



USAID
FROM THE AMERICAN PEOPLE



ENGENDERING UTILITIES: IMPROVING GENDER DIVERSITY IN POWER SECTOR UTILITIES

January 2016

Michael Cain, Clare Novak and Courtney Owen authored this report. Ellen Dragotto conducted requisite field interviews with Michael Cain. The authors would like to thank Ellen Dragotto for her comments and contributions to this report. The authors' views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

ENGENDERING UTILITIES: IMPROVING GENDER DIVERSITY IN POWER SECTOR UTILITIES

Contract: IDIQ No. AID-OAA-I-13-00015

Task Order: AID-OAA-TO-13-00048

This document was produced by Engility Corporation for USAID's Office of Energy and Infrastructure, Energy Division within the Bureau of Economic Growth, Education and Environment in Washington, DC.

January 2016

DISCLAIMER

The authors' views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

TABLE OF CONTENTS

ACRONYMS	v
EXECUTIVE SUMMARY	i
I. INTRODUCTION	3
A. Engendering Utilities Program.....	4
B. Development Hypotheses	5
II. RECENT RESEARCH ON GENDER AND ENERGY	7
III. EMPIRICAL METHODOLOGY AND SURVEY FINDINGS	11
A. Empirical Approach.....	11
B. Descriptive Survey Results on Employment by Gender	12
C. Descriptive Survey Results on Employment Practices	15
IV. UTILITY COMPANY PROFILES	19
A. Jordan: EDCO and IDECO	19
B. Republic of Macedonia: EVN Macedonia.....	22
C. Nigeria: EKEDP and IBEDC.....	23
D. Georgia: Energo-Pro	25
E. Kenya: Kenya Power and Lighting Company.....	27
V. POLICY APPROACH AND POLICY INTERVENTIONS	29
A. Policy Methodology and Evaluation.....	29
B. Discussion of Interventions	30
VI. CONCLUSIONS	34
BIBLIOGRAPHY	36

This page is intentionally left blank.

ACRONYMS

DEWA	Dubai Energy and Water Authority
DISCO	Distribution Company
EAPP	Eastern Africa Power Pool
ECG	Electricity Company of Ghana
EDCO	Electricity Distribution Company
EDGE	Economic Dividends for Gender Equality
EKEDP	Eko Electricity Distribution PLC
ELEM	Elektrani na Makedonija
ENERGIA	International Network on Gender and Sustainable Energy
ERC	Energy Regulatory Commission
ESM	Elektrostopanstvo na Makedonija
EU	European Union
EUPP	Energy Utility Partnership Program [USEA]
EVN	Energie-Versorgung Niederosterreich
HDI	Human Development Index
HR	Human Resources
IBEDC	Ibadan Electricity Distribution Company
IDECO	Irbid District Electricity Company
ILO	International Labour Organization
IRADe	Integrated Research and Action for Development
IRENA	International Renewable Energy Agency
IT	Information Technology
JEPCO	Jordanian Electric Power Company
KEC	Kingdom Electric Company
KEDS	Kosovo Energy Distribution Services
KPLC	Kenya Power and Lighting Company
LESCO	Lahore Electric Supply Company
MENA	Middle East and North African
MEPSO	Electricity Transmission System Operator of Macedonia
MEPCO	Multan Electric Power Company
MOE	Ministry of Energy and Petroleum
MOU	Memorandum of Understanding
MW	Megawatt(s)

OECD	Organization for Economic Co-operation and Development
STEM	Science, Technology, Engineering, and Math
TANESCO	Tanzania Electric Supply Company
UN GES	United Nations Gender Equity Seal
UN	United Nations
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNHCR	United Nations High Commissioner for Refugees
USAID	United States Agency for International Development
USEA	United States Energy Association
Women–LEED–Africa	Women’s Legal and Economic Empowerment Database for Africa
ZECO	Zanzibar Electric Company

EXECUTIVE SUMMARY

Women have traditionally been under-represented in the energy sector; they are often excluded from many power sector employment opportunities. At the same time, there is a lack of empirical research documenting the roles of women in the energy sector employment. Studies in other business sectors suggest that including more women in the workforce has a positive impact on productivity and the bottom line. Therefore, the development hypothesis for this study suggests that by improving labor market participation by women and mitigating gender disparities throughout a company's human resources practices, power sector utilities can increase operational efficiencies that will ultimately bring greater economic value to utilities companies. This study, the first of its kind, endeavors to better understand the role of women within electric power distribution companies (DISCOs) and the gender disparities in this segment of the energy sector. Based on data from 14 utilities in Eastern Europe, South Asia, the Middle East, and Africa, we find wide variations in gender-based employment practices and outcomes. Women's employment within power distribution utilities in the sample averages 13 percent of the workforce, with a range from less than 1 percent in Pakistan to more than 30 percent in Ukraine. From our sample, it is clear that women work at all management levels and in all employment categories in DISCOs, including technical field operations, engineering, finance, regulatory compliance, planning, customer service, human resources (HR), and information technology (IT) operations.

Although women work in all employment categories, women are not equally represented in all departments; technical field operations, high-voltage line operations, and field maintenance remain overwhelmingly dominated by men. These departments have the greatest number of employees of any departments within the DISCOs we sampled; therefore the data suggests that women are excluded from the majority of jobs in DISCOs. Even when controlling for the large number of men working in technical field operations, by excluding the technical field operations data from some statistics, almost all companies still had gender imbalances in remaining operational units. Gender imbalances in DISCOs, therefore, cannot be explained solely on the basis of the large percentages of men working in field operations and high-voltage line maintenance. Although all utilities in our sample have gender-neutral labor practices and practice equal opportunity, only two utilities in our sample disaggregated employment data by gender, and only one utility had a formal committee devoted to addressing gender inequalities in the company. In most companies, gender-neutral policies do not translate into an organizational capacity to understand or mitigate gender disparities in companies.

Our research also shows that training and internship opportunities for women were not used to correct unequal employment outcomes in utility companies. Across all companies reporting internship opportunities in the last two years, only 18.9 percent of women received internships and only 6.7 percent of training opportunities went to women. Most utilities are not using internships or professional training as organizational instruments to improve gender disparities within their companies.

These findings illustrate inequalities in employment outcomes and disparities in the way utilities run their businesses that have significant labor market consequences for women. To better understand and address the challenges facing women within the power sector, the United States Agency for International Development (USAID) is working with seven utilities in five countries on the *Engendering Utilities Program*. This program identified utilities where there was executive-level commitment to improve gender outcomes within the company. USAID completed field interviews in 2015 with board members, management, and staff at each utility to identify barriers preventing increased employment of women and to discuss possible collaborative interventions. Working with these utilities, the project has identified a series of collaborative interventions tailored to each utility designed to improve human resources,

employee life cycle processes, including recruitment, selection, training, pay equity and leadership opportunities for women over a two-year period.

The research phase of the program, summarized in this report, is expected to help development professionals better understand how electricity utilities can increase the labor market participation of women in the energy sector. The data facilitate the creation of company-specific interventions to improve women's career prospects while improving the quality and cost of electricity services. The development hypothesis grounding this policy work suggests that mitigating gender disparities can increase operational efficiencies that will ultimately bring greater value to utility companies. This has the potential to result in a positive feedback loop, where improvements in gender equality help change norms and expectations on gender, which ultimately allows women to participate in all aspects of the energy sector. This will likely improve the efficiency and operations of DISCOs. DISCOs are often among the largest, if not the largest, employer in a locality; therefore the economic improvement of DISCOs and of women's employment in them, may also result in improved societal development.

I. INTRODUCTION

Women represent half of the potential human capital in the world, yet in most societies, women are under-represented in labor markets, despite the fact that for over the past 30 years, more than half a billion women have joined the world's workforce. In Organization for Economic Co-operation and Development (OECD) countries, the rate of women's participation in the labor market is significantly lower than men's. On average, about 60 percent of eligible women are employed; many in part-time work and often at wages lower than what men earn for similar work (OECD, 2008).

Within the energy sector, gender inequality is perhaps more pronounced than many other sectors of the economy. In the power sector, specifically in generation, transmission, and distribution companies, women are poorly represented. Just how poorly represented remains a matter of speculation. Very few studies are devoted to careful empirical research on the role of women within the sector. Yet the power sector and distribution utilities in particular represent significant sources of employment and significant sources of revenues for all countries, regardless of their level of economic development. Given the scale and importance of DISCOs in an economy, increasing the number of women within power sector utilities represents a significant opportunity for improving gender outcomes within a society. For this reason alone, it is important to pursue gender equity in the DISCO workforce. Even small gains within the sector will likely yield significant improvements for the well-being of women in developing economies.

Improving the well-being of women in power sector utilities is not merely a noble goal. Companies are in the business of electric distribution and must run the business in a sound economic manner, producing a reliable service. As research has shown, gender diversity is connected to expected improvements in the performance of companies. Utilities stand to gain. For example, when more women join senior staff, the organizational management of firms improves (McKinsey, 2013). In addition to the new perspectives women can be expected to bring, surveys indicate that gender-diverse teams have a positive effect on meeting dynamics, with many senior managers reporting greater formality and more professional, results-oriented meetings (McKinsey, 2014). Including women and making teams more diverse can result in a richer set of ideas and a more comprehensive set of options for solving challenges and problems.

By improving a company's targeting and recruitment of women professionals, utilities can effectively expand the pool of talent to help drive transformational changes in their company. Women can be expected to bring new management styles that emphasize building their staff's capacity, achieving efficient communication, and participatory decision making (Eagly, 2013). Employing and training women for new positions within utilities are likely to open up new possibilities for improving customer relations, bill collections, and customer service—all with the potential to contribute to and improve the financial health of utilities.

McKinsey (2007) found that in a sample of 89 companies, those with gender diversity in leadership experienced higher return on equity, operating profit, and stock price. While McKinsey does not say that having women in leadership *causes* better results, the research suggests that having both men and women in leadership is good for the bottom line. This evidence, when applied to utilities in developing countries, suggests that mitigating gender disparities and improving women's labor market participation can increase operational efficiencies that will ultimately bring greater value to utility companies. This has the potential to result in a positive feedback loop, where improved gender equality helps change norms and expectations on gender, which allows women to participate in all aspects of the energy sector to better address the specific needs of women as energy consumers.

A. ENGENDERING UTILITIES PROGRAM

The research goal of this report is to improve our knowledge of gender in power DISCOs through an empirical study of labor practices in a sample of utilities throughout the world. This report is part of a USAID program designed to improve labor market opportunities for women in the energy sector and better understand how improved gender outcomes can contribute to better business practices and improved operations in distribution utilities. This program, called the *Engendering Utilities Program* is comprised of two phases of activities.

Phase One identified seven utilities (referred to as “Partner Utilities”) in five countries (**Table 1**), where there was executive-level commitment to improve gender outcomes within the company. Once the utilities agreed to participate in the program, interviews were conducted with staff and management. The purpose of the interviews was to identify barriers preventing increased employment of women, to explore options designed to mitigate these barriers, and to ensure senior management was committed to participating in the *Engendering Utilities Program*.

