

# BUSINESS REPORT 2021

## 65th Annual General Meeting



**THE ENGINEERING  
INSTITUTION OF ZAMBIA**



Engineering Institution of Zambia



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**NOTICE OF 65<sup>th</sup> ANNUAL GENERAL MEETING AND CONFERENCE**

**The Engineering Institution of Zambia (EIZ)  
(Established under EIZ Act No. 17 of 2010)**

NOTICE IS HEREBY GIVEN that the 65th Annual General Meeting (AGM) of the Engineering Institution of Zambia (EIZ) will be held on Saturday, 23rd April 2022 starting at 09:00 hrs at the AVANI Victoria Falls Resort in Livingstone or **Virtually in the event that restrictions on gatherings prevent us from holding a physical meeting.**

The Meeting will be preceded by the Zambia Women in Engineering Section (ZWES) Conference and Young Engineers Forum (YEF) on Wednesday 20th April 2022, while the EIZ Annual Symposium will be held on Thursday 21st April 2022 and Friday 22nd April 2022 respectively. The theme for the Symposium will be **"Engineering for a Changing World."**

Due to Covid 19, registration will be **strictly online** accessible at [www.eiz.org.zm](http://www.eiz.org.zm).

The AGM will take place to transact the following business:

**AGENDA**

1. National Anthem
2. Confirmation of Quorum
3. Call to order
4. Reading of the Annual General Meeting Notice
5. Receipt of Apologies
6. Adoption of the agenda
7. Welcome & opening remarks
8. Read 2021 member obituaries and observe minute of silence
9. Receive and adopt Minutes of the Annual General Meeting held at AVANI Victoria Falls Resort in Livingstone, 17th April, 2021.
  - 9.1 Corrections and adoption
  - 9.2 Matters Arising-Action taken Report
10. Receive and adopt Minutes of the Extra-Ordinary General Meeting held virtually, on 24th July, 2021.

- 10.1 Corrections and adoption
- 10.2 Matters Arising-Action taken Report
11. Receive and adopt Minutes of the Extra-Ordinary General Meeting held virtually, on 27th November, 2021.
  - 11.1 Corrections and adoption
  - 11.2 Matters Arising-Action taken Report
12. Receive and adopt the 60th Engineering Council report for the year ended 31st December.
13. Receive and adopt the Audited Financial Statements of the Institution for the year ended 31st December, 2021.
14. Appointment of Auditors for the financial year ending 31st December, 2022.
15. Consideration of motions tabled before the AGM.
16. Dissolution of The Disciplinary Committee (DC)
17. Dissolution of the Craftsperson's and Technicians Section (CTS)
18. Dissolution of the 60th Engineering Council of the Engineering Institution of Zambia.
19. Elections
  - 19.1 Confirmation of approved nominations
  - 19.2 Elections
  - 19.3 Election results
  - 19.4 Introduction of the elected Candidates
20. Close of Meeting by the EIZ President.

Elections will be conducted by the Nominations and Elections Committee (NEC) of the Institution during the AGM in accordance with the 2021 Constitution of the EIZ. The Conduct of the elections will be guided by the EIZ Election Rules and Procedures. The EIZ Election Rules and Procedures can be found in the EIZ Constitution as second Annexure, which can be accessed on the EIZ [website: www.eiz.org.zm](http://www.eiz.org.zm). Candidates are advised to read and familiarize themselves with these rules and procedures.

**Please NOTE that to be eligible to vote on the 23rd of April 2022 a member ought to be in GOOD STANDING by 23rd March 2022 in accordance with the EIZ Constitution.**

### **A) POSITIONS ON COUNCIL FOR WHICH NOMINATIONS ARE REQUIRED**

1. **President**
2. Vice President Policy Public Relations and National Development
3. Vice President Finance and Administration
4. **Vice President Membership and Continuous Professional Development**
5. **Engineers' Representative**
6. Technologists' Representative
7. **Technicians' Representative**
8. Craftsperson's Representative
9. Engineering Organizations Representative
10. Engineering Units Representative

**B) POSITIONS ON DISCIPLINARY COMMITTEE FOR WHICH NOMINATIONS ARE REQUIRED**

1. **Five (5) registered Members** who are not members of the Council, elected at a general meeting of the Institution.

The following shall also be members of the Disciplinary Committee, as provided for under Part VI Section 48 (1) and (2) of the Engineering Institution of Zambia (EIZ) Act No. 17 of 2010.

1. **A Chairperson and Vice Chairperson** who are Legal Practitioners qualified to hold, or who have held, high judicial office.
2. The President of the EIZ Council.

**In addition to the above the candidates will be required to meet the following requirements:**

- A Minimum of ten years' experience in a senior management position
- Availability to attend all disciplinary processes.
- An understanding of the rights, obligations and liabilities of the EIZ members is of fundamental importance for candidates.
- Proven previous knowledge and experience in adjudication and assessment of rights and party obligations
- Must be conversant with Procedural knowledge and be familiar with requirements of rules of natural justice and various forms of problem-solving procedures.
- Good interpersonal communication skills

Ability to be impartial and objective regarding the allocation of risk and the liabilities of the parties, as well as observe strict confidentiality in all matters related to the committee's proceedings.

**C) POSITIONS ON THE CRAFTSPERSON'S AND TECHNICIANS SECTION (CTS) WHICH NOMINATIONS ARE REQUIRED**

1. Chairperson
2. Vice Chairperson
3. **Technicians' Representative**
4. **Craftsperson's Representative**

**D) NOMINATION PROCEDURES**

Members in good standing wishing to stand for elections are required to complete nomination forms which can be obtained from either the EIZ website at [www.eiz.org.zm](http://www.eiz.org.zm) or from the Secretariat either in Kitwe or in Lusaka at the addresses shown below.

The duly completed nomination forms with respective attachments should be

returned in sealed envelopes marked EIZ 2022 ELECTIONS and Category Being Contested and the position being contested "e.g. EIZ 2022 ELECTIONS ENGINEERING COUNCIL CRAFTSPERSONS REPRESENTATIVE" then deposited in NOMINATION BOXES provided at the EIZ Head Quarters (HQ) in Lusaka and at Kitwe Offices or emailed to nec@eiz.org.zm. Nominations sent by email should have the subject written as shown in the following example "*George Sitwala- Council Elections- President*".

**PLEASE NOMINATION SUBMISSION INSTRUCTIONS ON THE NOMINATIONS FORM.**

The **CLOSING TIME AND DATE** for submission of nominations will be **14:00hrs on Friday 11th February, 2022**. Nominations will be opened immediately thereafter at the EIZ HQ and Kitwe Offices, and members wishing to witness the opening of nominations are welcome to physically observe.

Both the nominees and those nominating them should be in good standing in their membership subscriptions for the nominations to be valid.

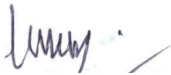
**E) NOMINATION FEES:**

There shall be **NO Nomination Fees to be paid**

**F) ADMISSION TO THE AGM AND ELIGIBILITY TO VOTE**

Please note that only members in good standing shall be admitted to the AGM and **ONLY** those members stipulated in Article VII of the Constitution shall be allowed to vote at the AGM

By order of the 60<sup>th</sup> Engineering Council



Eng. Linus Chanda  
**REGISTRAR & CHIEF EXECUTIVE OFFICER**



**THE ENGINEERING INSTITUTION OF ZAMBIA**

**EIZ HEADQUARTERS**

Stand No. 2374, Danny Pule Road,  
Showgrounds  
P.O. Box 51084  
Tel: +260 211 256214; +260  
211 255161

**SOUTHERN REGION**

Stand No. 2374,  
Danny Pule Road  
P.O. Box 51084  
Tel: +260 211 256214  
Email: [eiz@eiz.org.zm](mailto:eiz@eiz.org.zm)

**NORTHER REGION**

Engineers' House  
8 Kantanta Street,  
P.O. Box 23385  
Tel: +260 212 230111,  
+ 260 212 222608

**ADVANCING TECHNOLOGY FOR NATIONAL DEVELOPMENT**

AGENDA OF THE 64TH ANNUAL GENERAL MEETING OF THE ENGINEERING INSTITUTION OF ZAMBIA HELD AT AVANI VICTORIA FALLS RESORT IN LIVINGSTONE ON SATURDAY 17TH APRIL 2021.

1. National Anthem
2. Quorum confirmation
3. Calling meeting to order
4. Apologies
5. Adoption of the Agenda
6. Read Member obituaries and observe minute of silence
7. Receive and adopt minutes of the Extraordinary General Meeting held at Government Complex, Lusaka on 12<sup>th</sup> September 2020.
8. Receipt and adopt the 60<sup>th</sup> Engineering Council report for the year ended 31<sup>st</sup> December 2020 by the President.
9. Receive and adopt the Audited Financial Statements of the Institution for the year ended 31 December, 2020.
10. Appoint auditors for the financial year ending 31 December, 2021.
11. Consider motions tabled before the AGM.
  - 11.1 Presentation by Constitutional Review Committee (CRC) on the amendment to the EIZ Constitution and Act.
12. Dissolution of the Zambia Women in Engineering Section of the Engineering Institution of Zambia (***Nominations & Elections Committee***)
13. Dissolution of the Disciplinary Committee of the Engineering Institution of Zambia (***Nominations & Elections Committee***)
14. Elections of the Zambia Women in Engineering Section (***Nominations & Elections Committee***)
  - 14.1 Confirmation of approved nominations
  - 14.2 Elections
  - 14.3 Election results
  - 14.4 Introduction of the Section Committee
15. Close of Meeting.

**1. National Anthem**

The National Anthem was sung and prayer offered by Eng. David Kamungu, Acting Deputy Registrar.

**2. Quorum confirmation**

Quorum was confirmed by the Secretariat as having fifty (50) members eligible to vote and five (5) Fellows.

**3. Calling meeting to order**

The meeting was called to order at 12:45hrs.

**4. Apologies**

Apologies were recorded from the following;

- 4.1 Eng. David Chakonta
- 4.2 Eng. Lubasi Milupi
- 4.3 Prof. Clive Chirwa
- 4.4 Eng. Newton Zulu
- 4.5 Eng. Mufalo Nanyama
- 4.6 Eng. Stephen Simukanga
- 4.7 Eng. Peter Kapala
- 4.8 Teg. Chipola Mulenga
- 4.9 Eng. Rev. Happy Musumali
- 4.10 Eng. Tom Kamwendo
- 4.11 Eng. Sydney Matamwandi
- 4.12 Eng. Stephen Malumbila
- 4.13 Teg. Elizabeth Namakando

**5. Adoption of the Agenda**

There was a proposal to amend the agenda by deleting agenda item 15.

The motion to adopt the agenda was moved after a proposal by London Mwafulirwa and seconded by Eng. William Mulusa.

**6. Read Member obituaries and observe minute of silence**

A minute of silence was observed in remembrance of departed members of the Engineering Institution of Zambia.

**7. Receive and adopt minutes of the 63<sup>rd</sup> Annual General Meeting held at Avani resort on Saturday 18<sup>th</sup> April 2019.**

7.1 Corrections and Adoption



- 7.1.1 There were no corrections.  
The minutes were proposed for adoption by Eng. Mumba Kanyuka and seconded by Eng. Dumisani Nkhata.
- 7.2 Matters Arising - Action Taken Report  
There were no matters arising
- 8. Receive and adopt minutes of the Extraordinary General Meeting 1 held at Government Complex, Lusaka on 12<sup>th</sup> September 2020.**
  - 8.1 Corrections and Adoption
    - 8.1.1 There were no corrections.  
The minutes were proposed for adoption by Tec. Micheal Nkhata and seconded by Eng. Dr. Yohane Tembo.
  - 8.2 Matters Arising - Action Taken report
    - 8.2.1 The meeting was informed that Management was going to focus on improving the Technicians and Technologists membership category.
- 9. Receive and adopt minutes of the Extraordinary General Meeting 2 held at Government Complex, Lusaka on 12<sup>th</sup> September 2020.**
  - 9.1 Corrections and Adoption
    - 9.1.1 item 1.3 should read “annual”
    - 9.1.2 replace “a” with “A” on page 12

The minutes were proposed for adoption by Eng. Ennie Muchelemba and seconded by Eng. Sharon Musonda.
  - 9.2 Matters Arising - Action Taken report  
There were no matters arising.
- 10. Receipt and adopt the 60<sup>th</sup> Engineering Council report for the year ended 31<sup>st</sup> December 2020 by the President.**
  - 10.1 The meeting noted that the membership had increase in spite of the Covid 19 pandemic. The meeting urged Council to explore alternatives of conducting virtual workshops to ensure member CPD was continuous.
  - 10.2 The meeting requested Management to provide a roadmap into the completion of the EIZ HQ and give a tentative date of shifting. The meeting was informed that Management had projected to shift by 31<sup>st</sup> May 2021.

- 10.3 In regard to Compliance, the meeting was informed that the Institution had closed the year with a compliance of 68% on individuals and 67 % on engineering organisations and units.
  - 10.4 In regard to the Society House findings, the meeting was informed that the Technical Committee had advanced in its investigations and that a report was going to be made ready by the fourth quarter of 2021.
  - 10.5 The AGM proposed that the Ministry of Finance should set aside some funds to support investigations under the Technical Committee. The meeting requested Council to engage the Government on the matter.
  - 10.6 In regard to the Office of the Engineer General, the AGM requested Council to engage the Ministry to push the matter forward. Members noted that the issue had taken so long and needed to be actualized.
  - 10.7 Council appealed to all other disciplines to take advantages of the sections and ensure that their agenda is pushed forward.
  - 10.8 The AGM proposed that there was need to improve visibility through various TV and radio programs.
  - 10.9 The meeting deliberated on the report fully and Eng. Mufalo Nanyama moved a motion to adopt the report and Eng. London Mwafulirwa seconded.
- 11. Receive and adopt the Audited Financial Statements of the Institution for the year ended 31 December, 2020.**
- 11.1 The meeting was informed that the Institution recorded surplus of K14.1 Million kwacha compared to 2020. This was achieved during the period of the Covid 19.
  - 11.2 The meeting was informed that 23.9% income was increased in the year under consideration.
  - 11.3 The meeting heard that operational costs as a result of Covid 19 had reduced in 2021 compared to 2021.
  - 11.4 In regard to the financial performance the Institution remained stable in 2021 in spite of the coronavirus pandemic. The Vice President in charge of Finance invited the External Auditor to present their report.
  - 11.5 The External Auditor MPH Chartered Accountants presented the Auditor's report on the Audited Financial Statements and informed the meeting that in their opinion, the Financial Statements showed a true and fair view of the financial position of the Institution as at 31<sup>st</sup> December, 2020.
  - 11.6 The meeting requested Management to clarify the period of the fixed term deposits. The meeting was informed that the period was for 180 days and that it was short term.

- 11.7 The Vice President, F&A moved the motion to adopt the financial statements as presented.
- 11.8 The AGM commended Council and Management for managing the finances well in a difficult financial period.
- 11.9 Eng. London Mwafulirwa moved the motion to adopt the financial report. Eng. Dr. Godwin Beene seconded.

**12. Appoint auditors for the financial year ending 31<sup>st</sup> December, 2021.**

The Audit Committee Chairperson, Eng. Dr. Yohane Tembo moved the motion to reappoint Messers MPH Chartered Accountants as Auditors for the financial year ending December 31<sup>st</sup> 2021

Eng. Richard Kasongo proposed the motion to reappoint MPH chartered Accountants and was seconded by Eng. Davison Chakosa.

**13. Consider motions tabled before the AGM.**

There was a motion to revise the EIZ Act No 17 of 2010 presented to the AGM.

The AGM unanimously voted to revise the Act.

**13.1 Presentation by Constitutional Review Committee (CRC) on the amendment to the EIZ Constitution and Act.**

13.1.1 The CRC Chairperson made a presentation to the AGM on the progress made thus far.

13.1.2 The meeting noted with concern increased apathy on matters of the EIZ.

13.1.3 The meeting was urged to participate in matters of review of the Constitution going forward in order to improve the Institution.

13.1.4 The meeting was informed that the roadmap to complete the document was earmarked for June 2021.

**14. Dissolution of the Zambia Women in Engineering Section of the Engineering Institution of Zambia (*Nominations & Elections Committee*)**

The NEC Chairperson, dissolved the ZWES Executive in accordance with the

**15. Dissolution of the Disciplinary Committee of the Engineering Institution of Zambia (*Nominations & Elections Committee*)**

**16. Elections of the Zambia Women in Engineering Section (*Nominations & Elections Committee*)**

### 13.2 Confirmation of approved nominations

The Chairperson of the NEC informed the meeting that all nominees met all requirements as stipulated in the EIZ Constitution 2020 edition.

sn	POSITION	NUMBER OF CANDIDATES	CANDIDATES
I.	Chairperson	01	Eng. Ennie Muchelemba
II.	Vice Chairperson	01	Eng. Aggness Mwansa
III.	Engineers Representative	01	Eng. Mwanida Makashini
IV.	Technologists Representative	01	Teg. Namakando Elizabeth
V.	Technicians Representative	01	Tec. Kwimbi Namwila
VI.	Craftspersons Representative	01	Cra. Kaunda Chetwani
VII.	University Lecturer's Representative	01	Eng. Bawemi Mutonga

### 13.3 Elections

The meeting was informed that there were no elections as all positions were filled and unopposed.

### 13.4 Election results

The returning officer and NEC Chairperson, Eng. Bernard Chiwala announced the following as new Office Bearers of the Zambia Women in Engineering ZWES.

sn	POSITION	NUMBER OF CANDIDATES	CANDIDATES
I.	Chairperson	01	Eng. Ennie Muchelemba
II.	Vice Chairperson	01	Eng. Aggness Mwansa
III.	Engineers Representative	01	Eng. Mwanida Makashini
IV.	Technologists Representative	01	Teg. Namakando Elizabeth
V.	Technicians Representative	01	Tec. Kwimbi Namwila
VI.	Craftspersons Representative	01	Cra. Kaunda Chetwani
VII.	University Lecturer's Representative	01	Eng. Bawemi Mutonga

### 13.6 Introduction of the Section Committee

All members were introduced to the AGM.

### 17. Close of Meeting.

The meeting closed at 13:25hrs.

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Chairperson  
17<sup>th</sup> April 2021

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Secretary  
17<sup>th</sup> April 2021

## Attendance

### Present

- |                         |  |
|-------------------------|--|
| 1. Eng. Abel Ngáandu    | President (Chairperson)                      |
| 2. Eng. Monica Milupi   | Vice President - MCPD                        |
| 3. Eng. Charity K Chola | Vice President - Policy and Public Relations |
| 4. Mr. Eunie Ngandu     | Director of Finance and Administration       |
| 5. Eng. David Kamungu   | Director of Operations                       |
| 6. Eng. Kabwe Musonda   | Regional Manager South                       |
| 7. Eng. Maiwaseh Zulu   | Acting Regional Manager North                |
| 8. Mr. Rex Kalangu      | Technical and Quality Manager                |

### Apologies

1. Eng. Ghomezyo Mhone
2. Eng. Henry Mwale
3. Eng. David Chakonta
4. Mr. M Masanza

### Agenda of the EGM

- 1.0 National Anthem and Prayer
- 2.0 Confirmation of Quorum
- 3.0 Reading of EGM Legal Notice
- 4.0 Call to order
  - 4.1 Present
  - 4.2 Apologies
  - 4.3. Invited
- 5.0 Adoption of the Agenda
- 6.0 Remarks by Chairperson of the Engineering Council and President of EIZ
- 7.0 Consideration and Approval of the EIZ Council proposal to amend the 2020 EIZ Constitution
- 8.0 Presentation of the draft 2021 EIZ constitution
- 9.0 Resolutions
- 10.0 Close of Meeting

- 1.0 **National Anthem and Prayer**  
The national anthem was sung and prayer given by Eng. David Kamungu
- 2.0 **Confirmation of Quorum**  
The quorum was confirmed.
- 3.0 **Reading of the EGM Legal Notice**  
The EGM legal notice was read by the Registrar, Eng. Linus Chanda
- 4.0 **Call to order**
  - 4.1 **Present**
  - 4.2 **Apologies**  
Eng. Musompah Musanza  
Eng. Henry Mwale  
Eng. David Chakonta
  - 4.3 **Invited to attend**
    - 4.3.1 **Victors & Victors**

The obituaries of the members that we lost were read out. A moment of Silence was observed

- 5.0 **Adoption of the Agenda**  
The agenda was adopted, proposed by Eng. Kennedy Zitha and was seconded by Eng. Silvanus Chabola.
- 6.0 **Remarks by the Chairperson of the Engineering Council and president of EIZ**
  - 6.1 The Chairperson welcomed all the members to the 2021 Extraordinary General meeting.
  - 6.2 The Chairperson in his introductory speech, indicated that six months ago, the Council appointed a Constitutional Review Committee that went round to get submissions from the members. He, however expressed disappointment with the poor turn out and response from the members. He mentioned that this could have been attributed to the Covid 19 pandemic.
  - 6.3 The Chairperson said minor corrections needed to be made to the constitution and encouraged everyone to participate. He appointed the Vice President, Policy and public Relations to run through the motions.

6.4 He informed the meeting that adoption of the constitution was going to be by 2/3 majority

## 7.0 Consideration and Approval of the EIZ Council to amend the 2020 EIZ Constitution

The consideration to amend the 2020 EIZ constitution was proposed by Eng. Kenneth Chense and seconded by Eng. Joseph Phiri

## 8.0 Presentation of the draft 2021 EIZ Constitution

The chairperson presented the draft 2021 EIZ Constitution to the members and the following motions were proposed and adopted as follows:

Motion	Proposer	Secunder
1. To create a section titled preamble		
2. It is hereby proposed and recommended that: I. Section 1 be renamed as Article I - Name and Purpose II. The current clause 1 be transferred to Preamble III. The current clause 2 be removed IV. The current clause 3 be recast V. The current clause 4 be recast VI. The current clause 5 be transferred to Article II		
3. It is hereby proposed and recommended that Section II be amended as follows: I. Section II be referred to as Article II - Interpretations II. The functions of EIZ be removed III. The definitions and Acronyms from Section I (Article I) be placed from current section 1 to this section IV. Additional interpretations have been added V. Some definitions have been recast	Eng. Peter Mhone	Eng. Kennedy Musonda
4. It is hereby proposed and recommended that: I. The current section III be referred to as Article III - Structure of the Institution II. Clause 22 be recast III. Addition of two more clauses	Eng. M Kalunga	Eng. Kennedy Musonda
5. It is hereby proposed and recommended that: I. Section IV be referred to Article IV - Membership II. The rest of the clauses in the section be recast III. Life member criteria to include age limit	Eng. Happy Musumali	Eng. Bridget Sianthika
6. It is hereby proposed and recommended that: I. Section V be referred to Article V - Meetings II. The section (Article V) be reorganized with the inclusion of Clauses and Sub clauses	Eng. Kennedy Musonda	Eng. L Chinjenge
7. It is hereby proposed and recommended that: I. Section VI be referred to as Article VI - The Engineering Council II. Rephrasing of Clauses and Sub clauses	Eng. Kenneth Chense	Eng. Vernon Ngulube
8. It is hereby proposed and recommended that: I. Section VII be referred to Article VII - Elections	Eng. Yorum Sinyangwe	Eng. Donald H



**MINUTES OF THE 2021 EXTRAORDINARY GENERAL MEETING  
HELD VIRTUALLY ON SATURDAY 24TH JULY, 2021**

II. Creation of Clauses and Sub clauses III. Included procedure for election of Honorary member or a Life member		
9. It is hereby proposed and recommended that: I. Section VIII be replaced by Article VIII-Duties of President and Vice Presidents are listed in Annexure 1 II. Rephrase some of the clauses		
10. It is hereby proposed and recommended that: i. Section IX be replaced by Article IX - Committees of Institution ii. The provisions for the NEC in the current Constitution are updated and placed in this Article iii. Inclusion of Ethics and Integrity Committee	Eng. Kennedy Musonda	Eng. Freddie Malale
11. It is hereby proposed and recommended that: i. the current Section VIII be edited and placed here as Article X- Sections Regions and Branches	Eng. Vernon Ngulube	Eng. W Salani
12. It is hereby proposed and recommended that: i. the current Section IX be edited and placed here as Article XI- Amendments to the Constitution ii. The provisions to amend the Constitution are expanded	Eng.	Eng. Sharon Musonda
13. It is hereby proposed and recommended that: i. Annexure 1 be rephrased as First Annexure (Articles V and XI)-Conduct of Institution Meetings Rules ii. In the existing annexure 1, clause 2 up to 10 have been transferred to Article VII, VIII and X	Eng. Bridgette Sianthika	Eng. M Ziwa
14. It is hereby proposed and recommended that: i. Annexure II be removed from the Constitution ii. The Code of Ethics of the EIZ will be issued as a statutory Instrument by the Minister	Eng. Z Siluonda	Eng. Kenneth Chense
15. It is hereby proposed and recommended that: i. Annexure 3 is recast as Second Annexure - Election Rules ii. Inclusion of Interpretation iii. Inclusion of criteria of valid nominations		

## 9.0 Resolutions

The following resolutions were made;

9.1 The admission to the class of “skilled person” was to be maintained as in the previous constitution

9.2 The age limit for the class of 'life member' was reduced to 60 years

**10.0 Close of meeting**

There being no further business to discuss, the meeting closed at 10:30 hrs. The President thanked all the members that attended the meeting.

