

ETHIOPIAN ELECTRIC UTILITY CUSTOMER SATISFACTION SURVEY



ETHIOPIAN ELECTRIC UTILITY CUSTOMER SATISFACTION SURVEY

WALTA MEDIA AND COMMUNICATION CORPORATE

**ADDIS ABABA | JANUARY
2021**

Acronyms

E.C: Ethiopian Calendar

EEP: Ethiopian Electric Power

EEU: Ethiopian Electric Utility

G.C: Gregorian calendar

MRP: Material Resource Planning

SPSS: Statistical Package for Social Science

TABLE OF CONTENT

Chapter One	1
Introduction	1
1.1 Background of the Study	1
1.2 Goal of the Study	3
1.3 Objectives of the Study	3
1.4 Scope of the Study	4
1.5 Limitations of the Study	4
1.6 Organization of the Study	4
Chapter Two	5
Literature Review	5
2.1 Definition of Customer Satisfaction and Service Quality	5
2.1.1 Quality of Service	5
2.1.2 Customer Satisfaction	6
2.1.3 Development of General Infrastructure Services in Ethiopia	7
2.2 Electricity Service Development and Supply in Ethiopia	7
2.2.1 Theory of Power Development and Supply	7
2.2.2 History of Electric Power Development and Supply in Ethiopia	8
2.2.3 Existence of Electric Power Development and Supply in Ethiopia	9
2.3 The Concept of ERP	11
2.3.1 What is an ERP system?	11
2.3.2 Enterprise Resource Planning (ERP)	11
Chapter Three	13
Research Design and Methodology	13
3.1 Research Design	13
3.2 Sample Design of the Study	13
3.3 Method of Data Collection	19
3.4 Method of Analysis	20
3.5 Implementation of COVID-19 Health and Safety Plan	20
3.6 Problems Encountered and Measures Taken	21
Chapter Four	23
Data Analysis and interpretation	23
4.1 General Information about Respondents	23
4.2 Understandings of EEU Organizational Structure	26
4.3 The Length of Time Being a Customer of EEU	27
4.4 Electric-Meter Type	28
4.5 About a Recent Price Adjustment on the Electric Bill	30
4.6 Proper Utilization of Electric Power	32
4.7 Demand for New Electric Service and Customer Service	34
4.8 Postpaid, Electric Use Counter Reading and Participants' Opinion	36
4.9 Service Provision	38
4.10 Prepaid Billing Service	41
4.11 Grievance Presentation and Handling Procedure	43
4.12 Power outage notification	45
4.13 Electrical Injuries and Participants' Comments	48
4.14 Modern Operating System	50
4.15 Frequency of Power Outage	51
4.16 The Existence of Gender-based Discrimination in Service Centers	53
4.17 Implementation of a transparent and accountable system	55
4.18 Overall Customer Satisfaction	55
4.19 Gaps/Weakness/and strengths of EEU	57
4.20 Summary of Comparison with the Results of Last year's Study	59
Chapter Five	61
Main findings and conclusive Remarks	61
5.1 Main Findings of the Study	61
5.2 Conclusive Remarks	66
Annex 1: Questionnaire	69
Annex 2: Technical Committee Meeting Note	79

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

One of the most important issues for the development of a country is the availability of a reliable power supply. It's not possible to create a competitive economy in the world without ensuring competitive power supply services in terms of supply, quality, service efficiency, and price. This in turn will help sustain the competitive stance and development of a country on the global stage.

The electricity development history of Ethiopia dates back to the late 19th century. During these times, multiple engagements aimed at boosting the role of the sector, improving sectorial investment improving the accessibility of electricity, and thereby increase the economic competitiveness of the country have been done. The deep gap in service requirement and prevailing supply enrolled multiple government agencies to engage themselves in trying to alleviate the power supply problems of Ethiopia.

Following the 1991 revolution, the newly established government developed the first power supply policy. The key focus in the document was to boost overall energy generation, transmission, and distribution activities to cope up with the growing energy demand in the country. Supporting guidelines and revised strategic approaches were developed to aid the increase in the electric coverage of the country. The many efforts centered on realizing the dual aim of fueling the fast economic development of the country as well as increasing the export earnings. Employing the untapped energy potential of the country, significant achievements have been materialized and encouraging results have been registered.

The sector, in general, has proved to be the backbone of the country's fast economic growth in the past decades. In addition to building multiple dams across the country, much has been done to improve the accessibility of electricity. Associated with power generation, nearly 10 power dams have been built in the last two decades. With this, the country's total power generation capacity has more than tripled.

By far the most glorified structure in the history of power generation in the country, the Grand Renaissance Dam/GERD/ is under construction and is believed to satisfy the unquenched thirst for power both in the country and in the region as well. Upon completion, GERD and other power plants under construction are expected to increase the overall capacity by more than six times.

The industry as a whole as it's solely owned and operated by the government has been facing both intuitional and economic-based challenges. Inability to adequately and effectively cover the power supply demand, difficulty to cope up with the growing service requirement, sluggish and often prolonged construction project management, and limited financial ability as almost all funds are generated from the government, and protracted and often limited international support via grand aid. Aiming to address these age-long and deep-seated problems and better serve the public, the Ethiopian Electric Power Corporation has made organizational structural changes based on research.

The effect was establishing a two-winged approach to systematically address the above-raised problems. Tasked with power generation goal/infrastructural development/, Ethiopian Electric Power (EEP) and shouldering the distribution and service segment, Ethiopian Electric Utility was established in 2009 with the recommendation of House of Ministers which was established by Regulation No. 303/2006. The five main objectives of EEU are provided in the regulation. The Ethiopian Electric Utility (EEU) has been in line with the country's overall

management structure since 2019/20 to address the power supply problems and created a new decentralized regional organization. To address the operational limitations and problems of good governance of the institution, the Institute is working to better implement the three-pronged approach of decentralization, the use of automation and technology, and the use of outsourcing strategies. A strategic plan is also planned for the next ten years. In 2025, with the goal of “Light for All”, 65 percent of the main grid and the remaining 35 percent of the grid are being made available to all. The distribution network is outdated and plans are afoot to upgrade and rebuild it to provide uninterrupted energy supply.

The mission of the Ethiopian Electric Service is to provide international quality, reliable and sustainable electricity service to all consumers at an affordable price by expanding the service with the help of modern technology. To this end, the company is currently providing services to customers in accordance with the service tariff category, with the vision of becoming a competitive electricity service provider that will meet the economic and social needs of the middle-income nation in 2025.. Today, the institution is providing services to clients subject to the tariff category below.¹

Table 1: Category: EA Clients by Tariff Category

NO	THE WAY CUSTOMERS USE THE SERVICE (TARIFF CATEGORY)	QUANTITY
1	For household service	2,117,723
2	For commercial enterprise (total tariff)	390,684
3	Low and medium tariff user customers	48,213
4	For its own office service	2,055
5	Employees of the institution both serving and retired	29,874
6	Customers using prepaid meter	546,489
Total		3,135,038

Furthermore, to make the services technology-enabled and apply general institutional enhancements, it is implementing various projects designed so far. One of the modern methods that are being implemented is ERP. This technology will play an irreplaceable role in modernizing the sales system, financial management, procurement process, service delivery, and billing system of the institution.²

Electric utility from household consumption to large factories as well, social and service providers are all beneficial. The Ethiopian Electric Utility is working hard to make the service available to all citizens fairly across the country. Regardless of its efforts, EEU is experiencing continued complaints about its services. The service delivery gap both in the supply and quality of overall services is the cause of major customer complaints. Often the expectations are not matched between services they expect and consume. In some places, these service complaints have turned into questions of good governance. To reduce and eliminate these problems, as well as to better manage the various activities related to the power supply, to improve the service and adapt to the current needs, the service delivery process and quality, as well as service management competencies, are main issues that need to be addressed.

To better address the above-raised core problems, EEU needs to modernize its operations and adopt new technology-assisted practices. Quality of services could be better aided if it alleviates problems related to the

¹ *It is taken from the bid document prepared by the Ethiopian Electric Utility*

² <https://addisfortune.net/electric-utility-employs-erp-for-59m/>

process and modality of service delivery by implementing methods adequate to meet the demand for additional electricity and working in close ties with institutions tasked to increase the power supply which is necessary to address one of the core problems.

The executive body needs to be aware of the complaints and respond appropriately. Overall service satisfaction is better aided if customer's feedbacks are quickly addressed. Accordingly, Walta Media and Communication Corporate and Ethiopian Electric Utility have jointly conducted this customer satisfaction survey requiring what the opinion of the users of the electricity service is. The World Bank is also involved in providing the required budget and overseeing the overall work which was significant to conduct the study.

The primary aim of the study is to explore the level of satisfaction of electrical service users. The document is presented in five chapters. These are the introduction, review of related literature, methodology, analysis of study results, and conclusive remarks and summary.

1.2 Goal of the Study

The major goal of the study is to identify and evaluate the level of customer satisfaction of the services of Ethiopian Electric Utility (EEU). It is a nationwide inquiry involving a rigorous survey on existing and new energy consumers using the tariff category, measuring the level of customer satisfaction; identify problems related to service delivery and their solutions. It also tries to learn the root causes of customer dissatisfaction. The findings will help initiate improved service delivery modalities and serves as a basis for corrective action and input for the preparation of the strategic plan of the institution.

1.3 Objectives of the Study

General objective

The general objective of the study is to measure the level of customer satisfaction on the basic services of Ethiopian Electric Utility provided across the country and suggest directions to improve customer satisfaction.

Specific objectives of the study

To achieve the main objective of this study, the study will have the following specific objectives. They are:

- To understand the level of Ethiopian Electric Utility service delivery in terms of customers;
- To know the existence of a customer complaints system in the institutions; know its status in practice;
- Check the staff and the management of the institution if they are servicing their customers based on ethics;
- To know whether the institution has developed a system to involve the beneficiary community in various ways.
- Whether the service is given by the institution is viewed as transparently and faithfully by the customers;
- Identify points what Ethiopian Electric Utility needs to improve and those that need to be further strengthened;
- In general, to know the level of customer satisfaction in the provision of the electric utility.

1.4 Scope of the Study

The study was conducted on customers of Ethiopian Electric Utility, who use power for residential, commercial service, industry/factory, also categorized as prepaid and post-payment energy users' views; opinions and satisfaction level are assessed. The study was conducted in the nine regions and two administrative cities of the country in selected towns and service centers. The study has employed a well-proven scientific and internationally accepted research method to shape the design and methodology, determine the size and type of participants in this research.

1.5 Limitations of the Study

The main limitations encountered in the study were the short time allotted for the study, and the inability to gather information at all selected locations.

Only 52 days are given. During this time, it is challenging to complete research at the national level. However, due to the fact that the stakeholders involved in the study were able to cooperate and work in a coordinated manner, the work was completed on time. Another limitation of the study was the inability to gather information due to the conflict in the Tigray region and the security situation in some parts of the country.

Tigray State was excluded from the study due to its inability to gather data in all selected cities of the Tigray Region. However, the sample size was assigned to the nearby regions. So, the study was completed by distributing the Tigray region's allocated sample to the Amhara and Afar regions bordering the region. Similarly, due to insecurity in some parts of the country, data could not be collected; therefore, the sample size to be collected in those insecure areas were collected in other cities in the same region.

1.6 Organization of the Study

The first part of the study document is the introduction chapter. The second part is a literature review, which includes a variety of relevant ideas and research findings in the field. In the third part, the methodology of the study is presented in detail. In the fourth section, the general study data analysis is presented categorized into types, and included in the document. In the last part, the key findings of the study, conclusions, and recommendations are presented.

CHAPTER TWO

LITERATURE REVIEW

2.1 Definition of Customer Satisfaction and Service Quality

The role of the service sector is critical for both developed and developing countries. In particular, for a country like ours, it helps to diversify the GDP proportion and balance dependence on agriculture. In order to do that, improving service quality and boosting customer satisfaction is key. This is further escalated at times where the said service is sourced from a monopolistic provider. In absence of competition, the need to improve the quality of service should be driven by the organization itself, or else customers have no alternatives but rot in poor satisfaction. This is not just a matter of for-profit private enterprises, but it is also the main issue for public institutions that provide public services.

2.1.1 Quality of Service

Service can be said an activity to the needs of service users, customers, or the general public with a purpose by a government or non-governmental organization to satisfy it (Bekele, 2000 E.C). On the other hand, we find a service provider, as one that understands the customer's needs and makes every effort to meet the needs that indicate. This means that the service provider is a body providing the service correctly understanding what the service seeker requests and needs; or it is a concept of action or performance that encompasses all options. When we say service in general, it is any action that the service provider renders, understanding the needs of the service user including the performance to satisfy.

Service has four different features that are often mentioned. They are: it is an act or performance under the influence of the service provider, there may be different circumstances in the eyes of the customer, it varies and is based on the personal feelings of service seekers when it comes to the service seeker, and it is difficult to measure (Zini Kemahu). Service is developed by the service provider required to be effective when an action is performed; we find that it can be improved or reduced due to various internal and external factors.

Service is categorized in different levels for different purposes, mainly each in terms of the basics of service; however, it is divided into two parts called material and human services (Zini Kemahu). The material service part stands for tangible and physical service delivery process; whereas the one termed human is the intangible part of the service. Service providers also have to pay attention to both types of services to provide efficient services.

When we talk about services, it is mainly important determining service seekers' feelings about the quality of the service they have received by measuring their satisfaction and thereby improving it; the quality of the situation is improved by adjusting the requirements of facilitation as one of the most important things and strategic issues, service providers need to do to succeed in their endeavors. Thus, according to researchers of various studies in the field, it is important to establish a system that ensures the quality of services to stay competitive in the world market where necessary: this primarily uses what the service seeker expects and meets the needs of the service to increase satisfaction.

Quality of service, on the one hand, is an attitude about general service attached with judgment: this is the primary issue which shows the satisfaction of the general service users (Zeithaml and Bitner, 1996). On the other hand, the quality of service of an institution that meets the needs of its customers or is defined as the

ability to provide services that exceed customer needs (Zeithaml et al, 1990). Based on this, the quality of service from the users' perspective of the service is the difference between the level of service delivery that the user expects from the institution and the fact that s/he received from it.

2.1.2 Customer Satisfaction

For the question "Who is a customer of an institution?" many people's answer mainly focuses on only at individuals who come to the institution from outside of it in need of its services. However, when we take a closer look at the term customer, the customer is the service seeker (an individual, department, or institution) who comes to buy a service or a product and either to use or sell it to a third party to the facility for transmission in other circumstances (Bekele, 2000). The concept of customer satisfaction is often a process of measuring how services meet customer needs when service providers deliver services or products to their users during the marketing relationship they create.

Customer satisfaction is a key measure of success in many service provider institutions. It is considered a matter intended to attract customers in the modern world market as a key to differentiating between ongoing business competition and business strategy. It is also considered to measure the level of competition between institutions. Service providers mainly use customer satisfaction to make their employees pay more attention to meeting the needs of the customers and achieve institutional goals. As a result of this significant contribution, customers' proper management of satisfaction is a basic issue in service delivering institutions.

In general, the main purpose of institutions measuring customer satisfaction is to understand the level of managerial services and the quality of service providence and suggest points for overall improvement. With this, the institutions engage to adequately meet the needs of their customers. Providing this service also allows them to increase profits and market shares (Anderson et al. 1994). Besides, customer satisfaction is not limited to meeting customer benefits, it also includes a wide range of social values, including customer needs, the cost, and nature of services, protects various interests of customers including efforts and a variety of social values, primarily related to human relationships.

To provide that institutional services are rendered based on transparency and accountability; at least the following four basic requirements are met. First, what are the services provided by the institutions, and then access the services fulfilling the kind of requirements of service seekers detailed and clear information should be made available to the public. Second, the service seeker who requires the service must meet the requirements or prerequisites to request the service with the proof that it meets the conditions the nature of the possibility, the facilities to be provided only per the requirements, assessing service providers and providing services; the result or decision of the service delivery when put it in writing and to make sure that the decision is appropriate with circumstances to arise or service seekers are unfairly denied service when they create a body and a system that provides evidence and responds appropriately.

What connects the third with the second issue is if service seekers raise complaints and the one who receives the complaint appeals the decision and the reason of the decision gives them in writing and the decision was made public through announcement earlier, there is a favorable environment for evaluation. The fourth also supervisors of institutions able to ensure that the decision is implemented under the directive where the client has the opportunity to confirm this and to implement the control when there is a system and institution that allows, as well as service seekers in this using a grievance reprisal system to guide the use of systems and institutions where employees are being identified and adjusted accordingly. In general, this case shows that the services provided by government institutions are also being above all of the services they are issues related to

good governance. With this economic, political, administrative, the powers that be and those related to social and justice issues have become concepts that reflect the process they are implementing.

2.1.3 Development of General Infrastructure Services in Ethiopia

According to the Central Statistics Agency's population projection of 2009 E.C, Ethiopia has an estimated population of over 90 million; this makes it the second-largest in Africa. This population is growing rapidly with an annual growth rate of 2.6 percent. This shows that around 2 million children are born within a year in the country. According to the information from the African Development Bank, Ethiopia is a country that is registering rapid urbanization and impressive economic growth (10.3%), (ADB, 2015). According to the World Bank's 2019 report, Ethiopia's economic situation in 2016-17 is lower than in previous years but healthy and as always has a positive role to play in reducing poverty (World Bank, 2019).

To solve the problem of infrastructure and other issues in Ethiopia, national and other horizontal government agencies have been taking various measures. Later 1983 A.D, Ethiopia's market-driven reforms, structural change policies, implementing decentralized government structure, and agricultural-led industrial development through various activities have been made to ensure rapid development and lift the country out of poverty. During these twenty-five years, like any other field, the infrastructure sector has shown rapid development that the verification campaign has focused on leading the way in providing services in the sector but remain mainly as only government responsibilities.

The Ethiopian government is following the footsteps of its "developmental state" which plays a strong role in various economic sectors. This overall direction of government development strategy makes it based on investing high-level public sector investment. Accordingly, the country, although the general development movement has a very small foundation since 200, it has been attached with large-scale economic developments since 2010. Since then, the government has formed particularly an ambitious program for development and economic transition (World Bank, 2017). In these processes, the supply of infrastructure as a sector in the country recorded meaningful and tangible achievements in quality and accessibility.

2.2 Electricity Service Development and Supply in Ethiopia

2.2.1 Theory of Power Development and Supply

Energy is the driving force behind the modern economy. Power is the basis of industrial civilization and there can be no modern life without it. Industrial, agriculture, mining, and activities on basic services such as transport, communications, and health can be provided when there is an adequate power supply. Therefore, the supply of energy is very important for economic and social development as such. It should always be available at a reasonable price. There is no civilization and development without power. The reason for the Industrial Revolution is the discovery of a source of energy.

The presence of steam power contributed to the coming of the industrial revolution in the advent of in the early 17th century. Using this steam power, Britain, the world's largest motorist, dominated the manufacturing industry. The power that gave birth to the Industrial Revolution is the sector and the services it provides. It started running the engines of factories using coal steam power plant that exists in the factory; moving trains and giant ships began to serve. Thus, in a short period, produced more, production and production inputs could be transported in large quantities and quickly to remote areas. Steam power, in addition to running its engine, was also used to generate more power. It was possible to generate electricity by running steam turbines.

The creation of electricity, not only accelerated the growth of the industry but also made life easier and more comfortable (B. Negash, 2016).

Electric power produced from dams with the help of turbines is transferred and stored to sub-stations where a high population is found and then distributed from there through transmission lines to reach the users. Transferring and distributing power electric starting from power generation dams or stations, laying of different sized transmission and distribution power lines, transformers, and in general coordinating institutions to distribute the power for 24 hours ensuring continuous production, requires the engagement of thousands of professionals.

2.2.2 History of Electric Power Development and Supply in Ethiopia

The history of electric power development in Ethiopia dates back to the end of the 19th century; however, it began service to institutions in the first half of the 20th century. The first electric power supply was available from a generator: it also served only the palace and a limited number of people around it. Besides, the construction of a dam on the Akaki River was started to generate electricity from the water around 1912 E.C. The main purpose of the source was to provide power and serve many small industries that were thriving in the city. (EEPC, 2002 E.C.). This service, which was offered to the industries, was partially available to the public with a need of expanding to meeting places and roads.

With Emperor Haile Selassie came to power and some degrees of the need for changes and improvements of government structure and developmental activities, helped to plan the supply of energy to transfer to the houses and was on due operation; the invasion of Italy at the time, however, stopped including other planned development projects.

After the Italian invading army was pulled out of Ethiopia in 1941, an institution called Administrator of Enemy Properties was established to carry out various development activities. This institution was given the responsibility to generate and distribute energy in addition to other works and had been in charge for some time. This institution handed over the power generation and distribution responsibility in 1948 to an institution established with a name called Shaw Electric Power; the receiving institution had a low capacity but took over the responsibility of distributing power in all the regions until 1955 and performed various tasks.

During these times, the main purpose of the institution was to generate, transfer, and distributed power to the community; besides, other various activities were required by law to improve the work of the authorized institution and was given the authority and responsibility to do so. At this time, the power generation capacity of the plant reached around 35 megawatts and the general number of customers was not more than 13,000. With the regime collapse of Emperor Haile Selassie due to the political revolution that brought the military to power 1967 E.C, the general state of power generation and transmission was also changed to some extent. In connection with this, overall generation, transmission, distribution, and works of delivering power to the public were kept under the control of the central government: despite some changes in the service, the modern power supply, and benefits, however, remain low.

When we look at hydropower generations built from the time of Emperor Haile Selassie to the end of the Derg: 11 megawatts of Tis Abay in 1945 A.D, the Koka Dam on the Awash River which generates 42 megawatts in 1952 A.D; Awash 2, which generates 32 megawatts in 1958 A.D., Awash 3 which generates 32 megawatts established in 1963 A.D., Fincha Power Generation which generates 100 MW was established in 1965 A.D.; Melka Wakana which generates 153 MW was established in 1981 A.D., and a solar power plant which produces

5MW power was established in 1982 A.D. As a whole, Ethiopia, in its 60 years long of producing electricity, had only been able to generate about 350 megawatts of power (B. Negash, 2016).

2.2.3 Existence of Electric Power Development and Supply in Ethiopia

After the removal of the Derg government from power in 1983 E.C by the Ethiopian People's Revolutionary Democratic Front (EPRDF), when structural changes of policies, decentralized government structure, and agriculture led industrial development economy was started to implement; steps in the energy supply sector, as a whole power generation, transmission and distribution activities in line with the various changes, had been taken to adapt. Due to this, like the other sectors, to accelerate power development and energy supply, and to achieve other schemed development plans: by doing so, to ensure the growth as well as to develop the country's fast and sustainable economy, and to fulfil the foreign exchange demands by exporting the country's developed potential; the sector's policy and guidelines have been developed and revised. The most notable point to be mentioned even at the beginning of this movement is the power policy, the first of its kind to the country, prepared by the Transitional Federal Government of Ethiopia (1991-1994) was adopted in May 1994,(Social Research Forum, 2001 E.C).

As the introduction of the policy document shows, at that moment, 94% of the country's energy demand was supplemented with traditional energy sources such as firewood and charcoal, and the rest 6% was covered by modern sources of energy such as electricity and oil which shows power supply and utility levels were low. The policy set out main objectives of improving these issues: provide reliable power supply at the right time and an affordable price verification, progress from traditional energy sources to modern energy sources, encourage and stabilize the transition as well as the environment for energy development and utilization which includes making sure that it is done safely (Zini Kemahu). The main ones of policy issues were presented in five main sections; they are energy development, energy supply, energy-saving and utilization efficiency, and general policy measures. The policy was designed for different energy sources focused on renewable ones such as solar, wind, and geothermal but also primarily focus on hydroelectric power sources.