TABLE 1. ENGENDERING UTILITIES PROGRAM PARTNER UTILITIES

Country	Utility Company
Jordan	Electricity Distribution Company (EDCO) Irbid District Electricity Company (IDECO)
Georgia	Energo-Pro, Georgia
Macedonia	EVN Macedonia
Nigeria	Eko Electricity Distribution PLC (EKEDP) Ibadan Electricity Distribution Company (IBEDC)
Kenya	Kenya Power and Lighting Company (KPLC)

Phase One activities included obtaining survey data from utilities on women’s and men’s employment and labor practices. In addition to the seven Partner Utilities listed in **Table 1**, surveys were sent to seven additional DISCOs. The intention was to create a more robust dataset and to set a baseline for data comparison. The impact of interventions adopted and implemented in Phase Two can be determined by comparing the Phase Two data with the baseline data. These additional utilities will be referred to as the “Control Group” in this report and are listed in **Table 1a**. The baseline data for all utilities is described in Section III of this report.

TABLE 1A. ENGENDERING UTILITIES PROGRAM CONTROL GROUP

Country	Utility Company
Ghana	Electricity Company of Ghana (ECG)*
Kosovo	Kosovo Energy Distribution Services (KEDS)
Pakistan	Multan Electric Power Company (MEPCO)** Lahore Electric Supply Company (LESCO)**
Tanzania	Tanzania Electric Supply Company (TANESCO)** Zanzibar Electric Company (ZECO)**
Ukraine	KievEnergo

*Completed a shortened survey.

**These companies were contacted, but were either not able to submit survey data within the timeline or for other reasons did not participate. Limited data was then obtained from other sources.

Phase One identified potential interventions for each of the seven Partner Utilities and shared these interventions with each company for concurrence. The interventions were tailored to each utility and designed to improve organizational practices and employment outcomes for women. For example, several utilities have chosen to increase the number of women participating in internships with the goal

of full-time employment and/or eligibility for promotion. A second common intervention was mentoring programs in which women employees would have access to senior staff to receive career guidance and readiness for promotion. Phase Two activities will focus on working with each utility to implement the agreed upon interventions over a two-year period. A Memorandum of Understanding (MOU) was signed by each Partner Utility setting out the agreed upon interventions as well as the roles and responsibilities of USAID and USAID's partner companies. The interventions are further discussed in Section V of this report.

All participating utilities will be surveyed again at the conclusion of the program. This new information will be compared to the baseline data outlined in this report to measure the efficacy of interventions adopted in Phase Two. At the conclusion of the two-year period, the *Engendering Utilities Program* will evaluate improved gender practices and progress toward gender equity goals set by the utilities, as well as lessons learned from the interventions and the overall *Engendering Utilities Program*.

Interim measures will track progress in implementing the interventions. For example, if a company chooses to increase the number of women participating in internships, the measure may track the percentage increase in women participants each year. Specific measures and the process for data collection will be collaboratively developed with the Partner Utilities. Measures for each intervention will be developed as well as a timeline and action plan to implement those measures.

B. DEVELOPMENT HYPOTHESES

Studies on gender and gender inequality in the energy sector have focused mainly on consumer energy issues, often referred to in the industry as “downstream” issues, especially emphasizing the impact of clean cooking technologies on women’s health, rural electrification, and improved energy access (Köhlin et al., 2011). Despite the importance of these studies, there has been considerably less research on the role of women in the generation, transmission, or distribution of electric power—referred to in the industry as “upstream.” One result of the consumer focus is that any detrimental impacts of gender disparities associated with electricity infrastructure or power sector value chains have remained poorly understood. This has contributed to a knowledge gap about the role of women in the power sector and limited our knowledge about how to potentially improve women’s participation in the generation, transmission, and distribution of power.

The research phase of the *Engendering Utilities Program* focused on improving information about and knowledge of gender in power sector utilities at the distribution level. Our research showed that inequalities in employment outcomes and disparities in the way utilities run their businesses have significant labor market consequences for women. Interviews conducted in the field provided specific information on barriers preventing increased employment for women and provided the basis for identifying interventions for reducing the impact of those barriers. Internal practices and policies influenced employment outcomes and could be changed to improve women’s participation in the workforce. In each of the five countries, the interviews also identified external factors in the society, such as cultural norms associated with specific jobs, the average level and type of education women attain, or norms associated with the duties of women in a family, that influenced women’s employment outcomes in utility DISCOs. These external factors may be partially mitigated by interventions such as increased outreach to university students as the future workforce.

Several development hypotheses designed to improve labor market outcomes emerged from our survey and the organizational study of practices within utilities. First, to improve gender equity in utilities, managers will be able to build gender considerations into strategic planning and operational approaches. This may include regular human resource reporting using gender-disaggregated indicators across all departments or tracking job applications received by gender for all employment, internship, and mentoring opportunities. Increasing employment of women in utilities requires improved targeting of

women in the labor market, improving awareness, and changing perspectives on appropriate employment opportunities for women.

Second, to reduce existing gender disparities in utilities, training or internship opportunities that mitigate continued gender disparities could be pursued.

Third, utilities can improve labor policies that target women for job openings, programs that engage women in discussions of employment opportunities, and regular programs that identify women in secondary and post-secondary educational institutions. Institutions outside of the energy sector should work to improve incentives for women and girls to pursue Science, Technology, Engineering, and Math (STEM)-related fields or technical education in high school and post-secondary schooling.

Fourth, by increasing the number of women in utilities, the performance of utility companies may improve. Customer service, more efficient management, or more efficient business practices have been demonstrated to result from increased participation of women in the workforce. By increasing the number of women in utilities, senior management and staff may experience improvements in their company's business performance and financial bottom line.

These developmental hypotheses are only part of the answer to increasing the percentage of women working in upstream power sector activities. To be sustainable in the long term, the outcomes implied by these hypotheses should be linked to programs that attract more women to leadership positions in the energy sector, thereby insuring sustainable change in the sector and society.

II. RECENT RESEARCH ON GENDER AND ENERGY



Research on gender and development continues to grow at the policy level. Much of this research is normative in its approach, emphasizing why gender inclusion is important for development outcomes. Certainly, improvement in gender inclusion is required for women to leverage their capabilities and decision-making in all spheres of public and private life. This is true for women in the energy sector as well as other sectors. Yet, policy planning for energy sector development has generally been gender neutral. This neutrality has often translated into energy

planning that is gender blind in the sense that policy fails to recognize disparities and differences between men and women on issues involving energy and therefore omits any consideration of gender (Clancy et al., 2012).

A recent paper by the World Bank (2013) suggests that “...lack of gender disaggregated data or analysis hinders efforts to recognize the need for and design of specific gender-focused interventions” within the energy sector. A similar theme is echoed in “Energy and Gender” by Barbara Farhar and her co-authors (2014). They argue that energy justice means not only making energy technologies available, but also “...disaggregating and understanding energy problems and policies by gender in cultural and political contexts.” The importance of collecting this data appears crucial to formulating proper policies and building better policy frameworks for development (Merrill, 2014). The World Survey on the Role of Women in Development suggests that the lack of data “...limits the assessment of gender equality and women’s capabilities” (United Nations [UN] Women, 2014). Systematic data on gender outcomes and gender inequality within the energy sector remain difficult to obtain. Most reviews only underscore the crucial importance of collecting data.

Principles of gender equity have frequently been applied to evaluate downstream energy activities to better understand the consequences of poor energy access for women.¹ There has been particularly strong policy interest in clean cooking technologies and the role these technologies can play to improve women’s health and free women from the drudgery of fuel collection (Sovacool, 2012). For example, in rural households in Africa, women typically devote at least 25 percent of total domestic labor to wood collection (Sagar, 2005). Providing greater access to clean energy and lighting allows women to extend their productive hours and earn additional income and allows girls to make educational advancements (National Intelligence Council, 2008). Improvements in cooking technologies and access are likely to yield important development dividends to women through improved labor market participation and educational opportunities or achievements for women and girls at the bottom of the development pyramid.

Other studies emphasize the importance of gender inclusion in downstream energy sector activities to give women greater voice in policy outcomes (UN Women, 2014) and greater participation in energy sector employment; however, the employment studied is generally in small, renewable projects. Programs like Solar Sisters and Elephant Energy in Africa, Grameen Shakti in Bangladesh, Grupo Fenix in Nicaragua, and the Coastal Electrification and Women’s Development Cooperative in Bangladesh

¹ Köhlin et al. (2011) provides an in-depth discussion of the welfare implications to women for increased energy access.

attempt to provide employment opportunities for women and offer women clean energy products that help them gain access to clean energy in rural areas (Farhar et al., 2014; International Renewable Energy Agency [IRENA], 2012; International Labour Organization [ILO], 2013).

These projects provide rural women with both increased energy access and entrepreneurial job opportunities. While valuable, these projects do not reflect grid-based electrical generation and distribution.

Research is much more limited for generation, transmission, and distribution. What research does exist tends to emphasize more normative perspectives on why gender considerations are important. Gender equity principles applied to upstream energy activities, for example, require policymakers to consider equal participation in income-generating opportunities in the sector and a voice in decisions about upstream energy (UN Women, 2014).

Several themes emerge from empirical studies of gender in upstream energy activities. First, many case studies describe small-scale renewable generation projects and their contribution to women's employment and improved electricity access for women. A report by IRENA (2012) shows that in a survey of five hydro and solar companies in Central America and Tanzania, women derive considerable benefit from improved energy access; however, women employees in these five renewable energy companies remain a distinct minority, especially in managerial and technical positions. Women employees made up between 11 percent and 31 percent of employees in these companies (IRENA, 2012). The report concludes, "Within the renewable energy technology sector in rural areas, gender roles are not in balance." Another study entitled "The Role of Gender Concerns in the Planning of Small-Scale Energy Projects in Developing Countries" reports that among 192 clean energy projects, only 3 percent of projects fully addressed gender issues, and almost half the projects addressed gender issues "poorly or less than fairly" (Terrapon-Pfaff et al., 2015). Although access to energy improves the welfare of women, gender-related project planning and employment of women within the sector is often limited.

Second, large-scale energy projects, such as solar arrays, wind farms, generation plants, or transmission lines, may require significant amounts of land and leave a large physical footprint. In upstream energy generation and transmission, key gender disparities have been identified in resettlement and compensation for land. Studies show that when resettlement occurs, women often face discrimination in land ownership claims either because of lack of legal protections or lack of cultural acceptance of their rights. According to the Women's Legal and Economic Empowerment Database for Africa (Women-LEED-Africa), only eight countries include provisions to give women the right to own property.² A recent report on renewable energy in India notes that these systems "...are inherently controlled by and prove beneficial to men. In order to integrate women in the management of these systems, policy options that enable land to be granted to groups of women need to be explored." (Integrated Research and Action for Development [IRADe] and International Network on Gender and Sustainable Energy [ENERGIA], 2009)

Finally, when discussing utility DISCOs, there are no systematic studies on women's employment or systematic discussions of programs that assist with improving employment opportunities for women in grid-based DISCOs. It is highly likely that women experience unequal treatment in DISCOs and utilities. This unequal treatment may include human resource practices that actually hinder the recruitment of women for different types of jobs within utilities. Scattered reports suggest as much. For example, in Pakistan, women working at utility companies reported cases of harassment, lack of equal employment opportunities for new entrants, gender-biased promotions, communication barriers between men and

² While gender gaps in education tend to close with development, the same is not true of gender gaps in legal rights—middle-income countries are as likely as low-income countries to define men as the head of the household, to give the husband the right to choose the matrimonial home, or to deny women the ability to own assets in their own name.

women employees, and lack of basic infrastructure facilities (such as separate bathrooms) for women (USAID Power Distribution Program, 2013). Jaradat (2014) reports that in Jordan, social norms discourage the participation of women in a variety of energy sector positions. In Botswana, in a gender mainstreaming project, it was reported that the “number of female professionals in energy-related organizations was negligible: less than 5%” (Botswana Power Corporation, 2011).

