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Gender Equality Strategy and Action Plan for the Energy Sector

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Foreword

Globally, energy is an enabler of socio-economic development including Zambia. The Government of the Republic of Zambia (GRZ) has made this evident through its aspirations of developing the energy sector as stipulated in the National Development Plans and Vision 2030. This development cannot be complete without reaching equal participation of men and women. Therefore, we shall ensure that we engage in activities that will promote inclusiveness as highlighted in the National Energy Policy of 2019 (NEP 2019).

To guide equal participation of women and men in the development of the energy sector, the Government initiated the development of this Gender Equality Strategy and Action Plan (GESAP). The GESAP is aimed at ensuring the attainment of gender equality in the energy sector development processes by helping to overcome the existing gender imbalances. In doing so, the implementation of this Strategy provides for equal opportunities for women and men to actively participate and contribute to their fullest ability and to subsequently enjoy equitable benefits from the energy sector.

The overall objective of the GESAP is to enhance gender equality, social inclusion and non-discrimination in all spheres of the energy sector. The Strategy will achieve the overall objective through the following strategic objectives:

(1) To increase access to and use of clean energy by women for domestic and productive purposes;

(2) To increase social and gender integration in energy infrastructure projects;

(3) To promote equal representation and participation of women as decision-makers, employees and entrepreneurs in the energy sector;

(4) To strengthen institutional capacity to mainstream gender in energy policies, energy programmes and within organisations; and

(5) To increase coordination, collaboration and financing for gender equality in the energy sector.

The development of the GESAP was undertaken using a consultative process to foster collective involvement and effective participation of all the relevant stakeholders. This Strategy is a tool to guide gender mainstreaming within the energy sector and is linked to the NEP 2019. My Ministry will therefore work closely with other stakeholders through inter-sectoral collaboration to implement the activities proposed in the Strategy. These activities are expected to improve the gender equality situation in the energy sector.

My Ministry is grateful to all the stakeholders who contributed to the development of this Strategy. Without their support, the development would not have been possible.

Peter Kapala, MP
MINISTER OF ENERGY

Acknowledgements

The development of the Gender Equality Strategy and Action Plan (GESAP) was based on a countrywide consultative process involving various stakeholders. Accordingly, appreciation is extended to all the key stakeholders who took part in the GESAP development process. These included representatives from the following institutions:

(1) Cabinet Office;

(2) Various Government Ministries/ Institutions;

(3) Energy Utilities;

(4) European Union and other Cooperating Partners;

(5) Private Sector;

(6) Academia; and

(7) Civil Society.

The successful implementation of the GESAP will depend on the continued participation of the institutions listed above and other partners including the support of all Zambian citizens.

The development and publication of the GESAP would not have been possible without the generous financial support and technical assistance of the European Union (EU) through the Increased Access to Electricity and Renewable Production (IAEREP) project. Therefore, I wish to register special thanks to the EU for their support to the development of the GESAP and for their continued support to Zambia's Energy Sector as a whole.

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Permanent Secretary
MINISTRY OF ENERGY

Abbreviations

ACEZ	Association of Consulting Engineers of Zambia
AfDB	African Development Bank
CEEC	Citizen Economic Empowerment Commission
CP	Cooperating Partner
DoE	Department of Energy
DPI	Department of Planning and Information
EE	Energy Efficiency
EIA	Environmental Impact Assessment
EIZ	Engineering Institution of Zambia
ERB	Energy Regulation Board
ESMP	Environmental and Social Management Plan
EU	European Union
GAP	Gender Action Plan
GD	Gender Division
GEEA	Gender Equity and Equality Act No. 22 of 2015
GESAP	Gender Equality Strategy and Action Plan
GFP	Gender Focal Point
GM	Gender Mainstreaming
GRB	Gender-Responsive Budgeting
GTWG	Gender Technical Working Group
HR	Human Resource
ICS	Improved Cookstoves
IDC	Industrial Development Corporation
IAEREP	Increased Access to Electricity and Renewable Energy Production Project
LPG	Liquefied Petroleum Gas
M&E	Monitoring and Evaluation
MCDSS	Ministry of Community Development and Social Services
MoE	Ministry of Energy
MoU	Memorandum of Understanding
NEP	National Energy Policy
NGO	Non-Governmental Organisation
NGOCC	Non-governmental Gender Organisations' Coordinating Council
OGTF	Off-Grid Energy Task Force
PO	Policy Objective
PUE	Productive Use of Energy
RE	Renewable Energy
REA	Rural Electrification Authority
REMP	Rural Electrification Master Plan
S&G	Social and Gender

SHS	Solar Home System
SMEs	Small- and Medium-Scale Enterprises
SO	Strategic Objective
STEM	Science, Technology, Engineering and Mathematics
ToR	Terms of Reference
VSLA	Village Saving and Loan Association
WB	World Bank
ZamStats	Zambia Statistics Agency
ZEMA	Zambia Environmental Management Agency
ZGEN	Zambia Gender and Energy Network
ZPPA	Zambia Public Procurement Authority
ZWES	Zambia Women in Engineering Section

Definitions

Affirmative Action	A policy in which an individual's sex, ethnicity, religion, disability or other social factors are considered in employment, education and other areas to increase opportunities for disadvantaged and underrepresented groups.
'Do-No-Harm'	An approach that requires that projects/programmes conduct an analysis of the potential risks of unintentionally perpetuating or reinforcing gender inequalities in the context of the intervention, proactively monitor risks and take corrective/compensatory measures if applicable.
Energy Poverty	Lack of access to modern energy services and appliances in the household, such as access to electricity and clean cooking facilities (e.g. fuels and stoves that do not cause air pollution).
Gender	Social roles, behaviours and responsibilities assigned to men and women in each society.
Gender Analysis	Collection of information about the different roles and responsibilities of men and women, their different needs, power, opportunities, constraints and access to resources in each context, and the reason for the differences.
Gender Awareness	Being conscious about the differences in the roles and relationships between women and men and the attitudes, behaviours and beliefs that reinforce inequalities between women and men.
Gender Blind	Not considering the different roles, responsibilities, capabilities, needs and priorities of women and men, which means that they may be impacted differently.
Gender Discrimination	Unequal or disadvantageous treatment of individuals or groups based on gender.
Gender Equality	When women and men or girls and boys have equal rights, responsibilities and opportunities and the power to shape their own lives and contribute to society.
Gender Focal Point	A person who has been appointed as the contact and resource person for gender-related issues within their organisation and is responsible for coordinating and promoting the application of gender mainstreaming in the organisation.
Gender Gap	A quantifiable indicator of gender inequality and reveals the differences between females and males relating to resources, entitlements and opportunities.
Gender Issue	A situation in which there is gender inequality that requires intervention
Gender Mainstreaming	The process of assessing the implications for women and men of any planned action, including legislation, policies or programmes, in all areas and at all levels. It is a strategy to ensure that women's and men's concerns and experiences are taken into consideration.
Gender-Neutral	Is when gender is not considered relevant to an intervention
Gender-Responsive	Actions and initiatives that actively address differences and inequalities between men and women.
Gender-Responsive Budgeting	An approach for preparing and analysing budgets from a gender perspective to ensure that both men and women of different backgrounds benefit from consideration of their needs, interests and constraints, and from including the restructuring of revenues and expenditures in order to close gender gaps and promote gender equality.

Gender-Responsive Procurement	A procurement system that ensures that men and women benefit equally from works and service contracts and as project beneficiaries.
Gender Norms	Ideas about how men and women should be and behave.
Gender Safeguards	Measures taken to prevent potential negative impacts on men and women that reinforce gender inequalities.
Gender-Smart Investment	An investment strategy that seeks to intentionally and measurably use capital to address gender disparities and better inform investment decisions.
Gender-Specific Needs	The needs of men and women due to their different social roles and expectations.
Gender Stereotype	A widely held belief or generalisation about the behaviours and characteristics of and roles performed by women and men.
Gender Transformative	Actions and initiatives that aim to transform unequal gender relations to promote shared power, control of resources, decision making and support for women's empowerment.
Headship	The head of a household who is the person that all members of the household regard as the head and who normally makes day-to-day decisions concerning the running of the household.
Implementing Agencies	Include the REA, ZESCO, ERB, TAZAMA and Indeni.
Intersectionality	Recognising that people's experiences are shaped by their ethnicity, age, disability, class, gender, religion, sexual orientation and other social identities simultaneously, which produce different forms of power relations, inequalities and discrimination.
Occupational Segregation	The distribution of employees across and within occupations based on demographic characteristics, such as gender, ethnicity or age.
Off-Grid Access	Access to electricity through solar mini-grids, mini-hydro, SHSs and solar lanterns, solar lighting systems, rechargeable batteries or electricity generators.
Practical Gender Needs	Needs of women or men that relate to responsibilities and tasks associated with their traditional gender roles or immediate perceived necessity.
Sex	The biological characteristics of males and females (not the same as Gender).
Sex-Disaggregated Data	Collection and analysis of data separately for men and women to allow for comparisons in order to identify possible gender differences.
Social Inclusion	The process of improving the terms of participation in society, particularly for those who are disadvantaged, by enhancing opportunities, access to resources, voice and respect for rights.
Strategic Gender Interests	Things women need to improve their position in relation to men in society.
Time Poverty	Having too little time for rest and leisure after considering the time spent working, whether in the labour market, domestic work or other activities, such as fetching water and wood.

Women-Led Business	A business that is at least 25% owned by one or more women (i.e. management and control lie with one or more women), in which one-quarter of the board of directors is women (where a board exists), in which a woman is a signatory of the business's legal documents and financial accounts, and that is operated independently from businesses that are neither led nor owned by women[1].
Women-Owned Business	A business that is more than 50% owned by one or more women (i.e. management and control lie with one or more women), in which a woman is a signatory of the business's legal documents and financial accounts, and that it is operated independently from businesses that are not owned by women[2].
Women's Empowerment	The process by which women gain influence and equal opportunity to pursue personal, social and economic endeavours, engaging in all parts of society on the same basis as men.

1 Ministry of Commerce, Trade, and Industry (MCTI) and ITC SheTrades Initiative, 2021. Terms Related to Women's Entrepreneurship in Zambia. Formal Proposal March 2021.
2 Ibid.

1. Introduction

According to the National Energy Policy 2019 (NEP 2019), the goal of the energy sector is to enhance socio-economic development. The Gender Equality Strategy and Action Plan (GESAP) will help to achieve this goal by ensuring that men and women of different backgrounds in urban and rural areas benefit equally from energy services, job opportunities and investments in the energy sector. It will be implemented during the period 2022 – 2030.

The NEP 2019 is based on ten Policy Objectives (POs) and creates a general framework for sustainable development of the energy sector. Gender Mainstreaming (GM), climate change and health and safety form one of the POs. GM is the process of assessing the implications for men and women of any planned action and considering their different needs and experiences to ensure that both genders benefit equally and that inequality is not perpetuated. The goal is to achieve gender equality.

The Policy provides guidance on how gender should be systematically mainstreamed in the energy sector by identifying four key actions: gender gap analysis, affirmative action measures, internship/ mentorship programmes and capacity building in GM. Successful implementation of these measures will lead to gender-responsive policies and programmes, the increased representation of women and enhanced institutional capacity.

The GESAP will support the operationalisation of GM (PO 10) and the actions outlined in the NEP 2019 by articulating the change process for advancing gender equality in the energy sector. The GESAP was developed through a highly participatory process. Based on the findings, several key gender gaps exist in the energy sector, and they form the foundation for the GESAP.

The GESAP is divided into six chapters. Chapter 1 covers the introduction, while Chapter 2 provides a critical situation analysis. Chapter 3 outlines the vision, rationale and underlying guiding principles, and Chapter 4 provides the Strategic Objectives (SOs) and a summary of the activities for achieving the objectives. Chapter 5 provides the implementation framework based on institutional and legal frameworks, resource mobilisation and financing; the Monitoring and Evaluation (M&E) of the implementation of the plan; and an assessment of its impacts. The theory of change, underpinning the Action Plan is described in detail in Annex 3.

2. Situation Analysis

2.1. Legal and Policy Framework

The legal and policy framework related to gender equality and energy comprises gender laws and policies applicable to all sectors in Zambia, energy laws and policies, and other laws and policies with the potential to advance gender equality and non-discrimination in the energy sector.

2.1.1. The National Gender Framework

The Government of the Republic of Zambia (GRZ) is a signatory to several international laws and conventions on gender equality, such as the Protocol to the African Charter on Human and People's Rights on the Rights of Women in Africa, the Southern African Development Community (SADC) Protocol on Gender and Development and the Convention on the Elimination of All forms of Discrimination Against Women.

The commitment to gender equality is also expressed in various national plans and policies, which include the following:

(a) *The Vision 2030,* which sets out Zambia's long-term vision as to become 'a prosperous middle-income nation by 2030' and is primarily targeted at wealth creation and poverty reduction. Gender-responsive sustainable development is included as one of seven underlying principles of the Vision.

(b) *The Eighth National Development Plan (8NDP),* which aims at accelerating growth and improving the livelihoods of the Zambian people, particularly in rural areas. Gender equality is included as a cross-cutting issue and a stand-alone goal. The government is committed to prioritise interventions to tackle gender-based violence, teenage pregnancies, child abuse and violence against the vulnerable such as the aged, people with disabilities and mentally challenged persons. Gender inequality will be addressed by increased participation of women in decision-making positions at all levels of governance and sustaining and improving gender parity in education.

(c) *The Gender Equity and Equality Act (GEEA) No. 22 of 2015,* which provides the overall framework on how gender equality should be promoted in public and private organisations. The Act obligates public and private bodies to develop Gender Action Plans (GAP) and special measures to achieve 50% representation of women, which is further emphasised in the Constitution.

(d) *The Anti-Gender-Based Violence Act No. 1 of 2011,* which provides for the protection of victims of gender-based violence and sexual harassment.

(e) *The National Gender Policy 2014,* which provides guidance, strategies and interventions for various sectors, including the energy sector.

(f) *The Climate Change Gender Action Plan of 2016,* which addresses the gender and energy nexus and includes strategic objectives and gender-responsive actions for the energy sector.

2.1.2. The National Energy Framework

The NEP 2019 governs Zambia's energy sector development. It has GM and other cross-cutting issues as objectives and includes the following activities in the implementation plan: Undertake a gap analysis in gender; Conduct internship and mentorship programmes; Develop an energy sector gender strategy and action plan; Implement affirmative action measures in employment and on boards to promote balanced representation by gender; and Train staff in GM.

Despite the emphasis on gender equality in the NEP 2019, the legislation on energy is silent on gender. The major energy laws include the following: *the Energy Regulation Act No.12 of 2019; the Electricity Act No.11 of 2019; the Petroleum Act No. 8 of 1995*; and *the Rural Electrification Act No. 20 of 2003*.

While the legislation has traditionally been considered purely technical in nature, the GRZ recognises that gender-neutral policy measures have the potential to have significant differential impacts on men and women due to their different roles and responsibilities in society.

2.1.3. Other Legislation with the Potential of Advancing Gender Equality and Non-Discrimination in the Energy Sector

The legislation and regulations related to public procurement in Zambia include gender-supportive provisions, which can be used to support the advancement of gender equality in energy infrastructure projects. *The Public Procurement Act No. 12 of 2008* and *the Citizen Economic Empowerment Act No. 9 of 2006* give procurement entities the right to target specific groups, such as women, through reservation schemes or preferential schemes. This could include women-led companies, companies with a large number of female employees in senior management or companies that can demonstrate a commitment towards advancing gender equality (e.g. through GAPs or special budget allocations for GM).