Table 2: Extra- Ethiopia's total power generation capacity and production description of energy level

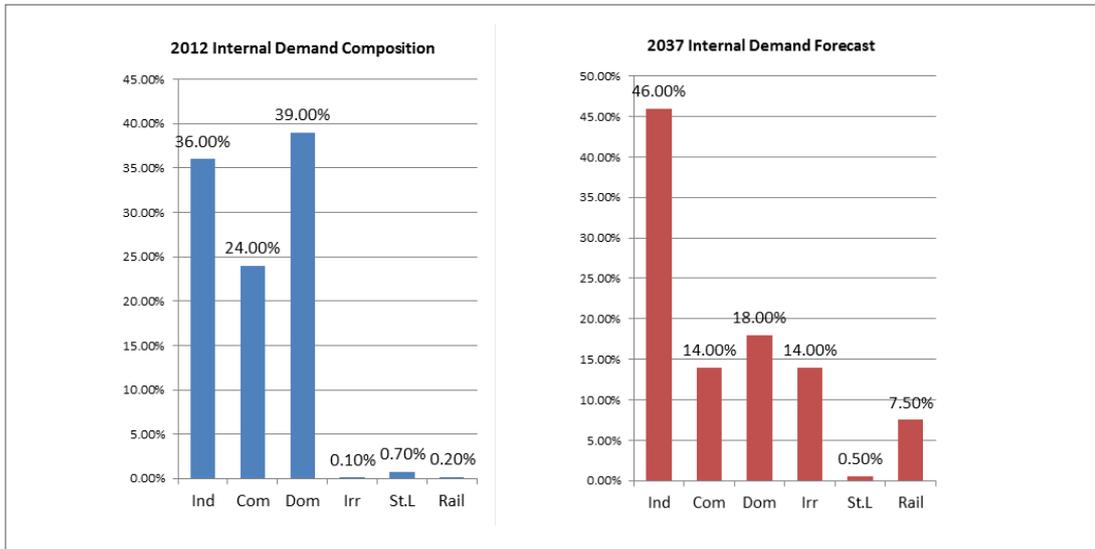
POWER SOURCE	MEASUREMENT	TOTAL POWER GENERATING CAPACITY	PRODUCED ENERGY SIZE IN%
Hydropower	MW	45,000	<5%
Solar/day	kWh/m2	Avg.5.5	<1%
Wind: Power Speed	GW m/s	1,350 > 6.5	<1%
Geothermal	MW	7000	<1%
Wood	Million tones	1120	50%
Agricultural waste	Million tons	15-20	30%
Natural gas	Billion m3	113	0%
Coal	Million tones	300	0%
Oil shale	Million tones	253	0%

Source: Ethiopian Electric Power Corporation

The main problem related to the demand and access to electricity is the development of the various sectors of the economy and the growing population, especially the urban population; the advent of electricity has led

to a significant increase in demand for energy because they made it so high. To address this inadequacy, in addition to bridging the gap between supply and demand, increase the current low per capita income; ensure better utilization in the course of increasing annual energy consumption by developing the potential of the country; believing to ensure the country’s rapid and sustainable economic growth through capacity building, the government is implementing programs to generate and distribute huge amounts of electricity.

Figure 1: A diagram showing the energy usage between sectors in 2012 and estimated in 2037



Source: Mekuria, 2014

Giving special focus to power generation, nearly eight dams have been built in the last twenty years alone. Based on this, the country’s overall energy production capacity was tripled to 2,360 MW in ten years duration in 2015. When the Renaissance Dam and other power plants which are under construction be completed by 2020, this capacity is expected to exceed 17,000 MW (World Bank, 2016).

The organizational structure change of the Ethiopian Electric Power Corporation made the organization more efficient. The organizational change divided the corporation into two. Base on this, one of the parts is a service management sector focused on electricity. The second was established by focusing on the construction of electric power and has become a construction sector. The service sector is called Ethiopian Electric Utility, established by the Council of Ministers with Regulation No. 303/2006 which has five main objectives of the institution also detailed in the regulation.

They are: carrying out construction and maintenance of power distribution lines; build the construction of distribution lines by contractors as necessary; manage electric power distribution lines and purchase bulk electricity for customers conducting sales of electricity services; present electricity tariff reform proposal and implement when authorized; selling bonds and negotiating loan agreements with domestic and foreign financial sources, signing and other related activities to help achieve its performing goals, development and bonding policy directions in accordance with the directives of the Ministry of Finance and Economic.

In terms of strengthening financial capacity, the planned energy development and distribution construction in the sector, believing activities cannot fully be funded by the government or by loans and supports from abroad, the government designed a plan to facilitate the participation of the private sector in the development scheme.

The involvement of the private sector in this regard is also a matter for the government that the service is provided without having to allocate the required budget, allows users or the government or both to pay for the services based on the premise which enables it to reduce the burden of spending; as well as the knowledge of the private sector to ensure that the planned works are completed in a short time and quality using modern methods; the importance of the partnership in facilitating knowledge and technology transfer.

2.3 The Concept of ERP

Historically, the ERP conceptual to simple MRP (material demand planning) and MRP II (Production Input Plan) has changed simple concepts. By ERP Software tools used in systems for production planning, the flow of orders, simulation, and there in the services and departments of the organizations link to sales to evaluate performance.³

2.3.1 What is an ERP system?

ERP is an external innovation integrated system to manage internal and external corporate assets in a wide range of fields and fields related to processing technologies. In short, ERP Enterprise Resource Management is a system. This term was first coined by the consulting firm Gartner Group in the 90s used early. Since then, the ERP has the concept multifaceted passed through the stages of development.⁴

2.3.2 Enterprise Resource Planning (ERP)

Enterprise Resource Planning (ERP) is implemented in our country by large national institutions such as Ethio-Telecom and Ethiopian Electricity Utility. Currently, these institutions have made their operations modern, efficient, quick, and accessible using it. The significant importance of the ERP system is widely understood in the institutions.⁵

Ethiopian Electric Utility has implemented Enterprise Resource Planning (ERP / SAP) since 2008 E.C. after completed building the project to provide international standard and quality service by adjusting the organization, the workflow of the institution, and technical excellence⁶; the first phase of implementation began in April 2019.

Considering the scope and complexity of the ERP project, it is made to be guided by a program level, and two projects (namely, application and infrastructure) projects are organized under it. When we see major duties carried out by the ARP project, centralized internet and email services are accessible for the staff working from the head office to the service centers. Standardized and secured Primary Data centers and Disaster Recovery Data centers are built.⁷

LAN and WAN network system is applied in 11 Regions, 28 District Offices, and 382 Service Centers throughout the country. A Call Centre capable of hosting 80 customers at a time and an IT Help Desk System for the internal staff is built. Application, when Automated Meter Reading (AMRS) is implemented in 35 stations i.e. in and around Addis Ababa, Adama, Bahir Dar, Mekele, Hawassa, Harari, Dire Dawa, and a total of 452 Automatic Energy Meter and 39 DCU, are applied.⁸

3 <https://www.erp-information.com/hitory-of-er.html>

4 <https://www.erp-information.com/hitory-of-er.html>

5 Hilina Taddese, *Opportunity and Challenge of Enterprise Resource Planning (ERP) Implementation in Ethio Telecom*, St. Mary University, Addis Ababa, Ethiopia, June 2017.

6 <http://197.156.69.62/index/219-erp-sap>

7 *Ibid.*

8 *Ibid.*

The first phase of the project Go-Live has six ECC modules: Finance and Control, Human Resources and Payroll, Asset Management and Warehouse, Enterprise Assets Management, Project Management, and Quality Management have been implemented in all parts of the institution.⁹

In the second chapter, Go-Live customer service; call center, reading, and billing as well as modules related to fundraising since May 2011 E.C. in Addis Ababa region, July 7, 2011 E.C. in 6 regions: Amhara, Tigray, Gambella, Benishangul-Gumuz, Dire Dawa and Harari, has been used in regional offices. In the same way, since August 07, 2011E.C. applied to the remaining 4 regions: Oromia, South, Somali, and Afar.

In general, in connection with the implementation of the ERP project, the E.E.A. office conducted and performed variety capacity building pieces of training to more than 4,000 project teams (core, champion) and system usage (End Users)in different technical pieces of training.¹⁰

The application of this project has brought significant positive impacts on the institution; currently, overall task implementation in the institution is almost completely grounded on the system. As a result, the day-to-day operations of the institution are carried out on a systematic basis; systematic follow-up and monitoring of material and financial activities are already cultured. A corrective action mechanism is created by the system for activities accomplished not governed by the institution's procedures, guidelines, and policies.¹¹

The main functions completed by the ARP system are as follows:

- General and a structured plan of the organization,
- Financial Management Company,
- Human resource management,
- Accounting for material assets,
- Accounting, and Supply and Sales Management
- Monitoring the implementation of current activities and monitoring the implementation of plans,
- Enterprise document flow and,
- Business results analysis and others.¹²

9 *Ibid.*

10 *Ibid.*

11 *Ibid.*

12 <https://www.bakertilly.com/insights/evaluating-erp-systems-in-an-evolving-utility-industry>

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Research Design

The study is a descriptive type of study. This type of study helps to explore how, where, and what questions. Based on this the study shows the fulfillment and level of satisfaction of the customers of Ethiopian Electric Service. The study is based on quantitative data. Analysis of the study was carried out using the data gathered by taking scientific samples of electricity user households from the nine regions and two city administrations of the country.

3.2 Sample Design of the Study

Method of Sample size determination

The focus of the study is to explore the views of Ethiopian Electric Service customers on general service delivery, on complaint redressal procedures, transparency, customers' participation, and to determine their level of satisfaction with the overall service of the organization. The populations covered in the study are households, businesses, and industries benefiting from the prepaid and postpaid electric services of the organization. Basic issues considered during determining the sampling methodology at the starting point were:

- the received list of EES customers prepared by different categories and type of service fee as a sample framework,
- the general need of the organization,
- the level of accuracy required in the study,
- the type and depth of data to be collected,
- the way to identify and access the sources of data,
- the time given for the data collection,
- the knowledge and skills of the data collectors we have used to gather the data and,
- the type and nature of the service.

To conduct the study in an acceptable and standardized way the study has used a sampling method and selection process, which has taken into account the number of customers and is based on the random selection of participant customers. For the purpose of this, the following two consecutive formulas were used.

Based on the sampling method selected, the minimum random sample size required for the study “n” was calculated by using the following formula.

$$n = \frac{DEFF * Z^2 * (p) * (1-p)}{E^2}$$

Where DEFF= Design Effect resulted from the difference of implementing simple random sampling and two stage stratified sample design optimum Sample Size with 95% Confidence Level and Acceptable Tolerable Error Domestic, Prepaid, Postpaid Commercial & Industry

n= Desired sample size
 Z= Confidence level (e.g. 1.96 for 95% confidence interval)
 P= Percentage of picking choice
 1- P= The Chance of not selected for the survey
 E= Tolerable error of margin which is 0.03

As the above statistical explanation clearly shows:

- **DEFF** = this is the adjustment difference in the utilization of some sampling methods over simple random sampling method to allow for the design structure. This occurs when not taking the list of all the customers of the company and selecting the study participants using a simple random probability sampling, and classifying the customers before the selection of the study participants to different categories, selecting respondents scientifically from these categories and taking an appropriate sample by taking into account the representativeness of the sampling methods.
- **n** = minimum initial sample size,
- **Z** = 95% certainty of the study’s findings,
- **P** = the probability of being selected and included in the study.
- **1-P** = probability of being excluded and not included in the study and
- **E** = Indicates the acceptable error rate of the study.

Accordingly, the minimum initial sample size, “n”, required for each region was calculated. This was used as a starting point for the calculation of the minimum sample size required for each study region and city administration. This is by calculating in advance for the sample size “n” that was used for the calculation of a representative sample by taking into account the number of service users in each of the study regions and city administrations.

After obtaining the initial sample size “n” as the main input for determining this next critical sample, estimation was done by taking the reported number of customers who have been provided with electricity services in the

prepaid and postpaid sectors by the organization in all the regions and city administrations in 2019. The exact sample size was determined using the statistical formula below.

$$N = \frac{n}{\{[1 + (N - 1)]/\text{NUMBER OF SERVICE USERS}\}}$$

This means that, depending on the size of the regional service users, the sample size may vary, indicating that the sample size can be used to represent the regions. The scientific process of determining the sample size of the study also provided an opportunity for households in each region and city administration to have equal opportunities in the sample selection. As a result, the survey has conducted in a scientific manner that has allowed enough respondents to be selected in each region.

Finally, the sample size was calculated by taking into account the potential customers who are likely to be involved in the study, and the probability of missing an additional 2% response. This is if the selected customers who are the basis for the survey are absent, unwilling to respond and if there are no customers who are knowledgeable enough to respond for various reasons.

$$N^1 = \{N + (N * 0.02)\}$$

N^1 = the final sample size calculated taking into account the probability of non-response

N = the minimum sample size “n” and the sample size calculated taking into account the number of different customers in each city

0.02 = probability of missing the expected response in the study

Using the sample formula above, the exact sample size required for each region is determined. Considering the 2% probability non-response, the final sample size is assigned to the regions and city administrations according to the customer’s payment system and type of service, as follows:

Table 3: Total sample size distribution by region

S/N	NAME OF THE REGION	NUMBER OF ANTICIPATED CUSTOMERS	INITIAL SAMPLE AS PER THE STANDARD FORMULA (FOR INFINITE NUMBER OF CUSTOMERS)	SURVEY SAMPLE BY CONSIDERING THE TOTAL ANTICIPATED CUSTOMERS FOR REGION (FOR FINITE POPULATION)	REQUIRED NUMBER OF RESPONDENTS FOR THE ACTUAL SURVEY BY CONSIDERING NON-RESPONSE	ADJUSTED SAMPLE SIZE
			$N = \{ \text{DEFF} * Z^2 * (P) * (1-P) \} / E^2$	$N = [N/1 + \{(N-1)/\text{CUSTOMERS SIZE OF THE SECTOR}\}]$	$N1 = [N + (N * \text{NON RESPONSE})]$	
1	Addis-Ababa	803,758	1493.956	1491.19	1521.0	1,520
2	Oromia	881,706	1600.667	1597.77	1629.7	1,628
3	Amhara	542,270	1280.533	1277.52	1303.1	1,304
4	SNNPR	385,413	1067.111	1064.17	1085.5	1,084
5	Tigray	319,832	960.4	957.53	976.7	976
6	Dire-Dawa	57,627	853.689	841.24	858.1	860
7	Harer	36,026	533.556	525.78	536.3	536
8	Somali	45,962	640.267	631.48	644.1	644
9	Benishangul-Gumuze	23844	426.844	419.35	427.7	428
10	Afar	37778	586.9111	577.95	589.5	588
11	Gambella	11737	320.133	320.13	326.5	324
Total		3,145,953	9,764	9704.11	9,898	9,892

Table 4 : Sample size distribution of the study participant based on the type of service provided by the organization

REGION	DISTRICTS	CITIES/ CENTERS	TOTAL SAMPLE SIZE	FOR HHS CUSTOMERS	FOR COMMERCIAL CUSTOMERS	FOR INDUSTRY CUSTOMERS
Addis Ababa	Addis-Ababa Total	Center	1,520	1,292	152	76
	North AA District	1:3:5 (Center)	380	323	38	19
	East AA District	2:6:8 (Center)	380	323	38	19
	South AA District	1:3:5 (Center)	380	323	38	19
	West AA District	2:6:8 (Center)	380	323	38	19
Afar	Afar Total	Center	588	500	59	29
	Afar District	Asayta City	294	250	29	15
	Afar District	Semera City	294	250	29	15
	Afar District	Awash City	244	208	24	12
Tigray	Tigray Total	Center	976	830	98	49
	Mekelle	1:3 (Center)	244	207	24	12
	Mekelle	Mayechew	244	207	24	12
	Shire	Adowa	244	207	24	12
	Shire	Shire	244	207	24	12
Amhara	Amhara Total	Center	1,304	1,108	130	65
	Bahir-Dar	1:2 (Center)	339	288	34	17
	Debre-Markos	1:2 (Center)	339	288	34	17
	Debre-Birhan	1:2 (Center)	339	288	34	17
	Kombolcha	Kombolcha City	339	288	34	17
	Debre-Markos	Debre-Markos City	339	288	34	17
	Gonder	Gonder City	339	288	34	17
Benishangul-Gumuze	Benishangul-Gumuze Total	Center	428	364	43	21
	Benishangul-Gumuze	Asosa City	214	182	21	11
	Benishangul-Gumuze	Pawe City	214	182	21	11
SNNP	SNNP Total	Center	1,084	921	108	54
	Hawassa	2 and 4 (Center)	217	184	22	11
	Bonga	Bonga City	217	184	22	11
	Hosaena	Hosaena and Butajera	217	184	22	11
	Wolita	1:2 (Center)	217	184	22	11
	Arba-Minch	Arba-Minch City	217	184	22	11
Dire-Dawa	Dire-Dawa Total	Center	860	731	86	43
	Dire-Dawa	1 (Center)	287	244	29	14
	Dire-Dawa	2 (Center)	287	244	29	14
	Dire-Dawa	3 (Center)	287	244	29	14

REGION	DISTRICTS	CITIES/ CENTERS	TOTAL SAMPLE SIZE	FOR HHS CUSTOMERS	FOR COMMERCIAL CUSTOMERS	FOR INDUSTRY CUSTOMERS
Gambela	Gambella Total		324	275	32	16
	Gambella	Gambella	162	138	16	8
	City District	32 Center	162	138	16	8
Harari	Harari Total	Center	536	456	54	27
	Harari	1 (Center)	268	228	27	14
	Harari	2 (Center)	268	228	27	13
Oromia	Oromia Total	Center	1,628	1,384	163	81
	Adama	1:3 (Center)	181	154	18	9
	Shashemene	1:2 (Center)	181	154	18	9
	Nekemete	Nekemte and Arjo	181	154	18	9
	Jimma	1:2 (Center)	181	154	18	9
	FinfinneZuria	Holeta City	181	154	18	9
	Ambo	Wolliso City	181	154	18	9
	Mettu	Bedele City	181	154	18	9
	Bale-Robe	Bale-Goba City	181	154	18	9
	Chiro	Haromaya City	181	154	18	9
Somali	Somali Total	Center	644	547	64	32
	JigJiga	1 (Center)	215	182	21	11
	JigJiga	2 (Center)	215	182	21	11
	Gode	Kebridahar City	215	182	21	11
Total			9,892	8,408	989	495

Accordingly, 9,892 (nine thousand eight hundred and ninety-two) respondents have participated in the study. The sample distribution was then divided into postpaid and prepaid users. The details are provided in the table below.

Table 5: Sample size for postpaid and prepaid system customers

S.N	REGION	% POSTPAID	% PREPAID	TOTAL CALCULATED SAMPLE	ALLOCATED SAMPLE FOR POSTPAID CUSTOMERS	ALLOCATED SAMPLE FOR PREPAID CUSTOMERS
1	Addis-Ababa	52	48	1,520	790	730
2	Oromia	86	14	1,628	1,400	228
3	Amhara	78	22	1,304	1,017	287
4	SNNPR	95	5	1,084	1,030	54
5	Tigray	88	12	976	859	117
6	Dire-Dawa	80	20	860	688	172

S.N	REGION	% POSTPAID	% PREPAID	TOTAL CALCULATED SAMPLE	ALLOCATED SAMPLE FOR POSTPAID CUSTOMERS	ALLOCATED SAMPLE FOR PREPAID CUSTOMERS
7	Harer	94	6	536	504	32
8	Somali	57	43	644	367	277
9	Benishangul-Gumuz	98	2	428	419	9
10	Afar	91	9	588	535	53
11	Gambella	99	1	324	321	3
Total				9,892	7,930	1,962

3.3 Method of Data Collection

The survey data was collected based on service centers in selected cities as the base center and selecting the households and institutions needed for the study. Individuals who are eligible to participate in the study in selected homes and institutions were 18 and over, and had information about the household's and the institution's use of electricity. 112 data collectors, 28 supervisors, 8 regional coordinators, and 2 general coordinators of the study participated in the data collection work. This means 150 people have participated in the study. Most of the data collectors who have participated in the study have experiences in different data collection activities conducted by the Central Statistics Agency and other research organizations and are residents of the selected areas of the study. This allows data collectors to understand and respect the local culture, language, and psychology of the study areas.

To have a similar understanding in the study process at all the levels and in all the cities of the study, orientations were provided on the selection of the participants, the content of the questionnaire, and COVID – 19 protocols. At the starting of the orientations, a mask, and hand sanitizer have been provided to all participants.

At a city level, the overall data collection work was done under the coordination of supervisors assigned for each of the cities and done by the data collectors assigned for the same. Supervisors first went to selected service centers in the study cities. They introduced themselves to the heads of the service centers and start delineating the areas covered by the center's services by requesting information from the concerned bodies. They then identify the households and institutions where the study will be conducted and assign data collectors to go from house to house to gather information.

To start the above process, data collectors, along with the supervisors, determined the central geographical location of the area served by the selected service center as the starting point for selecting the study households and institutions. For this purpose, both natural and man-made features have been used as a reference. For example, man-made and natural features such as mill, school, church, mosque, market, road junction, mountain, bridge, enterprise, shop, warehouse, water pump, garage, hotel, and other facilities have been used.

To show the process by example, one of the areas surveyed in the Southern Nations, Nationalities, and People's Region was Bonga. The sample size allocated for this city was 217. From this, the size allocated for residential electricity service users was 184 households who were getting service from the city's service center. This was done by taking a permanent marker from one of the features near the starting point of the sample, following

a clearly defined walking pattern, and mobilizing data collectors in all four directions to collect the data. The rest of the business and industry sample data was also collected by going to the facilities and interviewing the relevant management or owner.

3.4 Method of Analysis

Once the data necessary for the study has been properly collected, and office-level response verification and editing work was conducted and the questions were organized in such a way as to facilitate the analysis of the study. After the data has been organized in this way, it has been entered into a database prepared using SPSS software. The data entered is then re-edited and made ready for the analysis work.

The study has primarily focused on answering questions such as where what and how. It has also focused on indicators that can show some of the major differences between the regions studied. Based on this the data has been analyzed using different types of statistical analysis methods, such as frequency, cross-section, percentage, and average. This has been done using a social science statistical application software called SPSS. Statistical results from the software have been expressed using tables and different kinds of graphs. This has enabled us to show how the satisfaction of the Ethiopian Electric Service customers in the areas surveyed.

3.5 Implementation of COVID-19 Health and Safety Plan

Walta abide by different ethical standards at different levels of research works. Researchers are advised to carefully follow these ethical standards to ensure the safety of all participants of the researches and the quality of the research work. Based on this our institute uses a manual that contains different research ethics and quality standards and procedures to ensure these issues.

In this study, in addition to other ethical and quality issues, by taking into account the situation of the COVID-19 pandemic, various precautionary measures and actions have been implemented in accordance with National Directive No. 30/2013 on Determining Prohibitions and Obligations to Prevent and COVID-19 outbreaks. In addition, we have made some improvements to the basic standards, taking into account the general context of the precautionary measures to be taken in the course of research carried out by other international organizations.

In connection with this, various activities have been carried out since the preparation of the study. The main activities are:

1. Activities performed during the preparation period,
2. Activities that took place during the orientation workshops and the conditions that existed during the fieldwork.

At the beginning of the preparation work, after the sites of the study were selected and an attempt was made to assess the condition of the COVID 19 in the areas. With this in mind, efforts have been made to reduce the number of trips and meetings and to make travel and meetings safer. In addition, procedures have been designed and implemented to provide the resources needed to make the COVID 19 work effectively and to provide the participants with information on how to protect themselves and others from the epidemic.

In connection with this, the first task was to make the local data collection work by local supervisors and data collectors. This has significantly reduced the distance to be traveled for the study. Following this, eight Regional

Coordinators, 4 Supervisors, and 16 data collectors who were to be deployed in and around Addis Ababa were briefed in Addis Ababa on the COVID-19 prevention procedures.

The briefing was held in a well-ventilated hall with two adult steps space between the participants. In addition, adequate hand sanitizer and mouth mask for all working days, including the orientation day, were provided to participants. Participants of the orientation were also informed that they are obliged to take other precautions outlined in this procedure. The regional coordinators who participated in the presentation also selected the central cities in the regions deployed and gave a presentation on the overall process in the same way.

During the orientation, participants were briefed on the general transmission and prevention of COVID-19, as well as the precautionary measures to be taken to prevent the spread of the virus. The main points of focus during the orientation are as follows.

The members of the study team were given a careful face-to-face description of the COVID-19 transmission and protection methods to ensure their proper protection and monitoring. During this, they have been told to stop working and report, if they have a high fever while at work, have a new and increasing cough, and any other symptoms of COVID-19. They have also told that if these symptoms of COVID-19 worsen, they should report the matter to the appropriate authorities by telephone or in-person.

All members of the study teams were also advised to wear a mouth mask while working and to use hand sanitizer appropriately. In addition, they were instructed to clean their hands thoroughly before entering the selected study households and institutions. After entering the selected households and institutions of the study, they have to introduce themselves and the purpose for which they have attended, to select the appropriate person to participate in the study, and to seek the consent of the selected participants.

Before starting the interview with the selected participants, interviewees were also asked to wear a mask as much as possible. They were also informed to make sure that they are keeping the right personal distance during the interview. Participants were also instructed to discontinue the interview by thanking the participants if they encountered questionable COVID-19 signs during the interview, as well as to prevent non-participants from gathering in the area.

During the fieldwork, supervisors were also tasked with monitoring the safety of their own and data collectors to ensure that the above issues were being implemented properly. To this end, all members of the study team made sure to wear a face mask and hand sanitizer when they met in the morning for starting work. During the house-to-house inspection, they also focused on the matter.

3.6 Problems Encountered and Measures Taken

- Security threats and problems: This has been observed in Afar, Benishangul-Gumuz, Amhara, and Harari regions.
 - ▶ Afar Region and Pawi City: The data collection was carried out by communicating about security issues with the concerned bodies.
 - ▶ Pawi: Police detained the field supervisor and assigned data collectors for several hours due to security concerns in the area. Talking to the EES headquarters and getting the telephone address of the district office in the city, the head of the district resolved the issue. Besides, the study was continued per the timeline by writing a letter to concerned bodies and informing the security forces of any possible problems.

