

The transformation of governance in the South African energy sector: critical considerations for gender mainstreaming

DOI nr: <https://doi.org/10.35683/jcm191.0016>

D NEL*

University of Johannesburg, School of Public Management, Governance and Public Policy, College of Business and Economics
daniellen@uj.ac.za

* corresponding author

C JOEL

University of Johannesburg, School of Public Management, Governance and Public Policy, College of Business and Economics
carmenj@uj.ac.za

Abstract

The United Nations Sustainable Development Goal (SDG) 5, views gender equality as a basic human right. SDG 5 emphasises that the end of discrimination in all sectors across the globe, is essential to achieve SDG 5. SDG 7 calls for affordable and clean energy. Consequently, affordable energy and energy efficiency is a basic prerequisite for socio-economic development, whereas clean energy, is an essential component for preventing environmental degradation and resource depletion. Based on these SDGs, it is important that equal rights in terms of gender be reflected in the energy sector to achieve sustainable development. Gender inequality limits womans' opportunities to participate in policy- and decision-making in terms of energy resource governance. Gender mainstreaming addresses the inequality of women and therefore implies a shift in the role of women in the energy sector. This article aims to discuss the interrelationship of the energy sector and gender mainstreaming, to work towards achieving SDGs 5 and 7. The analysis in this article is based on a qualitative approach, using unobtrusive research techniques. Data was collected through a desktop study, using secondary data, including scholarly papers and books, reports from the United Nations, ministerial websites, relevant news articles, unsolicited government reports and policies. An analysis was done to determine the development of the level of female representation at the executive decision-making level in the energy sector in South Africa. The results indicate that male representation is higher than female representation', which may indicate, unequal access to participation in energy resource governance, which would reinforce an unequal gender power balance. Although there has been an improved effort from government in terms of gender mainstreaming and empowerment, a number of barriers remain, including a lack of gender-sensitive policies, awareness, information, and employment equity. The South African government has made some progress in terms of gender mainstreaming and there seems to be improvement in some areas in the energy value chain. However, these efforts have been fragmented and disjointed and not much has been achieved in terms of gender mainstreaming in the policy process and implementation.

Key phrases

Energy governance; energy resource management; gender mainstreaming and sustainable development goals

JEL CLASSIFICATION: J16

1. INTRODUCTION

Gender discrimination and inequality affect the development of women and limit their opportunities to participate at all levels of societies, including policy- and decision-making in terms of energy resource governance, which leads to a lack of participation in the policy process and an unequal gender power balance. This article looks at how the role of women has changed in terms of energy, from nurturing to that of participating in decision-making towards good energy governance. Gender-inclusive approaches are being discussed at different levels both internationally and locally (Vyas-Doorgapersad 2013:5). It is vital to conduct research on the level of gender representation and empowerment in energy governance. This article aims to discuss the interrelationship of the energy sector and gender mainstreaming, to work towards achieving SDGs 5 and 7. Specifically, this article focuses on the Department of Energy (DoE) in South Africa, considering mainstreaming at the bureaucratic and policy levels. At a contextual level, the role of women is emphasised in the energy sector. To this end, the article is structured around two objectives. The first objective is to determine the level of gender mainstreaming in energy policies. The second objective is to analyse the level of womans' descriptive numerical representation at the executive decision-making level in the energy sector in South Africa.

2. REVIEW OF THE LITERATURE

Based on the three pillars of sustainability, which is social, economic and environmental sustainability, it is essential, that equal rights in terms of gender be reflected to achieve sustainable development. The global initiative for climate change, Conference of Parties (COP) 23, also emphasises the importance of gender equality in support of climate change initiatives, such as energy resource management and energy governance.

2.1 Sustainable development: the nexus between SDGs 5 and 7

Sustainable development is a normative concept to understand the world and to solve global problems (Sachs 2015:15). The concept was adopted at the Rio Summit in 1992, with the central focus that "development today must not threaten the needs of the present and future

generations” (Sachs 2015:15). The United Nations General Assembly adopted the SDGs, the successor of the Millennium Development Goals (MDGs), on 25 September 2015 (UN Women 2016:3). Of the SDGs 17 were adopted as part of the 2030 Agenda for Sustainable Development. Building on the MDGs, the SDGs aim to go further to end all forms of poverty over the next 15 years (United Nations (UN) n.d). One of the most critical current challenges across the world is energy poverty; once communities have access to electricity; human development is possible United Nations Industrial Development Organisation (UNIDO 2014:3). SDG 7 aims to facilitate access to affordable, reliable, sustainable, and modern energy for all (UN n.d). Socially and economically, energy is seen as the most basic input to peoples’ sustainable livelihoods (Khamati-Njenga & Clancy 2003). Environmentally, electricity generated from fossil fuels, is the dominant contributor to climate change, accounting for around 60 per cent of total global greenhouse gas emissions (UN n.d). A shift is required to renewable and cleaner approaches to energy. In line with the sustainable development agenda, there is a need for a transition to cleaner energy sources, which provide greater energy access (Brown 2015:xii).

