



**REPUBLIC OF ZAMBIA**

**REPORT**

**OF THE**

**COMMITTEE ON ENERGY, WATER DEVELOPMENT AND TOURISM ON THE  
REPORT OF THE AUDITOR GENERAL ON THE PROMOTION OF  
RENEWABLE ENERGY SOURCES IN RURAL AREAS IN ZAMBIA, 2015-2019**

**FOR THE**

**FIFTH SESSION OF THE TWELFTH NATIONAL ASSEMBLY**

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# **REPORT OF THE COMMITTEE ON ENERGY, WATER DEVELOPMENT AND TOURISM ON THE REPORT OF THE AUDITOR GENERAL ON THE PROMOTION OF RENEWABLE ENERGY SOURCES IN RURAL AREAS IN ZAMBIA, 2015-2019 FOR THE FIFTH SESSION OF THE TWELFTH NATIONAL ASSEMBLY**

## **1.0 Membership of the Committee**

The Committee consisted of Mr E K Belemu, MP (Chairperson); Ms M C Chonya, MP (Vice Chairperson); Mr C M Zulu, MP; Mr D Mung'andu, MP; Mr M Jamba, MP; Mr J Chabi, MP; Mr K Mbangweta, MP; Mr S Mulusa, MP; Mr Romeo Kangombe, MP; and Mrs M D Mwanakatwe, MP.

The Honourable Mr Speaker  
National Assembly  
Parliament Buildings  
**LUSAKA**

Sir,

The Committee has the honour to present its Report on the Report of the Auditor General on the Promotion of Renewable Energy Sources in Rural Areas in Zambia for the period 2015 to 2019, for the Fifth Session of the Twelfth National Assembly.

## **2.0 Functions of the Committee**

The functions of the Committee are set out under Standing Order No. 157 (2) and among other functions, the Committee is mandated to consider special audit reports referred to it by the Speaker or an Order of the House.

## **3.0 Meetings of the Committee**

The Committee held seven meetings to consider submissions on the Report of the Auditor General on the Promotion of Renewable Energy Sources in Zambia for the period 2015 to 2019.

## **4.0 Procedure adopted by the Committee**

In order to better appreciate the issues raised in the Audit Report, the Committee requested both written and oral submissions from various relevant stakeholders. The list of stakeholders who made submissions before the Committee is attached at Appendix II.

## **5.0 Auditor General's Comments**

The Auditor General informed the Committee that in accordance with the provision of Article 250 (1) (c) of the Constitution of Zambia as amended by Act No. 2 of 2016, the Office of the Auditor General was mandated to carry out performance audits in ministries, government departments and statutory corporations, and to report the results to the Republican President and the National Assembly.

### **5.1 Background to the Audit**

The Auditor General informed the Committee that in a quest to increase access to electricity and improve the quality of life for rural communities, the Government established the Rural Electrification Authority (REA) and the Rural Electrification Fund (REF) through the *Rural Electrification Act, No. 20 of 2003*, for the rural electrification programme. The Committee learnt that the overall mandate of REA is to increase access to electricity in the rural areas of Zambia, and contribute to improved productivity and quality of life for the rural population.

The Committee was further informed that in 2007, the Government formulated the Rural Electrification Master Plan (REMP) to guide the implementation of the Rural Electrification Programme in Zambia. The Plan covers the period from 2008 to 2030. At inception in 2008, the REMP aimed to increase the rural access rate from 3.1 per cent to 51 per cent by 2030. The Committee learnt that access to electricity in Zambia is estimated at 31 percent of the total population which was about 15,473,905 in 2015. The electricity access rate for urban and rural areas is approximately 67 per cent and 4.4 per cent, respectively. These statistics meant that about 500,000 urban households and 1.8 million rural households do not have access to electricity.