- ▶ Dire-Teyara: Due to security concerns during the data collection time, the sample allocated for this area was added to the other two service centers in Harar city.
 - ▶ Woldia City: At the time of the data collection, there were security concerns in the city due to the clash between the Tigray region and the Federal government. In this case, it was difficult to conduct the data collection. The data collection was carried out by transferring the sample allocated to the city to another stable town in the region (i.e. Kombolcha).
- In Addis Ababa, Nekemte, Jimma, and Bedele, there were strong requests by the study participants as to why their name is written on the participants listing sheet.
 - ▶ It has been tried to explain that it is a registration form for selected households and that it has no other purpose than to ensure that the data collection is properly done. If the complaint is continued, only the first name or code is filled out in the list.
- Somali: Due to security concerns in the region, no one other than the residents could enter Jijjiga for any purpose. As a result, the regional coordinator who was deployed was unable to enter the city; He could not pass the Karamara checkpoint at the entrance.
 - ▶ In consultation with the EES headquarters, the Regional EES Head and the relevant security forces were communicated and able to enter the town and conduct the data collection.
- The number of prepaid users is small in different cities. For example, the problem is widespread in Gambella, Hosanna, Asosa, Pawi, Jijiga, Kebri-Dehar, Holeta, Woliso, and Nekemte.
 - ▶ In Gambella, an attempt was made to conduct a telephone interview by taking the telephone addresses of study participants from the EES district office in the city.
 - ▶ The number of prepaid users in Hossaina, Assosa, Jijiga, KebriDehar, and Holeta is small. Realizing that it is difficult for data collectors to find easily the prepaid beneficiaries, officers who have shown the location of the beneficiaries were assigned.
 - ▶ Pawi: In the city, the provision of the prepaid service was started three months. There were only 19 service users. These service users were covered by the study. Attempt to collect the remaining ones in a nearby town (i.e. Figs) was unsuccessful due to security concerns. Therefore, the remaining questionnaires were collected in the regional capital (Assosa).
 - ▶ Woliso and Nekemte: Prepaid users could not be found in these two cities. Therefore, the prepaid sample sizes were distributed in Sebeta and Jimma respectively.
- Regarding COVID-19: In most of the cities surveyed, we found that the population did not cover their mouths and noses using face masks. Furthermore, steering at people wearing masks, associating the coronavirus with politics, and believing that the virus does not exist in their city were the main problems during the study.
 - ▶ Data collectors have asked to maintain their distance and wear masks properly during the interviews without being confused by any local analysis and conclusions.

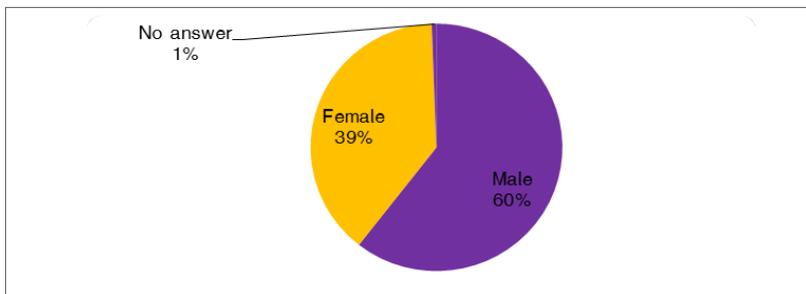
CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION

4.1 General Information about Respondents

The study ventured to cover the general information of the respondents by different means. The study mainly incorporated Gender, age, address, Number of Household members, educational status, occupation, and Electric service type. Male participants are 5872 (i.e. 60%) and Female 3769 (39%).

Graph 2:- Gender composition of respondents



In terms of age, participants aged 26 – 45 takes about 32% of respondents. Thirteen percent are in the age range of 46 – 55 and 16% are above 55 years of age. Respondents in their young ages (i.e. 18 -25) are not more than 8% of the sample.

Table 6:- Respondents composition by age

	NUMBERS	PERCENTAGE
18-25	734	7.6%
26-35	3015	31.1%
36-45	3087	31.8%
46-55	1233	12.7%
Above 55	1537	15.8%
No Answer	96	1.0%

The educational status of the respondents has been identified. And the result shows the Bachelor’s degree and diploma holders make about 29 and 20% of the sample, respectively. Secondary and Primary education respectively holds 20 and 11%. A lesser number, nearly 7%, is Secondary degree and above.

Table 7:- Respondents' level of Education

	NUMBERS	PERCENTAGE
Second Degree and above	650	6.7%
Bachlors degree	2812	29.0%
Diploma	1965	20.3%
Secondary school	1915	19.7%
Primary school	1017	10.5%
Literate	797	8.2%
Illiterate	452	4.7%
No answer	94	1.0%

A visibly large number, about 30%, of the respondents are civil servants. The self-employed, Traders and Housewives, in their order, make 20, 18, and 12% of the sample. The number of respondents' occupation data is listed in the graph below.

Table 8:- Respondents Occupation

	NUMBERS	PERCENTAGE
Civil servants	2943	30.3%
Traders	1746	18.0%
Housewives	1149	11.8%
Students	249	2.6%
Self-employed	1923	19.8%
Employees of private organization	785	8.1%
Job seekers	288	3.0%
Pensioners	359	3.7%
Agrarians	143	1.5%
Other	21	0.2%
No answer	96	1.0%

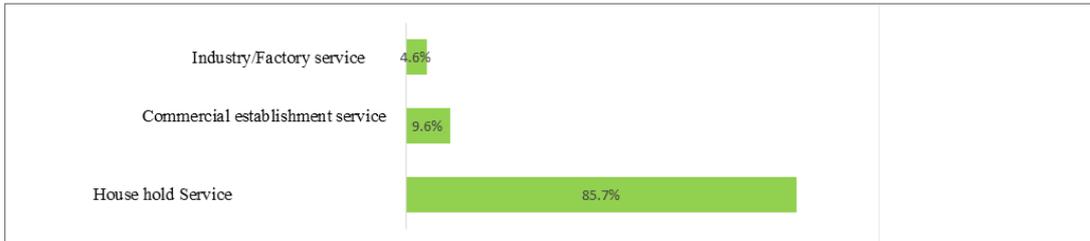
The number of members in the respondents' household has been recorded. Above 55% of households are comprised of 3-5 individuals and 25% have 5-8 members who use the households' electricity.

Table 9: Number of Respondents' household members

	NUMBERS	PERCENTAGE
Only me	251	2.6%
2 members	1082	11.2%
3-5 individuals	5308	54.7%
5-8 individuals	2385	24.6%
Above 8 Persons	444	4.6%
No Answer	232	2.4%

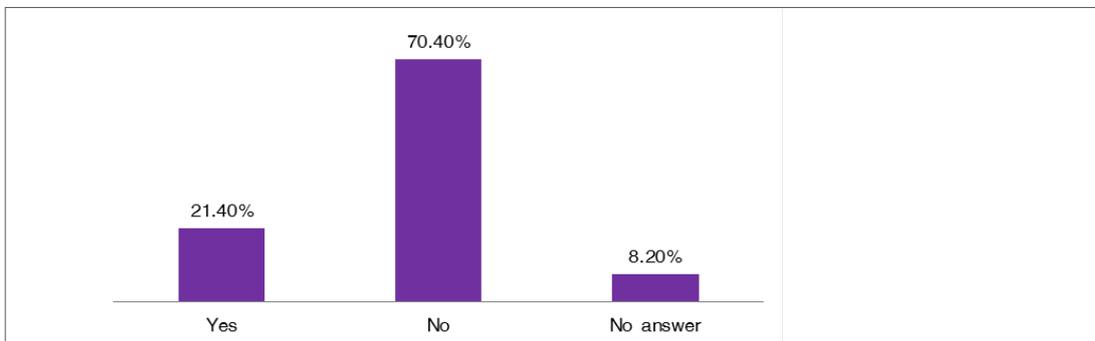
The service type that respondents have subscribed to is identified. The result shows Household service customers makes about 86% of the sample (i.e. 8317), Electricity for a commercial establishment is 10% (i.e. 936) and for industrial and factory use 5% (i.e. 449)

Graph 3:- Respondents' Electric service type



Industry/Factory service customers, who make only about 5% (449) of the sample, were asked if they enjoyed special attention from the service provider and 21% stated that they have had such treatment. But 70% said they didn't enjoy the attention. This number indicates that industries and factories are not given any special care in the service provided to them. Henceforth the EEU is expected to give considerable attention to these customers. The expansion of industries/factories is paramount to supply and fulfill societal needs, enhance fair competition, and have enormous influence in ensuring the overall development of the country.

Graph 4: About Industry customers enjoying special attention



In Gambela Regional State, 97% of respondents are Household customers. Except for Gambela state, 84-89% of respondents in all other regional states are household customers. Electric service customers for Commercial establishments are 13% in Afar State, 11% in Somali State, and only 1 % in Gambela state. In the rest of the states, 8-10% of respondents are commercial customers.

Industry/factory customer respondents in Addis Ababa are 7% and 5% in Oromia, Amhara, SNNP, and Benishangul Gumuz regional states. This information is included in the table below.

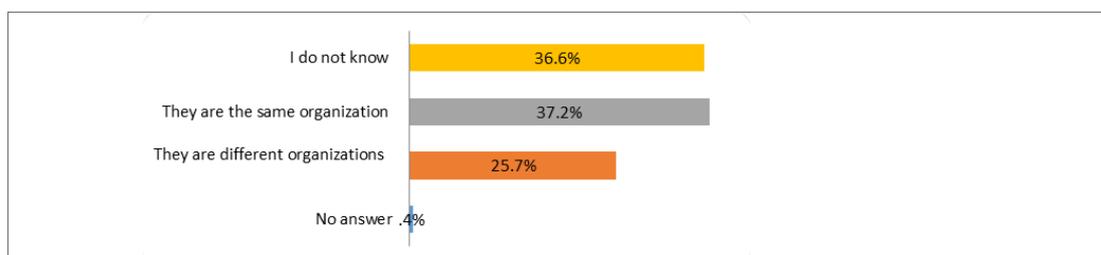
Table 10: Respondents' service type by regional states

REGION	CUSTOMER TYPES			TOTAL
	HOUSEHOLD	COMMERCIAL	INDUSTRY	
Oromia	85.4%	9.6%	5.0%	1609
Amhara	84.6%	10.1%	5.2%	2011
SNNP	84.6%	10.4%	5.0%	1075
Somali	85.0%	11.1%	3.9%	612
Gambela	97.2%	1.3%	1.6%	320
Benishangul	84.4%	10.1%	5.5%	417
Afar	86.1%	12.9%	1.0%	782
Harari	86.8%	8.8%	4.4%	521
Addis Ababa	84.3%	9.2%	6.5%	1501
Dire Dawa	88.8%	7.7%	3.5%	854

4.2 Understandings of EEU Organizational Structure

The first question presented for the research participants was about understanding whether or not the respondents think the two organizations - “Ethiopian Electric Utility” and “Ethiopian Electric power” are similar entities. The finding showed $\frac{1}{4}$ of the respondents consider the two organizations as separate entities that operate on their own.

Graph 5: Are the EEU and EEP separate organizations or identical



On the other hand, 37% considered them as identical or similar organizations. Similarly (37%) do not have sufficient information on their identical or separate status. More than $\frac{2}{3}$ of the respondents do not have awareness about the Ethiopian Electric Utility and The Ethiopian Electric Power are two separate organizations. Following its reform in 2012 GC, the former Ethiopian Electric power Corporation is now divided in two. The first one is the Ethiopian Electric Utility, and the other is Ethiopian Electric Power.

The service wing of the operation was established by the Council of Ministers Directive Number 303/2012 under the name Ethiopian Electric Utility, and its Five Main purposes are listed on the Directive. It has now been seven years since this was undertaken but the majority of the population doesn't seem to be aware. A study conducted in 2019 GC affirms this finding. Six out of ten respondents (about 62%) didn't know the separate status of the two organizations.

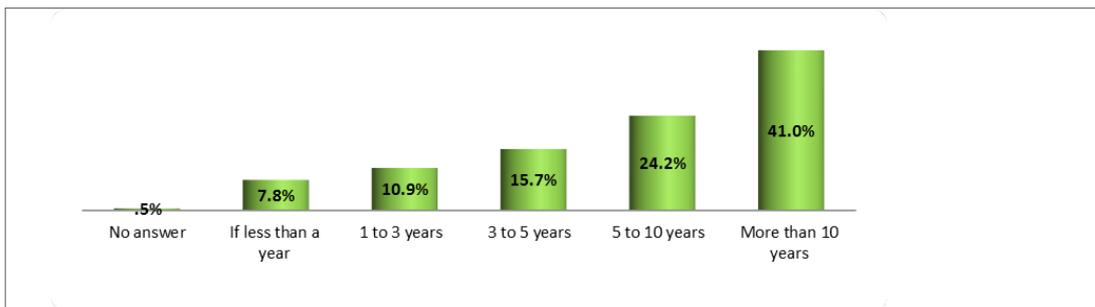
Table 11: Understanding of respondents EEU and EEP are separate organizations (2019 GC)

	NUMBERS	PERCENTAGE
I know	1304	36.4
I do not Know	2215	61.8
No Answer	66	1.8
Total	3585	100

4.3 The Length of Time Being a Customer of EEU

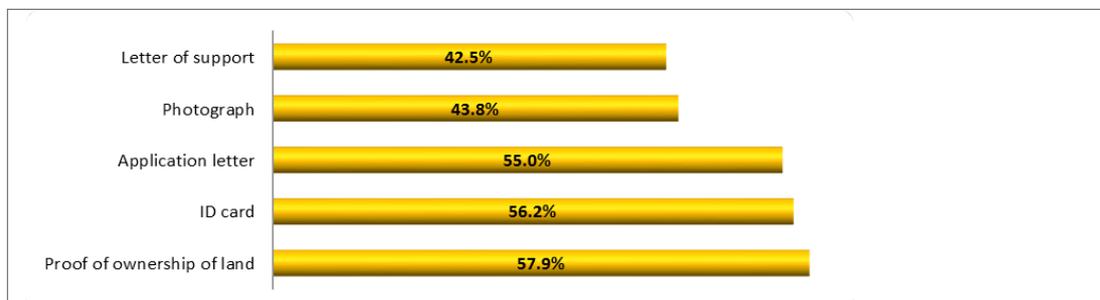
Four out of ten (41%) respondents have been EEU customers for more than ten years. About a quarter (24 percent) are clients of the institution for 5-10 years. One in ten (8%) of the study participants are EEU customers for less than a year. In general, it has been a long time since most of the participants in the study have been EEU customers.

Graph 6:- Duration of time since respondents become EEU customers by having the electric meter installed.



For customers who only stayed for less than a year, a follow-up question; - “what requirements were in place, for you to have the Electric-meter installed?” was asked. About 55 - 58% of respondents stated that they were asked for a Land ownership title deed, Identification, and Application letter. 42 – 44% remarked that a support letter and a photograph was requested.

Graph 7:- Requirements to have a new Electric-meter installed.



To improve its service delivery, the EEU took a few steps in April 2019 GC. Among this exist the easing of requirements to get new Electric-meters. Accordingly, the requirements are now limited to identification card, an application, and a photograph. However, the study indicates that customers who subscribed to the service within the last twelve months were asked to present a land ownership title deed and a support letter.

4.4 Electric-Meter Type

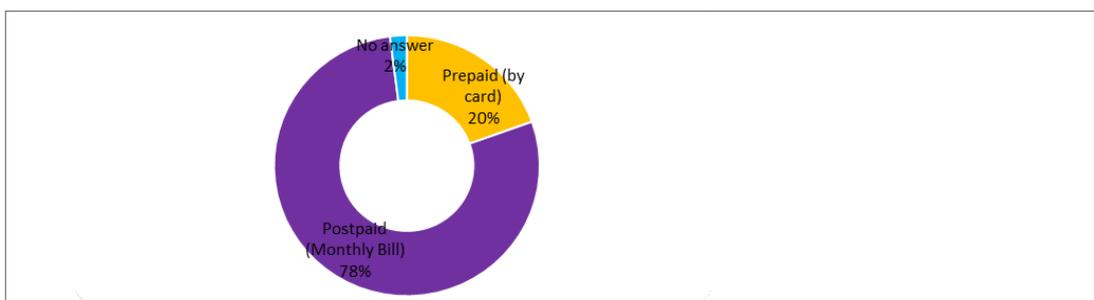
The EEU provides two types of Electric-Meters. These are Pre-paid (Billing card) and Post-Paid (Monthly billing). The study has allocated the sample based on the share of the electric-meters in different regional states to have the two billing systems represented in the survey. The finding shows the overwhelming majority (81%) are customers of the Post-paid service. The rest (19%) are Pre-paid customers.

Table 12:- Shares of the Types of Electric-Meter based on Regions

REGION	PRE-PAID		POST-PAID		TOTAL
	NUMBERS	PERCENTAGE	NUMBERS	PERCENTAGE	
Oromia	203	12.6%	1406	87.4%	1609
Amhara	373	18.5%	1638	81.5%	2011
S.N.N.P	51	4.7%	1024	95.3%	1075
Somali	268	43.8%	344	56.2%	612
Gambela	3	.9%	317	99.1%	320
Benishangul	26	6.2%	391	93.8%	417
Afar	97	12.4%	685	87.6%	782
Harari	31	6.0%	490	94.0%	521
Addis Ababa	641	42.7%	860	57.3%	1501
Diredawa	154	18.0%	700	82.0%	854
Total	1847	19.0%	7855	81.0%	9702

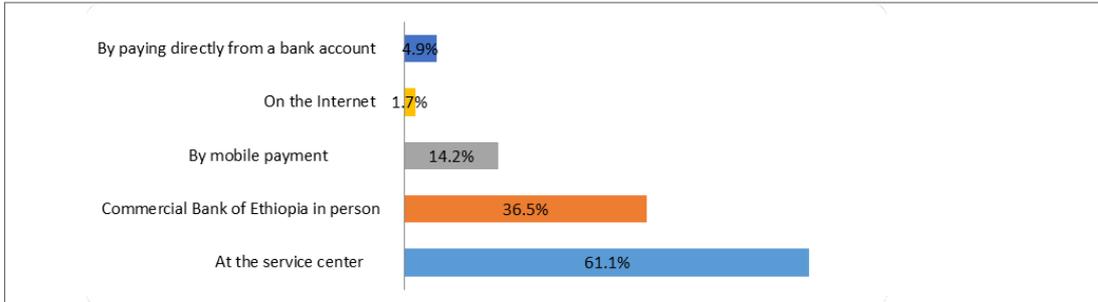
Solid Effort has been made in the methodology section of the research to represent Pre and Post-paid customers in the study. Consequently, the respondents selected from the Pre-paid and Post-paid customers were 19% and 81%, respectively. In the 2019 G.C study, 20% of the customers were Pre-paid customers, and 78% were post-paid.

Graph 8: Type of Electric-Meter used (2019GC)



The finding reveals, Six out of ten (61%) post-paid respondents (7855) use the post-paid services and conduct payment at the EEU service centers. This is the payment system that has been used by the organization for many years.

Graph 9: Payment systems used by Post-paid customers



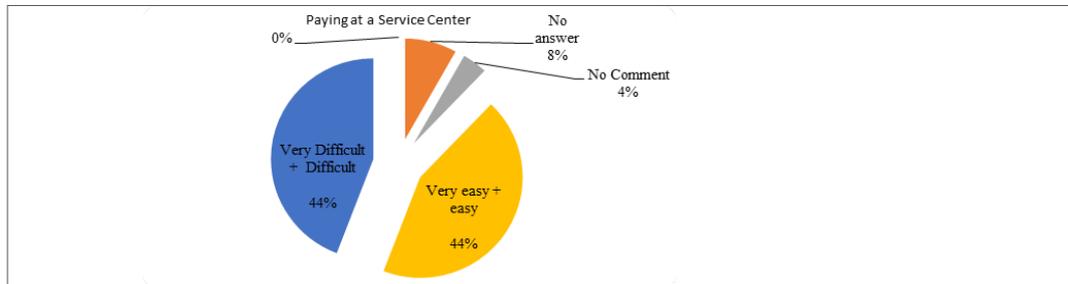
Recently EEP has employed different payment options, such as; personal Bank Payment, Directly from bank account payment, Mobile and Internet payment options. And the finding tells that, making payments through the Ethiopian commercial bank by appearing in person and via Mobile payment is being implemented and is becoming common. But this is not completely satisfactory. Their share is 34% and 14%, respectively.

The respondents that make payment directly from a bank account and via the Internet have a 5 and 2% share, respectively. In general, we can see from the results of the study that the new payment systems employed by the EEU are not being well used by the customers. Respondents indicate the following, as the reasons (for not using these options):

- We do not know if other payment systems are available.
- The EEU service centers are close to where I live.
- I'm used to making payments at the EEU service centers, so I don't want to explore other options.
- I make payment at the service centers because I want to receive the payment receipt.
- Since the monthly electric bill is excessive, I prefer the service centers to file a complaint and have it examined along the way.
- I prefer service centers because I want receipts for tax purposes.

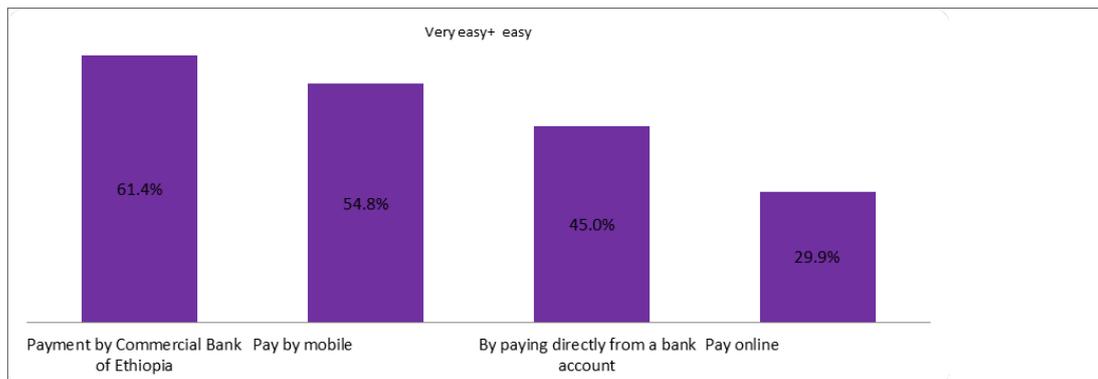
Moving on, the respondents were asked “which of the available payment options they think is simple to use by order of preference?” The option available for both Pre and Post-paid customers is the service center. 44% of the participants remarked that making payment at the service center is simple. On the other hand, a similar portion of respondents exclaimed the service is difficult. It is all shown in the graph below.

Graph 10:- Ease of making electric bill payments at the service centers



Only Post-paid customers use other payment options. In addition to the service centers, post-paid customers have the option to make payments at the Ethiopian commercial bank, mobile banking, internet banking, and by directly transferring from a bank account. Among these options, post-paid customers primarily favor making payments at the Ethiopian commercial bank, and next is the mobile transfer method.

Graph 11:- The ease of using EEU's newly applied payment methods.



The third place is the direct transfer of payment from a bank account; the last place is internet banking, according to the study. The last option, internet banking requires the access and know-how of using the internet on one side, and on the other, society is not well adept at using the internet. So, these results are unsurprising and expected from the study.

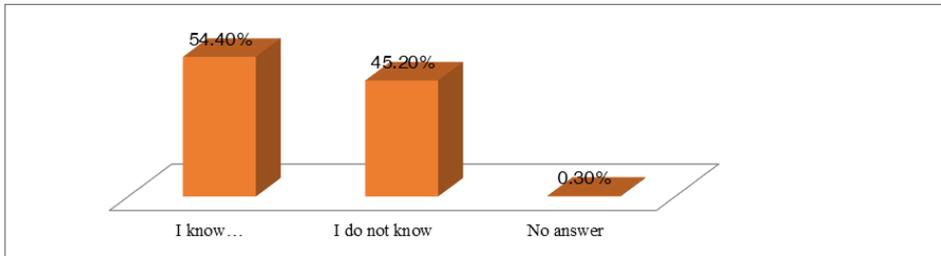
4.5 About a Recent Price Adjustment on the Electric Bill

The EEU indicated, in its annual performance report of the year 2019-2020 GC (i.e. 2012 E.T.), that price is calculated based on the tariff sections. For household customers, the tariff for post-pay customers is 10.00 ETB for up to 50KW and 42.00 ETB for those above 50KW. For pre-pay customers 3.50 ETB for up to 50KW and 14.70 ETB for those above 50KW. concerning general tariff sections, for all three-phase electric customers in the industry section tariff modification is made. To make sure the customers become aware of the modifications, the changes were posted on the EEU regional offices and service centers.