In some countries, however, women employees solve specific service issues. For example, when, for cultural or religious reasons, women are unwilling to allow men to enter the home to read meters, women meter readers are accepted. In India, at the Maharashtra State Electricity Distribution Company, for example, women employees form small squads called “Damini Pathaks.” A Damini Pathak is headed by a local woman engineer and assisted by two to three women employees equipped with a digital camera, a security guard in uniform, and a vehicle. The task assigned to these squads is to undertake surprise checks of the meter readings in their area. The aim is to address consumer complaints regarding photometer reading. The members of the squad visit the households between 10:00 a.m. and 4:00 p.m. when only women are generally at home. The squads are working satisfactorily, and the results are encouraging.

This review of recent research shows there is insufficient data on gender and employment outcomes within the energy sector in developing economies, particularly in grid-based utilities. The existing research emphasizes the significance of gathering additional data on gender and energy to aid policymakers.

This page is intentionally left blank.

III. EMPIRICAL METHODOLOGY AND SURVEY FINDINGS

This section describes the sample of distribution utilities and the methods used to gather data on gender and employment within power sector utilities. This section also reviews the quantitative survey results on employment trends and employment practices in the sample. We find, based on our survey of employment practices of utilities in Eastern Europe, the Middle East, and Africa that women make up only 13 percent of the workforce. Of nine utilities completing detailed labor market surveys, only two companies regularly disaggregate employment by gender or offer programs to improve and monitor gender inequalities in hiring outcomes. This study also finds wide disparities in employment practices and outcomes, ranging between less than 1 percent of women employed in DISCOs to greater than 30 percent employed. These findings illustrate inequalities in employment outcomes and practices in the way utilities run their businesses that have significant labor market consequences for women.³

A. EMPIRICAL APPROACH

In early 2015, utility companies throughout the world were contacted by USAID and asked to participate in surveys and interviews to learn more about the role of women in their companies. Utilities were identified using three criteria: willingness to participate in the study, the country where the utility is located, and the current ownership structure of the utility. The seven Partner Utilities were contacted initially and asked to participate in the *Engendering Utilities Program*. Seven additional companies were contacted later and asked to complete the survey as part of the control group.

Seven utilities (i.e., the aforementioned Partner Utilities) were invited to participate in more in-depth key informant interviews. The invitation to participate in more in-depth interviews was partially based on an expressed willingness by the utility to consider discussions on the importance of gender in employment within their company. Key interviews were held in the field between May 2015 and August 2015 with Partner Utilities in Georgia, Jordan, Kenya, Macedonia, and Nigeria. Interviews included meetings with board members, directors, general managers, HR staff, and men and women engineers as well as call center and customer service staff. At each location, there was an attempt to speak to women staff members about their views of the company or their views of the workplace. Ellen Dragotto (USAID) conducted the interviews; Michael Cain (Engility) assisted.

The full survey questionnaire delivered to the utilities included nine questions on employment within the utility over a five-year period, disaggregated by gender. The survey also included 11 questions on recruitment and employment policies as well as 9 questions on the work environment, retention, internships, and training.

³Gender inequalities and gender disparities refer to practices that may prevent women from being considered and ultimately hired for a position as well as aggregate employment outcomes in a company.

Surveys were delivered to 11 of the 14 utilities companies in the sample.⁴ These surveys were completed by utilities during the period of July through September 2015. Nine of the 12 companies completed the full survey, while one company, the Electricity Company of Ghana (ECG), completed only an abbreviated survey on gender and employment.

The Control Group includes seven DISCOs from five countries. Only two companies in the Control Group completed a full survey—Kosovo Energy Distribution Services (KEDS) and KievEnergo, while ECG completed an abbreviated survey. The Control Group also includes employment data on four additional companies collected from other sources. These companies included two companies from Pakistan, the Multan Electric Power Company (MEPCO) and the Lahore Electric Supply Company (LESCO), and two companies from Tanzania—the Tanzania Electric Supply Company (TANESCO) and the Zanzibar Electric Company (ZECO).⁵ These companies along with the three identified above, KEDS, KievEnergo and ECG, constitute the full Control Group. The full sample used for calculating the percentage of women employed therefore includes data from a total of 14 companies in Eastern Europe, South Asia, the Middle East, and Africa.⁶

B. DESCRIPTIVE SURVEY RESULTS ON EMPLOYMENT BY GENDER

The 14 utilities in the sample ($n = 14$) are from 10 countries: Georgia, Ghana, Jordan, Kenya, Kosovo, Macedonia, Nigeria, Pakistan, Tanzania, and Ukraine. Nine companies completed full survey questionnaires; one company completed an abbreviated questionnaire, while data was obtained from public sources for the remaining four companies in our sample. **Table 2** and **Table 3** provide country context for each utility in these 10 countries, including comparative information about the relative sizes of the utilities and their ownership structure.

TABLE 2. PARTNER UTILITIES: COUNTRY ENERGY PROFILES

	Macedonia	Georgia	Jordan		Kenya	Nigeria	
Country Population (in Millions)	2.1	4.4	6.6		47.1	173	
Number of DISCOs	1	3	3		1	11	
Total Installed Capacity (MW)	2,011	4,350	3,715		1,874	8,902	
	EVN Macedonia	Energo-Pro	EDCO	IDECO	KPLC	EKEDP	IBEDC
Total Number of Customers	812,000	850,000	139,800	442,441	3,610,340	394,570	1,136,000
Ownership	90% Private 10% State Owned	Private	Parastatal	Private	State-Owned	Private	Private

⁴ These 11 utilities included ECG, Ghana; EDCO, Jordan; EKEDP, Nigeria; Energo-Pro Georgia; EVN Macedonia; IBEDC, Nigeria; IDECO, Jordan; KEDS, Kosovo; KPLC, Kenya; KievEnergo Ukraine; and TANESCO, Tanzania.

⁵ We received data on Pakistan from the USAID Power Distribution Program, 2012; data from Tanzania was received from personal correspondence with Kristen Madler (USAID) and Aieysha Kayani (Engility).

⁶ These 14 companies are ECG; EDCO; EKEDP; Energo-Pro Georgia; EVN Macedonia; IBEDC; IDECO; KEDS; KPLC; KievEnergo; LESCO, Pakistan; MEPCO, Pakistan; TANESCO; and ZECO, Tanzania.

TABLE 3. CONTROL GROUP: COUNTRY ENERGY PROFILES

	Pakistan		Ukraine	Kosovo	Tanzania		Ghana
Country Population (in Millions)	182.1		45.49	1.82	49.6		25.9
Number of DISCOs	15		27	1	2		2
Total Installed Capacity (MW)	23,914		55,001	1,524	1,509		2,100
	MEPCO	LESCO	KievEnergo	KEDS	TANESCO	ZECO	ECG
Total Number of Customers	4,700,000	3,700,000	*	450,000	1,501,162	23,451	1,200,000
Ownership	State-Owned	State-Owned	Private	Private	State-Owned	State-Owned	State-Owned

*Missing data or no data received

Pakistan and Nigeria are the most populous of the 10 countries in our sample, with over 150 million people living in each country, while Georgia and Macedonia are the smallest with less than 5 million people. Three countries, Nigeria, Pakistan, and Ukraine, have more than 10 DISCOs in their countries respectively, while the remaining 7 countries have less than 3 DISCOs. As **Table 2** and **Table 3** illustrate, the total number of DISCOs in a country is related to the size or capacity of the power sector, measured in megawatts (MW). Ukraine and Pakistan have very large power sector capacity, well over 20,000 MW followed by Nigeria and Georgia with a power sector capacity under 10,000 MW.

The full sample includes a variety of different types of ownership: there are six state-owned utilities, two companies partially owned by state companies, and six privately owned companies. Half of the utilities in the sample have more than one million customers, including utilities from Ghana, Kenya, Nigeria (Ibadan Electricity Distribution Company [IBEDC]), Pakistan, Tanzania (TANESCO), and Ukraine. With the exception of Nigeria, utilities in these countries also had the largest numbers of total employees in the sample.

Data describing the power sector globally is limited, so comparing this data to global data must be regarded as a rough estimate or conditional to the data. In developed countries, the share of women employees in the energy industry is estimated at only 20 percent, most working in non-technical fields such as administration and public relations. Worldwide, women make up only 12 percent of engineers (ILO, 2007).⁷ Therefore, it is expected the percentage of women engineers in our sample would be low in comparison to men in engineering positions. Global estimates of women working in the energy sector therefore indicate significant bias in gender outcomes. Men are disproportionally represented in energy labor markets.

In our sample of utilities, women make up 13 percent of the workforce, significantly less than the entire energy industry in developed countries. Using the international benchmark of 20 percent previously mentioned, our sample of 14 utility companies shows gender disparities in employment in 6 companies. Women engineers, a subset of women employed in utilities, working in companies in the last two years made up 12.1 percent in Partner Utilities, very near the 12 percent of women engineers in developed countries (see **Table 4** and **Table 5**). We also found wide disparities in employment practices and

⁷ Globally, women occupy around 19 percent of all ministerial posts, but only 7 percent of these are in environment, natural resources, and energy and a mere 3 percent are in science and technology. See UN Women, "Gender Justice: Key to Achieving the Millennium Development Goals," 2012. Also see ILO, "Global Employment Trends for Women," 2007.

outcomes, ranging between less than 1 percent women employed in DISCOs to greater than 30 percent employed.

TABLE 4. PARTNER UTILITIES: PERCENTAGE OF WOMEN EMPLOYEES

	Macedonia	Georgia	Jordan		Kenya	Nigeria	
As a percent of employees	EVN Macedonia	Energo-Pro	EDCO	IDECO	KPLC	EKEDP	IBEDC
Women Employed %	19.6	10.8	6.3	5.6	19.4	20.2	19.0
Women Managers %	22.7	16.8	8.8	15.5	21.2	30.5	25.0
Women Engineers %	21.1	15.6	13.7	25.7	9.2	3.7	9.1
Total Employment	1,973	5,224	1,297	1,172	10,590	2,154	2,351

TABLE 5. CONTROL GROUP: PERCENTAGE OF WOMEN EMPLOYEES

	Ghana	Pakistan		Ukraine	Kosovo	Tanzania	
As a percent of employees	EC G	MEPCO	LESCO	KievEnerg	KEDS	TANESCO	ZECO
Women Employed %	20.6	0.8	2.2	31.8	5.7	20.3	17.1
Women Managers %	*	*	*	18.1	26.0	13.7	*
Women Engineers %	*	*	*	60.0	12.5	*	*
Total Employment	6,090	17,201	20,234	12,043	5,433	6,141	771

*Missing data or no data received

Technical field operations and field maintenance remain overwhelmingly dominated by men in our sample of utilities: With the exception of KPLC, men make up 96 percent of technical field operations (n = 5,412), representing 40 percent of all employees (total employees: n = 13,608). Women make up only 4.2 percent of workers in technical field operations (see **Table 6**).⁸ When KPLC is included in the sample, men make up almost 80 percent of technical field operation positions, while women make up just 20 percent of the workers. The overwhelming imbalance of men's to women's employment in technical operations can partially explain gender disparities in employment in utilities; however, it does not account for the entire imbalance.