The Auditor General informed the Committee that the Government was still committed to achieving 51 per cent rural electricity access by 2030. The Committee learnt that one of the strategies of the Seventh National Development Plan was to 'Promote Renewable and Alternative Energy.' The strategy was aimed at promoting the development and use of renewable and alternative sources of energy such as solar, wind, biomass, geothermal and nuclear as a way of diversifying the energy mix and improving supply. This was in line with the Sustainable Development Goal No. 7 on Affordable and Clean Energy.

The Committee was further informed that Zambia had abundant renewable energy sources. In this regard, the Government had identified solar and mini-hydro resources as a sustainable and affordable avenue to increase access to clean energy services in rural communities. During the period 2015 to 2019, the output indicators to increase contribution from renewable energy sources

from solar and mini-hydro resources from 0.72 per cent in 2013 to 2.7 per cent in 2016 were not achieved.

## **5.2 Motivation of the Audit on Promotion of Renewable Energy Sources in Rural Areas in Zambia**

The Committee was informed that the audit was inspired from the findings of stakeholder consultations conducted across the country on the role of energy in the economy. One of the findings that emanated from the consultations was that the energy deficit slowed down economic growth as industries failed to operate at an optimum level. The Auditor General reported that the electricity demand in Zambia had been growing at an average rate of 4 per cent per year. However, generation capacity expansion did not match the growth in demand, leading to power shortages, the worst being the period 2015 and 2016.

According to the REMP, the Government set electrification targets at 90 per cent for urban and 51 per cent for rural areas to be achieved by 2030. However, at the current pace, these targets were not expected to be achieved as the household electrification rates stood at approximately 67 per cent and 4.4 per cent for urban and rural areas, respectively.

## **5.3 Main Audit Objective**

The objective of the Audit was to assess whether the measures put in place by the Ministry of Energy were effective for facilitating increased access to Renewable Energy Sources (RES) to targeted rural beneficiaries.

## **5.4 Specific Objectives**

The objectives of the audit were to:

- (a) determine the extent to which the Ministry of Energy had implemented effective measures to promote the use of renewable energy sources in rural areas; and
- (b) ascertain the extent to which the Ministry of Energy had facilitated increased access to electricity through public private partnership (PPP) in rural electrification projects for renewable energy.

## **5.5 Audit Questions**

Based on the audit objectives, the audit was designed to answer the questions below.

- (a) To what extent had the Ministry implemented effective measures to promote the use of renewable energy sources in rural areas?
  - (i) Had the Ministry ensured that sufficient data and information is readily available on the renewable energy potential in rural areas?

- (ii) Had the Ministry ensured that significant infrastructure is available to exploit renewable energy sources?
  - (iii) Had the Ministry ensured that awareness campaigns are conducted so as to sensitise communities on modern energy sources?
  - (iv) Had the Ministry ensured routine inspections and maintenance of renewable energy projects to ensure increased access to electricity in rural areas
  - (v) Had the Ministry invested in Research and Development for renewable energy programmes in rural areas?
- (b) To what extent had the Ministry facilitated increased access to electricity through private public partnership participation in rural electrification projects for renewable energy?

## **5.6 Methodology**

In gathering audit evidence, the following audit techniques were used:

### **5.6.1 Document Review**

Documents were reviewed with the purpose of understanding the systems used in the implementation of the projects and to verify whether resources had been efficiently and effectively utilised.

### **5.6.2 Interviews**

The audit employed structured interviews with management and key staff at the Ministry of Energy (Department of Energy), Rural Electrification Authority and beneficiaries in order to gather evidence to support the audit findings.

### **5.6.3 Physical Inspections**

Physical site visits were conducted to inspect rural electrification projects implemented by the Ministry of Energy and Rural Electrification Authority to ascertain whether they were operating effectively and benefiting the targeted recipients.

### **5.6.4 Data Analysis**

The qualitative data collected through interviews and document review was analysed using content analysis. Quantitative data collected was also analysed using the excel spreadsheet for trend analysis and descriptive statistics. In some instance, evidence collected was presented through tables. The purpose of conducting the data analysis was to put the evidence into context with regard to the results from the site visits.