According to the United Nations Entity for Gender Equality and the Empowerment of Women (UN Women 2016:3) the SDGs form part of the 2030 Agenda for Sustainable Development as the agreed framework for international development. The 17 SDGs aim to be more gender-aware than the MDGs, SDG5, and its nine targets are dedicated to achieving greater gender equality and empowerment of women (Lee & Pollitzer 2016:5). According to Lee and Pollitzer (2016:15) “Women and girls continue to suffer discrimination and violence across the globe. Gender equality is not only a fundamental human right, but a necessary foundation for a peaceful, prosperous and sustainable world”.

Gender-blind policies means energy planning that fails to recognise that the needs of men and women are different (Khamati-Njenga & Clancy 2003:5). Gender-blind policies can be disadvantageous to women. More research is needed on how energy policies can become more gender-responsive as the vast majority of research focused on access to energy for the poor. Research should be done on how gender and identity affect power relations and impact energy use and transition (Lee & Pollitzer 2016:23). Low representation of women in policy and decision-making presents a barrier to new opportunities for women in the clean energy sector (Smith & Hart 2016:6). (UNIDO 2014:10) explains the gender-energy nexus by highlighting “that women can be powerful actors for change in the transition to sustainable energy and that their involvement in the design, distribution, management and consumption of sustainable energy solutions”. Women are often in the steering position as entrepreneurs

in the private sector and provide solutions at the community and household level. There is still underrepresentation of women at the public sector, policymaking and ministerial level (UNIDO 2014:10). The level of gender mainstreaming in policies is still low (Oparaocha & Dutta 2016:265). Supporting women to develop and manage energy resources contributes to national climate change mitigation strategies, stimulates employment and contributes to poverty reduction (United Nations Development Programme (UNDP) 2014:3). One factor in the poverty-energy nexus remains a critical but missing element of national energy planning: accommodating the needs of women (Bamberger 2006:2).

2.2 Gender mainstreaming

Gender is defined as “a role-player that can handle specific delegated responsibility, women, who represent the female aspect of gender, demand appropriate recognition and opportunities” (Vyas-Doorgapersad 2013:5). Gender for the purpose of this article implies the female aspect of gender, one who is able to participate in, and demand appropriate recognition and opportunity in energy governance. According to Mahapatro (2014:309) “gender is a dynamic concept that looks at the system formed by the interrelations between men and women in the context of society”. Khamati-Njenga & Clancy (2003:5) explain gender as “a concept which refers to a system of socially defined roles, privileges, attributes and relationships between men and women which are learned and not biologically determined”.

Gender mainstreaming as a concept was first launched at the Fourth World Conference on Women in Beijing in 1995, as a global strategy used to promote gender equality. It refers to the process of assessing the implications for women and men of any planned action, including policies and programmes at all areas and levels of government (Ismail & Arshad 2013:2). Mahapatro (2014:309) asserts that “gender mainstreaming has been the pursuit of segregated activities for women or targeted interventions to promote womens’ empowerment, whereas the essence of mainstreaming should be to infuse consideration of womens’ issues and gender equality into all policy development, research, advocacy, legislation, resource allocation, planning, implementation and monitoring of programmes and projects”.

Gender mainstreaming proposes that apart from the need to have policies aimed at addressing gender equality, a gender perspective should be embedded in all public policies (Bustelo 2003:384). Meier & Lombardo (2013:49) argue that gender mainstreaming is a transversal approach to promote gender equality, whereby gender issues are integrated into

all policy areas, and not only policies dealing with gender quotas, to promote a gender perspective and gender-equal society. A number of conventions and resolutions have been accepted internationally focusing on gender equality and mainstreaming, including: the Universal Declaration on Human Rights (1948); the Convention on the Political Rights of Women (1952); the Convention for Elimination of All forms of Discrimination against Women (1979), to mention a few (Vyas-Doorgapersad 2013:6). Gender equality policy includes gender mainstreaming as its key criteria for promoting gender equality (Mahapatro 2014:309).

Gender mainstreaming involves the integration of the gender perspective into all areas of policymaking; it also involves not restricting efforts to promote equality. Gender mainstreaming encompasses all aspects of planning, implementing and monitoring of social, political and economic actions (Ismail & Arshad 2013).

It is a transformative approach with an aim to propose tools and processes to encourage equality (Vingelli 2015:9). According to Meier and Lombardo (2013:48) “gender quotas are designed as a tool to address under-representation of women and to improve their descriptive representation”. There is a need to go beyond the debate on gender quotas to examining the potential for gender equality policies, to promote diversity in gender roles in policy and political decision- making (Meier & Lombardo 2013:49). Gender mainstreaming is a complex process, which proposes that the norms and practices at all policy levels and stages should be transformed to be more gender sensitive (Mahapatro 2014:309).

Gender quotas are a good practice of gender mainstreaming; however, it needs to build on a number of key quality criteria to encourage best practice of gender mainstreaming. This implies a shift in concepts underlying policymaking to include a broader concept of gender equality that explicitly addresses the patriarchal system by tackling interconnected factors. These interconnected factors depend on the level of analysis, and may include at the macro-level issues such as family, work, politics, sexuality and culture (Meier & Lombardo 2013:51). A gender analysis of these factors will reveal the power relations between men and women, in which women are usually subordinate, which result in barriers to womens’ empowerment and advancement (Mahapatro 2014:310). Gender analysis asks questions about gender roles and relationships (Khamati-Njenga & Clancy 2003:5).

