SOCIAL & GENDER INTEGRATION PLAN (SGIP)



Ghana Power Compact

Economic Growth and Poverty Reduction







SOCIAL AND GENDER INTEGRATION PLAN (SGIP)

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ABBREVIATIONS AND ACRONYMS

ACEP	Africa Centre for Energy Policy
AIDS	Acquired immune deficiency syndrome
AWDF	Africa Women's Development Fund
CBO	Community-based organization
CEO	Chief executive officer
COO	Chief operating officer
CRC	Convention on the Rights of the Child
CSO	Civil society organization
DACF	District Assembly Common Fund
ECG	Electricity Company of Ghana
ECOWAS	Economic Community of West African States
ECREE	ECOWAS Centre for Renewable Energy & Efficiency
EFOT	ECG Financial and Operational Turnaround
ESIA	Environmental and Social Impact Assessment
ESMAP	Energy Sector Management Assistance Program
ESMP	Environmental and Social Management Plan to protect
FGD	Focus group discussion
GAWE	Ghana Association of Women Entrepreneurs
GBV	Gender-based violence
GDP	Gross domestic product
GEDA	Gender and Energy Network, Ghana
GIS	Geographic information system
GoG	Government of Ghana
GSA	Ghana Standards Authority
GSGDA	Ghana Shared Growth and Development Agenda
GSI	Gender and Social Inclusion
GUTA	Ghana Union of Traders Association
GWG	Gender and Energy Working Group/Network
HIV	Human Immunodeficiency Virus
HR	Human resources
HSMP	Health and Safety Plans
IE	Implementing Entities
IEG	Independent Evaluation Group
IPP	Independent power producers
IRP	Integrated resource plan
KII	Key informant interview
LEAP	Livelihood Empowerment Against Poverty
LPG	Liquefied petroleum gas
LRP	Livelihood Restoration Plans
M&E	Monitoring and evaluation
MCA	Millennium Challenge Account
MCC	Millennium Challenge Corporation
MDA	Ministries, departments, and agencies
MiDA	Millennium Development Authority
MMDA	Metropolitan, Municipal, and District Assemblies

MoE	Ministry of Education
MoEN	Ministry of Energy
MoGCSP	Ministry of Gender, Children, and Social Protection
MoP	Ministry of Power
MoPe	Ministry of Petroleum
MOU	Memorandum of understanding
MSME	Micro, small, and medium-sized enterprises
NCPD	National Council on Persons with Disability
NEDCo	Northern Electricity Distribution Company
NGO	Non-government organization
NPC	National Population Council
PAP	Project Affected Person
PPAs	Power purchase agreements
PSP	Private sector participation
PUE	Productive Uses of Electricity
PURC	Public Utilities Regulatory Commission
PWD	Persons with disabilities
RAP	Resettlement Actions Plan
RFP	Request for proposal
SCADA	Supervisory Control and Data Acquisition
SGIAP	Social and Gender Integration Action Plan
SGIP	Social and Gender Integration Plan
SLTF	Students Loan Trust Fund
SME	Small and medium enterprises
SNEP	Strategic National Energy Plan
STEM	Science, technology, engineering, and mathematics
TIP	Trafficking in Persons
ToR	Terms of reference
UN	United Nations
UNDP	United Nations Development Programme
U.S.	United States
USAID	United States Agency for International Development
WILDAF	Women in Law and Development in Africa
WINE	Women in Engineering

1. INTRODUCTION

1.1 **The Compact**

The Millennium Challenge Corporation (MCC) and the Government of Ghana (GOG) through Millennium Development Account (MiDA), have agreed to an extensive power sector development program that aims at contributing to reducing poverty through sustainable economic growth in Ghana. MiDA is the entity accountable for overseeing, managing and implementing the Compact. A Constraints Analysis performed with the support of the U.S. Government and Government of Ghana (GoG) in 2013 revealed insufficient and unreliable electric power; lack of access to credit; and insecure land use rights as three binding constraints to Ghana's economic growth¹. Based on the analysis, the GoG selected the power sector as the priority focus area of its second, US\$469.3 million Compact with the MCC. The Compact's overarching goal is to reduce poverty through economic growth in Ghana.² Its Program objectives are to:

- Increase private sector investment and the productivity and profitability of micro, small, medium • enterprises (MSME) and large scale businesses;
- Increase employment opportunities for men and women; and •
- Raise earning potential from self-employment and improve social outcomes for men and women.

The Program objectives apply to all six power sector projects of Compact II.³ indicated below:

- Electricity Company of Ghana (ECG) Financial and Operational Turnaround (EFOT) Project: To improve the quality and reliability of electricity service; and ensure ECG's financial viability to sustainably operate, maintain and invest in its system, and thereby benefit productive use customers who contribute 22% of Ghana's GDP and other ECG electricity consumers.
- Northern Electricity Distribution Company (NEDCo) Financial and Operational Turnaround Project:⁴ To have the same approach, interventions and goals as for ECG's project, but on a limited basis to increase private sector participation and improve utility operations until an economic rateof-return may be demonstrated.
- Regulatory Strengthening and Capacity Building Project: To improve regulatory agency tariff review functions (and tariff structures) and sector performance reporting and monitoring.
- Access Project: To sustainably improve access to reliable electricity by micro, small, and medium-• sized enterprises (MSME) in selected markets and economic enclaves.
- Power Generation Sector Improvement Project: To attract timely private sector investments in new, least-cost generation capacity through improved planning, frameworks, and fuel supply.
- Energy Efficiency and Demand Side Management Project: To reduce electricity demand and • delay the need to invest in generation via customer-based energy efficiency and conservation.

During compact development, a series of social and gender assessments, sector focused due diligence studies, and inclusive consultations with stakeholders were carried out to ensure that gender and social inclusion considerations are integrated and the needs and concerns of women, men and marginalized groups

¹ Through the Partnership for Growth (PFG) project signed in 2013. Ghana's Action Plan for PFG focuses on improving unreliable, inadequate electricity supply and access to credit. <u>Http://www.mofep.gov.gh/?q=news/250314/partnership-for-</u> growth-joint-country-action-plan. ² MCC, Compact II Document, n.d.

³ Compact II Document. Support to achieve project and program goals to be provided via transaction/advisory services, technical assistance, operational and management tools, equipment and systems.

are taken into account in compact development. By integrating GSI in all Compact projects, MCC and MiDA aim to increase the Program's benefits and outcomes equitably for women, men and vulnerable groups, and establish new or improved means of inclusion and empowerment for them to thrive at all levels of society.

1.2 The Social and Gender Integration Plan (SGIP)

In line with MCC's Gender Policy (2011) and operational requirements as well as the gender and social inclusion policies of the Government of Ghana, MiDA developed the SGIP which will serve as an operational and monitoring tool to ensure gender and social inclusion are integrated into the detail design, implementation, monitoring and evaluation of the Compact projects. The development and approval of the SGIP is a Condition Precedent for second disbursement. It is an operational and reference document for MiDA, Implementing Entities (IEs), contractors and other Program stakeholders.

Building on the social and gender assessments, project focused due diligence and inclusive consultations carried out during compact development, the SGIP provides in-depth gender and social analysis and evidence and rational for enhancing gender integration and social inclusion into compact projects as catalyst for enhancing economic growth and reducing poverty. It is designed to systematize and foster inclusion of gender and social considerations by identifying potential entry points for GSI across all projects and activities of the Compact. The SGIP is expected to be periodically updated.

1.3 Compliance with the Social and Gender Integration Plan

The SGIP is referenced in all Compact documents, including in Implementing Entity Agreements, where specific measures and actions are to be undertaken throughout the Compact's duration and full compliance with gender and social inclusion requirements is expected, including the M&E Plan, Environmental and Social Management System (ESMS), Environmental and Social Performance Stakeholder Engagement Plan, Resettlement Action Plans (RAPs), Environmental and Social Impact Assessments (ESIAs), Environmental and Social Management Plans (ESMPs), and infrastructure designs, bidding documents, contract packages and other Compact documents. MiDA GSI team, in coordination with project teams, sector leads and with the support of MiDA management is responsible for the implementation and monitoring of the SGIP.

1.4 Methodology

To develop the SGIP, the following were undertaken: (i) desk review of relevant literature, Compact documents and due diligence reports; (ii) focus group discussions and key informant interviews; and (iii) consultations with key stakeholders including government agencies, non-governmental organizations (NGOs) and project implementing entities (IEs). For the series of in-country interviews and focus group discussions (FGDs) with stakeholders, selection criteria were developed to obtain a representative of cross-section of Compact stakeholders, and to gather more in-depth information on GSI in the power sector and complement the literature review.⁵ For the composition of the FGDs, see Annex 2. The results of these in-depth discussions with focus groups and representatives of relevant institutions were analyzed and incorporated into the SGIP.

⁵ Even though the purposive selection of interviewees and FDG participants may have led to some form of bias in opinions and experiences shared, the knowledge obtained complemented and enhanced the researchers' understanding of the institutional needs related to social and gender inclusion. See Annex 1 for a more detailed description of the methodology and Annex 2 for more information about FGD participants.

The SGIP is organized into five main parts. This introductory section presents the Compact and its projects; defines the SGIP and outlines its objectives, functions within the Compact, and methodology used in its development. Section 2 summarizes the social and economic context of Ghana relevant to Compact II implementation areas. Section 3 presents gender and social inclusion (GSI) issues analyzed for the SGIP relevant to the power sector and electricity use in Ghana, with references to international practices and illustrative case studies. Section 4 covers the social and gender aspects analyzed for each of the Compact projects, while Section 5 presents cross-cutting activities relevant to MiDA operations and the design and implementation of all Compact activities. Section 6 presents the Social and Gender Integration Action Plan (SGIAP), defining activities for enhanced gender and social inclusion during implementation, monitoring, evaluation, and closure of the Compact and expected results, indicators, and responsible parties. Box 1 defines key terms used in the SGIP.

Box 1. Key Definitions for Gender and Social Inclusion

Gender: Refers to how societies and specific cultures assign roles and ascribe characteristics to men and women on the basis of their sex;

Gender Equality: As enshrined in international agreements and national constitutions, refers to equal rights, power, responsibilities and opportunities for women and men, as well as equal consideration of the interests, needs and priorities of women and men; gender equality therefore entails that society values men and women and the roles they play equally; and,

Gender Equity: Refers to the process of being fair to women and men. To ensure equity, measures often need to be taken to compensate for (or reduce) disparity for historical and social disadvantages that prevent women and men from otherwise operating on an equitable basis. Equity, therefore, leads to equality.

Social Inclusion: There is no standard definition of social inclusion/exclusion. In Ghana, the best reference is the Social Protection Policy (November 2015), which is anchored on the notions of vulnerability and poverty and targets the 'sections of the population which, for any reason, are not able to provide for themselves. It specifically identifies three categories of people: (i) the chronically poor, such as the severely disabled, terminally ill, rural and urban unemployed, and subsistence smallholders; (ii) the economically at risk, including food crop farmers, street vendors, refugees and internally displaced persons, orphans, informal sector workers, widows, older persons, and migrants; and (iii) the socially vulnerable, comprising people living with HIV/AIDS (PLWHA), tuberculosis sufferers, victims of domestic violence, homeless persons, people living on the street, internally displaced persons and femaleheaded households, among others. As indicated in para 2.4, the provision of energy and utility subsidies is among the proposed interventions of the Social Protection Policy to the targeted groups.

1. Country Context: Background and Overview

1.1 Demographic Profile, Migration and Urbanization Ghana

Ghana's rapidly growing population is expected to reach more than 30.5 million by 2021,⁶ and has become greatly more urbanized, especially in the principal cities of Accra, Kumasi, and more recently Tamale. According to the recent World Bank report⁷, Ghana's urban population increased from 4 million to 14 million between 1984 and 2014 (i.e., an increase from 31% to 51% of the total population). Rapid urbanization coincided with fast GDP growth (urbanization generated 5.7% growth) leading to a 20% decline in poverty in urban areas between 1991 and 2012⁸. Population grew in Accra by 2.2% annually (current 2,076,546) while in Tamale (the fourth largest city with 374,022 population) grew by 3.3%. In the Greater Accra's urban and peri-urban communities, migrants make up 48.6% of the population (50.1% women).⁹ The population is ethnically divided into small groups speaking more than 50 languages and dialects, although English is the official language.¹⁰ Female headed households account for 34% in urban areas.

Ghana's population is young, with 39.4% under 15 years of age, a median age of 21 years, and only 4.8% at 65 years or older. About 20% of the population has never had any formal education. Only 22.8% of men and 11.7% of women have higher education. Women generally have lower participation in engineering schools (16.7% of total), vocational training (19.3% of female students vs. 22.8% of male students) and electricity apprenticeships (0.2% of females vs. 18.4% of males).¹¹

2.2 The Economy, Poverty Reduction and Gender Equality: Progress and Challenges

Ghana has demonstrated three decades of rapid economic growth and reduction in the incidence of poverty especially in urban areas.¹² Per capita growth rates averaged over 2.5 percent between 1983 and 2006, increasing to around 6 percent till 2011. On average, the economy grew at 6.92% annually from 2000 to 2016.¹³

Agriculture is the country's main economic sector (Table 1), accounting for about 35% of the country's gross domestic product (GDP), 55% of the labor force, and more than 55% of foreign exchange earnings.¹⁴ Ghana's industrial base, though small, is relatively vibrant compared to many other sub-Sahara African countries. In urban areas, 44.5% of women and 15.8% of men work in non-agriculture-related activities. Among these women, 57.4% are in sales and 13.7% work in crafts and trade. Food processing, farm-

⁶ U.N. Worldometer (current), <u>http://www.worldometers.info/world-population/ghana-population/</u>.

⁷ The World Bank, "Rising through Cities in Ghana: Urbanization Review-Overview Report," World Bank Group, Washington, DC, 2015: <u>http://documents.worldbank.org/curated/en/613251468182958526/Rising-through-cities-in-Ghana-urbanization-review-overview-report</u>

⁸ Ibid.

⁹ Ibid.

¹⁰ Ibid. In Ghana, 27% of men and 22.4% of women speak only Ghanaian languages.

¹¹ Ibid.

¹² Ibid.

¹³ World Bank. Country Partnership Strategy FY13-FY16. <u>www.tradingeconomics.com</u>, accessed April 15, 2017.

¹⁴ GDP, inflation and poverty data in table from World Bank "Rising through Cities in Ghana: Urbanization Review-Overview Report, 2015;" other data in table from <u>http://focusafrica.gov.in/sector_profile_ghana.html</u>.

product markets and stalls in Accra represent types of agriculture-based sector employment in Accra and other urban and peri-urban areas.

Key economic challenges of the country include overcoming infrastructure bottlenecks, especially in electricity, transport and water/sanitation services; improving management of natural resources; increasing human resource capacity and development; and establishing a business and investment climate that promotes private sector-led growth by MSMEs as well as large investors and divests state-owned enterprises.¹⁵

Selected Economic Data (2015)				
GDP/GDP annual growth	\$37.54 billion/3.9%			
Inflation (annual)	17.1%			
 Economic sectors (% of GDP)¹ Agriculture Trade, restaurants & hotels Government Construction Real Estate & Businesses 	35% 12.3% 11.5% 10.3% 8.7%			
Source: World Bank. Country Partnership Strategy FY13-FY16, www.tradingeconomics.com.				

Table 1. Selected Economic Data (2015)

Poverty Reduction: As mentioned earlier, Ghana has successfully accelerated poverty reduction over 3 decades, cutting the national incidence of poverty¹⁶ from 52.6% in 1991 to 24.2% in 2012 (below the 2012 the SSA average of 43%). There is relatively high incidence of poverty in rural areas as compared to the urban areas (37.9% and 10.6% respectively). With only 3.5% incidence of poverty in 2012, the Greater Accra Metropolitan Area (GAMA) experienced almost a 3 fold reduction of poverty from 12.0% in 2006. By World Bank estimates, the share of the population in poverty may have decreased from 28.5 percent in 2006 to 23.6 percent nationally by 2012, largely due to increased agricultural productivity and urbanization¹⁷.

As illustrated on Graph 1 on page 6, the poverty distribution across administrative regions, highlights the stark difference in the incidence of poverty across the regions, namely the major gap between Accra and the three Northern regions, which are: Northern (50.4%), Upper East (44.4%) and Upper West (70.7%) in 2012/13. It must, however, be noted that the incidence of poverty has been reduced in all three Northern regions, in particular in Upper West by 18.3% and Upper East by 28.5%. One important trend is the increase in poverty in the urban coastal localities.

Looking at non-monetary indicators of poverty, infant mortality declined from 57 deaths per 1,000 live births in 1998 to 41 in 2014, with mortality for children under-five years declining by more than half over

¹⁵ World Bank, op. cit.

¹⁶ The poverty line has been established at (in local Ghanaian Cedi currency) GHt 314 (or US\$1.83) in 2013 prices, per adult per year.

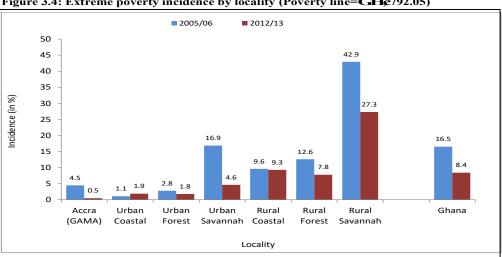
¹⁷ World Bank. Country Partnership Strategy FY13-FY16.

the same period.¹⁸ In spite of progress in reducing maternal mortality (a decline of 42% since 1990, to 350 per 1000 in 2008), significant disparities persist. For example, 94 percent of women giving birth from the top quintile are likely to be attended by a skilled attendant; but the figure drops to 24 percent for the poorest quintile.¹⁹ The World Bank report also notes that, while the economic growth generated by urbanization has been impressive and contributed to poverty reduction, improved employment and well-being, rapid urbanization continue to pose challenges for Ghana's development in key areas, housing, productivity, slum poverty and others. The increasing urbanization created challenges in service delivery, for example, access to piped water declined by 22.5% in Accra 2000-2010.



Graph 1. Poverty Incidence by Region between 2005/6 and 2012/13

Source: Adapted from GLSS6 2014, Appendix 1, pages 46-47. Note: The poverty line is GHc 1,314 or \$1.83 per day.



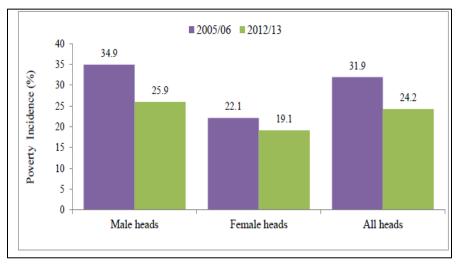
Graph 2. Distribution of Poverty and Extreme Poverty by Geographical Locality Figure 3.4: Extreme poverty incidence by locality (Poverty line=GH¢792.05)

Source: Adapted from GLSS6 2014, Appendix 1, pages 46 - 47. Note: The poverty line is GHc 1,314 or **\$1939-94-51atj** xtreme poverty incidence by region (Poverty line=GH¢792.05)

¹⁸ GLSS6, op. cit. 13 and 14.

¹⁹ World Bank, op.cit.

The incidence of poverty by the gender of the heads of households indicated that poverty was reduced among both female and male headed households. Graph 3 indicates that the incidence of poverty is higher among the male-headed households (25.9%) relative to female-headed households (19.1% in 2012/13), (19.1% and a similar trend in 2005/6). However, poverty was reduced at a faster pace among male-headed households (9%) than female-headed households (3%), while the rate of poverty reduction for all households over the period was 7.7%.



Graph 3. Poverty Incidence by the Head of Household between 2005/2006 and 2012/2013

Source: Adapted from GLSS6 2014, Appendix 1, pages 46-47. Note: The poverty line is GHc 1,314 or \$1.83 per day.

Gender Equality: Ghana is one of the sub-Saharan countries that has been making steady progress on key gender equality indicators. For example, the country is reaching close to parity on several indicators including youth literacy, net enrolment rates, and primary school completion rates. Between 2000 and 2012, net primary school enrolment of children of the relevant age group increased from 64 percent to 83 percent; the gender gap has almost closed, 82 percent of girls are enrolled, compared with 84 percent of boys. While primary completion rate (as a percentage of the relevant age group) has also improved over the same period, with the female primary completion rate increasing from 67 percent to 88 percent, there is still a gender gap, especially for senior high school years. However, the female enrollment rate increased from 32% to 56 % between 2000 and 2012, and the ratio of female to male enrolment rates increased from 0.86 to 0.90.

