Federal Democratic Republic of Ethiopia Ethiopian Electric Power

STUDY ON ENVIRONMENTAL AND SOCIAL CONSIDERATIONS FOR ADDIS ABABA TRANSMISSION AND DISTRIBUTION SYSTEM REHABILITATION AND UPGRADING PROJECT IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA



ABBREVIATED RESETTLEMENT ACTION PLAN

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LIST OF ABREVIATIONS

AAC	Addis Ababa City
AACA	Addis Ababa City Administration
AACRA	Addis Ababa City Roads Authority
ADN	Addis North
ADC	Addis Center
ARAP	Abbreviated Resettlement Action Plan
BLL	Black Lion
EC	Ethiopian Calendar
EEPCo	Ethiopian Electric Power Corporation
EEP	Ethiopian Electric Power
EEU	Ethiopian Electric Utility
EIA	Environmental Impact Assessment
ESIA	Environmental and Social Impact Assessment
ESO	Environmental and Social Office
FDRE	Federal Democratic Republic of Ethiopia
FHHs	Female Headed Households
JICA	Japan International Cooperation Agency
MoEFCC	Ministry of Environment, Forest and Climate Change
MoWIE	Ministry of Water, Irrigation and Electricity
NADC	New Addis Center
NSL	Nifas Silk Lafto
OH	Overhead
PAHs	project affected households
PAP	Project affected people/persons
PIU	Project Implementation Unit
SC	Sub-city
SS	Substation
TL	Transmission line
UG	Underground
WER	Weregenu

EXECUTIVE SUMMARY

1. Introduction

The current project is part of the Addis Ababa Transmission and Distribution System Rehabilitation and Upgrading Project and it comprises four components that are described in the project description section. The baseline survey and ESIA carried out for the project have showed that implementation of the project will not involve any resettlement of people. However, it will bring some economic impacts to 21 households and one association due to permanent or temporary land take for the project activities. Therefore, this ARAP is prepared to provide the framework for monetary compensation for the economically affected households. Accordingly, it establishes the compensation basis for project affected people and compensation estimates for impacted assets.

2. Description of the Project and Area of Influence

The project comprises four components. These include construction of a double circuit 132 kV overhead transmission line (8.7km long) between Kaliti-1 substation and Gofa substation; construction of a double circuit 132 kV underground transmission cables between Black Lion substation and Gofa substation as well as between Wereganu substation and Connection Point-3, with a total length of 10km; construction of one new substation, namely New Addis Centre SS that will replace the existing Addis Centre SS, and upgrading of five existing substations (Kaliti-1, Black Lion, Addis North, Weregenu and Gofa substations); and rehabilitation of a total of 375 km long 33kV/15kV medium voltage distribution lines with highest number of outages in the city and environs.

The facilities included in the current project would affect 6 sub-cities and 13 Woredas of the subcities. The economically affected households included in this ARAP are located in two sub-cities (Akaki Kaliti & Nifas Silk Lafto) and four woredas (W. 4 & 7 of A. Kaliti & W. 6 & 11 of NSL).

3. Policy, Legal and Administrative Framework

There are a number of national policies, legislations and guidelines that guide the preparation of RAP and compensation measures when land take is needed for public investment. The ones most relevant for this ARAP include the Constitution of FDRE, Proclamation on expropriation of land holdings and payment of compensation (No. 455/2005), Regulations on payment of compensation for property situated on landholdings expropriated for public purposes (No. 135/2007), Regulations on electricity operations (No. 49/1999), AAC directive on compensation of assets and replacement of land for expropriation of landholdings for public purposes (No. 19/2006 EC/ 19/2014 GC), and Directive on clearance of overhead electric lines and quality of supply (No. EEA/1/2005).

The Constitution of FDRE through Articles 40 (3) and 44 (2) guarantees 'usufruct rights' of people and 'recognizes' compensatory measures when these rights are adversely affected by investments for public goods. Article 40 (8) also recognizes advance payment of compensation for private property expropriated for public purposes. According to the relevant provisions of the Constitution, the project proponent/EEP and its Contractors have the duty to protect the environment, the wellbeing of the local communities and mitigate the adverse impacts resulting from implementation of the proposed project and its subsequent operation. In addition, persons who have lost their landholdings and properties due to land acquisition for the purpose of the project are entitled to be compensated to a similar land and financial compensation for the lost assets.

4. Surveys and Socio-economic Status of Project Affected Households

In order to grasp the socio-economic status of the project affected households (PAHs), socioeconomic survey and asset inventory were conducted from July 13 to 15, 2018. The survey covered social and demographic characteristics, livelihoods/occupations, sources of income and expenditure, property ownership, etc. The survey identified 13 households that are potentially affected by the tower base of the Kaliti 1 - Gofa overhead transmission line and 8 households and one association by the NADC - Gofa underground TL; in total 21 households and one association are potentially affected. Sixty two percent (62%) of the households are located in Nifas Silk Lafto SC, and the rest 38% are in Akaki kaliti SC. The majority (90%) of the households are male headed and the rest 10% are female headed households. The total population of the survey households is 100, with average family size of 4.8 people per household.

With respect to livelihoods, most of the household heads (16 HHs or 76.2%) were engaged in farming and animal rearing, and two household heads in small businesses, whereas two HH heads were unemployed. The main source of income for the households was crop production which accounted for about 51% of the total income, and others include house rent and trade activities.

5. Magnitude of Project Impacts

5.1 Description of Project Impacts

(i) **Positive Impacts**

Reliable energy supply and cost reduction: The main anticipated benefit of the rehabilitation and upgrading of the transmission and distributions network in Addis Ababa and surrounds is improved and reliable energy supply and distribution to residents and businesses in the capital city and environs. It is expected to improve the coverage of reliable power supply, thereby stimulating the economy and social service delivery in the impact area. Reliable electric energy supply will also reduce the costs and inconvenience associated with using substitute forms of energy supply.

Employment opportunity for local people: Implementation of the project is expected to bring a positive impact on local economy through creation of employment opportunities for unskilled, semi-skilled and skilled labour that will be sourced within Addis Ababa including from the local communities.

Public health and safety: Demolishment of old transmission lines and installation of new ones would reduce health and safety hazards related to old towers/ poles, electric cables and other structures.

(ii) Negative Impacts

Implementation of the project is not likely to have significant adverse impacts on the socioeconomic environment of the project influence areas due to the fact that most of the project activities will take place within the existing right-of-way. Hence, implementation of the proposed project will not involve significant land acquisition and will not cause physical displacement to residents. However, the following economic and other impacts are anticipated to occur in relation to the implementation of the project facilities.

Permanent loss of farmland and loss of crop production: Land taking for tower-base of the Kaliti 1-Gofa overhead transmission line is estimated to cause permanent loss of 1130 meter square (0.113ha) of farmland that belongs to 11 households and 64m² of grassland owned by 2 households. The potentially affected croplands are on average only 0.6% of the total farmland holdings of the farmers. The croplands are mainly used to grow cereal crops dominantly wheat and teff through rain-fed cultivation.

Temporary loss of farmland and loss of crop production: Construction of the New Addis Center – Gofa underground TL is estimated to temporarily affect 796 m² area of irrigated farmland and annual and perennial crops used by 8 households and one association. The households grow dominantly spinach and kale mainly through irrigation. They also grow some perennial crops dominantly *Enset* (false banana), but also some sugarcane and hop.

Air and noise pollution: Construction works that involve excavation, machinery and vehicles movements likely to cause noise emission and air pollution (dust & exhaust gas emissions). These in turn may create disturbances and health problems to local residents.

Impacts on public utilities: There are abundant public utility lines including water supply pipelines, sewer lines, telecommunication lines and electric distribution lines in the corridor of the underground and overhead transmission lines. Several of these are potentially affected during construction of the transmission lines particularly the underground cables as they intersect the electric lines at many places.

Impacts on road infrastructure and community access: Installation of the underground transmission lines is expected to cause significant damages to a number of main roads as well as community access roads due to cutting of the roads for burying electric cables.

Temporary disturbance of petty business/trade activities: There are some petty trade activities mainly selling of vegetables that are practiced on roadsides at two places along the NADC – Gofa underground transmission line. These activities are likely to be temporarily affected during construction of the underground TL due to lack of space, dust and noise disturbances and safety risks.

5.2 Magnitude of Impacts by Categories

The process of compensation payment involves inventory of assets and land take; valuation of properties/ assets, and delivery of entitlement. In the case of this project, EEP, the project proponent, is responsible for payment of compensation for asset losses due to project facilities and activities. On behalf of EEP, the consultant team has conducted inventory of project affected assets for generating database for valuation of the properties. Accordingly, the levels of impacts on farmland (annual crop land), grazing land and perennial crops was determined on the basis of inventory of assets, site visits and verification, and consultation of PAHs.

The total area of land take would be 2,000 m² (0.20 ha). Of this about 97% is farmland, which is mainly used for growing annual crops including cereals (mainly wheat & teff) and vegetables (dominantly spinach and kale). In addition, some perennial crops dominantly Enset (false banana) are grown on the farmlands. Of the total potentially affected land (farmland plus grassland), 1200 m² will be permanently impacted and this belongs to 13 households. On average one household would loss 140 m² of land. The remaining 800 m² area is totally farmland that will be temporarily affected during construction of underground transmission line.

5.3 Valuation and Compensation of Property Losses

The preparation of this ARAP has followed the provisions of the relevant Ethiopian law (Proclamation No. 455/2005) and the AAC Directive on Compensation of Assets (No. 19/2006 EC) as well as the compensation rates developed by the Addis Ababa City Administration Land Development and Urban Renewal Agency to determine the amounts of compensation for lost assets. Accordingly, the total amount of estimated compensation is 463,872.70 Birr that will be disbursed for the affected households. This comprises 279,200.32 Birr (60%) for permanent land take and 184,672.89 Birr (40%) for temporary land take.

6. Eligibility for Compensation

According to the relevant Ethiopian law (Proclamation No. 455/2005) and Regulations (No. 135/2007) as well as the AAC Directive on Compensation of Assets, any person who claims for payment of compensation should produce proof of legitimate possession of the expropriated landholding and ownership of the property entitling compensation. Accordingly, the owners of the land plots that would be permanently taken for the project reported that they have individual land holding certificate that provides them land use rights. Whereas the owners of the farmland plots that would be affected temporarily during construction of underground TL have land use rights provided for a group of 28 people who organized in association and provided land use rights by the Nifas Silk Lafto SC and Woreda 6 Administrations.

In line with the above Ethiopian laws and regulations, JICA Guidelines and World Bank Safeguard Policy, the compensation and assistance policy for the project, such as eligibility and compensation valuation is shown in chapter 6 (Table 6-1).

7. Grievance Redress Mechanism

In the implementation of this ARAP, the Consultants of this study propose to adopt the procedures applied by the Sub-city Land Development and Urban Renewal Offices in case of grievances and complaints raised about the compensation process, valuation of assets and amounts of compensation payment. The procedures are specified in chapter 7 of this ARAP.

8. Institutional Framework

The bodies responsible for the implementation of the ARAP are EEP and the concerned Subcities and Woredas with their respective offices. In the ARAP implementation, EEP will have the overall responsibility for management of compensation process and disbursement of payments. It is also responsible for coordination of different stakeholders both at the Federal and City levels who will be involved in the project activities. The role and responsibilities of the major parties are provided in chapter 8.

9. Implementation Schedule

Article 40 (8) of the Constitution of FDRE recognizes advance payment of compensation for private property expropriated for public purposes. The implementation of this ARAP, mainly payment of compensation, would begin from two to three months before commencement of project construction works. On the basis of this assumption, a schedule for ARAP implementation has been prepared and presented in chapter 9.

10. Cost and Budget

The main activities for implementing the ARAP and costs for the activities are estimated and shown in chapter 10. The total cost for implementation of this ARAP is estimated at 871,060 Birr.

11. Monitoring and Evaluation Plan

As the ARAP doesn't involve resettlement of people, it is suffice to undertake auditing the process of compensation payment to PAHs to ensure that all the required compensation processes are done properly and the appropriate amounts of payment is disbursed to eligible persons. Therefore, auditing is assumed to be made in two rounds; first before the disbursement of payment to check all the steps and processes for compensation has been carried out properly and secondly after the disbursement of all payments to ensure that the appropriate amount has been disbursed to eligible PAHs and to address grievances, if any.