In connection with these, we asked respondents if they are aware of the modifications, and 54% have the awareness but 45% have no information about the changes made. On this topic, even though the majority of responses indicate that the EEU has made an attempt to create awareness in the community, ignoring those that do not have the information is not recommended. So, the organization needs to find ways to make the

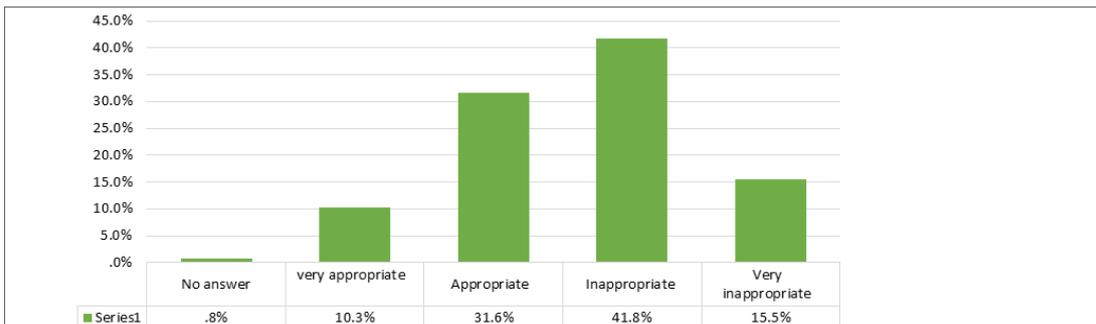
information available to the wider public. In addition to broadcasting advertisements using the mass media, leaving post notes on the electric-meters is recommended.

Graph 12:- EEU's tariff modification and customers' awareness



Respondents that are aware of the tariff changes are 5281 (54.4%), when asked about what their opinion is about the tariff changes, 42% responded very appropriately and appropriate. On the other hand, 57% replied very inappropriately and inappropriate.

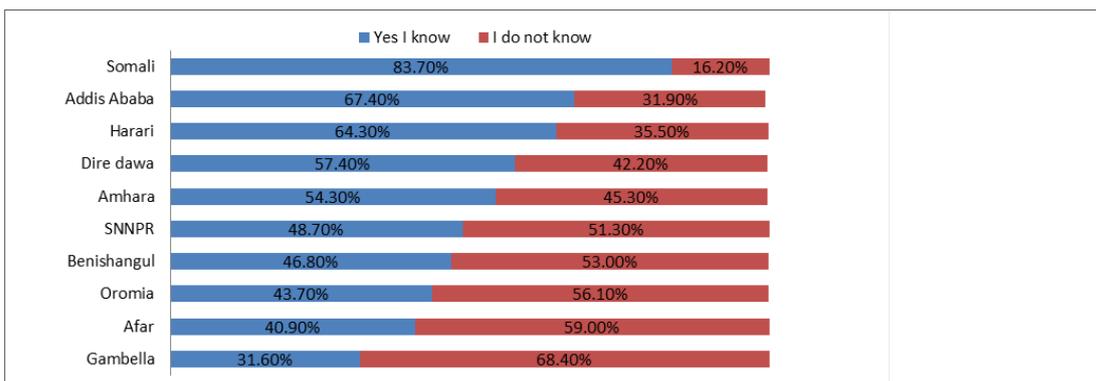
Graph 13:- Respondents opinion about the appropriateness of tariff changes



When compared to the previous study (the 2019GC study) 72% said the change is inappropriate. In contrast, those who responded negatively are lesser in number. However, the majority of participants still responded inappropriately.

When assessing the awareness of the community about the tariff change, the study found that the respondents who have the awareness based on regions are Somali 84%, Addis Ababa 67%, Harari 64%, and Amhara 54%. However, the following graph shows that the majority of the population in Gambella, Afar, Oromia, and Benishangul-Gumuz do not have much knowledge.

Graph 14:- EEU's tariff modification and participants' awareness by region

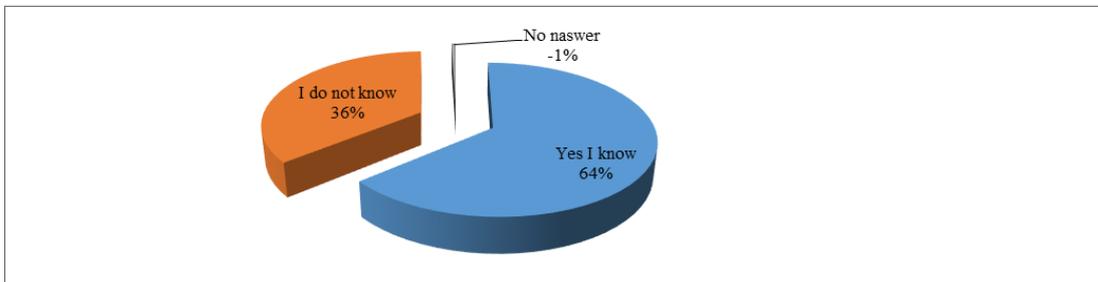


As can be seen in the graph above, there are regional states that have awareness about the tariff modification. Nonetheless, it would advance the operation and could lower the number of complaints if the EEU makes sure the price changes are noticed by the regional states with less information. Although in general, customers who know the changes have been made are the majority, those without shall not be neglected. Hence the EEU needs to give more attention, as recommended above.

4.6 Proper Utilization of Electric Power

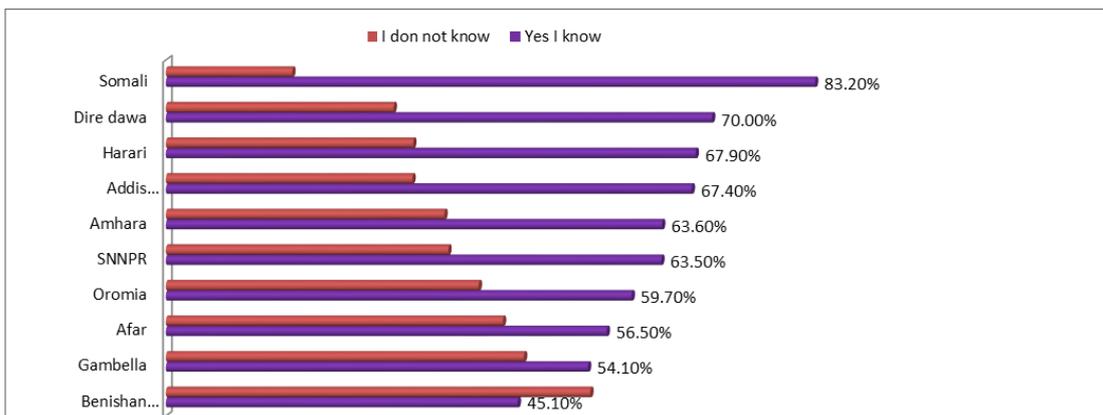
When asked, whether or not they have heard about saving and properly using electric power, 2/3 of respondents stated they have the information. On the other hand, effort needs to be made to create consciousness in the society, since 1/3 of the participants remarked they don't know.

Graph 15:- Know-how about saving and proper utilization of electric power



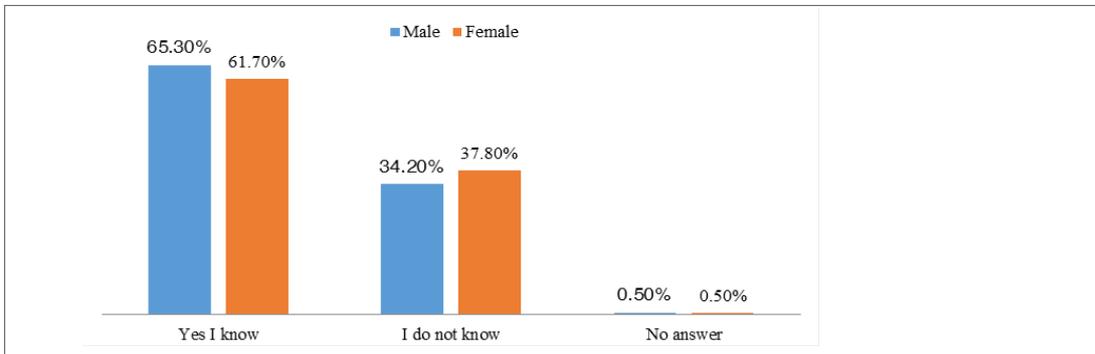
Based on regional states, save the lower awareness in Benishngul-Gumuz State, above 54% of customers in all regional states are informed about saving and proper use. We can consider this as a positive outcome.

Graph 16:- Respondents' Know-how about saving and proper utilization of electric power by regions



Male and female participants have a nearly similar level of know-how about saving and proper utilization of electric power.

Graph 16:- Participants' Know-how about saving and proper utilization of electric power based on gender



For the 6198 (64 percent) of participants who reported that they had received information on energy consumption and conservation in various ways, it is important to see how much effort they have taken to reduce their electricity bills. Hence we will take a look at Table 13 below.

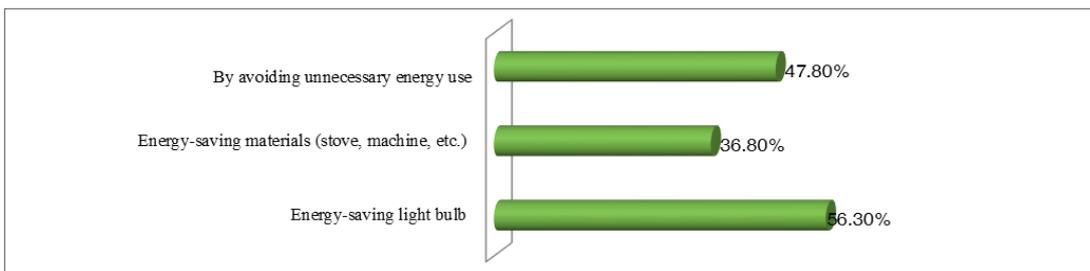
Table 13:- Efforts by participants to reduce energy bills by saving electricity

	NUMBERS	PERCENTAGE
No answer	82	1.3%
Very high effort	1575	25.4%
High effort	2092	33.8%
Medium effort	1867	30.1%
Low effort	338	5.5%
Very low effort	110	1.8%
No effort at all	134	2.2%

As shown in the table above, those who made high and very high effort accounted for 59%. About 30% disclosed they made a medium effort. In total, considering medium effort as a positive response, we can suggest 89% of the customers have made a great effort.

It should be noted that consumers who expressed their efforts to reduce energy consumption are more likely to make frequent efforts by using a device that reduces energy consumption or avoids unnecessary power consumption (selecting hours of use, etc.). According to the study, 56% of the population uses energy-saving light bulbs. Those using energy-efficient materials (stoves, machines, etc.) account for 37%. 48% reduced energy consumption by eliminating unnecessary energy use.

Graph 17:- Participants' remarks on using a power-reducing device



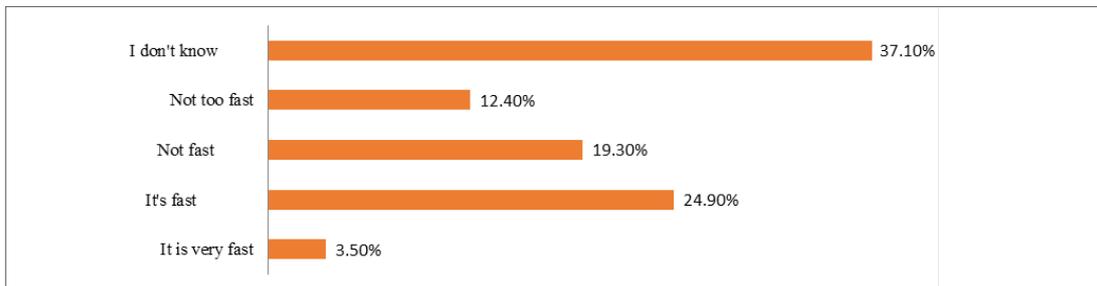
A similar result was obtained from our 2019GC EEU study. 79% knew that energy savings could reduce electricity bills. Therefore, most of the community understands that it is possible to reduce costs by using energy-saving light bulbs and energy-saving materials and avoiding unnecessary energy consumption.

In addition to the media, by using other means of communication, such as social media, the institution’s website, booklets, pamphlets, magazines, and more, the EEU may communicate the techniques to reduce energy consumption in the community. This has a significant contribution as it allows the EEU to devise a strategy to conserve energy (For example, to control those who use unauthorized power loads). The study is also an indication of the institutions’ need to use modern technology to address operational gaps.

4.7 Demand for New Electric Service and Customer Service

In line with the new plan, to increase the number of customers in rural areas and near the EEU network, during the budget year 2019-2020 (i.e. 2012 in Ethiopian calendar), including reconstruction, Out of the 405 towns listed in the plan for the 12 months of the budget year, 25,232 customers in 325 rural kebeles and villages had access to electricity and an electric meter installed, as indicated in the EEUs’ annual performance report for the budget year. Based on this information we asked respondents how they see the timeliness with which the institution responds to the demand for new energy. Their response is stated in the graph below.

Graph 18: New energy demand response rate and participants’ feedback

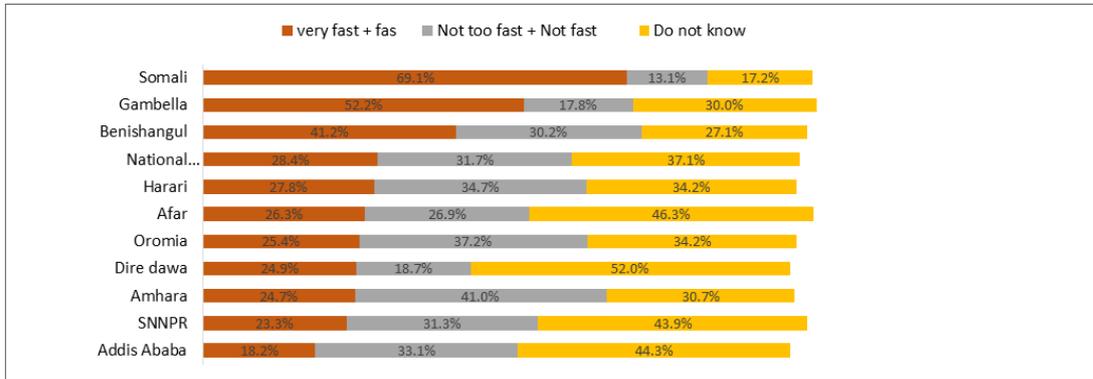


Accordingly, those who say they are ‘not very fast and ‘not fast’ have a 32% share. 28% replied the rate is ‘very fast’ and ‘fast’ while 37% said they do not have information. 69% of participants have either said the service response is not fast or that they do not have information.

Among the points cited by the study participants as the reasons for not being fast, we found;- The existence of a corrupt system from the top to the bottom, discrimination and bigotry, the tendency to demand bribery, and lack of the ethics to give an honest service in general. In this regard, EEU has a lot of work to do. Although there may be technical problems, lack of raw materials and equipment problems, transportation problems, manpower or shortage of professionals, etc., It is important to empower the workforce professionally and ethically and to create a system, organization, and attitude that can solve problems by coordinating energy.

In terms of regions, when enquiring how fast the response rate is those who remarked the service as ‘fast’ in the Somali region is 69% and Gambela 52%. Comparatively, most regional states say it is not fast. Also, most states do not have information. In particular, 52% of participants in Dire Dawa were found to be uninformed.

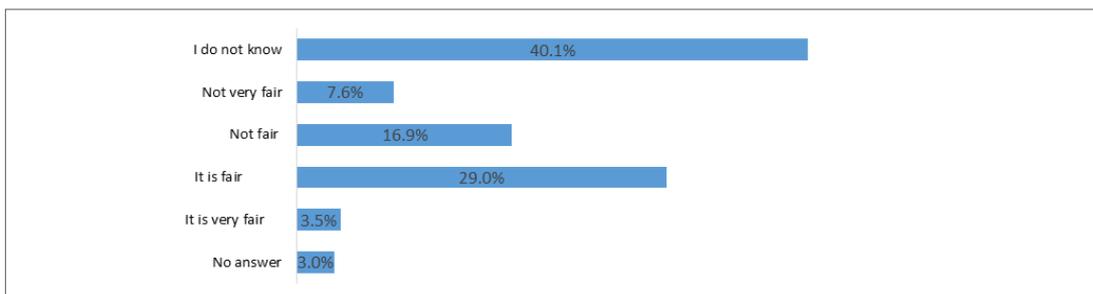
Graph 19: New energy demand response rate and participants’ view by region



Concerning the fairness of customer service in the demand for new energy supply, 33% of the respondents responded ‘very fair’ and ‘fair’. ‘very unfair and ‘unfair’ responses made 25%. In particular, 65 percent of the participants reported being unfair and did not have information. The reason given by some respondents as the reason for unfairness is the negligence by the management wing, discrimination, lack of transparency, and shortcomings in building power line infrastructure.

According to our 2019 GC EEU survey, 52% did not agree with the level of fairness of the service given for new power demand. Compared to this year, since only 25% say it is ‘not fair’ this year have shown better results. However, consideration needs to be given for the fact that this year, 40 percent of the study participants do not have the information to comment.

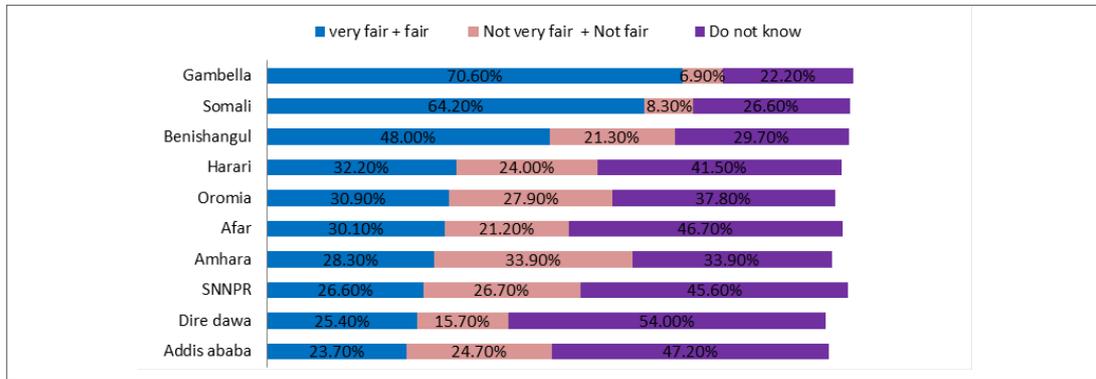
Graph 20: Participants’ comments on the fairness customer service for new energy



Nevertheless, according to the 2019-2020 GC (2012 EC) Performance Report, the aging of the distribution networks and substation sites as well as capacity constraints, increased Transformer damages and Failure to prevent this, and the lack of strong communication between the departments are the challenges faced during the budget year. These problems need to be addressed step by step, as they can make the treatment of power demands unfair.

Opinions about the fair treatment of new energy demand by regional states are as follows. 64% in Somali Region and 71% in Gambela believe that the treatment is ‘fair’. The majority of participants, in most regional states, responded to the treatment of new energy demand as ‘unfair’ and ‘No information’.

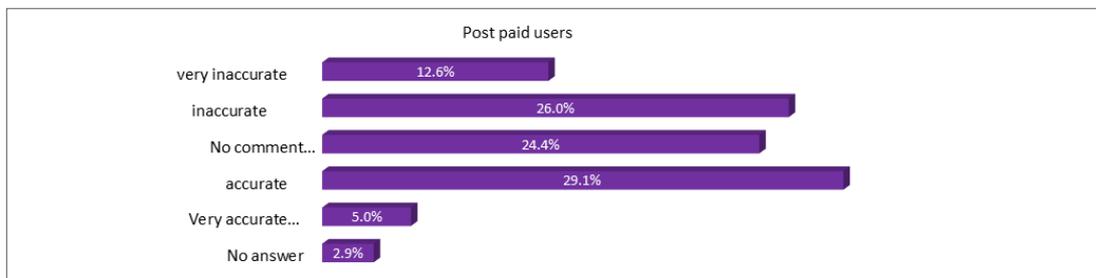
Graph 21: Participants’ opinion on the fair treatment of new energy request by region



4.8 Postpaid, Electric Use Counter Reading and Participants’ Opinion

Postpaid users (7855) commented on the accuracy of the monthly counter readings. A total of 37 percent said that the counter reading was ‘very accurate’ and ‘accurate’ whereas 44 percent said it was ‘very inaccurate’ and ‘inaccurate.’ The implication is that the accuracy of the counter reading is somewhat flawed.

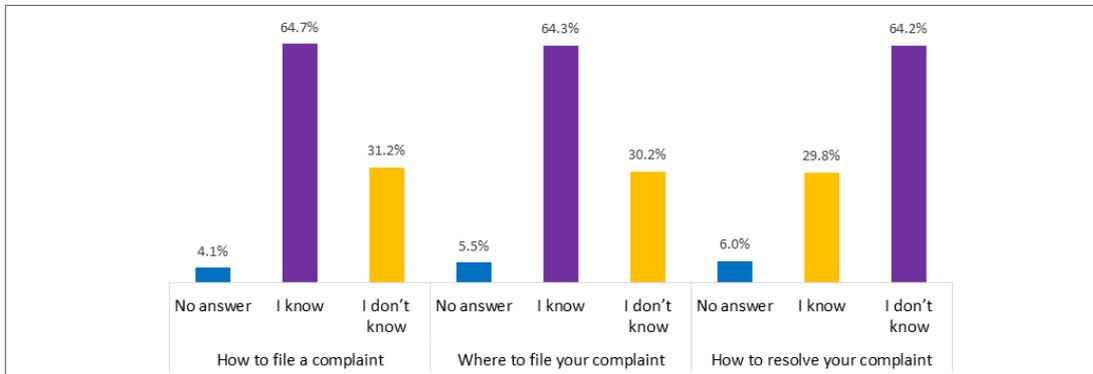
Graph 22: Counter reading accuracy and participants’ feedback



In the 2019 GC EEU study, 41% of the respondents reported that the reading of the counter was inaccurate. So not only has this year’s reading accuracy remained the same compared to last year, but the precision of counter reading seems to be declining. In the EEU’s 2019-2020GC (i.e. 2012 EC.) performance report, there is performance limitation to carry out tasks on time, also the inability to quickly address resource supply and enforcement capacity constraints are mentioned as downsides. Exploring this is a good thing, but as we have seen in the study, the EEU, in addition to making Procedural and Manpower adjustments, needs to implement modern technology-based work processes.

Related to this, we provided three related questions to the 44% (3752) participants who answered that it was not right or wrong and asked how and where to file their grievances and how to resolve their grievances. The responses are as follows.

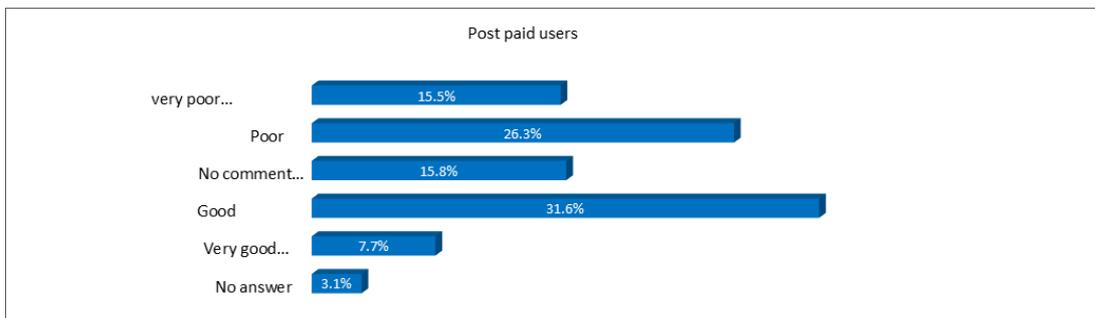
Graph 23:- Awareness about where and how to file a counter read complaint



Accordingly, those who know how to file a complaint and those who know where to file a complaint have a 65 percent share, separately. This should be taken as a good input. Hence, it is important to resolve grievances honestly and quickly. On the other hand, 65% of the study participants did not know how to resolve the grievance process. This means that the grievance redressal process is not clear to the public. Therefore, complaints should be made in a transparent and accountable manner when filing a complaint. If anyone is being held accountable, they should be held accountable and action is taken.

Postpaid customer (7855) respondents were asked about the timely reading of electric meters, with 44% responded 'good' and 'very good'. And 47% remarked 'poor' and 'very poor'. From this analysis, we can see that in terms of the counter reading the EEU has timeliness limitations.

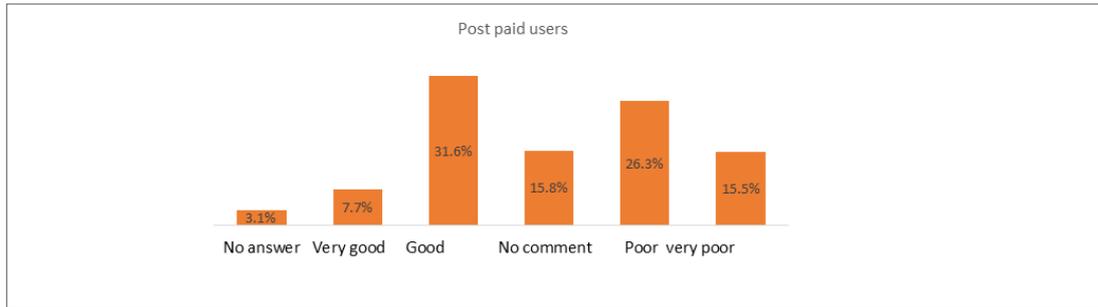
Graph 24: Respondents' opinion about timely electric counter reading monthly



Therefore, EEU needs to update its services to the community by making timely reading accessible to all its customers. The answer to the open question suggests that the root of the problems are work procedure (none usage of modern technology), lack of organization, and manpower.

