Energizing Equality:

sub-Saharan Africa's integration of gender equality principles in national energy policies and frameworks

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Key findings

- A 2017 International Union for Conservation (IUCN) Global Gender Office (GGO) analysis of 192 energy frameworks found that sub-Saharan Africa (SSA) is the world's regional leader in acknowledging gender considerations in national energy frameworks.
- From a sample of 45 national energy frameworks from 29 different SSA countries, nearly three-quarters (71%) of the frameworks include gender considerations to some extent.
- Of those that include gender keywords, context analysis reveals that around half (56% and 44%, respectively) consider women as potential stakeholders and beneficiaries.
- Seldom characterizing women as agents of change in national frameworks, countries have the opportunity to engage both women and men alike as powerful drivers toward a more equitable, impactful and productive energy sector.
- Twelve frameworks (27%) identify women's ministries (or equivalents) and organizations as implementing partners, tasked with specific activities or actions.
- Thirty-one frameworks (69%) acknowledge the negative health impacts of using traditional stoves, propose remedial actions to reduce the use of these stoves, and/or emphasize the need to ensure access to modern cooking technologies.
- Energy frameworks reflect diverse opportunities to advance a gender-responsive approach, including by addressing time poverty, energy poverty in both rural and urban areas, women's health and well-being and women's economic and educational opportunities in the sector.

Acronyms

AGENT	Advancing Gender in the Environment
BIPV	Building Integrated Photovoltaics
CEDAW	Convention on the Elimination of All Forms of Discrimination Against Women
ECOWAS	Economic Community of West African States
ECREEE	ECOWAS Centre for Renewable Energy and Energy Efficiency
EGI	Environment and Gender Information
IAP	Indoor Air Pollution
IBEDC	Ibadan Electricity Distribution Company
IRENA	International Renewable Energy Agency
IUCN	International Union for Conservation of Nature
IUCN GGO	IUCN Global Gender Office
RETs	Renewable Energy Technologies
REEEP	Renewable Energy and Energy Efficiency Partnership
SSA	sub-Saharan Africa
STEM	Science, Technology, Engineering and Math
UN	United Nations
USAID	United States Agency for International Development
WHO	World Health Organization
WiAP	Women in African Power network

Introduction

Two out of three people living in sub-Saharan Africa (SSA) lack access to electricity and reliable energy sources.[i] Ensuring universal access to sustainable forms of energy is a key global development goal and is essential to improving the lives and livelihoods of women and men on the continent. Women's and men's roles as energy providers and users, as well as their participation in the energy labor market and in decision-making processes, are determined by gender roles —the sociocultural expectations, behaviors, responsibilities and activities that a society constructs.

Countries articulate how they aim to develop their energy resources and meet their population's needs in national energy frameworks. In this report, the term *national energy frameworks* refers to the collection of policies, strategies and plans that govern the country's energy sector development. Though traditionally considered purely technical in nature, energy frameworks are not gender neutral. As a result, policies set forth in these frameworks have the potential to have strong differential impacts on women and men.

Research increasingly demonstrates the benefits of integrating gender considerations into the energy value chain and throughout the power sector. When the barriers that prevent women from having equal access to energy and economic opportunities are removed, major productivity gains are unlocked, thereby strengthening development and economic outcomes.[ii] Likewise, when the barriers to women's participation in the sector are removed, the sector benefits from women's contributions to the workforce, as they transform the energy sector in their roles as energy entrepreneurs, innovators and decision makers.

A 2017 International Union for Conservation of Nature (IUCN) Global Gender Office (GGO) analysis of 192 energy frameworks found that SSA was the world's regional leader in acknowledging gender considerations in national energy frameworks.[iii] To continue to understand the extent to which gender considerations are being integrated in national energy frameworks across SSA, IUCN GGO, in coordination with Power Africa, conducted an assessment of 45 energy frameworks from 29 different SSA countries. This assessment was developed under the Advancing Gender in the Environment (AGENT) initiative, a ten-year program launched by the United States Agency for International Development (USAID) and implemented by IUCN.

POWER AFRICA

A US Government-led partnership coordinated by USAID, Power Africa brings together technical and legal experts, the private sector and governments from around the world to work in partnership to double access to electricity in sub-Saharan Africa. Power Africa has the goal of adding more than 30,000 megawatts of electricity generation capacity and 60 million new connections across in sub-Saharan Africa. Promoting gender equality and female empowerment is a critical component of Power Africa, as it seeks to support projects, programs and policies that strive to reduce gender inequalities and promote the effective engagement of both men and women across the energy sector.

ADVANCING GENDER IN THE ENVIRONMENT (AGENT)

AGENT is a ten-year program launched in 2014 by the United States Agency for International Development (USAID) and implemented by the International Union for Conservation of Nature (IUCN). The purpose of this partnership is to increase the effectiveness of USAID's environmental programing through robust gender integration and improve gender equality and women's empowerment outcomes in a broad range of environmental sectors. Recognizing women as agents of change, and the value of diverse knowledge, experiences and capacities of women and men alike, AGENT envisions a world that approaches environmental work at all levels with gender-responsive policy and action. AGENT drives transformation toward a more sustainable and equitable future for all.

Gender and national energy frameworks in sub-Saharan Africa

Energy provision and access play a vital role in supporting all human activities, such as cooking and heating, sustaining production and commercial processes, delivering health services and transport. Despite the cross-sectoral socioeconomic dimensions of energy interventions, energy frameworks are often developed and thus perceived as highly technical and siloed, with few social considerations or outcomes associated. When national energy frameworks ignore gender considerations, however, they may unintentionally discriminate against women and their differentiated needs, as well as women's unique experiences, expertise and capacities to contribute to the sector.

The 2017 report **Energizing Equality** found that from a sample of 192 national energy frameworks, nearly one-third of the documents included references to women and/or gender. The SSA region well exceeded the global average, with 73% of policies including keyword references — outperforming all other regions. This report builds off of **Energizing Equality**, further examining gender in SSA national energy frameworks.

Energy frameworks can be gender-responsive by identifying and implementing interventions that address gender gaps and overcome historical gender biases in policies. Additionally, gender-responsive energy policies:[iv]

- Are developed using sex-disaggregated data;
- Include commitments to mainstream gender —including in activity design and budgetary support for implementation;
- Are developed in a participatory manner;
- Recognize women's role in energy provision and use; and
- Apply an integrated and holistic approach, recognizing that energy has multi-disciplinary aspects (i.e. political, environmental, economic, social).

Objectives

This assessment has been conducted to identify and understand the degree to which gender considerations have been addressed in national-level sub-Saharan African (SSA) energy policies, plans and strategies —herein commonly referred to as *frameworks*. Findings offer insights into the ways in which African governments are recognizing gender considerations in the context of their energy policymaking and planning.

Methods

SAMPLING

To understand the manner in which SSA countries are developing gender-responsive energy sector frameworks, this assessment was conducted using 45 documents from 29 different SSA countries.[1] All documents included in this assessment are the approved current policies, plans or strategies by national governments.[2] These national frameworks present energy priorities and ambitions of countries, or are specific to a national objective (e.g. renewable energy generation, rural electrification) or sector (e.g. gas, biomass). This assessment utilized IUCN's Environment and Gender Information (EGI) methodology to determine if and how countries include recognition of and interlinkages with their commitments toward gender equality and women's empowerment in their national energy frameworks.