12. Stakeholder Engagement

In accordance with the relevant policy and legal requirements specified in the Ethiopian Constitution, Ethiopian EIA Guideline Document and the JICA Guideline, engagement was made with key stakeholders at the sub-cities and woredas affected by the major project components (the overhead and underground transmission lines) as well as the potentially affected communities. Potential displacement of people and impacts on sources of livelihood were among the key issues raised and discussed during the formal consultations and focus group discussions held with the key stakeholders and community members. The key issues or concerns raised and the recommendations forwarded by the stakeholders in relation to resettlement, loss of livelihood and compensation issues are summarized in section 12.2 (Table 12-1).

1. INTRODUCTION

1.1 **Project Background**

As part of the Addis Ababa Transmission and Distribution System Rehabilitation and Upgrading Project, the current project comprises four components. These include construction of a double circuit 132 kV overhead transmission line (8.7km long) between Kaliti-1 substation and Gofa substation; construction of double circuit 132 kV underground transmission cables between Black Lion substation and Gofa substation as well as between Wereganu substation and Connection Point-3 (at Sahelete Mihret Church), with a total length of 10km; construction of one new substation, namely New Addis Centre SS that will replace the existing Addis Centre SS, and upgrading of five existing substations (Kaliti-1, Black Lion, Addis North, Weregenu and Gofa substations); and rehabilitation of a total of 375 km long 33kV/15kV medium voltage distribution lines with highest number of outages in the city and environs.

The baseline survey and environmental and social impact analysis (ESIA) carried out for the above mentioned project facilities have showed that implementation of the project will not involve any resettlement of people from the project impact areas. However, the assessments have indicated that it will bring some economic impacts to 21 households and one association due to permanent or temporary land take for the project activities. Therefore, this Abbreviated Resettlement Action Plan (ARAP) is prepared to provide the framework for monetary compensation for the aforementioned economically affected households.

This ARAP was developed in line with the policy, legal and institutional framework of the Federal Democratic Republic of Ethiopia, and of the Addis Ababa City Administration. In general the process of ARAP preparation included survey of the socio-economic baseline conditions of the project affected people (PAP), stakeholder and community consultations, and review of relevant legal and policy documents. It also comprised estimation of asset values, compensation payment and cost and budget for the implementation of the ARAP.

Accordingly the ARAP document establishes the compensation basis for project affected people and compensation estimates for impacted assets. Compensation for PAP was estimated at full replacement cost for permanent land take and sufficient compensation for temporary loss of income benefits due to disruption of land use during construction.

1.2 Objectives and Principles of the ARAP

The main objective of this ARAP is to provide an agreed plan for the land take or loss of assets and compensation of Project Affected Persons (PAPs) who would be impacted by the proposed overhead and underground transmission lines. The ARAP will be guided by the following principles:

- Compensation will be sufficient to improve or at least restore the pre-project income of affected persons;

- Lack of formal title to land should not be a bar to compensation or rehabilitation;
- Compensation activities will be carried out with equal consideration of women and men;
- The affected persons will be fully informed and consulted on compensation options, which is land for land and cash compensation;
- Asset compensation will be provided at market rates (for land and crops) and at replacement rates;
- Lost assets compensation, or rehabilitation provisions and allowances will be provided in full prior to land acquisition and commencement of project activities.

1.3 ARAP Team

This ARAP was prepared by two senior social consultants of ESSD Consultancy and reviewed by a senior consultant from NEWJEC of Japan. The ESSD Consultants are certified by the Ministry of Environment, Forest and Climate Change (MoEFCC) to carry out social analysis in Environmental and Social Impact Assessment (ESIA) studies, including preparation of Resettlement Action Plan. The list of the Consultants is shown below and copies of their Competence Certificates and CVs are presented in Annex 7. Similarly ESSD Consultancy is a consulting firm licensed by the MoEFCC to conduct ESIA studies and a copy of its Competence Certificate is shown in Annex 7.

Name of Consultant	Position	Responsibilities
Dr Ali Hassen	Senior Social Consultant	Preparation of ARAP
Lelisa Temesgen	Senior Social Consultant	Survey of PAPs & data analysis
Arebo Sambi	S. Consultant/Local Coordinator	Coordination of surveys & review of draft & final ARAP
Akihiro Osada	Lead Consultant from NEWJEC	Guidance on ARAP process and review of draft & final ARAP

List of Consultants involved in the preparation of ARAP

2. DESCRIPTION OF THE PROJECT AND AREA OF INFLUENCE

2.1 Description of Project Facilities

The outline of the project facilities or components included in the current project is presented in the following sections.

2.1.1 The 132 kV Transmission Lines and Substation facilities

(i) Overhead Transmission Line (132 kV)

This project component will involve dismantlement of the existing single circuit overhead transmission line and construction of a new double circuit transmission line between Kaliti-I substation and Gofa substation. This transmission line is 8.7km long and its main features are shown in the table below.

No.	From	То	Voltage (kV)	Number of Circuit	Distance (km)
OH_Route1	Connection Point 1 at Gofa Substation	Connection Point 2 at Kaliti-I SS	132	2	8.7

* Connection point is between overhead transmission line and underground cable.

(ii) Underground Cable Transmission Line

This component of the project comprises construction of four underground transmission lines (cables). These are shown in the table below.

No.	From	То	Voltage (kV)	Number of Circuit	Distance (km)
UG_Route1	NADC	Connection	132	2	4.45
	Substation	Point 1			
UG_Route2	Connection	KALI	132	2	0.1
	Point 2	Substation			
UG_Route3	NADC	BLL	132	1	1.95
	Substation	Substation			
UG_Route4	WER Station	Connection	132	2	3.5
		Point 3			

(iii) Substation facilities

Under this component one new substation will be constructed and five existing substations will be upgraded. The new substation is located at nearby the African Union and it will replace the existing Addis Centre substation located at Mexico. Details of the facilities are shown in the table below.

Name	Main Component	Primary Voltage (kV)
NADC Substation	Full replacement of substation (Outdoor type GIS) Transformers 250 MVA(50 x 5units)	132 kV
KALI Substation	Reinforcement of receiving equipment (2 c.c.t./ AIS)	132 kV
BLL Substation	Reinforcement of receiving equipment (1 c.c.t./ Indoor type GIS)	132 kV
ADN Substation	Upgrading of transformers 100MVA(50+50)	132 kV
WER SubStation	Reinforcement of receiving equipment (2 c.c.t./ AIS)	132 kV
Gofa Substation	Modification of outdoor equipment existing substation.	132 kV

2.1.2 Distribution Network

The distribution network covered in this project comprises rehabilitation of 33kV/15kV medium voltage distribution lines and replacement of distribution transformers. It will involve rehabilitation of a total of 275 km long 33kV/15kV medium voltage distribution lines with highest number of outages in the Addis Ababa City (Item B). The project will also include rehabilitation of a total of 100 km long 33kV/15kV medium voltage distribution lines in the environs of the city (Item C). In addition, it will comprise replacement of 757 units of distribution transformers in the city and 120 units outside of the city.

No.	Main Component	Length of Middle voltage (km)	Distribution transformer (Unit)	Low Voltage
Item A	3 areas including the city center	-	1,290	Out of scope
Item B	Feeders of highest number of outages	275	757	Out of scope
Item C	Feeders of outside of Addis Ababa City	100	120	Out of scope

2.2 Description of Area of Influence

Sub-cities and Woredas: The facilities included in the current project would affect 6 subcities and 13 Woredas of the sub-cities. Table 2-1 below shows the sub-cities and woredas affected by the project facilities. The economically affected households included in this ARAP are located in two sub-cities (Akaki Kaliti & Nifas Silk Lafto) and four woredas (Woredas 4 & 7 of Akaki Kaliti & Woredas 6 & 11 of Nifas Silk Lafto).

Sub-city	Woreda	Sub- woredas	Sefers	Block s	Project Components in the Woredas
Akaki Kaliti	Woreda 4	9	61	189	Kaliti I – Gofa Overhead TL & Kaliti I Substation
	Woreda 7	19	62	162	Kaliti I – Gofa Overhead TL
Nifas Silk	Woreda 5	5	21	68	NADC-Gofa Underground TL
Lafto	Woreda 6	7	23	81	NADC-Gofa UG TL, Gofa SS & Cable Terminal
	Woreda 11	11	36	77	Kaliti I – Gofa Overhead TL
	Woreda 12	11	40	98	Kaliti I – Gofa Overhead TL
Kirkos	Woreda 5	4	13	37	NADC-Gofa Underground TL
	Woreda 6	3	11	36	BLL-NADC-Gofa UG TL
Lideta	Woreda 8	-	-	-	BLL-NADC UG TL& Black Lion SS
Bole	Woreda 6	-	-	-	Weregenu-Connection Pt-3 Underground TL
	Woreda 7	-	-	-	As above
	Woreda 14	-	-	-	As above plus Weregenu SS
Gulele	Woreda 7	8	25	79	ADN Substation

Table 2-1 Woredas, sub-woredas, Sefers and blocks in the project affected Woredas

Source: AACA (2014) Addis Ababa City Atlas, and Project Document

Figures 2-1 and 2-2 below depict the administrative map of the project influence areas and the location of target facilities.

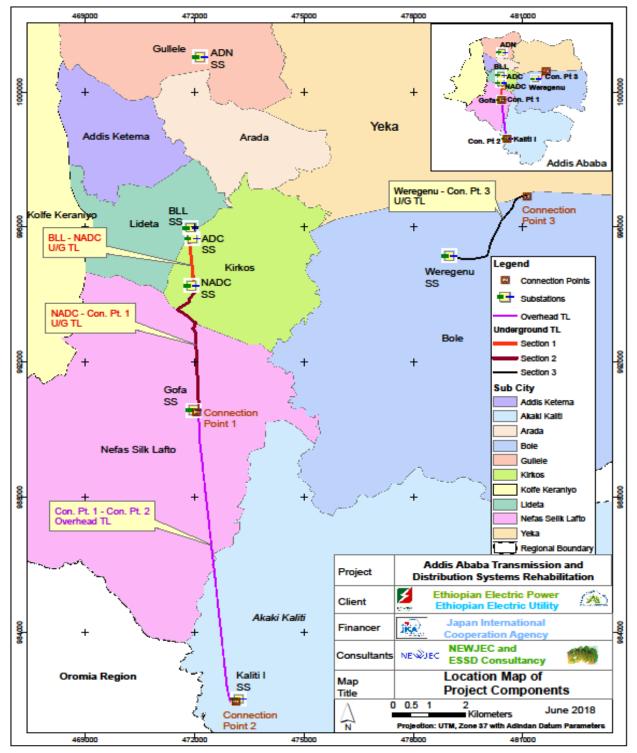


Figure 2-1: The administrative map of the Project area and the location of target facilities

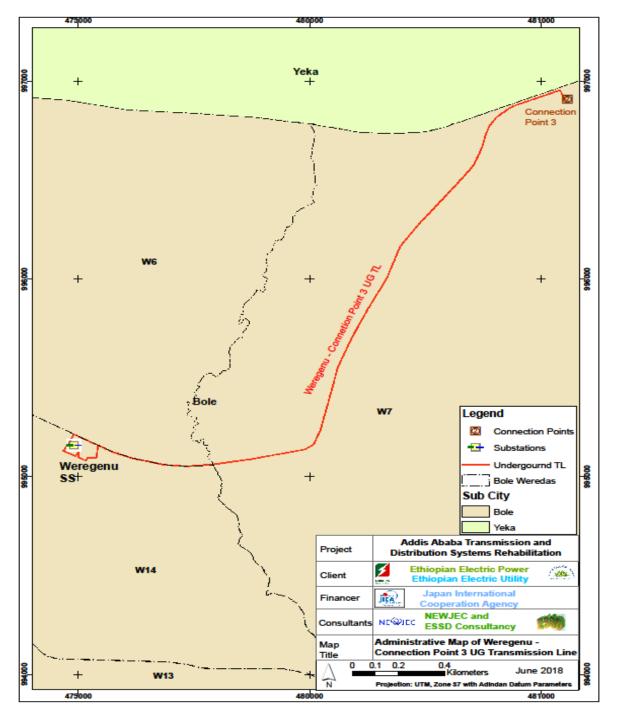


Figure 2-2 Administrative Map of the Weregenu-Connection Point 3 Underground TL

3. POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK FOR RESETTLEMENT AND COMPENSATION

There are a number of legal documents which provide legal frameworks for fulfilling requirements while designing, approving and implementing development projects. This section briefly describes policies, legislations and guidelines which have relevance for guiding the preparation of this ARAP, and compensation measures when land take is needed for public investment.