Despite this progress and several efforts in the Ghanaian society, gender gaps and inequalities persist due to patriarchal cultural norms and practices that privileged men and consequently are reflected in various sectors of the economy. For instance, the proportion of men in wage employment (29.5%) is 2.5 times higher than for women (11.7%).²⁰ In Ghana, not only are women less likely to own assets, but they generally own less valuable assets, leading to a large gender wealth gap in favor of men.²¹ Although women are economically active in Ghana, the perception about the role of women in society does not recognize this reality. During focus group discussions and interviews, participants noted that culturally

²⁰ Poverty Profile in Ghana: 2005-2013, GSS, August 2014.

²¹ Doss et al., 2014.

women are perceived as family care givers and many of them are perceived to depend on their husbands to provide for them.

2.3 Legal and Policy Frameworks Supporting Gender Equality and Social Inclusion in Ghana

The GoG is a signatory to international and regional policy frameworks and passed national policies and laws that are geared to end gender-based discriminatory practices. There is a wide range of legal and policy frameworks to guide the development outcomes of national development plans which produce social inclusiveness and gender-equitable outcomes. For example, Ghana's Energy Policy provides guidance to ensure that women participate in decision-making in the energy sector. The SGIP's recommended actions are in line with the policy and legal frameworks of the Government of Ghana. Annex 2, page 65, provides a comprehensive list of major national laws and policies that promote gender equality and prohibit discrimination on the basis of gender and other grounds in Ghana.

2.4 Institutional Framework for Social and Gender Integration Relevant to the Compact

MiDA, representing the Government of Ghana, is responsible for the implementation, management, oversight, and monitoring of the Compact. MiDA has Implementing Entity Agreements (IEAs) with key institutions responsible for project implementation and these include the Electricity Company of Ghana (ECG), the Northern Electricity Distribution Company (NEDCO), the Energy Commission (EC), the Ministry of Energy (MoE), and Public Utility Regulatory Commission (PURC). MiDA has a Memorandum of Understanding (MoU) with the Ministry of Gender, Children and Social Protection (MGCSP). In Addition, MiDA established the Gender and Energy Working Group representing key institutions of government, the civil society organizations and other stakeholders to play an advisory role in implementing the SGIP implementation and monitoring progress. The implementation of the SGIP will follow the already established institutional arrangements.

2. SOCIAL AND GENDER ANALYSIS OF THE POWER SECTOR

2.1 Social and Gender Analysis of the Power Sector in Ghana²²

Lack of reliable and sufficient supply of electricity is costly to economies and slows down economic growth. Deficits in electricity access also may represent a loss in the development of human capital and impair the quality of life.²³ Despite progress over the years, 620 million people in sub-Sahara Africa lack access to electricity. The majority (95%) of those who live without electricity in developing country live in rural areas. Global initiatives such as Sustainable Energy for All-SE4All²⁴ and bilateral programs such

²²

²³ Khandker, Shahid, Douglas F. Barnes, and Hussain Samad. 2009. "The Welfare Impact of Rural Electrification: Evidence from Vietnam." Development Research Group, World Bank Policy Research Working Paper No. 5057, Washington, DC.

²⁴ SE4All (<u>www.se4all.org</u>) was established in 2015 as a partnership between governments, companies, institutions, financiers, development banks, unions and communities, entrepreneurs and civil society, and others, with the objective to (1) ensure universal access to modern energy services;

as the U.S. Government's Power Africa initiative recognize the need for universal access to electricity to sustain economic development and improve people's lives sustainably²⁵.

Box 2. Definition of Access to Electricity

For the purpose of this report, access to electricity is understood as having quality, reliable, and affordable electricity for homes, businesses and services. The access rate is the rate of households and businesses connected to the grid or to an off-grid system producing equivalent power. (It excludes, however, individual diesel generators and solar lanterns.). Access is different from service coverage, which is the level of communities reached by the power networks, including mini-grids powered by diesel, solar or other decentralized sources of power, with single or multiple entry points in a community, but not necessarily connecting all of the individual households or businesses.

Several reasons hinder people from accessing electricity and these include, but are not limited to, (i) grid coverage has not reached their areas, (ii) connection costs are high, (iii) service costs are not affordable and (iv) in some cases, the process for connecting to grid is complex. This section of the SGIP presents analysis of the social and gender issues that limit people's ability to access electricity in Ghana, discusses international best practices that provided solutions for addressing these barriers and builds the business case as to why it is important and valuable to ensure gender and social inclusion into the electricity sector for policy makers, electricity distribution companies and customers.

3.1.1 Electricity Access, Reliability and Affordability

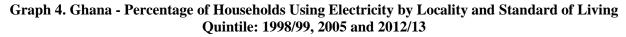
Ghana has the second highest overall electrification rate (70.2% in 2014) in Sub-Saharan Africa (SSA), following South Africa (with 89%). According to a recent World Bank study, Ghana is one of the seven countries of SSA – including Côte d'Ivoire, Mali, Nigeria, Senegal, São Tome and South Africa – to have an electricity access rate exceeding 50 percent.²⁶ Graph 5 on page 10 also provides the distribution between access in urban and rural areas and per income levels.

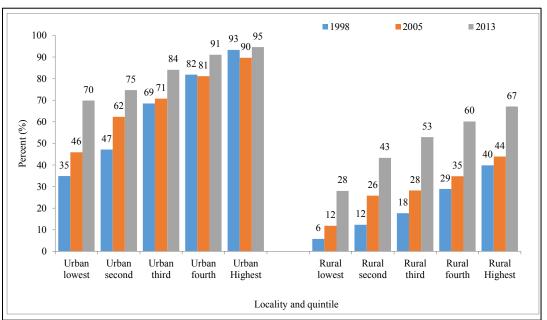
As shown on Graph 4, it is noteworthy that access to electricity has improved across all localities (with particularly sharp increases in rural areas) and among income groups between 2005/6 and 2012/13. However, disparity in access between urban (88.5%) and rural (48.6%) areas persists as well as between the lowest and highest income quintiles (70% to 95% for the lowest and highest quintiles in urban areas, and 28% and 67% for the lowest and highest quintiles in the rural areas). Likewise, electricity access among the lowest quintile in urban areas has shown a significant increase from 46% in 2005/6 to 70% in 2012/13, showing a narrowing gap of 25 percentage points. By contrast, for the rural areas, the gap in electricity access for the lowest quintile was only reduced by 16%, from 12% to 28% over the same period. In terms of household spending on electricity among female- and male-headed households, it is noted that the share of household expenditures for electricity (2.0–3.1%) is relatively high: about one

⁽²⁾ double the global rate of improvement in energy efficiency; and (3) double the share of renewable energy in the global energy mix.
²⁵ Power Africa was launched in 2013 through USAID (<u>www.usaid.gov/powerafrica</u>). It brings together experts, the private sector and governments from around the world to increase the number of people with access to power.

²⁶ Source: Kojima, M. et al. 2016. "Who Uses Electricity in Sub-Saharan Africa. Results from Household Surveys," World Bank Research Paper (7889). McKinsey 2015. "Powering Africa," which also cites Cameroon, Gabon and Namibia among the countries with more than 50% access to grid-electricity.

fifth of all urban items. In terms of electricity uses, about 80.3% of urban households have mobile phones, a television set, a refrigerator, and fans. Female-headed households spend a somewhat greater share of available cash on electricity. No specific data is available that documents access to electricity and/or expenditures on electricity consumption for other vulnerable groups, such as persons with disabilities (PWD).





Source: Ghana Statistical Service. 2014. GLSS6. Poverty Profile in Ghana (2005-2013).

3.1.2 Electricity Connection Charges and Electricity Tariffs: Affordability and Ability to Pay

The cost of connection and tariffs are significant elements in determining the affordability of the electricity service for poor households. In Ghana, while connection costs were relatively low and were one of the factors explaining the progress in access rates, they have increased in recent years. Tariff rates are structured to consider different income levels.

Affordability of Connection Costs: There is a strong correlation between the rate of access and the electricity connection costs, as presented in Graph 5, according to a World Bank study.²⁷ In the same study, the researchers found that worldwide for every \$10 increase in connection charges there is 1.1 percent decrease in the population with electrification. In Africa, they found that the decline is of only 0.5 percent, probably reflecting the fact that most countries have high connection charges.

²⁷ Golumbeau, R. & Barnes D., 2013. "Connection Charges and Electricity Access in Sub-Saharan Africa," Policy Research Paper 6511, p.7. Note that the somewhat lower rate of access on the graph results from the use of earlier data in the Barnes study than in the Kojima study.

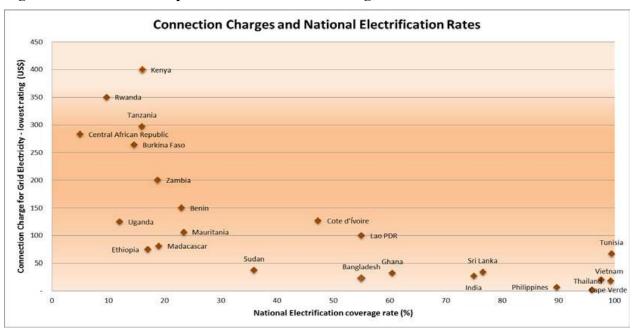


Figure 1: The Ablat Consult in the twee of Convolution Constigues Charges and National Constitution Rates 28

7

Source: Connection charge data collected from utilities, studies, and World Bank staff; access data are from IEA's World Energy Outlook 2011.

On the basis of 2011 data from NEDCo, Ghana's connection charge of \$32²⁹ was one of the lowest in SSA. Utilities around the world have treated connection charges quite differently. At one extreme, countries. (See Table 2, page 11 for ECG data). In recent years, basic connection costs have increased subsidies are provided to cover entire connection charges; at the other, the new customer is threefold to \$96 for a single phase, no-pole extension.³⁰ required to bear, in advance, the full costs of providing a connection. Between these two extremes, there are various Tables2 too boostion Changes in Changes: subsidizing some of the connection ectricity tariff, **Approved Charges** financing th Type of Service 1-Phase 3 Phase ers to pay the connection charge over time through credittschemes provided by the utility. **Straight Service** 400 96 700 168 The most control of the station of the sub-Saharano Africa is 576 require the new consumer to pay, in advance, the 2 - Pole Extension 4200 1008 7000 1680 le holds except in isolated cases are here fully subsidized by the been finded by the barge **SHEP/GOG Projects** Free uistance nom existing ciccuficity lines. An is computed customer s Addition Load example fro $\frac{1}{120}$ the connection (Upgrade to 3- phase) 500 500 120 charges, the customer must pay an additional 18 percent value-added tax (VAT) and an application Spurce: Adapted from http://www.ecgonline.info/images/publication/New_Service_Connect.pdf Table 2. Tab SSA countries, or 4.9% if measured as a percentage of family income (\$654.13). It was only one of three D1 and J1 categories, single phase, with prepayment meter SSA countries in the sample of the World Bank study, where the connection charge was below 10% of household income: the other two were Cape Verde (1.3%) and the Sudan (6.3%). For other countries in the 31 71 meters with 1 71 20 meters with 2 ²⁸ Source: Golumbeau, R. & Barnes D., 2013. "Connection Charges and Electricity Access in Sub-Saharan Africa," Policy

 ²⁸ Source: Golumbeau, R. & Barnes D., 2013. "Connection Charges and Electricity Access in Sub-Saharan Africa," Policy (Connection Charges and Electricity Access in Sub-Saharan Africa," Policy (Connection Charges and Electricity Access in Sub-Saharan Africa," Policy (Connection Charges and Electricity Access in Sub-Saharan Africa," Policy (Connection Charges and Electricity Access in Sub-Saharan Africa," Policy (Connection Charges and Electricity Access in Sub-Saharan Africa," Policy (Connection Charges and Electricity Access in Sub-Saharan Africa," Policy (Connection Charges and Electricity Access in Sub-Saharan Africa," Policy (Connection Charges and Electricity Access in Sub-Saharan Africa," Policy (Connection Charges and Electricity Access in Sub-Saharan Africa," Policy (Connection Charges and Electricity Access in Sub-Saharan Africa," Policy (Connection Charges and Electricity Access in Sub-Saharan Africa," Policy (Connection Charges and Electricity Access in Sub-Saharan Africa," Policy (Connection Charges and Electricity Access in Sub-Saharan Africa," Policy (Connection Charges and Electricity Access in Sub-Saharan Africa," Policy (Connection Charges and Electricity Access in Sub-Saharan Africa, (Connection Charges

sample, the percentage ranged from 25% in Ivory Coast, to 44% in Benin, 100% in Burkina Faso, and 140% in the Central African Republic. However, the situation in Ghana has changed dramatically since the study.

From the latest estimates of the poverty line in the Ghana Living Standard Survey (GLSS6), the connection rate represents 30% of the poverty line of GHc 1,314 per adult per year, and 50% of the absolute poverty line of GHc 792. The 2015 GSS6 reported an average annual household income of GHc 1,217, which would make the connection charge even higher as a proportion of household income (33%). With an average family size of 4.1 and two adults per household, the connection charge would be 15.2% of poor household incomes, about three times more than in 2011, and 25% for those living in absolute poverty. It is the same percentage (15.2%) if the connection is calculated as a percentage of the mean annual income per capita (GHc 644) for an average household size of 4.1 people. Although these calculations are a bit rough given the lack of systematic data, there seems to be a real issue of the affordability of the connection cost.

Affordability of Service Charges: Table 3 provides a comparison between PURC-approved tariffs (December 2015, applied since July 1, 2016) with ECG's current tariffs (available on ECG's website), and the tariff published on the Reckoner.³¹ Residential consumer tariffs have increased between 3.5 times for the first block to 3.8 times for the last three blocks. The comparison with the Reckoner data suggests that the upper three blocks are more heavily subsidized than the first block. It is noted that the first block pays for street lighting, whether or not poor residential customer areas have lighting or not. The due diligence study done by Mercados Energéticos for MCC documented (on the basis of 2013 data) that bulk consumers implicitly subsidized residential customers.³²

Residential		PURC		ECG	ECG-Reckoner	
Consumers	Until 10/1/2013	1-Oct-13	14-Dec-15	Current	Tariff	Service Charge
0-50 kWh	9.5	15.7	33.6	33.56	20.59	2.13
51-150 kWh	17.6	31.4	67.3	67.83	98.86	6.33
151-300 kWh	17.6	31.4	67.3	67.83	98.86	6.33
301-600 kWh	22.8	40.8	87.4	87.39	209.96	6.33
601+ kWh	25.3	45.4	97.1	97.08	498.3	6.33
Service Charge (Monthly)			633.17			

 Table 3. Residential Customer Tariffs Comparing PURC and ECG Current and Reckoner Rates (GHp/kWh)

Source: PURC published schedule, ECG Website: www.ecgonline.info.

The Reckoner provides the detailed composition of tariffs: the energy charge, the charge for street lighting, the national electricity levy, and the service charge. It also indicates "the net charge after realignment," but

³¹ The 'Reckoner' assists in the calculation of power consumption charges. The new Reckoner incorporates the directive for ECG to make the applicable electricity rate for 0-50 units of consumption inclusive so that all residential customers will enjoy the rate for lifeline customers. It also provides a subsidy which is energy based for industrial and commercial customer. The reliefs have been applied to extend the life line rate of all residential customers instead of the previous application to all customers with consumption between zero and fifty within a month. Therefore, instead of the rate of GHp 67 per unit for the first 50 units of consumption for all residential customers with consumption more than 50 units, a rate of 34 GHp per unit will be applied for that first increment. Source: www.myjoyonline.com. ³² Mercados 2014. Final Report. Due Diligence for PSP in Ghana's Distribution Sector, Exhibit 1 p. 34. MCC.

there is no definition of the realignment factor.

Lower income groups may also barely afford the cost of electricity consumption. A consumption of 30kWH/month, at the current tariff, means an annual expenditure outlay of GHc 12,082, 50 kWh/month means an annual expenditure outlay of GHc 20160, i.e. respectively 7.5 and 4.6 times the mean annual income for a household of an average size of 4.1 people. According to a "Willingness to Pay" study published in 2016³³ that collected data from 950 households in the Cape Coast Metropolitan Area, on average, households were prepared to pay 44 percent (GH¢6.80 or US\$3.42) more, relative to the mean monthly electricity bill in the sample, to improve electricity services.³⁴ The most important factors affecting the willingness to pay were monthly income, prior notice on power outages, business ownership, separate meter ownership, household size and education. However, 244 households were not willing to pay: the reasons for this are summarized in Table 4.

The study also found a negative correlation between household size and willingness to pay, possibly because larger households have other priorities: food, school fees, health care etc. The result of consultations with the women's groups highlighted some interesting findings of who in the household pays for electricity. Participants noted that in households that have post-pay meters, men tend to pay for the bill where as in households who have pre-paid meters, women tend to pay for electricity and the money comes from resource budgeted for food and other household expenditure.

³³ Taale, Francis & Kyeremeh, Christian. 2016. "Households' Willingness to Pay for Reliable Electricity Service in Ghana," Elsevier. <u>Renewable and Sustainable Energy Reviews</u>, <u>www.elsevier.com/locate/rser</u>.

³⁴ "The ages of the respondents ranged between 20 and 85 years, with a mean age of about 39 years. Males (54%) were dominant compared to females. Average income of the sampled respondents was GH¢ 397.71 (US\$200.83). The monthly expenditure on electricity ranged from GH¢4 (US\$2.01) to GH¢60 (US\$30.22). Trading was the dominant form (63%) of employment. The average willingness to pay calculated [was] approximately GH¢6.80 (US \$3.42), [using the following methodology]. Assuming that the sample mean WTP is representative of the metropolis and country. We calculate the aggregate WTP for the CCMA and the country by multiplying the mean WTP by the total number of households in each case. Given the current population of the metropolis of 169,894, with an average household size of 4.05, the number of households will be 41,949 and with a population of 24,658,823, the total number of households for Ghana will be 6,088,598. Multiplying these by the mean WTP, the aggregate WTP for the metropolis and the country will be GH¢ 285,253.20 (US\$143,651) and GH¢41,402,466.40 (US\$20,849,900) respectively. In terms of tariff adjustment, the mean WTP (GH¢ 6.80 or US\$3.42) represents about 44 percent increase in the average monthly expenditure on electricity."

Reason	Frequency	Percentage		
The electricity tariff is already too high	64	26.2		
I do not have enough income to pay for reliable electricity services	52	21.3		
I want to see improvement in electricity supply before I can pay more charges [either for additional consumption or more per kWh]	45	18.4		
Government should provide funds for the improvement [of the electricity network]	38	15.6		
I do not trust the extra money[if I pay more] will be used for the intended purpose	18	7.4		
There are more pressing uses of the extra income [meaning balance of disposable income not spent on electricity] to my household than reliable electricity supply	12	4.9		
The electricity companies should bear the extra cost [to improve network reliability]	10	4.1		
No response	5	2		
Total	244	99.9		

Table 4. Reasons for Households Not Willing to Pay for Electricity Consumption

Note: Percentages may not add up to 100 because of rounding problems. Language clarification in brackets. The study referred to in Footnote 34 does not provide the exact question posed, but restitutes the answers as stated.

Box 3. "LifelineTariff" and Compound Housing in Ghana

Most commonly, the majority of people who reside in compound houses, are characterized as low-income or poor. Compound houses are multi-tenant houses in which multiple families (households) reside and often share meters for water and electricity services. Individual households (tenants) have no control over their respective electricity consumption. The problem with having shared meters is that individual households who consume less than 50 kWh per month cannot benefit from the lifeline tariff. The limited electricity access for residents in such households may also be linked to their inability to benefit from the lifeline tariff policy. As noted by Ardayfio-Schandorf (2009), poor urban dwellers who live in compound houses tend to have high consumption due to their common meter which excludes them (collectively) from the lifeline category. Thus, most of those living in these compound households end up paying higher tariffs – even though each household's consumption within the compound may be below the threshold. This implies that the lifeline tariff is not benefiting all of those it is meant to support. The solution of providing an individual meter to each household is critical to make sure the lifeline tariff is properly targeted. However, according to the above-mentioned study, meters are in short supply in particular in the NEDCo area. In recognition of this challenge PURC launch a study to determine the consumption pattern of households in compound housing.