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**Chairperson**  
**Date**

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**Secretary**  
**Date**



## Matters Arising - Action taken report

ITEM	Discussion/Resolution	Responsibility	Status update
10.2	In regard to the roadmap on the completion of the EIZ HQ in readiness for Secretariat to move in		The HQ has been partially complete and the EIZ Secretariat moved on 1 <sup>st</sup> June 2021.
10.4	In regard to the Technical Investigations report on Society House		The Technical report was produced and submitted to NAPSA in the fourth quarter of 2021.
10.5	On engagements with government on the possibility of setting aside some financing for technical investigations		
10.6	Concerning the establishment of the Engineer General's Office		Council engaged the Ministry of Housing and infrastructure on the matter and made a submission for consideration. Government is in support.

## 1.0 INTRODUCTION

The Policy, Public Relations and National Development Committee of EIZ Council is responsible for, among other duties, the development of programs for the advancement of engineering profession, advancing EIZ cooperation with other institutions in advancing public recognition of the engineering profession and to advance EIZ position as an advisory institution to the nation on engineering matters.

The Committee held its Quarterly meetings as follows; 2<sup>nd</sup> February 2021, 26<sup>th</sup> May 2021, 3<sup>rd</sup> September 2021 and 7<sup>th</sup> December 2021. The Committee also held one special meetings on 5<sup>th</sup> January 2021.

The following table presents the members that were serving on the Committee, and their attendance status:

	2021-02-09	2021-01-05 Special	2021-05-26	2021-09-03	2021-12-07
Eng. Charity K Chola	✓	✓	✓	✓	✓
Eng. Alex Mbumba	✓	AP	AP	✓	AP
Eng. Edith Munungwe	✓	✓	✓	✓	✓
Eng. Bridget Sianthika	✓	✓	✓	✓	✓
Eng. Kennedy Musonda	✓	✓	✓	✓	✓
Teg. Elizabeth K. Namakando	✓	✓	✓	✓	✓
Teg. Gideon Chilongu	✓	✓	✓	✓	✓
Cra. Elizabeth Phiri	✓	✓	✓	✓	✓
Eng. Prof. Levy Siaminwe	AP	AP	Ceased to be a Member	Ceased to be a Member	Ceased to be a Member
Eng. Prof. John Siame	Not yet Member	Not yet Member	✓	✓	✓
Eng. Himba Cheelo	AP	AP	✓	AP	AP

### Key

- Present    **AP** Apologies    **AB** Absent
- Not yet a Committee Member
- Ceased to be member of Committee

## 2.0 ACTIVITIES

During the year under review, the PPRND Committee presided over a number of issues reported as follows:

### 2.1 2021 EIZ Symposium

- a. The 2021 EIZ Symposium took place on Friday, 16th April, 2021 at Avani Victoria Falls Resort in Livingstone under the theme, ***"Transformative Resilience in Times of Disruption: An Engineering Perspective"***.
- b. The opening ceremony was graced by Her Honour, the Republican Vice President, Mrs. Inonge M. Wina and was preceded by a keynote address from the FAEO President Eng. Carlien Bou-Chedid.
- c. Twelve (12) papers were presented during the Symposium of which Seven (7) were presented virtually and five (5) physically. Of the twelve (12) papers presented, five (5) were foreign (4 from South Africa and 1 from Lesotho) and Seven (7) were local (Zambian). Eight (8) presenters were female and four (4) presenters were male.

The Committee reviewed the proceedings of the 2021 EIZ Symposium and came up with the following recommendations to help improve the quality of papers and presentations at the Symposium.

- 2.1.1 The Committee resolved that the Symposium preparations would start two months after the preceding Symposium.
- 2.1.2 The Committee resolved that the number of days of the Annual Conference be revised from two days to three days so that the first day could be used for the official opening, second day for the Symposium and last day for the Annual General Meeting.
- 2.1.3 The Publications and Editorial Sub-Committee resolved that the Committee would come up with standards that would guide how it would operate going forward. The draft standards were done by Eng. Dr. Musungu Lungu and were adopted by the PPRND Committee.

## 2.2 3<sup>rd</sup> ZWES Conference

The Symposium was preceded by the Zambia Women in Engineering

Section (ZWES) Conference on the 15th of April 2021, and followed by the EIZ Annual General Meeting on Saturday 17th April 2021 at the same venue.

The Conference received Four (4) papers of which;

2.2.1 Three (3) were presented physically

2.2.2 The 4th paper could however not be presented fully from China (virtually) due to connectivity failure during presentation.

During the official opening of the ZWES Conference there were special presentations from cooperating partners being Zambia Railways, Rural Electrification Authority, ZESCO, CAMCO, Shawonga, CYPE and Kafue Gorge

### **2.3 Federation of African Engineering Organisations (FAEO)**

On 16<sup>th</sup> April 2021, the Institution hosted a FAEO Meeting at AVANI Victoria Falls Resort in Livingstone where a signing ceremony of the Africa, Asia and the Pacific Accord (AAP Accord) to place. The Africa, Asia and the Pacific Accord (AAP Accord) Agreement was signed between The Federation of Engineering Institutions of Asia and the Pacific (FEIAP) and Federation of African Engineering Organisations (FAEO) virtually via ZOOM platform.

The Africa Asia and Pacific (AAP) Accord is the framework for the establishment of an International Standard of Engineering Education, and empowers each member's jurisdiction or economy of Federation of Engineering Institutions of Asia and the Pacific (FEIAP) and Federation of African Engineering Organisations (FAEO), to establish a section of the Register for Engineering for Graduate Engineers, Engineering Technologist and Engineering technicians.

### **2.4 Southern African Federation of Engineering Organisations (SAFE0)**

On 16<sup>th</sup> April 2021, the Institution hosted a SAFE0 Meeting at AVANI Hotel in Livingstone. The Agenda of the meeting discussed the activities for the International Engineering alliance (IEA) under the mentorship of ECSA, handover of Secretariat duties from ECSA to EIZ

and to handover the Presidency of SAFE0 from Eng. George Sitali(Zambia) to Eng. Linda Moseki (Botswana).

Unfortunately, only the handover of presidency was concluded during the meeting. Another meeting took place on the 5<sup>th</sup> of May 2021 where this activity was concluded. A meeting with ECSA and EIZ was been arranged to conduct a physical handover of Secretarial duties. This meeting did not take place either due to travel restrictions due to COVID19 and was postponed to a later date to be advised.

## 2.5 Sub Committee Activities

### 2.5.1 Charge-out Rates Sub Committee

The EIZ 60th Council appointed a 7 persons' Committee to look into the matters of Minimum charge out rates and Guidelines for Engineering professionals, Engineering Organisation and Engineering units to address outstanding matters on the EIZ Act 17 of 2010 on its mandate to recommend remunerations and rates for Engineering professions to the Minister.

The objectives of the initiative was to:

- (i) Provide a schedule of minimum charge out fees for engineering professional engaged in delivering engineering service at any level from consultant Engineer to craft person and artisans in Zambia.
- (ii) Provide a list of works or documentations that must be certified/signed by recommended levels of registered practitioners for them to have legal effect or be accepted by public companies, insurance companies, government departments, etc.
- (iii) Provide a list of stakeholders that must be informed about these fees and guidelines and what is expected of them when dealing with issues of contracting engineering services.

The Committee conducted desk reviews and further held consultative meetings with various Institutions in the Northern and Southern Regions.

The Committee executed their mandate and submitted the Report on the 29<sup>th</sup> of April 2021 for further action. This was report was reviewed

and Council requested the Committee to attend to all the TOR 's including the fees for services.

The Committee reconstituted itself and attended to the request by Council. The second submission was done on 4<sup>th</sup> of August 2021.

## **2.5.2 Constitution Review Committee**

The Engineering Institution of Zambia (EIZ) Constitution Review Committee (CRC) was re-constituted in the first week of December 2020 by the 60<sup>th</sup> Council to fulfil the following TOR's;

- a. Undertake a systematic and comprehensive review of the current EIZ Act No. 17 of 2010 and the EIZ Constitution - 2019 Edition and all its provisions;
- b. Ascertain from the members of the EIZ, their views on the application and operation of the current EIZ Act No.17 of 2010 and EIZ Constitution and, in particular, the strengths and weaknesses of the Act and Constitution;
- c. Carry out countrywide sensitisations and meetings to get members' views on the current Act and Constitution;
- d. Draft any recommended amendments or rescindments;
- e. Present the draft Act and Constitutional amendment recommendations to EIZ Council through the Vice President - Policy, Public Relations and National Development for consideration and provide a draft amended Act and Constitution with possible amendments;
- f. Provide supplementary materials to explain the consequences of any recommendations made, where possible;
- g. Consult any parties affected by the recommended amendments;
- h. Seek advice from other professional bodies or other interest groups and use such advice to formulate recommendations.

The Committee executed their mandate and submitted their first draft



Report and Constitution to PPRND Committee for further review.

Council reviewed the submission and further subjected the draft to the legal drafter for refinement. The Draft Constitution was finally concluded and subjected to an Extra-Ordinary General Meeting which took place on 24<sup>th</sup> July 2021.

### **2.5.3 The International Engineering Alliance Committee (IEA)**

The IEA Committee held its meeting on 29<sup>th</sup> June 2021 to discuss among other things the

- a. perceived purpose and benefits of IEA;
- b. membership process and time frames;
- c. Local Administrative infrastructures;
- d. Enabling Legislation; EIZ Act amendment, interface with IEA ;
- e. Formation of Discipline specific sections;
- f. Role of Discipline specific sections;
- g. MOUs: ECSA with MHID and ECSA with ministry of Higher education;
- h. Road map.

The IEA Committee resolved to adhere to an implementation plan which was impacted by the non-commitment of the mentor (ECSA). Efforts are being enhanced to get firm Commitment from the Mentor and speed up the process.

### **2.5.4 Publications and Editorial Committee of EIZ.**

The Editorial and Publications Sub-Committee was requested to start planning for the 2022 Annual Symposium by coming up with the Theme and Sub themes. The following were the proposed Themes which were submitted to PPRND for adoption and were subsequently approved by Council.

#### **Main theme**

"Engineering for a changing world"

#### **Sub - Themes**

- a. Revamping the manufacturing sector - Engineering perspective

- b. Economic recovery for a changing world - Engineering perspective
- c. Engineering recovery and resilient approach to Covid - 19
- d. Engineering solutions amidst Covid - 19
- e. Innovative approaches to engineering practice and education
- f. Mining and sustainable development in Covid era
- g. Energy diversification for future need
- h. Climate Change

**SUMMARY OF THE STATUS OF THE 2022 EIZ CONFERENCE AND OTHER PUBLICATIONS MATTERS AS AT FEBRUARY 12, 2022**

**1. 2022 CONFERENCE**

**1.1 Status of Papers**

There was a total of 32 papers that have been received so by the time the Committee went for the Reviewers' Camp on 27<sup>th</sup> and 28<sup>th</sup> January 2022 at Ibis Gardens in Chibombo District. Twenty-eight (28) were received by the end of the deadline on 21<sup>st</sup> January, 2022 while two (4) were received between closing date and 25<sup>th</sup> January 2022 and the Committee agreed to included them in the papers for review. The papers are broken down as shown in Table 1.

**Table 1: Breakdown of Papers Received for the 2022 EIZ Conference**

No.	Category	Paper Nos.	No of Papers
1	EIZ Symposium	P0101 - P0127	27
2	ZWES Conference	P0201	01
3	Young Engineers and Innovators	P0301 - P0304	04
<b>TOTAL</b>			<b>32</b>

**Notes:**

- (1) The ZWES Conference is being planned around discussion panels rather than the formal paper presentations. This is the reason why there is only one paper as at now. There were no plans to receive papers.
- (2) The paper submission deadline was extended to 21<sup>st</sup> January 2022. Therefore, the Publications and Editorial Committee has since closed the process of receiving papers.
- (3) The Reviewers' Camp took place at Ibis Gardens on 27<sup>th</sup> and 28<sup>th</sup>

January 2022. Not all the Reviewers invited managed to camp. Out of ten (10) invited, nine managed to camp with the Publications Committee; one was unable to join the camp citing short notice.

- (4) The review process for the papers is expected to be completed by the end of March 2022.

## 2. JOURNAL OF THE ENGINEERING INSTITUTION OF ZAMBIA (JEIZ) PAPERS

There were 33 papers that were received as at 12<sup>th</sup> February, 2022.

### Notes:

- (1) There has been little progress in *The Journal* because the Committee has not really spent much time on this publication. Most of the time has been spent of the Annual Conference papers.
- (2) The reviewers for *The Journal* papers have been unusually unresponsive despite reminders.
- (3) It is proposed that new reminders be sent as if we were starting afresh and perhaps new reviewers for some papers needed to be identified.
- (4) The Publications and Editorial Committee has since proposed to hold separate meetings for *The Journal* rather than considering *The Journal* at the same meeting as the Annual Conference.

## 3. THE ENGINEERING ECHO

The Engineering Echo has continued to be published in a timely manner.

Issue No. 59 was published towards the end of 2021. Currently, the Committee is working on articles for Issue No. 60. It is envisaged that the publication will be on finalised for the First Quarter of 2022.

### 2.5.5 Scholarships Sub Committee

The Engineering Institution of Zambia published a call for applications to the EIZ Scholarships in the Zambia Daily Mail and various social media platforms on 18th May 2021 for the award of EIZ Scholarships.

At the closing date of receiving applications on 18th June 2021, a total of 181 applications were received and subjected to an initial screening process which was presented to the Scholarships Sub Committee in the week beginning 9<sup>th</sup> August 2021.

The Sub-Committee was comprised of the following members;

1. Eng. Nambala Chansa
2. Eng. Pride Kafwembe
3. Tec. Brenda Luatula
4. Cra. Francisco Chipundu

A total of 10 scholarships were awarded.

## 2.6 World Engineering Day (WED)

The Institution celebrated WED on Thursday 4<sup>th</sup> March, 2021. Due to the limitations in public gatherings, the Institution organised Webinars that are aimed at discussing engineering for a healthy planet.

### Webinar 1

The first Webinar featured prominent Engineering Professionals and discussed the following;

Sustainable engineering in the following key sectors;

- a. Road construction
- b. Water reticulation
- c. Green Energy
- d. Information and Communications Technology

### Webinar 2

The following Sections of the EIZ also had their webinar discussions on how green engineering is shaping the Zambian Engineer

- a. Civil and Structural Engineering Section
- b. Electrical and Electronics Engineering Section
- c. Zambia Women in Engineering Section
- d. Chemical, Metallurgical & Materials Engineering Section
- e. Craftsperson's and Technicians Sections

### Hackathon

A parallel hackathon session was organized and feature 8 students of engineering that competed in coding a program in line with the theme. The activities were held at the University of Zambia and

Copperbelt University.

## **2.7 Stakeholder Activities**

The Institution Interacted with various stakeholders on matters of common interest as listed below;

### **2.7.1 Skills for Energy for Southern Africa (SESA)**

The Institution worked with the International Labor Organisation (ILO) who were implementing a project called Skills for Energy in Southern Africa (SESA) Project.

The International Labour Organization (ILO), with funding provided by the Government of Sweden, is supporting the Kafue Gorge Regional Training Centre (KGRTC) to implement the Skills for Energy in Southern Africa (SESA) Project. This is a three-and-a-half-year intervention with the overall development objective of increasing the uptake of renewable energy, energy efficiency and regional energy integration through skills development in Zambia and the SADC region.

It is expected that the project will strengthen KGRTC's capacity as a Centre of Excellence for energy training in the region and significantly increase the number of power technicians, engineers and managers that are skilled in renewable energy, energy efficiency and regional energy integration. The project will be implemented through a Public Private Public Development Partnership (PPDP) approach.

In collaboration with ILO and KGRTC the Institution organised networking Cocktail under the auspices of the (SESA) project which was held at Garden Court Hotel, Kitwe, on Thursday 7 October 2021 at 17:30 hours.

The purpose for this networking Cocktail was to bring together sector players to share information on the SESA project and how collaboration could be enhanced. The Institution was further given a sit on the Technical Committee of the SESA Project which is expected to run for 3 years.

### 2.7.2 Science Technology, Engineering and Mathematics (STEM)

The Institution was invited by the Zambia National STEM Foundation to take part in its first ever All Africa STEM Conference which took place at Tag Pamodzi Hotel from 22<sup>nd</sup> to 24<sup>th</sup> September 2021. The EIZ Vice President for Policy Public Relations and National Development Committee Eng. Charity Kapatamoyo Chola was a guest Speaker at the event while the Minister of Science and Technology Honorable Felix Mutati was the Guest of Honour.

Through the 1st Annual All Africa STEM Awareness Conference 2021, participating speakers and thought leaders from across the world took part in championing the objective of sensitizing and creating awareness in government, industries and the larger society about the vital role of Science, Technology, Engineering & Mathematics.

The objectives of the Conference were

- a. Equipping tomorrow's workforce with the necessary tools to effectively become champions of economic development through STEM.
- b. Expanding the image of STEM as a positive force in economic development.
- c. Provide premium professional and personal development opportunities which are of high quality, offer value for money and time, and are interesting to everyone involved in STEM.
- d. Recognize and promote the contribution and achievements of STEM in areas of economic development.
- e. Analyze and emulate internationally proven and practical methods and models of implementation.

### 2.7.3 World Skills Zambia (WSZ)

World Skills Zambia was reformed and anchored under TEVETA under the auspices of the Ministry of Science and Technology. The EIZ was co-opted into the Technical Committee of World skills Zambia owing to its pivotal role in this initiative. The Institution was invited to the Consultative and Planning Meeting which was held at Kafue Gorge Regional Training Centre, in Kafue from 6 & 8 November 2021.

The objective of the meeting was to deliberate on the key roles of WSZ and envision the impact Zambia would experience with the power of skill. The following were some of the other specific

objectives;

- a. Strengthen WSZ and government linkage
- b. Focus our interest on the young people
- c. Provide platform for young people to exploit skills enhancement opportunities
- d. Attract stakeholder and industry participation
- e. Drive government policy on skills development and excellence.

The outcomes of the meeting were presented to the anchor ministry for consideration and approval. Some of the pertinent issues which were under discussion included but not limited to financing, membership, office bearers, skills competitions, skills basket, participation in world skills Competitions and operations guidelines.

#### **2.7.4 African Continent Free Trade Area Protocols (AfCFTA)- COMESA Trade Protocols**

The Government of the Republic of Zambia sought to raise the standard of living of its citizenry by elevating the country's status from Lower Income state to a prosperous Middle Income state and from a Least Developed Country to a Developing Country by the year 2030. This is elaborated in Vision 2030 and the Seventh National Development Plan, 2017-2021, the national economic growth and development blueprints.

To achieve these objectives and goals, Zambia was leveraging on its membership of regional, continental and multilateral trade arrangements to maximize national returns and earnings from these groupings particularly through enhanced trade including the provision of engineering services and construction services.

Within the African continent, the Country was revitalizing its engagement in the Common Market for Eastern and Southern Africa (COMESA) Free Trade Area (FTA), the Southern African Development Community (SADC) FTA, the Tripartite Free Trade Area (TFTA) and in the recently launched African Continental Free Trade Area (AfCFTA) agreement.

The Institution was invited to a workshop to discuss the 7th Draft National Strategy for Implementation of the African Continental Free

Trade Area Agreement for Zambia and also to the COMESA Technical Committee meeting to discuss regulatory frameworks in various sectors including engineering services.

### **2.7.5 ZASTI MOU**

The Institution signed an MOU with Zambia Air Services Training Institute (ZASTI) on 9<sup>th</sup> February 2021. The MOU was to enable ZASTI to conduct registration of students on behalf of EIZ.

### **2.7.6 Capacity Building Workshop on Trading Services by COMESA**

The Institution was invited to a training workshop on trading services which was held virtually from 12<sup>th</sup> to 15<sup>th</sup> July 2021 under the auspices of Ministry Commerce. The workshop was in preparation of the next session of negotiations with other member states on energy services. The workshop was facilitated by World Bank, World Trade Organisation and Commonwealth Secretariat. The EIZ was specifically invited as a stakeholder in engineering related services.

### **2.7.7 Proposal for Funding of Industry Based Training from TEVETA**

The Institution had an engagement with Lusaka Business and Technical College on the 21<sup>st</sup> of May 2021 with the aim of collaborating with that Institution in bidding for funding for Industry Based training which was being offered by TEVETA.

This initiative would enhance capacity for our members in terms of upskilling the current levels.

The Bid was successful and the two Institutions signed and MOU that would be followed by the implementation of the project in the Second quarter of 2022. Plans are currently underway to commence the training.

### **2.7.8 Quarterly Meeting of Quality Assurance Institutions by ZAQA**

The Institution was invited by ZAQA to attend a quarterly meeting of the Quality Assurance Institutions which was held at SAROVA Hotel on the 17<sup>th</sup> of June 2021. The aim of the meeting was to share experiences that regulatory bodies were facing in the execution of their respective mandates and also bring out issues that were common in order to harmonise the services.



The Meeting observed that holding such meeting regularly will reduce duplication of activities that were aimed at a common goal. The meeting was urged to prepare quarterly reports to update stakeholders on activities and intentions

## **2.8 Develop and implement Information, Education, and Communication (IEC) strategy**

The Institution commissioned the development of the Communication Strategy that will help enhance awareness and address some of the misconceptions in order to enhance public understanding and maintain a positive image of the Institution.

Mere recognition of Engineering Institution of Zambia as a regulatory body is not enough, hence the need for the public to understand the mandate and functions EIZ plays in the engineering sector. Awareness in this case, is critical in removing misconception regarding engineering. In this regard, to further strengthen the capacity of the Institution to fulfil its mandate, in particular that of awareness raising, there was need to develop a Communication Strategy including Information, Education and Communication (IEC) materials that would focus on raising awareness on EIZ through targeted messages shared through selected appropriate communication channels.

### **2.8.1 OBJECTIVE**

The objective of the Communication Strategy was to enhance the awareness, understanding, and knowledge of general public, key stakeholders in the government, private sector at the national and local levels and maintain compliance awareness among all stakeholders and members in Zambia.

The following objectives would be employed to achieve the overall goal of the Institution:

- a. Improve profile of the Institution;
- b. Arouse interest
- c. Reduce prejudices
- d. Build bridges
- e. Create trust

f. Create understanding

**Scope of Work**

- (a) Develop a communications strategy for EIZ to enhance the awareness, understanding, and knowledge of the general public, of key stakeholders in the government, private sector, civil society, etc., at the national and local levels.
- (b) Specify appropriate communication channels, dissemination methods and media such as video, print, web/online media, traditional media, and social media, among others, to effectively communicate key messages to specific stakeholders. The strategy is undergoing proof reading before it can be presented to this Committee for adoption.

**2.9 Quality Management System:**

1. The Institutions Strategic Plan 2019-2023 sought to pursue a quality management system that would enhance the operations systems at Secretariat. During the first quarter of 2021 the Quality Policy statement was signed off together with the implementation Plan. Furthermore, the Secretariat developed the following operating procedures;
  - 1.1 Document and Data Control Procedure (**Approved**)
  - 1.2 Control of Record Procedure(**Approved**)
  - 1.3 Communications Procedure (**Awaiting Approval**)
  - 1.4 Control of Non Conformances procedure(**Approved**)
  - 1.5 Enforcement Procedure (**Awaiting Approval**)
  - 1.6 Procurement & HR Procedure (**Awaiting Approval**)
2. Further specific procedures were being developed for Finance department. An orientation program was held on 20<sup>th</sup> November 2021 specifically for the non-conformances procedure, Control of Records procedure and Document and Data Control Procedure.
3. Secretariat began the implementation in the first quarter of 2022 and were expected to start complying with the provisions of these procedures.

## **2.10 Advise to Government/Parliament and several matters as depicted below**

The Institution received several requests from government and government Institutions as mandated by the EIZ Act NO 17 of 2010. Below is a summary of the requests received.

### **2.10.1 Public Procurement Regulation 2021**

The Institution received a letter dated 4<sup>th</sup> January 2021 from ZPPA requesting submissions on the draft public procurement regulation 2021 and submit a memorandum of comments before 14<sup>th</sup> January 2021. A committee of experts comprising Eng. James Njolomba, Eng. Sharon. M Musonda, Eng. Besa Mfula was constituted to attend to the assignment which was subsequently concluded and submitted before the stated deadline.

### **2.10.2 Engineering Institution of Zambia Bill NAB NO 26 OF 2021**

The Institution received a letter dated 10<sup>th</sup> March 2021 from The Parliamentary Committee on Transport Works and Supply. The Institution was requested to comment on the ramifications of the Engineering Institution of Zambia Bill NAB NO 26 OF 2021. The Comments were submitted on the 17<sup>th</sup> of March 2021 and the Institution appeared before the Committee on 22<sup>nd</sup> of March 2021.