For this ARAP, the relevant policy and legal documents as well as guidelines include the following among others:

- The Constitution of FDRE
- Proclamation on Expropriation of Land Holdings and Payment of Compensation
- FDRE Council of Ministers Regulation No. 135/2007
- Regulations on Electricity Operations
- Addis Ababa City Administration Directive on Compensation of Assets and Replacement of Land for Expropriation of Landholdings for Public Purposes
- Relevant Directive and Guidelines (EIA Directive and EPA's EIA Guidelines)
- Directive on Clearance of Overhead Electric Lines and Quality of Supply
- AACA Policy Documents and Guidelines for Compensation Payment.

3.1 Relevant Legal and Policy Framework

3.1.1 The Constitution of FDRE

The Constitution of the Federal Republic of Ethiopia, issued in August 1995, provides the overriding principles and legal provisions for all legislative frameworks in the country. Article 40 (3) and 44 (2) of the Constitution of FDRE guarantees 'usufruct rights' of people and 'recognizes' compensatory measures when these rights are adversely affected by investments for public goods. Article 40 (8) also recognizes advance payment of compensation for private property expropriated for public purpose.

The Constitution provides interventions for public goods, which may cause displacement of people or adversely affect the livelihoods of the local populations. It also gives the right to compensation by monetary or other means including resettlement, with adequate state assistance (Article 44.2).

The concept of sustainable development and the environmental rights of the people are enshrined in the Constitution's Articles 43, 44 and 92. The principles enshrined in the Constitution underpin the series of Proclamations of Federal and Regional governments on compensation and assistance to resettle and rehabilitate the affected people.

Article 92 provides environmental objectives and states that the design and implementation of development programs and projects shall not damage or destroy the environment. It also provides people the right to consultation and expression of views in

the planning and implementation of environmental policies and projects that affect them directly.

According to these provisions of the Constitution of Ethiopia, the project proponent/ EEP and its Contractors have the duty to protect the environment, the wellbeing of the local communities and mitigate the adverse impacts resulting from implementation of the proposed project and its subsequent operation. In addition, persons who have lost their landholdings and properties due to land acquisition for the purpose of the project are entitled to be compensated to a similar land and financial compensation for the lost assets.

3.1.2 Proclamation on Expropriation of Land Holdings and Payment of Compensation, No. 455/2005

This Proclamation, Proc. No. 455/2005, issued in July 2005, deals with appropriation of land for development works carried out by the government and determination of compensation for a person whose landholding has been expropriated. It includes provisions on power to expropriate landholdings, notification of expropriation order, responsibility for the implementing agency, and procedures for removal of utility lines. According to the Proclamation, the power to expropriate landholdings mainly rests on Woreda or urban administration authorities. Article 3 (1) of the Proclamation states that a Woreda or an urban administration shall, upon payment in advance of compensation in accordance with this Proclamation, have the power to expropriate rural or urban landholdings for public purpose where it believes that it should be used for a better development project to be carried out by public entities, private investors, cooperative societies or other organs, or where such expropriation has been decided by the appropriate higher regional or federal government organ for the same purpose.

In addition, the Proclamation deals with determination of compensation having articles on the basis and amount of compensation, displacement compensation, valuation of property, property valuation committees, complaints and appeals in relation to compensation. As per this Proclamation, a land holder whose holding has been expropriated shall be entitled to payment for compensation for his property situated on the land for permanent improvements he made to such land, and the amount compensation for property situated on the expropriated land shall be determined on the basis of replacement cost of the property. For houses in urban areas, the amount of compensation should not be less than the current market value of construction. In addition to the amount of compensation for the property expropriated, the Proclamation also gives a provision for cost of removal, transportation and erection.

3.1.3 FDRE Council of Ministers Regulation No. 135/2007

Regulations No. 135/2007 came into effect in July 2007 and deal with payment of compensation for property situated on landholdings expropriated for public purposes. These Regulations were issued by the Council of Ministers pursuant to Article 5 of the Definition of Powers and Duties of the Executive Organs of the FDRE Proclamation No.

471/2005 and Article 14(1) of the Proclamation No. 455/2005 (discussed above) with an objective of not only paying compensation but also to assist displaced persons to restore their livelihood.

The regulation provides the basis for compensation of affected properties and to assist the displaced or affected persons to restore their livelihood. The regulation sets the methods for the assessment of compensation, provision of land for land replacement and payment of displacement compensation. The methodology followed by the regulation for the assessment of compensation establishes the basis and formula for compensation that will be made for the different types of assets and categorizes into ten parts.

- 1. Compensation for buildings
- 2. Compensation for fences
- 3. Compensation for crops
- 4. Compensation for perennial crops
- 5. Compensation for trees
- 6. Compensation for protected Grass
- 7. Compensation for permanent improvement on rural land
- 8. Compensation for relocated property
- 9. Compensation to mining license
- 10. Compensation to burial ground

The regulation recognizes that land replacement should be made for urban and rural lands. In rural areas, if land replacement is not possible for permanently affected land, PAPs will be compensated for the affected perennial crops at ten times the annual production and for temporary loss of land; the amount of compensation will be calculated by the number of years the land is to be occupied by the project.

This Regulation may be triggered by the subject project since it may involve expropriation of lands under individual holdings and used for crop production, residential and business activities, etc. Therefore, EEP or the Addis Ababa City Administration has the responsibility to pay compensation or provide replacement land, house etc. according to this Regulation and other relevant government laws

3.1.4 Regulations on Electricity Operations, No. 49/1999

This Council of Ministers Regulations No. 49/1999 was issued in 1999 pursuant to Article 28(1) of the Electricity Proclamation No. 86/1997 to provide the regulations of electricity operations in the country. The Regulations are divided into six parts, which include requirements for *Electricity Operation Licenses; Rights and Obligations of Licensees and Customers; Electricity Price and Tariff; Standards of Safety, Technical and Quality of Service; and Miscellaneous Provisions.* The provisions most relevant for the subject project are described below.

As part of the general safety requirements, Sub-article 47(1) prohibits undertaking any type of construction work or growing trees under electric power lines or within the distance of horizontal clearance thereof.

Under the safety requirements for *Transmission Lines and Substations*, Article 58 provides the requirements for *Clearance from Buildings and Structures*. Sub-article (1) states that the horizontal distance from conductors to any point of a building or structure shall, with maximum wind, be at least 4.5 meters. If the requirement stated under Sub-Article (1) cannot be fulfilled, the height of the conductor from the building or structure shall, at maximum temperature and with conductor broken in the neighboring span, be at *least 5.5 meters*.

Similarly Article 59 provides the safety requirements for *Clearance from Trees*. According to Sub-article (1) the vertical distance of conductors from trees shall be at least 1.5 meters plus the minimum distance between live and un-energized parts. In the case of fruit trees the distance shall be 4m plus the minimum distance between live and un-energized parts as per Sub-article (2). The distances stated above shall be maintained in accordance with the expected growth of trees (Sub-article 3).

3.1.5 AACA Directive on Compensation of Assets and Replacement of Land for Expropriation of Landholdings for Public Purposes, Directive No. 19/2006 EC

Pursuant to Article 14(2) of Proclamation No. 455/2005, the Addis Ababa City Council issued an amended directive (no. 19/2006 EC= 19/2014) on compensation of assets and replacement of land for expropriation of landholdings for public purposes. The Directive was issued in April 2014 and is divided into 6 sections and 36 articles as well as 7 attachments. The main focuses of the directive are legal rights of landholdings and compensation payment for various properties lost from the expropriated land and valuation of assets.

The Directive, among others, comprises procedures of expropriation of land holdings, involvement of the affected holders, collection of data on land holdings and assets, determination of the legality of affected holdings and properties, assessment of the basis and amounts of compensation for properties, determination of displacement compensation for private residential houses or enterprises and for land used for seasonal crops and perennial crops production, determination of land or house replacement, procedures of expropriation orders and complaints/grievances, and procedures for restoration and support for displaced people.

The landholder needs to provide evidence of landholding rights and property ownership for both urban and rural areas. If the development will result in the need for displacement from housing rented from government, then the lessee will need to provide evidence of a legal contract agreement for that rental. Compensation will not be paid for property developed after the cut-off date if the affected property does not have any legal evidence. Assets which are the property of Addis Ababa City Administration will not be compensated.

Attachment one of the Directive acknowledges that the amounts of compensation for expropriated land and lost asset is determined on the basis of Proclamation No. 455/2005 (Part 3 Article 7(3) and Regulations No. 135/2007 (Part 2 Article 13) as follows:

Compensation for building = cost of construction at current market value + cost of permanent improvement on land + the amount of refundable money for the remaining term of lease contract.

Compensation for crops = the total area of the land (in square meters) X value of the crops per kilo gram X the amount of crops to be obtained per square meter + cost of permanent improvement on land.

Compensation for unripe perennial crops = number of plants (legs) X cost incurred to grow an individual plant + cost of permanent improvement on land.

Compensation for garden vegetables = area of the land (in square meters) X current market value of the vegetable per kilo gram + cost of permanent improvement on land.

Compensation for ripe perennial crops = the annual yield of the perennial crops (in Kilo grams) X the current price of the produce of the perennial crops + cost of permanent improvement on land.

Compensation for relocated property = cost of removal + cost of transferring + cost of reinstallation.

Compensation for protected grass = area covered the grass (in square meters) X the current market price of the grass per square meter.

The Addis Ababa City Administration Land Development and Urban Renewal Agency in consultation with concerned bureaus and agencies establishes unit rates for each asset and other items for calculation of compensation and revises the unit rates annually. Accordingly, the Agency has developed updated unit rates for different assets and distributed to the Land Development and Urban Renewal Offices at Sub-city level.

3.2 Relevant Guidelines/Legislation

3.2.1 EIA Directive

EIA Directive No. 1/ 2008 was issued to determine the categories of projects subject to the Environmental Impact Assessment Proclamation No. 299/ 2002. It lists the types of Projects for which the Environmental Impact Assessment Proclamation No. 299/ 2002 shall be applied. None of the facilities covered in this study are mentioned in the Directive.

3.2.2 EPA's EIA Guidelines

With a view to implement the environmental laws and regulations, several environmental guidelines have been issued by the former Environmental Protection Authority (EPA). Among these are the technical and procedural EIA guidelines, which were issued in 2000 and 2003 respectively. They are intended to guide developers, competent agencies and other stakeholders in carrying out EIAs. The procedural guideline details the required procedures for conducting an EIA, the permit requirements, the stages and procedures involved in EIA process, and the roles and responsibilities of parties involved in the EIA

process. The guidelines also include the categories of projects (schedule of activities) concerning the requirement of EIA, and list of project types under each category.

According to the guidelines *high power transmission lines* are categorized as Schedule 1, thus, they require a full scale EIA. In addition, *electricity transmission lines* are listed under Schedule 2 activities that imply they require preliminary environmental assessment. There is no specific description for substations and distribution lines in the guidelines.

In addition, the guidelines state that all projects in environmentally sensitive areas should be treated as equivalent to Schedule 1 activities irrespective of the nature of the project. Of the sensitive areas mentioned in the guidelines is *Religiously important area* and it might be relevant for the subject project as there are some churches in the vicinity of the overhead transmission line and underground transmission lines.

3.2.3 JICA Guidelines for Environmental and Social Considerations

The objectives of the guidelines are to encourage Project proponents etc. to have appropriate consideration for environmental and social impacts, as well as to ensure that JICA's support for and the examination of environmental and social considerations are conducted accordingly. The guidelines outline JICA's responsibilities and procedures, along with its requirements for project proponents etc., in order to facilitate the achievement of these objectives.

JICA classifies projects into four categories according to the extent of environmental and social impacts, taking into account an outline of project, scale, site condition, etc.

Category A: Proposed projects are classified as Category A if they are likely to have significant adverse impacts on the environment and society. Projects with complicated or unprecedented impacts that are difficult to assess, or projects with a wide range of impacts or irreversible impacts, are also classified as Category A. These impacts may affect an area broader than the sites or facilities subject to physical construction. Category A, in principle, includes projects in sensitive sectors, projects that have characteristics that are liable to cause adverse environmental impacts, and projects located in or near sensitive areas.