The lifeline tariff is a reduced tariff for customers who consume 50 kilowatt-hours (kWh) or less per month. It was introduced to allow poor residential customers to have access to electricity at an affordable price, targeting the estimated 5-20% of consumers who are considered vulnerable. According to PURC, there are 937,632 customers on a lifeline tariff within ECG and NEDCo networks. Whether the poor actually benefit from the lifeline tariff has been questionable. First, the majority of the poor (in particular in rural areas) are not connected to the grid, and therefore do not necessarily benefit from the lifeline tariff. Second, the majority of the low income population lives in compound housing with a common meter for several households and jointly consuming often above the threshold 50 kW per month-. One of the key challenges of implementing lifeline tariff is to determine ways to target the poor effectively so that the benefits do not leak to other groups that do not need them. The majority of those who benefit from the lifeline tariff in Ghana are the non-poor.³⁵ How to effectively target the poor has been a major challenge and recent emphasis in several countries has been placed on subsidizing the connection cost for the poor households instead of the service charges (for example interest free loans in Kenya and installment payments of connection costs in Liberia).

3.2 The Social and Gender Dimensions of Access to Electricity: the Business Case

This section reviews why it is important to integrate social and gender considerations into the design and implementation of electricity projects. It lays the foundation for the relevance of integrating social and gender dimensions into electricity programs from the perspective of key stakeholders such as electricity utilities, other power sector institutions, financiers, and the customers or beneficiaries.

3.2.1 The Business Case for Utilities and Public Institutions to Extend Access in Periurban and Rural Areas

There are many well-documented cases showing how utilities have (over time) positive operational and financial impacts related to their ability to provide reliable, affordable and quality electricity service and access to all segments of the population, regardless of gender and including vulnerable groups, in addition to the significant development impacts electricity offers for the country. From the electricity provider's perspective, negative impacts from low access and coverage rates include: illegal connections, electricity theft, corruption of utilities employees, and technical and commercial losses. Utilities that are not improving the quality of their service and operations incur a general or specific distrust by existing and potential customers, resulting in unpaid bills (note women customers are usually reported better payers) or theft, or abandonment of utilities and result in an untenable financial situation and mounting quasi-fiscal deficits as governments attempt to bolster them and/or provide customers subsidies.

When considering improvement of services for marginalized groups, utilities need to adapt and be sensitive to the particular needs and priorities of these groups. To achieve this sensibility, the utility needs to first adapt its internal policies and practices, to better utilize its own employees – especially those from GSI groups – to engage, dialogue and improve relationships with its customers representing poor or socially or otherwise disadvantaged groups in its service area. The reputation and public opinion of the utility company – usually a high profile and major employer in developing countries – may often depend of its reputation as an employer. Power utilities, as providers of a public service, are thus usually expected to be both *exemplary employers in terms of their human resource management policies* (in terms of the application of national policies to other human resource management aspects such as harassment, leave, work safety, etc.),

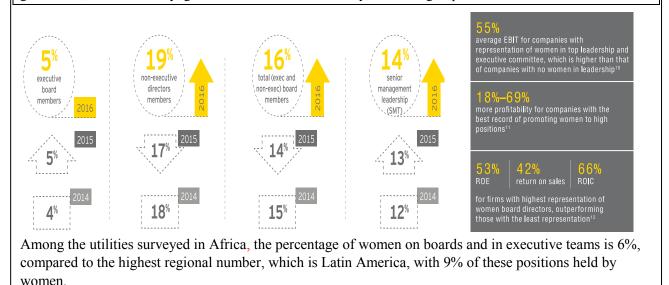
³⁵ World Bank: Ghana Poverty and Impact Analysis of the Electricity Tariff, 2010.

and exemplary service providers, in terms of providing services to all without any discrimination.

With respect to human resource management, studies have shown that utilities which make social and gender integration part of their corporate policies and practices will see net benefits in the 'bottom line.' For example, having a gender-diversified Board of Directors and executive teams (as shown in Box 4), attracting and developing a highly qualified and diversified workforce at all levels of the company; expanding its customer base; improving its collections and so forth generally improves the transparency and quality of its investments and efficiency of operations and services. This is recognized by many stories of women in senior utility technical and management positions being documented and touted. ECG itself features an online page for "Women in Power" (see Figure 1) profiling women holding senior positions in

Box 4. Women in Power and Utilities 2016

The Ernest & Young's (E&Y) Women in Power &Utility Index analyzes the boards and leadership teams of the top 200 utilities by revenue across the globe. The Index provides a baseline for measuring how much – or how little – the sector progresses each year. As depicted below, progress in having more women on Boards and in executive positions is progressing slowly, about 1 percentage point a year, although benefits from gender diverse boards and executive teams have demonstrated business benefits (data below). In addition, EY research shows that gender diversity facilitates better decision-making, greater independence, better adherence to corporate governance, less insolvency, greater innovation and creativity, and less 'group think'.



the company.

Figure 1. ECG Women in Power



With respect to GSI as part of their client services, some evidence is also available showing that where utilities adapt the delivery of services to the full range of potential customers, there are also improvements in the bottom-line. For example, ZEDCO (Electric Utility of Zanzibar) has seen a substantial increase in women's requests for connections since hiring more women in distribution services. Where tariff subsidies are transparently (rather than implicitly) targeted at, and directly transferred to, lower income groups, the utilities can sustainably do business with such customers.³⁶

For public energy institutions other than utilities (e.g., the Energy Ministry and other relevant ministries, the regulator, utility management contractors, IPPs, system operators, financiers, etc.), development of a diverse and inclusive workforce oriented (at minimum) or trained in GSI sensitivity may also be expected to benefit the overall performance of the power sector. In Ghana, the Ministry of Energy and Petroleum is accountable for implementing the national Gender and Social Protection Policies not only for its own compliance with the laws and/or policies, and good practices regarding employment and human resource management, but also to set an example for the public agencies it oversees, as well as for the general public. For the Public Utilities Regulatory Commission-PURC,³⁷ in addition to being accountable for social and gender integration in its own employment and human resource management, it is responsible for taking into account the situation of vulnerable groups in the study, structure and review of electricity tariffs and their impacts, and in monitoring the effectiveness of the lifeline tariff in benefiting the poor. PURC is also responsible for ensuring that the tariff structure will enable utilities to be financially viable. With that objective, whenever it agrees to a tariff increase, it sets performance indicators for utilities that should include increasing access and improving service quality for all, including the poor, women, etc.

³⁶ This was one of the recommendations of the Due Diligence Study for the Distribution Project done by Mercados Energéticos. Mercados 2014 op. cit.

³⁷ For more on the role of a regulator in electricity affordability and customer projection, please see the Asian Development Bank's paper, "Attaining Access for Role: Prop-poor Policy and Regulation for Water and Energy Services, "2010.

The Energy Commission, an independent agency that licenses private and public entities that will operate in the power sector, collects and analyzes energy data and contributes to the development of energy policy for Ghana, could be well placed to collect data on gender and vulnerable groups' access to electricity and their consumption of electricity.

3.2.2 The Business Case for Consumers

From the customers or potential customers' perspectives, the main interest in gender and social inclusion is that both initial access to the service (connection) and use of the service is done efficiently and without discrimination. The main constraints faced by socially vulnerable groups including women, are:

- High cost of connections (see section 3.2.2, page **Error! Bookmark not defined.**) and of extending services in geographically dispersed areas, with disparities between urban and rural areas;
- Low level of demand for domestic uses: among the lowest income groups, consumption levels often range from 15 to 30 kWh/month/household;
- Affordability: low- income levels of under/unserved customers and limited cash flows of customers; low levels of consumptions for domestic uses (note that electricity is not a cost-effective fuel for cooking, which is the most energy-consuming domestic use), and limited use of electricity for productive uses;
- Disparities between women and men in prioritization of domestic uses of electricity. When questioned about their preferred or priority domestic uses, women generally cite time-saving chores such as food grinding or uses that improve the family welfare such as lighting for children to study or heat to sterilize water, while men cite radio and television uses. More women also cite the importance of electricity for community facilities, in particular health centers and schools;
- Lack of information on the specific needs of most vulnerable groups;
- Difficulty to obtain financing and provide various forms of collateral for SMEs owned or managed by women and vulnerable groups in order to connect to the grid or access off-grid services.

Furthermore, the same electricity service may affect men and women differently, with different social or economic outcomes. For example, electricity prices and availability influence the capacity of microenterprises, mostly owned or managed by women, whose informal sector activities are often energyintensive (e.g., food processing and conservation, fish drying, some irrigated crop farming, and such small businesses as beauty salons). Another example is public lighting. The conversion of conventional streetlights in ECG target operational areas to LED street lighting on streets in Accra is likely to benefit more women and poor people as it improves public safety at night and provides a minimum of lighting for groups of people who do not have housing or for youth from non-electrified homes who use public lighting to study at night, while possibly – and significantly – reducing costs for its provision over time.

Finally, it is important to underline the development impact of electrification that takes into account the needs of all population groups. In its assessment of the benefits from rural electrification, the 2008 World Bank IEG analysis of household survey data found evidence of a positive impact of rural electrification on small-scale enterprises, including home businesses (mostly developed by women), in Ghana. The finding was strongest for the 15-year panel data from 1988 to 2003: the number of home businesses grew significantly more in communities that became electrified than in either those communities that did not or those that were already electrified in 1988. However, although the presence of electricity extends the work hours of home businesses, that particular analysis did not find compelling evidence of increases of the net income due to night activities. Other interesting findings included the positive correlation with the

age/duration of the enterprise and level of education of the business owner, and that small men-owned businesses earned more than women-owned businesses and that men tended to invest more in equipment than women.³⁸ The inclusion of productive uses components in peri-urban and rural electrification programs has proven most important to educate beneficiaries on the use of electricity, to generate additional income and therefore enhance the affordability of electricity, and to ensure the financial viability of the distribution company via improved payment for services.

3.3 International and Regional Good Practices on Promoting Gender and Social Inclusion in Electrification Programs.

Significant international and regional experiences are available on social inclusion and gender equitable electricity access initiatives. These experiences demonstrate the positive social and development impact both at the micro and macro levels, as well as the financial benefits for the sustainability of the institutions involved in electricity service delivery. Lessons learned from these experiences point to the need for strong and sustained political commitment, combined with effective and well-designed policies and implementation approaches, as the most important factors for equitable energy access without jeopardizing the financial standing of the utility companies. As seen in Kenya and Senegal (see Section 3.3.1 Utilities' Gender and Social Inclusion Policies), political commitment through energy sector policies translated into financial commitment and having gender legislation in place, strengthened institutional support for energy policies and programs favorable to women's needs. Increasing awareness and understanding of the relationship between gender, energy, and poverty reduction, including the direct benefits from having access to improved energy services, among management staff and implementers is an important factor in the success of energy programs.

Although few countries have embedded gender and social inclusion in their energy policies, many of the countries which have taken significant steps to implement the national gender and social inclusion policies in their energy sector and resolve the issues, have focused mainly on the impact of traditional household fuels on women and children in poor households: i.e., biomass-based energy for cooking or drying, kerosene for lighting – and the time consumed collecting fuels, health impacts from indoor air pollution, high maternal and children mortality rates at birth due to regulatory framework. In this context, many of the efforts made since the 1990s to analyze the linkages between the lack of good lighting and clean water, have aimed to tap the benefits of new energy technologies in peri-urban and rural electrification to substitute to traditional fuels where possible and create new opportunities for productive uses and income- earning opportunities.

In the rest of the section, selective country examples are provided to illustrate international and regional best practices incorporating gender sensitivity and social inclusion and business practices in the power sector, including the legal and regulatory frameworks, financial issues and options, and beneficiaries' uses of electricity.

³⁸ World Bank IEG. 2008. The Welfare Impact of Rural Electrification. Reassessing the costs and Benefits. Annex F.

3.3.1 Utilities' Gender and Social Inclusion Policies

Two examples of successful utility development of GSI policies are the Kenya Power and Light Company (KPL) and the Pakistan Electricity Distribution Company. The Kenya Power and Light Company commissioned a Gender Audit in 2010. Following the audit, management appointed a Gender Focal Point and established a Working Group that was tasked to draft the new gender policy for the company, in consultation with employees and management. Besides the gender policy, KPLC adopted new Equal Opportunities and Anti-Harassment Policies, undertook some improvements in physical facilities in order to have a more gender-friendly work environment (in particular, it constructed separate restrooms for women and men), and introduced a work-life balance policy that included a new paternity leave policy and benefits. It also adapted its procurement policy in order to have reserve tenders for women- and handicapped-owned business. To monitor the results of its employment policy, it started keeping sexdisaggregated data in employment, and continued its efforts to hire more women. The results reported are significant with women representing 19.4% of total employment in 2014, 21.2% of managers, and 9.2% of engineers.

The Pakistan Electricity Distribution Companies (PAK DISCOs) embarked in a significant program supported by USAID (2010-2015). The overall objective of the program was to enhance gender equity and female employment in the selected companies by: providing day care facilities, constructing separate restrooms for women and men and improving workstations, and utility exchange activities. The program also included in-house gender equity training for supervisions and training for Management Committee Members on the application of the Protection against Harassment at the Workplace Act of 2010, and community outreach, including conducting awareness campaigns on energy conservation in women's colleges, gender equity trainings in colleges, and radio programs. The results from the program were significant. The percentage of female employees climbed to 14% in three years (2011-2014), the rate absenteeism of female employees diminishes, and the number of female applicants increased; the number of female managers increased to 1.2% and that of engineers to 9.2%. The PAK DISCOs became branded as 'gender-friendly' companies. Energy conservation measures through the community and college outreach programs targeted at women, and largely led by women employees of the DISCOs.

One of the most successful electrification programs that integrated gender and social inclusion is the "Power to the Poor (P2P)" program in Laos reviewed in Box 5. More recent subsidy programs – for example, in Ethiopia, Kenya, and Senegal – have applied output-based financing, where the subsidy is disbursed to the service provider or concessionaire on the basis of pre-agreed and independently verified electrification targets. In Senegal, the subsidy represents 40% of the connection cost. The concessionaire covers the balance of 60%, including internal wiring and energy-efficient compact fluorescent lights and recovers its costs through monthly charges. Financing for the subsidies has been provided, among other sources, by the Global Partnership for Output-Based Aid (GPOBA), managed by the World Bank. Côte d'Ivoire established a revolving fund covering 90% of the connection cost and an interest-free loan for a two-year maximum.³⁹

³⁹ The cited and other examples, which do not always categorize beneficiaries by gender or vulnerability, are documented in: Golumbeanu R. and Barnes D., op. cit. pp.9-14; Kenya Power. ESIA. Slum Electrification Component April 2016; World Bank. 2016. "Kenya - Electricity Expansion Project: Additional Financing. Washington, DC. World Bank Group (http://documents.worldbank.org/curated/en/225551467995646673/Kenya-Electricity-Expansion-Project-

Box 5. Laos Gender-Sensitive and Socially Inclusive Power to the Poor (P2P)

Electrification Program

The Power to the Poor (P2)) Program was implemented by Electricité du Laos (EDL) with the support of the Ministry of Energy and Mines. Between 1995 and 2011, the rate of electrification had increased from 16 % to 74%. However, a gender assessment of those unconnected revealed that, overall, only 63% of female-headed households were connected, and in villages only 30% of female-headed households were connected. Female-headed households, but 8% of total households. The objective was to increase household connection rates to 85-90 percent in villages already connected to the grid. Participating households make an average up-front payment of about \$24 and can obtain an interest-free credit of up to \$87 to cover the costs of installation and indoor wiring. The credit is paid back over three years in installments of about \$2.50 as part of the household's monthly electricity bill. One of the key ideas behind P2P is to keep targeted households' monthly expenditures – for both the repayment of the interest-free credit and electricity consumption – at the same level as their expenditures for vastly inferior traditional energy (such as batteries, diesel lamps, and candles) used before connecting to the grid. The monthly savings in household energy expenditure are projected to be enough to allow households to repay the connection cost in three years.

In participating P2P villages, targeting female-headed and poor households, including those with disabled members, the electricity access rate increased from 74% in 2011 to 88% in 2015 and 97.4% in 2016, using grid and off-grid solutions. Currently, about 90% of female-headed households are connected in the villages included in the program. The connection cost of \$80-\$87/connection was financed from a revolving fund initially financed by Electricity Company (EdL) and several grants (IDA, GEF, AUSAID, NORAD). The interest-free coupon of \$80-\$87 given to the household was used to pay contractors for the connection service; contractors got paid upon presentation of the coupon to EDL.

Source: The World Bank. Lao PDR. Power to the People: Twenty Years of National Electrification, page 20-26.

Reducing Electricity Connection Costs to Increase Access: As seen on Graph 5 (in Section 3.1.2 Electricity Connection Charges and Electricity Tariffs: Affordability and Ability to Pay), the cost of connections in Sub-Saharan Africa is strongly correlated to the rate of electrification. I.e., the higher the cost, the lower the rate of connections and, conversely, the lower the cost of connection to the end-use consumer, the higher the rate of electrification. KPLC, with assistance from several donors, has launched a program (see Box 6) that deliberately includes steps to lower connection costs to end consumers and substantially increase the rate of electrification. Its electrification program is deliberately reaching out to vulnerable groups (in slum areas and including women-headed households), with the aim of universal access by 2021.

additional-financing); <u>http://www.kplc.co.ke/content/item/1951/kenya-power-confirms-5.9-million-customers-connected-to-the-grid</u> (March 2017).

Box 6. Kenyan Power Lighting Company's (KPLC) Experience

The five-year (2016-2021) power sector program in Kenya (supported by JICA, AfDB and The World Bank) for KPLC is adding 5,320 new transformers, 52 primary substations, 1,000 distribution substations, and 16,000 km of new powerlines to support increased access for 10.8 million new customers, including a significant portion of these for vulnerable groups, including grid extensions in slum areas.

- (KPLC) reduced the connection cost from 35,000 Kenyan Shillings (approximately \$340) to 15,000 Kenyan Shillings (approximately \$150): thus the new connection is 57% cheaper for households located within 600 meters of the closest power transformer.
- An installment payment was introduced for connection costs that would allow customers to pay over several months.
- KPLC simplified the cumbersome connection process by requiring the application of only one household (male or female-headed) to connect the neighbors.
- Ready boards are being used to connect houses which don't have internal wiring.
- This initiative is expected to connect 1.2 million new customers every year until 2021 (from 4.9 million in December 2016), including 251,000 from vulnerable groups in the 2017-2018 period via the "Last Mile" Project.
- The initiative will also support connecting schools.
- Universal access is expected to be achieved by 2020, connecting 3 million customers from vulnerable groups. (Access had reached 63% as of March 2017.)

Source: <u>Http://www.kplc.co.ke/content/item/1951/kenya-power-confirms-5.9-million-customers-connected-to-the-grid</u>, March 2017; and <u>http://www.nation.co.ke/business/Kenya-Power-draws-Sh219bn-budget-/996-3480142-lllybd/index.html</u>), December2016.

In the World Bank's Additional Financing Support (2016), it was noted that the new 2010 Constitution and subsequent national strategies and policies are trying to address "significant differences in opportunities and outcomes between women and men and for those living in the remote and most underdeveloped regions, and ethnicity remains an important factor in societal development." A part of the Additional Financing was specifically directed toward the scale-up of slum electrification efforts in urban, peri-urban and rural areas in Kenya. Also, new indicators were included in the results framework of the project: one is related to the number of new consumers in slums connected to the grid and one is related to citizen engagement to capture feedback from newly electrified slum consumers.⁴⁰

⁴⁰ World Bank. 2016. *Kenya - Electricity Expansion Project: Additional Financing*. Washington, DC. World Bank Group. <u>Http://documents.worldbank.org/curated/en/225551467995646673/pdf/PAD1282-PJPR-P103037-P153179-IDA-R2016-0113-1-Box394889B-OUO-9.pdf</u>.

Productive Uses of Electricity: In addition to the welfare benefits of electricity (improved lighting, connectivity, communications, reduced indoor air pollution, time saving on household chores, food conservation), the productive use of electricity is considered essential for poverty alleviation. Evidence is indeed emerging that when electricity is available in households, various micro and small enterprises are created, in particular by women, while some existing enterprises increase their productivity. The productive use of electricity – whether from the grid or through off-grid solutions, not only increases incomes but it also contributes to increasing the affordability and willingness to pay for the service by electricity uses, and by the same token, it contributes to the financial viability of service providers. A few studies have been carried out to document the adoption of electricity for productive uses, for example in India and the Philippines, Benin, Ghana, Peru and Uganda. The case of Peru is summarized in Box 7.