By removing these large operational units that consist almost exclusively of men, and recalculating the proportion of men to women, gender disparities in employment persist in our sample: Women make up just 21 percent of all employees in the corrected sample. Across the entire sample of utilities, only one company EVN Macedonia had an equal number of men and women when controlling for the large numbers of men in technical operations.

⁸There are no benchmarks for the number of women in utilities working in technical field operations. A possible but imperfect proxy is the number of women working in the construction industry globally. This is estimated at approximately nine percent.

TABLE 6. PARTNER UTILITIES: GENDER-DOMINATED DEPARTMENTS

	Macedonia	Georgia	Jordan		Kenya	Nigeria	
As a percent of employees	EVN Macedonia	Energo-Pro	EDCO	IDECO	KPLC	EKEDP	IBEDC
Departments with Most Men	Technical Field Operations	Technical Field Operations	Technical Field Operations	Technical Field Operations	Technical Field Operations	Technical Field Operations	Technical Field Operations
Total Men (as a percent of all employees)	745 (37.7)	1,692 (32.3)	584 (45.0)	468 (39.9)	3,970 (37.4)	994 (46.1)	929 (39.5)
Total Women	12	185	0	0	2190	19	26
	Macedonia	Georgia	Jordan		Kenya	Nigeria	
As a percent of employees	EVN Macedonia	Energo-Pro	EDCO	IDECO	KPLC	EKEDP	IBEDC
Departments with Most Women	Finance	Finance	HR	Engineering	Technical Field Operations	Customer Service	Finance
Total Women (as a percent of employees in department)	89 (71.7)	35 (66.0)	40 (31.0)	13 (23.3)	2190 (36.0)	193 (55.5)	107 (50)

*Missing data or no data received

Across the entire sample of utilities, women are represented in almost all labor categories, including technical field operations, engineering, finance, regulatory compliance, planning, customer service, HR, and IT operations. This is significant since it illustrates that, across countries, women perform skilled work in virtually any labor category at an electric power utility. For example, Eko Electricity Distribution PLC (EKEDP) in Nigeria had the highest percentage of women managers, with over 30 percent women managers and the Electricity Distribution Company (EDCO) in Jordan reported approximately 9 percent women managers and was among the lowest in the sample. Yet women engineers are well represented in Jordan, with the Irbid District Electricity Company (IDECO) reporting over 25 percent women engineers in the company. EKEDP ranked much lower at just over 4 percent. As **Table 6** illustrates, finance departments usually contain the most women in utility companies. Finance departments in five of seven utilities reported having the greatest number of women employed among all departments. Four finance departments reported having 50 percent or more women employees.

C. DESCRIPTIVE SURVEY RESULTS ON EMPLOYMENT PRACTICES

The previous section described the employment data of women in the past two years in a sample of power sector utilities and how they were employed within each utility. The survey also asked about a range of employment practices and policies within utility companies. With respect to wages and benefits, all companies responding to the survey reported providing comparable wages and benefits regardless of gender and advertising positions irrespective of gender.⁹ Yet of nine utilities surveyed, only two companies (Kenya Power and Lighting Company [KPLC] and EVN Macedonia) regularly disaggregated employment by gender or offered programs to improve gender inequalities in hiring outcomes. No

⁹ However, one company provided married men with children an extra stipend each month.

company except KPLC reported having formal policies in place to attract women.¹⁰ EVN Macedonia suggested in interviews that informal policies were used to assist with gender equality within the company and to promote women through training opportunities.

Companies are aware of the difficulties in attracting women into the sector. In discussions with HR departments, the most frequently cited reason was gender disparities in education. Yet geographic factors were also cited as reasons that contributed to gender disparities, such as cultural differences between urban and rural areas as well as regional differences within countries. For example, in Jordan and Nigeria, it was reported that recruiting women for positions in rural DISCO offices presented challenges. In many cases, married women could not move to take staff positions, even if they were fully qualified for the positions. In addition, single women might not consider applying or accepting positions that required them to move to a new location without a relative or husband. This contributes to the difficulty of hiring women in rural areas.

Maternity leave policies were discussed in all seven utility companies and were represented as a concern regarding hiring women. The maternity benefits offered vary from country to country and company to company. All of the companies offered maternity leave that ranged from approximately three to nine months. Some companies offered maternity leave benefits that extended beyond a formal leave period. For example, after returning from maternity leave, women were allowed to arrive one to two hours later and/or depart one to two hours earlier every day for up to a year. In discussions with EVN Macedonia, it was learned that women frequently wanted to come back to work after maternity leave and sometimes come even earlier and combine office with telework. Studies have found, for example, that women in Norway returned to work significantly faster when parental laws were executed (Rønsen & Kitterød, 2015). EVN Macedonia also allows approved telework for women; however, the Ministry of Labor regulates telework through the Labor Law. KPLC introduced a work balance policy that included a flextime awareness campaign to assist women in balancing work and family life.

Paternity leave was also raised in some of our interviews. At several companies, men mentioned they would like to have this benefit. Kenya mandates paid paternity leave as required by law. According to the National Employment Act, paternity leave is applicable to a man whose legal wife delivers a baby. It states: “A male employee shall be entitled to two weeks paternity leave with full pay.” In Georgia, fathers received five days of paternity leave. Currently, only KPLC and Energo-Pro offer paternity leave benefits. In Nigeria, EKEDP has a paternity policy that is waiting board approval before it will come into effect.

Most utilities in our sample exhibited some type of gender disparities in current policies or employment outcomes (the number of utilities exhibiting the characteristic is indicated in parentheses). These include gender disparities in aggregate employment outcomes (14) or when measured by international energy sector benchmarks (6); differences in financial benefits (1); gender disparities in internships and training opportunities or outcomes (5); and jobs for which neither men nor women would submit applications (5).

In interviews with Partner Utilities, management often expressed disappointment at not having more women in their company. There was a desire by management to employ more women, yet when analyzing training and internship opportunities in these companies, there is a gender imbalance in almost all utilities in our sample. Among respondents, seven Partner Utilities reported having internship programs in the last year. In the last two years, the overwhelming majority of internships went to men; only 18.9 percent of women received internships during the same period out of approximately 2,800 internships offered by all companies (see **Table 7**). It is possible that gender imbalances in internship

¹⁰ The Kenyan Constitution (2010) endorses affirmative action policies that targets 30 percent participation by women in all public committees and decision making bodies.

offerings stems from their use as an opportunity to attract graduates of technical high schools as a means to recruit technicians into field operations at utilities. Such programs mainly attract men as applicants since women are under-represented in technical high school and college programs. This possibility was not systemically explored in the study and represents possible future research.

TABLE 7. PARTNER UTILITIES: INTERNSHIPS OFFERED, 2013–2014

	Macedonia	Georgia	Jordan		Kenya	Nigeria	
	EVN Macedonia	Energopro	EDCO	IDECO	KPLC	EKEDP	IBEDC
Women	64	339	14	0	514	12	9
Men	72	1,986	196	30	826	34	5
TOTAL	136	2,325	210	30	1,340	46	14

The situation appears even more evident when it comes to training within companies (see **Table 8**). Over a two-year period (2013–2014), utilities reported training that overwhelmingly benefited men. Of almost 8,000 trained personnel at the utilities surveyed, only 6.7 percent were women. The remaining 7,400 were men. Although women on average made up over 13 percent of the workforce in the seven utilities that responded, only half of them receive training. It appears that training is generally focused on men or on positions mainly staffed by men. It was noted in discussions with utilities that many trainings, such as safety trainings for field operations, are directed mainly at men since they occupy positions where these trainings are required. This possibility was also not systematically explored in the study and represents possible future research.

TABLE 8. PARTNER UTILITIES: TRAINING COMPLETED, 2013–2014

	Macedonia	Georgia	Jordan		Kenya	Nigeria	
	EVN Macedonia	Energopro	EDCO	IDECO	KPLC	EKEDP	IBEDC
Women	*	38	42	72	2406	300	*
Men	*	3,890	274	1,108	6,788	1,006	*
TOTAL	*	3,928	316	1,180	9,194	1,306	*

*Missing data or no data received

This page is intentionally left blank.

IV. PARTNER UTILITY COMPANY PROFILES



A. JORDAN: EDCO AND IDECO

Jordan is an upper middle-income economy located in the Middle East. It has relatively high levels of human development, similar to southeast European countries such as Serbia.¹¹ The population of the country is predominantly Muslim with small Christian and Druze minorities. There are almost 6.5 million people in Jordan. In addition to Jordanians, the United Nations High Commissioner for Refugees (UNHCR) estimates there are over 650,000 Syrian refugees in Jordan in 2015.

WOMEN IN JORDAN

The majority of Jordanian women are educated, their literacy rate being among the highest in the Middle East, estimated at almost 97 percent. Women are high achievers at all levels of education in Jordan, routinely scoring higher than men at universities. Women represent 60 percent of all university graduates. Despite this, women are not well represented in the workforce. Men make up approximately 65 percent of the active participants in the labor market in Jordan compared to just 15 percent for women. In EDCO and IDECO, women make up less than 7 percent of the workforce. The government recognizes this discrepancy in educational achievement and women's employment,¹² which is partially explained by cultural constraints on women's labor market participation. Regional labor market participation by women in the Middle East and North African (MENA) countries is approximately 21 percent (McKinsey, 2014).

JORDAN'S ENERGY SECTOR

In 2002, Jordan passed a new national electricity law that called for an independent regulator and privatization of state run DISCOs. Three DISCOs emerged from privatization: the Jordanian Electric Power Company (JEPCO), EDCO, and IDECO. All three companies are regulated utilities.

¹¹ United Nations Development Programme (UNDP), Human Development Index (HDI).

¹² Jordan's National Employment Strategy 2011–2020.

Approximately 99 percent of Jordan is electrified with JEPKO as the largest of the three utilities in the number of customers serving approximately 64 percent of all customers in the country. EDCO and IDECO serve the remaining customers in Jordan, with EDCO serving customers in the southern and eastern part of the country and IDECO serving customers in the northern part of the country. JEPKO is partially privatized while both EDCO and IDECO are fully privatized, although some holdings are owned by the state social security fund. The Kingdom Electric Company (KEC) owns 100 percent of EDCO and 55 percent of IDECO. They jointly have a seven-member, all-male board.

ELECTRICITY DISTRIBUTION COMPANY

EDCO distributes energy to 55 percent of Jordan, mainly rural districts with 15 percent of all customers in the country. EDCO serves Karak, Tafileh, Maan, and Aqaba governorates; the Jordan Valley; and the entire eastern region to Iraq's borders.

EDCO has 1,285 employees, 82 of which are women. Sixty-three women work in the main office and 19 others work in district offices. A total of 69 women work in HR, finance, IT, and other administrative offices—HR and finance have the highest number of women staff. Unlike several other companies in our survey, very few women work in customer service, including call centers. In interviews, it was pointed out that the main reason for the small percentage of women in customer service was related to required shift work in the evening and weekends in the call centers. It was also pointed out that men often complained to call centers about electric power disruptions in ways that were disrespectful to most women.