In general, although there has been evidence of political commitment to gender equality, governments still remain weak, because of poor resources, capacity and lack of budget in ministries to commit to gender mainstreaming (Mahapatro 2014:309). Vingelli (2015:12)

emphasises gender budgeting mechanisms as an important best practice for gender mainstreaming. Gender budgeting mechanisms should be carried out at the national, provincial and local level. It requires that “government must incorporate gender among the criteria that drive resource allocation” (Vingelli 2015:12). Mahapatro (2014:309) argues that “gender mainstreaming is underdeveloped as a concept”, despite efforts from policymakers, researchers and advocates, putting into practice a mainstreaming strategy remains challenging (Mahapatro 2014:313).

By reorganising policy processes, policymakers and decision-makers should incorporate a perspective of gender equality in their policies, therefore gender mainstreaming is needed to achieve gender equality and good governance, which is measured based on womens’ participation in the process of decision-making (Ismail & Arshad 2013:5).

2.3 Gender mainstreaming and good governance

Good governance contributes to sustainable development. A key element of good governance is the process of decision-making by which decisions are implemented and the actors involved in the process and implementation of decision-making. In line with this, womens’ participation at the top management level of government is important. Female representation in decision-making is an important feature that must be present in good governance. The involvement of women at the top management level in government is still limited in most governments (Ismail & Arshad 2013:5).

Gender plays a critical role in terms of good governance both at the national policy level, bureaucratic level and in the energy value chain. Female participation in governance will determine who does what within a society concerning policymaking and implementation, and participation in the energy value chain. It also determines control of these vital resources. Energy governance, policy and infrastructure are critical factors in terms of economic growth, sustainable development and the provision of public services (Bamberger 2006:5).

Gender mainstreaming strategies should be based on an understanding of how institutions work, with change agents negotiating institutional arrangements to facilitate social change within institutions (Gurung, Syiem & Gurung 2010:47). Often institutions are influenced by the larger societies’ values and practices. Sector bureaucracies such as ministries are generally the vehicle for gender mainstreaming initiatives; however, they often tend to limit women because professionalism is equated with masculinity (Gurung *et al.* 2010:47-51). Institutional culture and arrangements have resulted in men being more privileged in terms of job configuration and career progress (Dubbelt, Rispens & Demerouti 2016:233).

Organisations were originally designed by men, for men, and research has shown that managerial roles are gendered along with masculine values (Burke 2003:274). Gender discrimination and job characteristics also play a role in influencing the empowerment of women. This is inclusive of first, job demands: such as job insecurity, workload, and work-family conflict. Second, job resources such as development opportunities, performance feedback, supervisor support and procedural fairness, are also instrumental in the development and empowerment of women in sector bureaucracies (Dubbelt *et al.* 2016:233). Thus, gender discrimination creates an unsafe work environment for women and future research should focus on the psychosocial safety climate in sector bureaucracies (Dubbelt *et al.* 2016:240). The type of sector also plays a role, for instance, women working in the manufacturing and energy sectors may report a less supportive work environment and job outcomes (Burke 2003:273). Sector-specific capacity building is needed, for instance in the energy sector technical skills such as: bookkeeping, marketing, managing a plant, or learning about new energy technologies or preparing bids for energy auctions (UNDP 2014:25).

There are strong cross-cutting links to other sectors and interventions that affect the empowerment of women, including for instance, education (green jobs, skills, capacity and energy literacy), reforms in local government and its management of natural resources, tenure reforms, investment safeguards (women gender entrepreneurs), awareness (mass media that portrays women in energy-related jobs and institutional reform (Köhlin, Sills, Pattanayak & Wilfong 2011:44-45). Khamati-Njenga and Clancy (2003:55) also confirm that women have been underrepresented in the energy sector. Impact evaluations of gender relationships with energy investment and procurement are needed. Increasing women's participation in policy- and decision-making can result in increased efficiency and a decrease in corruption (Köhlin *et al.* 2011:45).

3. RESEARCH METHODOLOGY

The methodology entails a desktop analysis of literature and official documents to conceptualise the area of investigation. The data collection sources for the desktop analysis entail authoritative books, articles, regulatory, policy and strategy documents. Secondary data was used for the analysis of numerical gender representation at the executive decision-making level and the bureaucratic level. The methodological approach included specific dimensions of unobtrusive research techniques. In general, "unobtrusive research techniques study social behaviour to eliminate bias and promote conceptual and contextual analysis" (Auriacombe 2016:1). Unobtrusive techniques including conceptual and content

analysis were used to analyse secondary data. A qualitative description of the findings focused on the themes that emerged from the research and the manner in which it was conceptualised to provide an analytical framework to contextualise the logic of the literature study. The energy sector was selected as a case, which included the main role-players in terms of energy governance in South Africa. Information is provided according to criteria derived from the key issues, analysed at the micro level. The following key criteria were developed to guide the analysis: gender mainstreaming in energy policy content, female empowerment in energy policy content and gender representation at the executive decision-making level. In using content analysis, information is described, by turning qualitative information into quantitative data, by converting it into numbers or categories (Auriacombe 2016:8-9).

Conceptual analysis was carried out to analyse literature. The conceptual analysis focused on themes that emerged from a review of literature. A search for thematic units was conducted in the literature analysis. The thematic units include: gender, gender mainstreaming, gender representation and female empowerment.