DATA COLLECTION AND ANALYSIS

This study determined whether and how often SSA energy frameworks discussed gender equality considerations by counting mentions of gender-related keywords in each framework.

First, IUCN's EGI gender keyword dictionary was used to determine a set of 73 unique English, Portuguese and French terms grouped into 11 broad categories: *gender; sex; female; woman; women; girl; mother; maternal; maternity; equity; equality*. The gender keyword dictionary included multiple forms of keywords in these categories to ensure counting of every mention; for example, the terms *gender, genders, gendered* and *gender-based* were included in the search, among others, to capture all instances of discussion on gender.

MAXQDA, a qualitative data analysis software, was used to identify keyword mentions in all SSA energy frameworks. Each keyword mention was then reviewed, and mentions not relevant to this study's discussion on gender equality in national energy frameworks were excluded.[3] Final keyword counts were tabulated to determine the overall frequency of keyword mentions and identify trends. Secondly, the keywords were analyzed for context to identify the ways in which gender has been characterized in each framework.

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1 This report is an addendum to the 2017 IUCN publication *Energizing Equality*, which analyzed 192 national frameworks from around the world. In the *Energizing Equality* report, the SSA region included 44 energy frameworks. This report includes an additional framework, the *Document de Politique Energetique Nationale* of the Central African Republic.

2 National energy frameworks were retrieved from national energy and environment ministries or from the Renewable Energy and Energy Efficiency Partnership (REEEP) *reegle* platform. This report does not attempt to be conclusive of all sub-Saharan African national energy sector frameworks, as not all energy frameworks are publicly accessible. These frameworks were retrieved in November 2017.

3 For example, mentions of "genre," which is the French word for "gender," were not included when they referred to a "type" or "sort."

LIMITATIONS

For the purposes of this assessment, the readily available and current energy policies, plans and/or strategies were included from as many SSA countries as possible. The content, structure and scope of these frameworks differ, as will be the case with any broad set of national sectoral frameworks. This study has made every effort, including by employing the EGI methodology, to set common criteria for assessment. This report does not attempt to be conclusive of all SSA national energy sector frameworks, as not all frameworks are publicly available.

Energy frameworks do not necessarily reflect ground-level implementation accurately. Some frameworks may have included planned activities that were not or are not being implemented, while others may have omitted descriptions of relevant actions; thus, the frameworks alone do not provide a complete understanding of gender equality considerations in SSA energy sector.

Finally, as this study includes examination of how and when women's participation in the framework development process itself is mentioned, the mere presence of women in decision-making spaces cannot be assumed to ensure gender equality in decision making. Considering these limitations, understanding the extent and content of reporting on women's participation still provides insight into the level of women's engagement in SSA national energy frameworks.

THE ENVIRONMENT AND GENDER INFORMATION (EGI) PLATFORM

IUCN's Environment and Gender Information (EGI) platform aims—through data and analysis—to convey the value of gender-responsive environmental conservation and sustainable development. By providing evidence-based information and knowledge products, the EGI platform guides action toward a more just world. Since its inception in 2013, the EGI has evolved into a source for new knowledge creation and dissemination—and for revealing progress and challenges in meeting commitments to women's empowerment and gender equality in environmental spheres.

Findings

FREQUENCY OF WOMEN AND GENDER KEYWORDS

Including gender-related keywords in national energy frameworks indicates a level of awareness of gender considerations relevant to the energy sector. Of the 45 energy frameworks analyzed, 32 (71%) include *women* and/or *gender* keywords [Figure 1a]. A total of 729 gender keywords are included across these 45 documents. *Figure 1b* provides a distribution of these gender keywords.

Figure 1a: Presence of gender keyword mentions in SSA national energy frameworks

29%

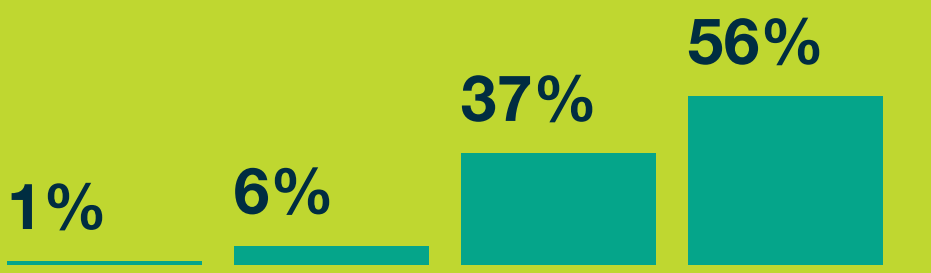
Frameworks not including keywords
(13 frameworks)

71%

Frameworks including keywords
(32 frameworks)

Nearly three-fourths (71%) of national energy frameworks included in this assessment mention at least one *women* and/or *gender*-related keyword.

Figure 1b: Distribution of 729 *women* and/or *gender* keyword mentions in SSA national energy frameworks



1%
maternal, maternity, mother (5 mentions)

6%
equality, equity (47 mentions)

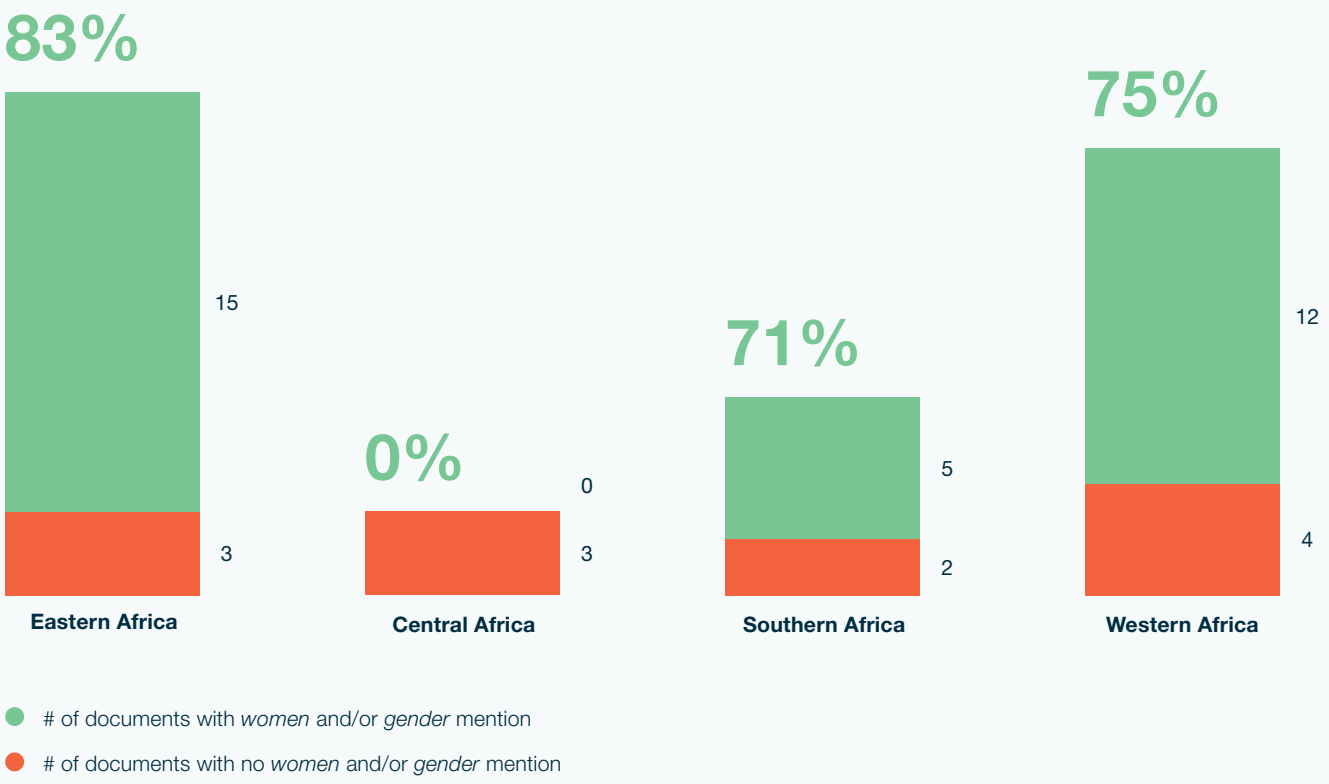
37%
gender, sex (266 mentions)