### **5.6.7 Audit Criteria**

The assessment criteria for the audit were drawn from the following key sources:

- (a) *The Rural Electrification Act, No. 20 of 2003*;
- (b) National Energy Policy of 2008;
- (c) Ministry of Mines, Energy and Water Development Strategic Plan, 2014-2016;
- (d) The Rural Electrification Authority Strategic Plan, 2014-2018;
- (e) Rural Electrification Master Plan, 2008-2030;
- (f) Rural Electrification Authority Five Year Rolling Plan, 2017-2021; and
- (g) Rural Electrification Authority Rural Electrification Projects, 2009.

## **6.0 CONSIDERATION OF SUBMISSIONS ON THE AUDIT FINDINGS AND OBSERVATIONS**

The Committee considered submissions from the identified stakeholders and the Minister of Energy. The summary of submissions made by these stakeholders, as well as the observations and recommendations made by the Committee are set out below.

### **Major Findings**

#### **6.1 To What Extent had the Ministry Implemented Effective Measures to Promote the Use of Renewable Energy Sources in Rural Areas**

##### **Stakeholders' Submissions**

##### **6.1.1 Alternative Energy Resources to Electricity Generation**

The Committee was informed that one of the objectives of the Rural Electrification Authority Strategic Plan for the period 2014 to 2016 was to increase the use of renewable energy. The output indicators were to increase the contribution from renewable energy sources from solar and mini-hydro resources from 0.72 per cent in 2013 to 2.7 per cent in 2016. Stakeholders submitted that the Rural Electrification Authority failed to meet the set target, as only 1.2 per cent was achieved at the expiry of the Strategic Plan in 2016. However, this improved to 4.5 per cent in 2019. Some of the factors that contributed to failure to attain the set targets were as outlined below.

##### **(i) Lack of Specific Legislation and Regulatory Framework for Promotion of Renewable Energy Technologies**

Stakeholders informed the Committee that the *Electricity Act* and *Energy Regulation Act* are inadequate to promote the exploitation of renewable energy sources because the two pieces of legislation were biased towards electricity

generation and regulatory matters, respectively. In this vein, stakeholders posited that there was need to enact specific legislation to govern the renewable energy sub sector in Zambia.

The Committee was informed that the Energy Regulation Board had developed regulations for mini-grid systems to facilitate development of grid connected renewable energy technologies. The mini-grid regulations covered licensing, grid encroachment, tariff and technical requirements for three categories of mini-grids, categorised as below 100 kilowatt, up to 1 megawatt and larger than 1 megawatt. However, the enactment of the new *Electricity Act* and the *Energy Regulation Act* had prompted a review of the mini-grid regulations in order to align them to the new laws.

### **Lack of Strategic Plan**

The Committee learnt that since the expiry of the Renewable Energy Strategic Plan in 2016, no new strategic plan had been developed. Stakeholders submitted that the lack of a Strategic Plan had negatively impacted the development of renewable energies in Zambia. Stakeholders further submitted that a strategic plan was critical in providing a roadmap on how to effectively exploit renewable energies in Zambia.

#### **(ii) Policy Emphasis on Grid-Connected Hydropower at the Expense of Other Renewable Technologies**

Stakeholders informed the Committee that the Government had focused on grid connected hydro power at the expense of renewable energy sources. Some stakeholders submitted that the country needed to invest in renewable energies, especially for areas that were far from the national grid. However, other stakeholders submitted that new policy developments had occurred. The Government had put in place the 2019 National Energy Policy with a dedicated policy objective to increase exploitation of renewable energy in order to diversify the energy mix. The Committee learnt that such a policy measure would facilitate promotion of renewable energy technologies in order to diversify the energy mix from the traditional grid connected hydropower and wood fuel.

#### **6.1.2 Data on Resource Potential and Consumption of Renewable Energy Sources**

The Committee was informed that there was insufficient data on the potential of renewable energy in Zambia, except for solar and wind energy. The lack of comprehensive data to ascertain the renewable energy potential, production and consumption had made it difficult to fully exploit the renewable energy potential of the country. Other stakeholders further submitted that geothermal could be a valuable renewable energy source to include in Zambia's energy mix. However, geothermal was costly to develop compared to solar and wind energy.