Among consumers who have commented on how electric bills are timely delivered 56% responded 'good' and 'very good' while 36% of them replied 'poor' and 'very poor' see the graph for details.

Graph 25:- Participants' comments on the timely delivery of electric bill

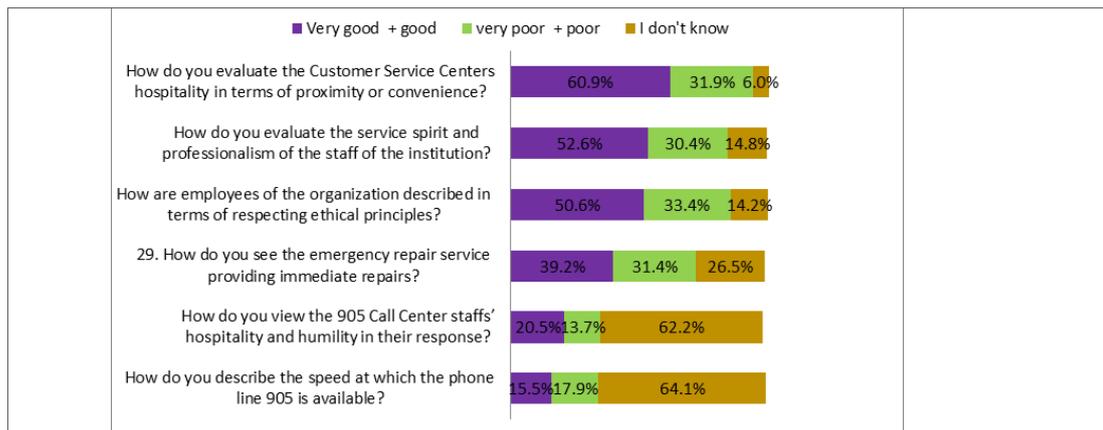


In this regard, the EEU has been enabled to achieve better results since it was able to make most of the billing available in modern ways, with banking and bank-related institutions. It eliminates the long queues that waste the community's working hours. It relieved staff stress and brought peace of mind. This has a positive effect on its development. Therefore, EEU needs to continue to update all its procedures by training and educating its staff.

4.9 Service Provision

A service by nature encloses intangible provisions and is often an important and valuable asset of a company. According to Gronroos (2007), it is a process that involves a variety of intangible tasks. In most cases, it's implemented between the service provider and recipient. In the process, it employs office equipment and systems that can be used to meet the needs and demands of the consumer.

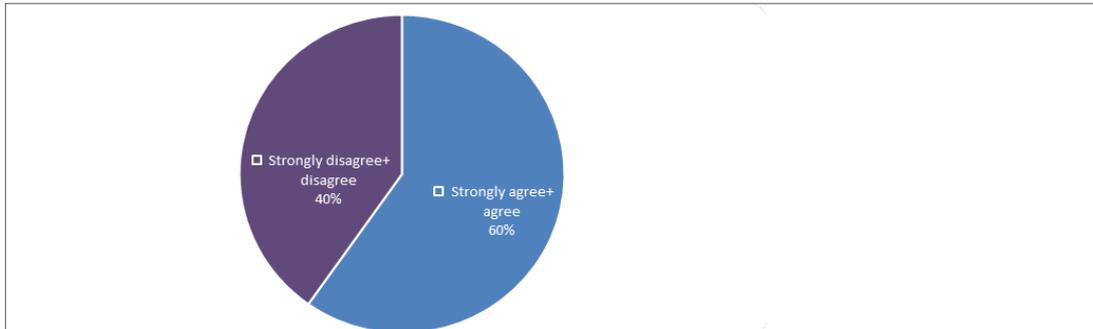
Service is an effort to meet customer needs based on knowledge or skills. Service is also a purpose-driven process that meets the needs of the customers which leads to successful economic efficiency by adding value to the recipient in the eyes of the customer. It is an activity performed by the service provider. The study participants were asked various questions about the service delivery and their responses are analyzed as such.



Ideally, unless the service provider and the recipient meet face to face during the service delivery process, the service will not be transferred from one to another. Consequently, service centers should be located close to the potential customer and set up conveniently. Accordingly, sixty one percent (61%) of survey respondents confirms that the service closeness of Ethiopian Electric Service was very good and positive and that EEU is

working closely with the client community. It's also recalled that in a 2018 survey, a similar question was posed to the participants, who said 55 percent of EEU's customer service stations were close and accessible

Graph 27: Closeness and accessibility of service centers



As compared to the results of the study conducted in 2018, this year's survey was positive by more than 6%. This shows that EEU has been expanding its service centers and implementing a decentralized service provision approach.

The institution's 2019 budget year report shows that the performance of preliminary repairs, as well as emergency repairs to the middle and lower lines, is very good. According to the report, more than 100% of the plans for both types of repairs have been implemented. Besides, transformer emergency repairs are 70 percent complete, according to the report. The details are as follows.

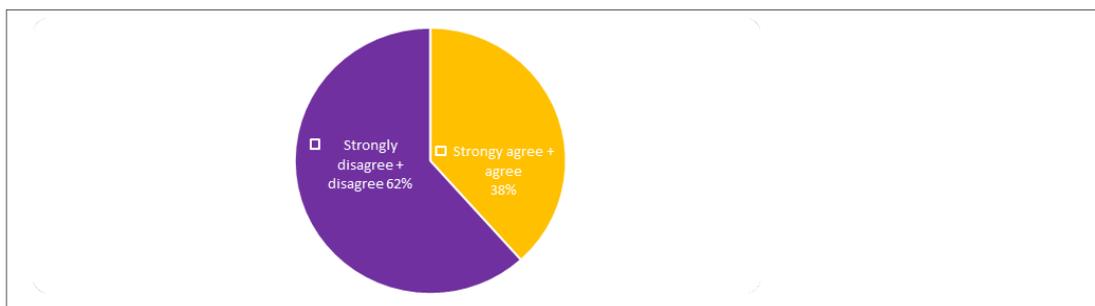
Table 14: Transformer, lower and middle line transformers performed by the regions Preliminary Urgent Repair, 2020

ተ.ቆ	ክልል	የትራንስፎርመር ትድመ ጥገና ስራ በቁጥር			የመካከለኛና ዝቅተኛ መስመሮች አስተካኪ ጥገና ሥራዎች በኪ.ሜ			የትራንስፎርመር አስተካኪ ጥገና በቁጥር		
		ዕቅድ	ከገጠገ	አረጋገጠ በመቶ	ዕቅድ	ከገጠገ	አረጋገጠ በመቶ	ዕቅድ	ከገጠገ	አረጋገጠ በመቶ
1	ቤንሻንጉል ጉምዝ	331	312	94.26	10,513.52	8511.00	80.95	1293	777	60.09
2	ጋምቤላ	234	173	73.93	7,439.39	6025.60	81.00	915	643	70.27
3	አዲስ አበባ	2477	2336	94.31	78,574.76	225331.08	286.77	9665	6613	68.42
4	ትግራይ	1494	4708	315.13	47,403.08	41795.52	88.17	5831	4509	77.33
5	አፋር	467	700	149.89	14,817.31	5483.82	37.01	1822	566	31.06
6	አሮጌያ	6366	6625	104.07	201,970.34	210464.00	104.21	24845	22531	90.69
7	ሐረር	228	182	79.82	7,254.95	9220.50	127.09	892	677	75.90
8	አማራ	3793	3399	89.61	120,321.45	132740.00	110.32	14801	9791	66.15
9	ድረጅዋ	319	378	118.50	10,144.63	11794.00	116.26	1247	816	65.44
10	ደቡብ	2711	3311	122.13	86,014.16	69984.03	81.36	10581	3618	34.19
11	ሶማሌ	957	890	93.00	30,372.40	14045.00	46.24	3736	2307	61.75
ጽምር		19382	23014	118.74	614,826.00	735394.55	119.61	75633	52848	69.87

The results of this particular study are not in line with the results of the previous findings as seen above. The results indicate that only 4 in 10 people (39%) claim that they get emergency repairs for damaged transformers and their urgent needs are not addressed quickly.

The number of respondents who affirmed the emergency repairs of EEU to be very weak and weak is almost equivalent to the above figure. Accordingly, 31% of the overall respondents confirm that emergency repair services are very weak and weak. It can be understood that the difference between the two results is very wide. The above results are further reinforced by the results of a 2018 study; when asked by the EEU that “repairs will be done quickly”, most (62 percent) said they did not agree with the idea.

Graph 28: Maintenance service is urgently provided 2018 study



Building the role and responsibilities of service providers is critical in creating an efficient service provision in an institution. The fact that EEU is the only electricity provider in our country emphasizes the amount of burden and responsibility of its employees. Services provided by EEU are not available in any other institution. For example, if an electric user says he/she does not want to continue with EEU anymore; they can't go to another provider. Therefore, the staff of the institution should serve the beneficiary community as sincerely, honestly, respectfully, and competently as possible.

Participants were asked three questions about EEU staff. More than half of the study participants agreed that the institute's staff adheres to the spirit of service and professionalism as well as ethical principles.

On the other hand, respondents who stated differently still have a significant proportion. Regardless, participants who replied positively are more than proportional.

The 905 call center service is mainly accessible in and around Addis Ababa. Most regions have their own call centers. As a result, regions instead of 905 call centers; they use local call centers. Most (62%) did not have information about the hospitality and humility of 905 call center staff. This shows, there may be no the 905 call center in the regions; or, they know there is a call center but they don't use it. Of the remaining participants, 21 percent of them described the call center staff politeness and courteous as good and very good. Fourteen percent, on the other hand, described the staff politeness and courteous as weak and very weak.

Questions directed to the 905 hot-line gathered diversified responses. Close to 60% of respondents have no idea about the call service line. This indicates that either the customers have no idea about the existence of the service or are unwilling to use it. Of the remaining respondents, 21 percent awarded very good and good claiming that the call center staffs were very polite and courteous. Meanwhile, 14 percent described their service as very weak and weak.

Besides, there was a question aiming to gauge the easiness of getting the 905 call center. For that, respondents were asked to measure the accessibility of the service hotline. Contrary to the findings of the study above, those

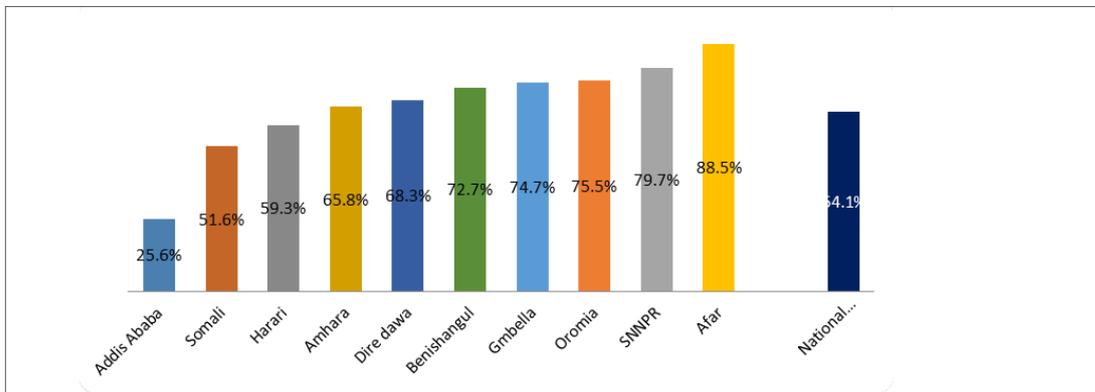
who responded negatively surpass positive respondents. Accordingly, 18 percent of participants agree that it is very difficult and difficult to get the call center line quickly. In contrast, those who responded positively accounted for 15 percent

Report of the organization in the 2018 fiscal year asserts that customer complaints are being processed at 905 call center and referrals are being provided to the relevant departments. According to the report, out of the 6,201,307 maintenance calls received during the fiscal year; 3,362,013 calls received complaints, most of which were repeated calls; a total of 922,753 calls were sent to the Maintenance Department, and 393,990 calls were solved. It is evident from the report and the assessment that the call center is not available quickly and that the service is not efficient and that users are not satisfied.

As compared to the results of the survey in the regions under study, customers in Addis Ababa are aware of the 905 call center; they also have serious complaints about service delivery. Nearly half (47 percent) of respondents to the EEU call center said that the quick accessibility of the EA call center was very weak and weak.

The study also affirms that the 905 call center is not uniformly known throughout the country. Accordingly, those regions which are mostly unaware of the service are Afar, SNNPR, Oromia, Gambella, and Benishangul-Gumuz regions in order of magnitude. In their order of appearance, their share is 89 percent, 80 percent, 76 percent, 75 percent, and 73 percent respectively.

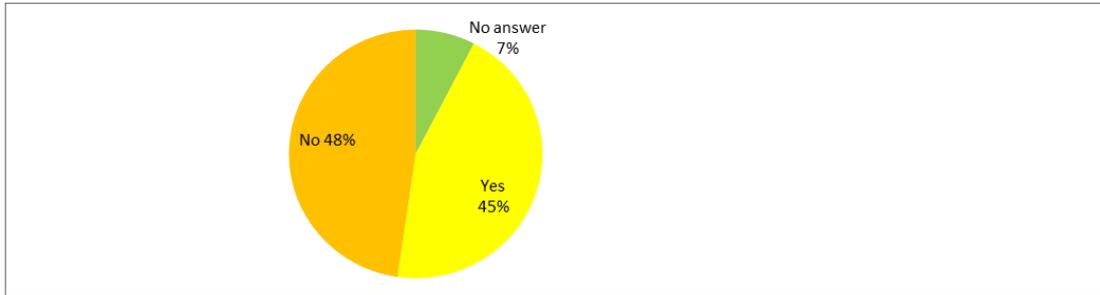
Graph 29: Regions with no or less awareness on 905 Service line



4.10 Prepaid Billing Service

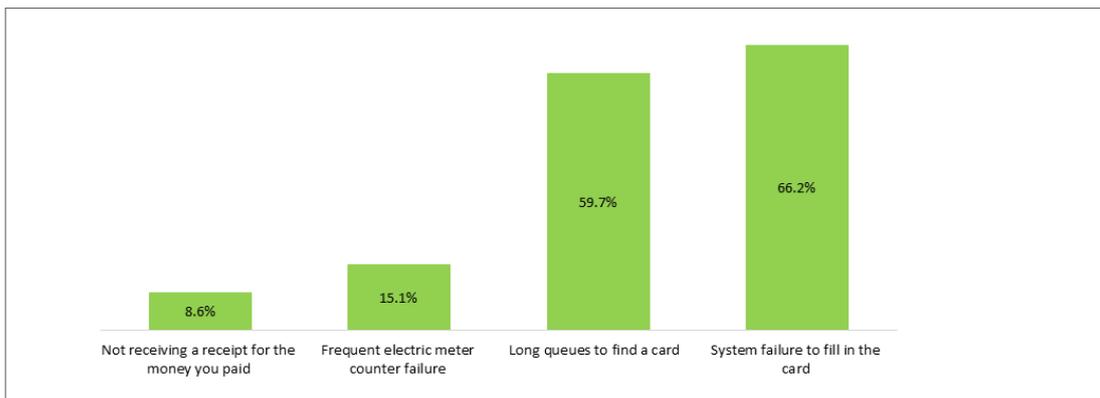
Findings from the survey conducted in 2018 highlighted some of the main issues in improving prepaid card payment services. Accordingly, some of the participants in the case study stressed the need for early payment services, especially concerning card filling. Similar questions were raised in this study, as well. Respondents were asked the same question in which, 48 percent of the 1,847 prepaid customers did not have any problems with filling up their prepaid card. Approximately 45 percent of participants reported having problems with their prepaid services.

Graph 30 : Category: Experience with filling out a prepaid card Problem, absence



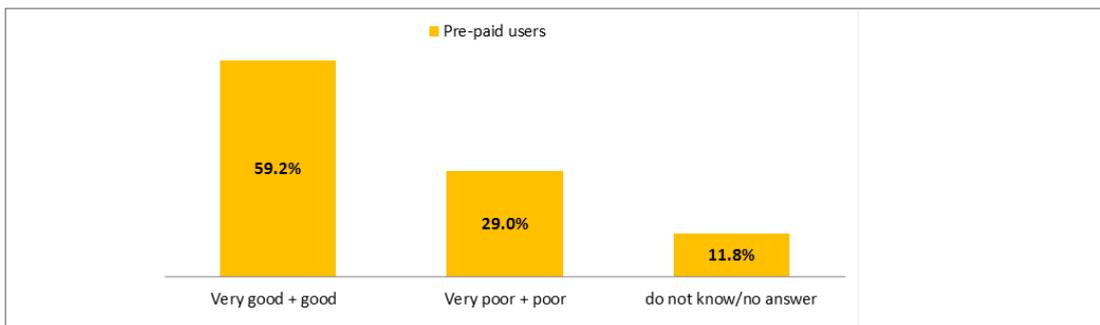
The primary problem faced by prepaid customers is the lack and interruption of a network system for filling out the card. The second is prolonged lines at service centers to fill out a card. They accounted for 69 percent and 59 percent respectively. The said problems often are detrimental to efficiency and cause frustration and time wastage of the customer.

Graph 31 : Category: Problems faced by the study participants regarding filling out a prepaid card



Participants in the study were asked, “How do you describe the convenience of pre-payment card filling and service centers?” Accordingly, Six out of ten users (59%) of the prepaid users said that the service centers are very good in terms of convenience and accessibility. Three out of ten (29 percent) responded differently and claimed it’s not convenient and accessible. In general, the results of the study indicate that the payment service centers have been organized in such a way that they are easily accessible in each area. It shows that they are convenient and accessible to the user community. However, EEU must continue to work to make it more accessible to the community.

Graph 32 : Accessibility and convenience of service centers

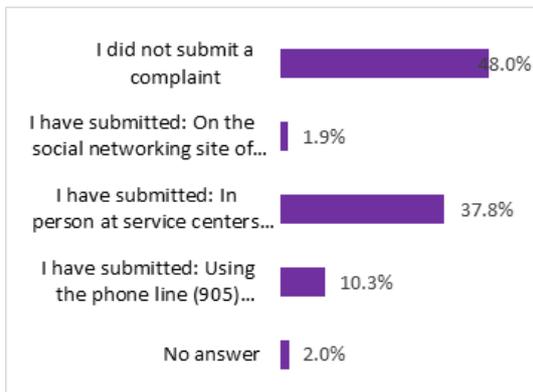


4.11 Grievance Presentation and Handling Procedure

As we have seen, there are problems with prepaid services and problems with the provision of electricity in general. In this section, we will look at customer’s complaints about the provision of electricity, how they filed it, and how long it took them to respond to their complaints, and so on.

About 50 percent of the respondents reported that they had complained about the provision of electricity, and about 48 percent did not. Of those who complained, 38 percent of those went to a physical service center and filed their complaints and their numbers are greater than those who complained on phone by threefold. A total of 905 customers complained by phone. Those who lodged their grievance in person surpass the number of people who did it on EEU social media. This wide disparity may be related to the expansion and access of technology infrastructures such as telephones and the internet, the lack of awareness among consumers even in areas where the technologies are better, the failure to promote the grievance options, and many other related factors.

Graph 33 : Out- Complaint and Complaint Options

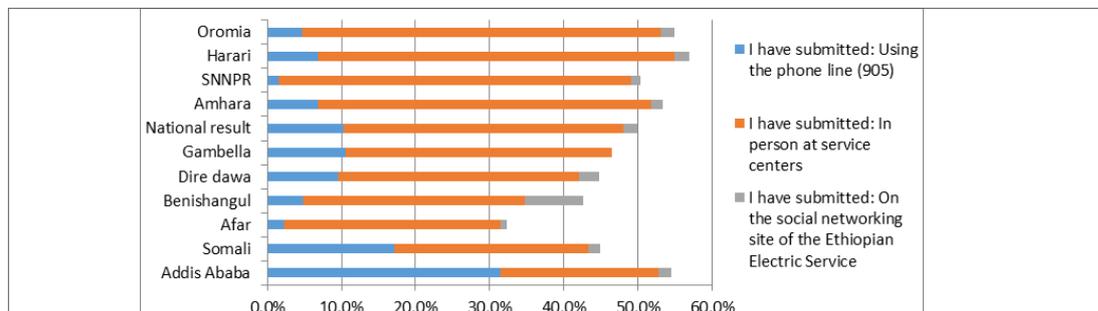


Graph 33 : Out- Complaint (2011)



The number of participants who went to physical service centers in all regions and city administrations was found to be high. This shows that in the areas surveyed, going to the physical service centers is the main way to file a complaint.

Graph 34 : Category: Payment Type and Complaint Options by State and City Administrations

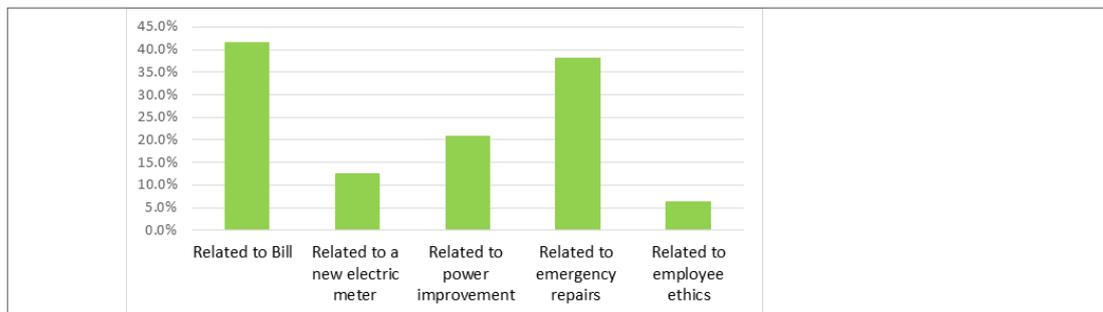


On the other hand, filing a complaint about the phone (905) and submitting it on an online or social networking site is still in its infancy and needs to be improved. Nonetheless, the Addis Ababa survey participants (31 percent) are better than other areas, especially in telephone complaints.

Looking at the experience of housing, business, and industry participants in the provision of electricity. The number of participants who said they had never complained was greater than the number of users who said they had never complained. Although the disparity between homeowners' and business customers' complaints presentation is not statistically significant; the difference is more prominent among industry participants.

Of the respondents who complained about the provision of electricity, the majority indicated that their complaint was related to Bill. Their share is about 42 percent. Billing complaints amount larger than any other complaints type. For instance, they are more than double those who presented power improvements, more than three times of those who complained about new meters, and nearly six times those who blamed employee ethics.

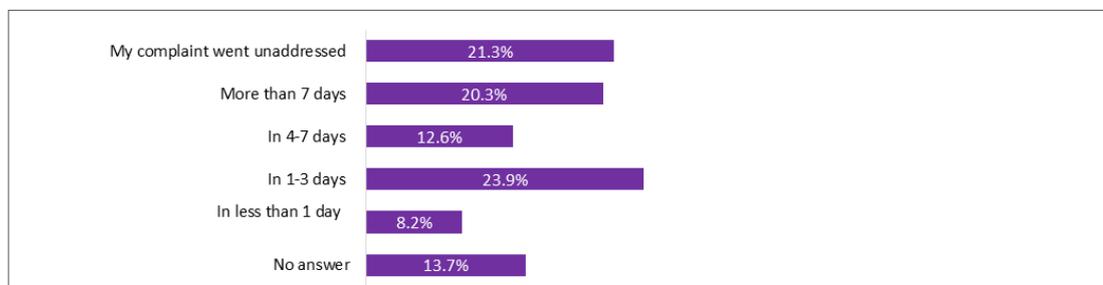
Graph 35 : Types of Complaints and Participants' Comments



Emergency repairs ranked as the second most significant complaints record amounting to 38 percent. Complaints about other options range from 21 percent to 6 percent. Participants in the study reported complaints about inaccuracies, miscellaneous payments, interruptions, and queuing.

About 1/4 of the study participants reported that they complained about the provision of electricity service and received a response within 1-3 days. More than one-fifth of the respondents didn't receive help despite physically presenting their complaints in person to service centers. Meanwhile, two-thirds of the respondents received some kind of responses at different times.