56%
women, woman, female, girl (411 mentions)

SUB-SAHARAN AFRICAN REGIONAL ANALYSIS

Comparisons of national energy frameworks across regions[4], as shown in *Figure 2*, reveal that with the exception of the Central Africa region, all regions of sub-Saharan Africa generally perform the same, at the average for the continent, in regards to acknowledging gender considerations in energy frameworks.

Figure 2: Regional comparison of national-level energy documents



CHARACTERIZATION OF WOMEN

Using the EGI's context-specific analysis framework, this study analyzed how the frameworks characterize women. Each gender-related keyword used was categorized into one of more themes according to the criteria listed in *Table 1*.

4 In this research, the regions of sub-Saharan Africa are categorized following the United Nations Statistics Division.

TABLE 1: FOUR EGI THEMES FOR CATEGORIZING KEYWORDS: HOW WOMEN ARE CHARACTERIZED

	AS:	WHEN:
How are women portrayed?	**Vulnerable**	Document discusses women's vulnerability, e.g. to gender-based discrimination or violence.
	Beneficiaries	Document includes policies, programs or measures acknowledging women as recipients of environmental, economic, social or other benefits, including educational and capacity-building opportunities.
	Stakeholders	Document identifies women as decision makers, managers, or as a group targeted for participation in decision making and management.
	Agents of Change	Document describes women as driving energy-sector activities or having a voice in policy change.

Women as vulnerable

Efforts to address the gendered dimensions of energy production, distribution and use often begin with recognizing how inequalities of access to and control and power over resources and services in the energy sector make women more vulnerable. For example, female-headed households are more likely to be poorer, so therefore disproportionately impacted by increases in energy prices.[v] In joining the energy sector labor force, women can be vulnerable to discrimination and/or harassment in their workplaces.[vi]

Five frameworks (11%) identify women as vulnerable or as comprising a vulnerable population that requires specific consideration in developing national frameworks to meet energy goals. For example, delivering "safer and affordable forms of energy among vulnerable groups, especially women," is listed as a specific policy measure in Zambia's *National Energy Policy* (2008).

Women as beneficiaries

By specifically targeting women as beneficiaries, energy activities have the potential to contribute to gender equality and women's empowerment, as well as other sustainable development goals. As energy is a cross-sectoral issue, women, along with their families and wider communities, can benefit from diverse opportunities such as through increased economic opportunities, improved health and safety, stronger social outcomes and better environmental results.[vii]

Twenty-five energy frameworks (56%) identify women as beneficiaries, either of specific interventions or more broadly of key objectives. The *National Gas Policy* of Tanzania (2013) states that adopting natural gas usage for cooking relieves women's drudgery and burden of collecting firewood. Additionally, the *Policy* posits that adopting natural gas usage improves women's health, as exposure to smoke from biomass fuel sources can lead to respiratory illness.

Women as stakeholders

As energy producers, consumers and users, women's lives and livelihoods are affected by decisions in energy sector management at all levels. Data reveals that women's participation in high-level decision making in the African energy sector remains low: women represent less than a quarter of senior management positions in African energy and materials companies.[viii] Additionally, while women are often the gatherers or purchasers of energy resources for household use, they are often excluded from energy consumption decisions, such as choosing the energy source or provider. When women are excluded from energy governance, decision-making processes are more likely to result in energy projects and policies that ignore the unique needs, knowledge and contributions of women.

>> 18 frameworks (40%) specifically recognize women as the main providers of energy at the household and community levels. <<

Twenty energy frameworks (44%) identify women as important stakeholders in energy sector governance and decision making at the local or national level. At the local level, Sierra Leone's *National Energy Strategic Plan* (2009) proposes involving and empowering village women's groups when establishing strategies to distribute renewable energy technologies (RETs). At the national level, Zimbabwe's *National Energy Policy* (2014) states that the government will promote the "acceleration of the representation of women at all levels and in all spheres of energy development and management activities."

Women as agents of change

Women are transforming the energy sector in Africa in their roles as energy entrepreneurs, innovators and decision makers.[ix] Findings from utilities and the private sector suggest that integrating women into all levels of the energy value chain will unlock greater productivity, returns on investment, energy efficiency and customer satisfaction.[x] However, women's knowledge and capacities[5] often go unrecognized because of social, political and economic structures hindering their access to reliable, clean and affordable energy resources and their participation within the sector.

Of the 45 SSA frameworks, two categorize women as agents of change, recognizing their potential to drive policy change and unlock more effective energy activities. Nigeria's *National Energy Masterplan* (2014) has an "Action Plan for Gender Issues", that includes an activity to organize meetings between women, grassroots-level development partners and other stakeholders to make energy policy recommendations to governments. The Republic of Mauritius' *Long-Term Energy Strategy* (2009) recognizes that women's roles as energy consumers and producers for households and businesses can, "to a greater extent achieve energy savings and energy efficiency objectives."

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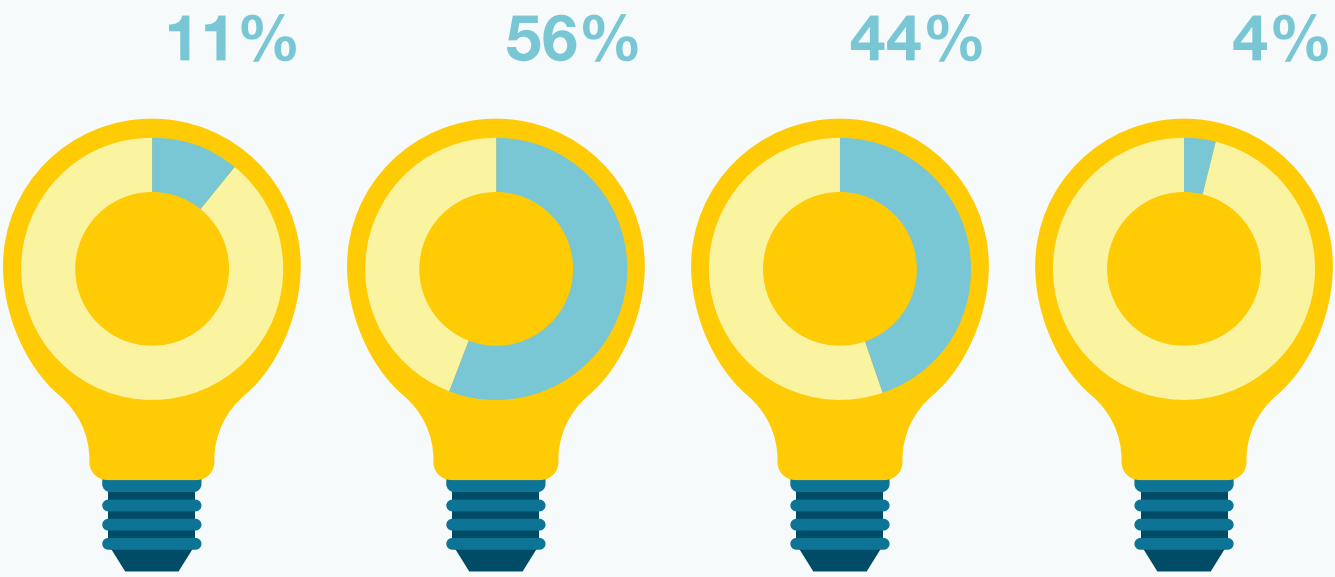
5 Agency is an individual's or group's ability to make effective choices and to transform those choices into desired outcomes. The World Bank. (2014). Voice and Agency: Empowering Women and Girls for Shared Prosperity. At: http://www.worldbank.org/en/topic/gender/publication/voice-and-agency-empowering-women-and-girls-for-shared-prosperity