The other relevant legislations that have an impact on gender equality in energy infrastructure projects include (but are not limited to) *the Environmental Management Act No. 12 of 2011* and *the Land Acquisition Act No. 13 of 1994*. Despite their impact on gender equality in energy infrastructure, these laws do not include any gender-supportive provisions.

Notwithstanding the foregoing, the GESAP will be governed by the following legal and policy frameworks even though they have some limitations as highlighted below.

(a) The Gender Equity and Equality Commission, as provided for in the GEEA, has not yet been operationalised, which weakens enforcement.

(b) The National Gender Policy provides guidance on GM in the energy sector, its objective is however limited to equal access to affordable RE and does not include strategic objectives and measures on other aspects of gender inequalities in the sector.

(c) The Public Procurement Act No. 12 of 2008 and the Citizen Economic Empowerment Act No. 9 of 2006 include strong provisions for advancing gender equality in procurement. However, the Public Procurement Regulations of 2011 and the Citizen Economic Empowerment (Preferential Procurement) Regulations of 2011 do not provide sufficient guidance on how these provisions should be applied.

(d) The Environmental Management Act or any Statutory Instrument has no provision that requires developers to conduct a gender analysis as part of an Environmental Impact Assessment (EIA). Yet a gender analysis of the different roles and the access to and control of resources by women and men is essential to capture the socioeconomic impacts of projects on both genders and to formulate appropriate mitigation and enhancement measures.

(e) The Rural Electrification Act No. 20 of 2003 gives the Rural Electrification Authority (REA) the mandate to promoting the use of electricity for economic activities. There is no legal provision to enable REA to promote the use of clean energy for domestic purposes, such as cooking, which is an area traditionally dominated by women.

(f) The Electricity Act No. 11 of 2019 and the Land Acquisition Act have no provisions that oblige developers to include special measures to prevent land acquisition from the disadvantaged women owing to customary laws and sociocultural norms and practices that often favour men access to and ownership of land.

2.2. Gender and Energy Access and Use

2.2.1. Access to Electricity

The levels of access to electricity by female and male headed households is dependent on the technology (on-grid/off-grid access) and residence location (urban/rural). In 2018, about 37% of households were connected to the national grid in Zambia, with a slightly higher connection rate among female-headed households than male-headed households[1]. A comparison of the electrification rates in male- and female-headed households in 2015 and 2018, as illustrated in Table 1, shows that the gender gap that existed in 2015[2] has been closed. This can be attributed to recent electrification programmes in which female-headed households were specifically targeted[3].

By contrast, the gap in off-grid access is significant: In 2018, male-headed households were almost four times more likely to use off-grid solutions than female-headed households. In rural areas, this difference is exacerbated, as only 2.1% of female-headed households had access to off-grid electricity compared to 9.4% of male-headed households. In urban areas, off-grid access to electricity is still higher in male-headed households than female-headed households, but the gap is smaller than in rural areas.

Table 1: Access to Electricity by Technology, Residence and Sex of the Household Head

		Electrifications rates in 2015 (LCMS 2015)			Electrifications rates in 2018 (WB 2018)		
Technology	**Household**	**Nation**	**Rural**	**Urban**	**Nation**	**Rural**	**Urban**
On-grid access (%)	**Total**	**31.4**	**4.4**	**67.3**	**37.7**	**4.1**	**74.8**
	Male-headed	32.2	5.0	68.9	36.8	3.9	74.5
	Female-headed	28.5	2.4	62.1	40.7	4.7	75.5
Off-grid access (%)	**Total**	**4.6**	**7.4**	**0.8**	**4.7**	**7.8**	**1.3**
	Male-headed	5.2	8.5	0.9	5.7	9.4	1.4
	Female-headed	2.4	3.8	0.6	1.5	2.1	0.8
No access (%)	**Total**	**68.5**	**95.6**	**32.7**	**57.6**	**88.1**	**24.0**
	Male-headed	67.7	95.0	31.1	57.5	86.7	24.1
	Female-headed	71.5	97.6	37.9	57.9	93.1	23.7
Sample size: 2015 = 3,014,965 households and 2018 = 3,537 households							

Female-headed households are generally less willing to pay for grid connections and off-grid solutions than male-headed households. Only 26.6% of female-headed households were willing to pay ZMW 1,211 (US$ 132)[4] to be connected to the grid, compared to 49.8% of male-headed households[5]. A similar gender gap in willingness to pay exists for Solar Home Systems (SHS). The reasons for these gender difference could be attributed to lower incomes, lower literacy levels, lower awareness of the benefits of electricity and, lower awareness of suppliers of SHS among female-headed households compared to male-headed households.

1 World Bank. 2018. ZAMBIA | Beyond Connections: Energy Access Diagnostic Report Based on the Multi-Tier Framewor
2 ZamStats (former Central Statistical Office). 2016. Living Condition Monitoring Survey Report 2015 (Complete data set).
3 E.g. Increased Access to Electricity Services Project of Zambia funded by the World Bank and implemented jointly by ZESCO and REA 2008-2012 (extended until 2017)
4 Effective exchange rate at time of the survey was 1 U.S. dollar = 9.1551 ZMW (8/2017)
5 World Bank. 2018. ZAMBIA. Beyond Connections: Energy Access Diagnostic Report Based on the Multi-Tier Framework

2.2.2. Access to Modern Cooking Solutions

Biomass is the most common energy source for cooking in Zambia. In rural areas, close to 80% of households use firewood for cooking, whereas in urban areas, the majority use charcoal (75.4%)[6]. Between 2015 and 2018, the proportion of households using clean cooking fuel nationwide dropped from 16.1% to 9.4% (see Table 2). During this period, there was an increase in the cost of electricity, which helps to explain why households changed fuel. In terms of cooking technologies, nationwide, 46% of households cook on a three-stone open-fire stove, mainly using firewood, and over 36% use traditional stoves (*mbaula*), mainly with charcoal. A small minority (0.4%) use Improved Cookstoves (ICS), which require less charcoal or use pellets. About 16.5% of households cook with electric stoves or cookers and 0.1% with LPG stoves[7].

Table 2: Households by Cooking Fuel and Residence

	2015			2018		
	Urban	**Rural**	**Total**	**Urban**	**Rural**	**Total**
Households using clean fuel for cooking (%)	**34.6**	**2.3**	**16.1**	**18.8**	**2.4**	**9.4**
Electricity (%)	34.5	2.1	16.0	18.4	2.0	9.0
LPG/natural gas/biogas (%)	0.1	0.1	0.1	0.3	0.1	0.2
Solar (%)	0.0	0.1	0.0	0.1	0.3	0.2
Households using biomass for cooking (%)	**65.1**	**97.6**	**83.6**	**81.4**	**97.7**	**90.5**
Wood	6.0	79.3	50.7	5.8	84.5	48.1
Charcoal	59.1	18.1	32.9	75.4	13.2	42.4
Other (coal/grass/dung/crop)	0.1	0.2	-	0.2	-	0.1

In households dependent on firewood, the task of collecting and transporting it is typically the responsibility of women and children, whereas cutting is performed by both genders[8]. Acquiring and preparing fuel are time-consuming tasks, with over two-thirds of rural households spending 3–7 hours per week on this task. Women aged 15 and older also spend a considerably greater amount of time cooking or in the cooking area (10.6 hours per week) than men (4.4 hours per week). Boys spend less than half of the time that girls spend cooking (1.6 and 3.3 hours per week, respectively)[9]. Cooking with electricity has been shown to increase the share of cooking done by men and boys, which shows that access to modern cooking solutions can have a transformative impact on gender relations[10].

Due to the disproportionate amount of time that women spend on fuel acquisition and preparation as well as cooking, women are considerably more impacted by energy poverty than men and so have less time for engaging in income generation, educational and recreational activities. There are also negative health impacts associated with cooking with biomass: 25% of households cook inside the home in Zambia[11], which increases the risks of respiratory diseases and eye problems due to the smoke. The decrease in the proportion of households using clean fuels for cooking, as observed in Table 2, means that the challenges that women experience in relation to energy poverty have worsened.

6 Zambia Statistics Agency, Ministry of Health (MoH) Zambia, and ICF. 2019. Zambia Demographic and Health Survey 2018
7 ibid.
8 IAEREP. 2021. Situational analysis on gender and energy in Zambia.
9 World Bank. 2018. ZAMBIA. Beyond Connections: Energy Access Diagnostic Report Based on the Multi-Tier Framework.
10 MECS, 2001. Zambia; Cooking Transitions. An analysis of Multi-Tier Framework Data for insights into transitions to modern energy cooking
11 Zambia Statistics Agency, Ministry of Health (MoH) Zambia, and ICF. 2019. Zambia Demographic and Health Survey 2018

2.2.3. Use of Energy Sources and Appliances

Nationwide, significantly more households choose to use electricity as their main energy source for lighting (31%) than cooking (16%)[12]. The bias towards using electricity for lighting rather than cooking is present in both male- and female-headed households. It is likely that using electricity for cooking is perceived to be too expensive, and a lower priority than lighting, in most households. The gender dynamics related to the use of electricity for cooking are not clear, with some studies showing that male-headed households are more likely to use electricity for cooking and other studies showing the opposite[13].

Access to electricity alone does not have a transformative impact on households unless it is coupled with appliances for various purposes. Appliances for domestic use can reduce drudgery and save time in performing household tasks, whereas appliances for productive purposes can improve incomes. In terms of labour-saving equipment, approximately 21% of households in Zambia own an electric stove, and 12% own a fridge, with no major differences between male- and female-headed households[14]. However, recreational equipment is more common in male-headed households, which are twice as likely to own a radio than female-headed households (45% and 22%, respectively)[15].

At the individual level, women are less likely to own a mobile phone (53%) than men (66%)[16]. Ownership of a mobile phone reflects autonomy and financial independence, and it gives the individual access to the mobile payment solutions increasingly used by clean energy technology suppliers. The gender gaps in ownership observed in relation to recreational equipment and mobile phones could either be an expression of different preferences or differences in affordability.

2.2.4. Decision-Making and Energy

Overall, in Zambia, women's decision-making power in *daily household purchases* is relatively high, with 57% of married women below the age of 50 years making decisions alone and 29% making decisions jointly with their husbands. However, when it comes to decisions on *major household purchases,* women's participation in decision-making drops sharply. Although most women make decisions jointly with their husbands (56%), there are significantly more husbands who make decisions alone (32%) than wives (12%)[17]. This gender gap in decision-making can also be observed in relation to energy. Although the decision to electrify the household is a joint decision by the husband and wife in a large proportion of households (22%), there are almost as many households in which the husband makes the decision alone (20%). Husbands are six times more likely to make the decision alone than wives. In most households (52%), electricity was already there when the tenants moved in, or it was initiated by the landlord[18].

Women have slightly more decision-making power in relation to electrical appliances. In over one-third of households (38%), the decision about which electric appliances to buy is made jointly by the husband and wife. In addition, age emerges as an important factor in decision-making, with the children (including adult children) being the main decision-makers in 27% of the households. Nevertheless, the gender gap between wife and husband still exists, as husbands are more than twice as likely as wives to make decisions alone[19]. Gender differences in the decision to purchase ICS are more contextual

12 ZamStats (former Central Statistical Office). 2016. Living Condition Monitoring Survey Report 2015
13 According to the Living Condition Monitoring Survey of 2015 (complete data set), male-headed households are more likely to use electricity for cooking compared to female-headed households (36% and. 30% in urban areas, respectively). However, a different study found that female-headed households are more likely to cook with electricity (exclusively or stacked with biomass) than male-headed households (MECS, 2001. Zambia; Cooking Transitions. An analysis of Multi-Tier Framework Data for insights into transitions to modern energy cooking). This calls for further research on the gender dynamics related to cooking.
14 ibid.
15 ibid.
16 ZamStats, Ministry of Health Zambia and ICF. 2019. Zambia Demographic and Health Survey 2018
17 Zambia Statistics Agency, Ministry of Health Zambia and ICF 2019. Zambia Demographic and Health Survey 2018.
18 Ministry of Energy, European Union and IAEREP. 2021. Situational analysis on gender and energy in Zambia
19 Ibid.

and dependent on residence. In urban areas, female members (58%) tend to make decisions regarding purchasing cookstoves, while in rural areas, male members (56%) usually make the decision[20].

2.2.5. Gender, Renewable Energy and Energy Efficiency

Due to a serious electricity supply deficit caused by droughts that Zambia experienced in the 2015/2016 rain season which resulted in frequent load shedding, the GRZ has committed to diversifying Zambia's energy sources with Renewable Energy (RE) and improving Energy Efficiency (EE). Solar is increasingly becoming the main RE source, as evidenced by the International Finance Corporation's Scaling Solar programme and Swedish International Development Cooperation Agency's (SIDA's) Beyond the Grid Fund for Zambia (BGFZ) programme.

However, in terms of addressing women's specific energy needs, i.e. clean energy for cooking, solar has important limitations. In households accessing electricity through Solar Home System (SHS) or solar mini-grids, electric cooking is usually not an option, as the electric load of a stove or cooker is too high. Thus, women's workload in providing energy for the household remains unchanged. In this regard, other RE sources, such as small hydropower and biogas, are more responsive to women's energy needs. In Zambia, where 80% of households use biomass for cooking, initiatives aimed at promoting clean energy for cooking are also key from an EE perspective.

Another increasingly topical issue related to EE/RE and gender is the potential gender impact of electronic waste (e-waste), which will be one of the long-term outcomes of the nationwide rollout of SHS in Zambia. It has been reported in some parts of the region that when the off-grid products no longer work, they are kept at home or disposed of in an unsound manner, posing a risk to individuals or the environment[21]. This could affect male and female members of the household differently due to their different roles and knowledge about these technologies. In addition, regarding the informal e-waste recycling, it has been further observed that women and children are usually the ones found at dumpsites collecting e-waste, exposing them to hazardous substances[22].

Although Zambia has some legislation on e-waste management[23], there are no specific regulations yet on the hazardous e-waste disposal. There is only one recycling company that has been licensed by Zambia Environmental Management Agency (ZEMA), which makes enforcement difficult, especially in remote rural areas. While e-waste can have negative impacts, practical skills training in the maintenance and decommissioning of off-grid technologies can provide an entry point for women's participation in the clean energy value chain. The link between gender, RE and EE is acknowledged in the 2022 Energy Efficiency Strategy and Action Plan (EESAP) and the Renewable Energy Strategy and Action Plan (RESAP), which have gender-responsive RE and EE measures.

2.3. Gender Mainstreaming in Energy Infrastructure Projects

Over the last decade, several large-scale energy infrastructure projects have been undertaken in Zambia. Following the development of the gender equality legal and policy framework, social and gender considerations must be integrated into projects so that both men and women benefit from these interventions; any potential negative impacts can be prevented or mitigated; and positive impacts can be enhanced. Among other things, this includes special measures to ensure equal job opportunities, prevent sexual harassment and exploitative working conditions and encourage community engagement.

20 World Bank. 2018. ZAMBIA | Beyond Connections: energy access diagnostic report based on the multi-tier framework.
21 Ibid.
22 Osibanjo, O. Gender and e-waste management in Africa
23 Extended Producer Responsibility (EPR) Statutory Instrument No. 65 of 2018

2.3.1. Gender Analysis in Environmental Impact Assessments

A recent assessment of energy projects in Zambia showed that close to half of the projects could not ensure compliance to the no-harm principle since no gender analysis had been undertaken. A gender analysis aims at identifying gender gaps and gender-specific needs in relation to an intervention.

