 | 11 | 33/11 | √ | | | | |
| | | Tulsipur New | 6/8 | 8 | 33/11 | | | | √ | |
| | | Bhaluwang | 3 | 3 | 33/11 | | | √ | | |
| 5. | Salyan | Sitalpati | 6/8 | 8 | 33/11 | √ | | | | |
| | | Tharmare | 3 | 3 | 33/11 | | | √ | | |
| | | Kapurkot | 6/8 | 8 | 33/11 | | | √ | | |
| 6. | Rolpa | Holeri | 0.75 | 0.75 | 33/11 | √ | | | | |
| | | Koilachaur | 6/8 | 8 | 33/11 | √ | | | | |
| 7. | Pyuthan | Damti | 3 | 3 | 33/11 | √ | | | | |
| | | Rajwada | 3 | 3 | 33/11 | | | √ | | |
| | | Khawang | 3 | 3 | 33/11 | | | √ | | |
| 8. | Dailekh | Dailekh | 3 | 3 | 33/11 | √ | | | | |
| | | Dullu | 3 | 3 | 33/11 | √ | | | | |
| 9. | Jajarkot | Kudu | 3 | 3 | 33/11 | √ | | | | |
| | | Chokhaba Bajar | 3 | 3 | 33/11 | | | √ | | |
| 10. | Jumla | Khalanga | 3 | 3 | 33/11 | | | √ | | |
| 11, | Mugu | Gamgad | 3 | 3 | 33/11 | | | √ | | |
| 12, | Dolpa | Dolpa | 3 | 3 | 33/11 | | | √ | | |
| 13. | Rukum Purba | Rukumkot | 3 | 3 | 33/11 | | | √ | | |
| **Total Existing** | | | | **201.25** | | **23** | | | | |

## 33 kV Feeder Status

| S.N. | Name of Distribution Center | Name of 33 kV Feeder | Length of Feeder(km) | Conductor Name/ Size (sq.inch) |
|---|---|---|---|---|
| 1 | Nepalgunj | Kohalpur-Nepalgunj line 1 | 21.59 | |
| | | Kohalpur-Nepalgunj line 2 | 21.59 | |
| | | Nainpara (India)-Nepalgunj | 26.07 | |
| 2 | Ghorahi | Lamahi-Ghorahi | 23 | |
| 3 | Guleriya | Kohalpur-Guleriya | 49.67 | |
| 4 | Tulsipur | Tulsipur | 25 | |
| 5 | Surkhet | Kohalpur-Surkhet | 54 | |
| | | Surkhet-Jajarkot | 29 | |
| 6 | Pyuthan | Ghimruk-Pyuthan | 151 | |
| 7 | Salyan | Tulsipur-Sitalpati | 46 | |
| 8 | Rolpa | Jhimruk-Rolpa | 135 | |
| | | Kapurkot-Rolpa | 30 | |
| 9 | Dailekh | Surkhet-Dailekh | 44 | |
| 10 | Jajarkot | Rakam-Kudu | 34 | |

## 11 kV Feeder Status

| S.N. | Name of Distribution Center | Name of 11 kV Feeder | Length of Feeder (km) | Conductor Name Size (sq.inch) |
|---|---|---|---|---|
| 1 | Nepalgunj | Bageshwori | 16.23 | Dog/Rabbit/Weasel |
| | | Fultekra | 11.38 | Dog/Rabbit/Weasel |
| | | Rural | 46.12 | Dog/Rabbit/Weasel |
| | | Khajura | 85.70 | Dog/Rabbit/Weasel |
| | | Airport | 23.93 | Dog/Rabbit/Weasel |
| | | Buspark | 16.84 | Dog/Rabbit/Weasel |
| | | Hawai | 6.88 | Dog/Rabbit/Weasel |
| | | Sadarline | 3.75 | Dog/Rabbit/Weasel |
| | | Citi | 7.15 | Dog/Rabbit/Weasel |
| | | Border | 13.45 | Dog/Rabbit/Weasel |
| | | Eastern | 20.44 | Dog/Rabbit/Weasel |
| | | Paraspur | 74.25 | Dog/Rabbit/Weasel |
| | | Industrial | 1.76 | Dog/Rabbit/Weasel |
| 2 | Ghorahi | Rampur | 36.00 | Dog/Rabbit/Weasel |
| | | Hospital | 0.00 | Dog/Rabbit/Weasel |
| | | Narayanpur | 55.00 | Dog/Rabbit/Weasel |
| | | Bazaar | 20.00 | Dog/Rabbit/Weasel |
| | | Hapur | 52.00 | Dog/Rabbit/Weasel |
| | | Nawalpur | 25.00 | Dog/Rabbit/Weasel |
| | | Holeri | 16.00 | Dog/Rabbit/Weasel |
| | | Gadhwa | 115.00 | Dog/Rabbit/Weasel |
| | | Lamahi | 45.00 | Dog/Rabbit/Weasel |
| | | Rihar | 85.00 | Dog/Rabbit/Weasel |
| | | Bhaluwang | 55.00 | Dog/Rabbit/Weasel |

| | | | | |
|---|---|---|---|---|
| 3 | Guleriya | Krishnasar | 20.00 | Dog/Rabbit/Weasel |
| | | Citi | 45.00 | Dog/Rabbit/Weasel |
| | | Magaragadi | 60.00 | Dog/Rabbit/Weasel |
| | | Nikunja | 32.00 | Dog/Rabbit/Weasel |
| | | Mainapokhar 1 | 30.00 | Dog/Rabbit/Weasel |
| | | Badhaiya | 5.00 | Dog/Rabbit/Weasel |
| | | Basgadhi | 78.00 | Dog/Rabbit/Weasel |
| | | Mainapokhar 2 | 50.00 | Dog/Rabbit/Weasel |
| | | Jamuni | 45.00 | Dog/Rabbit/Weasel |
| | | Bhurigaon | 45.00 | Dog/Rabbit/Weasel |
| | | Thakurdwara | 40.00 | Dog/Rabbit/Weasel |
| | | Rajapur | 102.00 | Dog/Rabbit/Weasel |
| 4 | Surkhet | Bulbule | 45.00 | Dog/Rabbit/Weasel |
| | | Pipira | 24.00 | Dog/Rabbit/Weasel |
| | | Bazaar | 19.00 | Dog/Rabbit/Weasel |
| | | Ramghat substation | 0.00 | Dog/Rabbit/Weasel |
| | | Rakam substation | 0.00 | Dog/Rabbit/Weasel |
| 5 | Salyan | Sitalpati substation, Khalanga | 40.00 | Dog/Rabbit/Weasel |
| | | Sitalpati substation, Srinagar | 165.00 | Dog/Rabbit/Weasel |
| | | Tulsipur substation | 45.00 | Dog/Rabbit/Weasel |
| 6 | Rolpa | Ghorahi-Holeri | 60.00 | Dog/Rabbit/Weasel |
| | | Budhagaon | 10.00 | Dog/Rabbit/Weasel |
| 7 | Dailekh | Bazaar | 11.00 | Dog/Rabbit/Weasel |
| | | Chupra | 56.00 | Dog/Rabbit/Weasel |
| 8 | Kohalpur | Kohalpur | 70.00 | Dog/Rabbit/Weasel |
| | | Chisapani | 45.00 | Dog/Rabbit/Weasel |
| | | Raajha | 36.00 | Dog/Rabbit/Weasel |
| | | Industrial | 14.00 | Dog/Rabbit/Weasel |
| | | Samshergunj | 67.00 | Dog/Rabbit/Weasel |
| | | Sikta | 13.00 | Dog/Rabbit/Weasel |
| | | Kusum | 14.00 | Dog/Rabbit/Weasel |
| 9 | Dolpa | Dunai-Jufal | 46.86 | Dog/Rabbit/Weasel |
| 10 | Kalikot | Manma | 61.00 | Dog/Rabbit/Weasel |
| | | Raskot | 27.00 | Dog/Rabbit/Weasel |
| | | Mumra | | Dog/Rabbit/Weasel |
| 11 | Gamgadh | Talcha-Gamgadhi | 12.50 | Dog/Rabbit/Weasel |
| 12 | Heldung | Bargaon Thehe Dojaam | 28.00 | Dog/Rabbit/Weasel |
| | | Simikot Dadafaya Kharpunath | 16.00 | Dog/Rabbit/Weasel |
| 13 | Rukum | Musikot | 30.00 | Dog/Rabbit/Weasel |
| | | Chaurjahari | 145.00 | Dog/Rabbit/Weasel |
| 14 | Jajarkot | Khalanga | 28.00 | Dog/Rabbit/Weasel |
| | | Kudu | 26.66 | Dog/Rabbit/Weasel |

# Electrification Status

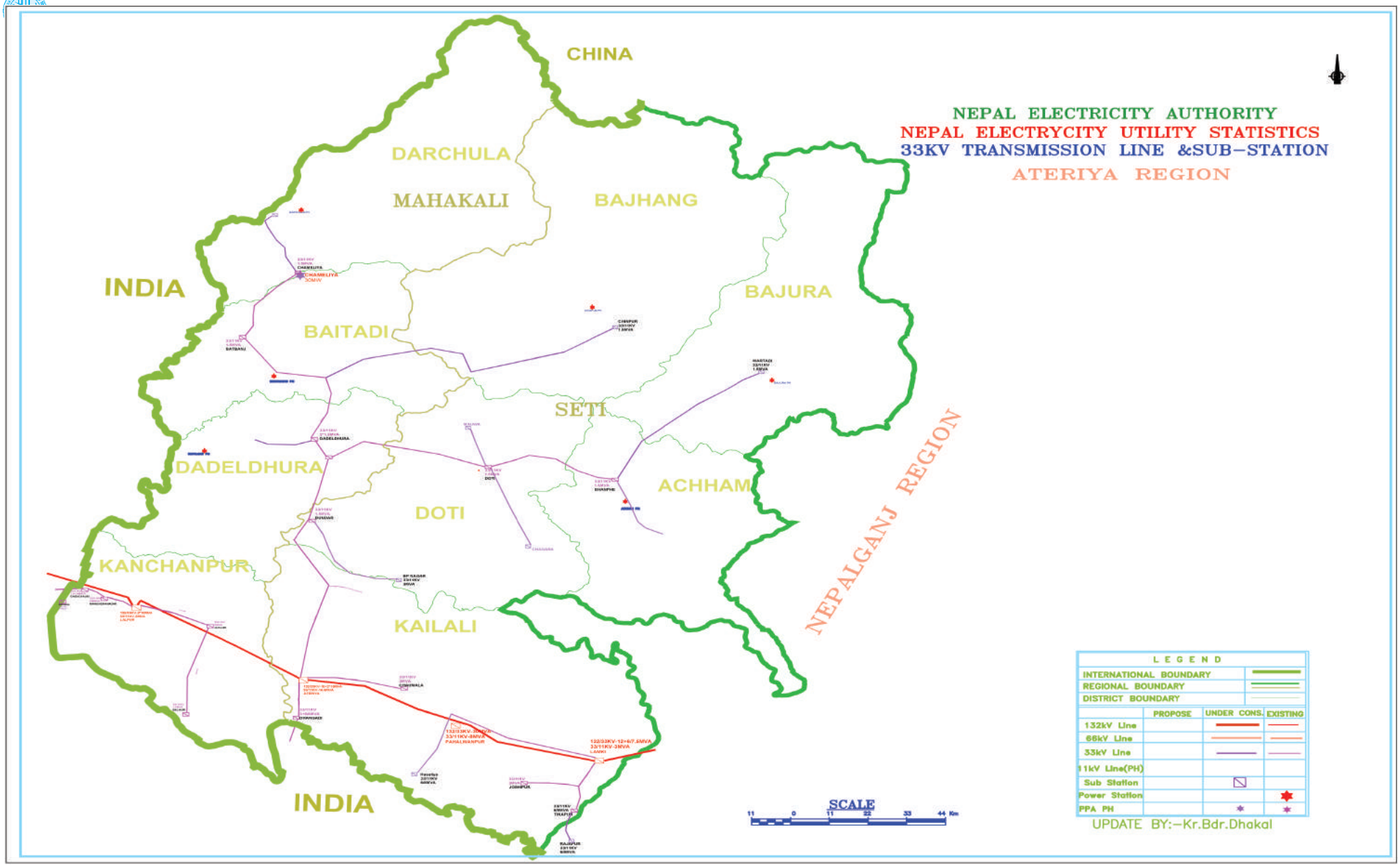
| S. N. | District | Municipalities / Rural Municipalities | Total Electrification % of municipalities (Grid Connected) | Populations | No of Households | Total 11 kV (HT) Circuit Kilometer (KM) required to fully electrified the Municipalities or rural municipalities | Total 0.4 kV (LT) Circuit Kilometer (KM) required to fully electrified the Municipalities or rural municipalities | No. of Transformer Required |
|---|---|---|---|---|---|---|---|---|
| 1 | Rukum West | 1.Musikot Municipality | 59.51 | 35792 | 7940 | 35 | 200 | 18 |
| | | 2.Chaurjahari Municipality | 31.16 | 29814 | 5891 | 63 | 342 | 27 |
| | | 3.Aathabiskot Municipality | 22.46 | 36512 | 6976 | 80 | 200 | 18 |
| | | 4.Sani Bheri | 30.58 | 24116 | 4488 | 50 | 180 | 16 |
| | | 5.Triveni | 21.27 | 21085 | 3919 | 48 | 230 | 15 |
| | | 6.Banphikot | 69.95 | 20316 | 4070 | 32 | 105 | 8 |
| | | **Total District: Rukum West** | **39.60** | **167635** | **33284** | **308** | **1257** | **102** |
| 2 | Salyan | 1.Sharada Municipality | 63.15 | 37474 | 8211 | 20 | 40 | 10 |
| | | 2.Bagchaur Municipality | 19.64 | 37904 | 6560 | 55 | 80 | 18 |
| | | 3.Bangad Kupinde Municipality | 13.62 | 40054 | 7514 | 80 | 120 | 18 |
| | | 4.Kalimati | 0.66 | 25558 | 4825 | 90 | 120 | 16 |
| | | 5.Triveni | 32.39 | 18469 | 3830 | 35 | 60 | 12 |
| | | 6.Kapurkot | 29.12 | 20224 | 4062 | 45 | 100 | 15 |
| | | 7.Chhatreshwori | 45.00 | 23833 | 4897 | 40 | 80 | 13 |
| | | 8.Dhorchaur | 18.00 | 15103 | 2672 | 45 | 75 | 14 |
| | | 9.Kumakha Malika | 1.82 | 27743 | 5272 | 75 | 120 | 22 |
| | | 10.Darma | 2.00 | 22183 | 3844 | 55 | 75 | 16 |
| | | **Total District: Salyan** | **24.31** | **268545** | **51687** | **540** | **870** | **154** |
| 3 | Surkhet | 1.Birendra Nagar Municipality | 78.97 | 117739 | 27788 | 20 | 100 | 30 |
| | | 2.Bheri Ganga Municipality | 47.16 | 48530 | 10342 | 30 | 150 | 25 |
| | | 3.Gurbhakot Municipality | 60.31 | 51293 | 11218 | 35 | 120 | 20 |
| | | 4.Panchapuri Municipality | 0.00 | 37775 | 7389 | 50 | 120 | 30 |
| | | 5.Lek Besi Municipality | 62.87 | 35507 | 7437 | 30 | 50 | 15 |
| | | 6.Chaukune | 0.00 | 29580 | 5401 | 30 | 70 | 20 |
| | | 7.Baraha Tal | 2.63 | 31412 | 6385 | 20 | 80 | 20 |
| | | 8.Chingad | 0.00 | 20247 | 3426 | 55 | 130 | 25 |
| | | 9.Simta | 8.88 | 30292 | 5970 | 50 | 80 | 10 |
| | | **Total District : Surkhet** | **45.64** | **402375** | **85356** | **320** | **900** | **195** |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 4 | Dailekh | 1.Narayan Municipality | 58.84 | 30361 | 6503 | 30 | 40 | 8 |
| | | 2.Dullu Municipality | 29.32 | 46649 | 9168 | 40 | 50 | 12 |
| | | 3.Chamunda Bindrasaini Municipality | 2.73 | 29364 | 5204 | 60 | 70 | 18 |
| | | 4.Aathabis Municipality | 0.00 | 32821 | 5911 | 70 | 70 | 16 |
| | | 5.Bhagawati Mai | 3.01 | 21087 | 3772 | 60 | 60 | 14 |
| | | 6.Gurans | 31.81 | 24742 | 4601 | 50 | 50 | 12 |
| | | 7.Dungeshwor | 53.51 | 17836 | 3419 | 30 | 35 | 8 |
| | | 8.Naumule | 6.71 | 23360 | 4164 | 70 | 60 | 16 |
| | | 9.Mahabu | 20.52 | 21648 | 3990 | 55 | 50 | 10 |
| | | 10.Bairavi | 15.31 | 23844 | 4464 | 60 | 60 | 12 |
| | | 11.Thantikandh | 0.00 | 21218 | 3737 | 70 | 70 | 14 |
| | | **Total District : Dailekh** | **21.36** | **292930** | **54933** | **595** | **615** | **140** |
| 5 | Jajarkot | 1.Bheri Municipality | 39.54 | 38287 | 7530 | 69 | 174 | 7 |
| | | 2.Chhedagad Municipality | 0.00 | 40321 | 7017 | 104 | 207 | 21 |
| | | 3.Triveni Nalgad Municipality | 0.00 | 29233 | 5393 | 70 | 205 | 21 |
| | | 4.Kuse | 0.00 | 23557 | 4101 | 108 | 122 | 19 |
| | | 5.Junichande | 0.00 | 24827 | 4311 | 109 | 212 | 13 |
| | | 6.Barekot | 0.00 | 20658 | 3532 | 82 | 216 | 12 |
| | | 7.Shivalaya | 2.69 | 17444 | 2920 | 61 | | |
| | | **Total District : Jajarkot** | **8.78** | **194327** | **34804** | **603** | **1136** | **93** |
| 6 | Dolpa | 1.Thuli Bheri Municipality | 40.00 | 9527 | 2165 | 12 | 30 | 4 |
| | | 2.Tripura Sundari Municipality | 40.00 | 11499 | 2212 | 25 | 20 | 5 |
| | | 3.Dolpo Buddha | 0.00 | 2419 | 533 | 45 | 40 | 8 |
| | | 4.She-Phoksundo | 0.00 | 3526 | 831 | 50 | 40 | 9 |
| | | 5.Jagadulla | 0.00 | 2588 | 493 | 45 | 35 | 9 |
| | | 6.Mudke Chula gaun | 0.00 | 5836 | 1054 | 40 | 40 | 10 |
| | | 7.Kaieke | 0.00 | 4070 | 889 | 40 | 30 | |
| | | 8.Chharka Tongsong | 0.00 | 1651 | 320 | 40 | 35 | 8 |
| | | **Total District : Dolpa** | **20.60** | **41116** | **8497** | **297** | **270** | **53** |
| 7 | Jumla | 1.Chandannath Municipality | 20.00 | 21599 | 4532 | 10 | 30 | 5 |
| | | 2.Kanaka Sundari | 0.00 | 14988 | 2548 | 30 | 40 | 8 |
| | | 3.Sinja | 6.76 | 13599 | 2265 | 40 | 35 | 10 |
| | | 4.Hima | 0.82 | 11967 | 1942 | 45 | 40 | 11 |
| | | 5.Tila | 2.38 | 15429 | 2550 | 30 | 35 | 9 |
| | | 6.Guthichaur | 3.11 | 11192 | 2096 | 45 | 45 | 10 |
| | | 7.Tatopani | 1.19 | 16597 | 3067 | 30 | 30 | 8 |
| | | 8.Patarasi | 1.23 | 16523 | 2876 | 35 | 40 | 9 |
| | | **Total District : Jumla** | **5.64** | **121894** | **21876** | **265** | **295** | **70** |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 8 | Kalikot | 1.Khandachakra Municipality | 19.21 | 24352 | 4333 | 15 | 18 | 10 |
| | | 2.Raskot Municipality | 64.00 | 19532 | 3223 | 8 | 10 | 3 |
| | | 3.Tila Gupha Municipality | 0.00 | 18925 | 3230 | 30 | 40 | 12 |
| | | 4.Pachal Jharana | 0.00 | 14816 | 2403 | 20 | 34 | 5 |
| | | 5.Sanni Triveni | 56.00 | 15418 | 2525 | 5 | 10 | 3 |
| | | 6.Narhari Nath | 0.00 | 25645 | 4304 | 20 | 38 | 10 |
| | | 7.Kalika | 0.00 | 16900 | 2949 | 30 | 40 | 10 |
| | | 8.Mahawai | 0.00 | 9989 | 1736 | 30 | 40 | 4 |
| | | 9.Palata | 0.00 | 18368 | 2906 | 25 | 30 | 4 |
| | | **Total District : Kalikot** | **15.61** | **163945** | **27609** | **183** | **260** | **61** |
| 9 | Mugu | 1.Chhaya Nath Rara Municipality | 49.44 | 22922 | 4156 | 10 | 15 | 4 |
| | | 2.Mugum akarmarong | 0.00 | 6159 | 1175 | 35 | 36 | 4 |
| | | 3.Soru | 0.00 | 13967 | 2408 | 38 | 42 | 5 |
| | | 4.Khatyad | 0.00 | 19536 | 3221 | 39 | 50 | 6 |
| | | **Total District : Mugu** | **18.75** | **62584** | **10960** | **122** | **143** | **19** |
| 10 | Humla | 1.Simkot | 86.65 | 13176 | 2927 | 35 | 30 | 15 |
| | | 2.Namkha | 0.00 | 4446 | 380 | 90 | 60 | 20 |
| | | 3.Kharpu Nath | 23.20 | 6854 | 1291 | 30 | 20 | 15 |
| | | 4.Sarkegad | 0.00 | 11250 | 2046 | 100 | 40 | 20 |
| | | 5.Chankheli | 0.00 | 6290 | 1099 | 60 | 30 | 25 |
| | | 6.Adanchuli | 0.00 | 8113 | 1279 | 75 | 25 | 15 |
| | | 7.Tanjakot | 0.00 | 6801 | 1169 | 70 | 50 | 20 |
| | | **Total District : Humla** | **27.83** | **56930** | **10191** | **460** | **255** | **130** |
| 7 | Pyuthan | 1.Pyuthan Municipality | 99.00 | 40607 | 9467 | 2 | 10 | 1 |
| | | 2.Swargadwari Municipality | 90.01 | 32676 | 7359 | 1 | 8 | 5 |
| | | 3.Gaumukhi | 39.15 | 26848 | 5053 | 12 | 56 | 6 |
| | | 4.Mandavi | 100.00 | 15903 | 3240 | | | |
| | | 5.Sarumarani | 96.56 | 19671 | 3680 | | | |
| | | 6.Mallarani | 94.99 | 18678 | 4351 | 2 | 15 | 1 |
| | | 7.Nau Bahini | 56.87 | 31992 | 6136 | 19 | 95 | 8 |
| | | 8.Jhimaruk | 100.00 | 29500 | 6198 | | | |
| | | 9.Eairabati | 100.00 | 23648 | 4912 | | | |
| | | **Total District : Pyuthan** | **86.32** | **239523** | **50396** | **36** | **184** | **21** |
| 8 | Rolpa | 1.Rolpa Municipality | 59.01 | 34502 | 7515 | 25 | 50 | 6 |
| | | 2.Triveni | 58.42 | 24179 | 4782 | 12 | 60 | 4 |
| | | 3.Dui Kholi | 0.00 | 21884 | 4233 | 72 | 140 | 24 |
| | | 4.Madi | 21.46 | 18943 | 3852 | 30 | 90 | 6 |
| | | 5.Runti Gadhi | 32.07 | 26371 | 5339 | 12 | 48 | 10 |
| | | 6.Lungri | 60.71 | 24889 | 4637 | 12 | 40 | 3 |
| | | 7.Sukidaha | 0.00 | 21074 | 3638 | 20 | 60 | 10 |
| | | 8.Sunchhahari | 14.42 | 16888 | 3177 | 25 | 80 | 12 |
| | | 9.Subarnawati | 81.45 | 29714 | 5957 | 9 | 40 | 3 |
| | | 10.Thawang | 0.00 | 11460 | 2287 | 25 | 70 | 10 |
| | | **Total District : Rolpa** | **39.40** | **229904** | **45417** | **242** | **678** | **88** |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 9 | Rukum East | 1.Bhume | 0.00 | 20200 | 4167 | 78 | 31 | 15 |
| | | 2.Putha Uttar Ganga | 0.00 | 19487 | 4196 | 96 | 33 | 25 |
| | | 3.Sisne | 33.57 | 17927 | 3811 | 51 | 12 | 10 |
| | | **Total District : Rukum East** | **10.51** | **57614** | **12174** | **225** | **76** | **50** |
| 10 | Dang | 1.Tulsipur Sub-Metropolitan | 82.40 | 163599 | 36114 | 120 | 800 | 25 |
| | | 2.Ghorahi Sub-Metropolitan | 84.27 | 180517 | 40942 | 108 | 201 | 59 |
| | | 3.Lamahi Municipality | 95.00 | 55088 | 10904 | 15 | 26 | 12 |
| | | 4.Banglachuli | 49.26 | 28027 | 5469 | 119 | 212 | 31 |
| | | 5.Dangi Sharan | 84.53 | 24834 | 5151 | 80 | 320 | 17 |
| | | 6.Gadhawa | 71.71 | 44610 | 8401 | 48 | 40 | 20 |
| | | 7.Rajpur | 70.06 | 28942 | 5170 | 30 | 36 | 18 |
| | | 8.Rapti | 75.66 | 47123 | 9312 | 35 | 30 | 17 |
| | | 9.Shanti Nagar | 70.29 | 29134 | 6159 | 150 | 650 | 14 |
| | | 10.Babai | 68.73 | 31753 | 6872 | 250 | 1200 | 17 |
| | | **Total District : Dang** | **79.86** | **633627** | **134494** | **955** | **3515** | **230** |
| 11 | Bardiya | 1.Gulariya Municipality | 97.92 | 74158 | 14529 | 5 | 15 | 2 |
| | | 2.Maduvan Municipality | 94.73 | 51646 | 10642 | 8 | 20 | 2 |
| | | 3.Rajapur Taratal Municipality | 90.00 | 66233 | 12139 | 10 | 20 | 4 |
| | | 4.Thakura Baba Municipality | 95.00 | 49286 | 9624 | 10 | 20 | 3 |
| | | 5.Bansgadhi Municipality | 88.94 | 62142 | 12467 | 25 | 25 | 5 |
| | | 6.Bar Bardiya Municipality | 99.59 | 69002 | 13615 | 5 | 15 | 3 |
| | | 7.Badhaiya Tal | 95.00 | 48169 | 11493 | 5 | 15 | 3 |
| | | 8.Geruwa | 92.00 | 38782 | 6823 | 5 | 20 | 3 |
| | | **Total District : Bardai** | **94.40** | **459418** | **91332** | **73** | **150** | **25** |
| 12 | Banke | 1.Nepalgunj Sub-Metropolitan | 90.00 | 168278 | 33777 | 55 | 200 | 60 |
| | | 2.Kohalpur Municipality | 79.22 | 85558 | 18752 | 50 | 300 | 40 |
| | | 3.Narainapur | 0.00 | 42318 | 7154 | 60 | 500 | 54 |
| | | 4.Raptisonari | 87.16 | 72597 | 13009 | 15 | 60 | 10 |
| | | 5.Baijanath | 83.26 | 65903 | 13401 | 40 | 400 | 50 |
| | | 6.Khajura | 70.00 | 61717 | 12460 | 80 | 150 | 30 |
| | | 7.Duduwa | 70.00 | 45366 | 7980 | 100 | 125 | 35 |
| | | 8.Janaki | 80.00 | 45824 | 8143 | 80 | 125 | 35 |
| | | **Total District : Banke** | **77.24** | **587561** | **114676** | **480** | **1860** | **314** |