A qualitative content analysis was carried out to analyse the secondary data obtained from various sources. For table 1, an analysis was carried out to determine the level of gender mainstreaming in selected energy policies. These policies include: the Regulatory framework for the economic regulation of municipal electricity distributors of South Africa, the Renewable Energy IPP Procurement Programme 2015: Determination under section 34(1) of the Electricity Regulation Act, 2006 (Act No. 4 of 2006), the Integrated Energy Plan 2016, the National Energy Act 2008, the White Paper on Renewables 2003, the White Paper on the Energy Policy of the Republic of South Africa December 1998, the Integrated Resource Plan for Electricity 2010-2030, the Electricity Regulation Act, 2006; the Electricity Regulation Act, 2006; and the Electricity Regulations on New Generation Capacity.

Secondary data, which was used for the analysis of numerical gender representation at the executive decision-making level (see table 2) was obtained from the DOE, Eskom, NERSA and CEF websites. A breakdown of the leadership representation for each entity is provided on their websites. The breakdown of leadership also indicates whether the representatives of the executive management and board of directors are male or female. Table 3 includes an outline of the numerical gender representation of women at the bureaucratic level of the DoE. Secondary data for the analysis was obtained from the DoEs' annual report of 2018.

4. RESULTS AND DISCUSSION

The following section presents the findings and discussion of the article.

4.1 The case of South Africa: energy governance

A number of entities, the DOE, Eskom and National Energy Regulator South Africa (NERSA) are the main role players for energy governance in South Africa. Eskom is a State-Owned Enterprise (SOE), responsible for generating and distributing electricity. The DoE is the national and provincial energy ministry responsible for policymaking and planning. The Central Energy Funds' (CEF) mandate is to contribute to energy access through commercial and development investment projects. NERSA is responsible for regulating electricity in terms of the policies and regulations set by the DoE, the DoE. The CEF and NERSA report to the Minister of Energy (DoE). While there are other role players, the aforementioned are the main role players in terms of policymaking, decision- making, energy generation, distribution, regulation and energy investment. Hence, the analysis in this article focused on the DoE, Eskom and CEF. Other associated institutions that also report to the Minister of Energy (DoE) include National Nuclear Regulator (NNR), Nuclear Energy Corporation of South Africa (NECSA), South African National Energy Development Institute (SANEDI) and the National Radioactive Waste Disposal Institute (NRWDI).

The South African government acknowledges the importance of gender mainstreaming. Chapter 2, Section 24, of the Constitution of the Republic of South Africa 1996, states that everyone has a right and responsibility to “secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development”. The Constitution acknowledges the importance of sustainable development and promoting equality in terms of economic and social development.

4.2 Policy context for gender mainstreaming in the energy sector

In 2000, the Presidency, in accordance with its jurisdiction over the national gender programme, proposed that Cabinet adopt the policy framework prepared by the Office on the Status on Women. The policy framework was titled: South Africa's National Policy Framework for Womens' Empowerment and Gender Equality (WEGE). This framework is generally referred to as the Gender Policy Framework (The Office on the Status of Women 2000) (DoE 2017:1). These policies are generic trans-sectoral policies and do not provide prescriptions for different sectors as different sectors should develop their policies in line with the Gender Policy Framework and the Gender Equality Framework for Public Service (The Christian AIDS Bureau for Southern Africa (CABSA): internet source). The DoE developed

an energy discussion paper on the WEGE Strategy. The establishment of the South African Policy Framework on WEGE has laid the foundation for the development of this strategy (DoE 2017:1).

The South African government has agreed to support several regional and international instruments to further gender mainstreaming. These include the Southern African Development Corporation (SADC) Declaration on Gender and Development, SADC Protocol on Gender and Development, African Union (AU) Protocol to the Charter on Human and Peoples' rights on the Rights of Women in Africa, Convention on the Elimination of All Discrimination against Women (CEDAW), MDGs, 2013 Agenda for Sustainable Development and the Beijing Platform of Action (BPA) (DoE 2017:1).

The DoE confirms that these instruments need to be taken into account in ensuring gender mainstreaming and including the provisions in the policy to mainstreaming gender issues in the policy sector. Upon this background the DoE aims to formulate a strategic framework for WEGE (DoE 2017:1) and to this end, the energy sector discussion paper on WEGE strategy was developed in 2017. The DoE WEGE strategy is based on four strategic pillars:

- Creating an enabling environment
- Equity
- Gender mainstreaming
- Creating a barrier free workplace (DoE 2017:4)

The DoE WEGE strategy is based on four operational pillars:

- Capacity development initiatives
- Economic growth and development initiatives
- Organisational support initiatives
- Governance and institutional development (DoE 2017:5)

Efforts to empower women in energy have been observed, including the following initiatives:

- The draft Energy Gender Strategy presented at the Women in Energy Dialogue in 2017
- Women in Energy Electronic Business Directory
- Draft Energy Sector Discussion Paper on Women

- Empowerment and Gender Equality (WEGE) Strategy has been developed and circulated for inputs (Marabwa 2017:4-5).