Box 7. Case Study: Productive Enterprises in Newly Electrified Rural Peru

From 2006 to 2012, the World Bank and Global Environmental Facility funded the implementation of a rural electrification program in various rural communities across Peru using Business Development Services (BDS) techniques to increase productive uses of electricity for production. The barriers facing the rural community included: insufficient technical and management skills of producers, limited access to financing, and low interest in electricity due to a negative perception of grid supplied electricity. This project primarily focused on small and home-based businesses and assisted them in gathering information, securing funding sources, and implementing marketing campaigns to the community and potential entrepreneurs. While the program did not specifically target women, many women producers received assistance from this program, especially given the small and home-based business focus. In the training workshops, women were often the primary attendees; in some regions, they comprised almost two-thirds of the participants.

One key aspect of this project was promotion of productive uses of electricity. Business case profiles were prepared that showed the benefits to businesses of productive electricity usage, and focused on cost saving factors, increased income, and investment payback periods. These were shared in open discussions and used as promotional materials with communities and businesses. The program also worked with local communities on promotional efforts, working with community groups, participating in fairs, and organizing community events. They used the community theater to put on a play that promoted productive uses of electricity and created enthusiasm for the project. They also partnered with local institutions to bring computers to local schools and children, increasing the community's confidence in their work. Overall, the project saw almost 20,000 producers adopting productive uses of electricity with an annual electricity consumption of 7.769 MWh/y and secured over US\$2 million of investment.

Source: Finucane, James, Susan V, Bogach and Luis E. Garcia, "Promoting Productive Uses of Electricity in Rural Areas of Peru: Experiences & Lessons Learned." The World Bank. 2012.

In the studies of Benin, Ghana, and Uganda, electricity usage hardly translated into higher firm profits in a measurable way. In one country case, Benin, it seems that the financial burden resulting from the investment in the connection and subsequent electricity bills can even reduce the profitability of firms, indicating that from a pure business perspective getting connected is not always a rational option.

The lack of a clear indication of the positive effects of electricity access on firm performance are a contrast to evidence indicating that electrification can lead to the creation of new firms, which then generate additional income and, hence, impacts on the target population in the project regions.

3. SOCIAL AND GENDER SITUATION ANALYSIS UNDERPINNING GHANA COMPACT PROJECTS AND ACTIVITIES

4.1 Electricity Company of Ghana (ECG) Financial and Operational Turnaround (EFOT) Project

The objective of this project is to improve the quality and reliability of electricity service in ECG's operation area, and to ensure ECG's financial viability to sustainably operate, maintain and invest in its system, and thereby benefitting the productive use customers who contribute 22% of Ghana's GDP and other ECG electricity consumers. Five main activities are envisaged:

4.1.1 Private Sector Participation

MiDA with the support of MCC consultants is currently conducting a literature review of the social and gender impacts of private sector participation in the electricity sector. The findings of the summary report will be used to update this section.

4.1.2 Modernizing Utility Operational Activity

Under this activity, the project will support the installation of a GIS system that will, inter alia, facilitate the identification of customer's location and characteristics; the adoption of an Enterprise Resource Planning (ERP) tool to improve the flow of information within ECG and with external stakeholders;

Possible opportunities and risks exist in the proposed adoption of GIS and ERP tools as they will help identify existing and potential customers, both in terms of their geographic locations, but also in terms of their demand, effective consumption, and records of payments. The GIS can be very instrumental in locating poor unserved or underserved customers (households, businesses, and communities); it is less clear whether it can be helpful to collect sex-disaggregated data without ground-proofing.⁴¹ The risk may be to rely on these tools to take major policy or planning decisions, e.g., disconnecting customers with payment arrears at the expense of the poorest rather than doing a finer analysis of the customer base. One would need to benchmark the use of such tools to ascertain that they do not erode the already weak trust between the utility and poor customers.

Upgrade of data center and communication network aimed at assisting ECG to create a data center compatible with current industry standards and to better manage the network; a loss characterization study, to identify both technical and commercial losses, including a detailed analysis of commercial losses; technical assistance for the application of tariffs, including training to develop a rate case filing compliant with the Tariff Plan; institutionalization of gender responsiveness; and assistance to ECG's training center in Tema (in the form of tools and curriculum development).

⁴¹ GIS has been used to develop poverty maps in Burkina Faso as well as the planning of rural electrification programs in Cameroon.

4.1.2.1 Institutionalizing Gender Responsiveness at ECG

As mentioned earlier, studies have shown the link between enhanced gender diversity at utilities and improvement in the financial performance of the companies. In recognition of the linkage, MCC and MiDA due diligence consultants assessed the gender responsiveness of the institutional environment at ECG and NEDCo, reviewed existing studies and held consultations with key stakeholders including management and staff. ⁴²Moreover the consultants held a series of interviews with ECG staff and management. The main findings from these reviews are presented in Table 5 on page **Error! Bookmark not defined.**. The findings indicate the following:

Human Resource Policies and Practices

- ECG does not yet have well-articulated gender and social inclusion policies. ECG applies the basic tenets of the Gender Equality and Social Protection laws (2015) in its human resource policies.
- As shown in Table 5, women represented 21% of ECG's staff. The proportion of women in management (15%) is a significant improvement since 1995 when there were no women in management. The Power Queens, an association of female employees, is an outstanding innovation in ECG (see Box 7). Women are better represented in the regions than at headquarters, but are less represented among junior than senior staff. There are no female directors and only seven women hold general manager positions, mainly in human resources, finance, and customer service. There are only 14 female engineers and 16 female technician engineers. There does not seem to be hiring and promotion policies that seek to increase the number of women in the company. The Labour Act of 2003 stipulates that employers are to provide 12 weeks of paid maternity leave. It is unclear whether ECG provides these benefits. There is no paternity leave.
- No data are available on the employment of people from other vulnerable groups, such as people with disabilities.
- Training is offered to ECG staff, but there are no gender-disaggregated data available to assess the parity between women and men on training opportunities and the professional areas of the training.
- There no gender disaggregated data or analyses to assess equity in salaries and promotions in order to reduce the gender gap.
- ECG does not have anti-sexual harassment policy per se, but sexual harassment is embedded in the code of conduct guidelines: there is no formal, independent procedure to report sexual harassment. Focus Group Discussions with staff reported that the lack of formal policy and procedures hampers women from reporting harassment situations, both at headquarters and in the regions.

⁴² ENERGIA, Gender Audit, 2010.

Table 5. ECG Staff by Gender (December 2013)43						
	Male	Female	Total	% of Total	%Male	%Female
Region						
Head Office	806	161	967	15%	83%	17%
Reg. &	4,342	1,207	5,5489	85%	78%	22%
Districts						
Total	5,148	1,368	6,516	100%	79%	21%
Management	156	28	184	3%	85%	15%
Senior Staff	1,202	393	1,595	24%	75%	25%
Junior Staff	3,790	947	4,737	73%	80%	20%
Sub Total	5,148	1,368	6,516	100%	79%	21%

Box 7. ECG Power Queens

Started more than 25 years ago when all ECG documentation was male focused, the Power Queens have facilitated change on gender equality to the extent possible. In addition to lobbying ECG management to develop and implement a gender policy, they have been instrumental in fostering training for women both within ECG and outside. By networking with the Unions and other organizations, their goal is to raise awareness on gender sensitivity both in ECG and other institutions in the power sector, in particular the Ministry of Energy. They also aim to foster young women's interest in pursuing technical fields of study. Most of the improvements in women's working conditions at ECG (separate restrooms, adequate working clothes etc.) are attributed to their actions.

Source: Meadows, Kate. 2014. Op. cit., p. 20.

Based on analyses carried out during the compact development phase, a sub-activity – Institutionalizing Gender Responsiveness – has been included to support ECG's institutional transformation. Capitalizing on best practices in the international and regional experiences discussed in 3, there are four major reasons for ECG to integrate social and gender considerations in its corporate policies and practices: (i) to achieve its mandate on gender equality and social inclusion as requested by the policies of the GoG; (ii) to gain efficiency in service delivery; (iii) to gain greater outcomes for its efforts to expand its customer base and therefore contribute to the national development effort; and (iv) to ensure that women and men and customer of all income categories, benefit both in the household and the business sectors.

The Institutionalizing Gender Responsiveness sub activity will support (i) undertaking a comprehensive gender auditing – a gender assessment and social assessment for the company that would include a thorough review of its human resource and operational policies and practices through the gender and social lens. (ii) based on the findings of the gender audit, develop a gender policy for ECG; (iii) develop the institutional capacity of ECG to implement the policy; (iv) support women employees association – the Power Queens to network and advocate for creating an enabling environment for women's equal opportunities. The sub-

⁴³ Meadows, Kate. 2014. Op. cit., p. 21.

activity will also support the development and implementation of an internship and mentoring program for young students in Science, Technology, Energy and Math (STEM) with interest to develop careers in the energy sector. Finally, utility programs that employ a conscious policy to recruit women and socially exclude groups, regularly host job fairs to specifically recruit female and PWD candidates, and tap into existing pools of qualified leaders demonstrate tangible benefits⁴⁴. As echoed in international best practice, the development and full implementation of a GSI workplace policy will greatly increase ECG's ability to recruit and maintain the employment of women and other socially excluded groups due to the family-friendly, harassment free and gender-sensitive policies, and is likely to increase its overall productivity and bottom line.

4.1.2.2 Reduction in Commercial Losses and Improvement of Revenue Collection Rates

This activity will support the creation and implementation of connection service standards; strengthening of the commercial loss reduction program; installation of automated meter readings at target locations and critical nodes for special tariff and non-special tariffs; and replacement of legacy meters with pre-payment meters in ECGs target regions.

Some potential benefits and disadvantages of replacement of legacy meters with pre-payment meters are presented below.⁴⁵

Benefits to Utilities

Utilities prefer prepayment schemes because it minimizes risk and reduces costs. Since payment is required prior to receiving services, utilities can eliminate delinquent payments and write-offs, while also reducing the operational costs of bill collection and disconnection of nonpaying customers. It also allows new customers segments to be served that might otherwise be considered unviable.

Benefits to Consumers

In addition to increasing the population of poor customers whom utilities are willing to serve, prepayment gives customers greater control over household energy use particularly in the case of those with irregular income streams and inability to save in advance for a monthly payment; eliminates fines for late payment; and reduces the risk of disconnection.

Disadvantages for Consumers

While the risk of fines and disconnection are reduced, customers may face higher per-kWh charges under prepayment mechanisms. Prepaid meters can also come with a social stigma because prepaid meters are primarily used in low-income areas. A study in Soweto, South Africa, found a strong correlation between higher levels of income and positive attitude about prepaid meters.⁴⁶

⁴⁴ Clancy, J. 2011. Cites the cases of El Salvador, Argentina and South Africa.

⁴⁵ This section was adopted from draft technical paper: The Gender and Social Dimensions of Access to Electricity prepared by Deloitte for MCC's Gender and Social Inclusion Practice Group.

⁴⁶ Ibid.

¹¹⁰ Ibid.

As it relates to gender, a study of the Edenor prepayment program in Buenos Aires, Argentina notes that because women and children care for the house during the day, they are often the ones who are affected by self-disconnections – conscious rationing of the household's prepaid electricity. Women reported using less heating and reducing use of the washing machine as a result.¹¹⁰ However, the USAID study also suggested that women may initially be more receptive to prepayment meters than their male counterparts; in several cases, women accepted the new meter but later withdrew from the program due to their husbands' refusal.⁴⁷

One of the interesting findings during stakeholder consultations in Ghana during compact development was that women indicated that when households have post-pay meters, the male heads of households pay the bill together with other utility bills, rent etc. However, in households with pre-paid meters, women are considered to pay for the bill from their household expenditure for food. This will mean less resources will be available for food.

Box 8. Prepaid Meters: Case Study South Africa

Prepaid meters were introduced in South Africa in the early 1980s to meet aggressive electricity access expansion targets and address systematic non-payment by marginalized communities. Currently, there are over 10 million prepayment meters across the country, and electrification rates have increased from about 20% to over 85% in 2012. Still, there are challenges. As of 2011, consumption rates were very low – below the breakeven point that would ensure full cost recovery by the utility. Illiteracy also poses challenges, particularly for the nearly two-thirds of keypad type meters that require the customer to enter a 20-digit encryption code. Magnetic card readers overcome this challenge, but the cards can be damaged easily and must be physically purchased as opposed to codes sent over SMS.

Source: "Pre-Payment Meter Analysis," USAID, 2011: The World Bank Database. http://data.worldbank.org/indicator/EG.ELC.ACCS.ZS

4.2 NEDCo Financial and Operational Turnaround (NFOT) Project

4.2.1 Description of the NFOT Project

The Redesigned NEDCo Financial and Operational Turnaround Project consists of categories of activities and interventions aimed at making service improvements in Tamale, the commercial capital of northern Ghana and improving the customer mix to serve more commercial customers in NEDCo's service territory for the purpose of achieving an acceptable economic rate of return ("*ERR*").

The Project includes the following activities and sub-activities

1) A Private Sector Participation Activity

⁴⁷ Wendy Annecke, Marialba Endelli, and Claudio Carpio, "Report on the Acceptability and Socio-Economic Impact of Prepayment Meters in Merlo, Buenos Aires," University of Cape Town: 2004.

- Hiring a transaction advisor, to prepare the management contract; and
- Funding the management contract itself for a total period of five years. The objective is to help structure NEDCo as a fully independent and viable utility.
- 2) A Modernizing Utility Operations Activity, with seven sub-activities to be implemented in NEDCo's geographical area of responsibility:
 - Customer census and normalization of consumer services;
 - Customer information system;
 - Procurement and deployment of operations and maintenance (O&M) materials,
 - Procurement of vehicles, tools, and equipment to improve system technical performance.
 - Institutionalizing Gender responsiveness in NEDCo
 - Development of an Environment and Social Management System (ESMS) for NEDCo
 - Technical Assistance for Tariff Development (Development of Rate Cases)
- 3) Tamale Service Improvement Activity
 - Rehabilitation/upgrade of lines and underground cables.
 - High Voltage Distribution System ("HVDS").
 - Construction of primary substations.
 - Installation of Automatic Meter Reading ("AMR") technology at critical nodes.
 - Reactive power compensation for primary substations.
- 4) Commercial Development Activity
 - Customer densification and intensification
 - AgDevCo Irrigation Scheme Connection

The next section discusses three of the activities more relevant for gender and social inclusion as follows:

4.2.2 Institutionalizing Gender Responsiveness at NEDCO

MCC's and MiDA's gender analysis and due diligence studies conducted during compact development indicated gender gaps that need to be addressed as part of the investment in modernizing utility operations of NEDCO. Some of the key issues identified include:

- NEDCO did not have sex disaggregated data during the 2012/3 gender and social assessment however, observation was made that there were less number of women employed
- NEDCO has no female board member and few women in decision making positions.
- Although NEDCO had Guidelines for Code of Conduct, the utility does not have a gender policy. Likewise there is neither policy nor mechanism to address sexual harassment.
- NEDCO's women employees' association, known as NEDCo Ladies has limited engagement with management to address some challenges women employees may have.

• No sex disaggregated data are available on training and promotion.

Taking into account the above findings, the Institutionalizing Gender Responsiveness sub-activity was included. The components and intervention described under ECG's similar sub-activity will be further developed.

4.2.3 AgDevCo Irrigation Scheme Connection Activity Opportunity

AgDevCo is a social impact fund that identifies, develops and initiates agricultural projects that contribute to local communities and bridge the gap between subsistence and commercial agricultural production. AgDevCo provides long-term, flexible risk capital that is structured to support early stage businesses to reach profitability. The AgDevCo project in Babator began in 2011 to develop a farming hub that when completed would provide energy, irrigation and transportation infrastructure to support grain, sugar cane and other marketable crops on a commercial scale.

The objective of the AgDevCo Connection Project is to provide reliable medium voltage electric service to the newly established AgDevCo farming hub.

The AgDevCo Project presents specific opportunities to attract a diversified group of agricultural entrepreneurs amongst women farmers and vulnerable groups.

4.2.4. Customer Densification (Intensification) Activity

The customer densification activity is aimed at increasing the number of commercial customers as many as 6,400 new connections in the areas where there are underutilized transformers exist. However, stakeholder consultations highlighted that NEDCO has a shortage of meters⁴⁸ and low institutional capacity of customer service. Moreover, the process for new connections is lengthy. At one of the field visits of the offices in Tamale, stakeholders mentioned that the long waiting time and the lack of separate toilets for women and men.

4.3 Regulatory Strengthening and Capacity Building Project

The regulatory strengthening and capacity building project has two activities:

4.3.1 Sector Performance Monitoring Capacity Building Activity

This activity comprises of - capacity and needs Project assessment for sector data collection, analysis and monitoring of key sector institutions: Ministry of Energy, Public Utilities Regulatory Commission (PURC),

⁴⁸ Francis, B: The Cost of Effectiveness of NEDCO Providing Meters to Each Tenant in Compound Houses (2011)

Energy Commission, and National Development Planning Commission, including technical assistance for the development of an MIS and training; and support for the publication of data.

4.3.2 A Tariff Review and Regulation Activity

This activity comprises of partnerships with national and international institutions to benefit from best regulatory practices, and various studies to update existing studies and support the development and implementation of a new tariff plan (cost of service, willingness/ability to pay, cost of cross-subsidization, multiple dwellings, street lighting etc.).

Electricity regulators have responsibilities to protect all categories of customers and ensure inclusive consolation⁴⁹. As reviewed in Section 3, one of the roles of PURC is to examine electricity tariffs to ensure that the poor will be protected from high-cost tariffs. It is also tasked to verify that connections are legal, discourage corruption, and quality services are provided.

- To date, PURC follows the 1999 Electricity Rate Setting Guidelines. It sets the Bulk Generation Tariff (BGT) and reviews the pricing component of the Purchase Agreement (PPA) with ECG and NEDCo.⁵⁰ According to a World Bank Study⁵¹ (2010), periodic tariff adjustments are done with limited knowledge: "regulators often ignore regulation for quality of service because it is easier to specify tariff levels than service quality, which is multi- dimensional and difficult to monitor. While the Guidelines are broadly acceptable as a document of regulatory principles (subject to modifications), they lack specificity on implementation. A more recent study⁵² has raised doubts over how PURC undertakes its regulatory assessment and potentially its independence. This raises the question of its ability to protect the interests of all parties, including private sector participants.
- There is no evidence that PURC has a thorough understanding of gender and social issues, including for households and MSMEs and it takes these issues into account when undertaking the tariff reviews. PURC understands the issues of compound housing and how they affect the poor's ability to qualify for lifeline tariff.
- Finally, besides anecdotal evidence periodically reported by various donors/international organizations and NGOs, there is no systematic monitoring or recent comprehensive analysis of how the lifeline tariffs impact women and the socially excluded/disadvantaged.⁵³

⁴⁹ ADB: Attaining Access for All: Pro-poor Policy and Regulation for Water and Energy Services. 2010.

⁵⁰ Www.purc.com.gh.

⁵¹ World Bank. 2010. Address the Electricity Access Gap. Background Paper for the World Bank Group Energy Sector Strategy.

⁵² Mercados, EM. 2014.

⁵³ Keener & Banerjee, 2005.

4.3.3 Opportunities for Social and Gender Inclusion in Tariff and Regulation: the Business Case

Given the regulator's responsibilities as well as those of oversight institutions such as the Ministry of Energy and the Energy Commission, social and gender integration in their activities is of paramount importance to the fulfillment of their missions:

- To protect all consumers;
- To ensure the delivery of quality and reliable electricity services;
- To ensure financial viability of energy suppliers (producers and distributors).

Opportunities for social and gender integration in the Tariff Review and Regulation activity include:

- For the four agencies targeted by the project: to pursue comprehensive human resource management policies akin to those described for ECG with respect to employment and benefits, means to integrate social and gender inclusion into all their approaches, products and services to individuals, households and MSMEs;
- For the capacity building component, this will entail building-up the gender and social sensitivity of all those involved in data collection, analysis, and monitoring systems;
- For the tariff review and regulatory activity, this will mean deepening the understanding of who benefits by gender, income levels, and other vulnerability criteria from the current tariff structure.