# ATTARIYA REGIONAL OFFICE



**Satish Kumar Karn**
Attaria Regional Office Chief

**Jung Bahadur Chand**
Mahendranagar DC

**Dhirendra Kumar Yadav**
Dhangadhi DC

**Himansu Kumar Yadav**
Tikapur DC

**Sunil Kumar Shah**
Belauri DC

**Buddinath Jha**
Doti DC

**Mohan Dev Joshi**
Baitadi DC

**Dayaram Shah**
Darchula DC

**Bijaya Raj Regmi**
Achham DC

**Pratish Dhakal**
Bhajani DC

**Ishwor Kumar Shrestha**
Dadeldhura DC

**Anjani Kumar Yadav**
Bajura DC

**Rakesh Prasad Bhatta**
Bajhang DC

## Introduction

The Attariya Regional office (ARO) responsibilities lies within the Far Westren Region, Seti and Mahakali Zone, Nine Districts. There are 11 (Eleven) distribution centers in seven districts (two in Kailali district). Area of operation of this regional office covers Kailali, Kanchanpur, Dadeldhura, Doti, Achham, Baitadi, Darchula and Bajhang districts .There are 7 Small hydro power plants in this region, namely Dumri S.H.P-300 K.W.(Darchula DC), Surnaygad S.H.P -200 K.W.(Baitadi DC), Kailah Khola S.H.P -400 K.W.(Achham DC),Rupalgad S.H.P -100 K.W.(Dadeldhura DC), Samohagad S.H.P -200 K.W.(Doti DC), Surmadevi S.H.P -200 K.W.(Bajhang) and Bajura S.H.P-200 K.W. (Bajura). Among them Surmadevi and Bajura S.H.P is running in lease while others are under the respective distribution Center. Surnayagad S.H.P is the only one connected to the grid of NEA.

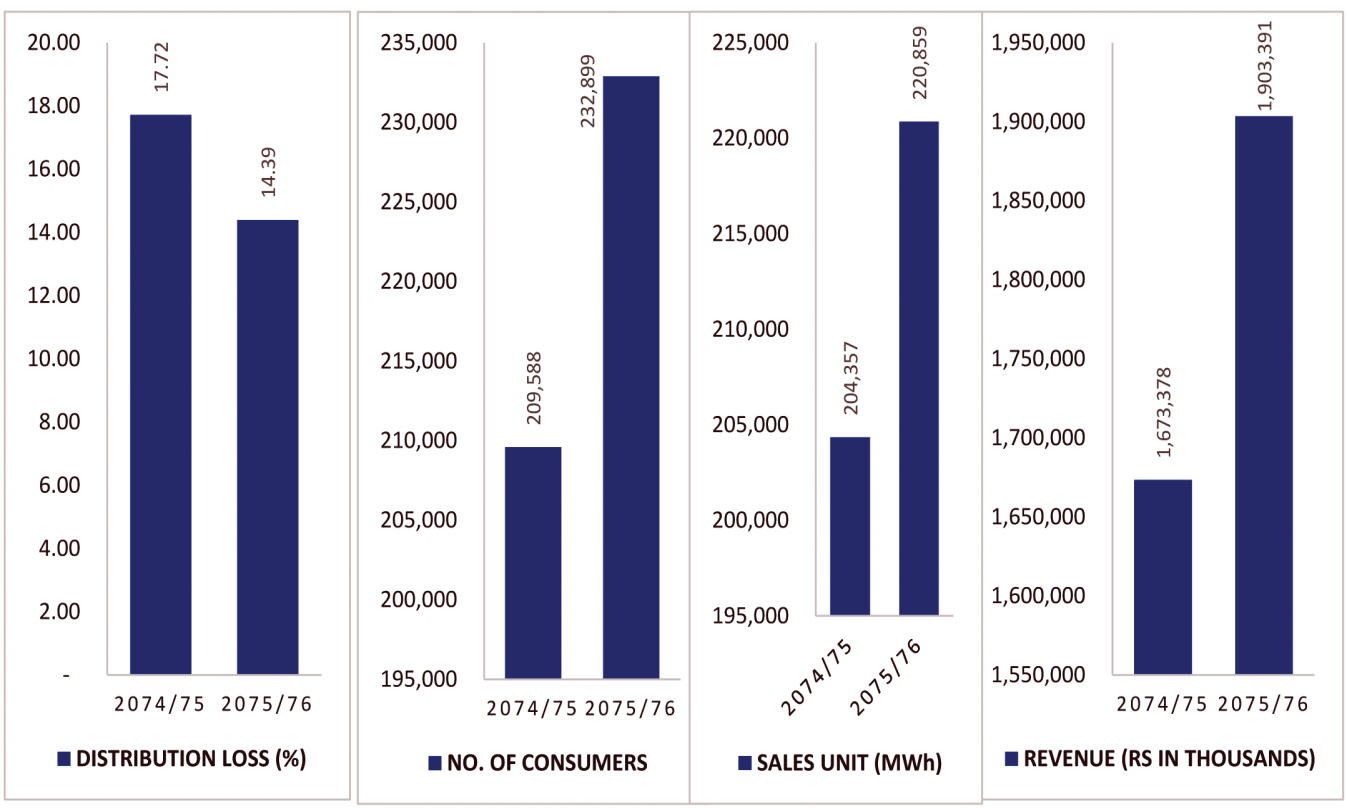
## Operational Structure

There are 11 Distribution Centers within this Regional Office for effective administration. During the year under consideration three new Distribution Center namely Belauri, Bhajang and Bajhani was established for the convenience of the consumers. The source of fund is Government of Nepal and NEA itself. There are nine 33 kV transmission line, substation project and a rural electrification project funded by Government of Nepal under this regional office

## Key Objectives

- To monitor the loss reduction activities.
- To achieve and reduce the loss target set.
- To monitor the progress of rural electrification work of all the distribution centre.
- Connecting the non-grid connected districts to the national grid by construction of 33 kV sub-transmission line and 33/11 kV substations.
- To provide reliable and quality electricity supply to the consumer.

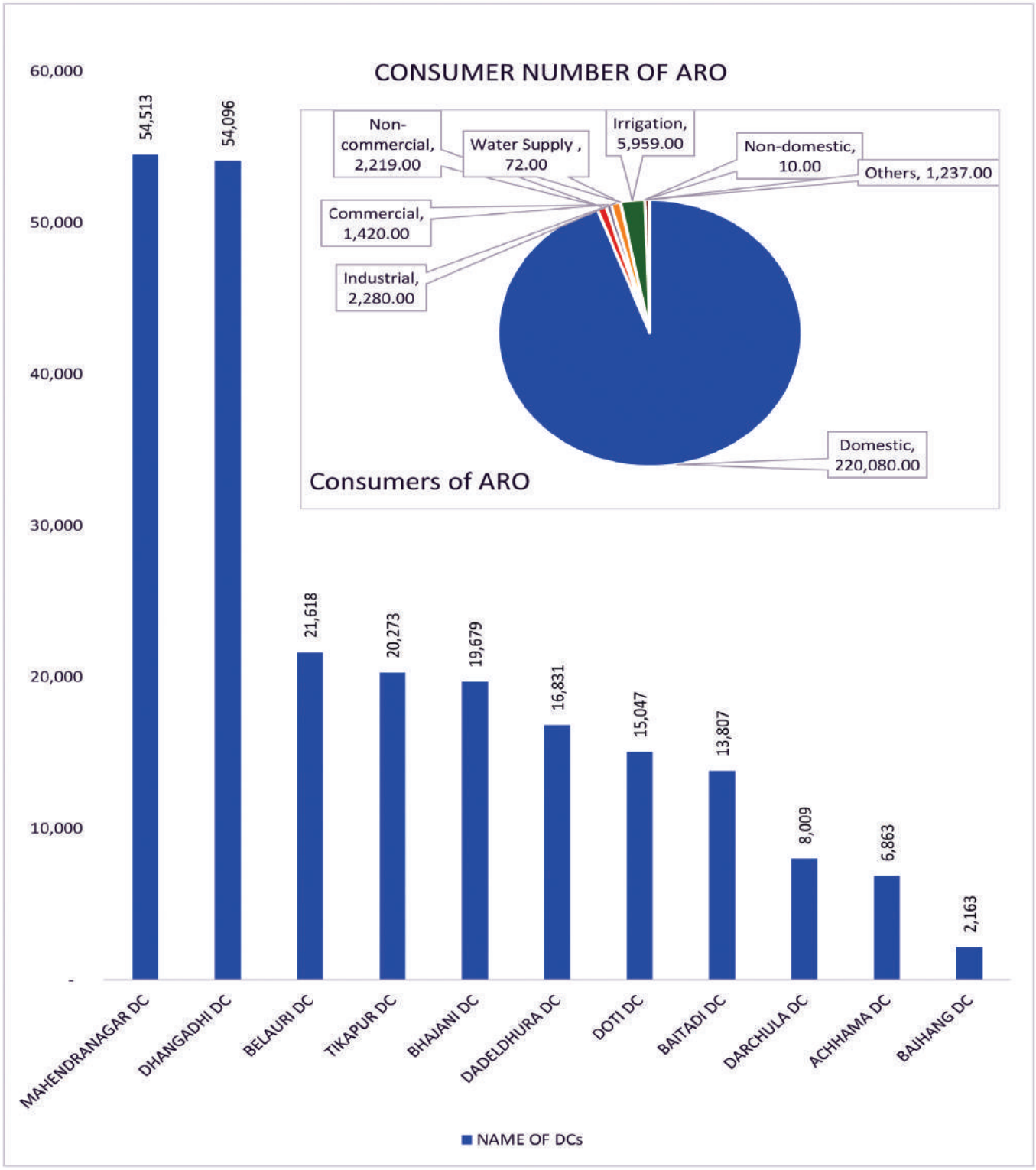
The comparative salient features of this regional office are as follows:



## Highlights of the Year

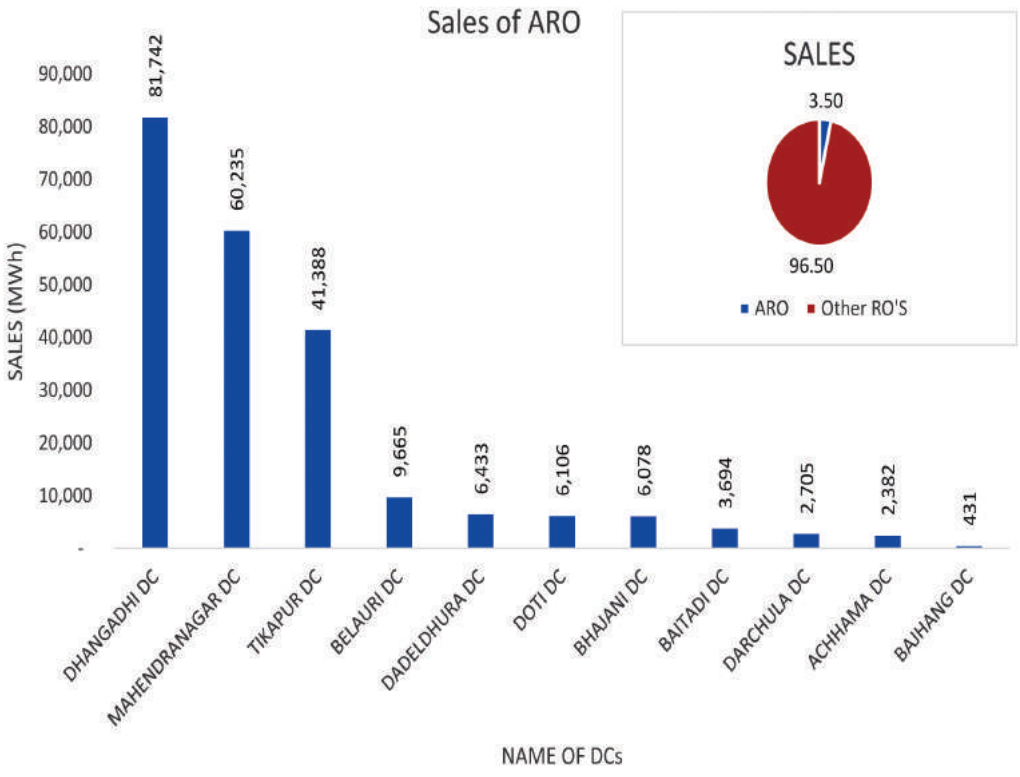
### Consumer Number

ARO recorded 232,899 consumer accounts by the end of the fiscal year 2075/76. The majority of consumer accounts were in the domestic category (220,080) while the second most were from the irrigation category (5,959).



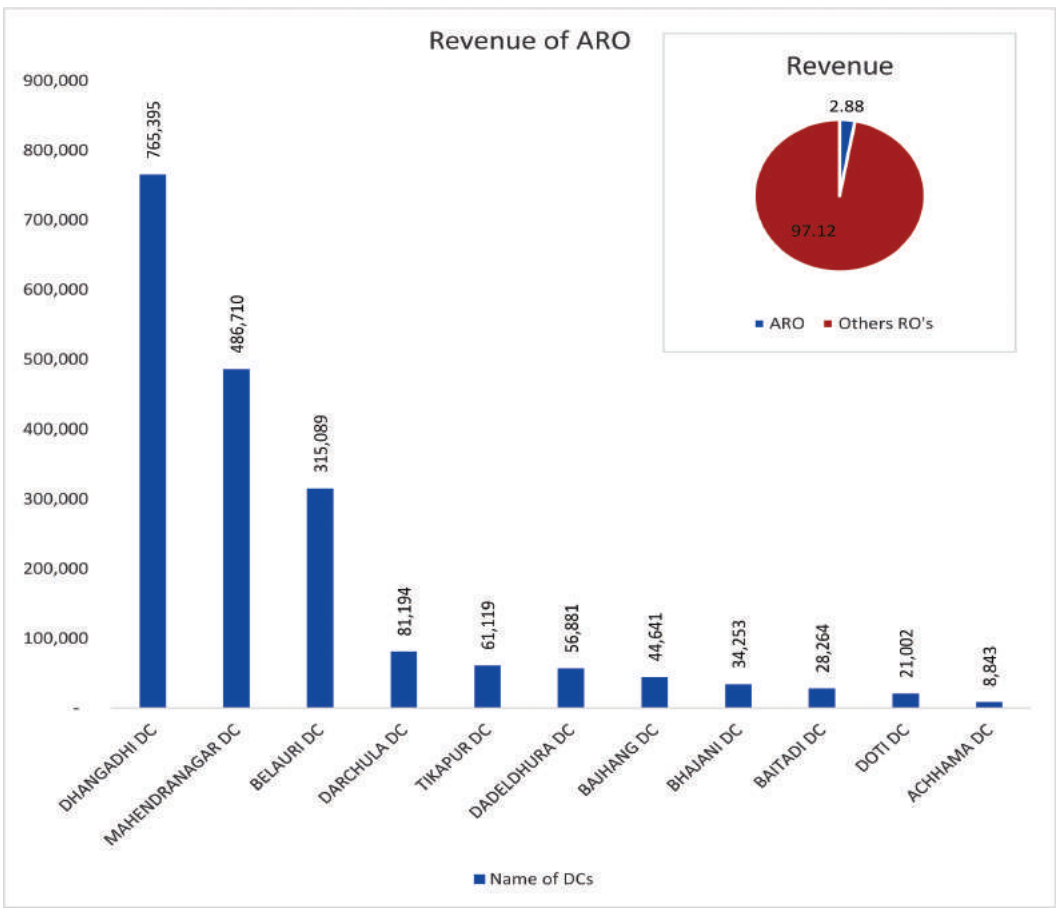
## Sales

ARO reported 3.50% of electricity sales within DC'S. In the fiscal year 2075/76, 220,859 MWh of electricity was sold in the region, an 8.08% increase over previous year. Dhangadhi DC accounts for 40.21% of total sales in the region.

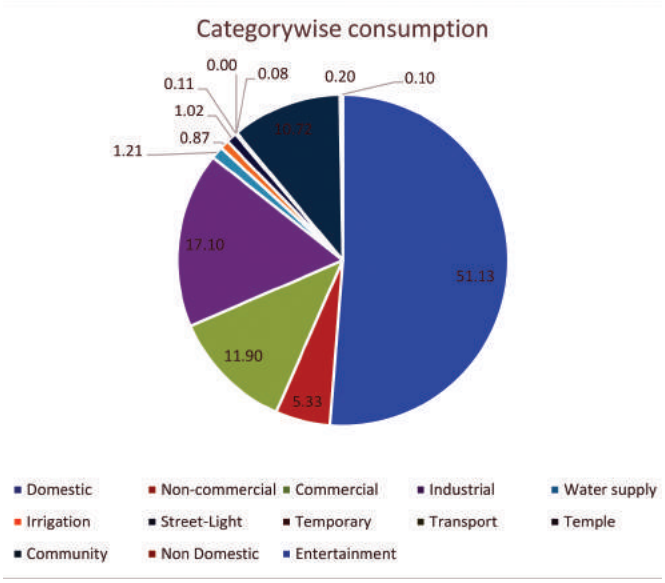



## Revenue

The revenue from electricity sales during the year was Rs. 1,903.4 million which is 14.74% increase from last year. The reasons for increase of revenue are the growth of energy sales, recovery of old dues from consumers. ARO accounts for 2.88% of the total revenue of the DCs.



The majority of revenue in ARO recorded from domestic tariff category which is approximately 51.13% of the total revenue of the region. The higher sales was due to higher consumption of domestic consumers within the territory of ARO.




Dhangadhi DC accounts for 40.21%, Mahendranagar DC accounts for 25.57%, Tikapur DC accounts for 16.55%, Belauri DC accounts for 4.27%, Dadeldhura DC accounts for 3.21% and Doti DC accounts for 2.99% of the total revenue in the Region.

## Distribution Infrastructure

| | |
|---|---|
| 33 kV Distribution Lines | 588.23 km |
| 11 kV Distribution Lines | 3865.68 km |
| 33/11 kV primary Substations | 19 |
| LV Distribution Lines | 12,653.37 km |
| LV Distribution transformers | 2,494 Nos. |
| Distribution Transformers Total installed capacity | 158.43 MVA |

## Performance Highlights

| | |
|---|---|
| Consumer per Staff | 557.17 |
| LT 0.4/0.24 kV Line Length per Staff (km/staff) | 30.27 |
| Sales per Consumer per year (kWh/Consumer) | 948 |
| Revenue per Consumer per year (Rs./Consumer) | 8,172 |
| Consumer per Distribution Transformers | 93 |

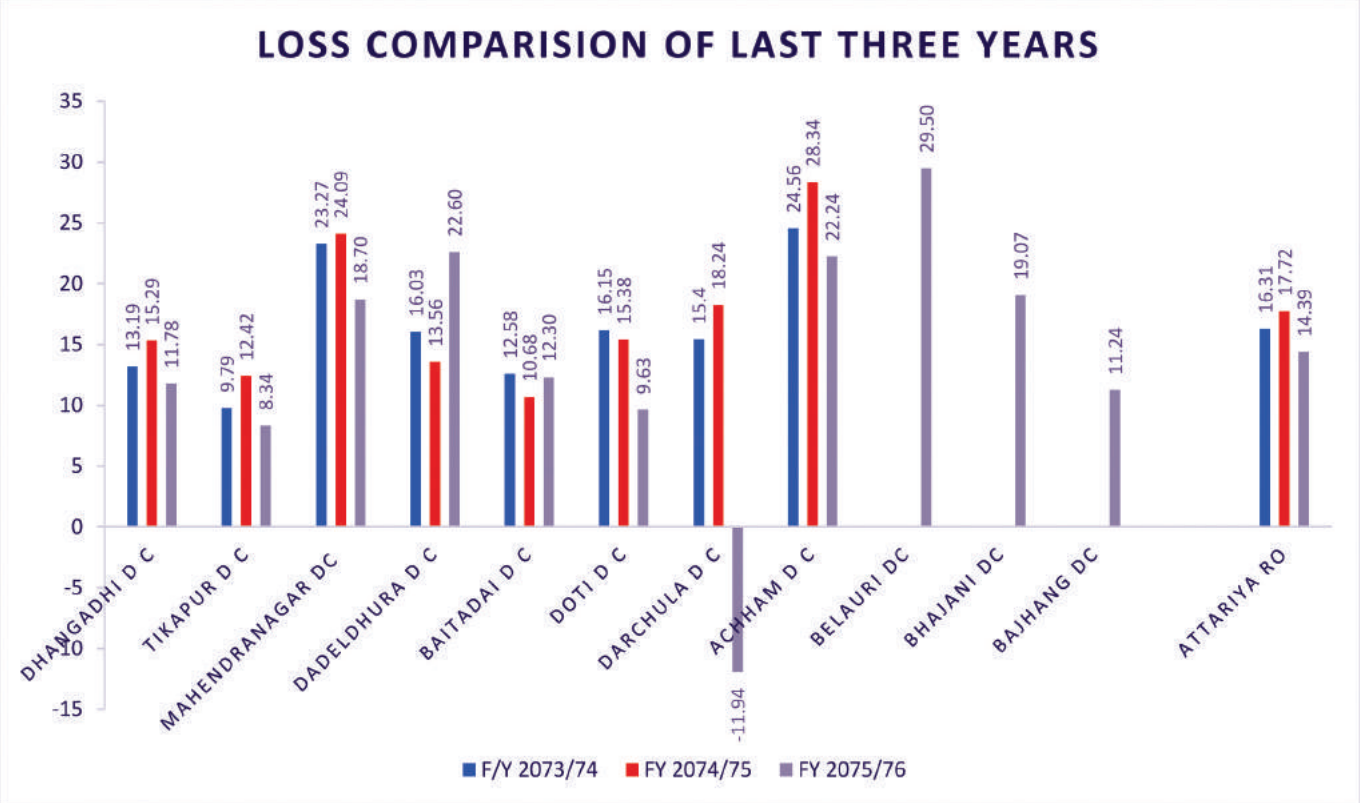
## Customer Care

Special efforts were taken to improve the service at the customer interface points. The staff attached to 11 Distribution Centers took special efforts to serve our valued customers better during the year. Nepal Electricity Authority has made arrangements to submit electricity bill easily through the online systems. This system has given the service of paying the bill online and also updates about the bill payment for the consumers and the obligation for consumers to come to counters for bill payment has ended, thus saving time of the consumer. Consumers can pay their bills via 8 service providers (eSewa, PayPoint, CFS Remit, City Express, Prabhu Bank, Nepal Investment Bank, Himalayan Bank and Mahalaxmi Bikash Bank). NEA has introduced one door system to facilitate the consumers and to provide the service as quickly as possible. This system saves the time of the consumer. Round the clock no-light services have been implemented in most of the urban no-light centers. NEA regular works for addition of new transformers, shifting of distribution transformer at load centers, addition of two wires and upgradation of Substation have key roles in voltage improvement providing quality supply.

Free meter distribution to unprivileged consumers (Doti DC)

## Loss Reduction Program/ Loss Reduction Activities

The distribution networks comprise of technical and non- technical losses, in which proportion of non-technical losses is quite high. During the year under review, various measures taken in the preceding years were continued to reduce the non-technical losses. Massive awareness campaigns as workshops and review meetings were implemented




in various distribution centers. Strict measures for electricity theft control such as confiscation of electric equipments and taking legal action against culprits were also conducted in various distribution centers with the help of local administration and security agencies. NEA management made various decisions as 'Immediate Action Plans' to improve its functioning. This plan included regular inspection of Time-of-Day (TOD) meters, data download and analysis to curb any connection fault or manipulation.

## Future Plans/Programs

### Electrification

The electrification work under Nepal government & NEA budget shall be carried out at all the non-electrified VDCS/Muncipality of this region. Especially, the remote areas of Dadeldhura, Baitadi, Achham, Doti, Bajura, Bajhang and Darchula will be taken care with more responsibility. The work schedule of electrification work shall be monitored strictly in order to complete the work in time.

### Up gradation/Rehabilitation

The 33/11 kV substation and transmission/ distribution line which are functioning under overload condition will be identified and the budget allocation for the upgradation of these infrastructures shall be requested to the respective division.

### Construction of 33/11kV substation and 33 KV Transmission line

The Nepal government budget given to the distribution and consumer services directorate for construction of 33 kV transmission line and substation will floored in this fiscal year and the one which are under construction shall be monitored strictly so as the work is completed in the given time period. The main goal of this projects will be to connect the districts like Bajhang, Bajura and Headquarter of Darchula with national grid supply.

### Loss reduction Activities:

The activites under loss reduction like meter resealing,

changing the Faulty meter, transformer/distribution line upgradation, and energy theft control e.t.c will be carried out with more efficiency and dedication.

## Safety Measures/ Safety day

Safety measures have become necessary as there are occurrences of electric accidents of employees, people and domestic animals every year due to leakage of electricity and non-safety working habit. Initiative will be taken to raise the awareness of the working staff regarding safety hazards. Use of safety tools will be made mandatory for all the working staffs.

## Challenges within Regional Office

The various Challenges faced by the Regional office to provide reliable service to the consumers are as follows:

- Remote rural areas of Dadeldhura, Baitadi, Achham, Doti, Bajura, Bajhang and Darchula districts are yet to be electrified .To connect those areas to National Grid construction of 33 kV lines, 33/11 kV Substations and distribution lines is a major challenge.
- Due to the adverse topography of the DCs in hilly regions within the regional office, it is very difficult to provide quick service to the consumers.
- Technical challenge within the region is distribution system reliability which needs to be sorted out by system upgradation like conductor upgrading, feeder separation, substation rehabilitation, undergrounding of conductor in city areas, etc.
- Segregation of technical and non-Technical losses within the region and action to reduce technical loss is necessary.
- Social and political challenges are also vibrant within the region.

## Projects within the Regional Office

### Budar-Jogbuda, Bagarkot (Dadeldhura) 33 kV Transmission Line and Substation Project

The scope of this project includes construction of 33/11 kV substation at Bagarkot of Dadeldhura District, 33 kV lines, 11 kV lines & 0.4 kV lines. This project is funded by Government of Nepal and the overall budget of this project is Rs. 271,000,000. This project is expected to complete in this fiscal year.

### Khodpe (Baitadi)-Chainpur (Bajhang) 33 kV Transmission line and Substation Project

The scope of this project includes construction of 33/11 kV substation at Bagthala & Bhainpur of Bajhang District, 33 kV lines From Baitadi Khodpe to Bajhang,

DO fuse fitting at khodpe chaipur line 33 kV line

11kV lines & 0.4 kV lines. This project is also funded by Government of Nepal and 77.25% of the project has been completed so far.

### Sangebagar-Chamara-Chautara 33 kV Transmission Line and Substation Project

The scope of this project includes construction of 33/11 kV substation at Tikhattar (Doti), 33 kV lines From Rajpur to Tikhattar, 11kV lines & 0.4 kV lines.

### Balanch (Gokuleshwor)-Khalnga (Darchula) 33 kV Transmission Line and Substation Project

The scope of this project includes construction of 33/11 kV Sub-station at Thaligad of Darchula, 33 kV lines from Gokule to Thaligad, 11 kV lines & 0.4 kV lines. This project is expected to complete in this fiscal year and 86.91% of the works has been completed so far.

Under construction Thaligad Substation at Darchula

## Sanfe-Manma-Jumla 33 kV Transmission Line & Substation Project

The scope of this project includes construction of 33/11 kV substation at Achham (Kamalbazar), Kalikot & Manma (Jumla), 33 kV lines and 11kV lines & 0.4 kV lines. Only 39.65% of this project has been completed till date due to various issues.

## Mahendranagar Distribution System Rehabilitation Project

The scope of this project includes construction of 11 kV Industrial Feeder, upgrading of conductors and transformers, 11 kV lines and route change work of 400/230 V in Mahendranagar area. Only 42.84% of this project has been completed till date and the project is expected to be completed in 2 years.

## Dhangadhi-Attariya Distribution System Rehabilitation Project

The scope of this project includes the construction of 11 kV Industrial Feeder, upgrading of conductors and transformers, 11 kV lines and route change work of 400/230 V in Dhangadhi and Attariya. So far 51.14% of the project has been completed.

## Attariya-Punarbas 33 kV Transmission Line and Substation Project

The scope of this project includes construction of 33/11 kV substation at Punarbas of Kanchanpur District, 33 kV transmission line,11 kV lines and 400/230 V lines.