### **2.10.3 Urban and Regional Planners (Amendment) Bill, N.A.B No. 23, 2021**

The Institution received a letter dated 11<sup>th</sup> March 2021 from the Parliamentary Committee On Local Governance, Housing and Chiefs' affairs -the Institution was requested to comment on ramifications of Urban and Regional Planners (Amendment) Bill, N.A.B No. 23, 2021. The Comments were submitted on the 20<sup>th</sup> of March 2021 and the Institution appeared before the Committee on 8<sup>th</sup> of April 2021.

### **2.10.4 Rural Electrification (Amendment) Bill, N.A.B No. 20, 2021**

The Institution received a letter dated 11<sup>th</sup> February 2021 from the

Parliamentary Committee On Delegated Legislation -the Institution was requested to comment on ramifications of the Rural Electrification (Amendment) Bill, N.A.B No. 20, 2021. The Comments were submitted on the 15th of February 2021 and the Institution appeared before the Committee on 22<sup>nd</sup> of February 2021.

### **2.10.5 Petroleum-Exploration and Production (Amendment) Bill, N.A.B No. 10, 2021**

The Institution received a letter dated 10th February 2021 from the Parliamentary Committee on National Economy, Trade and Labour-the Institution was requested to comment on ramifications of the Petroleum-Exploration and Production (Amendment) Bill, N.A.B No. 10, 2021. The Comments were submitted on the 16th of February 2021 and the Institution appeared before the Committee on 18th of February 2021.

### **2.10.6 Higher Education Authority Bill 2021**

The Institution was invited to a virtual meeting organised by the Ministry of Higher Education on 28<sup>th</sup> of January 2021 to appear before the Ministry of Justice to discuss the ramifications of the Higher Education Authority Bill 2021.

This meeting was meant to adjudicate the HEA Bill 2021 which was enacted to remove the accreditation provisions in the principal EIZ Act No 17 of 2010. The principle Act mandated the EIZ to perform accreditation functions for all its Engineering programs in Zambia.

### **2.10.7 Mining Occupation Standards-ZAQA**

The Engineering Institution of Zambia (EIZ) received a letter 19<sup>th</sup> January 2021 from the Zambia Qualifications Authority requesting the Institution to make comments on the Draft Mining Occupation Standards.in the following occupations;

- a. Process Engineer;
- b. Senior Chemist;
- c. Mine Safety Officer;
- d. Mining Blaster;
- e. Winding Engine Operator; and

f. Mine Data Entry Operator.

Experts were identified in the respective fields to draft responses as per the request. Comments were submitted on the 5<sup>th</sup> of March 2021.

### 2.10.8 Infrastructure Policy and Master Plan

The Institution of was invited by the Ministry of Housing and Infrastructure Development to a consultative meeting held on the 21st and 22nd April 2021 at Protea Hotel in Chisamba to make comments on the Draft Infrastructure Policy and Master Plan.

During the said meeting, the Institution was requested to make a detailed written submission on the said documents and submit to the Ministry on or before Thursday 29th April 2021. A Committee of experts was constituted to undertake the task.

### 2.10.9 2022 National Budget EIZ Proposals

The Ministry of Finance issued a call for proposals to various Stakeholders to provide input into the 2022 National Budget.

In view of the above, the Institution constituted an Adhoc Committee in order to provide input from the Engineering sector perspective.

The Adhoc Committee drafted the comments and were submitted to the Ministry on the 15 of May 2021

### 2.10.10 Submissions of the 8<sup>th</sup> National Development Plan

In response to the call for proposals which was published in the media by the Ministry of National Planning in June 2021, the Institution responded to the call for proposals and submitted a detailed report on the 4<sup>th</sup> of June 2021. The submission contained detailed proposals

- a. Improved Transport Systems and Infrastructure
- b. Enhance Generation, Transmission and Distribution of Electricity
- c. Water Resources Development and Improved Water Supply and Sanitation
- d. A Growing Copper Based and Diversifying Export-Oriented Mining Sector with a Reputation of Being a Competitive

- Resource Endowed, Policy Stable and Attractive Mining Investment Destination
- e. Reducing of Development Inequalities Plan
  - f. Enhanced Decent Job Opportunities in The Economy
  - g. Proposed Improvements to The Implementation Plan of The 8th National Development Plan

### **2.10.11 Comments on the Review of the Public Roads Act**

The Institution received a request from the Road Development Agency (RDA) on the second of November 2021. In a bid to enhance the overall performance of the road sector and to preserve the road infrastructure RDA was reviewing the Public Roads Act No12 of 2002 to improve and make clear as well as take on board the best practice. The Institution was requested to make comments on the Act in this regards.

The comments were prepared and submitted on the 29<sup>th</sup> of November 2021 as requested.

### **2.10.12 Submission on the Cost of Roads and Public Infrastructure**

The Institution was requested by the Ministry of Infrastructure, Housing and Urban Development to advise Government on the way forward with regards to the cost of roads in Zambia which was an ongoing concern for government.

A committee was constituted to undertake this task and make submissions accordingly. The Committee was informed that the issue of roads had not started with the current Government but was also on the cards with the former minister of infrastructure who wrote to EIZ to request for opinions on the cost of roads.

The Committee is currently conducting their review and is expected to conclude with the report in the second quarter of 2022.

### **2.10.13 Committee of parliament on Expanded Planning and Budget Implementation**

The Institution received a letter from the Committee of Expanded Planning and Budgeting dated 1<sup>st</sup> November 2021 requesting for

comments on the 2022 budget which was presented to Parliament by the Honourable Minister of Finance, Dr. Situmbeko Musokotwane on 30 October 2021.

The EIZ prepared comments on the following areas of the budget:

Economic Transformation and Job creation

- i. Mining
- ii. Manufacturing and Industrialisation
- iii. Energy
- iv. Transport
- v. Information and Telecommunications Technology

Human and Social Development

- i. Education and Skills Development
- ii. Water and Sanitation
- iii. Environmental Sustainability
- iv. Application of Constituency Development Fund

The Institution further appeared before the Committee of Parliament on 5<sup>th</sup> November 2021 to speak to the submission. The Committee of Parliament was pleased with the detailed submission and looked forward to using the information contained therein.

## **2.10.14 Committee of Parliament on Energy, Water Development and Tourism**

The Institution received a letter dated 11<sup>th</sup> October 2021 from the Clerk of the National Assembly. The Institution was informed that the Committee on Energy, Water Development and Tourism, at its first meeting, on Monday 4<sup>th</sup> October 2021, adopted its programme of work for the First Session of the Thirteenth National Assembly. The Committee resolved to interrogate "Water Resource Management in Zambia" as its topical issue of the session.

The Committee, therefore, requested EIZ to submit a written memorandum regarding the subject under consideration. In addition to the specific issues outlined below, EIZ was requested to include in its memorandum any other information, or recommendations that could assist the Committee to effectively study its topical issue.

- i. Comments on the adequacy of the legal and policy framework governing water resource management
- ii. What needs to be done to promote water resource infrastructure development?
- iii. What are the major challenges to water resources management?
- iv. Recommendations and the way forward?

This memorandum of specific issues and recommendations was prepared accordingly for each of the specific issues which are outlined in the foregoing paragraph.

The context of Water resources management was viewed as activities of planning, distributing and managing the optimum use of water resources. Uses of water resources included major undertakings related to water supply, sanitation, hygiene, environmental protection, natural resources management (forest conservation), transportation, tourism, energy generation, agriculture uses, industrial uses. This submission was done on 29<sup>th</sup> of November 2021

### 2.10.15 Committee of Parliament on Transport, Works and Supply

The Institution received a letter dated 26<sup>th</sup> October 2021 from the Clerk of the National Assembly. The Institution was informed that the Committee on Transport, Works and Supply, adopted its programme of work to carry out a study on the Implementation of the Road Tolling Programme in Zambia.

The Committee requested the Institution to submit a detailed memorandum on the following;

- i. The adequacy of the Legal and Policy Framework that govern the program;
- ii. How the government is implementing the programme in terms of roll-out of the toll facilities;
- iii. The administration of the road fund in relation to toll fees and its application to road construction, maintenance and rehabilitation.
- iv. Challenges and opportunities, if any in the implementation of the programme; and
- v. Make recommendations on the way forward.



This detailed memorandum and recommendations were prepared to respond to the request made by the Committee and submitted on 29<sup>th</sup> November 2021

### **2.10.16 Committee of Parliament on Local Government Housing and Chiefs Affairs**

The Institution received a letter dated 22<sup>nd</sup> October 2021 from the Clerk of the National Assembly. The Institution was informed that the Committee on Local Governance, Housing and Chiefs, resolved to undertake a detailed study on the Maintenance of Township Roads in Zambia.

The Committee requested the Institution to submit a detailed memorandum on the following;

- i. Appreciate the adequacy of the Legal and Policy Framework that govern the maintenance of township roads and associated road infrastructure in Zambia;
- ii. Understand the funding gaps in the maintenance of township roads and township road infrastructure.
- iii. Appreciate local Councils capacity to maintain township roads;
- iv. Appreciate programmes in place if any, drawn by the government in enhancing capacity of local authorities in their mandate of maintaining township roads and associated road infrastructure;
- v. Appreciate the challenges faced by the local authorities in maintaining township roads; and
- vi. recommendations on the way forward.

This detailed memorandum and recommendations were prepared to respond to the request made by the Committee and submitted on 29<sup>th</sup> November 2021.

### **2.10.17 Comments of the Procurement standards of the Public Private Partnerships in Zambia (PPP)**

The Institution received a letter from The Ministry of Finance dated 17<sup>th</sup> November 2021 regarding the implementation of the Public Private Partnerships Projects (PPP) specifically the procurement documents.

Since the PPP Policy was put in place in 2008 and the legal framework enacted in 2009, the PPP department has been using the SADC solicitation documents to aid the procurement process. This notwithstanding, the department had developed a customized draft set of standard bidding documents in line with the PPP Act No 14 of 2009.

The Institution was requested to make comments on the standardized bidding documents below and make recommendations;

- a Request for expression of Interest Template
- b Request for qualification Template
- c Generic concession agreement Template
- d Request for competing proposal Template
- e Request for proposals

Experts reviewed the templates and submitted comments on 10<sup>th</sup> of December 2021.

### **2.10.18 Kazungula Bridge Authority Bill**

The Road development Agency (RDA) was mandated to construct the Kazungula Bridge, a bilateral project between Zambia and Botswana. RDA was further mandated to establish the legal framework for Kazungula bridge Authority (KBA) which would manage the bridge.

The Institution received a letter dated 25<sup>th</sup> November requesting to submit comments on the layman's KBA Bill and submit the comments before 28<sup>th</sup> of December 2021.

Experts have been identified to comment on the matter and are expected to conclude before on 10<sup>th</sup> December 2021.

### **2.10.19 Proposal for Engineer General**

The Institution was engaging government on the possibility of including the position of Engineer General in the constitutional appointments.

The EIZ Council was subsequently invited by the Ministry of Housing and Infrastructure Development (MHID) to discuss the formulation of

## COMMITTEE REPORTS

### POLICY, PUBLIC RELATIONS AND NATIONAL DEVELOPMENT COMMITTEE

this Portfolio. With this background in mind an Adhoc Committee was formed to come up with the following;

- a. Functions
- b. Organisation Chart
- c. Interaction with Ministries and Constitutional Offices
- d. And any other information to enhance the argument

The proposal was done and submitted to the ministry for consideration.

Eng. Charity Kapatamoyo Chola FEIZ

VICE PRESIDENT POLICY PUBLIC RELATIONS AND NATIONAL DEVELOPMENT COMMITTEE



## 1. INTRODUCTION

The Finance and Administration Committee is a Committee of Council with the duties:

- (i) To assess and evaluate the budgets and work plans as presented by the Institutions' management for soundness, viability, and reasonableness taking into account the prevailing position of the organization.
- (ii) To ensure that proper books and records of the funds of the Institution are kept properly and submit statements of Accounts to Council Meetings.
- (iii) To advise Council on application fees and subscriptions structures.
- (iv) To submit to the Council and to the Annual General Meeting an Audited Statement of Financial Position, Income and Expenditure Account and Statement of Funds as at the end of the Financial Year;
- (v) To submit an estimate for the Statement of Financial Position, Income and Expenditure Account Statement of funds flow for ensuing year.
- (vi) To advise Council on the operations of the Secretariat of the Institution including policies on employment; remuneration and any administrative matters on the operation of the Institutions Office.

The following members served on the Committee:

<b>Name</b>	<b>Position</b>
1. Eng. Wesley Kaluba	Chairperson
2. Eng. Michael Nsefu	Vice Chairperson
3. Eng. Mulenga Kapembwa	Member
4. Eng. Nathan Kazembe	Member
5. Eng. Diana Kangwa -Muya	Member
6. Tech. Jane Manase	Member
7. Mr. Chabota Simuusa	Member
8. Eng. Linus Chanda	Registrar/ Secretary

Below is a table of Committee meetings held:

## COMMITTEE REPORTS FINANCE AND ADMINISTRATION

Date of Meeting	15/03/21	01/04/21	07/05/21	28/05/21	10/08/ 21	1/09/21	8/09/ 21	18/11/21	24/11/21	Total Attendance
Eng. Wesley Kaluba	✓	✓	✓	✓	✓	✓	✓	✓	✓	9/9
Eng. Michael Nsefu	✓	✓	✓	✓	✓	✓	✓	✓	✓	9/9
Eng. Mulenga Kapembwa	AP	AP	AP	✓	✓	✓	✓	✓	✓	6/9
Mr. Chabota Simuusa- ZICA	✓	✓	✓	✓	✓	✓	✓	✓	✓	9/9
Eng. Nathan Kazembe	✓	✓	✓	✓	✓	✓	✓	✓	✓	9/9
Tech. Jane Manase	✓	✓	✓	✓	✓	✓	✓	✓	✓	9/9
Eng. Diana Kangwa -Muya	✓	✓	✓	✓	✓	✓	✓	✓	✓	9/9

### Key

- ✓ Present    **AP** Apologies    **AB** Absent
- ❖ Not yet a Committee Member  
Ceased to be member of Committee

### Key

- ✓ Present    **AP** Apologies    **AB** Absent
- ❖ Not yet a Committee Member  
Ceased to be member of Committee

## 2. HIGHLIGHTS OF THE COMMITTEES RESOLUTIONS DURING 2021.

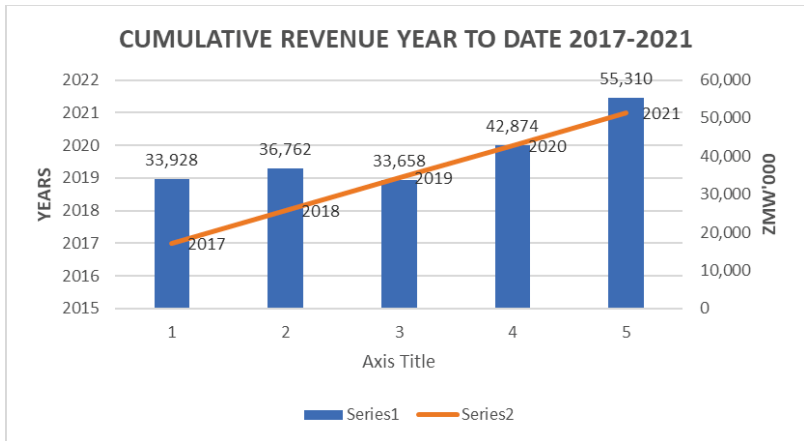
- 2.1 The Committee approved the quarterly Management accounts for ratification by the EIZ Council;
- 2.2 Recommended the 2021 AWPB to the EIZ Council for Approval;
- 2.3 The Committee continued monitoring the construction of the EIZ HQ project;
- 2.4 The Committee identified and developed strategic operational policies;
- 2.5 Mid-term review of the current Strategic Plan using balanced Scorecard method;
- 2.6 The Committee continued guiding management on the prudent use of Members' funds through well thought policies;
- 2.7 The Committee outlined mechanisms of Increasing efficiency in resource utilization through the monitoring of monthly and quarterly management reports;
- 2.8 The Committee redefined performance appraisal system for enriched staff performance;
- 2.9 In an effort to increase non-traditional income, the Committee approved the setting up of an online store for the sale of EIZ regalia

- and other merchandise;
- 2.10 The Committee continued to increase publicity and sensitization to members on the value and benefits of being an EIZ Member;
- 2.11 The Committee managed to procure the New Database Management Information System that was commissioned in January of 2022; and
- 2.12 Continued monitoring and reviewing institutional costs with the aim of reducing operational costs while improving operational efficiency.

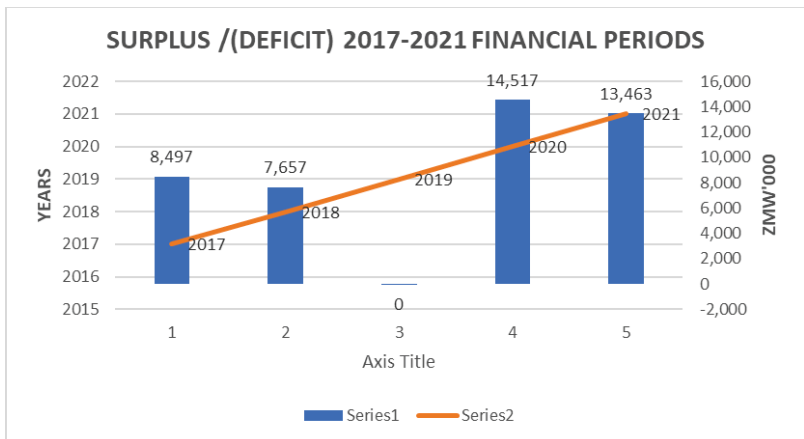
### **3. OVERALL PERFORMANCE REVIEW**

- 3.1 This report covers the period 1<sup>st</sup> January to 31<sup>st</sup> December, 2021 and reviews the financial performance of the Institution in implementing the 2021 Annual Work Plan & Budget (AWP&B).
- 3.2 The Institution recorded a surplus ZMW13.46 million of Income over Expenditure for the year ended 31 December, 2021, representing a 7% decrease from the surplus of ZMW14.52 million in 2020. Income received in 2021 increased from ZMW41.15 million in 2020 to ZMW 54.57 million representing an increase of approximately 32.61%.
- 3.3 Total expenditure for the year was ZMW 42 million compared to ZMW 28.3 million in 2020. The cost structure was greatly affected by the increase in the number of operational activities that the Institution undertook during the year under review. Please note that most operational activities were shelved by the Institution in 2021 due to the Covid-19 pandemic prevalence being on its peak. The tables below show the cumulative revenue collected and surplus/(deficit) for the Strategic Planning period 2021, being the third year.

### 3.4 Total Revenue Collected 2017 to 2021



### 3.5 Surplus/(Deficit) 2017 to 2021



## 4. REVIEW OF STATEMENT OF FINANCIAL POSITION (BALANCE SHEET)

### 4.1 Capital expenditure

Capital expenditure incurred during the year was ZMW 2,298,802 against ZMW 3,470,334 in 2020. The expenditure was for the acquisition of motor vehicles, office equipment and furniture &

fittings.

## **4.2 Investments**

The Finance & Administrations Committee continued to invest in the New EIZ HQ Building in order to expedite the completion of the building. For the financial year 2021, the committee managed to invest in this project a total of ZMW 13.62 million. With this amount, the committee was able to move the EIZ Secretariat to the New EIZ HQ Building by June 2021.

The total investment in EIZ Properties Plc stood at ZMW 85.20 million as at 31 December, 2021. Comparatively, the investment stood at ZMW 71.58 million as at 31 December, 2020.

## **4.3 Liquidity**

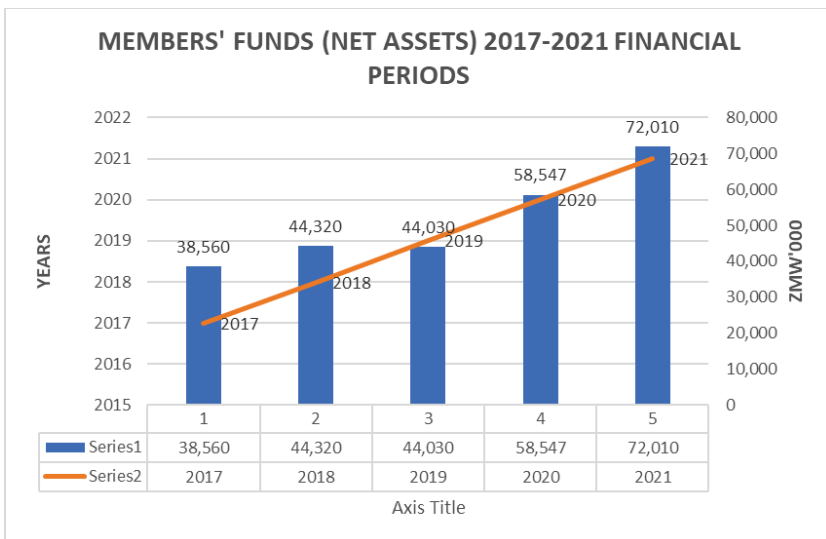
Liquidity shows the ability of the Institution to meet its short-term obligations i.e. the ability of the Institution to pay debts as and when they fall due. It is determined by the difference between Current Assets and Current Liabilities expressed as a ratio or percentage of Current liabilities.

As at 31<sup>st</sup> December, 2021 the liquidity position of the Institution decreased from 0.54 as at 31<sup>st</sup> December, 2020 to 0.45, this decrease was mainly as a result of the following factors:

- I. Included in the current liabilities is the accrued ZMW 4.2 million owed to the Main Contractor;
- II. The Institution invested more in the New EIZ HQ Building, thereby depleting the cash at bank and short-term deposits;
- III. Current liabilities included an amount of ZMW 18.94 million relating to membership fees prepaid for 2022 renewals, which will be invoiced in 2022 financial year.

Net assets or Members funds increased from ZMW 58.5 million in 2020 to ZMW 72 million in 2021 representing a growth of ZMW 13.50 million which is approximately 23.1%. This increase in the Members' funds was made up of the surplus that has been reported for the period ended 31 December 2021.





- 4.1 During the period under review the following factors affected the overall performance of the Institution:
- I. The reduced compliance by Engineering Organizations and Units in both regions affected the collection of Registration and Membership fees;
  - II. The non-Compliance of Engineering Professionals in the Public Service still remained a big challenge; and
  - III. There was reduction in new membership applications and upgrades mainly due to the effects of Covid-19 pandemic which slowed down (contracted) the economy thereby increasing unemployment levels in the country.

## 5. 2021 ANNUAL WORK PLAN & BUDGET (AWP&B) SUMMARY

Annual work plans and budgets are prepared to give a guide of the planned operations and activities of the Institution for each financial year. The 2021 budget had been prepared in line with the Five-year Strategic plan (2019-2023) of EIZ as well as the EIZ Act No. 17 of 2010; incorporating relevant policies of Council and resolutions of the 2020 General Meeting of the members. The budget has thus been prepared to ensure that the following objectives are met:

- Co-ordinate the activities of the different Departments making up the EIZ Secretariat;
- Establish a system of Monitoring and Control;
- Plan activities for each year;
- Used as a tool or yardstick for which actual performance is compared;
- Monitor employee's performance; and
- Provide Council with a tool to Monitor and Evaluate the performance of the Secretariat relative to agreed targets;

The budget has been prepared on an **Activity Based Budgeting** approach i.e. estimates of costs and expenditure will be determined on the basis of the activities to be under taken by each unit.