Graph 36 : Dates of complaints resolution in figures



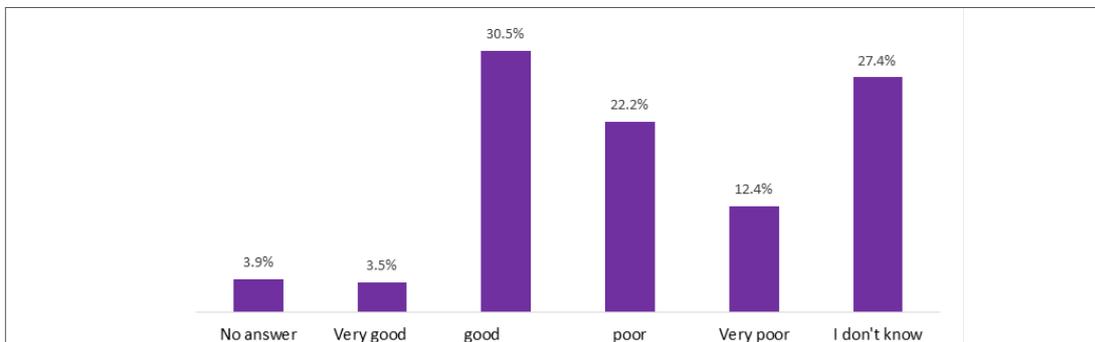
In the 2018 survey, 54 percent of respondents' complaints were resolved and 44 percent did not have the chance. In this regard, the number of customers in this study whose claims were addressed surpasses those in the earlier study by 11%, and the number of none responded complaints is less by 23%. This indicates that EEU is improving in complaint resolution.

Customer complaints reception and resolution systems at service centers are said weak (weak and very weak) by 35% of the respondents. Almost 34% of the participants described the customer complaints and resolution as good and very good. The main weaknesses of the service centers' customer complaints and resolution systems were cited as lack of access and prompt response to complaints, lack of proportional staff with the bulk of complaints, frequent appointments, harassment, and often absenteeism in particular those in authority.

Although we divided the study participants into prepaid and postpaid, the situation is similar. Overall, participants' comments suggest that customer service complaints and resolution procedures in service centers have a long way to go in terms of creating customer satisfaction.

To measure the customer's level of awareness in EEU's complaints resolution procedures, 33% said they had no information. Meanwhile, another 33% said it's good and very good and the remaining 30% said it's weak and very weak. The main reasons for the poor customer complaint management as described by the participants include lack of satisfactory response, poor responsiveness, harassment, corruption, and procrastination. This indicates the prevalence of a gap in customer care and it's proving to be a great source of grievance.

Graph 37 : Evaluation: Response to Complaints by Electricity Service Institute Managers

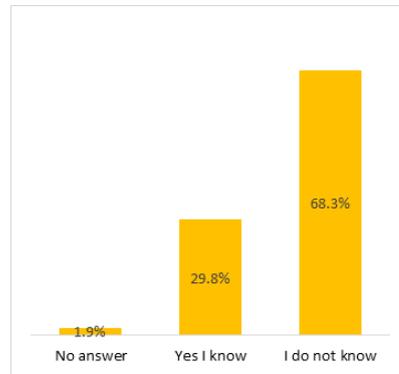


4.12 Power outage notification

In the above sessions, we covered customer complaints and the overall services of EEU. In this section, we will look at the participants' access to a power supply and power outages, how to access the notification for the ration, and the responses provided by the organization.

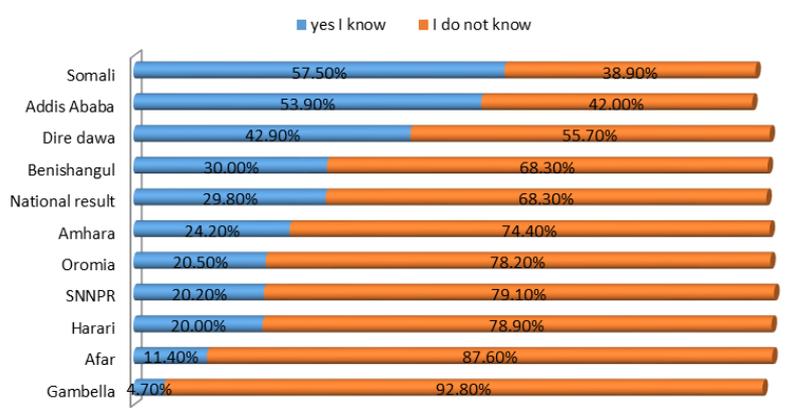
The lion share of respondents of the study, Sixty-six percent, of participants in the study, said they were unaware of the power outages notifications. They are also more than twice as many participants (30 percent) who said they knew the notification. As a result, most participants did not know the notifications. This is a negative result. The findings indicate that there is a gap in access to information.

Graph 38 : Power outage notification



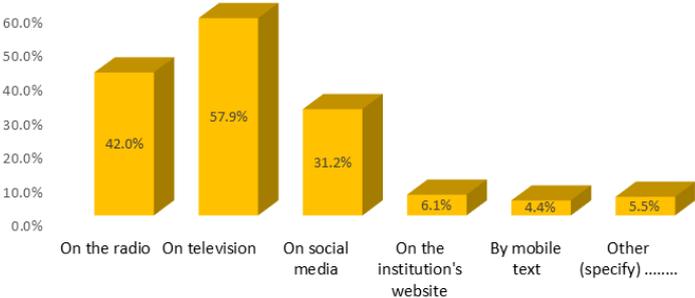
In Somali (58%) and Addis Ababa (54%) of participants in the study said they know about the notifications making them greater in number than those who said they didn't know about the notifications. Elsewhere, those who said they did not know the notifications were outnumbered. Comparing regional distribution, Gambella (93 percent) and Afar (88 percent) of respondents confirm they didn't know about the notifications. This indicates that the larger proportion of residents in Addis Ababa and Somali were better prepared to handle power interruptions and took a precautionary approach and planned to manage their electricity-related activities by understanding the power supply and disconnection notifications. In Gambella and Afar, there is little information about the notifications, which means that there is a risk that they will be harmed.

Table 40: Participants' perception of shift power supply by region



Among the source of information through which power interruption is communicated, television (58 percent) is still the biggest source of information. Whereas, radio accounts for 42% of the information source. Followed by social media (31 percent). The organization's website and mobile text program as a source of information on power outages are very small. The results of the study show that access to the power supply notification is more accessible on television, radios, and social media than the institute's website and mobile text.

Graph 41: Ways of shifting power supply acquisition methods



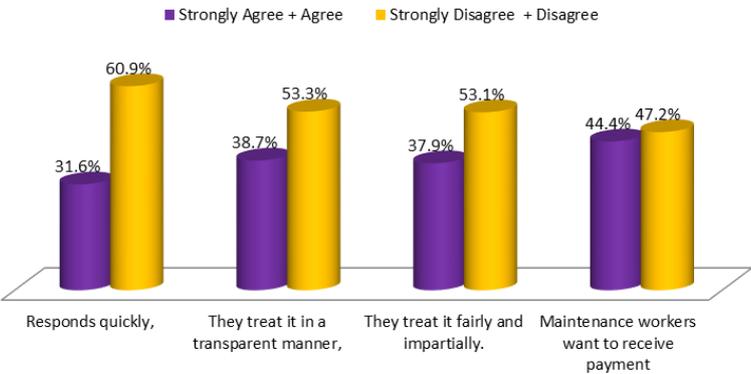
In addition, some of the participants in the study said that they would find out about the power outage notification by asking people from the neighborhood and locals, but there were also some who said its entirely off their pre-set schedule. This in turn disrupts the customer’s work, causing unnecessary expenses and often puts them off their plans.

The study participants were asked about the kind of response they are given at times of power outage. The questions were ranked in four separate measurements. These are whether their request is speedily resolved, are their openness in their approach, is the service not discriminatory and fair, and ethical behavior of the employees and maintenance workers of EEU.

The sum of disagreements on all criteria (disagree and strongly disagree) is greater than the sum of agreements (I agree and strongly agree). The majority of respondents (61 percent) disagreed with the “fast response” criterion. Similarly, in a 2018 survey, most respondents (57 percent) disagreed about the speed with which maintenance work was provided. Thirty-five percent agreed on the speed of repairs.

Other measures including transparency and discrimination exhibit very close results. Accordingly, “transparent treatment” (53%) and “non-discriminatory treatment” (53%) were witnessed as the responses of participants of the study. In general, participants’ comments indicated that they were unhappy with the response to power outages, particularly in the area of speedy maintenance.

Graph 42 : Re- Response to power outage

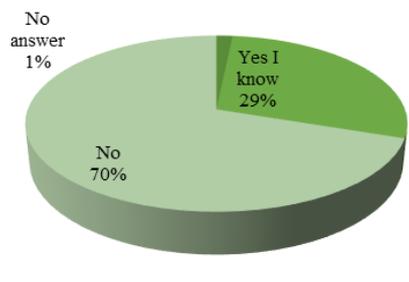


4.13 Electrical Injuries and Participants' Comments

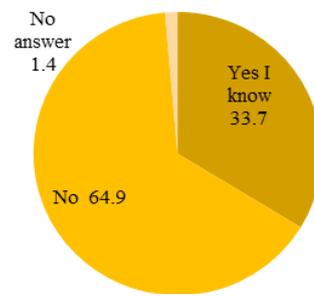
Personal and property damages due to electricity are often serious. When asked in a 2018 survey whether they, their families, and property were damaged by electricity, two-thirds said they had never been harmed. One-third had been injured. In this study, most (70 percent) stated that they, their families, and their property had never been harmed by electricity. Those who say they have been injured account for 29 percent. Participants in this particular study who had been injured with some kind of electric shock account for 29 percent which is 6% lesser than those in the 2018 survey (34 percent injured).

It should be noted that one out of four participants in this study was injured. It should be noted that in addition to the various physical, psychological and other effects this can have on people, it can be devastating as a country and appropriate attention should be rewarded.

Graph 43 : Study participants who were electrocuted

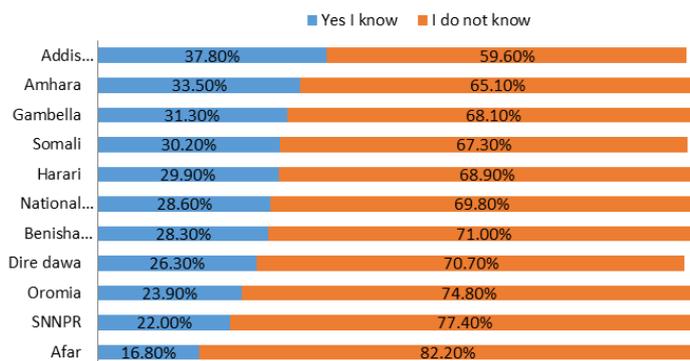


Graph 44 : Participants in Electrical Injury (2018)



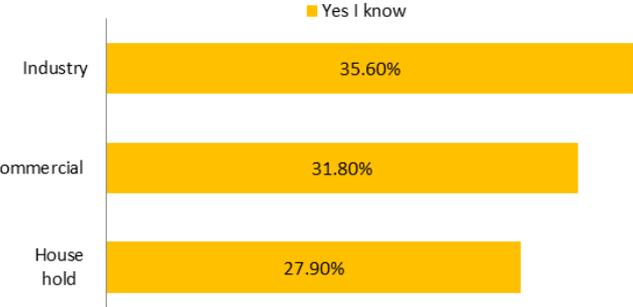
Among those participants who said they sustained some kind of injuries, Addis Ababa (38 percent), Amhara (34 percent), Gambella (31 percent), and Somali (30 percent) were the most affected, according to the study. The lowest risk was reported in Afar (17 percent).

Graph 45 : - Participants in the study who have been injured by an electric shock in the region,



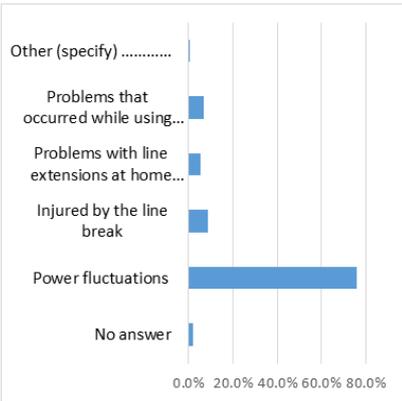
Industry participants (36 percent) are the most affected by electricity-related injuries. Business (32%) and residential (28%) participants followed. This is especially true for those who use more electricity than homes, such as industry and commerce. Therefore, special attention should be paid to such users.

Graph 46 : Study participants who have been electrocute by type of users

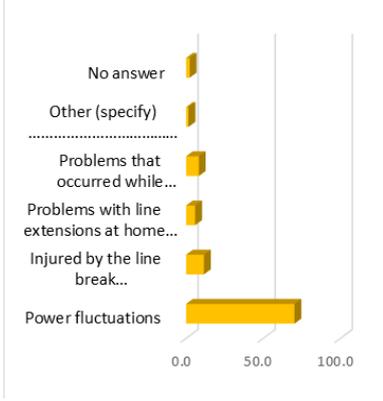


More than three-quarters of the participants attributed the damage to power fluctuations. The rest were injured due to line breakage, power outages, and other causes. The 2018 study also confirms this. Most of the study participants in 2018 amounting to 70 percent reported that they had been electrocuted. This shows that the source of most electrical hazards is not from the power user customer but the power utility provider.

Graph 47 : Causes of Accident

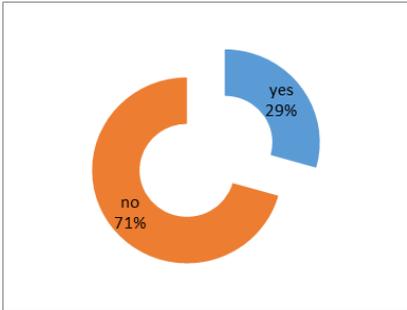


Graph 48 : Causes of Accident on 2018

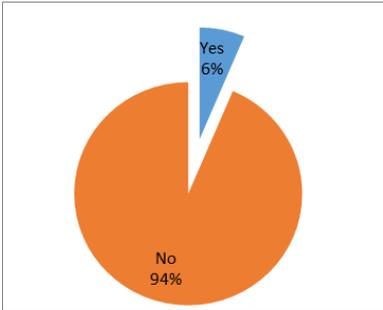


Of the total population who sustained an electric injury, a large number of participants (40 percent) reported that they never lodged a complaint. Among those who were able to submit a complaint, most of the complainants (71%) said that our complaint was not properly addressed; 29 percent said their complaints were properly addressed. This shows that those who say that we have not been treated fairly are more than doubled.

Graph 49: complaints proper entertainment



Graph 50: Damage compensation



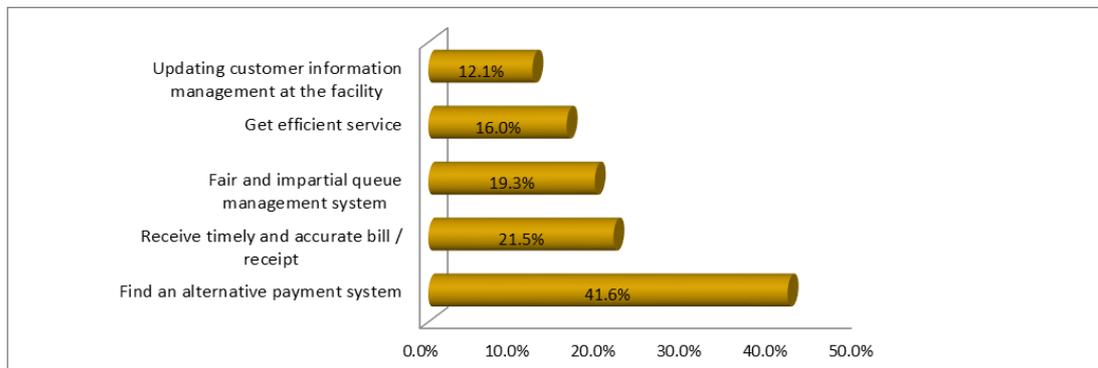
A total of 1,607 participants in the study complained of damages and requested compensation. Only a small minority (6 percent) said they had been compensated. The remaining (94 percent) participants said they had not been compensated. In general, the comments of the study participants may indicate a gap in both the complaint and the response to the complaint.

4.14 Modern Operating System

The Ethiopian Electric Utility has been implementing operational modernization software to improve its services. In particular, since 2019, there has been a modernization of the EEU’s overall process; called ERP. This practice will be fully operational by the institution until 2022¹³. ERP is a practical approach designed to provide timely and accurate billing or payment receipts to EEU, creating a fair and impartial queue management system, updating customer information management, creating alternative payment systems, and providing efficient services. It has been one year since the practice began. To see the changes that have taken place during this implementation period, the participants were asked, “Which of the following is the benefit of the recent ERP?”

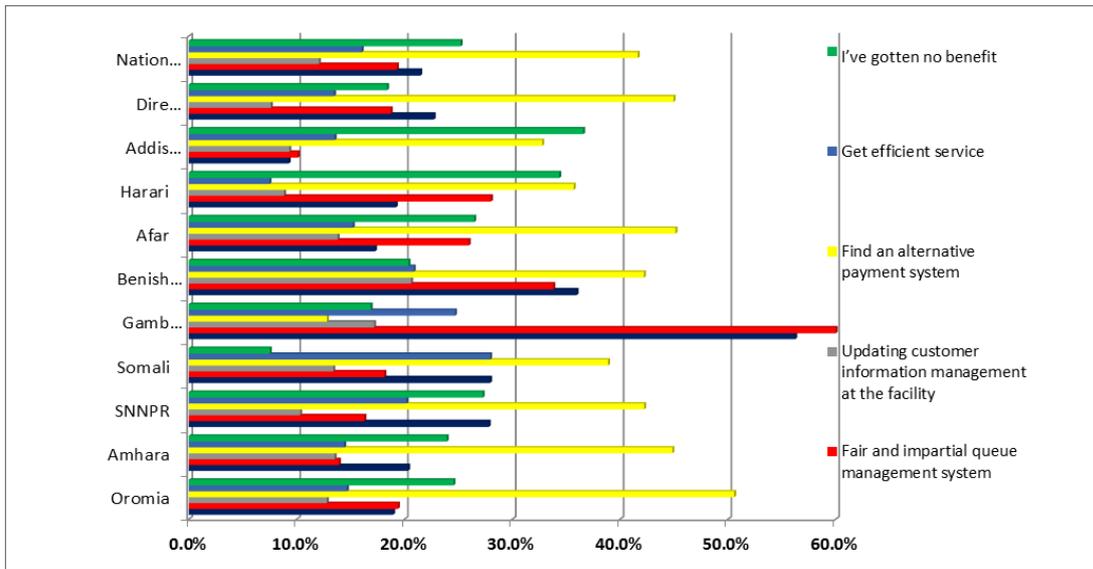
They understand that they have been offered an alternative payment system in the first place. Next, the participants testified that a timely and accurate billing and the non-discriminatory queuing system is being created.

Graph 51 : Extra: The Benefits of ERP Implementation Comments from participant



The effect of the ERP implementation was also evaluated on regional customers. Looking at the results in the region, the results for the rest of the regions, with the exception of Gambella and Addis Ababa City customers are similar. Most of the study participants in each region agree that the EEU has recently introduced an alternative payment system. The details can be seen in the graph below.

13 <https://addisfortune.news/electric-utility-employs-erp-for-59m/>



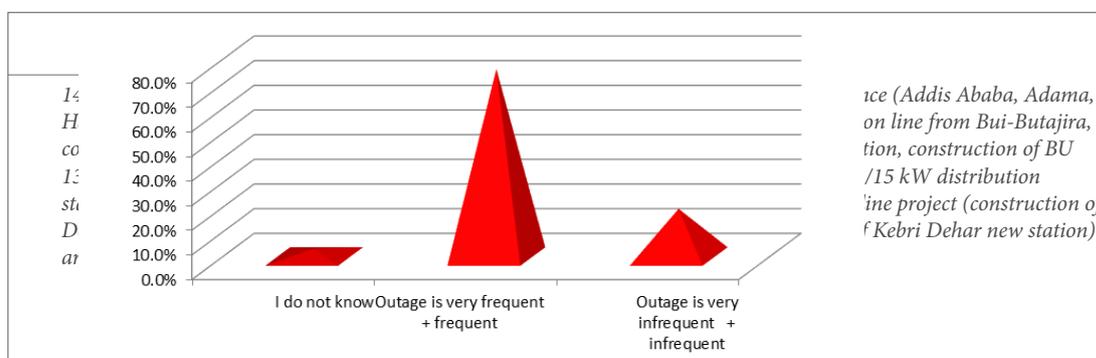
Meanwhile, a significant number (37 percent) of Addis Ababa respondents have said that they have not benefited from the EEU in recent years. Sixty (60) percent of Gambella study participants claim they get non-discriminatory queuing and 56 percent receive timely and accurate bill receipts after the implementation of the ERP.

4.15 Frequency of Power Outage

Electricity in our country is widely disrupted for various reasons. Moreover, there has been a shift in service nationwide in particular in 2018. According to the organization's 2019 report, various capital projects are underway to increase access to electricity at the institutional level and reduce power outages¹⁴.

Although the institute is implementing a wide range of projects, the results of the study show that there are serious complaints from the consumers about power outages. Three-quarters of the study participants reported that power outages were widespread. This is a very high figure.

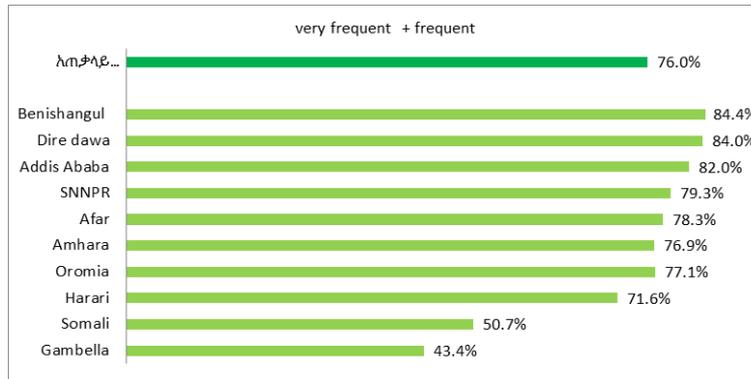
Graph 53 : - The power supply supplied by EEU is disconnected from the power supply Participant feedback in terms of frequency



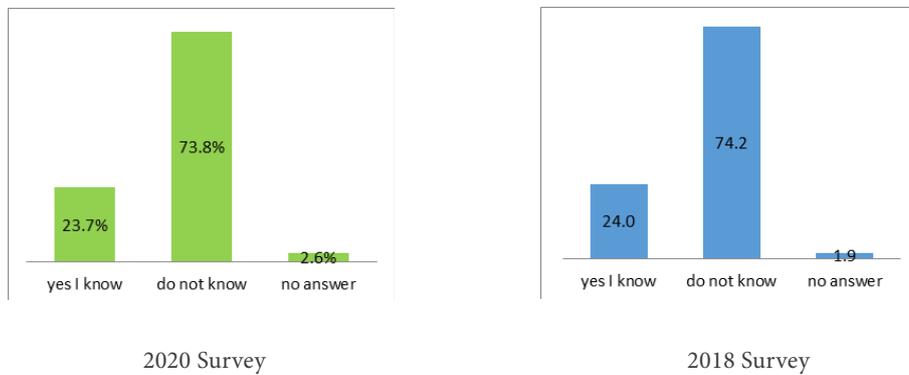
ice (Addis Ababa, Adama, on line from Bui-Butajira, tion, construction of BU /15 kW distribution ine project (construction of f Kebri Dehar new station)

According to the study, the frequency of power outages is predominant in Benishangul-Gumuz, followed by Dire Dawa and then in Addis Ababa. Relatively low power outages occur in Gambella and the Somali region. The details are as follows.

Graph 54: Regional description of EEU supplied electricity is power outage frequency



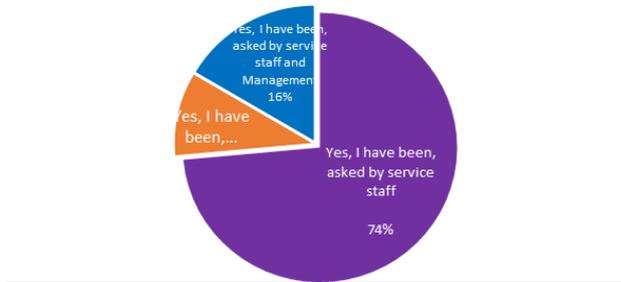
Improper linkages and exchanges between government service providers and consumers are particularly common in government agencies. The fact that EEU is the only electricity service provider in our country makes it even more vulnerable. To address this, study participants were asked whether EEU staff and management had unfairly asked them for illegal benefits to provide electricity. Accordingly, three-quarters of participants have never requested this either on them or via family members. In a 2018 study, they were asked the same question: the results are quite similar. See the graph below for details.



Graph 56: Have you or your family ever been requested for corruption by power utility workers and management?

The results of the study above show that the number of participants who were asked for illegal benefits is not that different from the previous study. A quarter of the participants in the study said that they were asked to give inappropriate benefits to EEU staff and leaders in both studies. This means that one in four participants in the study has been asked about improper use or corruption in obtaining EEU services. Therefore, the institution needs to make its personnel freer from corruption, more efficient, and honest. Participants in the study indicated that the question of inappropriate use is particularly prevalent among maintenance staff.