Increased transparency in tariff setting and the inclusion of women, men, and socially disadvantaged groups in the consultative processes will ensure that the concerns of power sector customers are addressed. Strengthening the capacity of stakeholders in GSI and also engagement and building greater trust among stakeholders to ensure sustainability of Compact projects could be useful. Strategic partnerships could be developed with stakeholders, for example between PURC and other vulnerable groups organizations such as Federations of PWDs, to organize programs to increase people's understanding of regulatory issues and how it affects marginalized groups. Through these partnerships, PURC could ensure that the poor are educated on how the lifeline tariff impacts their electricity consumption.

4.4 Access Project

The Access Project was conceptualized to address the electricity access needs among Micro, Small and Medium enterprises (MSMEs). It, intends to identify various barriers and key gaps, such as: i) uneven and unreliable supply of electricity in markets and economic enclaves where thousands of MSMEs operate, ii) low institutional capacity at various levels; iii) limited coordination among key stakeholders including ECG, the local government, formal and informal MSME/market women associations and other key actors; and iv) challenges to obtaining access to electricity, such as high connection cost and cumbersome application process.

During consultations with vendors in markets and economic enclaves, the entrepreneurs emphasized that improved access to electricity would add value through improved productivity, safety, and security in markets.

The preliminary qualitative study conducted in seven markets and economic enclaves showed that the majority of the vendors in markets are women, while men dominate the economic enclaves. A 2010 World

Bank 2010⁵⁴ mentions the benefits from an integrated partnership approach to engage CSOs and NGOs, such as women's and men's professional and other associations, to gain community support for the expansion of electrification and ensure inclusion of gender and social issues. This approach also supports the engagement of women and socially-excluded groups in micro and small enterprises (such as such as those in food processing and vending, cold store operation, hairdressing, and tailoring) in GSI-responsive dialogues, sensitization meetings and consultations in market and economic enclave selection in order to maximize the positive impacts of the Compact⁵⁵. This is also an opportunity for women's advocacy groups to train market women's associations, particularly Market Queens, to engage better with utility companies and Metropolitan, Municipal, and District Assemblies (MMDAs).

4.4.1 Entry Points

Currently studies are being finalized that will provide data and key information for the detail design of the Access Project. The following are key entry points for consideration when designing the project:

- The multiple challenges facing female entrepreneurs and those from vulnerable groups in particular, such as fewer networking and training opportunities, must be addressed. To do so, the Compact implementing agencies, could partner with women's and other organizations so as to provide training and skills to identified groups such as market associations and professional associations, This will strengthen the beneficiaries' networking skills and capacity to engage with other stakeholders such as MMDAs, utility companies, PURC, and the private sector.
- Sensitization and educational programs on gender and social should be designed and delivered for all implementing entities and other stakeholders to enhance the capacity to carry out GSI-related activities. The training should cover the benefits of including GSI considerations in electricity service at the household and small business levels. The timing of GSI training and sensitization programs should be as early as possible among the decision-making and management levels of Implementing Entities, to establish a solid basis for success in this area of Compact activities. For example, if the legalization of illegal connections in the markets is undertaken as part of the Compact activities, all stakeholder groups, including women and vulnerable groups, should be involved in pro-active stakeholder engagement activities by the distribution company. These may help to find the best, most accepted solutions for such issues as ownership of stalls and meters, and name of account-holder, and other such concerns. These dialogue activities may present good opportunities to issue rental certificates, property titles, and electricity accounts to those actually owning or managing the businesses, thereby reducing gender and other disparities.
- A study on the potential productive uses of electricity by MSMEs should be carried out to better understand the challenges they have in using electricity to increase their productivity and income.

⁵⁴ Op. cit.

⁵⁵ Ghana MCA Program, n.d.

4.5 **Power Generation Sector Improvement Project**

4.5.1 Project Description

The Power Generation Sector Improvement Project aims to reduce disruptions in electricity service due to generation shortfalls. It will:

- Promote timely investments in additional installed generation capacity, by establishing a competitive tendering process for IPPs. Private sector companies and individuals in Ghana will be allowed to engage in the power sector as independent power producers (IPPs).
- Ensure a more cost-effective fuel mix by instituting a framework for a reliable fuel supply for thermal generation.

4.6 Energy Efficiency and Demand Side Management Project

4.6.1 Project Background and Objective

Ghana has over thirty years of experience on energy efficiency (EE) and demand-side management (DSM). The first program was launched in 1985 when the National Energy Board was established to advise the Ministry of Fuels and Power. The objective was to conserve energy in order to meet the shortages and the expanding demand as a result of economic growth. Over the years, Ghana has met with quite a bit of success, combining public information and education campaign, improving the performance standards of appliances, and massively switching from incandescent lamps to CFLs, and from old refrigerator models to more efficient ones. In 2010, Ghana was awarded the Global Energy Efficiency Award.⁵⁶

The objective of the Energy Efficiency and Demand Side Management Project (EE/DSM) is to reduce the cost to consumers of their electricity requirements through improved efficiency of appliances and equipment, while also reducing the total load on the network and thereby improving reliability and offsetting the growth in demand for additional generation capacity. Electricity savings (kWh) gained from consumers undertaking energy efficiency improvements makes more electricity available for new consumers or enables an increase in consumption by current consumers without additional capital investments by the utility. This should ultimately help to improve the financial viability of ECG and NEDCo, and may potentially improve consumers' net income through reduced electricity costs and reduced need for public funding for subsidies. This Project will achieve the intended results through:

- The development and enforcement of energy-efficient standards and labels;
- Improvement of energy audits (including capacity building);
- Provision of education for technical workers and the general public which may encourage private energy service providers to enter the energy efficiency and conservation market; and
- Investment in demand side management infrastructure (e.g., piloting back-up power, gridconnected solar systems, energy efficient technologies for lighting, motors, appliances, equipment, etc.).

⁵⁶ Ofosu Ahenkorah, A.K. 2015. "Promoting Energy Efficiency and Conservation: The Journey so far from Policy and Regulation to Implementation". PowerPoint Presentation, <u>www.energycom.gov.gh</u>.

4.6.2 Potential Entry Points for Gender and Social Inclusion

All focus group discussion respondents considered energy efficiency essential in their households and workplaces; they are aware of a variety of energy efficiency methods and use these methods to ensure the most efficient and economical use of power. Women discussants, due to their significant home management responsibilities, were aware of these measures. This could be improved upon through continued educational and sensitization programs for energy saving best practices.

GSI-related actors involved in related access, electricity-consuming productive activities, or electricity supply or energy efficiency/conservation services may develop strategic partnerships with relevant CSOs that already have experience and access to various vulnerable groups, including female-headed households and MSMEs, for whom energy efficiency and demand-side management is of the utmost economic relevance.

In addition, conducting GSI training for implementation agencies to build-up their skill set to address gender and social inclusion issues will improve their ability to understand the needs and priorities of female-headed or other GSI-relevant PUE households or businesses regarding electricity use, costs and consumption. With the greater awareness of GSI distinctions in electricity needs and priorities, the Implementing Entities and their partners will be able to effectively promote the project's energy efficiency and demand-side management activities and goals. Provided funding is available through partner programs or other sources, developing educational/professional internships for young engineers and technical specialists, with an emphasis on women and vulnerable groups, in energy testing laboratories and standards agencies, vocational training centers and universities, and other related organizations may attract a more diverse talent pool from which eligible candidates can be later be engaged in employment opportunities in the energy efficiency/conservation and demand-side management areas as energy auditors, installers, etc.

Evidence shows that energy efficiency allows energy consumers of lower economic status to consume less and pay less for energy. This benefit may encourage these customers to use the additional disposable income to increase their electricity consumption (e.g., through the acquisition of additional appliances or increased productive uses benefitting from electricity, such as food processing or refrigeration) or use it for other priority expenses.

4.6.3 Entry points for public information communication approaches

- Understanding the gender dynamics in households at the local level can help save sector representatives' time, resources, and energy (e.g., sending energy meter readers and collection agents of the same sex at appropriate times helped decrease the number of return service visits necessary if a male technician could not be admitted to the home without a male family member present).
- Collecting and disseminating data disaggregated by sex and other characteristics on localized, gender-sensitive energy usage trends will help the energy sector best tailor customer-focused energy efficiency campaigns and trainings, while helping the sector make a case for modern, efficient electricity usage in comparison to traditional, labor intensive methods.
- Developing and implementing GSI-sensitive consumer education programs in the safe and efficient use of energy related to energy efficient labels, appliances, and reduction strategies will help reduce costs and improve energy conservation, especially among women and socially excluded groups.

Engaging local women leaders as local "energy efficiency motivators" and local public speakers will help inform the public on energy efficiency importance and best practices (e.g., availability of credit to replace old and inefficient energy products), while showcasing the importance of female participation in the program.

5.0 CROSS-CUTTING THEMES

5.1 Trafficking in Persons (TIP)

MCC formally integrated the U.S. Department of State's Trafficking in Persons Report into its selection process and recently developed its own Counter-trafficking Policy. The Ghana Human Trafficking Act 694, 2005 was passed into Law in November 2015. These two instruments provide a framework for addressing anti-trafficking issues. According to the 2016 TIP report, Ghana is on the Tier 2 Watch List. However, Ghana might be subjected to an automated downgrade to Tier 3 country in the 2017 TIP report because the government did not fully comply with the minimum standards for the elimination of trafficking in persons for two consecutive years and is not making significant efforts to do so. Tier 3 countries might be subjected to restrictions on U.S. government assistance, including development aid and this Compact. Children, in particular, are subject to trafficking in Ghana and can be found in the fishing, domestic service, street hawking, begging, portering, artisanal gold mining, quarrying, herding, and agriculture industries (United States Department of State, 2016). Of particular note for the Compact, young girls from the rural north who are sent to seek work as porters, known as Kayayei, are at greatest risk for sex trafficking and forced labor. In addition, under the current Compact, persons may be trafficked from non-Compact intervention areas to intervention areas. This may be attributed to improved lighting in markets that will provide safer, longer working hours. In other words, trafficking could be linked to the adverse social risks associated with these longer working hours and related economic activities (SGIP KIIs, 2016).

As it concerns the Power Generation Sector Improvement Project, while new equipment and infrastructure may generate income for women and other vulnerable groups selling goods around these construction areas, it also creates an opening for unsafe sex and TIP, for *kayayei* in particular and other vulnerable groups in general. Commercial sex workers who might be attracted to an environment where predominantly male construction workers are present are not necessarily a TIP risk. MCC only considers them to be at risk when the sexual activities are conducted "through force, fraud or coercion" or when the person performing the act is not yet 18 years old (MCC, 2016). TIP risk could be construction workers offering rides to community members, which could then lead to project vehicles transporting trafficking victims. Clear guidelines need to be established at the start of the project regarding the use of project vehicles and well communicated throughout the project community to avoid this potential risk.

Ultimately, projects will be assessed for TIP risk at the beginning of the project, per MCC guidelines. The MiDA GSI Director, as well as representatives from the MoGCSP, NGOs, women's associations, and other interested organizations, should be involved to re-examine entry points for potential TIP risks and adjust activities accordingly. Targeted educational sessions on TIP risks, as well as HIV/AIDS risks, should be conducted to educate vulnerable groups in project areas where new construction is taking place. Additionally, there might be openings for these groups to develop their soft skills in ways that can benefit the renewable energy objectives of this project and reduce the vulnerability of these groups. In particular,

these groups could support the private and public sectors in creating awareness and knowledge around solar power and possibilities for reducing electricity costs.

Ghana's readiness to invest in the power sector of the economy to create jobs for youth will not only reduce mass migration, but also contribute towards the fight against human trafficking. The Compact has the potential to create community advocates in line with existing programmatic efforts currently being implemented by International Needs Ghana with support from International Organization for Migration and Free-the-Slaves. Through project activities, MiDA could forge new partnerships to engage and strengthen individuals, families, and communities in the project area to champion eradicating trafficking in persons in Ghana.

5.2 Private Sector Engagement

Inviting the private sector to participate in energy sector activities provides the opportunity to actively engage private entities in GSI activities and policy efforts, as is the case with ECG. Prospective IPPs, for example, as mentioned in our analysis, can be mandated to develop gender-aware and socially inclusive policies as part of their participation in the tender process. Another entry point would be the 656 private sector companies currently engaged by ECG in various activities. As discussed, while women are often absent from higher-level positions within these companies themselves due to deeply engrained and systemic issues, there are ways to pull marginalized groups into the arena. For example, working closely with women's associations and other CSOs, companies can engage them to provide feedback on their stakeholders with special attention on gender and social issues affecting their clients, as well as ways to increase the company's own capacities for being more gender inclusive. Additionally, companies could work to identify female-owned MSME and attract them to the gas-to-power value chain⁵⁷ through incentives.

Other avenues for engaging greater participation of women and socially excluded groups in the private sector include sensitizing women investors to new investment opportunities, based on studies that will be conducted under the power generation project and other IPP competition, in addition to creating incentives for women entrepreneurs and other businesses that target women's interests.

It is important that regulations governing private sector involvement are friendly and sensitive to women and socially excluded groups. Competition for private sector participation needs to be based on quality, ensuring that socially excluded groups have access to the best. Regulations for the private sector should also address transparency and accountability issues, recognizing the importance of the role civil society can play in advocating for socially marginalized groups.

A critical aspect of engaging private sector entities in incorporating gender responsiveness and social inclusion is to make a strong business case that GSI increases profitability and improves operations, including cost savings. An immediate entry point to engage the private sector is the PSP. Leveraging this opportunity to demonstrate a successful model of integrating gender and social inclusion to enhance company operations and sharing such results with other private companies will encourage them to follow

⁵⁷ Note that there are high and low value ends in the gas-to-power value chain and attention should focus where greater impact can be maximized.

such steps. Recognizing senior officials working for private sector entities publically for their commitment to the implementation of policies that advance women and diversity in the workplace, marketplace, and community can encourage others to follow such steps, especially if coupled with enhancing the company's bottom line.

5.3 Environment and Social Performance

Compact activities will bring tremendous benefits to women, men, and vulnerable groups and will contribute to improving their lives and productivity by offering new jobs and increased availability of reliable electricity, which will also improve social benefits such as health care and education. However, there are potential negative environmental and social consequences that might occur as a result of Compact projects and activities. The compact identifies Health and Safety and resettlement as two of the biggest environmental and social performance risks associated with the ECG Financial and Operational Turnaround, NEDCo NFOT and Access Projects. Health & safety risks to workers and the community, such as workers falling from heights, electrocution, tripping and walls of trenches collapsing on workers Injuries from hand and power tools, cranes, forklift and mechanized equipment and exposure to hazardous materials and chemicals are among areas that need mitigation Management plans to avoid, minimize and/or mitigate negative outcomes are therefore integral components of the Environmental and Social Management Systems (ESMS) which elements include but are not limited to the Emergency Preparedness and Response Plan, Health and Safety Policy and Procedures, Resettlement Policy Framework etc. As a result of extended and expanded access to electricity in all Compact operational areas, there is the potential for social and environmental issues to arise that are related to inter-connecting sub-transmission lines, low voltage bifurcation, and laying underground cables within markets, economic enclaves, and other operational areas of the project. This might result in land acquisition and physical and/or economic displacements affecting women, men, and other vulnerable groups who sell goods and provide services in those areas. The development and implementation of RAP and LRP to address this must be in place before construction begins as the specific design of any urban or peri-urban electrification project can differ in its effects on women, men, and vulnerable groups.

Land ownership and acquisition are also critical environmental and social elements to consider throughout the expansion of electricity services. Gender inequality in land acquisition has contributed significantly to the economic disempowerment of women. Women's right to land is buried in a complex cultural web of norms that denies them outright ownership, especially when it comes to receiving compensation for land used to expand electricity access.

Taking these issues into consideration, it is critically important to consider factors that might affect women's rights and socially excluded groups' interests regarding both physical and temporary economic displacement. Resettlement Action plans should incorporate different restoration packages for different categories of PAPs. This presents an opportunity to support women and vulnerable groups and will avoid having them lose income. Plans must be developed with a gender perspective and should include onsite sensitization and education, as appropriate. Involvement of community members, men, women, and vulnerable social groups, is necessary (Ghana MCA Program, n.d.C). Other considerations that should be taken into account in expanding access to electricity include to HIV prevention activities; prevention of TIP and the exploitation of children, women, and vulnerable groups in construction work; mitigation of risks and hazards; and addressing fire safety issues and management.

There are also a number of social consequences that could occur as a result of Compact projects and activities, which must be planned for and monitored throughout the life of the Compact. As a result of increased electricity to markets, women will have longer working hours since they will be able to continue their businesses at night. The increased working hours and economic independence have the potential to increase family disputes and potentially increase divorce rates, as women are staying out later from their homes and not attending to household responsibilities and their families. There is also the risk of an increase in GBV as a result of greater female economic productivity, which can be seen as a threat to men and goes against traditional cultural norms where women are seen as housekeepers (KIIs).

Potential positive health safety and social benefits of increased electricity in areas such as markets, economic enclaves, hospitals, and other public facilities has the potential to decrease violence and theft due to lighting at night. In addition, increased lighting could reduce incidence of GBV and rape, as well as sexually transmitted infections such as HIV resulting from rape.

MCC formally integrates the U.S. Department of State's Trafficking in Persons Report into its selection process as well as the World Bank's Rule of Law indicator, an aggregate indicator that considers human trafficking as one of its factors (MCC, 2016). According to the 2016 TIP report, Ghana is on the Tier 2 Watch List. However, Ghana might be subjected to an automated downgrade to Tier 3 country in the 2017 TIP report because the government did not fully comply with the minimum standards for the elimination of trafficking in persons for two consecutive years and is not making significant efforts to do so. Tier 3 countries might be subjected to restrictions on U.S. government assistance, including development aid and this Compact. Children, in particular, are subject to trafficking in Ghana and can be found in the fishing, domestic service, street hawking, begging, portering, artisanal gold mining, quarrying, herding, and agriculture industries (United States Department of State, 2016). Of particular note for the Compact, young girls from the rural north who are sent to seek work as porters, known as kayayei, are at greatest risk for sex trafficking and forced labor. In addition, under the current Compact, persons may be trafficked from non-Compact intervention areas to intervention areas. This may be attributed to improved lighting in markets that will provide safer, longer working hours. In other words, trafficking could be linked to the adverse social risks associated with these longer working hours and related economic activities (SGIP KIIs, 2016).

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activities accordingly. Targeted educational sessions on TIP risks, as well as HIV/AIDS risks, should be conducted to educate vulnerable groups in project areas where new construction is taking place. Additionally, there might be openings for these groups to develop their soft skills in ways that can benefit the renewable energy objectives of this project and reduce the vulnerability of these groups. In particular, these groups could support the private and public sectors in creating awareness and knowledge around solar power and possibilities for reducing electricity costs.

Ghana's readiness to invest in the power sector of the economy to create jobs for youth will not only reduce mass migration, but also contribute towards the fight against human trafficking. The Compact has the potential to create community advocates in line with existing programmatic efforts currently being implemented by International Needs Ghana with support from International Organization for Migration and Free-the-Slaves. Through project activities, MiDA could forge new partnerships to engage and strengthen individuals, families, and communities in the project area to champion eradicating trafficking in persons in Ghana.

5.4 Communication and Outreach

The directorate leads in all communication and outreach engagements with external stakeholders, providing information about the Compact. Public consultations are critical to this and have already taken place with a wide range of stakeholders, including media and religious organizations, IEs, CSOs, and more. Consultations are expected to continue into the implementation phase of the Compact. Specifically, EFOT and the Access Projects will depend on continuous consultations with stakeholders and receiving feedback from potential beneficiaries as well as from ECG and NEDCo. The Energy Efficiency and Demand Side Management Project will rely heavily on communication and outreach efforts, particularly with the public education activity under the Project to ensure the general public and targeted customer groups are aware of cost-effective energy saving opportunities. Targeted messages will be crafted, informed by evidence based principles for different audiences, especially to advocate for GSI among ministries or private sector entities.

Developing infrastructure alone does not guarantee that people will connect to the network, through legally acquired meters, pay the electricity bills and use electricity to increase productivity and energy efficiency. Effective communication and outreach are critical to manage changes that will take place due to the transition to PSP, reduce commercial and technical losses and regain trust. A nationwide, gender-sensitive public education and awareness-building campaign would be required to educate the public on the methods and benefits of electricity conservation and its efficient use. In particular, communities need specific electricity reduction strategies to reduce the cost of their bills. Communication materials must also educate consumers on illegal connections to meters, theft, reliability, and energy efficiency. MiDA will support the respective IEs to undertake these activities.