## **5.1 KEY AWP&B PROPOSALS**

### **5.2 Key strategic objectives of the 2021 AWP&B**

The key strategic objectives planned to be achieved in the 2021 financial year were as detailed below:

- 5.2.1 Completion of the Construction of the new EIZ Head office in Lusaka;
- 5.2.2 To grow non-traditional revenue sources to 10% of annual revenue;
- 5.2.3 To develop and implement a mentorship and skills development program for all membership categories of the Institution;
- 5.2.4 To rebrand EIZ as a world class professional body;
- 5.2.5 Increase membership by approximately 5,000 members from the current membership base of 30,000 (revised based on compliance) and achieve 90% retention on existing Membership;
- 5.2.6 Continued sensitization on the use of the on-line registration facility to enhance efficiency of the membership registration process. This would be achieved through the acquisition of the New Database Management Information System (DMIS) that was currently under development stage and planned to be commissioned in January of 2022;
- 5.2.7 Increased Continuous Professional Development activities targeted at the various classes of membership of the Institution;

- 5.2.8 Increased Compliance and Inspection activities to enhance compliance with the EIZ Act No. 17 of 2010;
- 5.2.9 Develop, enhance and retain competent human capital at the EIZ Secretariat;
- 5.2.10 Mainstream HIV/AIDS; Covid-19 awareness; Safety, healthy, environment and quality; gender and disability as cross cutting issues in EIZ programmes;
- 5.2.11 Advised government and industry on matters that related to the engineering profession;
- 5.2.12 Promoted the general advancement of science, engineering, technology and allied disciplines;
- 5.2.13 Fostered value addition as a tool for Industrialization leading to sustainable national development;

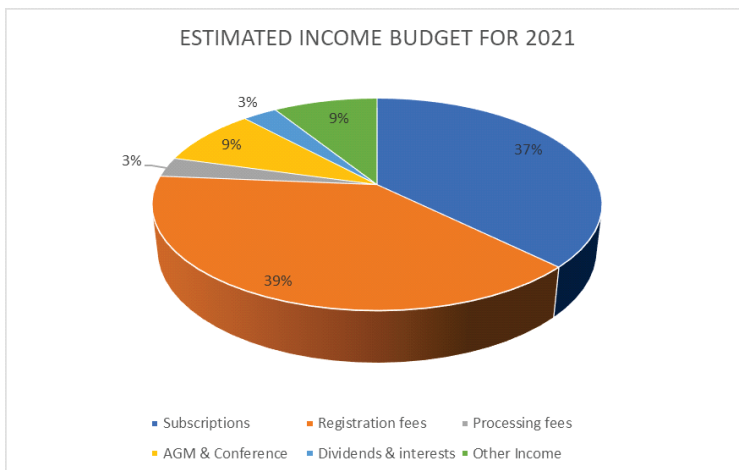
### 5.3 Summary of Projected Income

The Committee proposed a budget of **K70.9 million** projected operational Income. Operating expenditure was projected at **K50.7 million** and Investments and Capital expenditure at **K20,218 million** for the 2021 financial year as detailed below:

	AWP&B 2021 ZMW'000	AWP&B 2020 ZMW'000
Budget operational Income	70,889	55,989
Equity and Capital Raise	-	-
Budget Operating Expenditure	(50,666)	(37,604)
Investments and CAPEX	(20,218)	(18,381)
Budget Surplus/(Deficit)	5	4

Project income for the year is broken down as detailed below:

Income head	2021 Estimated budget (ZMW'000)	Proportion of total budget (%)	2020 Estimated budget (ZMW'000)
Subscriptions	26,471	37	21,084
Registration Fees	27,640	39	24,256
Processing Fees	2,138	3	1,937
AGM & Conference	6,198	9	5,647
Annual Engineering Conference	-	-	-
Building Levy			-
Dividends & Interest Income	2,100	3	2,000.00
Other Income & Fundraising	6,342	9	1,066.00
<b>Total Income from Operations</b>	<b>70,889</b>		<b>55,989.00</b>
Equity Financing	-		-
<b>Total</b>	<b>70,889</b>	<b>100</b>	<b>55,989.00</b>



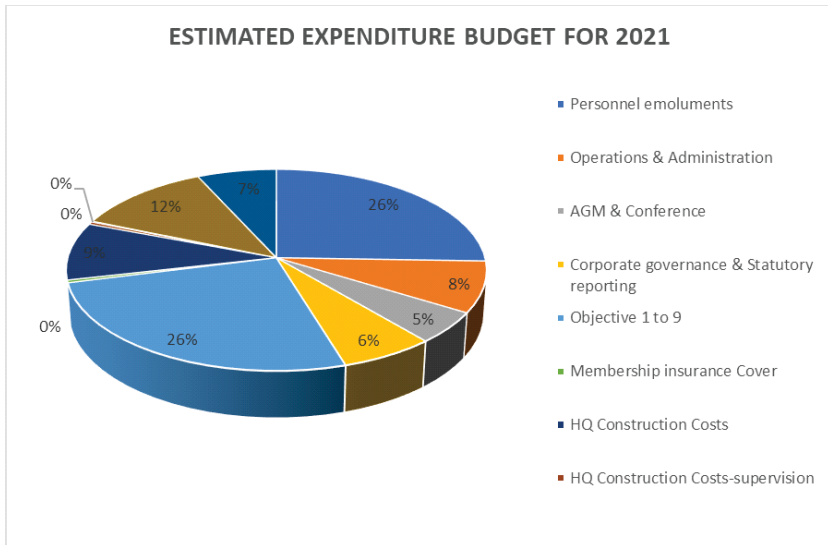
#### 5.4 Summary of Projected Expenditure

Council approved an operational expenditure budget of **K50.7 million** and an Investment and capital expenditure budget of **K20.2 million** for the 2021 financial year.

The detailed breakdown of the expenditure is as detailed below:

<i>Expenditure head</i>	<i>2021 Estimated budget (K'000)</i>	<i>Proportion of total budget (%)</i>	<i>2020 Estimated budget (K'000)</i>
Personal emoluments	18,088	25.52	13,268
Operations & Administration	5,805	8.19	7,717
AGM & Conference	3,603	5.08	4,406
Corporate governance & statutory reporting	4,594	6.48	2,228
Objective 1 to 9 expenditure	18,275	25.78	9,010
Membership insurance cover	300	0.42	975
<b>Total Operating Expenditure</b>	<b>50,665</b>	<b>71.47</b>	<b>37,604.00</b>
Construction costs	6,571	9.27	5,760.00
Construction costs-Supervision	300	0.42	800.00
Equity Financing Cost	-	-	-
Office partitioning-New HQ Building	100	0.14	650.00
Term loan repayments	8,400	11.85	7,020.00
Capital expenditure	4,848	6.85	4,151.00
<b>Total Investment &amp; CAPEX</b>	<b>20,219</b>	<b>28.53</b>	<b>18,381.00</b>
<b>Total Expenditure</b>	<b>70,884</b>	<b>100</b>	<b>55,985.00</b>

## COMMITTEE REPORTS FINANCE AND ADMINISTRATION



**Eng. Wesley Kaluba**  
Vice President-Finance & Administration- Chairperson

## 1.0 INTRODUCTION

**The Membership and Continuous Professional Development Committee is a Committee of Council with the following duties:**

1. To make recommendations to the Council concerning policies for membership;
2. To investigate appeals from dismissed members and to report findings to the Council;
3. Consider petitions for the formation of new Sections, Branches or Regions;
4. To make recommendations to the Council for formation and/or dissolution of Sections or Branches;
5. To promote co-operation and interaction among Sections and Regions;
6. To review the status of Sections and Branches and Regions on 5 year intervals;
7. To promote student involvement in all institution activities;
8. To assist Sections and Regions in coordinating their efforts among each other and with the Secretariat;
9. To make recommendations to the Council concerning student policies, accreditation, continuing education, and professional registration for Engineers and Engineering Professionals;

**Composition of the Committee is outlined below;**

- |                              |                                   |
|------------------------------|-----------------------------------|
| 1. Eng. Monica Milupi        | Chairperson & Vice President MCPD |
| 2. Eng. Prof. John Siame     | Member                            |
| 3. Eng. Dr. Joel Kabika      | Member                            |
| 4. Eng. Lusungu Nyirenda     | Member                            |
| 5. Eng. Taperewa K Namwinga  | Member                            |
| 6. Eng. Ennie Muchelemba     | Member                            |
| 7. Eng. Shadrick Chanda      | Member                            |
| 8. Teg. Munjina Mundonu      | Member                            |
| 9. Cra. Evans Kafusha        | Member                            |
| 10. Ms. Namuunza B Sizyoongo | Member                            |
| 11. Eng. Mufalo Nanyama      | Member                            |

## COMMITTEE REPORTS

### MEMBERSHIP AND CONTINUOUS PROFESSIONAL DEVELOPMENT COMMITTEE

#### 2.0 ATTENDANCE LIST

Period	Q1	Q2	Q3	Q4	Total
					4
Eng. Monica Milupi	✓	✓	✓	✓	4/4
Eng. Prof. John Siame	✓	✓	✓	✓	4/4
Eng. Lusungu Nyirenda	✓	✓	✓	✓	4/4
Eng. Sydney Mulenga	✓	✓	x	x	2/4
Eng. Taperewa Namwinga Kabwe	✓	✓	✓	✓	4/4
Eng. Dr Joel Kabika	✓	x	x	x	4/4
Eng. Ennie Muchelemba	✓	✓	✓	✓	4/4
Eng. Mujina Mundonu	✓	✓	✓	✓	4/4
Teg. Shadrack Chanda	✓	✓	✓	✓	4/4
Cra. Evans Kafusha	✓	✓	✓	✓	4/4
Ms. Namunza B. Sizyoongo	✓	✓	✓	✓	4/4
Mr. Ishmael Mutale	✓	✓	✓	✓	4/4
Ms. Gomezyo Mahone	✓	✓	✓	✓	4/4

#### Key

- ✓ Present
- AP Apologies
- AB Absent
- ❖ Not yet a Committee Member
- Ceased to be member of the Committee

#### 3.0 COMMITTEE ACTIVITIES AND ACHIEVEMENTS

**During the period under review (January - December 2021) the Committee implemented and achieved the following;**

1. Registered 5,776 new members on the database representing a performance of 115% achieved against the strategic target of 5,000.
2. Total number of New registered students are 3002
3. Renewed a total number of 23,578 members in the year 2020.
4. Launched the Environmental Engineering Section
5. Launched the Energy Auditors Section
6. Launched the Mining & Geology Engineering Section.
7. Launched the UNZA student Chapter on 5<sup>th</sup> November, 2021.

## COMMITTEE REPORTS

### MEMBERSHIP AND CONTINUOUS PROFESSIONAL DEVELOPMENT COMMITTEE

8. Participated in the World Engineering day on 4<sup>th</sup> March, 2021.
9. Developed and implemented the new EIZ DMIS for member registration and administration services.
10. Launched Chirundu Branch
11. Successfully held two EGMs for the adoption of the EIZ Constitution and Election of the Ethics and Integrity Committee.
12. Successfully conducted Corporate Governance training and induction for the MCPD Committees members.
13. Conducted CPD forums in Lusaka, Siavonga, Chipata, Kasama, Chingola, Chililabombwe and Kitwe.
14. Successfully hosted twenty one (21) Zoom based Webinars Nation-wide.
15. Successfully commemorated International Women in Engineering day 2021.
16. Hosted the third Zambia Women in Engineering Section (ZWES) International Conference in collaboration with the 2021 Annual General Meeting.
17. Signed MOU with IEEE and offered over 400 members 17 free online courses.
18. Successfully commemorated International Engineering Week 2021.
19. Successfully started the implementation of the mentorship programme.

#### 4.0 PLANNED ACTIVITIES

The Membership and Continuous Professional Development committee plans to achieve the following in 2022:

1. Participate in the World Engineering Day scheduled for 4<sup>th</sup> March, 2022.
2. To host an Engineering Skills Workshop at the 2022 Annual General Meeting to showcase skills by the Craftsperson's and Technicians Sections.
3. To sign MoU with TEVET and Higher Education Authority in order to begin mandatory registration of ALL engineering students.
4. To launch student chapters at all Universities, Colleges and Trade schools' country wide
5. To launch branches in Mkushi, Zambezi, and Mwinilunga.
6. To enhance paid for CPD programs as guided by the strategic plan.



## 5.0 TOTAL MEMBERSHIP FIGURES

The following are the membership figures for the period 2011 to 2021.

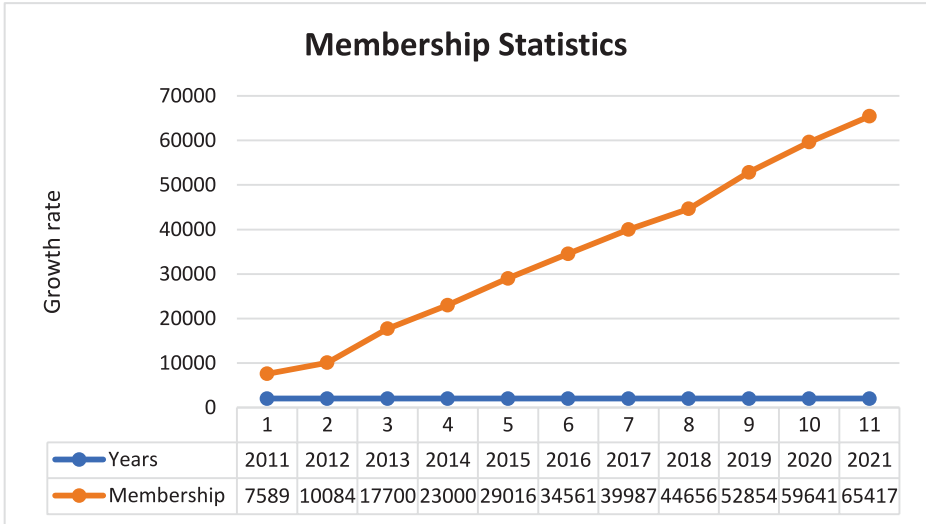


Fig. 1: Membership Comparative Growth for the period Dec, 2011 to Dec, 2021

In the period under review the Institution registered 5,776 members that representing a membership growth of 115% and a total register of 65,415 members as compared to 6,789 members in 2020. The reduction was largely attributed to reduced Compliance registration activities in the first, third and fourth quarter of 2021.

## COMMITTEE REPORTS

### MEMBERSHIP AND CONTINUOUS PROFESSIONAL DEVELOPMENT COMMITTEE

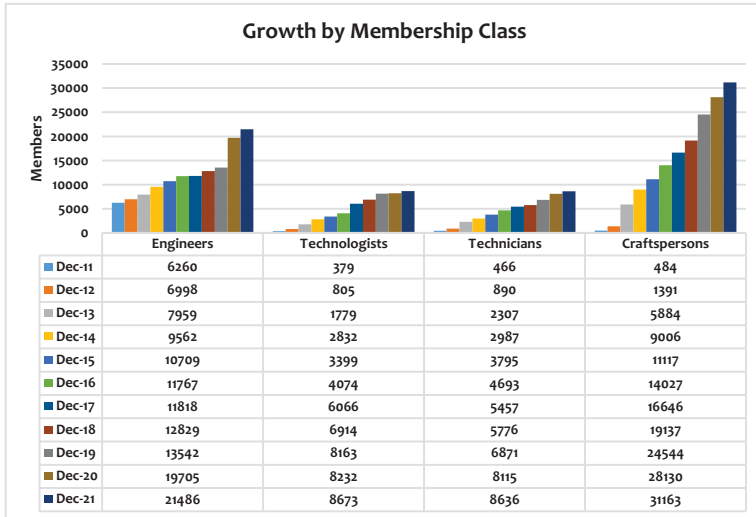


Figure 2: Membership Comparative growth by category for the period Dec 2011 to Dec 2021

The Institution targets to grow membership at a rate of 5,000 new members per annum as outlined in the Institutions strategic plan for the period 2019-2023.

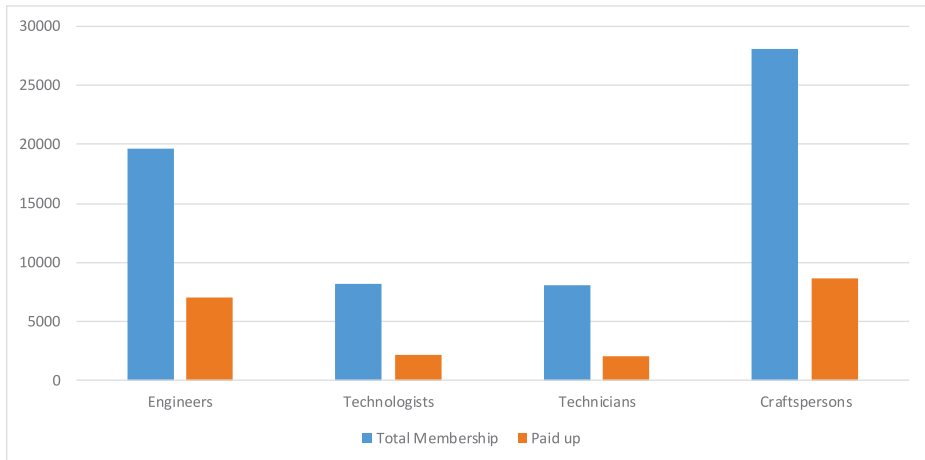


Figure 3: Membership Renewals by category for the year 2021

**COMMITTEE REPORTS**  
**MEMBERSHIP AND CONTINUOUS PROFESSIONAL**  
**DEVELOPMENT COMMITTEE**

**6.0 MEMBERSHIP AND CPD ACTIVITIES**

S/n	Date	Activity	Resource Persons	Town
1	01/07/2021	Webinar -Entrepreneurship for Engineers	Eng. Abel Ngandu Mr. Dumisani Ncube	Zoom
2	11/06/2021	Signing of MOU's with Tertiary Institutions	Eng. Monica Milupi	Kitwe
3	03/07/2021	Corporate Governance Training for all Branch Executives	Eng. Maiwaseh Zulu Eng. Kabwe Mutashi	Zoom
4	11/06/2021	Career Talk- Chankwa Secondary School Taugup Secondary School	Eng. Rhodah Phiri Eng. Kenneth Mukosha Tech. Edgar Besa	Mufulira
5	24/07/2021	EGM to review the EIZ Constitution	EIZ Council	Lusaka/ Zoom
6	30/07/2021	Webinar- CV Writing skills and leadership	Ms. Priscilla E. Banda	Zoom
7	30/07/2021	Courtesy Call to North Western water and Sewerage Company to set up New Solwezi office	Eng. Happy Musumali Eng. David Kamungu Eng. Maiwaseh Zulu Mr. Eunie Ng'andu	Solwezi
8	04/10/2021	Career Talks	Branch executives	All branches
9	19/08/2021	Introduction to the Africa Mall App	Mr. Chanshi Chanda	Zoom
10	17/09/2021	Launch of Chirundu Branch	Eng. Kabwe Musonda	Chirundu
11	September Ongoing	IEEE online Courses	Eng. Lucy Muchira	
12	6/10/2021	Benefits of Volunteering in IEEE sections and EIZ	Eng. Ariel Phiri	Zoom
13	4/10/2021	EIZ Young ZWES Art Competition	ZWES executive	

## COMMITTEE REPORTS

### MEMBERSHIP AND CONTINUOUS PROFESSIONAL DEVELOPMENT COMMITTEE

14	22/11/2021	Launch of Membership Survey	Eng. Francis Mwale	Zoom Garden Court
15		Transformational Leadership part 1	Eng. Bernard Chiwala	Zoom
16	08/10/2021	Transportation and Technology “Focus on Road Transport Sector”	Kelvin Lungu Lubinda Walubita	Zoom
17	07/10/2021	A young Engineers perspective on Diversity in a work place	Eng. Kaulu Mushota Eng. Misheck Daka	Zoom
18	13/11/2021	Southern Region Marathon	Southern Region	EIZ Headquarters
19	14/07/2021	Entrepreneurship for Engineers	Eng. Dumisane Ncube	Zoom
20	10/08/2021	Role of Engineers in Occupational Health in Workplaces	Dr. Evans Tulisha	
21	05/08/2021	Importance of CPD’s for personal growth	Eng. Ariel Phiri	Zoom
22	11-15/10//2021	Compliance Registration	Inspector Kalume, Inspector Chomba Ian, & Canisius Mwila	North Western Province - Lumwana, Bamboo Drilling, Kascco, Pehizo Investments, Avantech and Kal Tyre
23	17/11/2021	Compliance Registration	Gerald Chisongo, & Canisius Mwila	Reliant Mining - KCM (Compliance Officer Marvellous)
24	03/11/2021	Compliance Registration	Gerald Chisongo, & Prudence Kabwe	Tongquan - Chambishi Mr Mkwandawire (HR)
25	05/11/2021	Compliance Registration	Gerald Chisongo, & Prudence Kabwe	Zambian Breweries Plc Ndola Mwansa Chiyanda, Phaides Ng’andu
26	03/12/2021	Compliance Registration	Inspector Chomba Ian, Inspector Kalume, & Prudence Kabwe	Luapula Province
27	09/12/2021	Compliance Registration	MCPDO - Gerald Chisongo, & Ms.	Zambian Breweries Plc

**COMMITTEE REPORTS**  
**MEMBERSHIP AND CONTINUOUS PROFESSIONAL**  
**DEVELOPMENT COMMITTEE**

			Prudence Kabwe	Ndola (Followup)
28	14/12/2021	Compliance Registration	Ms. Prudence Kabwe, & Inspector Kalume Sakwala	Dangote (Eng. Mbeba) Silondwa Engineering Mr Lukavu (HR) Handyman's Lime
29	02/12/2021	Compliance Registration/Sensitization	MCPDO - Gerald Chisongo, & RM - Eng. Maiwaseh Zulu	North Western Province - Mini Expo
30	13/12/2021	FQML Mentorship/Internship Training	MCPDO - Gerald Chisongo, & Beatrice Mwaba	North Western Province - Kansanshi Mining

The reduction in member activities was as a result of the coronavirus pandemic.

## INTRODUCTION

The Engineering Registration Board was established under the Part IV, Section 12 of the EIZ Act No. 17 of 2010 to perform all the registration functions of the Institution.

Composition of the Engineering Registration Board for the years 2019 - 2021 is as outlined below;

Name	College	Position
1. Eng. Kabaso S. Musebe	NC6	Chairperson
2. Eng. Kelvin Chitumbo	NC2	Vice Chairperson
3. Eng. Yoram Sinyangwe	NC4	Member
4. Eng. Francis Mwale	NC5	Member
5. Eng. Moses Nkhata	NC1	Member
6. Teg. Chisanga Misengo	NC7	Member
7. Tec. Noah Kasanda	NC8	Member
8. Cra. Pride Lombe	NC9	Member
9. Eng. Linus Chanda		Secretary

## ATTENDANCE REGISTER

Table 1: Attendance Register

Period	Q1	Q2	Q3	Q4	Total
Meeting Date	28/03/21	02/06/21	09/09/21	08/12/21	4
Eng. Stephen K Musebe	✓	✓	✓	✓	4/4
Eng. Kelvin Chitumbo	✓	✓	AP	✓	3/4
Eng. Yoram Sinyangwe	✓	✓	✓	✓	4/4
Eng. Francis Mwale	✓	✓	✓	✓	4/4
Eng. Moses Nkhata	AB	AB	AB	AB	0/4
Teg. Chisanga Misengo	✓	✓	✓	✓	4/4
Tec. Noah Kasanda	✓	✓	✓	✓	4/4
Cra. Pride Lombe	✓	✓	✓	✓	4/4

### Legend

- ✓ Present
- AP Apologies
- AB Absent
- ❖ Not yet a Board Member
- Ceased to be member of Board

## 2.0 FUNCTIONS OF THE BOARD

The establishment of the Engineering Registration Board is prescribed in the Engineering Institution of Zambia Act 17 of 2010, part IV. The Board may, for purposes of performing its functions under this Act, establish such other committees as the Board may determine and may delegate to the committees any of its functions. The main function of the Board shall be to perform all the registration functions of the Institution.

## 3.0 TECHNICAL COMMITTEE

The Technical Committee of the Engineering Registration Board is established through provisions of the EIZ Act No. 17 of 2010 Section 12 (2), whose role is to provide oversight on registration matters on behalf of the Board; with the following specific duties:

1. Provide guidelines and procedures to Secretariat on Registration activities.
2. Review the work of Secretariat to ensure registration guidelines and procedures are being followed.
3. Receive from Secretariat difficult cases or proposals to improve registration procedures.
4. for resolution.
5. Present to the Board new registration for ratification.

The Composition of the Technical Committee (2020 - 2021) is as follows;

<b>Name</b>	<b>Position</b>
1. Eng. Kelvin Chitumbo	Chairperson
2. Eng. Robinson Misitala	Member
3. Eng. Yoram Sinyangwe	Member
4. Eng. Benson Mwale	Member
5. Mr. Whiteson Chavula	Member Immigration
6. Teg. Ocean Matimba	Member TEVETA
7. Tec. Noah Kasonde	Member
8. Cra. Pride Lombe	Member
9. Eng. Happy Musumali	Member

**ATTENDANCE REGISTER**

Table 1: Attendance Register

Period	Jan	Feb	Mar	Apr	Aug	Sept	Oct	Nov	Total
Eng. Kelvin Chitumbo	✓	✓	✓	✓	✓	AP	✓	✓	7/8
Eng. Robinson Misitala	✓	✓	✓	✓	✓	✓	✓	AP	7/8
Eng. Benson Mwale	✓	✓	✓	✓	✓	✓	✓	✓	8/8
Mr. Whiteson Chavula	✓	✓	✓	✓	AB	AB	AB	AB	4/8
Eng. Yoram Sinyangwe	✓	✓	✓	✓	✓	✓	AP	✓	7/8
Teg. Ocean Matimba	✓	✓	✓	✓	✓	✓	✓	✓	8/8
Eng. Happy Musumali	✓	✓	✓	✓	✓	✓	✓	✓	8/8
Tec. Noah Kasanda	✓	✓	✓	✓	✓	✓	✓	✓	8/8
Cra. Pride Lombe	✓	✓	✓	✓	✓	✓	✓	✓	8/8

**Legend**

- ✓ Present
- AP Apologies
- AB Absent
- ❖ Not yet a Board Member
- Ceased to be member of Board

**4.0 BOARD ACTIVITIES AND ACHIEVEMENTS**

During the period under review 2021 the Engineering Registration Board Achieved the following;

- 4.1 Ratified a total of 2,172 applications from individuals and a total of 615 applications from engineering organisations and units broken down as;
  - I. 493 Registered Engineers
  - II. 335 Registered Technologists
  - III. 300 Registered Technicians
  - IV. 1005 Registered Craftpersons
  - V. 615 Registered Engineering Organisations and Units.

This represents a 13.6% and an 18.4% increase for registered professionals and registered organisations and units respectively.