Power transmission and distribution lines involving large-scale involuntary resettlement are among the sensitive sectors and large-scale involuntary resettlement is a sensitive characteristic.

Category B: Proposed projects are classified as Category B if their potential adverse impacts on the environment and society are less adverse than those of Category A projects. Generally, they are site-specific; few if any are irreversible; and in most cases, normal mitigation measures can be designed more readily.

Category C: Proposed projects are classified as Category C if they are likely to have minimal or little adverse impact on the environment and society.

Category FI: Proposed projects are classified as Category FI if they satisfy all of the following requirements: JICA's funding of projects is provided to a financial intermediary or executing agency; the selection and appraisal of the sub-projects is substantially undertaken by such an institution only after JICA's approval of the funding, so that the sub-projects cannot be specified prior to JICA's approval of funding (or project appraisal); and those sub-projects are expected to have a potential impact on the environment.

3.2.4 Directive on Clearance of Overhead Electric Lines and Quality of Supply

This Directive (No. EEA/1/2005) was issued by the Ethiopian Electricity Agency pursuant to the authority vested on it by Articles 55, 67 and 69 of Electricity Operations Council of Ministers Regulations No. 49/1999. The objective of this Directive is to set standards for the clearance spaces associated with transmission and distribution lines for the purpose of the protection of persons from risk and property from damage, as well as to specify the quality of supply voltage.

Article 6 of the Directive sets standards for clearance of overhead electric lines. Sub-Article 6.1 (6.1.4) applies for a line with a voltage exceeding 66kV but not exceeding 132kV and it requires that the height above ground of an overhead electric line shall not, at any time, be less than 8.0 meters above a road accessible to vehicular traffic and 7.0 meters above any other point. This requirement applies to the Gofa - Kaliti-1 Overhead Transmission Line as its voltage 132kV. In the ESIA study and this ARAP it is assumed that <u>any other point</u> includes <u>buildings and any other structures found under an overhead</u> transmission line.

Sub-Article 6.5 is applicable for the distribution network covered in this project. It indicates that an overhead electric line shall not, at any time, be closer to a part of a building or structure than the following minimum distances corresponding to the voltage of the line:

- 6.5.1 Vertically above those parts of a building or structure normally accessible to a person 4.6 meters for a line with a voltage exceeding 1kV but not exceeding 33kV.
- 6.5.4 In any other direction from windows, openings and balconies and those parts of a building or structure normally accessible to a person 2.7 meters for a line with a voltage exceeding 1kV but not exceeding 33kV.
- 6.5.5 In any direction from a footbridge 4.6 meters for a line with a voltage not exceeding 33kV.

Article 7 of the Directive sets standards for clearance from vegetation and Sub-Article 7.1 is applicable for both the Gofa - Kaliti-1 TL and the distribution network. The Sub-Article states that growing of trees under overhead electric lines shall not be allowed. An overhead electric line shall not, at any time, be closer to vegetation in all directions than the following minimum distances corresponding to the voltage of the line:

7.1.1 Not exceeding 33kV - 2.5 meter. This applies for the distribution network

7.1.3 Exceeding 66kV but not exceeding 132kV - 13.0 meter. This applies for the overhead TL.

In addition, Sub-Article 7.2 which states that *the space vertically above the overhead electric line shall be kept clear of vegetation at all times*. This applies for both the Gofa-Kaliti 1 TL and the distribution network.

Article 11 comprises provisions for *Position, Insulation and Protection of Electric Lines.* Sub-Article 11.1 is relevant for the distribution network and it states *any part of an electric line placed above ground, which is not connected with earth and which is ordinarily reached by hand from any scaffolding, ladder or other construction erected or placed on, in, against or near to a building or structure shall be de-energized, or so insulated that it is protected against mechanical damage or interference, or adequately protected to prevent damage.*

3.3 Relevant Legal Document for Grievance Addressing

The most recent legal document that provides procedures on compensation of assets replacement of land for expropriation of landholdings for public purposes is the amended Directive no. 19/2006 E.C.(issued in April 2014) issued by the Addis Ababa City Council. In the Directive the following two articles are relevant to grievance/complaint process:

Article 23: Submission of Complaints and Decision Making

Sub-article 1: States that the individual who has be given expropriation order can submit his complaint with details of reasons and documentation within 15 working days to the organ who issued the expropriation order.

Sub-article 2: Indicates that the organ referred to in Sub-Article (1) shall examine the compliant and give its decision within 15 working days and let the complainer in writing. If the complaint hasn't been accepted by the organ, the reason has to be clearly explained in the decision.

Article 24: Submission of Appeals on the Decision

This Article states that if the complainer (referred to in Article 23) is dissatisfied with the decision referred to in sub-article 23(2) above, he/she can present his appeals to the Addis Ababa City Expropriation and Compensation Issues Grievance Council within 30 days. The Directive doesn't provide further information on grievance mechanism.

3.4 Institutional Framework

Several institutions are involved for the implementation of the Resettlement Action Plan. The main responsible bodies of the implementation of the ARAP are the Project Proponent (EEP), Project Funding Agency (JAICA) and the concerned sub-cities/Woredas. In the implementation of this ARAP, EEP has the overall responsibility. EEP is also responsible for the coordination of the different stakeholders working both at federal and regional/local level in regards to the implementation of ARAP and the project activities. The role and responsibilities of major actors are provided below.

3.4.1 Ethiopian Electric Power

Ethiopian Electric Power (EEP) is a government-owned, power related organization accountable to Ministry of Water, Irrigation and Electricity (MoWIE). Until recently, the Ethiopian Electric Power Corporation (EEPCo) was the sole public utility responsible for generation, transmission and distribution of electric power throughout Ethiopia. The Ethiopian Government has recently established two new organizations, known as the Ethiopian Electric Power (EEP) and Ethiopian Electric Utility (EEU) under the supervision of MOWIE through Council of Ministers Regulations No. 302/2013 and No. 303/2013 respectively.

Some of the major responsibilities of EEP include undertaking feasibility studies, design and survey of electricity generation, transmission and substation; undertaking electricity generation, transmission and substation construction and upgrading; handling electricity generation and transmission operation and maintenance activities; leasing electricity transmission lines as required; selling bulk electric power; and, undertaking universal electric access works.

EEP has extensive experience in the preparation and implementation of a number of ARAPs that have been implemented under its power projects. In EEP, the Environmental & Social Office is responsible for the monitoring and evaluation of Environmental and Social Impact Assessment (ESIA) and ARAP documents prepared for power projects and its implementation.

EEP's Environmental and Social Office (ESO), which is under the Environment, Social, Health, Safety and Quality (EHS&Q) Directorate, has the overall responsibility to coordinate, monitor and evaluate ARAPs and ESIAs for power projects. The ESO was consulted in the preparation of this ARAP and the ESIA Report.

3.4.2 Ministry of Environment, Forest and Climate Change

In the year 2013, as part of the effort to realize the government's Climate Resilient Green Economy strategy, the former Environment Protection Authority has been upgraded to Ministry of Environment, Forest and Climate Change. The new Ministry is responsible among other undertakings for spearheading the reforestation, and other wide-ranging tasks. As stipulated in a bill which was enacted by the parliament, making the economy free from carbon emission would entitle the country to get the support of industrialized nations.

The MoEFCC is mandated to drive environmental impact assessment processes in Ethiopia. However, it has delegated the respective Ministries to review, and decision making authority for ESIA documents of projects in the respective sectors.

3.4.3 Ministry of Water, Irrigation and Electricity

The Ministry of Water, Irrigation and Electricity (MoWIE) is mandated and responsible for exploration, allocation and utilization of water resources in Ethiopia. In addition, the Ministry needs to ensure measures are put in place so as to prevent and control pollution to the country's water resources. The Ministry is also responsible for ensuring sustainable development in the energy sector. The MoEFCC is mandated to drive environmental impact assessment processes in Ethiopia. However, it has delegated the MoWIE review and decision making authority for ESIA documents of projects in the water and energy sectors.

3.4.4 Addis Ababa City Administration Environmental Protection Authority

The Addis Ababa City Administration Environmental Protection Authority (EPA) is one of the executive organs of the city government established by Proclamation No.15/2001, which has been amended several times. According to the amendment made in 2012 by Proclamation No. 35/2012 the AAC EPA, being accountable to the Mayor, shall have the following powers and functions, among others:

- prepare the City's environmental protection standards in accordance with the standards prepared by the Federal Environmental Protection Authority; design strategies to protect the environment from pollution; coordinate stakeholders with regards to environmental protection;
- cause the due propagation of environmental protection and the sustainable and nonabuse use of natural resources; aware the public about environmental protection through mass media;
- follow up and control that the disposition of industrial residue, by-products and waste are in accordance with the law;
- in consultation with the concerned bodies, prepare and submit strategies of environmental protection; ensure implementation of same upon approval;
- study the site and economic, social, cultural and environmental benefits of various plant species and implement same; determine the plant type and quantity to be planted on areas designated for recreational parks, forest, beaches and other green areas in accordance with the master plan of the City;
- cause the undertaking of forest development and soil conservation activities on forest areas and beaches designated as green areas in accordance with the master plan of the City; and
- give permit for cutting of trees grown on private or Government holdings; follow up and supervise to protect the cutting of trees without the knowledge and permit of the Authority.

3.4.5 Addis Ababa City Administration Land Development and Urban Renewal Agency

The Addis Ababa City Administration Land Development and Urban Renewal Agency is one of the government offices under the AAC Land Development and Management Bureau. Among the mandates of the Agency are the preparations of directive on compensation of assets and replacement of land for expropriation of landholdings for public purposes and establishing unit rates for assets on the basis of the directive. It is also responsible for assessment of project affected people and assets, calculation of compensation for affected assets and payment of compensation for affected people, as well as for arrangement of land replacement for people who lost their land due to expropriation of landholdings. The Agency has branch offices in all the sub-cities of Addis Ababa and the sub-city level offices are responsible for executing the tasks related to compensation and land replacement issues at local level.

3.4.6 Sub-City and Woreda Level Administrations in Addis Ababa City

The project is located within Addis Ababa city which is administratively structured into Subcities. The sub-cities are subdivided into Woreda (district) administrations. In this ARAP, the woreda administrations would be the main contact. The sub city level of administration has a major role and responsibility in facilitating resettlement activities and compensation measures. Sub-cities are responsible in the implementation of ARAP and effecting compensations to PAP.

3.5 Gap Analysis between JICA Guidelines and Laws of Ethiopia

Analysis of the gaps between the JICA Guidelines and the relevant laws of Ethiopia with respect to the provisions applicable to resettlement and compensation issues was undertaken and the details are shown in Annex 3. Where there is a gap in the Ethiopian laws, the provisions of the JICA Guidelines are adopted. The analysis also indicates the policies applied to the current project.

4. SURVEYS AND SOCIO- ECONOMIC STATUS OF PROJECT AFFECTED HOUSEHOLDS (PAHS)

This section presents the socio-economic profile of project affected households (PAHs). These include social and demographic characteristics, livelihoods/occupations, sources of income and expenditure, property ownership, etc.

In order to grasp the socio-economic status, asset inventory and socio-economic survey of PAHs were conducted from July 13 to 15, 2018.

4.1 Households Affected by Overhead and Underground TLs

This section briefly describes the socio-economic profile of households affected by the tower base of the Kaliti 1 - Gofa overhead transmission line and the NADC - Gofa underground TL. Table 4-1 below shows the number of households potentially affected

by the aforementioned transmission lines. The BLL – NADC and Weregenu – Connection Point-3 underground TLs will not affect individual households.

Table 4-1 Number of households potentially affected by Kaliti 1 - Gofa overhead TL and
NADC - Gofa underground TL

Name of Transmission Line	No. of affected Households	Type of project activity
Kaliti 1 - Gofa Overhead TL	13	Tower base
NADC - Gofa Underground TL	8	Underground cable
Total	21	

The following sections provide a brief description of the socio-economic characteristics of the potential affected households.

4.2 Residence and Household Heads

Table 4-2 below illustrates the distribution of project affected households by sub-city and woredas. About 62% of the households are from Nifas Silk Lafto sub-city, and the rest 38% are from Akaki kality sub-city. Of the total 21 households, the majority (i.e. 90%) are male headed households and the rest 10% are female headed households.