## Substation Status

| S.N. | Distribution Center | Name of Substation | Capacity (MVA) | Total Capacity (MVA) | Voltage level(kV) | Existing | Proposed | Planned | Underconstruction | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Dhangadi | Dhangadi | 2*8/12 | 24 | 33/11 kV | √ | | | 20/24 MVA | Upgrading |
| | | Chaumala | 2*1.5 | 3 | 33/11 kV | √ | | | 8 MVA | Upgrading |
| | | Hasuliya | 8 | 8 | 33/11 kV | √ | | | | |
| | | Attariya Substation (@ Premises at attariya Grid ) | 16.6 | 16.6 | 33/11 kV | √ | | | | |
| | | Pahalmanpur Substation(@ Premises at Pahalmanpur Grid) | 8 | 8 | 33/11 kV | √ | | | | |
| 2 | Mahendranagar | Mahendranagar | 8 | 8 | 33/11 kV | √ | | | 20/24 MVA | Upgrading |
| | | Kaluwapur | 3 | 3 | 33/11 kV | √ | | | 20/24 MVA | Upgrading |
| | | Gaddachauki | 8 | 8 | 33/11 kV | √ | | | | |
| | | Chadani | 5 | 5 | 33/11 kV | √ | | | | |
| | | Lalpur Substation(@ Premises at lalpur Grid) | 7.5 | 7.5 | 33/11 kV | √ | | | | |
| 3 | Belauri | Belauri | (4+3) | 7 | 33/11 kV | √ | | | 20/24 MVA | Upgrading |
| | | Punarbas | 8 | 8 | 33/11 kV | | | | √ | |
| 4 | Tikapur | Tikapur | 6/8 | 8 | 33/11 kV | √ | | | | |
| | | Lamki Subsation (@ Premisses of Lamki Grid) | 16.6 | 16.6 | 33/11 kV | √ | | | | |
| | | Sugarkhal | 1.5 | 1.5 | 33/11 kV | | √ | | | |
| 5 | Bhajani | Joshipur | 3 | 3 | 33/11 kV | √ | | | 8 MVA | Upgrading |
| 6 | Dadeldhura | Dadeldhura | 1.5+1.5 | 3 | 33/11 kV | √ | | | 8 MVA | Upgrading |
| | | Budar | 3 | 3 | 33/11 kV | √ | | | 8 MVA | Upgrading |
| | | Syaule Substation (@ Premises at Syule Grid) | 8 | 8 | 33/11 kV | √ | | | | |
| | | Bagarkot | 3 | 3 | 33/11 kV | | | | √ | |
| | | Sakayal | 3 | 3 | 33/11 kV | | √ | | | |
| 7 | Baitadi | Baitadi | 3 | 3 | 33/11 kV | √ | | | 8 MVA | Upgrading |
| | | Patan | 8 | 8 | 33/11 kV | | √ | | | |
| | | Melauli | 8 | 8 | 33/11 kV | | √ | | | |
| | | Musya | 8 | 8 | 33/11 kV | | √ | | | |
| 8 | Doti | Pipalla | (3+1.5) | 4.5 | 33/11 kV | √ | | | 8 MVA | Upgrading |
| | | Mauwa | 3 | 3 | 33/11 kV | | | | √ | |
| | | Tikhatar | 3 | 3 | 33/11 kV | | | | √ | |
| | | BP Nagar | 3 | 3 | 33/11 kV | | | | | |
| 9 | Achham | Jhakale, Sanfe Bagar | 3 | 3 | 33/11 kV | | | | √ | |
| | | Kamalbazar | 3 | 3 | 33/11 kV | | | | √ | |
| 10 | Darchula | Balanch Substation (@ premises of Chameliya HP) | 3 | 3 | 33/11 kV | √ | | | | |
| | | Thaligad | 3 | 3 | 33/11 kV | | | | √ | |
| 11 | Bajhang | Bagthala | 3 | 3 | 33/11 kV | √ | | | | |
| | | Chainpur | 3 | 3 | 33/11 kV | √ | | | | |
| 12 | Bajura | Martadi | 8 | 8 | 33/11 kV | | √ | | | |
| | | Kolti | 5 | 5 | 33/11 kV | | | √ | | |
| | | **Total Existing** | | **226.7** | | | | | | |

## 33 kV Feeder Status

| S.N. | Name of Distribution Center | Name of 33 kV Feeder | Length of Feeder (km) | Conductor Name/Size (sq.inch) |
|---|---|---|---|---|
| 1 | Dhangadhi | Attariya-Dhangadhi 33 KV Line | 13 Km | 0.01 Sq inch(DOG) |
| | | Attariya-Budar 33 KV Line | 39 Km | 0.01 Sq inch(DOG) |
| | | Attariya-Chaumala 33 KV Line | 20 Km | 0.01 Sq inch(DOG) |
| | | Pahalmanpur-Chaumala 33 KV Line | 13 Km | 0.01 Sq inch(DOG) |
| 2 | Mahendranagar | LALPUR-MAHENDRANAGAR | 7.5 Km | 0.01 Sq inch(DOG) |
| | | MAHENDRANAGAR-GADDACHAUKI | 4.5 Km | 0.01 Sq inch(DOG) |
| | | GADDACHAUKI- DODHARA | 8 Km | 0.05 Sq inch(Rabbit) |
| | | LALPUR-KALAWAPUR | 15 Km | 0.01 Sq inch(DOG) |
| 3 | Tikapur DC | Lamki-Tikapur-Joshipur 33 KV line | 22KM | 0.01 Sq inch(DOG) |
| 4 | Bhajani | Joshipur Feeder | 10.4 KM | 0.01 Sq inch(DOG) |
| 5 | Dadeldhura | Syaule- Dadeldhura 33KV line | 3.5 Km | 0.01 Sq inch(DOG) |
| | | Syaule- buder 33 KV Line | 33.5 Km | 0.01 Sq inch(DOG) |
| 6 | Baitadi | Dadeldhura-Baitadi 33KV Line | 65 Km | 0.05 Sq inch(DOG) |
| | | Balanch - Baitadi 33 KV Line | 32 Km | 0.01 Sq inch(DOG) |
| 7 | DOTI | Syaule- Doti (Pipla)33 KV Line | 37KM | woolf |
| 8 | Darchula | Gokule-Khalanga 33 KV Line | 25KM | 0.01 Sq inch(DOG) |
| 9 | Achham Feeder | Doti (Pipla)-Achham 33 KV Line | 65 km | 0.1 Sq inch(DOG) |
| 10 | Belauri | Lalpure-Belauri 33 KV Line | 22 Km | 0.05 Sq inch(Rabbit) |

## 11 kV Feeder Status

| S.N. | Name of Distribution Center | Name of 11kV Feeder | Length of Feeder, km | Conductor Name Size (sq.inch) |
|---|---|---|---|---|
| 1 | Dhangadhi | Attariya Feeder | 65 km | 0.05 Sq inch (Rabbit) |
| | | Krishnapur Feeder | 38 km | 0.05 Sq inch (Rabbit) |
| | | Chaumala Feeder | 20 km | 0.05 Sq inch (Rabbit) |
| | | Geta Feeder | 32 Km | 0.05 Sq inch (Rabbit) |
| | | Sukhad Feeder | 34 Km | 0.03 Sq inch (Weasel) |
| | | Masuriya Feeder | 29 Km | 0.03 Sq inch (Weasel) |
| | | Chaumala Feeder | 20 km | 0.03 Sq inch (Weasel) |
| | | Banbehada Feeder | 40 Km | 0.03 Sq inch (Weasel) |
| | | Masuriya Feeder | 15 Km | 0.03 Sq inch (Weasel) |
| | | Bhansar Feeder | 6 Km | 0.05 Sq inch (Rabbit) |
| | | RAJPUR FEEDER | 12 Km | 0.05 Sq inch (Rabbit)/Weasel |
| | | Hasanpur Feeder | 16 Km | 0.05 Sq inch (Rabbit) |
| | | Bela Feeder | 40 Km | 0.05 Sq inch (Rabbit)/Weasel |
| | | Manera Feeder | 25 Km | 0.05 Sq inch (Rabbit) |
| | | Hasuliya Feeder | 90 Km | 0.05 Sq inch (Rabbit)/Weasel |

| | | | | |
|---|---|---|---|---|
| 2 | Mahendranagar | LALPUR | 88.5 Km | 0.05 Sq inch (Rabbit)/Weasel |
| | | DAIJE | 84 Km | 0.05 Sq inch (Rabbit)/Weasel |
| | | BAZAR | 85.7 Km | 0.05 Sq inch (Rabbit)/Weasel |
| | | BHAASI | 76.5 Km | 0.05 Sq inch (Rabbit)/Weasel |
| | | AITHPUR | 79.2 Km | 0.05 Sq inch (Rabbit)/Weasel |
| | | BANGAAU | 80.7 Km | 0.05 Sq inch (Rabbit)/Weasel |
| | | KRISHNAPUR | 82.5 Km | 0.05 Sq inch (Rabbit)/Weasel |
| | | BANI | 75.2 Km | 0.05 Sq inch (Rabbit)/Weasel |
| | | JHALARI | 85.5 Km | 0.05 Sq inch (Rabbit)/Weasel |
| | | PIPLADI | 65.7 Km | 0.05 Sq inch (Rabbit)/Weasel |
| | | DODHARA CHADANI | 83 Km | 0.05 Sq inch (Rabbit)/Weasel |
| | | BASKHEDA | 82.5 Km | 0.05 Sq inch (Rabbit)/Weasel |
| | | BHRAMADEV | 85.2 Km | 0.05 Sq inch (Rabbit)/Weasel |
| 3 | Belauri | Beldandi Feeder | 38 Km | 0.05 Sq inch (Rabbit)/Weasel |
| | | Belauri Feeder | 22 Km | 0.05 Sq inch (Rabbit)/Weasel |
| | | Punarbas Feeder | 40 Km | 0.05 Sq inch (Rabbit)/Weasel |
| 4 | Tikapur DC | Tikapur Feeder | 42.5km | 0.05 Sq inch (Rabbit) |
| | | Satti Feeder | 55km | 0.05 Sq inch (Rabbit) |
| | | Durgauli-munuwa Feeder | 23.5km | 0.05 Sq inch (Rabbit) |
| | | Baliya Feeder | 37km | 0.05 Sq inch (Rabbit) |
| | | Chuha Feeder | 60km | 0.05 Sq inch (Rabbit) |
| | | Jagatpur Feeder | 40km | 0.05 Sq inch (Rabbit) |
| 5 | Bhajani | Sukhad Feeder | 85.43 Km | 0.05 Sq inch (Rabbit) |
| | | Joshipur Feeder | 40.65 Km | 0.05 Sq inch (Rabbit) |
| | | Sukkhad Feeder | 89.03 Km | 0.05 Sq inch (Rabbit) |
| 6 | Dadeldhura | Bazzar feeder | 47.8 KM | 0.05/0.03 Sq inch |
| | | Chamada Feeder | 92.3 KM | 0.05/0.03 Sq inch |
| | | Sakayal feeder | 80.89 KM | 0.05/0.03 Sq inch |
| | | Doti ghatal Feeder | 15 KM | 0.03 Sq inch (Weasel) |
| | | Bhatkada Feeder | 9 KM | 0.03 Sq inch (Weasel) |
| | | Jogbuda Feeder | 110 KM | 0.10/0.05/0.03 sq. inch |
| | | Buder Feeder | | |
| 7 | Baitadi | Bazar Feeder | 172 KM | 0.03 Sq inch (Weasel) |
| | | Tripura Feeder | 79 KM | 0.03 Sq inch (Weasel) |
| | | Julaghat Feeder | 12KM | 0.03 Sq inch (Weasel) |
| 8 | Doti | DIPAYAL FEEDER | 110.43 KM | 0.03, 0.05 Sq inch |
| | | RAJPUR FEEDER | 107.77 KM | 0.03, 0.05 Sq inch |
| | | SIGADI FEEDER | 92 KM | 0.03,0.05 Sq inch |
| | | JORAIL FEEDER | 34.7 KM | 0.03 Sq inch (Weasel) |
| | | ACHHAM FEEDER | 75 KM | 0.03 Sq inch (Weasel) |
| 9 | Darchula | Joljibi Feeder | 38 KM | 0.03 Sq inch (Weasel) |
| | | Khalanga Feeder | 21KM | 0.03 Sq inch (Weasel) |
| | | Huti Feeder | 10KM | 0.03 Sq inch (Weasel) |
| | | Dungri Feeder | 6KM | 0.03 Sq inch (Weasel) |
| | | Gokuleshwor Feeder | 13Km | 0.03 Sq inch (Weasel) |
| 10 | Achham | Achham | 120 km | ACSR Dog-65 km weasel - 55 km |
| 11 | Bajhang DC | Bagthala | 0.5 | 0.03 Sq inch (Weasel) |
| | | Chainpur | 34.5 | Weasel/Rabit |

# Electrification Status

| S. N. | District | Municipalities Rural Municipalities | Total Electrification % (Grid Connected) | Populations | No of Households | Total 11 kV (HT) Circuit Kilometer (KM) required to fully electrified the Municipalities or rural municipalities | Total 0.4 kV (LT) Circuit Kilometer (KM) required to fully electrified the Municipalities or rural municipalities | No. of Transformer Required |
|---|---|---|---|---|---|---|---|---|
| 1 | Bajura | 1.Badi Malika Municipality | 81.09 | 19122 | 3919 | 10 | 25 | 10 |
| | | 2.Triveni Municipality | 95.00 | 20879 | 3810 | 25 | 40 | 17 |
| | | 3.Budhi Ganga Municipality | 62.00 | 24645 | 4861 | 20 | 35 | 15 |
| | | 4.Budhi Nanda Municipality | 83.00 | 21347 | 3923 | 35 | 60 | 19 |
| | | 5.Gaumul | 70.00 | 9680 | 1773 | 20 | 40 | 15 |
| | | 6.Jaganath Rural Municipality | 83.00 | 10723 | 1915 | 25 | 45 | 13 |
| | | 7.SwamiKartik | 60.00 | 14534 | 2527 | 20 | 40 | 10 |
| | | 8.Chhededaha | 60.00 | 21118 | 3609 | 25 | 50 | 14 |
| | | 9.Himali | 0.00 | 10476 | 1957 | 30 | 60 | 17 |
| | | **Total District : Bajura** | **69.20** | **152524** | **28294** | **210** | **395** | **130** |
| 2 | Bajhang | 1.Jaya Prithvi Municipality | 72.00 | 24930 | 4509 | 50 | 200 | 16 |
| | | 2.Bungal Municipality | 20.00 | 37323 | 6156 | 80 | 600 | 30 |
| | | 3.Talkot | 47.00 | 12984 | 2248 | 70 | 600 | 22 |
| | | 4.Masta | 56.00 | 16794 | 2760 | 55 | 400 | 16 |
| | | 5.Khaptadchhanna | 73.00 | 17853 | 3488 | 45 | 450 | 22 |
| | | 6.Thalara | 56.00 | 20167 | 3608 | 65 | 600 | 30 |
| | | 7.Bitthadchir | 40.00 | 19270 | 3076 | 50 | 500 | 30 |
| | | 8.Surma | 42.66 | 10135 | 1592 | 65 | 300 | 23 |
| | | 9.Chhabis Pathibhera | 37.00 | 18306 | 3319 | 60 | 500 | 20 |
| | | 10.Durgathali | 42.00 | 14572 | 2749 | 60 | 400 | 20 |
| | | 11.Kedarsyun | 51.00 | 23935 | 4028 | 65 | 600 | 26 |
| | | 12.Kanda | 54.00 | 2452 | 408 | 75 | 400 | 10 |
| | | **Total District : Bajhang** | **48.00** | **218721** | **37941** | **740** | **5550** | **265** |
| 3 | Achham | 1.Mangalsen Municipality | 44.20 | 35942 | 7303 | 35 | 30 | 10 |
| | | 2.Sanfebagar Municipality | 53.38 | 37357 | 7401 | 50 | 48 | 16 |
| | | 3.Kamalbazar Municiplaity | 22.00 | 26247 | 4957 | 32 | 48 | 16 |
| | | 4.Panchdeval Binayak Municiplaity | 15.00 | 30391 | 5490 | 30 | 45 | 18 |
| | | 5.Chourpati | 34.29 | 27808 | 5654 | 16 | 40 | 10 |
| | | 6.Mellekh | 41.25 | 27276 | 4820 | 32 | 36 | 12 |
| | | 7.Bannigadhi Jayagadh | 55.69 | 19194 | 3730 | 15 | 25 | 5 |
| | | 8.RamaRoshan | 52.00 | 27826 | 4816 | 32 | 39 | 13 |
| | | 9.Dhakari | 10.00 | 23840 | 4197 | 45 | 48 | 15 |
| | | 10.Turmakhand | 15.00 | 27382 | 5059 | 32 | 64 | 16 |
| | | **Total District : Achham** | **35.15** | **283263** | **53427** | **319** | **423** | **131** |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 4 | Doti | 1.Dipayal-Silgadi Municipality | 96.02 | 33238 | 7512 | 10 | 15 | 4 |
| | | 2.Shikhar Municipality | 97.34 | 32087 | 6725 | 6 | 10 | 6 |
| | | 3.Purbi Chouki | 68.56 | 22683 | 4881 | 15 | 20 | 10 |
| | | 4.Badikedar | 0.00 | 16870 | 2744 | 80 | 80 | 15 |
| | | 5.Jorayal | 61.52 | 21011 | 3843 | 80 | 80 | 10 |
| | | 6.Sayal | 40.67 | 19727 | 3807 | 60 | 80 | 10 |
| | | 7.Aadarsha | 60.23 | 24159 | 4789 | 60 | 80 | 6 |
| | | 8.K.I. Singh | 77.50 | 21091 | 4297 | 30 | 40 | 8 |
| | | 9.Bogtan | 14.37 | 18063 | 3159 | 80 | 80 | 30 |
| | | **Total District : Doti** | **66.30** | **208929** | **41757** | **421** | **485** | **99** |
| 5 | Kailali | 1.Dhangadhi Sub-Metropolitan | 97.89 | 177337 | 34982 | 5 | 9 | 2 |
| | | 2.Tikapur Muncipality | 100.00 | 91326 | 18432 | | | |
| | | 3.Ghodaghodi Municipality | 77.09 | 90727 | 15813 | 30 | 85 | 14 |
| | | 4.Lamki-Chuha Municipality | 100.00 | 90534 | 17713 | | | |
| | | 5.Bhajani Municipality | 81.98 | 62231 | 10463 | 12 | 40 | 8 |
| | | 6.Godavari Municipality | 90.92 | 93646 | 17903 | 30 | 10 | 3 |
| | | 7.Gauri Ganga Municipality | 87.05 | 66396 | 12088 | 5 | 12 | 3 |
| | | 8.Janaki | 87.81 | 58263 | 10865 | 8 | 11 | 4 |
| | | 9.Bardagoriya | 88.68 | 39231 | 6846 | 9 | 11.5 | 6 |
| | | 10.Mohanyal | 0.00 | 26471 | 4764 | 73 | 30 | 13 |
| | | 11.Kailari | 91.34 | 57599 | 9364 | 12 | 12 | 5 |
| | | 12.Joshipur | 89.21 | 43764 | 7673 | 8 | 24 | 7 |
| | | 13.Chure | 19.86 | 22714 | 4035 | 30 | 35 | 15 |
| | | **Total District : Kailali** | **87.61** | **920239** | **170941** | **222** | **279.5** | **80** |
| 6 | Kanchanpur | 1. Bhimdatta Municipality | 91.24 | 110997 | 21950 | 50 | 200 | 50 |
| | | 2. Punarbas Municipality | 80.00 | 56913 | 10515 | 10 | 30 | 12 |
| | | 3. Bedkot Municipality | 91.47 | 52506 | 9782 | 30 | 120 | 30 |
| | | 4. Mahakali Municipality | 91.89 | 41653 | 7845 | 15 | 150 | 15 |
| | | 5. Shuklaphanta Municipality | 90.23 | 49698 | 9398 | 45 | 200 | 45 |
| | | 6. Belauri Municipality | 86.75 | 56819 | 9184 | 7 | 25 | 10 |
| | | 7. Krishnapur Municipality | 89.75 | 60106 | 10628 | 20 | 100 | 20 |
| | | 8. Beldandi | 73.61 | 23291 | 3991 | 5 | 25 | 8 |
| | | 9. Laljhadi | 93.46 | 23949 | 3863 | 1 | 10 | 5 |
| | | **Total District : Kanchanpur** | **88.50** | **475932** | **87156** | **183** | **860** | **195** |
| 7 | Dadeldhura | 1.Amargadhi Municipality | 71.70 | 23442 | 5270 | 10 | 40 | 5 |
| | | 2.Parashuram Municipality | 34.70 | 38599 | 6610 | 160 | 250 | 28 |
| | | 3.Aalitaal | 57.17 | 20446 | 3619 | 80 | 120 | 10 |
| | | 4.Bhageshwor | 59.84 | 15589 | 2716 | 70 | 110 | 12 |
| | | 5.Navadurga | 51.62 | 22019 | 4559 | 30 | 70 | 7 |
| | | 6.Ajaymeru | 43.49 | 18831 | 3653 | 40 | 70 | 8 |
| | | 7.Ganyapdhura | 34.40 | 16652 | 3388 | 20 | 60 | 6 |
| | | **Total District : Dadeldhura** | **49.89** | **155578** | **29815** | **410** | **720** | **76** |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 8 | Baitadi | 1.Dasharath Chanda Municipality | 79.26 | 38150 | 8007 | 12 | 16 | 8 |
| | | 2.Patan Municipality | 59.36 | 32115 | 6087 | 22 | 30 | 15 |
| | | 3.Melauli Municipality | 0.77 | 23791 | 4166 | 45 | 85 | 55 |
| | | 4.Purchaundi Municipality | 0.00 | 41339 | 6744 | 65 | 68 | 48 |
| | | 5.Surnaiya | 25.11 | 19574 | 3505 | 26 | 50 | 28 |
| | | 6.Sigas | 0.00 | 22699 | 3941 | 55 | 70 | 45 |
| | | 7.Shivanath | 0.00 | 18061 | 2924 | 35 | 55 | 32 |
| | | 8.Pancheshwor | 1.73 | 19803 | 3495 | 27 | 55 | 30 |
| | | 9.Dogada Kedar | 26.73 | 25994 | 4810 | 24 | 28 | 16 |
| | | 10.Dilasaini | 11.56 | 24191 | 4337 | 32 | 48 | 26 |
| | | **Total District : Baitadi** | **26.49** | **265717** | **48016** | **343** | **505** | **303** |
| 9 | Darchula | 1.Mahakali Municipality | 79.62 | 22834 | 4869 | 12 | 21 | 5 |
| | | 2.Sailya Shikhar Municipality | 38.75 | 23727 | 4325 | 42 | 104 | 11 |
| | | 3.Malikarjun | 36.85 | 16758 | 3329 | 48 | 145 | 13 |
| | | 4.Api Himal | 0.00 | 7291 | 1167 | 75 | 210 | 20 |
| | | 5.Duhun | 13.84 | 11634 | 2132 | 38 | 97 | 15 |
| | | 6.Naugad | 0.00 | 17074 | 2813 | 76 | 212 | 22 |
| | | 7.Marma | 7.86 | 16086 | 2697 | 45 | 110 | 18 |
| | | 8.Lekam | 10.30 | 15959 | 3066 | 48 | 120 | 17 |
| | | 9.Byans | 12.67 | 11129 | 2063 | 120 | 200 | 28 |
| | | **Total Disrict: Darchula** | **29.72** | **142492** | **26461** | **504** | **1219** | **149** |