Figure 3: Characterization of women in national energy frameworks (45 total documents)



5 policy frameworks identify women as **vulnerable**

25 policy frameworks identify women as **beneficiaries**

20 policy frameworks identify women as **stakeholders**

2 policy frameworks identify women as **agents of change**

RECOGNIZING GIRLS IN NATIONAL ENERGY FRAMEWORKS

Seven SSA frameworks (18%) characterize girls as vulnerable, as beneficiaries or as stakeholders in national energy frameworks. Uganda's *National Energy Policy* (2002) proposes deploying energy technologies to "ease the household burdens on the girl-child." Rwanda's *Energy Policy* (2015) lists, "encouraging girls to study science or mathematics and courses related to building knowledge of energy technologies and basic engineering" as a specific measure to mainstream gender. The *National Energy Policy of Malawi* (2003) references the country's "National Gender Policy," which calls for the participation of girls in "sustainable and equitable development for poverty reduction."

CROSS-CUTTING GENDER ISSUES REFLECTED IN NATIONAL ENERGY FRAMEWORKS

This section provides insight into the ways in which gender considerations are integrated into SSA energy frameworks. These include considerations of time poverty, energy access in rural areas, energy access in urban areas, education, technology and innovation, entrepreneurship and energy-sector careers. Additionally, this section discusses gender considerations in the context of women's health and well-being, by further exploring references to biomass fuel sources as a detriment to health, cooking interventions, physical security and access to improved healthcare services.

Energy, gender and time poverty

Throughout SSA, women and girls hold the primary responsibility of collecting biomass fuel sources—such as animal dung, wood or charcoal—to meet their household energy needs. A World Health Organization (WHO) review of women's time spent on fuel collection across 14 SSA countries revealed a range of 0.33 to 4 hours daily.[xi] In another example, in Tanzania, the round-trip distance to collect fuel varies between 1 and 10.5 kilometers.[xii] This time consuming responsibility contributes to *time poverty*, defined as the amount of time lost conducting menial tasks or unpaid care work that could be spent on education, income generating activities or leisure. Additionally, deforestation and environmental degradation can increase the distances that women and girls must travel to collect fuel, further exacerbating time poverty.[xiii]

Eleven energy frameworks (24%) mention time expenditure as a gender dimension of energy. In Rwanda's *Energy Policy* (2015), the government is promoting the use of biogas instead of biomass, stating that adopting the source will, "free up the time spent by women and children in collecting firewood, giving them more time to study and undertake more productive commercial activities."

The gender-energy nexus in rural areas

There are great disparities in energy access between rural and urban areas in SSA, with electrification rates of approximately 14% in rural areas and 68% in urban areas, as of 2015.[xiv] *Article 14* of the UN Convention on the Elimination of All Forms Discrimination of Against Women (CEDAW)[6] lays out measures to eliminate discrimination against women in rural areas by ensuring that rural women participate in, and benefit from, rural development programs and activities. As an example of this connection, evidence from South Africa suggests that rural electrification can significantly raise female employment and enable micro-enterprises.[xv]

Twelve (27%) SSA energy frameworks include references to *women* and/or *gender* in the specific context of rural energy access and electrification. Zambia's *National Energy Policy* (2008) commits to mainstreaming gender in all rural energy provision programs and emphasizes the unrecognized but vital role women hold as energy providers in rural contexts. Namibia's *Policy Goals* (1998) notes that the country's rural population has a high proportion of female-headed

6 CEDAW was adopted by the UN General Assembly in 1979. CEDAW defines discrimination against women and establishes an international agenda for national action to end discrimination.

households—due to the migration of men to cities to find employment—and states that it is, "crucial that energy policies reflect a clear understanding of the energy needs of different rural women, the problems and constraints they face and the impact that energy policies and interventions may have on them."

The gender-energy nexus in urban areas

Sub-Saharan Africa is the world's fastest urbanizing region, with its urban population expected to grow by 16% by 2050.[xvi] While there is much research and action focusing on the gender-energy nexus in rural settings, the gender-energy nexus in urban settings is often overlooked. For example, in South Africa, nearly a third of women live in urban informal settlements where dwellings are not able to access subsidies such as the Free Basic Electricity subsidy, and often rely on landlords who resell electricity at exorbitant and unaffordable prices.[xvii, xviii]

Only one framework, Namibia's *Energy Policy Goals* (1998), acknowledges gender-related energy challenges in urban settings. The document identifies the need for more research into energy use in urban spaces, and adds that all empirical information resulting from this research should, "address, or be sensitive to, gender relations at the household level."

Energy, gender and education

In SSA, approximately 90% of children attend primary school buildings that lack electricity.[xix] Globally, countries with lower electricity access often correlate with lower girl-to-boy ratios in primary and secondary schools whereas electrification has shown to increase levels of girls' day-to-day attendance, improve girl-to-boy ratios and result in improved academic performance.[xx]

Five SSA energy frameworks (11%) discuss how electricity and energy sources can provide access to education. The *National Energy Policy* of Liberia (2009) writes that household tasks, including collecting fuelwood limits women and children's ability to pursue education. Mauritius' *Long-Term Energy Strategy* (2009) states that women's empowerment relies on their mobility, work attendance and "access to evening study" through electrification.

Women in energy technology and innovation

As consumers of electricity and energy sector products, and as the population most affected by energy poverty, women can play an important role in finding innovative solutions to their unique challenges. As for the global technology sector as a whole, research from other sectors suggests that gender diversity in the workplace can enhance innovation and creativity.[xxi] For example, building-integrated photovoltaics (BIPV) solar cells that can easily be used into walls, windows and roofs of homes and a coal-and-charcoal water filter to provider safer drinking water supplies to households are just two of many products designed and used by African women innovators.[xxii] Additionally, as science, technology, engineering and math (STEM) education often serves as a foundation to energy careers, it is important to encourage women and girls to excel in these fields.[xxiii]

Ten SSA energy frameworks (22%) either acknowledge disparity in access to energy technology between women and men, or identify

diverse opportunities for women in energy technology and innovation—not including clean cookstove technologies. For example, Malawi's *National Energy Policy* (2003) proposes a national objective to involve women in decision making in energy technology design, development and dissemination. In addition, Rwanda's *Energy Policy* (2015) encourages girls to study science and mathematics courses specifically related to building their knowledge of energy technologies and basic engineering.