The DoE has also collaborated with the Women in Oil and Energy South Africa (WOESA) Non- Profit Organisation (NPO). The DoE has made strides in terms of gender equality, however, these efforts have been fragmented and disjointed and a number of constraints still need to be debunked. These constraints include among others a lack of energy-gender advocacy, a lack of an organisational culture for women in the energy sector to enhance the understanding of womens' experience in the workplace in the energy sector, a lack of multi-stakeholder partnerships, gender-based budgeting at all levels of government in the energy sector. A closer look at the Mid-Term Expenditure Framework (MTEF) and Integrated Development Planning (IDP) would be useful to understand the level of gender-sensitive budgeting in the energy sector. The DoE Gender Policy sets out the broad framework, which enables the Department to actively develop and implement strategies, plans and instruments that will create a conducive environment to empower women in the energy space (DoE 2018:12). The policy is generic in nature and does not aid in debunking the above-mentioned constraints. A strategic framework should provide guidelines that are more concrete, regulations and targets. Table 1 includes an outline of the level of gender mainstreaming in energy policy.

Table 1 presents the level of gender mainstreaming in selected energy policies.

Table 1: Gender mainstreaming in energy policy

Policy	Gender mainstreaming	Female empowerment
Regulatory framework for the economic regulation of municipal electricity distributors of South Africa	No	No
Renewable Energy IPP Procurement Programme 2015 Determination under section 34(1) of the Electricity Regulation Act, 2006 (Act No. 4 of 2006)	No	No
The Integrated Energy Plan of South Africa 2016	Yes	No
National Energy Act 2008	No	No
White Paper on Renewables 2003	Yes	No
White Paper on the Energy Policy of the	Yes	No

Republic of South Africa December 1998		
Integrated Resource Plan for Electricity 2010-2030	No	No
Electricity Regulation Act, 2006	No	No
Electricity Regulations on New Generation Capacity	No	No

Source: Authors' own construction

A number of policies were analysed to determine the level of gender mainstreaming in energy policies. A large number of energy laws, regulations, policies, guidelines, and circulars have been issued in South Africa (Senosha 2017:91). The list of policies analysed in Table 1 is not an exhaustive list of energy policies. For the purpose of this article, these policies were the most prominent policies. Based on the analysis, only three policies make mention of gender. The Integrated Energy Plan of South Africa (2016:43) makes mention of the importance of gender representation, however, no gender perspective is offered of how gender mainstreaming is viewed or aims to be operationalised. In addition, the White Paper on Renewable Energy (2003:38) mentions gender. The White Paper acknowledges the importance of energy access and education and training, but does not provide tangible guidelines or targets, neither are women acknowledged in policy- and decision- making. The White Paper on the Energy Policy of the Republic of South Africa, (1998:31), acknowledges that labour is engendered and that capacity building and numerical representation of women is required. No guidelines or targets are provided. In addition, there is no mention of the gender empowerment and mainstreaming in either the 2015/2016 or the 2017/2018 policy and budget speech of the Minister of Energy (Joemat-Pettersson 2015:1-17; Radebe 2018:1-7).

4.3 The case of South Africa: gender representation

An analysis of the DoE, Eskom and NERSA was done to determine the level of female representation at the executive decision-making level. Table 2 presents the level of numerical representation of women. Information for the analysis was obtained from the DOE, Eskom, NERSA and CEF websites in February 2019.

Table 2: Numerical gender representation of women at the executive decision-making level

Institution	Position	Female	Male
DoE	Minister	0	1
DoE	Deputy Minister	1	0
DoE	Director General (DG)	0	1
DoE	Deputy DG (DDG): Policy and Planning	0	1
DoE	Acting DDG (ADDG): Petroleum & Petroleum Products Regulation	0	1
DoE	DDG: Nuclear Energy	0	1
DoE	ADDG: Clean Energy	1	0
DoE	DDG: Electrification and Energy Programmes & Project Management	0	1
DoE	DDG: Corporate Services	1	0
DoE	DDG: Financial Management Services	1	0
DoE	ADDG: Governance and Compliance	1	0
Eskom	Board of Directors	5	7
Eskom	Executive Committee	3	6
NERSA	Chief Executive Officer	0	1
NERSA	Chairperson	0	1
NERSA	Deputy Chairperson	1	0
NERSA	Full-Time Member: Piped-Gas	1	0
NERSA	Full-Time Member: Petroleum Pipelines	0	1
NERSA	Part-Time Member	0	2
CEF	Board of Directors	3	6
CEF	Executive management	2	8
Total		20	38

Source: Authors' own construction

Table 2 indicates that men hold more executive positions in the main institutions that play a role in energy governance in South Africa. Thus, womans' contribution in the decision-making process may not be fully utilised (Vyas-Doorgapersad 2013:14), which may be preventing gender mainstreaming at the policymaking level. Table 3 provides a numerical gender representation of women at the bureaucratic level of the DoE.

Table 3: Numerical gender representation of women at bureaucratic level of the DoE

Occupational Band	Male	Female
Top management	7	2
Senior Management	42	27
Experienced specialists: middle management	75	94
Skilled & qualified workers: junior management	45	124
Semi-skilled & discretionary decision-making	51	36
Professionals	47	58
Technicians and related workers	3	1
Service shops and market sales workers	38	9
Clerks	30	82
Senior officials and managers	38	4
Contract (unskilled)	8	8
Total	384	445

Source: DoE (2018:88)

In contrast to Table 2, Table 3 indicates that women hold more bureaucratic positions in the DoE than men do. Womens' contribution at the implementation level is thus utilised, this shows gender equality has been addressed from the bottom-up. Thus, in terms of the empowerment approach, there is affirmation, that women are being empowered at the bureaucratic level. Skills development for the period 1 April to 31 March 2018 was predominantly focused on males: 143 males and 138 females (DoE 2018:88).