Sub-city	Woreda	Number of Impacted HHs	Percent
Akaki Kality	Woreda 4	4	19.05
	Woreda 7	4	19.05
Nifas Silk Lafto	Woreda 6	8	38.10
	Woreda 11	5	23.80
Total	4	21	100

Table 4-2: Distribution of Project Affected Households by Sub-city and Woreda

4.3 Social and Demographic Characteristics of PAHs

4.3.1 Population and Family Size

As depicted in Table 4-3 below, the total population of the survey households is 100, with average family size of 4.8 people per household. Of these 100 members of households, 43 are male and 57 are female.

HH Size	HH Size Frequency House	
2	2	4
3	3	9
4	4	16

 Table 4-3
 Households' Population and Family Size

Total HH Population		Male = 43 Female= 57 =100
Total HHs Surveyed		21
Average HH size		4.8
Total	21	100
8	2	16
7	1	7
6	3	18
5	6	30

4.3.2 Age Category and Marital Status of Household Heads

Char 4-1 below illustrates the distribution of household heads by age category. The majority (about 43%) are in age range of 41-60 years, while 38% are between the ages of 22-40 years. Only 19% of the household heads are 61 and above years.

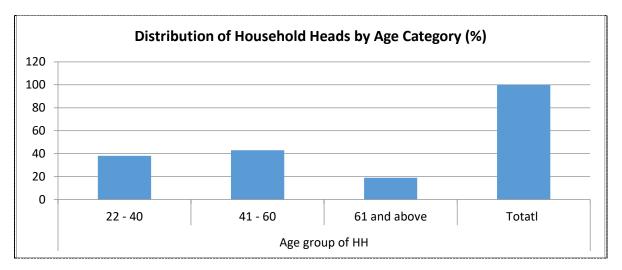
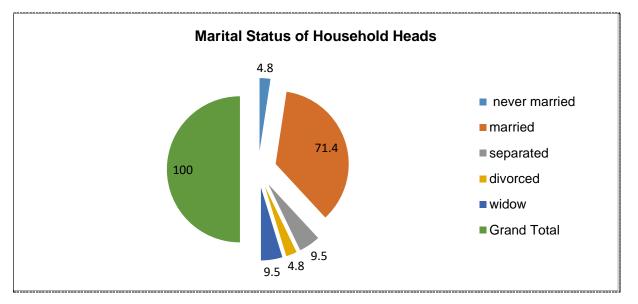


Chart 4-1: Distribution of Household Heads by Age Category

Pie chart 4-2 below depicts the marital status of household heads. The majority (about 71% are married. Nine percent each are separated and widow. The rest 5% each are divorced and never married.

Pie chart 4-2: Distribution of Household Heads by Marital Status



4.3.3 Educational Level of Households Heads

Self-reported literacy rate of household heads (for reading and writing) is 14%, whereas 24 % are illiterate. About 33% attended primary school, and 9% and 19% attended high school and preparatory school respectively. The details are shown in Table 4-3 below.

Education level of HH head	Frequency (HH)	Percent (%)
Illiterate	5	23.8
Writing and reading	3	14.3
1 st cycle Primary School (1-4 th Grade)	1	4.8
2 nd cycle Primary School (5-8 th Grade)	6	28.6
High School (9-10 th Grade)	2	9.5
Preparatory (11-12 th Grade)	4	19.0
Total	21	100.0

Table 4-3: Education level of Household Heads

4.3.4 Health Status of Household Heads

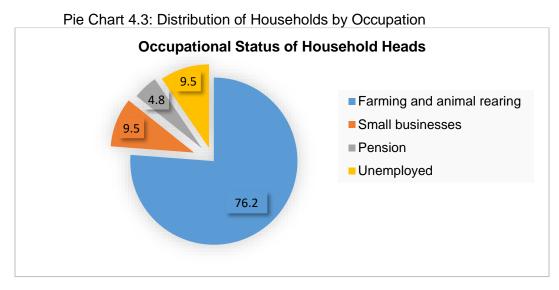
Table 4-4 below presents the health status of the household heads. Accordingly, the majority (about 90%) reported healthy status, whereas one household was physically impaired and other one was chronically ill at the time of the survey.

Health status	Frequency (HH)	Percent (%)	
Healthy	19	90.5	
Physically impaired	1	4.8	
Chronically ill	1	4.8	
Total	21	100.0	

Table	Δ-Δ·	Health	Status	of	Household Hea	he
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4.3.5 Livelihoods/Occupation of PAHs

Pie Chart 4-3 below depicts the occupation of the household heads. Accordingly, 16 (76%) household heads were engaged in farming and animal rearing and two persons in small businesses, whereas two household heads were unemployed; and one person was pensioner at the time of the survey.



4.4 House Ownership and Housing Condition

4.4.1 House Ownership

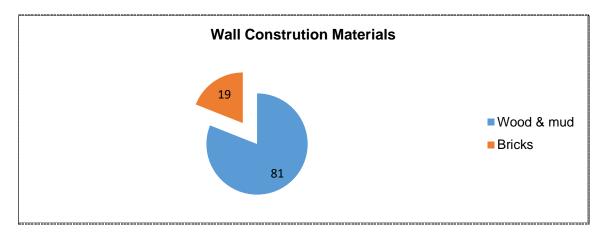
As depicted in Table 4-5 below, 14 household heads have their own private house, whereas 6 households live in rented house. One household lives in a relative's private house temporarily for free. The average room for the survey households is about 2. Of the total households, 9 households have less than 3 rooms; 5 have 3 rooms. 2-3 households have 4 or five rooms. Only one household has 14 rooms.

House ownership	Frequency (HH)	Percent (%)
Privately owned	14	66.7
Rented house	6	28.6
Relative's private house temporarily used for free	1	4.8
Total	21	100.0

4.4.2 House Construction Materials

As can be seen from Pie Chart 4-4 below, the walls of houses (81% of them) are made from wood and mud wall. Only four (19%) are made from bricks. All the roofs are made

from corrugated iron sheet. Floors of seven houses are made from earth and rest 14 from cement concrete



Pie Chart 4-4 Wall Construction Materials

4.4.3 Kitchen and Toilet

Nineteen households have separate kitchens, whereas 2 households have kitchen inside the house. Regarding sanitation facilities, 13 households have private toilet, whereas seven households use public toilets. Only one household uses open field.

4.4.4 Sources of Drinking Water

Nine households use public tap, whereas another nine households have private tap. Only one household purchases water from private tap. Two households use well water as source of water. The main problems of source of drinking water are interruption (81%); poor quality (9.5 %) and queuing (9.5%).

4.4.5 Source of Lighting and Cooking

Twenty households use electricity, and one household use solar for lighting. The main source of cooking is electricity (66%); followed by charcoal (24%) and firewood (10%).

4.5 Sources of Income and Expenditure

4.5.1 Income Sources of Households

As depicted in Table 4-6, the main income source for households is crop production which accounted for about 51% of the total income. This income source is followed by income from house rent accounting for about 22%, and trade for 8% of the total income. The average annual income earned from all income sources is 45833.33 Birr.

Table 4-6. Household yearly income from different source	S
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Source of HH Income	Birr	Percent
Agricultural and related activities	489,700	50.9
Livestock production and related activities	38,000	3.9
Trade	74,500	7.7
Handcraft	28,000	2.9
House rent	209,100	21.7
Daily labor	24,000	2.5
Employment	99,200	10.3
Total annual Income	962,500	100.0
Average annual income	45833.33	-

4.5.2 Annual Expenditure

Table 4-7 below illustrates annual expenditure on different items. Expenditure items in their order of importance were food, clothes and medical care. The amount of money spent by all households on these items was 426,200 Birr, which accounted for 62% of the total expenditure. Other expenditure items in their order of importance include house rent, education and social expenses which account for 9%, 8.6% and 8.4% of the total expenditure respectively. The average annual expenditure for the survey households is calculated at 32,891.

List of items	Total (in Birr)	Proportion for the total (%)	Average annual Expenditure per
Household expenditure on food, clothes and medical care	426,200	61.7	20295.2
Expenditure for education	59,100	8.6	2814.3
Farming and livestock production activities	49,840	7.2	2373.3
Renting house	61,700	8.9	2938.1
Social activities (holiday, Idir)	57,730	8.4	2749.0
Transport & communication	36,140	5.2	1721.0
Total expenditure	690,710	100.0	32891.0

Table 4-7: Household Annual Expenditure on different items

4.6 **Property/Asset Ownership by PAHs**

Table 4-8 depicts the types of properties or assets owned by the project affected households. These properties are rain-fed farmland, grassland and irrigated land. The total number of owners of these proprieties is 22, which include 21 individual households plus one association comprising 28 members – the association has a small parcel of land used for growing vegetables and some perennial crops (see Tables 4.10 and 4.11 for

types of crops). The total land area that would be affected by the project is estimated to be about 2,000 square meters (0.20 ha).

Table 4-8 Types of Prop	erties Affected by Project

			Area			
Properties	Owner Households	In hectare	In square meter	Percent of the total		
Land						
Farmland (annually cropped)	20	0.1924	1924	96.8		
Grassland	2	0.0064	64	3.2		
Total	22*	0.1988	1,988	100.0		

*21 individual households plus one association

4.6.1 Farmlands

Table 4-9 below illustrates the number of households and size of their land holdings which would be affected by the project activities

Impacted farmland size			Total impacted land size	
In hectare (A1)	In square meter (A2))	No. of Households (B)	Hectare (A1xB)	In Square meter (A2xB)
		1		
		1		
		1		
		1		
		1		
		1		
		1		
		1		
		5		
		1		
		2		
		2		
		1		
		1		
		1		
		1		
	Total	22*	0.19887	1988.7

Table 4-9: Number of Households and the Size of their Landholding

*21 individual households plus one association

4.6.2 Types of Crops Grown by PAHs

4.6.2.1 Annual Crop Types

Table 4-10 below depicts the types of crops grown by the project affected households. The main annual crops grown in the project affected farmlands are spinach, wheat, and Kale. Most of the households dominantly grow either wheat or vegetables mainly spinach and kale.

Types of Crops Grown	No. of HHs reported to grow the crop (dominantly)	Notes
Spinach (Kosta)	9	These HHs also grow kale
Wheat	8	Most of these HHs also grow teff
Enset	5	Perennial crop
Kale	2	2 nd dominant vegetable grown by irrigation
Grass	2	Used as cut & carry
Tomato	1	

Table 4.10 Types of Crops Grown by the Households

4.6.2.2 Perennial Crops

Table 4-11 depicts perennial crops grown in project affected farmlands. The most reported perennial crops are Enset (false banana), Sugarcane, and Gesho (hop).

Table 4-11 Project impacted perennial crops by type, size and number

Perennial Crops	Counted Total number
Enset (false banana)	32
Hop*	7
Sugarcane*	8
Apple	1
Total	49

* Plants growing from same stock were considered as one plant

5. MAGNITUDE OF IMPACTS BY CATEGORIES AND QUANTIFICATION OF PROPERTY LOSS

5.1 Description of Project Impacts

Some of the potential positive and negative social impacts associated with the project implementation and operation are briefly described below.

5.1.1 Positive impacts

Reliable energy supply and cost reduction: The main anticipated benefit of the rehabilitation and upgrading of the transmission and distributions network in Addis Ababa and surrounds is improved and reliable energy supply and distribution to residents and businesses in the capital city and environs. It is expected to improve the coverage of reliable power supply in urban and rural areas of Addis Ababa, thereby stimulating the economy and social service delivery in the impact area. Reliable electric energy supply will also reduce the costs and inconvenience associated with using substitute forms of energy supply.

Job and employment for local people: Implementation of the project is expected to bring a positive impact on local economy through creation of employment opportunities for unskilled, semi-skilled and skilled labour that will be sourced within Addis Ababa including from the local communities.

Public health and safety: Demolishment of old transmission lines and installation of new ones would reduce health and safety hazards related to old towers/ poles, electric cables and other structures.

5.1.2 Negative Impacts

Implementation of the project is not likely to have significant adverse impacts on the socioeconomic environment of the project influence areas due to the fact that most of the project activities particularly the overhead transmission line will take place within the existing rightof-way of the TL. Hence, implementation of the proposed project will not involve significant land acquisition and will not cause physical displacement to residents. However, the following economic and other impacts are anticipated to occur in relation to the implementation of the proposed transmission lines.