Stakeholders submitted that the country had data on solar energy but had failed to fully exploit the resource. Stakeholders further submitted that the problem was exacerbated by the lack of a legal and policy framework to govern the exploitation of renewable energy sources to boost economic development.

### **6.1.3 Development of Investment Plan for Renewable Energy Projects**

The Committee was informed that renewable energy projects required huge capital investment. Therefore, it was imperative to ensure that the renewable energy sub sector was guided by a robust investment plan. Stakeholders submitted that in addition to the investment plan, there was need to encourage private sector participation.

### **6.1.4 Beneficiaries in Rural Areas not Accessing Energy from Renewable Sources**

The Committee was informed that some renewable energy projects had not been completed due to lack of funds. This meant that commencement of new projects was also put on hold. Stakeholders further informed the Committee that, at such a pace, it was very unlikely that the desired renewable energy accessibility set targets for rural areas could be attained. Other stakeholders submitted that failure by some contractors to complete works had resulted in delayed completion of projects.

### **6.1.5 Maintenance of Renewable Energy Projects**

Stakeholders informed the Committee that maintenance of renewable energy infrastructure was critical. Notably, spare parts for renewable energy technology being installed in rural areas could not be sourced locally. Further, most beneficiaries of rural electrification technologies did not regard the equipment installed as their own property. As a result, the beneficiaries of these technologies abandoned the equipment even for simple problems such as replacement of a bulb. The Committee was informed that low literacy levels among the beneficiaries contributed to failure to understand the maintenance requirements of the equipment. The Committee was further informed that there was need to conduct research to establish the most cost effective approach for maintenance of the technologies and explore the possibility of manufacturing some of the spares parts locally.

### **6.1.6 Low Levels of Awareness on Renewable Energy Technologies**

The Committee was informed that most beneficiaries of renewable energy technologies in rural areas were not fully aware of how to use and maintain the renewable energy equipment. As result of this limitation, most renewable energy technologies were prone to vandalism and damage. Stakeholders

further informed the Committee that beneficiaries of these technologies should be included in the initial planning stage before implementation.

The Committee was further informed that the Ministry of Energy conducted continuous community sensitisation programmes on the usage and benefits of renewable energy technology. Other stakeholders informed the Committee that the Government should consider using all available channels of community engagement such as through traditional leaders, civic leaders, teachers, market road shows and house to house campaigns.

### **6.1.7 Investment in Research and Development**

Stakeholders submitted that renewable energy technology kept evolving, therefore, there was need for continued research. The Committee was informed that there was capacity in different institutions in the country that could assist the Government in the area of research on renewable energy. In this vein, stakeholders suggested that the Ministry of Energy should consider partnering with the institutions of higher learning and private consulting firms to carry out research. They stressed the importance of adequate funding towards research.

## **6.2 To what extent has the Ministry facilitated increased access to electricity through Private Public Partnership Participation in Rural Electrification Projects for Renewable Energy**

### **6.2.1 Private Sector Participation in Rural Electrification using Renewable Energy Sources**

The Committee was informed that lack of a dedicated renewable energy legal and regulatory framework had impeded prospects of attracting investment in the sub sector. Stakeholders were of the view that a specific renewable energy legal and regulatory framework would facilitate and promote private sector participation.

The Committee was further informed that the Ministry of Energy, with support from the German Government, was implementing the Renewable Energy Feed in Tariff (REFiT) Strategy of 2017. The Strategy aimed at increasing the national generation through private sector investments in renewable energy technologies. However, it was difficult to fully implement the Strategy, owing to uncertainty surrounding the issue of return on investment for the private sector.

### **6.2.2 Communication Policy and Strategy**

The Committee was informed that the Rural Electrification Authority did not have an updated communication strategy.