The small number of energy projects informed by a gender analysis can be attributed to the gap in the regulatory framework on EIA. Any plan, project, development, or operation that involves a change in land use, requires the approval of ZEMA. Developers are required to submit an EIA to determine whether the intervention may have significant adverse or beneficial impacts on the environment. The regulations state that the socio-economic impacts of the project (positive and negative), must be included in the EIA. However, there is no explicit requirement to conduct a gender analysis. Consequently, few of the EIAs for energy projects address gender or ensure that the intervention comply with the provisions of the GEEA.

According to environmental regulations, developers are also required to design Environmental and Social Management Plans (ESMP) to mitigate any negative impacts identified in the EIA and measures to enhance the positive impacts. These measures must include performance indicators and frequency of monitoring. Since the ESMP is based on the findings of the EIA, if gender is absent from the EIA, it will also most likely be absent from the ESMP. Consequently, many ESMPs do not include specific measures to prevent potential negative S&G impacts such as sexual harassment, exploitative working conditions or pregnancies in the community, nor do they propose measures to enhance positive impacts, such as ensuring equal employment opportunities for women, youths or other groups who may be overlooked through quotas or targets. In practice, this means that the approach to S&G issues is reactive (responding to incidents) rather than preventive or proactive.

2.3.2. Gender-Responsive Procurement

The procurement stage of a project provides ample opportunities to mainstream gender. The Public Procurement Act No. 8 of 2008 gives procuring entities the right to target specific groups, such as women-led businesses, either through reservation schemes or preferential schemes. This is further emphasised in the Citizens Economic Empowerment Act No. 9 of 2006, in which women are identified as 'targeted citizens' (together with other marginalised groups) who should be given preferential treatment in accessing and being awarded tenders for the procurement of services and goods.

While other government agencies have implemented these provisions, such as the Road Development Agency, which reserves 30% of all road maintenance contracts for female-owned companies, no such initiatives have been undertaken in the energy sector. It should be noted that in 2021, formal international definitions of businesses owned or led by women were adopted in Zambia through an initiative between the International Trade Centre's SheTrades Initiative and the Swedish Institute for Standards. These definitions have been aligned with those of citizen-owned and citizen-empowered companies used in preferential public procurement, as provided for in the Citizens Economic Empowerment Regulations. This makes it easier to target female-owned/led businesses and collect data on women's entrepreneurship.

In addition to encouraging increased participation of women in procurement, tender documents can also specify certain S&G issues that must be considered by the bidders. While tender documents for energy projects in Zambia sometimes include S&G compliance requirements, they are often general guiding principles rather than contractually binding specific requirements. Therefore, they do not appear in the technical specifications, nor are they budgeted for in the bill of quantity. Similarly, the key personnel requirements rarely include gender specialists or gender expertise. Whereas noncompliance to environmental and health and safety requirements may result in penalties according to project contracts, there are no equivalent penalties for S&G requirements.

2.3.3. Monitoring and Reporting on Social and Gender Performance

Contractors usually submit monthly reports to developers that cover the technical aspects of projects, whereas the monitoring of the ESMP is done separately by the environmental units/staff through site visits. Since S&G issues are usually either absent from the ESMP or lack performance indicators, monitoring is not systematic. In addition to the monthly report, contractors are requested to conduct investigations and submit incident reports for any environmental and health and safety incidents, including near misses. The procedures for reporting S&G incidents differ from environmental and health and safety incidents. Because the grievance redress mechanisms and the reporting of other, more serious S&G incidents, are not included in the standard reporting procedures, there is a risk that S&G incidents are not given the same attention and priority by the project management team as other incidents.

2.3.4. Community Participation

To increase the uptake of modern energy services and technologies in rural areas, the participation of the community is essential. As of 2021, REA has established 47 community committees across the country that help to promote ownership and sustainability of energy infrastructure projects through community mobilisation and sensitisation during and after project implementation. The composition of the committees cuts across several stakeholders within the community, including the traditional leadership. Participation of both men and women in these structures is important to ensure that both men's and women's needs and concerns are considered. In total, 640 community members sit on these structures, of which 70% are men and 30% are women.

Regarding private mini-grid operators, community engagement is governed by the Energy Regulation Board's (ERB's) technical regulations, which limit community engagement to operational contacts between developers and communities and provide no guidance on the scope, depth and process of engagement.

2.4. Representation and Participation

Gender equality in the energy sector goes beyond equal access to energy at the consumer level. The gender gap between men and women in relation to representation and participation as decision-makers, employees and entrepreneurs in the energy sector must also be addressed. Equally important is to ensure a conducive work environment for both female and male employees free from sexual harassment and workplace accidents and promote a work–life balance that enables equal division of domestic and care work in the home.

2.4.1. Gender Parity in Employment and Decision-Making Positions

Zambia's energy sector is an important source of employment in Zambia. However, it is largely male-dominated, and women are poorly represented at all levels. Nationwide, only 5.8% of employees in the electricity supply industry[24] in Zambia are women[25]. Employment data from the Ministry of Energy (MoE), ZESCO, REA and ERB shows that in 2021, on average, 24% of employees were women.

MoE has the largest representation of women employees (47%), followed by ERB (31%) and then ZESCO (24%). No increase in women's representation has taken place since 2018[26]. In addition to employment in the four institutions above, the construction of energy infrastructure projects creates many job opportunities. While developers such as REA and ZESCO usually require that the contractors provide sex-disaggregated employment data, there has been no attempt to compile data across projects to

24 Electricity, gas, steam and air conditioning supply industry is the full name of this sector as per the classifications used in the Labour Force Study.
25 ZamStats, 2018. Labour Force Study 2018
26 Ministry of Energy, European Union and IAEREP. 2019. Gender assessment of the energy sector in Zambia (version 2).

assess who benefits from employment in infrastructure projects.

Women working in technical positions, both vocational and advanced engineering, account for much smaller percentages of employees in all four institutions, as shown in Figure 1. On average, women in technical positions constitute only 6% of the total workforce. This disparity within all four institutions reveals a high degree of occupational segregation, a common observation in the energy sector. Women tend to be concentrated in headquarters-based corporate functions, such as legal, finance and human resource (HR), rather than in field-based or technical operations positions.

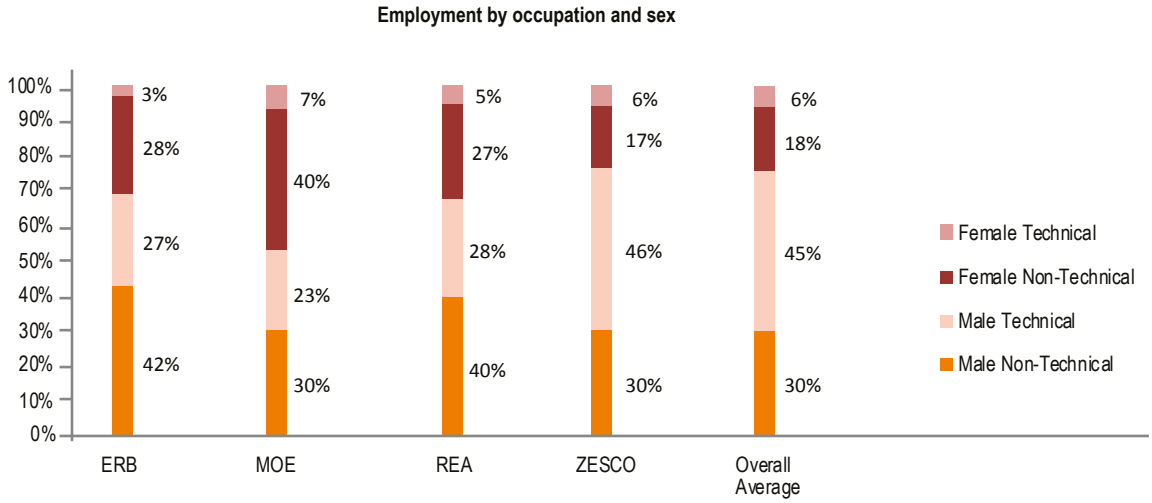

Figure 1: Employment by Occupation and Sex

Women are also underrepresented in the four institutions at middle and senior management levels, as illustrated in Figure 2. Women make up 21% of middle management and only 4% of senior management on average across the four institutions. Analysis of the employment data shows that most women in management positions (75%) are found in nontechnical positions.

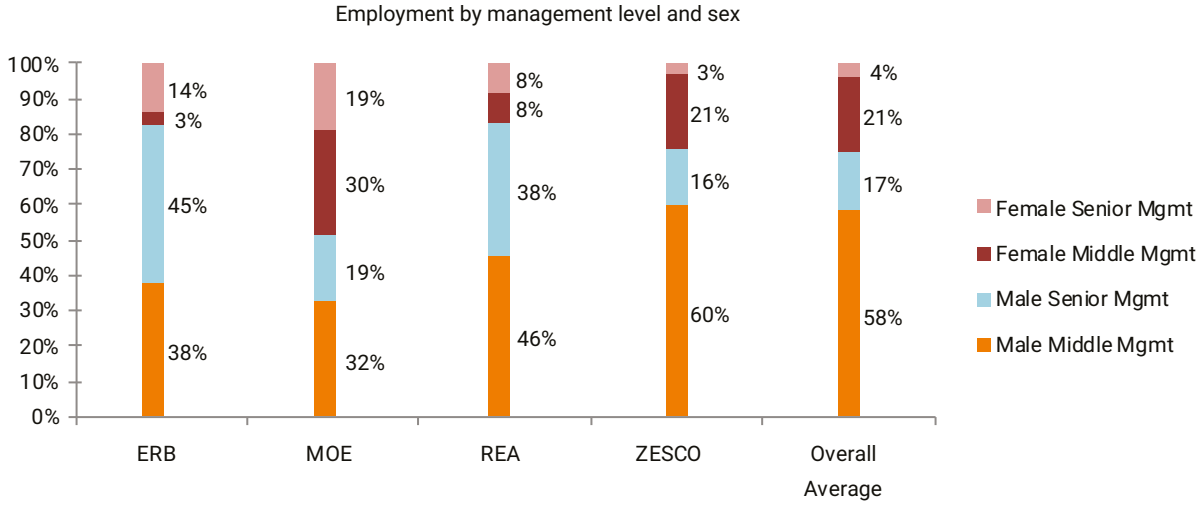

Figure 2: Employment by Institution, Management Level and Sex

Women's representation is higher at the board level than other decision-making positions in employment. As illustrated in Table 3 below, the highest representation of women is found at the REA[27], ERB and Indeni, with three female board members each. At ZESCO and TAZAMA, two out of seven board members are women.

27 A seventh member is pending appointment.

Table 3: Board Members by Institution and Sex

	Men	Women	Total
ERB	4	3	7
REA	3	3	6
ZESCO	5	2	7
Indeni	4	3	7
TAZAMA	5	2	7

2.4.2. Reasons Behind the Gender Gap

The gender gap in employment and on boards can be attributed to the low number of women undertaking Science, Technology, Engineering and Mathematics (STEM) programmes. Nevertheless, the number of women in engineering has increased in the last 10 years, according to Zambia Women in Engineering Section (ZWES). In 2020, approximately 5% out of 46,546 engineers registered with the Engineering Institution of Zambia (EIZ)[28] were women. This includes professionals in both advanced and vocational engineering as well as students enrolled at educational institutions. The number of women is highest among engineers (degree holders), especially student engineers, of which women make up close to 20%.

According to ZWES, the reason why so few women choose STEM programmes is mainly due to strong gender norms which discourage girls and women from pursuing such programmes as they are considered to be too technical and demanding.

ZWES has identified three main barriers to women's retention and advancement to leadership positions based on consultations with its members. Firstly, young female engineers are more likely to be assigned administrative and less challenging tasks as compared to their male colleagues. Secondly, there are several reported cases in which clients or contractors preferred to work with male engineers (expressed explicitly or implied)[29]. Finally, young female engineers have encountered sexism and sexual harassment in the workplace.

2.4.3. Existing Measures to Improve Gender Balance and the Work Environment

According to the GEEA, public and private bodies are obliged to develop special measures to achieve 50% representation of women. This is reflected in the Implementation Plan of the NEP 2019, which stipulates that affirmative action measures should be undertaken within employment and boards. Affirmative action measures can include targets or quotas, internship programmes, training, mentorship opportunities and other activities aimed at promoting a gender balance not only in recruitment but also in promotion and retention. Currently, ERB is the only public energy sector institution with an explicit target of 50% representation of women in professional, technical and managerial positions; this target is also applied in training and development, promotion and retention.

Gender balance in training opportunities for staff members varies greatly between institutions, but overall, most public energy sector institutions make efforts to ensure that both male and female employees benefit equally. At ZESCO, women constituted more than one-third of staff members who received professional and technical training in 2019, which is higher than the proportion of female in the company[30]. ERB runs an internship programme, which has an intentional bias towards women, with seven out of ten interns being women. While ZESCO takes on interns based on ad hoc requests from universities, there is no system in place to ensure that at least half of the interns are women. REA and

28 Note that 3,651 members with 'unknown sex' have been excluded from the total number.
29 As recently as 2019 a contractor issued a job advert stating, 'No women' according to ZWES.
30 World Bank, 2019. ZAMBIA | Highlights from 2019 Africa gender baseline data survey

MoE do not currently have any internship programmes in place[31].

Across institutions, there are inadequate policies aimed at creating a conducive work environment that helps improve the retention of women in the energy sector and the well-being of both male and female employees. Sexual harassment policies are in place at MoE, REA, ZESCO and ERB; however, there is little sensitisation of employees to the content of the policies and the grievance procedures. Consequently, there are very few reported cases of sexual harassment. Maternity and paternity leave policies follow the legally mandated period of paid leave according to the employment laws of Zambia (four months for women and five working days for men). The short period of paternity leave prevents male employees from supporting their spouses. While REA offers part-time employment, flexible work options are not available to employees in MoE, ZESCO and ERB. None of the institutions have lactation facilities for new mothers to accommodate breastfeeding/expression in order to avoid the development of mastitis.

2.4.4. Energy Entrepreneurship

There is limited data on women's participation as entrepreneurs in the energy sector in Zambia. ERB, the institution mandated to issue licences to energy operators and conduct regular compliance monitoring, does not collect sex-disaggregated data on majority shareholding (female/male-owned) and management (male/female-headed) of energy operators and other licensees in the electricity and petroleum subsectors. There is currently no known developer or Cooperating Partner (CP) that applies the gender-supportive provisions in the procurement laws to promote the participation of women-led energy companies that are owned or managed by women.

While there is limited information on women's participation in the electricity and petroleum subsectors, there is more documented information on men's and women's roles in charcoal production and distribution, which provides job opportunities for close to 218,000 people in Zambia. Whereas men are predominantly involved in charcoal production (95%), women tend to be overrepresented on the supply side. Most of the wholesalers (58.1%) and charcoal retailers (70%) are women[32].

The challenges to women's entrepreneurship in the energy sector are, in many ways, similar to other sectors, such as discrimination due to the dual legal system (customary and statutory law), lack of voice and influence, limited business skills, limited access to finance and the occurrence of sexual harassment and gender-based violence. However, since the energy sector is highly male-dominated, some of the challenges are exacerbated, and many women do not consider venturing into the sector or are discouraged by their family due to gender stereotypes about what is appropriate for a woman to do according to the Zambian culture.

2.5. Institutional Capacity in Gender Mainstreaming

Institutional capacity for GM in energy policies, programmes and organisations in the energy sector includes human capacity, procedures and systems for Monitoring and Evaluation (M&E) and reporting structures.