Table 4 provides a summary of the results obtained from the analysis. The analysis to determine the level of gender mainstreaming in 9 energy policy documents, reveal that only

3 policies consider gender mainstreaming important. An analysis of the representation of woman at the executive decision-making level is still under represented, 34% of decision-makers are female. The analysis of the gender representation at the bureaucratic level of the DoE reveals that 46% female representation.

Table 4: Summary of results obtained from the analysis

Category	Frequency item	
Thematic unit	Occurrence of gender construct	
Gender mainstreaming in energy policy	3	0
Physical unit	Females	Males
Numerical gender representation of women at the executive decision-making level	34%	66%
Physical unit	Females	Males
Numerical gender representation of women at bureaucratic level of the DoE	46%	54%

Source: Authors own construction

The DoE has been cooperative with different stakeholders in society, encouraging communication, collaboration and advocacy to understand the women and energy nexus. The DoE recognises and supports the advancement of gender equality, empowerment and mainstreaming. The DoE is planning to continuously collaborate with stakeholders, to develop and implement plans to operationalise gender mainstreaming and gender empowerment. The aim is to develop associations and partnerships with private and public sector engagement. Another goal is also to collaborate with higher learning institutions to encourage the development of energy sector training programmes. In addition, the DoE has set a target to have 50 per cent of senior management representative of women (Marabwa 2017:15).

Although there has been an improved effort from government in terms of gender equality and empowerment, a number of barriers remain, including: gender-sensitive policies, awareness and information, job descriptions, employment equity and gender disaggregated

data for qualitative and quantitative monitoring and evaluation. Access to information and knowledge of opportunities and finance for women and energy remain a challenge in South Africa (Marabwa 2017:16). The energy sector in South Africa is still predominantly males, with 23 per cent of women in South Africa's business management roles (Stuurman 2017). The next step in the energy planning process to achieve gender equality is to focus more on enabling factors that need to be in place if income-earning opportunities and other benefits such as improvements on empowerment, education and so forth, for women are to materialise (Stiftung 2017:30).

4.4 Gender mainstreaming in South Africa's value chain

In order for energy governance transformation to take place, reform across the value chain is required. An area of concern that requires further engagement is the inclusion of women throughout the energy value chain. South Africa has spearheaded one of the largest investment-driven programmes for renewable energy development in Africa under the DoEs' Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) (South African Institute of International Studies (SAIIA) 2018:3).

Eskom is the sole owner and operator of the national electricity grid, making it a vertically integrated utility, which generates, transmits and distributes electricity to a wide range of customers and redistributors. While Eskom no longer holds exclusive rights to electricity generation in the country, it continues to monopolise bulk electricity supply; while renewable energy Independent Power Producers (IPPs) have developed their respective market shares. The IPPs generate renewable energy under the REIPPPP based on a competitive bidding format, where prospective power producers submit bids, which are adjudicated according to various criteria, price being the most critical (British High Commission Pretoria 2016:19).

This competitive bid programme has strong requirements for broad-based economic growth. Successful bidders are selected based on these requirements. Despite their best efforts, plans to include women throughout the energy value chain have not been successful (SAIIA 2018:3). This is because gender mainstreaming has not been embedded and institutionalised from the ministerial level down to the implementation level, with the effect that women have been underrepresented in the energy value chain.

5. CONCLUSION

The aim of this article was to determine the level of gender mainstreaming at the ministerial level in the energy sector. The analysis focussed on determining the level of female

representation at the decision-making level in terms of energy governance in South Africa. An analysis of the representation of woman at the DoE, Eskom, CEF and NERSA, reveal that woman are still under represented, 34% of decision-makers are female. An analysis of the gender representation at the bureaucratic level of the DoE reveals that 46% female representation. More efforts to include women in the decision-making level, to increase female representation in the policy planning process, will ensure a balance in power in terms of making decisions about socio-economic participation in the energy sector. Furthermore, an analysis to determine the level of gender mainstreaming in 9 energy policy documents, reveal that only 3 policies consider gender mainstreaming important. These 3 documents recognise the importance of gender mainstreaming; however, no tangible strategies, targets or guidelines are included in these policy documents, to ensure gender mainstreaming. Hence, policies should be adapted to include guidelines and targets to achieve gender mainstreaming. A gender sensitive approach need to be taken in policy making in the energy sector.

The descriptive numerical representation of women does not provide a complete picture of the challenges experienced in terms of institutional aspects; therefore, research into the organisational culture for women in the energy sector at the bureaucratic level will enhance the understanding of womens' experience in the workplace in the energy sector. Future research using primary data to determine the experience of woman in the workplace in the energy sector will provide more insight on the challenges experienced by woman in the workplace.

This article provides an overview of female representation in terms of the executive decision making level and the bureaucratic level for energy governance in South Africa. Future research should explore gender representation across the energy value chain, including local government, the private sector and community based participation.

The South African government has made progress in terms of gender mainstreaming. Progress includes efforts such as collaboration with the WOESA, an energy discussion paper on the WEGE and the implementation of the REIPPPP. The DoE has made some progress; however, these efforts have been fragmented and disjointed and not much has been achieved in terms of gender mainstreaming in the policy process.