## **ADDITIONAL INFORMATION**

Stakeholders informed the Committee that the Ministry of Energy and Rural Electrification Authority should ensure that strategic environmental assessments were conducted prior to commencement of any project. In that regard, stakeholders emphasised that officers in the Ministry of Energy and Rural Electrification Authority needed to be trained in matters pertaining to identification of possible adverse environmental impacts as a result of the use of renewable energy sources.

### **Submission by the Permanent Secretary, Ministry of Energy**

#### **(i) Alternative Energy Sources to electricity generation**

In response to the Auditor General's findings and recommendations, the Minister informed the Committee that from 2016 to 2019, the Government, through the Rural Electrification Authority, had intensified the implementation of renewable energy projects. This was done through the implementation of the projects outlined below.

- (i) Sustainable Solar Market Packages (SSMP II) Project in Chama, Lundazi and Ikeleng'e with the combined capacity of 1,800WP
- (ii) Chunga Solar Mini-Grid Project with a capacity of 200WP
- (i) Lunga Solar Mini-Grid Project with a capacity of 300WP
- (ii) Kasanjiku Mini Hydro Power Project with capacity of 640KW

The Committee was informed that out of the four projects highlighted above, only the SSMP II had been completed. The rest of the projects were still being implemented with considerable progress.

#### **(ii) Data on the Resource Potential or the Production and Consumption of Renewable Energy Sources**

The Minister submitted that, as revealed in the Auditor General's Report, the Ministry had only undertaken studies for solar and wind energy. The Committee learnt that the Ministry of Energy had not conducted any studies to ascertain the viability and potential of other renewable energy sources such as geothermal due to limited resources. The Minister further submitted that there was some information on geothermal from private companies that were conducting feasibility studies on the resource.

#### **(iii) Investment Plan for Renewable Energy Projects**

The Minister, in noting the findings and recommendations by the Auditor General, submitted that the Ministry had, with support from cooperating partners, finalised the Scaling-up Renewable Energy Programme (SREP) in

Low-Income Countries in May, 2019. The Minister informed the Committee that due to the austerity measures and limitations on loan contraction, the projects in the Investment Plan had not been implemented.

(iv) **Beneficiaries in Rural Areas not Accessing Energy from Renewable Energy Sources**

In agreeing with the findings of the Auditor General, the Minister submitted that the construction of Lunga Solar Mini Grid was at 10 per cent construction stage and works had stalled due to the COVID 19 pandemic. However, the Minister informed the Committee that the completion of the project would be attained using the public private partnership model under the Increased Access to Electricity and Renewable Energy Production (IAEREP) Project with European Union grant funding. The Minister further informed the Committee that the Ministry had undertaken the Comprehensive Feasibility and the Market, Economic and Financial Analysis Studies.

(v) **Maintenance of Renewable Energy Projects**

In noting the findings and recommendations of the Auditor General, the Minister informed the Committee that due to lack of funds, the Ministry had not conducted any monitoring and evaluation of the installed solar home systems. The Committee was, however, informed that in order to ensure sustainability of the systems, the Ministry undertook comprehensive capacity building programmes for the beneficiaries of the solar home systems after installation. The Minister further submitted that the Rural Electrification Authority entered into an agreement with the beneficiaries, which stipulated that the operation and maintenance of the systems was the responsibility of the beneficiary.

The Minister informed the Committee that the Ministry was in the process of addressing the issue of maintenance of the solar home systems by provision of an After Sales Service Centre, which would ensure that end users were in constant contact with the suppliers of the solar kits. The Minister further submitted that a real-time custom data repository/software would also be ideal to monitor the solar home systems.

The Minister further submitted that in August, 2019, the Ministry undertook a verification exercise and distributed solar home kits to Members of Parliament from rural areas. The exercise revealed that Members of Parliament had distributed the solar kits to the targeted constituencies and the beneficiaries were utilising the kits for lighting and charging their phones at schools and rural health centres.

(vi) **Level of Awareness on Renewable Energy Technologies**

The Minister informed the Committee that the Ministry conducted awareness campaigns during the installation of the solar home systems on public institutions and houses. However, due to the high turnover of civil servants in rural areas, there was no proper hand over of systems to the new employees. The Minister further submitted that in order to address the problem, the Ministry was in the process of developing a communication strategy which would assist serve as an effective communication tool to all stakeholders.