When addressing these topics, communication tools and activities need to take into account the varying needs of women and the socially vulnerable, including PWD and the poor, in order to be understood by all. Current outreach channels such as newspapers, radio, and television have limited reach among the socially excluded. Strategies to reach these marginalized groups should leverage already established groups, such as CSOs, CBOs, and religious and women's associations, as well as information vans, community radio, and possibly text messaging. PWD can be contacted through institutionalized service providers, such as the

District Assembly or the Department of Social Welfare, which are involved in providing services through the District Assembly Common Fund allocation. Consultative forums and community workshops at the local level can also help to effectively disseminate information.

At the institutional level, it is important to incorporate GSI language, results, and impact from activities into all Compact communication and outreach materials, including brochures, advertisements, announcements, publications, websites, and social media. Additionally, communication materials must be reviewed to ensure all clients can access services and policy information that is accurate, consistent, and easy-to-understand (e.g., no technical terms).

The SGIP itself and its implementation will be communicated to relevant stakeholders through different media, in consultation with the Communication and Outreach Directorate. The audience will include: Implementing Entities, Government Agencies, Private Sector, Civil Society Organizations working in the Energy sector; NGOs representing the interests of Women and other vulnerable groups; Development Partners with common interests and objectives; MiDA Board, Management and staff. Implementing Entities, MiDA Board, Management and Staff; as well as the Gender Focal Persons, Power Queens and the Gender and Energy Working Group will be socialized on the SGIP to understand its importance for the Compact and their respective roles and responsibilities for its implementation.

To achieve this, the communication and outreach directorate should strategically collaborate to do more stakeholder engagements in consultation with the GSI directorate, while targeting identifiable gender advocates on specific areas of focus and interest under the Compact. Both directorates must collaborate as necessary with targeted messaging to reach women and men in order to address the issues at the nexus of gender and energy that are relevant for implementation of the Compact. Communication and outreach materials need to be issued in English, Ghanaian and Braille to ensure inclusiveness.

5.5 Monitoring and Evaluation

Monitoring and Evaluation (M&E) is an integral component of both the project development and implementation processes, In addition, there are some processes that have to be put in place for post-Compact M&E. The MiDA M&E Plan (approved December 2016) has been developed through wide consultations processes with stakeholders including MiDA project staff, Implementing Entities (IEs) and other government agencies as well as MCC.

The M&E Plan explains in detail the program logic and expected results and how MCC and MiDA will monitor the Compact to determine whether the Projects are on track to achieve their intended results. It sets out data and reporting requirements and quality control procedures. The M&E Plan incorporates gender and social activities as integral components of each project and cross-cutting activity, as well as indicators for reporting outputs, outcomes and overall project impacts. It will help assess whether each project has achieved the intended GSI results as outlined in the SGIAP and in the Program and project logics in Annex 5. Specific GSI disaggregated indicators to be monitored are shown in Table 2 on the next page. Each project manager will be responsible for monitoring progress in achieving GSI results as outlined in the SGIAP.

The M&E Plan also sets out a monitoring framework which establishes a process to alert implementers, MiDA management, stakeholders, and MCC as to whether or not the program is achieving it major milestones during program implementation. This is used to determine whether there is the need for making program adjustments. The Plan also has an evaluation component which explains how MCC and MiDA will evaluate whether or not the interventions achieved their intended results and expected impacts over time. It will help assess whether the projects have achieved the intended GSI results and evaluate strategies and lessons learned, share successful practices, and document adverse events affecting men, women, children, and vulnerable groups.

6. SOCIAL AND GENDER INTEGRATION ACTION PLAN (SGIAP)

		CG Operational Policies and Activities		
Project Components	Entry point/Activities	Outputs	Responsible parties	Status /Remarks
1.1 Private Sector Participation Component	1. Provide TA contractor and selected Private Sector Partner with MCC Gender Policy and Compact II SGIP	 TA contractor includes gender and social inclusion in tender documents for private sector partner Contract with selected Private Sector Partner includes gender and social inclusion amongst obligations and performance requirements 	ECG Compact Technical Team ECG Gender Focal Person MoEn Reform Manager MiDA /GSI EFOT Project Unit Private sector partner ECG Compact Technical Team ECG Gender Focal Person Procurement Unit MoEn Reform Manager MiDA /GSI EFOT Project Unit Private Sector Partner	

COMPACT Project I: Electricity Company of Ghana (ECG) Financial and Operational Turnaround (EFOT) Project				
Goal: Promote Gend Project Components	er and Social Inclusion in all E(Entry point/Activities	CG Operational Policies and Activities Outputs	Responsible parties	Status /Remarks
1.2 Modernization of ECG's Operational Activities Institutionalizing Gender responsiveness in ECG	1. Gender Audit: Undertake a comprehensive gender and social assessment for the company including, a thorough review of its human resource and operational policies and practices through the gender and social lens	 Recommendations to revise HR policies and action plan to ensure gender equity, including improved gender balance in company's management and staffing Recommendations to revise operational practices (e.g. sex-disaggregated customer-data collection and analysis, and revised staffing for customer services Gender Audit Report adopted and disseminated. 	ECG Compact Technical Team MiDA Consultant ECG Gender Focal Person MoEn Reform Manager MiDA /GSI EFOT Project Unit	
1.2 Modernization of ECG's Operational Activities Institutionalizing Gender responsiveness in ECG	2. Gender Policy: Develop and operationalize a GSI workplace policy that includes equal opportunities for women, men, and PWD at ECG; prevents workplace sexual harassment, by improving the workplace environment and advancing women's leadership and participation in the power sector	 GSI workplace policy developed, from Gender Audit recommendations, adopted, socialized and institutionalized Gender Action Plan (GAP) with activities, outputs, indicators, responsible parties and timelines approved and adopted 	ECG Compact Technical Team MiDA Consultant ECG Gender Focal Person ECG HR Manager MoEn Reform Manager MiDA /GSI EFOT Project Unit	

Goal: Promote Gende	er and Social Inclusion in all E	CG Operational Policies and Activities		
Project Components	Entry point/Activities	Outputs	Responsible parties	Status /Remarks
	.3 Develop institutional capacity strengthening, networking and advocacy program.	 Guideline and tools for creating a gender and social inclusive recruitment, training and promotion developed and approved. Policy. Staff and management trained in gender and social inclusion practices Capacity strengthening of ECG to implement policy and Gender Action Plan (GAP) Leadership and other capacity building programs developed and implemented or Female employee associations. Capacity strengthening of women employees associations – Power Queens through training. Information sharing, networking and advocacy forums created in partnership with key stakeholders. 	ECG Compact Technical Team ECG Gender Focal Person MiDA /GSI GWG EFOT Project Unit	
	4 Design and implement an internship and mentoring program for women in tertiary institutions pursuing STEM courses to potentially expand the supply of qualified candidates to work in ECG Conduct assessment(s) of current status of gender in STEM education and challenges and opportunities	 Internship and mentoring program developed and implemented for Women in Tertiary institutions pursuing STEM courses Placement opportunities for STEM students STEM students paired with mentors Pursuing long-term careers in STEM stimulated 	ECG Compact Technical Team MiDA Consultant ECG Gender Focal Person MiDA /GSI GWG EFOT Project Unit KNUST University of Ghana	

Goal: Promote Gender and Social Inclusion in all ECG Operational Policies and Activities					
Project Components	Entry point/Activities	Outputs	Responsible parties	Status /Remarks	
	for career path in the energy sector. Assess internship needs of key institutions Engage key stakeholders and build partnership. Network with outside institutions, including educational institutions for placement opportunities for students Based on the outcomes of the above design and implement an internship and mentoring program	Overtime greater supply of qualified female and other applicants responding to the criteria of social inclusion Number of women in STEM fields in ECG and the Energy sector increase	Polytechnics MoEn MoE MoGCSP SEU/GES TEU/GES WINE		
 3.Reduction in Commercial Losses and Improvement Revenue Collection Rates Activity. d)Replacement of legacy credit meters with pre-payment meters in the ECG Target Regions to 	Ensure gender and social inclusive approach in the design and implementation of the replacement of legacy credit meters with pre- payment meters in ECG target regions. Ensure targeting beneficiaries receiving pre-paid meters is inclusive of low income and	 Specific GSI-focused interventions are identified and integrated into the design and implementation of the replacement of legacy meters with pre-paid meters. Reduction in commercial losses and better services to female individual and business clients from vulnerable groups 			

COMPACT Project I: Electricity Company of Ghana (ECG) Financial and Operational Turnaround (EFOT) Project							
	Goal: Promote Gender and Social Inclusion in all ECG Operational Policies and Activities						
Project Components	Entry point/Activities	Outputs	Responsible parties	Status /Remarks			
improve collection efficiency and timely closing of monthly financial statements	female headed households and small businesses. Explore the possibility of piloting the provision of pre- paid meters to individual tenants of compound housing. Support the technology of pre-paid meters is user						
	friendly by all category of customers including illiterate population. Support information and outreach campaign to all category customers about the use of pre-paid meters						

COMPACT Project II: N	Northern Electricity Developm	ent Company (NEDCo) Financial and (Operational Turnaround (EFOT) Project
Goal: Promote Gender a		DCo Operational Policies and Activities		
Project II Components	Entry point/Activities	Outputs	Responsible parties	Status /Remarks
2.1 Private Sector Participation Component	1. Provide TA contractor and selected Private Sector Partner with MCC Gender Policy and Compact II SGIP	 TA contractor includes gender and social inclusion in tender documents for private sector partner Contract with selected Private Sector Partner includes gender and social inclusion amongst obligations and performance requirements 	NEDCo Compact Technical Team NEDCO Gender Focal Person MoEn Reform Manager MiDA /GSI NFOT Project Unit Private sector partner NEDCO Compact Technical Team NEDCO Gender Focal Person Procurement Unit MoEn Reform Manager MiDA /GSI NFOT Project Unit Private Sector Partner	
2.2 Modernization of NEDCO's Operational ActivitiesInstitutionalizing Gender responsiveness in NEDCO	1. Gender Audit: Undertake a comprehensive gender and social assessment for the company including, a thorough review of its human resource and operational policies and practices through the gender and social lens	 Recommendations to revise HR policies and action plan to ensure gender equity, including improved gender balance in company's management and staffing Recommendations to revise operational practices (e.g. sex- disaggregated customer-data collection and analysis, and revised staffing for customer services 	NEDCO Compact Technical Team MiDA Consultant NEDCO Gender Focal Person MoEn Reform Manager MiDA /GSI NFOT Project Unit	

¥		nent Company (NEDCo) Financial and DCo Operational Policies and Activities		(EFOT) Project
Project II Components	Entry point/Activities	Outputs	Responsible parties	Status /Remarks
		3. Gender Audit Report adopted and disseminated.		
2.2 Modernization of NEDCO's Operational Activities	2. Gender Policy: Develop and operationalize a GSI workplace policy that includes equal opportunities for women, men, and PWD	 1. GSI workplace policy developed, from Gender Audit recommendations, adopted, socialized and institutionalized 2. Gender Action Plan (GAP) with 	NEDCO Compact Technical Team MiDA Consultant NEDCO Gender Focal Person	
1. Institutionalizing Gender responsiveness in NEDCO	at NEDCO; prevents workplace sexual harassment, by improving the workplace environment and advancing women's leadership and participation in the power sector	activities, outputs, indicators, responsible parties and timelines approved and adopted	NEDCO HR Manager MoEn Reform Manager MiDA /GSI NFOT Project Unit	

		ent Company (NEDCo) Financial and (Operational Turnaround (EFOT) Project
Goal: Promote Gender a Project II Components	and Social Inclusion in all NEI Entry point/Activities	OCo Operational Policies and Activities Outputs	Responsible parties	Status /Remarks
	.3 Develop institutional capacity strengthening, networking and advocacy program.	 Guideline and tools for creating a gender and social inclusive recruitment, training and promotion developed and approved. Policy. Staff and management trained in gender and social inclusion practices Capacity strengthening of NEDCO to implement policy and Gender Action Plan (GAP) Leadership and other capacity building programs developed and implemented or Female employee associations. Capacity strengthening of women employees associations – Power Queens through training. Information sharing, networking and advocacy forums created in partnership with key stakeholders. 	NEDCO Compact Technical Team NEDCO Gender Focal Person MiDA /GSI GWG NFOT Project Unit	
	4 Design and implement an internship and mentoring program for women in tertiary institutions pursuing STEM courses to potentially expand the supply of qualified candidates to work in NEDCO Conduct assessment(s) of current status of gender in STEM education and	 I.Internship and mentoring program developed and implemented for Women in Tertiary institutions pursuing STEM courses Placement opportunities for STEM students STEM students paired with mentors 	NEDCO Compact Technical Team MiDA Consultant NEDCO Gender Focal Person MiDA /GSI GWG NFOT Project Team KNUST	

		ent Company (NEDCo) Financial and (Operational Turnaround (I	EFOT) Project
Goal: Promote Gender a Project II Components	and Social Inclusion in all NEI Entry point/Activities	OCo Operational Policies and Activities Outputs	Responsible parties	Status /Remarks
	 challenges and opportunities for career path in the energy sector. Assess internship needs of key institutions Engage key stakeholders and build partnership. Network with outside institutions, including educational institutions for placement opportunities for students Based on the outcomes of the above design and implement an internship and mentoring program 	 4. STEM graduates Pursuing long-term careers in STEM stimulated 5. Overtime greater supply of qualified female and other applicants responding to the criteria of social inclusion 6. Number of women in STEM fields in NEDCO and the Energy sector increase 	University of Development Studies University of Energy & Natural Resources Polytechnics SADA Northern Regional Offices of the following: • MoEn • MoE • MoGCSP • SEU/GES • TEU/GES WINE	
2.3 Commercial Development Activity AgDEVCo	 AgDevCo: identify potential small-holder female farmers and farmers from vulnerable groups to participate in pilot electrification program. Customer densification: identify female businesses and businesses from vulnerable groups to participate in program 	1A percentage (TBD) of the 1000 targeted small holder farmers that will participate in AgDevCo pilot electrification program will be women and people from vulnerable groups. A percentage (TBD) of the 6400 small businesses targeted by the project will be owned by women or people from vulnerable groups	AgDevCO management Support from MiDA-GSI Consultants, if needed NEDCO Gender Focal Person NEDCo Project Unit	

COMPACT Project III: Regulatory Strengthening and Capacity Building Project				
Goal: Ensure Gender a responsibilities	nd Social Inclusion in Regulate	or's own Human Resource Policies, Tari	ff Reviews and other oper	rational
Project III Components	Entry point/Activities	Outputs	Responsible parties	Status /Remarks
3.1 Sector Performance Monitoring Capacity Building ActivityA) Capacity and need assessment with regard to data quality, monitoring systems	 B) Technical assistance in developing and implementing monitoring and reporting systems 1. Advocate for CAP-Scan Consultants to integrate GSI issues into the methodology and analysis for the capacity audit and monitoring systems Develop gender and social integration checklist and guide the capacity needs assessments , development and implementation of data quality and monitoring systems (data collection, analysis, reporting, quality control and communications) 	GSI checklist provided For incorporating GSI dimensions into CAP-Scan methodology, Organization /Development Analysis and monitoring system Project Manager CAP-Scan Consultants	Coordinate with GSI Unit RSB Project Officer M&EE Director	
3.2 PURC and other sector institutions' HR and operational policies	1. Undertake comprehensive assessment and action plan for PURC and the Ministry of Energy to include gender and social inclusion into their HR policies and activities	 PURC and the Ministry have improved staffing composition and the GSI sensitivity of their policy and regulatory work PURC's data base includes data by gender and vulnerable groups Tariff reviews take into account the situation of women and the poor 	Coordinate with GSI Unit Generation Dir RSB Project Officer M&EE Director MoEN PURC PURC Consultants EC PURC GFP EC GFP	

COMPACT Project III: Regulatory Strengthening and Capacity Building Project Goal: Ensure Gender and Social Inclusion in Regulator's own Human Resource Policies, Tariff Reviews and other operational				
responsibilities Project III Components	Entry point/Activities	Outputs	Responsible parties	Status /Remarks
3.3 PURC Tariff Reviews and monitoring activities	 Train PURC staff in sex- disaggregated data collection and analysis, as well as in collection and analysis for disadvantaged groups Consult with women and other vulnerable groups as part of the process for tariff reviews Partner with other organizations to explain tariffs and electricity use options to individual, household and business consumers with a special effort to reach women and disadvantaged groups 	4. Poor customers are better informed and can make better decisions on electricity use based on the tariff structure	PURC PURC	

COMPACT Project IV				•
Goal: Improve the sup enclaves and social inst		nall and Medium-size Enterprises (MSN	(IEs) in targeted markets, ec	onomic
Project IV Components	Entry point/Activities	Outputs	Responsible parties	Status /Remarks
4.1 Public lighting in selected markets & connections to MSMEs	 Undertake a gender- sensitive and socially- inclusive study on productive uses of electricity to establish the baseline, do the final design of the components, and identify the beneficiaries Provide training to beneficiaries on productive uses of electricity 	 Increased safety for women and vulnerable people from public lighting Increased number of MSMEs connected to safe and reliable electricity network Increased MSMEs business results from electricity use for productive uses and productivity increases 	ECG and NEDCO in their respective areas with MiDA-GSI & MCC/MiDA Consultant support Access Project Unit Local professional associations MiDA GSI Access Project Unit	
4.2 Improving service delivery and strengthening partnerships	1. Advocate for the inclusion of Gender and Women's Rights Experts in Consultants to provide capacity building skills to Market women and other trade associations to engage better with duty bearers such as AMA and other he MMDAs and Utility companies.	 Awareness of rights Productive engagements with Duty bearers Duty bearers held accountable for service delivery Improved and equitable service delivery 	GFP of MMDAs Consultants/Trainers Access Project Team	

Goal: Enhance Stakeholder s' engagement and interest in incorporating GSI in their activities					
Project V	Entry point/Activities	Outputs	Responsible parties	Status	
Components				/Remarks	
5.1 Encourage women entrepreneurs and entrepreneurs from vulnerable groups to	1. Hold bidding conference with the Ghana Association of Women Entrepreneurs (GAWE), including	1. A number (TBD) of female enterprises and enterprises from vulnerable groups have become electricity service suppliers as IPPs or	GAWE NBSSI MiDA GSI PGSIP Unit		
participate in power supply as independent power producers (IPPs)	entrepreneurs from vulnerable groups, including for the supply of off-grid electricity solutions	distributors			

Ŭ	I: Energy Efficiency and Dema			
Project VI Components	Entry point/Activities	Outputs	Responsible parties	Status /Remarks
6.1 Promote EEDSM through public education	6.1.1Support the development of gender and socially responsive informative and education materials to introduce labels for household appliances and products to ensure the general public, including vulnerable groups, can understand them	Gender sensitive energy-efficient label standards and guidelines developed to include symbols, accessible to illiterate and blind consumers	MiDA GSI EEDSM Unit Communication and Outreach Unit EC GSA MoE	
	6.1.2. Enlist women and vulnerable groups' leaders and CSOs to promote EE and DSM	 Capacity of local leaders and CSOs on EE and DSM is increased Energy consumption is more efficient, benefiting the energy budget of the poor and possibly enabling more people to be served. 	CSOs EEDSM Unit MiDA GSI	
	 6.2.2 Capacity building for female employees and students for improved Energy Auditing Activity Advocate for and support the training of eligible female employees to become professional energy auditors, when possible, at their work facilities 	 Eligible females identified and trained on energy surveys and audit practices in work facilities Improved energy auditing 	GSA Focal Person MiDA GSI EEDSM Unit EC Focal Person	

Goal: Ensure Ger	Goal: Ensure Gender and Social Inclusion in Public Education					
Project VI Components	Entry point/Activities	Outputs	Responsible parties	Status /Remarks		
	6.2.3 Advocate for the development of opportunities for placement for young female engineers in testing laboratories, and facilitate	Internship program developed with GSA Overtime increase in talent pool of young women for GSA and EC				
	women's access to development programs that focus on leadership training to attract talent					