2.5.1. Expertise in Gender Mainstreaming and Gender Analysis

There is currently no energy institution in Zambia with a dedicated gender specialist who can provide expertise on GM in energy infrastructure projects, policies and plans. This includes MoE itself, which has a Department of Planning and Information (DPI) responsible for mainstreaming gender into policy and monitoring mainstreaming in other areas. While ZESCO and REA have environmental specialists, social scientists and community engagement specialists, they generally do not have sufficient expertise, time or resources to identify and integrate gender considerations. Consequently, many key energy

31 Ministry of Energy, European Union and IAEREP, 2019. Gender assessment of the energy sector in Zambia
32 Ministry of Energy, 2017. National woodfuel study

programmes and plans have not been informed by gender analysis, which may result in overlooking the specific energy needs of women and other disadvantaged groups.

As a way of addressing this gap in capacity, REA signed a Memorandum of Understanding (MoU) with the Non-Governmental Gender Organisations' Coordination Council (NGOCC) in 2018. Other initiatives to increase capacity in GM include training workshops targeting over a hundred stakeholders in the energy sector that were organised under the European Union (EU) funded *Increased Access to Electricity and Renewable Energy Production* (IAEREP) project in 2020. While this initiative contributed to increased knowledge of basic gender concepts, there is an absence of more comprehensive, tailor-made, long-term training programmes to support the incorporation of gender into existing systems and procedures.

2.5.2. Institutional Policies and Procedures

In 2011, a comprehensive gender analysis was conducted in the energy sector in Zambia[33], and a Proposed Gender and Energy Mainstreaming Strategy and Action Plan[34] was developed with support from the Zambia Gender and Energy Network (ZGEN). The proposed strategy and action plan was intended to guide MoE and other actors in the energy sector to develop their own plans, but it was never formally adopted or implemented.

Currently, REA is the only public energy institution with a Gender Action Plan (GAP) aimed at improving gender equality internally across departments and externally in programmes and projects. The GAP was developed in 2019 with technical support from the NGOCC, the umbrella organisation for gender organisations in Zambia. ZESCO and ERB have gender/women's empowerment policies in place that focus on gender-responsive recruitment and work environment to increase the representation of women in the organisations. However, these plans are limited to HR and lack actions and indicators to integrate S&G considerations into other areas, such as procurement and technical departments and energy projects.

2.5.3. Reporting, Monitoring and Evaluation

The Department of Planning and Information (DPI) at MoE has the main responsibility for coordinating data collection within the energy sector. DPI has the mandate to request data from implementing agencies and other actors in the energy sector. The 2020 M&E Plan for the energy sector includes a result area on the mainstreaming of cross-cutting issues in energy programmes and projects as well as gender-responsive indicators in other result areas. In addition, sex-disaggregated data will be collected on representation in employment and management, access to and use of energy for households (male/female-headed), enterprises (male/female-owned) and the operation of filling stations (male/female-headed). What is missing is sex-disaggregated data on licensees in the energy and petroleum subsector in terms of majority shareholding (male/female-owned) and management (male/female-led). This information could easily be collected by ERB, the public body in charge of the licensing process. It would provide important information on the participation of women-led/owned energy companies in the energy sector.

2.6. Coordination, Collaboration and Financing

GM across the energy sector requires coordination and collaboration between various actors and adequate financing.

33 GRZ, 2011. Zambia Gender and Energy Mainstreaming Strategy 2011 -2013, Part One: Gender Analysis of the Energy Sector,
34 GRZ, 2011. Zambia Gender and Energy Mainstreaming Strategy 2011 -2013, Part Two: Proposed Gender and Energy Mainstreaming Strategy and Action Plan 2011

2.6.1. Coordinating Structures

The Gender Division (GD) under the Office of the President (OP) is responsible for promoting gender equality and coordinating gender mainstreaming across line ministries. MoE serves as a secretariat of ZGEN whose members come from various public, private and civil society institutions in the energy sector. ZGEN is a driving force in promoting GM in policy and implementation in the energy sector but its sustainability depends on external funding.

As a way of increasing the participation of Non-Governmental Organisations (NGO) in the energy sector, the Ministry of Community Development and Social Services (MCDSS) in cooperation with MoE, established an NGO platform on RE and EE in 2021. The platform is aimed at enhancing the interactions among the NGOs and other key stakeholders on energy-related issues and increase advocacy for RE and EE. While gender equality is not an explicit objective of the platform, it provides a potential entry point for gender-responsive advocacy on RE and EE by NGOs.

The most active coordinating structure in the energy sector at the time of developing this strategy was the Off-Grid Energy Task Force (OGTF), which is a government-led platform that brings representatives of various ministries, statutory bodies, the private sector and the CPs together to coordinate initiatives in the off-grid electrification space. Currently, there is no member in this group with gender expertise to be providing a gender perspective on various activities implemented by the platform. The level of support, buy-in and commitment from the OGTF is likely to influence the effective implementation of the GESAP. Another structure with the potential to coordinate GM initiatives in the energy sector is the Energy Sector Advisory Group (ESAG).

As for the CPs, despite an increasing interest in the gender and energy nexus and several ongoing donor-funded energy programmes that include a strong gender component, there is limited communication and collaboration. Hence, at present, there is no proactive gender forum for the energy sector that could be sustained into the foreseeable future.

2.6.2. Gender Mainstreaming Financing and Investments

The national energy budget does not include any specific budget allocations for GM in programmes and policies or capacity-building initiatives. The recently established Energy Fund as provided for in the Energy Regulation Act No. 12 of 2019, presents an opportunity to allocate funding towards GM. The Energy Fund, whose main purpose is to develop the energy sector and ensure the stability of supply and strategic reserves, includes the possibility of earmarking funding for any other purposes as may be prescribed. In addition to specific budget allocation, Gender-Responsive Budgeting (GRB) is currently not applied in MoE. However, the EU is currently supporting the adoption of GRB in the Ministry of Finance and National Planning (MFNP) as part of the EFFECT programme. The Ministry of Finance is also introducing output-based budgeting, as reflected in the National Planning and Budgeting Act No. 1 of 2020, which obliges ministries to develop Institutional Strategic and Implementation Plans that are linked to the achievement of the development targets set out in the National Development Plan. Given that the 8NDP includes targets related to gender equality, it will support GRB initiatives in ministries, including MoE.

Besides government funding, there are various initiatives to increase private investment in the energy sectors in Zambia. There is limited information about the extent to which investors and financial institutions apply a gender lens in investment decisions (gender-smart investments). The Zambia Renewable Energy Financing Framework project, co-funded by the African Development Bank (AfDB) and Green Climate Fund (GCF) with additional funding from other investors (amounting to a total of US$154 million), is the only known initiative in Zambia that may be incorporating a gender perspective into energy financing. The framework, which will finance 100 MW RE projects and provide technical assistance to financial institutions to improve RE financing, has a GAP that, among other things, includes training of financial institutions in gender-responsive climate financing. However, the plan appears to be underfinanced, as only US$120,000 has been allocated towards its implementation.

3. Vision, Rationale and Guiding Principles

3.1. Vision

Women and men have equal access and decision-making power to acquire clean, reliable and affordable energy and technologies for productive and domestic use, and there is gender balance in representation and participation in all spheres of the sector.

3.2. Rationale

A GESAP for the energy sector is necessary to close the gender gaps in representation in decision-making and employment and ensure that energy policies and programmes are responsive to men's and women's energy needs. Increased gender equality is critical, as it contributes to the overall vision of the energy sector of universal access to clean and affordable energy. Nevertheless, gender equality and non-discrimination are not just a means to an end but also a tremendously important goal, as demonstrated by the GRZ's ratification of international conventions and enactment of gender related laws in the country.

With the enactment of the GEEA, public and private bodies were provided with an overall framework on how gender equality should be promoted. The NEP 2019 incorporated many of the principles and special measures provided by the GEEA. Therefore, to operationalise the objective of the NEP 2019 to increase systematic mainstreaming of gender in the energy sector, the GESAP has identified the available gender gaps in the energy sector and provides activities that will ensure gender equality and non-discrimination in the energy sector.

3.3. Guiding Principles

The GESAP will be guided by the following principles:

Morality and Ethics	In implementing gender mainstreaming and social inclusion programmes in the energy sector, Government will ensure that morality and ethics are upheld.
Patriotism and National Unity	Patriotism and national unity are a cornerstone for socioeconomic development. Infrastructure in the energy sector is very key to ensure equitable and inclusive delivery of services and Government will ensure that the public exercise patriotism and national unity so as to ensure ownership of infrastructure and reduce vandalism.
Social Justice	In implementing gender mainstreaming and social inclusion programmes in the energy sector, Government will ensure that it protects vulnerable groups in society.
Equality and Non-Discrimination	The Government will endeavour not to discriminate in the implementation of gender mainstreaming programmes in the energy sector.
Accountability	All departments, units, statutory bodies and parastatals under MoE will be accountable for achieving agreed-upon objectives and activities.

Based on the above guiding principles, the GESAP adopts two main strategies to achieve gender equality, namely GM and women's empowerment. The strategies go hand in hand, and one cannot replace the other. GM is the process of assessing the implications for women and men of any planned action and considering their different needs and experiences to ensure that both genders benefit equally and inequality is not perpetuated. GM is not a goal, but a means to achieve gender equality.

Women's empowerment is a process comprising of five equally important dimensions: welfare, access to resources, awareness, participation, and control. While GESAP recognises that both men and women can be disadvantaged and experience different forms of vulnerability due to their respective gender roles, the gender gaps in the energy sector almost exclusively disadvantage women, as clearly shown in the situation analysis. For this reason, women's empowerment is a critical aspect of achieving gender equality.

4. Objectives and Actions

4.1. Strategic Objectives

The overall objective of GESAP is to enhance gender equality, social inclusion and non-discrimination in all spheres of the energy sector. The GESAP is underpinned by the following five SOs that will help to achieve the overall objective:

(a) Strategic Objective 1: To increase access to and use of clean energy for domestic and productive purposes;

(b) Strategic Objective 2: To increase social and gender integration in energy infrastructure projects;

(c) Strategic Objective 3: To promote equal representation and participation of women as decision-makers, employees and entrepreneurs in the energy sector;

(d) Strategic Objective 4: To strengthen institutional capacity to mainstream gender in energy policies, energy programmes and within organisations; and

(e) Strategic Objective 5: To increase coordination, collaboration and financing for gender equality in the energy sector.

The GESAP specifically supports PO10 of NEP 2019, which is on GM in the energy sector, but since gender is a cross-cutting issue, it also cuts across the other POs.

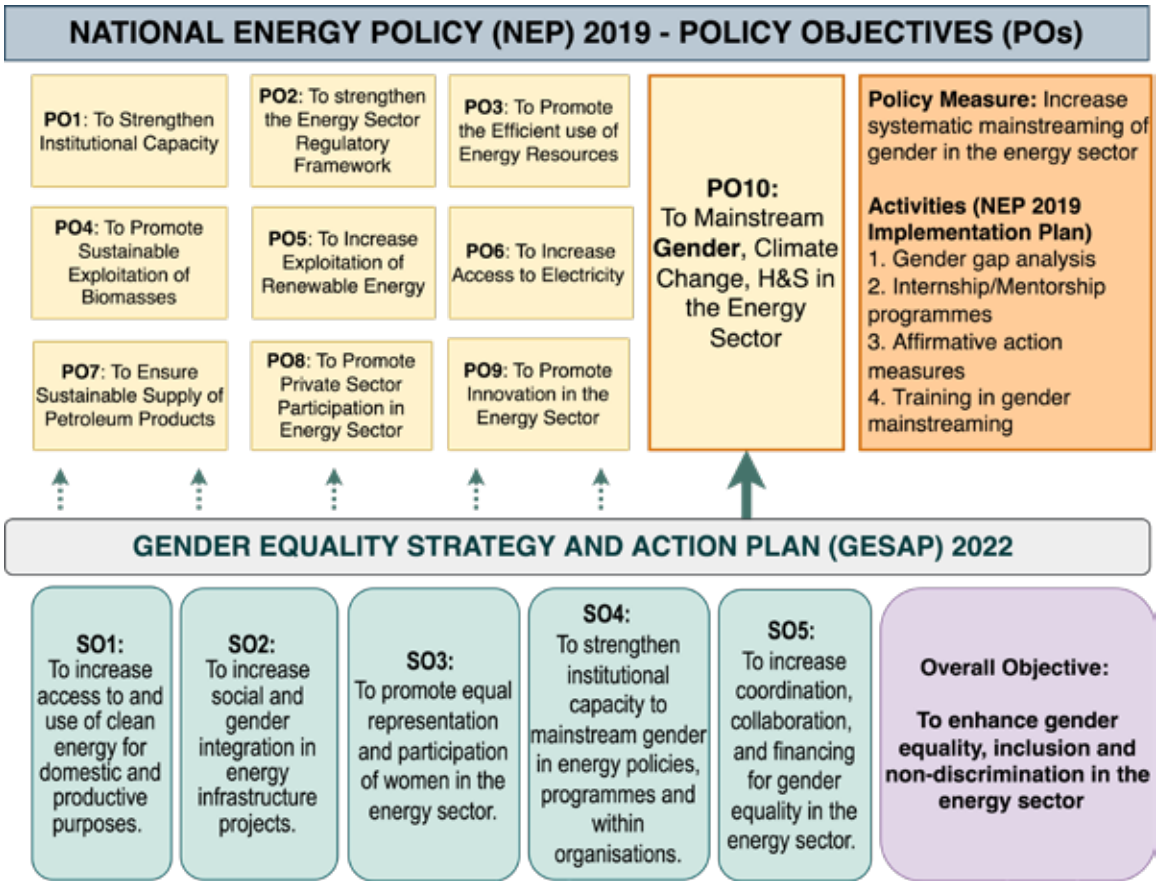

Figure 3: Linkages Between the National Energy Policy 2019 and the Gender Equality Strategy and Action Plan

4.2. Summary of Activities

Each SO is supported by five activities, as illustrated in the text box below. The details of the implementation are described in the Action Plan in Chapter 5. The Action Plan is underpinned by a theory of change, which is described in detail in Annex 2.

Strategic Objective 1: To Increase Access to and Use of Clean Energy for Domestic and Productive Purposes

Key activities

1.1. Design/implement a nation-wide Clean Energy for Cooking programme
1.2. Design/implement a gender-responsive PUE programme
1.3. Develop a creative financing mechanism for clean energy technologies
1.4. Support the NGO platform on EE and RE to conduct gender-responsive RE/EE advocacy activities
1.5. Conduct a gender analysis prior to the development/revision of major electrification plans, policies and programmes

Strategic Objective 2: To Increase Social and Gender Integration in Energy Infrastructure Projects

Key activities

2.1. Adopt gender-responsive procurement practices and incorporate gender in tender documents
2.2. Include gender specialists as key personnel in energy infrastructure works contracts
2.3. Develop and incorporate minimum S&G requirements in EIA/ESMP guidelines
2.4. Enforce laws and regulations on gender equality, working conditions and health and safety
2.5. Conduct an ex-post study on the gender impacts of energy infrastructure projects

Strategic Objective 3: To Promote Equal Representation and Participation of Women as Decision-Makers, Employees and Entrepreneurs in the Energy Sector

Key activities

3.1. Undertake STEM outreach activities and scholarship programmes targeting girls
3.2. Undertake internship, mentorship and leadership programmes targeting women
3.3. Adopt formally a target of 50% representation in employment and on boards
3.4. Support HR in creating a conducive work environment
3.5. Design and implement a women's energy entrepreneurship programme

Strategic Objective 4: To Strengthen Institutional Capacity to Mainstream Gender in Energy Policies, Energy Programmes and Within Organisations

Key activities

4.1. Support implementing agencies in developing/revising organisational GAPs
4.2. Conduct annual internal gender audits
4.3. Provide tailor-made training and support to staff in GM and gender analysis
4.4. Incorporate S&G considerations into existing procedures, plans and reporting templates
4.5. Collect sex-disaggregated data to inform policy making and programming

Strategic Objective 5: To Increase Coordination, Collaboration, and Financing for Gender Equality in the Energy Sector

Key activities

5.1 Strengthen the role of the GFPs
5.2 Establish mainstreaming subcommittees in all implementing agencies
5.3 Establish strong reporting and accountability mechanisms on gender performance
5.4 Adopt GRB and earmark funding for GM
5.5 Conduct a gender assessment of private investments in the energy sector in Zambia and formulate recommendations on how to promote gender-smart investments

5. Action Plan

The Action Plan describes in detail the activities underpinning each SO, and provides outcome indicators, targets, responsible units and budgets.