(vii) **Investment in Research and Development**

The Minister informed the Committee that the Ministry had finalised the development of the Energy Sector Research Strategy (ESReS) in 2020. The Committee learnt that the Strategy, which covered the period 2019 to 2030, aimed at strengthening the energy sector research to ensure improved planning, policy setting, programme design and investment decision.

The Committee was further informed that the Ministry, with support from the European Union under the Increased Access to Electricity and Renewable Energy Production (IAEREP), had developed the Energy Sector Monitoring and Evaluation Plan (ESMEP). The Plan was meant to guide the monitoring and evaluation of activities in the sector so as to increase accountability and successful implementation of projects and programmes.

(viii) **Private Sector Participation in Rural Electrification Using Rural Electrification Strategy**

The Minister informed the Committee that the Ministry, through the Rural Electrification Authority, had developed guidelines for financing rural electrification projects. The guidelines provided direction on how the private sector could access smart capital subsidies. This was aimed at attracting private sector participation in rural electrification programmes. The Minister further submitted that the Ministry had developed investment guidelines, which provided direction on how the private sector could participate in rural electrification programmes, which included sites at which the private sector could invest. The Ministry had also developed a methodology for tariff determination for rural electrification projects which could be utilised by the private sector to determine tariffs.

(ix) **Communication Strategy**

The Minister informed the Committee that the Ministry had revised the Communication Strategy and the Interim Board Committee approved it in September, 2020.

## **COMMITTEE'S OBSERVATIONS AND RECOMMENDATIONS**

Following interactions with various stakeholders, the Committee makes observations and recommendations as set out below.

### **(i) Enact Renewable Energy Legislation**

The Committee notes that both the *Electricity Act, No. 11 of 2019* and *Energy Regulation Act, No. 12 of 2019*, do not adequately provide for the effective exploitation and promotion of renewable energy sources in Zambia. The *Electricity Act* is heavily skewed towards electricity generation, while the *Energy Regulation Act* is more focused on regulatory matters. In this regard, the Committee strongly urges the Government to develop legislation to specifically govern the development of renewable energy sources in Zambia.

### **(ii) Improve Funding towards Rural Electrification Projects**

The Committee observes that the funds appropriated for rural electrification projects are far below what is needed to ensure increased access to electricity energy in rural areas. The Committee strongly urges the Government to provide more funds towards rural electrification projects and develop a resource mobilisation strategy with the private sector.

### **(iii) Progress on Access to Renewable Energy Sources in Rural Areas in Zambia**

The Committee observes the slow pace at which renewable energy projects are being implemented in the country. For instance, during the period 2016 to 2019, only one project, namely the Sustainable Solar Market Packages II Project in Chama, Lundazi and Ikelenge, were completed. The other three projects are still being implemented. At this pace, it is unlikely that increased access to energy in rural areas will be achieved by 2030. The Committee, therefore, recommends that the Government should review the measures currently being used to promote the use of renewable energy in Zambia, in order establish the most effective model.

### **(iv) Devise Robust Maintenance Plans for Renewable Energy Technologies**

The Committee notes that the approach that the Government is using for maintenance of renewable energy technologies is not sustainable. The Committee further notes that beneficiaries of these technologies do not regard the equipment as their own and they abandon the equipment when a fault develops.

In this regard, the Committee urges the Government to devise a robust sustainability plan that covers the entire project cycle from procurement, installation, operation and maintenance, training, monitoring and evaluation for the solar home systems and other renewable energy technologies. The Committee further urges the Government to involve communities at an early stage in the project cycle so as to create a sense of ownership.

(vi) **Enhance Research and Development**

The Committee observes that implementation of most renewable energy technologies in Zambia are not preceded by comprehensive research to establish suitability and viability of these projects. The Committee is of the view that research is a vital component in such projects as it helps to determine the best and most cost effective method of implementing the projects.