There are approximately 220 people working in the main office in Amman; 28 percent are women. There are two district offices without any women employees. In interviews with officials, we found it is not appropriate for women to serve in positions where they were alone with other men or expected to travel in locations without a relative accompanying them. This presented obstacles to hiring women into many different types of jobs within the company, especially employment positions in rural areas.

There are 94 engineers, of which 13 are women, at EDCO. EDCO has very high standards to qualify for engineering positions, and men applicants outnumber women applicants by almost four to one. This has changed recently, with more women increasingly applying for engineering positions. In the past five years, applications from women candidates for engineering have grown from 32 applications in 2010 to 80 applications in 2014. Despite the growth in women applicants, it has only translated into a net gain of 2 women in engineering positions as opposed to 15 positions for male candidates. (For four of the past five years, the number of male applicants for engineering positions was constant). Given this growth in women applicants and the increasing numbers of women engineering graduates, there may be opportunities to hire additional women through greater outreach to engineering schools or changes in the approach of the company to hiring engineers.

It was also reported that the turnover rate for male engineers is high. In interviews, it was reported that men usually stay between two to three years and move on to other more lucrative jobs outside Jordan. When looking at data on resignations from the company, men exit at higher rates than women. Once hired, women in DISCOs in Jordan are twice as likely to remain with the company compared to men (2 percent versus 4 percent attrition). This means, all things being equal, that educational and training investments in women are more likely to return benefits directly to the company.

Men were trained in much higher percentages than women in the past two years at EDCO. Men also account for most of the internship opportunities in the company. The percentage of women attendees in training was 13 percent, compared to 86 percent for men attending training. EDCO has a six-month internship program for university students in electrical engineering and computer engineering. They also have an internship for management accounting. They reported 205 interns in the past 2 years with just 9 women interns in this program.

TABLE 9. EDCO: TOTAL EMPLOYEES BY DEPARTMENT, 2014

	IT	Finance	Regulation	Planning	Customer Service	Engineering	HR	Technical Field Operations
Women	7	12	4	7	4	9	39	0
Men	12	112	13	3	185	71	90	584

IRBID DISTRICT ELECTRICITY COMPANY

IDECO is a generation, transmission, and distribution company in northern Jordan. IDECO provides energy to approximately 25.6 percent of Jordan, primarily to Irbid, Jerash, Mafrq, Ajloun, and parts of Balqa.

Similar to EDCO, IDECO currently employs less than 6 percent women in the company. Prior to 2002, IDECO had only five women working in the company, but at that time, the board and management decided to change the corporate culture and hire women. By 2010, there were 61 women out of a total of 1,051 employees. Since bringing more women into the company, the number of women working in the company has remained very stable, while the total number of men has grown. Since 2010, the total number of women in the company has increased by only 5 to 66, while the number of men in the company increased by 116 to 1,106.

Improvements in gender disparities in senior-level positions are evident in IDECO. Since 2010, the number of women managers has tripled, growing from 4 to 19 women managers. The number of technical engineers has almost doubled, growing to 12 women in 2014. Like EDCO, women represent a very small portion of staff in customer service: Only 9 of 389 customer service employees are women. No women worked in the call center operations. As **Table 10** shows, women are well represented in the IT, finance, engineering, and regulation departments.

TABLE 10. IDECO: TOTAL EMPLOYEES BY DEPARTMENT, 2014

	IT	Finance	Regulation	Planning	Customer Service	Engineering	HR	Technical Field Operations
Women	4	11	6	1	9	10	5	0
Men	19	91	16	8	380	41	13	468

Like many other DISCOs, there are very few women who apply for jobs supporting technical operations in the field. In interviews, staff cited two main reasons: Women would be required to travel alone or with another man, and this is not acceptable to most women or their families in this geographical area. The other reason cited is that in vocational schools, women do not pursue technical training. It was suggested that the number of women graduating from technical school influenced the number of women who apply for technical operations.

Men were trained in much higher percentages than women in the last 2 years at IDECO. Four percent of the attendees in training were women, compared to 96 percent attendance by men in training. The majority of all training offered is technical and there are currently no women in technical positions to receive this training which may account for the gender imbalance in training attendance. Men also accounted for all of the 30 internship opportunities in the company in the past 2 years. The internship focuses on recruiting technicians from the vocational and technical schools. It is a yearlong program and, at the conclusion of the training, the company hires all those who pass the program to become electrical technicians.

B. REPUBLIC OF MACEDONIA: EVN MACEDONIA

Republic of Macedonia is an upper middle-income economy located in southeastern Europe. It has relatively high human development, similar to countries like Ukraine.¹³ The population of the country is 2.1 million people, predominantly Eastern Orthodox with a minority Muslim population consisting mainly of ethnic Albanians.

WOMEN IN MACEDONIA

Prior to 1989, under communist rule, women enjoyed high levels of educational and labor market opportunities. Economic and political transformation in the region changed the structure of the labor market in ways that influenced men and women differently.¹⁴ However, women in Macedonia continue to have a high literacy rate—almost 96 percent.¹⁵ Women continue higher education at universities, at rates higher than men, with 39 percent of women graduating with degrees in engineering, manufacturing, and construction.¹⁶ Gender discrimination is prohibited in Macedonia under the Constitution (Article 32) and the Law of Labor Relations, yet labor market participation by women is only 51 percent compared to 77 percent for men.¹⁷ EVN Macedonia employs 20 percent women.

MACEDONIA'S ENERGY SECTOR

Republic of Macedonia unbundled their energy sector to meet the standards of the European Union's (EU) energy sector for EU accession and the requirements of the Energy Charter Treaty. In 2005, Macedonia created an independent regulator (the Energy Regulatory Commission [ERC]) and started liberalization of the energy sector. Three utility companies emerged from market restructuring: Elektrani na Makedonija (ELEM) as a generation company with a small distribution network, Electricity Transmission System Operator of Macedonia (MEPSO) a transmission company and state-run monopoly Elektrostopanstvo na Makedonija (ESM), the national DISCO. ESM was sold in 2006 to EVN, an Austrian company. EVN Group, a publically listed company, owns 90 percent of EVN Macedonia, and the government of Macedonia retains a 10-percent stake in the company. Macedonia has nearly 100-percent electrification.

Similar to other public utilities that are privatized, the workforce of EVN Macedonia has decreased in size since it was first purchased. Looking at the last five years, EVN Macedonia's workforce has shrunk by almost 19 percent, yet attrition among men and women has been at similar rates. This has left the percentage of men and women in EVN Macedonia roughly the same over the past five years.

EVN MACEDONIA

EVN Macedonia provides energy to 812,000 customers under regulated prices. EVN Macedonia employs over 1,000 employees. Women are well represented among top- and mid-level managers in the company at almost 22 percent. Women dominate three of EVN Macedonia's departments (finance, planning, and customer service), where they make up 75 percent, 78 percent, and 85 percent of employees, respectively (see **Table 11**). In interviews, women reported being treated equally and believe that any job in the company is open to them. As a result, women are represented in every operational department, including technical operations.

¹³ UNDP, HDI.

¹⁴ While analysts agree that labor markets throughout Central and Eastern Europe have changed radically since 1990, they have produced different evaluations of how these changes affected women's occupational changes and work opportunities. This is partly due to inadequate data. See Jacobs, 2006, "The Story Behind the Numbers: Women and Employment in Central and Eastern Europe," United Nations Development Fund for Women.

¹⁵ World Bank, Gender Statistics.

¹⁶ World Bank, Gender Statistics.

¹⁷ The World Economic Forum, "Global Gender Gap Report 2014," p. 64.

TABLE 11. EVN MACEDONIA: TOTAL EMPLOYEES BY DEPARTMENT, 2014

	IT	Finance	Regulation	Planning	Customer Service	Engineering	HR	Technical Field Operations
Women	7	88	24	11	34	47	15	15
Men	12	29	26	3	6	172	9	415

Although there are no formal programs to attract or promote women, EVN Macedonia's leadership informally monitors gender outcomes. For example, a summer program to develop future managers within the company permits diversity considerations in the selection process. Any employee may apply to this program and, if selected, employees receive five days of intensive training in Austria. As a follow up program for the participants in the summer program, EVN Macedonia has a mentoring program designed to evaluate and prepare managers for new assignments. In the past two years women made up almost 30% of those in the summer program.

EVN Macedonia has a strong internship program that attracts an almost equal number of women and men. Approximately 44 percent of the interns are women. This one-month paid internship is held during the summer for university students. EVN Macedonia has also created cooperation with several technical High Schools from all over the country wherein students from the final two years of study attend tailor-made internships during the school year or summer holiday. There is also cooperation with several Engineering Faculties both for summer internships and scholarship programs.

C. NIGERIA: EKEDP AND IBEDC

Nigeria is a lower middle-income economy located in West Africa on the Gulf of Guinea.¹⁸ There are 173 million people in Nigeria, including both Christians and Muslims.

WOMEN IN NIGERIA

While Nigeria has mandated a National Gender Policy, there are still significant gender gaps. The National Gender Policy encourages women's empowerment, yet women's representation in the National Assembly has averaged fewer than 7 percent and, as recently as 2014, their representation in the Federal Cabinet was less than the 35 percent required by the National Gender Policy. Although there have been notable shifts away from patriarchal norms, a recent UN report suggests Nigeria has "...a long way to go."¹⁹

Women make up almost half of the labor force in Nigeria (48 percent). While more than half of Nigerians are literate (57 percent), there are large regional variations and variations between genders. The literacy rate for men is 69 percent, and literacy rate among women is estimated to be 49 percent.²⁰ The literacy rate in Nigeria is low compared to the other countries in our sample.²¹ In the north, especially in rural areas, there is a tendency toward less formal education for women due to religious convictions. Like Jordan, differences in rural norms often influence the ability of women to move or take new positions in new places. Only 9 percent of all women are enrolled in tertiary or post-secondary education and, of those, only a very small number of women enroll in engineering at universities in Nigeria.²²

¹⁸ UNDP, HDI.

¹⁹ The United Nations System in Nigeria, "United Nations Briefing Kit" Nigeria, 2013.

²⁰ The World Factbook, CIA 2015.

²¹ World Bank, Gender Statistics.

²² World Bank, Gender Statistics.

NIGERIA'S ENERGY SECTOR

Nigeria has faced serious challenges in its electricity sector with about 55-percent electrification countrywide. It has one of the lowest rates of electricity generation per capita in Africa. Electricity generation does not meet current demand and there is frequent load shedding and blackouts. People regularly rely on small diesel generators. To improve this situation, Nigeria passed the Electric Power Sector Reform Act in 2005 that established a national regulatory commission and reformed the sector. In 2012, the government evaluated bid proposals and, in 2013, they successfully privatized 11 DISCOs. Both EKEDP and IBEDC emerged as private DISCOs in November 2013. EKEDP covers southern Lagos state, and IBEDC covers Oyo, Ogun, Osun, states in the Southwest region of Nigeria and Kwara in the Northcentral region of Nigeria.

In response to competitive pressures, IBEDC and EKEDP have each decreased the size of their workforce in the last two years. IBEDC has decreased the number of employees by over 15 percent, and EKEDP has decreased their workforce by almost 13 percent. Yet gender dimension can be observed in these changes. The decrease in the proportion of working women has been especially pronounced at IBEDC; women represent almost 54 percent of the decrease in the workforce, but less than 20 percent of all employees. At EKEDP, women fared better, with women representing just 28 percent of the overall decrease in the workforce.