Botswana's *National Energy Policy* (2009) found that more male-headed households are able to take loans for solar photovoltaic equipment than female-headed households. As a result, the Botswana Power Corporation developed a series of strategies to increase its outreach to female-headed households, including improving its planning by including gender-related and sex-disaggregated information on connection rates and the obstacles these households face in getting connected.

Women as energy entrepreneurs

Across sub-Saharan Africa, women are at the forefront of entrepreneurship and innovative energy solutions in the production, distribution and servicing of energy technologies.[7] Evidence reveals that women entrepreneurs are in a better position to interact and engage with consumers. A recent study in Kenya found that women who participated in a USAID-supported training program sold nearly three times as many cookstoves as their male counterparts.[xxiv]

Seven SSA energy frameworks (16%)—including 3 from Nigeria—regard women as effective or potential energy entrepreneurs. Liberia's *National Energy Policy* (2009) recognizes the potential women have as strong influences in marketing campaign roles, or as teachers for energy technology use. Rwanda's *Energy Policy* (2015) proposes developing credit enhancement and micro-finance programs specifically targeting women for driving investments in clean energy technologies. At the national level, South Africa's *Energy Policy* (1998) includes a program to provide support and access to women-led businesses providing services or contracting with the Department of Energy and Minerals.

Women's participation in energy sector careers

Statistics on women's participation in the African energy sector are limited, however it is understood that the sector is male-dominated.[xxv] According to a McKinsey and Company report, women represent 22% of middle management and 22% of senior management positions in the "energy and materials" sector on the African continent.[xxvi] In a specific example, women represent less than 20% of the total employees at Nigeria's largest electricity distribution company, Ibadan Electricity Distribution Company (IBEDC).[xxvii] In the global renewable energy sector, a survey found that women

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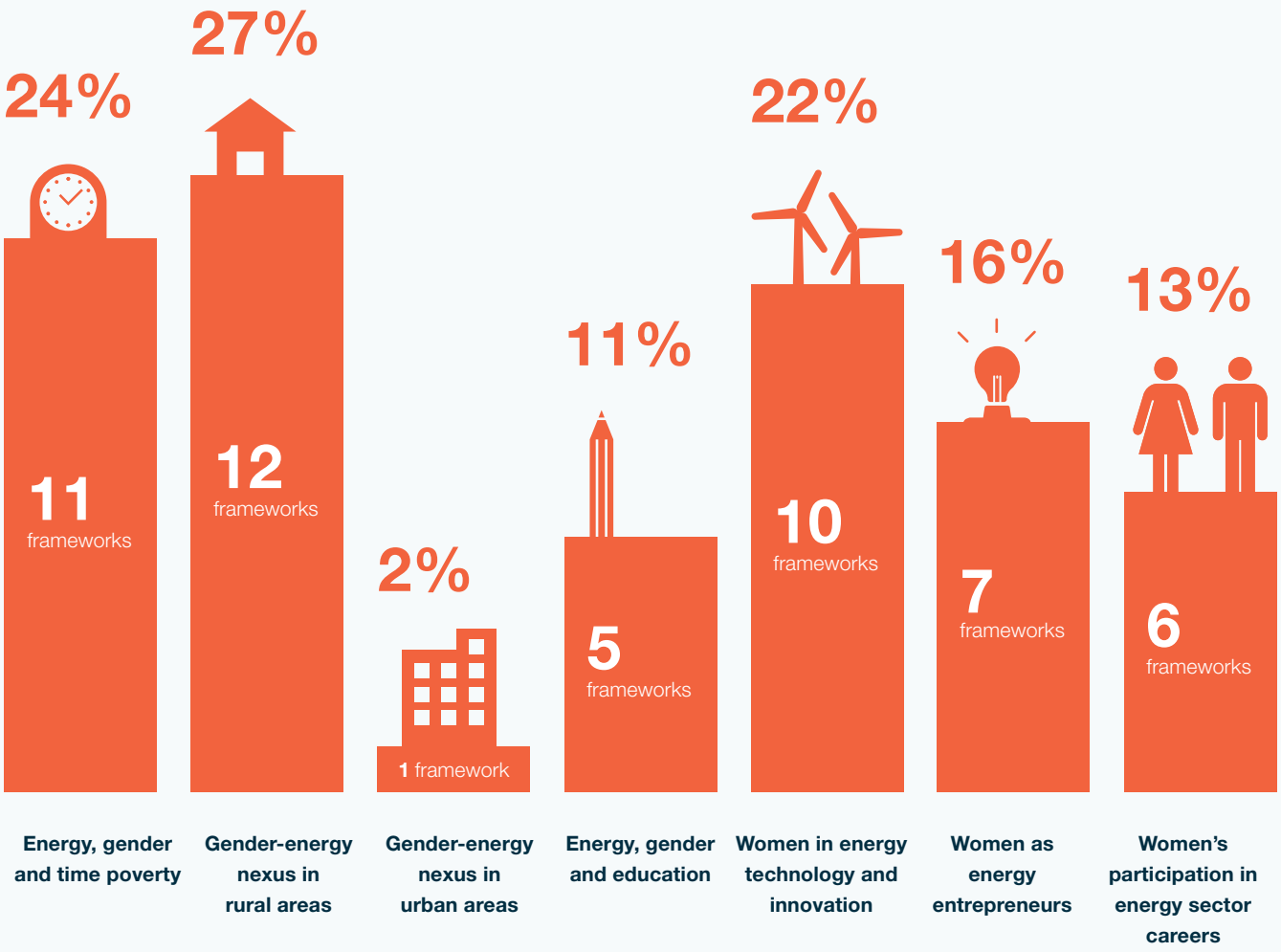
7 For example, Sylvia Paulot works with rural women to distribute solar lamps within their communities in her native Madagascar. The goal is to eventually install mini-grids in these communities, while providing women with additional economic opportunities and technical skills. At: http://climatereality.co.za/meet-sylvia-paulot-the-malagasy-climate-leader-who-brings-renewable-energy-to-local-communities/ On a similar manner, Solar Sister works in Uganda, Tanzania and Nigeria, tailoring marketing strategies, capacity building and business development to invest in women as entrepreneurs. At: https://www.solarsister.org

represent approximately 35% of the workforce of surveyed companies, compared to 20-25% of positions within the energy sector as a whole.[xxviii]

Six SSA energy frameworks (13%) either identify women's underrepresentation in the energy industry or propose actions to close this gap. In developing rural energy services, Botswana's *National Energy Policy* (2009) reports that the percentage of female professionals in "energy-related organizations" is less than 5%. South Africa's *Energy Policy* (1998) states that the Department of Minerals and Energy will develop an employment equity plan to assist with attracting appropriately skilled people and correcting gender imbalances of the past. Swaziland's *National Energy Policy* (2003) claims that national efforts exist to promote women in energy related disciplines, including by encouraging the study of science while in school.