The Committee, therefore, recommends that the Government should collaborate and utilise local capacities within the country such as institutions of higher learning like universities, colleges and research institutions to conduct research.

(vii) **Enhance Private Sector Participation in Renewable Energy Projects**

The Committee observes that, while the Government has put in place investment guidelines and a methodology for tariff determination to promote renewable energies, these measures alone, without a specific legal and regulatory framework in place, will not advance the development of alternative sources of energy and attract investment for the renewable energy sub sector.

In light of the above, the Committee urges the Government to, as a matter of urgency, enact legislation on renewable energy so as to, among other issues, promote development of renewable energies and enhance private sector participation.

(viii) **Implement Communication Strategy**

The Committee observes that the revised Communication Strategy that was approved in September, 2020 has not been released for utilisation. The Committee notes that this meant that the renewable energy projects are being implemented without a communication strategy. The Committee, therefore, urges the Government to ensure that the Communication Strategy is released without further delay.

(ix) **Raise Awareness on Renewable Energy Technologies**

The Committee observes that sensitisation and awareness campaigns undertaken by the Government to educate beneficiaries of renewable energy technologies are not yielding the desired results. The Committee, in this vein, further notes that most people do not fully understand how to use and maintain the equipment used in the renewable energy sub sector. As a result, renewable energy equipment is abandoned when a fault develops and eventually become susceptible to vandalism.

The Committee, therefore, recommends that the Government should review the strategy being used to educate and sensitise beneficiaries of renewable energy technologies. The Committee further urges the Government to translate the information on renewable energy into local languages, so that the sensitisation process is inclusive.

## **7.0 CONCLUSION**

No significant progress has been made towards rural electrification in Zambia. The Report of the Auditor General on the Promotion of Renewable Energy Sources in Rural Areas in Zambia for the period 2015 to 2019 has revealed that the Government, through the Rural Electrification Authority, developed a Strategic Plan for the period 2014 to 2016, whose objective, among others, was to increase the use of renewable and alternative sources of energy. However, the output indicator to increase the contribution of renewable energy sources by solar and mini-hydro sources from 0.72 per cent in 2013 to 2.7 per cent in 2016, was not achieved. In this regard, it is necessary that the Government reviews the measures and strategies that are being used to promote renewable energy sources for the entire country. This will assist to establish the most effective model that can be used to achieve the renewable energy agenda. The Government should also develop a specific legislative framework on renewable energy so as to attract investors into the sub sector. Additionally, the Government should provide adequate financial resources towards renewable energy projects.

Lastly, the Committee is grateful to you, Mr Speaker, and to the Clerk of the National Assembly for the guidance and support rendered to it during its deliberations. The Committee is also indebted to all the witnesses who appeared before it for their cooperation and input.

**E K Belemu, MP**  
**CHAIRPERSON**

**February, 2021**  
**LUSAKA**

**APPENDIX I - List of National Assembly Officials**

Ms C Musonda - Principal Clerk of Committees

Mr F Nabulyato - Deputy Principal Clerk of Committees (SC)

Mrs C K Mumba - Senior Committee Clerk (FC)

Mrs S B M Nyirongo - Committee Clerk

Mrs D H Manjoni - Personal Secretary II

Mr M Chikome - Committee Assistant

## **APPENDIX II – List of Witnesses**

### **MINISTRY OF ENERGY**

Hon M Nkhuwa – Minister  
Mr D K Chisenda – Permanent Secretary  
Mr A M Simwaba – Acting Director, Department of Energy  
Mr M Ziba – Acting Director Technical, Department of Energy  
Mr A K Chivunda – Engineer  
Mr M Chipala – Chief Planner  
Mr V Chingangu – Planner