ACKNOWLEDGEMENTS

The National Research Foundation under the grant number funded this research: 99218.

REFERENCES

- AURIACOMBE CJ.** 2016. Towards the construction of unobtrusive research techniques: critical considerations when conducting a literature analysis. *African Journal of Public Affairs* 9(4):1-19.
- BAMBERGER B.** 2016. Gender and its place in the energy sector. *Women's Policy Journal* 3. (Summer 2006):1-18.
- BRITISH HIGH COMMISSION PRETORIA.** 2016. Report on the electricity market reform in Southern Africa. [Internet:<http://promethium.co.za/wp-content/uploads/2016/03/2016-03-21-Report-Electricity-Market-Reform-in-SADC-final.pdf>; downloaded on 14 January 2018.]
- BROWN LR.** 2015. The great transition: Shifting from fossil fuels to solar and wind energy. New York: W.W. Norton & Company.
- BURKE R.** 2003. Do gender proportions matter? *Women in Management Review* 18(5):267-275. [Internet:<https://doi.org/10.1108/09649420310485104>; downloaded on 29 May 2018.]
- BUSTELO M.** 2003. Evaluation of gender mainstreaming: ideas from a meta-evaluation study. *Evaluation* 9(4):383-403.
- DEPARTMENT OF ENERGY (DOE).** 2018. Annual Report 2017/2018. [Internet:<http://www.energy.gov.za/files/Annual%20Reports/DoE-Annual-Report-2017-18.pdf>; downloaded on 03 January 2019.]
- DEPARTMENT OF ENERGY (DOE).** 2017. Energy sector discussion paper on women empowerment and gender equality strategy. [Internet:file:///C:/Users/daniellen/OneDrive%20-%20University%20of%20Johannesburg/Documents/2019_articles/Gender%20article/Draft-Energy-Sector-Discussion-Paper-on-WEGE-Strategy.pdf; downloaded on 12 October 2018.]
- DUBBELT L, RISPENS S & DEMEROUTI E.** 2016. Gender discrimination and job characteristics. *Career Development International* 21(3):230-245. [Internet: <https://doi.org/10.1108/CDI-10-2015-0136>; downloaded on 29 May 2018.]
- THE CHRISTIAN AIDS BUREAU FOR SOUTHERN AFRICA (CABSA).** n.d. [Internet:<http://www.cabsa.org.za/content/south-africas-national-policy-framework-womens-empowerment-and-gender-equality-2000>; downloaded on 12 July 2018.]
- GURUNG B, SYIEM D & GURUNG N.** 2010. Generating legitimacy and accountability for gender equality. *Gender Technology and Development* 14(1):45-66. [Internet:<https://doi.org/10.1177/097185241001400103>; downloaded on 29 May 2018.]
- ISMAIL NSA & ARSHAD R.** 2013. Good governance practices: women participation and gender mainstreaming. *Journal of Governance and Development* 9:1-19 [Internet:https://www.researchgate.net/publication/308965405_Good_Governance_Practices_Women_Participation_and_Gender_Mainstreaming; downloaded on 12 October 2018.]
- JOEMAT-PETTERSSON T.** 2015. 2015/16 Policy and Budget speech. Minister of Energy, Ms Tina Joemat-Pettersson, MP National Assembly, Parliament. Cape Town. [Internet: http://www.eskom.co.za/news/Documents/BUDGETVOTESPEECH_DoE2015.pdf; downloaded on 02 June 2018]. (19th of May 2015 at 10:00.)
- KHAMATI-NJENGA B & CLANCY J.** 2003. Concepts and issues in gender and energy. ENERGIA. [Internet: https://ris.utwente.nl/ws/portafiles/porta/5132343/Concepts_in_Gender_and_Energy_final_version_as_submitted.pdf; downloaded on 12 March 2018.]
-

KÖHLIN G, SILLS EO, PATTANAYAK SK & WILFONG C. 2011. Energy, gender and development: what are the linkages? Where is the evidence. *Social development papers: social inclusion & social resilience*. [Internet:<https://elibrary.worldbank.org/doi/abs/10.1596/1813-9450-5800>; downloaded on 12 March 2018.]

LEE HE & POLLITZER E. 2016. The Role of Gender-based Innovations for the UN Sustainable Development Goals Toward 2030: Better Science and Technology for All. [Internet:<https://sustainabledevelopment.un.org/forum/download.php?doc=472>; downloaded on 12 March 2018.]

MAHAPATRO M. 2014. Mainstreaming gender: shift from advocacy to policy. *Vision* 18(4):309-315. [Internet:<https://doi.org/10.1117/0972262914551663>; downloaded on 29 May 2018.]

MARABWA E. 2017. The draft Energy Gender Strategy presented at the Women in Energy Dialogue in 2017. The Department of Energy. Durban. (ICC 2017 presentation). [Internet:<http://www.energy.gov.za/files/PPMO/Presentation-on-Energy-Gender-Strategy-11-08-2017.pdf>; downloaded on 03 June 2018.]

MEIER P & LOMBARDO E. 2013. Gender quotas, gender mainstreaming and gender relations in politics. *Political Science* 56(1):46-62. [Internet:<https://doi.org/10.1177/0032318713488114>; downloaded on 29 May 2018.]