# ANNEX I

## ANNEX 1

**The statistics of employed personnel till the end of the fiscal year is tabulated as:**

| S. No. | Office Name | Approved Staff | Working Staff | Remarks |
|---|---|---|---|---|
| 1 | Distribution and Consumer Services Directorate | 24 | 26 | |
| 2 | Administration Division | 16 | 11 | |
| 3 | Finance Division | 21 | 13 | |
| 4 | Planning and Technical Service Department | 128 | 74 | |
| 5 | Community and Rural Electrification Department | 13 | 16 | |
| 6 | Kathmandu Regional Office | 1821 | 1509 | |
| 7 | Biratnagar Regional Office | 1334 | 1010 | |
| 8 | Janakpur Regional Office | 1038 | 778 | |
| 9 | Hetauda Regional Office | 850 | 661 | |
| 10 | Pokhara Regional Office | 778 | 487 | |
| 11 | Butwal Regional Office | 933 | 635 | |
| 12 | Nepalgunj Regional Office | 769 | 549 | |
| 13 | Attariya Regional Office | 580 | 418 | |
| | **Total** | **8305** | **6187** | |

## ANNEX 2

The statistics of vehicles in different Department/Regional Offices of the fiscal year is tabulated as:

| S. No. | Office Name | SUV Pickup Truck | Crane Truck | Two-wheelers | Remarks |
|---|---|---|---|---|---|
| 1 | Distribution and Consumer Services Directorate | 10 | 0 | 13 | |
| 2 | Planning and Technical Service Department | 8 | 0 | 5 | |
| 3 | Community and Rural Electrification Department | 4 | 0 | 2 | |
| 4 | Kathmandu Regional Office | 78 | 60 | 17 | |
| 5 | Biratnagar Regional Office | 65 | 20 | 6 | |
| 6 | Janakpur Regional Office | 56 | 7 | 4 | |
| 7 | Hetauda Regional Office | 50 | 12 | 3 | |
| 8 | Pokhara Regional Office | 33 | 6 | 2 | |
| 9 | Butwal Regional Office | 38 | 9 | 4 | |
| 10 | Nepalgunj Regional Office | 45 | 7 | 2 | |
| 11 | Attariya Regional Office | 24 | 4 | 7 | |
| | **Total** | **411** | **125** | **65** | |

## ANNEX 3

**The statistics of accidents occurred regional-wise in the fiscal year is tabulated as:**

| S. No. | Office Name | Death | Injuries | Death of Animals | Remarks |
|---|---|---|---|---|---|
| 1 | Kathmandu Regional Office | 12 | 9 | 3 | |
| 2 | Biratnagar Regional Office | 3 | 2 | 3 | |
| 3 | Janakpur Regional Office | 10 | 11 | 12 | |
| 4 | Hetauda Regional Office | 4 | 9 | 3 | |
| 5 | Pokhara Regional Office | 3 | 3 | 1 | |
| 6 | Butwal Regional Office | 4 | 5 | 1 | |
| 7 | Nepalgunj Regional Office | 12 | 11 | 27 | |
| 8 | Attariya Regional Office | 6 | 8 | 2 | |
| | **Total** | **54** | **58** | **52** | |

## ANNEX 4

**The statistics of training provided / inspection carried out / seminar attended in the fiscal year is as follow:**

| S.No. | Office Name | Nepal | India | China | Bangladesh | Thailand | France | Indonesia | Netherlands | Singapore | Malaysia |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Distribution and Consumer Services Directorate / GSEEP | - | 13 | 7 | - | - | - | 1 | 3 | 1 | - |
| 2 | Planning and Technical Services Department | - | 14 | 7 | - | - | - | - | - | - | |
| 3 | Community and Rural Electrification Department | - | 6 | 1 | 3 | - | - | - | - | - | |
| 4 | Kathmandu Regional Office | 2 | 15 | 9 | - | - | - | - | 1 | - | 1 |
| 5 | Biratnagar Regional Office | 3 | 15 | 3 | - | - | - | - | 1 | - | 1 |
| 6 | Janakpur Regional Office | - | 7 | 3 | - | - | 1 | 1 | - | 1 | 1 |
| 7 | Hetauda Regional Office | 13 | 10 | 2 | 1 | - | - | - | 1 | - | 1 |
| 8 | Pokhara Regional Office | - | 6 | 1 | - | 1 | - | - | 1 | - | 1 |
| 9 | Butwal Regional Office | 1 | 9 | 4 | 1 | - | - | - | 1 | - | 1 |
| 10 | Nepalgunj Regional Office | 6 | 20 | - | 3 | - | - | - | 1 | - | 1 |
| 11 | Attariya Regional Office | - | 3 | - | 6 | - | - | - | 1 | - | 1 |
| 12 | Other office of NEA | - | 3 | - | - | - | - | - | - | - | - |
| 13 | Expert outside of NEA | - | 2 | - | - | - | - | - | - | - | - |
| | **Total** | **25** | **123** | **37** | **14** | **1** | **1** | **2** | **10** | **2** | **8** |

# ANNEX II

## Nepal Electricity Authority
## Distribution And Consumer Service Directoriate
## Cumulative Loss Comparision With Target F/Y 2075/076

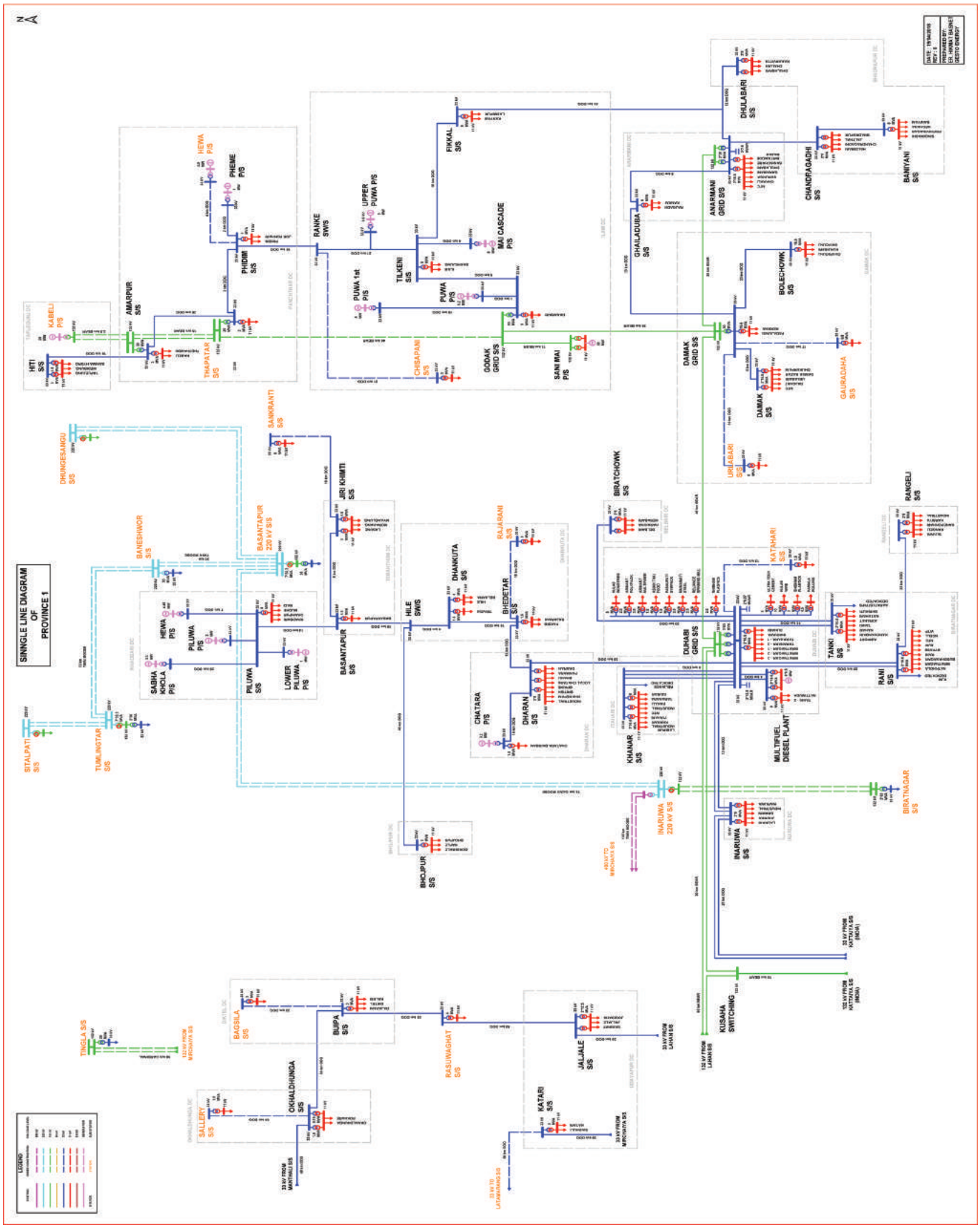
| S.N | Regional With Dc | Cumulative Loss achieved till Asar for 2074/075 | Loss Target for 2075/76 | Cumulative Loss achieved till Asar for 2075/076 |
|---|---|---|---|---|
| **A** | **Total Distribution Loss** | **14.82** | **11.00** | **11.28** |
| **1** | **Kathmandu Regional Office** | **8.56** | **7.29** | **7.40** |
| 1 | Ratnapark D C | 2.70 | 2.56 | 2.94 |
| 2 | Baneshor D C | 9.42 | 8.03 | 8.22 |
| 3 | Kuleshor D C | 8.16 | 6.96 | 7.75 |
| 4 | Maharajgung D C | 4.48 | 3.82 | 5.25 |
| 5 | Kirtipur D C | 6.73 | 5.74 | 5.42 |
| 6 | Lagankel D C | 7.78 | 6.55 | 6.47 |
| 7 | Pulchowk D C | 3.29 | 2.81 | 8.02 |
| 8 | Bhaktapur D C | 18.57 | 15.82 | 13.06 |
| 9 | Thimi D C | 10.35 | 8.49 | 8.84 |
| 10 | Kavre D C | 28.17 | 24.00 | 20.43 |
| 11 | Jorpati D C | 6.98 | 5.95 | 9.95 |
| 12 | Nuwakot D C | 17.04 | 13.79 | 13.34 |
| 13 | Dhading D C | 8.32 | 7.09 | 7.70 |
| 14 | Sindhu D C | 35.63 | 29.07 | 19.37 |
| 15 | Dolakha D C | 14.85 | 12.65 | 11.16 |
| 16 | Ramechhap D C | 14.78 | 12.59 | 12.61 |
| 17 | Helambu D C | 4.57 | 3.89 | 0.61 |
| 18 | Dhunche Dc | 8.98 | 7.66 | 7.60 |
| 19 | Balaju Dc | 5.60 | 4.77 | 2.84 |
| | | | | |
| **2** | **Birat Nagar Regional Office** | **15.08** | **11.20** | **12.15** |
| 1 | Biratnagar D C | 12.86 | 9.55 | 9.68 |
| 2 | Itahari D C | 10.41 | 7.73 | 8.03 |
| 3 | Damak D C | 18.93 | 14.06 | 13.31 |
| 4 | Bhadrapur D C | 15.38 | 11.43 | 13.33 |
| 5 | Belbari D C | 25.42 | 18.88 | 21.37 |
| 6 | Rangeli D C | 29.82 | 22.15 | 23.70 |
| 7 | Dharan D C | 10.35 | 7.69 | 12.49 |
| 8 | Dhankuta D C | 17.39 | 12.92 | 12.80 |
| 9 | Ilam D C | 21.71 | 16.13 | 13.52 |
| 10 | Anarmani D C | 17.83 | 13.25 | 12.73 |
| 11 | Khandbari Dc | 19.59 | 14.55 | 26.27 |
| 12 | Duhabi D C | 6.71 | 4.99 | 4.96 |
| 13 | Bhojpur D C | 12.96 | 9.63 | 16.85 |
| 14 | Terhathum D C | 17.30 | 12.85 | 16.26 |
| 15 | Inaruwa D C | 28.07 | 20.86 | 24.58 |
| 16 | Urlabari D C | 16.69 | 12.40 | 18.08 |
| 17 | Talejung | 9.07 | 6.74 | 8.98 |
| 18 | Gauradah Dc | | | 19.72 |