Figure 4: Cross-cutting gender issues reflected in SSA national energy frameworks

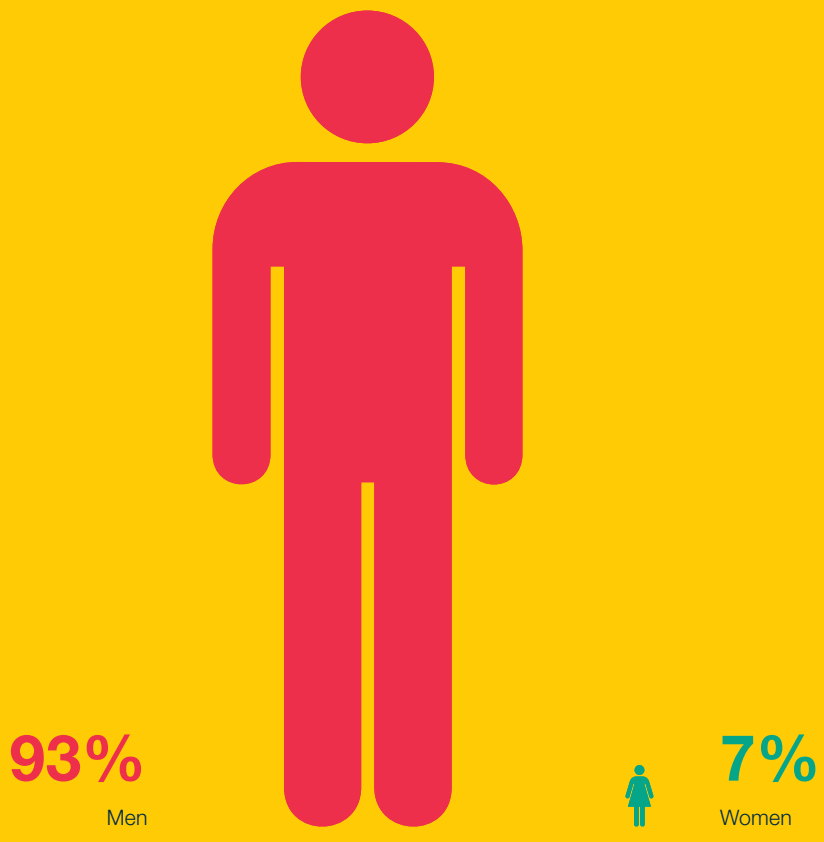


WOMEN MINISTERS OF ENERGY IN SUB-SAHARAN AFRICA

Women's participation in the energy sector, and particularly in positions of power, is limited both worldwide and in SSA. In order to have a better understanding of women's participation in the region, and as part of the research conducted for this report, the name, title, and sex of 56 heads of energy ministries in 48 SSA countries were collected from self-reported government websites in December 2018. For this assessment, all national ministries with an energy focus were included in the analysis, such as those for petroleum, electricity, hydrocarbons and mines.

This analysis found that women make up only 4 (7%) of the 56 positions of lead energy-sector ministers in SSA (Figure 5).[8] UN Women reports that as of 2014, globally, women held 17% of all national ministry leadership positions —across all sectors.[xxix] At 7%, women's leadership in energy-sector ministries is below the average for all ministries worldwide.

Figure 5: Heads of national energy-sector ministries, by gender, 2017



8 At the time of producing this report, women energy-sector ministries represent the countries of: Mozambique, Niger, Rwanda, Swaziland and Uganda.

Energy and women's health and well-being

Nearly half of the world's households' meals are cooked over open fires or on rudimentary cookstoves, using inefficient and polluting biomass fuel sources.[xxx] As a result, millions suffer from cancer, lung disease and other respiratory diseases caused by chronic exposure to indoor air pollution and poor ventilation. In many parts of SSA, more than 90% of the population relies on biomass and the WHO estimates that indoor air pollution (IAP) contributed to nearly 600,000 deaths in 2012.[xxxi, xxxii]

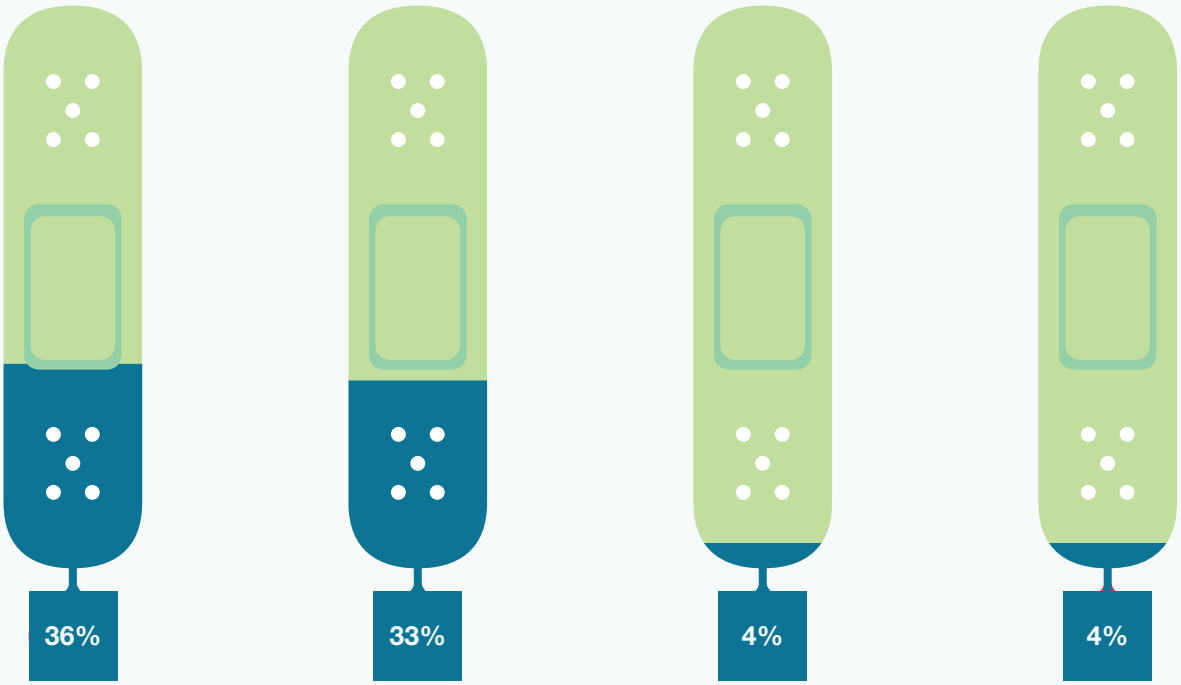
Sixteen energy frameworks (36%) recognize that household use of biomass fuel sources is detrimental to women and/or children's health. For example, Mozambique's *Energy Policy* (2011) states that biomass has adverse effects on human health, particularly affecting women and children. Text in other frameworks that recognize this link is similar.

Fifteen (33%) SSA energy frameworks specifically propose interventions designed to address women's energy use while cooking. Cape Verde's *National Plan of Action for Renewable Energy* (2015) proposes partnering with relevant organizations and health workers to raise awareness and introduce new equipment and practices. Rwanda's *Energy Sector Strategic Plan* (2015) reports that private sector-led efforts in the country to distribute clean cookstoves have the potential to decrease biomass consumption by 68-94%.

Two frameworks, from Burundi and Mauritius, reference the interconnectedness between energy access and women's physical security. Women and girls traverse into dangerous and isolated areas in order to collect fuel for their households.[xxxiii] For example, the majority of confirmed assaults outside a refugee camp in Chad occurred while women were out collecting fuelwood. [xxxiv] Burundi's *Energy Policy* (2012), mentions that fuelwood collection puts women at risk for physical attacks. Mauritius' *Long-Term Energy Strategy* (2009) recognizes that, "women's empowerment and political development also depend [sic] on their mobility and access to evening study, community meetings or attending work," and proposes additional lighting in public spaces to increase their personal security while accessing these spaces at night.