(i) Permanent Loss of Farmland and Loss of Crop Production

According to the socio-economic survey conducted for the project, 13 households will permanently lose a small part of their farmland holdings and grasslands due to land taking for tower-base of the Kaliti 1 – Gofa overhead TL. The total area of the potentially affected cropland is 1129 meter square (m^2) (0.113 ha) of which 994 m^2 is rain-fed farmland and 135 m^2 is irrigated farmland. The croplands are owned by 11 households, and the affected farmlands is only 0.2 to 2.6% (av. 0.6%) of their total farmland holdings. In addition, 64 m^2 of grassland owned by 2 households is potentially affected by tower-base.

Eight (73%) of the potentially affected farmers grow cereal crops dominantly wheat and teff through rain-fed cultivation while the rest three farmers grow vegetables including tomatoes, spinach (*Kosta* in Amharic) and kale (*Abesha Gomen*) mainly through irrigation, but also through rain-fed cultivation.

Proposed mitigation measures

Permanent loss of farmlands, crops and grasslands will be mitigated through payment of adequate compensation and site restoration measures as specified below:

- Permanent loss of farmlands and crops will be mitigated through payment of sufficient cash compensation for the affected households according to applicable government law (Procl. No. 455/2005) and regulations (Regulations No. 135/2007). Based on the Regulations and the procedures provided by the AAC Land Devt and Urban Renewal Agency, details of the project affected households and compensation cost estimate are provided in this ARAP;
- Execution of the construction works in farmlands during the dry season only that is after crop harvest and before the next cultivation season; and
- Restriction of land taking and project activities to the area absolutely required for the project activities.

(ii) Temporary Loss of Farmland and Loss of Crop Production

The results of the socio-economic survey also show that 8 households and one association will temporarily lose their irrigated farmland and annual and perennial crops due to construction of the New Addis Center – Gofa underground TL at just before end of the TL at the EEP warehouse. In total these households would lose 796 m² area of farmland. The potentially affected farmlands comprise about 11 to 100% (av. 50%) of the total farmland holdings of the households.

The households grow dominantly spinach and kale mainly through irrigation. They also cultivate maize, potatoes etc. during wet season. In addition, they grow some perennial crops dominantly *Enset* (false banana), but also some sugar cane and hop (*Gesho*).

Proposed mitigation measures

Temporary loss of farmlands and crops will be mitigated through payment of adequate compensation and site restoration measures as specified below:

Temporary loss of farmlands and crops will be mitigated through payment of sufficient cash compensation for the affected households according to applicable government law (Procl. No. 455/2005) and regulations (Regulations No. 135/2007). Based on the Regulations and the procedures provided by the AAC Land Devt and Urban Renewal Agency, details of the project affected households and compensation cost estimate are provided in this ARAP;

- Restriction of land taking and project activities to the area absolutely required for the project activities;
- Careful removal, proper stockpile and re-use of the topsoil from the underground route section located in farmland, temporary access route and materials laydown areas for restoration of the temporarily affected sites when construction works are completed; and
- Restoration of temporarily affected areas including the route of UG cables, access roads and materials stockpile areas to productive state by removing any pavement materials, ripping compacted soils and spreading topsoil over the surfaces.

(iii) Impacts of Air and Noise Pollution

Construction works that involve excavation, machinery and vehicles movements likely to cause noise emission and air pollution (dust & exhaust gas emissions). These in turn may create disturbances and health problems to local residents.

Proposed mitigation measures

Potential air and noise pollution problems will be mitigated through the following mitigation measures:

- Implementing measures that will reduce dust from construction activities including spraying water on unpaved access roads, exposed earth and any stockpiles on site to suppress dust emission;
- Setting speed limits for vehicular traffic operating on unpaved access roads esp. in the vicinity of sensitive areas (residential and business areas, social services, religious places) and enforcing the limit to reduce dust emission;
- Use of modern mechanical plant, equipment and vehicles fitted with effective noise silencers/ mufflers and their regular maintenance to reduce excessive exhaust emissions and noise levels;
- Switching off equipment and vehicles when not in use to avoid noise emission; and
- Carrying out noisy construction activities in the vicinity of sensitive areas during normal working hours only.

(iv) Impacts on Public Utilities

There are abundant public utility lines including water supply pipelines, sewer lines, telecommunication lines and electric distribution lines in the corridor of the underground and overhead transmission lines. Several of these are potentially affected during construction of the transmission lines particularly the underground cables as they intersect the electric lines at many places. In particular the potential impact on water supply network along the Black Lion – New Addis Center – Gofa and Weregenu – Conn. Pt-3 underground transmission lines is predicted to be high because of the high density of water lines and their occurrence at shallow depth. This means the pipelines are easily vulnerable to damages during excavation in ground for installation of electric cables.

Casual damages of utility lines during construction of the envisaged electric lines could result in unexpected interruption of utility services to users. This situation can lead to complains from the users as well as the service providers. In addition, it can result in wastage of resources or environmental pollution if damages were caused to water lines or sewer lines respectively.

Proposed mitigation measures

Potential impacts on public utilities will be avoided or minimized through the following mitigation measures:

- Considering the location or route of major utility lines such as the primary and secondary water supply lines and sewer lines during detail design of the electric lines thereby avoiding or minimizing impacts on existing utility lines;
- If there would be unavoidable impacts, relocation of the potentially affected utility lines by the concerned utility agencies prior to commencement of construction works at the particular locations, or re-connection of the utility line that has been disconnected before the beginning of electric line works as soon as the works have been completed;
- In case of unavoidable interruption of utility services due to the construction works, announcement of the situation to users well ahead of the interruption date; and
- At locations where primary water lines or sewer lines intersect with the underground TLs, adopting pipe jacking technique to install the envisaged electric cables without causing damages to the water or sewer lines.

(v) Impacts on Road Infrastructure and Community Access

The proposed underground and overhead transmission lines traverse or run along the median of a number of main roads. In addition, they travel along or cross several access roads, most of which are built from cobblestone through community contribution. Installation of the underground lines is expected to cause significant damages to the main roads as well as community access roads due to cutting of the roads for burying electric cables. In addition, a community road is potentially affected due to excavation for foundation of tower-base of two towers, namely Tubular Towers 11 and 12.

Moreover, damages could be caused to the roads esp. the cobblestone built community roads used by project vehicles and equipment as access roads during construction. This situation may affect the economic and social activities of the local people resulting in community complains. The impact on road infrastructure has been evaluated as a major, short term adverse impact.

Proposed mitigation measures

Impacts on road infrastructure will be mitigated by taking the following measures:

Restoration of the damaged sections of the main roads and community roads affected due to the project activities as soon as possible;

- For major road intersections and square mostly busy with high vehicular traffic volume like the Mexico square and roads around it, and the roads that would be provided with new BRT system, applying pipe jacking technique to install the envisaged electric cables without damaging roads, squares, and underground utilities including water supply, sewer and telecommunication lines; and
- Shifting the location of Tubular Towers 11 and 12 to either side of the affected community access road to avoid damaging of the road and the obstruction to be created by the towers.

(vi) Temporary Disturbance of Petty Business/Trade Activities

There are some petty trade activities mainly selling of vegetables that are practiced on roadsides at two places along the NADC – Gofa underground transmission line. The geographic coordinates of these places are 472109 E, 994300 N and 472214 E, 991141N. These small scale economic activities are carried out by low income people as a source of livelihood. These activities are likely to be temporarily affected during construction of the underground TL due to lack of space, dust and noise disturbance and safety risks.

Proposed mitigation measures

The temporary impacts on petty trade activities will be mitigated through arrangement of alternative work places for the traders or payment of cash compensation to traders for loss of income benefits during the construction period. The former mitigation measure will be implemented by officials of respective Woredas that is Woreda 6 of Kirkos SC and W. 6 of Nifas Silk Lafto SC.

5.1.3 Impacts on Vulnerable Groups and Underserved Groups

According to the socio-economic survey carried out on households residing within 30m corridor of the overhead TL, 27% of the households are female headed families. In addition, a significant proportion of the inhabitants in the area are low income households that earn their livelihoods mainly by engaging in small-scale business activities such as small shops, tea rooms, groceries, vegetables market etc. It is not uncommon to see a number of women involved in petty trade activities such as selling injera, local drink (*Tela, Areke*), vegetables and other small businesses just at their door step as well as at village open market usually called Gulet for survival. Some of these activities are located within the direct impact zone of the project as indicated above in section (vi), thus, they are likely to be affected during the construction works. It is expected that some project activities or project impacts would affect more women than men, particularly if appropriate considerations or actions were not taken to mitigate the adverse impacts.

The social survey conducted for the TL project has identified 21 potentially affected households (PAHs) out of which 2 are female headed households. Although the number of female headed households affected by the project is very small, the number of female population in the PAHs is higher than male population. Out of the total 100 population of the 21 PAH members, 57 are female. This shows that more number of women population will be directly or indirectly impacted by the proposed project. In addition, of the 21

households potentially affected, one household head was physically impaired and another one household was seriously ill at the time of the survey.

Generally, except these groups, no any other vulnerable groups were identified to be affected by the project. In the preparation of this ARAP, special consideration will be given for the above-mentioned groups and women group. In addition, gender action plan or mitigation actions will be taken to mitigate gender related issues or impacts during implementation as well as operation phases of the project.

Regarding underserved groups, the project affected sub-cities do not have any underserved groups whose traditional life style would be compromised through the project activities.

5.2 Magnitude of Impacts by Categories and Quantification

5.2.1 Magnitude of Impacts by Categories

The process of compensation payment involves inventory of assets and land take; valuation of properties/ assets, and delivery of entitlement. In the case of this project, EEP, the project proponent, is responsible for payment of compensation for asset losses due to project facilities and activities. On behalf of EEP, the consultant team has conducted inventory of project affected assets for generating database for valuation of the properties. Accordingly, the levels of impacts on the farmland (annual crop land), grazing land and perennial crops was determined on the basis of inventory of assets, site visits and verification, and consultation of PAHs. Impacts by categories are given in Table 5-1 below.

	No. of Owner		Area			
Properties	Households & Association	In hectare	In square meter	Percent of the total		
Land						
Farmland	20	0.1924	1924	96.8		
Grassland	2	0.0064	0.0064 64			
Total	22	0.1988	1,988	100.0		
Perennial crops	In Number					
Enset (false banana)	32	-	-	-		
Hop (Gesho)	7	-	-	-		
Sugarcane	8	-		-		
Apple	1	-	-	-		
Total	49	-	-	-		

Table 5-1 Magnitude of Impacts by Categories

As shown in Table 5-1 above, the total area of land take would be about 2,000 m² (0.20 ha). Of this about 97% is farmland, which is mainly used for growing annual crops including

cereals (mainly wheat & teff) and vegetables (dominantly spinach and kale). In addition, some perennial crops dominantly Enset are grown on the farmlands.

Of the total 2,000 m² area of potentially affected land (farmland plus grassland), 1200 m² will be permanently impacted and this belongs to 13 households. On average one household would loss 140 m² (0.014 ha of land. The remaining 800 m² area is totally farmland that will be temporarily affected during construction of underground TL.

Table 5-2 below shows the list of households and size of their land holdings potentially affected as well as the types of main crops they cultivate.

Household Code	Types of land	Impacted land size (ha)	Main annual crops including vegetables	Affected perennial crops (in number)	Project facility	
	Farmland (Rain-fed)		Wheat	_	Kaliti-1 to Gofa Overhead TL	
	Farmland (RF)		Wheat	_	"	
	Farmland (RF)		Wheat	_	"	
	Farmland (RF)		Wheat	_	"	
	Farmland (RF)		Tomato	_	"	
	Farmland (RF)		Wheat	_	"	
	Farmland (RF)		Wheat	_	"	
	Farmland (RF)		Kale	_	"	
	Farmland (RF)		Wheat	_	"	
	Grass land		Grass	_	"	
	Farmland (Irrigation)		Spinach	_	"	
	Grass land		Grass	_	"	
	Farmland (RF)		Wheat	_	"	
	Farmland (Ir)		Spinach	Enset (8)	NADC to Gofa Underground TL	
	Farmland (Ir)		Spinach	_	"	
	Farmland (Ir)		Kale	_	"	
	Farmland (Ir)		Spinach	_	"	
	Farmland (Ir)		Spinach	_	"	
	Farmland (Ir)		Spinach	Hop (7) & Enset (1)	"	
	Farmland (Ir)		Spinach	Enset (5); Apple (1); Sugarcane (8)	"	
	Farmland (Ir)		Spinach	Enset (3)	"	
	Farmland (Ir)		Spinach	Enset (15)	"	
Total		0.1988	-	-		

Note: HH-1 to HH-9 & HH-13 mainly depend on rain-fed cultivation.