- 4.2 Achieved a compliance rate of 76% for Individual Engineering Professionals and 73% for Engineering Organisations and Units





## COMMITTEE REPORTS

### ENGINEERING REGISTRATION BOARD 2021 REPORT

- compared to 78% and 74% in 2020 respectively.
- 4.3 Successfully held a collaborative meeting with the Department of Immigration and Zambia Institute of Human Resources in order to re-align the registration of foreign professionals.
  - 4.4 Successfully printed the 2021 Gazette of all registered professionals
  - 4.5 Successfully printed and published a list of non-compliant organisations and units that improved compliance to the EIZ Act of 2010.

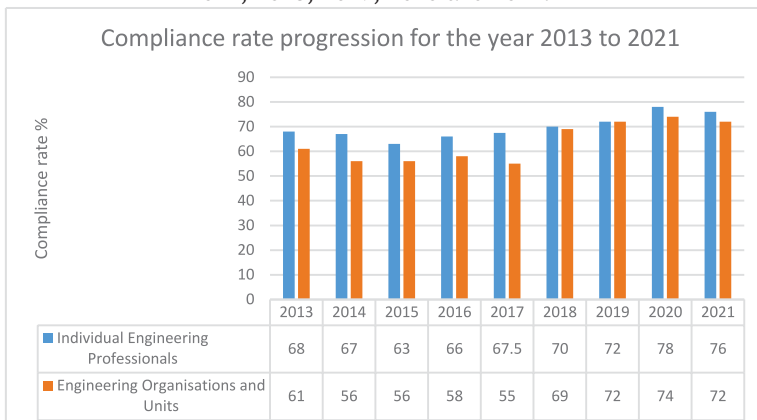
## 5.0 BOARD FOCUS FOR THE FINANCIAL YEAR 2021

- 5.1 Enhanced and targeted compliance for both engineering organisations and units.
- 5.2 Publication of registration statistics on a quarterly basis and suspended licences.
- 5.3 Continued publication of the Gazette as provided for in the EIZ Act No. 17 of 2010.
- 5.4 Publication of fraudulent cases in the media to encourage organisations and firms to comply

## 6.0 PRACTICE REGISTRATION STATISTICS

The Total Register on the database at the close of the year under review was 20 164 individuals (registered professionals) and 4,736 registered engineering organizations and engineering units.

Figure 1: Compliance rate Comparison for the year 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020 and 2021.



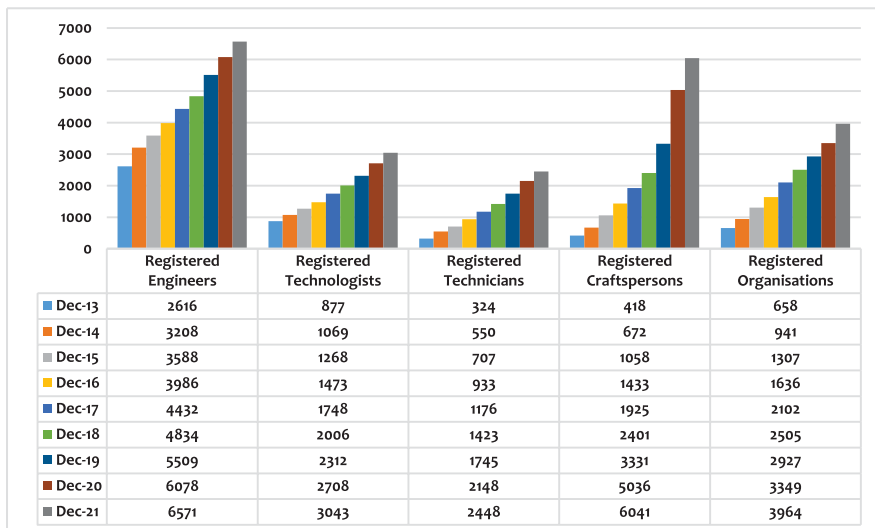
## COMMITTEE REPORTS

### ENGINEERING REGISTRATION BOARD 2021 REPORT

During the year, January to December 2021, the Engineering Registration Board ratified a total of 2,172 applications from individuals and total of 615 applications from engineering organisations and engineering units. The slight drop in compliance rates for both individuals, organisations and units can be attributed to the reduction of contractual work offered during the COVID19 pandemic.

However, with the increment of Constituency Development Fund (CDF), the Institution is already seeing an increase in the 2022 organisations and units' registration.

Figure 2: Comparative growth by class for Engineering Professionals for the years 2013 - 2021



## 7.0 ENFORCEMENT AND COMPLIANCE

Institutional Strategic Objective No. 6 - To attain a 90% compliance rate on engineering practice by 2023.

The shift in registration statistics was attributed to the emergence of the coronavirus disease.

The increase in compliance rate was attributed to targeted inspections that were conducted in the third quarter of 2019 particularly in the North

Western and Lusaka Provinces.

## **8.0 PLANNED ACTIVITIES**

The Engineering Registration Board plans to undertake the following activities:

- 8.1 Increase of registered professionals by an increase in compliance activities.
- 8.2 Conduct a National Skills analysis to determine the skills needs on a national level.
- 8.3 Ensure that utility/service companies/parastatals require skilled professionals that are registered with the Engineering Registration Board (such as is the case with ZESCO).
- 8.4 Sign MoU with Immigration Department

-----  
**Eng. Kabaso Stephen Musebe**  
**Board Chairperson Engineering Registration of Zambia**



## 1.0 INTRODUCTION

The Engineering Technical Committee is an organ of the Engineering Institution of Zambia (EIZ) constituted to address particular functions of the EIZ as mandated under the EIZ Act No 17 of 2010. These functions are but not limited to the following;

- a. investigate allegations of professional misconduct and impose such sanctions as may be necessary;
- b. advise the Government on matters relating to the engineering profession.
- c. To make recommendations in developing, promoting and enforcing internationally comparable engineering practice standards in Zambia.
- d. To make recommendations on reports of investigations and national emergencies or disasters or any matter of public concern.
- e. To make recommendations on matters referred to the Committee by Council.

This report is an account of the activities that the Committee is, or has been working on.

## 2.0 Membership

The Chairperson of this Committee is Eng. Kalumbu Nsefu who is deputised by Eng. Taperewa Namwinda Kabwe. Depending on what the Committee is working on at any particular time, experts are appointed to the Committee to deal with specific matters as they arise. During the period under review, the Committee worked on the projects below;

## 3.0 Projects

### 3.1 Alick Nkhata Flyover Bridge

The grade separation structure on Alick Nkhata Road was constructed under the project for the shopping complex development by the Public Service Pensions Fund. The structure was temporarily opened to traffic in 2020 prior to hand over to the Public Road Authority. Upon opening to the public, adverse comments on its safety and road user comfort were made by the general public, public officials and engineers.

The Engineering Institution of Zambia was compelled to get involved

due to high public interest and government concern. The Institution undertook two visits to site and engaged the developer; the Public Service Pensions Fund as well as the professional team. The Institution carried detailed investigations to establish whether the bridge and the support infrastructure; roundabouts, tapers, bus bays and pedestrian facilities meet acceptable engineering practice for function, user comfort and safety. This was imperative to formulate a firm professional opinion and to render such opinion to the Government, the Public Road Authority and the Developer.

Below is a caption of the conclusions and recommendations from the report;

a) **Conclusions**

***Traffic Impact Assessment:***

Although the designer came up with the conclusions of how to proceed, the impact assessment report does not clearly show how these conclusions were made; It is not clear how the issue of the vehicle fly-over bridge came about. From the impact assessment report, it looks like the bridge was just 'sneaked' into the project because there is no clear background as to why a vehicle fly-over bridge was done as opposed to the foot bridge. A foot bridge with a clear view fence in the middle of the road to prevent pedestrians crossing the road would have been a better option;

***Safety***

In terms of safety, the designers needed to consider the safety of pedestrians, drivers and passengers. The safety of pedestrians has not been covered adequately, although the impact assessment report looked at it as one of the issues in coming up with the lay out;

Out of the eight (8) lanes that have been created (including the four (4) on the fly-over bridge), the pedestrians still have to cross four (4) of the lanes which are at ground level;

The tunnels created under the bridge as passage for pedestrians, have created a blind spot for both pedestrians and drivers. The pedestrians will be coming out of the tunnel and straight into the road

on both sides. While the safety of the pedestrian is dependent on the pedestrian and the drivers, the bridge has created an obstruction for drivers not having a safe stopping site distance in case a pedestrian walked in;

The pedestrians themselves have no space to observe traffic after leaving the tunnel. This is especially dangerous for children;

### ***Motorists and passengers***

The steep slope of the bridge is a safety hazard for motorists and passengers. Because of the reduced speed of heavier vehicles on ascending, there is a likelihood of an increased frequency of accidents because of the slow vehicles, causing intolerable conditions for the drivers behind (following drivers);

While on the descent, the increased speed would cause accidents due to possible mechanical failures;

### ***Sudden slope change at Bridge deck***

The slope of the ramps of the bridge changes to 0% at the deck, joining a flat deck. Consequently, this will cause serious discomfort to drivers and passengers as they enter the top of the bridge and when leaving the bridge. The designer did not follow the allowable slope changes which should not be more than 1% (AASHTO allows 0.5% while SATCC allows up to 1%);

Because of the sudden slope change at the deck, the bridge will be subjected to impact loading from vehicles. This will affect the integrity of the bridge in the long run;

### ***Traffic circles***

The traffic circle at the junction going to University of Lusaka (UNILUS) has a diameter of 16-meters going against their own analysis in the impact assessment which provides for a 30-meter diameter traffic circle. This will create difficulties for bigger vehicles;

In the impact assessment report, there was no provision at the T-

junction at FAZ house, but it was included in the project, further restricting the working space of the bridge;

The bridge does not meet acceptable engineering practice for function, user comfort and safety. It also doesn't meet their own parameters in their impact assessment report.

**b) Recommendation**

It was recommended to maintain the roundabouts and the bus bays. However, the bridge must be demolished to pave way for a redesign and reconstruction of the road section between the two roundabouts;

We recommended that the whole road infrastructure from UNILUS traffic circle to FAZ traffic circle be redesigned. There should be a provision of a foot-bridge with a clear view fence in the middle along the median for pedestrian safety reasons;

The current bridge should be removed because there was no space for it to meet the recommended minimum standards. For this reason, we recommended that they reduce the number of lanes from 8 to 6 in order to create space for the verge to accommodate other road accessories. That said, the outer lane should be strictly for vehicles going into the Mall and an island to separate it from the vehicles coming from the Mall;

The bridge did not meet any warranty requirements for construction as shown in the report. The vertical parameters such as length of vertical curve and maximum grade of slopes were not met by the bridge. Acceleration lanes, deceleration lanes and taper lengths did not meet standards as discussed above. This was likely to cause blind spots due to limited transition lengths. The bus bay was not correctly placed, but due to limited space on the road reserve, the location for the bus bay could be maintained.

**3.2 Robert Kapasa Makasa /Ministry of Higher University Project**

Robert Kapasa Makasa University hosts the Incomplete old four storey building that was initially built as an administration block for a police academy in Chinsali district in the early seventies.

It was reported that the construction of the Police academy was halted because the local people were against its construction as there was a belief that it was being built to be a source of Police brutality against the local people. The local people rose up against the construction and hence the project was abandoned.

Over the years the building was vandalized by the local people to get some building materials. Concrete was chipped off columns and beams to get reinforcement steel. Block walls were broken and blocks taken to be re-used for local construction works.

With the need for Office accommodation for Robert Kapasa Makasa University, which was constructed at the same premises, it was felt that there was need to conduct an assessment to ascertain whether the old Police academy building could still be completed, to provide the extra office and lecture room space.

The Ministry of Higher Education in this regard approached the EIZ to provide an independent assessment to this effect.

This was with the background that two assessments had already been done by other parties.

The EIZ team visited the site in Chinsali on the 9<sup>th</sup> of February 2021 and conducted physical inspections. A report has since been prepared for the Ministry of higher Education.

Below is a caption of the recommendations of the Committee;

**Interim Recommendations:**

**We recommended the following:**

- 1.1 That initial design drawings be availed for assessment of design adequacy.
- 1.2 The building be cleaned and rid of all rubble, vegetative growth within and around it.
- 1.3 The building be barricaded off to restrict access for safety reasons and also to reduce further damage.
- 1.4 That Tests be carried out as below;
  - 1.4.1 Ultrasonic Test (optional due to its complicated



nature) - establishes the homogeneity of concrete, are there voids, what reinforcement is there- this is a consistency test.

1.4.2 **Schmidt hammer tests** or rebound test on all columns, beams and bases.

1.4.3 **Coring** - On a few columns, beams, slabs and foundation bases that are lightly loaded to confirm Schmidt hammer test results - Drill cores and do compressive test on them to establish strength and grade of concrete.

1.4.4 **Foundation tests**: Expose foundations and Test to assess foundation strengths.

1.5 That a consulting Engineering firm in good standing with EIZ be engaged to draw inference from the test results.

1.6 After test results this team can reconstitute and Make further recommendations so as to answer TOR nbr 4, 5 & 6:

1.6.1 TOR # 4- Cost assessment

1.6.2 TOR # 5 -Summary Findings

1.6.3 TOR # 6 Conclusion

The Ministry has not been able to proceed from that point.

### 3.3 Society Business Park

The public and the procuring Entity of the Society Business Park in Lusaka raised a concern on the safety and quality of the said structure arising from the failure of some of the pillars that hold the structure. The failures raised concerns in the media on the legitimacy and professionalism of the engineers that were assigned on the project.

The EIZ has subsequently hired a consultant Hopkins Engineering who are currently onsite conducting the over 1000 Pillars that support the Structure.

Representatives of a Committee of EIZ Council visited the Society Business Park to monitor the progress of the design review and structural analysis of the entire structural members, (beams, and columns and slabs). The Consultant engaged to carry out this work on behalf of the ETC is concluded the works towards the end of December 2021. A presentation of the report was conducted at the Society house to the management of NAPSA who indicated that they were going to subject the report to independent reviewers and commence remedial action.

The report can be accessed from the Institution by written request.

### 3.4 The EIZ /ACEZ L400 project

There has been a number of concerns from the public regarding the durability and quality of roads and specifically the Lusaka Roads. ACEZ felt that this was an opportunity for the Engineering Institution of Zambia being the regulator for engineering works in Zambia to take a proactive role in addressing this matter and provide appropriate feedback to government and the Public.

Subsequently, ACEZ wrote to EIZ and seconded 3 experts to work with ETC Committee in conducting a technical audit of the L 400.ETC and the 3 experts began the work on Wednesday 17<sup>th</sup> February 2021.

The Committee encountered challenges in getting requisite data from the procuring entity in order to proceed with the audits.

### 3.5 Lufwanyama Project

The then Republican President of Zambia His Excellence Dr. Edigar Chagwa Lungu visited Lufwanyama on 20<sup>th</sup> October 2020 to inspect projects that were under the Ministry of Infrastructure and Housing Development. The president was subsequently displeased with the way some of the projects were progressing and being implemented and challenged the Engineers to come forward and vindicate the profession;









\*Projects visited by the Republican President\*

1. Lufwanyama district administration block - disappointed
2. Lufwanyama housing units for civil servants - disappointed
3. ECL convention Centre Ndola - impressed
4. Masaiti hospital - procurement issues

The projects in question are under Ministry of Infrastructure and buildings department are the supervising authority.

## COMMITTEE REPORTS

### ENGINEERING TECHNICAL COMMITTEE

1.  
  - 10 Medium cost housing units
  - HENINA enterprises ltd
  - 50% completion
  - stalled works
2.  
  - 20 low cost housing units
  - DOVE enterprises ltd
  - 75% completion
  - stalled works since 2017
3.  
  - Administrative office block
  - LAMWA contractors ltd
  - 75% completion
  - works stalled
4.  
  - 3 medium cost houses
  - TUNTA enterprises ltd
  - 50% completion
  - stalled works

Preliminary EIZ Status of involved firms;

- HENINA - not a member
- LAMWA - not a member
- TALO - member
- TUNTA - member
- DOVE - not a member

The Engineering Technical Committee constituted an experts Committee to conduct investigations.

The Committee conducted their preliminary investigations and subsequently requested for contract documentation from the Ministry of Infrastructure. The Committee could not further proceed as the documentation was not provided.

### **3.6 State of the CovidAd Hoc Committee Meeting**

#### **1.0. Introduction**

Zambia had seen a sharp increase of infections, hospitalisations, and deaths since the beginning of 2021 from the relentless spread of the Covid-19 pandemic. The EIZ Council, in recognition of the unique role that engineers could play in such national matters resolved to create a sub-committee to recommend solutions. A subcommittee was inaugurated and had its first meeting on Monday 19 July 2021. The committee comprised:

Eng. Michael Kalumbu Nsefu	Chairperson
Eng. Taperewa N. Kabwe	Vice Chairperson
Eng. Bernard Chiwala	Member
Eng. Alex Mbumba	Member
Eng. Lukonde Mfula	Member
Eng. Emmanuel Katepa	Member
Eng. Flora Chitalu	Member
Eng. Mwango Mukayi	Member

#### **Secretariat**

Eng. David Kamungu	Deputy Registrar
Eng. Chimfwembe Mutale	Compliance Inspector - Southern Region

#### **Ministry of Health**

Mr. Mphande	MOH National Coordinator for Oxygen
Dr. Chanda	National Coordinator Anaesthesia
Mr. Kaleya Mbewe	Chief Planner Medical Technologies
Mr. Wisdom Chelu	Chief Anaesthetic Officer
Mr. Paul Chewe	Principle Planner Med Technologies

#### **2.0. Background**

Reports indicated that many fatalities from Covid-19 were ascribed to the inability to provide adequate medical grade oxygen to patients. The EIZ Secretariat requested proposals from members, in addition to unsolicited proposals from concerned engineers for solutions to the engineering problem.

### **3.0. Method**

- 3.1. The committee studied the proposals that had been received and additionally, also reviewed a report from Deloitte and Touché who had studied the Covid-19 impact in Zambia in 2020 (Deloitte & Touche, 2021).
- 3.2. The Committee, through the Secretariat, also met with officials from the Ministry of Health on 27th July, 2021 to discuss the most pressing needs, from the perspective of the Government of the Republic of Zambia. The committee saw it fit to identify the current position of the Ministry of Health so that the efforts of the engineering professionals could be focused on the most urgent needs.

### **4.0. Findings**

The key Challenges that were highlighted are as follows;

- 4.1. **Deficient Oxygen production capacity.**  
It was highlighted that both the oxygen suppliers and the in Hospital oxygen plants were not designed to supply bulk oxygen. This had resulted in the shortage of oxygen supply and refilling capacity;
- 4.2. **Lack of Manifolds and Piping in hospitals**  
Many of our hospitals were designed for bed space only. This meant that for oxygen to be delivered to patients the oxygen bottles had to be moved to the actual bedsides. This was not only unsustainable but also dangerous. It also gave a serious work load on the nurses in the Hospitals.
- 4.3. **Insufficient Oxygen Cylinders**  
There was a serious lack of medical oxygen cylinders in the nation. For example, University Teaching Hospital alone uses up to 1000 Oxygen cylinders in a day.
- 4.4. **The lack of Stable power supply to the Hospitals.**  
The reliable power supply to the hospitals was another problem that was highlighted. This had resulted in the loss of expensive equipment and erratic operation of Oxygen supply to the health facilities.

- 4.5. The Ministry had identified three sites that would receive funding from donors to upgrade existing oxygen plants so that they could also be used to fill cylinders. Patients require oxygen to be provided in a form that is easy for those nursing to handle. The current desirable state is for a nurse to be able manage provision of oxygen support from a manifold. The use of oxygen cylinders should be an emergency provision.
- 4.6. The proposals received from engineers focused on production capacity enhancements whilst one also tackled the problem of transportation through the proposal of a mobile/portable oxygen plant. There was also a proposal received for improving Covid-19 information gathering through Geographical Information Systems (GIS) to aid policy formulation and decision making.

#### **5.0 Recommendations**

Based on the above findings the committee recommended that it be treated with the sense of urgency as the Country was expected to have the fourth wave of the pandemic. The recommended solutions were categorised as short term, medium term and long term measures.

Short term measures were to be completed within a period of not more than 3 months. This was in order to ensure that these immediate actions were in place before the onset of the “fourth wave” of Covid-19 anticipated between December 2021 and January 2022 by the Ministry of Health.

Medium term measures were to be done within a period of 9 months and a mid-term review would be completed by 1st July 2022.

Long term measures included all the actions that were to be completed and reviewed over a period of two years in the context of the report.

### **3.7 State of Grandstand at Indeni Sports Complex Stadium- Ndola**

#### **1.0. Background**

INDENI sports Complex is a sports facility located in Ndeke township of Ndola and owned by the City's only oil refinery, INDENI Petroleum Refinery. The facility was commissioned in 1983 and boasts of a 1000 capacity stadium which is home to Zambian Super

League outfit, INDENI Football Club.

However, on 28<sup>th</sup> May 2021 the Engineering Institution of Zambia received a complaint from a concerned citizen regarding the Safety of Spectators in the INDENI Sports Complex stadium arising from the deterioration of the grandstand seats. Subsequently, the Institute through its Technical Committee constituted an ad-hoc technical committee to investigate the matter.

## 2.0. Committee composition:

	<b>Name</b>	<b>Role</b>	<b>Institution</b>	<b>Remarks</b>
1	Eng. Tapererwa Namwinga Kabwe	Vice Chair- EIZ Technical Committee	EIZ Technical Team	Declared interest and Excused herself from the visit being an employee of INDENI
2	Eng. Shapola Mutyoka	Adhoc Committee member	EIZ Technical Team	
3	Eng. Joseph M Malisawa	Adhoc Committee Team lead	EIZ Technical Team	

## 3.0. Scope of Investigation

The scope of the assessment included the following:

- 3.1. To conduct a site visit and verify the account as submitted by the complainant to the institution.
- 3.2. To assess the ability of the seats to function as intended.
- 3.3. Make recommendations

## 4.0. Findings

An inspection was conducted on Friday 11<sup>th</sup> June 2021 to ascertain the extent of the reported deterioration to the grandstand by Eng. Mutyoka and Eng. Malisawa

	<b>Name</b>	<b>Role</b>	<b>Institution</b>
1	Eng. Jonathan Nyangulu	Technical Manager	INDENI
2	Stephen Lilongwe	Football club President	INDENI
3	Justine Kabwe - Indeni football club vice secretary	Club vice secretary	INDENI

- 4.2. INDENI sent the following representatives
- 4.3. At the time of the visit, INDENI Sports Complex Management team had taken a proactive measure and removed all the degraded seats in the grandstand.
- 4.4. INDENI Team admitted that the timber material used for the grandstand seats had indeed significantly degraded and posed a serious risk to the spectators (See figures 2 and 3 below). From the physical inspection, the brick piers which offered support for the wooden seats appeared to be in a good condition.
- 4.5. It was also established that the height of the steel doors dividing the various sections of the grand stand terraces were lower than standard 2m hence posing a head injury risk (see figure 4)
- 4.6. INDENI Football Club Management have reported that they did not expect to host any football matches at the facility for the remainder of the 2020-2021 Zambian Super League season
- 4.7. INDENI Management reported that they would commence with renovation works to the aging grandstand as soon as they had resources.

## **5.0. Conclusions & Recommendations**

- 5.1. We recommend that the grandstand terrace facility be put out of use until the timbers are replaced.
- 5.2. We further recommend that the steel doors be adjusted upwards to standard height of not less than 2m.
- 5.3. We also recommended that the methodology of replacing the timbers be shared with EIZ for comments as an interested party.

**Eng. Michael Kalumbu Nsefu**  
**CHAIRPERSON ENGINEERING TECHNICAL COMMITTEE**



## INTRODUCTION

The Audit & Risk Committee of the Engineering Institution of Zambia (EIZ) is a Committee of Council with the primary role to ensure the integrity of financial reporting and the audit process by ensuring that the External auditor is independent and objective and fostering a culture and expectation of effective oversight, in ensuring that the institution has sound internal financial control systems and systems for the control of non-financial risks.