COMPACT Cross-cutting Activity: Communication and Outreach

Goal: Ensure Gender and Social Inclusion in Compact Communication

VII Components	Entry point/Activities	Outputs	Responsible parties	Status /Remarks
7.1 Ensure GSI considerations are included in all communication and outreach strategies to support GSI efforts in all Compact projects and enhance gender and social integration	7.1.1 Incorporate GSI language and results/impact from activities in all Compact communication materials/tools (e.g., brochures, adverts, announcements, publications, case studies, social media, and websites)	GSI-sensitive communications materials and project documentation	Communication and Outreach Director Coordinate with GSI Director	
efforts in the electricity sector	7.1.2 Support sensitizing media and communications professionals working for IEs on GSI issues in the power sector	Media and communications professionals knowledgeable on GSI- related issues in the power sector		
	7.13 Communication materials must also educate consumers on illegal connections to meters, theft, reliability, and energy efficiency. MiDA will support the respective IEs to undertake these activities.	GSI activities and results are widely and effectively disseminated to the target populations		

CROSS-CUTTING ACTIVITIES						
COMPACT Cross-cutt	ng Activity: Environment and	Social Performance				
Goal: Ensure Gender and Social Inclusion in Environment and Social Performance Activities						
VIII Components	Entry point/Activities	Outputs	Responsible parties	Status /Remarks		
8.1 Collaborate with and support the ESP team in the implementation of all ESP related Plans, assessments and studies to promote maximum development benefit and sustainability for women and men of different socio- economic groups	8.1.1 Incorporate and enforce GSI considerations in the Stakeholder Engagement Plan, Environmental and Social Impact Assessments (ESIAs), Environmental and Social Management Plans (ESMPs), Health and Safety Plans (HSMPs) and Resettlement Action Plans (RAPs) to protect Project Affected Persons (PAPs), minimize and mitigate risks from impacts of implementation of project activities	GSI-sensitive Reports and Plans that benefit women, men and vulnerable groups	Environmental and Social Performance Director Coordinate with GSI Director			
8.2 Ensure contractors, IEs, and other stakeholders have staff with necessary gender responsive and social inclusion expertise and provide capacity building opportunities where necessary so that all are involved in implementation of	8.2.1 Incorporate gender and social inclusion expertise as a requirement for Contractors, IEs to effectively address the specific issues and concerns of diverse groups of women and men in the project areas	Staff with requisite GSI knowledge and experience or GSI expert engaged by consultants and contractors				

CROSS-CUTTING ACTIVITIES					
	ing Activity: Environment and				
Goal: Ensure Gender a	nd Social Inclusion in Environ	ament and Social Performance Activities			
VIII	Entry point/Activities	Outputs	Responsible parties	Status /Remarks	
Components				/ Nemai KS	
recommendations made in ESP reports					
8.3 Develop and implement a gender responsive and socially inclusive RAP Database	8.3.1 Consult and ensure the participation of women and vulnerable groups in the development and implementation of the RAP database and compensation disbursement	RAP database disaggregated by sex and other social variables such as age, educational and income levels	Environmental and Social Performance Director Coordinate with GSI Directorate		

COMPACT Cross-cutting Activity: Monitoring and Evaluation

Goal: Ensure Gender and Social Inclusive in Monitoring and Evaluation Activities

IX Components	Entry point/Activities	Outputs	Responsible parties	Status /Remarks
9.1 Support the integration of gender and social considerations into the M&E Framework	9.1.1 Support the develop gender sensitive data collection /and reporting template to collect information by MiDA staff, IEs, and contractors	Gender-sensitive data collection and reporting template in place	M&E Director	
	9.1.2 Support the incorporation GSI into approaches, methodologies and instruments of studies and surveys to be carried within the Compact, as well as the analysis of data.	Gender responsive and socially inclusive methodologies, and instruments used in the Enterprise Survey	M&E Director	
	9.1.3 Support capacity building of MiDA staff and IEs to collect, analyze, and report on data disaggregated by sex and social status and also GSI-sensitive indicators relevant to the Compact	Trainings for MiDA staff and IEs on GSI-sensitive M&E conducted	M&E Director Coordinate with GSI Director	

	CR	OSS-CUTTING ACTIVITIES				
COMPACT Cross-cutt	ing Activity: Gender and Socia	l Inclusion				
Goal: Ensure Gender responsive and socially Inclusive Electricity service delivery in Compact Project Activities and enhance the quality of GSI in MiDA						
X Components	Entry point/Activities	Outputs	Responsible parties	Status /Remarks		
10.1 Ensure gender- responsive and socially inclusive Compact implementation of all projects and cross- cutting areas in order to comply with MCC and MiDA requirements	 10.1.1 Conduct gender- responsive and social inclusion sensitization and training workshops for MiDA Board &staff, IEs Board & Staff, consultants and contractors and other relevant stakeholders 10.1.2 Set minimum GSI guidelines and develop stock language for ToRs, MOUs, EOIs, and RFPs, and reporting in all key documents including publications, circulars, and website information 	GSI knowledge sensitization and trainings conducted for MiDA board and staff, IEs board and staff, consultants and contractors knowledgeable and able to integrate GSI issues in their work GSI requirements and specific language integrated into TORs, MOUs, EOIs, RFPs, and all project documents	MiDA GSI			
	10.1.3 Review and Incorporate GSI requirements in procurement documents contracts and project deliverables.	GSI language developed and incorporated into procurement documents contracts and project deliverables				
	10.1.4 Review and contribute to all communication and outreach materials to ensure they reflect gender responsiveness and social inclusivity	GSI responsive Communication and outreach materials developed				

COMPACT Cross-cutt	ing Activity: Gender and Socia	l Inclusion				
Goal: Ensure Gender responsive and socially Inclusive Electricity service delivery in Compact Project Activities and enhance the quality of GSI in MiDA						
X Components	Entry point/Activities	Outputs	Responsible parties	Status /Remarks		
10.2 Promote institutional capacity in gender and social inclusion among power and electricity stakeholders in order to achieve improved	10.1.5 Identify and develop a pool of partners working with women and PWD to collaborate with Project teams on the implementation of compact activities 10.2.1 Develop ToR for workplace gender and social inclusion policy for IEs that includes compliance with minimum requirement regarding human trafficking prevention and child labor	Project and crosscutting Leads gain easy access to GSI stakeholders for their participation in project activities ToR to create GSI workplace policy developed	MiDA GSI			
Compact outcomes 10.2.2 Organize and facilitat workshops and public fora o gender in Compact activities	10.2.2 Organize and facilitate workshops and public fora on gender in Compact activities	Workshops and public fora organized for stakeholders on the role and benefits of GSI integration in electricity delivery	GSI Director Coordinate with Communication and Outreach Director			
	10.2.3 Participate in public seminars for sharing information and experiences	GSI issues in the energy sector shared and exchanged with other stakeholders for wider dissemination	GSI Director Coordinate with Communication and Outreach Director			

COMPACT Cross-cutting Activity: Gender and Social Inclusion

Goal: Ensure Gender responsive and socially Inclusive Electricity service delivery in Compact Project Activities and enhance the quality of GSI in MiDA

X Components	Entry point/Activities	Outputs	Responsible parties	Status /Remarks
Components 10.3Promote institutional capacity in gender and social inclusion among power and electricity stakeholders in order to achieve improved Compact outcomes	10.3.1 Establish and facilitate a gender and energy working group 10.3.2 Organize meetings	A wide range of organizations (e.g., Women's groups, Africa Women's Development Fund (AWDF), WILDAF, MoGCSP, ECG Power Queens, Gender and Energy Network) are actively engaged to ensure the promotion of gender and social inclusion, Slum Dwellers Associations, WINE, STLF, Universities and Polytechnics Key lessons, and challenges gaps on	GSI Director GWG GSI Director Project	
	once every quarter to discuss gender and social integration in the Compact	integration GSI in Compact projects identified for redress.	Managers (including the Reform Manager)	
	10.3.3 Participate in quarterly meeting of each project to review the implementation of Project TIP risks and mitigation plans.	TIP risk and mitigation plan updated	GSI Director Project Team	

		MiDA CORPORATE		
LEGAL				
Goal: Ensure Gen MOU	der responsiveness and socially Inc	lusion in Legal advice to the Board and	Management and in agree	ements and
XI Components	Entry point/Activities	Outputs	Responsible parties	Status /Remarks
	1.1 Develop GSI language to be incorporated in relevant legal agreements and MOU	GSI language incorporated in relevant legal agreements and MOUs	Legal Council	

MIDA CORPORATE						
FINANCE						
Goal: Ensure budget a	llocation to implement Gender	and Social Inclusion Activities				
XII	Entry point/Activities	Outputs	Responsible parties	Status		
Components				/Remarks		
	12.1 Provide adequate financial resource for the implementation of GSI activities	Financial resources allocated to implement GSI activities	Finance Director			

MiDA CORPORATE							
PROCUREMENT							
Goal: Ensure gender responsiveness and social inclusion considerations in all relevant procurements for MiDA							
XIII Components	Entry point/Activities	Outputs	Responsible parties	Status /Remarks			
	13.1 Ensure that all ToR and bidding documents (RFP and tenders) have incorporated GSI language	GSI language developed to incorporate in ToR, RFP and other procurement documents	Procurement Director				
	13.2 Incorporate GSI language in all compact contracts to ensure providers implement Compact activity comply with the SGIAP	GSI language to incorporate in contracts developed	Procurement Director				
	13.3 Set GSI requirements in evaluation criteria of proposals and tender documents	Evaluation criteria for proposals and tenders contain GSI considerations	Procurement Director				
	13.4 Organize procurement outreach to women and PWD businesses to inform them about procurement opportunities in the Compact	Procurement outreach organized	Procurement Director				
	13.5 Invite women- and disability-owned businesses to bidders conferences and make information about bidding process clear and easy to understand	Relevant women and disability-owned businesses invited	Procurement Director				

MiDA CORPORATE						
INTERNAL AUDIT						
1. Goal: Ensure g	ender responsiveness and socia	l inclusion considerations in all risk mar	nagement activities MiDA			
XIV Components	Entry point/Activities	Outputs	Responsible parties	Status /Remarks		
	14.1 Incorporate GSI into assessments, advise and material support to MiDA	GSI taken into account in MiDA risk management				
	14. 2 Incorporate GSI considerations into reporting, advice and guidance to the MiDA Board.	Gender responsive and socially inclusive reports and support. to the MDA Board				

		MiDA CORPORATE		
COMMUNICATION A	AND OUTREACH			
Goal: Enhance the qua	lity of Gender and social inclus	ion communication in MiDA		
XV	Entry point/Activities	Outputs	Responsible parties	Status /Remarks
Components				
14. Internal	14.1 Support MiDA GSI with internal communication on gender and social inclusion	Appropriate materials, language, format and setting for internal communication on GSI.		

7. **REFERENCES**

- 1. Abdul-Salam, Y. (2014). Access to electricity in Sub Saharan Africa: Modelling the importance and adoption of off-grid renewables. A Thesis: University of Aberdeen. http://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.646102.
- Adair-Rohani, H, Zukor, K, Bonjour, S, Wilburn, S, Kuesel, AC, Hebert, R, Fletcher, ER. (2013). Limited electricity access in health facilities of sub-Saharan Africa: a systematic review of data on electricity access, sources, and reliability. Global Health Science Practice. 2013 Aug; 1(2): 249– 261.
- 3. AF-MERCADOS EMI. (2014). Due Diligence and Private Sector Participation Options Study in Ghana's Distribution Sector. Final Report, Volume 1. <u>http://mida.gov.gh/compact2/wp-content/uploads/2014/08/Final-Report-Due-diligence-PSP-Options-Study-in-Ghanas-Distribution-Sector.pdf.</u>
- 4. Agyarko, K.A. (2014). Status of Gender Mainstreaming in Energy Access in Ghana: Promoting Social Inclusion for Sustainable Energy for all. Regional Validation Workshop for the ECOWAS Policy for Gender Mainstreaming in Energy Access, ECREEE, [PPT].
- 5. Alhassan, Eva et al. (2016). "Entrepreneurial Characteristics and Profiles of Small and Medium Size Enterprises. A Case Study of Tamale Metropolitan Area," Macrothink Institute. Business Management and Strategy. 2016, Vol. 7, No. 1.
- 6. AllAfrica (2015). Ghana Electricity Crisis (dumsor) the Causes, Disadvantages and Solutions. http://allafrica.com/stories/201503051476.html
- 7. Alstone, P., Neithammer, C., Mendonca, B., Eftimie, A. (2011). Expanding Women's Role in Africa's Modern Off-Grid Lighting Market. Lighting Africa.
- 8. Amu, N.J. (2001). The Role of Women in Ghana's Economy. Fredrich Ebert Stiftung, Ghana. http://library.fes.de/pdf-files/bueros/ghana/02990.pdf.
- 9. ANOMENA. (2010). Gender Assessment of the Ghana Energy Sector. ANOMENA Ventures, Tema, Ghana.
- 10. Ardayfio-Schandorf, E. 2009. Energy and the Development Nexus, the Realities, Challenges and Opportunities for the Future, an Inaugural Lecture Delivered at the University of Ghana on 16th September, 2004, Accra, Ghana University Press
- Asante, L.A., Sasu, A., Ayitey, J.Z., Gavu, E.K. (n.d.). The Changing Face of Compounds Houses in Ghana and its Effect on Rental Value: A Case Study of Selected Neighbourhoods in Kumasi, Ghana.

http://www.academia.edu/12188407/Conference_Paper_ARES_2015_The_Changing_Face_of_Co mpound_Houses_in_Ghana_and_Its_Effect_on_Rental_Value_A_Case_of_Selected_Neighbourho ods_in_Kumasi_Ghana_

- 12. Asian Development Bank. (2012). Gender tool kit: Energy—Going Beyond the Meter.
- 13. Brown, A., Stern, J., Tenebaum, B., Gencer, D. (2006). Handbook for Evaluating Infrastructure Regulatory Systems. The World Bank.
- Berthaud, A., Delescluse, Deligiorgis, D., et al. (2004). Integrating Gender in Energy Provision: Case Study of Bangladesh. Joint UNDP/World Bank Energy Sector Management Assistance Programme (ESMAP). <u>http://documents.worldbank.org/curated/en/2004/07/5215825/integrating-gender-energy-provision-case-study-bangladesh.</u>
- 15. Christensen, J. M., Mackenzie, G. A., Nygaard, I., & Pedersen, M. B. (2015). Enhancing Access to Electricity for Clean and Efficient Energy Services in Africa. UNEP DTU Partnership.

- Clancy, J. (2011). Gender Mainstreaming in Energy Sector. MDB- Sponsored Regional Workshops 16. to Mainstream Gender Equality in Infrastructure Projects and Policies. Africa Regional Workshop. http://siteresources.worldbank.org/EXTGENDER/Resources/workshop-032211-Dav-1-JoyClancy Energy.pdf.
- Clancy, J.S., Skutsch, M. (n.d.). The Gender-Energy-Poverty Nexus: Finding the Energy to Address 17. Gender Concerns in Development. DFID Project CNTR998521. http://www.riaed.net/IMG/pdf/DFID Doc Energy Gender.pdf.
- Coglianese, C., Nash, J., Olmstead, T. (2002). Performance-Based Regulation: Prospects and 18. Limitations in Health, Safety and Environmental Protection. Harvard University; John F. Kennedy School of Government.
- CountryEconomy.com. (n.d.) Ghana Population. 19. http://countryeconomy.com/demography/population/ghana.
- 20. Dinkelman, T. (2010). The effects of rural electrification on employment: New Evidence from South Africa. Princeton, NJ. https://www.princeton.edu/rpds/papers/dinkelman electricity 0810.pdf.
- Doss, C., Deere, C., Oduro, A et al. The Gender Asset and Wealth Gaps. Development (2014) 57, 21. Issue 3, p. 400-409.
- Dovi, Efam: (April 2006). Tapping Women Entrepreneurship in Ghana. Aprica Renewal. 22.
- ECOWAS Centre for Renewable Energy & Energy Efficiency (ECREEE). (2015). Situation 23. Analysis of Energy & Gender Issues in ECOWAS Member States, 2015 Report. http://www.cleanenergyministerial.org/Portals/2/pdfs/Situation-Analysis-of-Energy-and-Gender-Issues-full-report.pdf.
- Electricity Corporation of Ghana. Electricity Company of Ghana (ECG). (2006-2008). Annual 24. Report & Audited Accounts 2006-2008. Accra, Ghana.
- 25. Electricity Corporation of Ghana. ECG. (2009-2013). Annual Report & Financial Statements 2009-2013. Accra, Ghana.
- 26. ECG. PURC Published Schedule, ECG Website: www.ecgonline.info.
- Electricity Corporation of Ghana (n.d). Women in Power" 27. (http://www.ghanaweb.com/GhanaHomePage/business/Meet-the-power-women-at-ECG-477429)
- 28. Energy Sector Management Assistance Program (ESMAP). (2005). Power Sector Reform in Africa: Assessing Impact on Poor People. http://siteresources.worldbank.org/EXTAFRREGTOPENERGY/Resources/ESMAP_PowerSectorR eform in Africa.pdf.
- 29. Energy Sector Management Assistance Program (ESMAP) (November 2011). Energy Access and Productive Uses for the Urban Poor: Final Report on Ghana Scoping Study (73509). The World Bank Group, Washington, DC. http://www.esmap.org/node/2258.
- Forkuoh, SK. (2015). Electricity Power Insecurity and SMEs Growth: A Case Study of the Cold 30. Store Operators in the Asafo Market Area of the Kumasi Metro in Ghana. OJBM, 3, 312-325. Available at http://file.scirp.org/pdf/OJBM 2015072711380104.pdf
- Gender Studies and Human Rights Documentation Centre. 2015. Measuring Gender Attitudes 31. among Male Adolescents and Young Men in Accra, Ghana. http://gendercentreghana.org/wpcontent/uploads/2015/06/HLP-Final-Report-A-Karklina.pdf
- Ghana Energy Commission. The Ghana Energy Access (GhEA) Toolkit. 32. http://www.ghea.energycom.gov.gh/database/index.php
- Ghana Energy Commission. (2006). Strategic National Energy Plan 2006 2020, Main Report. 33. https://s3.amazonaws.com/ndpcstatic/pubication/Strategic+National+Energy+Plan+2006-2020.pdf.

- 34. Ghana Millennium Challenge Account (MCA) Program. (2012). Gender and Social Inclusion Analysis. Draft Paper; Compact II.
- 35. Ghana Millennium Challenge Account (MCA) Program (n.d.A). Social and Gender Analysis. Compact II.
 - http://www.mida.gov.gh/pages/view/Social_and_Gender_Analysis_Final_1_11_12.pdf/113
- 36. Ghana Millennium Challenge Account (MCA) Program. (n.d.B). Power Distribution & Utilization Concept Paper. Compact II.
- 37. Ghana Millennium Challenge Account (MCA) Program. (n.d.C). Powering Private Sector Investment Through Power Sector Reform. Concept Paper; Project 1.
- Ghana Millennium Challenge Account (MCA) Program (n.d.D). Social and Gender Analysis. Compact II.

http://www.mida.gov.gh/pages/view/Social_and_Gender_Analysis_Final_1_11_12.pdf/113.

- Ghana Millennium Challenge Account (MCA) Program. Minutes of the 12th Board Meeting. September 9th, 2016. <u>http://www.mida.gov.gh</u>. Referenced in FN#1.
- 40. Ghana/starrfmonline.com/103.5FM (2016). Ghana wins African Gender Award. Available on http://m.starrfmonline.com/1.9554881#%2EV47kJfq-958%2Elinkedin.
- 41. Ghana Statistical Service (2012),
- 42. Ghana Statistical Service. (2013). 2010 Population & Housing Census National: Analytical Report. Accra, Ghana. <u>http://www.statsghana.gov.gh/docfiles/2010phc/National_Analytical_Report.pdf</u>.
- 43. Ghana Statistical Service. (2014). Poverty Profile in Ghana; 2005-2013. Ghana Living Standards Survey Round 6. <u>http://www.statsghana.gov.gh/glss6.html.</u>
- 44. Goldstein, Markus, and Christopher Udry. (2008). The Profits of Power: Land Rights and Agricultural Investment in Ghana." Journal of Political Economy, 116 (6): 981-1022.
- 45. Golumbeau, R. & Barnes D. (2013). Connection Charges and Electricity Access in Sub-Saharan Africa. The World Bank, Policy Research Paper 6511, p.7.
- 46. Finucane, James, Susan V. Bogach, and Luis E. Garcia, "Promoting Productive Uses of Electricity in Rural Areas of Peru: Experiences & Lessons Learned." The World Bank. 2012.
- 47. Horowitz, R. (1998). His and Hers: Gender, Consumption and Technology.
- 48. <u>Http://savannahnewsblogspotcom.blogspot.com/2011/11/socio-cultural-barriers-cause-of.html/Tamale: West Africa Fastest Growing City. Referenced in FN#22 But another site notes it is perhaps the fastest growing city in W. Africa: http://www.ghanaweb.com/GhanaHomePage/geography/tamale.php.</u>
- 49. The World Bank Group. IEG (Independent Evaluation Group). (2008). *The Welfare Impact of Rural Electrification: A Reassessment of the Costs and Benefits*. Impact Evaluation Report, World Bank, Washington, DC.
- 50. The World Bank Group. IEG. (2014). World Bank Support to Public-Private Partnerships.
- International Finance Corporation. (2011). Strengthening Access to Finance for Women-Owned SMEs in Developing Countries. <u>http://www.ifc.org/wps/wcm/connect/a4774a004a3f66539f0f9f8969adcc27/G20_Women_Report.p</u> df?MOD=AJPERES.
- The World Bank Group. (2016). Women, Business and the Law 2016. <u>http://wbl.worldbank.org/~/media/WBG/WBL/Documents/Reports/2016/Women-Business-and-the-Law-2016.pdf</u>
- 53. Keener, S., Banerjee, S.G. (2005). Ghana: Poverty and Social Impact Analysis of Electricity Tariffs. The World Bank; Energy Sector Management Assistance Program.
- 54. Kenya Power & Light Company (KPL). <u>http://www.kplc.co.ke/content/item/1951/kenya-power-confirms-5.9-million-customers-connected-to-the-grid</u> (March 2017).