5.1. Access to and Use of Clean Energy

Strategic Objective 1: To Increase Access to and Use of Clean Energy for Domestic and Productive Purposes

Access to and use of clean energy for cooking is an important energy need for women due to their role as the main provider of energy for households. The high dependency on biomass in Zambia disproportionately affects women, as they spend a considerable amount of time acquiring and preparing fuel for domestic use and are exposed to smoke during cooking, with consequent health effects. Despite the adverse impacts on women, clean energy for cooking has been overlooked in Zambia, as evidenced by the recent large-scale investments in SHS and solar mini-grids in off-grid areas. These systems usually do not accommodate electric stoves and cookers due to the high electrical load and, thus, fail to address an important energy need for women.

Whereas PUE has gained more attention by energy planners than domestic use, such as cooking, there tends to be an (implicit) assumption that once a community is connected, this will, by default, lead to improved livelihoods and socioeconomic development in the community, which has not quite been the case. Many households that have access to electricity use it for lighting, phone charging and television primarily, rather than for productive purposes. Another gender gap related to access to and use of energy is the unequal uptake of off-grid solutions, such as SHS and solar lanterns. In rural areas, male-headed households are more than four times as likely to use off-grid solutions than female-headed households. Despite significant gender gaps in access to and use of clean energy, as discussed above, many energy programmes, policies and plans have not been informed by a gender analysis, which would help to identify and address gender-specific barriers, such as willingness to pay or awareness of clean energy technology suppliers, helping to design appropriate measures aimed at increasing the uptake of electricity services in rural areas.

5.1.1. Activity 1.1: Design and Implement a Nationwide Clean Energy for Cooking Programme Aimed at Increasing the Uptake of Clean Cooking Solutions

Changing cooking practices, passed on from generation to generation, is a complex and challenging task. Despite several cookstove programmes operating worldwide, including in Zambia, the adoption and sustained use of improved/clean cookstoves remain low among households. Thus, it is key that the design of such programmes is informed by a systematic review of evidence about drivers of and barriers to clean energy technologies. In order to achieve transformational change, the programme must be holistic and combine the following interventions; enhancement of demand, strengthening supply and creating an enabling environment for clean cooking programmes.

While women are an important target group for such programmes as cooking is primarily performed by women, in most households, men must also be targeted as they are decision makers in many homes. In addition, the programme should not reinforce the gender stereotype that cooking is only for women but rather take the opportunity to promote men's participation in the household.

5.1.2. Activity 1.2: Design/Implement a Gender-Responsive Productive Use of Energy Programme

The government recognises the importance of going beyond access to energy to the use of energy. Thus, the need for a PUE programme, ideally implemented in cooperation with NGOs and local leaders. As a pilot, this programme could target recently electrified communities or demonstration projects in order to amplify the impact of these initiatives.

The PUE programme should be evidence-based and tailored to specific communities, with clearly defined and measurable expected socioeconomic impacts. There should be a strong focus on end-user training and the provision of appliances based on local value chains.

The PUE programme should be gender-responsive, i.e. make sure that men and women benefit equally from the programme by identifying gender-specific barriers, opportunities and needs. Women-led cooperatives, and other women's groups should be specifically targeted.

5.1.3. Activity 1.3: Develop Creative Financing Mechanisms to Improve Access to Clean Energy Technologies for Productive and Domestic Use

The success of clean cooking and PUE programmes is partly dependent on access to credit, as the majority of households, especially in rural areas, live in poverty. Different financing mechanisms must be explored, such as grants, credit lines, Pay-As-You-Go (PayGo), VSLAs and subsidies.

This activity should be linked to the GAP of the Zambia Renewable Energy Financing Framework, which includes several initiatives to increase financing in RE, specifically targeting women.

This activity should be aligned with other energy sector related strategies which includes initiatives aimed at improving and scaling up existing RE financial instruments.

5.1.4. Activity 1.4: Support the NGO Platform on EE and RE to Conduct Gender-Responsive Advocacy Activities

The NGO Platform on RE and EE was established in May 2021 by MCDSS in cooperation with MoE. The rationale behind the platform is to enhance the interaction of NGOs amongst themselves and with other key stakeholders on energy-related issues and increase advocacy for RE and EE. The NGOs on the platform have received technical training on RE, EE and advocacy skills, and a web-based database has been set up to facilitate collaboration and sharing of information across organisations.

The platform will require further support in designing and implementing advocacy initiatives, which provides a good entry point for GM. Rather than a gender-neutral (i.e. gender-blind) approach to RE and EE, the platform should promote RE and EE solutions that are responsive to men's and women's energy needs.

5.1.5. Activity 1.5: Conduct Gender Analysis Prior to the Development and Revision of Major Energy Plans, Policies and Programmes

Gender analysis helps planners to identify gender-specific needs and barriers related to access to and the use of clean energy for different groups. Based on the findings, measures can be designed that respond to these needs, thus, amplifying the impact of the policy or programme.

A gender analysis goes beyond gender and also looks at how gender interacts with other factors, such as age, marital status, disability and residence, which may produce different forms of power relations, inequalities and discrimination. For example, rather than targeting female heads by default, which is a very heterogeneous group, gender analysis may find that widows and widowers living with disabilities in rural areas belong to the most vulnerable group for an intervention related to electricity access.

Gender analysis must be conducted prior to the development/revision of all major energy plans, policies

and programmes. While capacity will be built for MoE to conduct basic gender analyses, an expert consultant will be required to conduct more comprehensive gender analyses for certain programmes and plans.

Table 4: Strategic Objective 1 - Implementation of Activities

Activities		Responsible unit	Estimated cost (ZMW)	Timeline
1.1	Clean Energy for Cooking programme (nationwide)	MoE, MoCTI, REA, academia, private sector, CSOs	10,000,000	2021-2025
1.2	PUE programme	MoE, REA, academia, private sector, CSOs	5,000,000	2026-2030
1.3	Creative financing mechanisms	MoE, AfDB	200,000	2021-2030
1.4	NGO Platform on EE and RE	MoE, MCDSS, CSOs	500,000	2021-2030
1.5	Gender analysis	MoE, implementing agencies	3,000,000	2021-2030

5.2. Energy Infrastructure Projects

Strategic Objective 2: To Increase Social and Gender Integration in Energy Infrastructure Projects

Despite progressive procurement laws with gender-supportive provisions in the country, the energy sector has not made deliberate efforts to promote the participation of women-led businesses in procurement related to energy infrastructure works contracts. In addition, tender documents generally lack clear and measurable S&G requirements. Another challenge is the gap in the regulatory framework on EIAs. Currently, there is no explicit requirement to conduct a gender analysis, which is necessary to capture the socioeconomic impacts of the project (positive and negative) on men and women. Consequently, the ESMPs of most energy projects do not include mitigation and enhancement measures to ensure that both genders benefit from the intervention.

While there are no exact statistics, the number of women employees in energy projects is generally very low, and they tend to face gender-specific challenges, such as sexual harassment and fewer opportunities for advancement. Male workers, on the other hand, are more vulnerable to workplace accidents.

5.2.1. Activity 2.1: Adopt Gender-Responsive Procurement Practices through Reservation and Preference Schemes and Inclusion of Social and Gender Requirements in Tender Documents

According to the procurement laws of Zambia, reservation schemes can be used to reserve certain work contracts for targeted groups, while preference schemes give a margin of preference to targeted citizens and companies in the evaluation of bids. The scheme can be applied to women-led businesses or businesses with a large number of women if the application of the scheme and eligibility to participate are stated in the solicitation documents.

Inclusion of S&G requirements in procurement documents, including technical specifications and the bill of quantity, is another entry point to advance gender equality and ensure that men and women are not negatively impacted by a project, e.g. quotas for female employment, regular toolbox talks on anti-sexual harassment for all workers and raising awareness in project-affected communities regarding corruption and sexual exploitation.

The Zambia Association for Women in Construction (ZAWIC) and the EIZ through the ZWES are important organisations to involve as gender-responsive procurement guidelines are developed.

The gender-responsive guidelines should be linked to the current efforts of MoE under related energy strategies, to develop an innovative e-procurement platform for Small and Medium Enterprises.

5.2.2. Activity 2.2: Include Social and Gender Specialists as Key Personnel in Works Contracts and EIA Service Contracts for Large Energy Infrastructure Projects

To ensure that S&G considerations are adequately integrated with infrastructure projects, S&G specialists must be included as key personnel in the staffing requirements for EIA service contracts as well as works contracts.

The S&G specialist should be responsible for developing and implementing the contractor's ESMP, conducting S&G audits, investigating reported cases of harassment, corruption and other S&G incidents, and supporting site establishment through community engagement.

In addition, the S&G specialist should, in cooperation with existing community structures, create an enabling environment for the uptake of energy services for productive and domestic use, e.g. raising awareness of the benefits of electricity and suppliers of clean energy technologies, providing training in entrepreneurship and facilitating linkages with financial institutions and VSLAs to increase access to electricity.

5.2.3. Activity 2.3: Develop Sector-Wide EIA and ESMP Guidelines for Energy Projects with Minimum Social, Gender and Environmental Requirements and Key Performance Indicators

As per ZEMA regulations, all developers must conduct an EIA prior to any project development. Although ZEMA has guidelines (formats) to support the development of EIAs and ESMPs, they are not very detailed and are silent on gender. As long as developers comply with the minimum requirements set out in the ZEMA guidelines, they are free to develop their own guidelines, which ZESCO has already done.

Rather than each developer having their own guidelines, MoE, in cooperation with ZEMA, should take the lead in developing sector-wide EIA and ESMP guidelines for energy projects that, among other things, include minimum S&G requirements, such as 30% female employment and training on sexual harassment prevention and response. In this way, gender will be systematically mainstreamed in the energy sector rather than on an ad hoc basis, depending on the project financier. It is critical that this activity is aligned with the corresponding initiative put forward in the RE Strategy and Action Plan, i.e. to support ZEMA in streamlining EIA procedures.

5.2.4. Activity 2.4: Enforce Laws and Regulations on Gender Equality, Working Conditions and Health and Safety through Monitoring Compliance and Auditing Contractors and Operators

While the GD is mandated with coordinating and supervising the implementation of the GEEA, it is the responsibility of public and private bodies to implement the provisions of the Act within their areas of operation.

Observations from the field have shown that the GEEA, other important pieces of legislation and regulations related to working conditions and health and safety need to be enforced. Male workers are disproportionately represented in workplace accidents, making health and safety a gender-specific need for men.

Compliance monitoring of contractors and energy operators, conducted by REA, ZESCO and ERB, provides a good entry point for monitoring S&G performance and enforcing the above laws. The Association of Consulting Engineers of Zambia (ACEZ), EIZ and ZEMA also have an important role to play in this area.

While ZESCO and REA are obliged to ensure compliance with various laws and regulations in their capacity as implementing agencies, ERB does not have the same legal obligations. However, it should

be noted that Section 3 of the Electricity Act No. 11 of 2019 emphasises that the ERB should carry out functions conferred on it under any other written law in addition to the Electricity Act No. 11 of 2019 and the Energy Regulation Act No. 12 of 2019. As a public body, it has the same responsibility as REA and ZESCO to develop special measures to implement the various provisions in the GEEA, e.g. the inclusion of S&G requirements in the technical regulations for mini-grid operators and subsequent monitoring of compliance.

5.2.5. Activity 2.5: Conduct an Ex-Post Gender Impact Study of Energy Infrastructure Projects

While developers are obliged to conduct an EIA prior to any project intervention, there are few studies conducted after the completion of projects. There is a need for a systematic review of energy projects that looks at: gender impacts related to the construction phase, such as employment opportunities, working conditions, resettlement issues and reported S&G incidents, e.g. job discrimination, exploitative working conditions, corruption, sexual harassment and sexual abuse[35]; and gender impacts related to project implementation, such as time savings and improved wellbeing of women. The study should look at positive as well as negative gender impacts.

Table 5: Strategic Objective 2 - Implementation of Activities

Activities		Responsible unit	Estimated cost (ZMW)	Timeline
2.1	Adoption of gender-responsive procurement	MoE, implementing agencies, ZPPA, CEEC	500,000	2021–2022
2.2	S&G specialists as key personnel	MoE, REA, ZESCO	Neutral	2021–2022
2.3	Sector-wide EIA and ESMP guidelines for energy projects	MoE, REA, ZESCO, ERB, ZEMA	500,000	2021–2030
2.4	Enforcement of laws and regulations on gender equality, working conditions and health and safety	MoE, REA, ZESCO, ERB, ACEZ, EIZ, ZEMA	200,000	2021–2030
2.5	Conduct an Ex-Post Gender Impact Study of Energy Infrastructure Projects	MoE, Academia	1,000,000	2021-2022

5.3. Representation and Participation

Strategic Objective 3: To promote equal representation and participation of women as decision-makers, employees and entrepreneurs in the energy sector.

The energy sector is a traditionally male-dominated sector, with women making up, on average, only 24% of the workforce in public energy institutions, mainly concentrated towards corporate functions such as legal, finance and HR. In technical positions, women's representation in employment drops to 6% despite the increasing number of women graduates in engineering and technical areas. Women are also underrepresented in management positions and on energy boards, which limits their opportunities to participate in energy governance.

There is limited information about female energy entrepreneurs due to gaps in data collection; however, the number of women-led/owned businesses in the electricity and petroleum subsectors is likely to be low. In contrast, in the charcoal value chain, women make up most of the wholesalers and retailers.

35 The study should combine reports from the contractors and developers on social and gender performance, including incidents reported through the Grievance Redress Mechanism, with primary data collection with former workers and men and women in project-affected communities.

5.3.1. Activity 3.1: Undertake STEM Outreach Activities and Scholarships Programmes for Girls

While the last decade in Zambia has seen progress in girls taking up STEM subjects as a result of the establishment of Girls' Technical Schools, STEM subjects are still dominated by boys. In order to achieve equal participation of men and women in the energy sector, girls must be encouraged at an early age to take up STEM subjects. Outreach activities should aim at changing the perceptions of who can make a career in the energy sector by inviting female engineers and technicians from key energy institutions to talk about their work. As part of these activities, negative gender norms about male primacy (men as hierarchically superior) and gender essentialism (men and women as fundamentally, intrinsically different) must be addressed[36].

Scholarships to STEM programmes (ideally related to energy) should be provided to girls with a talent for and interest in STEM subjects. Girls in communities with recently implemented energy infrastructure projects should be specifically targeted to increase local capacity in the operation and maintenance of energy infrastructure/technologies, including the decommissioning of technologies such as SHS.

5.3.2. Activity 3.2: Undertake Internship, Mentorship and Leadership Programmes Targeting Female Engineers, Technicians and Managers

The internship programmes will require close cooperation with universities and training institutions. While internship programmes are aimed at recruiting more women into technical positions, mentorship and leadership programmes will aim at retaining women in the sector and supporting career advancement.

It is recommended that the EIZ, through ZWES and female engineers and technicians currently working in the energy sector, be involved in the design of these programmes.