Graph 57: Proportion of corrupt practices among EEU personnel



Of the total customers who said they have been requested for a corrupt means (2295), three-quarters have been misused by EEU maintenance and repair staff. Next, 17 percent reported abuse of power by staff and management. The remaining 10 percent said they had been asked by the leadership. We will look at the results of the survey in the participants' region and type of payment.

Graph 58: Regional description of an abuse of power by EEU personnel

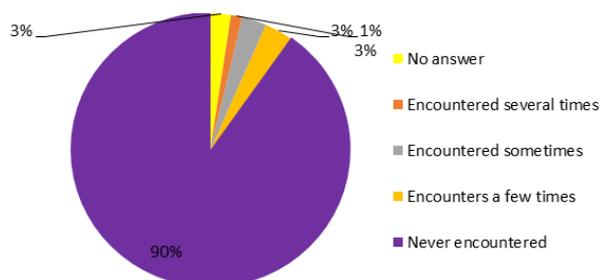


Looking at the results of the study above, it can be seen that in almost all regions, illegal fees are being requested by EEU maintenance staff. However, 19 to 40 percent of study participants from Benishangul-Gumuz, Afar, Amhara, SNNPR, and Harari states are requested by the leadership and staff.

4.16 The Existence of Gender-based Discrimination in Service Centers

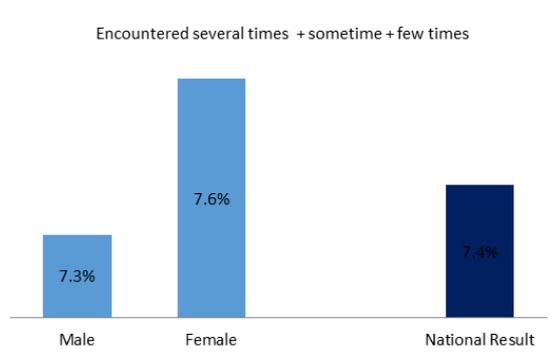
Equal treatment of customers is the rock foundation of excellent customer service. The first-come, first-serve principle still a phenomenal guideline. In contrast, at service centers of EEU, for various reasons, customers are not treated equally. One of these is gender-based discrimination. The vast majority of participants (90 percent) had never experienced gender-based discrimination in EEU service centers. Seven percent have experienced gender-based discrimination at EEU service centers.

Graph 59: Gender based discrimination at EEU service centers



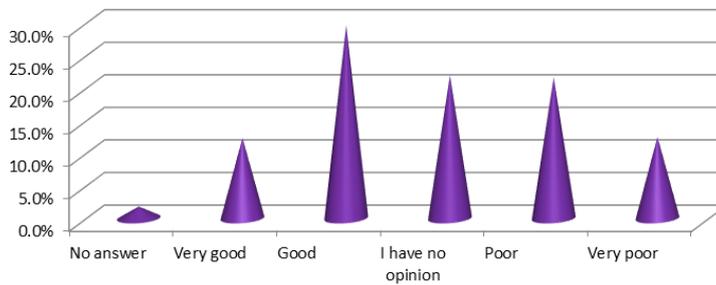
The results of the study were similar to the general results. 7.6 percent of females and 7.3 percent of men have experienced gender-based discrimination at EEU centers. This is in line with the overall result.

Graph 60 : Gender based on EEU customer service centers comments of participants who have experienced discrimination on the basis of gender



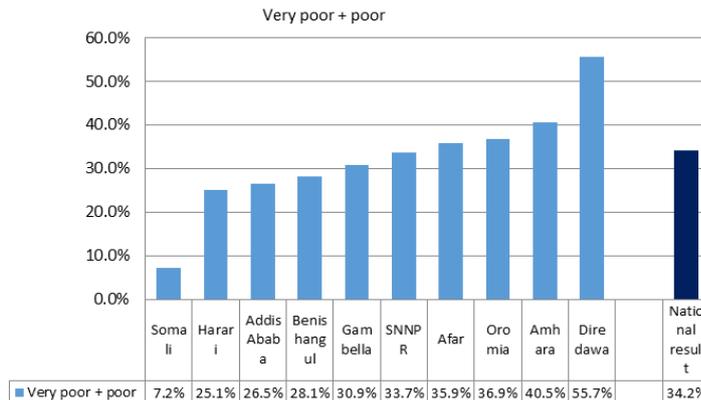
Participants in the study were asked, “How do you prioritize pregnant women or infants in the electrical services you use or treat them in a separate window?” Four out of ten participants (42 percent) said they would give priority to users of pregnant women and infants at EEU service centers. On the contrary, one-third of respondents said they never prioritized pregnant women and those who bring babies.

Graph 61: Prioritizing vulnerable users (pregnant and women with children) at service centers



Dire Dawa (56 percent) was the first region in the region to respond negatively; Amhara (41 percent), Oromia (37 percent), and Afar (36 percent) are next.

Graph 62:- Regional summary of negative responses for prioritizing vulnerable (pregnant and women with Children) customers at service centers



4.17 Implementation of a transparent and accountable system

Government services at every service station should be transparent and in line with pre-set open procedures. This means customers could easily access the requirements and related information needed to access the service. If the customer can get the right information in a timely and easy manner, it will fasten the waiting time and duration thereby reducing customer complaints. To improve the transparency of government service providers; the staff and management of each institution must fulfill their responsibilities.

It should be stressed that government officials and professionals are accountable to the public and the communities they represent. This means that if they do not abide by the rules and regulations, harm the interests of the people and the country, and commit corruption in violation of ethical principles, appropriate and adequate action must be taken and as such it should be well communicated with the public of the action taken. Participants were asked how they would evaluate the institution's efforts in ensuring transparency and accountability in the service delivery.

Table 63 : Participants take on the level of transparency and accountability of the service delivery of the institution

	NUMBERS	PERCENT
No answer	129	1.3%
Very good	468	4.8%
Good	3647	37.6%
I have no opinion	1542	15.9%
Poor	2965	30.6%
Very poor	951	9.8%

Both spectra of customer's responses on the level of transparency and accountability have similarities. In order of appearance, the positive and negative responses have 42 percent and 40 percent, respectively. This shows that transparency and accountability in the provision of EEU services have not been developed and enhanced. This raises the question of good governance in the service delivery of the institution; causing strong dissatisfaction in the customer. The results of the study show that EEU needs to create and develop transparency and accountability in its operations.

The findings show that the lack of transparency and accountability is particularly prevalent in the Afar and Amhara regions. According to the report, 51 percent and 49 percent lack transparency and accountability in the two regions respectively.

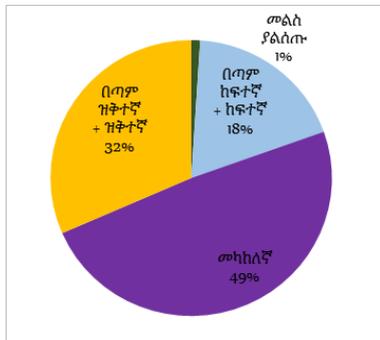
4.18 Overall Customer Satisfaction

Services of EEU are exclusive to the institute as the organization is a monopolistic provider of electricity in the country. Being the sole provider of this vital source of power, customers don't have an alternative source of consumption. This in turn limits the options of the public not to source their supply in their convenient time and place. Most of the problems faced by customers are characteristic of the monopolistic provider. The fact that EEU is the only supplier of power in the country prohibits competition and results in cumulated problems discussed above.

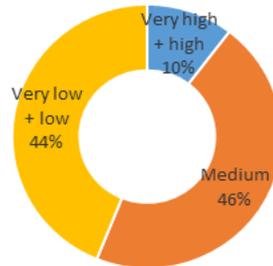
Finally, the participants were asked, "To what extent do you feel satisfied with the service provider of electricity in Ethiopia in general? Accordingly, half (49 percent) of the participants are moderately satisfied with EEU

service delivery. Customer satisfaction results of the 2018 study are similar to the current study with 46% of respondents claiming moderate satisfaction in the time. The comparative graph is below.

Graph 65: Overall customer satisfaction of EEU services



Graph 66: overall customer satisfaction (2018 survey)

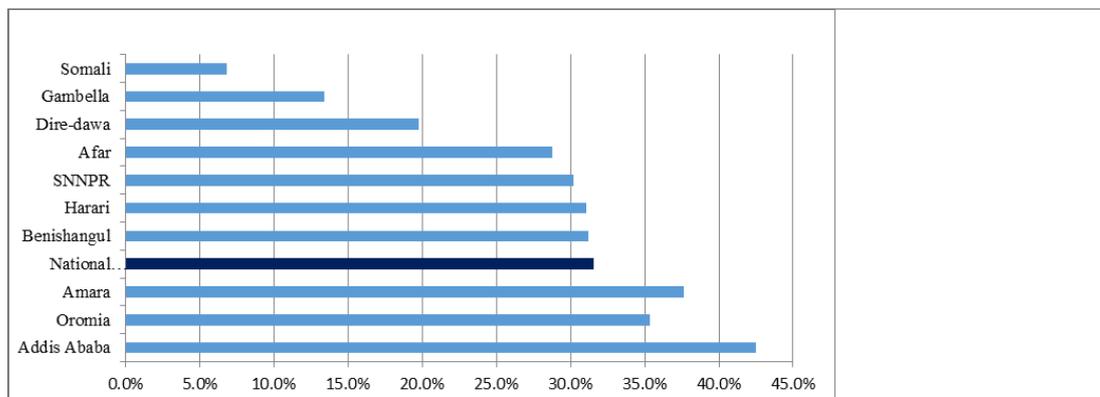


In complete contrast to its previous study which was conducted by the institution in mid-2019, customer satisfaction is comparatively low. The mid-2019 study by EEU claims overall customer satisfaction to be 65%15. However, an independent study by WALTA put the net satisfaction rate in this study to be 18 percent. According to the 2018 survey, customer satisfaction is recorded to be 10 percent. It is evident that there is a wide difference between the results of the customer satisfaction study between the WALTA and EEU study

According to the 2018 survey, 44% of respondents said their satisfaction level with the services of EEU to be very low or low. An improved result was recorded in the current assessment. In which, they showed a 12 percent reduction and contain a 32 percent share. This result is considered good and encouraging. One-third of the study participants were dissatisfied with EEU service delivery. Satisfaction with the rest of the study on EEU service delivery is moderate, high, and very high. Overall, they accounted for 2/3 of the study participants.

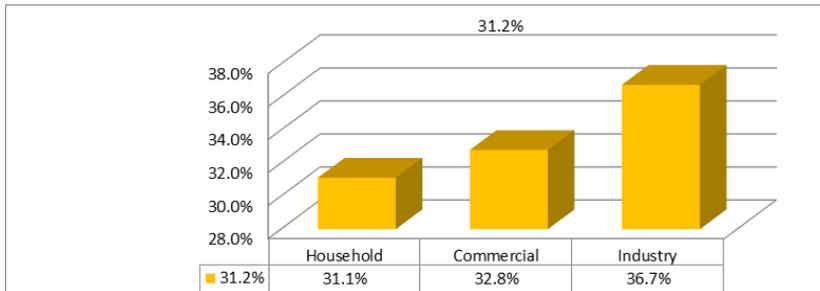
The EEU is expanding its reach to the community from time to time. However, there is a long way to go in promoting the satisfaction of the consumers. It has not been able to create a level playing field in the consumer community as compared to the level of expectation of the customer. The results of the study indicate that the satisfaction of the participants is particularly worse in Addis Ababa, Oromia, and Amhara regions.

Graph 66: General customer satisfaction of EEU services based on region customers with low level of Satisfaction



This section tries to compare customer satisfaction among the main segment of consumers of the service. In this regard, industrial customers recorded the lowest level of satisfaction. From the industrial consumers, those who categorized their level of satisfaction to be very low and low surpass those in the homeowners and the business sector. When we look at the results of the study based on the type of payment for electricity service and gender, it corresponds to the overall findings of the study.

Graph 67: Description of low customer satisfaction based on type of service



4.19 Gaps/Weakness/and strengths of EEU

Study participants were asked to identify and list our main gaps and strengths of the institution. Although several factors were raised, here is a summary of their overall responses.

1. Strengths of EEU

Since its inception in 2013, evidence suggests that the Ethiopian Electric Utility has been undertaking various activities to fuel the country’s rapid economic growth and contribute to the equitable distribution of the gains of the growth as accessible as possible to the society. One way of doing that was introducing ERP to help modernize its customer service and to update the payment system.

The public is well aware of the extensive responsibilities of EEU. They noted that in light of its load, the institution’s activities in modernization of its services, timeliness, technology improvement, and betterment of its service are improving. For instance, as per the study participants, introducing prepaid card services has greatly addressed customer complaints.

According to the participants of the study, the postpaid users of the electricity service were able to make their monthly consumption bills at the Commercial Bank of Ethiopia’s online payment system. They said, “Online digital payment will not only prevent the current Covid pandemic but also accelerate the transition to the digital system.” Such efforts of modernization are encouraging as per the participants.

With regards to customer services, grievance handling, service delivery, and overall EEU services, study participants confirm that there is an improved performance from the institution. The efforts in the modernization of its services and enhancing its efficiency are said to be encouraging. Here are some of the main positive remarks by the respondents.

- Time consumed for installing electric meter device has improved
- Previous problems with regards to the modernization of its service are addressed
- Modernized billing system

- Bank-based post-payment has reduced customer dissatisfaction
- More accessible service centers and improved service at the centers
- Relatively speedy line maintenance and repair in times of need
- Modernized Power consumption modality
- Convenient service centers
- Notification on the bill on when to pay next and the queue has reduced penalty exposure
- Provide up-to-date, relevant, and fast information disseminated via media.

2. Gaps or Weakness of the EEU

The Study participants raised the post payments procedure of electric consumption as one of the biggest problems of the EEU. Accordingly, one of the major negative comments made rotates on the operation, process, and service of the post-payment system, which is being used to charge customers for their monthly electricity bills, is time-consuming and inappropriate. It often takes a prolonged time and is inflated as compared to the actual consumption as per the respondents.

Here are some of the main weaknesses which need improvement as per the study participants.

- Lack of work discipline in some employees of the institution
- Lack of trained and quality manpower in the institution
- Failure to ensure non-partisan and avoid kinship in its operations
- Power outage and interruptions
- Failure of its employees to properly serve customers
- Failure to properly issue advance notification on times of power interruptions
- Prioritizing individual benefit ahead of an institution
- Delayed repair services and frequent harassment as well as lack of cooperation
- Lack of discipline in its employees
- Failure to timely replace old and damaged transformers
- Inability to fix/replace problematic electric meters
- Absence of professionalism
- Lack of motivation and corrupt practices are becoming norms

4.20 Summary of Comparison with the Results of Last year's Study

This study compares the results of the study with the results of the 2011 study. The main results in this regard are summarized in the table below.

	COMPARISON CASE	2018 RESULTS	2020 RESULTS	IMPROVEMENT AND OTHER COMMENTS
1.	Number of study participants who know the difference between EEU and EEP organizations	36.4%	25.7%	<i>Lowered; it is important to make others note that they are different and that they are working differently.</i>
2.	The number of participants in the study who believe that the price adjustment made by the institution is inappropriate	72%	57.3%	<i>Significantly improved</i>
3.	The large number of participants in the study who know that it is possible to reduce costs by saving energy	79%	64%	<i>Lowered; a variety of awareness-raising activities are required.</i>
4.	Number of study participants who believe that the treatment of new customers for power and energy is unfair	52%	25%	<i>Significantly improved</i>
5.	Number of study participants who believe that counter reading is incorrect	41%	43.5%	<i>Although there has been a decline in numbers, it does not make any significant difference and should be improved by setting different direction as a solution</i>
6.	The number of participants who believe that EA's customer service stations are close and accessible	55%	61%	<i>Although there has been a numerical improvement, it does not make a significant difference and should be viewed in the context of the long-term plan of the institution</i>
7.	The number of participants in the study stated that emergency repairs will be carried out by the institute	38%	39%	<i>Although there has been a numerical improvement, it does not have a significant difference and should be improved by setting different solutions</i>
8.	Number of study participants who reported complaints to the institute	76.6%	52%	<i>Significant reduction; there is a need to strengthen the notification.</i>
9.	Number of study participants who indicated that they had received a response to their complaint	43%	54%	<i>Improved; there is a need to strengthen the notification</i>
10.	Those who agree that the repair service should be provided immediately	38%	39%	<i>Although there has been a numerical improvement, it does not make a significant difference and should be viewed in the context of the long-term plan of the institution</i>
11.	Number of study participants who reported being injured by an electric	33.7%	29%	<i>There has been some improvement; we need to strengthen the work that has been done in various ways to solve the problem.</i>
12.	The number of participants in the study stated that the cause of the injury was a power fluctuation	70.3%	75.9%	<i>It has risen; it is an issue that needs to be addressed by studying the root causes of the problem.</i>
13.	The number of participants in the study stated that they or their family members have been asked bribe by electric power workers and management.	24%	23.7%	<i>Although there has been a decline in numbers, it does not make any significant difference and should be improved by setting different direction as a solution</i>
14.	Satisfaction with EEU service delivery is moderate, high and very high	56%	67%	<i>Significantly improved</i>

CHAPTER FIVE

MAIN FINDINGS AND CONCLUSIVE REMARKS

5.1 Main Findings of the Study

Regarding service delivery and transparency

- Nearly half of the prepaid participants said they had some kind of problems filling out prepaid cards. The main problems are system/network failure and extending lines at service centers/queuing up. Participants in the study indicated that they were not happy with the response to power outages and that there was much to be done, especially in terms of quick response.
- Concerning injuries as the result of electric problems, most participants reported that they, their families, and their property had never been harmed by electricity. More than double the number of victims. Those who reported some kind of damage or injury in this study are less than those who reported in the 2018 survey by 5%. Although the number of injuries is reduced, it's still significant accounting for 1 in 4. Amongst those who reported injuries, participants from Addis Ababa, Amhara, Gambella, and Somali were the most affected, according to the study. The lowest risk was reported in Afar. The most extensive damages due to power-related damages were recorded in the Industries followed by businesses and households.
- More than a third of the study participants attributed the damage to power fluctuations. This is also in line with the 2018 survey. This may indicate that the source of most electrical hazards is not the power user but the power utility provider. Of the total respondents who sustained some kind of damages, the lion share didn't go to submit their complaints. From those who presented their cases to the institution, most of the participants complained that their complaints were not properly addressed. More than twice as many participants reported that our complaints were not properly addressed. Only a small percentage of the complainants received compensation.
- Service is an effort to meet customer needs based on knowledge or skills. If the service provider and the recipient do not meet face to face during the service delivery process, the service will not be transferred from one to another. Six out of ten respondents believe that EEU is close to the community. This in turn is just 6% above the results of the study conducted in 2018. Meanwhile, the institution's 2019 fiscal year report shows that the performance of preliminary repairs, as well as emergency repairs to the middle and lower lines, is very good. The findings of this particular study are different in many aspects. Accordingly, 3 respondents out of 10 said they won't get adequate emergency repairs and responded negatively. The above conclusion is asserted by the findings of the previous survey (2018) that also claims that 6 out of 10 people confirm the lack of emergency repair when required.
- The role and responsibility of staff are crucial to creating efficient service delivery in institutions. In this regard, more than half of the study participants agree that the institute's staff adheres to the spirit of service, professionalism, and ethics. Most of the study participants did not have information about the

hospitality and humility of the 905 call center staff. In contrast, respondents in Addis Ababa are better aware of the 905 call center are often dissatisfied with the service.

- Ease of getting the lines for the 905 call is a challenge. In this regard, the proportion of respondents who said getting through the hotline is difficult surpasses those who claimed otherwise. Reports of the organization at the end of 2019 mention that customers are well entertained both through 905 and referred departments. Even these reports assert that getting the lines for 905 is fairly difficult.
- Customers should be treated equally regardless of their differences in every center. However, for various reasons, there is a preferred service provision witnessed across the centers. Seven percent of the participants reported gender-based discrimination at EEU service centers. In terms of gender, results are similar across the study. 1/3 of participants suggest that prioritizing pregnant women and mothers with children is not that common in service centers. In particular, the problem is more prominent in Dire Dawa, Amhara, Oromia, and Afar regional states.
- With regards to transparency and accountability of EEU services, there are similarities in both the positive and negative responses of the study participants. This shows that the transparency and accountability culture in the institution is not developed or enhanced.
- This further raises the cause for good governance and leads to continued complaints and frustration in the eyes of the customer. As the result, EEU should create and build transparent and accountable work procedures.

Related to complaints and resolution

- Half of the study participants reported that they had complained about the provision of electricity. As compared to the 2018 survey, their numbers are less by 25%. The majority of the complaints are sourced from Oromia, Amhara, Addis Ababa, SNNPR, and Harari regions. Industrial customers are the first to complain in the time of power outage or fluctuation.
- Bill related complaints top the range of issues raised. Most of the participants in the study who complained about the power supply indicated that their complaint was related to Bill. The second type of complaint they mentioned was related to urgent repairs. Overall, most of the participants reported their complaints have been resolved. Grievance resolution is found out to be better than that of the 2018 survey.
- The majority of participants in the study reported that the customer complaint reception and efforts to resolve at service centers are weak. This indicates that efforts to ensure customer satisfaction at service centers still have a long way to go. Participants in Amhara, South Afar, and Addis Ababa, in particular, ranked the service centers very badly. Industry participants expressed a relatively high level of satisfaction with customer complaints and resolution systems; whereas business participants put it low.

Involving the community and making information accessible

- The majority of the respondents of the study (3/4) didn't know that EEU and EEP are separately restructured. However, the government has been organizing the two organizations separately since 2013 EC and has been implementing various missions. The results of this study are reinforced by the results of a similar study conducted in 2018. Sixty-two percent of the participants in the study did not know that EEU and EEP were different organizations. Therefore, according to the results of the study, the concerned body should inform the consumer community that the two organizations have started providing services separately and have different missions, structures and practices.
- Prerequisites for taking a new electric metering device since April 2018 were identification card, application, and photographs. However, the survey found that the majority of those who took a new apparatus in the past year were also requested to present the land and homeownership papers and supporting letters.
- The majority of participants in the study had access to or heard of information about systematic use and energy savings in various ways. The same is true of the regional states. This is a good result. The result of the study shows that the vast majority (89 percent) of respondents have made significant and moderate efforts to reduce and conserve energy. According to them, the most commonly used ways to reduce power consumption is by using energy-reducing tools or the avoidance of unnecessary energy consumption.
- Customers use a variety of options to forward their grievances and complaints. In this regard, the majority of participants preferred presenting it to physical service centers. Their number is more than three times as much as those who did so by telephone (905) and many times more than those who did so using the EEU social networking site. Just like the results of this study, in the 2018 survey also most of the participants went to physical service centers and complained. The number of participants who went to physical service centers in all regions and city administrations was found to be high. This shows that in the areas surveyed, going to the physical service centers is the main way to file a complaint. Addis Ababa study participants were found to be better off than others in telephone complaints. Industrial customers are dominant in filing complaints through both physical presence at centers and via telephone (905).
- As the means of lodging complaints, the sources of information on power outages and schedule are diverse. Television and radio are the most predominant sources of information in this regard. The third source is via social media. Those who said they get the information via the institution's website and mobile text account for a small share. The results of the study indicate that access to information concerning the shift power supply program is primarily via television, radio, and social media followed by the agency's website and mobile text.
- With the hope of modernizing its overall operation, EEU has implemented ERP since 2019. It's imminent that ERP will better serve the organizational efficiency. As per the responses of study participants the primary benefits of implementing ERP include: offering an alternative payment platform, providing

timely and accurate billing, providing non-discriminatory queuing management. If we compare the results of the study by region, with exception of Addis Ababa and Gambella, the remaining regions show more or less similar results.

- Evidence of this is that majority of the study participants confirm that EEU has implemented alternative payment modalities.
- Frequent power interruption in the country is prevalent across Ethiopia. On top of that, the instantiation is implementing massive projects across the land. Meanwhile, 3/4 of respondents have confirmed that their power interruption is repetitive and frequent. Looking at the regional dispersion of power interruption complaints; Benishangul region leads followed by Dire Dawa and Addis Ababa city administrations.
- Regarding service convenience and accessibility, 6 out of 10 prepaid customer respondents provided a positive assessment. In general, the study confirms that prepaid service centers easily available in their surroundings and are established in such a way that they are convenient and accessible to customers.
- Miss management and corruption are prevalent in government institutions. The study has tried to explore this behavior in the employees and management of EEU. Accordingly, 3/4 of respondents have never witnessed this in themselves or their relatives; the results in 2018 are similar to this. However, 1 out of 4 said they experienced miss management and corruption from either the staff or management of EEU. In particular, this problem is rampant among the employees of the organization. This is uniformly attested in every region.