EKO ELECTRICITY DISTRIBUTION PLC

EKEDP has a total of 2,154 employees, with approximately 20 percent women employees, representing less than half the national average of women in the workforce. Despite this, employees at EKEDP enjoy high job satisfaction with women represented at all levels of management. (A recent internal survey of employees showed that 78 percent of respondents reported EKEDP as a good place to work.)

The top management committee of the company is composed of 11 members and includes 3 women. The numbers for the top- and mid-level managers exhibit considerable parity with 108 women and 246 men in managerial positions. This is in stark contrast to only 8 women engineers and 183 men engineers.

As **Table 12** shows, women are represented in nearly every department of the company. In the southern part of Nigeria, there are no restrictions on what women can do or where they can go. The highest numbers of women are in customer service, followed by finance and HR. Like all other utilities, the largest department at EKEDP is the technical field operations and, even here, women are represented—often going out in the field to assist with cutting people off from power who steal or do not pay.

TABLE 12. EKEDP: TOTAL EMPLOYEES BY DEPARTMENT, 2014

	IT	Finance	Regulation	Planning	Customer Service	Engineering	HR	Technical Field Operations
Women	2	130	N/A	2	193	4	59	26
Men	19	122	N/A	2	387	56	176	953

Training programs at EKEDP do not appear to target women. This may be due to the proximity of training locations, opportunity, or training offered that might not apply to women's work at EKEDP. The number of women trained in 2014 was 5 compared to the 385 men trained. Additionally, the participation of women in EKEDP's internship program has declined from 2013 to 2014. Eleven women participated in 2013, and only one woman participated in the unpaid internship program in 2014. The internship program is designed to help students acquire practical experience that will assist them in their university studies. The duration of the internship ranges from three to six months.

IBADAN ELECTRICITY DISTRIBUTION COMPANY

IBEDC is the largest distribution network in Nigeria with over 1.2 million customers. Prior to privatization, the state-run DISCO had almost 6,000 employees; however, recent restructuring in the company has led to a considerably smaller workforce. In 2013, IBEDC reported 2,689 employees; this number decreased by almost 13 percent in 2014. IBEDC currently has slightly more employees than EKEDP with 2,351 employees. Similar to EKEDP, IBEDC has a total of 19 percent women employees, with larger percentages of women in managerial positions (25 percent) compared to EKEDP. As **Table 13** shows, that like EKEDP, although there are very few women who are engineers in the company, women are represented in all operations in the company.

TABLE 13. IBEDC: TOTAL EMPLOYEES BY DEPARTMENT, 2014

	IT	Finance	Regulation	Planning	Customer Service	Engineering	HR	Technical Field Operations
Female	3	45	2	1	255	7	8	26
Male	8	54	3	1	461	116	6	929

In interviews with the company, it was acknowledged that recruitment of women has been a challenge, especially for rural positions. This is important since the company covers a much broader geographic area than EKEDP. As was noted earlier, it is difficult for women to work in company business hubs because some of these hubs are in rural, remote areas. This would require women to move and uproot their families, so job location can present a barrier to hiring more women in certain locations.

IBEDC has a small paid internship program. In 2014, there were eight women interns and four men interns.

D. GEORGIA: ENERGO-PRO

Georgia is a lower middle-income economy located in the Caucasus region of Eurasia. It has relatively high development, similar to Turkey's.²³ Its population is predominantly Eastern Orthodox alongside Muslims, Armenians, and Catholics. There are 4 million people in Georgia.

WOMEN IN GEORGIA

Women in Georgia, similar to Russia and other former states of the Soviet Union, enjoy a 100-percent literacy rate.²⁴ Thirty-one percent of women continue to tertiary education and almost 42 percent of these women graduate with a STEM degree.²⁵ Similar to other post-communist states, women in Georgia are respected participants in the workforce who may expect to both work and have a family. Georgian law prohibits gender discrimination in the workplace.

An estimated 60 percent of women participate in the labor market in Georgia.²⁶ In spite of high labor force participation rates, women are not well represented in the labor market in the energy sector. Women make up less than 11 percent of the workforce at Energo-Pro.

²³ UNDP, HDI.

²⁴ World Bank, Gender Statistics.

²⁵ World Bank, Gender Statistics.

²⁶ The Global Gender Gap Report 2014.

GEORGIA'S ENERGY SECTOR

After the collapse of the Soviet Union, Georgia's electricity sector faced serious challenges with daily blackouts, power theft, and disintegrating infrastructure. Over the last decade, however, the power sector in Georgia has been transformed with the unbundling of generation, transmission, and distribution. Since 2004, the Ministry of Energy and Petroleum (MOE) has overseen deregulation of the electricity sector, resulting in dramatic sector performance. Improvements over the last few years include regular supply of electricity to nearly 100 percent electrification of the country and commercialization of much of the sector.

ENERGO-PRO

In 2006, the government organized tenders to sell state-owned hydropower generation and distribution assets. Energo-Pro, a Czechoslovakian utility company, purchased several energy assets in Georgia in 2007. Energo-Pro is now the largest DISCO in Georgia, responsible for 62.5 percent of the electricity distribution market and serves 850,000 customers. Unlike several other companies in our sample, Energo-Pro Georgia also owns 15 small- and medium-sized hydroelectric stations across the country. This may partially account for higher employment totals compared to other DISCOs without generation.

Energo-Pro has 5,200 employees; 567 of these employees are women. Since 2010, the number of women working in the company has decreased by almost 80 women, roughly a full percentage point, whereas the total number of men at the company has increased slightly during the same 5-year period (2010–2014). During this period, applications from women have grown, suggesting that information on job openings are indeed reaching women.²⁷ Even though the number of women has declined in the company, Energo-Pro has been able to more than double the number of women managers from 6 to 13 in the last 5 years. The number of male managers grew by 18, from 46 to 64 during the same 5-year period.

The leadership of the company in Georgia has four board members, including one general director and three deputy directors. One deputy director is a woman. The head of the service center and the head of grid development are women. Women work in all parts of the company, including meter reading, except in East Georgia where there is a much higher percentage of Islamic Georgians.

In discussions with management, one challenge facing the company is its rapidly aging workforce that needs to be replaced by qualified younger workers. However, because of a very tight job market and low retirement pensions, many people who could retire continue working.

Energo-Pro training and internship programs exhibit gender biases. Internships are used to attract new employees who can be tested after an internship to qualify for employment. Tests are provided in billing, metering, and other technical areas. Internships normally last between one and six months. Women represented only 15 percent of all internships placements. In interviews, staff indicated that approximately 175 interns were hired in 2015, with women representing approximately 20 percent of this total.

TABLE 14. ENERGO-PRO: TOTAL EMPLOYEES BY DEPARTMENT, 2015

	IT	Finance	Regulation	Billing	Customer Service	Technical	HR	Commercial
Women	4	35	1	2	8	185	13	357
Men	14	18	4	9	3	1,692	2	2,527

²⁷ The company has noted that about 70 percent of Energo-Pro's jobs are categorized as physically difficult so that women typically will not apply for these jobs. They note that most of these jobs demand physical work that may be dangerous, working under non-standard weather conditions or hours. These jobs include cable repair brigade electrician, security service, and high-voltage electricity transmission lines operations.

	Internal Audit	Admin	Security Division	Legal	Dispatch Control Service	Development	Corporate and Int'l Power Trade
Women	2	26	0	8	12	22	4
Men	34	166	14	3	79	57	9

Energo-Pro reported that less than 2 percent of all attendees at company training are women. This may be the result of technical training associated with technical field staff, where men are overly represented, but it illustrates nonetheless that training is not used by the company to improve the capacities of women. Women are better represented in the mentorship program within the company, where 22 percent of mentees in the last two years have been women.

E. KENYA: KENYA POWER AND LIGHTING COMPANY

Kenya is a lower middle-income economy in East Africa. The population of the country is predominantly Christian alongside a small minority population of Muslims, indigenous traditional beliefs, and Hindus. The population of Kenya is estimated at 44.3 million.

WOMEN IN KENYA

There are different views of a women's role in Kenyan society that partially depends on tribal differences. Some tribes expect women to raise a family and take on traditional duties. Other tribes are concerned that educated women may reject tribal norms. Nevertheless, the majority of Kenyan women are educated, with a literacy rate of 84 percent among women.²⁸ Approximately 83 percent of women are pre-primary school educators.²⁹ Some 47 percent of women participate in the labor force.³⁰

KENYA'S ENERGY SECTOR

Kenya's energy sector is overseen by the MOE and ERC. Kenya is a part of the Eastern Africa Power Pool (EAPP) and it is anticipating connection to the South African grid. It is estimated that about 50 percent of the population has access to electricity.

KENYA POWER AND LIGHTING COMPANY

KPLC is a limited liability, state-owned utility serving the entire country. It has more than 3.6 million customers. KPLC employs over 8,000 men and over 2,000 women, or almost 20 percent women. Women are represented in almost all areas of operations within the company. While KPLC enjoys a higher percentage of women employees than other utility companies in our sample, they have plateaued in recruiting women over the last four years.

Customer call centers were staffed almost exclusively by women prior to the organization, so recruiting more men into the customer service role is a goal for KPLC. Similar to other utility companies in Africa in our sample, KPLC has relatively low percentages of women engineers.

KPLC started gender mainstreaming activities in 2008. A Gender Committee was established with four men and four women. A baseline survey to evaluate the Gender responsiveness of the organization was conducted. The results of the baseline survey provided the roadmap to various interventions required to ensure that KPLC is gender mainstreamed. Therefore, in 2011, the board approved a series of measures

²⁸ World Bank, Gender Statistics.

²⁹ United Nations Educational, Scientific and Cultural Organization (UNESCO) Institute for Statistics data, 2013.

³⁰ The Global Gender Gap Report 2014.

on gender: the Gender Mainstreaming Policy, Sexual Harassment and Discrimination Policy, Equal Opportunity Policies, Gender Mainstreaming Strategic Plan 2010–2015, and the Monitoring and Evaluation Framework.

In implementing the gender policy, KPLC has recognized the need to focus its efforts to attract more women and achieve greater gender balance. The baseline assessment revealed that affirmative action was practiced in recruitment. It was also revealed that women had limited involvement in policy decisions and that they did not move jobs within the company due to family responsibilities. They also noted that all communications sent out by the company had a male face and that data gathered by KPLC was not gender disaggregated. The Gender Committee documented that for every woman executive, there were six men.

KPLC has a training school that offers courses on electrical, electronic, installation, line construction, and other technician knowledge. Over the years, KPLC has noticed an increase in women participating in the training school. However, this has not yet translated into increased numbers of women working in the company. KPLC has, by the use of a consultant, sensitized about 1,200 employees on the Gender Mainstreaming, Equal Opportunity and Sexual Harassment policies. This has necessitated a desire to develop an online Gender Mainstreaming course to ensure that a larger number of staff get sensitized within a short time frame so as to attain the desired gender outcomes.