5.3.3. Activity 3.3: Formally Adopt a Target of 50% Representation of Women in Employment and on Boards

Setting targets for women's participation is effective if followed by regular monitoring and reporting, strong accountability mechanisms and periodic reporting to MoE. The 50% target should be formally adopted and internal and/or public communication must be circulated on this Commitment. The target should be applied in recruitment, professional development, promotion, and board appointments. For boards, gender alternation between the president and vice president is recommended, i.e. if the president is a man, the vice president is a woman and vice versa.

Data on women's participation should not only focus on the total number of women but also look at the number of women in technical positions and management. HR should produce biannual corporate gender dashboards with statistics relating to the number of female recruits, women in management, shortlisted female candidates, female interns, etc.

5.3.4. Activity 3.4: Support HR in Creating a Conducive Work Environment

Sexual harassment in the workplace disproportionately affects women, especially in male-dominated sectors. Strengthening the HR capacity in sexual harassment prevention and investigation is likely to have a positive impact on the retention of women in the energy sector. Development of anti-sexual harassment policies should include a clear reporting mechanism and recurrent sensitisation of staff.

HR should also be supported in identifying barriers to women's participation and retention in the energy sector by incorporating gender considerations into existing workplace/employee satisfaction surveys, conducting salary mapping and training senior staff in acknowledging and addressing their own gender

36 Gender essentialist norms can explain why gender segregation in education and occupations is more pronounced in egalitarian and developed countries. For more information see Breda, T., 2020. Gender stereotypes can explain the gender-equality paradox. Proceedings of the National Academy of Sciences of the United States of America.

bias. Gender bias by senior staff may result in young female engineers being assigned administrative and less challenging tasks while their male counterparts are sent into the field, which ultimately affects their career progression.

Creating family-friendly policies is another way to improve the work environment for female employees and allow male employees to take more responsibility at home. This could include generous maternity and paternity leave, flexible time for employees who are breastfeeding or the availability of lactation facilities.

5.3.5. Activity 3.5: Design and Implement a Women's Energy Entrepreneurship Programme

The design phase of the programme should include an assessment of women's entrepreneurship along the clean energy value chain, including collecting sex-disaggregated data for ERB licensees in the energy sector (shareholding and management). The assessment should include a gender analysis of the operation, maintenance and decommissioning of clean energy technologies, such as SHS.

Based on the findings, relevant target groups should be identified and appropriate interventions developed. This could include supporting existing women-led energy companies to become Energy Service Companies (ESCOs) and accredited service providers in energy auditing, measurement and verification and other specialised energy services. In rural off-grid communities, female led SMEs could be trained in the operation, maintenance and decommissioning of clean energy technologies.

Table 6: Strategic Objective 3 - Implementation of Activities

Activities	Responsible unit	Estimated cost (ZMW)	Timeline
3.1 STEM outreach activities and scholarships for STEM programmes	MoE, implementing agencies (with support from the EIZ through ZWES)	1,500,000	2021–2030
3.2 Internship, mentorship and leadership programmes	MoE, implementing agencies	500,000	2021–2030
3.3 Target of 50% representation of women	MoE, implementing agencies	Neutral	2021–2030
3.4 Conducive work environment	MoE, implementing agencies	500,000	2021–2030
3.5 Women's energy entrepreneurship programme	MoE, REA, private sector	4,500,000	2026–2030

5.4 Institutional Capacity

Strategic Objective 4: To strengthen institutional capacity to mainstream gender in energy policies, energy programmes and internally.

There is currently no energy institution in Zambia with a dedicated gender specialist who can provide expertise in GM in energy infrastructure projects, policies and plans. It is also rare for gender expertise to be requested as part of the key personnel in tender documents for works or service contracts. Consequently, many key energy programmes and plans, have not been informed by a gender analysis to identify gender gaps, e.g. willingness to pay and uptake of energy services and other areas, which could influence the implementation of those programmes and plans.

REA is the only implementing agency with a GAP aimed at improving gender equality internally across departments as well as externally in programmes and projects. Generally, gender tends to be mainstreamed on an ad hoc basis, as there are no checklists or minimum requirements that must be followed in policy development, programming and procurement.

Another challenge is the lack of sex-disaggregated data in the energy sector. The collection of sex-disaggregated data is key to identifying gender gaps and monitoring gender equality performance.

5.4.1. Activity 4.1: Develop/Revise Organisational Gender Action Plans for all Implementing Agencies to Ensure Operationalisation of and Alignment with the GESAP

The successful implementation of the GESAP is dependent on the implementing agencies and private sector taking ownership of the plan and developing their own GAPs tailored to their operations and mandate or revising existing GAPs to ensure that they are aligned with the objectives of the GESAP. As per the GEEA, all public and private bodies are obliged to develop GAPs to advance gender equality within their area of operation.

The GAPs should be developed through a participatory approach with the active involvement of senior management and the support of a gender specialist. As per the GEEA, organisational GAPs should be submitted to the GD for review and approval.

5.4.2. Activity 4.2: Conduct Gender Audits to Assess the Gender Equality Performance of the Ministry of Energy and Implementing Agencies.

The GD is mandated with conducting gender audits of public and private bodies. However, due to lack of capacity and resources, this does not take place on a regular basis. There is a need to complement these audits with internal and external audits conducted by MoE with technical assistance. The self-assessment should be conducted on a biannual basis by the Planning and/or HR department within the respective organisation, with the support of the Gender Focal Point (GFP) person. There are many self-assessment tools available, but United Nations (UN) Women recommends Women's Empowerment Principles Gender Gap Tool[37], which covers policies and practices on gender equality across business functions.

In addition to the self-assessments, gender audits of selected energy programmes will be needed. These should be conducted by MoE. These gender audits could be combined or incorporated with the midterm evaluation of programmes. While MoE and implementing agencies should be the main organisations conducting gender audits, private companies should also be encouraged to complete these audits as per the provisions of the GEEA.

5.4.3. Activity 4.3: Provide Tailor-Made Training and Support in Gender Mainstreaming and Gender Analysis

Capacity building in GM for staff is required and it should target MoE, implementing agencies and relevant sector associations. The focus of the training should be decided in cooperation with the mainstreaming subcommittees and the GFP persons of each organisation. Examples of topics which should be covered include social and gender integration in energy projects, gender-responsive procurement, and compliance monitoring of energy operators.

The first phase of the training should be implemented over a period of two years through quarterly meetings and mentoring. The training should be action-oriented by agreeing on actions to be implemented between the meetings. This should be followed by a second phase, which should focus on refresher training on an annual basis.

5.4.4. Activity 4.4: Incorporate Social and Gender Considerations into Existing Procedures, Plans and Reporting Templates

This activity is closely linked to activity 4.3 (training). The training will have a strong focus on reviewing existing procedures and documents within the respective organisations to make them more gender-responsive, e.g. creating a community mobilisation strategy or including a section on S&G performance in the annual reports.

37 weps-gapanalysis.org

There are also synergies with activity 4.5, as the collection of sex-disaggregated data will be added to many existing procedures, e.g. the application for a license in the electricity and petroleum subsectors managed by the ERB could include sex-disaggregated information of the shareholders and management of the company.

5.4.5. Activity 4.5: Collect Sex-Disaggregated Data on Gender and Energy to Inform Policy Making and Programming

Evidence-based policy making and programming require sex-disaggregated data to identify and address gender gaps in energy access and use. Sex-disaggregated data should be collected as part of existing studies in the energy sector, such as market assessment studies, EIAs and programme evaluations. In addition, it is essential that Zambia Statistics Agency (ZamStats) collects sex-disaggregated data on different gender and energy aspects through their various national surveys. Table 7 provides additional examples of sex-disaggregated data that could be collected through various surveys/studies.

There is a need to change certain procedures and reporting systems to include sex-disaggregated data. For example, REA's and ZESCO's contractors must report on the number of male and female employees, and ERB must start to collect sex-disaggregated data on licensees in terms of majority shareholding (male/female-owned) and management (male/female-led), which would provide important information on the participation of women-led/owned companies in the energy sector.

The collection of sex-disaggregated data must be followed by a gender analysis that summarises the gender gaps and the implications of the gender gaps and formulates recommendations for policy making and programming in order to address the gaps.

Table 7: Sex-Disaggregated Data to Collect

Relevant Surveys	Examples of sex-disaggregated data to collect
The MoE and implementing agencies	
Environmental impact assessment (baseline/ ex-ante/ex-post)	1) Economic activities, poverty/income levels and civil status 2) Land ownership practices 3) Gender-based violence, child marriages and teenage pregnancies 4) Participation in decision-making
Market assessment studies	1) Willingness to pay for energy services and technologies 2) Energy demands
End-of-programme evaluations	1) Impact of the project on men and women related to economic activities, health and time
Energy sector M&E plan	While many of the indicators in the M&E plan will be sex-disaggregated according to the result matrix, the following indicators are not: ▪ majority shareholding (female/male-owned) of licensees in electricity/petroleum subsectors ▪ management (male/female-led) of licensees in electricity and petroleum subsectors This information could be collected by the ERB as the body that manages licences across the energy sector.
ZamStats	
Living condition monitoring survey (LCMS)[38]	1) Percentage of households using improved/clean cooking stoves as their main cooking solution (electric stove/cooker, LPG stove, improved mbaula, pellet stove etc.) 2) Time spent by the household acquiring and preparing fuel for cooking
Demographic and health survey	1) Health and environmental impacts of using energy technologies and services (including traditional fuels) 2) Time spent acquiring and preparing fuel for cooking and heating (by men, women, boys and girls) 3) Time spent in the cooking area (by men, women, boys and girls) 4) Percentage of men/women aware of clean energy technology suppliers in their area 5) Percentage of men/women that have experienced respiratory problems and irritated eyes within the past three months

38 *Currently, the LCMS only collects data on energy usage at the household level, which can be problematic from a gender perspective, as it is based on the assumption of the household as a unit in which resources are shared equally between household members. It also obscures the different roles that men and women perform in the household, e.g., in relation to firewood collection.*

Labour force study	1) Percentage of women/men participating in the energy sector as employees or energy entrepreneurs

Table 8: Strategic Objective 4 - Implementation of Activities

Activities	Responsible unit	Estimated cost (ZMW)	Timeline
4.1 Organisational GAPs	Implementing agencies, GD	1,000,000	2021–2023
4.2 Gender audits	MoE, implementing agencies	3,000,000	2021–2030
4.3 Training and support in GM (recurrent)	MoE, implementing agencies	2,000,000	2021–2030
4.4 S&G considerations in existing procedures	MoE, implementing agencies	300,000	2021–2030
4.5 Sex-disaggregated data on gender and energy	MoE, implementing agencies, ZamStats	300,000	2021–2030

5.5 Coordination, Collaboration and Financing

Strategic Objective 5: To increase coordination, collaboration and financing for gender equality in the energy sector

In 2011, the ZGEN, which was headed by DOE, conducted a gender assessment of the energy sector, and based on the findings, a comprehensive Proposed GM Strategy and Action Plan was developed. However, this plan was never formally adopted and implemented by MOE, and the ZGEN gradually became inactive as the external financial support ended. Therefore, the successful implementation of this GESAP is dependent upon strong leadership from MoE, effective and sustainable coordination structures, strong reporting and accountability mechanisms and adequate funding.

In terms of coordination, MoE, REA, ZESCO and ERB have appointed GFPs; these are staff members responsible for coordinating and promoting the application of GM in their organisations. While this initiative has the potential to increase the systematic mainstreaming of gender in the sector, it has not been fully anchored within the organisations. The role and mandate of the GFPs are not clear, and in some cases, the appointments have not been communicated internally.

To further strengthen coordination on GM, MoE has established a gender secretariat. This is headed by MoE GFP and includes representation from all departments within the ministry and the GFPs of the implementing agencies. The gender secretariat is complemented by a multi-stakeholder Gender Technical Working Group (GTWG) with representation from the public, private and NGO sectors. In order to improve the efficiency of these structures and ensure sustainability, it is necessary to develop clear ToRs and establish reporting and accountability mechanisms.

Lastly, the implementation of the GESAP 2022 is dependent on adequate funding. The energy sector budget must include adequate allocations towards GM.

5.5.1. Activity 5.1: Strengthen the Role of the Gender Focal Points

To strengthen the role of the GFPs at MoE, REA, ERB and ZESCO, the tasks of the GFP, as clearly outlined in the ToRs provided by the GD, must be incorporated into their job descriptions and performance appraisals and include clear, monitored outcomes. This must be followed by internal communication within each organisation to spread awareness about the GFPs and their role. For ZESCO, which has close to 7,000 staff members, it is recommended that each department has a gender representative who can support the GFP.

Once the role of the GFPs has been agreed upon, they should receive annual training by the GD on GM, gender analysis and other tools that will help them to identify areas and processes within their organisation where gender should be mainstreamed.

The GFPs will be part of the mainstreaming subcommittees to be established in all implementing agencies and serve as a link between the committee and the gender secretariat at MoE. The gender secretariat will call for quarterly meetings to obtain reports from the GFPs on the gender performance of each organisation related to the implementation of the GESAP, the organisational GAPs and the gender-related indicators of the energy sector M&E plan.

5.5.2. Activity 5.2: Establish Mainstreaming Subcommittees in all Implementing Agencies

The mainstreaming committees will have representation from all departments within the organisation, including technical and procurement, and be headed by a senior staff member from the planning department with support from the GFP. The purpose of the mainstreaming subcommittees is to ensure that gender and other cross-cutting areas are mainstreamed in all areas of operation.

The mainstreaming subcommittees will be responsible for monitoring and reporting on the implementation of the organisational GAPs. Quarterly reports on the gender performance of their organisation will be produced and shared with senior management and the gender secretariat of MoE. The GFPs of each implementing agency will function as the link between the mainstreaming subcommittees and the gender secretariat of MoE.

The establishment of a mainstreaming subcommittee should also be considered by the OGTF and ESAG.

5.5.3. Activity 5.3: Establish Strong Reporting and Accountability Mechanisms on Gender Performance

ToRs for the gender secretariat, GTWG and mainstreaming committees must be developed that clearly outline the roles of these structures and the reporting requirements. MoE will develop agenda and reporting templates to be used by the respective structures. It is also critical that the information technology unit is engaged in order to improve the knowledge management of gender performance in the sector.

5.5.4. Activity 5.4: Adopt Gender-Responsive Budgeting, Earmark Funding for Gender Mainstreaming and Promote Gender-Smart Investments by the Private Sector

The energy sector budget does not include any allocations towards GM in policy making and programming. In order to conduct a gender analysis prior to the development/revision of major electrification plans, policies and programmes, among other things, funding must be provided.

The Energy Fund, as provided for in the Energy Regulation Act No. 12 of 2019, should include allocations towards clean energy for cooking and other gender-specific needs as well as allocations aimed at closing gender gaps in off-grid access to electricity between male- and female-headed households. Resources must also be made available for technical assistance in GM, gender analysis, gender audits and other areas.

5.5.5. Activity 5.5 Conduct a Gender Assessment of Private Investments in the Energy Sector in Zambia and Formulate Recommendations on How to Increase Gender-Smart Investments

There are many initiatives to increase private investment in the energy sectors in Zambia. Such investments have the potential to contribute to closing the gender gap in the energy sector through gender-smart investing. Gender-smart investing is an investment strategy that seeks to intentionally and measurably use capital to address gender disparities and better inform investment decisions.

The gender assessment should explore the level of gender awareness of investors and developers in the energy sector in Zambia, identify how decisions around investments are made and formulate recommendations on how to increase gender-smart investments.