## DUTIES OF THE COMMITTEE

- Monitor the integrity of the financial statements of the institution;
- Review the institution's internal financial control system;
- Review the risk management systems;
- Monitor and review the effectiveness of the institution's internal audit function;
- Make recommendations to Council in relation to the appointment of the External auditor;
- Approve the remuneration and terms of engagement of the External auditor following appointment by the Members in a General meeting;
- Monitor and review the External auditor's independence, objectivity and effectiveness;
- Develop and implement policy on engagement of the External auditor to supply non-audit services.
- Act on other matters referred by Council as necessary

## COMMITTEE MEMBERS AND ATTENDANCE AT MEETINGS

The following members served on the Committee:

<b>Name</b>	<b>Position</b>
Eng. Yohane Tembo	Chairperson
Eng. Ngenda Situmbeko	Member
Ms. Chanda Chalwe Kasonde	Member
Eng. Sydney Chande	Member
Eng. Francis Namakanda	Member
Eng. Linus Chanda	Registrar/Secretary
Ms Musumbulwe Mambwe	Internal Auditor/Secretary

## COMMITTEE REPORTS DISCIPLINARY COMMITTEE

Below is a table of Committee meetings held:

Names	Position	Dates of Meeting						Total
		10.02.2021	16.03.2021	18.05.2021	07.09.2021	24.11.2021	14.12.2021	
Eng. Yohane Tembo	Chairperson	✓	✓	✓	✓	✓	✓	6/6
Eng. Ngenda Situmbeko	Member	✓	AB	✓	AP	✓	✓	4/6
Ms. Chanda Chalwe Kasonde	Member	✓	AP	✓	AP	AB	✓	3/6
Eng. Sydney Chande	Member	✓	✓	✓	✓	✓	✓	6/6
Eng. Francis Namakanda	Member	✓	✓	✓	✓	✓	✓	6/6
Eng. Linus Chanda	Secretary	✓	✓	✓	✓	N/A	N/A	4/6
Ms Musumbulwe Mambwe	Secretary	N/A	N/A	N/A	✓	✓	✓	3/6

### Key

- ✓ Present
- AP Apologies
- AB Absent

The Chief Executive Officer, Deputy Registrar/Director of Operations, Director Finance and Administration, Internal Auditor and representatives of the external auditors attend the committee meetings by invitation. Committee agendas provide for confidential meetings between committee members and the internal and external auditors, as well as management.

## 2. HIGHLIGHTS OF THE COMMITTEES RESOLUTIONS DURING 2021.

- 2.1 The Committee appointed the Internal Auditor;
- 2.2 The Committee recommended the Internal Audit Charter to the EIZ Council for approval;
- 2.4 The Committee continued providing oversight over the maintenance of sound internal control and risk management systems;
- 2.5 The Committee noted 100% completion of the planned audits in the financial year 2021
- 2.6 Considered the integrity of the year-end financial statements and recommended to the Board whether the audited financial statements should be included in the Annual and statutory reports.
- 2.7 Reviewed and approved the Internal audit function's Annual audit plan for the Financial year 2021
- 2.8 Reviewed and approved the Internal audit function's Annual audit plan for the Financial year 2022.
- 2.9 Discussed significant matters arising from completed internal and external audits with the Internal Auditor, management and the

external auditors.

- 3.0 Considered the integrity of the year-end financial statements and recommended to the Board whether the audited financial statements should be included in the Annual and statutory reports.

### **3. INTERNAL AUDIT**

#### **3.1 Internal audit remit**

The internal audit function is an independent assurance function which supports EIZ in improving its overall control framework. The internal audit function contributes to the maintenance of a systematic and disciplined approach to evaluate and improve the design and effectiveness of EIZ's risk management, control and governance processes. The primary role of the internal audit function, through its assurance and investigation activities, is to safeguard value by protecting EIZ's assets and reputation in relation to the organisation's defined goals and objectives. In 2021 the Audit and Risk Committee reviewed and recommended the internal audit function's charter for the Councils approval.

#### **3.2 Annual internal audit plan**

In 2021, the Audit Committee considered and approved the internal audit function's annual audit plan, including focus areas for 2021 consisting of: (i) Organizational Compliance with laws and regulation (ii) Finance Functions as well as (iii) Operations of the Membership and Inspectorate unit. Furthermore, the Committee approved the annual audit plan for 2022 including focus areas consisting of: (i) Quality Management System Audit (iii) Network Security (iv) Finance Functions as well as (v) Operations of the Membership and Inspectorate unit

#### **3.3 Employment of the Internal Auditor**

In 2021 the Audit and Risk Committee successfully contracted the in house internal auditor.

#### **3.4 Internal Audits**

The Committee noted 100% completion of the planned audits in the

financial year 2021. The following audits were completed in the Financial year 2021:

Quarter	Activity	Location	Status
3,2021	Compliance Health check activities - Review compliance with the Public Health Act by the EIZ	Head Office	Completed
3,2021	Audit of the Revenue and banking for the EIZ	Head Office	Completed
3,2021	Audit of the Bank reconciliations	Head Office	Completed
3,2021	Review of the payment system	Head Office	Completed
3,2021	Audit of travel and fuel imprest	Head Office	Completed
3,2021	Audit of the salary advance account	Head Office	Completed
4, 2021	Audit of the Membership and Inspectorate	Kitwe	Completed
4, 2021	Compliance with Motor vehicle policy	Kitwe	Completed
4, 2021	Audit of the Membership and Inspectorate	Head Office	Completed
4, 2021	Compliance with Motor vehicle policy	Head Office	Completed

## 4.0 EXTERNAL AUDITOR

### 4.1 The External Auditors Remuneration and re-appointment

The Audit and Risk Committee is responsible for considering whether, in order to ensure continuing auditor quality and/or independence, there should be a rotation of the audit firm, including consideration of the advisability and potential impact of conducting a tender process for the appointment of a different independent auditor. The Audit and Risk Committee is also responsible for making a recommendation to the Council for approval at the AGM, to appoint, reappoint or remove the external auditor.



The Audit and Risk Committee during the period under review approved the remuneration for the audit and non-audit services provided by MPH. Furthermore, they recommended to the Council the reappointment of MPH as External Auditors.

## 4.2 External Audit

The Committee monitored the execution of the audit as well as reviewed the management letter results.

## 5. FINANCIAL REPORTING

In 2021, the Audit and Risk Committee received the Annual report from management and the external auditor which included the financial report, accounting policies and judgements and reporting matters. Furthermore, it recommended for approval to the Council the audited Annual Financial Statements for the financial year end 2020.

## 6. RISK MANAGEMENT AND INTERNAL CONTROL

### 6.1 Internal Control

The committee is responsible for assessing the systems of internal controls of the Institution. In this regard the committee has evaluated reports on the effectiveness of the systems of internal controls conducted by the internal audit function, considered information provided by management and held discussions with the external auditor on the results of their audit.

### 6.2 Risk Management

Throughout the year, the Audit and Risk Committee discussed with management the Company's overall approach to risk management and internal control, including compliance. The Audit and Risk Committee received quarterly reports from the Internal Auditor & Risk officer on the status of actions to address control weaknesses identified during assurance reviews. As part of considering the risk management framework, the AC was informed of developments in the legal, regulatory and financial reporting landscape that could affect the Company.

The **Key Strategic risks** noted and reviewed by the Committee in the financial year were as follows:



Risk	Risk Rating
<b>Competitor Risk</b> - The institution faces the increasing risk of its roles either being taken over by competitor Institutions and or losing its membership to such Institutions.	High
<b>Going concern risk</b> - The risk that EIZ ceases to exist due to the repeal of EIZ Act	High
<b>Economic / Investment Risk</b> - Loss of Income earned from fixed deposits due to fluctuating interest rates dictated by the financial markets.	Moderate
<b>Project Risk</b> - Loss of credibility and potential law suits by the Main contractor due to poor project management (including non-payment of issued certificate of completion of work) and financing of the HQ project	Moderate
<b>Investment Risk</b> - Investment risk- Transfer of the HQ building to EPROPs resulting in EIZ carrying liabilities for the project	Moderate
<b>Technological Infrastructure Risk</b> - Inefficient Data Base Information Management System for management of members services	High
<b>Financial Risk</b> - Non-payment of membership and practice fees by civil servants	Moderate
<b>Reputational Risk of EIZ as a professional institution</b> - The risk of loss resulting from damages to EIZ's reputation e.g Social media threats to EIZ's brand, public's perception on their mandate, responsiveness to malpractice in the industry etc	Moderate
<b>Health and Safety Risk</b> - Impact of the Covid-19 Pandemic on the operations of the Engineering Institution of Zambia and its general membership. This has led to the reduction in the Membership and annual subscriptions which in turn translates to loss of revenue for the institution	Moderate

The Institution is actively working to manage the risks as they evolve and identify and mitigate new ones that will impact the achievement of their objectives. Furthermore, risk Mitigation strategies have been established to manage the risks identified.



## 2020 EGM ATTENDANCE LIST

First Name	Surname	Class	Region
Aaron	Tembo	Student Engineer	North
Aaron	MULINDA	Professional Engineer	South
Abednego	Chella	Student Technologist	South
Abel	Ngandu	Fellow	South
Abel	Misengo	Professional Technologist	North
Abigail	Malichi	Professional Engineer	South
Adolphus	Muleya	Full Technician	South
Agness	Mwamba	Student Technologist	South
Agness	Mofya-Mwansa	Fellow	North
akalemwa	milinga	Graduate Engineer	South
Alain Nachita	Chola	Full Craftsperson	North
ALBERT	WASHA	Master Craftsperson	North
Albright	Mulenga	Full Technician	North
Alex	Mbumba	Fellow	South
Alex	Mwala	Master Craftsperson	South
Alfonsina	Phiri	Associate Engineer	North
Alick	Kambenja	Student Engineer	North
Alick	Mbewe	Professional Engineer	South
Allan	Banda	Professional Engineer	North
Allan	Makoba	Full Technician	North
Aloysius	Chilufya	Full Craftsperson	North
Amos	Mutwale	Full Craftsperson	South
Amos c	Chitalu	Full Craftsperson	North
Ananias	Sichone	Professional Engineer	South
Andrew	Guja	Master Craftsperson	South
Andrew	Sikwese	Professional Engineer	North
Andrew	Kasoma	Professional Engineer	South
Andrew Anderson M	Musonda	Full Technologist	Select Region
Angel	Malisawa	Full Craftsperson	North
Angela	Banda	Student Engineer	North
Anna	Nalweya	Master Craftsperson	North
Arnold	Changwe	Professional Engineer	South
Aubson	Pukeni	Full Craftsperson	South
Augustine	Phiri	Full Craftsperson	South
Austin	Zulu	EIZ Membership Class (select)	South
Azele	Phiri	Professional Engineer	North
Balimu	Mwiya	Fellow	South
Banda	Mabvuto	Full Craftsperson	North
BEENE	CHUYUMABEENZU	Student Engineer	South
beneldah	bwalya	Student Engineer	North
Benson	Sinyana	EIZ Membership Class (select)	South
Bernard	Chiwala	Fellow	South
Bertha	Chilufya	Professional Technologist	South
Betsy	Mukena	Fellow	South
Botha	Langisi	Full Craftsperson	South
Boyd	Musonoyi	Full Craftsperson	South
Brian	Chungu	Student Technologist	North
Brian	Mwangu	Master Craftsperson	South
Brian	Chutu	Fellow	South
BRIAN	SICHIVULA	Full Technologist	North
BRIAN CHAMPO	MUSONDA	Certified Technician	North
Brian Chazyia	Simbule	Professional Technologist	North
Bright	Bwembya	EIZ Membership Class (select)	South
BUUMBA	SIMUYAMBALA	Professional Engineer	South
Bwalya	Chileshe	Full Technologist	South
Bwalya	Chishimba	Professional Engineer	North
Bwalya	Chitanika	Certified Technician	North
Bweupe	Lombanya	Professional Engineer	South
Caleb	Tembo	Professional Engineer	South
Calvin	Simwanza	EIZ Membership Class (select)	South
Cecilia	Seyuba	Full Craftsperson	Select Region

## 2020 EGM ATTENDANCE LIST

First Name	Surname	Class	Region
Cephas	Museba	Professional Engineer	South
Chabota	Kaliba	Professional Engineer	South
Chali	Mulenga	Full Technologist	South
Chalwe	Kabaso	Full Craftsperson	South
Chanda	Chisha	Professional Engineer	South
Chansa	Brian	Student Technologist	South
Chansa	Mfula	Student Technologist	South
Charity	Chola	Fellow	South
Charles	Shindaile	Fellow	South
Charles	Kaputo	Full Technologist	South
Charles	Phiri	Full Craftsperson	South
Charles	Mubita	EIZ Membership Class (select)	South
Charles	Ngwenya	Skilled Person	South
Charles Chanda	Kaoma	Fellow	South
CHIBAMBA	YAMISHI	Full Craftsperson	South
Chileshe	Witika	Professional Engineer	South
Chilufya	Mwewa	Full Craftsperson	South
Chimfwembe	Mutale	EIZ Membership Class (select)	South
Chioni	Daka	Professional Engineer	Select Region
CHISUNKA	CHISUNKA	Full Technician	North
Chitambala	Smellen	Full Technician	North
Chola	Kolala	Master Craftsperson	North
CHRIS	KYPRIOS	Student Engineer	South
Christopher	Kabwe	Full Technologist	South
Christopher	Chipatela	Full Craftsperson	North
Christopher	Silwimba	Student Technologist	North
Christopher	Kalenga	Full Technician	North
Clara	Hara	Master Craftsperson	North
Cleadwin	Chinyama	Skilled Person	South
Cleave	Silavwe	Full Technician	North
Cleave	Silavwe	Full Technician	North
Clement	Chabu	Master Craftsperson	North
Cliff	Bwalya	Professional Engineer	North
Clive	Nyirenda	Student Technologist	Select Region
Clive	Musumali	Full Technologist	North
Clive	Chibwe	Certified Technician	Select Region
Collins	Chola	Full Craftsperson	North
Corrence	Chisila	Full Craftsperson	South
Cosmas	Muma	Full Craftsperson	North
Cosmas	Chuula	Master Craftsperson	South
Cuthbert	Mulenga	Full Craftsperson	South
Cyprian	Chititundu	Fellow	Select Region
Daliso	Mtonga	Student Technologist	South
Dalitso	Mhango	Professional Engineer	South
Damson	Kachali	Professional Engineer	North
Daniel	Mwale	Professional Engineer	South
Daniel	Chitambala	Full Technician	North
David	Kamungu	Professional Engineer	South
David	Lombe	Associate Engineer	South
DAVID	KANUNGWWE	Master Craftsperson	North
David	Mukuka	Student Technologist	South
David	Makasalo	Full Craftsperson	South
David Amon	Ngosa	Master Craftsperson	North
David Solo	Mubanga	Master Craftsperson	North
December Musa	Banda	Professional Engineer	South
Dennis	Mibenge	Student Technologist	South
Dennis	Malambo	Professional Engineer	South
Dennis	Kunda	Master Craftsperson	North
Dennis	Sichilongo	Full Technician	North
Dereck	Mwenifumbo	Professional Engineer	South



## 2020 EGM ATTENDANCE LIST

First Name	Surname	Class	Region
Deria	Nalawwe	Graduate Engineer	South
DERRICK	MWILA	Full Craftsperson	South
Derrick	Mweemba	Full Craftsperson	South
Derrick	Musonda	Professional Engineer	South
Derrick	chisala	Full Craftsperson	South
Derrick	Ntonyo	Professional Engineer	North
Desiderius	Chapewa	Professional Engineer	South
Dimas	Mulenga	Student Technologist	South
donald	chishimba	Student Engineer	North
Donald	Simutowe	Graduate Engineer	Select Region
Dryton	Kabwe	Certified Technician	South
Dumisani	Nkhata	Professional Engineer	South
Dylan	Chewe	Student Engineer	South
Dylan	Kasonde	Fellow	South
Edward	Hofisi	Student Technologist	South
Edward	Mwanza	Professional Engineer	North
Elias	Njebele	Professional Engineer	South
Elias	Malama	Full Technologist	North
Elias	Kabungo	Master Craftsperson	North
Eliphaz	Lutente	Student Engineer	North
Elizabeth	Phiri	Master Craftsperson	North
Elizabeth Kyulabantu	Namakando	Professional Technologist	South
Elvis	Mubangalala	Master Craftsperson	South
Elvis	Mwape	Full Craftsperson	North
Emmanuel	Msiska	Master Craftsperson	South
Emmanuel	Nswana	Certified Technician	South
Emmanuel	Chanda	Full Craftsperson	South
Emmanuel	Kapesa	Student Engineer	North
Emmanuel	Ngambi	Professional Engineer	South
Emmanuel	Bwalya	Certified Technician	South
Emmanuel	Chanda	Certified Technician	South
Eng. BENJAMIN	HENRIQUE	Professional Engineer	South
Eng. Elson	Banda	Professional Engineer	South
Ennie	Muchelemba	Fellow	South
ERIC	LUPENGA	Full Craftsperson	South
Eric	Banda	Student Craftsperson	South
Eric	Musama	Professional Engineer	South
Ernest	Katodika	Professional Engineer	South
Ethel	Mwelwa	Professional Technologist	South
Ethel	Chifunda	Full Craftsperson	North
EUGENE	NDHLOVU	Graduate Engineer	Select Region
Evanovic	Kapila	Full Technician	South
Evans	Mulenga	Full Craftsperson	South
Evans Chansa	Kafusha	Full Craftsperson	South
EVANS NJALAMIMBA	MUSONDA	Fellow	South
Evaristo	Sikalunda	Full Craftsperson	South
Everisto	Mwemba	Master Craftsperson	South
Faith	Katuta	Trainee Technician	South
Faith	Katuta	EIZ Membership Class (select)	South
Faith	Mumba	Certified Technician	North
Fanwell	Nyamayedenga	Master Craftsperson	South
Felix	Kazwala	Fellow	South
Felix	Simfukwe	Master Craftsperson	North
Festus M.	Kakana	Associate Engineer	South
Fideliko	Phiri	Full Craftsperson	South
Field	Simwanda	EIZ Membership Class (select)	South
Francis	Bweupe	Full Craftsperson	South
Francis	Njovu	Full Craftsperson	South
Francis	Musaba	Professional Engineer	North
Frank	Kalumba	Master Craftsperson	Select Region
Frank	Mwangilwa	EIZ Membership Class (select)	Select Region

## 2020 EGM ATTENDANCE LIST

First Name	Surname	Class	Region
Frank	Mulundu	Professional Engineer	North
Fred	Mushashu	Certified Technician	North
Freddie	Kataya	Certified Technician	South
Fridah	Like Malama	Full Technician	South
Fridah	Nkunde	Graduate Engineer	South
Friday	Kalolo Simbeya	Professional Engineer	South
Gabriel	Chanda	ELZ Membership Class (select)	South
Garry	Mukelabai	Fellow	South
Gasto	Chola	Full Technician	South
GAYTON	chabala	Certified Technician	North
Geoffrey	Siankwilimba	Full Craftsperson	South
George	Nyirenda	Student Technologist	South
George	Bwalya	Student Engineer	Select Region
George	Mvula	Full Technician	North
Gerahom	Mweete	Professional Engineer	North
Gerald	Chisongo	Professional Engineer	North
Gibbs	Mwiiti	Student Craftsperson	South
Gideon	Chilongu	Full Technologist	South
Gideon	Sichilyango	Student Technologist	Select Region
Gift	Monde	Professional Engineer	South
Gift	Mukaba	Professional Engineer	North
Given	Muzamai	Master Craftsperson	South
Godfrey	Chishimba	Full Technologist	South
Godfrey	Muwowo	Full Technologist	North
Godwin	Beene	Fellow	South
Grace	Kalunga	Student Technologist	South
Gwen	Hamalila	Full Craftsperson	South
HAGGAI	Mwansa	Full Technician	South
Happy	Musumali	Fellow	South
Hared	Kasonde	Full Craftsperson	North
Harrison	Chalwe	Full Technician	South
Hassan	manase	Master Craftsperson	South
Hastine	Likonge	Full Craftsperson	South
Henry	mukuka	Full Craftsperson	North
Henry	Mwale	Fellow	South
Henry	Mubanga	Full Craftsperson	Select Region
HOLDON	KABOKO	Certified Technician	Select Region
HOLDON	KABOKO	Certified Technician	North
Hope	Kakwende	Student Engineer	South
Humphrey	Mutale	Master Craftsperson	North
Humphrey	Lwando	Full Craftsperson	South
Humphrey musonda	Mukosha	Master Craftsperson	South
Ian	Kamilo	Full Technician	South
Ignatius M	Ziwa	Professional Engineer	South
Ignitius	habeene	Full Technician	South
Iluba	Iluba	Full Craftsperson	South
Innocent	Ngosa	Student Engineer	Select Region
Innocent	Simukoko	Full Technician	North
Isaac	Zulu	Student Engineer	South
Ishmael	Mutale	Student Engineer	North
James Imutombo	Siita	Full Craftsperson	South
Jane nambeye	manase	Certified Technician	South
Janet	Nambaya	Full Technologist	South
Jarvis	Lwimbo	Full Technician	South
Jeff	Phiri	Full Craftsperson	North
Joe	Kalusa	Professional Technologist	South
John	Musambachime	Professional Technologist	South
John	Mutale	Master Craftsperson	North
JOHN	SIAME	Fellow	North
Jonathan	Daka	Full Craftsperson	South
Jonathan	Tembo	Certified Technician	North
Joplin	Sinyangwe	Trainee Craftsperson	North
Joseph	Malisawa	Professional Engineer	North
JOSEPH	SEPISO	Full Craftsperson	South

## 2020 EGM ATTENDANCE LIST

First Name	Surname	Class	Region
Joseph	Chola	Master Craftsperson	North
Joseph	Mbasela	Certified Technician	North
Joseph	Chilupe	Master Craftsperson	South
Joseph	Tuntepe	Certified Technician	South
Joseph	Zimba	Student Engineer	South
Joseph	Sichone	Professional Engineer	South
Josh	Zulu	Full Technologist	South
Joshua	Musaya	Professional Technologist	South
Kabaso Stephen	Musebe	Professional Engineer	South
KABWE	ABRAHAM	Student Engineer	South
Kabwe	Musonda	Professional Engineer	North
Kaela	Wilson	Full Technician	North
Kaemba	Kalinda	Master Craftsperson	North
Kaluba	Musebe	Full Technician	South
Kalume	Sakwala	Full Technologist	North
Kantibhai	Patel	Professional Engineer	South
Katongo	Sampa	Full Craftsperson	North
Kayembe	nkhata	Full Technologist	South
Kelvin	Bwalya	Certified Technician	South
kelvin	Chitumbo	Fellow	South
Kelvin	Mulenga	Full Technician	North
Kelvin Chibomba	Mubita	Full Craftsperson	South
Kelvin chiyabi	Chilobya	Master Craftsperson	South
Kennedy	Chipoma	Certified Technician	North
kennedy	musonda	Professional Engineer	South
Kenneth	Mukosha	Professional Engineer	North
Kenneth	Chense	Fellow	North
kibble hills	nyemba	Student Craftsperson	South
KILDARE LAZAROUS	MULIKITA	Full Craftsperson	South
Kingsley	Mubiana	Full Technician	North
Kombe	Chola	Full Technician	South
Kondwani	Mwafullirwa	Professional Technologist	South
Kumbirai	Chandwe	Professional Engineer	South
Kunda	Mumba	Master Craftsperson	Select Region
Kwimbi	Namwila	Certified Technician	South
Larry	Sholoka	EIZ Membership Class (select)	South
Larry	Linyantwe	Full Craftsperson	South
Lawrence	Shankaya	Professional Engineer	North
LAWSON	ZYAMBO	Student Craftsperson	South
Lazzy	Mukaba	Full Technician	South
Leo	Hampeyo	Master Craftsperson	South
Leonard	Chisela	Full Craftsperson	South
Leonard	Chikumba	Graduate Engineer	South
Levy	Nyirongo	Skilled Person	South
Levy	Kumwenda	Full Technologist	South
Lewis	Kunda	Full Craftsperson	South
Limbikani	Kamanga	Professional Engineer	South
Linus	Chanda	Fellow	South
Lizzy	Kavimba	Full Craftsperson	Select Region
Lloyd	muchinzi	Full Craftsperson	South
Lloyd	Munthali	Master Craftsperson	North
Lloyd	Muchinzi	Full Craftsperson	South
Lombe	Maiba	Professional Engineer	South
Loyce	Simukoko	Full Craftsperson	South
Lubasi	Milupi	Fellow	North
Lucy	Kangwa	Student Technologist	South
Luis	Musukwa	Full Craftsperson	North
Luka	Sinkala	Student Technologist	North
Lusungu	Nyirenda	Professional Engineer	South
Luziya	Kambwela	Graduate Engineer	South
Lweendo	Siajunza	Associate Engineer	North
Machayi Charles	Maseka	Full Technologist	South
Mahaku	Maloza	Fellow	South
Mailesi	Tembo	Full Craftsperson	South