TABLE 15. KPLC: TOTAL EMPLOYEES BY DEPARTMENT, 2014

	IT	Finance	Regulation	Planning	Customer Service	Engineering	HR	Technical Field Operations
Women	126	227	23	8	470	210	236	2190
Men	220	389	102	34	1,368	3,874	97	3,970

V. POLICY APPROACH AND INTERVENTIONS

The information provided in this report is a baseline reference for the design of a USAID program, called the *Engendering Utilities Program*. It seeks to better understand how electricity utilities can increase the professional participation by women in the energy sector and facilitate the creation of company-specific interventions to improve women's career prospects while improving the quality and cost of electricity services. To address gender inequalities in employment outcomes in utilities and assist USAID's commitment to greater gender equality in energy, the *Engendering Utilities Program* proposes an intervention-based approach to evaluate the effectiveness of multiple initiatives to improve gender outcomes in utilities. This section discusses the main components of this approach and the methods used to evaluate the merits of different interventions. We end with a discussion of the proposed interventions designed to improve gender equity in recruitment, development opportunities, and promotion through HR policies within select utilities.

A. METHODOLOGY AND EVALUATION

The approach outlined in this section contains five separate components and a method for evaluating outcomes. The five components include: (1) Develop information and baseline data on gender, employment, and human resource practices within a sample of Partner Utilities. This was described in the earlier sections of this report. (2) Working directly with the Partner Utilities and using information and baseline data gathered on these utilities, the *Engendering Utilities Program* identified potential interventions; these interventions were identified and designed to improve organizational practices and employment outcomes for women in utilities. Working with each utility, the program consulted on agreements with Partner Utilities that will be used to codify the types of interventions most appropriate to the utility. (3) Collaborate with our partners to implement interventions tailored to each utility and in consultation with them over a two-year period. (4) Collaborate with United States Energy Association (USEA) Networking Partnerships to focus on the HR department and call centers in client companies that choose initiatives in those areas. (5) Monitor and evaluate the effectiveness of individual interventions on improvements in mitigating gender disparities in recruitment, training, employment, and HR policies. The *Engendering Utilities Program* activity is expected to be implemented from April 2015 through October 2017.

The evaluation design for this activity, the utilities, and the potential interventions are outlined in **Table 16**. The technical evaluation of the program approached utilities from three different regions—Africa, Eastern Europe, and the Middle East. When selecting utilities, we considered: (1) only utilities from one of the three regions, (2) the type of ownership, (3) the degree of management capacity, and (4) the cost recovery rates in the utility or company.

Utilities have been divided into two groups to measure the efficacy of the interventions: one group, the Partner Utilities, will implement a series of interventions over a two-year period while the second group will not be asked to implement interventions and will serve as a Control Group. After the implementation of interventions and at the end of the two-year period, utilities from each region will be asked to complete a survey to determine changes in the value of the baseline indicators. Survey data from utilities in each region will then be compared to initial baseline data gathered in 2015. This will allow us to estimate the value of interventions for improving gender outcomes.

TABLE 16. EVALUATION OF TREATMENT (PARTNER UTILITIES) AND CONTROL GROUPS

	Partner Utilities	Control Group
Before	Africa EKEDP and IBECO, Nigeria KPLC Kenya	Africa ECG Ghana TANESCO and ZECO, Tanzania
	Eastern Europe EVN Macedonia Energo-Pro Georgia	Eastern Europe KievEnergo, Ukraine KEDS Kosovo
	Middle East EDCO and IDECO, Jordan	Middle East United Arab Emirates
		South Asia MEPCO and LESCO, Pakistan
Baseline Factors	▪ Percent of women employed ▪ HR gender policies ▪ Financial state of utility ▪ Percent of women in senior management ▪ Outreach and recruitment practices of utility ▪ Attitudes of men toward women in society ▪ Training of workforce in utility	▪ Percent of women employed ▪ HR gender policies ▪ Financial state of utility ▪ Percent of women in senior management ▪ Outreach and recruitment practices of utility ▪ Attitudes of men toward women in society ▪ Training of workforce in utility
Interventions	▪ Educational needs ▪ Mentoring program ▪ New HR proposals ▪ Succession planning ▪ Gender seals ▪ “Bring Your Daughter to Work” day ▪ Outreach programs (internships) ▪ Gender mainstreaming ▪ Review call center staff training	No Intervention

B. DISCUSSION OF INTERVENTIONS

When developing interventions for any company, it is important to be compliant with relevant national policies and laws. This still allows for innovative approaches to equity and collaboration with other utilities, USAID, USEA, and others when developing company-specific gender strategies. This collaboration might be among the first steps in introducing gender equity concerns into the workplace. Identifying a gender intervention strategy will help map out how a company intends to proceed with improving gender outcomes. These gender strategies will provide a clear path to both attract and retain women employees, while treating men equally. Best practices in HR create policies that focus on respect and equitable treatment for all employees.

GENDER CERTIFICATIONS

When discussing interventions in utilities, an option is to certify gender equity in the company through a gender certification program. Two example programs are the United Nations Gender Equity Seal (UN GES) and the Economic Dividends for Gender Equity (EDGE) Certification. These “seals” recognize companies for their gender practices and promote gender



equity in employment. EDGE is a certification that uses a methodology for “business rather than a theoretical approach that incorporates benchmarking, metrics, and accountability into the process.” EDGE has worked with more than 100 companies in 31 countries and 21 industries, including energy and energy equipment supply companies. The UN GES provides criteria for policies, training, and other management components to provide a roadmap to implement gender equity policies after conducting a gender audit. By branding the company with a gender seal, this identifies the company as “woman-friendly” (i.e., that it meets international practices for gender). A certification would give the company marketing opportunities, as well as assisting with future gender equitable employee recruitment.

Should the company decide to pursue a certification, the HR policy areas identified in this section are starting points for assessing and implementing policies aligned with certification.

Utility companies are encouraged to assess their gender strategy each year, particularly if pursuing a certification. Companies can undertake gender audits, using both qualitative and quantitative data on gender. After completing a gender audit, HR along with company executives can then use the data to develop action plans for the following year.

COMPANY CULTURE AND PERSPECTIVES ON GENDER

A company culture informs and guides how employees will institute gender-mainstreaming strategies. An important component of a successful communications strategy is executive involvement. The role of the Executive Team during change is to communicate the desired change and to support with resources and visibility the internal champions who carry forward the desired change. Men and women senior managers who champion change can speak to employees and share their commitment to gender initiatives. Women are often empowered when they see another woman succeeding. Men are encouraged and reassured when they see other men support gender equity initiatives. Additionally, women are more likely to apply to companies where other women are visible in the workforce.

As part of the company’s gender strategy, having executives charter the creation of a Gender Committee is often useful. While the term “Gender Committee” is used for continuity of language in this report, locally the committee may be titled “Diversity” or “Inclusion” or other locally acceptable language so as not to disenfranchise men who are champions of change. A Gender Committee is usually comprised of men and women. The committee generally sets its agenda to discover ways to meet the agreed upon company gender equity initiatives. The committee may also consider either including HR professionals on the committee or partnering with HR to carry out agreed upon initiatives.

Potential interventions identified by the Partner Utilities are closely aligned with the work of HR. HR guides the employee lifecycle within companies and is increasingly tasked with future workforce development in addition to its traditional duties: recruitment, hiring, new hire orientation, job descriptions, training and development, performance management, succession planning, compensation and benefits, and retirement planning.

Interventions, such as changing outreach for internship programs, recruiting women engineers directly from universities, or mentoring young women in the workplace, may not require HR policy change but rather a change in the application of current policies and procedures. HR or Gender Committees are natural partners in these endeavors.

USEA ENERGY UTILITY PARTNERSHIP PROGRAM

USEA manages the USAID-funded Energy Utility Partnership Program (EUPP). The program sets up partnerships between United States utility companies and developing country utilities to transfer best practices of policy and technology in the energy sector. The partnership often focuses on increasing modern energy services, expanding consumer access to reliable electricity, and instituting efficient management and operation of the company. For the *Engendering Utilities Program*, USEA is working with

the Partner Utilities to create an *Engendering Utilities* network comprised of staff from the Partner Utilities. The USEA *Engendering Utilities* partnership will focus on HR and call center issues that will help advance gender outcomes and improve utility performance. This partnership is a two-year activity, and the group will meet twice each year.

HUMAN RESOURCES POLICIES

HR can support and reinforce gender equity through policies implementing gender-based equity during the employee lifecycle for women employees. HR can also review existing policies to determine compliance levels as well as determine if the existing policies can be implemented more inclusively.

The HR department is well positioned to implement the company's commitment to equal opportunity in all areas, especially outreach, hiring, access to training, and promotion. Additionally, the HR department may review job descriptions, initially for those positions selected for increased inclusion of women, such as call centers, engineering positions, or field positions, so the description does not deter women from qualifying and applying.

FUTURE WORKFORCE DEVELOPMENT, RECRUITMENT, AND HIRING

The company can become involved in future workforce development, such as encouraging STEM education for young girls with a "Bring Your Daughter to Work" day. This will introduce girls to the energy sector at an early age. A well-designed program can introduce the daughters to their father's or mother's job as well as to the work of other men and women in the utility. During the second year, this activity will be expanded to "Bring Your Child to Work" day and include boys.

The company, in conjunction with its HR department, may choose innovative recruitment strategies. When recruiting women engineers, utility companies often recruit engineers directly from the university. However, women engineers, especially in electrical engineering, are few in number at many universities. One strategy may be to encourage more women to apply for internships at the company across all engineering and non-engineering fields. Those internships may be open to both university and secondary students.

CAREER DEVELOPMENT AND MENTORING

Companies, perhaps through their HR departments, may choose to innovatively assist with career development; recognizing, for example, the importance of allocating funding to attend training and workshops equally to women and men. Career development is beneficial to both the company, through increased skill and knowledge, and to the individual. Many companies choose to implement a mentoring program for women, using both men and women as mentors. There are a variety of best practices for a mentoring program, perhaps including short learning programs, one-to-one mentoring, community and business speakers, etc.

PERFORMANCE EVALUATIONS

Most companies have a performance evaluation process. The process is generally used to provide feedback, set goals, identify development opportunities, determine salary increases, and identify potential for promotion. A Gender Committee may choose to obtain data, if available, from this process to determine the level of gender equity within the development, salary, and promotion processes. If the current process does not capture some or all of this data, the Committee may choose to work with the HR department to begin capturing the data. The data can then inform next steps for ensuring equity.

A Gender Committee, in considering success measures, could design or use an existing Employee Engagement Survey with specific items assessing the success of strategies and programs in creating a gender-equal workforce. The survey can include items regarding promotion rates and equity performance in departments included in initial gender equity strategies. The Committee can then review the data to determine success and next steps.

Equitable access to training and promotion empowers companies to create inclusive succession plans. Succession planning is critical to the future success of the organization, and broadening access benefits the company as it reaches out to all talented workers.

As each company works to implement the agreed upon interventions, they have agreed to track the staff time spent. The time spent is a record of their commitment and an economic contribution by each Partner Utility. This is a unique feature of the Memorandum of Understanding and demonstrates mutual investment in attaining the interventions.

VI. CONCLUSIONS

This report is not intended to suggest that attaining gender parity in employment within the power sector can be achieved in the short term. There are numerous barriers in societies and deep-seated social attitudes that require change before gender equality can be fully realized in the energy sector. However, this research and the *Engendering Utilities Program* are designed to begin to address gender disparities in energy DISCOs and improve gender inequalities in employment outcomes. We understand this program to be an important first step by USAID and its partners to advance gender equality with the sector in general and utilities in particular.