Table 9: Strategic Objective 5 - Implementation of Activities

Activities	Responsible unit	Estimated cost (ZMW)	Timeline
5.1 Role of GFPs	MoE, GD, implementing agencies	50,000	2021–2022
5.2 Establish mainstreaming subcommittees	Implementing agencies	Neutral	2021–2023
5.3 Reporting and accountability mechanisms	MoE, implementing agencies	100,000	2021–2022
5.4 GRB and earmarked funding for GM (recurrent)	MoE, implementing agencies	3,150,000	2021–2030
5.5 Recommendations on how to promote gender-smart investments	MoE, IDC	500,000	2022–2023

5.6. Result Matrix and Draft Budget

The result matrix below provides a summary of the activities, expected results and budget of the GESAP. First, it considers the expected results at the outcome level. It includes outcome indicators, baseline data and targets for each strategic objective. It should be noted that for practical purposes, most of the outcome indicators are drawn from the Energy Sector M&E Plan 2019. The M&E plan mainly relies on data that is already being collected by ZamStats and other actors. Additional areas where it would be important to collect data in order to monitor gender gaps and measure gender impacts are outlined in in Chapter 5.

Second, the result matrix provides a summary of the activities under each SO, with output indicators, timelines and proposed budgets. More funding may be required, especially for larger interventions, such as the programmes on clean cooking (activity 1.1), PUE (activity 1.2) and women's entrepreneurship (activity 3.5). This will be determined during the design phase of these programmes.

Table 10: Gender Action Plan Result Matrix

Impact (Overall Objective): enhanced gender equality, inclusion and non discrimination in the energy sector										
Outcomes (Strategic Objectives)										
Strategics	**Outcome Indicators**	**Baseline**						**Target 2030**		**Responsible**
SO1: To increase access to clean energy for productive and domestic purposes	1.1 Percentage of households with access to grid electricity (female/male-headed households) *(Linked to result indicator 1.1 of the Energy Sector M&E Plan)*		Total	Male	Female			Nation: 70% Rural: 50% Urban: 90% <u>No differences</u> in access rates in male- and female-headed households		MoE, ZESCO, REA, ERB, private sector, CSOs
		Nation	37.1% (34.2)	38.8%	40.7%					
		Rural	8.4% (4.1)	3.9%	4.7%					
		Urban	69.1% (74.8)	74.5%	75.5%					
		Source: WB, 2018 MTF survey. Number in brackets: DHS 2018.								
	1.2 Percentage of households with off-grid access to electricity (female/male-headed) *(Linked to result indicator 1.1 of the Energy Sector M&E Plan)*		Total	Male	Female			Mini grids: 5.4%, 1.4 million (rural) SHS: 28.9%, 7.3 million (rural) <u>No differences</u> in access rates in male- and female-headed households		
		Nation	4.7% (4.6)	5.7%	1.5%					
		Rural	7.8% (7.6)	9.4%	2.1%					
		Urban	1.3% (0.8)	1.4%	0.8%					
		Source: WB, 2018 MTF survey. Number in brackets: LCMS 2015.								
	1.3 Percentage of business enterprises with access to electricity (female/male-owned) (Linked to result indicator 1.3 of the Energy Sector M&E Plan)	TBC						TBC		
	1.4 Percentage of households using clean cooking fuel (electricity, LPG/natural gas/biogas, solar) (Linked to result indicator 1.7 and 5.1 of the Energy Sector M&E Plan)		Clean fuel total	Electricity	LPG Biogas Natural gas	Solar			Electricity	LPG
		Nation	9.1%	9%	0.2%	0.2%		Nation	18.5%	40%
		Rural	2.1%	2%	0.1%	0.3%		Rural	13%	-
		Urban	18.7%	18.4%	0.3%	0.1%		Urban	24%	-
		Source: DHS 2018						<u>No differences</u> in access rates in male- and female-headed households		

	1.5 Percentage of households using biomass for cooking *(Linked to result indicator 1.7 and 5.1 of the Energy Sector M&E Plan*		Firewood	Charcoal		Firewood	Charcoal	
		Nation	48.1%	42.4%	Nation	29%	21.4%	
		Rural	79.3%	18.1%	Rural	61.5%	14%	
		Urban	5.8%	75.4%	Urban	4.5%	58.5%	
		Source: DHS 2018			No differences in access rates in male- and female-headed households			
	1.6 Percentage of households using improved/clean cookstoves	Nation: 0.4% Rural: 0.2% Urban 0.5%. *Source: WB, 2018 MTF survey*			TBC			
SO2: To increase S&G integration in energy infrastructure projects	2.1 Number of people employed in energy projects (male/female) *(Linked to result indicator 8.1 of the Energy Sector M&E Plan)*	TBC The MoE will request that ZESCO, the REA and the ERB start collecting sex-disaggregated data in accordance with the Electricity Act No. 11 of 2019, Section 3(k), 10(h), and 50(1).			TBC			ZESCO, REA, ERB, private sector
	2.2 Number of implementing agencies that have adopted gender-responsive procurement	0			All implementing agencies			
	2.3 Percentage of energy projects with published EIA reports that include a gender analysis in the socioeconomic impact assessment (including special measures and KPIs for gender equality/non-discrimination) *(Linked to result indicator 8.3 of the Energy Sector M&E Plan)*	**0%** *Source: Review of EIA reports for energy projects published on ZEMA's website (Jan 2021).*			**100%**			
SO3: To increase participation and representation of women as decision-makers, entrepreneurs and	3.1 Percentage of fuel filling stations operated by Zambians (male/female-managed) *(Linked to result indicator 3.4 of the Energy Sector M&E Plan*	TBC The MoE will request that the ERB starts collecting sex-disaggregated data in accordance with the Electricity Act No. 11 of 2019, Section 3(k)			TBC			MoE, implementing agencies, private sector

employees in the energy sector	3.2 Number of licensees in the petroleum and electricity sub-sector (male/female-owned) *(Linked to result indicator 7.2 of the Energy Sector M&E Plan)*	TBC The MoE will request that the ERB starts collecting sex-disaggregated data in accordance with the Electricity Act No. 11 of 2019, Section 3(k)					TBC	
	3.3 Percentage of women represented in employment in energy in the public sector (male/female) *(Linked to result indicator 8.1 of the Energy Sector M&E Plan)*		MoE	ERB	REA	ZESCO	50% representation of each sex	
		Male	69 (53%)	90 (69%)	65 (68%)	5153 (76%)		
		Female	62 (47%)	40 (31%)	31 (32%)	1606 (24%)		
	3.4 Percentage of women represented in energy sector management (middle/senior management) *(Linked to result indicator 8.2 of the Energy Sector M&E Plan)*	Male Senior	7 (50%)	13 (76%)	9 (82%)	171 (83%)	50% representation of each sex	
		Female Senior	7 (50%)	4 (24%)	2 (18%)	34 (17%)		
		Male Middle	12 (52%)	11 (92%)	11 (85%)	661 (74%)		
		Female Middle	11 (48%)	1 (8%)	2 (15%)	237 (26%)		
	3.5 Percentage of women in technical positions in the energy sector (public sector)	Male Tech	30 (77%)	35 (90%)	27 (84%)	3128 (88%)	30% of women in technical positions 50% of women in non-technical positions	
		Female Tech	9 (23%)	4 (10%)	5 (16%)	433 (12%)		
		Male Non-tech	39 (42%)	55 (60%)	38 (59%)	2023 (63%)		
		Female Non-tech	53 (58%)	36 (40%)	26 (41%)	1175 (37%)		
SO4: To increase institutional capacity to mainstream gender in energy	4.1 Number of implementing agencies that conduct annual internal gender audits and report the results to MoE and GD (using the Women's Empowerment Principles tool or other self-assessment tools)	0					All implementing agencies	MoE, GD, implementing agencies

policies and programmes and within organisations	4.2 Number of gender audits of energy projects (conducted by MoE with technical assistance) *(Linked to result indicator 8.4 of the Energy Sector M&E Plan).*	0	10 (one gender audit per year)	
	4.3 Number of gender audits of MoE (conducted by the GD)	One gender audit of MoE was conducted in 2019 by the GD. *Source: GD*	10 (one gender audit per year)	
	4.4 Number of ongoing energy programmes informed by a gender analysis (marked as G1 as per the OECD system)	IAEREP, LTDRP and Electricity Service Access Project (as of 2021)	All projects	
	4.5 Gender-responsive energy policies, strategies and plans developed	REMP 2008 (no gender), electrification strategy (under development) and biomass/clean cooking strategy/plan (missing)	Revised REMP (incl. gender) Biomass/clean cooking strategy/plan.	
SO5: To increase coordination, collaboration and financing for gender equality in the energy sector	5.1 Number of implementing agencies and coordinating structures in the energy sector with active mainstreaming committees that produce quarterly reports for their board (if applicable) and the gender secretariat of MoE	0	All implementing agencies and the OGTF.	
	5.2 Percentage of the energy sector budget and the Energy Fund allocated towards GM and the GESAP	0	TBC	

Actions for SO1 - increased access to and use of clean energy by women for productive and domestic use

Actions	Output Indicators	Timeline	Responsible Institution	Budget (ZMW)*
1.1: Design and implement a nationwide Clean Energy for Cooking programme	Number of men and people reached disaggregated by district	2021–2025	MoE, REA, academia, private sector, CSOs	10,000,000
1.2: Design/implement a gender-responsive PUE programme in selected districts	Number of women-led cooperatives, VSLAs and women's groups reached	2026–2030	MoE, MoCTI, REA, academia, private sector, CSOs	5,000,000
	Number of recently electrified communities reached			
1.3: Develop creative financing mechanisms for clean energy technologies	Gender assessment of creative financing mechanisms for clean energy technologies conducted	2021–2030	MoE, AfDB	200,000

Note! Align with the RE Strategy (see Section 5.2.2)	Operationalisation of the GAP of the Zambia Renewable Energy Financing Framework.			
1.4: Support the NGO platform on EE and RE to conduct gender-responsive advocacy campaigns	Number of NGO's trained on RE, EE, advocacy skills and the web-based database	2021–2030	MoE, MoCDSS, CSOs	500,000
1.5: Conduct a gender analysis prior to the development/revision of major electrification plans, policies and programmes. *Note! It is estimated that an expert consultant will be required for approximately 10 gender analyses*	Number of policies and plans informed by a gender analysis Number of programmes with gender-specific indicators in the log frame/result framework	2021–2030	MoE, implementing agencies	3,000,000
Actions for SO2 - increased social and gender integration in energy infrastructure projects				
2.1: Adopt gender-responsive procurement and incorporate gender in tender documents. *Note! This activity should be linked to the development of an innovative e-procurement platform, as outlined in the RE Strategy (see Section Error! Reference source not found.)*	Number of implementing agencies that have revised their procurement plans/strategies and procedures Number of works contracts with a minimum target or quota for female employment	2021–2022 2021–2022	MoE, implementing agencies, ZPPA, CEEC	500,000
2.2: Include gender specialists as key personnel in energy infrastructure works contracts	Number of works contracts that include gender specialists by institution	2021–2022	MoE, REA, ZESCO	Neutral
2.3: Develop sector-wide EIA and ESMP guidelines for energy projects with minimum social, gender and environmental requirements and key performance indicators *Note! Align with a similar initiative proposed under RE Strategy (see Section Error! Reference source not found.)*	EIA and ESMP guidelines developed Formal communication on the guidelines and minimum requirements shared by MoE to relevant implementing actors	2021–2030	MoE, REA, ERB, ZESCO, ZEMA	500,000
2:4: Enforce laws and regulations on gender equality, working conditions and health and safety	Legal requirements related to health and safety, working conditions and gender equality incorporated into compliance monitoring and audits	2021–2030	MoE, REA, ZESCO, ERB, ZEMA, EIZ, ACEZ	200,000
2.5: Conduct an ex-post study on the gender impacts of selected energy infrastructure projects	Ex-post study conducted on the gender impacts of selected energy infrastructure projects (approximately five projects)	2021–2022	MoE	1,000,000
Actions for SO3 - increased participation and representation of women as decision-makers, entrepreneurs and employees in the energy sector				

3.1: Undertake STEM outreach activities and scholarship programmes targeting girls: *Fifteen scholarships for secondary school and tertiary education* *!Five scholarships for secondary school and university*	Number of implementing agencies undertaking STEM outreach activities and scholarship programmes Number of participants in STEM outreach activities and number of applicants selected for STEM scholarships	2021–2030	MoE, implementing agencies (with support from the EIZ through ZWES)	1,500,000 (of which 1,000,000 is for scholarships)
3.2: Undertake internship, mentorship and leadership programmes targeting women *Note! Also included as an activity in NEP 2019*	Number of implementing agencies undertaking internship, mentorship and leadership programmes targeting women Number of female employees in internship, mentorship and leadership programs	2021–2030	MoE, implementing agencies	500,000
3.3: Formally adopt a target of 50% representation of women in employment and on boards	Formal communication on this commitment shared internally and/or publicly Biannual corporate gender dashboards with statistics on the number of female recruits, women in management/technical positions, shortlisted female candidates, female interns, etc. produced and presented to the board	2021–2030	MoE, implementing agencies	Neutral
3.4: Support HR in creating a conducive work environment	Number of implementing agencies with lactation rooms Number of implementing agencies that have incorporated gender considerations into existing workplace/employee satisfaction surveys	2021–2030	MoE, implementing agencies	500,000
3.5: Design and implement a women's energy entrepreneurship programme	Number of women successfully completing women's energy entrepreneurship programme	2021–2025	MoE, REA, private sector	5,000,000
Actions for SO4 - Increased institutional capacity to mainstream gender in energy policies and programmes and within organisations.				
4.1: Support implementing agencies in developing/revising organisational GAPs	Number of implementing agencies with organisational GAPs aligned with the GESAP	2021–2023	Implementing agencies, GD	1,000,000
4.2: Conduct gender audits (both self-assessments and external audits) *Note! It is estimated that an expert consultant will be required for approximately 10 gender audits*	Number of gender audits conducted (see outcome indicator 4.1, 4.2 and 4.3)	2021–2030	MoE, implementing agencies	3,000,000

4.3: Provide tailor-made training and support to staff in GM, gender analysis, etc.	Percentage of staff participation in gender training disaggregated by sex	2021–2030	MoE, implementing agencies	2,000,000
4.4: Incorporate S&G considerations into existing procedures, plans and reporting templates	Number of procedures, plans and reporting templates reviewed/approved by the mainstreaming subcommittees	2021–2030	MoE, implementing agencies	300,000
4.5: Collect sex-disaggregated data to inform policymaking and programming	Sex-disaggregated data collected and analysed for the indicators of the national M&E plan for the energy sector 2019	2021–2030	MoE, implementing agencies, ZamStats	300,000
	Revised reporting system by ZESCO, including sex-disaggregated employment data by contractors			
	Revised licensee process of the ERB to include sex-disaggregated data on shareholding and management of energy operators			
Actions for SO5 - increased coordination, collaboration and financing for gender equality in the energy sector				
5.1: Strengthen the role of GFPs	Formal communication shared internally about the role and mandate of the GFPs	2021–2022	MoE, GD, implementing agencies	50,000
	Number of implementing agencies with revised job descriptions/performance appraisals for GFPs			
5.2: Establish mainstreaming subcommittees in all implementing agencies	Number of implementing agencies with mainstreaming subcommittees	2021–2023	Implementing agencies	Neutral
	Number of reports produced by the committees and submitted to the gender secretariat			
5.3: Establish strong reporting and accountability mechanisms for gender performance	Develop ToR for the gender secretariat, GTWG and mainstreaming committees	2021–2022	MoE, implementing agencies	100,000
	Develop templates for agendas and reports			
5.4: Adopt GRB and earmark funding for GM	Number of implementing agencies trained in GRB	2021–2030	MoE, implementing agencies	3,150,000
	Number of implementing agencies with earmarked funding for GM (including implementation of organisational GAPs)			
5.5: Conduct a gender assessment of private investments in the energy sector in Zambia and	Number of gender assessments conducted	2022–2023	MoE, IDC	500,000
formulate recommendations on how to promote gender-smart investments				

6. Implementation Framework

Implementation of the Gender Equality Strategy and Action Plan will be undertaken by a broad range of stakeholders led by MoE as the custodian of the energy sector. The GTWG and the mainstreaming subcommittees will also play a critical role in implementation. Since gender is a cross-cutting issue, it is critical that the implementation of the GESAP, including resource mobilisation, is linked to the implementation of other strategies and plans, such as the Renewable Energy and Energy Efficiency strategies and the Integrated Resource Plan.