OPARAOCHA S & DUTTA S. 2011. Gender and energy for sustainable development. *Current Opinion in Environmental Sustainability* 3(4):265-271. [Internet:<https://doi.org/10.1016/j.cosust.2011.07.003>; downloaded on 12 March 2018.]

RADEBE J. 2018. Media Statement by the Minister of Energy: Jeff Radebe on the 2018/19 Budget Vote of the Department of Energy. [Internet:<http://www.energy.gov.za/files/media/pr/2018/MediaStatement-by-the-Minister-on-the-2018-19Budget-Vote-of-the-Department-of-Energy-16May2018.pdf>; downloaded on 02 June 2018].

REPUBLIC OF SOUTH AFRICA.1996. The Constitution of the Republic of South Africa, 1996. Pretoria: Government Printer.

SACHS J. 2015. The Age of Sustainable Development. New York: Colombia University Press.

SENOSHA SS. 2017. Green economy policy management challenges in the city of Tshwane Metropolitan Municipality. Johannesburg: University of Johannesburg. (Unpublished Masters' Dissertation. Masters' in Public Management and Governance.)

SMITH GM & HART C. 2016. The central role of women in achieving energy-related Sustainable Development Goals. [Internet:http://ic-sd.org/wp-content/uploads/sites/4/2016/06/Central_role_of_women_in_achieving_SDGs_Smith.pdf; downloaded on 12 February 2018.]

SOUTH AFRICAN INSTITUTE OF INTERNATIONAL STUDIES (SAIIA). 2018. Gender mainstreaming across Africa: an exploration of Rwandan Solar Energy Initiatives and South Africa's REIPPP Programme. [Internet:<http://www.gegafrika.org/item/740-gender-mainstreaming-across-africa-an-exploration-of-rwandan-solar-energy-initiatives-and-south-africa-s-reipp-programme>; downloaded on 23 August 2018.]

STIFTUNG HB. 2017. Energy Poverty and Gender in Urban South Africa. [Internet:<http://www.sustainable.org.za/uploads/files/file124.pdf>; downloaded on 02 June 2018.]

STUURMAN N. 2017. Meet SA women doing wonders in the energy sector. *Business Report* 09 August 2017. [Internet:<https://www.iol.co.za/business-report/meet-sa-women-doing-wonders-in-the-energy-sector-10688813>; downloaded on 12 June 2018.]

THE OFFICE ON THE STATUS OF WOMEN. 2000. South Africa's National Policy, Framework for Women's Empowerment and Gender Equality. [Internet:http://www.ilo.org/dyn/natlex/natlex4.detail?p_lang=en&p_isn=94056&p_country=ZAF&p_count=1051&p_classification=05&p_classcount=38; downloaded on 12 November 2018.]

UNDP. 2014. Gender and energy. Gender and Climate Change Asia and the Pacific Policy Brief. [Internet:<http://www.undp.org/content/dam/undp/library/gender/Gender%20and%20Environment/PB4-AP-Gender-and-Energy.pdf>; downloaded on 16 February 2018.]

UNITED NATIONS DEVELOPMENT PROGRAMME (UNDP). 2004. Gender and energy for sustainable development: a toolkit and resource guide. [Internet:<https://www.undp.org/energyandenvironment/>; downloaded on 02 April 2018.]

THE INTEGRATED ENERGY PLAN OF SOUTH AFRICA. 2016. Pretoria: Department of Energy. [<http://www.energy.gov.za/files/IEP/2016/Integrated-Energy-Plan-Report.pdf>; downloaded 12 December 2018]

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANISATION (UNIDO). 2014. Sustainable energy for all: gender dimensions. [Internet:https://www.unido.org/sites/default/files/2014-02/GUIDANCENOTE_FINAL_WEB_s_0.pdf; downloaded on 12 February 2018.]

UNITED NATIONS. n.d. Sustainable Development Goals. [Internet:<http://www.un.org/sustainabledevelopment/development-agenda/>; downloaded on 01 May 2016.]

UN WOMEN. 2016. Women and sustainable development goals. [Internet:<https://sustainabledevelopment.un.org/content/documents/2322UN%20Women%20Analysis%20on%20Women%20and%20SDGs.pdf>; downloaded 13 January 2019.]

VINGELLI G. 2015. Gender mainstreaming as institutional innovation? Gender budgeting, velvet triangles and (good) practices. [Internet:<https://riul.ull.es/bitstream/handle/>; downloaded on 12 March 2018.]

VYAS-DOORGAPERSAD S. 2013. Rethinking domestic water resource management: A shift from gender-based approach. *Administratio Publica* 21(2):4-20.

WHITE PAPER ON THE ENERGY POLICY OF THE REPUBLIC OF SOUTH AFRICA. 1998. Pretoria: Department of Energy. ISBN: 0-9584235-8-X. [Internet:http://www.energy.gov.za/files/policies/whitepaper_energypolicy_1998.pdf; downloaded on 12 June 2018].

WHITE PAPER ON RENEWABLE ENERGY. 2003. Pretoria: Department of Minerals and Energy. [Internet:https://unfccc.int/files/meetings/seminar/application/pdf/sem_sup1_south_africa.pdf; downloaded on 16 June 2018).