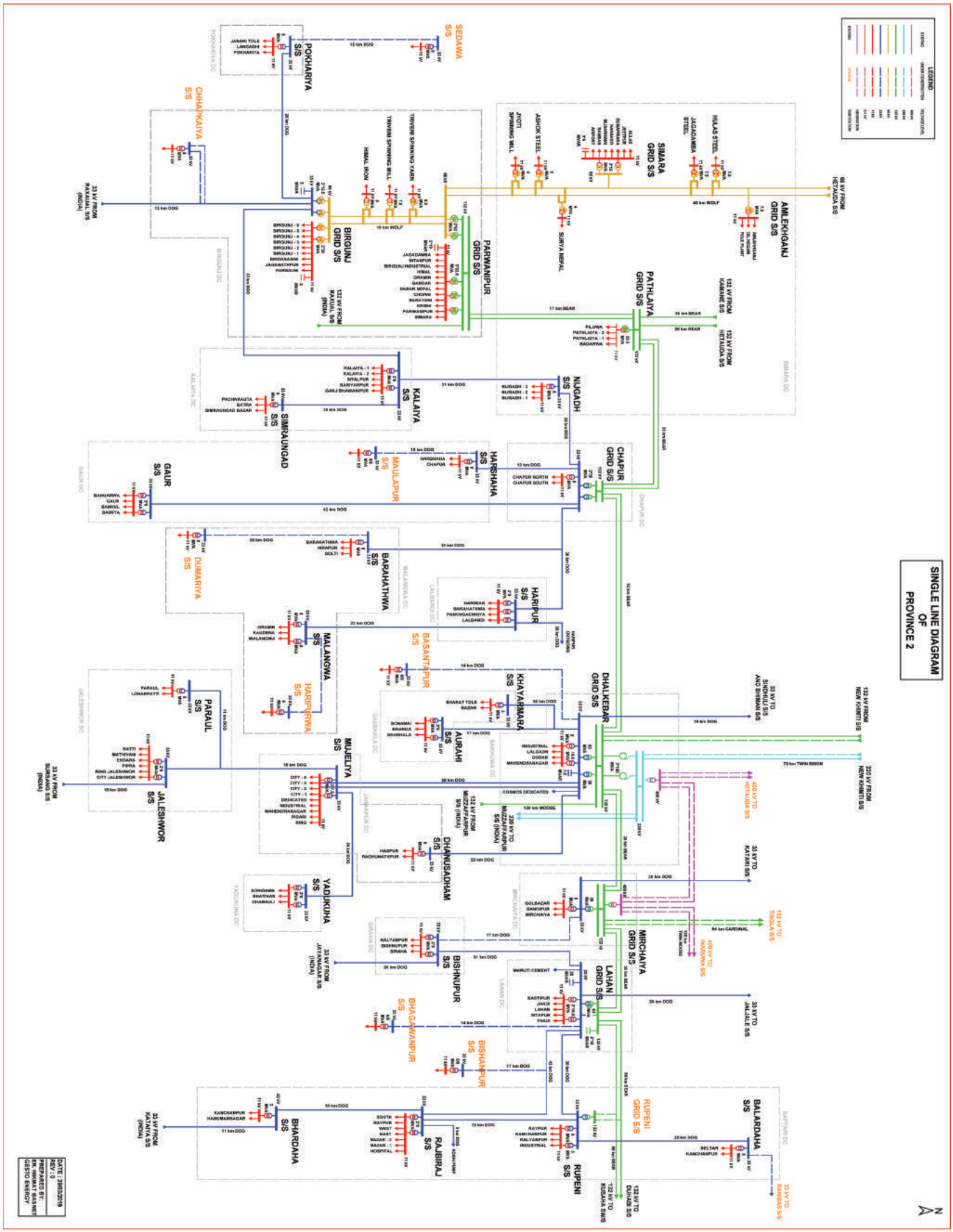
| | | | | |
|---|---|---|---|---|
| **3** | **Janakpur Regional Office** | **31.30** | **22.20** | **23.36** |
| 1 | Jaleshor D C | 48.31 | 34.26 | 32.80 |
| 2 | Janakpur D C | 39.53 | 28.04 | 33.85 |
| 3 | Malangawa D C | 34.24 | 24.29 | 22.64 |
| 4 | Rajbiraj D C | 50.33 | 35.69 | 38.96 |
| 5 | Lahan D C | 34.90 | 24.76 | 27.29 |
| 6 | Siraha D C | 34.34 | 24.36 | 24.08 |
| 7 | Udayapur Dc | 7.99 | 5.67 | 5.07 |
| 8 | Sindhuli D C | 10.59 | 7.51 | 8.21 |
| 9 | Diktel D C | 21.86 | 15.51 | 10.89 |
| 10 | Mahendranagar D C | 20.06 | 14.23 | 18.46 |
| 11 | Okhaldhunga D C | 6.24 | 4.43 | 5.12 |
| 12 | Lalbandi D C | 24.95 | 17.69 | 17.53 |
| 13 | Mirchaya D C | 9.27 | 6.57 | 9.06 |
| 14 | Gaushala D C | 34.96 | 24.80 | 18.58 |
| 15 | Yadukuha Dc | | | 46.23 |
| 16 | Kanchanpur Dc | | | 27.72 |
| | | | | |
| **4** | **Hetauda Regional Office** | **13.37** | **9.93** | **8.39** |
| 1 | Gaur D C | 43.57 | 32.37 | 31.28 |
| 2 | Kalaiya D C | 56.06 | 41.65 | 40.97 |
| 3 | Tandi D C | 16.98 | 12.61 | 15.97 |
| 4 | Birgunj D C | 10.19 | 7.57 | 4.96 |
| 5 | Hetauda D C | 8.88 | 6.60 | 1.78 |
| 6 | Bharatpur D C | 11.21 | 8.33 | 9.23 |
| 7 | Simara D C | 0.58 | 0.43 | (0.13) |
| 8 | Palung D C | 18.96 | 14.09 | 13.92 |
| 9 | Chadranigapur Dc | 44.28 | 32.89 | 19.23 |
| 10 | Pokariya Dc | | | 41.73 |
| | | | | |
| **5** | **Butwal Regional Office** | **15.55** | **11.55** | **12.39** |
| 1 | Bhairawaha D C | 4.23 | 12.22 | 12.89 |
| 2 | Butwal D C | 9.95 | 7.39 | 6.91 |
| 3 | Palpa D C | 18.70 | 13.89 | 13.50 |
| 4 | Kawasoti D C | 14.83 | 11.01 | 12.79 |
| 5 | Parasi D C | 12.29 | 9.13 | 9.26 |
| 6 | Taulihawa D C | 35.05 | 26.04 | 32.17 |
| 7 | Krishna Nagar D C | 10.25 | 7.61 | 11.16 |
| 8 | Archakhanchi D C | 11.29 | 8.39 | 6.62 |
| 9 | Gulmi D C | 16.14 | 11.99 | 13.76 |
| 10 | Naya Mill Dc | | | 15.19 |

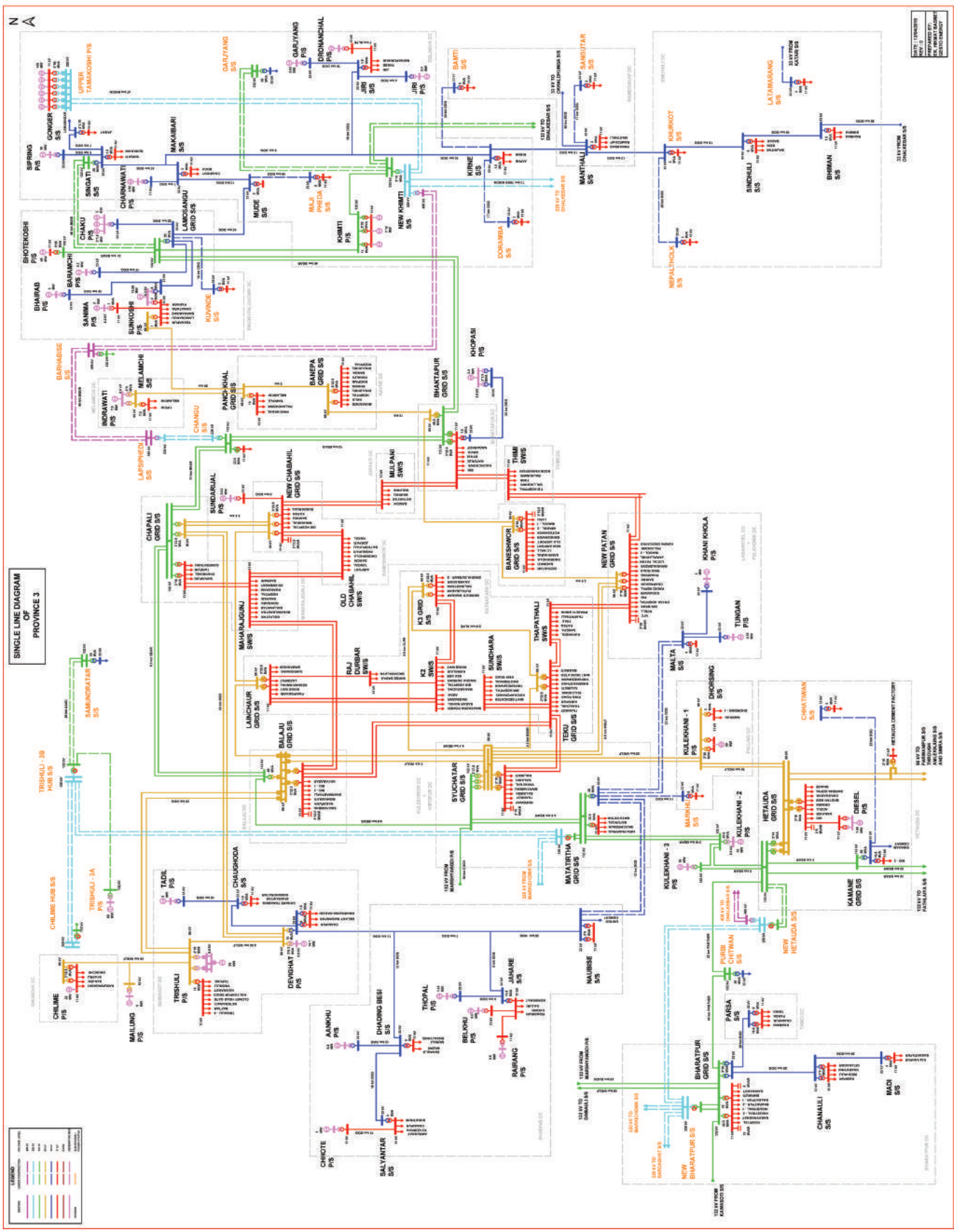
| | | | | |
|---|---|---|---|---|
| **6** | **Pokhara Regional Office** | **11.67** | **8.67** | **9.79** |
| 1 | Pokhara D C | 8.72 | 6.48 | 8.77 |
| 2 | Lekhnath D C | 15.56 | 11.56 | 13.56 |
| 3 | Tanahu D C | 16.67 | 12.38 | 7.51 |
| 4 | Lamjung D C | 4.07 | 3.02 | 1.58 |
| 5 | Syanga D C | 14.24 | 10.58 | 13.96 |
| 6 | Gorkha D C | 12.64 | 9.39 | 9.85 |
| 7 | Arughat D C | 11.56 | 8.59 | 12.63 |
| 8 | Parbat Dc | 17.37 | 12.90 | 9.46 |
| 9 | Balung Dc | 16.18 | 12.02 | 15.78 |
| 10 | Myagdi Dc | 11.93 | 8.87 | 22.07 |
| 11 | Tatopani Dc | | | 11.02 |
| | | | | |
| **7** | **Nepalganj Regional Office** | **16.81** | **11.82** | **11.57** |
| 1 | Nepalganj D C | 18.89 | 13.28 | 11.02 |
| 2 | Surkhet D C | 19.25 | 13.54 | 20.34 |
| 3 | Ghorahi D C | 6.88 | 4.83 | 4.26 |
| 4 | Tulsipur D C | 30.86 | 21.69 | 19.41 |
| 5 | Gulariya D C | 25.62 | 18.01 | 21.58 |
| 6 | Salyan D C | 18.83 | 13.24 | 18.17 |
| 7 | Pyuthan D C | 20.94 | 14.72 | 18.96 |
| 8 | Rolpa D C | 15.13 | 10.64 | 12.31 |
| 9 | Dailekh Dc | 19.31 | 13.58 | 16.56 |
| 10 | Kohalpur Dc | 16.21 | 11.39 | 9.45 |
| | | | | |
| **8** | **Attariya Regional Office** | **17.72** | **11.21** | **14.39** |
| 1 | Dhangadhi D C | 15.29 | 9.67 | 11.78 |
| 2 | Tikapur D C | 12.42 | 7.85 | 8.34 |
| 3 | Mahendranagar Dc | 24.09 | 15.24 | 18.70 |
| 4 | Dadeldhura D C | 13.56 | 8.57 | 22.60 |
| 5 | Baitadai D C | 10.68 | 6.76 | 12.30 |
| 6 | Doti D C | 15.38 | 9.73 | 9.63 |
| 7 | Darchula D C | 18.24 | 11.54 | (11.94) |
| 8 | Achham D C | 28.34 | 17.93 | 22.24 |
| 9 | Belauri Dc | | | 29.50 |
| 10 | Bhajani Dc | | | 19.07 |
| 11 | Bajhang Dc | | | 11.24 |