Energy is critical for the provision of health services, yet many healthcare facilities and clinics—as many as 58% in SSA—have no access to electricity.[xxxv] Two energy frameworks, Liberia's and Zambia's, acknowledge the nexus between energy access and women's health. Liberia's *National Energy Policy* (2009) mentions that modern energy services lead to a reduction in maternal mortality and allows for health clinics to refrigerate vaccines and care for patients during the night. Zambia' *National Strategy* (2008) plans to couple HIV/AIDS awareness programs for women in communities that are implementing national energy projects.

Figure 6: Energy and women's health, safety and well-being



16 frameworks recognize that household use of biomass fuel sources is detrimental to women's and children's health

15 frameworks specifically propose interventions designed to address women's energy use while cooking

2 frameworks recognize the interconnectedness between energy access and women's physical security

2 frameworks acknowledge the nexus between energy access and improved healthcare services

ELEMENTS FOR ENSURING GENDER-RESPONSIVE IMPLEMENTATION OF NATIONAL ENERGY FRAMEWORKS

Energy policies provide the framework under which national energy ministries are tasked with energy production, regulation, distribution and management of energy resources. This framework can include specific objectives for addressing social inclusion and ensuring energy policy implementation is gender responsive. In addition, energy policies can already specify the institution or department who will be responsible for overseeing the implementation of gender-responsive actions or ensure budgetary support will be allocated to energy initiatives that take women and men's needs into account. This section showcases a series of elements found in energy frameworks that provide guidance towards ensuring that gender considerations are consistently addressed through implementation of energy initiatives.

Gender equality as a guiding principle within energy frameworks

Fourteen of the reviewed SSA national energy frameworks (31%) include "gender equality" or "gender mainstreaming"[9] as a guiding principle, or specifically commit to a gender mainstreaming process across the sector. Including a commitment to gender mainstreaming or gender equality as a guiding principle within energy frameworks can signal a country's recognition and prioritization of gender considerations and indicate subsequent integration of gender-responsive objectives, strategies and actions.

Women's ministries and organizations involved in development and implementation

Twelve frameworks (27%) identify women's ministries (or equivalents) or women's organizations as implementing partners. The ministries and organizations identified as implementing partners of the energy frameworks are often listed in tables and connected to specific activities or actions. Women's organizations and ministries are occasionally listed as the primary stakeholder responsible. For example, in Nigeria's *National Energy Masterplan* (2014), the Federal Ministry of Women Affairs and Social Development is tasked with nearly 40 unique activities, such as conducting trainings on the installation RETs and conducting awareness campaigns on energy related environmental problems.[10] More commonly, the ministry/mechanism is listed among the many implementing stakeholders responsible for specific actions or activities.

Two frameworks, from Benin and Zimbabwe, designate gender focal points for relevant energy ministries to direct and coordinate gender-mainstreaming activities.

Gender indicators for the energy sector

Translating gender-responsive action into measurable indicators is necessary for informing policy development, tracking progress, identifying the need for corrective measures and evaluating the achievement of a policy's objectives. These gender indicators build on sex-disaggregated statistical data, such as the percentage of women with access to electricity. However, this quantitative data may not entirely capture qualitative changes within a community, such as husbands' attitudes towards their wives pursuing energy entrepreneurship or the recognition of women as community leaders.[xxxvi]

Eight energy frameworks (18%) propose to develop or employ gender indicators. Three frameworks, from Niger, Benin and Botswana identify explicit gender indicators for the policy or specific project relating to gender and energy. Examples of gender indicators include:

- Number of jobs created for men and women as a result of renewable energy generation (Benin)
- Number of maintenance technicians trained in the production of energy technologies designed to alleviate women's domestic tasks (Niger)
- Accessibility to loans to purchase solar technologies, by gender (Botswana)

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9 Gender mainstreaming refers to the consideration of gender equality concerns in all aspects of policies, programs, administrative and financial activities, and in organizational procedures, thereby contributing to organizational transformation.

10 The *Masterplan* identifies the Federal Ministry of Women Affairs and Social Development (FMWA&SD) as either the main implementing agency or as a collaborating agency.

Gender budgeting

Gender budgeting is a means for governments and/or agencies to promote and mainstream gender equality in fiscal policy.[xxxvii] In turn, designating funding for gender-related activities ensures that government actions align with commitments. Zimbabwe's *National Energy Policy* (2014) states that the Ministry of Energy and Power Development will, "adopt gender-sensitive budgeting in energy-sector planning and programing"—the only framework to state so.

Figure 7: Identification of gender mainstreaming elements found in SSA energy policy frameworks (45 total documents)