HH-11 & HH-14 to HH-22 mainly cultivate using irrigation.

5.2.2 Valuation and Compensation

Pursuant to Article 14(2) of Proclamation No. 455/2005, the Addis Ababa City Council issued an amended directive (no. 19/2006 EC /2014GC) on compensation of assets and replacement of land for expropriation of landholdings for public purposes. The main focuses of the directive are legal rights of landholdings and compensation payment for various properties lost from the expropriated land and valuation of assets. Attachment -1, of the Directive acknowledges that the amounts of compensation for expropriated land and lost asset is determined on the basis of Proclamation No. 455/2005 (Part 3 Article 7(3) and Regulations No. 135/2007 (Part 2 Article 13) as follows:

- Compensation for crops = the total area of the land (in square meters) X value of the crops per kilo gram X the amount of crops to be obtained per square meter + cost of permanent improvement on land.
- Compensation for unripe perennial crops = number of plants (legs) X cost incurred to grow an individual plant + cost of permanent improvement on land.
- 3. Compensation for garden vegetables = area of the land (in square meters) X current market value of the vegetable per kilo gram + cost of permanent improvement on land.

Therefore, the preparation of this ARAP has followed these provisions and compensation rates developed by the Addis Ababa City Administration Land Development and Urban Renewal Agency to determine the amounts of compensation for lost assets.

The Land Development and Urban Renewal Agency in consultation with concerned bureaus and agencies establishes unit rates for each asset and other items for calculation of compensation and revises the unit rates annually. Accordingly, the Agency often develops updated unit rates for different assets and distributes to the Land Development and Urban Renewal Offices at Sub-city level.

Similar to the previous approach for revising rates, the Agency has developed updated rates for different assets and distributed to the Sub-city Land Development and Urban Renewal Offices on *Hidar* 29, 2010 EC (December 8, 2017) so that they would use the updated rates in the valuation of assets. This ARAP has used these updated rates for estimation of the amount of compensation to be paid to PAHs. The results are presented in the following section.

5.2.3 Quantification of Property Losses

As indicated in above section, the main properties that would be affected are (i) farmland which is used by households mainly for growing annual crops; (ii) grassland and (iii) perennial crops. In ARAP, the updated rates developed by the Addis Ababa City Administration Land Development and Urban Renewal Agency are used for quantifying property losses. Tables 5-3 and Table 5-4 depict the amounts of compensation to be paid

for Permanent Land Take and Temporary Land Take respectively. Accordingly, a total of 463,872.70 Birr will be disbursed for the affected households (see Table 5-6). This comprises 279,200.32 Birr for permanent land take (Table 5-3) and 184,672.89 Birr for temporary land take (Table 5-5).

Househol d Code	Type of land	Main annual crops gown	Impacted land size (in ha) (A)	Compensation rate/ha for the crop type (in Birr) (B) *	Total Compensation (in Birr) (AxB)
	Farmland	Wheat			
	Farmland	Wheat			
	Farmland	Wheat			
	Farmland	Wheat			
	Farmland	Tomato			
	Farmland	Wheat			
	Farmland	Wheat			
	Farmland	Kale			
	Farmland	Wheat			
	Grassland	Grass			
	Farmland	Spinach			
	Grassland	Grass			
	Farmland	Wheat			
Total	-	-	0.1193		279,200.32

 Table 5-3 Compensation for Permanent Land Take

* The Addis Ababa City Administration Land Development and Urban Renewal Agency, Hidar 29, 2010EC (December 8, 2017GC).

ETHIOPIAN ELECTRIC POWER Abbreviated Resettlement Action Plan

Table 5-4 Compensation for Temporary Land Take

Household		Compens	ation for a	nnual crops			Compensatio	n for perennial c	rops	
Code	Type of land use	Main annual crops gown	Impacte d land size (in ha)	Compensation rate/ha for the type of crop (in Birr)*	Total compensati on for annual crops	Total compensation for annual crops for 2 years ¹	Perennial crops and number	Compensation rate for the type of crop (in Birr)*	Total compens ation for perennial crops	Grand total
	Irrigation Farm	Spinach					Enset (3)	3760		
	Irrigation Farm	Spinach					_	-		
	Irrigation Farm	Kale					_	-	ŀ	
	Irrigation Farm	Spinach					_	-	ŀ	
	Irrigation Farm	Spinach					_	-	ł	
	Irrigation Farm	Spinach					Hop (8)	1565		
	Irrigation Farm	Spinach					Enset (5)	3760		
	-	-	I	I	I	ŀ	Sugarcane (8)	695		
	-	-		I			Apple (1)	789		
	Irrigation Farm	Spinach					Enset (3)	3760		
	Irrigation Farm	Spinach					Enset (15)	3760		
Total				-	34,021.69	68,043.37	-	-	116,629	184,672.89

* The Addis Ababa City Administration Land Development and Urban Renewal Agency, Hidar 29, 2010EC (December 8, 2017GC).

¹Two years income benefit is considered assuming that the households would resume crop production on the temporarily affected land within two years period.

Table 5-6 depicts summaries of the compensations by category of impacts. Of the total amount of estimated compensation, about 60% of the compensation would be disbursed to the households who would lose their farmland permanently.

Impact Category	Estimate Value (in Birr)	Of the category from the total
Farmland (permanent land take)	275,129.92	59.31
Grassland (permanent land take)	4,070.40	0.88
Irrigation farmland (temporary land take)	68,043.37	14.67
Loss of perennial crops	116,629.00	25.14
Total	463,872.69	100

Table 5-6 Summaries of the Compensation Estimate Value (in Eth. Birr)

6. ELIGIBILITY FOR COMPENSATION

Article 44.2, of the Constitution of the Federal Democratic Republic of Ethiopia (1995), provides interventions for public goods, which may cause displacement of people or adversely affect the livelihoods of the local populations. It also gives the right to compensation by monetary or other means including resettlement, with adequate state assistance. World Bank Operational Policies and Bank procedures explicitly address the need for proper compensation payments and restitution of livelihoods. Article 40 (3) and 44 (2) of the Constitution of Government of Ethiopia (GoE), guarantees 'usufruct rights' of people and 'recognizes' compensatory measures when these rights are adversely affected by investments for public goods. In addition Article 40 (8) recognizes advance payment of compensation for private property expropriated for public purpose.

According to the relevant Ethiopian law (Proclamation No. 455/2005) and Regulations (No. 135/2007) as well as the AAC Directive on Compensation of Assets, any person who claims for payment of compensation should produce proof of legitimate possession of the expropriated landholding and ownership of the property entitling compensation. Accordingly, the owners of the land plots that would be permanently taken for the project reported that they have individual land holding certificate that provides them land use rights. Whereas the owners of the farmland plots that would be affected temporarily during construction of underground TL have land use rights provided for a group of 28 people who organized in association and provided land use right by the Nifas Silk Lafto sub-city and Woreda 6 Administrations.

In line with the above Ethiopian laws and regulations, JICA Guidelines and World Bank Safeguard Policy, the compensation and assistance policy for the project, such as eligibility and compensation valuation is shown in Table 6-1.

Table 6-1 Entitlement Matrix

Type of Loss	Eligible Groups	Im	pact	Entitlement	Responsibl e Bodies
Seasonal crops	Crop owner	 Loss of seasonal crops used for subsiste nce Loss of livelihood 	Permanent loss (loss caused by the construction of tower base for overhead transmission lines)	 Cash compensation based on prices of such crops based on the area coverage, type, productivity and selling price of crop* Seasonal crops may continue to be planted even after erection of towers as long as they do not grow tall to interfere with the power lines 	EEP & Sub-cities (Akaki Kaliti & Nifas Silk Lafto)
			Temporary loss (loss caused by the construction of underground transmission lines)	 Cash compensation based on prices of such crops based on the area coverage, type, productivity and selling price of crop* It is considered that crops will continue to be planted after installation of underground TLs as long as their roots do not grow deep to interfere with the power lines 	EEP & Sub-city (Nifas Silk Lafto)
Perennial crops	Crop owner	 Loss of per used for su Loss of live 	ubsistence	 Cash compensation based on prices of such crops based on the size/age, type, productivity and selling price of crop* 	EEP& Sub- city (Nifas Silk Lafto)
Waged employment (Day laborers/ traders)	Employee	- Loss of live	elihood	 Employment opportunities during construction 	EEP, Contractor & Sub-cities (A. Kaliti, NSL & Kirkos)
Vulnerable Groups	Vulnerable groups (HHs headed by women, physically impaired persons and seriously ill persons)	 Loss of cro subsistenc Loss of live 	e elihood	Cash compensation in addition to the above compensation for crop loss	EEP & Sub-cities (Akaki Kaliti & Nifas Silk Lafto)

*The unit rates provided by the AAC Land Development and Urban Renewal Agency was adopted for this ARAP

7. GRIEVANCE REDRESS MECHANISM

Section 3.3 above presents the relevant legal document that provides procedures on compensation of assets and replacement of land for expropriation of landholdings for

public purposes and the relevant articles for addressing grievances. According to the document, Article 23, Sub-article 1 states that "the individual who has been given expropriation order can submit his complaint with details of reasons and documentation within 15 working days to the organ who issued the expropriation order". Sub-article 2 indicates that "the organ referred to in Sub-Article (1) shall examine the compliant and give its decision within 15 working days and let the complainer in writing. If the complaint hasn't been accepted by the organ, the reason has to be clearly explained in the decision.

Article 24 states that if the complainer (referred to in Article 23) is dissatisfied with the decision referred to in sub-article 23(2) above, he/she can present his appeals to the Addis Ababa City Expropriation and Compensation Issues Grievance Council within 30 days. The Directive doesn't provide further information on grievance mechanism.

And yet, the information on the practices followed by sub-cities in addressing grievances revealed that the Sub-city Land Development and Urban Renewal Offices adopt the following procedures:

- If an individual is not satisfied with the amounts of compensation or any other decision, he/she can fill the *Grievance Application Form* and present it to the Grievance Committee established under the Land Devt and Urban Renewal Office.
- Upon receipt of the complaint, the Grievance Committee would communicate the case to the head of the office and request the official to arrange for examination of the data collection and valuation process of the compensation issue. Then, the official would communicate the Compensation Committee/Team to check the data on the individual's assets and the valuation procedures again. As necessary, the official or Compensation Committee may assign a separate expert or team of experts who would collect the data on assets and make the valuation process again based on the directive and current compensation rates provided by the AAC Land Dev't & Urban Renewal Agency. Finally, the Committee would pass this to the Grievance Committee.
- Finally, the Complainer would receive the decision through the Grievance Committee.
- If the Complainer is still dissatisfied with the decision, he can take the case to the concerned regular court.

In the implementation of this ARAP, the Consultants of this study propose to adopt these procedures in case of grievances and complaints raised about the compensation process, valuation of assets and amount of compensation payment.

8. INSTITUTIONAL FRAMEWORK

The bodies responsible for the implementation of the ARAP are EEP and the concerned Sub-cities and Woredas with their respective offices. In the ARAP implementation, EEP will have the overall responsibility for management of compensation process and disbursement of payments. It is also responsible for coordination of different stakeholders both at the Federal and City levels who will be involved in the project activities. The role and responsibilities of the major parties are provided below.

8.1 Federal Level

At the federal level, the major organizations that would be involved in implementation of the ARAP include the Ministry of Water, Irrigation & Electricity, the Ministry of Finance and Economic Cooperation (MoFEC), and Ethiopian Electric Power (EEP), which is the implementing agency. EEP has extensive experience in the implementation of ARAP developed for transmission lines. Particularly, the Environmental & Social Management Office within the EEP is responsible for the evaluation of the ARAP documentation prepared for current project and its implementation.

8.2 Addis Ababa City Government Level

The project components for which this ARAP applicable are located within the Addis Ababa city which is further divided administratively into sub-cities and Woredas. For this ARAP, the sub-cities in collaboration with their respective Woreda administrations will be the main contacts and have a major role and responsibility for facilitating ARAP implementation. They are also responsible for working closely with the PIU during the implementation of this ARAP.