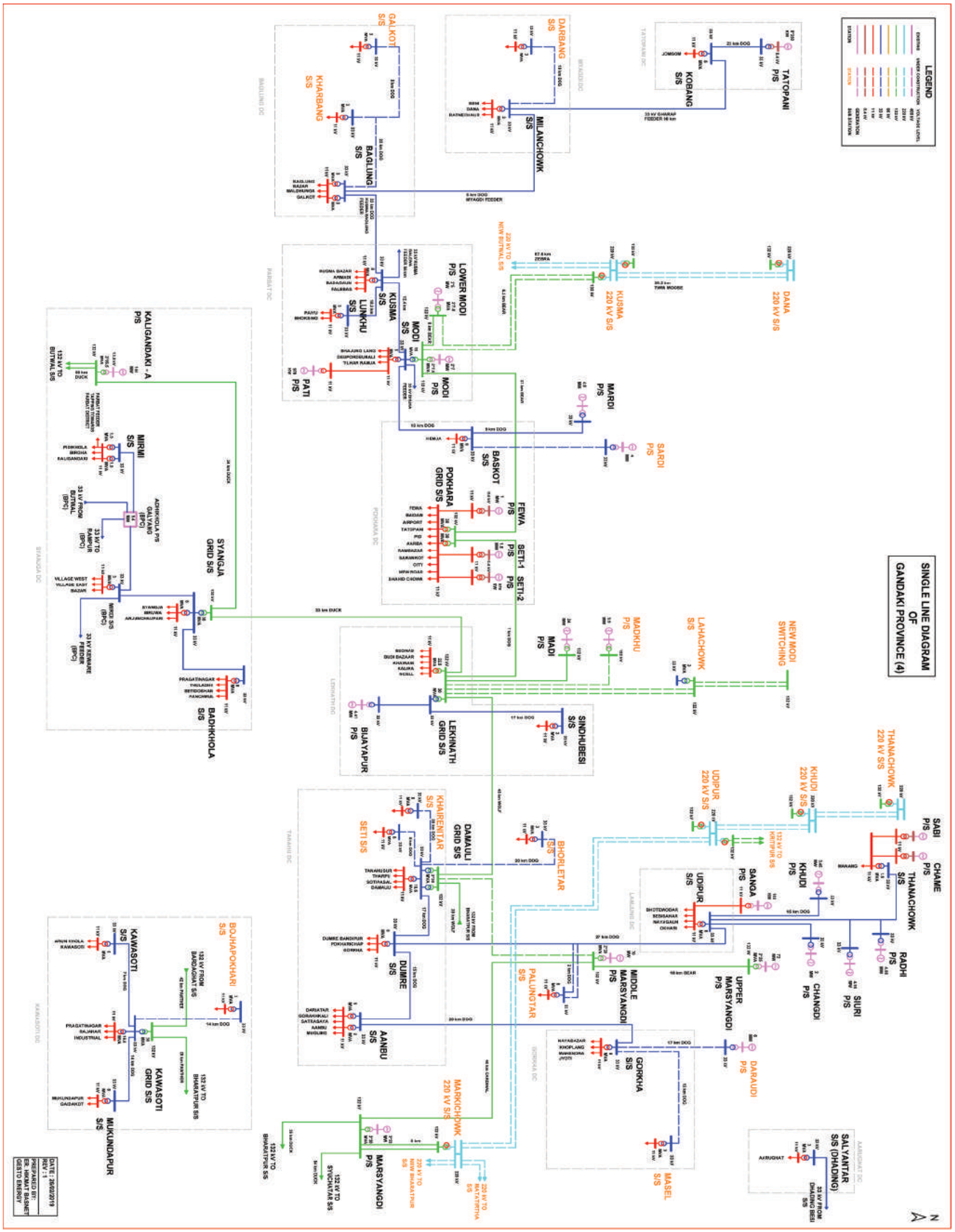
# ANNEX III

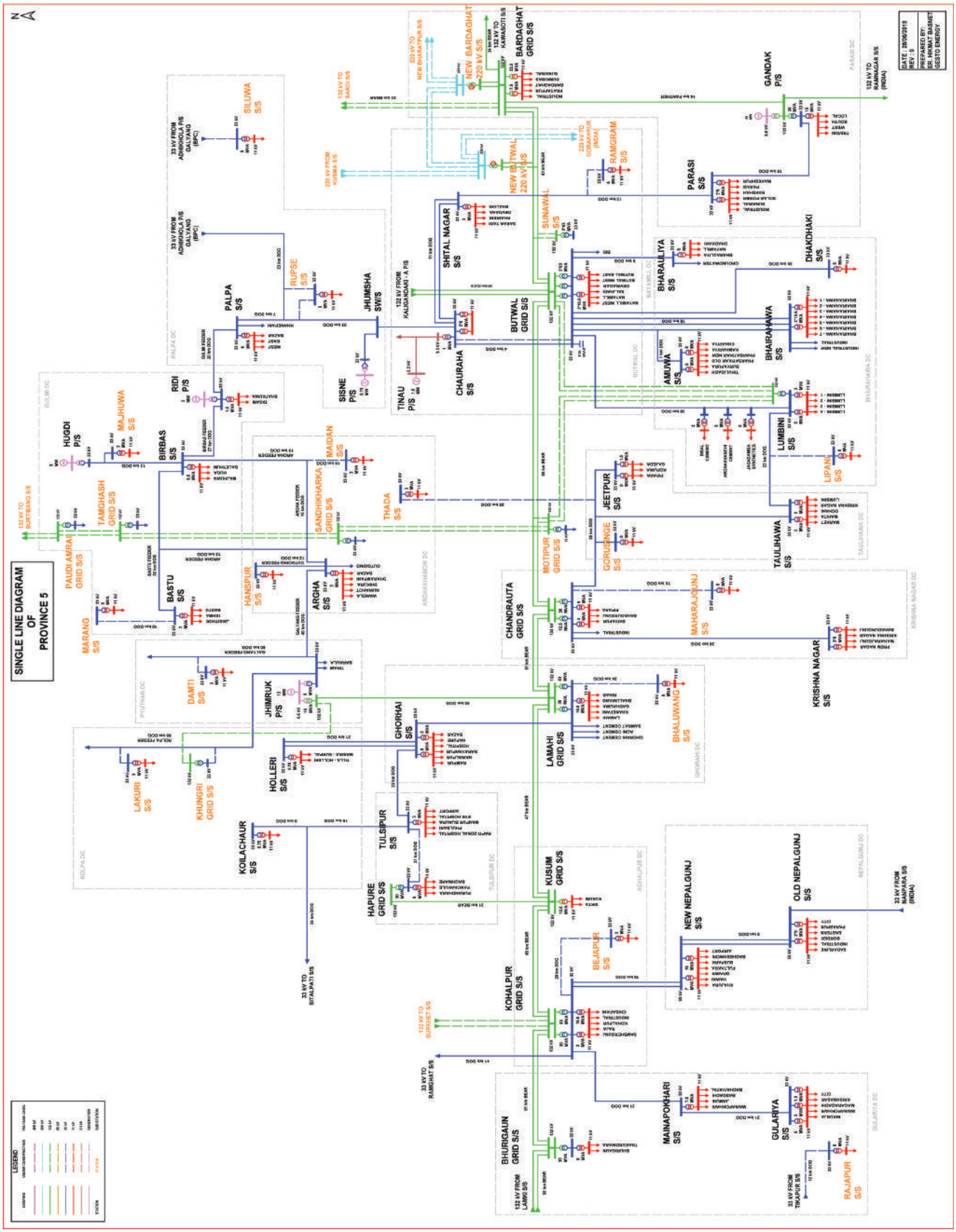
## PROVINCE-WISE SINGLE LINE DIAGRAMS

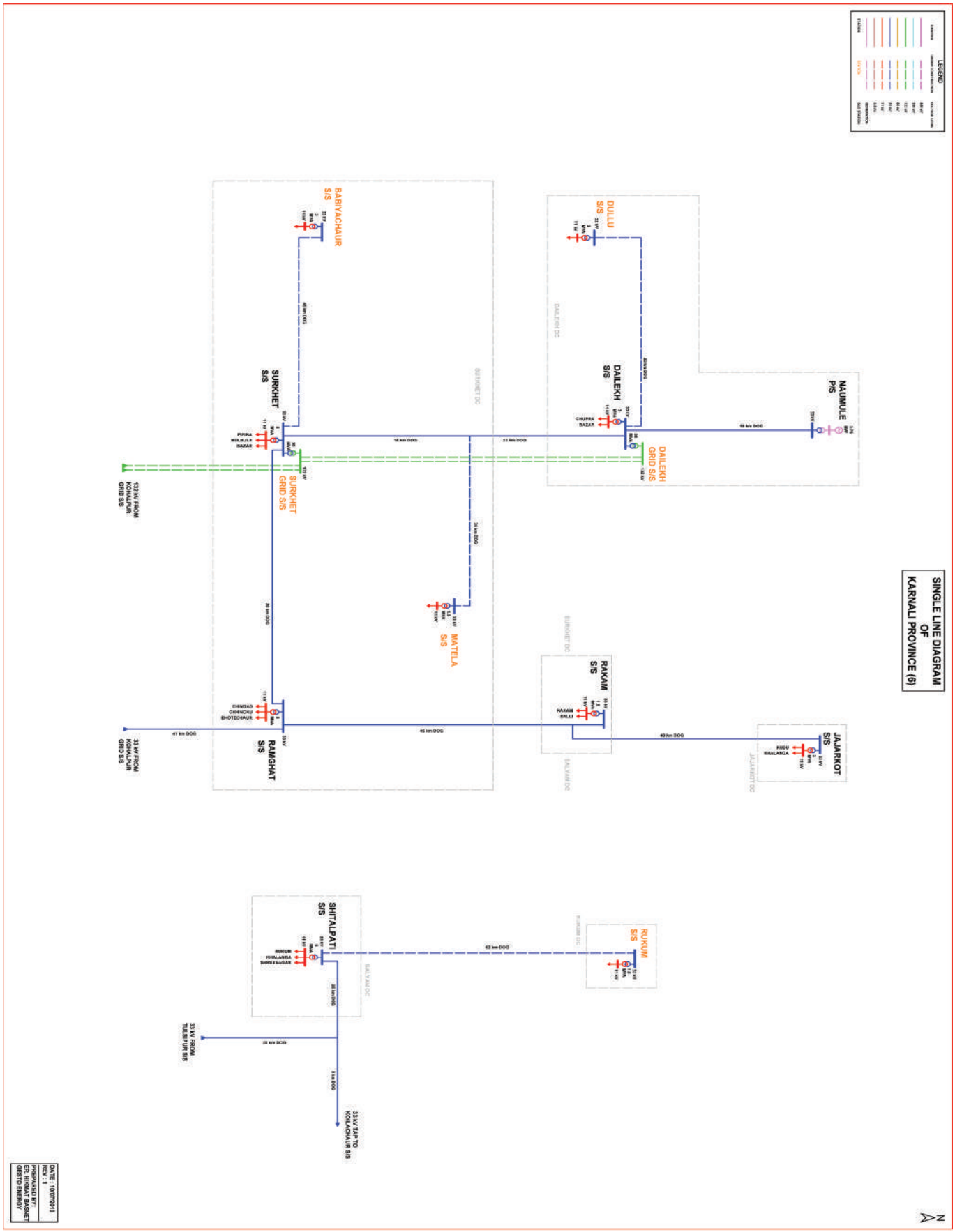


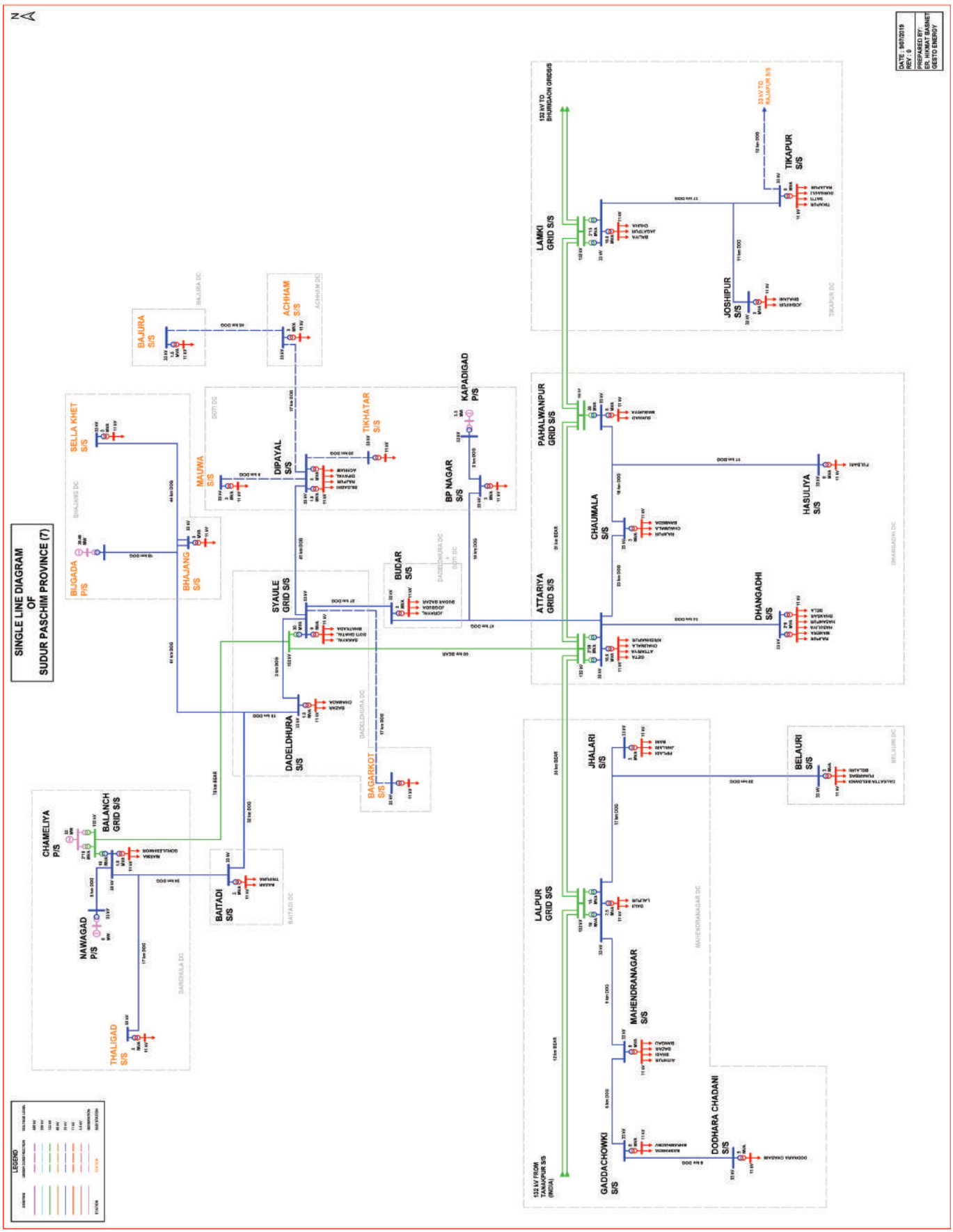

SINGLE LINE DIAGRAM OF PROVINCE 2
LEGEND
POKHARIYA S/S
SEDAWA S/S
CHHAPKAIYA S/S
BIRGUNJ GRID S/S
PARWANIPUR GRID S/S
SIMARA GRID S/S
AMLEKHGANJ GRID S/S
PATHLAIYA GRID S/S
NIJGADH S/S
KALAIYA S/S
SIMRAUNGAD S/S
GAUR S/S
MAULAPUR S/S
HARSHAHA S/S
CHAPUR GRID S/S
DUMARIYA S/S
BARAHATHWA S/S
HARIPUR S/S
MALANGWA S/S
HARIPURWA S/S
BASANTAPUR S/S
KHAYARMARA S/S
DHALKEBAR GRID S/S
PARAUL S/S
JALESHWOR S/S
AURAHI S/S
MUJELIYA S/S
DHANUSADHAM S/S
YADUKUHA S/S
MIRCHAIYA GRID S/S
LAHAN GRID S/S
BISHNUPUR S/S
BHAGAWANPUR S/S
BISHANPUR S/S
RUPENI GRID S/S
BHARDAHA S/S
RAJBIRAJ S/S
BALARDAHA S/S
132 kV FROM HETAUDA S/S
132 kV FROM KAWASOTI S/S
132 kV FROM RAXAUL S/S (INDIA)
33 kV FROM RAXAUL S/S (INDIA)
132 kV FROM KAMANE S/S
132 kV FROM NEW KHIMTI S/S
220 kV FROM NEW KHIMTI S/S
33 kV FROM SURSAND S/S (INDIA)
33 kV FROM JAYNAGAR S/S (INDIA)
33 kV FROM KATAIYA S/S (INDIA)
132 kV FROM MUZZAFFARPUR S/S (INDIA)
220 kV TO MUZZAFFARPUR S/S (INDIA)
132 kV TO DUHABI S/S
132 kV TO KUSAHA S/S
132 kV TO TINGLA S/S
33 kV TO RANGELI S/S
33 kV TO JALALE S/S
33 kV TO KATARI S/S
33 kV TO SINDHULI S/S AND BHIMAN S/S
400 kV TO HETAUDA S/S
400 kV TO NADDA S/S
DATE: 19/03/2019
REV: 0
PREPARED BY:
BR. HIKMAT BASNET
GESTO ENERGY


SINGLE LINE DIAGRAM
OF
PROVINCE 3
N
UPPER TAMAKOSHI P/S
GARJYANG S/S
GARJYANG P/S
DRONANCHAL P/S
JIRI S/S
JIRI P/S
BAMTI S/S
SANGJITAR S/S
GONGER S/S
SIPRING P/S
SINGATI S/S
MAKAIBARI S/S
CHARNAWATI P/S
LAMOSANGU GRID S/S
MUDE S/S
MAJI PHEDA S/S
KIRNE S/S
KHIMTI P/S
NEW KHIMTI S/S
DOKAMBA S/S
MANTHALI S/S
KRURKOT S/S
LATAMARANG S/S
SINDHULI S/S
BHIMAN S/S
NEPALTHOLK S/S
BHOTEKOSHI P/S
CHAKU P/S
BARANCHI P/S
BHAIRAB P/S
SANIMA P/S
SUNKOSHI P/S
KUVINDE S/S
BARHABISE S/S
MELAMCHI S/S
INDRAWATI P/S
PANCHKHAL GRID S/S
BANEPA GRID S/S
BHAKTAPUR GRID S/S
KHOPASI P/S
CHANGU S/S
LAPSIPHEDI S/S
SUNDARJAL P/S
NEW CHABAHIL GRID S/S
MULPANI SWS
THIMI SWS
CHAPALI GRID S/S
OLD CHABAHIL SWS
BANESHWOR GRID S/S
NEW PATAN GRID S/S
KHANI KHOLA P/S
TUNGAN P/S
MAHARAJGUNJ SWS
K3 GRID S/S
THAPATHALI SWS
MALTA S/S
RAJ DURBAR SWS
K2 SWS
SUNDHARA SWS
LAINCHAUR GRID S/S
BALAJU GRID S/S
TEKU GRID S/S
SYUCHATAR GRID S/S
KULEKHANI - 1 P/S
DHORSING S/S
CHHATIWAN S/S
HETAUDA CEMENT FACTORY
SAMUNDRATAR S/S
TRISHULI - 3B HUB S/S
TRISHULI - 3A P/S
MARKHU S/S
KULEKHANI - 2 P/S
HETAUDA GRID S/S
DIESEL P/S
KULEKHANI - 3 P/S
MATATIRTHA GRID S/S
KAMANE GRID S/S
CHILIME HUB S/S
TADI P/S
CHAUGHODA S/S
DEVGHAT P/S
CHILIME P/S
TRISHULI P/S
MAILUNG P/S
NAUBISE S/S
NEW HETAUDA S/S
PURBI CHITWAN S/S
PARSA S/S
AANKHU P/S
DHADING BESI S/S
THOPAL P/S
JAMARE S/S
BELKHU P/S
RAIRANG P/S
CHIHOTE P/S
BALYANTAR S/S
BHARATPUR GRID S/S
NEW BHARATPUR S/S
CHANAULI S/S
MADI S/S
LEGEND


SINGLE LINE DIAGRAM
OF
GANDAKI PROVINCE (4)
LEGEND
GALKOT S/S
KHARBANG S/S
BAGLUNG S/S
DARBANG S/S
MILANCHOWK S/S
KOBANG S/S
TATOPANI P/S
KUSMA 220 kV S/S
DANA 220 kV S/S
LOWER MODI P/S
LUNKHU S/S
KUSMA S/S
MODI S/S
MODI P/S
PATI P/S
MARDI P/S
SARDI P/S
KALIGANDAKI - A P/S
MIRMI S/S
SYANGJA GRID S/S
BADIKHOLA S/S
POKHARA GRID S/S
BASKOT S/S
FEWA P/S
SETI-1 P/S
SETI-2 P/S
MADI P/S
MADHKU P/S
LAHACHOWK S/S
NEW MODI SWITCHING
LEKHNATH GRID S/S
BIJAYAPUR P/S
SINDHUBESI S/S
DAMAULI GRID S/S
KHAIRENITAR S/S
SETI S/S
BHORLETAR S/S
UDIPUR 220 kV S/S
KHUDI 220 kV S/S
THANACHOWK 220 kV S/S
SABI P/S
CHAME P/S
THANACHOWK S/S
KHUDI P/S
SANGA P/S
UDIPUR S/S
RADHI P/S
SIURI P/S
CHANGDI P/S
UPPER MARSYANGDI P/S
MIDDLE MARSYANGDI P/S
PALUNGTAR S/S
DUMRE S/S
AANBU S/S
KAWASOTI S/S
KAWASOTI GRID S/S
BOJHAPOKHARI S/S
MULKUNDAPUR S/S
GORKHA S/S
DARAUDI P/S
MASEL S/S
MARKICHOWK 220 kV S/S
MARSYANGDI P/S
SALYANTAR S/S (DHADING)
AARUGHAT
DATE : 26/02/2019
REV : 1
PREPARED BY:
ER. HIMAT BASNET
GESTO ENERGY


SINGLE LINE DIAGRAM OF PROVINCE 5
N
NEW BARDAGHAT 220 kV S/S
BARDAGHAT GRID S/S
NEW BUTWAL 220 kV S/S
BUTWAL GRID S/S
SHITAL NAGAR S/S
SUNAWAL S/S
RAMGRAM S/S
GANDAK P/S
PARASI S/S
DHAKDHAKI S/S
BHARAULIYA S/S
BHAIRAHAWA S/S
AMUWA S/S
LUMBINI S/S
LIPANI S/S
TAULIHAWA S/S
KRISHNA NAGAR S/S
MAHARAJGUNJ S/S
BHALUWANG S/S
CHANDRAUTA GRID S/S
MOTIPUR GRID S/S
GORUSINGE S/S
JEETPUR S/S
LAMAHI GRID S/S
GHORAHAI S/S
TULSIPUR S/S
KUSUM GRID S/S
BEJAPUR S/S
NEW NEPALGUNJ S/S
OLD NEPALGUNJ S/S
KOHALPUR GRID S/S
HAPURE GRID S/S
KOILACHAUR S/S
HOLLERI S/S
LAKURI S/S
KHUNGRI GRID S/S
JHIMRUK P/S
DAMTI S/S
PAUDI AMRAI GRID S/S
MARANG S/S
BASTU S/S
HANSPUR S/S
ARGHA S/S
SANDHIKHARKA GRID S/S
MAIDAN S/S
THADA S/S
TAMGHASH GRID S/S
BIRBAS S/S
HUGDI P/S
MAJHUWA S/S
RIDI P/S
PALPA S/S
RUPSE S/S
SILUWA S/S
JHUMSHA SW/S
SISNE P/S
TINAU P/S
CHAURAHA S/S
BHURIGAUN GRID S/S
MAINAPOKHARI S/S
GULARIYA S/S
RAJAPUR S/S
LEGEND


SINGLE LINE DIAGRAM
OF
KARNALI PROVINCE (6)
LEGEND
BABIYACHAUR S/S
DULLU S/S
SURKHET S/S
DAILEKH S/S
NAUMULE P/S
SURKHET GRID S/S
DAILEKH GRID S/S
MATELA S/S
RAKAM S/S
JAJARKOT S/S
RAMGHAT S/S
SHITALPATI S/S
RUKUM S/S
132 kV FROM KOHALPUR GRID S/S
33 kV FROM KOHALPUR GRID S/S
33 kV FROM TULSIPUR S/S
33 kV TAP TO KOHLACHAUR S/S
DATE: 19/07/2019
REV.: 1
PREPARED BY:
ER. HIKMAT BASNET
GEETO ENERGY


SINGLE LINE DIAGRAM
OF
SUDUR PASCHIM PROVINCE (7)
LEGEND
LAMKI GRID S/S
TIKAPUR S/S
JOSHIPUR S/S
PAHALWANPUR GRID S/S
CHAUMALA S/S
HASULIYA S/S
ATTARIYA GRID S/S
DHANGADHI S/S
SYAULE GRID S/S
BUDAR S/S
DADELDHURA S/S
BAGARKOT S/S
LALPUR GRID S/S
JHALARI S/S
BELAURI S/S
MAHENDRANAGAR S/S
GADDACHOWKI S/S
DOODHARA CHADANI S/S
BALANCH GRID S/S
CHAMELIYA P/S
NAWAGAD P/S
BAITADI S/S
THALIGAD S/S
BHAJANG S/S
BUGADA P/S
SELLA KHET S/S
BAJURA S/S
ACHHAM S/S
MAUWA S/S
DIPAYAL S/S
TIKHATAR S/S
KAPADIGAD P/S
BP NAGAR S/S
132 kV TO BHURIGAON GRID S/S
33 kV TO RAJAPUR S/S
132 kV FROM TANAKPUR S/S (INDIA)