## 2020 EGM ATTENDANCE LIST

First Name	Surname	Class	Region
Mainza Simoonga	Banda	Fellow	South
Maiwaseh	Zulu	Professional Engineer	North
Manasseh	Kasuba	Full Craftsperson	North
Mandona	Meleka	Full Craftsperson	North
Marcel	Sinkala	Student Engineer	North
Margaret	Lupeke	Full Technician	South
Marine	Nkhoma	Full Craftsperson	North
Martin	Kaoma	Professional Engineer	North
Martin	Mutale	Full Craftsperson	North
Mascot	Kapoya	Full Craftsperson	South
Master	Hachaba	EIZ Membership Class (select)	Select Region
Master	Hachaba	Master Craftsperson	South
Mathew	Saili	Fellow	South
mathews	kakumba	Full Craftsperson	South
Mathews	Chileshe	Trainee Technologist	South
Mathews	Chilangwa	Full Technician	South
Mathews Chilenga	Jere	Student Technician	South
MATOMOLA	MUNDIA	Certified Technician	South
Matthew	Banda	Student Engineer	South
Maxwell	Matendeko	Master Craftsperson	North
Memory	Lusaka	Full Craftsperson	South
Mercy	Nakapite	Master Craftsperson	South
MERVIN	LUMAI	Graduate Engineer	South
Michael	Ndhlovu	Professional Engineer	South
Michael Kalumbu	Nsefu	Professional Engineer	North
Michael Mubanga	Musakanya	Full Technologist	Select Region
Mobby	kanungo	Student Technologist	South
Monica	Milupi	Fellow	North
Morgan	Chinunchi	Professional Engineer	South
Moriah	Gondwe	Student Engineer	South
Morris	Njelekwa	Professional Technologist	South
Morris	Ngoma	Full Craftsperson	South
Morris	Luchembe	Student Engineer	South
Moses	Zulu	Student Technologist	North
Moses	Mulenga	Full Craftsperson	North
Moses	Nkhata	Fellow	South
MOSES	SIMFUKWE	Full Technician	North
Mpaisha	Phiri	Fellow	South
MPEMBA	CHATE	Professional Engineer	South
Mpepesa	Kabwe	Full Craftsperson	North
Mubanga	Elvis	Student Engineer	North
Mujina Harriet	Mundonu	Full Technologist	South
Mukupa	Mulenga	Professional Engineer	South
Mukupa	Mwaba	Fellow	South
Mulenga	Kangwa	Master Craftsperson	South
Mulife	Indala	Full Craftsperson	South
Muliyani	Banda	Full Technician	South
MUMBI	NG'AMBI	Full Technologist	South
Mumbuwa	Liyungu	Professional Engineer	South
Mundia	Muya	Fellow	South
Musa	Banda	Full Craftsperson	Select Region
Mususu	Kaonda	Fellow	South
Mutale	Mwamba	Student Engineer	South
Muteba	Muteba	Full Technician	South
MUWANEI	BRIAN	Full Craftsperson	South
MWAAANGA	SIKABBUBBA	Trainee Technologist	Select Region
Mwaba	Mande Luswili	Certified Technician	North
Mwansa	Kalikenka	Professional Engineer	South
Mwansa	Manda	Professional Engineer	North
Mwansa	Mutale	Full Craftsperson	North
Mwansa	Kombe	Professional Engineer	North
Mwape	Mapulanga	Associate Engineer	North

## 2020 EGM ATTENDANCE LIST

First Name	Surname	Class	Region
MWELA	KATONGO	Full Craftsperson	South
Mwewa	Musumali	Professional Engineer	South
Myreen	Nzila	Student Engineer	South
Namuunza	Busiku	Student Engineer	North
Nathan	Kazembe	Professional Engineer	North
Nathan	Malama	Full Technologist	Select Region
Nchimunya	Mulala	Full Craftsperson	North
Ndilakulampa	Hamalambo	Professional Engineer	North
Nebert	Libingi	Full Craftsperson	South
Nebert	Libingi	Full Craftsperson	South
Nemrod	Nabulwe	Certified Technician	North
Newton	Chinyanta	Master Craftsperson	South
Ngoma	Jairos	Full Craftsperson	South
Nicholas	Chongo	EIZ Membership Class (select)	South
Noah	Kasanda	Certified Technician	South
Norbie	Mwelwa	Professional Engineer	South
Norman	Nawa	Full Technologist	South
Norman	Kasitom	Certified Technician	South
Ntamanyile	Mulenga	Student Technologist	South
Ntega	Mugala	Full Technician	South
Numel	Mbewe	Master Craftsperson	South
Nyongani	Nthele	Full Craftsperson	South
Obedy	Musonda	Full Craftsperson	South
Okell	Mainza	Full Technologist	North
Osborne	Hambwaza	Full Craftsperson	South
Padwell	Hamoonga	Full Craftsperson	South
Painet	Mutuna	Certified Technician	North
Pardon	Mofya	Full Technologist	North
Pardon	Phiri	Full Craftsperson	North
PATIENCE	Lyandenga	Professional Engineer	South
Patrick	Chibesa	Full Craftsperson	North
Patrick	Shangala	Fellow	North
patson	kalunga	Certified Technician	North
Patson	Kalunga	Full Technician	North
Pauline	Phiri	Professional Engineer	South
Peart	Siwale	Fellow	North
PEGGY	NAkAUNDI	Trainee Technologist	North
Percy	Kaela	Professional Engineer	South
Peter	Nshindano	Professional Technologist	Select Region
Peter	Munkondya	Professional Engineer	South
Peter	Witika	Full Craftsperson	South
Peter	Tayali	Full Technician	North
Peter	kayafa	Full Craftsperson	South
Philemon Christopher	Tembo	Full Technologist	North
Philimon	Lungu	Full Craftsperson	South
Piki	Kayombo	Professional Engineer	South
Precious	Mukuka	Graduate Engineer	South
Presley	Ndoso	Full Craftsperson	North
Pride	Lombe	Master Craftsperson	North
Princess chabala	Sampa	Full Craftsperson	South
Rajuh	Samboko	Master Craftsperson	South
Raphael	Phiri	Student Engineer	North
Reagan	Chilufya	Full Technician	North
Rebecca	Mutalisha	Full Craftsperson	North
renox	mulela	Full Technologist	South
Richard	Chilambuka	Full Technologist	North
Richard	Simwaka	Full Technician	Select Region
Richard	Kasitu	Full Technologist	North

## 2020 EGM ATTENDANCE LIST

First Name	Surname	Class	Region
Richard	Chisi	Full Craftsperson	North
Ricky	Katwizi	Full Craftsperson	North
Rodgers Chewe	Chilenje	Fellow	North
Rodney	Bossa	Student Engineer	Select Region
Ronald	Ddumba	Professional Engineer	South
Ronald	Mbwili	Professional Engineer	South
Ronald Muchali	Simutlil	Full Technologist	South
Ross	Chanda	Full Technician	North
Royd	Banda	Full Craftsperson	South
Sampa	mulenga	Full Craftsperson	North
Samson	Banda	Full Craftsperson	North
Samuel	Machamire	Student Engineer	South
Samuel	Tembo	Master Craftsperson	South
Samuel	Maswaka	Full Technologist	North
samuel mwango	kasonde	Full Technologist	South
Schalla Mulenga	Mwakazanga	Fellow	North
Shadrick	Chanda	Professional Technologist	North
SHARON	MABENGWA MUSONDA	Professional Engineer	South
Sibajene	Mabeta	Graduate Engineer	South
Silvanus	Chabala	Professional Engineer	South
Simukonda	Kingsley lucky	Full Technologist	North
Simwinji	Simwinji	Full Technician	South
Smart	Sakala	Student Technologist	South
Stalin	Lupiya	Full Craftsperson	South
STAVY	SHIPOTA	Professional Engineer	South
STEGA	LWEENDO	Full Craftsperson	North
Stephen	Sakala	Full Technologist	South
Stephen	Sikatema Masiye	Graduate Engineer	North
Stephen	Sichone	Full Craftsperson	North
Stephen	Malubila	Fellow	South
Stephen	Chanda	Professional Technologist	North
Stephen	Mutale	Student Engineer	South
Steward	Mulusa	Graduate Engineer	North
Sudden	Siame	Master Craftsperson	North
Sunny	Silunjili	Master Craftsperson	South
SuwilANJI	Namposya	Student Engineer	Select Region
Sydney	Busiku	Full Craftsperson	South
SYDNEY	MULENGA	Fellow	North
Sylvester	Banda	Master Craftsperson	South



# THE ENGINEERING INSTITUTION OF ZAMBIA

## 2022 ANNUAL CONFERENCE, SYMPOSIUM AND ANNUAL GENERAL MEETING

“Engineering for a Changing World”

FULL  
CONFERENCE  
PROGRAMME

Our PARTNERS



FQM



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ZESCO



ULTRASPEC – DIAGNOSTICS



MAAMBA



INFRA TEL



ZAMBEZI RIVER  
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ZSIC LIFE



STANBIC BANK



TEVETA



PRUDENTIAL



CAMCO



SARO AGRO



SHAWONGA



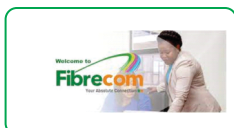
INVESTTRUST



RURAL ELECTRIFICATION  
AUTHORITY



KCM



FIBER COM



BRIDGING GAP  
SOLUTIONS (BGS)



## Young Engineers' forum PROGRAMME

Conference Day 1 Morning		FIRST YOUNG ENGINEER'S FORUM CONFERENCE PROGRAMME Date : Wednesday, 20th APRIL 2022, Time: 08:30 to 13:00 HRS Venue: AVANI VICTORIA FALLS RESORT		
Wednesday 20 <sup>th</sup> April, 2022	08:30–08:40	National Anthem and Opening Prayer	Dumisani Nkhata	
	08:40–08:50	Welcoming Remarks by EIZ President	Eng. Abel Ngandu	
	08:50–09:10	Motivational Talk by a PP	Eng. Dr. Godwin Beene	
	09:10–09:40	Motivational Talk	Eng. Prof. E. Clive Chirwa	
	09:40–10:30	Paper presentations	Moderator - Dumisani Nkhata	
	09:40–09:50	Production of gypsum by reacting rock lime with sulphuric acid Idah Mwape, Marc Mate, Charles Mazala and Richard Phiri	Idah Mwape,	
	09:50–10:00	Design of cost-effective house-hold water treatment system (HWTS): A case study of Makululu Settlement. Jackson Daka, Muembe Lweendo and Goods on Masheka	Jackson Daka	
	10:00–10:10	Impact of Urbanization on surface runoff using remote sensing and GIS technology: A case study of Lusaka District Yobe Jacob Mwale, Goodson Masheka and Muembe Lweendo	Yobe Jacob Mwale	
	10:10–10:20	Estimation of charging points for electric vehicles along Lusaka - Ndola Road. Henry Mulenga and Balimu Mwiya	Henry Mulenga	
	10:20–10:30	Green hydrogen production. Hassan Diakite Phiri	Hassan Diakite Phiri	
	10:30–11:00	<b>HEALTH BREAK</b>	<b>HEALTH BREAK</b>	<b>HEALTH BREAK</b>
	11:00–11:30	Soft skill presentations (CV writing, interview conduct and MS package)	Eng. Happy Musumali	
	11:30–12:00	Debate competition (mining in the lower Zambezi, moderated by Eng. Busiku)	Eng. Namunza Busiku	
	12:00–12:40	Panel discussion on bridging the gap between industry and young engineers	Dr. Beene, FAEO Representative, Eng. Diana Kangwa, and Student Representatives	
	12:40–12:55	Question and answer session	Moderator-Dumisani Nkhata	
12:55–13:00	Closing Remarks and Prize giving to Young Engineers debate winners	Eng. Charity Chola		
13:00–14:00	<b>LUNCH (Main Dining Hall)</b>	<b>LUNCH (Main Dining Hall)</b>	<b>LUNCH (Main Dining Hall)</b>	

## ZWES Conference PROGRAMME

Conference Day 1 Afternoon		4TH ZAMBIAN WOMEN ENGINEERING CONFERENCE 2022 THEME: ENGINEERING FOR A CHANGING WORLD; PERSPECTIVE OF WOMEN IN ENGINEERING Date : Wednesday, 20th APRIL 2022, Time: 13:30 to 17:30 HRS Venue: AVANI VICTORIA FALLS RESORT				
Wednesday, 20 <sup>th</sup> April, 2022		Master of Ceremonies & Introduction of Moderators - Eng. Edith Munungwe				
Time	Activity	Resource Person				
13:30–14:00	Arrival / Logins/registration	All				
14:00–14:20	Welcome Address and ZWES Report	ZWES Chair – Eng. Ennie Muchelemba				
14:20–14:40	Keynote speech by Guest of Honour	SAFE0 First Female President - Eng. Linda Moseki				
14:40–15:00	Building Partnership in achieving gender equality	Engineering Society of Liberia - Eng. Deena Cooper Morgan				
PANEL DISCUSSION MAIN TOPIC Exploring Climate Change, Engineering and Gender Nexus						
Time	Panel No.	Panel discussion sub topics	Panelists	Moderator	Rapporteur	
15:00–16:30	2	1. Having cleaner environment for a brighter and healthier future for all.	Eng. Alex Mbumba (Energy Specialist)/ Eng. Glenda K. Mwandama (Environmental Specialist)/ Eng. Alice Isibika (Tanzanian Women in Engineering)	Teg. Elizabeth Kyulabantu	Secretariat	
		2. Impact of climate change on communities and ecosystems.	Chitimbwa Chifunda (water Aid)/ Eng. Indie Dinala (Climate change specialist)			
		3. The role of engineering in mitigating climate change impacts on gender equality	Eng. Doreen C. Bwalya (Africa clean energy)/ Eng. Chibesa Pensulo (Green Climate Fund)/			
16:30–16:50	3	Interactive Session/Open Forum/Resolutions			Eng. Malama Munkonge	

## ZWES Conference PROGRAMME

	16:50 –17:20	4	Female Student Activity - Open debate	Chokwandi & Chanzi Mantamba
	17:20 –17:30	5	Closing Remarks	Eng. Agness Mofya Mwansa
	17:30	End of Programme		
	18:00	Welcome Cocktail and Wine Tasting at the AVANI Pool side		

## Official Opening PROGRAMME

Conference Day 2 Thursday 21 <sup>st</sup> April 2022	<b>CONFERENCE OFFICIAL OPENING CEREMONY</b>			
	GRACED BY <b>HIS EXCELLENCY, THE PRESIDENT OF THE REPUBLIC OF ZAMBIA, MR. HAKAINDE HICHILEMA</b>			
	Moderated by Eng. Grain M Munakaampe			
	09:00	Arrival of Delegates and Dignitaries	Director of Programmes	
	09:30 –09:40	Arrival of the Guest of Honour	Director of Programmes	
	09:40 –10:00	National Anthem and Prayer	Director of Programmes	
	10:00 –10:20	Welcome Remarks by the EIZ President	Eng. Abel Ngandu	
	10:20 –10:40	Keynote Address by First Quantum Minerals (FQM) CEO	Eng. Anthony Mukutuma	
	10:40 –11:00	Address by the Minister of for Southern Province	Hon. Cornelius Mweetwa, MP	
	11:00 –11:20	Address by the Minister of Infrastructure, Housing Urban and Development	Hon. Eng. Charles Milupi, MP	
11:20 –11:50	Address by the Guest of Honour	His Excellency, The President of The Republic of Zambia, Mr. Hakainde Hichilema		
11:50 –13:00	Conferment of the EIZ Fellows	Eng. Abel Ngandu		
13:00 –14:00	LUNCH (Main Dining Hall)	LUNCH (Main Dining Hall)	LUNCH (Main Dining Hall)	

## Minister's FORUM

	<b>MINISTERS' FORUM &amp; KEYNOTE PRESENTATIONS - Moderator: Grain M Munakaampe</b>		
1	Minister of Energy	Hon. Eng. Peter Chibwe Kapala, MP	
2	Minister of Green Economy and Environment	Hon. Eng. Collins Nzovu, MP	
3	Water Resources Management Authority (WARMA)	TBA	
4	Zambia Information & Communications Technology Authority (ZICTA)	TBA	
	<b>HEALTH BREAK</b>	<b>HEALTH BREAK</b>	<b>HEALTH BREAK</b>
5	Zambia Electricity Supply Corporation (ZESCO)	TBA	
6	Copperbelt Energy Corporation PLC (CEC)	TBA	
7	Road Development Agency (RDA)	TBA	
8	Energy Regulation Board (ERB)	Eng. Ezra Siamasumo	
9	Investrust	TBA	
10	Shawonga	TBA	
11	Zambezi River Authority	TBA	
12	Lumwana	TBA	
13	Maamba	TBA	
14	TEVETA	TBA	
15	CYPE	TBA	
	18:10	Closing Remarks - EIZ President, Eng. Abel Ng'andu	
	18:30	Closing of Day's Activities	

# Symposium PROGRAMME

Conference Day 3				
SYMPOSIUM PAPER PRESENTATIONS				
PARALLEL SESSIONS				
VENUE 1:		VENUE 2:		
Friday 22 <sup>nd</sup> April 2022	<b>SESSION 1A:</b> Energy diversification for future needs, and an Engineering perspective in Revamping the manufacturing sector and Economic recovery for a changing world		<b>SESSION 2A:</b> Innovative approaches to engineering practice, education and research and Sustainable economic approaches to Mining development	
	Chairperson: Eng. Edith Vwalika Mwale Munungwe		Chairperson: Eng. Musango Lungu	
	09:00 –09:20	Sustainability of Hydropower generation for future energy needs in Zambia. David Zimba, Bryan Kalundu and Vincent Chikuse Mbewe	Issues and Anxieties of Engineering interns: A Departmental Perspective. H. Musaidzi, S. Bvekerwa and D. Simango	
	09:20 –09:40	Small scale photovoltaic (PV) capacity. Mweetwa Mundia Sikamikami	Roughness measurement along the Lusaka Inner Ring Road using an Android smartphone. Paul Habasimbi, Koichi Yagi and Bernard Zulu	
	09:40 –10:00	Impact of the rapidly evolving technologies on local refined products: A case of Indeni Refinery, Zambia. Abel C. Misengo	Quick concrete design-A new mobile application for concrete mix design using either the British, American or Indian codes. Angel Musonda and Chewe Kambole	
	10:00 –10:20	Investigating incentive drivers for promoting energy efficient buildings: A case of Zambia. Chipozya Kosta Tembo, Mark Mafuleka and Franco Muleya	Permeable pavement as a sustainable method for urban flooding and pollution management system-Sustainable engineering. King Bisanka	
	10:20 –11:00	<b>HEALTH BREAK</b>	<b>HEALTH BREAK</b>	<b>HEALTH BREAK</b>
	<b>SESSION 1B:</b> Energy diversification for future needs, and an Engineering perspective in Revamping the manufacturing sector and Economic recovery for a changing world		<b>SESSION 2B:</b> Innovative approaches to engineering practice, education and research and Sustainable economic approaches to Mining development	
	Chairperson: Eng. John Siame		Chairperson: Eng. Agnes Mofya Mwansa	
	11:00 –11:20	The energy transition and demand for metals: Opportunities for Zambia. Michael Musialike	Adaptable engineering professionals' role in sustainable development of Zambia. Francis Mwale	
11:20 –11:40	Production of green charcoal by the use of organic solid waste. Mwango Makayi	The role of the engineer in developing smart city initiatives in Zambia. Franco Muleya, Hector Sikazwe and Chipozya Kosta Tembo		
11:40 –12:00	A relation between solid waste mismanagement and climate change and energy generation from solid waste. Chita Bwalya	Application of chain filter media as a simple way to increase treatment efficiency of gaseous emissions and reduce environmental impact in material processing. Mweene Himwiinga, Sergey Yurevich Panov, S. S. Panova and Wezi Nyimbili Nkonde		
12:00 –12:20	Ban of Fossil-fuel propelled automobiles versus Evolution of Electric Motor Vehicles (EMVs), how ready are we? Andrew Munde	An assessment of the use of sustainability tools in the mining sector on the Copperbelt of Zambia. Annie Nyambi and Jhonnah Mundike		
12:40 –13:00	Evaluation of engineering profession regulation in Kenya, Tanzania, and Zambia in a fast-changing world. Martin Aluga and Kambole Chewe	A review of mine closure and rehabilitation plans during the operations of Nchanga open pit mine. Mutinta E. Syafunko, Bunda Besa and Mususu K. Mpongo		
13:00 –14:30	<b>LUNCH (Main Dining Hall)</b>	<b>LUNCH (Main Dining Hall)</b>	<b>LUNCH (Main Dining Hall)</b>	
<b>SESSION 1C:</b> Energy diversification for future needs, and an Engineering perspective in Revamping the manufacturing sector and Economic recovery for a changing world		<b>SESSION 2C:</b> Engineering solutions for a changing society and Climate Change		
Chairperson: Teg. Agnes Mbaoy Nyirenda		Chairperson: Eng. Selemani Ngwira		
14:30 –14:50	Global warming, energy and sanitation solution for Zambia Choolwe Knivel Mulamfu	Assessing the impact of COVID-19 pandemic on Zambia's preparedness to train Mining Engineers for the future: A case study. Sunday Mulenga and Bunda Besa		
14:50 –15:10	Comparison of soil water characteristic curves for an unsaturated silt soil obtained by laboratory and model tests with application of different stress conditions. Paul Habasimbi and Tomoyoshi Nshimura	An assessment of the solutions to the socio-economic impacts of mine closure on the livelihood of the local community: A case study of Luanshya. Tombozi Mwamba and Mususu K. Mpongo		
15:10 –15:30	An investigation into the PVC conduits used in residential and commercial properties in Zambia. Charles. S. Lubooya and Nasilele L. Simakando	Transition to circular economy for sustainable mining in Zambia: copper slag waste recycling. Tina Phiri-Chanda, Cornwell Tapa, Misozi Makangila-Daka, Hillary Chanda and Yotamu S.R. Hara		
15:30 –16:00	<b>HEALTH BREAK</b>	<b>HEALTH BREAK</b>	<b>HEALTH BREAK</b>	

## Symposium PROGRAMME

16:00 –16:20	Prevalence and extent of heavy metals contamination from informal recycling of used lead acid batteries at identified sites in Lusaka –Zambia. Mwendalubi Kambombi and James Madalitso Tembo	A synopsis view of the COVID-19 challenges on the Zambian large scale copper mining industry. Victor Mutambo, Chela Makumba and Tanda Banda
16:20 –16:40		Remote sensing applications in agriculture. Kachizya Mwale
<b>Friday 22<sup>nd</sup> April 2022</b>	<b>PARALLEL MEETINGS</b>	
10:00 –13:00	International Engineering Alliance Committee (IEA) and Engineering Council of South Africa (ECSA)	
16:40 –17:00	Symposium Closing Formalities	
17:00	End of Symposium Programme	

## Gala Dinner PROGRAMME

### Master of Ceremonies: Cheelo Mwanachingwala

17:30-18:00	Arrival of invited guests
18:00-18:10	National Anthem by the Band
18:10-18:15	Prayer
18:15-18:20	Welcome by the Registrar and CEO Eng. David Kamungu
18:20-18:40	Maiden Speech by EIZ President
18:40-19:00	Remarks by Guest of Honour
19:00-19:40	Remarks by Gala Dinner Sponsor
19:40-20:00	Vote of thanks
20:00-onwards:	Dinner & Entertainment

## Spouse PROGRAMME

DATE	TIME	DESCRIPTION OF ACTIVITY	RATE/CHARGE	ACTIVITY DURATION
<b>DAY 1 19/04/22 Arrivals</b>	08:00 - Onwards	<ul style="list-style-type: none"> <li>Arrival of Conference Delegates (Airport Pickups)</li> <li>Bus arrives at Harry Mwaanga Nkumbula International Airport For Airport pick -ups (3 trips only)</li> </ul>	Free	4 Hours (12h – 16h)
<b>DAY 2 20/04/22 Spouses' Program</b>	08:30-08:50	Bus arrives at AVANI Victoria Falls Resort for pick -up	Free	20 Min
	08:50-09:10	Bus arrives at Protea Hotel for pick -up	Free	20 Min
	09:10-09:30	Bus arrives at David Livingstone Safari & Spa for pick -up	Free	20 Min
	09:30-12:30	<b><u>Visit to Mukuni Big Five Safaris &amp; Mukuni Village</u></b> <ul style="list-style-type: none"> <li>Animal Viewing only (Kids below 12 years free of charge)</li> <li>Lion or Cheetah Walk</li> <li>Lion &amp; Cheetah Cub Interactions</li> </ul> <b><u>Visit to the Livingstone &amp; Rail Museums</u></b>	K100.00 pp K550.00 pp K280.00 pp K10.00pp	3Hr:00 Min
12:30-14:00 (Lunch Time Activities)	<ul style="list-style-type: none"> <li>AVANI Kids Club (Games, Jumping castle, Water slides, etc.) within AVANI Resort. (Kids booked at AVANI its free of charge)</li> <li>Pony Horse Ride - for kids (within AVANI Resort)</li> </ul>	K160.00 pp  K60.00 pp	1Hr:30 Min	

## Spouse PROGRAMME

### Note:

All kids in need of this activity should be at AVANI Resort by 12:00 hrs as this activity is done during lunch time. **Kindly book with EIZ in advance.**