Tariff price adjustment

- Despite the EEU's efforts to inform the public about tariff adjustments, a significant number of respondents remain uninformed. Despite this, its efforts have brought significant impact. Comparative numbers of the community are still not well informed about the amendments as the study results are approximate. The Somali, Addis Ababa, Harari, and Amhara communities are better aware of the price adjustment of electricity service bills. In contrast, the Gambella, Afar, Oromia, and Benishangul-Gumuz regions are largely not informed.
- Fifty-seven (57) percent of the study participants believe the said tariff amendment is not appropriate. As compared to that of the 2018 survey, the proportion of the respondents who opposed the fairness of the tariff amendment has reduced from 72% to 57%. However, in this year's study, it should be emphasized that those who say that the tariff adjustment is exaggerated are superior.

New power Request

- With regards to the new demand for additional power, the speed of the new energy demand entertainment, a larger number of participants reported that it was not fast and or they did not have information. Some of the reasons given by the study participants for lack of urgency in service delivery include lack of discipline from the top of the hierarchy of personnel to the bottom, kinship and

discriminating, and the need for more bribes and overall lack of discipline. According to the study, Somali and Gambella regions are relatively fast compared to other regions. Concerning to new power request, those who responded to the service to be fair are closer to those who said otherwise. The main reasons for the lack of fairness in new service entertainment as per the respondents include reluctance and lack of leadership, a lack of transparency and preferred treatment, and a weak line infrastructural development. The last one will raise concerns for other stakeholders as well. According to our 2018 EEU survey, 52 percent of respondents said the new power demand service was unfair. Compared to this year, only 25 percent said it's unfair. This shows massive improvement. However, about 40 percent of the study participants didn't have the information to comment on. Consumption of new power requests was only described as fair by Somali and Gambella regions. The majority of respondents in most regions have gone so far as to say that they do not have information on the bias of the new power demand.

Regarding Post-paid

- Most of the postpaid beneficiaries (7855) use payment services at EEU service centers. This payment option has been a common practice in the institution for many years. The second option requires them to be physically present in person at the Commercial Bank of Ethiopia and/or pay by mobile phone. The number of participants who pay for electricity service directly from their bank accounts and online is very small. Overall, the results of the study indicate that the payment options recently introduced by EEU are not as common and are not being used as much in their service centers. Among the top reasons raised by participants of the study include lack of awareness and lack of experience to affect their payments in other options other than service centers. They are simply not used to making their bills in other ways.
- The number of study participants who said paying via service centers is easy is as many as those who claim it to be difficult, 44%. Looking at the payment modality preference of post-paid consumers, paying via CBE is strongly preferred followed by the mobile banking payment option. The third preferable option is conducting account to account transfer. The fourth and last preferable option is using the internet to pay post-paid bills.
- Thirty-seven percent of total postpaid customers (7855) users reported a lack of accuracy in their monthly counter readings. In the 2018 EEU survey, 41 percent of participants questioned the accuracy of the counter reading. So this year's result has not changed compared to the 2018 survey.
- In terms of timely reading of the electric meter, EEU has failed to travel a long distance. Our findings suggest that those who gave a positive response are not that much and negative responders are more pronounced than those of positive feedback. Therefore, EEU needs to update its services to the community by making timely reading accessible to all its customers. In contrast, the majority of participants in the study said that the timely payment of bills was good and this is encouraging.

5.2 Conclusive Remarks

Potentially going to a government institution in search of service makes us a customer of the organization. Failure to meet the needs of consumers in government service delivery is a manifestation of poor governance. Therefore, every customer's case needs to be considered in the process of ensuring customer satisfaction. Complaints or grievances related to dissatisfaction are the starting points for an in-depth review of service delivery.

The response of customers who are dissatisfied with the service delivery of government institutions has an impact on the performance of the institutions, but the results have been slow. Therefore, EEU's ongoing efforts to assess customer satisfaction regularly will greatly help to understand and comprehend the needs of its customers. The main focus of this study was to identify the perceptions of the institution's customers on general service delivery, grievance handling and resolution practices, level of transparency, and community participation. This will help craft a road map on how to measure and improve their level of satisfaction for future improvements. According to this study, the institution has various strengths as well as weak points that need to be rectified.

The Ethiopian Electric Service Utility has gone about improving the power distribution across the country following its inception in 2013. It has undertaken various activities to make the country's rapid economic growth as accessible as possible and to ensure the equitable beneficence of society. These include practical steps to modernize its service by empowering itself with technology and modernizing the payment system. Participants in the study indicated that the measures taken by the institute have improved their experience as customers.

Judging on the closeness of service centers, respondents claimed positively by saying that the institution is providing services to the customer in better proximity. The other points which are raised as a greatly positive experience include EEU's efforts to raise awareness on how to save and better use electricity using various ways and facilitating the payment of electricity service to the community through various options. When it comes to adjusting tariffs, making them more accessible to the public in various ways, the time it takes to install a new meter is improving.

Meanwhile, participants in the study did not hide the fact that in terms of service delivery, grievance handling, transparency and accountability, and limited access to information to the user community at the right time, place, and situation, EEU has significant limitations. Significant Notable problems have also been identified in the study.

Although it is difficult to make recommendations only on the basis of a multi-faceted customer satisfaction survey, the following conclusions are based on the findings of the study and they require strong attention.

- Industrial/factory customers are not offered special attention to electricity supply and general service delivery. Therefore, special attention should be paid to high energy users in the future. To better serve customers, EEU should strengthen the reforms initiated by the institute. The other is, it needs to follow suit the main problems and shortcomings of the institution's 2019 fiscal year report step by step.
- Problems related to system/network failure and queuing to top up a debit card can be detrimental to work efficiency and can lead to delays and time constraints for users. Therefore, there is a need to increase the number of card filling centers and options, strengthen the working relationship with

the stakeholders, to update the internal operation with technology and improve procedures, and to provide awareness to the customers about card filling and payment system in general.

- Accidents caused by electricity, especially in the event of power fluctuations, should be avoided in advance. This will in return protect the public from physical, economic, social, and other damage. On the other hand, the grievances of the injured parties should be properly addressed and prompt compensation should be paid.
- Critical problematic areas of service delivery identified include frequent power outages, unresponsiveness in the event of a power outage, inefficient prepaid card filling, unequal/preferred treatment of new power demand and unfair handling and meter reading accuracy, and inaccessibility or difficulty to get the 905 free call center lines. Subsequently, the utility company must rebrand itself with newly improved ways of addressing the above raised detrimental issues. To do so, it needs to streamline its service delivery efficiency and options, modernize its operations and build the capacity of its staff and make them respond faster.
- EEU needs to multiply suggestion channels to better receive customer dissatisfaction and grievances, encourage consumers to voice their grievances in the event of a problem, improve the extent of responsiveness of customer complaints, and better react to consumers' requirements. This will help modernize and improve the company's service efficiency and help it to better modernize itself.
- The institution should better arrange its customer service centers' customer complaints and resolution efforts to be customer-focused. It should also encourage customers to be aware of and use them when they face problems. With the newly improved modalities and approaches, customers will be better initiated to come across with faced problems and ways of improvements. The forwarded ideas shouldn't fell on deaf ears. Instead, a proactive approach taking the customers' interests into consideration should be followed.
- Transparency and accountability are not deeply founded in the service delivery of EEU. According to the results of the study, transparency, and accountability in the service delivery of the institution have not been developed and developed. This raises the question of good governance in the service delivery of the institution; it also causes grievances with customers. As the result, EEU should extend its effort to boost both transparency and accountability.
- Customers should be aware of the power outages and interruptions in advance. This helps to ensure transparency. It also helps customers be better prepared. The management and staff should work to improve transparency by following objective decision making to enhance customer satisfaction. The institution is required to inform the customers of the procedures, information, and decisions that the public needs to know in a timely and complete manner.
- Corruption and lack of discipline are common in the institution as per the study results. Accordingly, one in four participants has been requested to come forward with some kind of bribe or illegal payment. The problem is deeper in technical and maintenance staff. Therefore, the institution should strengthen its transparency and accountability in its work procedures and implementations, develop

grievance handling modalities, properly and quickly respond to suggestions from the customers, and work together with the consumer to better nick out corrupt personnel and administer corrective steps that could be used as a role model for the rest of its staff and leadership.

- Inadequate information sourcing is raised as one of the primary problem areas of EEU. The necessary information about the workings of the institution, its procedures, and methods of accountabilities are not well communicated to the larger public. In this regard, notable problems in this study include the lack of adequate access to information, and failure to engage the customer in identifying or resolving them, poor access to relevant information. Ideal examples are the failures of the institution to better educate the overall public of its restructuring since 2013 (EEU and EEP) are different entities, informing the cause and need for ERP implementation, free call center(905) is not that known, and a lack of awareness of recently upgraded payment options. The institution should improve its readiness to work closely with customers and productively engage them. Besides, valuable information should be made available to the customer in a variety of ways, transparent practices should be followed, and existing good and modernized practices should be strengthened.
- EEU needs to forge a free information platform with customers through which up to date and valuable information's are communicated. Any kinds of alterations and amendments should be communicated without hesitation to enhance customer satisfaction. For example, currently, the public is learning the techniques to reduce energy consumption from the media and this isn't enough. The very company responsible for expanded and efficient electric usage should take matters into its hands and engage in aggressive awareness campaigns using diverse modalities. The use of mass media and posting messages in the regional office is not enough and they need to serve the customers' convenience better. The use of various options can make a fundamental difference and will directly help galvanize its success. It should also be noted that the continued dissatisfaction and grievance with regards to inflated tariffs should also be objectively scrutinized. As study participants suggested ignoring public opinion that electricity tariffs are inappropriate or exaggerated is not helpful.

ANNEX 1: QUESTIONNAIRE

THE ETHIOPIAN ELECTRIC UTILITY IN COLLABORATION WITH WALTA A STUDY TO ASSESS THE LEVEL OF CUSTOMER SATISFACTION ABOUT ELECTRIC SERVICE

The purpose of this study is to prepare a document that can be used as a resource for future activities by studying the views of Ethiopian Electric Service customers on general service delivery, grievance redress, transparency, and community discussion. We kindly ask you to complete this short questionnaire to make this study a success. It does not take more than 15 minutes to complete the questionnaire. The answers to these questions are of great value to our study.

Do not put your name in the questionnaire as the results of the study will be analyzed based on general opinion. Please answer all questions. Show your answer by circling the options provided or marking “ü”. Questionnaire data will not be used for any purpose other than the study. Give the information to the collector as soon as you have completed the questionnaire. Thank you for your willingness to complete the questionnaire.

Part One: Study Questions

1. Ethiopian Electric Service and Ethiopian Electric Power organizations ?
 - A. They are different organizations
 - B. They are the same organization
 - C. I do not know

2. How long has it been since you subscribed and got an electric meter installed ?
 - A. If less than a year
 - B. 1 to 3 years
 - C. 3 to 5 years
 - D. 5 to 10 years
 - E. More than 10 years

3. If your answer to question 2 is “less than 1 year old”, what is the prerequisite for obtaining a counter ? (More than one answer- possible)
 - A. Proof of ownership of land
 - B. Letter of support
 - C. ID card
 - D. Photograph
 - E. Application letter
 - F. others (specify) _____

4. Which type of counter you use?
- A. Prepaid (by card)
 - B. Postpaid (Monthly Bill)
5. If your answer to question 4 is “B” which of the following payment options do you use? (More than one answer – possible)
- A. At the service center
 - B. Commercial Bank of Ethiopia in person.
 - C. By mobile payment
 - D. On the Internet
 - E. By paying directly from a bank account
-
6. In your opinion from among the payment options available, please rate in their order, which ones are easy to use? (Answer all questions)

S.N.	QUESTIONS	VERY EASY	EASY	NO COMMENT	DIFFICULT	VERY DIFFICULT
6.1	Pay at a service center					
6.2	Payment by Commercial Bank of Ethiopia					
6.3	Pay by mobile					
6.4	Pay online					
6.5	By paying directly from a bank account					

7. Did you know that there has been a recent price adjustment for electricity bills?
- A. I know
 - B. I do not know
8. If your answer to question 7 is “I know,” how do you see the adjustment?
- A. very appropriate
 - B. Appropriate
 - C. Inappropriate
 - D. Very inappropriate
9. Have you ever heard or had information about the proper use and saving of electricity in different ways?
- A. Yes I know
 - B. I do not know

10. If your answer to question 9 is “Yes, I know,” how much effort do you put into energy consumption by conserving electricity?

- A. Very high effort
- B. High effort
- C. Medium effort
- D. Low effort
- E. Very low effort
- F. I make no effort

11. If your answer to question 10 is “A” to “E”, which of the following do you use most often? (More than one answer-Possible)

- A. Energy-saving light bulb
- B. Energy-saving materials (stove, machine, etc.)
- C. By avoiding unnecessary energy use
- D. If so, please (Specify).....

12. How do you see the speed with which the institution responds to the demand for new energy?

- A. It is
 - B. It's fast
 - C. Not fast
 - D. Not too fast
 - E. I don't have the information
- } **→** Please explain why?

13. How do you see the fairness of the institution's response to the new energy demand?

- A. It is very fair
 - B. It's fair
 - C. Not fair
 - D. Not very fair
 - E. I don't have the information
- } **→** Please explain why?

14. How do you measure the accuracy of your monthly meter reading?

- A. Very accurate
- B. accurate
- C. No comment
- D. inaccurate
- E. very inaccurate

15. If your answer to question 14 is “incorrect” or “very incorrect”, do you know where and how to file your complaint? (Answer all questions)

SN.	QUESTIONS	I KNOW	I DON'T KNOW
15.1	How to file a complaint		
15.2	Where to file your complaint		
15.3	How to resolve your complaint		

16. How do you evaluate the timely counter reading of the electric meter?

- A. Very good B. Good C. No comment
- D. Poor E. very poor

17. How do you evaluate the timely delivery of electric bills?

- A. Very good B. Good C. No comment
- D. Poor E. very poor

18. How do you evaluate the Customer Service Centers hospitality in terms of proximity or convenience?

- A. Very good b. Good c. No comment
- D. Poor E. very poor

19. How do you describe the convenience/accessibility of prepaid card payment and service centers?

- A. Very good
- B. Good
- C. Poor } → Please explain why?
- D. Very poor }
- E. I don't have the information

20. Did you encounter problems related to filling out a prepaid card?

- A. Yes
- B. No
- C. I don't use prepaid card

21. If your answer to question 20 is “yes”, which of the following problems do you encounter? (More than one answer - possible)

- A. Not receiving a receipt for the money you paid
- B. Frequent electric meter counter failure
- C. Long queues to find a card
- D. System failure to fill in the card
- E. Others (Specify).....

22. Have you ever submitted a complaint about the provision of electricity? If so, how?

- A. I have submitted: Using the phone line (905)
- B. I have submitted: In person at service centers
- C. I have submitted: On the social networking site of the Ethiopian Electric Service
- D. I did not submit a complaint

23. If your answer to question 22 is "A", "B" or "C", what is your complaint about? (More than one answer - Possible)

- A. Related to Bill
- B. Related to a new electric meter
- C. Related to power improvement
- D. Related to emergency repairs
- E. Related to employee ethics
- F. Others (Specify).....

24. If your answer to question 22 is "A", "B" or "C", how many days did it take to get a response to your complaint?

- A. In less than 1 day
- B. In 1-3 days
- C. In 4-7 days
- D. More than 7 days
- E. My complaint went unaddressed

25. How do you evaluate customer complaint intake and resolution systems in customer service centers?

- A. Very good
- B. Good
- C. Poor } → Please explain why?
- D. Very poor }
- E. I don't have the information

26. After pleading/submitting a complaint to the management of the institution, how do you describe the response or solution you were given?

- A. Very good
- B. Good
- C. Poor } → Please explain why?
- D. Very poor }
- E. I don't have the information

27. How do you describe the speed at which the phone line 905 is available?
- A. Very good B. Good C. No comment
- D. Poor E. very poor
28. How do you view the 905 Call Center staffs' hospitality and humility in their response?
- A. Very good b. Good c. I have no information
- D. Poor E. very poor
29. How do you see the emergency repair service providing immediate repairs?
- A. Very good
- B. Good
- C. Poor } → Please explain why?
- D. Very poor }
- E. I don't have the information
30. How is the power supply provided to you in terms of the frequency of power outages?
- A. Outage is very frequent B. Outage is frequent C. I don't have the information
- D. Outage is infrequent E. Outage is very infrequent
31. How are employees of the organization described in terms of respecting ethical principles?
- A. Very good b. Good c. No comment
- D. Poor E. very poor
32. How do you evaluate the service spirit and professionalism of the staff of the institution?
- A. Very good b. Good c. No comment
- D. Poor E. very poor
33. From among the following, what benefits did the recent EEU's state-of-the-art system (ERP) bring to you?
(You can select more than one)
- A. Receive timely and accurate bill / receipt
- B. Fair and impartial queue management system
- C. Updating customer information management at the facility
- D. Find an alternative payment system
- E. Get efficient service
- F. I've gotten no benefit

34. Do you receive the program about when electricity may or may not be available when a power outage occurs for maintenance purposes, and during outage rounds?

- A. Yes, I Know.
- B. No, I don't know

35. If your answer to question 34 is, "Yes, I know," then how do you find a power outage program? (You can select more than one)

- A. On the radio
- B. On television
- C. On social media
- D. On the institution's website
- E. By mobile text
- F. Other (specify)

36. How is your response to power outages for various reasons described in the following criteria?

S.N	QUESTIONS	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
36.1	Responds quickly,				
36.2	They treat it in a transparent manner,				
36.3	They treat it fairly and impartially.				
36.4	Maintenance workers want to receive payment				

37. Have you or your family been hurt or your property been damaged because of a problem with electricity?

- A. Yes, It has Been
- B. Not, It hasn't been

38. If your answer to question 37 is "Yes, It has Been," what was the cause of the injury or damage?

- A. Power fluctuations
- B. Injured by the line break
- C. Problems with line extensions at home or workplace
- D. Problems that occurred while using electricity
- E. Other (specify)

39. If your answer to question 37 is, " Yes, It has Been," then what was the organization's response to the injury

S.N.	QUESTIONS	IF A COMPLAINT IS SUBMITTED TO THE ORGANIZATION		NO COMPLAINT SUBMITTED
		YES	NO	
39.1	Your complaint has been properly addressed,			
39.2	Compensation for your injury,			

40. Have you or your family been asked to pay a bribe (unnecessary benefit) by power utility workers and management?

- A. Yes, I have been, asked by service staff
- B. Yes, I have been, asked by Management
- C. Yes, I have been, asked by service staff and Management
- D. I have never been asked

41. Have you ever experienced gender-based discrimination in customer service?

- A. Encountered several times (If willing), what have you encountered?
- B. Encountered sometimes
- C. Encounters a few times
- D. Never encountered

42. How do you view the service that assigns a separate window or prioritizes pregnant women or women carrying children at the service centers you use?

- A. Very good
- B. Good
- C. I have no opinion
- D. Poor
- E. Very poor

43. How is the overall service delivery of the institution defined in terms of transparency and accountability?

- A. Very good
- B. Good
- C. I have no opinion
- D. Poor
- E. Very poor

44. What is your level of satisfaction with the overall provision of electricity in Ethiopia?

- A. Very high
- B. High
- C. Medium
- D. Low
- E. Very low

45. If there are any problems with the Ethiopian Electric utility and qualities you think should be strengthened in the future, please explain?

WEAKNESSES	STRENGTHS

Part Two; General Information of Participants

1. Gender _____ 2. Age _____ 3. Region _____ 4. City/Sub-city _____ 5. Woreda _____
6/ Number of household members A. Only me B. 2 persons C. 3-5 individuals D. 5-8 individuals E. above 8 persons
7. Your average monthly fee for electricity; A. Under 100 Birr B. 100 - 1,000 Birr C. 1,001 - 5,000 Birr D. 5,001 - 15,000 Birr E. 15,001 – 30,000 Birr F. 30,001 – 50,000 Birr G. 50,000 Birr
8. Educational Status A. Second Degree and above B. First Degree C. Diploma D. Secondary Education E. Primary Education F. Literate G. Illiterate
9. Occupation A. Civil servant B. Trader C. House wife D. Student E. Self-employed F. Employee at a private organization G. Job seeker H. Pensioner J. Agrarian H. other (Specify).....
10. Your electric service group? (<i>Select only one</i>) A. House hold Service B. Commercial establishment service C. Industry/Factory service D. organization/Company service
11. If your answer to question 10 is “industrial / factory service”, Do you receive special attention? A. Yes B. No

THANK YOU FOR AGREEING TO FILL THIS QUESTIONNAIRE!!

ANNEX 2: TECHNICAL COMMITTEE MEETING NOTE

EEU Annual Customer Satisfaction Survey Weekly Technical Committee Meeting Note November 13 - December 28, 2020

In support and supervision of the annual EEU customer satisfaction survey (CSS), the technical team from EEU, Walta Media and Communication Corporate (Independent Consultant) and the World Bank were meeting on weekly basis starting from November 13 – December 28, 2020 (seven weeks) to share updates and discuss on the overall progress of EEU CSS. The main objective of the support and supervision was to ensure the CSS is conducted as per the requirements under DLI6 of ELEAP and to be published on EEU website by January 7, 2021.

Technical committee members who were participating in the weekly meetings were:

1. Esubalew Tenaw (Ethiopian Electric Utility)
2. Aschalew Worku (Walta Media and Communication Corporate)
3. Yezihalem Kassa (Walta Media and Communication Corporate)
4. Terefe Worku (Walta Media and Communication Corporate)
5. Tewodros Kore (Walta Media and Communication Corporate)
6. Abiy Tsegaye (Walta Media and Communication Corporate)
7. Abdulhakim Mohammed (World Bank)
8. Inka Schomer (World Bank)
9. Senay Gebrekidan (World Bank)
10. Meskerem Mulatu (World Bank)

On November 13, 2020, Walta shared the draft CSS questionnaire to EEU and the WB Energy team. EEU and the bank team reviewed the survey questionnaire twice and the second revision of the CSS questionnaire made by November 16, 2020. The following key comments/feedback were given and Walta research team addressed on the comments/feedbacks:

SERVICE:	GRIEVANCE:
<ul style="list-style-type: none"> • Ability to provide reliable electric services • Ability to restore electric service after outage • Information and tips on energy-saving • Staff courtesy and helpfulness • Understanding the connection costs and bill 	<ul style="list-style-type: none"> • Ability to submit grievance related to energy service • Handling time of grievance • Customer satisfaction regarding grievance redress • Understanding of consumer rights and customer charter related to energy services
TRANSPARENCY AND INTEGRITY:	DIALOGUE:
<ul style="list-style-type: none"> • Wait listing and connection procedures • Billing accuracy, clarity and timeliness • Outages • Consumer prioritization of connection • Feedback on EEU staff and contractor conduct 	<ul style="list-style-type: none"> • Involvement in energy forums • Clarity and timeliness of communication and information provision (format/mode) • Participation in citizen engagement mechanisms

After reviewing all the comments/feedback were integrated into the CSS questionnaire on November 18, 2020, EEU and WB team confirmed that comments/feedback on the survey questionnaire are all addressed. EEU provided approval to Walta Research team to proceed to the next steps of data collection of the survey.

Prior to starting the data collection process, Walta provided orientation training for survey coordinators and data collectors in all sample EEU regions. Data collection of the CSS has been started in the week of November 23, 2020 in all regions. In the meantime, the CSS methodology section of the CSS have been shared to EEU and the Bank team on November 19, 2020. EEU and the Bank energy team reviewed and provided comments/feedback on the survey methodology section. It was proposed and agreed to use a sample size of 9892 and sample size for individual households, business organizations, industries and social institutes need to be clustered because their characteristics like demands, timing, utilization of power is different. Since the situation in Tigray wouldn't allow for the survey to be conducted, it was agreed to distribute the sample size allocated for Tigray amongst adjacent regions (Amhara and Afar). The same have been made during the data collection of the CSS.

Data collection of all regions completed on December 11, 2020. Data entry started immediately and data set cleaning, consistency check and final quality check of all encoded data have been made. While writing up and analyzing the data it was agreed to consider the key aspects of customer satisfaction (service, grievance, transparency and dialogue) as thematic areas of the analysis. Taking this into consideration, on December 17, 2020, Walta team shared statistical I tabulation of the survey to EEU and WB energy team. Comments were provided on the statistical tabulation and Walta team confirmed comments were considered.

It was discussed and agreed Walta will incorporate a section in the report with details of protocols that have been in place throughout the survey period towards maintaining protection against COVID- 19 as well as details on challenges that were faced, actions taken to overcome the challenges and lessons learned. Other contextual limitations will also be reflected in the limitation section of the report.

It was agreed to finalize the writeup and data analysis of the survey within 20 days after the data collection completed. In the meantime, Walta team drafted partial report of the CSS (Introduction, methodology, literature review etc) and share the first draft to EEU and the Bank for comments/feedback on December 25, 2020. Comments/feedback on the partial report provided by EEU and the Bank energy team.

Walta submitted the Amharic version of the final zero draft of the CSS report to EEU and WB energy. Comments/feedback have been shared to Walta to review both the Amharic and English version of the CSS report before officially submitting the revised version of the CSS report for EEU to publish the same before January 7, 2021.