# ANNEX IV

## NEA TARIFF STRUCTURE

### 1. Domestic Consumers

### (a) Minimum and Energy Charge (Single Phase)

| kWh (Monthly) Units | 5 Ampere | | 15 Ampere | | 30 Ampere | | 60 Ampere | |
|---|---|---|---|---|---|---|---|---|
| | Minimum Charge | Energy Charge | Minimum Charge | Energy Charge | Minimum Charge | Energy Charge | Minimum Charge | Energy Charge |
| 0-20 | 30.00 | 3.00 | 50.00 | 4.00 | 75.00 | 5.00 | 125.00 | 6.00 |
| 21-30 | 50.00 | 7.00 | 75.00 | 7.00 | 100.00 | 7.00 | 150.00 | 7.00 |
| 31-50 | 75.00 | 8.50 | 100.00 | 8.50 | 125.00 | 8.50 | 175.00 | 8.50 |
| 51-150 | 100.00 | 10.00 | 125.00 | 10.00 | 150.00 | 10.00 | 200.00 | 10.00 |
| 151-250 | 125.00 | 11.00 | 150.00 | 11.00 | 175.00 | 11.00 | 225.00 | 11.00 |
| 251-400 | 150.00 | 12.00 | 175.00 | 12.00 | 200.00 | 12.00 | 250.00 | 12.00 |
| Above 400 | 175.00 | 13.00 | 200.00 | 13.00 | 225.00 | 13.00 | 275.00 | 13.00 |

### (b) Minimum and Energy Charge (Three Phase)

**Low Voltage (230/400 V)**

| kWh | Up to 10 KVA | | Above 10 KVA | |
|---|---|---|---|---|
| | Minimum Charge | Energy Charge | Minimum Charge | Energy Charge |
| Up to 400 | 1100.00 | 12.50 | 1800.00 | 12.50 |
| Above 400 | | 13.50 | | 13.50 |

### (c) Minimum and Energy Charge: Three Phase

**Medium Voltage (33/11 KV)**

| kWh | Up to 10 KVA | |
|---|---|---|
| | Minimum Charge | Energy Charge |
| Up to 1000 | 10000.00 | 11.00 |
| 1001-2000 | | 12.00 |
| Above 2001 | | 13.00 |

**Billing Method (For 5 Ampere)**

| S.No. | Electricity Consume Block | Rate Rs. Per Unit | Billing Method |
|---|---|---|---|
| 1 | Up to 20 units | 3.00 | Minimum Monthly Service Charge Rs. 30.00 for up to 20 units and Energy Charge Rs. 3.00 per unit |
| 2 | 21 to 30 units | 7.00 | Minimum Monthly Service Charge Rs. 50.00 and Energy Charge per unit Rs. 3.00 for per unit up to 20 units and Rs. 7.00 per unit for 21 units to 30 units |

| | | | |
|---|---|---|---|
| 3 | 31 to 50 units | 8.50 | Minimum Monthly Service Charge Rs. 75.00 and Energy Charge per unit Rs. 3.00 for per unit up to 20 units and Rs. 7.00 per unit for 21 units to 30 units and Rs. 8.50 per unit for 31 units to 50 units |
| 4 | 51 to 150 units | 10.00 | Minimum Monthly Service Charge Rs. 100.00 and Energy Charge per unit Rs. 3.00 for per unit up to 20 units and Rs. 7.00 per unit for 21 units to 30 units and Rs. 8.50 per unit for 31 units to 50 units and Rs. 10.00 per unit for 51 units to 150 units |
| 5 | 151 to 250 units | 11.00 | Minimum Monthly Service Charge Rs. 125.00 and Energy Charge per unit Rs. 3.00 for per unit up to 20 units and Rs. 7.00 per unit for 21 units to 30 units and Rs. 8.50 per unit for 31 units to 50 units and Rs. 10.00 per unit for 51 units to 150 units and Rs. 11.00 per unit for 151 units to 250 units |
| 6 | 251 to 400 units | 12.00 | Minimum Monthly Service Charge Rs. 150.00 and Energy Charge per unit Rs. 3.00 for per unit up to 20 units and Rs. 7.00 per unit for 21 units to 30 units and Rs. 8.50 per unit for 31 units to 50 units and Rs. 10.00 per unit for 51 units to 150 units and Rs. 11.00 per unit for 151 units to 250 units and Rs. 12.00 per unit for 251 units to 400 units |
| 7 | Above 400 | 13.00 | Minimum Monthly Service Charge Rs. 175.00 minimum charge and Energy Charge per unit Rs. 3.00 for per unit up to 20 units and Rs. 7.00 per unit for 21 units to 30 units and Rs. 8.50 per unit for 31 units to 50 units and Rs. 10.00 per unit for 51 units to 150 units and Rs. 11.00 per unit for 151 units to 250 units and Rs. 12.00 per unit for 251 units to 400 units and Rs. 13.00 per unit for above 400 units |

Similarly, billing will be made for 15, 30 and 60 Ampere.

## 2. Other Consumers

### 2.1 Low Voltage (230/400 V)

| Consumer Category | Tariff Rate | |
|---|---|---|
| | Demand Charge | Energy Charge |
| | Rs. per KVA/ month | Rs./unit |
| 1. Industrial | | |
| a) Rural and Domestic | 60.00 | 7.80 |
| b) Small Industry | 110.00 | 9.60 |
| 2. Commercial | 325.00 | 11.20 |
| 3. Non-Commercial | 215.00 | 12.00 |
| 4. Irrigation | | 4.30 |
| 5. Water Supply | | |
| a) Community Water Supply | 155.00 | 5.20 |
| b) Other Water Supply | 230.00 | 7.20 |
| 6. Temple | | 6.10 |
| 7. Street Light | | |
| a) Metered | | 7.30 |
| b) Non-Metered | 2475.00 | |
| 8. Temporary Supply | | 19.80 |
| 9. Non-Domestic | 350.00 | 13.00 |
| 10. Entertainment Business | 350.00 | 14.00 |

### 2.2 High Voltage

| Consumer Category | Tariff Rate | |
|---|---|---|
| | Demand Charge | Energy Charge |
| | Rs./KVA/month | Rs./unit |
| **A. High Voltage (66 KV or above)** | | |
| 1. Industrial | 240.00 | 7.50 |

| | | |
|---|---|---|
| **B. Medium Voltage (33 KV)** | | |
| 1. Industrial | 255.00 | 8.40 |
| 2. Commercial | 315.00 | 10.80 |
| 3. Non-commercial | 240.00 | 11.40 |
| 4. Irrigation | 55.00 | 4.80 |
| 5. Water Supply | | |
| a) Community Water Supply | 220.00 | 6.00 |
| b) Other Water Supply | 220.00 | 6.60 |
| 6. Transportation | | |
| a) Trolley Bus | 230.00 | 5.60 |
| b) Other Transportation | 255.00 | 8.60 |
| 7. Non-Domestic | 350.00 | 12.55 |
| 8. Entertainment Business | 350.00 | 13.50 |
| **C. Medium Voltage (11 KV)** | | |
| 1. Industrial | 255.00 | 8.60 |
| 2. Commercial | 315.00 | 11.10 |
| 3. Non-commercial | 240.00 | 11.50 |
| 4. Irrigation | 55.00 | 4.90 |
| 5. Water Supply | | |
| a) Community Water Supply | 220.00 | 6.20 |
| b) Other Water Supply | 220.00 | 6.80 |
| 6. Transportation | | |
| a) Trolley Bus | 230.00 | 5.60 |
| b) Other Transportation | 255.00 | 8.80 |
| 7. Temple | 220.00 | 9.90 |
| 8. Temporary Supply | 330.00 | 12.00 |
| 9. Non-Domestic | 350.00 | 12.90 |
| 10. Entertainment Business | 350.00 | 13.90 |

Under Non-Domestic: Embassy, Foreign Mission, INGO, Private Campus, Star Hotel, Shopping Mall etc.

Under Entertainment: Cinema Hall, Fun Park, Theater etc.

## 3. Time of Day (ToD) Tariff Rate

### a) Electricity Tariff Rate from Baishakh to Mangsir

| Consumer Category | Tariff Rate | | | |
|---|---|---|---|---|
| | Demand Charge Rs. per KVA/ month | Peak Time (17.00-23.00) | Off Peak Time (23.00-5.00) | Normal time (5.00-17.00) |
| **A. High Voltage (66 KV or above)** | | | | |
| 1. Industrial | 240.00 | 9.30 | 4.15 | 7.50 |
| **B. Medium Voltage (33 KV)** | | | | |
| 1. Industrial | 250.00 | 10.20 | 5.25 | 8.40 |
| 2. Commercial | 315.00 | 12.30 | 6.75 | 10.80 |
| 3. Non-Commercial | 240.00 | 13.20 | 7.00 | 12.00 |

| | | | | |
|---|---|---|---|---|
| 4. Irrigation | 55.00 | 6.30 | 3.15 | 4.70 |
| 5. Water Supply | | | | |
| a) Community Water Supply | 220.00 | 7.30 | 3.60 | 5.90 |
| b) Other Water Supply | 220.00 | 10.20 | 5.25 | 8.40 |
| 6. Transportation | | | | |
| a) Trolley Bus | 230.00 | 7.00 | 3.70 | 5.50 |
| b) Other Transportation | 255.00 | 9.35 | 3.70 | 8.40 |
| 7. Street Light | 80.00 | 8.40 | 3.50 | 4.20 |
| **C. Medium Voltage (11 KV)** | | | | |
| 1. Industrial | 250.00 | 10.50 | 5.40 | 8.55 |
| 2. Commercial | 315.00 | 12.60 | 6.90 | 11.10 |
| 3. Non-commercial | 240.00 | 13.50 | 7.15 | 12.25 |
| 4. Irrigation | 55.00 | 6.40 | 3.50 | 4. 75 |
| 5. Water Supply | | | | |
| a) Community Water Supply | 220.00 | 7.45 | 4.40 | 6.10 |
| b) Other Water Supply | 220.00 | 10.50 | 5.40 | 8.50 |
| 6. Transportation | | | | |
| a) Trolley Bus | 230.00 | 7.15 | 4.20 | 5.60 |
| b) Other Transportation | 255.00 | 9.65 | 4.20 | 8.50 |
| 7. Street Light | 80.00 | 8.80 | 3.75 | 4.40 |
| 8. Temple | 220.00 | 11.30 | 5.15 | 9.10 |
| 9. Temporary Supply | 330.00 | 14.40 | 6.60 | 11.75 |

## b) Electricity Tariff Rate from Paush to Chaitra

| Consumer Category | Tariff Rate | | |
|---|---|---|---|
| | Demand Charge Rs. per KVA/ month | Peak Time (17.00-23.00) | Normal Time (23.00-5.00) |
| **A. High Voltage (66 KV or above)** | | | |
| 1. Industrial | 240.00 | 9.30 | 7.50 |
| **B. Medium Voltage (33 KV)** | | | |
| 1. Industrial | 250.00 | 10.20 | 8.40 |
| 2. Commercial | 315.00 | 12.30 | 10.80 |
| 3. Non-Commercial | 240.00 | 13.20 | 12.00 |
| 4. Irrigation | 55.00 | 6.30 | 4.70 |
| 5. Water Supply | | | |
| a) Community Water Supply | 220.00 | 7.30 | 5.90 |
| b) Other Water Supply | 220.00 | 10.20 | 8.40 |
| 6. Transportation | | | |
| a) Trolley Bus | 230.00 | 7.00 | 5.50 |
| b) Other Transportation | 255.00 | 9.35 | 8.40 |
| 7. Street Light | 80.00 | 8.40 | 4.20 |
| **C. Medium Voltage (11 KV)** | | | |
| 1. Industrial | 250.00 | 10.50 | 8.55 |
| 2. Commercial | 315.00 | 12.60 | 11.10 |
| 3. Non-commercial | 240.00 | 13.50 | 12.25 |
| 4. Irrigation | 55.00 | 6.40 | 4.75 |

| | | | |
|---|---|---|---|
| 5. Water Supply | | | |
| a) Community Water Supply | 220.00 | 7.45 | 6.10 |
| b) Other Water Supply | 220.00 | 10.50 | 8.50 |
| 6. Transportation | | | |
| a) Trolley Bus | 230.00 | 7.15 | 5.60 |
| b) Other Transportation | 255.00 | 9.65 | 8.50 |
| 7. Street Light | 80.00 | 8.80 | 4.40 |
| 8. Temple | 220.00 | 11.30 | 9.10 |
| 9. Temporary Supply | 330.00 | 14.40 | 11.75 |

## 4. Community Wholesale Consumer

| Voltage Level | Energy Charge (Rs./unit) |
|---|---|
| a) Medium Voltage (11KV/33KV) | |
| Upto (N* x 30) units | 4.25 |
| Above (N* x 30) units | 6.00 |
| b) Lower Voltage Level (230/400 Volt) | |
| Upto (N* x 30) units | 4.25 |
| Above (N* x 30) units | 6.25 |

N*= Total Number of Consumers of a Community Group

## Notes

a) Low Voltage refers to Electricity Supply of 230/400 V, Medium Voltage refers to 11 KV and 33 KV and High Voltage refers to 66 KV or above.

b) If Demand Meter of any consumer reads kilowatts (kW), then KVA=kW/0.8. Consumers having kW demand meter shall mandatorily install capacitors within the given time. Otherwise their KVA demand shall be calculated as KVA=kW/07.

c) 10% rebated in total bill amount will be given to the Government of Nepal approved Industrial Districts, if the bill is paid within 21 days of billing date.

d) If the Crematory House, Governmental Hospital and Health Centers (except Residential Complex or part thereof) under the Government of Nepal pay the bill within 21 days, 20 percent rebate will be given in total bill amount.

e) Consumers supplied at High Voltage (66 KV or above) and Medium Voltage (33 KV and 11 KV) should compulsorily install ToD Meter.

f) If New Additional Consumers applying for 11 KV supply are to be supplied at 33 KV, they will be charged as per 11 KV Tariff Structure.

# PUBLICATION COMMITTEE

**Ramji Bhandari**
Director
Co-ordinator

**Balaram Silwal**
Joint Director
Member

**Jagadish Chandra Joshi**
Deputy Manager
Member

**Umesh Kumar Bhandari**
Deputy Director
Member

**Bijaya Sen Khadka**
Assistant Manager
Member-Secretory

**Pramila Chaudhary**
Engineer
Member

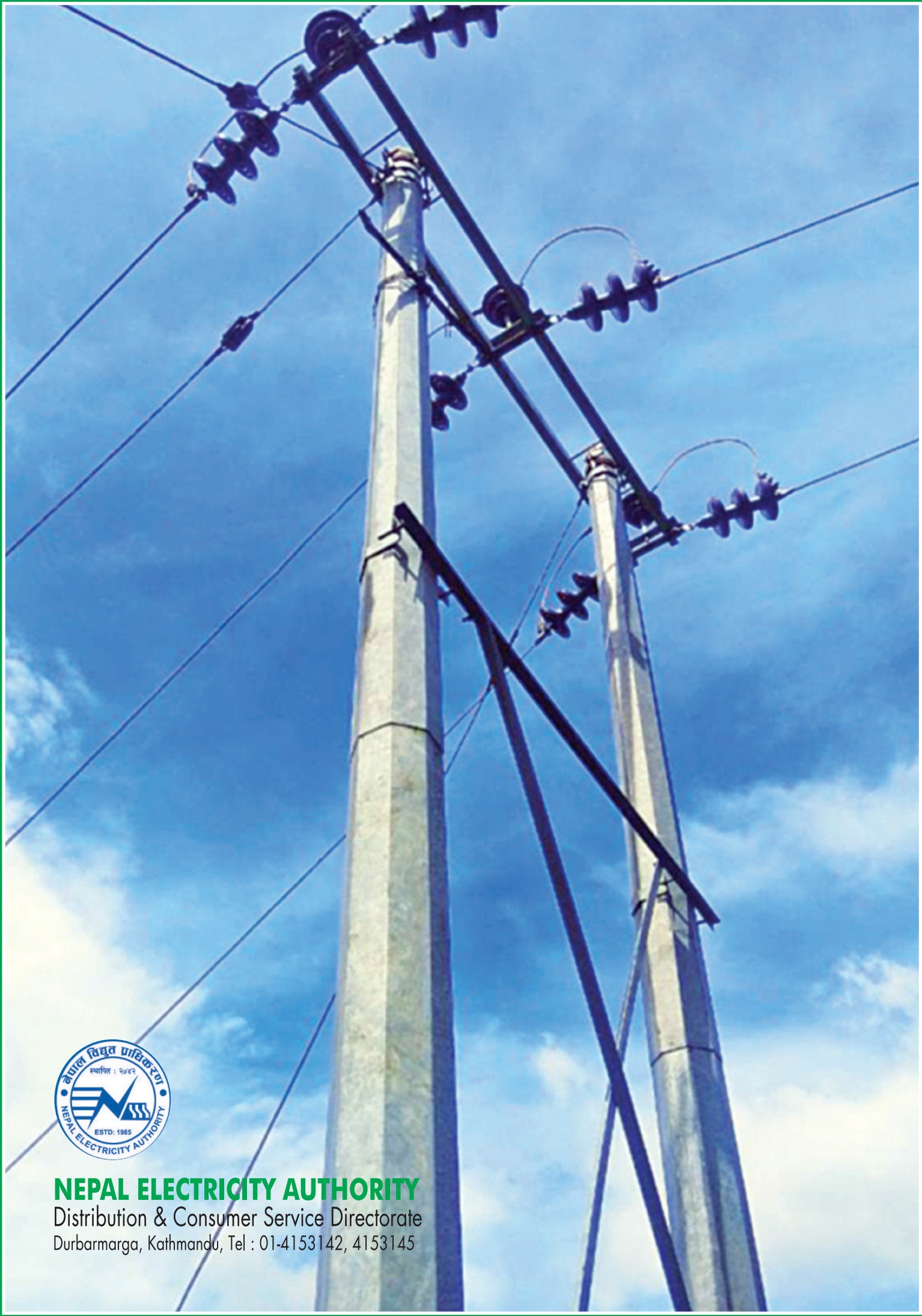
**Milana Prajapati**
Engineer
Member

**Prabin Dhakal**
Engineer
Member

**Suraj Dhungel**
Engineer
Member

**Bhola Nath Dhungana**
Asst. Computer Officer
Member

Night View of Kathmandu Valley on the day of Laxmi Puja




**NEPAL ELECTRICITY AUTHORITY**

Distribution & Consumer Service Directorate

Durbarmarga, Kathmandu, Tel : 01-4153142, 4153145