31%

14 policy frameworks include "gender equality" or "gender mainstreaming" as a

27%

12 policy frameworks identify women's ministries and organizations as

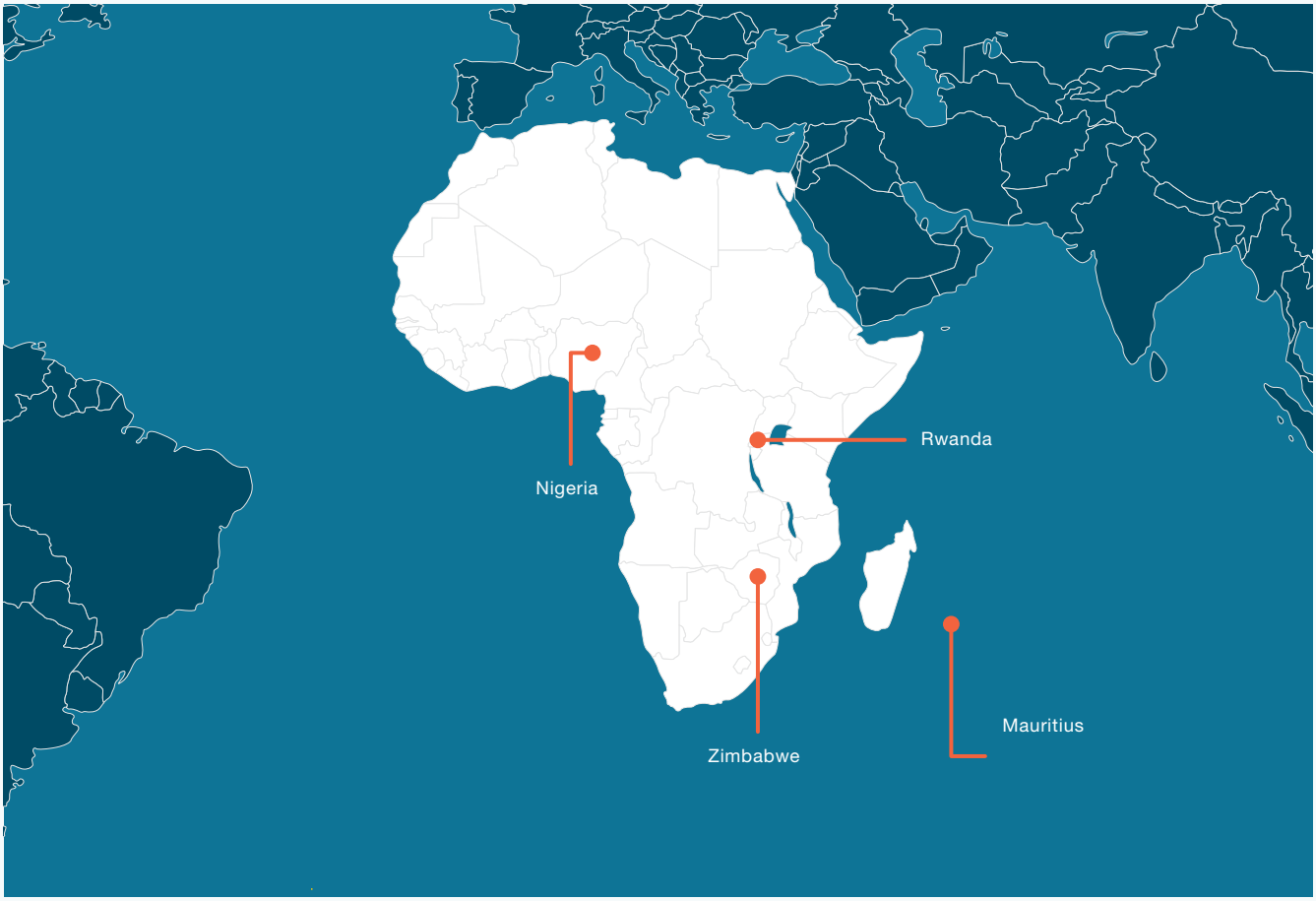
18%

8 policy frameworks propose to develop or employ gender

2%

1 policy framework mentions the use of gender budgeting for implementation

ENERGIZING EQUALITY IN SUB-SAHARAN AFRICA



National energy frameworks have the potential to improve gender equality outcomes by addressing gender considerations at all stages of design and implementation. This map offers examples of national energy frameworks in sub-Saharan Africa that include strong gender-responsive elements.

Only a little more than half of **Nigeria's** population—the most populous country in Africa—has access to electricity.[11] Nigeria's *National Masterplan* (2014) outlines national activities in coordination with the Federal Ministry of Women Affairs and Social Development. For example, activities include establishing microcredit facilities for women entrepreneurs to invest in clean energy and providing trainings for women to construct their own energy efficient cookstoves.

As a small island nation, **Mauritius** relies on imported energy sources to meet its energy

11 Data retrieved from the World Bank, SEforALL database at: https://data.worldbank.org/indicator/EG.ELC.ACCS.ZS

demand, posing an important threat to the nation's energy security. The country's *Long-Term Energy Strategy* (2009) has a gender component to make women less vulnerable to energy insecurity. For example, the *Strategy* proposes strengthening community grassroots networks, staggering payments of electricity charges to vulnerable groups of women and ensuring that public spaces are lit to increase women's safety while traveling at night.

Access to modern energy in rural areas remains one of **Zimbabwe's** greatest energy challenges, with less than 6% of rural households reporting access.[12] As the country addresses this issue, the *National Energy Policy* (2014) commits to integrating a gender perspective into all energy programs and institutions. For example, the Ministry of Energy and Power Development will identify a gender focal point to represent that Ministry and direct and coordinate the implementation of gender mainstreaming in the energy sector.

Rwanda has one of the world's' highest female labor force participation rates and one of the narrowest wage gaps between women and men.[xxxviii] Rwanda's *Energy Policy* (2015) includes encouraging girls to study science and math disciplines to build knowledge of energy technologies and engineering, and calls for women's participation in the sector in the planning, design and execution of energy programs.

12 Data retrieved from the World Bank, SEforALL database at: https://data.worldbank.org/indicator/EG.ELC.ACCS.ZS

REGIONAL EFFORTS TO PROMOTE INTEGRATION OF GENDER CONSIDERATIONS IN THE ENERGY SECTOR

Since energy resources and markets—and resulting emissions—transcend national boundaries, regional frameworks can ensure cooperation between countries. One example of regional cooperation on gender and energy is seen in the Economic Community of West African States (ECOWAS), a regional economic union of 15 African countries.

In 2015, ECOWAS endorsed a draft policy for gender mainstreaming in energy access, with the stated intention to, "promote gender equality in energy development, through equal access to resources and equal contribution to the decision-making processes that shape and influence energy expansion in West Africa.[xxxix] The policy states five strategic objectives, with corresponding targets to track as implementation proceeds. Examples of objectives and targets include:

- *Objective 1*: Achieve widespread understanding of energy and gender considerations at all levels of society. Targets include having 100% of energy sector government employees receive relevant trainings and for 50 new scientific articles about gender and energy to be published in scientific journals.
- *Objective 2*: Ensure that all energy policies, programs and initiatives, including large energy infrastructure and investments are gender inclusive. An example target is for 50% of energy projects, programs and initiatives with government participation to include gender considerations in planning, implementation, analysis and evaluation by 2020, rising to 100% in 2030.
- *Objective 3*: Increase women's public sector participation in energy-related technical fields and decision-making positions. The set target is to have women represent 25% of public sector energy workforce by 2020, and achieved a 50/50 gender balance by 2030.

In 2017, the ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE), with support from USAID/Power Africa, developed and validated the *ECOWAS Directive for Gender Assessments in Energy Projects.*[xxxx] The *Directive* aims to ensure that vulnerable and marginalized populations are included as both beneficiaries and participants of energy infrastructure. Additionally the *Directive* commits to improving transparency in the planning and implementation processes, as well as ensuring that any adverse impacts on women and men resulting from the project is recognized, avoided and mitigated.[xxxxi]

Powering forward

From a sample of 45 documents from 29 SSA countries, this report reveals that nearly three-fourths of national energy sector frameworks consider gender to some extent within their principles, objectives, strategies or activities for their national energy sector. The frameworks included in this study offer diverse opportunities to advance a gender-responsive approach with SSA's energy sector policy and planning design, including time and energy poverty, health and well-being, education, economic empowerment, energy sector careers and opportunities in energy technology and innovation.

Many SSA frameworks do more than only regard women as the passive users of energy, and outline specific strategies and objectives to empower women in the sector and foster equality. When women have access to and control over energy resources and are able to participate in decision making, they can be vital drivers toward effective policy change and implementation. In their roles as energy providers, consumers and users, women are "agents of change" who are key to a more equitable and sustainable future.

Although this assessment of SSA energy frameworks is not intended to be an evaluation, this report and the text extracted as good practices helps identify some key elements in frameworks that may ensure gender considerations are addressed through implementation. For example, pairing how women are characterized with specific activities designed to either reduce their vulnerabilities, enhance their engagement as stakeholders, or facilitate their involvement in transformation actions, all can point out to a stronger implementation of the policy.

Moving forward, countries can develop gender action plans specific to their energy sector policies, include clear targets and objectives, and elaborate on the the steps a country can take—such as including gender-budgeting, identifying gender indicators to track progress, establish gender focal points within the Ministries of Energy or liaise with Ministries of Women Affairs and women's organizations—to ensure gender mainstreaming is tangible in a country's energy work.

13 Power Africa's Women in African Power (WiAP) network convenes and connects established and emerging female leaders who are working in the African energy sector, and provides a platform for networking, information exchange, professional mentorship, and exposure to new business opportunities.

The following are suggestions for enhancing progress toward gender equality in SSA energy sector policy making:

- *Build government, donor and civil society capacity to implement gender inclusive provisions of energy sector policies*
- *Collect and track data on demographics and women's participation in the energy sector to inform research and reporting*
- *Collect gender disaggregated data on energy access and usage*
- *Encourage Ministries of Gender/Women's Affairs to increase their understanding of energy technologies and the benefits these bring to women and girls in order to contribute substantively to policymaking discussions*
- *Ensure gender balance of policy makers and other stakeholders in energy policy discussions*
- *Support women's professional networks, such as Women in African Power (WiAP),[13] that offer opportunities for career development and mentorship*

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