The research outlined in this report is intended to provide qualitative and quantitative perspectives on gender inequalities in employment outcomes. The findings reveal significant inequalities in employment outcomes in our sample. Based on employment practices in 14 utilities that either completed the survey or for which data from other sources was available, we find women make up only 13 percent of the workforce in these utilities. This gender inequality in employment outcomes can be partially explained by the over-representation of men employed in technical operations. However, when this imbalance in men's employment in technical operations is omitted and we recalculate the proportion of men to women in employment, gender disparities persisted: Women make up just 21 percent of all employees in the corrected sample. Across the entire sample of utilities, only one company—EVN Macedonia—had an equal number of men and women when controlling for the large numbers of men in technical operations.

The study also revealed that women work in diverse jobs at all management levels, alongside men who are their counterparts within utility companies. Jobs traditionally staffed by men in one utility may be held by women at another utility, and jobs traditionally staffed by women may be held by men elsewhere. These findings not only illustrate gender diversity of employment within utility companies, but it also suggests that interventions designed to improve gender diversity must be carefully tailored to the circumstances of individual companies. Our preliminary findings suggest there is no “one size fits all” solution: HR and/or gender specialists need to gather specific data on employment and information on energy sector and HR practices to formulate successful interventions to improve gender outcomes. This is the approach followed in the *Engendering Utilities Program*.

In discussions with the Partner Utilities, we found a strong desire by management and company officials to hire more women and improve gender outcomes within their companies. Yet our survey data and our review of organizational processes often indicated that management's stated desire was not linked to a corporate or organization strategy designed to increase the number of women employees in their company. For example, only two utilities in our sample disaggregated employment data by gender, and only one utility had a formal committee devoted to addressing gender inequalities.

Our survey also found that training or internship opportunities for women were not used to correct unequal employment outcomes. Across all companies reporting internship opportunities in the last 2 years, only 18.9 percent of women received internships and only 6.7 percent of training opportunities went to women. Most electric utilities are not using internships or training as potential mechanisms to improve gender disparities or as a means to attract more women to their company.

Although we have not yet provided specific empirical data related to DISCOs, the development hypotheses in this report suggest that improving gender outcomes in utilities will help improve the fiscal performance of companies and allow women to contribute to the energy sector in more meaningful ways.

This not only will improve the autonomy of women in developing economies, but it also may advance the well-being of women and society.

BIBLIOGRAPHY

- Botswana Power Corporation. (2011, November). *Gender Mainstreaming in the Botswana Power Corporation*. Botswana, Africa.
- Clancy, J., Winther, T., Matinga, M., and Oparaocha, S. (2012, January). “Gender Equity in Access to and Benefits from Modern Energy and Improved Energy Technologies.” *World Development Report Background Paper*. ETC/ENERGIA in Association Nord/Sør-konsulentene.
- Dinkelman, T. (2011). “The Effects of Rural Electrification on Employment: New Evidence from South Africa.” *The American Economic Review*, 101(7), 3078-3108.
- Dithale, N., and Wright, M. (2003). “The Importance of Gender in Energy Decision Making: The Case of Rural Botswana.” *Journal of Energy in Southern Africa*, 14(2), 63-70.
- Eagly, A. (2013). “Gender and Work: Challenging Conventional Wisdom.” *Harvard Business School*.
- ECO Consult. Energy Sector Capacity Building (ESCB) Program. USAID, n.d. <http://ecoconsult.jo/project/energy-sector-capacity-building-escb-program>.
- Economic Dividends for Gender Equality (EDGE). “The Global Business Certification Standard for Gender Equality.” n.d. <http://www.edge-cert.org/>.
- Electricity Company of Ghana (ECG) Limited. n.d. <http://www.ecgonline.info/>.
- Farhar, B. C., Osnes, B., and Lowry, E. A. (2014). “Energy and Gender” in *Energy Poverty: Global Challenges and Local Solutions*, Oxford University Press.
- Gonzalez-Eiras, M., and Rossi, M. A. (2007). “The Impact of Electricity Sector Privatization on Public Health.” Washington, DC. Inter-American Development Bank.
- Greenberg, Josh. “Diversity in the Workplace: Benefits, Challenges and Solutions.” *The Multicultural Advantage*, n.d. <http://www.multiculturaladvantage.com/recruit/diversity/diversity-in-the-workplace-benefits-challenges-solutions.asp>.
- Insights, F. (2012). “Diversity & Inclusion: Unlocking Global Potential—Global Diversity Rankings by Country, Sector and Occupation.” *Forbes*, New York, NY.
- International Labour Organization (ILO). (2007). “Global Employment Trends for Women, Brief.” http://www.ilo.org/empelm/pubs/WCMS_114287/lang—en/index.htm.
- International Labour Organization (ILO). “Jordan’s National Employment Strategy 2011-2020.” n.d. http://www.ilo.org/wcmsp5/groups/public/—arabstates/—ro-beirut/documents/meetingdocument/wcms_313611.pdf.
- International Labour Organization (ILO). (2013). “Providing Clean Energy and Energy Access Through Cooperatives.”
- Integrated Research and Action for Development (IRADe) and International Network on Gender and Sustainable Energy (ENERGIA). (2009, February). “Gender Analysis of Renewable Energy in India: Present Status, Issues, Approaches and New Initiatives.”
- Irbid District Electricity Company (IDECO). n.d. <http://www.kec.jo/node/27>.

- International Renewable Energy Agency [IRENA]. (2012, June). “Renewable Energy Jobs and Access.” International Renewable Energy Agency, Abu Dhabi.
- Jacobs, G. (2006). “The Story Behind the Numbers: Women and Employment in Central and Eastern Europe and the Western Commonwealth of Independent States.” UNIFEM, Bratislava.
- Jaradat, Jenine. (2014). “The Potential Role of Women within Energy Service Providers in Jordan.” USAID.
- Köhlin, G., Sills, E. O., Pattanayak, S. K., and Wilfong, C. (2011). “Energy, Gender and Development: What Are the Linkages? Where Is the Evidence?” Social Development Working Papers. Social Dimensions of Climate Change. Washington, DC. World Bank.
- McKinsey & Company. (2007). *Women Matter: A Corporate Performance Driver*.
- McKinsey & Company. (2013). *Women Matter. Gender Diversity in Top Management: Moving Corporate Culture, Moving Boundaries*.
- McKinsey & Company. (2014). *Women Matter. GCC Women in Leadership from the First to the Norm: Unlocking Women’s Potential to Enhance Organizational Effectiveness in the Gulf Cooperation Council (GCC) States*.
- McKinsey Global Institute. (2015, September). *The Power of Parity: How Advancing Women’s Equality Can Add \$12 Trillion to Global Growth*. McKinsey Global Institute, San Francisco, CA.
- Merrill, L. (2014, May). “Power, Gender and Fossil-Fuel Subsidy Reform in India.” *Global Subsidies Initiative (GSI) Report*. International Institute for Sustainable Development (IISD), Canada.
- Moss, C., Lewis, C., and Hwang, J. “UN Women Gender Equity Seal Certification System and Implementation Strategy.” *SAI*, 2012.
http://www.sai-intl.org/data/n_0001/resources/live/GenderEquitySeal.pdf.
- National Intelligence Council. (2008). “Global Trends 2025: A Transformed World.” Washington DC: U.S. Printing Office.
- OECD. (2008). “Gender and Sustainable Development, Maximizing the Economic, Social and Environmental Role of Women.”
- Peace FM Online. (2014). “Ghana Electrometer Supports Power Queens Club of ECG.” *Peace FM Online*.
<http://news.peacefmonline.com/pages/news/201405/199864.php>.
- Rønsen, M., and Kitterød, R. H. (2015). “Gender-Equalizing Family Policies and Mothers’ Entry into Paid Work: Recent Evidence from Norway.” *Feminist Economics*, 21(1), 59-89.
- Runyon, Jennifer. (2014). “Utility Profits Linked to Gender Diversity.” *RenewableEnergyWorld*.
<http://www.renewableenergyworld.com/rea/news/article/2014/06/utility-profits-linked-to-gender-diversity>.
- Sagar, A. D. (2005). “Alleviating Energy Poverty for the World’s Poor.” *Energy Policy*, 33(11), 1367-1372.
- Sovacool, B. K. (2012). “The Political Economy of Energy Poverty: A Review of Key Challenges.” *Energy for Sustainable Development*, 16(3), 272-282.
- Sustainable Water and Sanitation in Africa (SUWASA) Kenya. (2014). “Gender Mainstreaming.” USAID.
<http://usaid-suwasa.org/index.php/component/phocadownload/category/1-e-newsletters?download=18:mainstreaming-gender-in-water-supply-and-sanitation-services>.

- Terrapon-Pfaff, J., Dienst, C., & Ortiz, W. (2015). "The Role of Gender Concerns in the Planning of Small Scale Energy Projects in Developing Countries." *Decentralized Solutions for Developing Economies* (pp. 285-294). Springer International Publishing.
- UNDP. Human Development Index (HDI). 2014. <http://hdr.undp.org/en/content/human-development-index-hdi>.
- UNESCO. Institute for Statistics Data. 2013. <http://www.uis.unesco.org/Pages/default.aspx>.
- UNIFEM. "Gender Justice: Key to Achieving the Millennium Development Goals." *United Nations Entity for Gender Equality and the Empowerment of Women (UN Women)*, 2010. <http://www.unwomen.org/en/digital-library/publications/2010/1/gender-justice-key-to-achieving-the-millennium-development-goals>.
- UN Women. (2012). *Gender Justice: Key to Achieving the Millennium Development Goals*. Retrieved from <http://www.unwomen.org/en/digital-library/publications/2012/4/gender-justice-key-to-achieving-the-millennium-development-goals>
- UN Women. (2014). *The World Survey on the Role of Women in Development 2014: Gender Equality and Sustainable Development*. Retrieved from <http://www.unwomen.org/en/digital-library/publications/2014/10/world-survey-2014>.
- United States Agency for International Development, Power Distribution Program. (2012, June). *Impact Assessment Report: Energy Conservation Campaign for Power Distribution Companies of Pakistan*.
- United States Agency for International Development, Power Distribution Program. (2013, May). *Gender Strategy Gender Equity Training Report for Power Distribution Companies of Pakistan*.
- United States Department of Energy. *Coordinating the Council on Women and Girls*. n.d. <http://energy.gov/diversity/services/coordinating-council-women-and-girls>.
- United States Department of Energy. *Diversity and Inclusion*. n.d. <http://www.energy.gov/diversity/services/diversity-and-inclusion>.
- World Bank. (2013). "Integrating Gender Considerations into Energy Operations." Knowledge Series, 014/13. Washington, DC.
- World Bank. (2014). Gender Equality Data and Statistics. <http://datatopics.worldbank.org/gender/>.
- World Economic Forum. *The Global Gender Gap Report 2014*. <http://reports.weforum.org/global-gender-gap-report-2014/>.
- Wyatt, Clay. "The Top 5 Benefits of Gender Diversity in the Workplace." *TTI Diversity*, n.d. .

This page is intentionally left blank.

U.S. Agency for International Development

1300 Pennsylvania Avenue, NW

Washington, DC 20523

Tel: (202) 712-0000

www.usaid.gov