8.3 Sub-city Level

ARAP Implementation Committee (IC): Implementation Committees (IC) may be established at the sub-cities crossed by TLs. The committee has the responsibility for coordinating and monitoring of compensation payments. The sub city level IC will have the mandate and authority to ensure the proper implementation of the ARAP, and to assess the timely payment of compensation to the PAHs.

The committee will report directly to the Sub-city Administration Office and to the EEP PIU, and will be responsible (i) to coordinate activities between the various organizations involved in ARAP implementation; (ii) to ensure that appropriate compensation procedures are adopted and followed; (iii) to supervise the activities of the valuation and grievance mechanism and how grievances are addressed (see Table 8-1 for proposed IC members).

No	Committee Members	Responsibility
1	Sub-city Land Devt and Urban Renewal Office (Head/Expert)	Chairperson
2	Sub-city Finance and Economic Office	Secretary

Table 8-1 Proposed Members of ARAP Implementation Committee

	Sub-city Trade Office	Member
3	Representative of the respective Woredas crossed by TLs	Member
4	Woreda Community Mobilization Office	Member
5	Expert from PIU of EEP	Member
6	Representatives of PAPs (1 male and 1 female)	Members
	Total	8

9. IMPLEMENTATION SCHEDULE

Article 40 (8) of the Constitution of FDRE recognizes advance payment of compensation for private property expropriated for public purposes. The implementation of this ARAP, mainly payment of compensation, would begin from two to three months before commencement of project construction works. On the basis of this assumption, the following schedule for ARAP implementation has been prepared (Table 9-1).

Table 9-1 ARAP Implementation Schedule

No.	Activity	Duration	Responsible body	Remarks
1	Disclosure of ARAP to Project Affected Persons (PAPs), Woreda and Sub-city Admonitions	6 day	PIU of EEP	After the approval of final draft ARAP
2	Verification of assets evaluations by experts of Sub-city Land Devt & Urban Renewal Office or Compensation committee	6 day	Sub-city Land Devt & Urban Renewal Office or Compensation Committee	Including preparation of final comp. payment
3	Grievance redress committee would address complaints and grievances (if any) raised by PAPs	4 days	Sub-city Grievance Committee	
4	PIU/EEP would conduct consultation with PAHs on the disbursement of compensation.	3 Days	PIU of EEP	
5	Compensation payment to all PAPs	2-3 months	PIU & SC Comp. Committee	Within 2-3 months before commencement of construction
6	Monitoring and evaluation for PAPs or auditing compensations and processes	4 days	Independent Consultant	
7	Preparation of completion report by PIU	10 days	PIU of EEP	

10. COST AND BUDGET

The main activities for implementing ARAP and estimated costs for each activity are shown in Table 10-1 below.

No.	Description	Inputs (A)	Unit Rate/Day/ Person (in Birr) (B)	Total (AxB)
1	Disclosure of ARAP to Project Affected Persons (PAPs), Woreda and Sub-city administrations and EEP	4 days input from 3 experts	2,000	24,000
2	Verification of assets evaluations by experts from sub- cities and Woreda Compensation committees.	6 days input from 4 experts	1,500	36,000
3	Grievance redress committees would address complaints and grievances (if any) raised by PAPs.	4 days input from 4 committee members	1000	16,000
4	PIU/EEP would conduct consultation with PAHs on the disbursement of compensation.	3 days input from 2 experts	2,000.	12,000
5	Compensation payment for all PAP.	22 PAHs	-	463,872.70
6	Additional support for vulnerable groups including 2 FHHs and 2 other households	4 HHs	10, 000	40,000
7	Monitoring and evaluation for PAPs or auditing the compensation processes	8 days by 2 Consultants	10, 000	160,000
8	Preparation of completion report by PIU/EEP	10 days input by 2 experts	2,000	40,000
	Total Cost	-	-	791,872.7
	Contingency (10% of the total)	-	-	79,187.27
	Grand total			871,059.97

Table 10-1 Itemization of ARAP Budget

11. MONITORING AND EVALUATION PLAN

As the ARAP doesn't involve resettlement or relocation of PAHs, it is suffice to undertake auditing the process of compensation payment to PAHs to ensure that all the required activities for compensation processes are done properly and the appropriate amount of payment is disbursed to eligible persons according the schedule outlined above.

Therefore, auditing is assumed to be made in two rounds; first before the disbursement of payment to check all the steps and processes for compensation has been carried out properly and secondly after the disbursement of all payments to ensure that the appropriate amount has been disbursed to eligible PAHs and to address grievances, if any.

12. STAKEHOLDER ENGAGEMENT

12.1 Introduction

The Ethiopian Constitution gives the right to people to be consulted and participate in the planning and implementation of programs and projects that would affect them. The Ethiopian EIA Guideline Document also emphasizes the need to engage the interested and affected parties including project affected communities in the EIA process that includes the design of appropriate mitigation or compensation measures for project affected people.

Early engagement provides an opportunity to understand the concerns of the affected communities and their authorities and other key stakeholders, and their ideas or recommendations to find solutions to the concerns or impacts. In addition, stakeholder consultation is required to fulfil international funding agency guidelines such as the JICA Guideline.

In accordance with the above stated policy and legal requirements, engagement was made with key stakeholders at the sub-cities and woredas affected by the major project components (the overhead and underground transmission lines) as well as the potentially affected communities. Potential displacement of people and impacts on sources of livelihood were among the key issues raised and discussed during the formal consultations and focus group discussions held with the key stakeholders and community members. The key issues or concerns raised and the recommendations forwarded by the stakeholders in relation to resettlement, loss of livelihood and compensation issues are summarized in section 12.2 below.

12.2 Key Issues Related to Resettlement and Compensation

The potentially affected communities and key stakeholders raised a number of issues and concerns related to potential displacement and loss of livelihood sources. These are summarized in Table 12-1 below.

Key Issues and Concerns Raised by PAPs & Stakeholders	Measures Recommended by PAPs and Stakeholders	Responses Provided by the ESIA Team			
I. Communities Affected by Overhead TL (Consultations held with 4 communities in 3 Woredas – Woredas 4 & 7 of Akaki Kaliti SC & W. 11 of Nifas Silk Lafto SC)					
1. Displacement of households living within 30	. Displacement of households living within 30m corridor of the TL				
There are many households that have constructed residential houses within the 30m corridor of the TL and lived there for many years. They were very much concerned about displacement from the area as they don't have alternative houses that could be used for residence or sources of livelihood. Displacement will cause economic, social and psychological problems to affected people. On the basis of the existing government laws and regulations the compensation that would be paid for eligible properties and land use right would be inadequate. Displacement without any compensation for households that don't have legal documents of land holdings or for their houses or other structures.	Strongly requested the city government and EEP to arrange alternative residential houses and provide adequate support that would help them to restore their sources of livelihood if they have to be relocated from the 30m corridor of the TL. Payment of fair compensation for affected properties that would be adequate to replace the lost properties	The ESIA team explained to the participants that EEP and the Design Consultant will make possible efforts to avoid or minimize displacement of households from the 30m corridor through tower design and other measures. However, if this wouldn't be achievable, the Study Consultant will develop a resettlement action plan (RAP) that will consider the measures proposed by the participants; RAP will be implemented in coordination with the concreted sub-city government.			
2. Loss of existing livelihood sources due to di	splacement				
Loss of employment, income generation activities or other sources of livelihood found in the project impact zone. Relocated people may not be able to restore their livelihood or the current living standard if infrastructures (like road, water supply, market) and social services (schools, health) development in the new settlement area is poor or inadequate, which is the case for most new settlement sites.	For the people earning their livelihood from petty trade and renting their houses, alternative sources of livelihood should be created for them at the new settlement area or at reasonable distance from where they live.	The ESIA team will propose mitigation or compensation measures in ESIA report or RAP.			
3. Impacts on community access roads and public utilities					

Table 12-1: Key Issues and Concerns Raised, and Measures Recommended

Key Issues and Concerns Raised by PAPs & Stakeholders	Measures Recommended by PAPs and Stakeholders	Responses Provided by the ESIA Team
Existing cobblestone roads could be damaged during the project construction period. Potential damages to public utilities (like electric distribution lines, water supply systems, telephone lines) found within the 30m corridor and other project operation areas such as access roads and materials stockpile or laydown areas.		The project will repair any damages caused to community access roads. Impacts on public utilities will be minimized and any damages repaired properly through consultation with the service providers.
4. Impacts on vulnerable groups		
There are a number of vulnerable groups within the 30m corridor and these include female headed households, old people and economically poor people. These would become more vulnerable if they were displaced from their current residences.	Provision of additional support for the vulnerable groups to help them to reconstruct replacement houses or provide built houses and to restore their livelihood.	The proposed action will be considered in ARAP if the project will involve resettlement of such groups or impacts on livelihood of those groups.
III. Officials of the Sub-cities and Woredas affe	ected by the overhead transmi	ssion line
 Displacement of people residing under the exproblems associated with resettlement 		
There will be potential displacement of people from the TL right-of-way due to demolishment of housing units – there are many houses most of which are low standard and illegally constructed. Economic and social problems to the displaced people due to low economic status of the majority of the affected people and inability to re-construct the affected structures unless they are supported by the city government or the electric project. The existing government laws and regulations on compensation and land replacement matters apply only for people who have legal entitlement of landholding and properties. Therefore, as the majority of the potentially affected people don't have land or property certificate, the local government and the power project would face a major problem in relocating the people and keeping the RoW free of settlements unless special considerations would be taken.	Implementing compensation, land replacement and/or restoration measures for the PAPs who are eligible for compensation as per the relevant government laws and regulations. Provision of special consideration and support for the affected people who have no legal rights of land ownership and properties located within the project right-of-way esp. for the poor households, elders and female headed households who don't have the capacity to arrange alternative residential houses or means of living.	EEP and the Design Consultants will make maximum efforts to avoid or minimize displacement of people through transmission system design. Resettlement would be the last resort.
2. Impacts on community access roads, public construction works	utilities and new road	
There will be potential damages to access roads mainly cobblestone roads due to operation of heavy equipment and vehicles	EEP to contact and discuss with AACRA's authorities to	Damaged roads will be repaired upon completion of

Key Issues and Concerns Raised by PAPs & Stakeholders	Measures Recommended by PAPs and Stakeholders	Responses Provided by the ESIA Team
during construction of the TL, and this situation may affect the economic and social activities of the road users. Excavation works for construction of the TL may cause damages to water supply lines and interruption of water supply.	avoid conflicts between road construction and the TL due to overlap of right-of-way. Considering the tubular type pylon for the TL project as it would occupy much less space than the normal tower (lattice type).	construction works and the costs of road maintenance will be covered by the project or EEP. Care will be taken during design as well as construction time to avoid or minimize damages of public utilities, and unavoidable damages will be repaired by the service providers while EEP will cover the costs.
IV. Officials of the Sub-cities and Woredas affe	smission lines	
1. Impacts on public utilities		
Excavation works for installation of underground cables may cause damages to water supply, telecommunication and underground electric lines, and interruption of the supply of those utilities to users.		Care will be taken during design as well as construction time to avoid or minimize damages of public utilities, and unavoidable damages will be repaired by the service providers while EEP will cover the costs.
2. Air and noise pollution during construction	on phase	
Project activities that would involve operation of heavy equipment, plant and vehicles to execute construction works such as excavation of trenches, drilling in ground or rock, and transport of materials are likely cause significant air and noise pollution problems.	Taking all appropriate measures to reduce air and noise pollution problems during construction period to acceptable levels.	Potential air and noise pollution problems are among the issues that will be assessed in the ESIA study and appropriate mitigation measures provided.
3. Spoil materials management		
The project is expected to generate significant excavation or spoil materials that may cause environmental pollution, access and safety problems etc. unless properly collected and disposed of at approved disposal sites.	Proper management of excavation or spoil materials through timely collection and disposal of the materials at approved disposal sites.	The issue and proposed mitigation was well noted, and it will be included in the ESIA & ESMP.

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ANNEXES

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Annex 3-4: Minutes of the Meeting held with Officials of W. 11 of NSL SC on April 12, 2018

Annex 3-5: Minutes of the Meeting conducted with PA People in Ketena 2 of W. 11 in NSL SSC on April 12, 2018

Annex 3-6: Minutes of the Meeting undertaken with Community Representatives of Ketean-6 (Cheri Village) of W. 7 of Akaki Kaliti SC on April 11, 2018

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