- 55. Khandker, Shahid, Douglas F. Barnes, and Hussain Samad. (2009). The Welfare Impact of Rural Electrification: Evidence from Vietnam. Development Research Group, World Bank Policy Research Working Paper No. 5057, Washington, DC.
- 56. Kojima, M. et al. (2016). Who Uses Electricity in Sub-Saharan Africa. Results from Household Surveys. World Bank Research Paper (7889).
- 57. McKinsey & Co. (2015). Powering Africa.
- Kwenda, S. (2010). Africa's disabled will not be forgotten. Africa Renewal Online. http://www.un.org/africarenewal/magazine/april-2010/africa%E2%80%99s-disabled-will-not-be-forgotten.
- Meadows, Dr. Kate et al., (February 2014). Assessment of the Social and Gender Responsiveness of Electricity Service Delivery of ECG & NEDCO, for Integrating Gender into MCA Compact 2. MCC, Washington, DC.
- Mensah, E.K. (2015). No Exclusion! Women are Key Players in bringing Energy Revolution in West Africa. ECREE Standtall Competition, 2015.<u>http://ecowgen.ecreee.org/index.php/standtall_competitionno-exclusion-women-are-key-players-in-bringing-energy-revolution-in-west-africa/.</u>
- 61. Millennium Challenge Corporation (MCC). Ghana Compact II 2016). Referenced in FN # 3.
- 62. Millennium Challenge Corporation. (2011). Ghana Constraints Analysis. https://assets.mcc.gov/documents/GhanaII CA withCover.pdf.
- 63. Millennium Challenge Corporation. (2012). MCC: A Leader in Poverty Reduction through Gender Equality and Social Inclusion. <u>https://www.mcc.gov/resources/doc/factsheet-gender</u>.
- 64. Millennium Challenge Corporation. (2016). Counter Trafficking in Persons Policy. https://www.mcc.gov/resources/doc/policy-counter-trafficking-in-persons-policy.
- 65. Millennium Challenge Corporation (2016). Social and Gender Dimensions of Access to Electricity Services.
- 66. Ministry of Energy (MoEN), Ghana. (2010). Energy Policy. <u>https://s3.amazonaws.com/ndpc-static/pubication/Energy+Policy_Feb2010.pdf.</u>
- 67. Ministry of Finance. (2016). Budget Statement and Economic Policy of the Government of Ghana for the 2016 Financial Year. <u>http://www.mofep.gov.gh/sites/default/files/news/2016</u>/BUDGETSTATEMENT.pdf.
- 68. Ministry of Gender, Children, and Social Protection (MoGCSP). (2015). National Gender Policy. http://www.ghana.gov.gh/images/pressreleases/National_Gender_Policy_Summary.pdf.
- 69. Ministry of Gender, Children, and Social Protection (MoGCSP). (2016). National Social Protection Policy. <u>http://www.ghana.gov.gh/index.php/media-center/features/2863-national-social-protection-policy-to-address-poverty-social-inequalities-and-other-vulnerabilities</u>.
- 70. National Council on Persons with Disability. (2010). Guidelines for the Disbursement and Management of the District Assembly Common Fund Allocation to Persons with Disability. http://www.gfdgh.org/Guidelines%20for%20Disbursement%20of%20District%20Assembly%20Common%20Fund.pdf.
- 71. National Institute of Standards and Technology Special Publication 800-30, Risk Management Guide for Information Technology Systems, July 2002
- 72. NIST Special Publication 800-30: Information Security Handbook: A guide for Managers.
- 73. National Population Council (NPC). (2014). Ghana's Demographic Transition: The Demographic Dividend. Policy Brief II. Accra, Ghana. Available at: http://www.npc.gov.gh/web/jdownloads/Policy%20Briefs/Ghanas%20Demographic%20Transition%20Transition%20Demographic%20Dividend%20-%20June%202014.pdf.

- 74. Oduro, Abena (2014). Ownership of the Place of Residence in Ghana: A Gender Analysis. Journal of African Development, 17(1): 17-44.
- 75. OECD. (2009). Gender Responsive Budgeting the Case of Ghana. <u>http://www.oecd.org/dac/gender-development/43332630.pdf</u>
- Ofosu Ahenkorah, A.K. (2015). Promoting Energy Efficiency and Conservation: The Journey so far from Policy and Regulation to Implementation. PowerPoint Presentation, <u>www.energycom.gov.gh</u>.
- 77. Osei-Assibey, E. (2014). Pan-African Conference in Inequalities in the Context of Structural Transformation. *Inequalities Country Report Ghana*. <u>http://africainequalities.org/wp-content/uploads/2014/05/Ghana.pdf.</u>
- 78. Partnership for Growth (PFG). Ghana's Action Plan for PFG. <u>Http://www.mofep.gov.gh/?q=news/250314/partnership-for-growth-joint-country-action-plan</u>. Referenced in FN #2.
- 79. PHC. (2010).
- 80. Public Utilities Regulatory Commission of Ghana (PURC). <u>Www.purc.com.gh</u>.
- Seitz, V., Adato, M. (2012). Principles into Practice: Gender Equality and Poverty Reduction Through Growth. Millennium Challenge Corporation. <u>https://assets.mcc.gov/reports/paper-2012001153101-principles-gender.pdf</u>.
- 82. SGIP FGDs, 2016
- 83. SGIP KIIs, 2016
- Standal, K., Winther, T. (2016). Empowerment Through Energy? Impact of Electricity on Care Work Practices and Gender Relations. Forum for Development Studies, 43:1, 27-45, DOI: 10.1080/08039410.2015.1134642.
- 85. Sustainable Energy For All (SE4All). (<u>www.se4all.org</u>)
- 86. Taale, Francis & Kyeremeh, Christian. 2016. "Households' Willingness to Pay for Reliable Electricity Service in Ghana," Elsevier. <u>Renewable and Sustainable Energy Reviews</u>, <u>www.elsevier.com/locate/rser</u>.
- 87. The World Bank. (2010). Addressing the Electricity Access Gap. Background Paper for the World Bank Group Energy Sector Strategy.
- 88. The World Bank. . (2017). Doing Business 2017 Report.
- 89. The World Bank. . (2011). Energy Access and Productive Uses for the Urban Poor. ESMAP Final Report on Ghana Scoping Study. <u>http://www.esmap.org/node/2258.</u>
- 90. The World Bank (2016). Kenya Power. ESIA. Slum Electrification Component.
- The World Bank. 2016. Kenya: Electricity Expansion Project: Additional Financing. Washington, DC. World Bank Group (http://documents.worldbank.org/curated/en/225551467995646673/Kenya-Electricity-Expansion-
- Project-additional-financing).
 92. The World Bank. (2013). Gender and Development; and UN Women: http://www.un.org/womenwatch/osagi/gendermainstreaming.htm. Referenced in FN#10.
- 102 The World Dank Chang Country Derthership Strategy EV12 EV16 youry tradingsoonemics of
- 93. The World Bank. Ghana Country Partnership Strategy FY13-FY16. <u>www.tradingeconomics.com</u>.
- 94. The World Bank. (2006).Ghana: Women's Energy Enterprise: Developing a Model for Mainstreaming Gender into Modern Energy. Report on a Feasibility Study prepared by Kumasi Institute of Technology and Environment (KITE).
- 95. The World Bank (2012). Lao PDR. Power to the People: Twenty Years of National Electrification. <u>http://documents.worldbank.org/curated/en/850691468027854018/pdf/696610ESW0P1010LaoPD</u> <u>R0PowertoPeople.pdf</u>

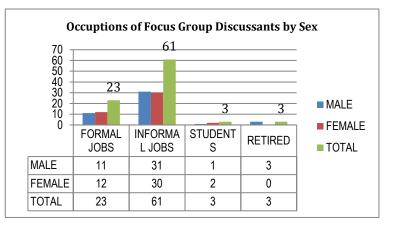
- 96. The World Bank (2006). Policy and Social Impact Analysis of Reforms; Lessons and Examples from Implementation. Ghana; Electricity Tariff Reform. <u>http://siteresources.worldbank.org/INTPSIA/Resources/490023-1120845825946/PSIACASESTUDIES_BOOK.pdf.</u>
- 97. The World Bank. (2015). Poverty Reduction in Ghana. Progress and Challenges. <u>http://www.worldbank.org/en/country/ghana/publication/poverty-reduction-ghana-progress-challenges</u>.
- 98. The World Bank. (2015) Rising through Cities in Ghana: Urbanization Review-Overview Report. <u>http://documents.worldbank.org/curated/en/613251468182958526/Rising-through-cities-in-Ghana-urbanization-review-overview-report</u>. Referenced in FN#17.
- 99. The World Bank. (2008). The Welfare Impact of Rural Electrification: A Reassessment of the Costs and Benefits. An Independent Evaluation Group Impact Assessment. http://siteresources.worldbank.org/EXTRURELECT/Resources/full_doc.pdf.
- 100. The World Bank. (2007). World Development Report 2007. http://siteresources.worldbank.org/INTWDR2007/Resources/1489782-1158107976655/overview.pdf.
- 101. The World Bank (2012) Asia Sustainable and Alternative Energy Program Lao PDR Power to the People: Twenty Years of National Electrification. http://siteresources.worldbank.org/INTEAPASTAE/Resources/LaoPDR-PowertoPeople.pdf
- 102. United Nations Children's Education Fund (2016). Ghana Poverty and Inequality Report 2016: Using the 6th Ghana Living Standards Survey. http://www.unicef.org/ghana/Ghana Poverty and Inequality Analysis FINAL Match 2
- 103. United Nations Development Programme. (2015). Human Development Report 2015. http://hdr.undp.org/sites/default/files/2015 human development report.pdf.
- 104. United Nations Industrial Development Organization (UNIDO) and UN Women. (2013). Sustainable Energy for All: The Gender Dimensions. <u>https://www.unido.org/fileadmin/user_media_upgrade/What_we_do/Topics/Women_and_Youth/G_UIDANCENOTE_FINAL_WEB.pdf</u>. 2016 Trafficking in Persons Report. <u>http://www.state.gov/j/tip/rls/tiprpt/2016/index.htm</u>
- 105. United Nations. Worldometer, <u>http://www.worldometers.info/world-population/ghana-population/</u>. (FN#13 & 15)
- 106. United States Agency for International Development (USAID). Power Africa. (www.usaid.gov/powerafrica)
- 107. United States Department of Labor. (2013). Occupation safety and health administration women in construction. <u>https://www.osha.gov/doc/topics/women</u>
- 108. UN Women. (2014). The World Survey on the Role of Women in Development; Gender Equality and Sustainable Development. <u>http://www2.unwomen.org/~/media/headquarters/attachments/sections/library/publications/2014/un</u> women surveyreport advance 16oct.pdf?v=1&d=20150303T172710.
- 109. United States Agency for International Development (USAID), International Union for Conservation of Nature (IUCN). (2014). Women at the Forefront of the Clean Energy Future. Initiative Gender Equality for Climate Change Opportunities (GECCO). <u>https://portals.iucn.org/union/sites/union/files/doc/women_at_the_forefront_of_the_clean_energy_f_uture_1.20.15.pdf</u>.
- 110. United States Department of State. (2016). Ghana; 2016 Trafficking in Persons Report. http://www.state.gov/j/tip/rls/tiprpt/countries/2013/215470.htm.
- 111. University of Ghana, Institute of Statistical, Social and Economic Research/GTZ. (2007). Electricity Use and Demand among Micro, Small and Medium Enterprises: Results of Census in Ghana's Brong-Ahafo Region.

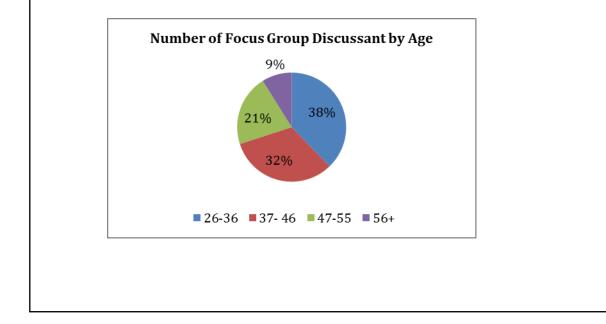
- 112. Wamukonya, N. (2002). A Critical Look at Gender & Energy Mainstreaming in Africa. Gender Perspectives in Sustainable Development side event, UNDESA/DAW and WEDO. <u>http://www.un.org/womenwatch/daw/forum-sustdev/Njeri-paper.pdf.</u>
- 113. World Economic Forum. (2015). The Global Gender Gap Index 2015 Ghana. http://reports.weforum.org/global-gender-gap-report-2015/economies/#economy=GHA.
- 114. World Population Review. (November 20, 2016). http://worldpopulationreview.com/countries/ghana-population/. FN#13.
- 115. Woroniuk, B., & Schalkwyk, J. (1998). Energy Policy & Equality Between Women and Men. Sida Equality Prompt #9. https://www.oecd.org/dac/gender-development/1849338.pdf.

8. ANNEXES

Annex 1. Characteristics of FGD Participants

The FGDs in the operating areas found a number of different occupational categories both in the informal and the formal sectors among discussants. The occupations found in the informal sector where females dominated included chop-bar/food vending, petty trading, beauty-care, auto mechanical, driving, baking, electricians, hairdressing, dressmaking/tailoring, poultry farming, carpentry, masonry among many others.





Annex 2. Relevant Laws, Policies, and Legislative Frameworks on Gender and Social Inclusion

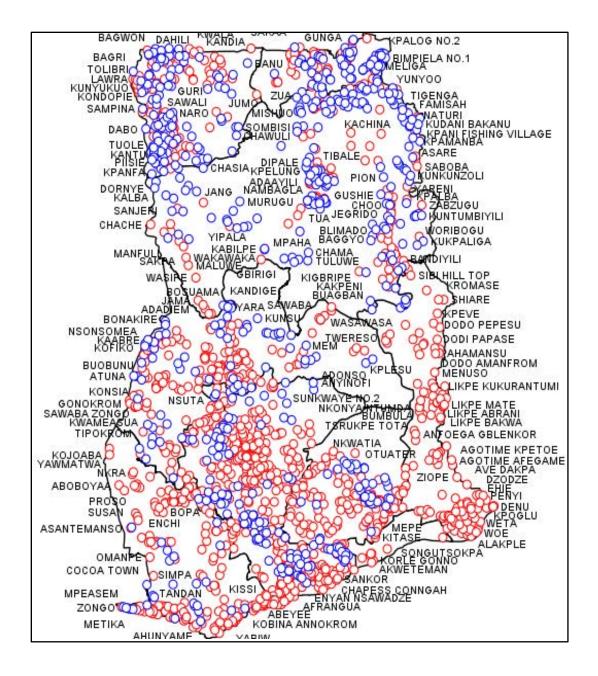
Ghana					
Social Protection Policy, 2016					
The National Gender Policy, 2015					
Ghana Shared Growth and Development Agenda (GSGDA) II, 2014-2017, 2014					
Sustainable Energy for All Action Plan, 2012					
Renewable Energy Act (Act 832), 2011					
Ghana National Energy Policy, 2010					
Energy Sector Strategy and Development Plan, 2010					
Electricity Supply and Distribution Regulations (Standards of Performance), Regulation 4(1), 2008					
The Domestic Violence Act (Act 732), 2007					
Persons with Disability Act (Act 715), 2006					
National Disability Act, 2006					
Strategic National Energy Plan 2006-2012, 2006					
Growth and Poverty Reduction Strategy 2006-2009 (GPRS II), 2006					
The Human Trafficking Act (Act 694), 2005					
The Human Trafficking Law, 2015					
The Labour Act (Act 651, Section 68), 2003					
District Assembly Common Fund Act (Act 455), 1993					
Public Utilities Regulations (Consumer Service Committee), Regulation 3(1), 2002					
Female Genital Mutilation Criminalized by an Amendment to the Criminal Code Amendment Act (Act 554), 1998					
The 1992 Constitution of Ghana (Chapter 5 & 6 and Article 17), 1992					
The Intestate Succession Law, 1985					
Repeal of Section 42(g) of the Criminal Offences Act (Act 29), 1960					
Regional					
Protocol to the African Charter on Human and People's Rights on the Rights of Women in Africa, 2005					
The 1985 Nairobi Forward Looking Strategies for the Advancement of Women, 1985					
The African Charter on Human and People's Rights, Ratified1989 International					
The Declaration on the Rights of Indigenous people, 2007					
The Beijing Declaration and platform for Action, 1995					
The International Conference on Population and Development (ICPD) Declaration, 1994					
The 2000 Millennium Development Goals, 2000					
UN Security Council Resolution 1325 and 1820 on Women Peace and Security and Violence Against Women,					
2000					
The Optional Protocol to the Convention on the Elimination of All Forms of Discrimination against Women, 1999					
The International Convention on the Protection of the Rights of all Migrant Workers and Members of their Families,					
1990					
The Vienna Declaration on Human Rights, 1993					
The International Convention on the Rights of the Child (CRC), 1991					
The Covenant on Economic Social and Cultural Rights (ECOSOC), 1985					
Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment, 1984					
Convention on the Elimination of All Forms of Discrimination Against Women, 1979					
The International Convention on the Elimination of All Forms of Racial Discrimination, 1965					
International Covenant on Economic, Social and Cultural Rights, 1966					
The International Covenant on Civil and Political Rights (ICCPR), 1966					
The Universal Declaration of Human Rights, 1948					

	All people				People classified poor			
Country	Urban	Rural	Total	Q1	Q5	Urban	Rural	Total
Angola	75	14	47	8	85	40	6	16
Botswana	63	23	46	15	79	42	10	25
Burkina Faso	47	3	13	2	38	14	2	3
Côte d'Ivoire	88	31	57	41	38	14	2	3
Ethiopia	96	12	23	7	45	86	6	10
Ghana	89	47	68	37	91	74	32	41
Madagascar	38	6	12	1	44	12	3	4
Malawi	38	4	9	1	31	8	0	1
Mali	92	57	65	49	80	86	50	52
Mozambique	47	2	16	1	51	11	1	2
Niger	61	6	15	2	47	20	3	4
Nigeria	93	48	64	33	88	88	38	48
Rwanda	48	6	12	1	46	6	1	1
São Tomé and Príncipe	69	48	59	49	72	62	44	53
Senegal	93	32	59	36	84	84	26	44
Sierra Leone	42	2	17	3	43	25	1	8
South Africa	94	81	89	78	99	87	77	81
Swaziland	70	30	40	4	83	45	16	19
Tanzania	52	9	20	4	58	7	4	4
Togo ^a	80	10	37	6	76	65	6	19
Uganda	39	7	15	3	42	6	4	4
Zambia	59	16	31	8	78	19	11	12
Median	66	13	34	7	65	33	6	11

Annex 3. Table 5. Percentage of People with Access to Electricity in Sub-Sahara **Countries where Data are Available**

Source: World Bank staff analysis of household surveys

Annex 4. Map 1: Distribution of Electrified and Non-electrified Communities⁵⁸



⁵⁸ Source: Ghana Energy Access Toolkit. Energy Commission Website.