	12:30 -14:00	LUNCH		1Hr:30 MIN
	14:00 -14:15 14:20 -14:35 14:40 -14:55	<ul style="list-style-type: none"> <li>Bus arrives at AVANI Victoria Falls Resort for pick -up</li> <li>Bus arrives at Protea Hotel for pick -up</li> <li>Bus arrives at David Livingstone Safari &amp; Spa for pick -up</li> </ul>	Free Free Free	15 Min 15 Min 15 Min
	15:00 -17:00	<ul style="list-style-type: none"> <li>Game Drive in the Mosi -Oa-Tunya National Park (Kids below 12 years K12pp)</li> <li>Park fees</li> </ul>	K25.00 pp K17.00 pp	2Hr:15 Min
		<p><b>Note:</b> Park Fees are charged separate at <b>K17</b> per vehicle if using own transport</p>		
DAY 3 21/04/22 Spouses' Program	08:30 -08:50 08:50 -09:10 09:10 -09:30	<ul style="list-style-type: none"> <li>Bus arrives at Protea Hotel for pick -up</li> <li>Bus arrives at David Livingstone Safari &amp; Spa for pick -up</li> <li>Bus arrives at AVANI Victoria Falls Resort for pick -up</li> </ul>	Free Free Free	20 Min 20 Min 20 Min
	09:30 -12:30	<ul style="list-style-type: none"> <li>Visit to the Victoria Falls (Knife Edge Bridge &amp; Boiling pot).</li> <li>Victoria Falls Bridge (Zambia - Zimbabwe Border Tours)</li> </ul>	K15.00 pp	1Hr:15 Min 1Hr:30 Min
	12:30 -14:00 (Lunch Time Activities)	<ul style="list-style-type: none"> <li>AVANI Kids Club (Games, Jumping castle, Water slides, etc.) within AVANI Resort.</li> <li>Pony Horse Ride - for kids (within AVANI Resort)</li> </ul>	K150.00 pp K150.00 pp	1Hr:30 Min 1Hr:30 Min
		<p><b>Note:</b> The two above activities are free of charge for kids staying at AVANI, and are done during lunch time (12:00hrs – 14:00hrs). <b>Please book with EIZ or directly with AVANI in advance for this activity</b></p>		
	12:30 -14:00	LUNCH		1Hr:30 MIN
	09:00 -11:00 Or 12:00 -14:00	<ul style="list-style-type: none"> <li>Dry Hire Boat Cruise (Kids below 12 years is K100.00pp), bar/drinks. Minimum number of people required is 15.</li> </ul> <p><b>Please book with EIZ in advance for this activity</b></p>	cash K200.00pp	2Hrs
DAY 4 22/04/22 Spouses' Program	08:30 -12:30	<ul style="list-style-type: none"> <li>Free choice of tours (Delegates can choose any activities of their choice to be visited)</li> </ul>	TBA	4hrs
DAY 4 23/04/22 Spouses' Program	14:00 -16: Onwards	<p><b>Visit to Crocodile Farm</b></p> <ul style="list-style-type: none"> <li>Crocodile and Snakes viewing (Kids below 12 years is K40.00pp)</li> </ul> <p><b>Note:</b> Feeding of crocodiles is done once a week every Saturday at 15:00hrs, but it can be done on Friday at an extra fee of K50.00 pp. If you want to witness this very <b>exciting</b> feeding of crocodiles, please book with EIZ in advance.</p>	K80.00pp	-
23/04/22 Gala Dinner Dance	17:00 -17:15 17:15 -17:30	<ul style="list-style-type: none"> <li>Bus arrives at Protea Hotel for Gala Dinner pick -up</li> <li>Bus arrives at David Livingstone Safari &amp; Spa for Gala Dinner pick -up</li> </ul>	Free Free	15 Min 15 Min
	18:00 Onwards	<ul style="list-style-type: none"> <li>Arrival of delegates</li> <li>Entertainment – The Impact Band</li> <li>National Anthem</li> <li>Speech by Guest of Honour</li> <li>Speech by EIZ President</li> <li>Dinner</li> <li>Entertainment – The Impact Band till late (mixed genres)</li> </ul>	K1,200 pp	Till late
DAY 4 24/04/22 Departures	07:00 - Onwards	<ul style="list-style-type: none"> <li>Departure of Conference Delegates</li> <li>Bus arrives at AVANI Victoria Falls Resort, Protea Hotel &amp; David Livingstone Safari &amp; Spar for pick -ups to Harry Mwaanga Nkumbula International Airport</li> </ul> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>Delegates at all the three hotels wishing to be ferried to the bus station or airport to be ready for pick -up by 07:00h as transport will not wait for anyone. Please book for transport with EIZ secretariat in advance.</li> <li>For any other activities not stated, please see Secretariat for advise</li> </ul>	Free	1Hour

## Spouse PROGRAMME

Livingstone Adventures have the following activities for the families;

- **Water Taxi**

The water taxi allows guests to arrive at their destination in splendid style; on the Zambezi River. Departing from the Royal Landing Jetty, guests are whisked away on a boat for a thrilling 10 minute boat trip to the Royal Livingstone Hotel Sun Deck and welcomed by the hotel's check in staff. The ultimate introduction to the mighty Zambezi, and an exciting start to your trip.

Livingstone Adventure also offer airport transfer services (at an additional cost) that drops guests at their Royal Landing Jetty, while guests' luggage is conveniently taken to the hotel by road.

Rates for the water taxi is **\$40pp**

- **Boat Cruise - Dry Hire Option:**

This option is available for both morning and lunch cruises. The duration of the cruise is 2 hrs for lunch that is 12hrs – 14hrs. The rate is **K200.00** pp for the hire of the boat which is inclusive of park fees.

Kindly **note** that snacks are not inclusive in this rate and beverages are sold on a cash bar basis. If you would like to bring your own snacks or food it attracts a corkage charge of **K300.00** per boat trip booked, but if you prefer that they prepare snacks it will attract a charge of **K100.00** pp. The minimum number of people for this Boat Cruise is **2 (two)**.

- **Below Activities can also be arranged**

- Helicopter Ride
- Quad Biking
- Segway Tours
- Bungee Jumping
- Gorge Swing

**Notes and useful Clothing tips:**

Gala Dinner dress code: Black Jacket & bowtie

- For walking safaris – light neutral coloured clothing, comfortable walking shoes, warm jacket for evenings and early morning and a wide brimmed hat are recommended.
- For water activities, nylon water sandals are ideal.

**If you are in need of these or any other activities? Please contact the EIZ Secretariat and make that booking in advance**

## Presenters' Bios by Session -MAIN SYMPOSIUM

<b>VENUE A:</b>	<b>VENUE B:</b>
<b>SESSION 1A:</b> Energy diversification for future needs, and an Engineering perspective in Revamping the manufacturing sector and Economic recovery for a changing world	<b>SESSION 2A:</b> Innovative approaches to engineering practice, education and research and Sustainable economic approaches to Mining development
Chairperson: Eng. Edith V.M.Munungwe/ Eng. Dr. Bunda Besa	Chairperson: Eng. Musango Lungu/Eng. Tina Phiri Chanda



### Eng. Bryan Kalundu

Eng. Bryan Kalundu is a Civil Engineer with a background in Construction having worked on a number of Civil Engineering works from RCC Dams, Roads, Bridges and multi-story buildings. In his current capacity at ZESCO, he is working as a Civil Engineer on the 2400 MW Batoka Gorge Hydroelectric Scheme project and the 161 MW Kalungwishi River HPP with a bias towards project management and hydropower development. Bryan holds a Bachelor of Science Degree in Civil Engineering and Construction from The Copperbelt University and a Certificate in Sustainable Hydropower Development from ICH, Norway.



### Eng. Henry Musaidzi

Engineer Musaidzi has over 13 years' experience as a professional Engineer, in Industry and academia. He holds a BSc (Hons) in Mechanical Engineering, MSc in Manufacturing Systems and Operations Management and a Post graduate diploma in Higher Education. His research interests are in Machine Mechanisms and Design, Advanced Manufacturing Technologies and Engineering curriculum development. Henry has published several papers in international journals. He is a Lecturer in the Department of Mechatronics at Chinhoyi University of Technology, Zimbabwe. Eng. Musaidzi is a Member of the Zimbabwe Institute of Engineers (ZIE).



### Eng. Mweetwa Mundia Sikamikami

Mweetwa is a young and motivated individual pursuing academics alongside meaningful youth engagement in International affairs, and a graduate in Water Engineering, from the University of Zambia and Natural Resources Development College. As a passionate Climate Activist, he actively participates in youth-led conferences for Renewable Energy, Sustainable Agriculture, Civil Engineering and Art Exhibitions; as a participant and moderator in youth fora and talks.

Through his research, Mweetwa has investigated the macroeconomic impacts of renewable energy transition in the Southern African Region to highlight the environmental and economic opportunities that these technologies present.



### Eng. Paul Habasimbi

Paul Habasimbi is a Professional Registered Civil Engineer with vast experience in engineering design, works supervision and project management of various infrastructure development projects throughout Zambia. He works for the Road Development Agency as Regional Manager, Western Region. His experience covers design, project supervision and management of various infrastructure projects primarily in transportation, pavement, and geotechnical engineering. He holds a Master of Science in Engineering Degree Civil & Environmental Engineering (with specialization in Environmental Systems Engineering) from Ashikaga University, Japan and a Bachelor of Science in Civil Engineering from the Copperbelt University.

Presenters' Bios by Session -MAIN SYMPOSIUM



**Eng. Abel Chisanga Misengo**

Abel, 47, is a process supervisor at INDENI. He has served over 12 years as a middle manager in various process units of the petroleum process plant. He holds an MSc degree in Project Management (Cavendish University), a PG Diploma in Project Management (Cavendish College, U.K), a Licentiate Diploma in Process Plant (LCGI) London, a Diploma in Teaching Methodology (Chalimbana University). He is an MBA candidate Oil and Gas at UNICAF. In 2018, He did research in Mineral Processing and Beneficiation (MINTEK, RSA).

Abel served as Technologist rep. in 59<sup>th</sup> Council and currently serves as Board member in EngrB.



**Eng. Angel Musonda**

Angel Musonda is a trainee civil engineer working on a water and sanitation improvement project. He received his Bachelor of Engineering in Civil Engineering from Copperbelt University in 2021. In his current job placement, he monitors construction works, especially the structural aspects, to ensure compliance with standards and specifications.

Angel's research interest is the application of computational and mathematical modelling in Civil Engineering.



**Eng. Dr. Chipozya Kosta Tembo**

Chipozya Kosta Tembo is a senior lecture at the Copperbelt University in the Department of Construction Economics and Management. She holds a Doctor of Philosophy from Witwatersrand University, MSc in Construction Law from Wolverhampton University and BSc in Building Science from the Copperbelt University. Dr. Tembo has research interests in dispute resolution, contract management, procurement, risk management, sustainability, securities in the construction industry, construction materials and development of Small and medium enterprises.



**Mr. King Bisanka**

King Bisanka is a final year civil engineering student at Mulungushi University. He is quite fervent to always be on the lookout for ways of solving problems by creating technically viable, justifiable and lasting solutions. That is why he came up with a research for the development of a permeable pavement using plastics so as to mitigate urban flooding, thereby contributing to pollution management. King once served as Secretary-General for Mulungushi University Engineering Student Chapter and he was venerated for his efforts and contribution.



## Presenters' Bios by Session -MAIN SYMPOSIUM

<p><b>SESSION 1B:</b> Energy diversification for future needs, and an Engineering perspective in Revamping the manufacturing sector and Economic recovery for a changing world Chairperson: Eng. Prof. John Siame/Eng. Dr. Kaonda Mususu</p>	<p><b>SESSION 2B:</b> Innovative approaches to engineering practice, education and research and Sustainable economic approaches to Mining development Chairperson: Eng. Agnes Mofya Mwansa/ Eng. Paul Habasimbi</p>
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### Eng. Dr. Michael Musialike

Michael Musialike is a lecturer/researcher at the Copperbelt University in the School of Mines and Mineral Sciences, Department of Geology. He has 10 years' experience in mineral exploration projects that ranged from greenfield through brownfield to active mines.

His interests are in economic geology of clean energy technology mineral resources that include: lithium, copper, cobalt, manganese, nickel, tin, tantalum, zinc, lead, and chromium; and geothermal energy.

Dr. Musialike has a PhD in Geology (2018), Camborne School of Mines, University of Exeter, United Kingdom, an MSc Economic Geology (2016), CODES, University of Tasmania, Australia and a BSc Geology (2010), University of Zambia.



### Eng. Francis Mwale

Francis Mwale has 28 years of post-graduate industrial experience as follows:

- 1994 - 1999 in Electrical and Instrumentation at ZCCM, Nchanga Division, rising to Section Engineer;
- 1999 - 2004, Project and Sales Engineer at Siemens Limited Zambia; and
- 2005 to-date, founder and CEO, Mido Engineering Limited, specialising in electrical and electronics sales and services.

Francis sat on the Engineers Registration Board (2020 - 2023), as C4 Category representative. Mido Engineering Limited sits on task force TC4, under a joint ZICTA/ZABS initiative to domesticate ICT standards in Zambia.

He is married to Mutinta, with 4 children.



### Eng. Mwango Mukayi.

Mwango holds a BSc. Mobile Communications, an Advanced Diploma in Electrical and Electronics and an Advanced Certificate in Electrical. He is a research fellow at Zambia Research and Development Centre (ZRDC). His main research areas are energy, wireless communications and artificial intelligence, in particular deep learning. As an author, he is also a peer reviewer for academia.edu in wireless communication.

His area is solid recovered fuels (SRF), and efficient utilisation of energy. His research has enabled him to redesign the brazier hence the Energy Saving Mbabula (ESM) range of braziers.



### Eng. Dr. Franco Muleya

Franco Muleya an Associate Professor in the department of Construction Economics and Management at the Copperbelt University in Kitwe, Zambia. He obtained his PhD in terramechanics from Anglia Ruskin University, UK where he also served as Graduate Teaching Assistant and Tutor in the Faculty of Science and Technology. Dr. Muleya holds a Master's Degree in Management of Projects from the University of Manchester in the UK and a Bachelor's degree in Building Science from CBU. He is a registered quantity surveyor with the Quantity Surveyors Registration Board in Zambia and a Fellow in the Surveyors Institute of Zambia.

Presenters' Bios by Session -MAIN SYMPOSIUM



**Ms. Chita Bwalya**

Chita Bwalya is a 22-year-old fourth year student at The Copperbelt University pursuing an Honours degree in Civil Engineering. As an avid lover of Science, Technology, Engineering and mathematics (STEM) related programmes, she has from childhood wanted to be a part of something that revolutionizes the way humans live, hence has gained basic knowledge in the python programming language, drone operation and map automation in the hope that it will aid her in that dream.

Chita is passionate about girl child education especially in science and engineering. She hopes to one day serve in a senior capacity, like President, in EIZ.



**Eng. Dr. Mweene Himwiinga.**

Dr. Mweene Himwiinga is an Environmental Engineer who is passionate about a clean, green and healthy environment. Her research interests include: designing devices and modifying processes to reduce industrial pollution; recycling of by-products from waste water treatment; and social and environmental impact of climate change.

Dr. Himwiinga has over five years' industrial and research experience in waste management. She believes that Africa is the future of innovation and technology. She constantly shares her knowledge.



**Eng. Andrew Munde**

The Presenter's Industrial experience spans over 17 years having diligently served in the following firms; Wood Processing Limited, Konkola Copper Mines and now plying his trade at Zambia's largest Power utility, ZESCO. He has worked in numerous portfolios with hands-on experience as Plant Engineer, Senior Assistant Engineer, Operations Engineer, and supervisory roles as Manager-SHEQ, Regional Manager and currently Chief Maintenance Engineer.

Andrew's knowledge is founded in Power and Machines Engineering, with professional expertise in Energy Efficiency, Planning and Business Management. He is a key proponent of diversification in Energy Systems as a prelude to Sustainable Development and Fellow of EIZ.



**Ms. Annie Nyambi**

Annie Nyambi is a female Zambian, a current holder of a BSc degree in Chemical and Biological Sciences from the University of Zambia and currently pursuing her Master's degree in Project Management.

Annie is a versatile and experienced Chemist. She is a certified ISO 17025 signatory and proficient in analytical testing, method validation and quality management. She is also well-organised, goal and detail-oriented with excellent project management skills and planning abilities developed over a period of more than five years in the manufacturing industry and commercial laboratory.

Annie desires a sustainable integrated system in manufacturing and processing industries.

Presenters' Bios by Session -MAIN SYMPOSIUM



**Eng. Dr. Martin Aluga**

Martin Asige Aluga, MSc. (CBU-Zambia) and BSc. (UoN-Kenya), is a civil engineer, researcher, and Ph.D. student at Copperbelt University since 2019. He is also the Visiting Doctorate Student of engineering thermodynamics of fluids at the School of Industrial Engineering, Universidad de Valladolid, Spain. Aluga is the pioneer of GTE International Journal which publishes peer-reviewed research on green technology extraction of nanomaterials. Martin is also a senior engineer at Shah Technical Consultants Pvt Ltd, a civil engineering consulting firm.

Dr. Aluga is the Founding Chairman and President of Engineers Without Borders Kenya. Aluga has several peer-reviewed and conference articles ID:<https://orcid.org/0000-0002-6670-0435>



**Eng. Mutinta Esther Syafunko**

Mutinta Esther Syafunko is a young and spirited geologist with a passion for sustainable development. She holds a Bachelor of Mineral Science (Geology) degree from the University of Zambia and is currently concluding her studies to obtain a Master of Mineral Science (Sustainable Mineral Resource Development) degree from the same institution. Mutinta currently serves as a Technical Assistant – Geology at ZCCM-IH and has a combined 4 years of experience in business strategy, mine geology and exploration.

Away from work and the professional scene, Mutinta enjoys being outdoors and spending time with family and friends.

**SESSION 1C:**

Energy diversification for future needs, and an Engineering perspective in Revamping the manufacturing sector and Economic recovery for a changing world

Chairperson: Teg. Agnes Mbaoy Nyirenda/Eng. Dr. Franco Muleya

**SESSION 2C:**

Engineering solutions for a changing society and Climate Change

Chairperson: Eng. Selemani Ngwira/Eng. Dr. Mweene Himwiinga



**Eng. Choolwe Knivel Mulamfu**

Choolwe Mulamfu is a High Voltage Systems Technical Advisor at First Quantum Minerals Operations. His career started with Mopani Copper Mines, Mfulira Division, in 2012, just after acquiring his Bachelor of Engineering in Electrical/Electronic Engineering from the Copperbelt University. He worked as a Senior Assistant Engineer in the Power Plant and Smelter Sections. He then joined First Quantum Minerals where he got exposure in electrical and instrumentation and reliability and optimization.

Presenters' Bios by Session -MAIN SYMPOSIUM



**Eng. Sunday Mulenga**

Sunday Mulenga is a Mining Engineer currently working as a lecturer at the University of Zambia, Department of Mining Engineering. With combined experience from industry and academia, Sunday has found interest in improving mining education in the midst of many local and global challenges. Together with academic members of staff of the School of Mines, he has successfully developed new academic programmes in line with industry requirements and evolution.

Sunday will discuss the topic of how COVID-19 has impacted Zambia's preparedness to train mining engineers for the future having the concept of the future mine in mind.



**Eng. Paul Habasimbi**

Paul Habasimbi is a Professional Registered Civil Engineer with vast experience in engineering design, works supervision and project management of various infrastructure development projects throughout Zambia. He works for the Road Development Agency as Regional Manager, Western Region. His experience covers design, project supervision and management of various infrastructure projects primarily in transportation, pavement, and geotechnical engineering. He holds a Master of Science in Engineering Degree Civil & Environmental Engineering (with specialization in Environmental Systems Engineering) from Ashikaga University, Japan and a Bachelor of Science in Civil Engineering from the Copperbelt University.



**Ms. Tombozi Mwamba**

Tombozi Mwamba is a Middle officer at AB Bank. She is currently pursuing a Master of Science degree in Sustainable Mineral Resource Development from the University of Zambia in the School of Mines, Department of Metallurgy.

Tombozi also holds a Bachelor of Arts degree in Development Studies and Public Administration from the University of Zambia, School of Humanities and Social Sciences.



**Eng. Dr. Charles Smart Lubobya**

Charles Lubobya has an Electrical and Telecommunication background with over 10 years practice and academia in Electrical, Electronic, and Telecommunications and ICT fields. He works for UNZA as Lecturer and Researcher.

Dr. holds a PhD, MSc and BEng in Electrical Engineering. He has been Chairperson of the Zambia Bureau of Standards Committee on Electrical PVC conduits and Chairperson of the ERB's Grid Code Technical Committee (GCTC). Charles worked for ZESCO as an intern and ZAMTEL as a Technologist, Engineer and Lecturer. In 2010, ZICTA employed him as Manager R&D, a position he held until 2012 when he joined UNZA.

Presenters' Bios by Session -MAIN SYMPOSIUM



**Eng. Tina Phiri Chanda**

Tina Phiri Chanda is a Lecturer in Minerals Engineering/Metallurgy at the Copperbelt University. She holds a Master of Science in Minerals Engineering at University of Exeter, UK. Currently, Tina is pursuing her PhD studies at Murdoch University, Australia under the Schlumberger Foundation Faculty for the Future Fellowship.

Tina has over 12 years of teaching and practical industrial experience. During this journey, Tina has published 10 research papers in peer reviewed journals and has attended/presented at various conferences including technical paper presentations at ALTA 2016 and 2020 Conferences, Australia. Tina is a mentor and very passionate about girls in STEM fields.



**Eng. Mwendalubi Kambombi**

Mwendalubi Kambombi is a Microbiologist and an Environmentalist. She has experience in carrying out chemical and microbial tests according to testing protocols. She is also experienced in the research, review and writing of scientific reports. She is a holder of BSc degree in Microbiology and has just completed her studies to obtain her MEng degree in Environmental Engineering.

Her research topic was focused on investigating the prevalence and extent of heavy metals contamination from informal recycling of used lead acid batteries in Lusaka, Zambia.

Her passion lies in finding solutions that would enhance the safety of the environment and the public.



**Eng. Dr. Victor Mutambo**

Victor Mutambo holds a MSc. in Mining Engineering and a PhD (Engineering Sciences) - Mining Engineering. Currently, he works in the Department of Mining Engineering at the University of Zambia as a Senior Lecturer where he has taught several courses such as Underground mine design; Mine ventilation and Mine safety engineering.

Dr. Mutambo has also worked at the Universities of Zimbabwe, Faculty of Engineering, Department of Mining Engineering (2005- 2008) and Namibia, Faculty of Engineering and Technology (2010- 2016). He has more than twenty (20) refereed journal publications, seventeen (17) refereed conference proceedings and two (2) Book chapters.



**Eng. Kachizya Mwale**

Kachizya Mwale is a Zambian citizen, born in Kabwe on the 14<sup>th</sup> of May 1994. His parents were expatriate educational professionals in Botswana, so he grew up in the mining town of Selebi-Phikwe in the Mmadinare District. He did his high school at Kafue Boys Secondary and eventually his tertiary education in Zonguldak, Turkey at Bulent Ecevit University where he graduated with a BSc in Geomatics Engineering.

Kachizya's first official job was as a surveyor with consultants Electronic Survey Automation (ESA), He currently works for First Quantum Minerals at Kansanshi Mine in Solwezi.

## Presenters' Bios by Session -MAIN SYMPOSIUM

16:40 -17:00	Symposium Closing Formalities and Prize giving to Young Engineers debate winners
17:00	End of Symposium Programme

**PRESENTERS' BIOS BY SESSION –YOUNG ENGINEERS' FORUM**

**Chairperson: Moderator Dumisani Nkhata**



**Idah Mwape**

Idah was born and raised in Luanshya, Zambia. She attended Munchinshi Primary and Luanshya Girls' Secondary schools. She later went to Trident College after which she went to the Copperbelt University where she obtained a bachelors' degree in Chemical engineering. She will be graduating this year with a Distinction.

Growing up, Idah had always found the concept of forming something new from new materials fascinating and fundamental. This curiosity, she believes, guided her to her path in chemical engineering and still does to this day. In her spare time, Idah loves to read, exercise, watch documentaries and participate in community work.



**Jackson Daka**

Jackson Daka is a recent university graduate with a background in engineering. He currently works as a Technical Officer-Mapping and remote sensing under Ministry of Agriculture which specializes in surveying of Agricultural farm blocks in Sinazongwe District. He holds a Bachelor's Degree in Civil Engineering from Mulungushi University. His professional interest focuses on water related projects and his current research includes cost effective design of a house hold water treatment system for Makululu settlement.

He is currently registered with the Engineering Institute of Zambia (EIZ) as a graduate Engineer.



**Yobe Jacob Mwale**

Yobe Jacob Mwale currently lives and works in Lusaka. He graduated with a bachelor's degree in civil engineering from Mulungushi University. He is an enthusiastic and ambitious person. His career interests include good analytical skills and a creative eye for problem solving, a foundation he has used in his research.

His current research study focuses on the impact of urbanization on surface runoff, an issue that has plagued Lusaka District for many years.



**Henry Mulenga**

Henry Mulenga has just completed his final year Civil Engineering at the University of Zambia. He is expected to graduate with a Bachelor of Engineering in Civil and Environmental Engineering this coming 51<sup>st</sup> graduation ceremony. He is a student member of the Engineering Institution of Zambia (EIZ). He is currently working for Mkina Investments Limited as a Site Civil Engineer where they are constructing about 30 filling stations.

However, his passion is in renewable energy and reduction on carbon emissions on the road.

[www.eiz.org.zm](http://www.eiz.org.zm)



**EIZ HEADQUARTERS**

CL/7 Brentwood Drive,  
Longacres  
P.O. Box 51084  
Tel: +260 211 256 214,  
+260 211 255161

**SOUTHERN REGION**

Buildings Department HQ  
Fairley Road Ridgeway  
P.O. Box 51084,  
Telefax: + 260 211 256214  
Email: [eiz@eiz.org.zm](mailto:eiz@eiz.org.zm)

**NORTHERN REGION**

Engineers' House  
8 Kantanta Street,  
P.O. Box 23385,  
Tel: +260 212 230111,  
+260 212 222608

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