6.1. Institutional Arrangements

The effective implementation of the activities of the GESAP will be achieved through the collaborative efforts of all stakeholders at various levels as follows:

Ministry of Energy	Oversee and ensure the effective nationwide implementation of measures stipulated in this strategy.
Gender Division (Office of the President)	Monitor the effective implementation of the GEEA in public and private bodies in the energy sector and provide support in the development of organisational GAPs (activity 4.1), gender audits (activity 4.2) and training of GFPs (activity 5.1).
Ministry of Commerce, Trade and Industry (Department of Cooperatives)	Engage female-headed cooperatives to participate and mobilise other community members in the PUE programme (activity 1.2) and the Clean Energy for Cooking programme (activity 1.1) and create linkages between the cooperatives and VSLAs/financial institutions (activity 1.3).
Ministry of Community Development and Social Services	Provide support to the NGO platform on RE and EE (activity 1.5) as the leading ministry in collaboration with MoE and facilitate awareness-raising and behavioural change initiatives in the Clean Energy for Cooking and PUE programmes (activity 1.1 and activity 1.2) by engaging existing community structures, such as community welfare assistance committees and district/ provincial development coordinating committees.
Ministry of Green Economy and Environment (Forestry Department)	Support the Clean Energy for Cooking programme (activity 1.1) by promoting sustainable exploitation of wood fuel for efficient utilisation.
Academia	It will be critical to involve academia to ensure that the design of activities, such as the Clean Cooking programme and PUE programme, is based on evidence from the latest research in the area.
Association of Consulting Engineers of Zambia (ACEZ)	Enforcement of legislation on gender equality, working conditions, and health and safety through compliance monitoring and audits (activity 2.4).
Citizen Economic Empowerment Commission (CEEC)	Revise the regulations on public and preferential procurement and support the adoption of gender-responsive procurement in the energy sector (activity 2.1).
Engineering Institution of Zambia (EIZ through ZWES)	Provide guidance on the design and implementation of internship, leadership and mentorship programmes (activity 3.1), STEM scholarships and outreach activities (activity 3.2) and the creation of a more conducive work environment (activity 3.4).
Industrial Development Corporation (IDC)	Implement recommendations on gender-smart investments (activity 5.5).
Implementing agencies (REA, ERB, ZESCO, TAZAMA and Indeni)	Develop/revise organisational GAPs aligned with the strategic objectives and activities set out in the GESAP 2021, with concrete actions and adequate funding (activity 4.1). In particular, the REA and ZESCO must take the lead in S&G integration in energy infrastructure projects (Chapter 5.2), and the ERB has a pivotal role in collecting sex-disaggregated data on licensees (activity 4.5) to monitor women's participation in the energy sector.
Non-Governmental Organisations	Support the implementation of energy sector activities outlined in this strategy, especially the establishment and future activities of the NGO platform on RE and EE (activity 1.4).

Private sector	Support the implementation of energy sector activities outlined in this strategy, particularly the PUE programme (activity 1.2) and the women's energy entrepreneurship programme (activity 3.5).
Zambia Environmental Management Agency (ZEMA)	Revise regulations and guidelines on developing EIAs to include a gender analysis.
Zambia Public Procurement Agency (ZPPA)	Revise the regulations on public procurement and preferential procurement and support the adoption of gender-responsive procurement in the energy sector (activity 2.1).
ZamStats	Coordinate the development of a comprehensive energy sector statistical database, including sex-disaggregated data on gender and energy (activity 4.5).
Zambia Development Agency (ZDA)	Implement recommendations on gender-smart investments (activity 5.5).
Traditional leaders and local communities	Facilitate community consultations on the implementation of energy sector projects, ensure that both men and women benefit from employment (activity 2.4), help to monitor the S&G performance of the contractors and report any incidents to the developer and/or appropriate authorities (activity 2.5). This may also require engagement with the Ministry of Chiefs and Traditional Affairs and the House of Chiefs.
Cooperating Partners (CPs)	Support the implementation of energy sector activities outlined in this strategy.
The media	Facilitate and disseminate information on gender equality and energy and serve as a watchdog for improved accountability by government.

6.2 Resource Mobilisation and Financing

Implementation of the GESAP will require adequate human, financial, material and technical resources. The MoE will have the primary responsibility for committing adequate financial resources for the implementation of the plan. Since MoE and implementing agencies lack expertise in GM and gender analysis, many activities will require expert consultants and the support of CPs.

While MoE will mobilise resources specifically aimed at the implementation of the GESAP, the cross-cutting nature of gender means that it is important to consider the GESAP in resource mobilisation for other related energy sector strategies.

6.3. Monitoring and Evaluation

The implementation of this GESAP will be closely monitored to ensure that it is adequately institutionalised in line with its objectives. The monitoring will be done in accordance with the M&E plan for the energy sector. The monitoring, evaluation and reporting of the plan shall be result-oriented, with result-based indicators attached to each objective to measure results at the outcome level. This should be complemented by narrative reports, including a gender analysis of the collected data to highlight the implications for men and women and how the findings should be used to inform programming and policies.

The GESAP will undergo a midterm review after five years and a final-term review after ten years. The midterm assessment will focus on progress made in the implementation of the plan and assess the appropriateness of the overall strategic direction. Therefore, it will be designed to inform the remaining period of the policy and recommend adjustments where needed. The final evaluation will be undertaken after ten years and will focus on the impact of the implementation of the GESAP.

Adequate technical and financial resources will be allocated to the midterm assessment and final evaluation, which will be a participatory process and include the GTWG, implementing agencies and other relevant stakeholders from the public, private and civil society sector.

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Annex 1 – Engineering Institution of Zambia Engineering Membership Categories of 2020 by Sex

Category	Class	No. of Men	% of Men	No. of Women	% of Women	Total
Engineers (degree)	Fellow	253	94%	15	6%	268
	Professional engineer	6,446	96%	273	4%	6719
	Incorporated engineer	23	88%	3	12%	26
	Associate engineer	1,041	92%	95	8%	1,136
	Graduate engineer	2,149	91%	223	9%	2,372
	Student engineer	909	81%	220	19%	1,129
	Total engineers	10,821	93%	829	7%	11,650
Technologists (diploma)	Professional technologist	1,223	98%	25	2%	1,248
	Full technologist	1,810	95%	101	5%	1,911
	Trainee technologist	1,126	94%	73	6%	1,199
	Student technologist	1,455	91%	139	9%	1,594
	Total technologists	5,614	94%	338	6%	5,952
Technicians (advanced certificate)	Certified technician	1,422	97%	51	3%	1,473
	Full technician	2,404	97%	82	3%	2,486
	Trainee technician	772	97%	21	3%	793
	Student technician	1,154	97%	34	3%	1,188
	Total technicians	5,752	97%	188	3%	5,940
Craftsperson (craft certificate)	Master craftsperson	4,133	97%	118	3%	4,251
	Full craftsperson	6,268	96%	232	4%	6,500
	Trainee craftsperson	2,042	95%	104	5%	2,146
	Skilled person	4,435	98%	72	2%	4,507
	Student craftsperson	5,180	93%	420	8%	5,600
	Total craftspeople	22,058	96%	946	4%	23,004
Total engineers[39] (advanced and vocational)		44,245	95%	2301	5%	46,546

39 Note that 3,651 members with "unknown sex" have been excluded from the total number.

Annex 2 – Theory of Change for Enhancing Gender Equality in the Energy Sector

The GESAP 2021 will be guided by the theory of change model, which explains how an intervention is expected to lead to the intended results (outputs, outcomes and impacts). The theory of change explains how activities are understood to produce a series of results that can contribute to achieving the intended results and the vision of the energy sector. The model helps to map out the 'missing middle' between what a programme does (its activities) and how these lead to achieving the desired goals (its outcomes). As illustrated in Figure 7, SO1, SO2 and SO3 directly contribute to the overall objective (impact) of enhanced gender equality, while SO4 and SO5 help to create an enabling environment through institutional capacity, coordination and financing. The expected change processes for the former are explained below. Chapter 5 provides more details on the activities underpinning each strategic objective.

The intervention logic for SO1 is that the nationwide Clean Energy for Cooking Programme and gender-responsive PUE programme (activity 1.1 & 1.2) in combination with the design of creative financing mechanisms for clean energy (activity 1.3) and an advocacy campaign for RE and EE solutions (activity 1.4) will lead to the following outputs: increased knowledge about the benefits of clean energy and awareness of suppliers, improved enabling environment for RE and EE, increased access to credit and increased willingness to pay for clean energy technologies. This will result in increased access to and use of clean energy for domestic and productive purposes (SO1). Lastly, activity 1.5 helps to ensure that future energy policies and programmes will be informed by a gender analysis, which will lead to more gender-responsive energy programmes and policies that correspond to the gender-specific energy needs of different groups (output) and will reinforce SO1, increasing the access to and use of clean energy.

The change process for SO2 assumes that if S&G requirements are incorporated in tender documents (activity 2.1), gender specialists are included as key personnel (activity 2.2), and the ESMP guidelines for contractors clearly specify the minimum S&G mitigation and enhancement measures to be included (activity 2.3), it will lead to the following output: an increased number of S&G mitigation/enhancement measures and KPIs included in contractor's ESMPs. This will be complemented by the enforcement of laws and regulations on gender equality, working conditions and health and safety through compliance monitoring and audits (activity 2.4) and conducting an ex-post study on the positive and negative gender impacts of energy infrastructure projects (activity 2.5), leading to increased knowledge of gender equality performance by contractors, including S&G incidents, such as discrimination, sexual harassment and child labour (output). The combination of gender-responsive ESMPs and the enforcement of gender legislation will contribute to the achievement of increased social integration in energy infrastructure projects (SO2).

The achievement of SO3 is centred around the understanding that due to strong gender norms about what is appropriate, many girls and young women never consider STEM programmes as an option or are discouraged by their families and communities. Therefore, STEM outreach activities and scholarship programmes specifically targeting girls and women (activity 3.1) are critical to increasing the pool of qualified female engineers and technicians in the energy sector (output) to be recruited for employment or targeted as potential energy entrepreneurs in the Women Energy Entrepreneurship Programme (activity 3.5). Formally adopting a 50% target for women participation (activity 3.3) will lead to increased monitoring and reporting by HR on women's representation at different levels and in various positions (output). In addition to monitoring performance and progress against the target, this will help to identify gender gaps in different areas and implement special measures to address those gaps. Lastly, undertaking mentorship and leadership programmes targeting women (activity 3.2) coupled with the creation of a conducive environment that has family-friendly policies and is free from sexual harassment and discrimination (activity 3.4) will lead to an improved work environment (output) and an increase in the number of women with leadership skills (output). This will contribute to the achievement of SO3 through an improved retention rate for women and an increased number of women being appointed to leadership positions.

Additional assumptions that underpin the change processes described above include:

(1) The government, as well as national and international stakeholders and development partners, remain supportive of advancing gender equality and non-discrimination in the energy sector.

(2) The economic and political environment in Zambia will remain stable to enable sustainable socioeconomic development that will benefit both men and women.

(3) The newly established GD will take over many of the functions previously performed by the MoG, including the coordination and monitoring of the GEEA and the gender-focal point system.

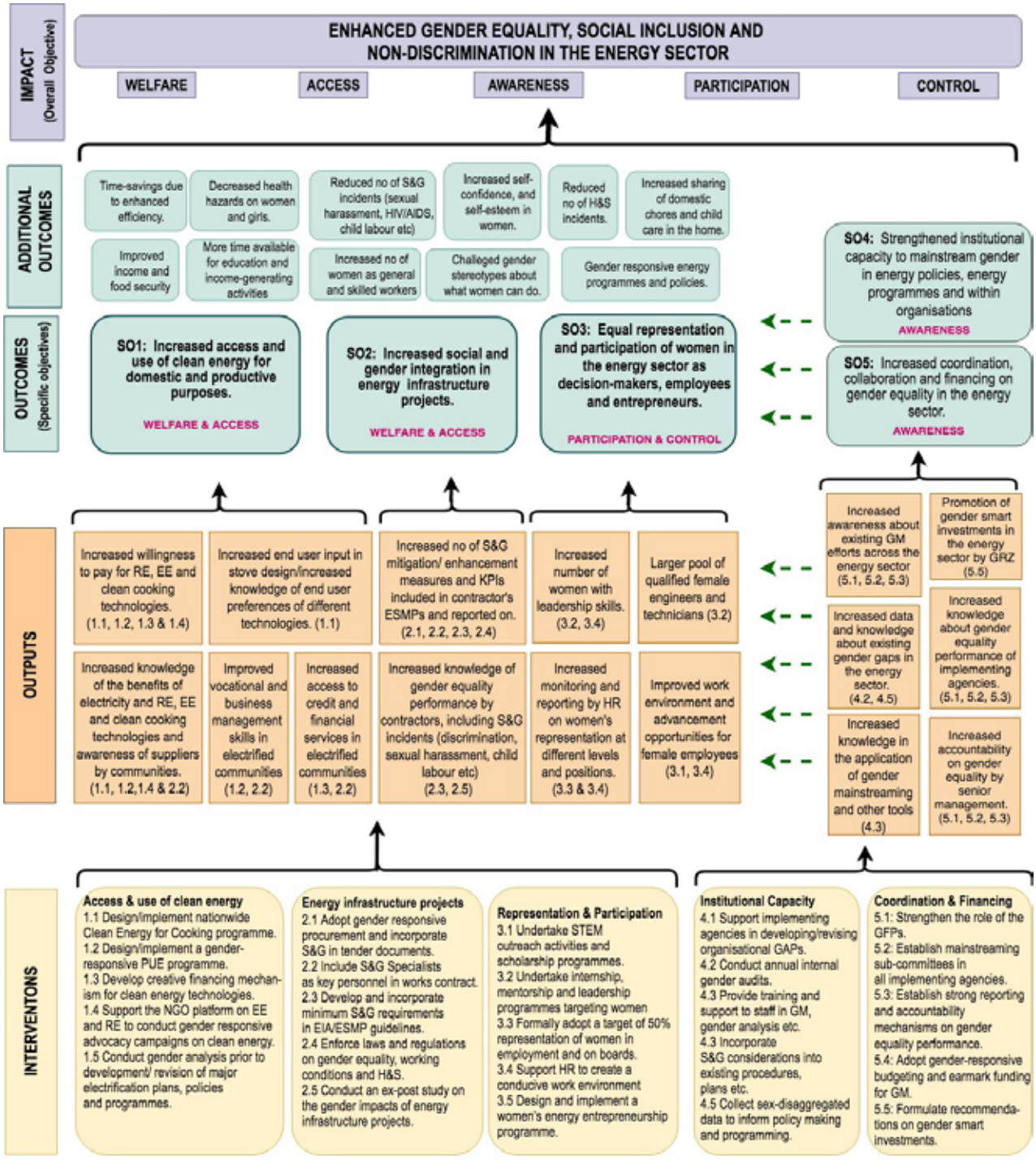

Figure 4: Theory of Change for Enhancing Gender Equality in the Energy Sector