### **OFFICE OF THE AUDITOR GENERAL**

Dr D C Sichembe – Auditor General  
Mr F Mbewe – Deputy Auditor General, Audits  
Mr E Tembo – Director, Specialised Audit Directorate  
Ms M Munkanta, Assistant Director, Performance and Environmental Audits  
Ms C Chituta - Principal Auditor, Performance and Environmental Audits  
Mr B Muyoba – Principal Auditor, Planning  
Mr E Chisalu – Senior Auditor, Performance and Environmental Audits  
Mr R Nkausu – Senior Auditor, Performance and Environmental Audits

### **CONSUMER UNITY AND TRUST SOCIETY**

Mr I Zulu – Programme Coordinator  
Ms S Kagulura – Research Assistant

### **ZAMBIA INSTITUTE OF POLICY ANALYSIS AND RESEARCH**

Mr Z Chikuba – Acting Senior Research Fellow  
Ms M Nyambe - Mubanga – Research Fellow  
Dr B Tembo – Research Fellow  
Ms M Phiri – Research Fellow  
Mr J Kabandala – Research Assistant (Intern)

### **POLICY MONITORING AND RESEARCH CENTRE**

Ms L N Tembo - Head of Monitoring and Evaluation  
Ms E N Besa - Senior Researcher  
Mr P Lupiya - Senior Researcher  
Ms S Williams - Research Fellow

### **ZAMBIA ENVIRONMENTAL MANAGEMENT AGENCY**

Mr J Msimuko - Director General  
Ms K Banda - Director Legal Services  
Mr D Kapindula - Acting Director Operations  
Mrs Y Kaunda - Manager - Audit  
Mr A Phiri - Technical Assistant to the Director General  
Mr C Simwanza - Acting Manager South  
Mrs C Mukumba - Principal Inspector

Mr M Kumwenda - Principal Legal Officer  
Mr D Mwila - Inspector

**COPPERBELT UNIVERSITY**

Dr L Siwale – Dean, School of Engineering  
Mr B Kumwenda – Lecturer, School of Engineering  
Mr G Phiri – Monitoring and Evaluation Officer

**INDUSTRY DEVELOPMENT CORPORATION**

Mr M C Kaluba - Group Chief Executive Officer  
Mr M Kasongola - Chief Investments Officer  
Mr B Nalishuwa - Head of Investments, Manufacturing, Mining and Agribusiness  
Mr C Chisanga - Senior Investment Analyst, Energy, Infrastructure and Services  
Ms S Kaweza - Senior Analyst Research and Strategy

**CITIZENS ECONOMIC EMPOWERMENT COMMISSION**

Mr L Mukumbuta – Director General  
Mrs H M Mwanza – Operations Manager  
Mrs M Munansangu – Acting Director, Business Development  
Mr M Mumba – Project Manager, Skills Development and Entrepreneurship Project

**ENERGY REGULATION BOARD**

Ms L H Lungu – Director General  
Mr A Mwila – Director, Economic Regulation  
Mr A Polito – Director, Technical Regulation  
Mr M Sikazwe – Senior Manager, Director General’s Office  
Mr S Mwiinga – Senior Manager, Electricity  
Mr S Buumba – Senior Manager, Pricing and Research  
Mr L Muzeya – Manager, Director General’s Office  
Mr F Lubingu – Manager, ICT  
Mrs C Sichinga – Acting Manager, Renewable Energy

**MUHANYA SOLAR**

Mr G Kaila – Managing Director

**RURAL ELECTRIFICATION AUTHORITY**

Mr C Silavwe – Chief Executive Officer  
Mr P Mubanga – Director, Engineering Services  
Mrs L Daka – Legal Counsel and Company Secretary  
Mrs J Musonda – Director, Strategy and Planning  
Mr G Kunda – Director, Finance  
Mr G Kamanga – Director, Human Resource and Administration  
Mr S Mphande – Manager, Procurement

Mr J Mukosa – Manager, Corporate Affairs  
Mr D Ngosa – Acting Manager, Internal Risk and Audit  
Ms R Tetamashimba – Senior Monitoring and Evaluation Officer

**ZESCO LIMITED**

Mr V M Mundende – Managing Director  
Mr F Mubiana – Director, Generation  
Mr E Banda – Senior Manager, Generation Development